

Attachment N.3A
Noise Measurement Data, Site Details, and Photographs

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Attachment N.3A

Noise Measurement Data, Site Details, and Photographs

This attachment presents a data summary form for each noise monitoring location. Forms include the location, noise measurement equipment used, measurement data, weather observed during monitoring, and photographs of the site.

N.3A.1 Short-Term Noise Measurements

Monitoring Location

Monitoring No.	ST-1
Address	4500 39th Avenue Southwest
Area	West Seattle
Parcel	095200-7350

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	51818
Microphone	ACO Pacific 7052E	62522
Preamplifier	Svantek SV18	49561
Calibrator	Larson Davis CAL200	9512

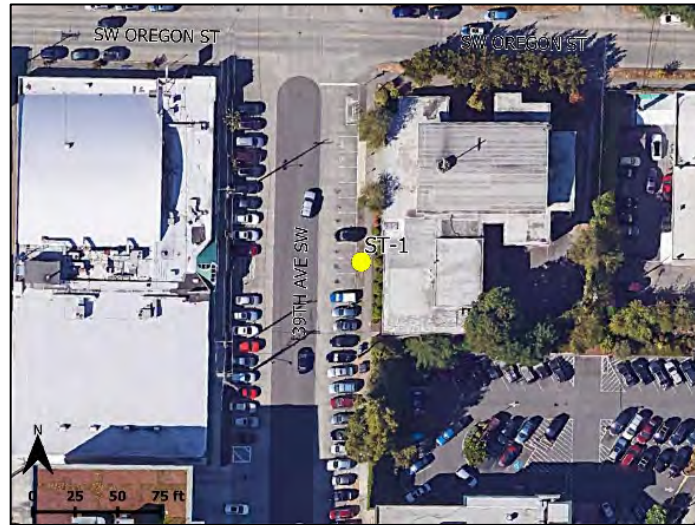
Measurement Data

Measurement Information	Morning Measurement	Afternoon Measurement
Date	8/22/2019	8/26/2019
Start Time	8:55 a.m.	4:32 p.m.
End Time	9:25 a.m.	5:02 p.m.
L _{eq} sound level	57.1 A-weighted decibels	57.7 A-weighted decibels
Day-night average sound level	55.4 A-weighted decibels	55.4 A-weighted decibels

Weather

Measurement	8/22/2019	8/26/2019
Temperature	59 degrees Fahrenheit	76 degrees Fahrenheit
Pressure	30.1 inches	30.1 inches
Wind Speed	5 miles per hour	9 miles per hour
Wind Direction	South southwest	Northwest

Plan View (ST-1)



Looking North (ST-1)



Looking South (ST-1)



Looking East (ST-1)



Looking West (ST-1)



Monitoring Location

Monitoring No.	ST-2
Address	4530 38th Southwest Avenue
Area	West Seattle
Parcel	095200-7660

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	51818
Microphone	ACO Pacific 7052E	62522
Preamplifier	Svantek SV18	49561
Calibrator	Larson Davis CAL200	9512

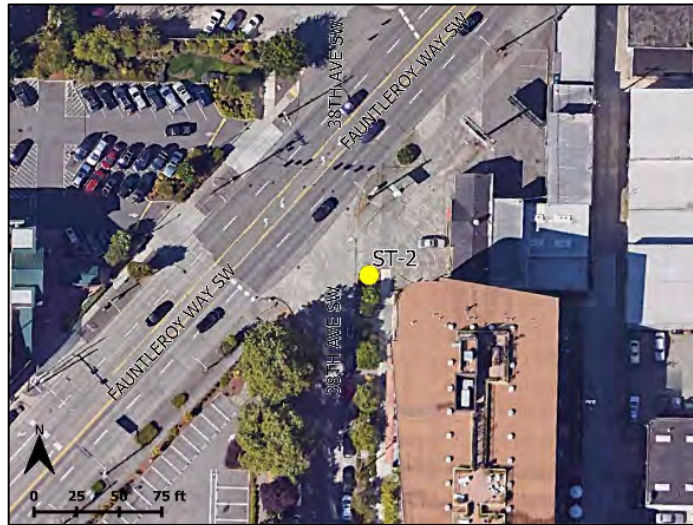
Measurement Data

Measurement Information	Morning Measurement	Afternoon Measurement
Date	8/22/2019	8/26/2019
Start Time	8:06 a.m.	3:55 p.m.
End Time	8:36 a.m.	4:25 p.m.
L _{eq} sound level	68.8 A-weighted decibels	68.8 A-weighted decibels
Day-night average sound level	66.8 A-weighted decibels	66.8 A-weighted decibels

Weather

Measurement	8/22/2019	8/26/2019
Temperature	58 degrees Fahrenheit	76 degrees Fahrenheit
Pressure	30.1 inches	30.1 inches
Wind Speed	7 miles per hour	13 miles per hour
Wind Direction	Southeast	Northwest

Plan View (ST-2)



Looking North (ST-2)



Looking South (ST-2)



Looking East (ST-2)



Looking West (ST-2)



Monitoring Location

Monitoring No.	ST-3
Address	4470 35th Avenue Southwest
Area	West Seattle
Parcel	132403-9014

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	72542
Microphone	ACO Pacific 7052E	68284
Preamplifier	Svantek SV18	72239
Calibrator	Larson Davis CAL200	16827

Measurement Data

Measurement Information	Morning Measurement	Afternoon Measurement
Date	8/22/2019	8/22/2019
Start Time	7:47 a.m.	5:36 p.m.
End Time	8:17 a.m.	6:06 p.m.
L _{eq} sound level	69.5 A-weighted decibels	68.2 A-weighted decibels
Day-night average sound level	66.9 A-weighted decibels	66.9 A-weighted decibels

Weather

Measurement	8/22/2019	8/22/2019
Temperature	58 degrees Fahrenheit	76 degrees Fahrenheit
Pressure	30.1 inches	30.1 inches
Wind Speed	4 miles per hour	4 miles per hour
Wind Direction	South	South

Plan View (ST-3)



Looking North (ST-3)



Looking South (ST-3)



Looking East (ST-3)



Looking West (ST-3)



Monitoring Location

Monitoring No.	ST-4
Address	Longfellow Creek Legacy Trail
Area	West Seattle
Parcel	935800-1220

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	72542
Microphone	ACO Pacific 7052E	68284
Preamplifier	Svantek SV18	72239
Calibrator	Larson Davis CAL200	16827

Measurement Data

Measurement Information	Morning Measurement	Afternoon Measurement
Date	8/22/2019	8/23/2019
Start Time	8:27 a.m.	6:15 p.m.
End Time	8:57 a.m.	6:45 p.m.
L _{eq} sound level	47.2 A-weighted decibels	46.0 A-weighted decibels
Day-night average sound level	44.6 A-weighted decibels	44.6 A-weighted decibels

Weather

Measurement	8/22/2019	8/23/2019
Temperature	59 degrees Fahrenheit	75 degrees Fahrenheit
Pressure	30.1 inches	30.0 inches
Wind Speed	4 miles per hour	1 mile per hour
Wind Direction	South	South

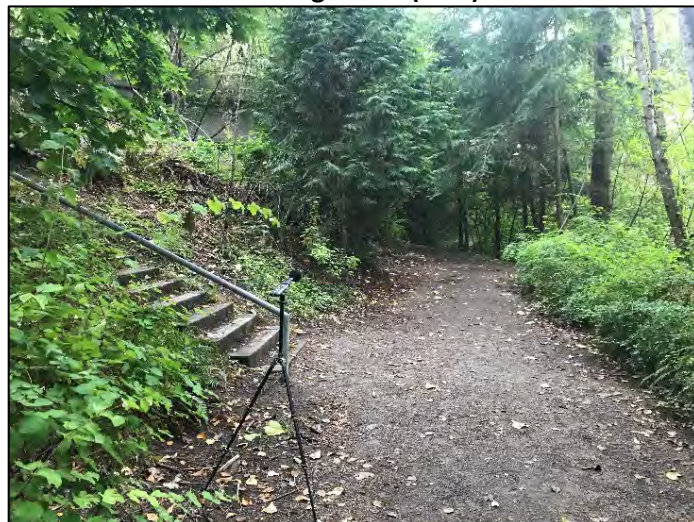
Plan View (ST-4)



Looking North (ST-4)



Looking South (ST-4)



Looking East (ST-4)



Looking West (ST-4)



Monitoring Location

Monitoring No.	ST-5
Address	4501 Delridge Way Southwest
Area	West Seattle
Parcel	132403-9030

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 979	46177
Microphone	GRAS 40AE	258193
Preamplifier	Svantek SV17	57824
Calibrator	Larson Davis CAL200	16828

Measurement Data

Measurement Information	Morning Measurement	Afternoon Measurement
Date	8/22/2019	8/26/2019
Start Time	7:42 a.m.	4:07 p.m.
End Time	8:12 a.m.	4:37 p.m.
L _{eq} sound level	74.2 A-weighted decibels	56.1 A-weighted decibels
Day-night average sound level	69.3 A-weighted decibels	69.3 A-weighted decibels

Weather

Measurement	8/22/2019	8/26/2019
Temperature	56 degrees Fahrenheit	74 degrees Fahrenheit
Pressure	30.1 inches	30.1 inches
Wind Speed	4 miles per hour	11 miles per hour
Wind Direction	South	North

Plan View (ST-5)



Looking North (ST-5)



Looking South (ST-5)



Looking East (ST-5)



Looking West (ST-5)



Monitoring Location

Monitoring No.	ST-6
Address	4408 Delridge Way Southwest
Area	West Seattle
Parcel	338812-0000

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 979	46177
Microphone	GRAS 40AE	258193
Preamplifier	Svantek SV17	57824
Calibrator	Larson Davis CAL200	16828

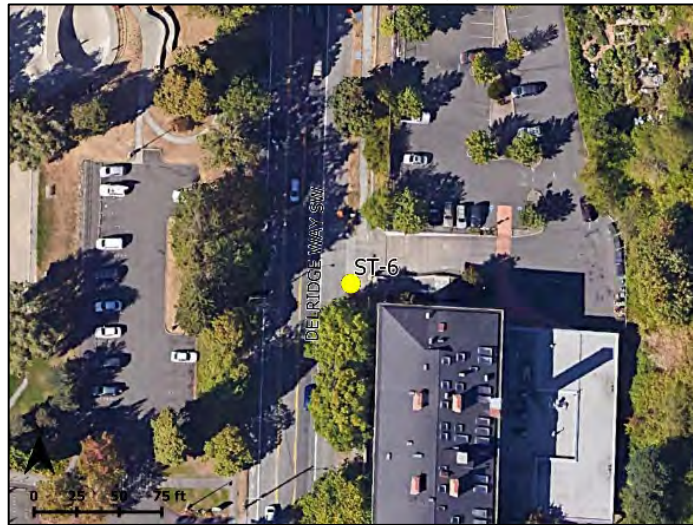
Measurement Data

Measurement Information	Morning Measurement	Afternoon Measurement
Date	8/22/2019	8/26/2019
Start Time	8:42 a.m.	4:43 p.m.
End Time	9:12 a.m.	5:13 p.m.
L _{eq} sound level	73.5 A-weighted decibels	73.9 A-weighted decibels
Day-night average sound level	71.7 A-weighted decibels	71.7 A-weighted decibels

Weather

Measurement	8/22/2019	8/26/2019
Temperature	56 degrees Fahrenheit	74 degrees Fahrenheit
Pressure	30.1 inches	30.1 inches
Wind Speed	4 miles per hour	10 miles per hour
Wind Direction	South	North

Plan View (ST-6)



Looking North (ST-6)



Looking South (ST-6)



Looking East (ST-6)



Looking West (ST-6)



Monitoring Location

Monitoring No.	ST-7
Address	1011 Southwest Klickitat Avenue
Area	Crossing
Parcel	766670-1220

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	72542
Microphone	ACO Pacific 7052E	68284
Preamplifier	Svantek SV18	72239
Calibrator	Larson Davis CAL200	16827

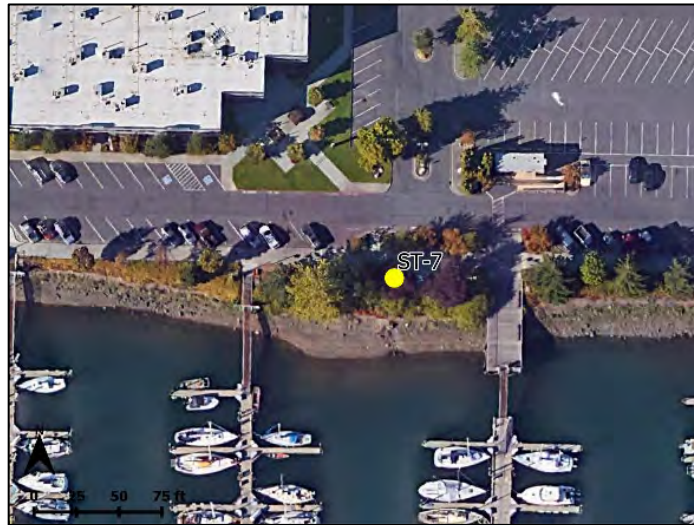
Measurement Data

Measurement Information	Morning Measurement	Afternoon Measurement
Date	8/22/2019	8/26/2019
Start Time	9:21 a.m.	5:32 p.m.
End Time	9:51 a.m.	6:02 p.m.
L _{eq} sound level	59.4 A-weighted decibels	62.6 A-weighted decibels
Day-night average sound level	59.3 A-weighted decibels	59.3 A-weighted decibels

Weather

Measurement	8/22/2019	8/26/2019
Temperature	60 degrees Fahrenheit	74 degrees Fahrenheit
Pressure	30.1 inches	30.1 inches
Wind Speed	3 miles per hour	10 mile per hour
Wind Direction	South	North

Plan View (ST-7)



Looking North (ST-7)



Looking South (ST-7)



Looking East (ST-7)



Looking West (ST-7)



Monitoring Location

Monitoring No.	ST-8
Address	Queen Anne Greenbelt Trail (south end)
Area	Ballard
Parcel	616990-0320

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	72542
Microphone	ACO Pacific 7052E	68284
Preamplifier	Svantek SV18	72239
Calibrator	Larson Davis CAL200	16827

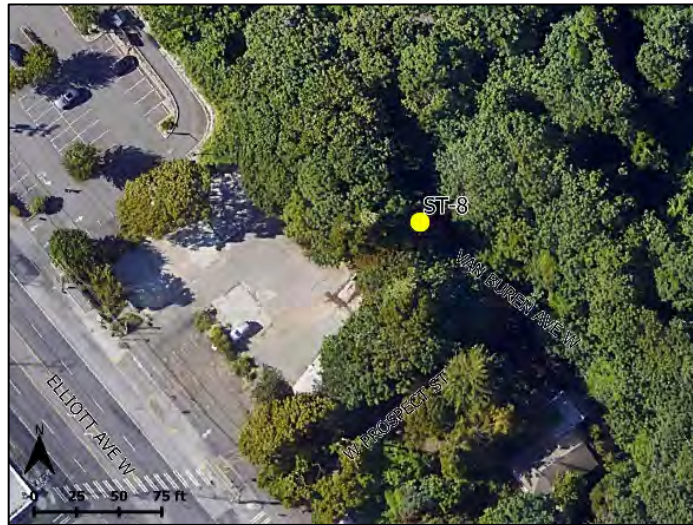
Measurement Data

Measurement Information	Morning Measurement	Afternoon Measurement
Date	8/23/2019	8/23/2019
Start Time	9:45 a.m.	3:34 p.m.
End Time	10:15 a.m.	4:04 p.m.
L _{eq} sound level	62.0 A-weighted decibels	63.6 A-weighted decibels
Day-night average sound level	60.9 A-weighted decibels	60.9 A-weighted decibels

Weather

Measurement	8/23/2019	8/23/2019
Temperature	64 degrees Fahrenheit	68 degrees Fahrenheit
Pressure	29.9 inches	29.9 inches
Wind Speed	3 miles per hour	2 mile per hour
Wind Direction	North	Northwest

Plan View (ST-8)



Looking North (ST-8)



Looking South (ST-8)



Looking East (ST-8)



Looking West (ST-8)



Monitoring Location

Monitoring No.	ST-9
Address	Queen Anne Greenbelt Trail (north end)
Area	Ballard
Parcel	616990-0320

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	72542
Microphone	ACO Pacific 7052E	68284
Preamplifier	Svantek SV18	72239
Calibrator	Larson Davis CAL200	16827

Measurement Data

Measurement Information	Morning Measurement	Afternoon Measurement
Date	8/23/2019	8/23/2019
Start Time	9:01 a.m.	3:31 p.m.
End Time	9:31 a.m.	4:04 p.m.
L _{eq} sound level	55.2 A-weighted decibels	56.8 A-weighted decibels
Day-night average sound level	54.1 A-weighted decibels	54.1 A-weighted decibels

Weather

Measurement	8/23/2019	8/23/2019
Temperature	62 degrees Fahrenheit	69 degrees Fahrenheit
Pressure	29.9 inches	29.7 inches
Wind Speed	2 miles per hour	5 mile per hour
Wind Direction	Southwest	North

Plan View (ST-9)



Looking North (ST-9)



Looking South (ST-9)



Looking East (ST-9)



Looking West (ST-9)



Monitoring Location

Monitoring No.	ST-10
Address	2451 15th Avenue West
Area	Ballard
Parcel	277110-8091

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	72542
Microphone	ACO Pacific 7052E	68284
Preamplifier	Svantek SV18	72239
Calibrator	Larson Davis CAL200	16827

Measurement Data

Measurement Information	Morning Measurement	Afternoon Measurement
Date	8/26/2019	8/26/2019
Start Time	9:00 a.m.	5:22 p.m.
End Time	9:30 a.m.	5:52 p.m.
L _{eq} sound level	60.8 A-weighted decibels	61.8 A-weighted decibels
Day-night average sound level	59.3 A-weighted decibels	59.3 A-weighted decibels

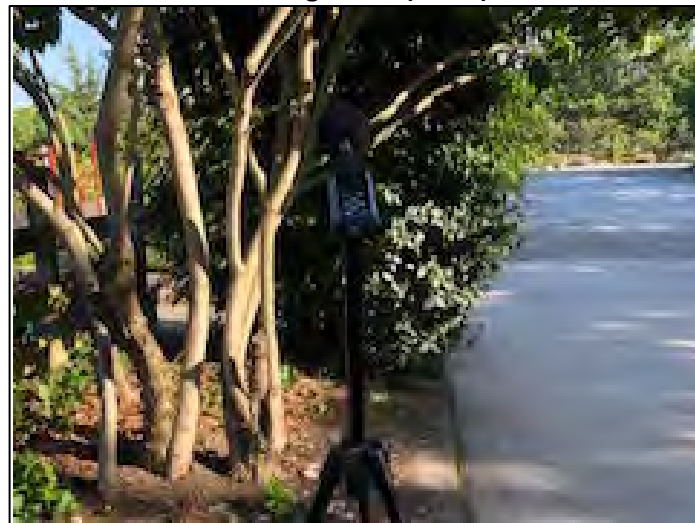
Weather

Measurement	8/26/2019	8/26/2019
Temperature	59 degrees Fahrenheit	75 degrees Fahrenheit
Pressure	30.3 inches	30.2 inches
Wind Speed	3 miles per hour	4 mile per hour
Wind Direction	Northwest	Northwest

Plan View (ST-10)



Looking North (ST-10)



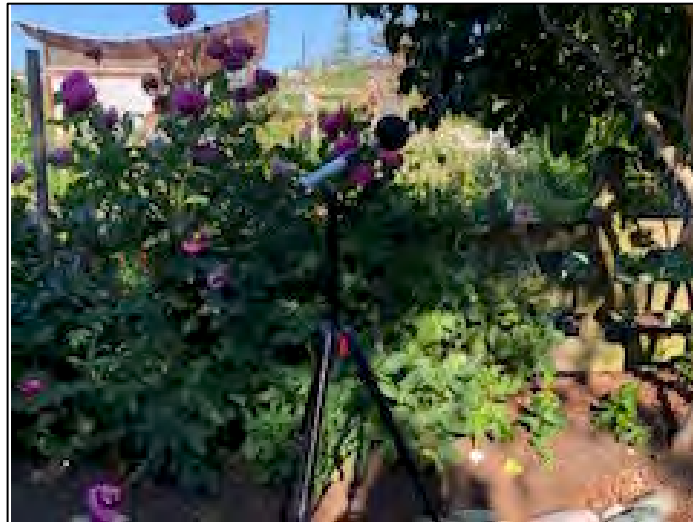
Looking South (ST-10)



Looking East (ST-10)



Looking West (ST-10)



Monitoring Location

Monitoring No.	ST-11
Address	3027 17th Avenue West
Area	Ballard
Parcel	277110-8091

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	72542
Microphone	ACO Pacific 7052E	68284
Preamplifier	Svantek SV18	72239
Calibrator	Larson Davis CAL200	16827

Measurement Data

Measurement Information	Morning Measurement	Afternoon Measurement
Date	8/23/2019	8/22/2019
Start Time	7:41 a.m.	4:01 p.m.
End Time	8:11 a.m.	4:31 p.m.
L _{eq} sound level	56.4 A-weighted decibels	55.7 A-weighted decibels
Day-night average sound level	54.1 A-weighted decibels	54.1 A-weighted decibels

Weather

Measurement	8/23/2019	8/22/2019
Temperature	57 degrees Fahrenheit	74 degrees Fahrenheit
Pressure	30.0 inches	30.0 inches
Wind Speed	2 miles per hour	6 mile per hour
Wind Direction	North	Southwest

Plan View (ST-11)



Looking North (ST-11)



Looking South (ST-11)



Looking East (ST-11)



Looking West (ST-11)



Monitoring Location

Monitoring No.	ST-12
Address	1401 Northwest Leary Way
Area	Ballard
Parcel	276830-2590

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	51818
Microphone	ACO Pacific 7052E	62522
Preamplifier	Svantek SV18	49561
Calibrator	Larson Davis CAL200	9512

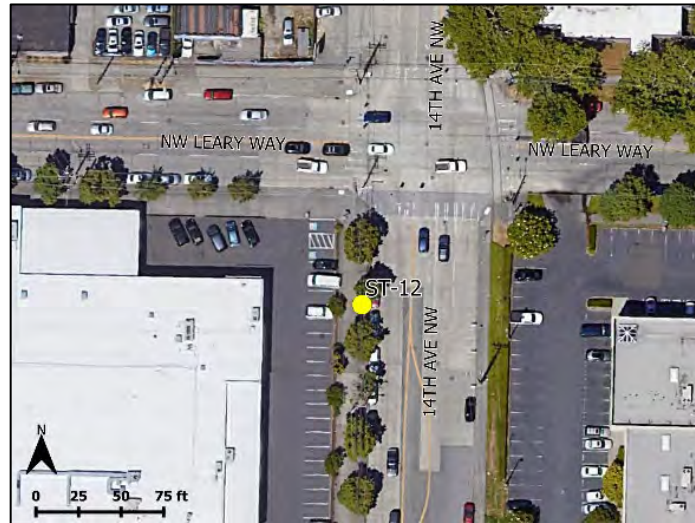
Measurement Data

Measurement Information	Morning Measurement	Afternoon Measurement
Date	8/28/2019	8/27/2019
Start Time	7:41 a.m.	4:46 p.m.
End Time	8:11 a.m.	5:16 p.m.
L _{eq} sound level	65.5 A-weighted decibels	64.5 A-weighted decibels
Day-night average sound level	63.0 A-weighted decibels	63.0 A-weighted decibels

Weather

Measurement	8/28/2019	8/27/2019
Temperature	78 degrees Fahrenheit	68 degrees Fahrenheit
Pressure	29.6 inches	29.6 inches
Wind Speed	10 miles per hour	1 mile per hour
Wind Direction	North	Southeast

Plan View (ST-12)



Looking North (ST-12)



Looking South (ST-12)



Looking East (ST-12)



Looking West (ST-12)



Monitoring Location

Monitoring No.	ST-13
Address	923 Northwest 54th Street
Area	Ballard
Parcel	276830-0695

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	72542
Microphone	ACO Pacific 7052E	68284
Preamplifier	Svantek SV18	72239
Calibrator	Larson Davis CAL200	16827

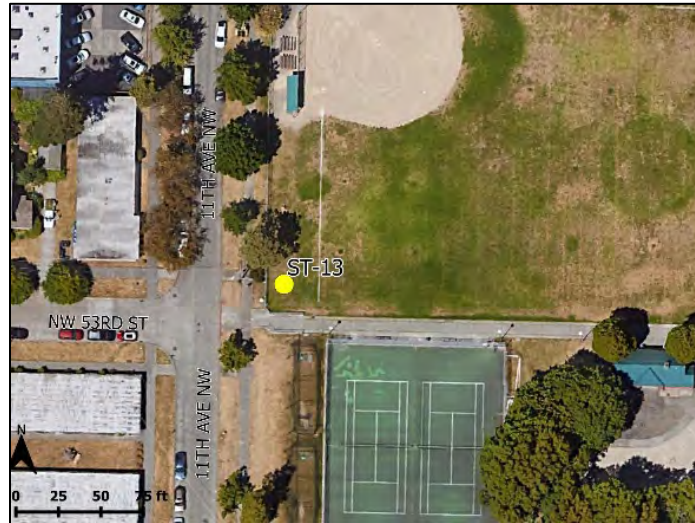
Measurement Data

Measurement Information	Morning Measurement	Afternoon Measurement
Date	8/26/2019	8/27/2019
Start Time	8:10 a.m.	3:38 p.m.
End Time	8:40 a.m.	4:08 p.m.
L _{eq} sound level	55.1 A-weighted decibels	56.1 A-weighted decibels
Day-night average sound level	53.6 A-weighted decibels	53.6 A-weighted decibels

Weather

Measurement	8/23/2019	8/22/2019
Temperature	57 degrees Fahrenheit	78.1 degrees Fahrenheit
Pressure	30.3 inches	30.4 inches
Wind Speed	3 miles per hour	11 mile per hour
Wind Direction	Northwest	North

Plan View (ST-13)



Looking North (ST-13)



Looking South (ST-13)



Looking East (ST-13)



Looking West (ST-13)



Monitoring Location

Monitoring No.	ST-14
Address	1415 Northwest 58th Street
Area	Ballard
Parcel	276790-0390

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	51818
Microphone	ACO Pacific 7052E	62522
Preamplifier	Svantek SV18	49561
Calibrator	Larson Davis CAL200	9512

Measurement Data

Measurement Information	Morning Measurement	Afternoon Measurement
Date	8/28/2019	8/28/2019
Start Time	8:30 a.m.	4:22 p.m.
End Time	9:00 a.m.	4:52 p.m.
L _{eq} sound level	56.9 A-weighted decibels	58.8 A-weighted decibels
Day-night average sound level	56.0 A-weighted decibels	56.0 A-weighted decibels

Weather

Measurement	8/28/2019	8/28/2019
Temperature	71 degrees Fahrenheit	85 degrees Fahrenheit
Pressure	29.5 inches	29.5 inches
Wind Speed	5 miles per hour	9 mile per hour
Wind Direction	North	North

Plan View (ST-14)



Looking North (ST-14)



Looking South (ST-14)



Looking East (ST-14)



Looking West (ST-14)



N.3A.2 Long-Term Noise Measurements

Monitoring Location

Monitoring No.	M-1
Address	4023 Southwest Edmunds Street
Area	West Seattle
Parcel	757920-0491

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Bruel and Kjaer 2250	3006756
Microphone	Bruel and Kjaer 4189	2550228
Preamplifier	Bruel and Kjaer ZC-0032	24600
Calibrator	Bruel and Kjaer 4231	2545696

Measurement Data

Start Date	10/22/2019
End Date	10/25/2019
Start Time	9:00 a.m.
End Time	9:00 a.m.
Peak Hour L_{eq} sound level	62 A-weighted decibels
Day-night average sound level	62 A-weighted decibels

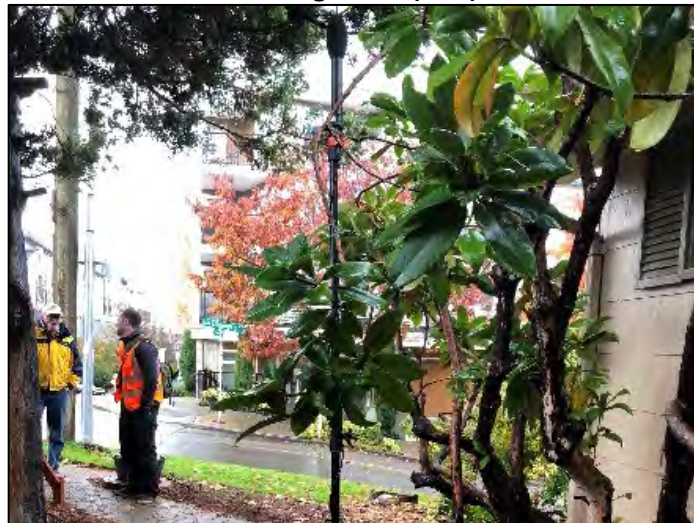
Weather

Measurement	10/22/2019	10/23/2019	10/24/2019	10/25/2019
Temperature	53 degrees Fahrenheit	48 degrees Fahrenheit	50 degrees Fahrenheit	51 degrees Fahrenheit
Pressure	30.3 inches	30.5 inches	30.4 inches	30.2 inches
Wind Speed	0 miles per hour	0 miles per hour	0 miles per hour	1 miles per hour
Wind Direction	West northwest	West southwest	West southwest	Southwest

Plan View (M-1)



Looking North (M-1)



Looking South (M-1)



Looking East (M-1)



Monitoring Location

Monitoring No.	M-4
Address	4700 38th Avenue Southwest
Area	West Seattle
Parcel	612660-0005

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek SV307	78633
Microphone	Svantek ST30	82565
Preamplifier	N/A	N/A
Calibrator	Larson Davis CAL200	16826

Measurement Data

Start Date	12/6/2019
End Date	12/10/2019
Start Time	11:00 a.m.
End Time	1:00 p.m.
Peak Hour L_{eq} sound level	69 A-weighted decibels
Day-night average sound level	68 A-weighted decibels

Weather

Measurement	12/7/2019	12/8/2019	12/9/2019
Temperature	55 degrees Fahrenheit	47 degrees Fahrenheit	45 degrees Fahrenheit
Pressure	29.9 inches	30.3 inches	30.2 inches
Wind Speed	1 mile per hour	1 mile per hour	2 miles per hour
Wind Direction	Northwest	Northeast	South

Plan View (M-4)



Looking North (M-4)



Looking South (M-4)



Looking East (M-4)



Looking West (M-4)



Monitoring Location

Monitoring No.	M-5
Address	4450 38th Avenue Southwest
Area	West Seattle
Parcel	095200-4935

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek SV307	78654
Microphone	Svantek ST30	82345
Preamplifier	N/A	N/A
Calibrator	Larson Davis CAL200	16826

Measurement Data

Start Date	2/11/2020
End Date	2/14/2020
Start Time	3:00 p.m.
End Time	9:00 a.m.
Peak Hour L_{eq} sound level	66 A-weighted decibels
Day-night average sound level	68 A-weighted decibels

Weather

Measurement	2/11/2020	2/12/2020	2/13/2020	2/14/2020
Temperature	41 degrees Fahrenheit	45 degrees Fahrenheit	42 degrees Fahrenheit	44 degrees Fahrenheit
Pressure	30.5 inches	30.4 inches	30.2 inches	30.2 inches
Wind Speed	1 mile per hour	0 miles per hour	3 miles per hour	4 mile per hour
Wind Direction	South	Southeast	South	Southwest

Plan View (M-5)



Looking North (M-5)



Looking South (M-5)



Looking East (M-5)



Looking West (M-5)



Monitoring Location

Monitoring No.	M-9
Address	3256 Southwest Avalon Way #401
Area	West Seattle
Parcel	032100-0000

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek SV307	78633
Microphone	Svantek ST30	82565
Preamplifier	N/A	N/A
Calibrator	Larson Davis CAL200	16826

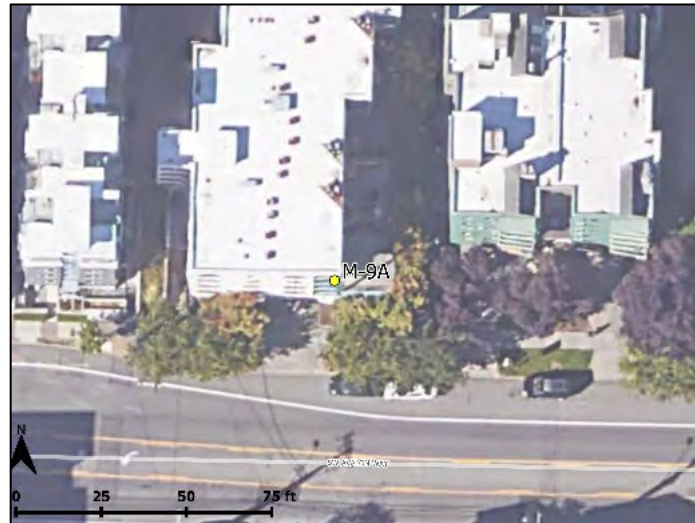
Measurement Data

Start Date	1/6/2020
End Date	1/10/2020
Start Time	2:00 p.m.
End Time	2:00 p.m.
Peak Hour L_{eq} sound level	67 A-weighted decibels
Day-night average sound level	68 A-weighted decibels

Weather

Measurement	1/7/2020	1/8/2020	1/9/2020	1/10/2020
Temperature	50 degrees Fahrenheit	40 degrees Fahrenheit	35 degrees Fahrenheit	40 degrees Fahrenheit
Pressure	29.8 inches	30.0 inches	30.1 inches	30.0 inches
Wind Speed	7 miles per hour	3 miles per hour	0 miles per hour	4 miles per hour
Wind Direction	Southwest	Southwest	Southeast	South

Plan View (M-9)



Looking South (M-9)



Looking East (M-9)



Looking West (M-9)



Monitoring Location

Monitoring No.	M-10
Address	4147 Fauntleroy Way Southwest
Area	West Seattle
Parcel	929730-1525

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek SV307	78633
Microphone	Svantek ST30	82565
Preamplifier	N/A	N/A
Calibrator	Larson Davis CAL200	16826

Measurement Data

Start Date	2/14/2020
End Date	2/20/2020
Start Time	9:00 a.m.
End Time	3:00 p.m.
Peak Hour L_{eq} sound level	70 A-weighted decibels
Day-night average sound level	73 A-weighted decibels

Weather

Measurement	2/17/2020	2/18/2020	2/19/2020
Temperature	44 degrees Fahrenheit	38 degrees Fahrenheit	30 degrees Fahrenheit
Pressure	30.3 inches	30.4 inches	30.5 inches
Wind Speed	4 miles per hour	3 miles per hour	1 mile per hour
Wind Direction	Southwest	North	Northwest

Plan View (M-10)



Looking North (M-10)



Looking East (M-10)



Looking West (M-10)



Monitoring Location

Monitoring No.	M-11
Address	3225 Southwest Genesee Street
Area	West Seattle
Parcel	929730-1780

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	51818
Microphone	Aco Pacific 7052E	62522
Preamplifier	Svantek SV18	49561
Calibrator	Larson Davis CAL200	9512

Measurement Data

Start Date	11/12/2019
End Date	11/14/2019
Start Time	12:00 p.m.
End Time	1:00 p.m.
Peak Hour L_{eq} sound level	56 A-weighted decibels
Day-night average sound level	59 A-weighted decibels

Weather

Measurement	11/12/2019	11/13/2019	11/14/2019
Temperature	50 degrees Fahrenheit	50 degrees Fahrenheit	48 degrees Fahrenheit
Pressure	30.1 inches	30.1 inches	30.0 inches
Wind Speed	0 miles per hour	0 miles per hour	2 miles per hour
Wind Direction	Northwest	Northwest	Southwest

Plan View (M-11)



Looking North (M-11)



Looking South (M-11)



Looking East (M-11)



Looking West (M-11)



Monitoring Location

Monitoring No.	M-12
Address	4143 32nd Avenue Southwest
Area	West Seattle
Parcel	929730-1220

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	72542
Microphone	Aco Pacific 7052E	68284
Preamplifier	Svantek SV18	72239
Calibrator	Larson Davis CAL200	16827

Measurement Data

Start Date	2/11/2020
End Date	2/14/2020
Start Time	2:00 p.m.
End Time	9:00 a.m.
Peak Hour L_{eq} sound level	53 A-weighted decibels
Day-night average sound level	56 A-weighted decibels

Weather

Measurement	2/11/2020	2/12/2020	2/13/2020	2/14/2020
Temperature	41 degrees Fahrenheit	45 degrees Fahrenheit	42 degrees Fahrenheit	44 degrees Fahrenheit
Pressure	30.5 inches	30.4 inches	30.2 inches	30.2 inches
Wind Speed	1 mile per hour	0 miles per hour	3 miles per hour	4 miles per hour
Wind Direction	South	Southeast	South	Southwest

Plan View (M-12)



Looking North (M-12)



Looking South (M-12)



Looking East (M-12)



Looking West (M-12)



Monitoring Location

Monitoring No.	M-13
Address	2848 Southwest Genesee Street
Area	West Seattle
Parcel	935800-2353

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	51818
Microphone	Aco Pacific 7052E	62522
Preamplifier	Svantek SV18	49561
Calibrator	Larson Davis CAL200	9512

Measurement Data

Start Date	10/22/2019
End Date	10/25/2019
Start Time	11:00 a.m.
End Time	9:00 a.m.
Peak Hour L_{eq} sound level	60 A-weighted decibels
Day-night average sound level	60 A-weighted decibels

Weather

Measurement	10/22/2019	10/23/2019	10/24/2019	10/25/2019
Temperature	55 degrees Fahrenheit	47 degrees Fahrenheit	50 degrees Fahrenheit	51 degrees Fahrenheit
Pressure	30.3 inches	30.5 inches	30.4 inches	30.7 inches
Wind Speed	2 miles per hour	2 miles per hour	0 miles per hour	3 miles per hour
Wind Direction	South	Northwest	East northeast	South southwest

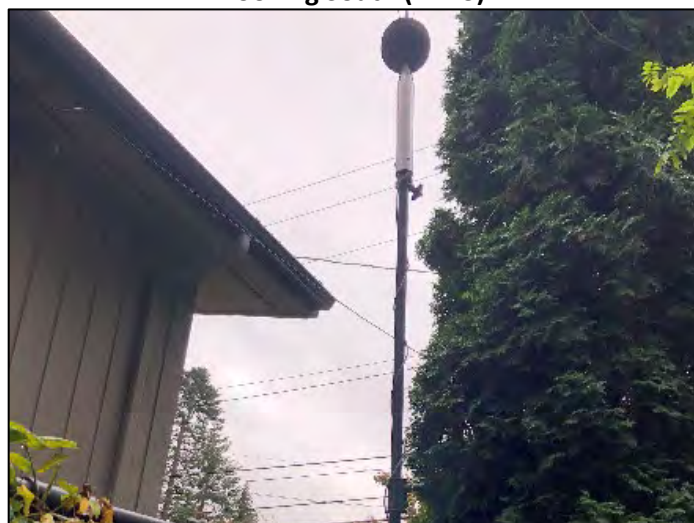
Plan View (M-13)



Looking North (M-13)



Looking South (M-13)



Looking East (M-13)



Monitoring Location

Monitoring No.	M-15
Address	4421 26th Avenue Southwest
Area	West Seattle
Parcel	177260-0710

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 307	78647
Microphone	Svantek ST30	79071
Preamplifier	N/A	N/A
Calibrator	Larson Davis CAL200	16827

Measurement Data

Start Date	12/6/2019
End Date	12/10/2019
Start Time	10:00 a.m.
End Time	1:00 p.m.
Peak Hour L_{eq} sound level	51 A-weighted decibels
Day-night average sound level	53 A-weighted decibels

Weather

Measurement	12/7/2019	12/8/2019	12/9/2019
Temperature	55 degrees Fahrenheit	47 degrees Fahrenheit	45 degrees Fahrenheit
Pressure	29.9 inches	30.3 inches	30.2 inches
Wind Speed	0 miles per hour	1 mile per hour	2 miles per hour
Wind Direction	Northwest	Northeast	South

Plan View (M-15)



Looking North (M-15)



Looking South (M-15)



Looking East (M-15)



Looking West (M-15)



Monitoring Location

Monitoring No.	M-16
Address	4106 26th Avenue Southwest
Area	West Seattle
Parcel	789160-0017

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 307	78633
Microphone	Svantek ST30	82565
Preamplifier	N/A	N/A
Calibrator	Larson Davis CAL200	16827

Measurement Data

Start Date	1/16/2020
End Date	1/22/2020
Start Time	9:00 a.m.
End Time	10:00 a.m.
Peak Hour L_{eq} sound level	52 A-weighted decibels
Day-night average sound level	54 A-weighted decibels

Weather

Measurement	1/17/2020	1/20/2020	1/21/2020	1/22/2020
Temperature	39 degrees Fahrenheit	38 degrees Fahrenheit	46 degrees Fahrenheit	45 degrees Fahrenheit
Pressure	29.7 inches	30.0 inches	29.7 inches	30.0 inches
Wind Speed	3 miles per hour	1 mile per hour	5 miles per hour	5 miles per hour
Wind Direction	Southwest	Southwest	Southwest	South

Plan View (M-16)



Looking North (M-16)



Looking South (M-16)



Looking East (M-16)



Looking West (M-16)



Monitoring Location

Monitoring No.	M-17
Address	4143 23rd Avenue Southwest
Area	West Seattle
Parcel	789210-0020

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	72542
Microphone	Aco Pacific 7052E	68284
Preamplifier	Svantek SV18	72239
Calibrator	Larson Davis CAL200	16827

Measurement Data

Start Date	11/12/2019
End Date	11/14/2019
Start Time	11:00 a.m.
End Time	1:00 p.m.
Peak Hour L_{eq} sound level	59 A-weighted decibels
Day-night average sound level	62 A-weighted decibels

Weather

Measurement	11/12/2019	11/13/2019	11/14/2019
Temperature	50 degrees Fahrenheit	50 degrees Fahrenheit	48 degrees Fahrenheit
Pressure	30.1 inches	30.1 inches	30.0 inches
Wind Speed	0 miles per hour	0 miles per hour	2 miles per hour
Wind Direction	Northwest	Northwest	Southwest

Plan View (M-17)



Looking North (M-17)



Looking South (M-17)



Looking East (M-17)



Looking West (M-17)



Monitoring Location

Monitoring No.	M-20
Address	3709 20th Avenue Southwest
Area	West Seattle
Parcel	934990-0080

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 307	78661
Microphone	Svantek ST 30	82349
Preamplifier	N/A	N/A
Calibrator	Larson Davis CAL200	16827

Measurement Data

Start Date	1/16/2020
End Date	1/22/2020
Start Time	10:00 a.m.
End Time	11:00 a.m.
Peak Hour L_{eq} sound level	72 A-weighted decibels
Day-night average sound level	75 A-weighted decibels

Weather

Measurement	1/16/2020	1/17/2020	1/20/2020	1/21/2020
Temperature	39 degrees Fahrenheit	38 degrees Fahrenheit	46 degrees Fahrenheit	45 degrees Fahrenheit
Pressure	29.7 inches	30.0 inches	29.7 inches	30.0 inches
Wind Speed	3 miles per hour	1 mile per hour	5 miles per hour	5 miles per hour
Wind Direction	Southwest	Southwest	Southwest	South

Plan View (M-20)



Looking South (M-20)



Looking East (M-20)



Looking West (M-20)



Monitoring Location

Monitoring No.	M-21
Address	3712 19th Avenue Southwest
Area	West Seattle
Parcel	934990-0225

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	72542
Microphone	Aco Pacific 7052E	68284
Preamplifier	Svantek SV18	72239
Calibrator	Larson Davis CAL200	16827

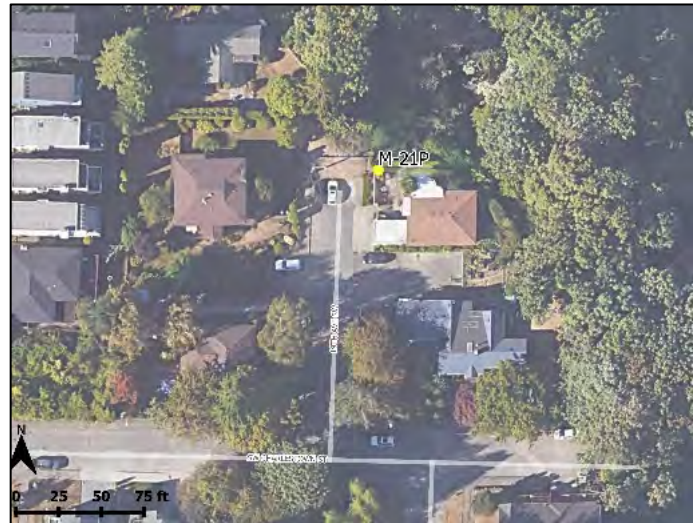
Measurement Data

Start Date	10/22/2019
End Date	10/25/2019
Start Time	10:00 a.m.
End Time	9:00 a.m.
Peak Hour L_{eq} sound level	72 A-weighted decibels
Day-night average sound level	75 A-weighted decibels

Weather

Measurement	10/22/2019	10/23/2019	10/24/2019	10/25/2019
Temperature	55 degrees Fahrenheit	47 degrees Fahrenheit	50 degrees Fahrenheit	51 degrees Fahrenheit
Pressure	30.3 inches	30.5 inches	30.4 inches	30.7 inches
Wind Speed	2 miles per hour	2 miles per hour	0 miles per hour	3 miles per hour
Wind Direction	South	Northwest	East northeast	South southwest

Plan View (M-21)



Looking North (M-21)



Looking South (M-21)



Looking East (M-21)



Looking West (M-21)



Monitoring Location

Monitoring No.	M-22
Address	3823 17th Avenue Southwest
Area	West Seattle
Parcel	754730-0940

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 958	59108
Microphone	Svantek Mk255	12529
Preamplifier	Svantek SV12L	57961
Calibrator	Larson Davis CAL200	9512

Measurement Data

Start Date	11/7/2019
End Date	11/14/2019
Start Time	12:00 p.m.
End Time	1:00 p.m.
Peak Hour L_{eq} sound level	67 A-weighted decibels
Day-night average sound level	69 A-weighted decibels

Weather

Measurement	11/7/2019	11/8/2019	11/11/2019	11/12/2019	11/13/2019
Temperature	45 degrees Fahrenheit	48 degrees Fahrenheit	50 degrees Fahrenheit	50 degrees Fahrenheit	48 degrees Fahrenheit
Pressure	30.2 inches	30.1 inches	30.1 inches	30.1 inches	30.0 inches
Wind Speed	1 mile per hour	3 miles per hour	0 miles per hour	0 miles per hour	2 miles per hour
Wind Direction	Northeast	South	Northwest	Northwest	Southwest

Plan View (M-22)



Looking North (M-22)



Looking East (M-22)



Looking West (M-22)



Monitoring Location

Monitoring No.	M-26
Address	1606 12th Avenue West
Area	Ballard
Parcel	770510-0165

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 958	59108
Microphone	Svantek Mk255	12529
Preamplifier	Svantek SV12L	57961
Calibrator	Larson Davis CAL200	16827

Measurement Data

Start Date	11/1/2019
End Date	11/6/2019
Start Time	11:00 a.m.
End Time	9:00 a.m.
Peak Hour L_{eq} sound level	59 A-weighted decibels
Day-night average sound level	63 A-weighted decibels

Weather

Measurement	11/1/2019	11/4/2019	11/5/2019	11/6/2019
Temperature	46 degrees Fahrenheit	49 degrees Fahrenheit	46 degrees Fahrenheit	47 degrees Fahrenheit
Pressure	30.2 inches	30.0 inches	29.9 inches	30.0 inches
Wind Speed	1 mile per hour	1 mile per hour	1 mile per hour	2 miles per hour
Wind Direction	North	North	North northeast	North northeast

Plan View (M-26)



Looking North (M-26)



Looking South (M-26)



Looking East (M-26)



Looking West (M-26)



Monitoring Location

Monitoring No.	M-29
Address	2557 14th Avenue West
Area	Ballard
Parcel	277110-6055

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	72542
Microphone	Aco Pacific 7052E	68284
Preamplifier	Svantek SV18	72239
Calibrator	Larson Davis CAL200	16827

Measurement Data

Start Date	11/19/2019
End Date	11/21/2019
Start Time	4:00 p.m.
End Time	4:00 p.m.
Peak Hour L_{eq} sound level	70 A-weighted decibels
Day-night average sound level	73 A-weighted decibels

Weather

Measurement	11/19/2019	11/20/2019	11/21/2019
Temperature	47 degrees Fahrenheit	42 degrees Fahrenheit	39 degrees Fahrenheit
Pressure	30.0 inches	30.1 inches	30.0 inches
Wind Speed	13 miles per hour	3 miles per hour	1 mile per hour
Wind Direction	North	North	Southwest

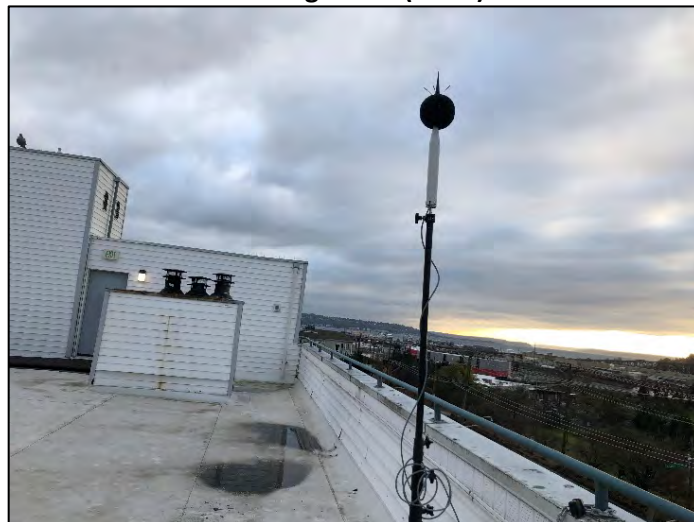
Plan View (M-29)



Looking North (M-29)



Looking South (M-29)



Looking East (M-29)



Monitoring Location

Monitoring No.	M-33
Address	3457 14th Avenue West
Area	Ballard
Parcel	277060-3545

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	51818
Microphone	Aco Pacific 7052E	62522
Preamplifier	Svantek SV18	49561
Calibrator	Larson Davis CAL200	9512

Measurement Data

Start Date	11/4/2019
End Date	11/6/2019
Start Time	11:00 a.m.
End Time	11:00 a.m.
Peak Hour L_{eq} sound level	66 A-weighted decibels
Day-night average sound level	67 A-weighted decibels

Weather

Measurement	11/4/2019	11/5/2019	11/6/2019
Temperature	48 degrees Fahrenheit	46 degrees Fahrenheit	47 degrees Fahrenheit
Pressure	30.3 inches	30.3 inches	30.3 inches
Wind Speed	0 miles per hour	1 mile per hour	1 mile per hour
Wind Direction	North	North	North

Plan View (M-33)



Looking North (M-33)



Looking South (M-33)



Looking East (M-33)



Looking West (M-33)



Monitoring Location

Monitoring No.	M-37
Address	1408 Northeast 50th Street
Area	Ballard
Parcel	276830-1820

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	72542
Microphone	Aco Pacific 7052E	68284
Preamplifier	Svantek SV18	72239
Calibrator	Larson Davis CAL200	16827

Measurement Data

Start Date	2/14/2020
End Date	2/20/2020
Start Time	6:00 p.m.
End Time	4:00 p.m.
Peak Hour L_{eq} sound level	70 A-weighted decibels
Day-night average sound level	74 A-weighted decibels

Weather

Measurement	2/17/2020	2/18/2020	2/19/2020
Temperature	44 degrees Fahrenheit	38 degrees Fahrenheit	40 degrees Fahrenheit
Pressure	30.3 inches	30.4 inches	30.5 inches
Wind Speed	4 miles per hour	3 miles per hour	1 mile per hour
Wind Direction	Southwest	North	Northwest

Plan View (M-37)



Looking North (M-37)



Looking South (M-37)



Looking East (M-37)



Looking West (M-37)



Monitoring Location

Monitoring No.	M-38
Address	1139 Northwest Market Street
Area	Ballard
Parcel	276830-0135

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 307	78647
Microphone	Svantek ST30	79071
Preamplifier	N/A	N/A
Calibrator	Larson Davis CAL200	16827

Measurement Data

Start Date	1/16/2020
End Date	1/22/2020
Start Time	11:00 a.m.
End Time	11:00 a.m.
Peak Hour L_{eq} sound level	52 A-weighted decibels
Day-night average sound level	56 A-weighted decibels

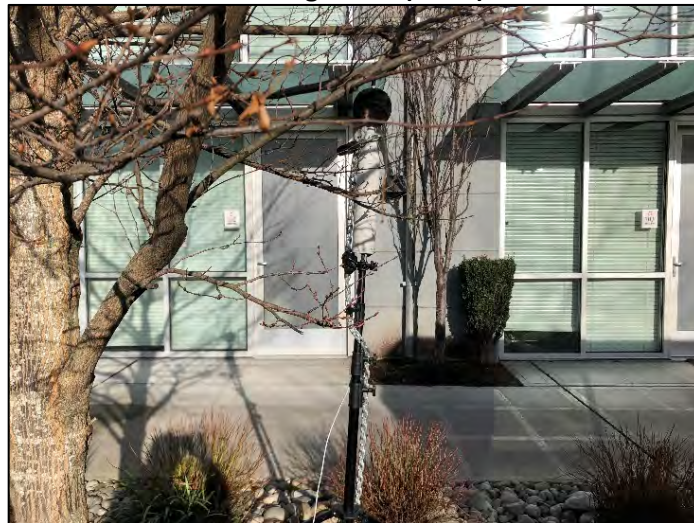
Weather

Measurement	1/17/2020	1/20/2020	1/21/2020	1/22/2020
Temperature	39 degrees Fahrenheit	38 degrees Fahrenheit	46 degrees Fahrenheit	45 degrees Fahrenheit
Pressure	29.7 inches	30.0 inches	29.7 inches	30.0 inches
Wind Speed	3 miles per hour	1 mile per hour	5 miles per hour	5 miles per hour
Wind Direction	Southwest	Southwest	Southwest	South

Plan View (M-38)



Looking North (M-38)



Looking South (M-38)



Looking East (M-38)



Looking West (M-38)



Monitoring Location

Monitoring No.	M-39
Address	5606 14th Avenue Northwest
Area	Ballard
Parcel	276810-0230

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	51818
Microphone	Aco Pacific 7052E	62522
Preamplifier	Svantek SV18	49561
Calibrator	Larson Davis CAL200	9512

Measurement Data

Start Date	10/29/2019
End Date	10/31/2019
Start Time	10:00 a.m.
End Time	1:00 p.m.
Peak Hour L_{eq} sound level	58 A-weighted decibels
Day-night average sound level	60 A-weighted decibels

Weather

Measurement	10/29/2019	10/30/2019	10/31/2019
Temperature	42 degrees Fahrenheit	42 degrees Fahrenheit	41 degrees Fahrenheit
Pressure	30.1 inches	30.1 inches	30.3 inches
Wind Speed	0 miles per hour	1 mile per hour	0 miles per hour
Wind Direction	East	North	East southeast

Plan View (M-39)



Looking North (M-39)



Looking South (M-39)



Looking East (M-39)



Looking West (M-39)



Monitoring Location

Monitoring No.	M-40
Address	5712 14th Avenue Northwest
Area	Ballard
Parcel	276790-0630

Equipment

Equipment Type	Model Number	Serial Number
Level Analyzer	Svantek 971	72542
Microphone	Aco Pacific 7052E	68284
Preamplifier	Svantek SV18	72239
Calibrator	Larson Davis CAL200	16827

Measurement Data

Start Date	12/6/2019
End Date	12/10/2019
Start Time	12:00 p.m.
End Time	1:00 p.m.
Peak Hour L_{eq} sound level	56 A-weighted decibels
Day-night average sound level	57 A-weighted decibels

Weather

Measurement	12/7/2019	12/8/2019	12/9/2019
Temperature	48 degrees Fahrenheit	42 degrees Fahrenheit	41 degrees Fahrenheit
Pressure	29.8 inches	30.1 inches	30.0 inches
Wind Speed	1 mile per hour	1 mile per hour	3 miles per hour
Wind Direction	Northeast	Northeast	Southeast

Plan View (M-40)



Looking North (M-40)



Looking South (M-40)



Looking East (M-40)



Looking West (M-40)



Attachment N.3B
Vibration Measurement Site Photographs

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Attachment N.3B

Vibration Measurement Site Photographs

Figure N.3B-1. Photograph of Vibration Propagation Measurement Site V-A – Alley off of 41st Avenue at Alaska Way



Figure N.3B-2. Aerial View of Vibration Propagation Measurement Site V-A – Alley off of 41st Avenue at Alaska Way



Figure N.3B-3. Photograph of Borehole Vibration Propagation Measurement Site V-2 – 39th Avenue Southwest at Southwest Genesee Street



Figure N.3B-4. Aerial View of Borehole Vibration Propagation Measurement Site V-2 – 39th Avenue Southwest at Southwest Genesee Street



Figure N.3B-5. Photograph of Borehole Vibration Propagation Measurement Site V-3 – 32nd Avenue Southwest at Southwest Genesee Street



Figure N.3B-6. Aerial View of Borehole Vibration Propagation Measurement Site V-3 – 32nd Avenue Southwest at Southwest Genesee Street



Figure N.3B-7. Photograph of Vibration Propagation Measurement Site V-B – Southwest Genesee Street at 32nd Avenue Southwest



Figure N.3B-8. Aerial View of Vibration Propagation Measurement Site V-B – Southwest Genesee Street at 32nd Avenue Southwest



**Figure N.3B-9. Photograph of Vibration Propagation Measurement Site V-C –
Dakota Street at 25th Avenue Southwest**



**Figure N.3B-10. Aerial View of Vibration Propagation Measurement Site V-C –
Dakota Street at 25th Avenue Southwest**



Figure N.3B-11. Photograph of Vibration Propagation Measurement Site V-D – Bike Path at 22nd Avenue Southwest near West Seattle Bridge

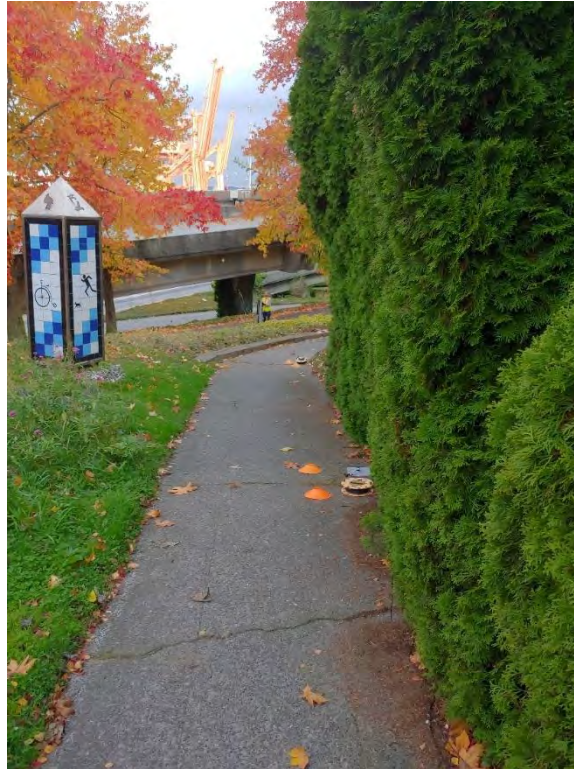


Figure N.3B-12. Aerial View of Vibration Propagation Measurement Site V-D – Bike Path at 22nd Avenue Southwest near West Seattle Bridge



Figure N.3B-13. Photograph of Vibration Propagation Measurement Site V-E – Harbor Island Machine Works, 3431 11th Avenue Southwest

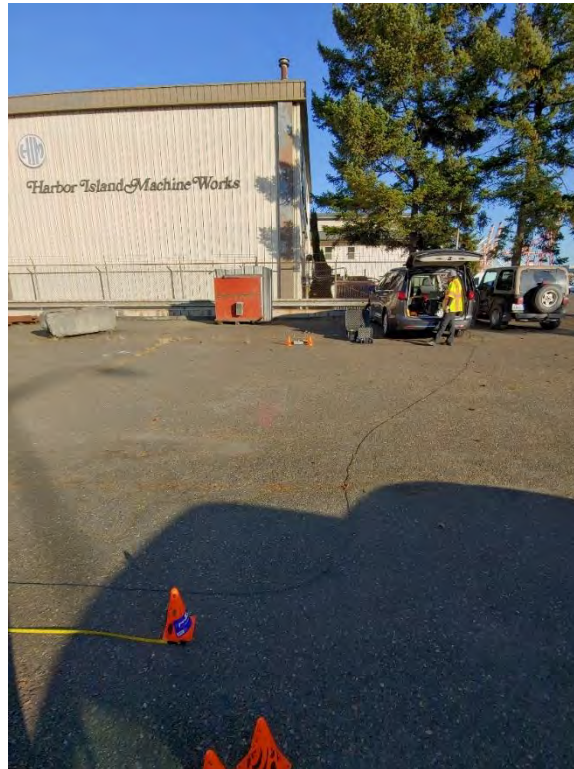


Figure N.3B-14. Aerial View of Vibration Propagation Measurement Site V-E – Harbor Island Machine Works, 3431 11th Avenue Southwest



Figure N.3B-15. Photograph of Borehole Vibration Propagation Measurement Site V-6 – 5th Avenue and Marion Street, Downtown Seattle

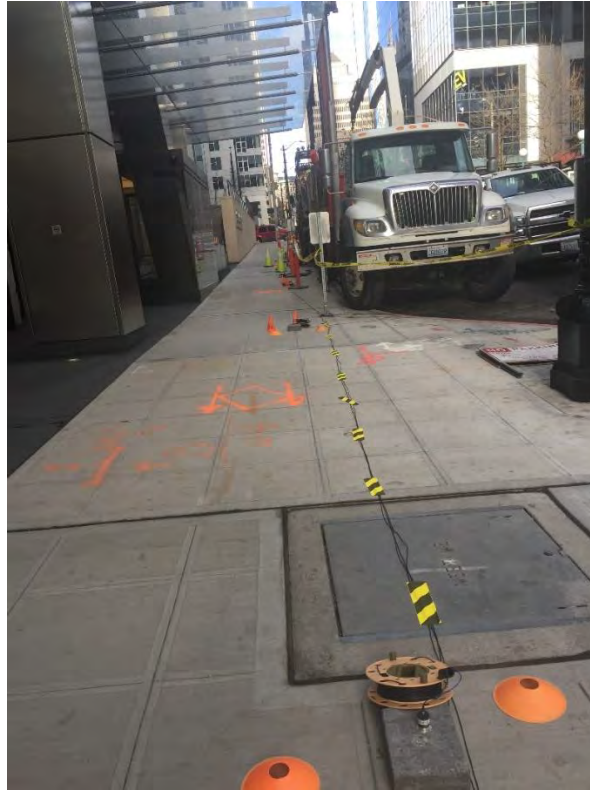


Figure N.3B-16. Aerial View of Borehole Vibration Propagation Measurement Site V-6 – 5th Avenue and Marion Street, Downtown Seattle



Figure N.3B-17. Photograph of Borehole Vibration Propagation Measurement Site V-8 – 7th Avenue and Westlake Avenue, Downtown Seattle

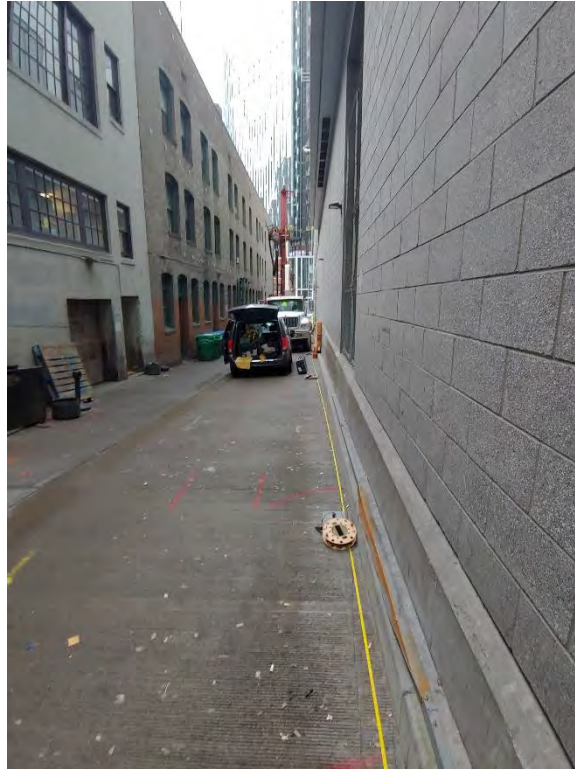


Figure N.3B-18. Aerial View of Borehole Vibration Propagation Measurement Site V-8 – 7th Avenue and Westlake Avenue, Downtown Seattle

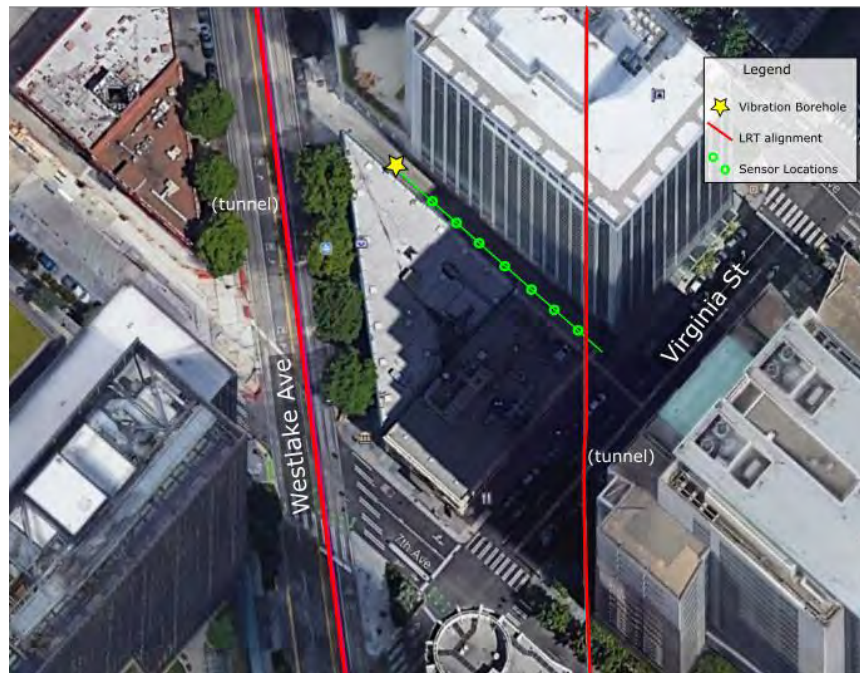


Figure N.3B-19. Photograph of Borehole Vibration Propagation Measurement Site V-9 – Thomas Street between Westlake Avenue and 9th Avenue



Figure N.3B-20. Aerial View of Borehole Vibration Propagation Measurement Site V-9 – Thomas Street between Westlake Avenue and 9th Avenue



Figure N.3B-21. Photograph of Vibration Propagation Measurement Site V-11 – Accelerometer in Allen Institute EM Suite

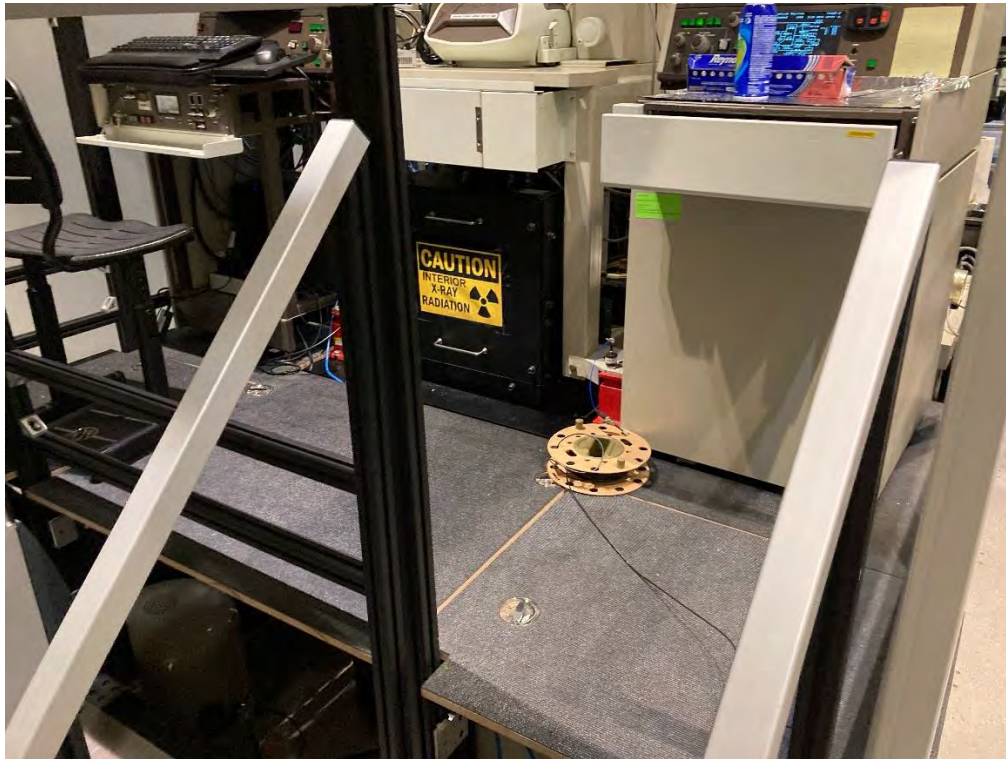


Figure N.3B-22. Aerial View of Borehole Vibration Propagation Measurement Site V-11 – Mercer Street and 9th Avenue North at the Allen Institute



Figure N.3B-23. Photograph of Vibration Propagation Measurement Site V-12 – Accelerometer in Cascade Public Media (KCTS 9 Television) Main Studio

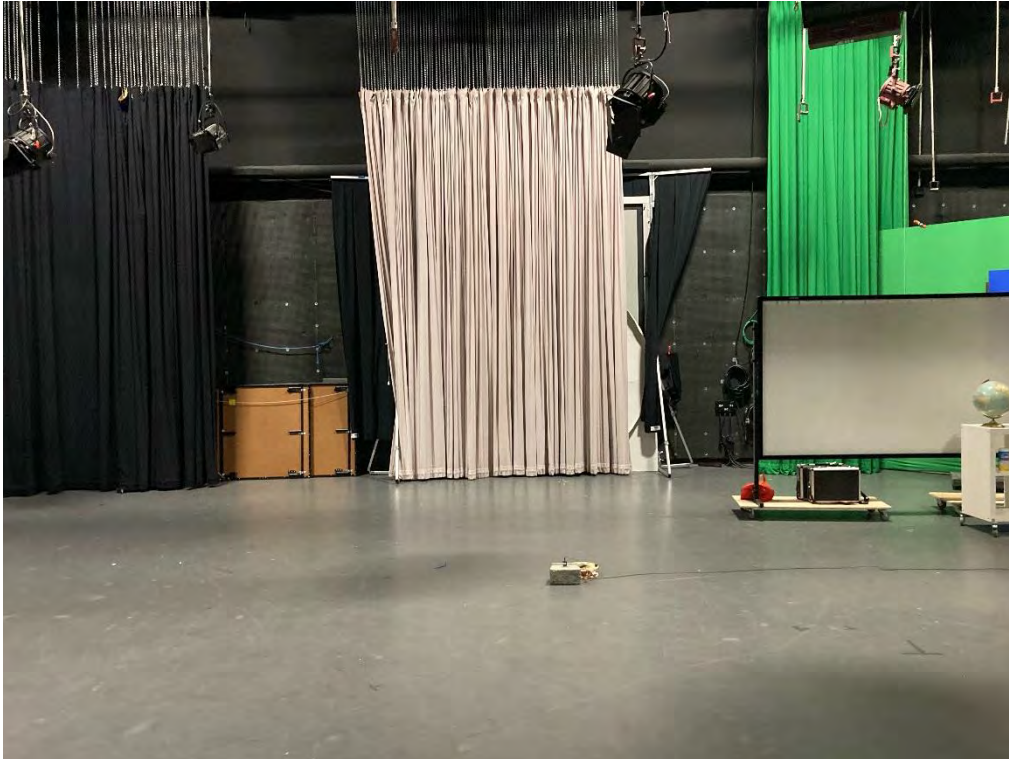


Figure N.3B-24. Aerial View of Borehole Vibration Propagation Measurement Site V-12 – 4th Avenue at Cascade Public Media (KCTS 9 Television)

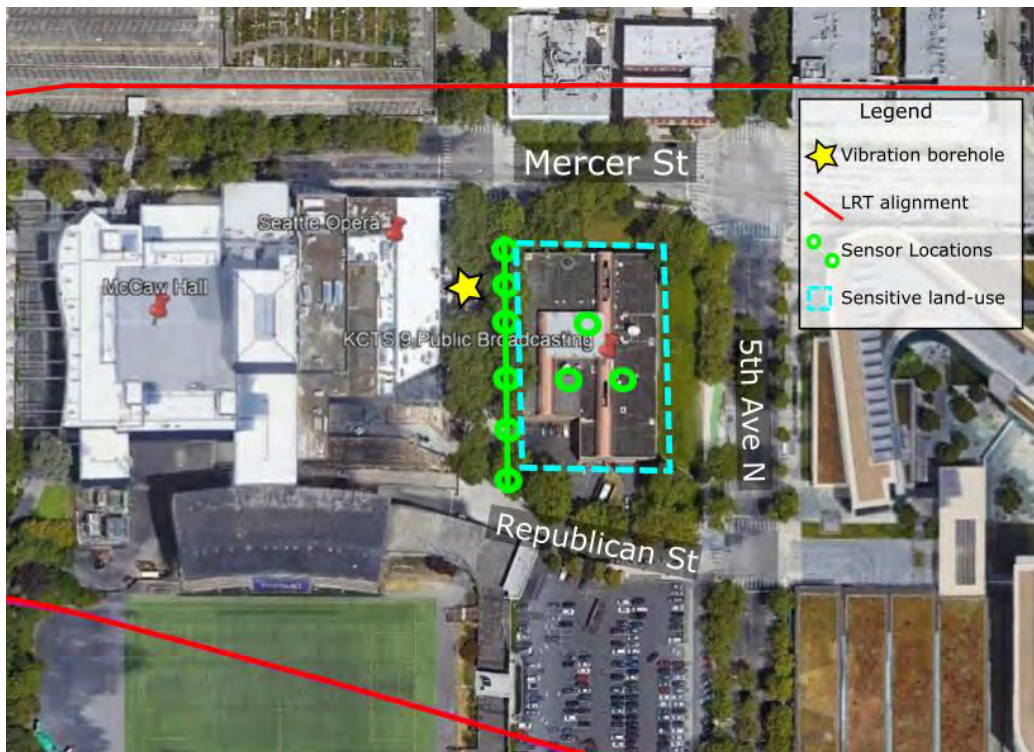


Figure N.3B-25. Photograph of Vibration Propagation Measurement Site V-13 – Accelerometer in McCaw Hall

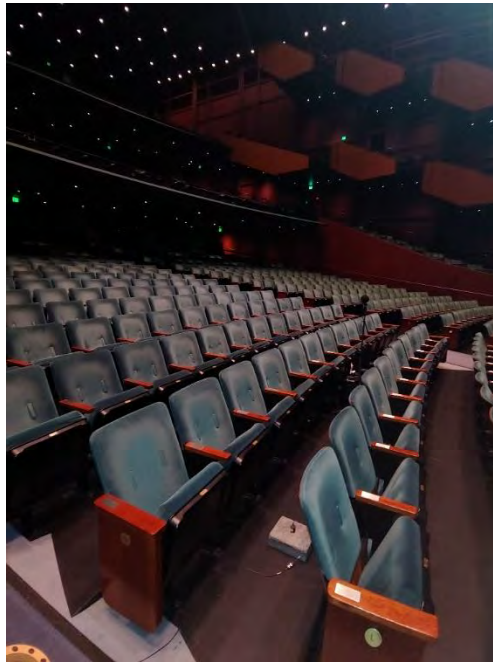


Figure N.3B-26. Aerial View of Borehole Vibration Propagation Measurement Site V-13 – Republican Street at 3rd Avenue in the Seattle Center

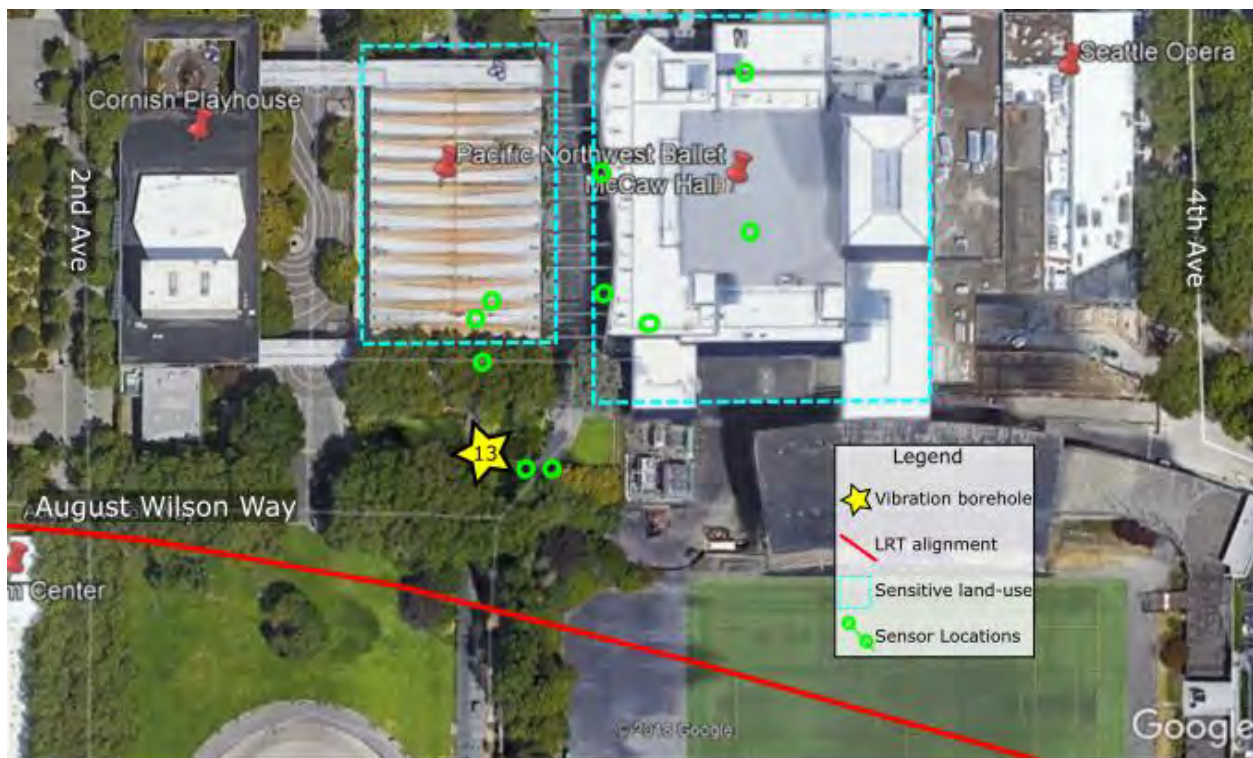


Figure N.3B-27. Photograph of Vibration Propagation Measurement Site V-13b – Seattle Opera Building

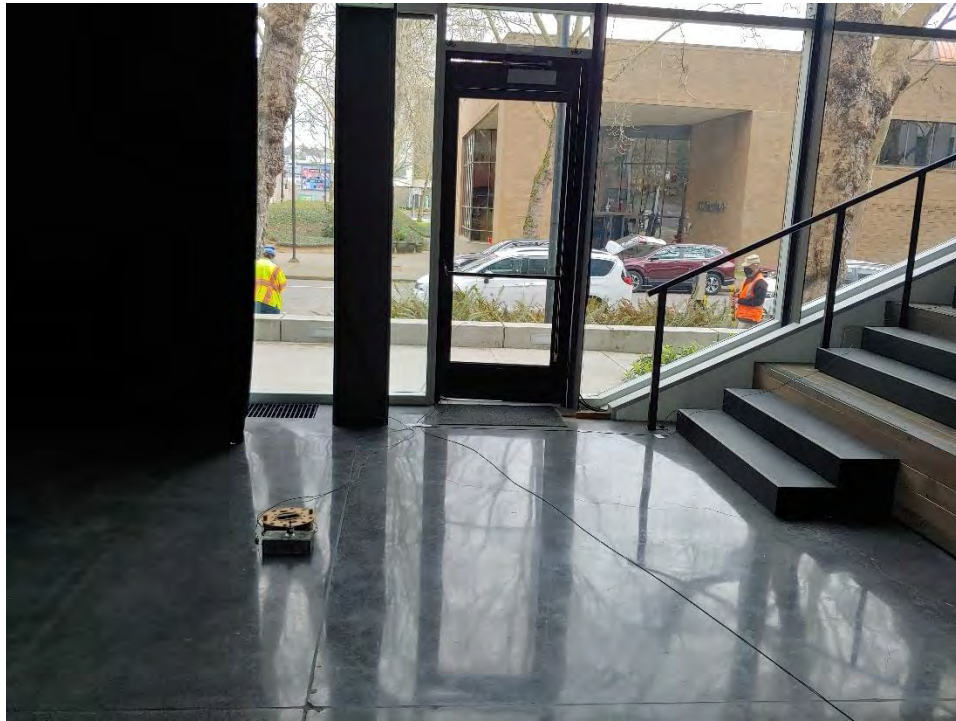


Figure N.3B-28. Aerial View of Surface Vibration Propagation Measurement Site V-13b – Seattle Opera Building



Figure N.3B-29. Photograph of Vibration Propagation Measurement Site V-14 – Mercer Street at 2nd Avenue between Seattle Repertory Theatre and Cornish Playhouse

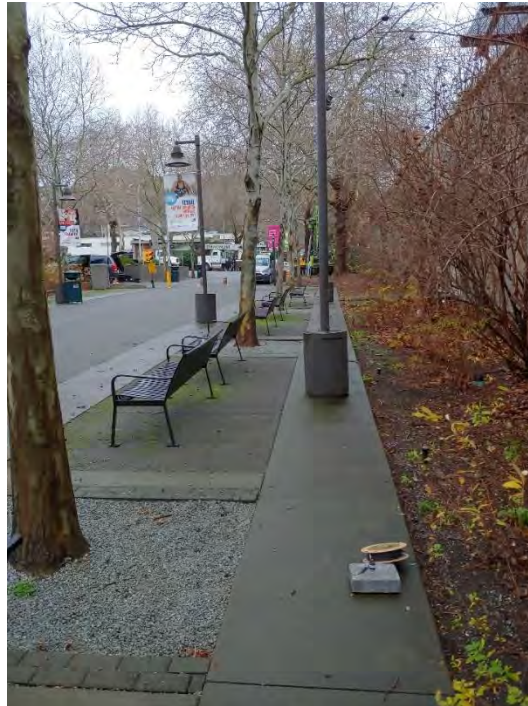


Figure N.3B-30. Aerial View of Borehole Vibration Propagation Measurement Site V-14 – Mercer Street at 2nd Avenue between Seattle Repertory Theatre and Cornish Playhouse

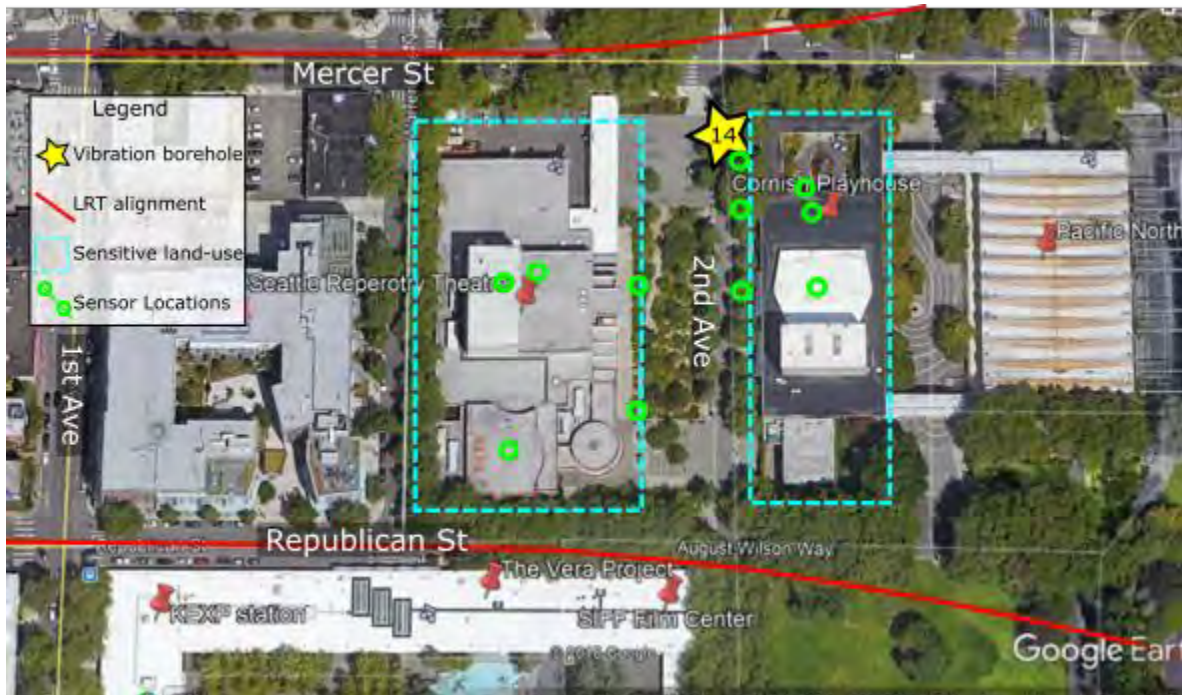


Figure N.3B-31. Photograph of Vibration Propagation Measurement Site V-15 – Republican Street at 1st Avenue with Indoor Measurements at KEXP, The Vera Project, and Seattle International Film Festival



Figure N.3B-32. Aerial View of Borehole Vibration Propagation Measurement Site V-15 – Republican Street at 1st Avenue at KEXP, The Vera Project, and Seattle International Film Festival



Figure N.3B-33. Photograph of Vibration Propagation Measurement Site V-G – Victory Studios, 2247 15th Avenue West

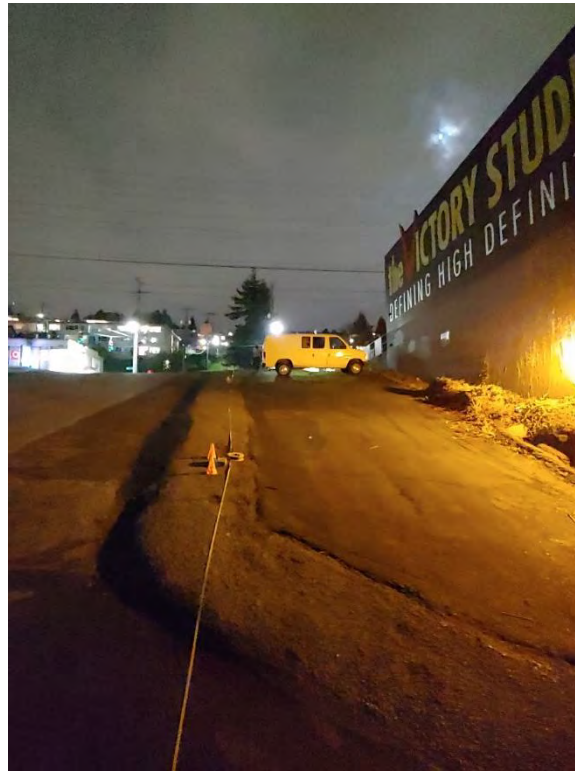
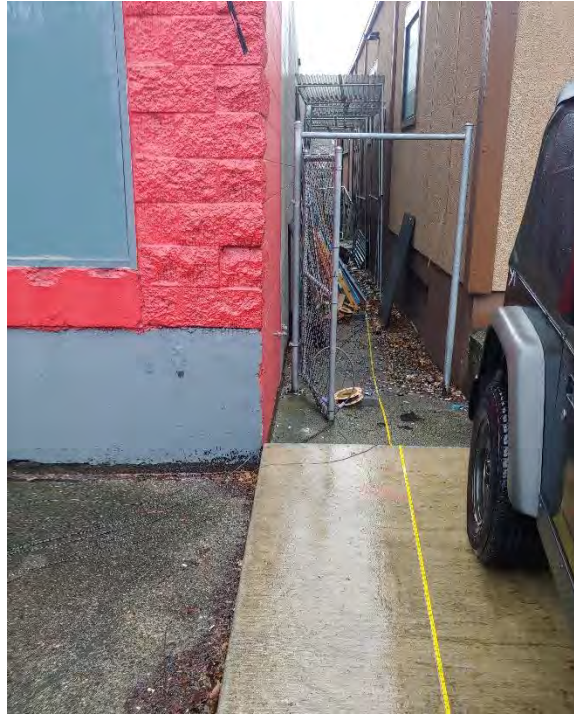


Figure N.3B-34. Aerial View of Vibration Propagation Measurement Site V-G – Victory Studios, 2247 15th Avenue West



**Figure N.3B-35. Photograph of Vibration Propagation Measurement Site V-H –
Seattle Film Institute, 3210 16th Avenue West**



**Figure N.3B-36. Aerial View of Vibration Propagation Measurement Site V-H –
Seattle Film Institute, 3210 16th Avenue West**



Figure N.3B-37. Photograph of Vibration Propagation Measurement Site V-17 – Nickerson Street Cloverleaf



Figure N.3B-38. Aerial View of Borehole Vibration Propagation Measurement Site V-17 – Nickerson Street Cloverleaf

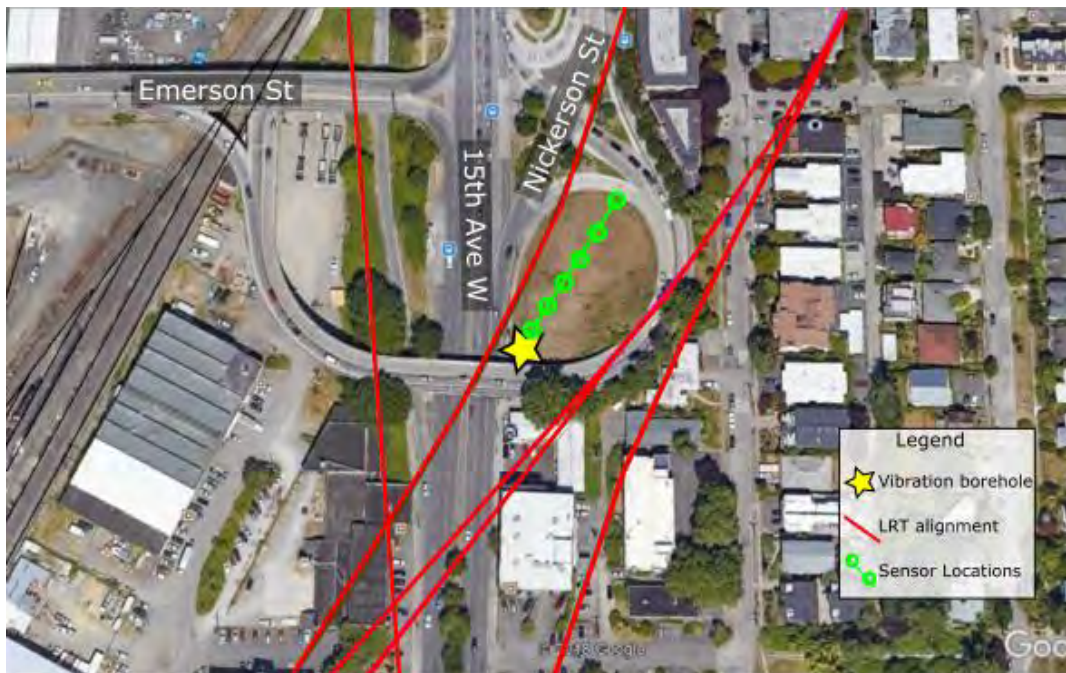


Figure N.3B-39. Photograph of Vibration Propagation Measurement Site V-I – West Emerson Street at 14th Avenue West

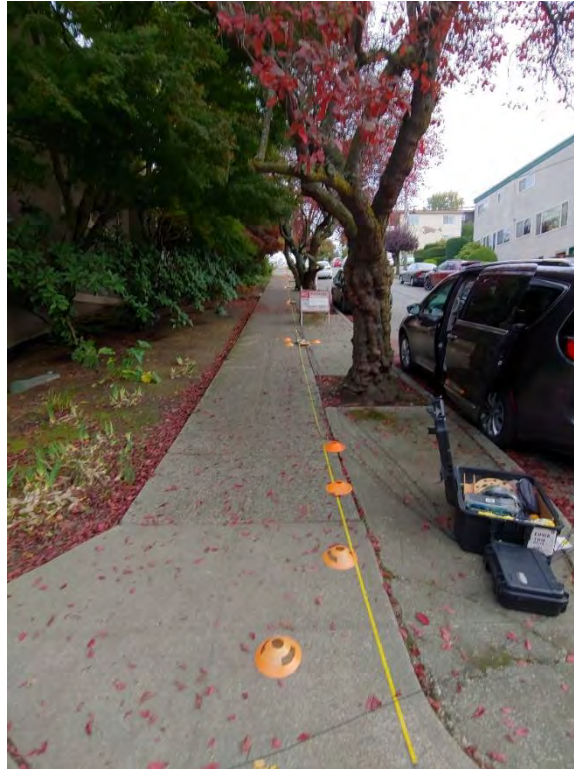


Figure N.3B-40. Aerial View of Vibration Propagation Measurement Site V-I – West Emerson Street at 14th Avenue West

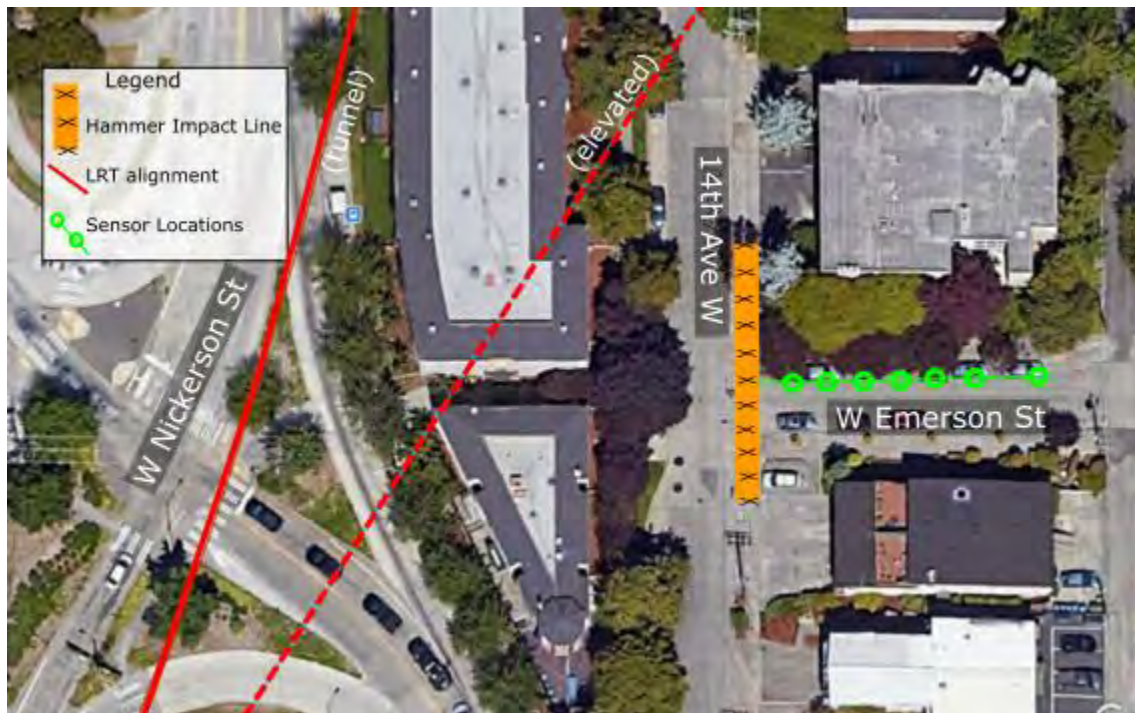


Figure N.3B-41. Photograph of Vibration Propagation Measurement Site V-J – Northwest Leary Way at 14th Avenue Northwest



Figure N.3B-42. Aerial View of Vibration Propagation Measurement Site V-J – Northwest Leary Way at 14th Avenue Northwest



Figure N.3B-43. Photograph of Vibration Propagation Measurement Site V-K – Northwest 52nd Street at 15th Avenue Northwest

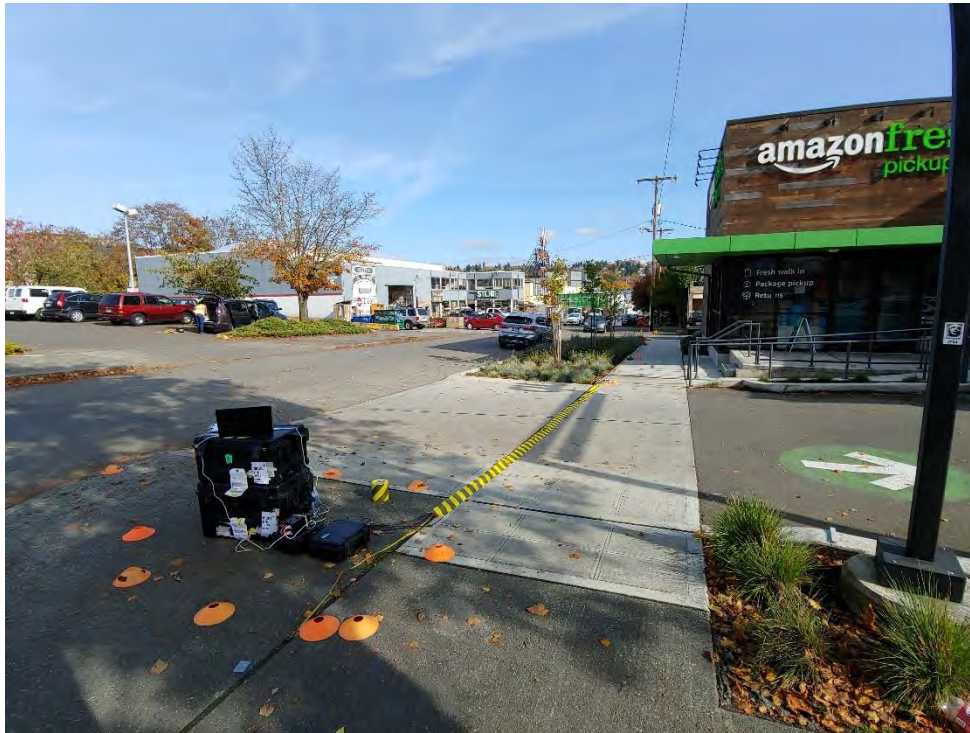


Figure N.3B-44. Aerial View of Vibration Propagation Measurement Site V-K – Northwest 52nd Street at 15th Avenue Northwest



Figure N.3B-45. Photograph of Borehole Vibration Propagation Measurement Site V-18 –14th Avenue Northwest at Northwest Market Street



Figure N.3B-46. Aerial View of Borehole Vibration Propagation Measurement Site V-18 –14th Avenue Northwest at Northwest Market Street



Figure N.3B-47. Photograph of Vibration Propagation Measurement Site V-M – Accelerometer in 219 Terry Avenue



Figure N.3B-48. Aerial View of Vibration Propagation Measurement Site V-M – Alleyway behind 219 Terry Avenue N



Figure N.3B-49. Photograph of Vibration Propagation Measurement Site V-N – Accelerometer in Alleyway behind 401 Terry Avenue



Figure N.3B-50. Aerial View of Vibration Propagation Measurement Site V-N – Alleyway behind 401 Terry Avenue N

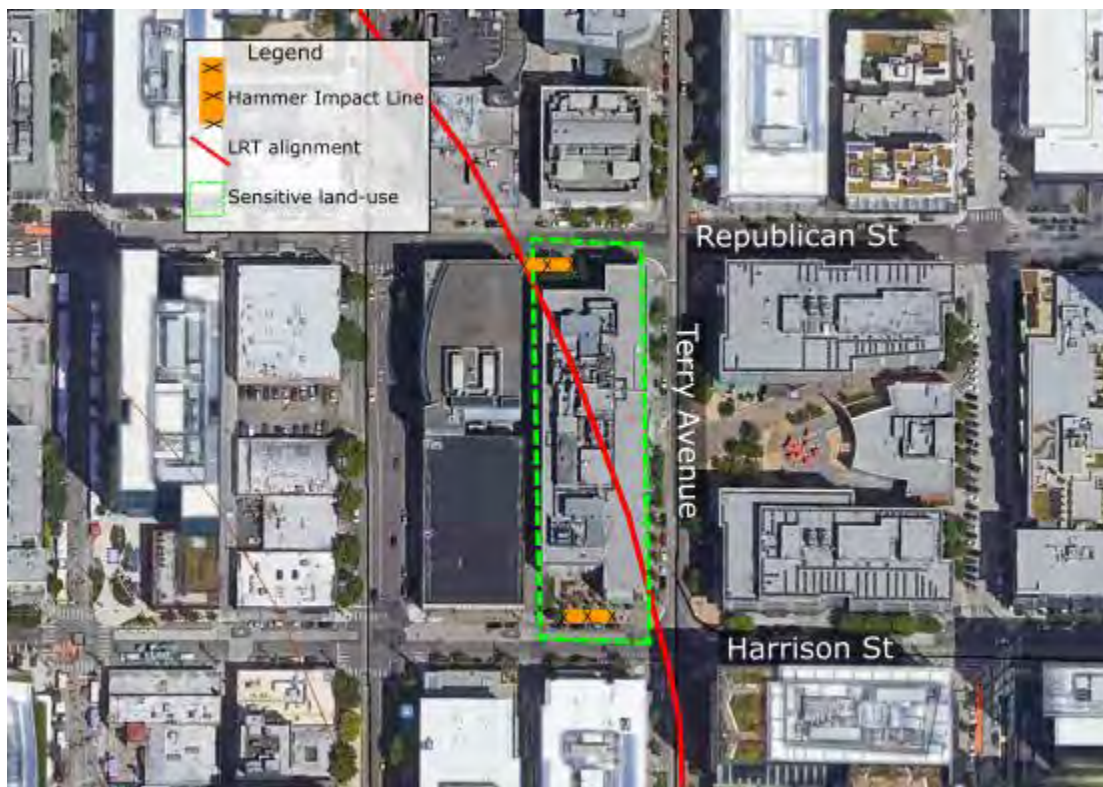


Figure N.3B-51. Photograph of Vibration Propagation Measurement Site V-O – Accelerometer in Alleyway behind 400 Dexter Avenue

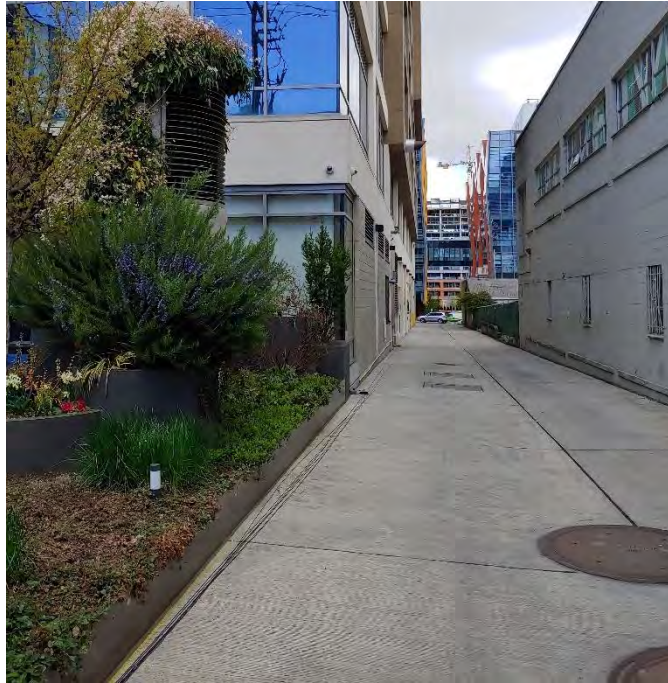


Figure N.3B-52. Aerial View of Vibration Propagation Measurement Site V-N – Alleyway behind 400 Dexter Avenue N

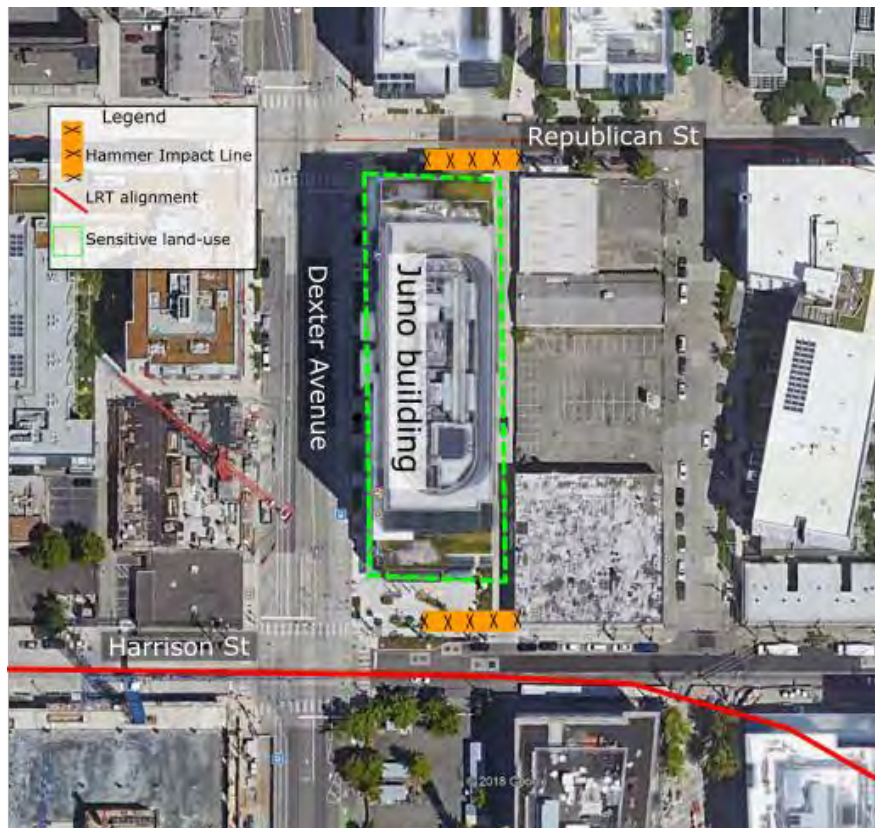


Figure N.3B-53. Photograph of Existing Vibration Measurement Site V-i on Main Street between 4th and 5th Avenues above the Existing Link Light Rail



Figure N.3B-54. Aerial View of Existing Vibration Measurement Site V-i on Main Street between 4th and 5th Avenues above the Existing Link Light Rail



Figure N.3B-55. Photograph of Existing Vibration Measurement Site V-ii at 4th Avenue and Jefferson Street above Existing Freight Tunnel



Figure N.3B-56. Aerial View of Existing Vibration Measurement Site V-ii at 4th Avenue and Jefferson Street above Existing Freight Tunnel



Figure N.3B-57. Photograph of Existing Vibration Measurement Site V-iii at Westlake Avenue and Virginia Street near Existing Streetcar Line

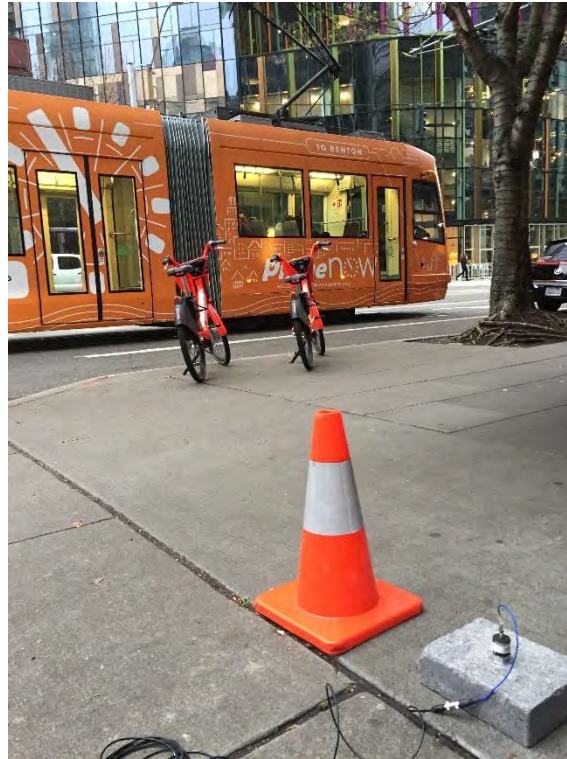


Figure N.3B-58. Aerial View of Existing Vibration Measurement Site V-iii at Westlake Avenue and Virginia Street near Existing Streetcar Line

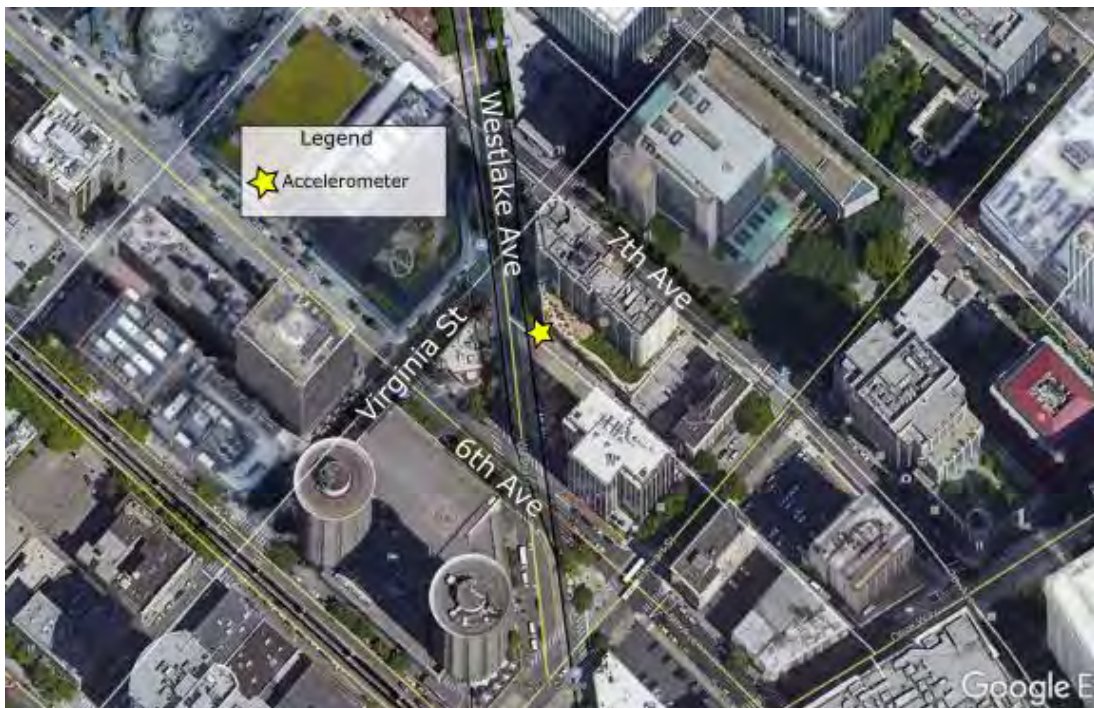


Figure N.3B-59. Photograph of Existing Vibration Measurement Site V-iv at the Helix Pedestrian Bridge off of Elliott Avenue at Prospect Street



Figure N.3B-60. Aerial View of Existing Vibration Measurement Site V-iv at the Helix Pedestrian Bridge off of Elliott Avenue at Prospect Street



Attachment N.3C
Vibration Propagation Measurement Results

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Attachment N.3C

Vibration Propagation Measurement Results

Site V-A: Alley on 41st Avenue, North of Alaska Way, West Seattle

Table N.3C-1. Line Source Transfer Mobility (L.S.T.M.) Coefficients for Site V-A

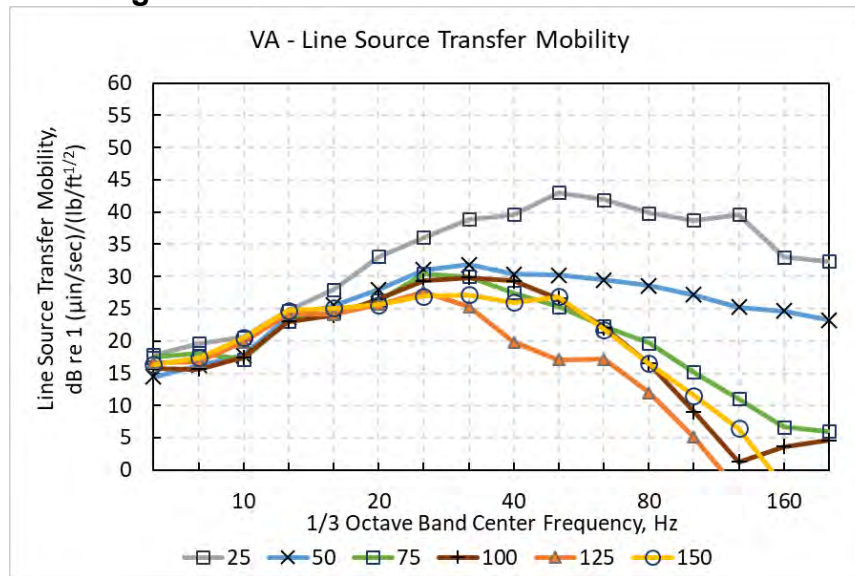
Coeff.	6.3 Hertz (Hz)	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	18.2	22.7	19.3	24.6	33.4	44.9	51.1	59.8	66.0	75.6	79.9	86.6	96.7	112.6	114.5	125.5
B	-0.9	-2.9	-0.2	-0.4	-4.4	-9.3	-11.1	-15.6	-19.9	-25.3	-28.8	-34.4	-42.1	-53.0	-56.5	-63.7
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Coeff. = coefficient

Hz = hertz

Figure N.3C-1. Measured L.S.T.M. at Site V-A



dB = decibels

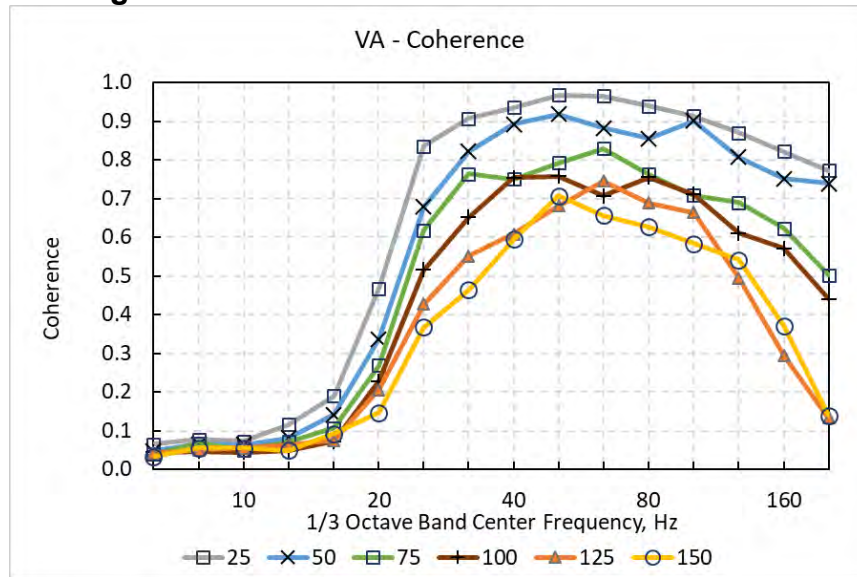
µin = micro inch

sec = seconds

lb = pounds

ft = feet

Figure N.3C-2. Measured Coherence at Site V-A



Site V-2: 39th Avenue Southwest at Southwest Genesee Street, West Seattle

Table N.3C-2. L.S.T.M. Coefficients for Site V-2

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	45.2	68.1	66.7	57.7	5.5	55.5	16.4	57.7	85.4	109.7	45.9	22.9	57.5	71.3	99.0	99.2
B	-21.8	-33.3	-30.7	-27.6	-4.6	-26.8	-6.4	-23.1	-35.5	-45.9	-18.7	-6.7	-21.8	-30.2	-44.2	-44.6
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Figure N.3C-3. Measured L.S.T.M. at Site V-2

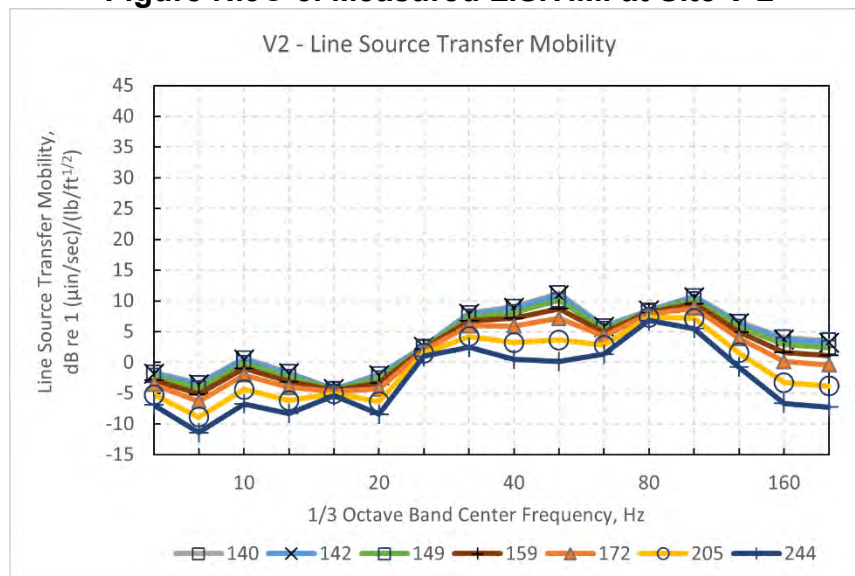
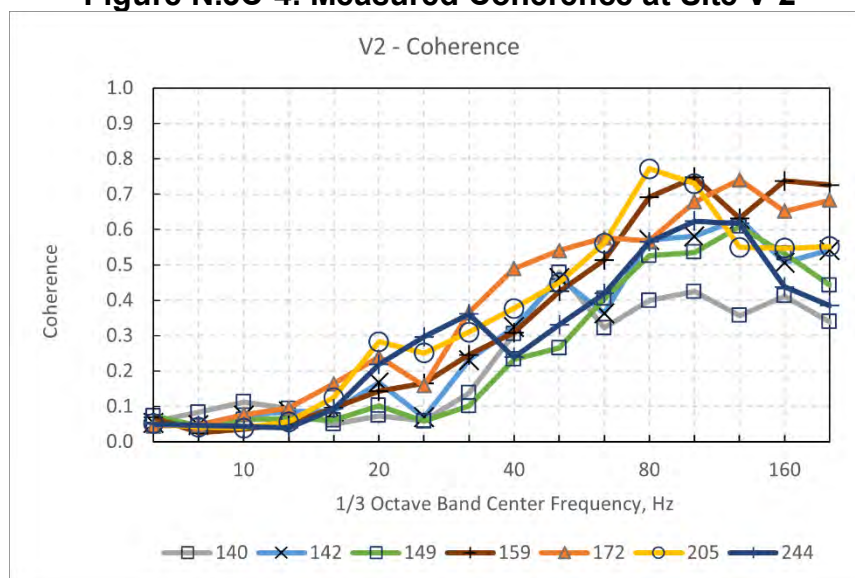


Figure N.3C-4. Measured Coherence at Site V-2



Site V-3: Alley at Southwest Genesee Street and 35th Avenue Southwest

Table N.3C-3. L.S.T.M. Coefficients for Site V-3

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	16.6	13.4	30.9	43.6	31.1	40.3	35.9	39.6	36.6	79.2	65.0	79.8	90.3	90.6	117.2	105.4
B	-9.8	-7.4	-15.3	-20.4	-15.2	-18.8	-16.7	-16.7	-13.4	-32.4	-26.4	-33.3	-38.1	-38.7	-52.6	-47.5
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Figure N.3C-5. Measured L.S.T.M. at Site V-3

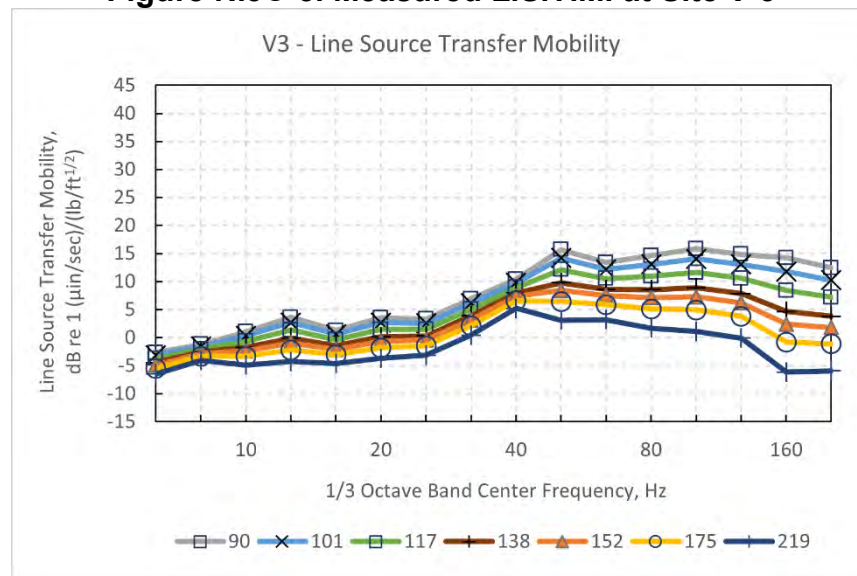
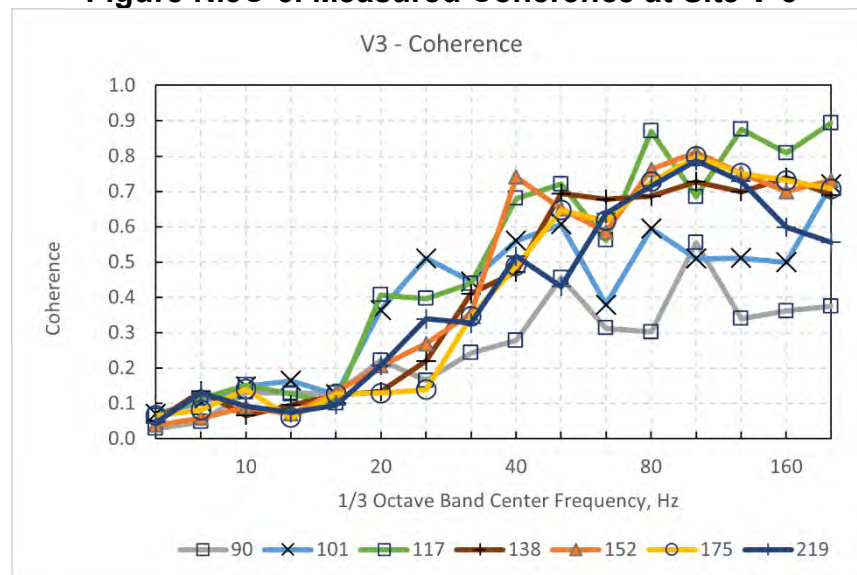


Figure N.3C-6. Measured Coherence at Site V-3



Site V-B: Southwest Genesee Street at 32nd Avenue, West Seattle

Table N.3C-4. L.S.T.M. Coefficients for Site V-B

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	20.6	22.1	22.8	27.9	30.6	36.9	48.9	61.5	63.2	67.9	63.6	81.5	85.7	71.4	67.1	74.4
B	-1.0	-3.0	-3.5	-4.3	-4.7	-6.9	-11.3	-16.0	-16.1	-19.7	-19.0	-30.2	-35.3	-30.8	-30.8	-37.8
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Figure N.3C-7. Measured L.S.T.M at Site V-B

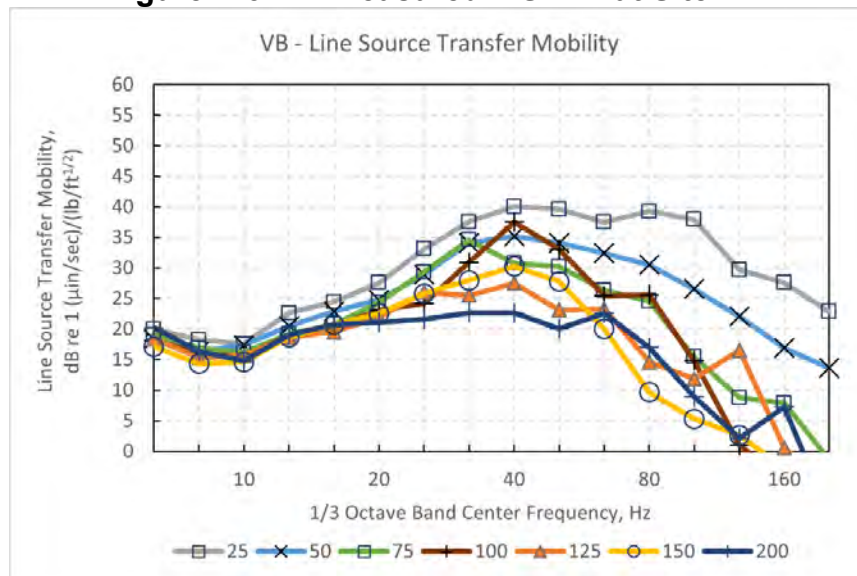
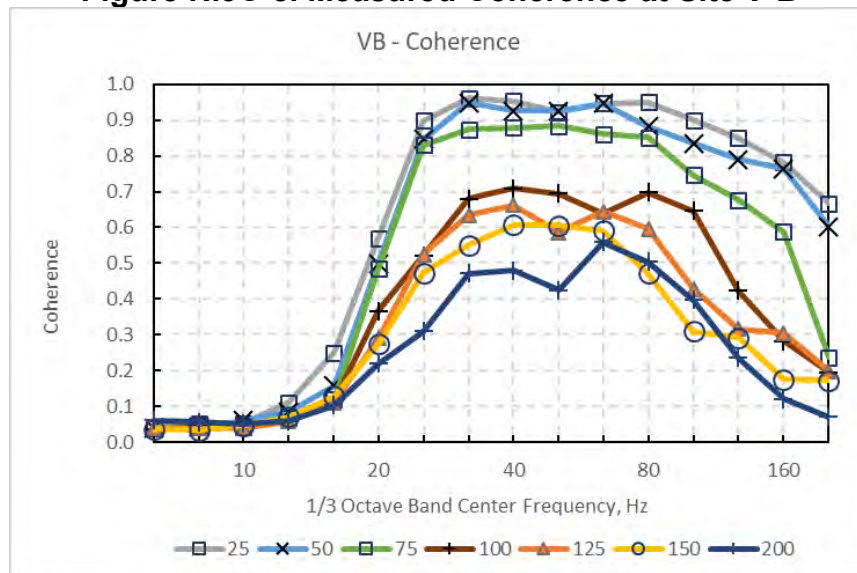


Figure N.3C-8. Measured Coherence at Site V-B



Site V-C: Southwest Dakota Street at 25th Avenue Southwest, West Seattle

Table N.3C-5. L.S.T.M. Coefficients for Site V-C

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	26.1	29.2	31.2	35.4	37.8	52.2	58.0	60.9	58.7	68.5	75.1	91.4	77.2	60.2	40.0	23.8
B	-3.4	-4.0	-2.9	-3.5	-5.0	-11.4	-13.2	-15.0	-14.2	-19.1	-24.3	-36.0	-32.4	-27.6	-19.4	-13.8
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Figure N.3C-9. Measured L.S.T.M at Site V-C

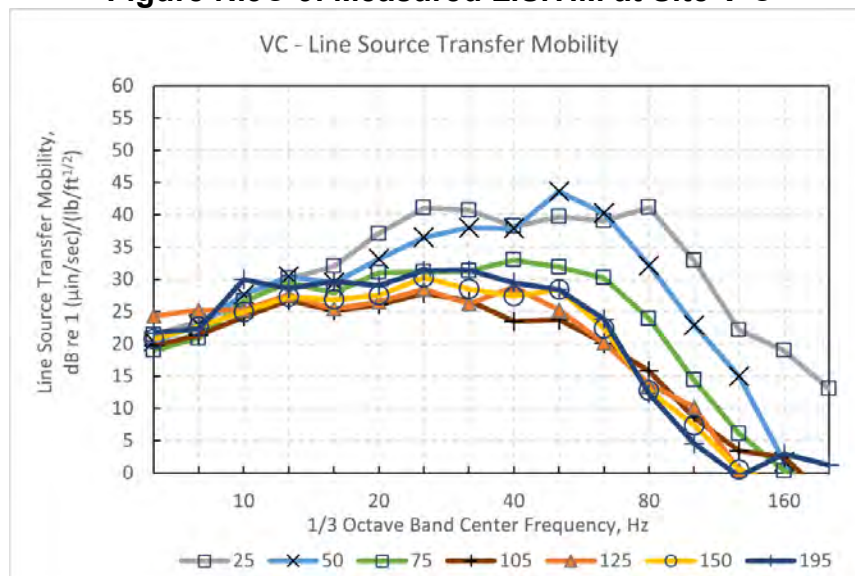
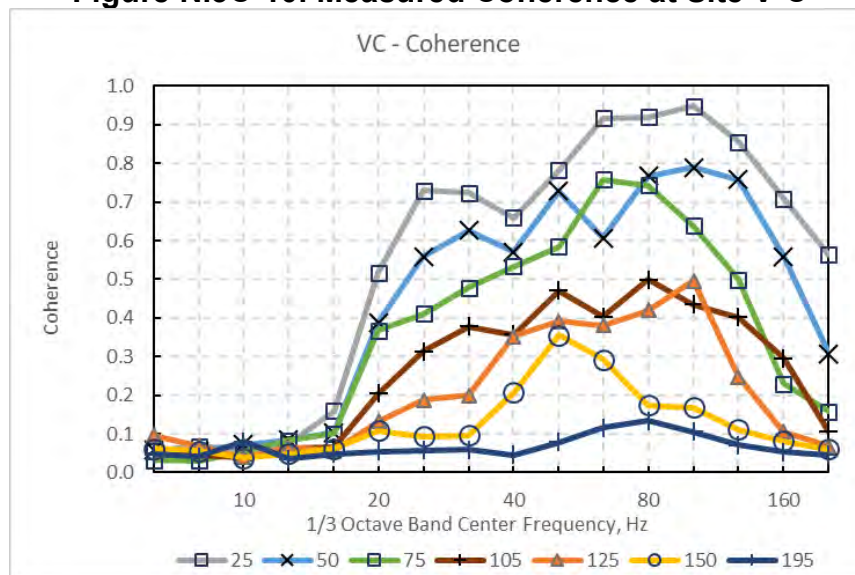


Figure N.3C-10. Measured Coherence at Site V-C



Site V-D: Bike Path at 22nd Avenue Southwest at West Seattle Bridge, West Seattle

Table N.3C-6. L.S.T.M. Coefficients for Site V-D

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	26.3	32.0	36.3	37.8	40.5	47.5	53.5	54.8	45.2	52.0	58.6	50.8	56.2	42.3	30.8	22.7
B	-0.4	-1.4	-3.0	-3.4	-5.9	-10.7	-14.2	-14.9	-10.5	-14.8	-19.8	-18.4	-23.7	-18.6	-14.4	-11.2
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Figure N.3C-11. Measured L.S.T.M. at Site V-D

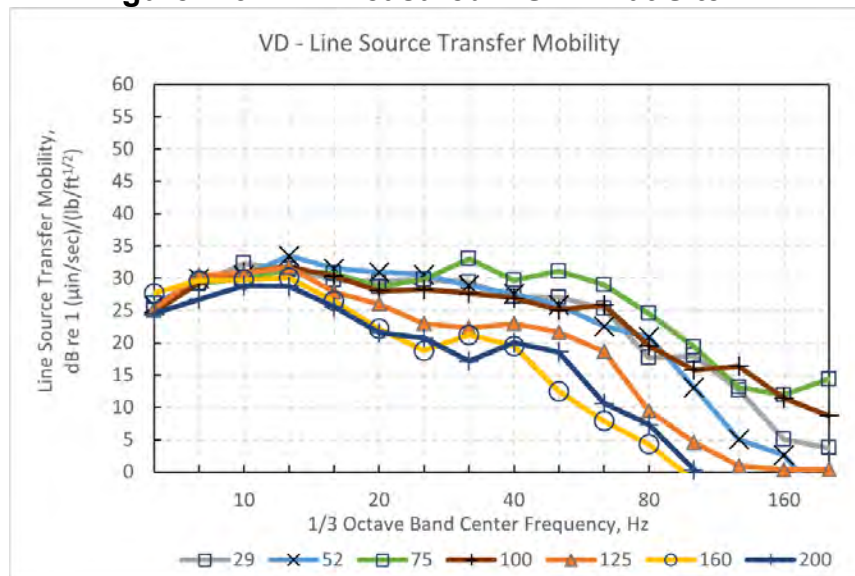
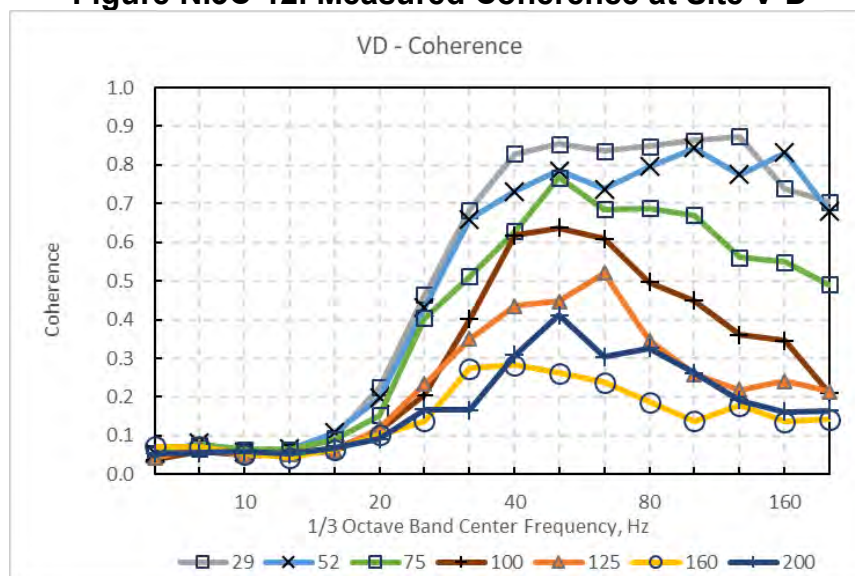


Figure N.3C-12. Measured Coherence at Site V-D



Site V-E: Harbor Island Machine Works, 3431 11th Avenue Southwest

Table N.3C-7. L.S.T.M. Coefficients for Site V-E

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	41.3	46.3	50.2	48.2	53.9	59.6	66.9	71.6	77.9	115.0	114.9	117.5	80.8	79.2	80.2	49.1
B	0.0	-3.3	-6.4	-6.0	-10.4	-13.5	-18.3	-21.7	-25.5	-44.7	-47.6	-53.2	-36.0	-38.8	-42.3	-25.1
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Figure N.3C-13. Measured L.S.T.M. at Site V-E

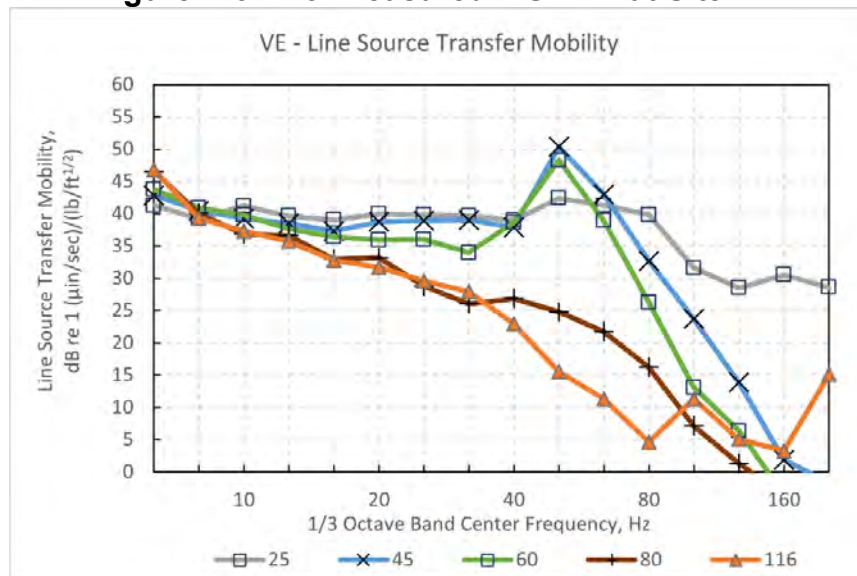
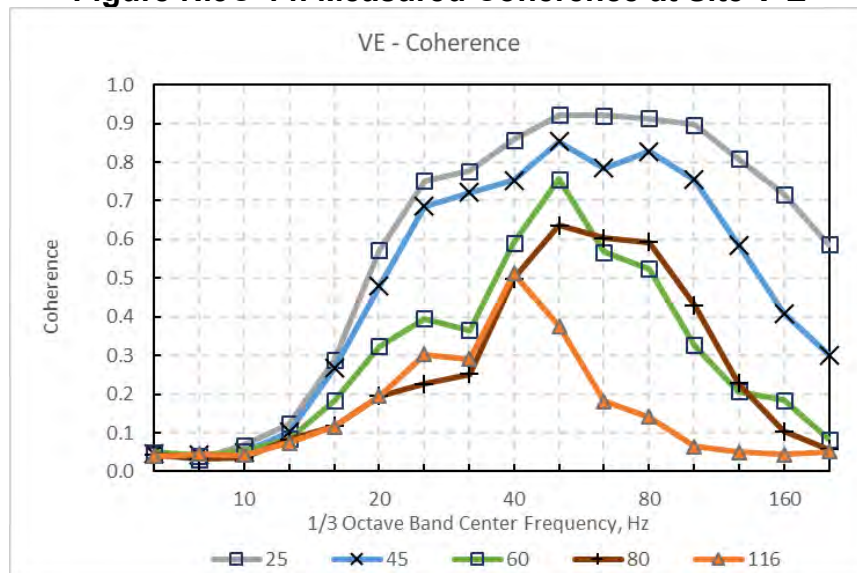


Figure N.3C-14. Measured Coherence at Site V-E



Site V-6: 5th Avenue and Marion Street, Downtown Seattle

Table N.3C-8. L.S.T.M. Coefficients for Site V-6

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	223.5	354.1	178.0	-0.4	121.2	46.8	146.7	244.4	381.9	326.6	372.9	442.0	470.5	575.2	674.6	811.4
B	-100.3	-156.3	-78.5	-0.4	-53.8	-21.2	-64.7	-106.9	-166.9	-143.3	-163.2	-192.8	-205.4	-250.6	-293.7	-354.4
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figure N.3C-15. Measured L.S.T.M. at Site V-6

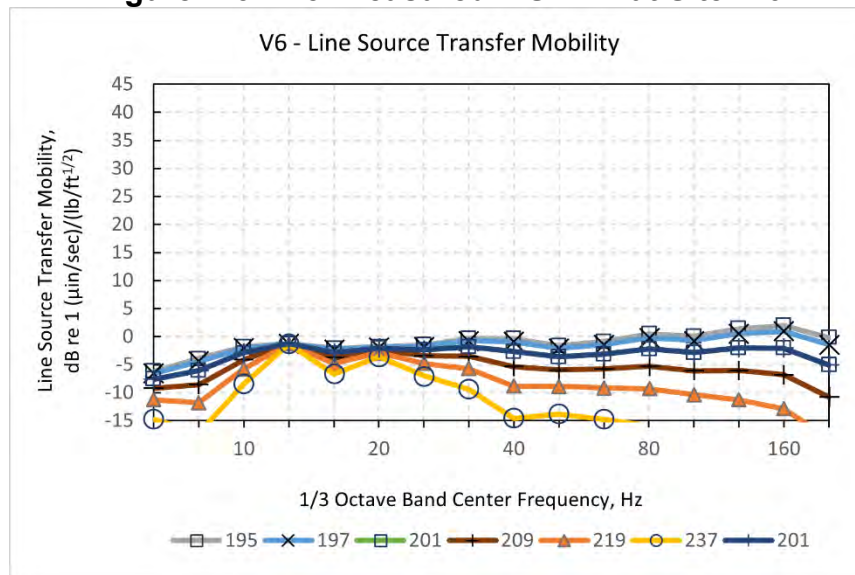
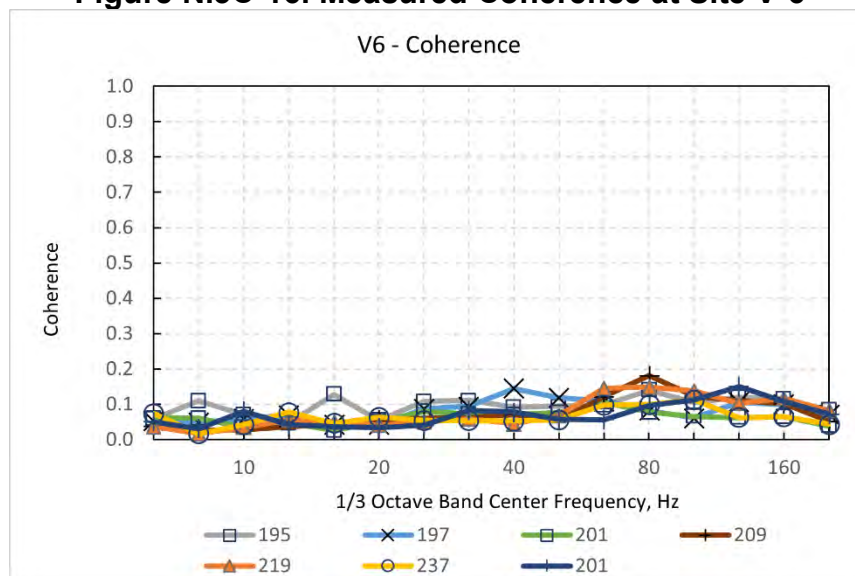


Figure N.3C-16. Measured Coherence at Site V-6



Site V-8: 7th Avenue and Westlake Avenue, Downtown Seattle

Table N.3C-9. L.S.T.M. Coefficients for Site V-8

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	80.0	72.2	99.3	79.9	150.7	71.9	22.6	162.1	242.3	213.2	151.4	223.5	294.8	98.6	203.6	308.3
B	-40.7	-35.6	-49.1	-39.9	-72.5	-35.7	-11.4	-73.9	-109.9	-98.1	-69.6	-105.1	-139.5	-49.3	-99.9	-146.6
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Figure N.3C-17. Measured L.S.T.M. at Site V-8

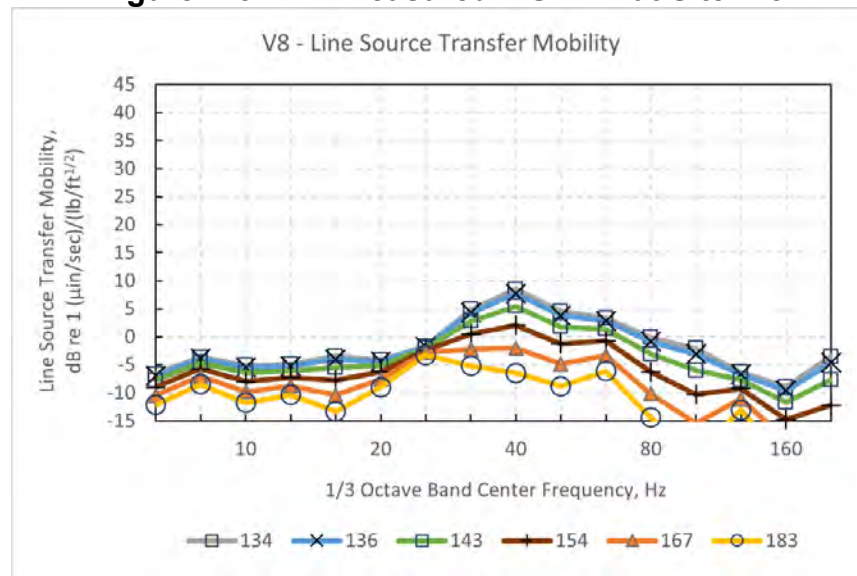
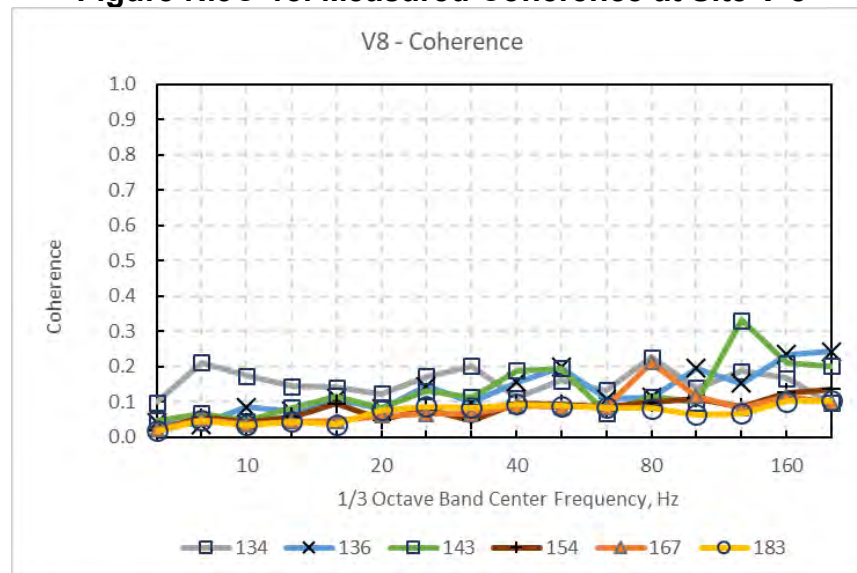


Figure N.3C-18. Measured Coherence at Site V-8



Site V-9: Thomas Street between Westlake Avenue and 9th Avenue, Downtown Seattle

Table N.3C-10. L.S.T.M. Coefficients for Site V-9

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	17.5	53.6	34.2	24.3	5.2	35.9	6.7	30.2	37.3	72.7	159.0	132.5	179.0	171.1	191.6	163.1
B	-10.1	-29.7	-19.0	-13.7	-2.4	-17.7	-3.4	-12.8	-16.5	-33.7	-74.3	-62.4	-86.0	-81.9	-91.9	-78.5
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figure N.3C-19. Measured L.S.T.M. at Site V-9

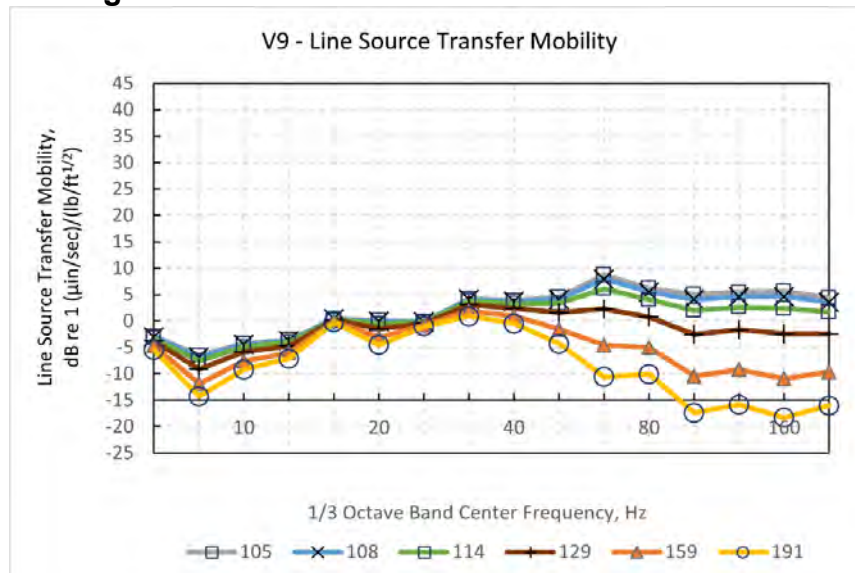
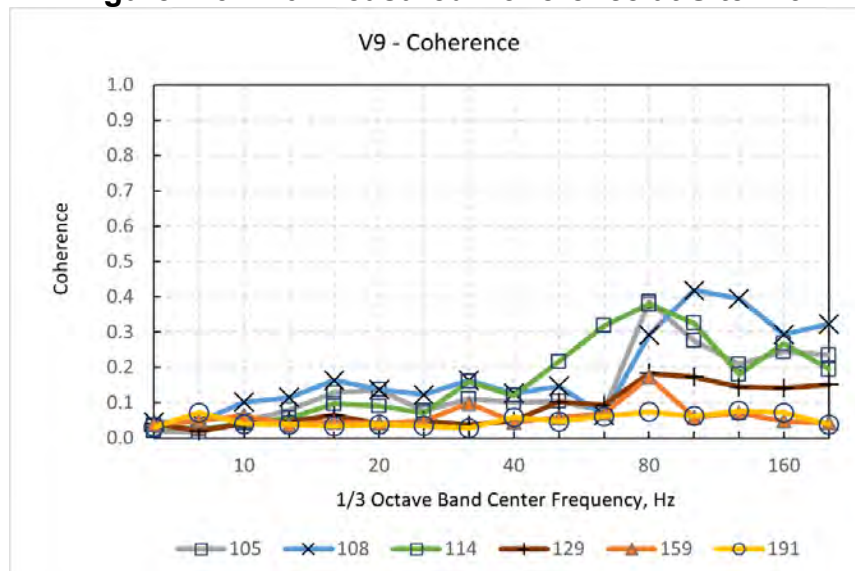


Figure N.3C-20. Measured Coherence at Site V-9



Site V-11: 9th Avenue and Mercer Street, The Allen Institute

Table N.3C-11. L.S.T.M. Coefficients for Site V-11

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	22.7	7.8	11.1	40.0	-5.7	10.8	14.6	32.7	59.5	45.8	63.2	109.4	104.2	41.2	28.5	13.8
B	-7.7	-0.9	-5.2	-18.7	1.4	-7.0	-8.9	-16.2	-28.9	-22.7	-31.2	-52.5	-51.2	-23.7	-19.1	-12.3
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figure N.3C-21. Measured L.S.T.M. at Site V-11

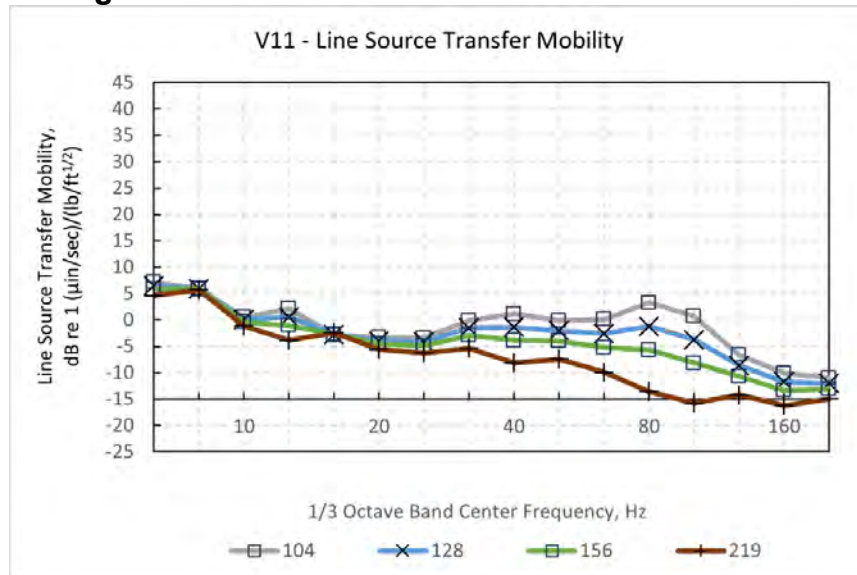
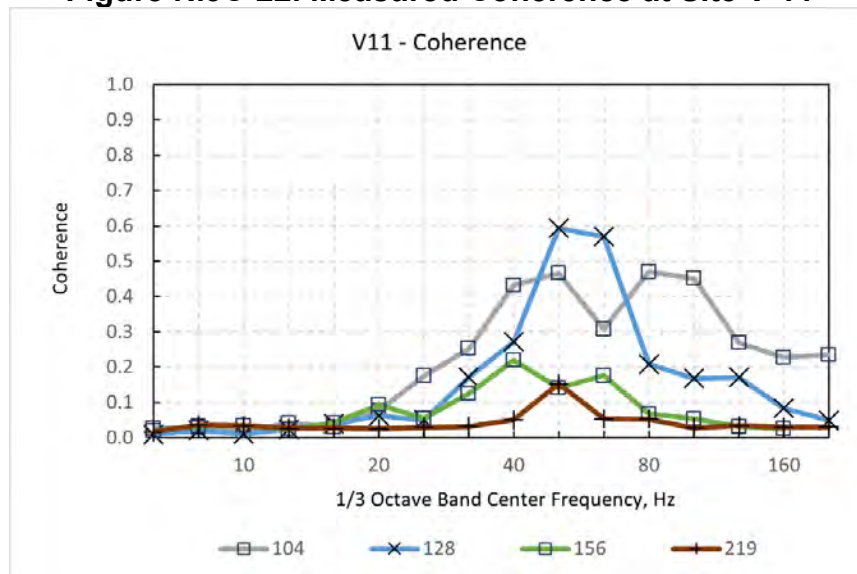


Figure N.3C-22. Measured Coherence at Site V-11



Site V-12: 4th Avenue and Mercer Street, Cascade Public Media (KCTS 9 Television)

Table N.3C-12. L.S.T.M. Coefficients for Site V-12

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	-6.9	23.3	8.3	-0.3	8.0	5.1	38.8	14.0	20.9	77.0	48.0	18.2	67.7	152.9	258.6	246.0
B	-1.3	-13.7	-5.0	-1.6	-2.4	-2.0	-19.0	-8.0	-10.6	-32.9	-22.4	-8.5	-31.9	-72.1	-121.5	-115.8
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figure N.3C-23. Measured L.S.T.M. at Site V-12

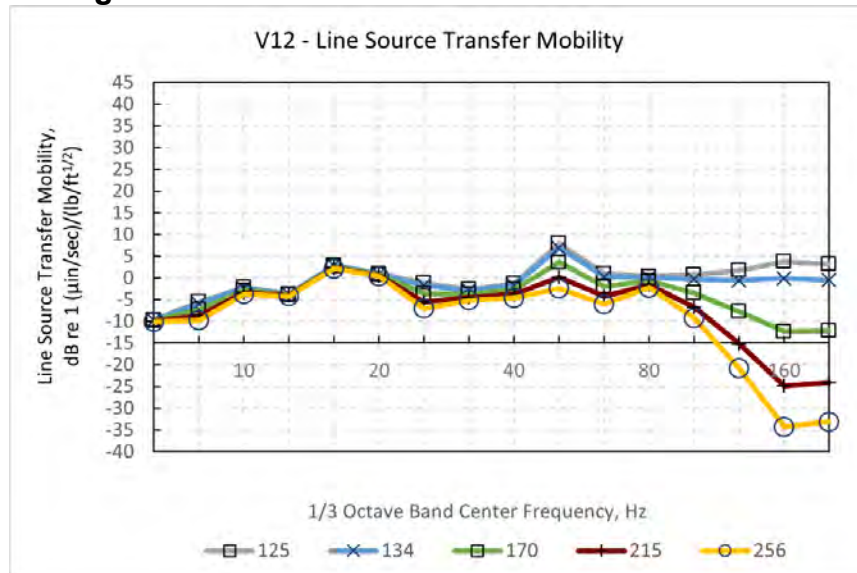
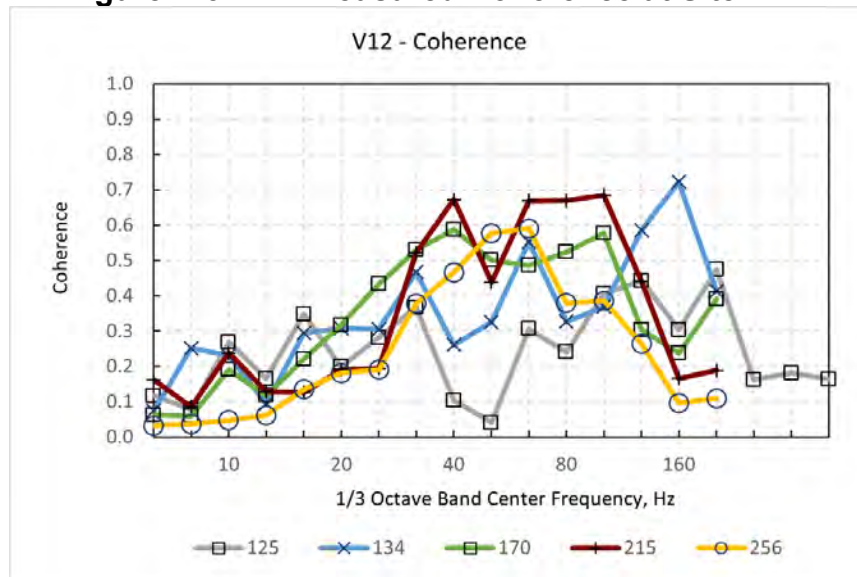


Figure N.3C-24. Measured Coherence at Site V-12



Site V-13: Republican Street at 3rd Avenue North, Seattle Center

Table N.3C-13. L.S.T.M. Coefficients for Site V-13

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	8.9	30.1	29.0	46.1	49.1	47.4	56.4	65.4	86.4	105.2	105.5	98.9	98.1	83.5	97.5	69.6
B	-2.2	-12.1	-10.2	-17.4	-20.0	-20.4	-25.3	-30.5	-38.9	-48.5	-48.7	-48.0	-47.2	-40.5	-47.8	-35.7
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figure N.3C-25. Measured L.S.T.M. at Site V-13

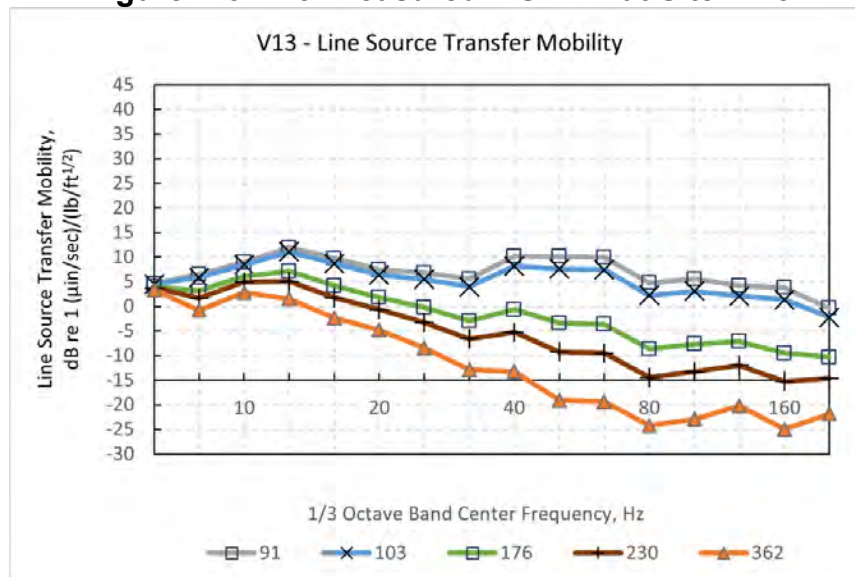
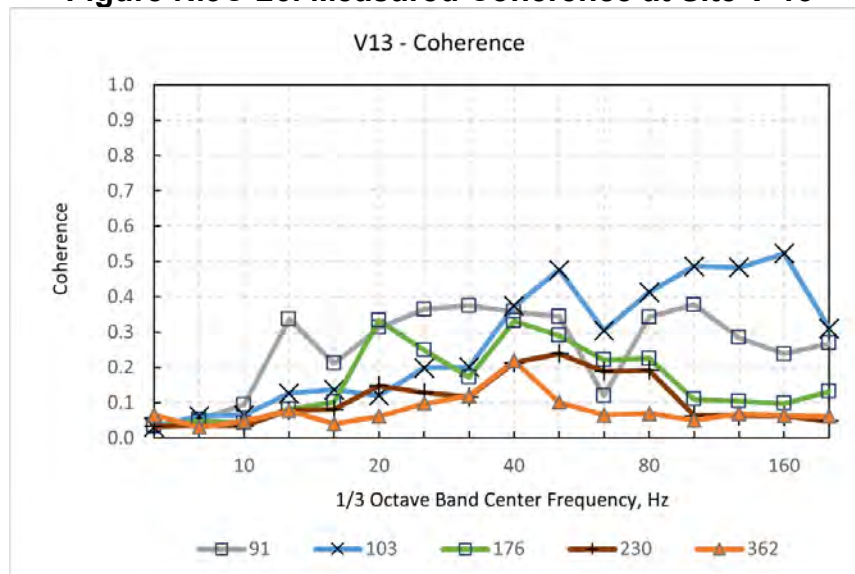


Figure N.3C-26. Measured Coherence at Site V-13



Site V-14: Mercer Street at 2nd Avenue North, Seattle Center

Table N.3C-14. L.S.T.M. Coefficients for Site V-14

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	57.7	71.1	71.5	78.9	70.7	91.6	111.3	102.9	110.4	121.2	111.5	105.4	112.5	85.6	93.8	87.4
B	-24.3	-29.8	-30.2	-33.5	-30.2	-39.0	-46.4	-43.1	-48.5	-53.5	-49.8	-47.3	-50.9	-39.2	-43.0	-38.8
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figure N.3C-27. Measured L.S.T.M. at Site V-14

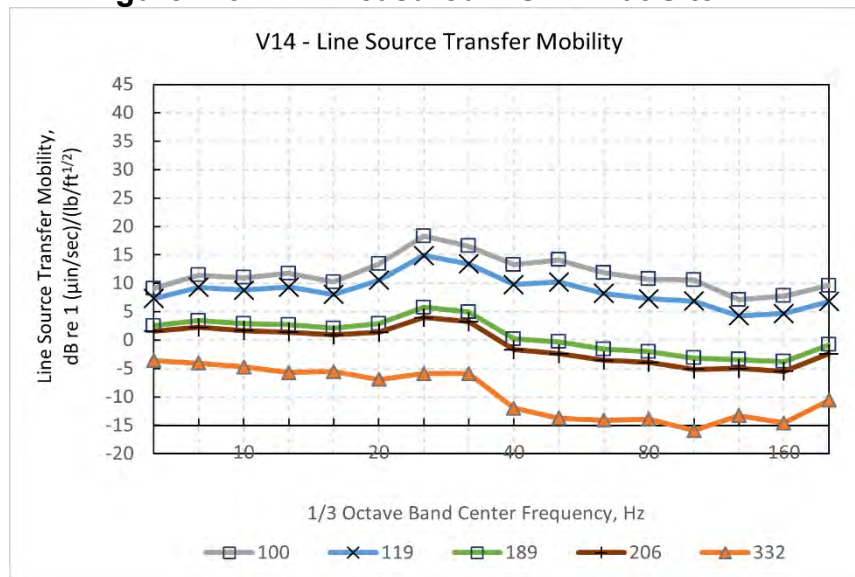
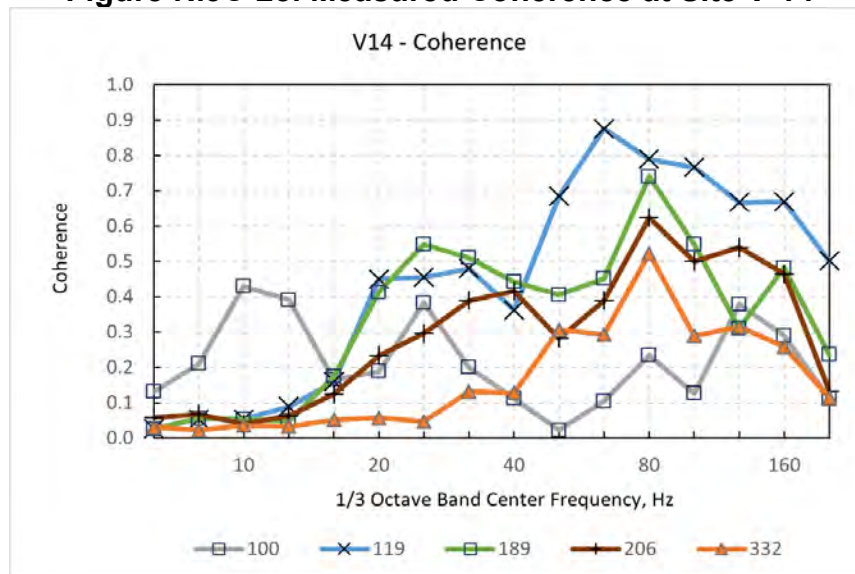


Figure N.3C-28. Measured Coherence at Site V-14



Site V-15: Republican Street at 1st Avenue North, Seattle Center

Table N.3C-15. L.S.T.M. Coefficients for Site V-15

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	40.2	40.9	29.6	47.6	45.9	52.2	44.9	71.1	97.0	162.1	138.6	110.3	143.0	164.3	161.2	152.5
B	-15.4	-15.0	-9.6	-16.5	-15.8	-17.6	-13.8	-25.7	-38.4	-66.7	-56.9	-44.5	-59.0	-69.0	-68.2	-65.5
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Figure N.3C-29. Measured L.S.T.M. at Site V-15

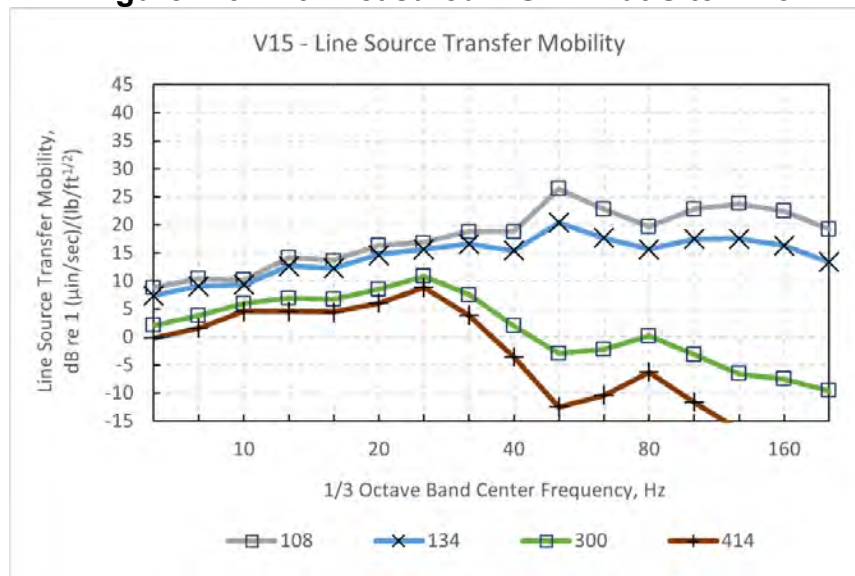
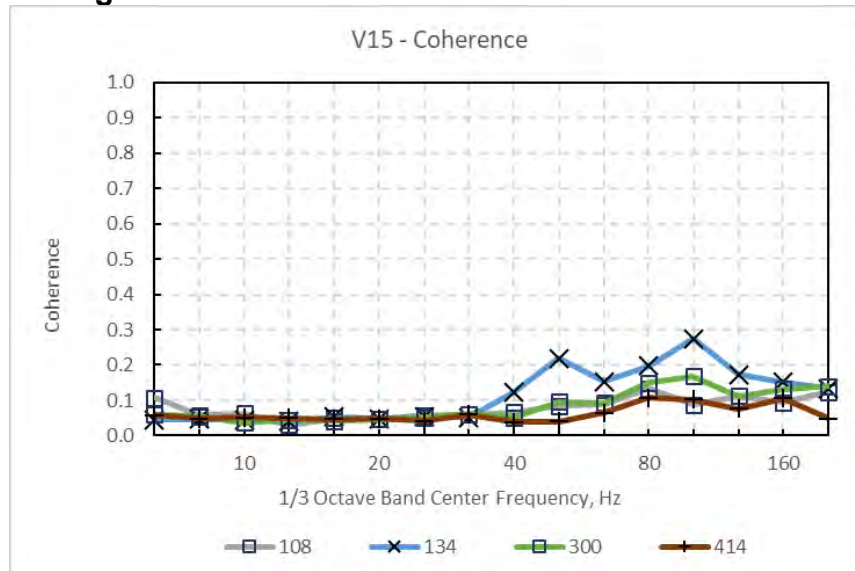


Figure N.3C-30. Measured Coherence at Site V-15



Site V-G: Victory Studios, 2247 15th Avenue West, Interbay

Table N.3C-16. L.S.T.M. Coefficients for Site V-G

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	43.0	51.1	47.5	39.8	40.9	47.3	69.1	76.0	93.6	107.5	115.1	117.5	110.7	106.9	96.9	76.6
B	-11.2	-19.4	-18.0	-13.7	-13.2	-13.1	-20.4	-22.5	-32.0	-41.9	-49.8	-54.4	-53.4	-54.8	-51.6	-42.9
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Figure N.3C-31. Measured L.S.T.M. at Site V-G

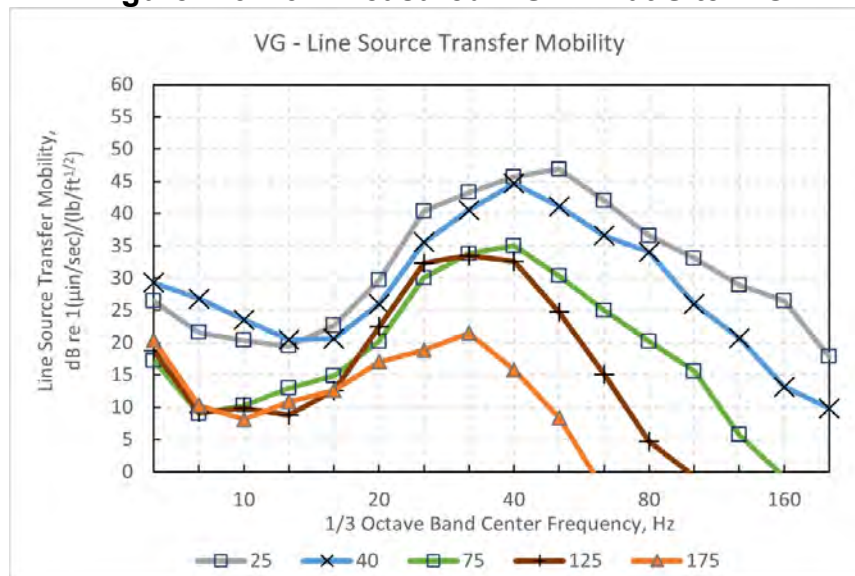
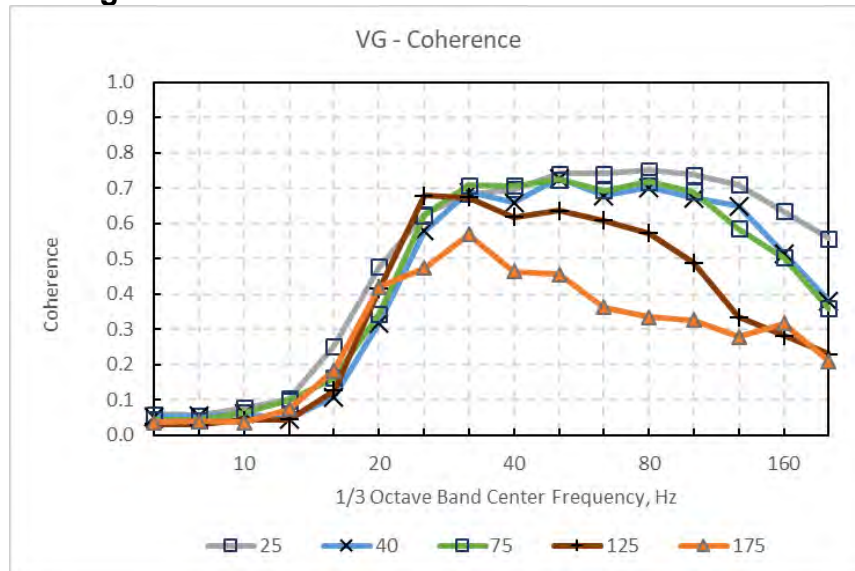


Figure N.3C-32. Measured Coherence at Site V-G



Site V-H: Seattle Film Institute, 3210 16th Avenue West, Interbay

Table N.3C-17. L.S.T.M. Coefficients for Site V-H

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	17.8	27.4	28.9	36.6	35.7	43.5	63.6	85.8	95.9	70.5	82.0	79.4	75.5	57.5	56.1	51.6
B	-0.7	-4.3	-3.1	-5.9	-5.0	-7.2	-17.0	-29.1	-35.5	-24.2	-32.8	-33.4	-33.0	-25.3	-29.7	-30.2
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Figure N.3C-33. Measured L.S.T.M. at Site V-H

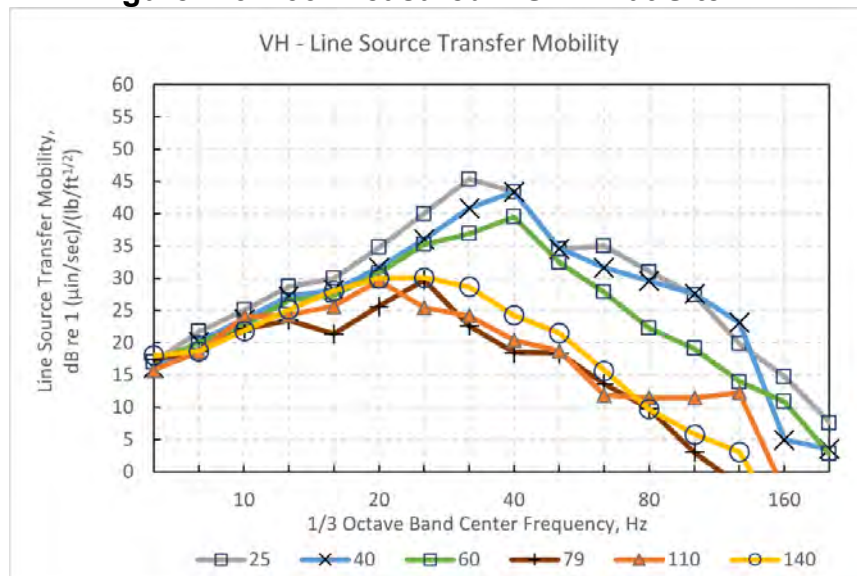
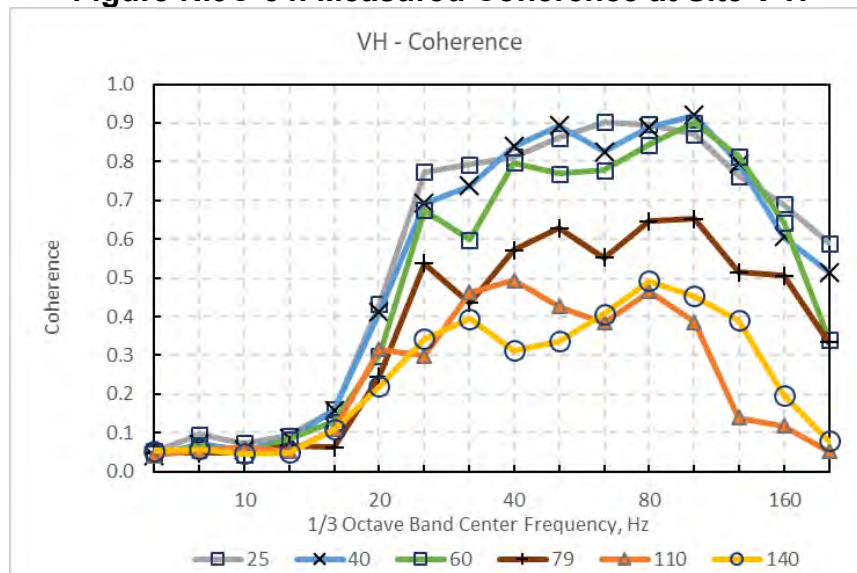


Figure N.3C-34. Measured Coherence at Site V-H



Site V-17: Nickerson Street Cloverleaf, Interbay

Table N.3C-18. L.S.T.M. Coefficients for Site V-17

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	-4.2	7.4	10.3	15.2	51.6	42.8	52.0	47.9	32.3	25.1	32.3	75.9	121.0	142.1	115.1	92.1
B	-0.4	-7.4	-8.7	-9.8	-24.3	-18.3	-23.1	-23.1	-17.2	-13.5	-16.4	-38.5	-60.7	-70.9	-60.7	-51.5
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Figure N.3C-35. Measured L.S.T.M. at Site V-17

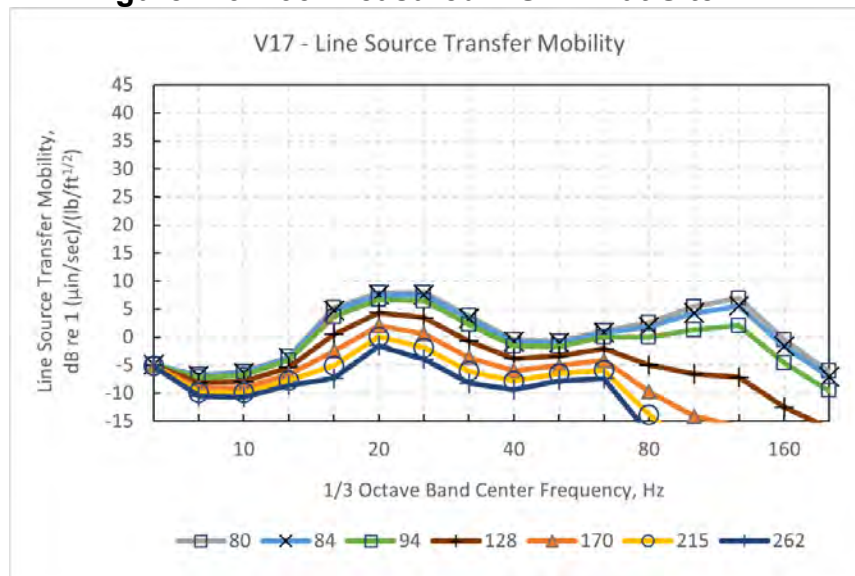
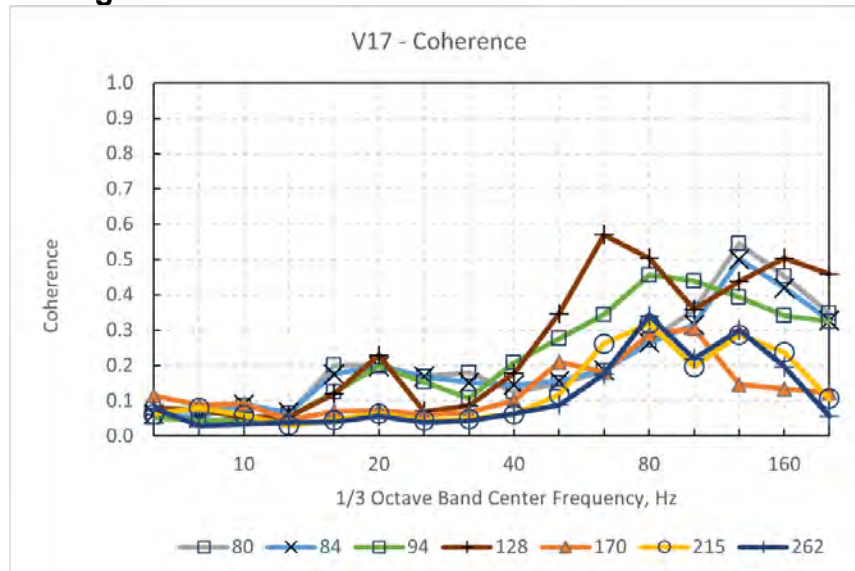


Figure N.3C-36. Measured Coherence at Site V-17



Site V-I: West Emerson Street at 14th Avenue West

Table N.3C-19. L.S.T.M. Coefficients for Site V-I

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	25.2	30.5	19.9	18.0	24.8	60.5	87.2	96.7	108.1	116.1	114.5	110.0	115.9	108.2	105.2	93.0
B	-2.9	-6.9	-3.3	-2.7	-5.4	-21.1	-31.9	-36.0	-42.9	-49.3	-51.1	-51.6	-55.5	-53.8	-53.1	-45.7
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Figure N.3C-37. Measured L.S.T.M. at Site V-I

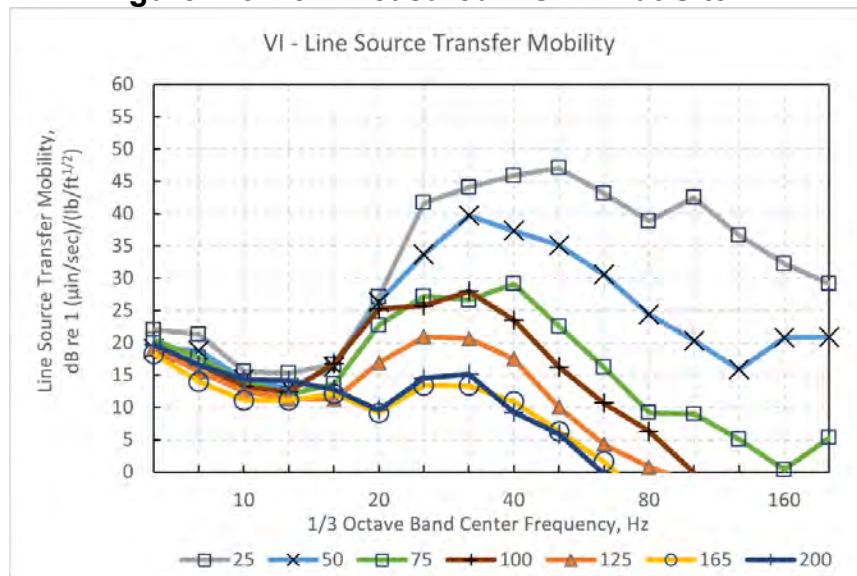
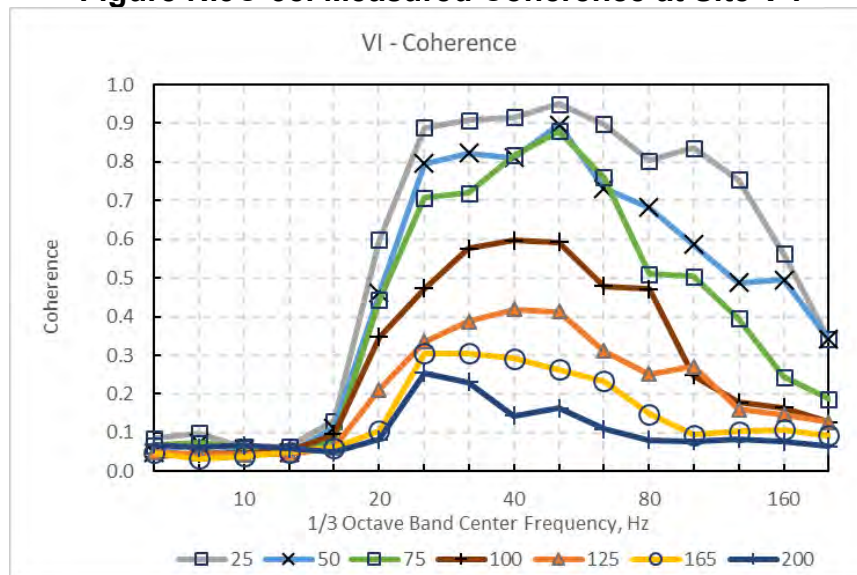


Figure N.3C-38. Measured Coherence at Site V-I



Site V-J: Northwest Leary Way at 14th Avenue Northwest

Table N.3C-20. L.S.T.M. Coefficients for Site V-J

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	44.8	33.7	29.1	25.5	24.6	34.0	48.4	66.7	71.2	69.5	59.5	60.8	53.8	52.7	42.1	60.8
B	-11.7	-6.0	-3.2	-1.1	-1.3	-4.9	-10.2	-16.9	-19.2	-20.4	-18.5	-21.1	-19.8	-22.1	-17.6	-29.8
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Figure N.3C-39. Measured L.S.T.M. at Site V-J

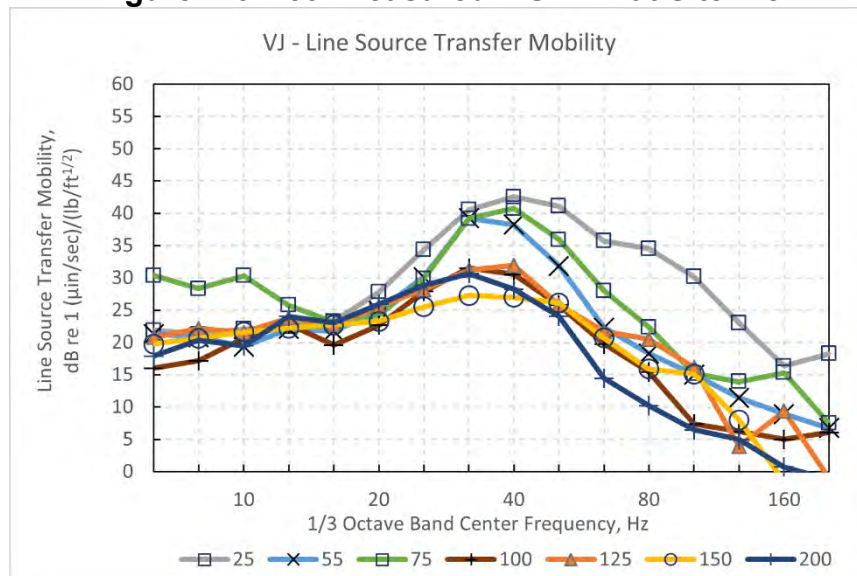
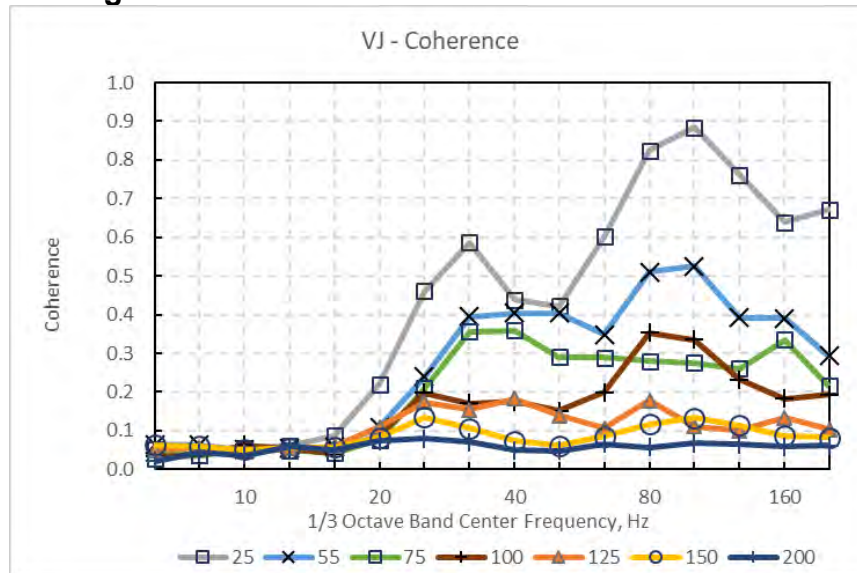


Figure N.3C-40. Measured Coherence at Site V-J



Site V-K: Northwest 52nd Street at 15th Avenue Northwest, Ballard

Table N.3C-21. L.S.T.M. Coefficients for Site V-K

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	42.0	35.0	31.3	26.7	28.1	40.0	56.6	81.0	102.1	104.9	109.0	91.5	79.1	84.8	81.2	58.2
B	-12.6	-8.7	-7.0	-3.9	-4.0	-8.8	-15.2	-25.9	-37.1	-40.6	-44.8	-39.0	-34.5	-39.2	-41.5	-31.8
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Figure N.3C-41. Measured L.S.T.M. at Site V-K

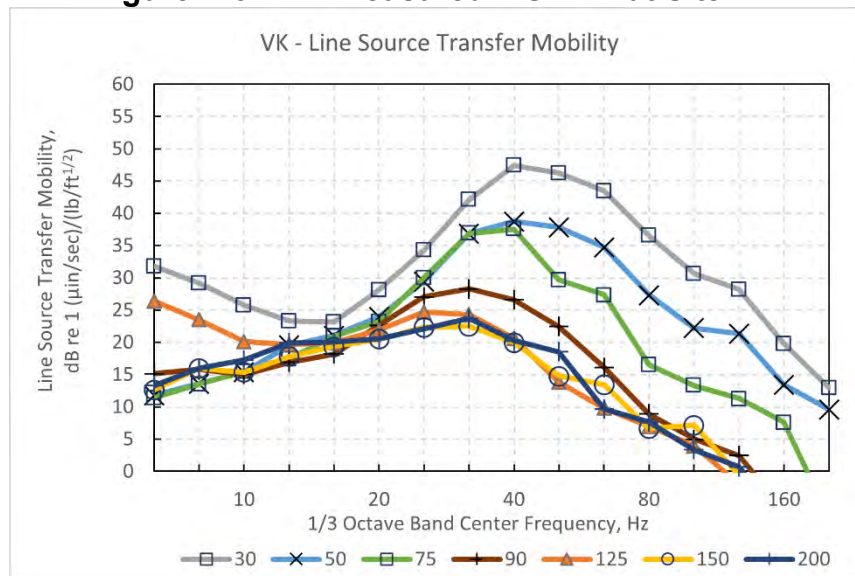
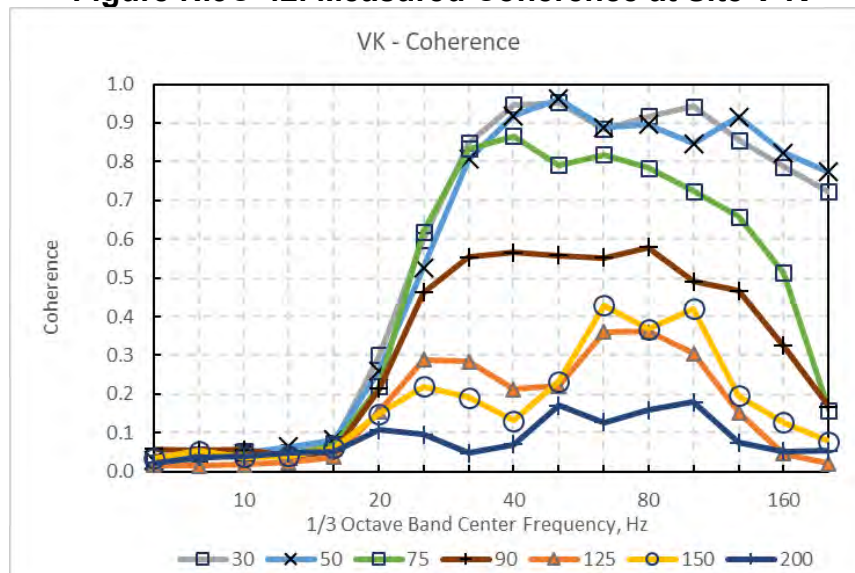


Figure N.3C-42. Measured Coherence at Site V-K



Site V-18: 14th Avenue Northwest at Northwest Market Street, Ballard

Table N.3C-22. L.S.T.M. Coefficients for Site V-18

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	15.5	16.1	17.8	26.5	28.9	31.8	29.6	37.1	60.1	67.4	70.5	55.9	46.8	59.9	98.4	113.8
B	-7.2	-7.5	-8.0	-11.6	-12.2	-12.4	-10.2	-12.2	-23.3	-26.7	-27.9	-20.5	-16.2	-23.3	-43.7	-53.3
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Figure N.3C-43. Measured L.S.T.M. at Site V-18

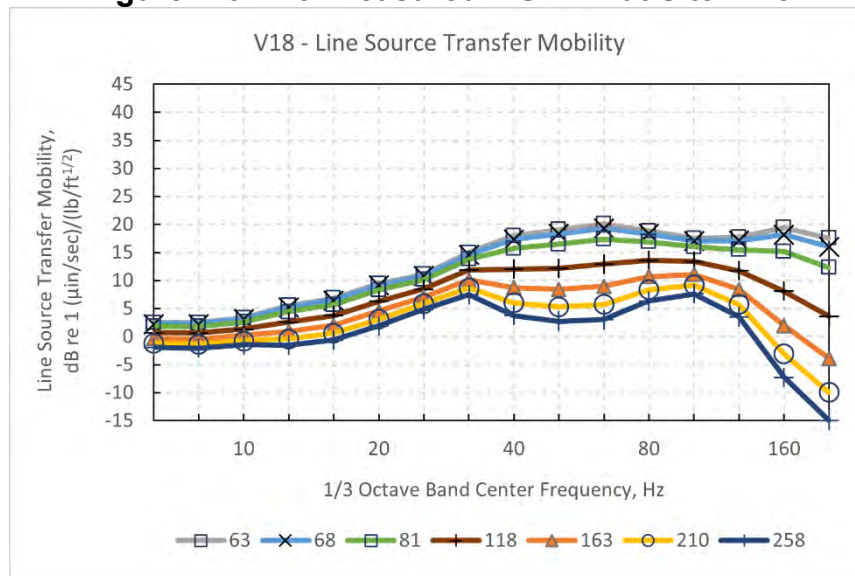


Figure N.3C-44. Measured Coherence at Site V-18

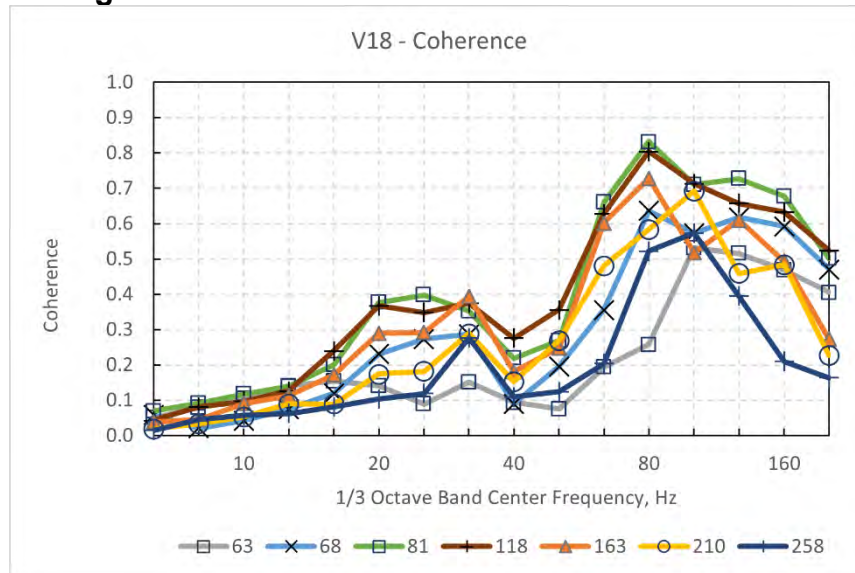


Table N.3C-23. L.S.T.M. Coefficients for Surface West Seattle

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	23.5	28.0	31.5	33.9	37.0	47.5	53.8	59.8	60.2	67.8	70.9	83.4	84.7	85.8	81.1	86.8
B	-1.0	-1.9	-2.8	-3.1	-5.3	-10.4	-12.6	-15.4	-15.7	-20.1	-23.3	-32.2	-35.9	-38.7	-38.1	-42.4
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$LSTM = A + B * \log(dist) + C * \log(dist)^2$$

Note: Applied to sensitive receivers near elevated, at-grade, or retained-cut track in the Duwamish, Delridge, and West Seattle Junction segments.

Table N.3C-24. L.S.T.M. Coefficients for Borehole West Seattle

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	34.8	37.8	53.0	49.4	21.7	46.1	23.3	52.2	63.1	96.8	57.9	49.9	69.7	81.8	108.2	102.2
B	-17.5	-18.6	-24.7	-23.4	-11.3	-21.8	-10.1	-21.3	-25.1	-40.1	-23.5	-18.9	-27.7	-34.8	-48.4	-46.0
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Note: Applied to sensitive receivers near tunnel track in the Duwamish, Delridge, and West Seattle Junction segments.

Table N.3C-25. L.S.T.M. Coefficients for Borehole Downtown

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	34.3	54.5	47.8	56.3	59.0	72.7	87.8	97.4	145.6	137.7	126.0	137.0	164.2	103.1	118.9	150.8
B	-14.6	-23.7	-20.1	-23.7	-25.3	-32.0	-37.4	-41.9	-63.3	-61.5	-57.4	-62.7	-74.9	-48.4	-55.8	-68.1
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Note: Applied to sensitive receivers near tunnel track in the Downtown and South Interbay segments.

Table N.3C-26. L.S.T.M. Coefficients for Surface Ballard

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	38.1	33.5	29.0	29.9	30.7	42.5	65.2	77.8	88.6	91.0	92.2	84.7	82.0	77.7	71.4	77.1
B	-9.3	-7.5	-4.6	-4.4	-4.6	-8.9	-18.7	-23.8	-29.5	-32.7	-36.0	-34.7	-35.3	-35.5	-34.1	-39.2
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Note: Applied to sensitive receivers near elevated, at-grade, or retained-cut track in the South Interbay or Interbay/Ballard segments.

Table N.3C-27. L.S.T.M. Coefficients for Tunnel Ballard

Coeff.	6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz
A	10.1	13.6	15.5	23.6	35.8	36.1	34.2	35.6	56.8	63.3	66.5	53.5	45.7	59.8	95.9	110.8
B	-5.5	-7.5	-8.0	-11.3	-15.9	-14.7	-13.2	-12.8	-23.1	-26.1	-27.3	-20.7	-17.0	-24.5	-43.9	-53.3
C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

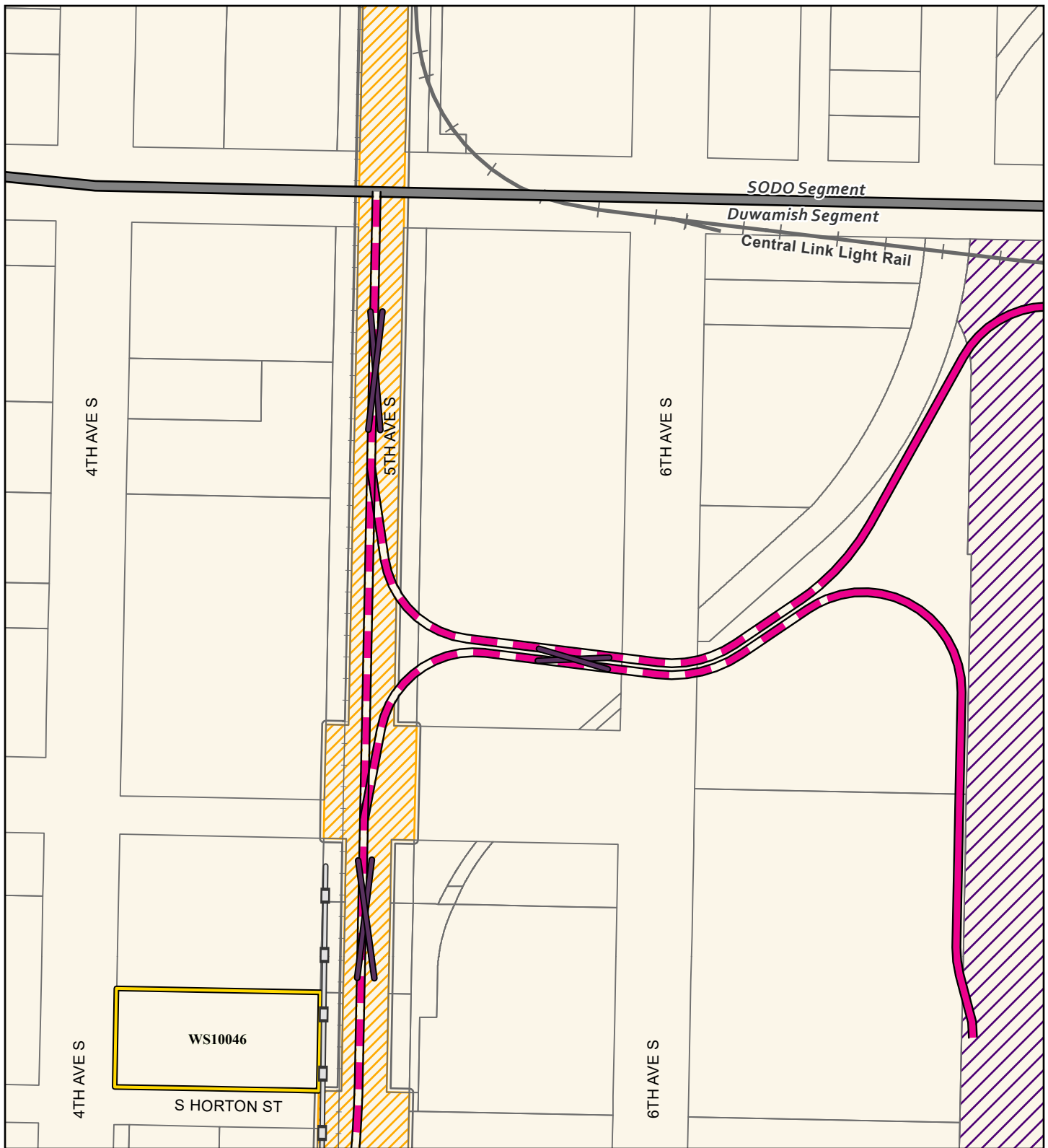
$$L.S.T.M. = A + B * \log(dist) + C * \log(dist)^2$$

Note: Applied to sensitive receivers near tunnel track in the Interbay/Ballard Segment.

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Attachment N.3D
Maps of Noise Impact Assessment

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Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

Segment Line

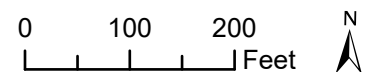
- Existing Link Light Rail
- Railroad
- Proposed Sound Wall
- Sound Transit Operations and Maintenance Facility (ST OMF)
- Parcel
- SODO Busway

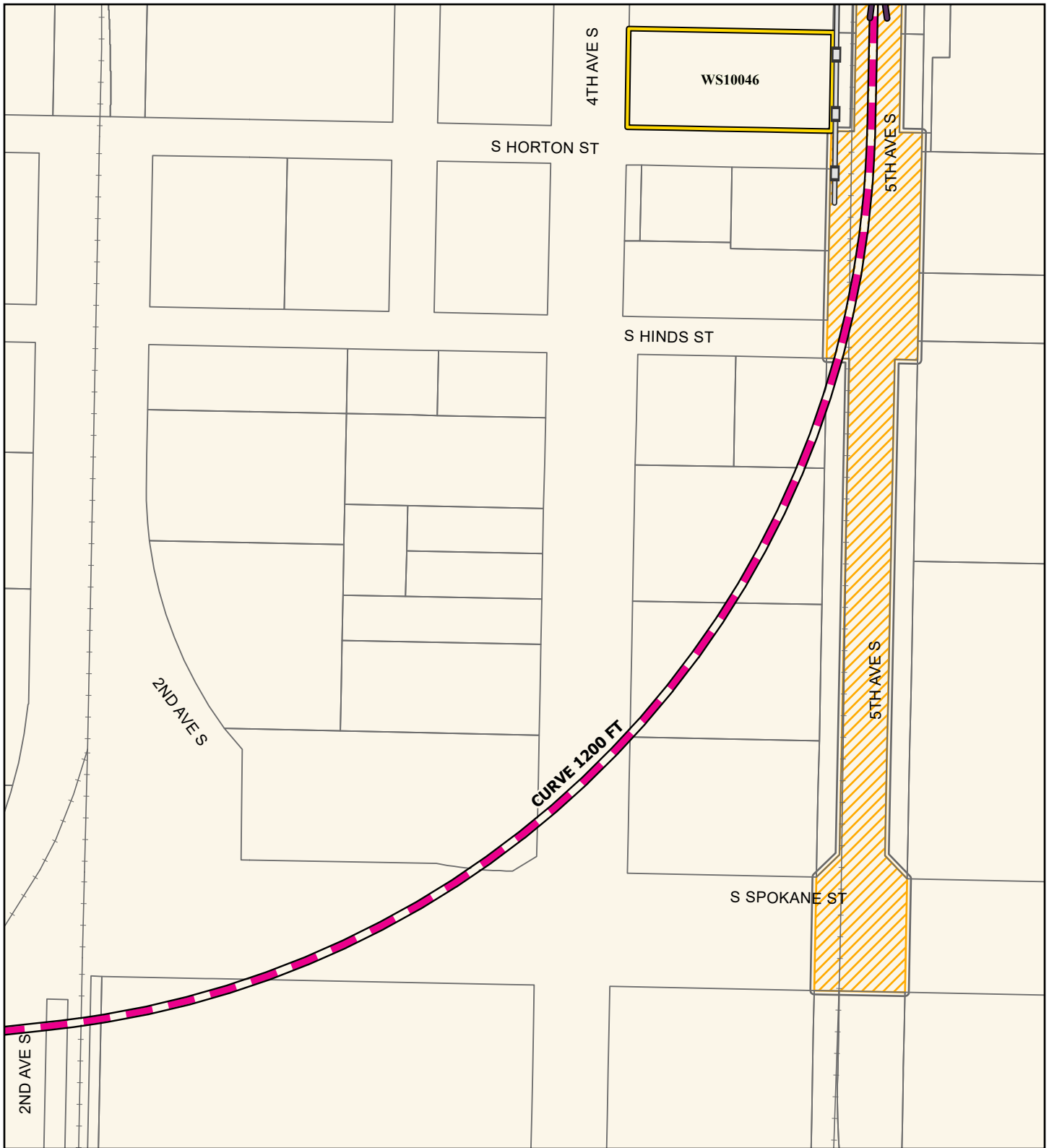
- Crossover

Noise Impacts

- Moderate Impact

FIGURE N.3D-1a
Alternative DUW-1a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

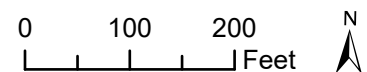
- Elevated
- At-Grade
- Tunnel
- Retained Cut

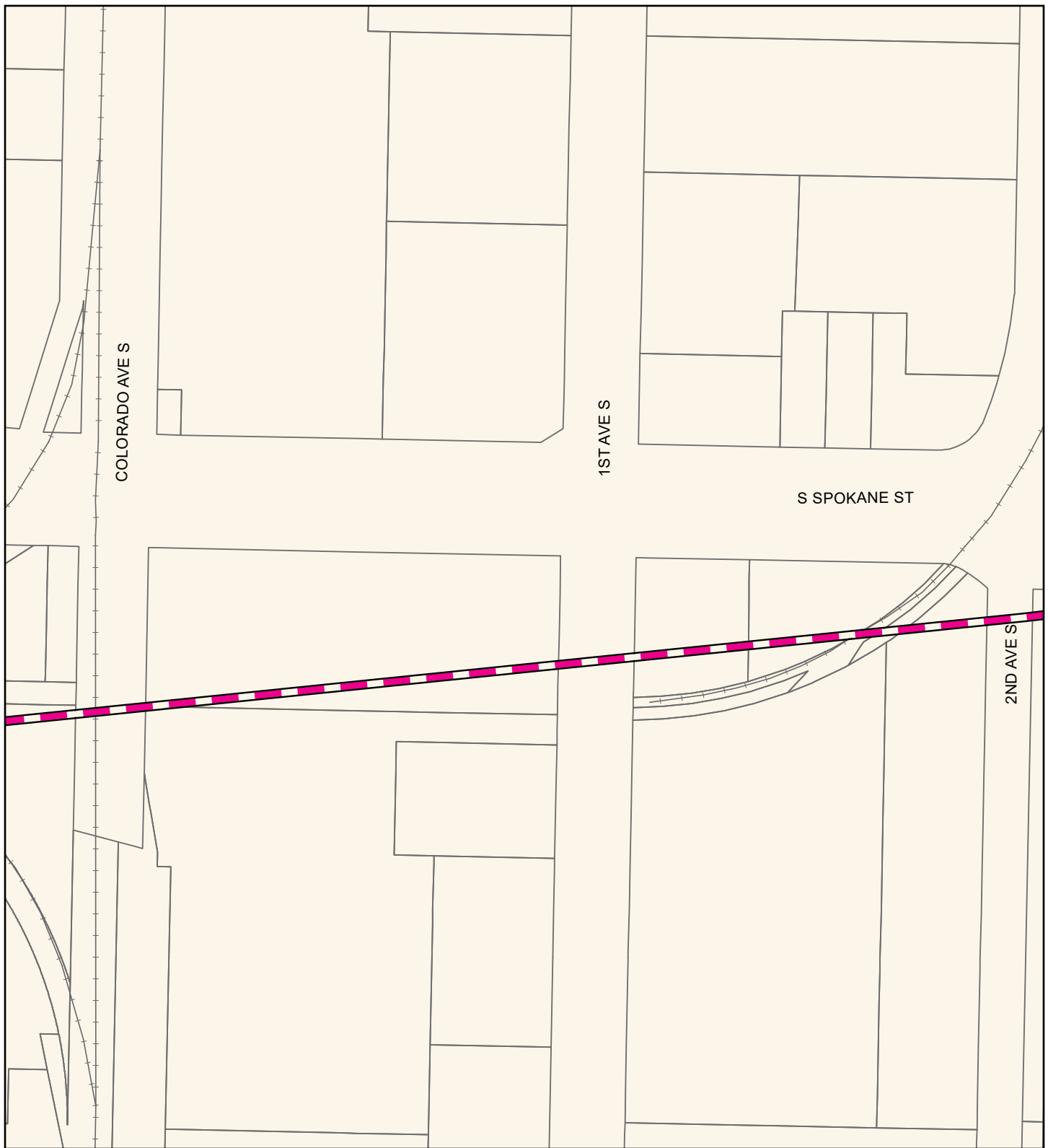
Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- SODO Busway
- Crossover
- Noise Impacts
- Moderate Impact

FIGURE N.3D-1b
Alternative DUW-1a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

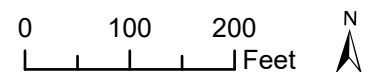
- Elevated
- Tunnel
- At-Grade
- Retained Cut

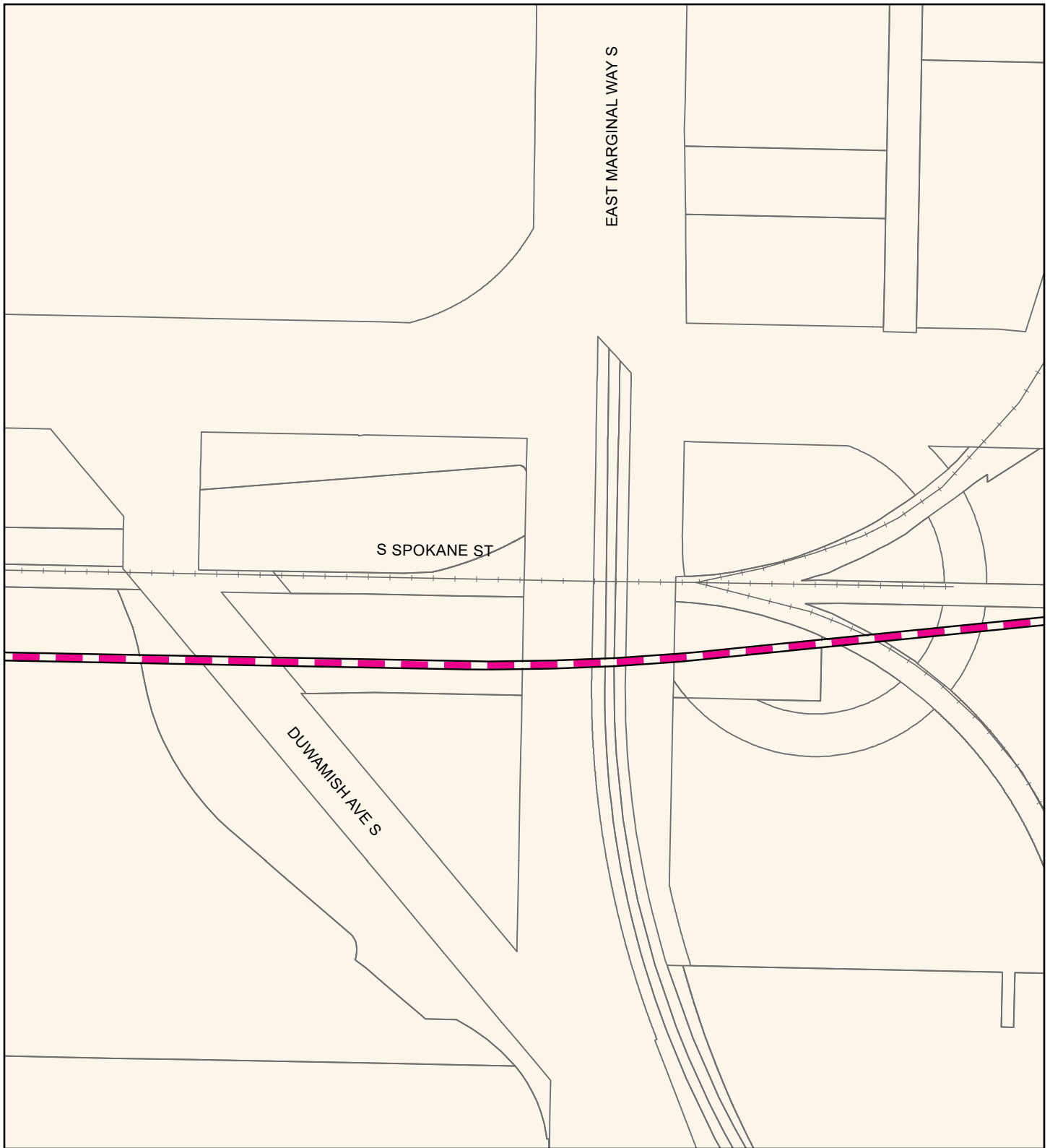
Station

- New
- Existing

- Railroad
- Parcel

FIGURE N.3D-1c
Alternative DUW-1a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

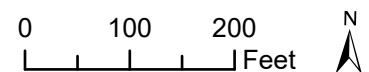
- Elevated
- At-Grade
- Tunnel
- Retained Cut

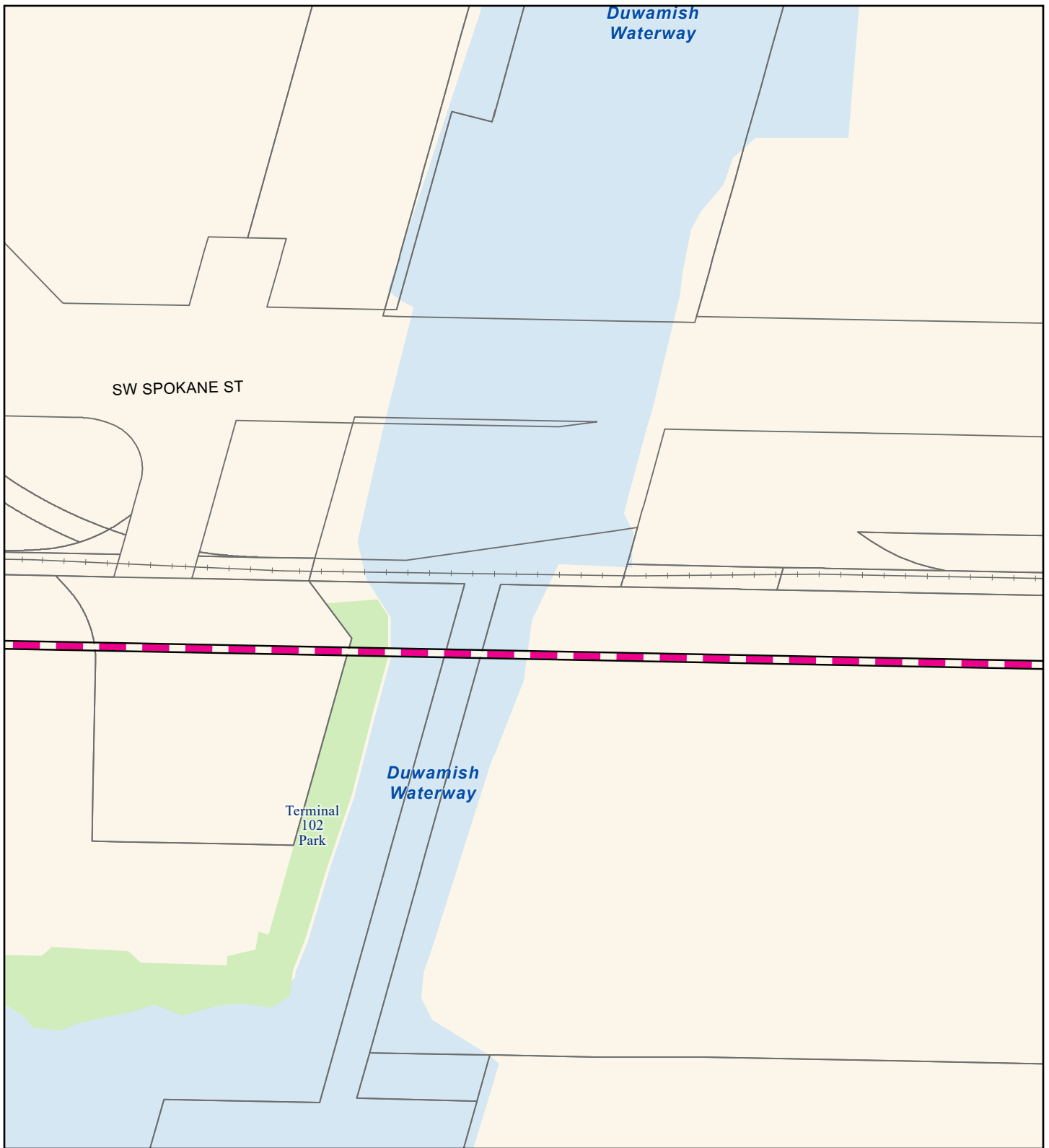
Station

- New
- Existing

- Railroad
- Parcel

FIGURE N.3D-1d
Alternative DUW-1a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

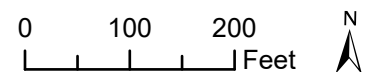
- Elevated --- Tunnel
- At-Grade --- Retained Cut

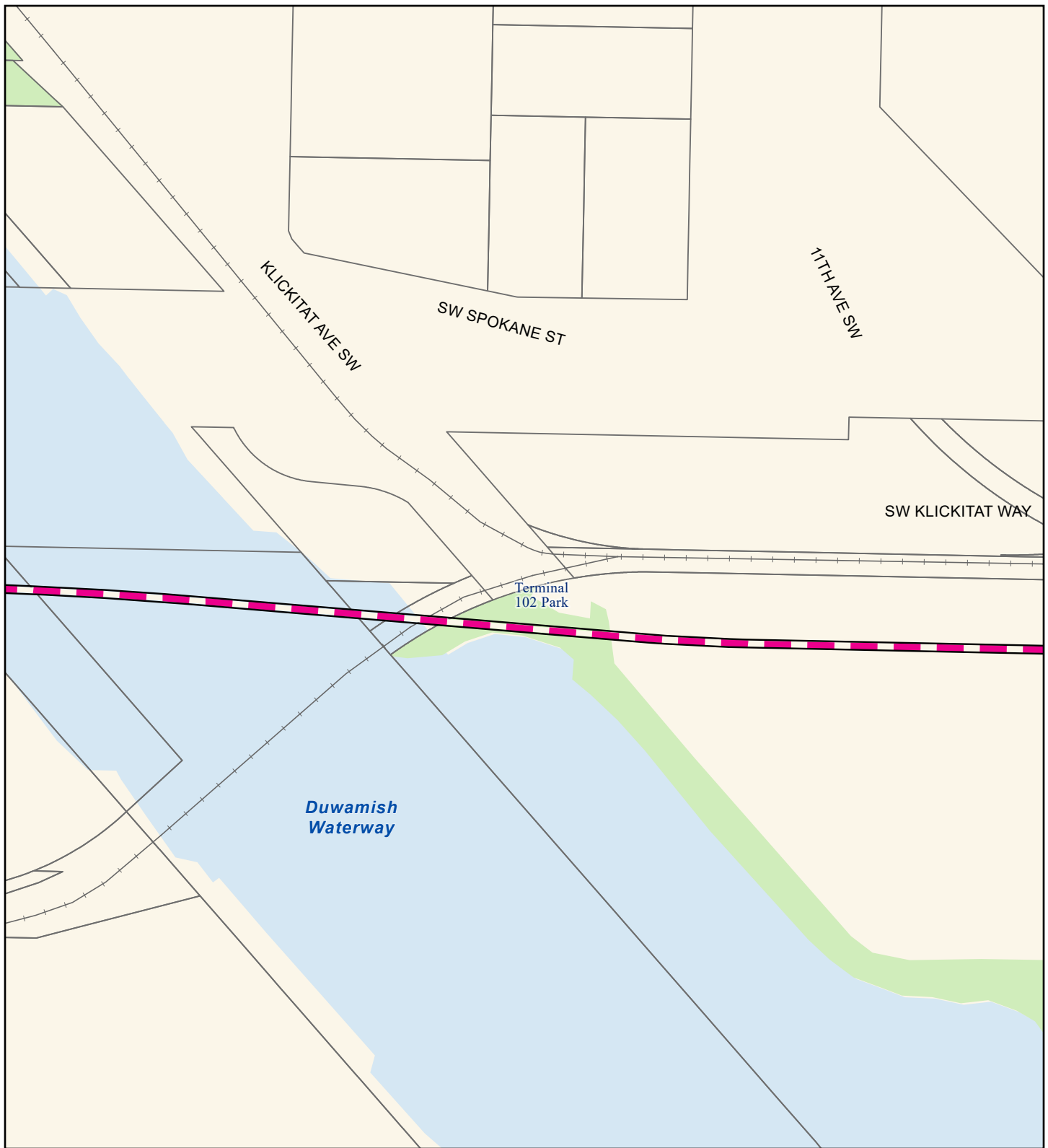
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3D-1e
Alternative DUW-1a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

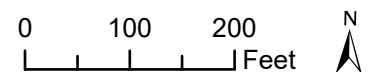
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3D-1f
Alternative DUW-1a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

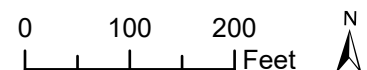
- Elevated
- At-Grade
- Tunnel
- Retained Cut

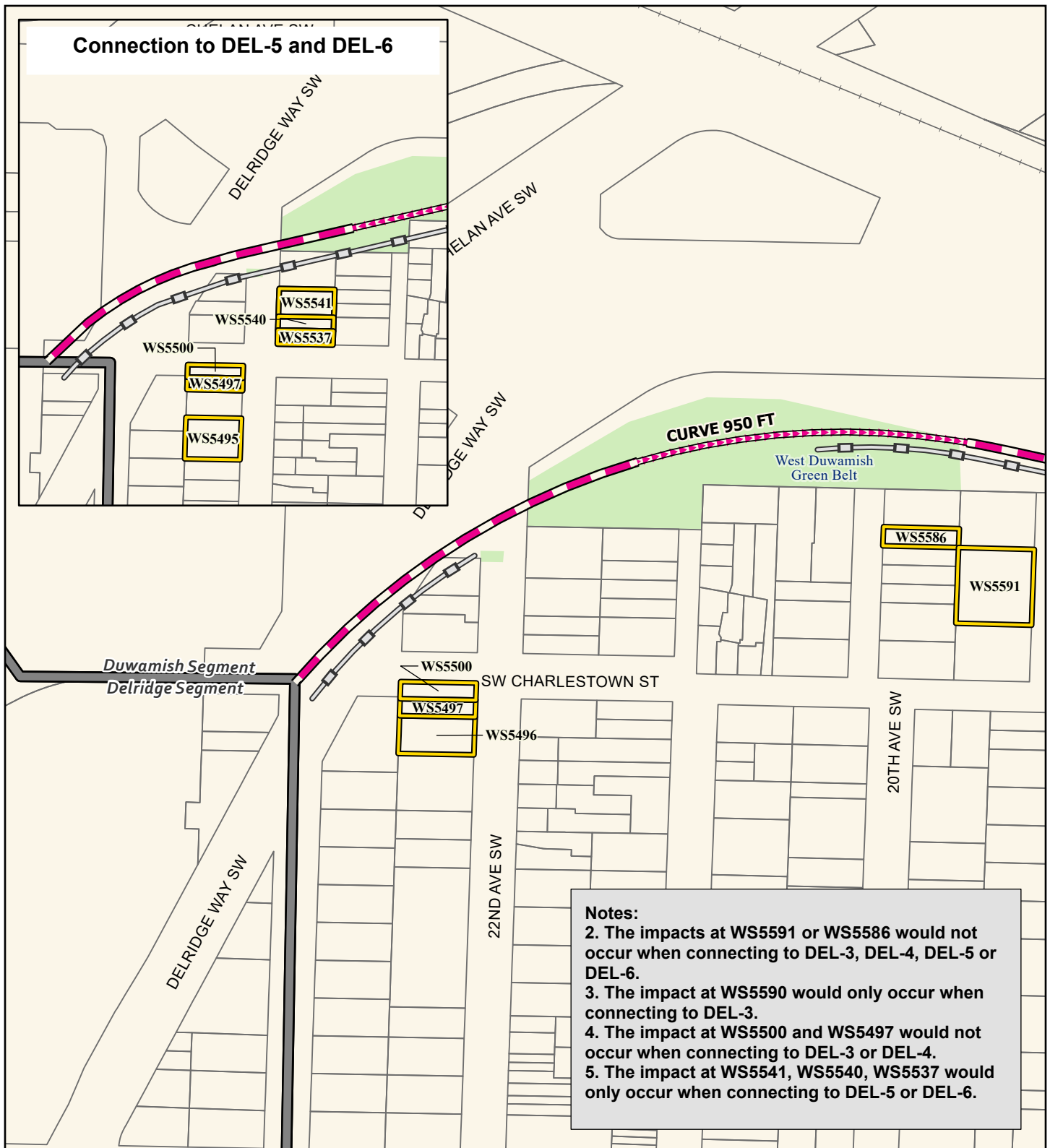
Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- Park
- Water Body
- Noise Impacts
- Moderate Impact

FIGURE N.3D-1g
Alternative DUW-1a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

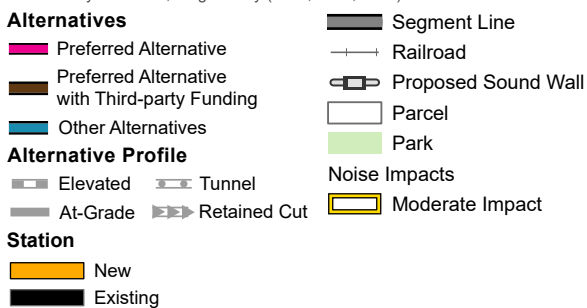
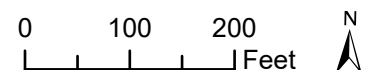
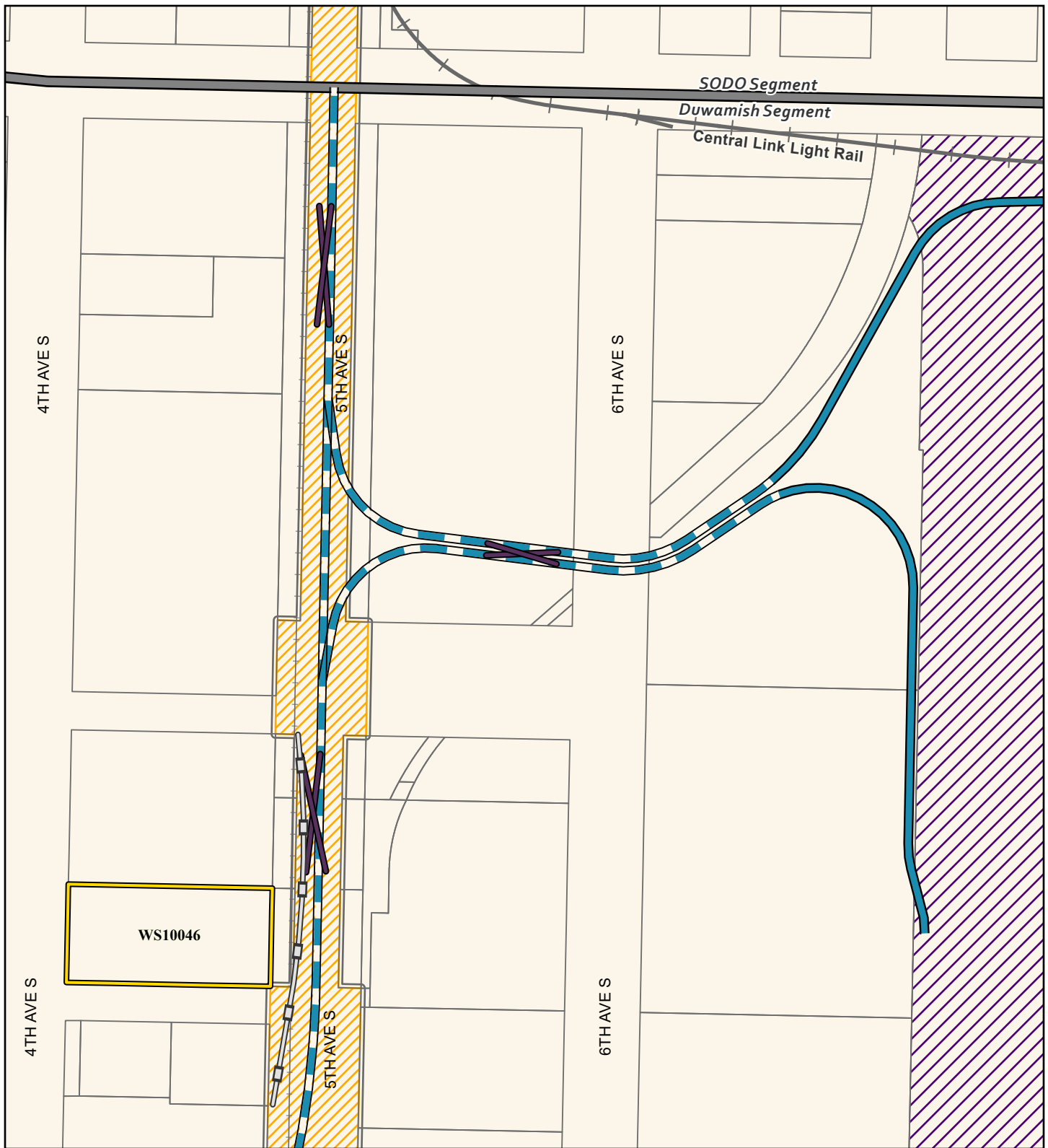


FIGURE N.3D-1h
Alternative DUW-1a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

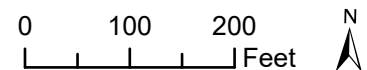
Segment Line

- Existing Link Light Rail
- Railroad
- Proposed Sound Wall
- Sound Transit Operations and Maintenance Facility (ST OMF)
- Parcel
- SODO Busway
- Crossover

Noise Impacts

- Moderate Impact

FIGURE N.3D-2a
Option DUW-1b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

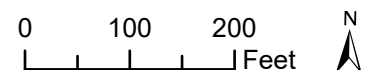
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- SODO Busway
- Crossover
- Noise Impacts
- Moderate Impact

FIGURE N.3D-2b
Option DUW-1b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

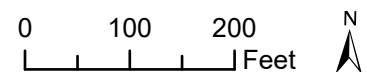
- Elevated
- At-Grade
- Tunnel
- Retained Cut

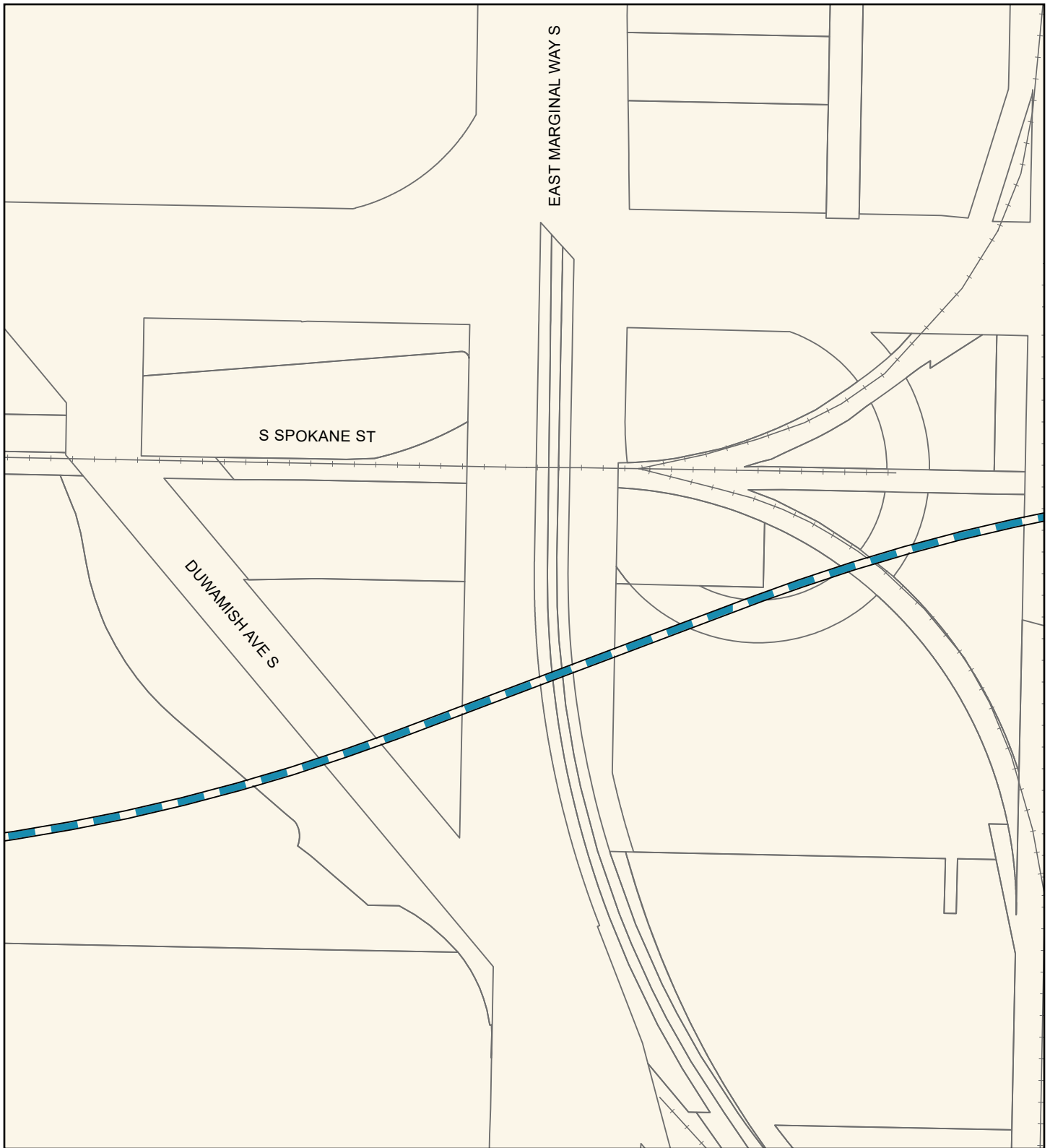
Station

- New
- Existing

- Railroad
- Parcel

FIGURE N.3D-2c
Option DUW-1b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

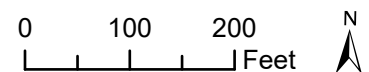
- Elevated
- Tunnel
- At-Grade
- Retained Cut

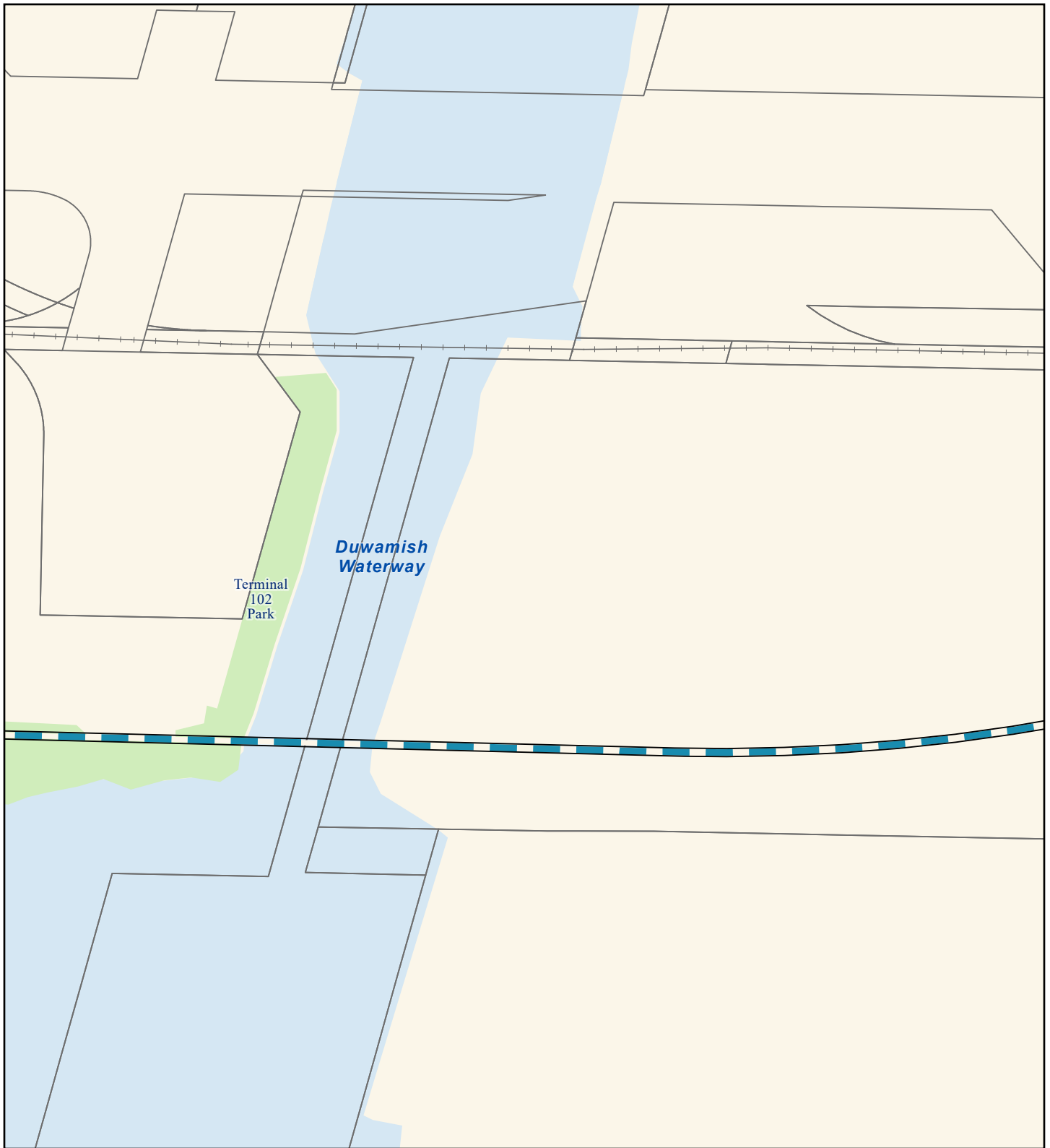
Station

- New
- Existing

- Railroad
- Parcel

FIGURE N.3D-2d
Option DUW-1b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

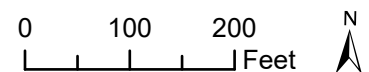
- Elevated
- Tunnel
- At-Grade
- Retained Cut

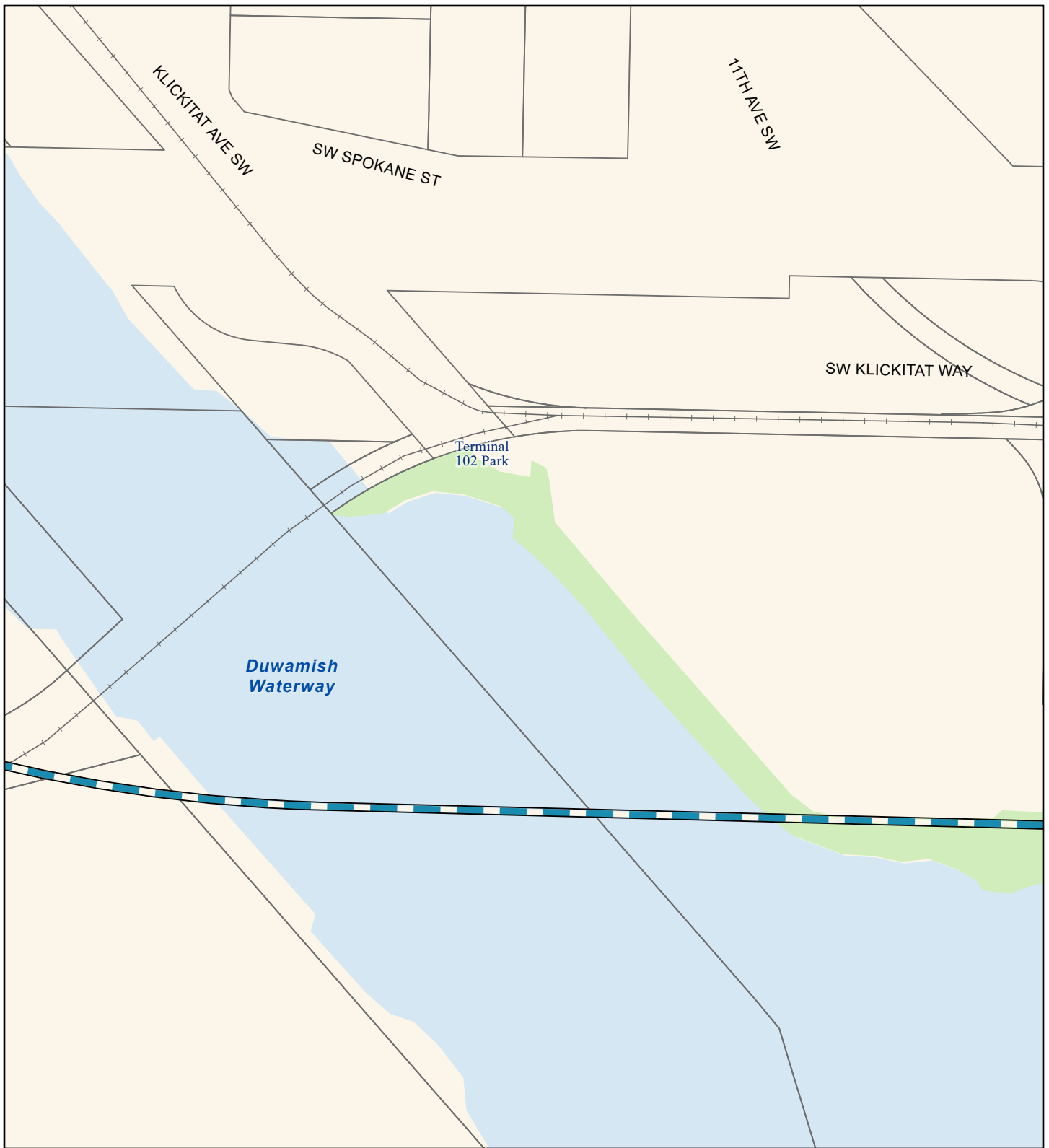
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3D-2e
Option DUW-1b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

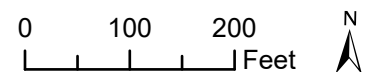
- Elevated — Tunnel
- At-Grade — Retained Cut

Station

- New
- Existing

- +— Railroad
- Parcel
- Park
- Water Body

FIGURE N.3D-2f
Option DUW-1b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

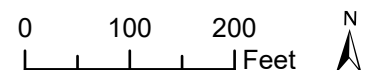
- Elevated
- At-Grade
- Tunnel
- Retained Cut

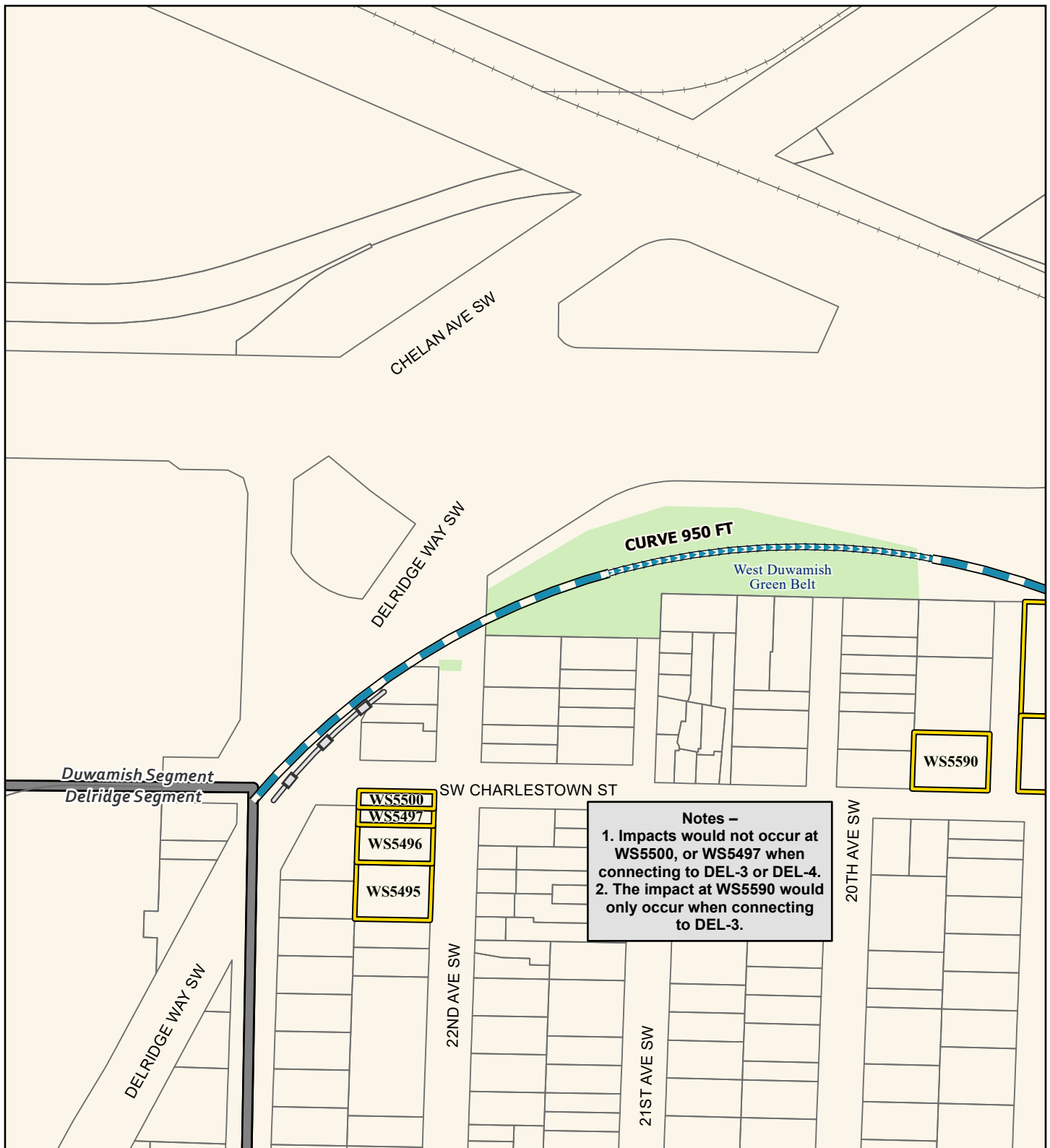
Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- Park
- Water Body
- Noise Impacts
- Moderate Impact

FIGURE N.3D-2g
Option DUW-1b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

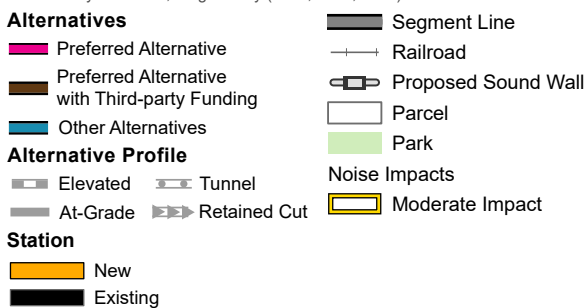
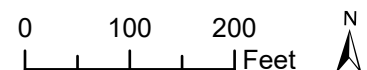
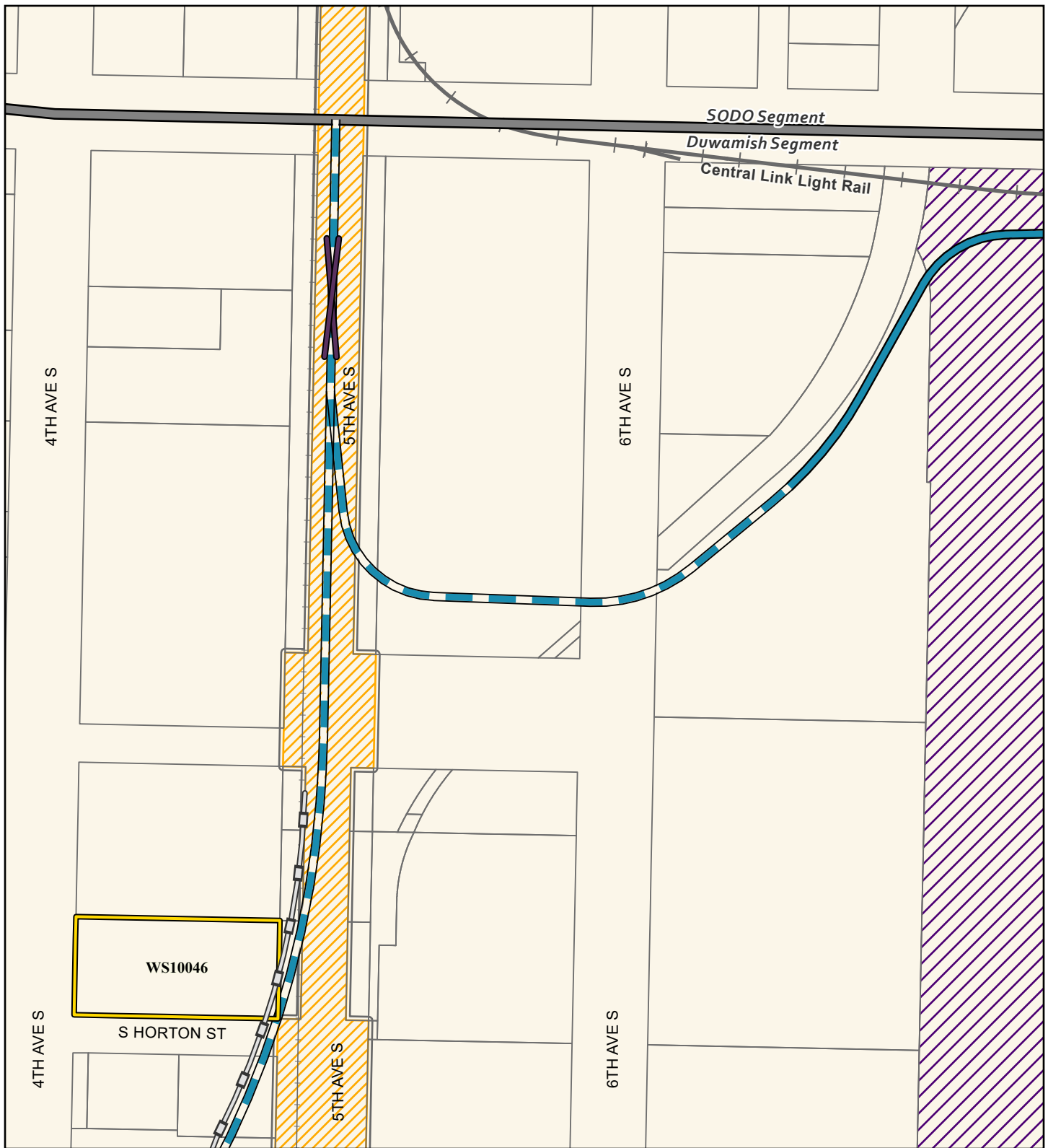


FIGURE N.3D-2h
Option DUW-1b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

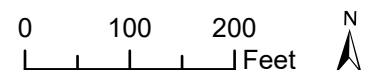
- Elevated
- At-Grade
- Tunnel
- Retained Cut

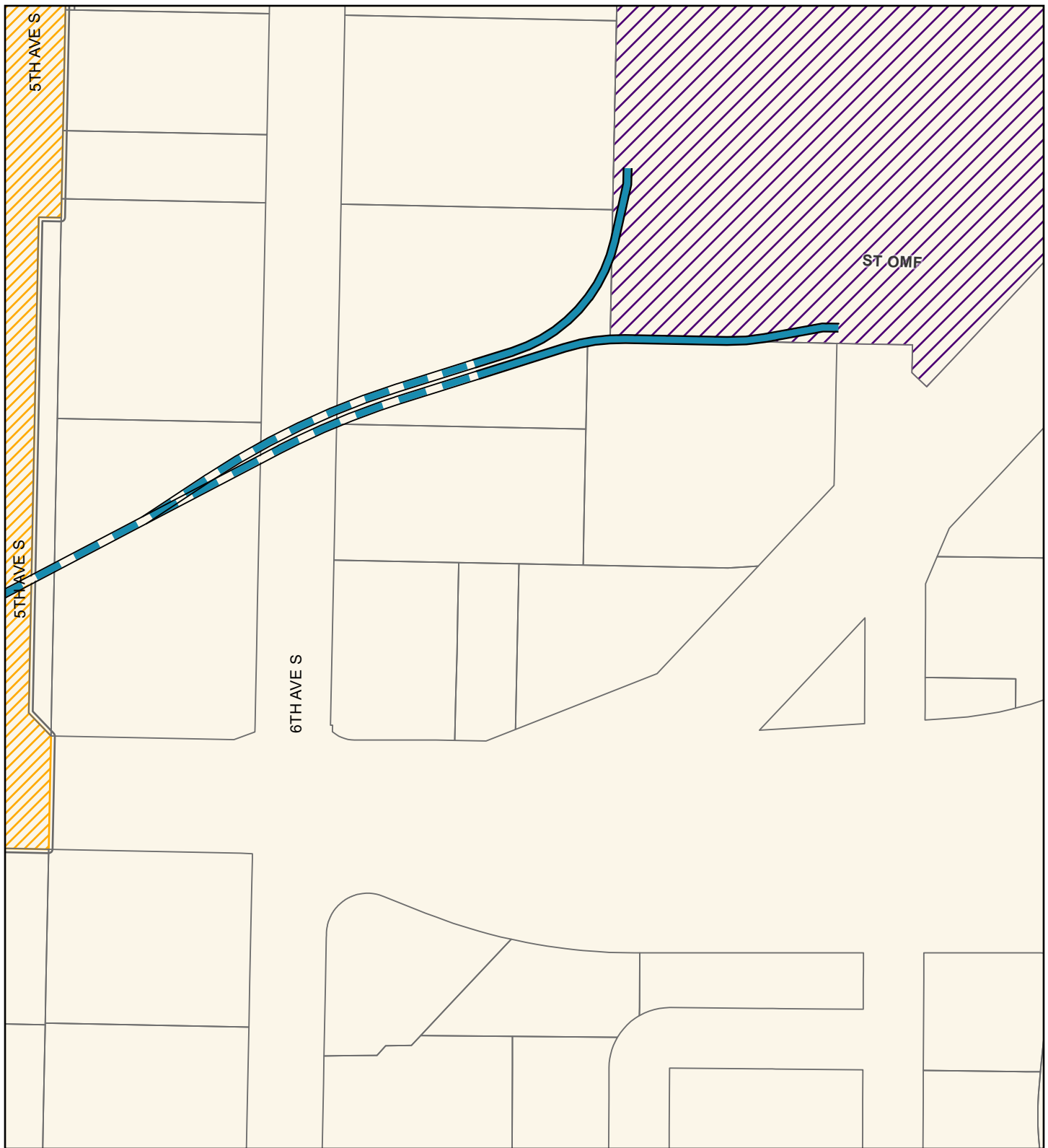
Station

- New
- Existing

- Segment Line
- + Existing Link Light Rail
- + Railroad
- + Proposed Sound Wall
- Sound Transit Operations and Maintenance Facility (STOMF)
- Parcel
- SODO Busway
- Crossover
- Noise Impacts
- Moderate Impact

FIGURE N.3D-3a
Alternative DUW-2
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

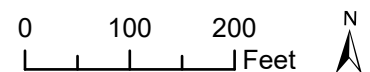
- Elevated — Tunnel
- At-Grade — Retained Cut

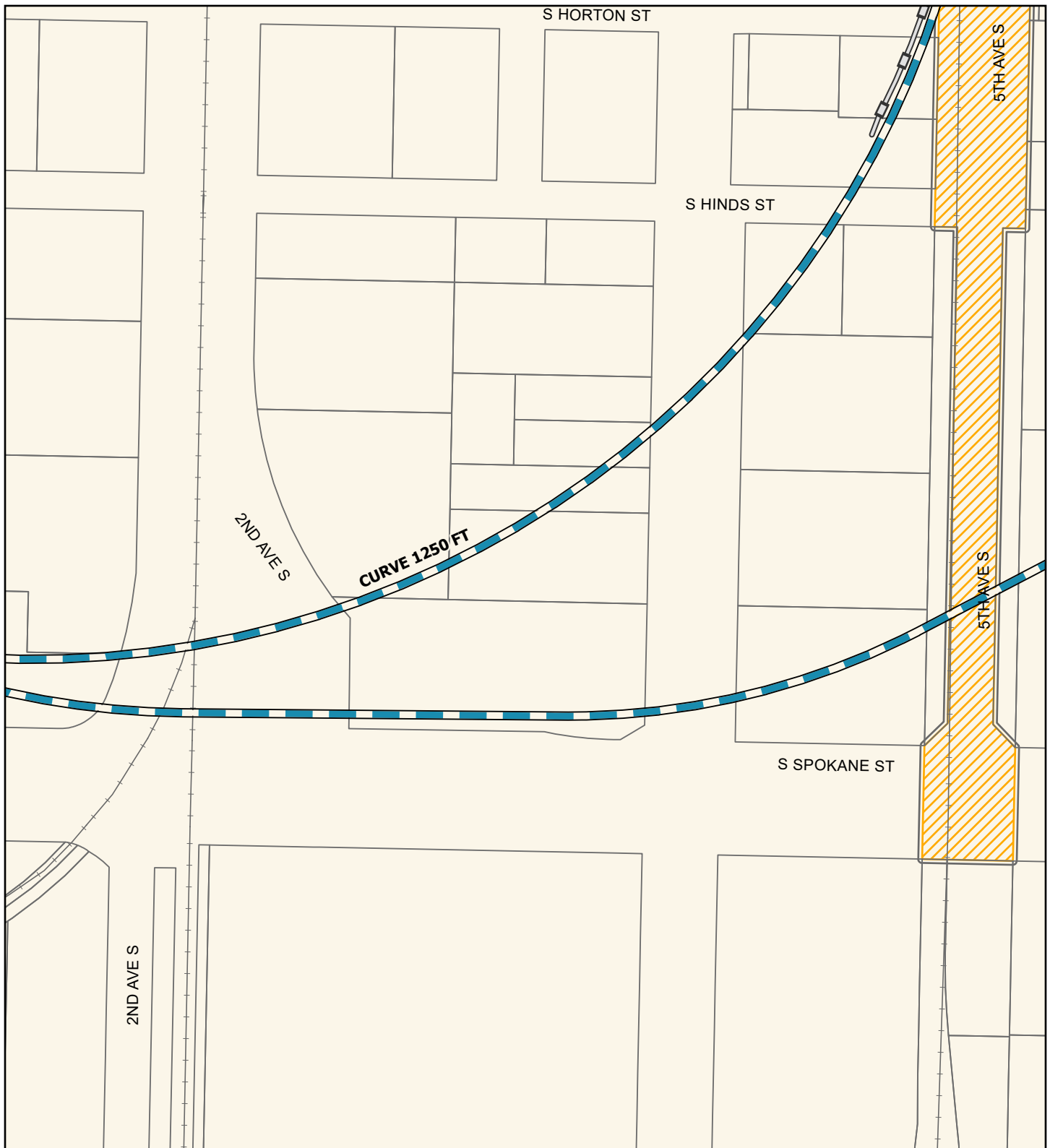
Station

- New
- Existing

- ▨ Sound Transit Operations and Maintenance Facility (ST OMF)
- ▨ Parcel
- ▨ SODO Busway

FIGURE N.3D-3b
Alternative DUW-2
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

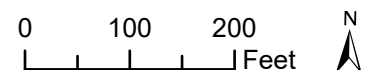
- Elevated
- At-Grade
- Tunnel
- Retained Cut

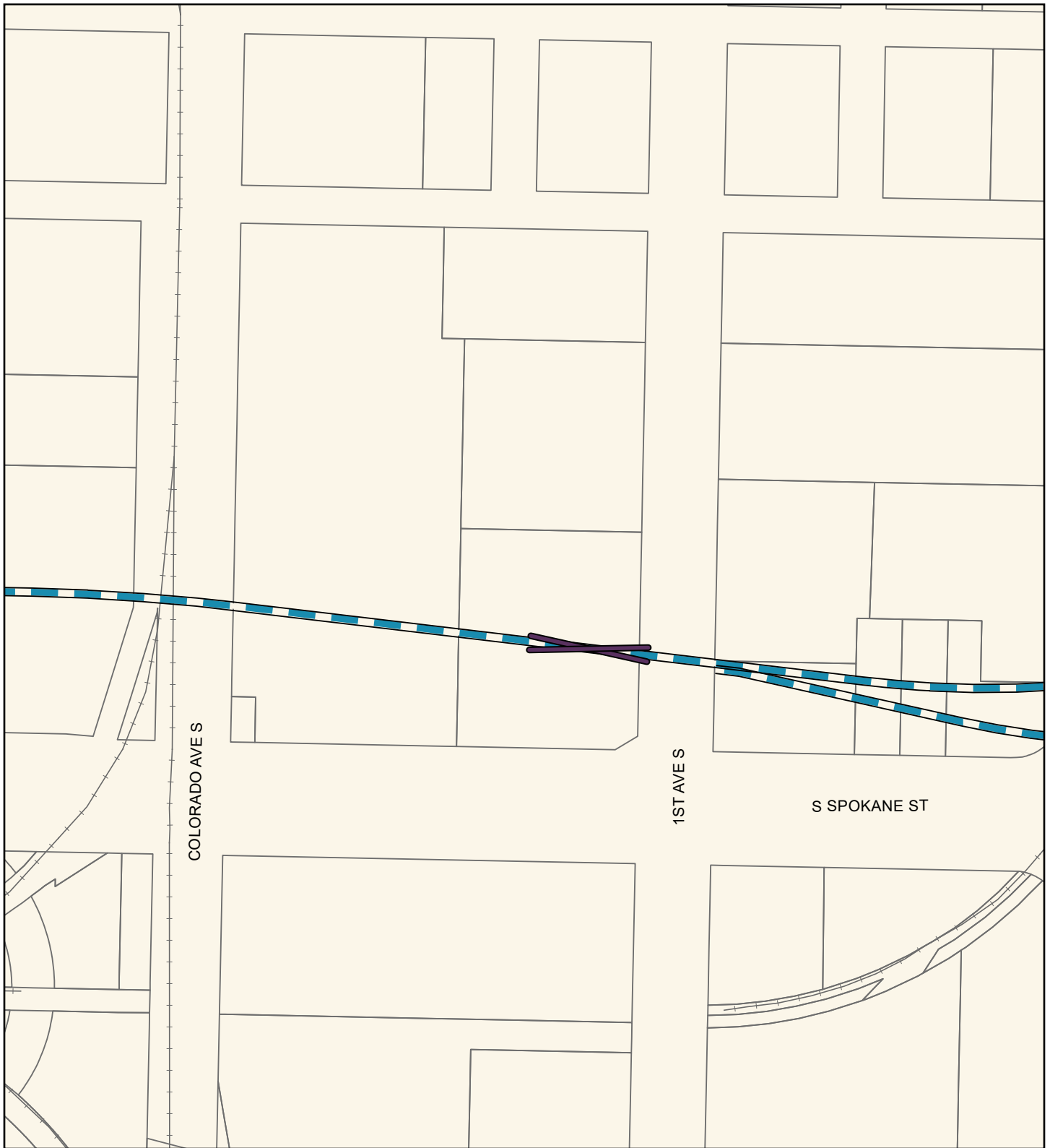
Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- SODO Busway

FIGURE N.3D-3c
Alternative DUW-2
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

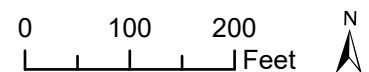
- Elevated
- At-Grade
- Tunnel
- Retained Cut

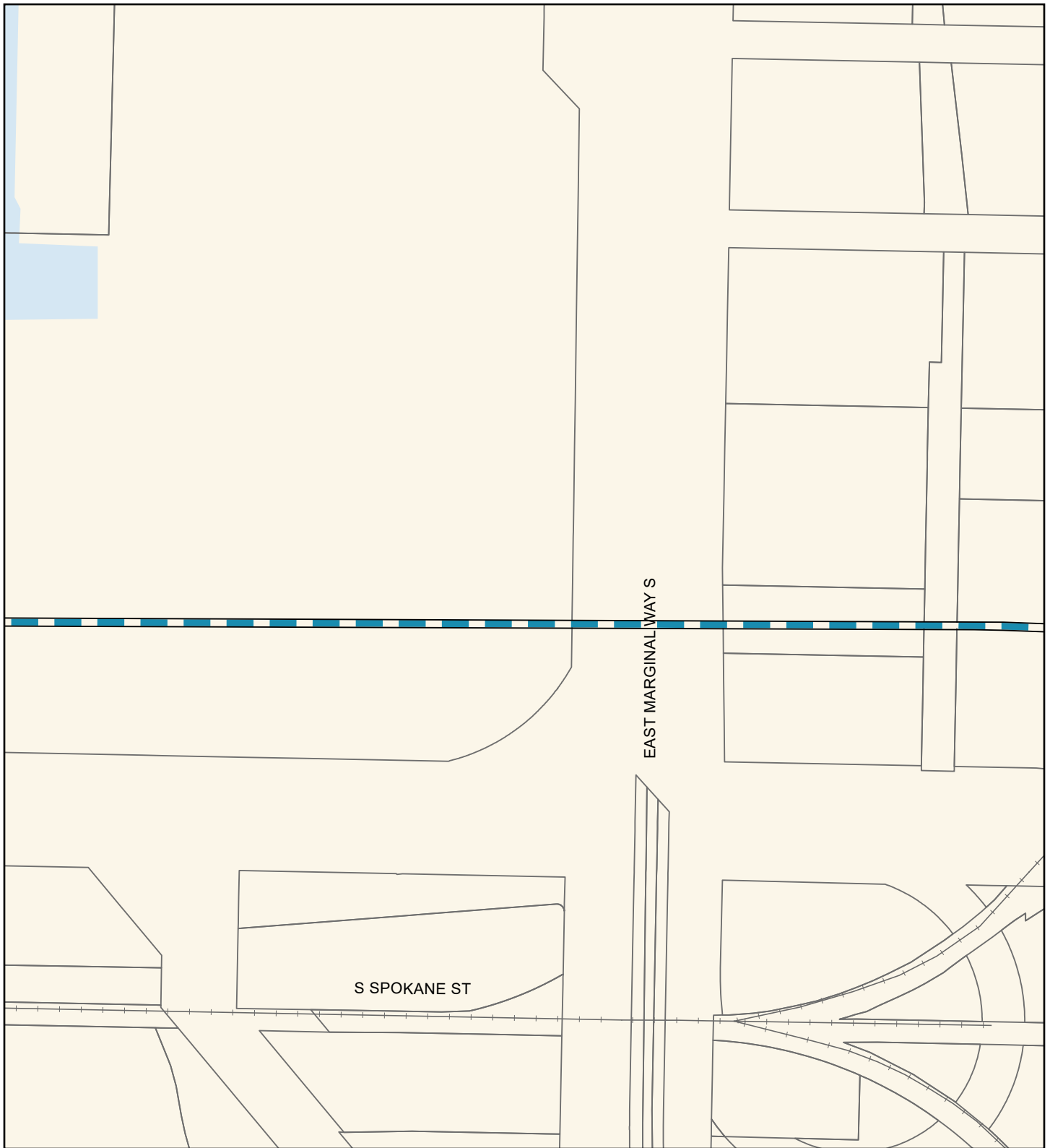
Station

- New
- Existing

- Railroad
- Parcel
- Crossover

FIGURE N.3D-3d
Alternative DUW-2
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

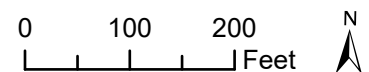
- Elevated
- At-Grade
- Tunnel
- Retained Cut

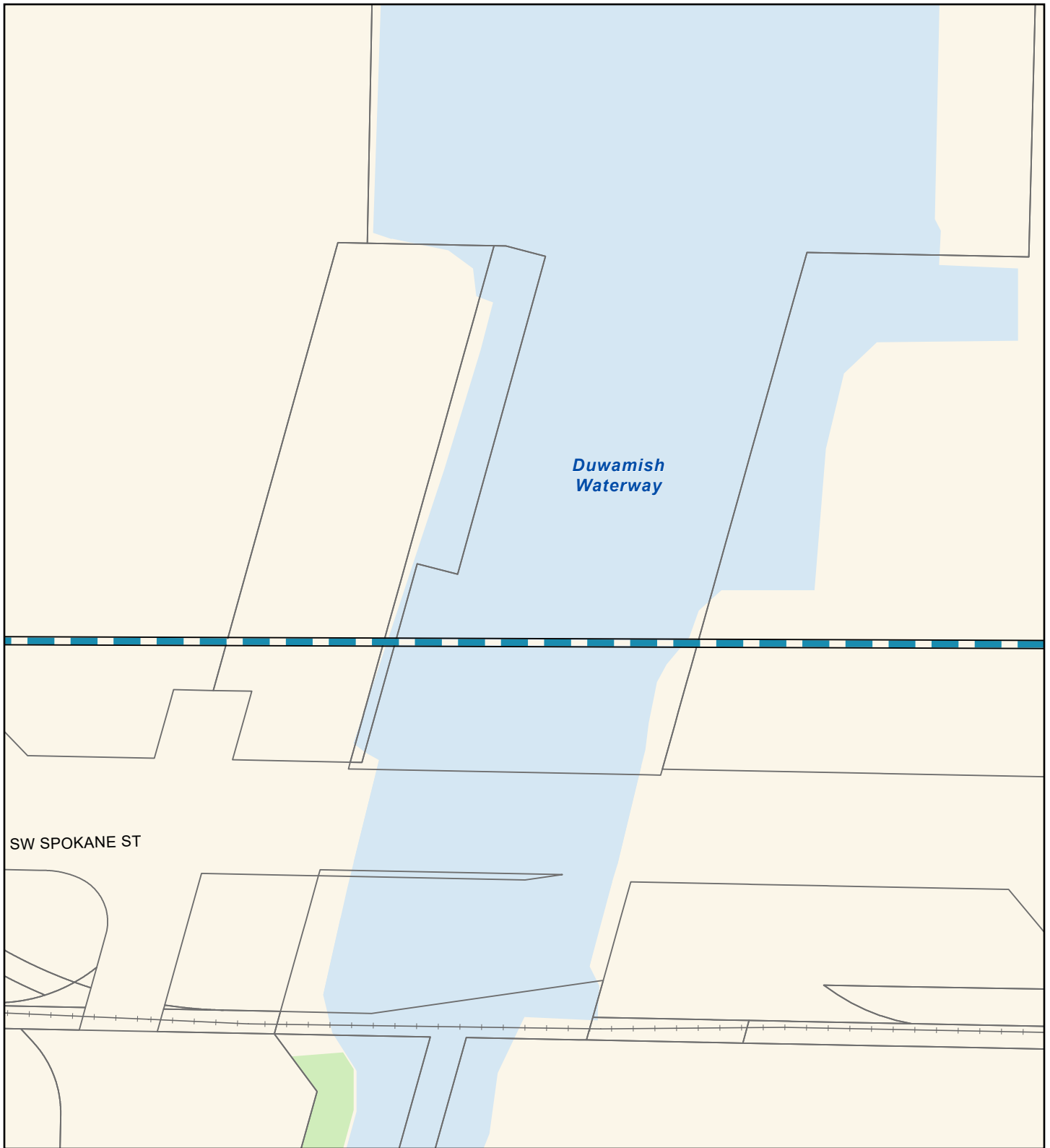
Station

- New
- Existing

- Railroad
- Parcel
- Water Body

FIGURE N.3D-3e
Alternative DUW-2
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

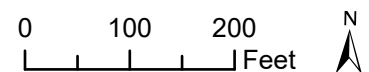
- Elevated
- At-Grade
- Tunnel
- Retained Cut

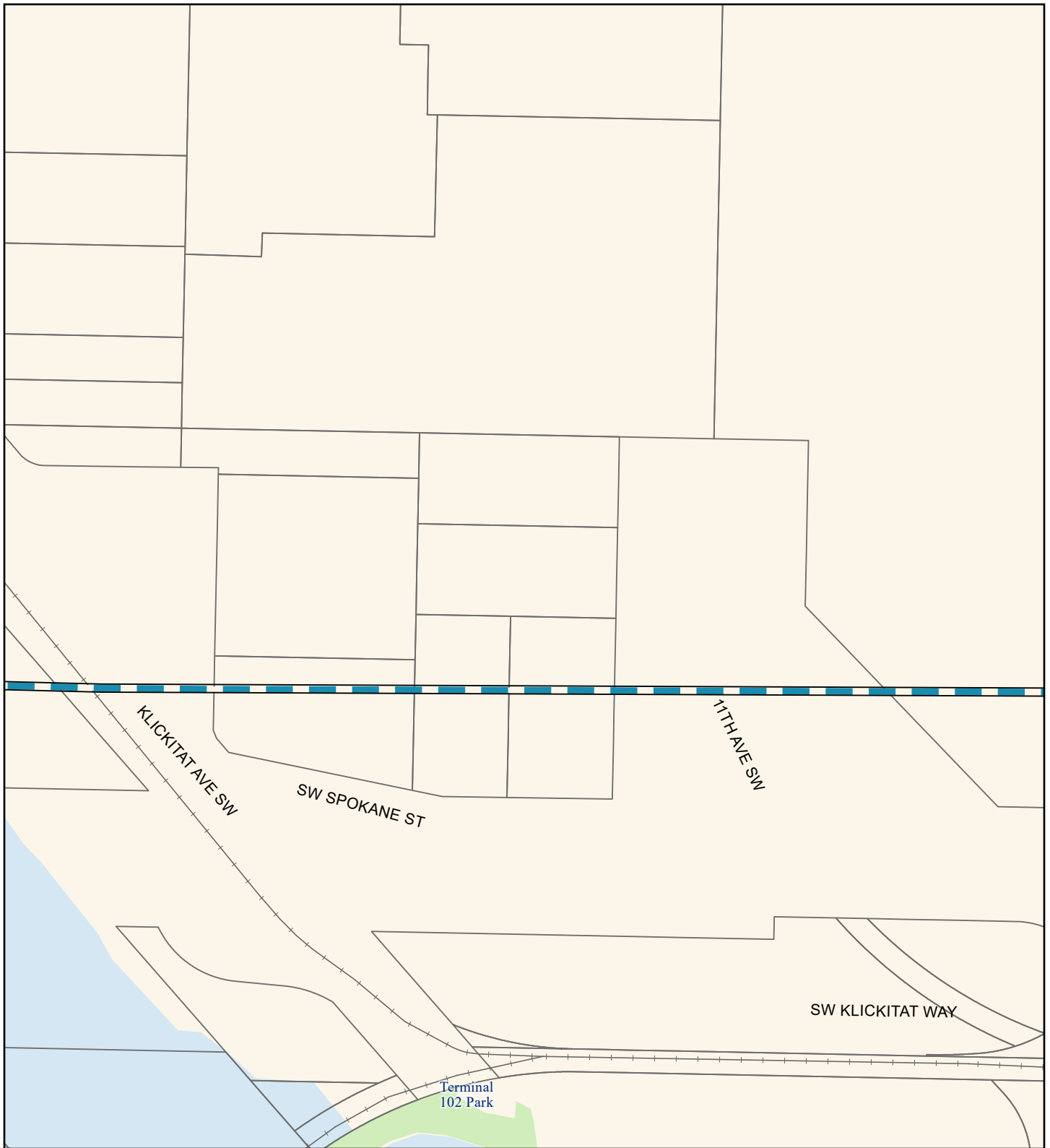
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3D-3f
Alternative DUW-2
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

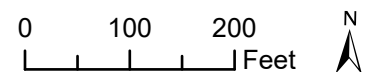
- Elevated
- At-Grade
- Tunnel
- Retained Cut

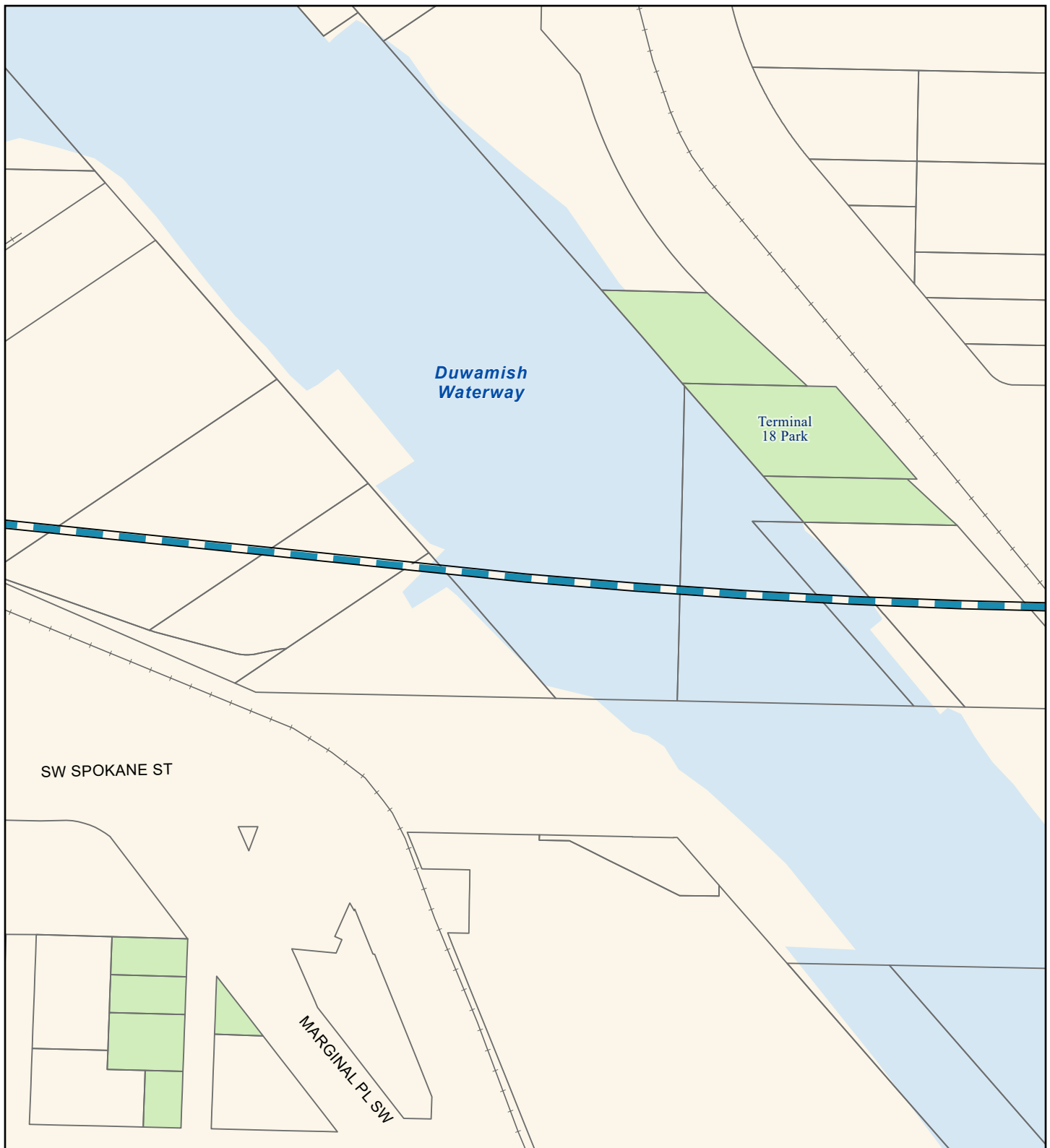
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3D-3g
Alternative DUW-2
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

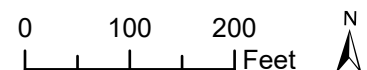
- Elevated
- At-Grade
- Tunnel
- Retained Cut

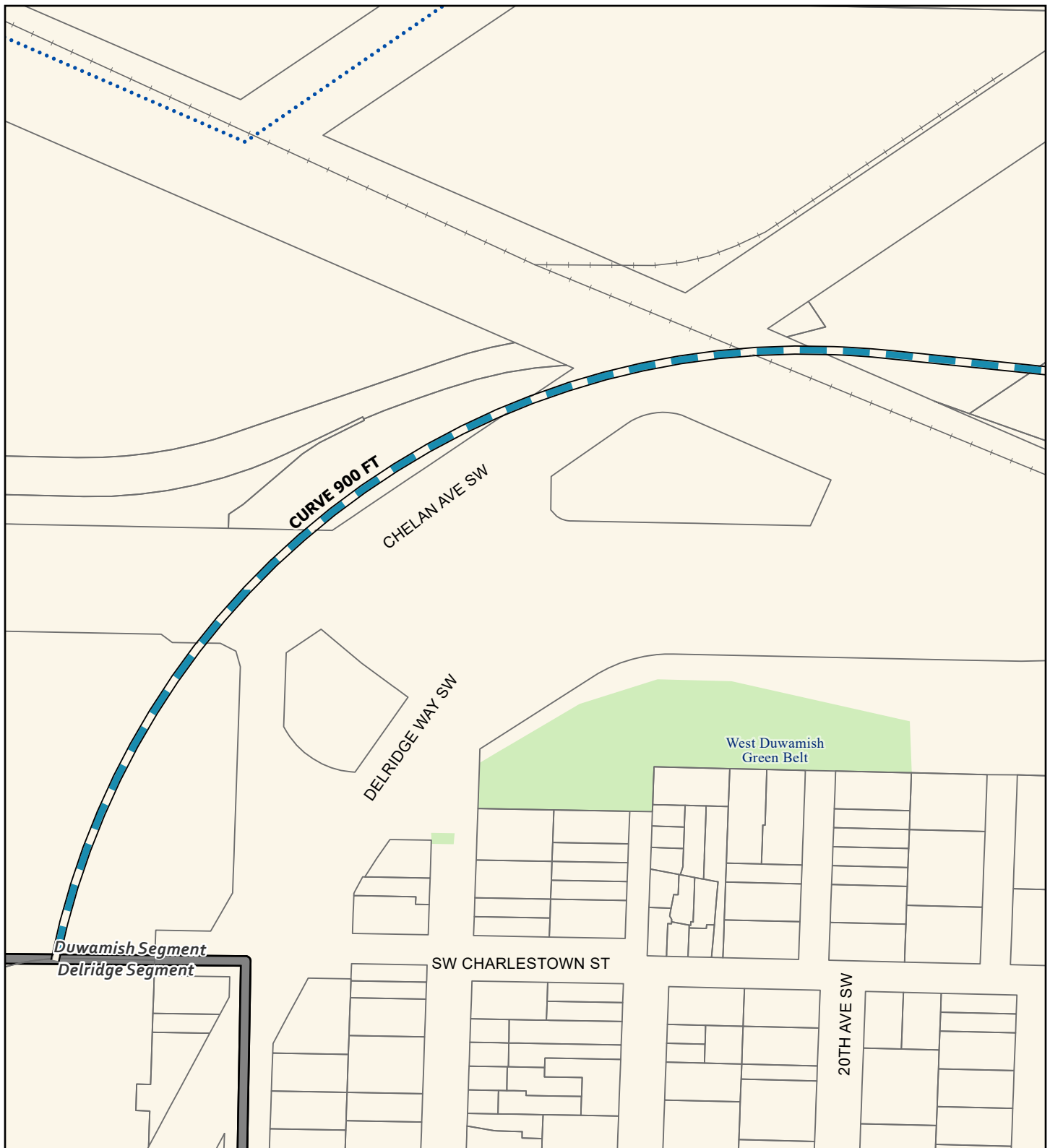
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3D-3h
Alternative DUW-2
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

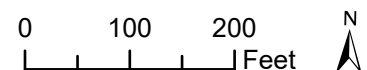
- Elevated
- At-Grade
- Tunnel
- Retained Cut

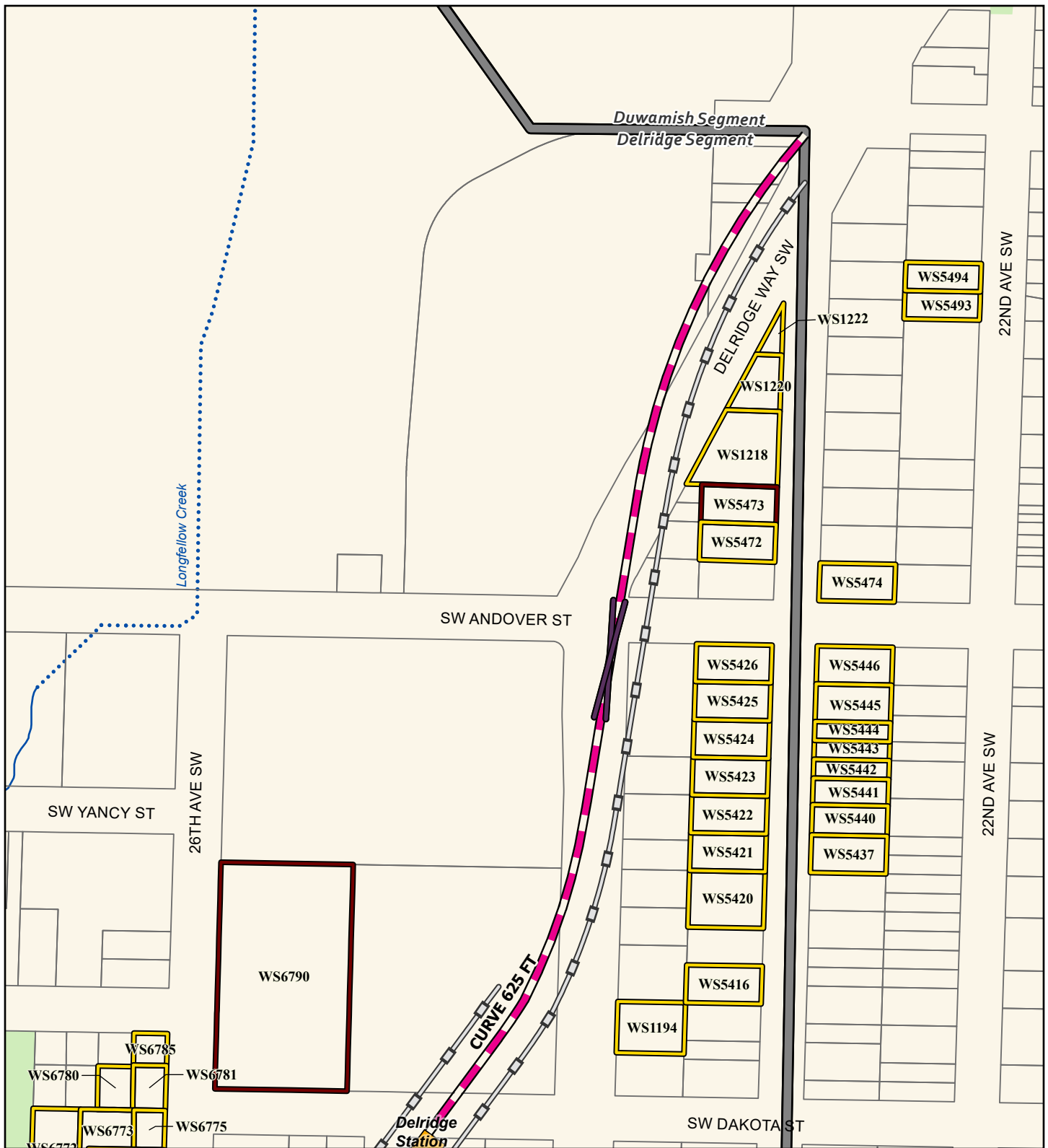
Station

- New
- Existing

- Segment Line
- Railroad
- Piped Stream
- Parcel
- Park

FIGURE N.3D-3i
Alternative DUW-2
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

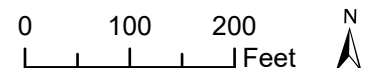
- Elevated
- At-Grade
- Tunnel
- Retained Cut

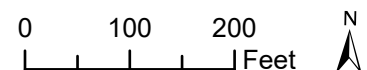
Station

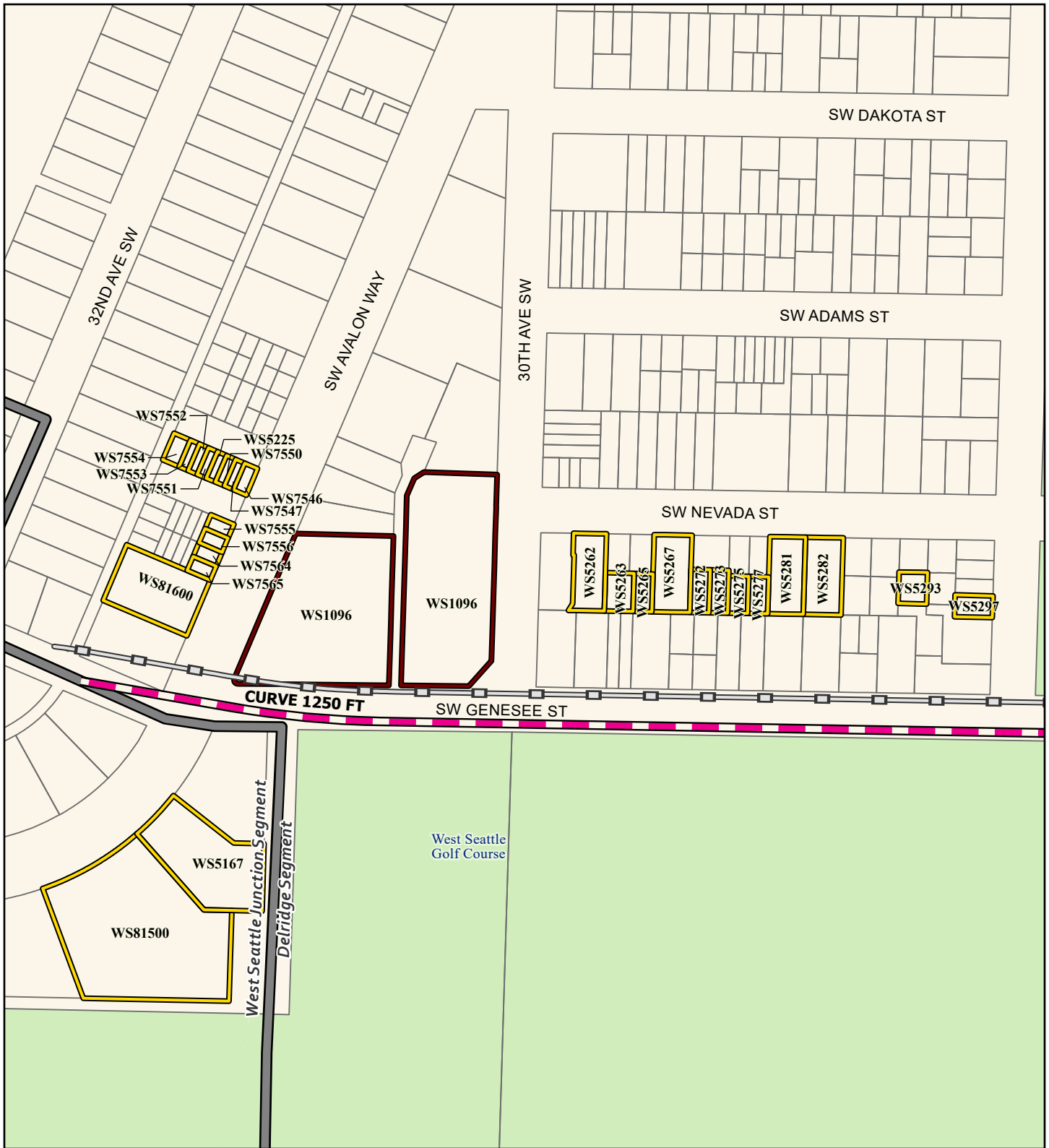
- New
- Existing

- Segment Line
- Stream
- ... Piped Stream
- Proposed Sound Wall
- Parcel
- Park
- Crossover
- Noise Impacts
- Severe Impact
- Moderate Impact

FIGURE N.3D-4a
Alternative DEL-1a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions







Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

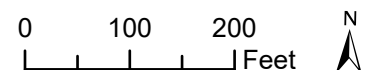
- Elevated
- At-Grade
- Tunnel
- Retained Cut

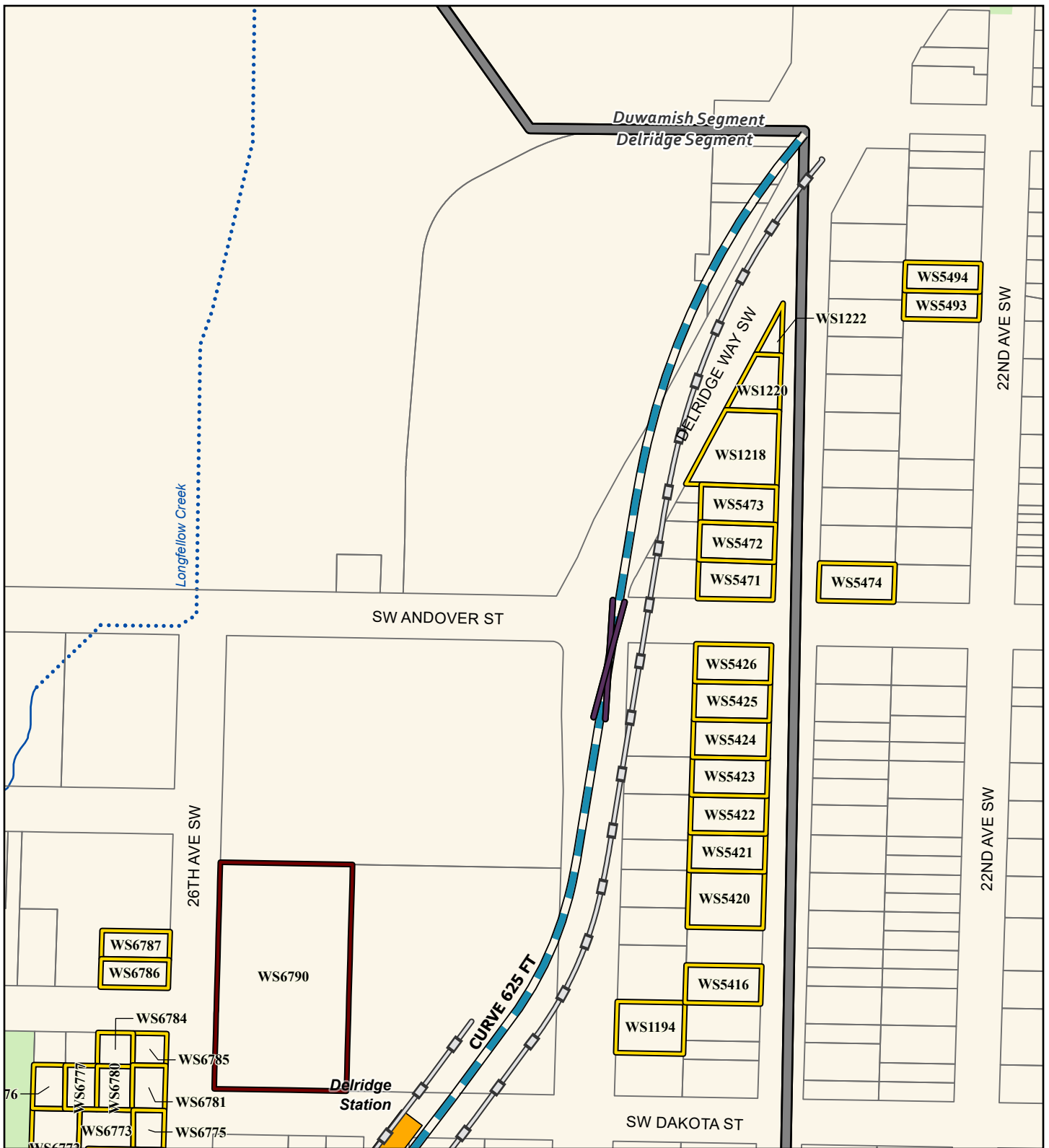
Station

- New
- Existing

- Segment Line
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts**
- Severe Impact
- Moderate Impact

FIGURE N.3D-4c
Alternative DEL-1a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

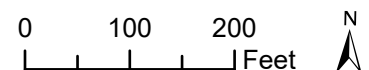
- Elevated
- At-Grade
- Tunnel
- Retained Cut

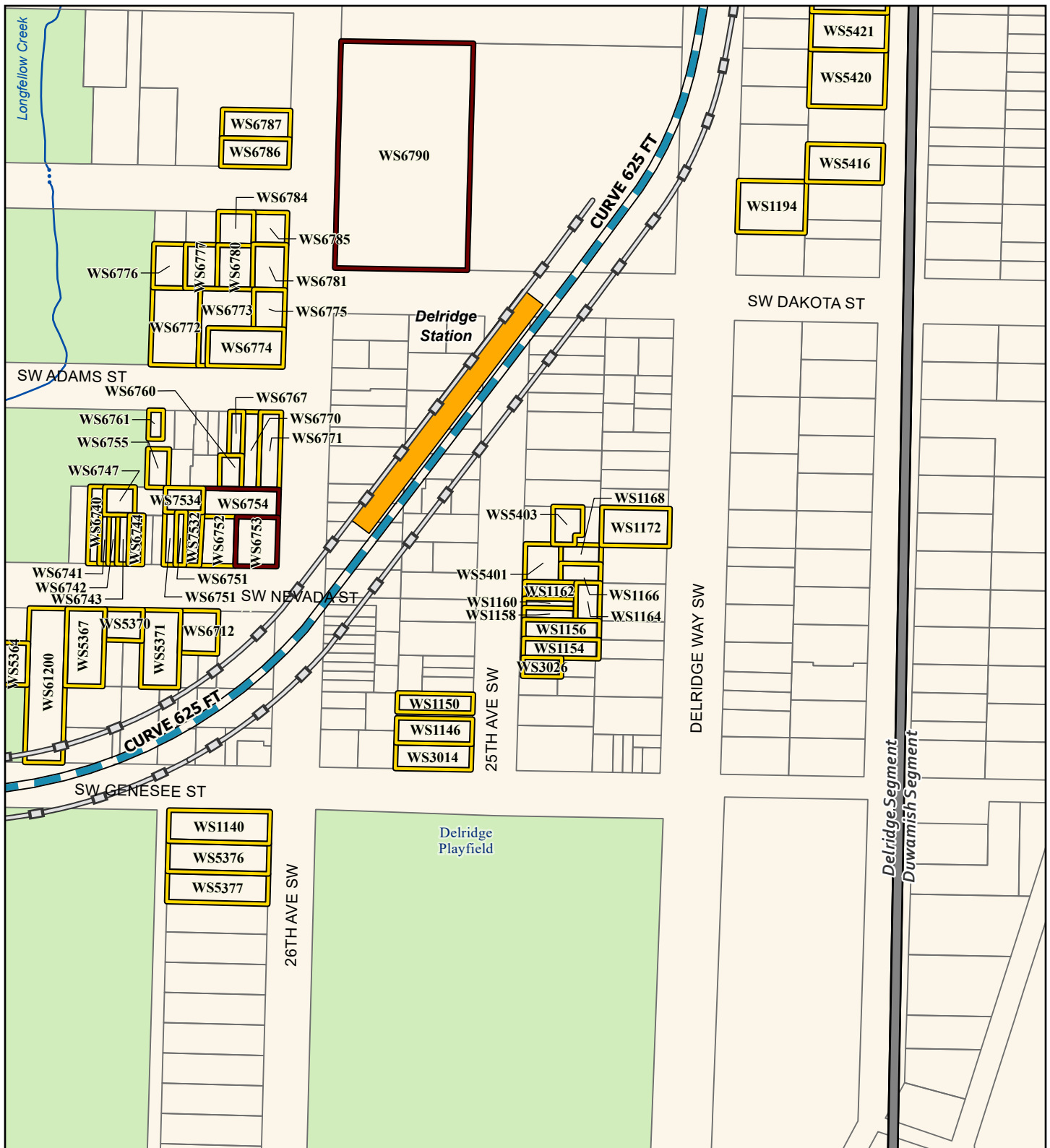
Station

- New
- Existing

- Segment Line
- Stream
- ... Piped Stream
- Proposed Sound Wall
- Parcel
- Park
- Crossover
- Noise Impacts
- Severe Impact
- Moderate Impact

FIGURE N.3D-5a
Option DEL-1b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions

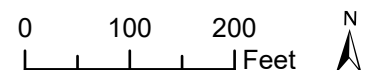


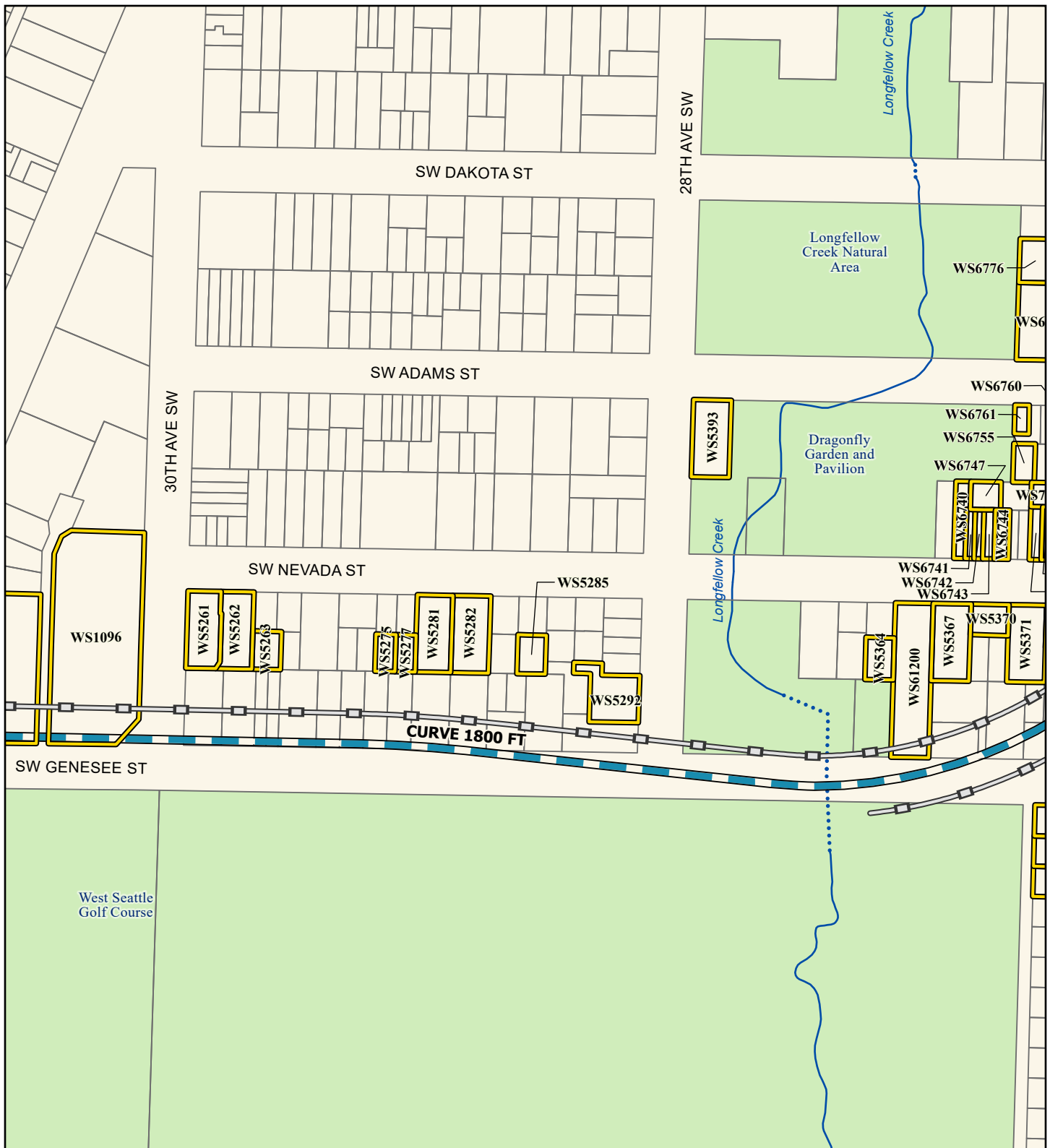


Source: City of Seattle, King County (2019, 2020, 2021).

- Alternatives**
- Preferred Alternative
 - Preferred Alternative with Third-party Funding
 - Other Alternatives
- Alternative Profile**
- Elevated
 - At-Grade
 - Tunnel
 - Retained Cut
- Station**
- New
 - Existing
- Noise Impacts**
- Severe Impact
 - Moderate Impact
- Legend**
- Segment Line
 - Stream
 - Piped Stream
 - Proposed Sound Wall
 - Parcel
 - Park

FIGURE N.3D-5b
Option DEL-1b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

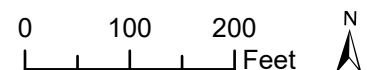
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Stream
- Piped Stream
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Moderate Impact

FIGURE N.3D-5c
Option DEL-1b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

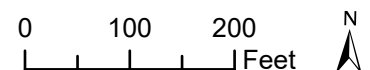
- Elevated
- At-Grade
- Tunnel
- Retained Cut

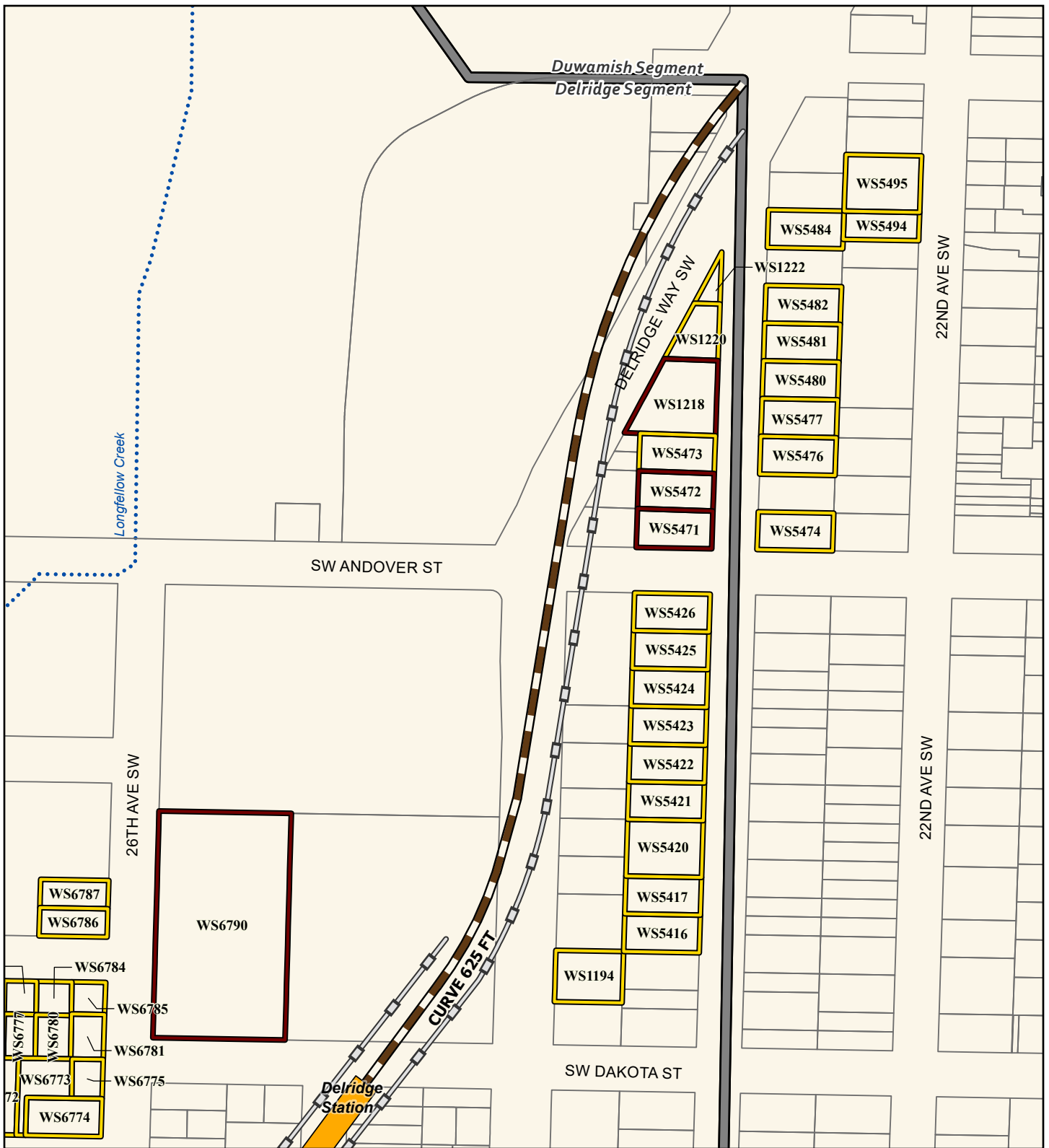
Station

- New
- Existing

- Segment Line
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts**
- Severe Impact
- Moderate Impact

FIGURE N.3D-5d
Option DEL-1b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

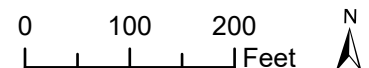
- Elevated
- At-Grade
- Tunnel
- Retained Cut

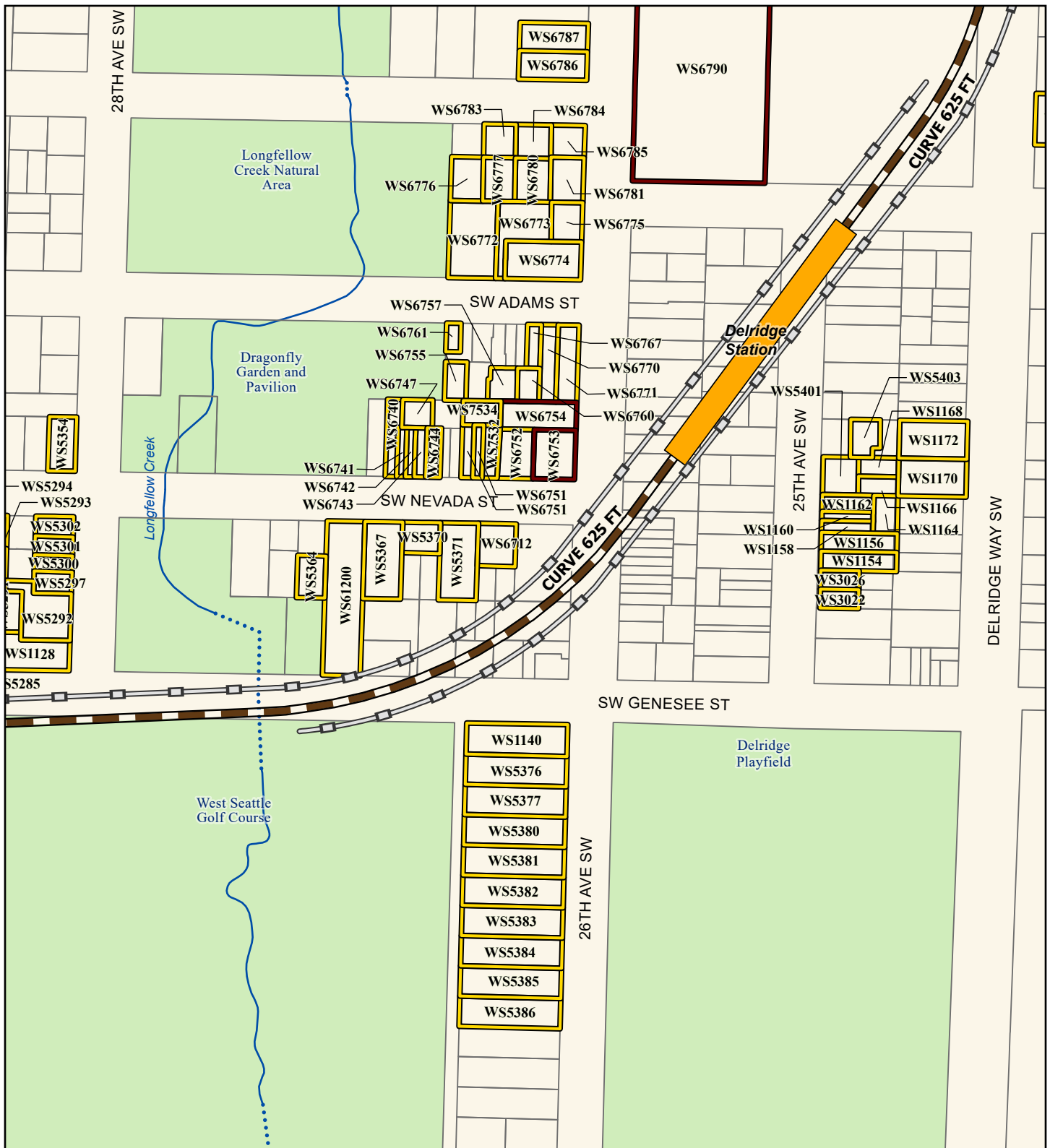
Station

- New
- Existing

- Segment Line
- Piped Stream
- Proposed Sound Wall
- Parcel
- Noise Impacts
 - Severe Impact
 - Moderate Impact

FIGURE N.3D-6a
Alternative DEL-2a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

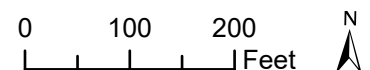
- Elevated
- At-Grade
- Tunnel
- Retained Cut

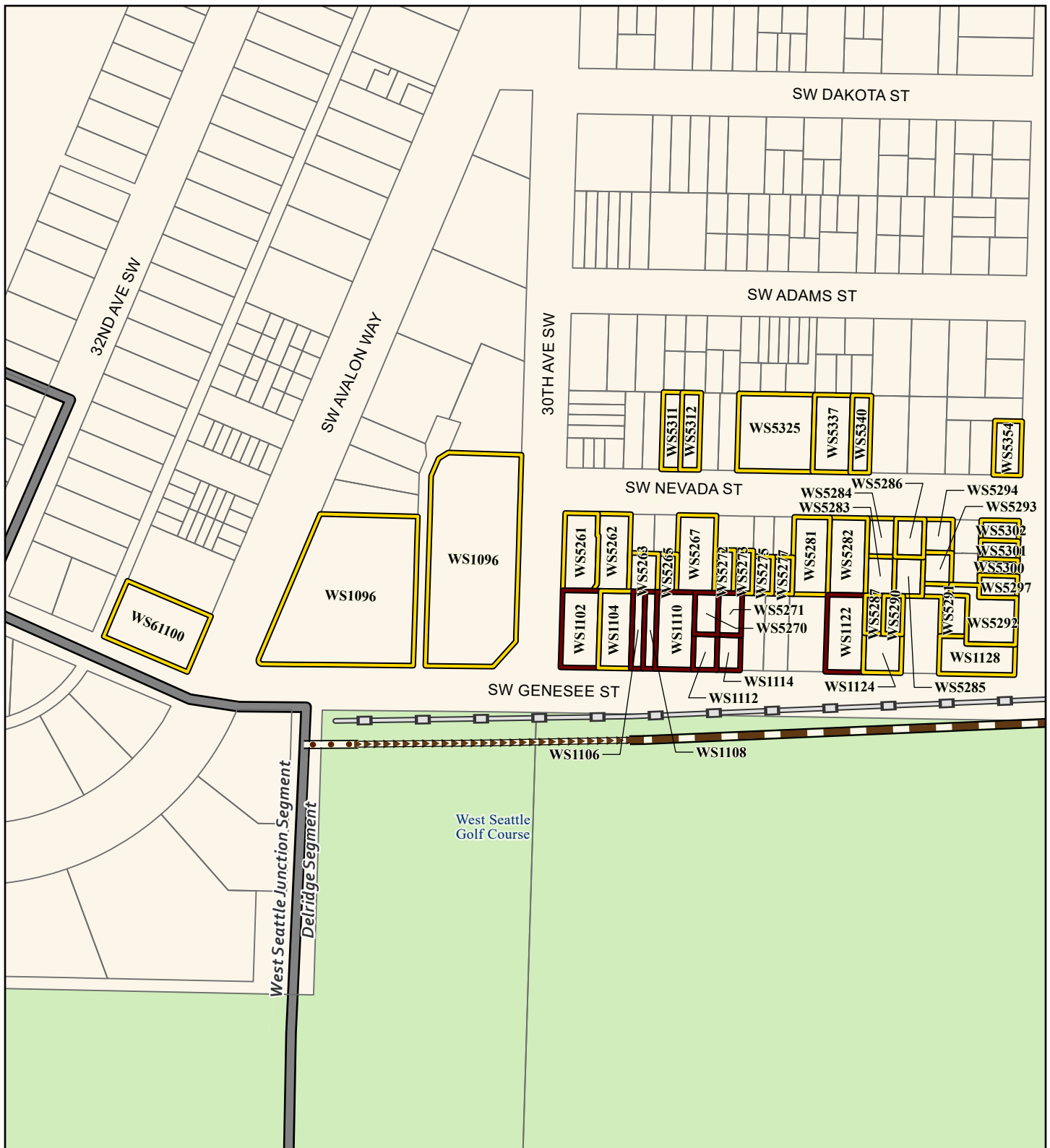
Station

- New
- Existing

- Stream
- Piped Stream
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Severe Impact
- Moderate Impact

FIGURE N.3D-6b
Alternative DEL-2a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

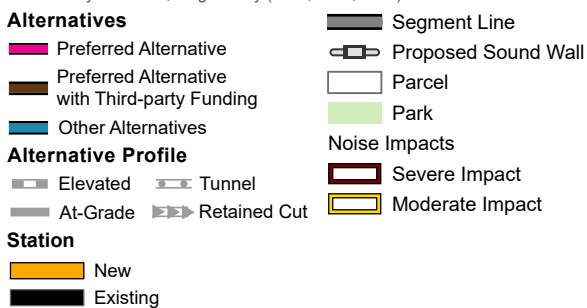
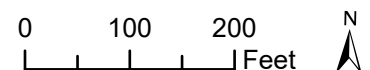
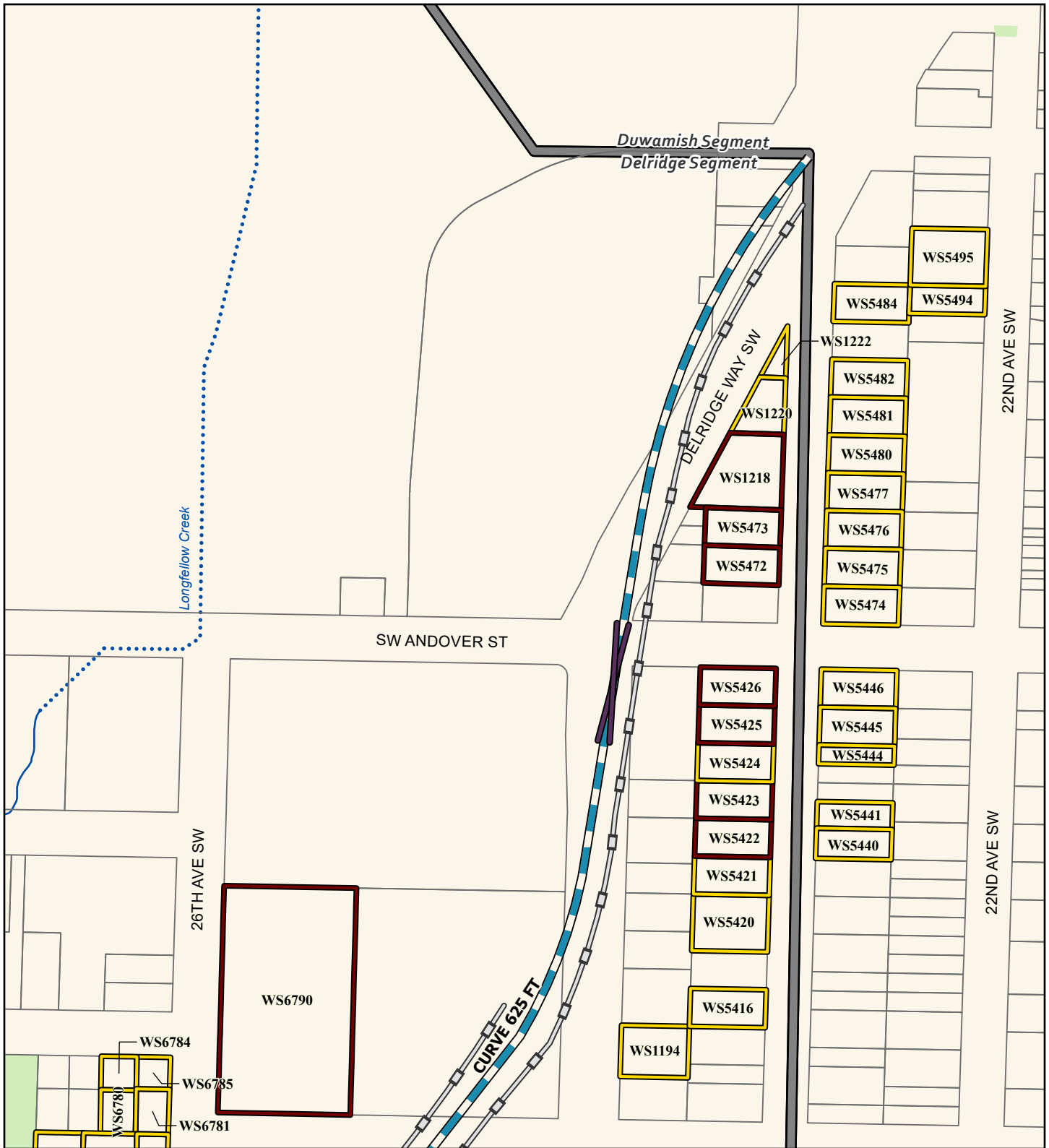


FIGURE N.3D-6c
Alternative DEL-2a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

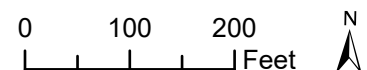
- Elevated
- At-Grade
- Tunnel
- Retained Cut
- Crossover

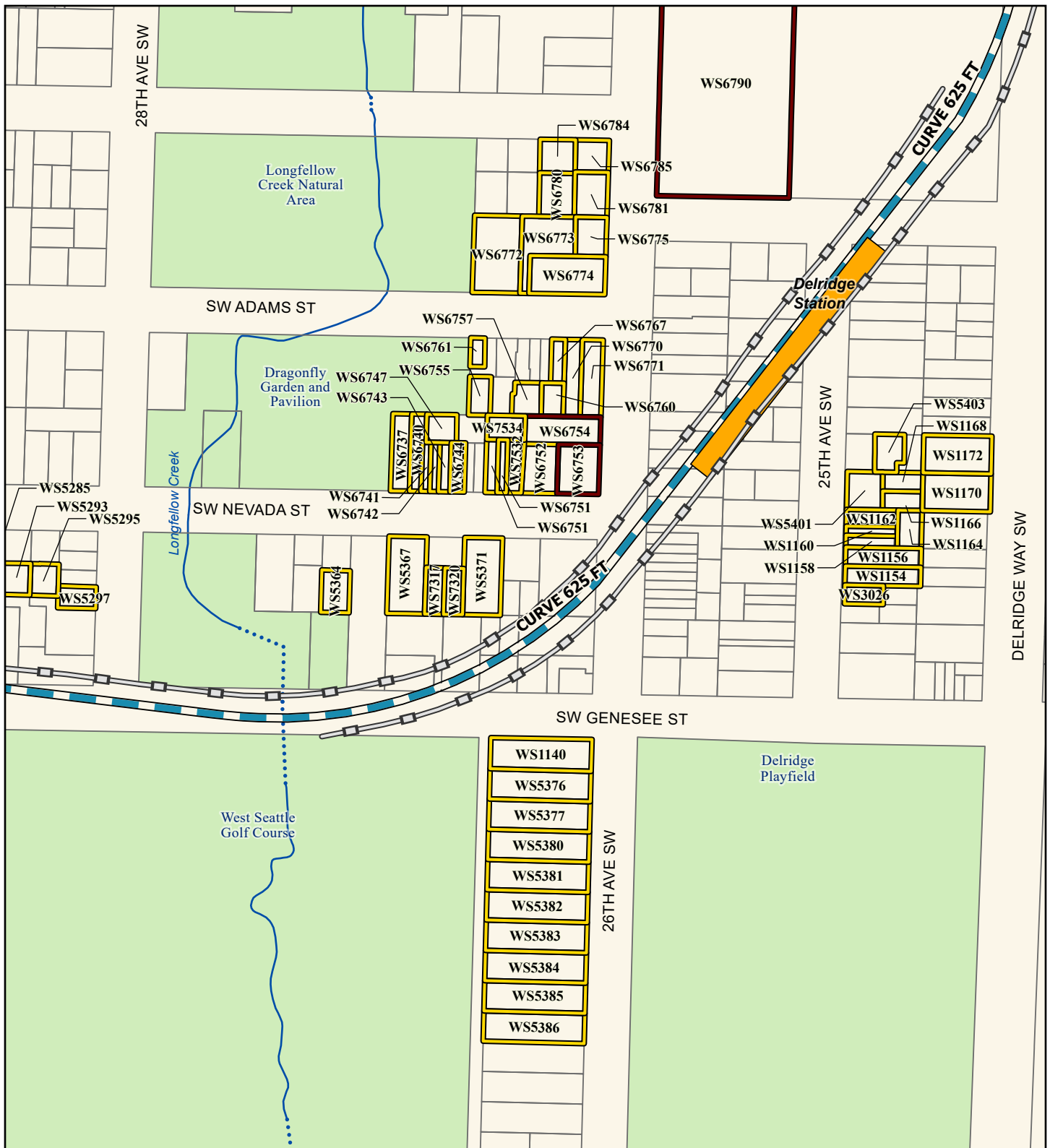
Station

- New
- Existing

- Segment Line
- Stream
- Piped Stream
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Severe Impact
- Moderate Impact

FIGURE N.3D-7a
Option DEL-2b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

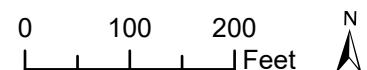
- █ Elevated
- █ At-Grade
- █ Tunnel
- █ Retained Cut

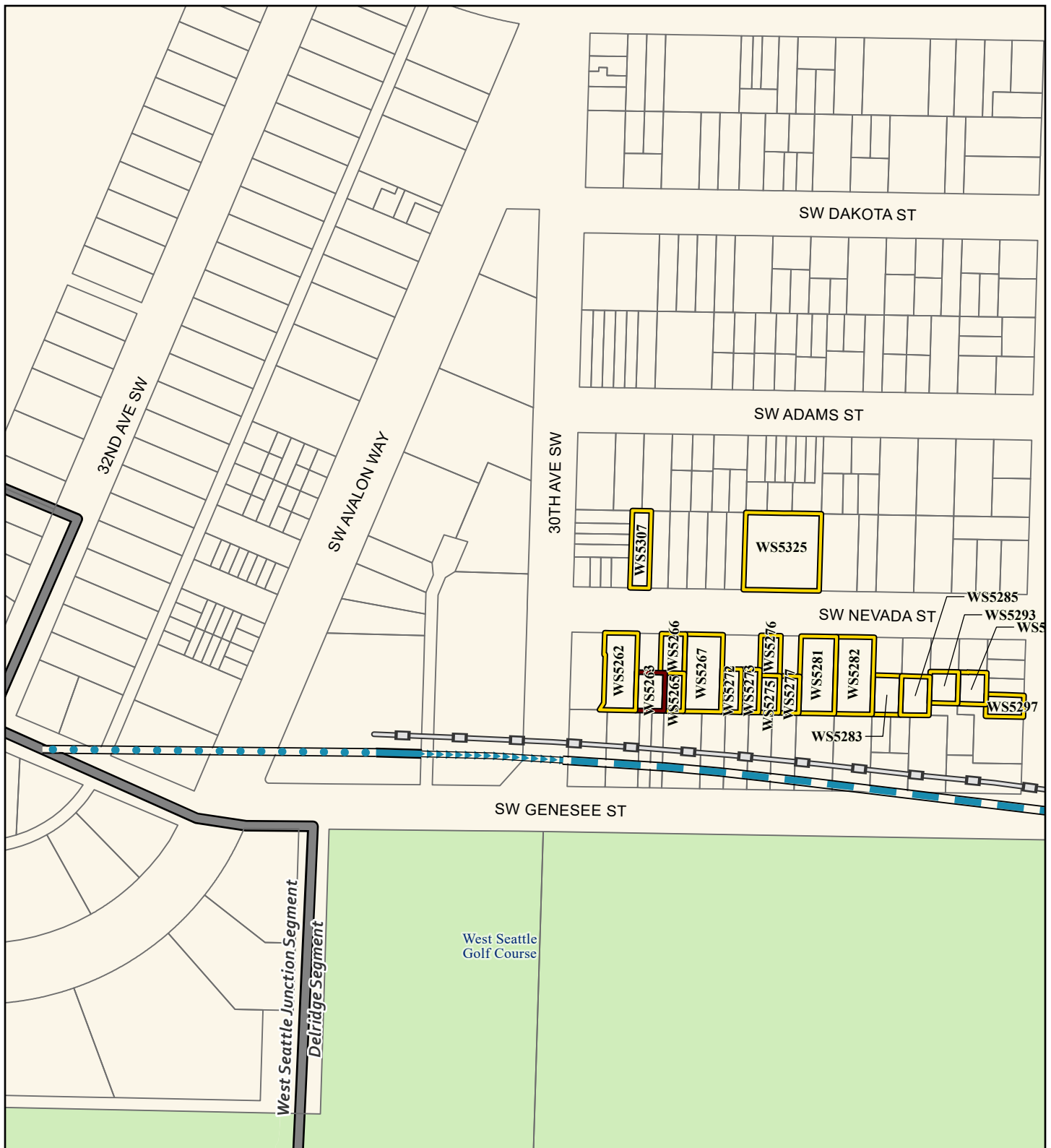
Station

- █ New
- █ Existing

- Stream
- ⋯ Piped Stream
- ▬ Proposed Sound Wall
- Parcel
- █ Park
- Noise Impacts**
- Severe Impact
- Moderate Impact

FIGURE N.3D-7b
Option DEL-2b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

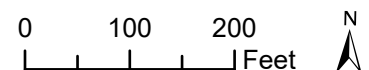
- Elevated
- At-Grade
- Tunnel
- Retained Cut

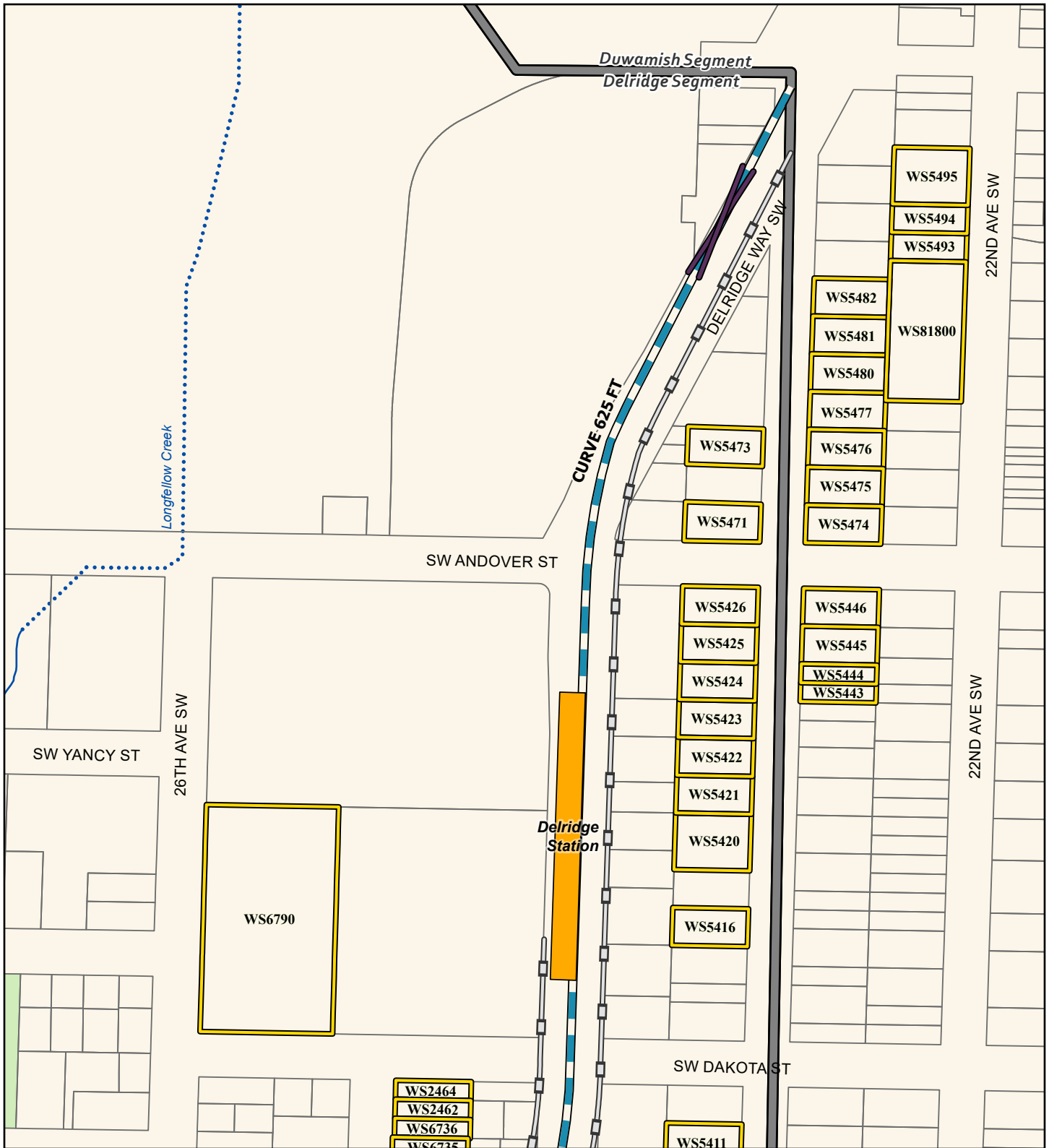
Station

- New
- Existing

- Segment Line
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts**
- Severe Impact
- Moderate Impact

FIGURE N.3D-7c
Option DEL-2b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

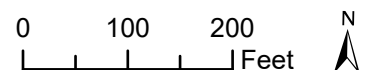
- Elevated
- At-Grade
- Tunnel
- Retained Cut

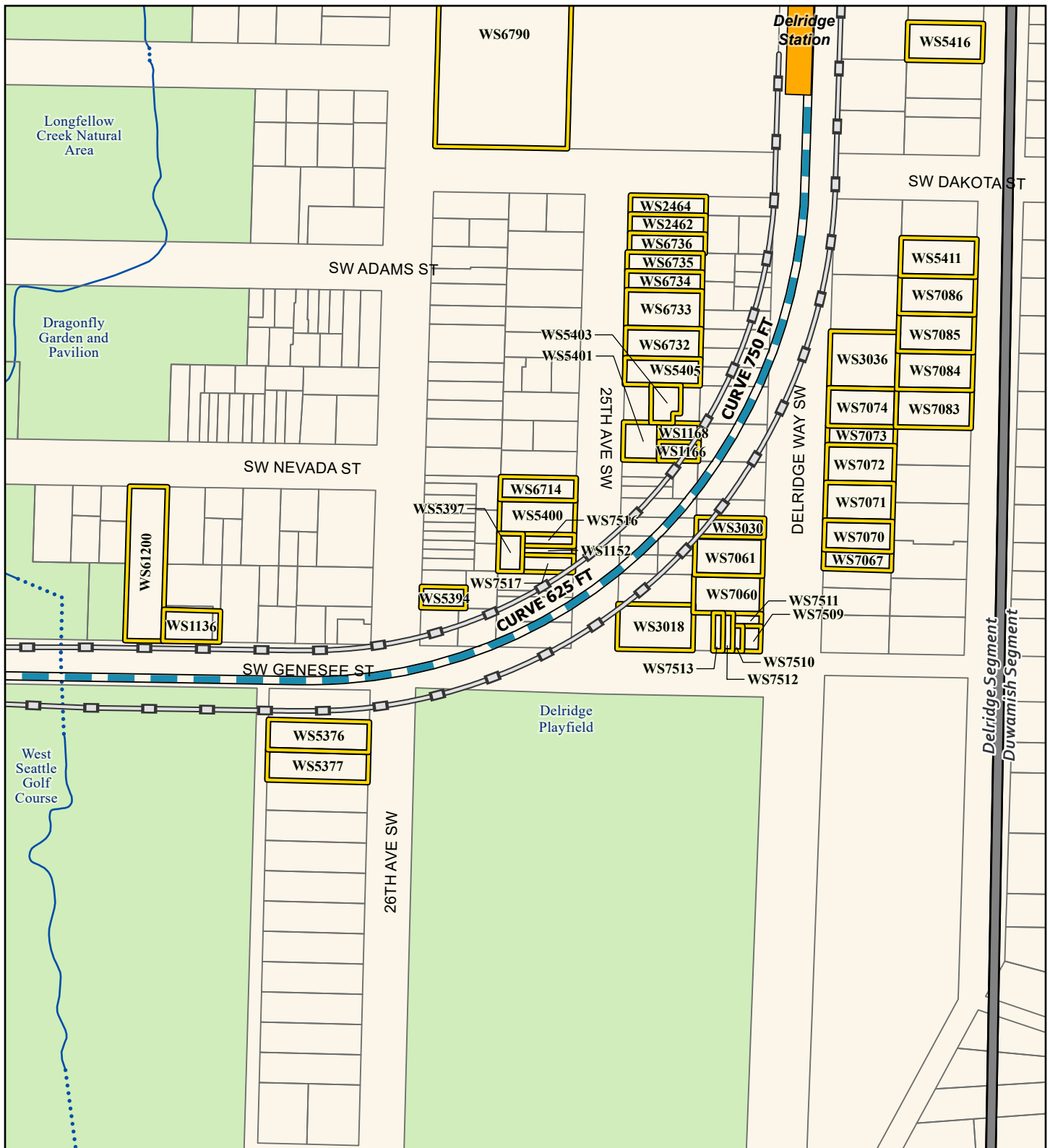
Station

- New
- Existing

- Segment Line
- Stream
- ... Piped Stream
- Proposed Sound Wall
- Parcel
- Park
- Crossover
- Noise Impacts
- Moderate Impact

FIGURE N.3D-8a
Alternative DEL-3
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

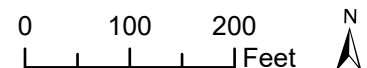
- Elevated
- At-Grade
- Tunnel
- Retained Cut

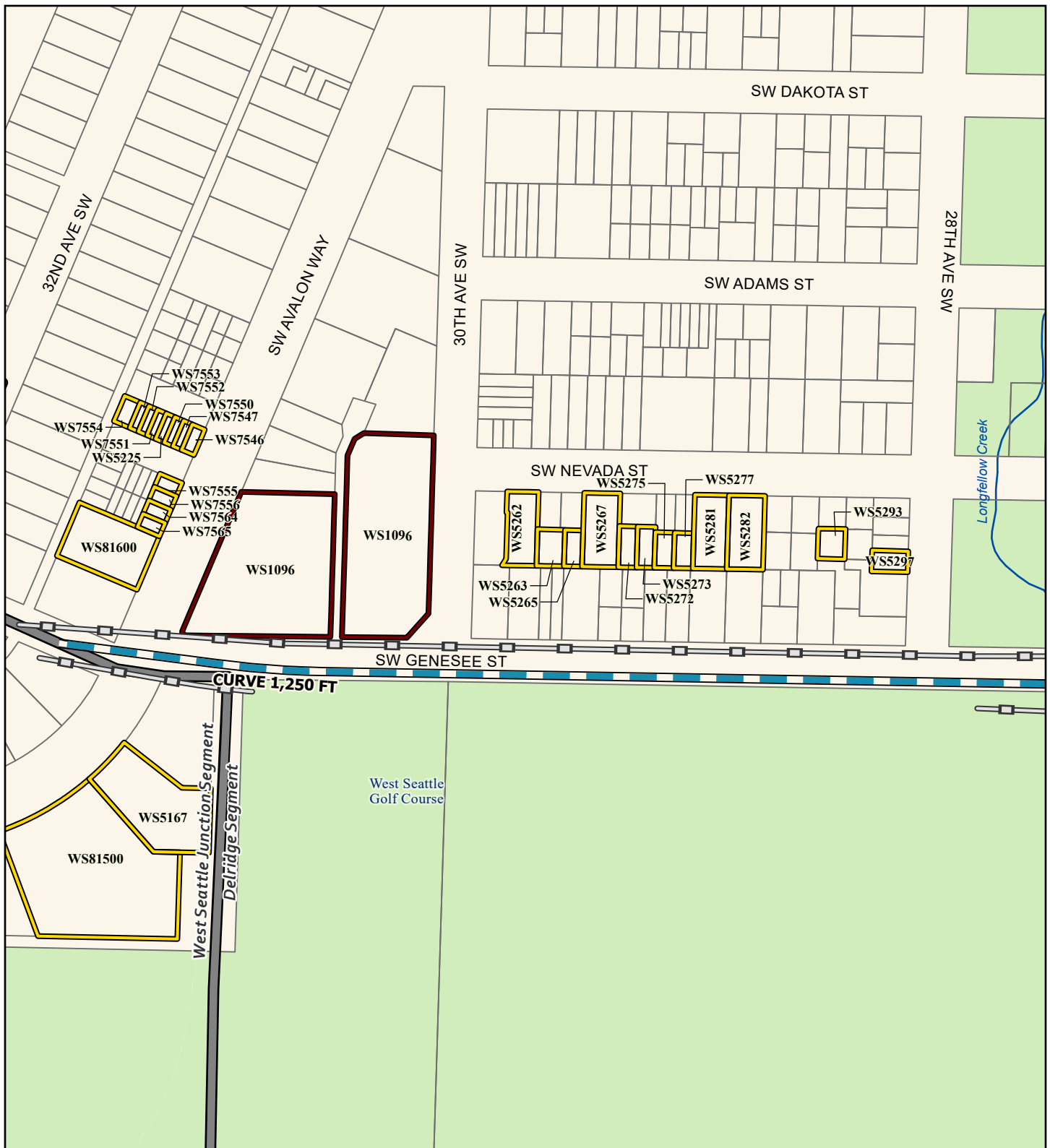
Station

- New
- Existing

- Segment Line
- Stream
- ... Piped Stream
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Moderate Impact

FIGURE N.3D-8b
Alternative DEL-3
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

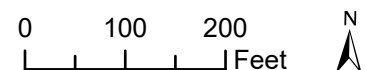
- Elevated
- At-Grade
- Tunnel
- Retained Cut

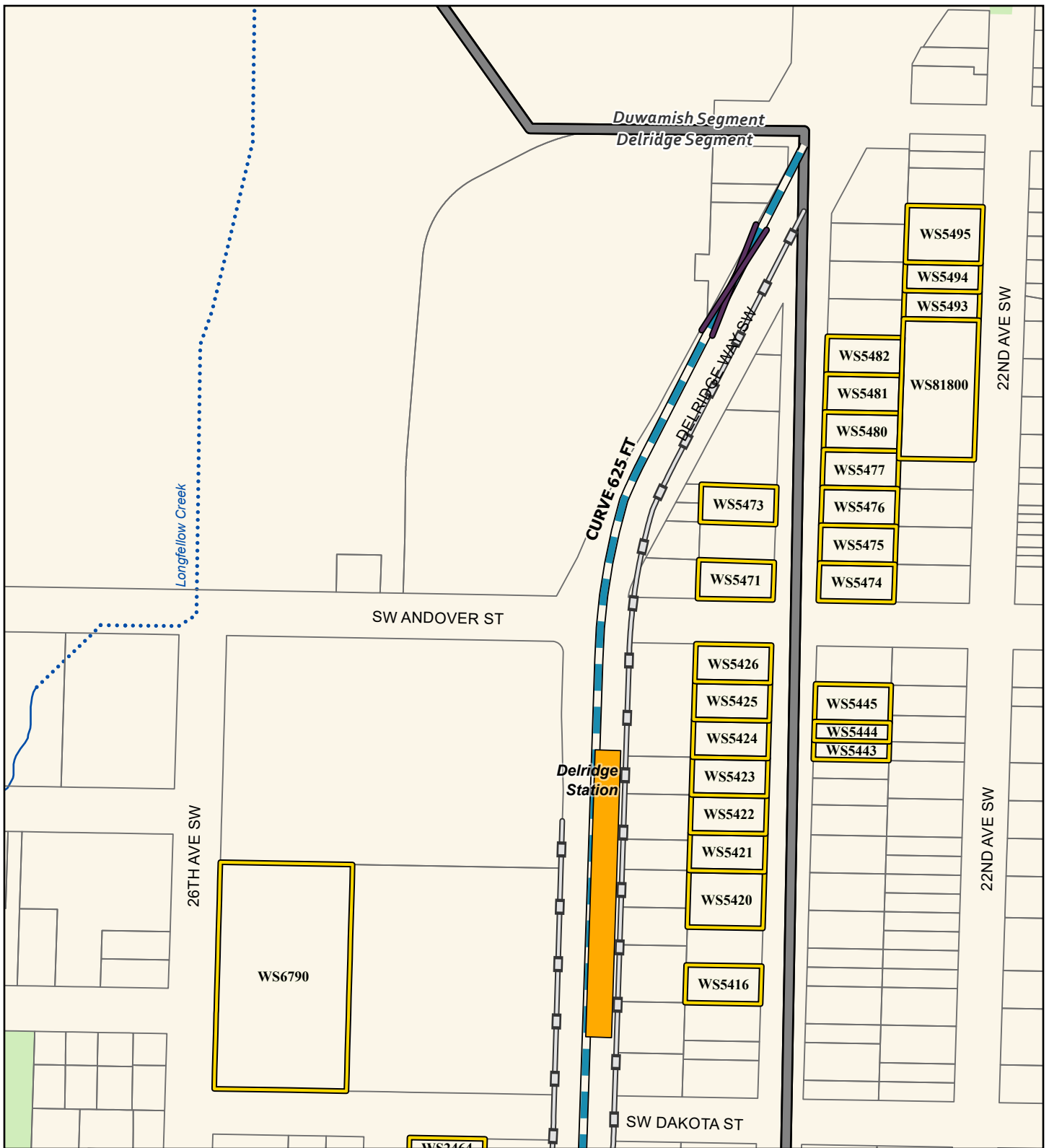
Station

- New
- Existing

- Segment Line
- Stream
- ... Piped Stream
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Severe Impact
- Moderate Impact

FIGURE N.3D-8c
Alternative DEL-3
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

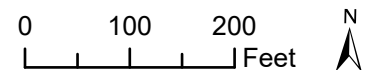
- Elevated
- At-Grade
- Tunnel
- Retained Cut

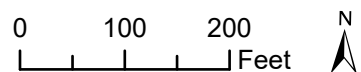
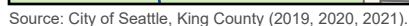
Station

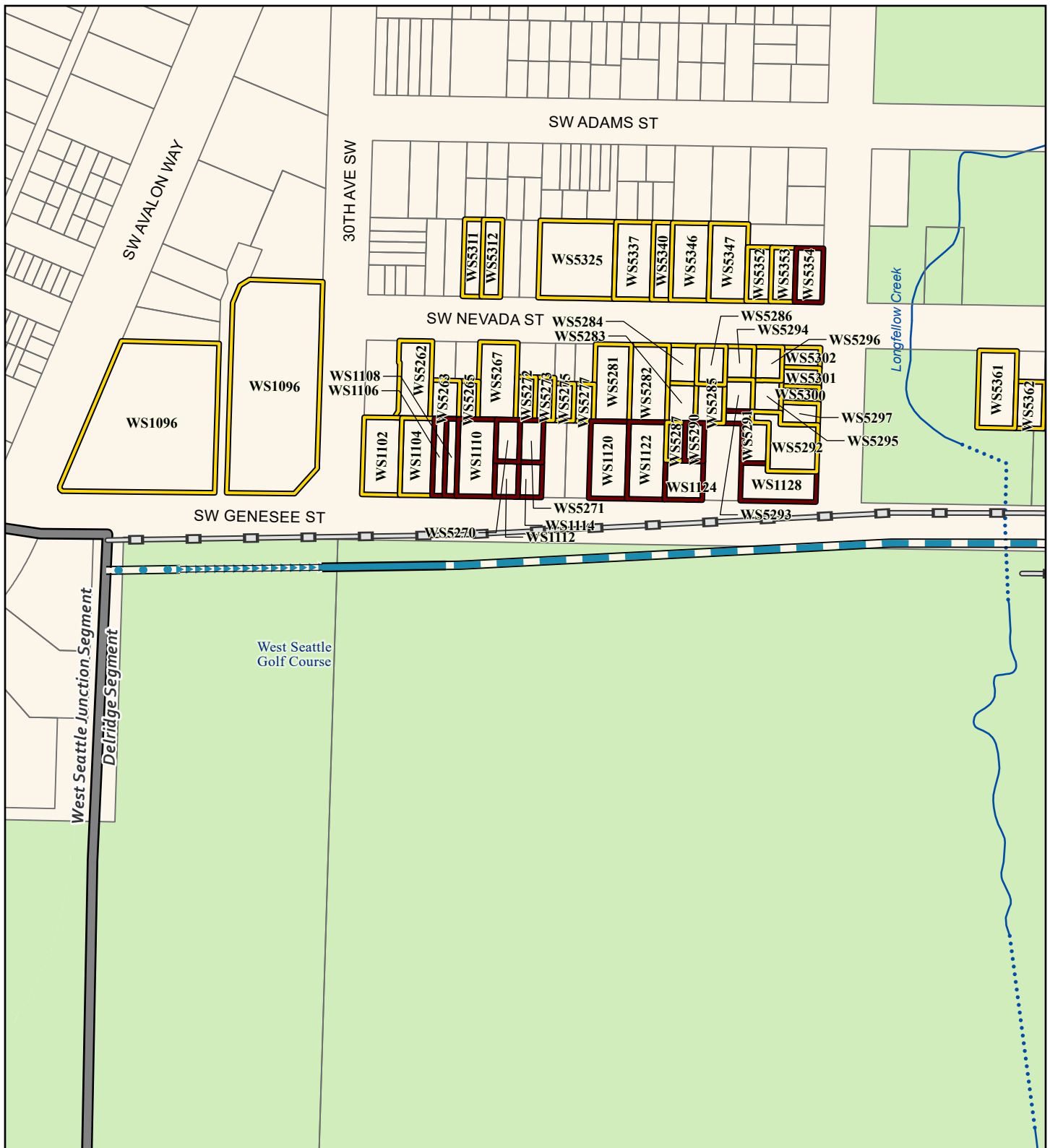
- New
- Existing

- Segment Line
- Stream
- ... Piped Stream
- Proposed Sound Wall
- Parcel
- Park
- Crossover
- Noise Impacts
- Moderate Impact

FIGURE N.3D-9a
Alternative DEL-4
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions







Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

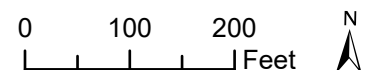
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Segment Line
- Stream
- ... Piped Stream
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Severe Impact
- Moderate Impact

FIGURE N.3D-9c
Alternative DEL-4
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

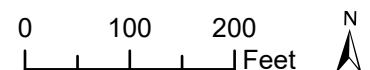
- Elevated
- At-Grade
- Tunnel
- Retained Cut

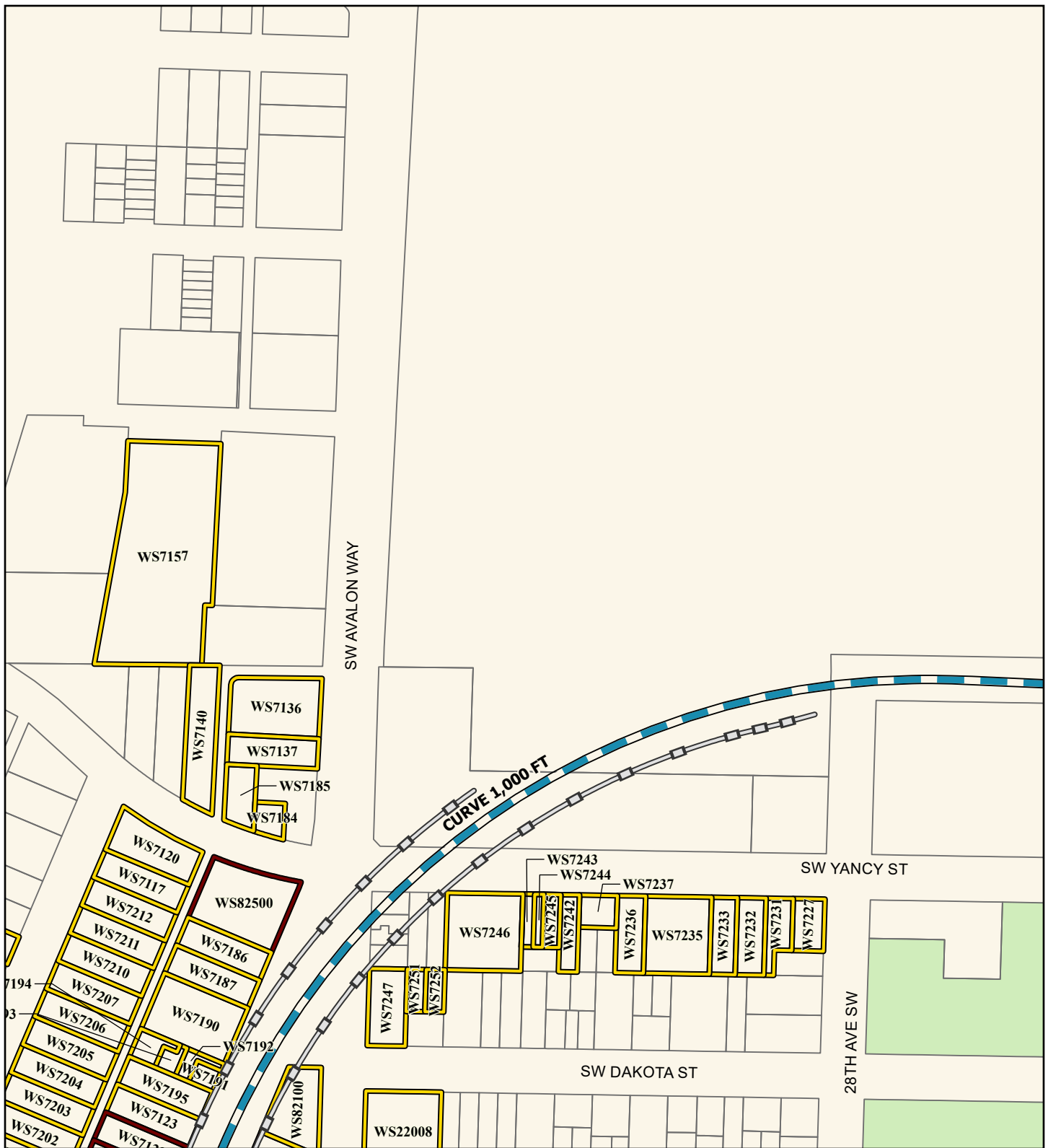
Station

- New
- Existing

- Segment Line
- Stream
- ... Piped Stream
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Moderate Impact

FIGURE N.3D-10a
Alternative DEL-5
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

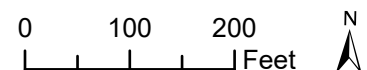
- Elevated
- At-Grade
- Tunnel
- Retained Cut

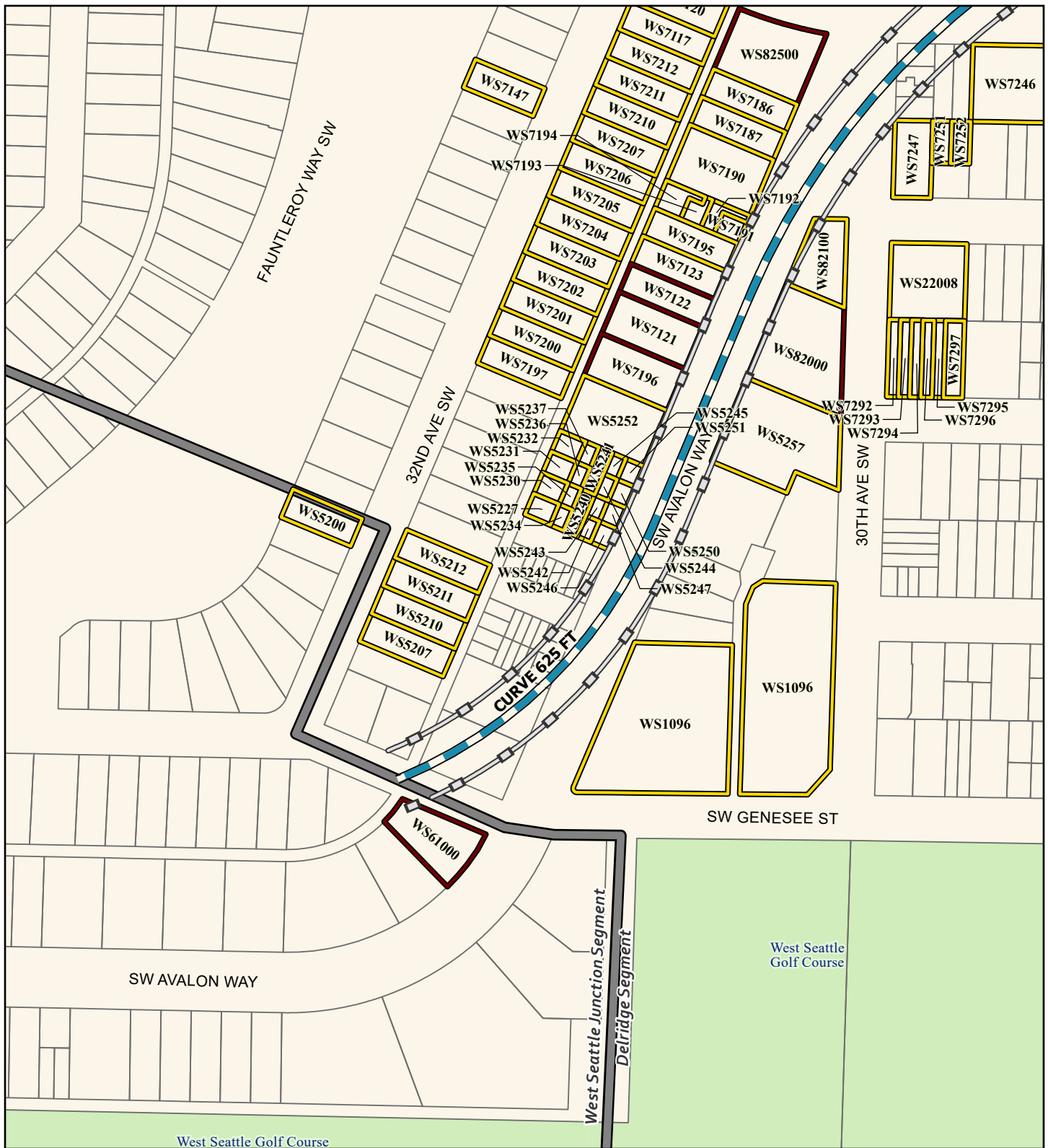
Station

- New
- Existing

- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts**
- Severe Impact
- Moderate Impact

FIGURE N.3D-10b
Alternative DEL-5
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
*West Seattle and
 Ballard Link Extensions*

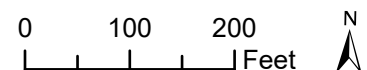


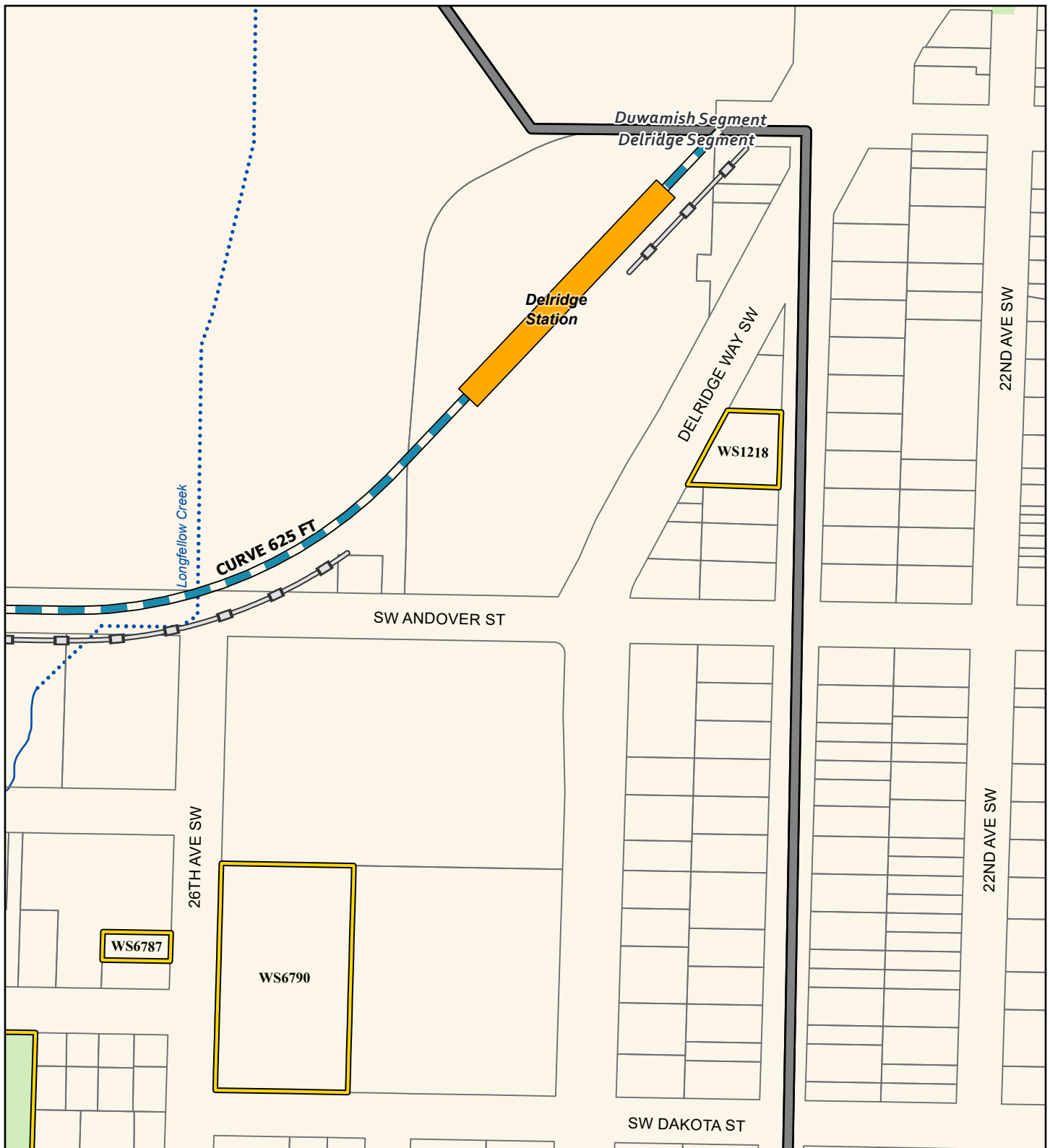


Source: City of Seattle, King County (2019, 2020, 2021).

- Alternatives**
- Preferred Alternative
 - Preferred Alternative with Third-party Funding
 - Other Alternatives
- Alternative Profile**
- Elevated
 - At-Grade
 - Tunnel
 - Retained Cut
- Station**
- New
 - Existing
- Noise Impacts**
- Severe Impact
 - Moderate Impact
- Legend**
- Segment Line
 - Proposed Sound Wall
 - Parcel
 - Park

FIGURE N.3D-10c
Alternative DEL-5
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

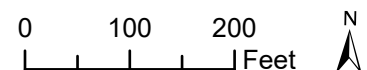
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Segment Line
- Stream
- ... Piped Stream
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Moderate Impact

FIGURE N.3D-11a
Alternative DEL-6
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

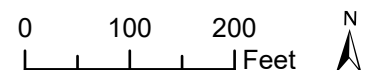
- Elevated
- At-Grade
- Tunnel
- Retained Cut

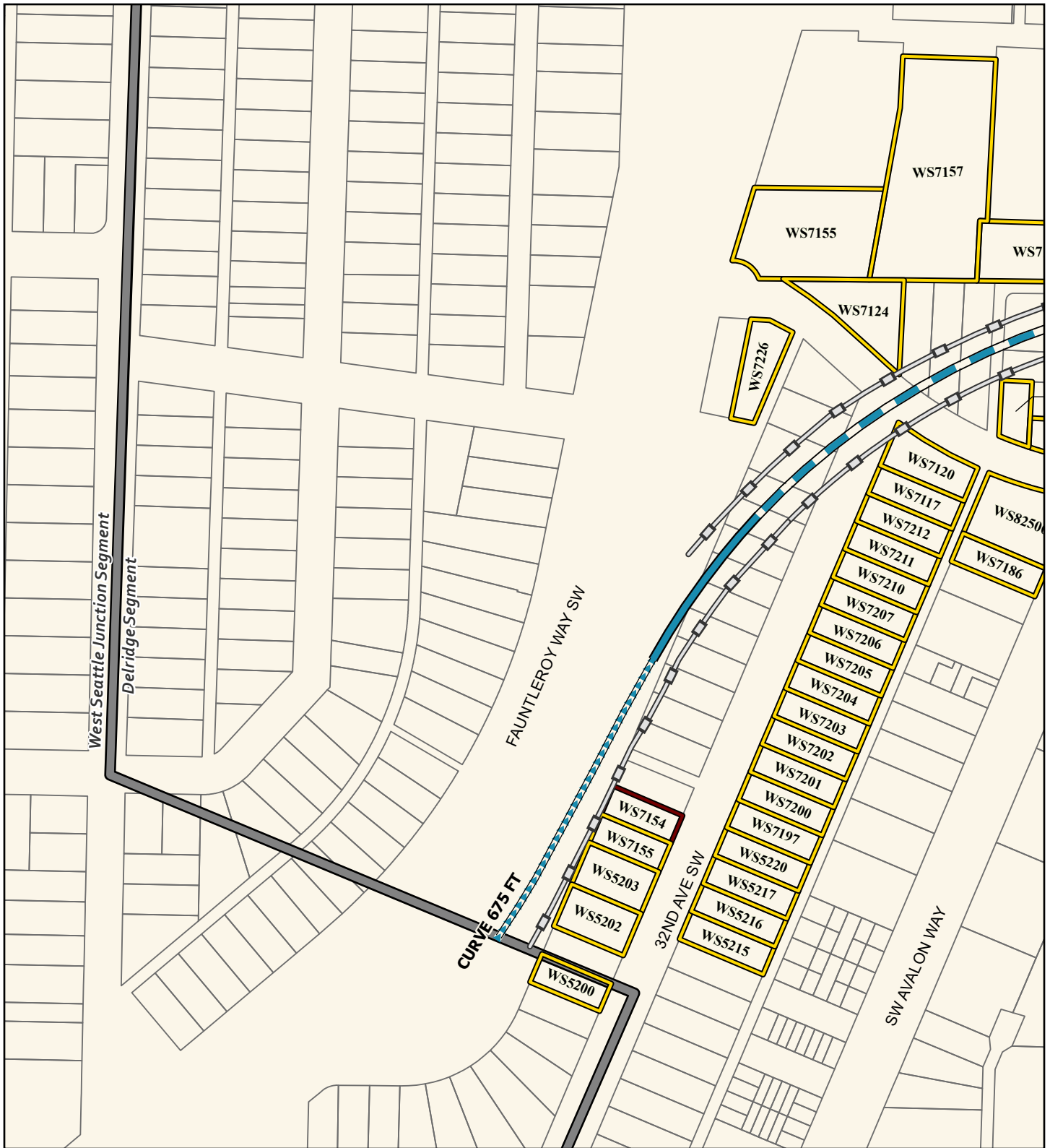
Station

- New
- Existing

- Stream
- Piped Stream
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Moderate Impact

FIGURE N.3D-11b
Alternative DEL-6
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

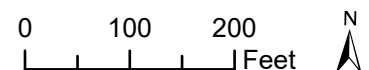
- Elevated
- At-Grade
- Tunnel
- Retained Cut

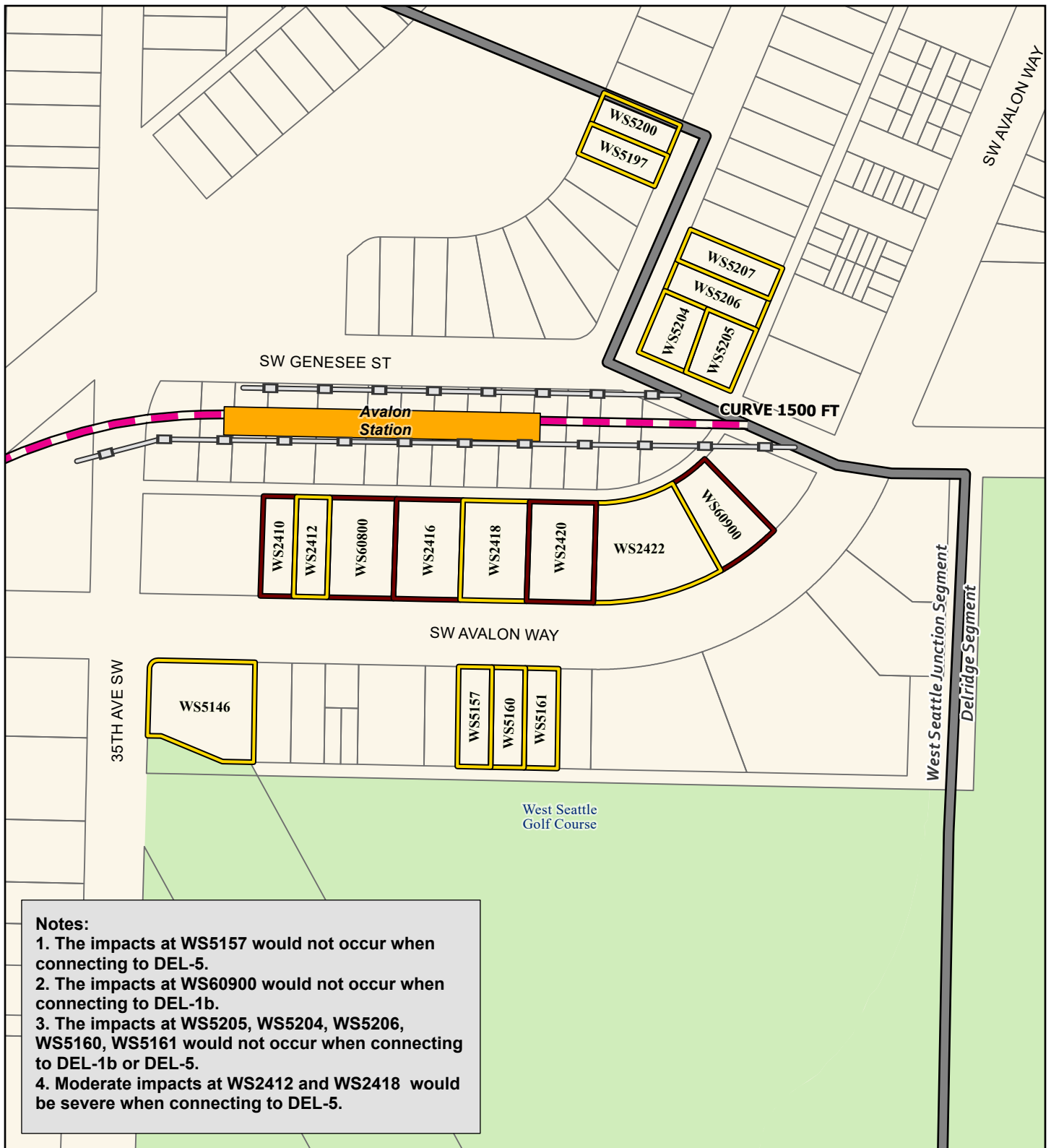
Station

- New
- Existing

- Segment Line
- Proposed Sound Wall
- Parcel
- Noise Impacts
 - Severe Impact
 - Moderate Impact

FIGURE N.3D-11c
Alternative DEL-6
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

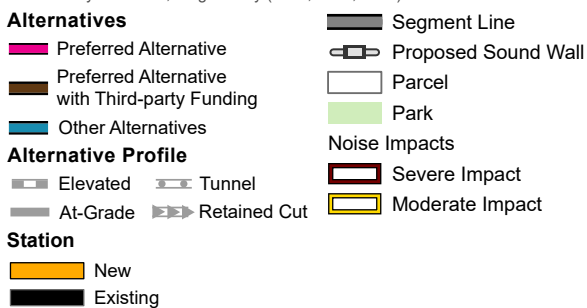
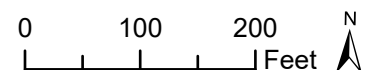
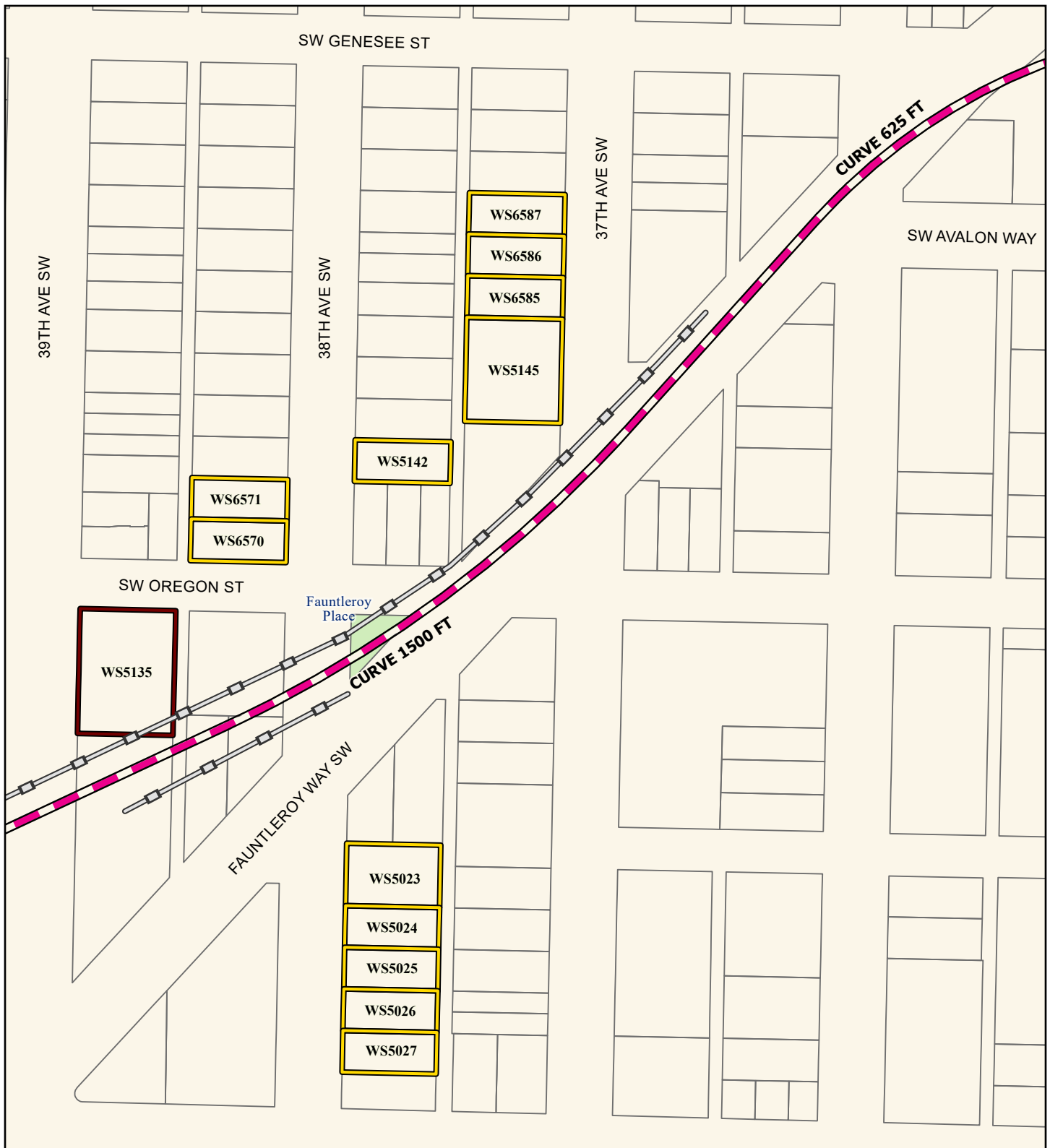


FIGURE N.3D-12a
Alternative WSJ-1
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

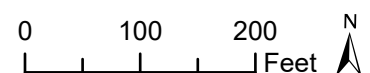
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
 - Severe Impact
 - Moderate Impact

FIGURE N.3D-12b
Alternative WSJ-1
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

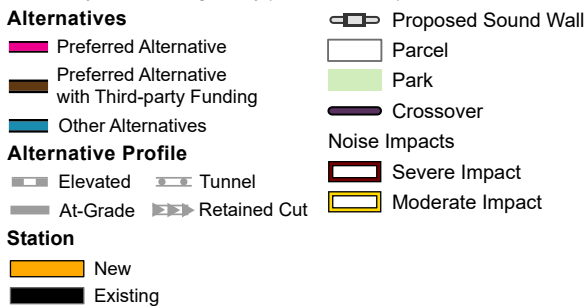
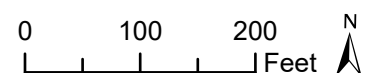
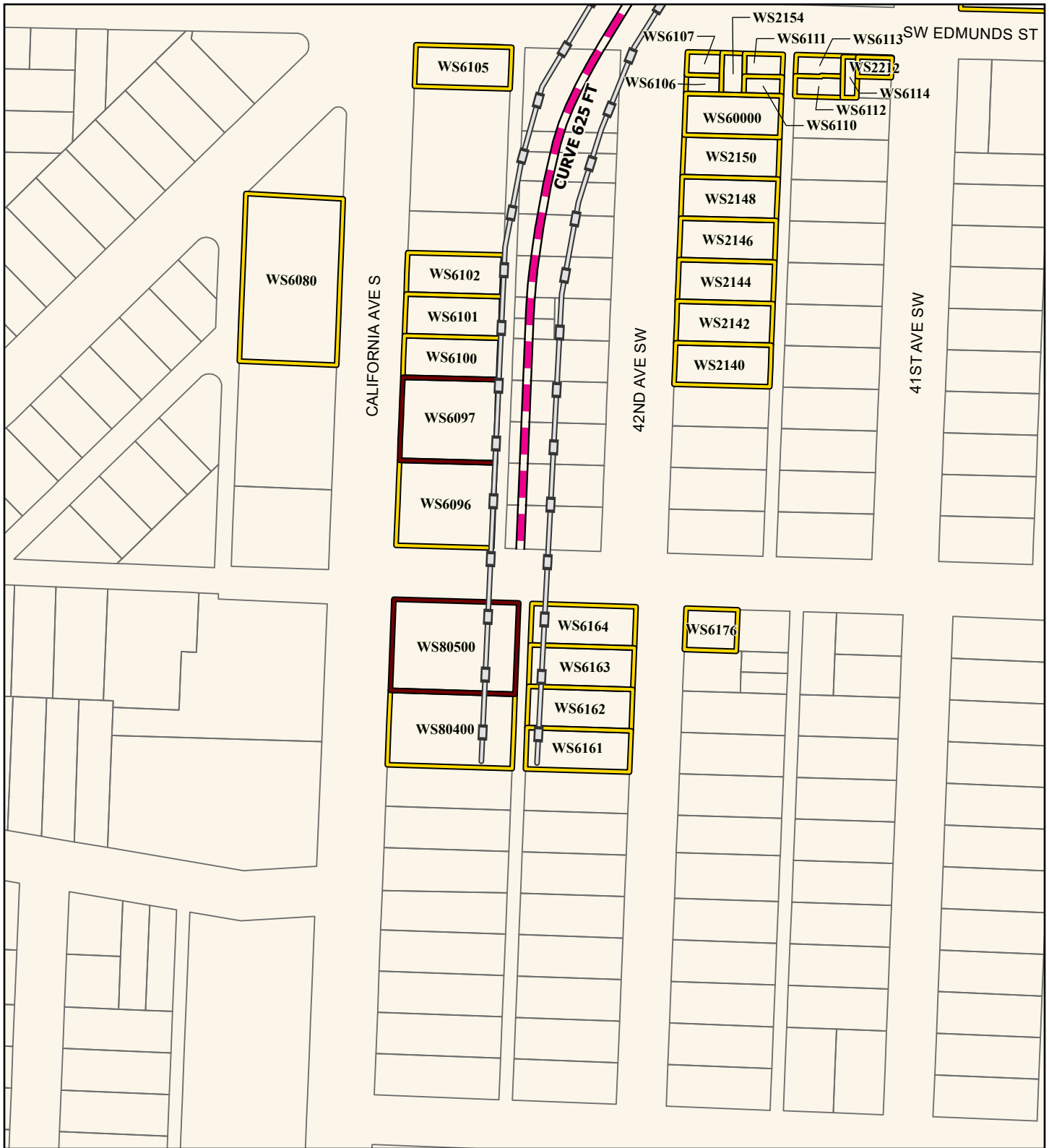


FIGURE N.3D-12c
Alternative WSJ-1
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

— Proposed Sound Wall

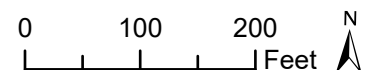
Parcel

Noise Impacts

- Severe Impact
- Moderate Impact

FIGURE N.3D-12d
Alternative WSJ-1
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment

*West Seattle and
 Ballard Link Extensions*



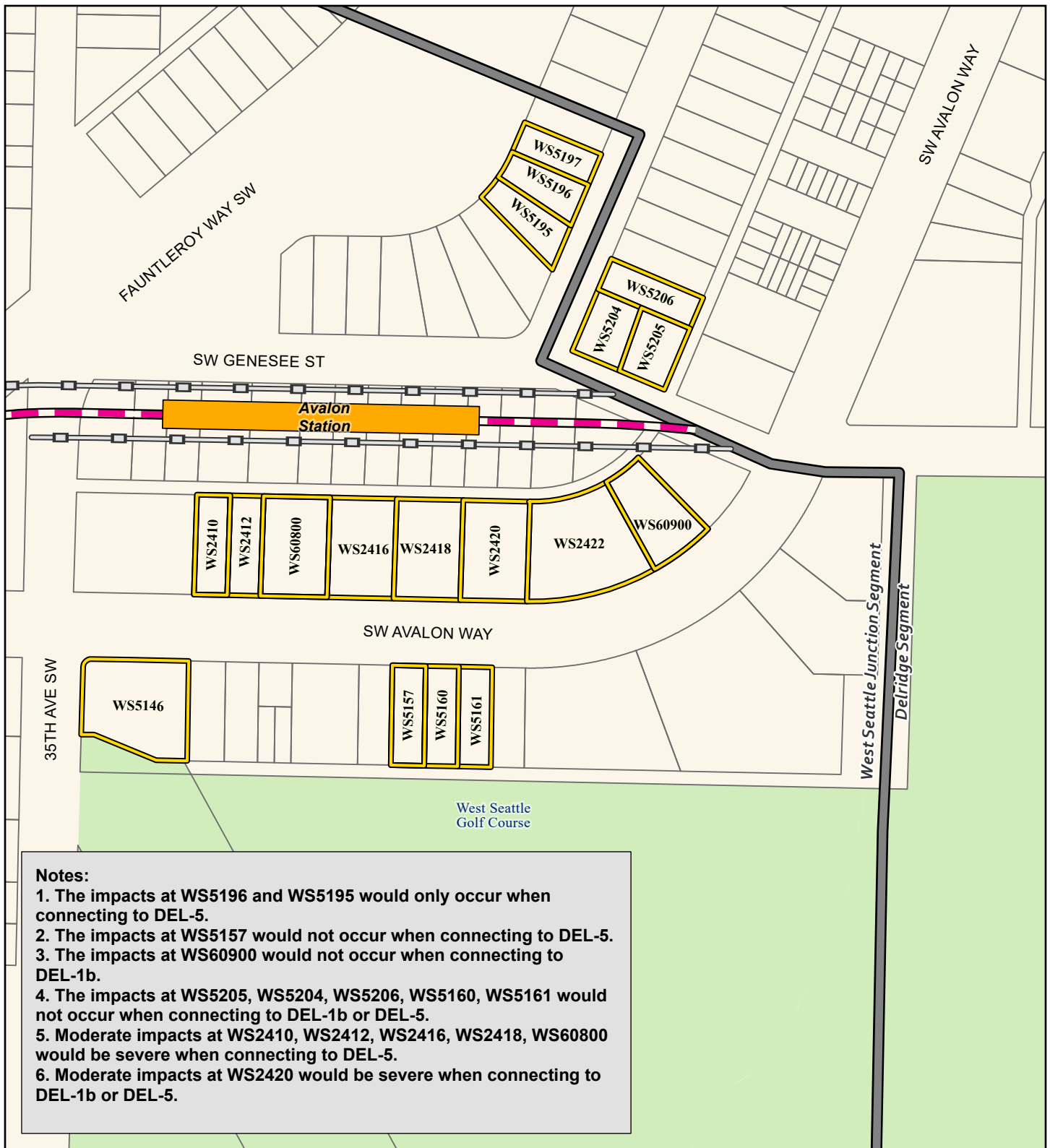
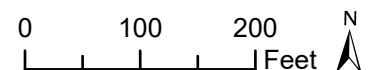
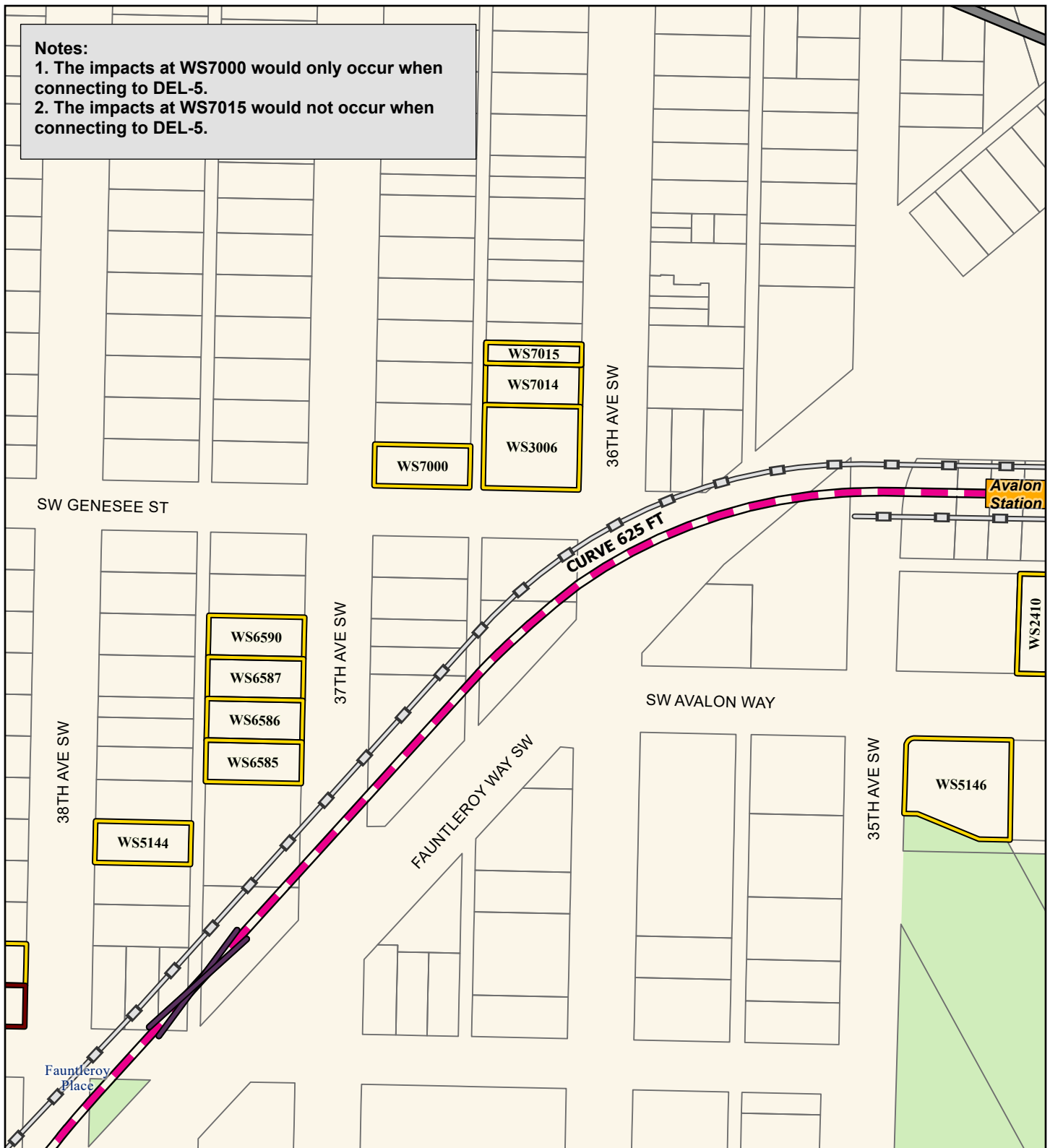


FIGURE N.3D-13a
Alternative WSJ-2
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*



Notes:

1. The impacts at WS7000 would only occur when connecting to DEL-5.
2. The impacts at WS7015 would not occur when connecting to DEL-5.



Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

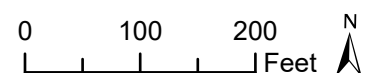
- Elevated
- At-Grade
- Tunnel
- Retained Cut

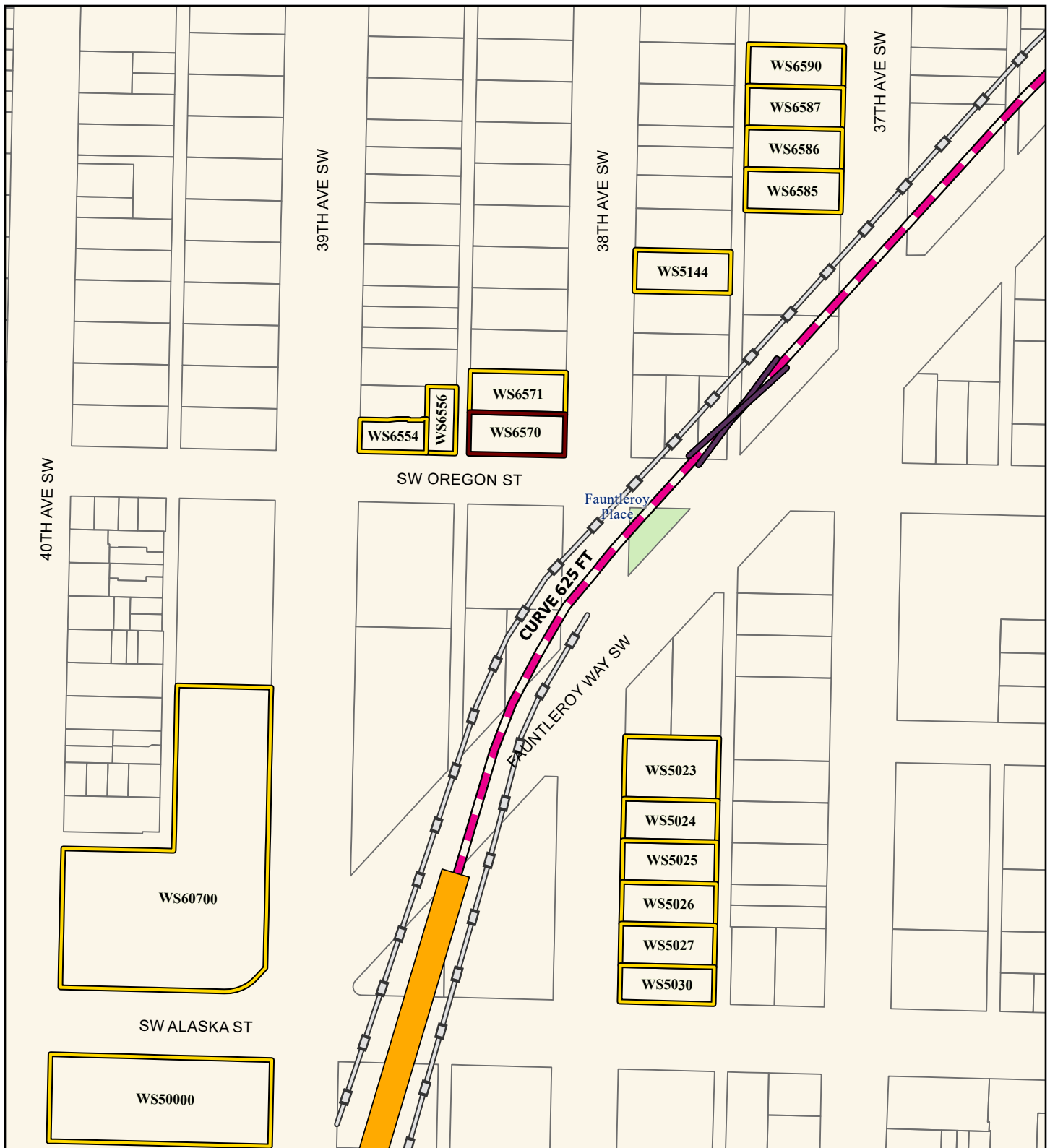
Station

- New
- Existing

- Segment Line
- Proposed Sound Wall
- Parcel
- Park
- Crossover
- Noise Impacts
 - Severe Impact
 - Moderate Impact

FIGURE N.3D-13b
Alternative WSJ-2
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

— Proposed Sound Wall

— Parcel

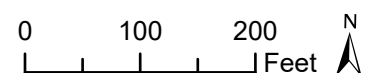
— Park

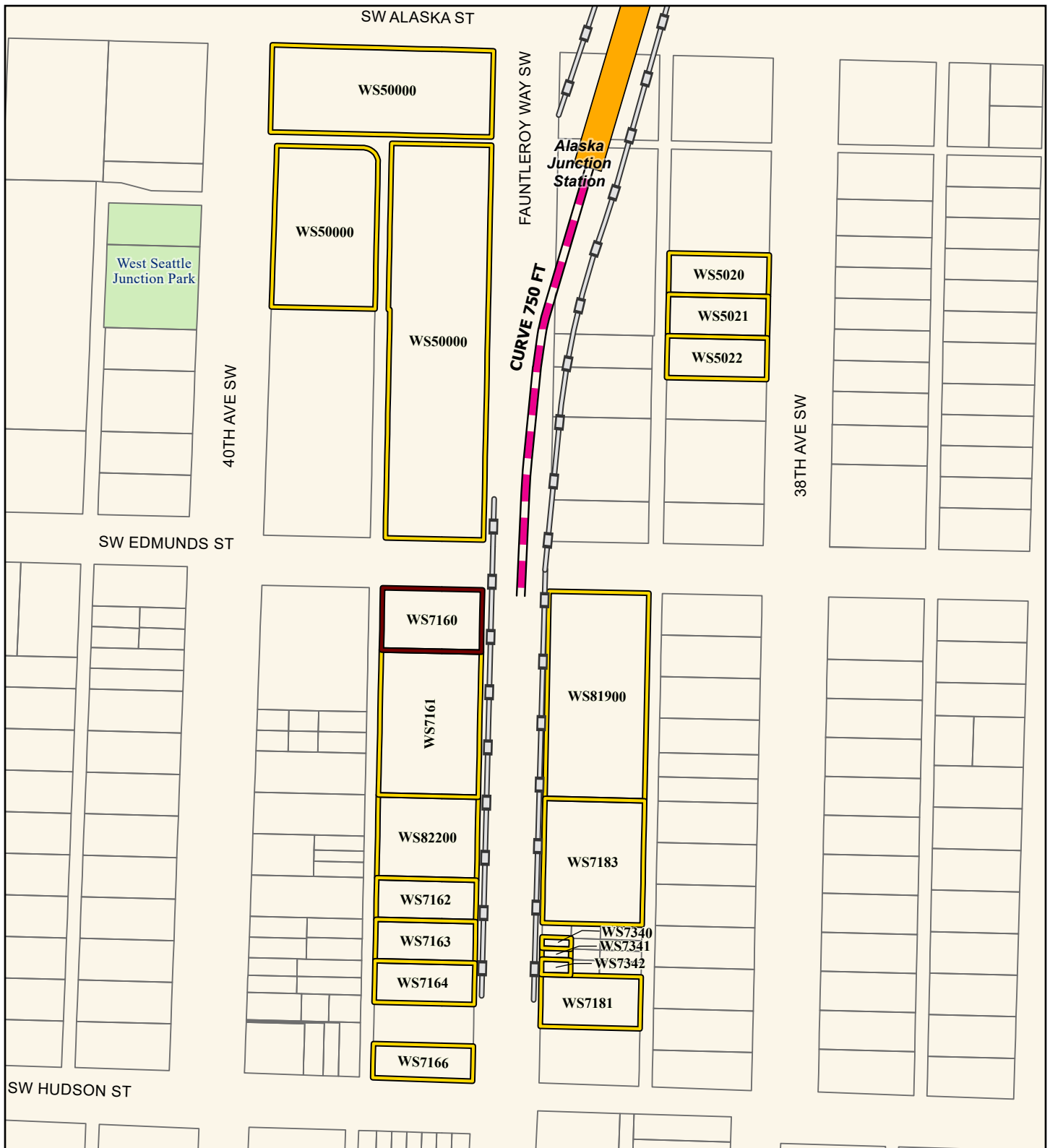
— Crossover

Noise Impacts

- Severe Impact
- Moderate Impact

FIGURE N.3D-13c
Alternative WSJ-2
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

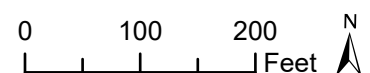
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
 - Severe Impact
 - Moderate Impact

FIGURE N.3D-13d
Alternative WSJ-2
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

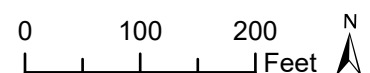
- Elevated
- At-Grade
- Tunnel
- Retained Cut

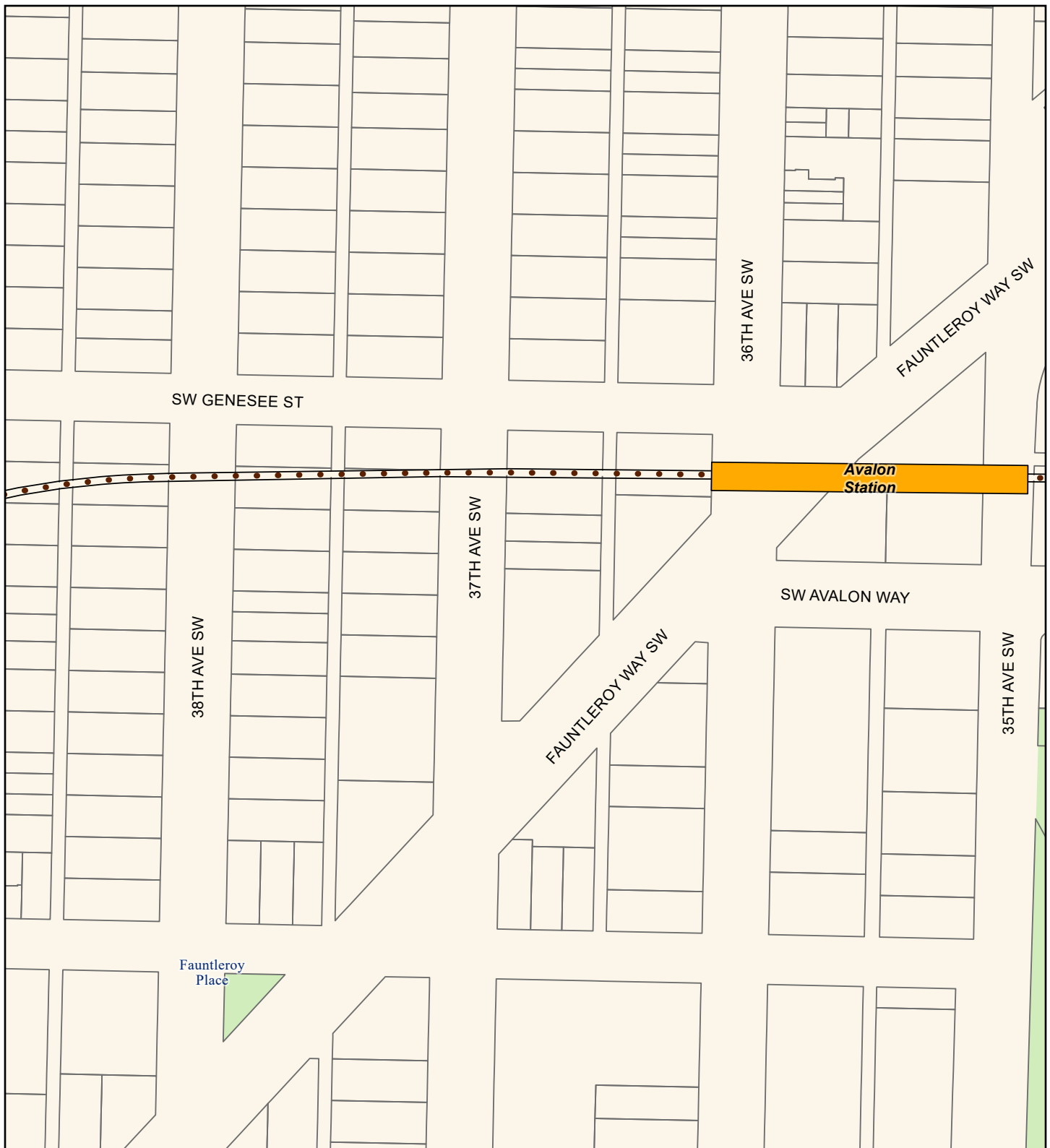
Station

- New
- Existing

- Segment Line
- Parcel
- Park

FIGURE N.3D-14a
Alternative WSJ-3a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

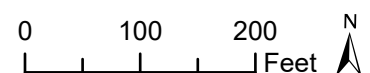
- Elevated Tunnel
- At-Grade Retained Cut

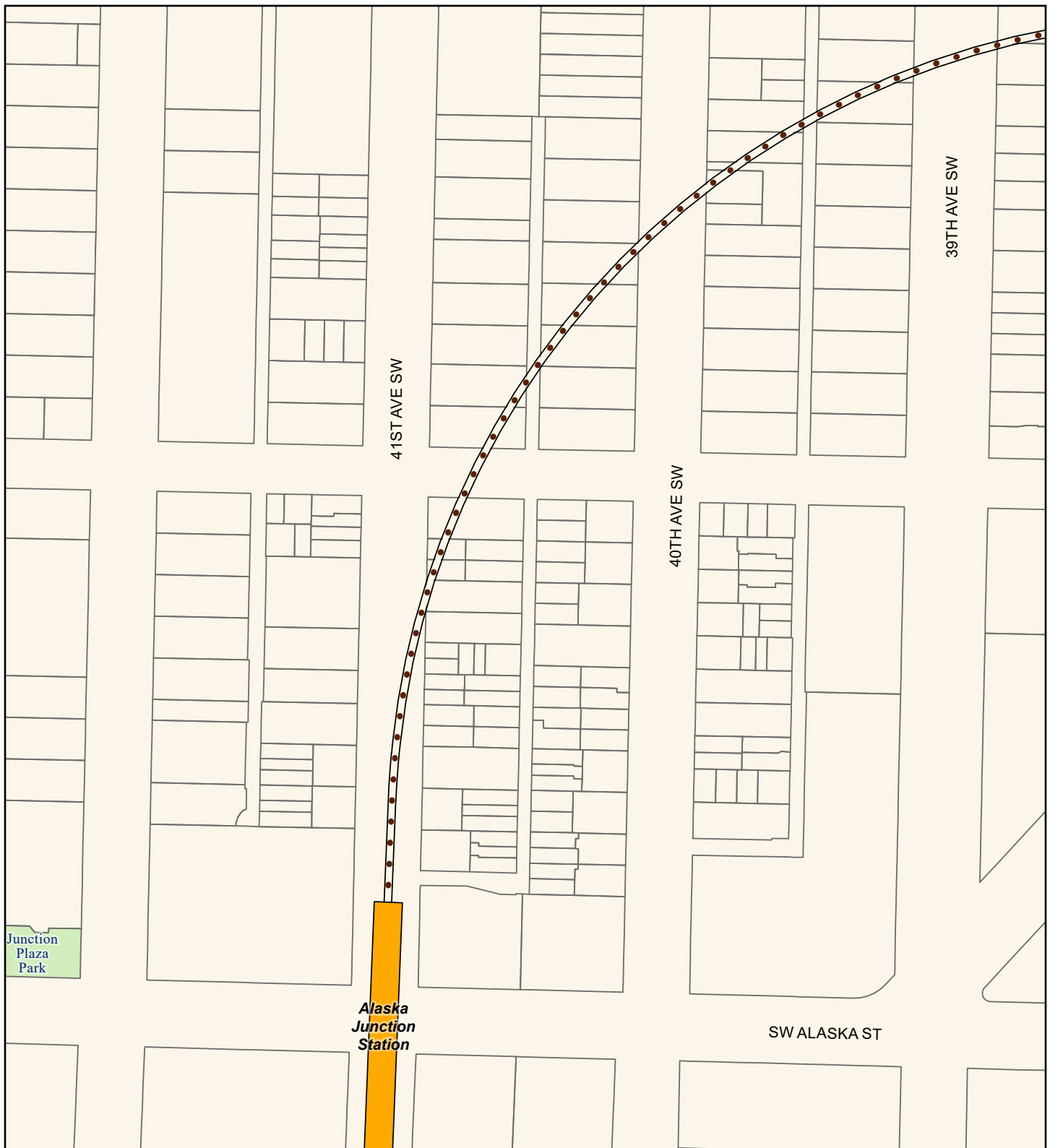
Station

- New
- Existing

- Parcel
- Park

FIGURE N.3D-14b
Alternative WSJ-3a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

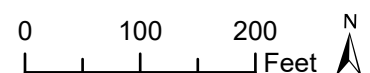
- Elevated — Tunnel
- At-Grade — Retained Cut

Station

- New
- Existing

- Parcel
- Park

FIGURE N.3D-14c
Alternative WSJ-3a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

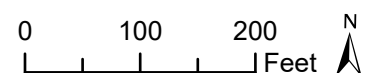
- Elevated
- At-Grade
- Tunnel
- Retained Cut

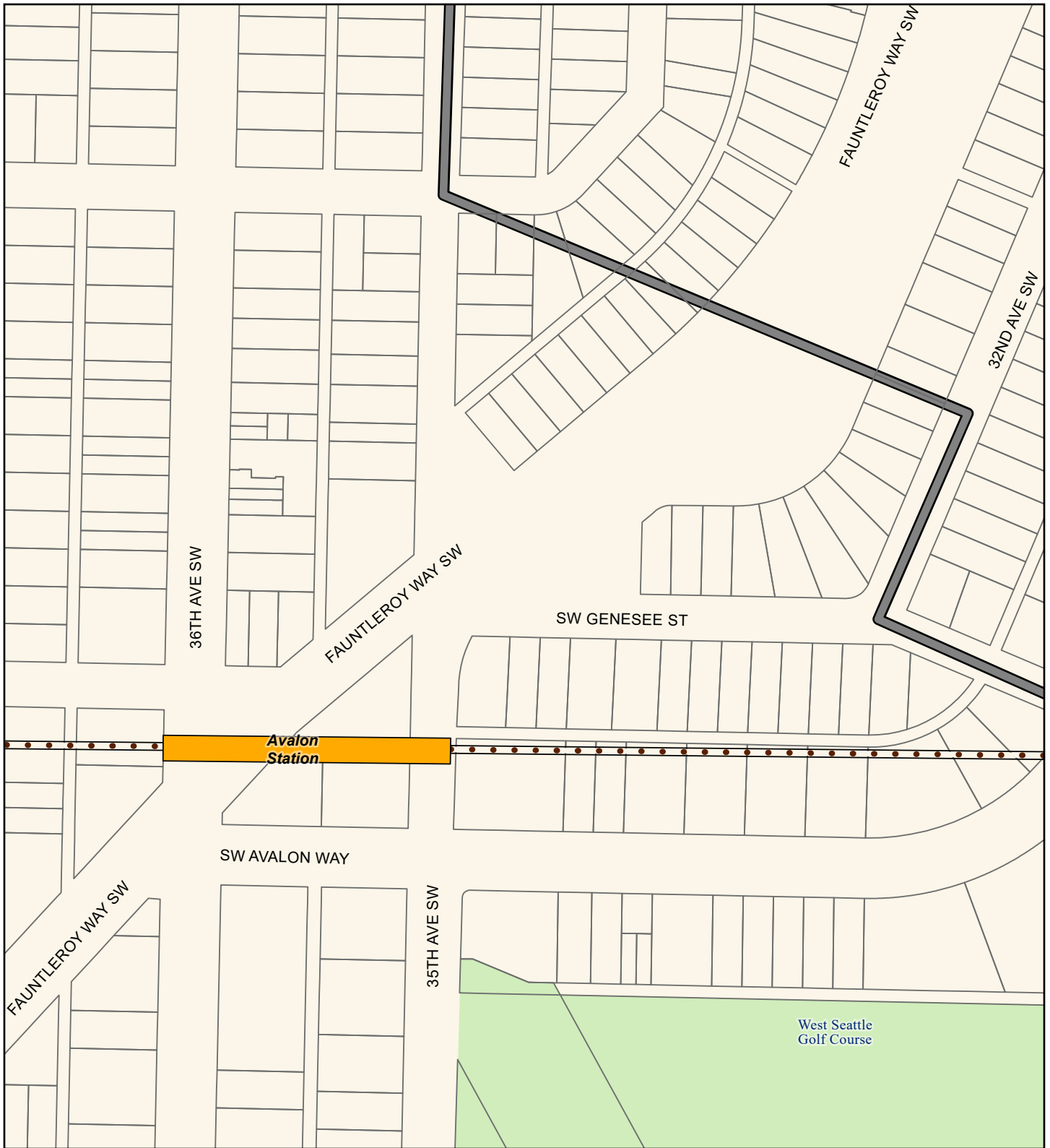
Station

- New
- Existing

- Parcel
- Park
- Crossover

FIGURE N.3D-14d
Alternative WSJ-3a
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

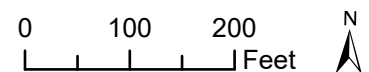
- Elevated
- Tunnel
- At-Grade
- Retained Cut

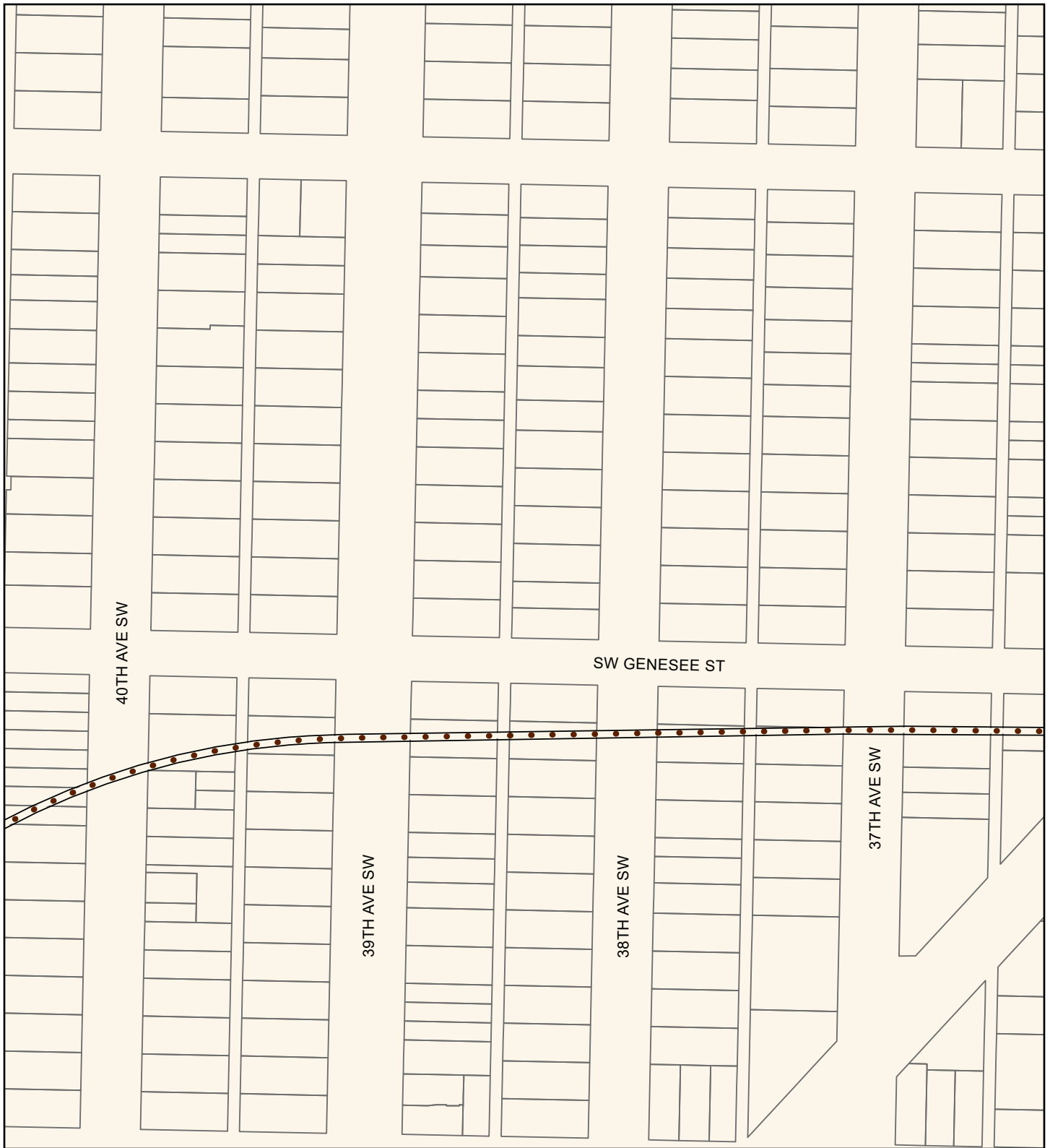
Station

- New
- Existing

- Segment Line
- Parcel
- Park

FIGURE N.3D-15a
Option WSJ-3b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

Parcel

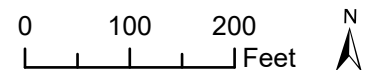
FIGURE N.3D-15b

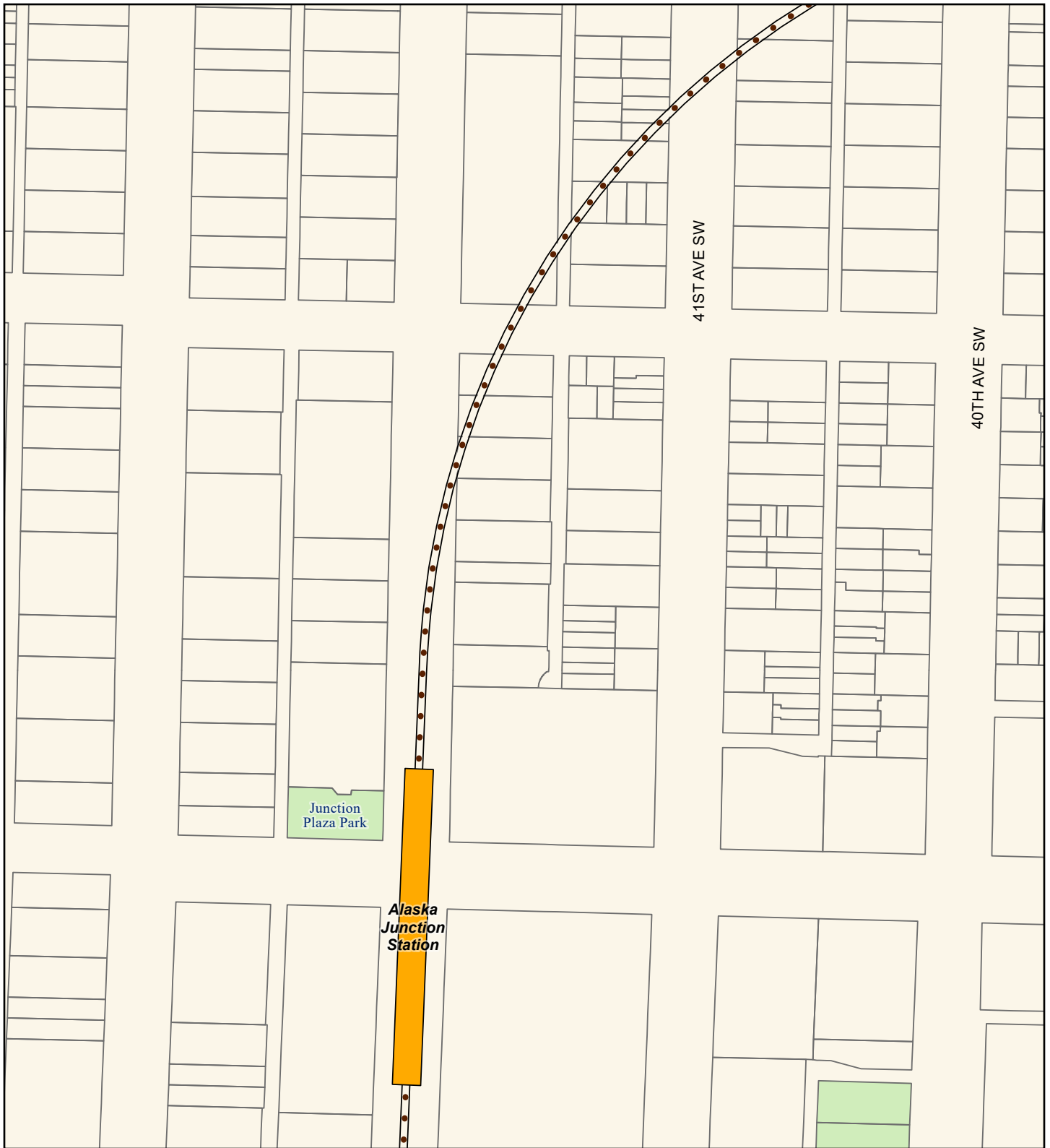
Option WSJ-3b

Noise Impacts (before mitigation)

West Seattle Link Extension -
West Seattle Junction Segment

*West Seattle and
Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

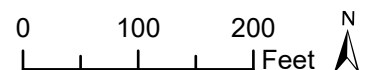
- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

- Parcel
- Park

FIGURE N.3D-15c
Option WSJ-3b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

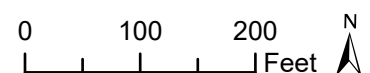
- Elevated
- Tunnel
- At-Grade
- Retained Cut

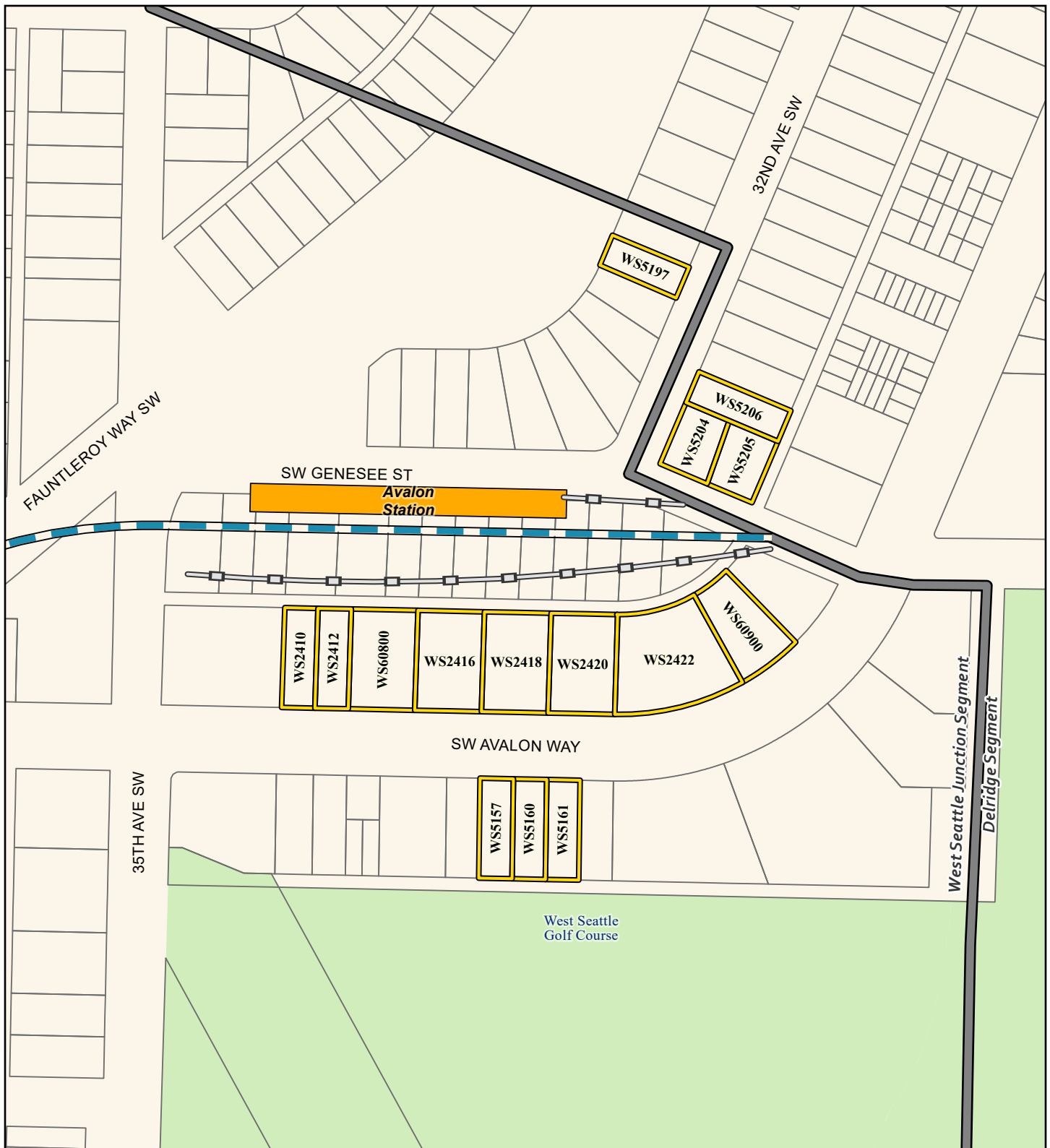
Station

- New
- Existing

- Parcel
- Park
- Crossover

FIGURE N.3D-15d
Option WSJ-3b
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

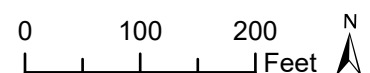
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Segment Line
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts**
- Moderate Impact

FIGURE N.3D-16a
Alternative WSJ-4
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

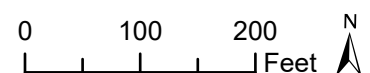
- Elevated
- At-Grade
- Tunnel
- Retained Cut

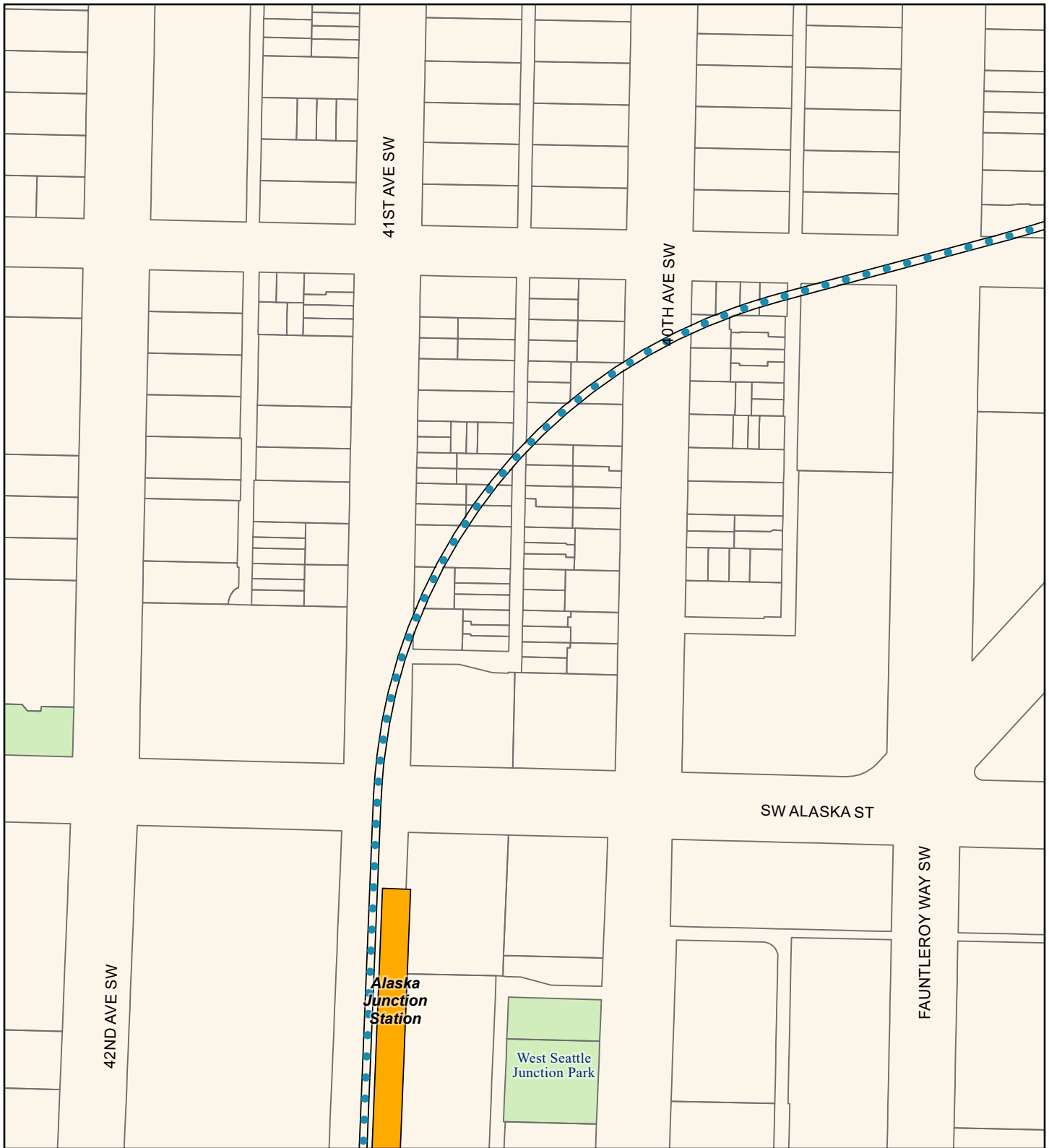
Station

- New
- Existing

- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Moderate Impact

FIGURE N.3D-16b
Alternative WSJ-4
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

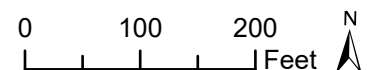
- Elevated
- Tunnel
- At-Grade
- Retained Cut

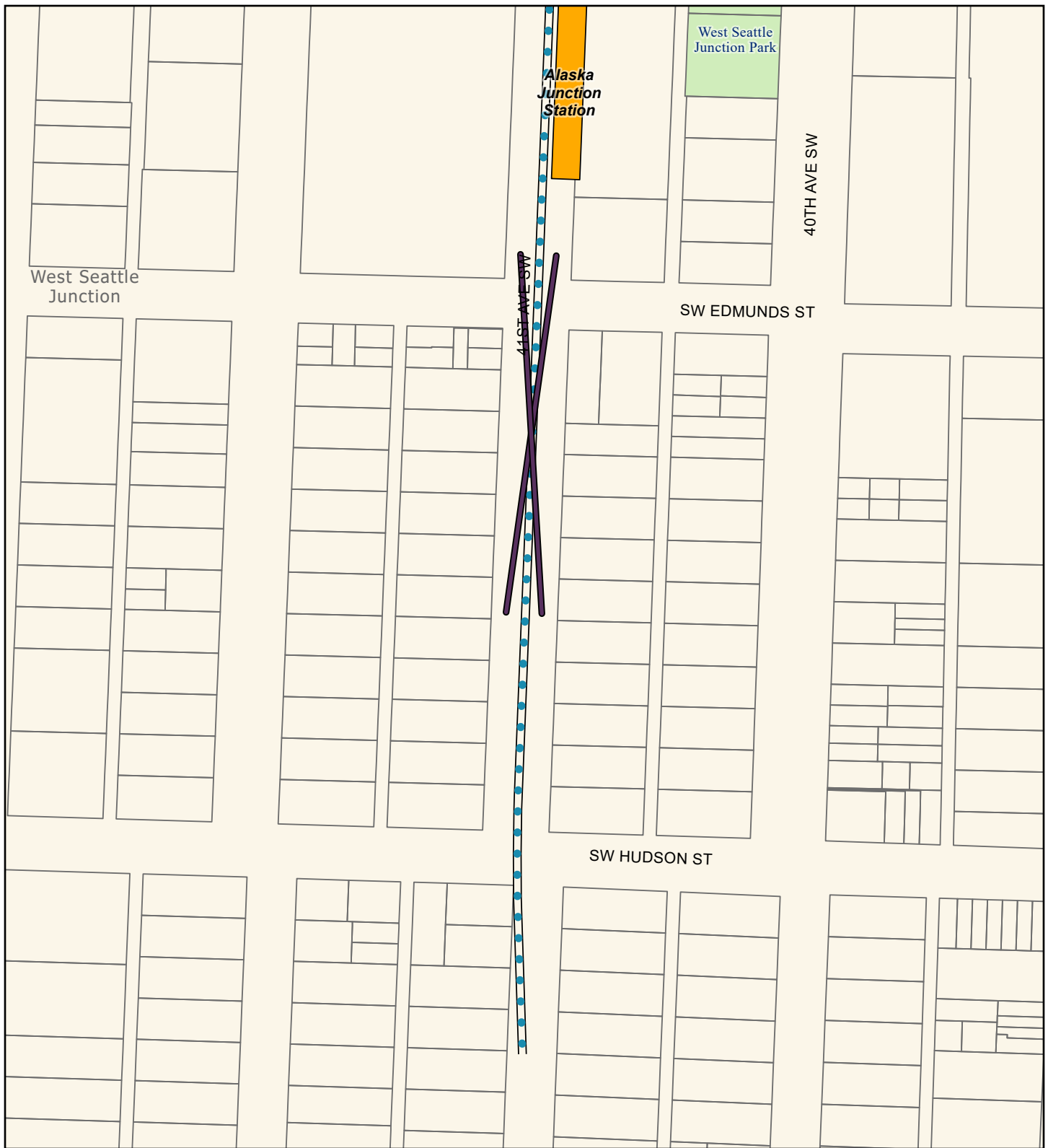
Station

- New
- Existing

- Parcel
- Park

FIGURE N.3D-16c
Alternative WSJ-4
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

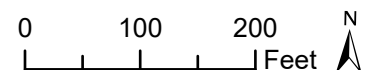
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Parcel
- Park
- Crossover

FIGURE N.3D-16d
Alternative WSJ-4
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

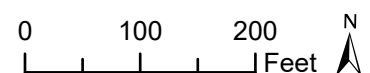
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Segment Line
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Moderate Impact

FIGURE N.3D-17a
Alternative WSJ-5
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

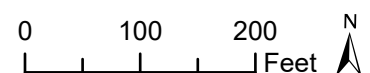
- Elevated — Tunnel
- At-Grade — Retained Cut

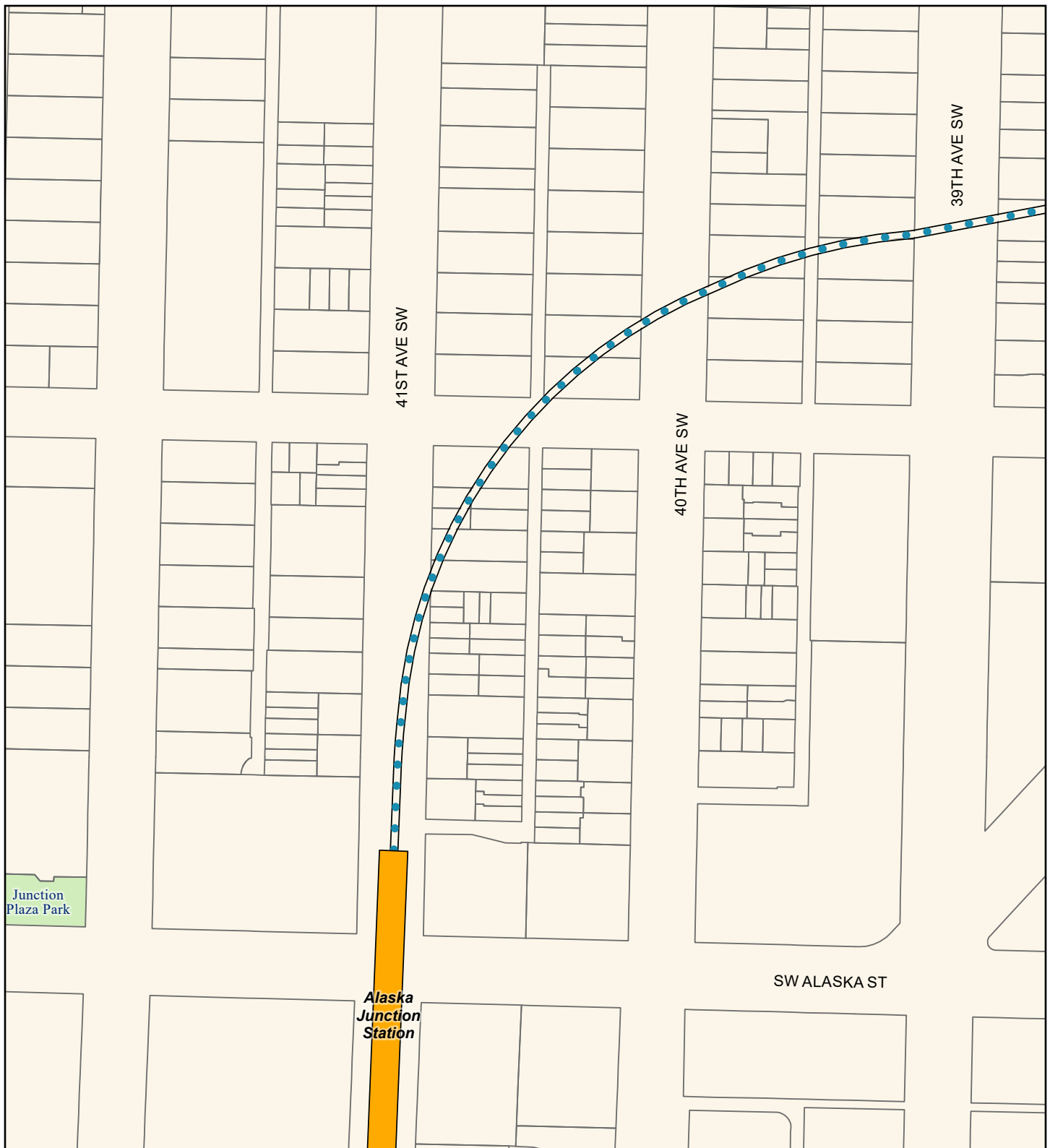
Station

- New
- Existing

- Parcel
- Park

FIGURE N.3D-17b
Alternative WSJ-5
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

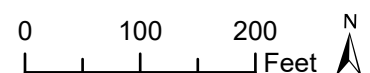
- Elevated ■ Tunnel
- At-Grade ■ Retained Cut

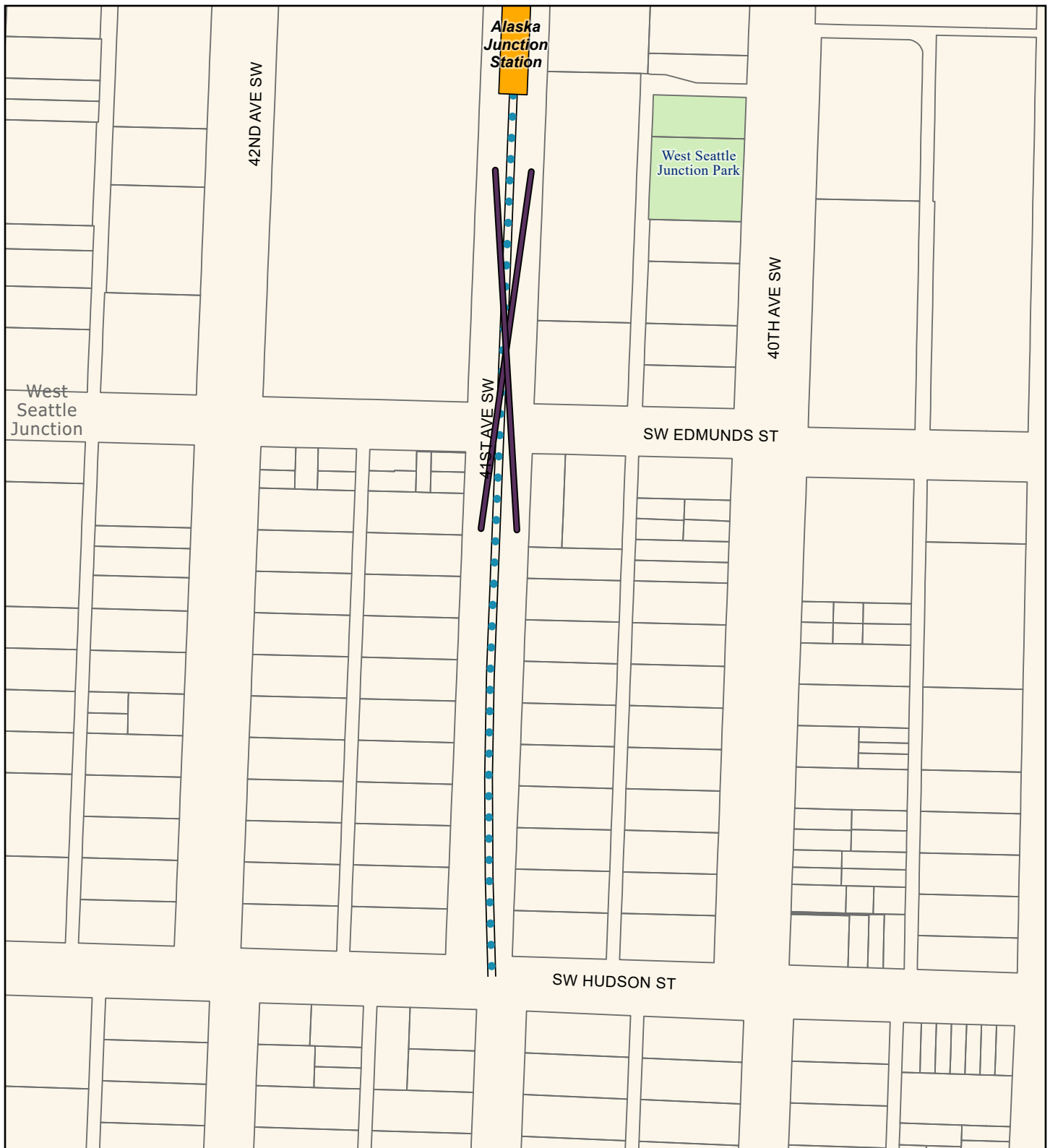
Station

- New
- Existing

- Parcel
- Park

FIGURE N.3D-17c
Alternative WSJ-5
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

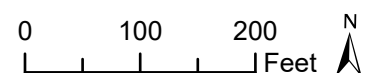
- Elevated
- Tunnel
- At-Grade
- Retained Cut

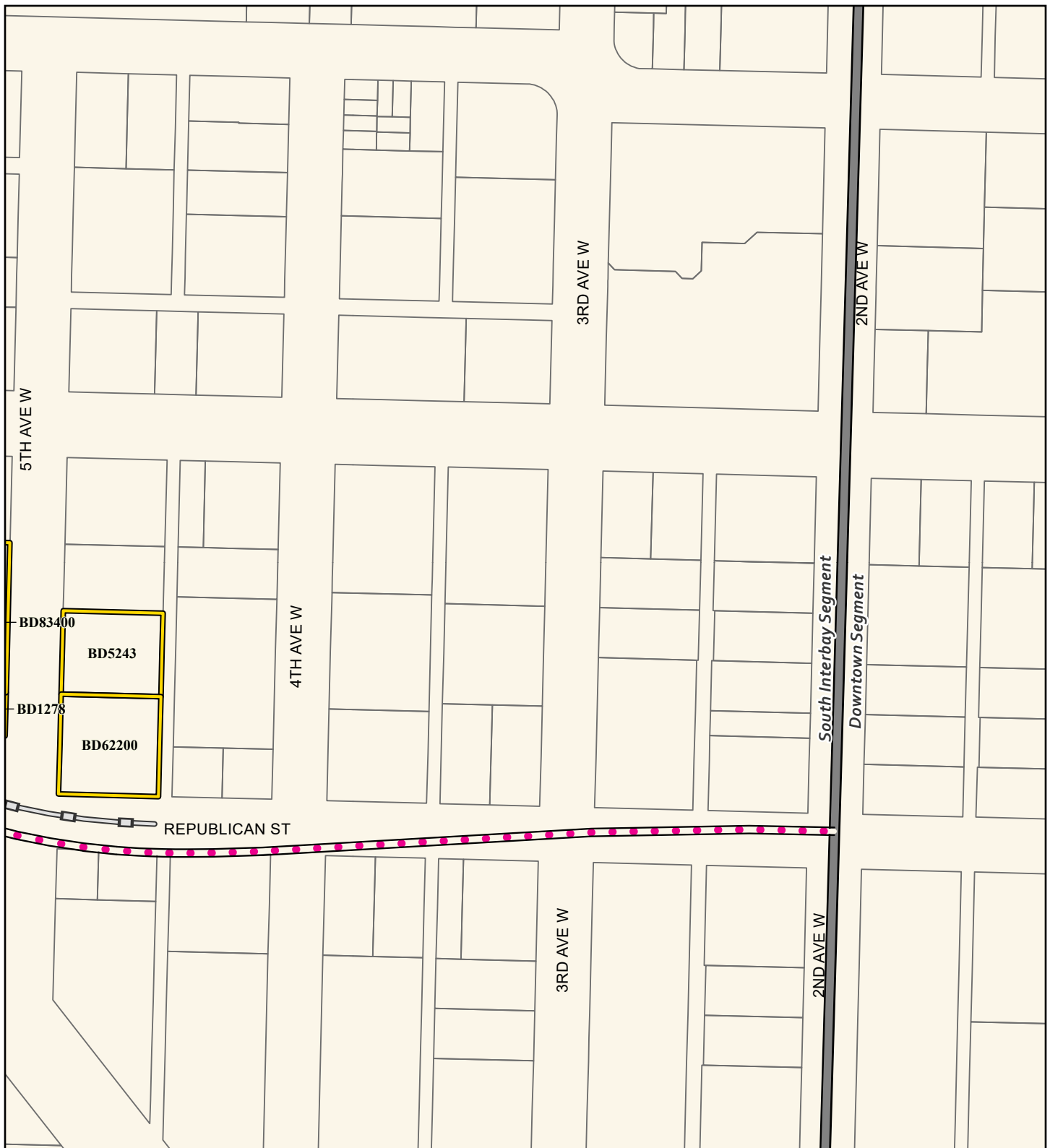
Station

- New
- Existing

- Parcel
- Park
- Crossover

FIGURE N.3D-17d
Alternative WSJ-5
Noise Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

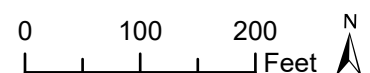
- Elevated
- At-Grade
- Tunnel
- Retained Cut

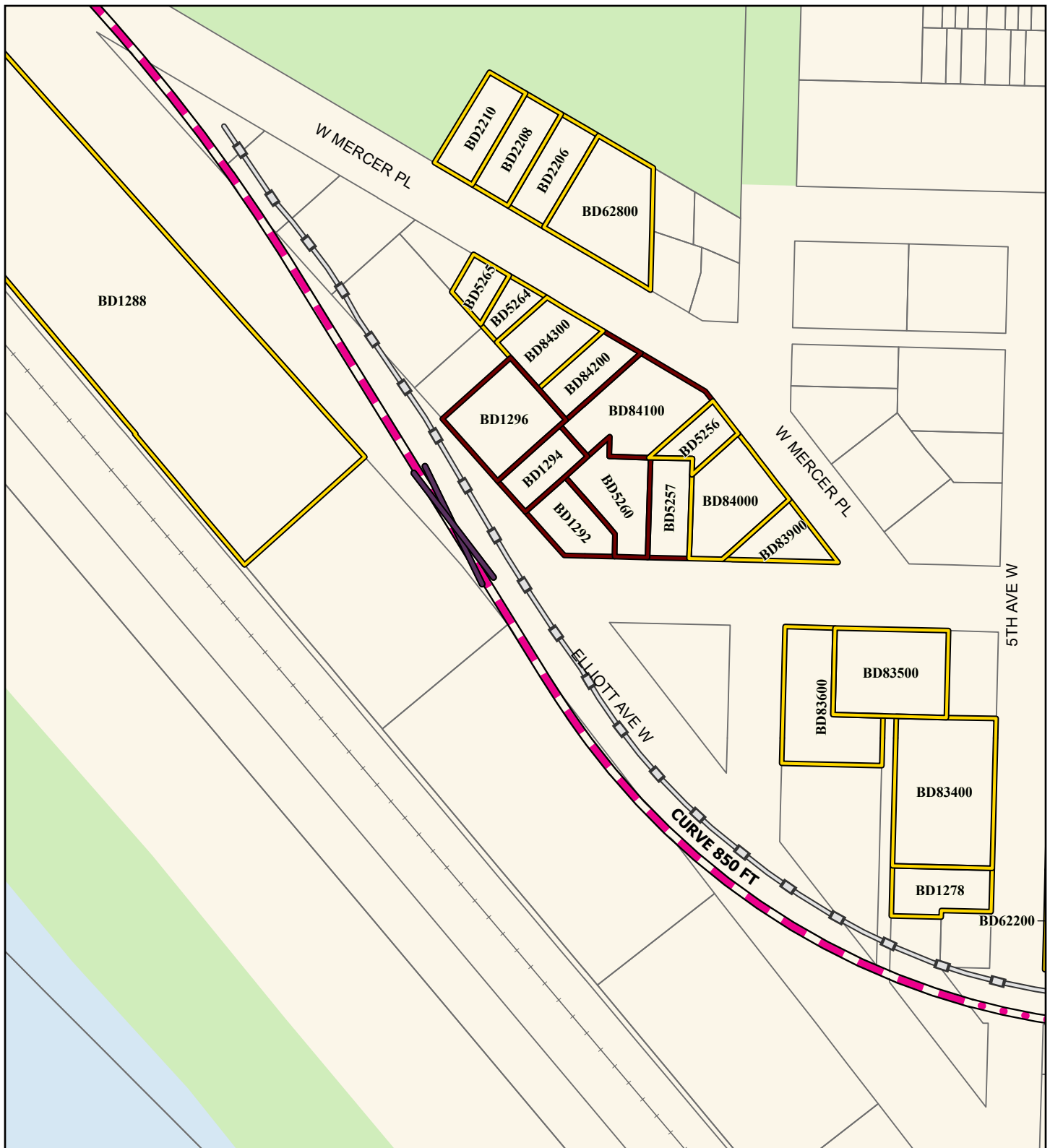
Station

- New
- Existing

- Segment Line
- Proposed Sound Wall
- Parcel
- Noise Impacts
- Moderate Impact

FIGURE N.3D-18a
Alternative SIB-1
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

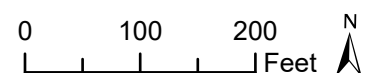
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- Park
- Water Body
- Crossover
- Noise Impacts
- Severe Impact
- Moderate Impact

FIGURE N.3D-18b
Alternative SIB-1
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

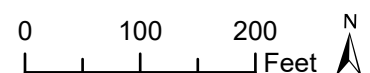
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Moderate Impact

FIGURE N.3D-18c
Alternative SIB-1
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

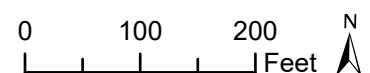
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Moderate Impact

FIGURE N.3D-18d
Alternative SIB-1
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

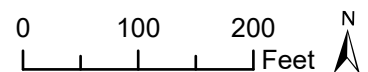
- Elevated
- At-Grade
- Tunnel
- Retained Cut

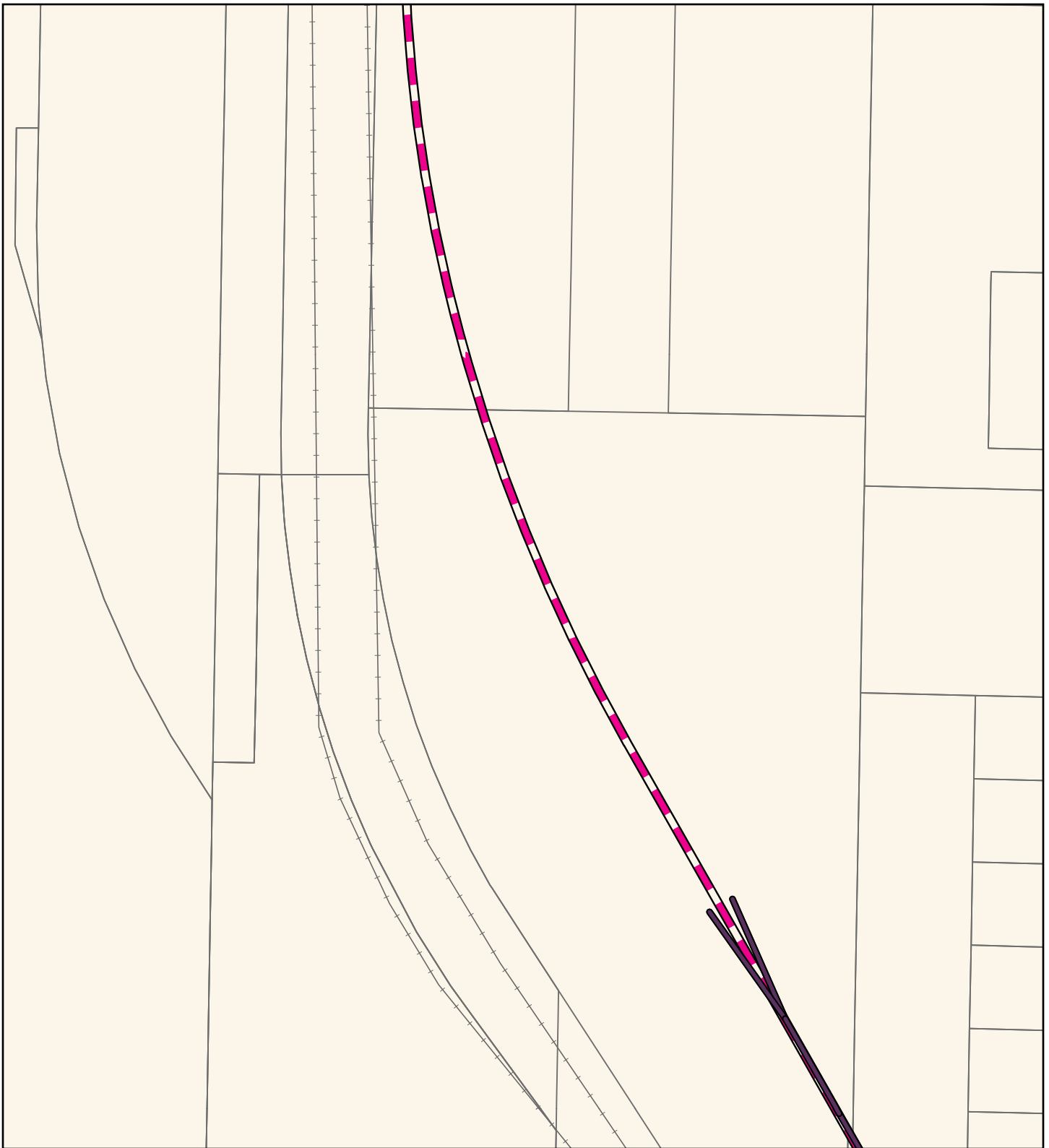
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body
- Crossover

FIGURE N.3D-18e
Alternative SIB-1
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

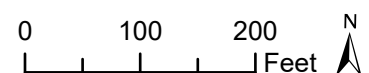
- Elevated
- At-Grade
- Tunnel
- Retained Cut

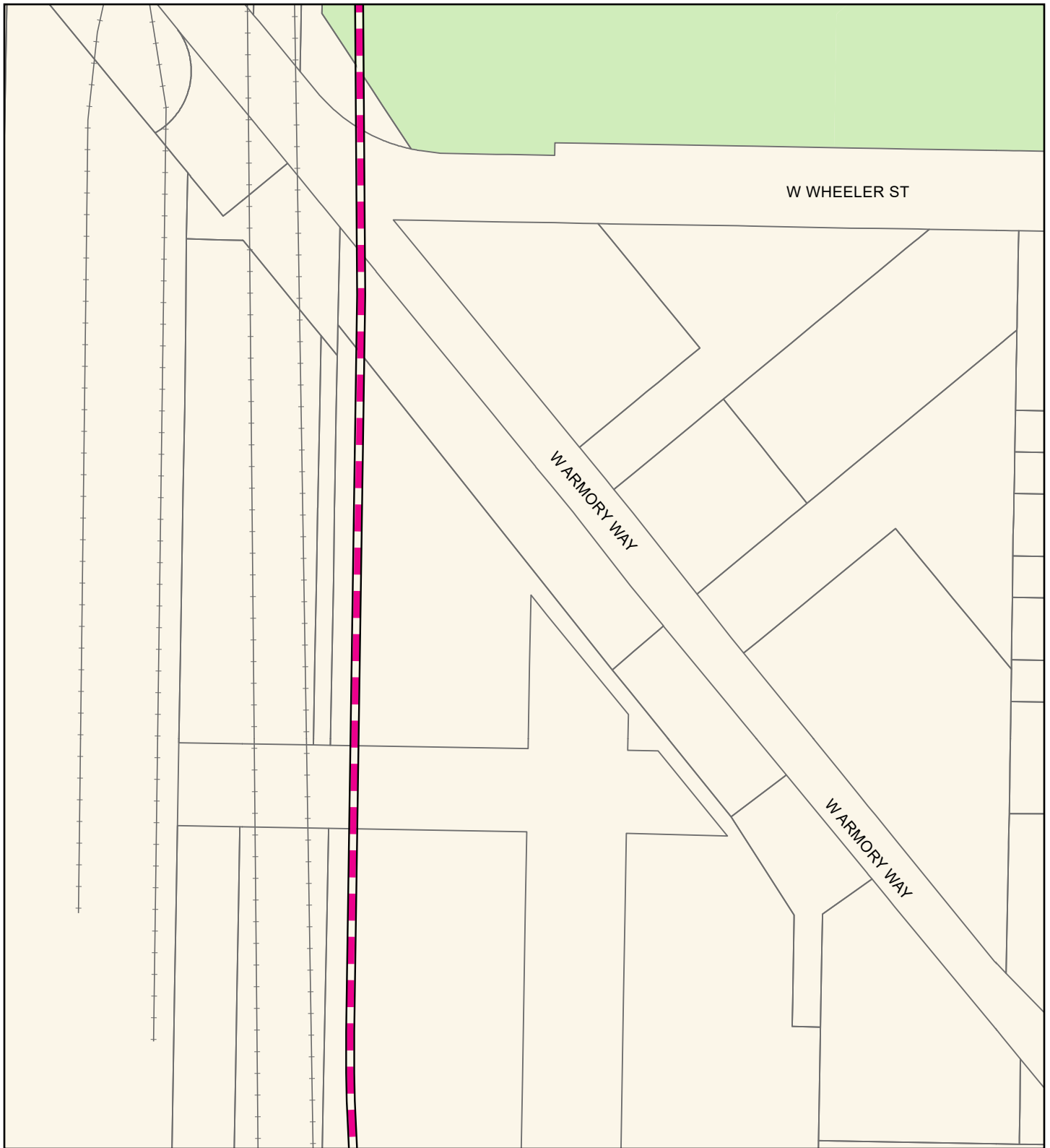
Station

- New
- Existing

- Railroad
- Parcel
- Crossover

FIGURE N.3D-18f
Alternative SIB-1
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

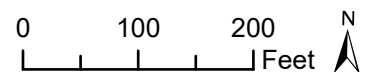
- Elevated
- At-Grade
- Tunnel
- Retained Cut

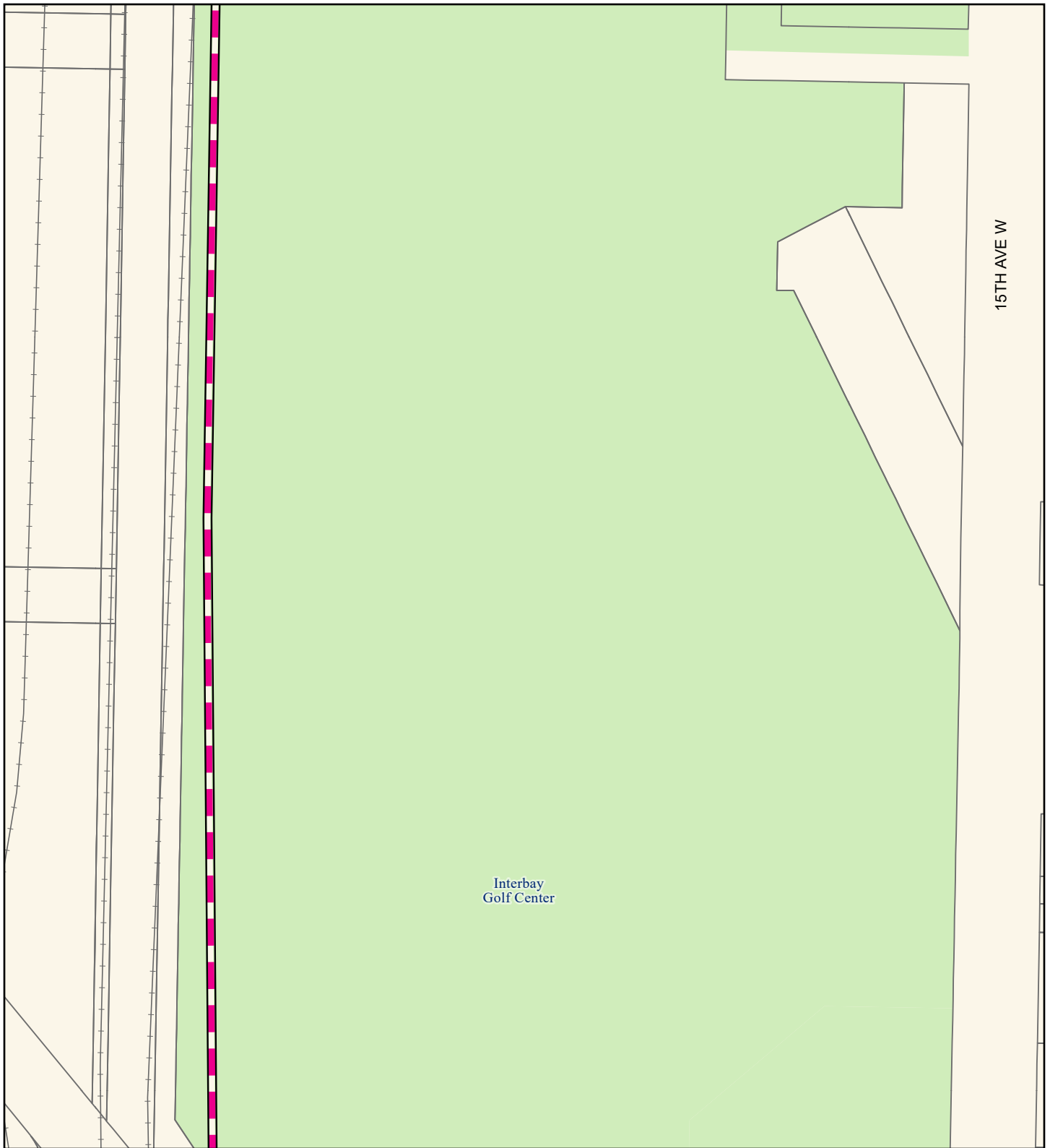
Station

- New
- Existing

- Railroad
- Parcel
- Park

FIGURE N.3D-18g
Alternative SIB-1
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

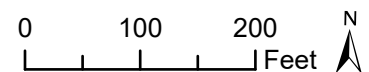
- Elevated
- At-Grade
- Tunnel
- Retained Cut

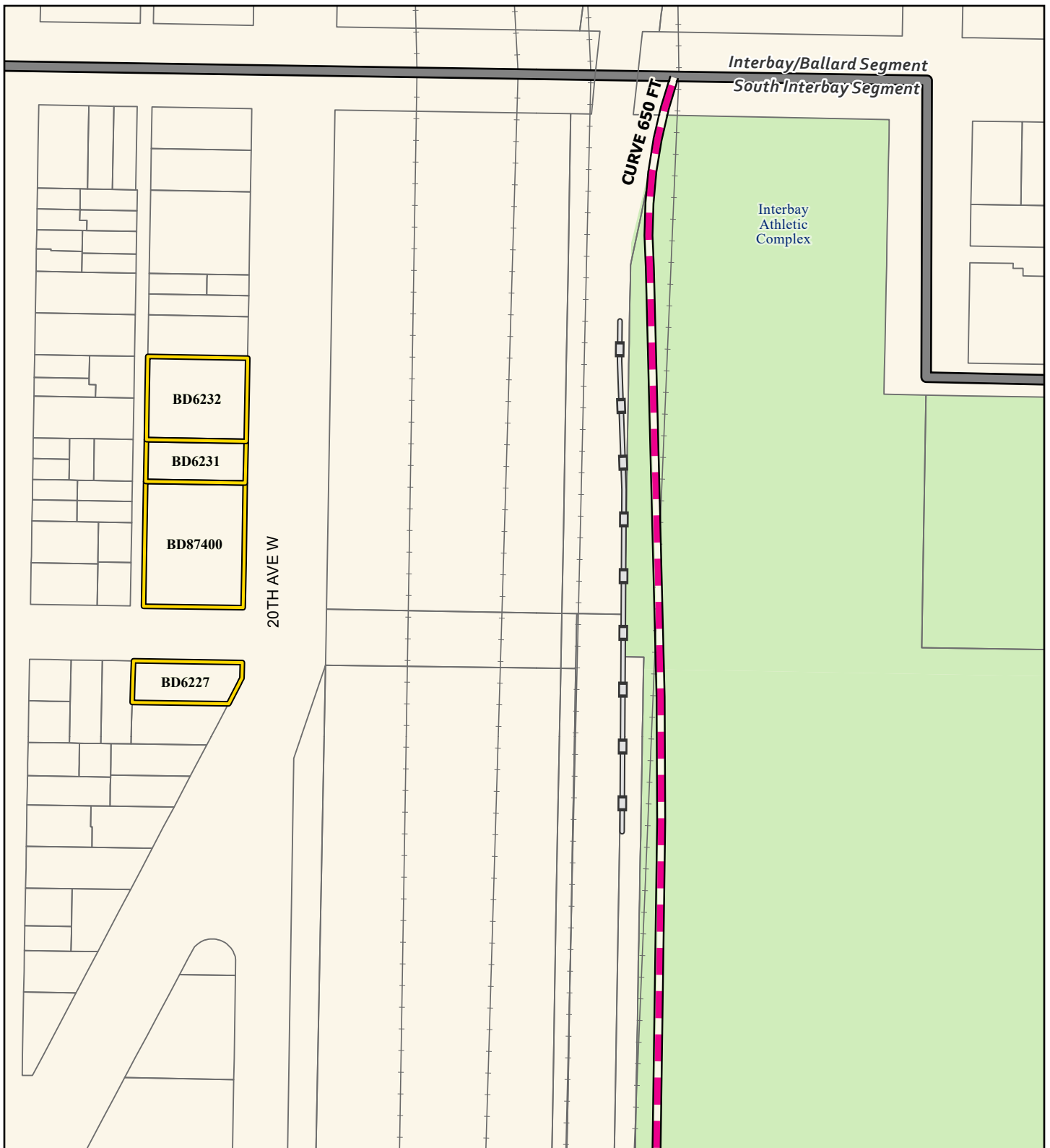
Station

- New
- Existing

- Railroad
- Parcel
- Park

FIGURE N.3D-18h
Alternative SIB-1
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*

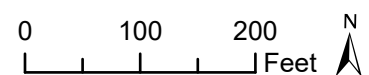


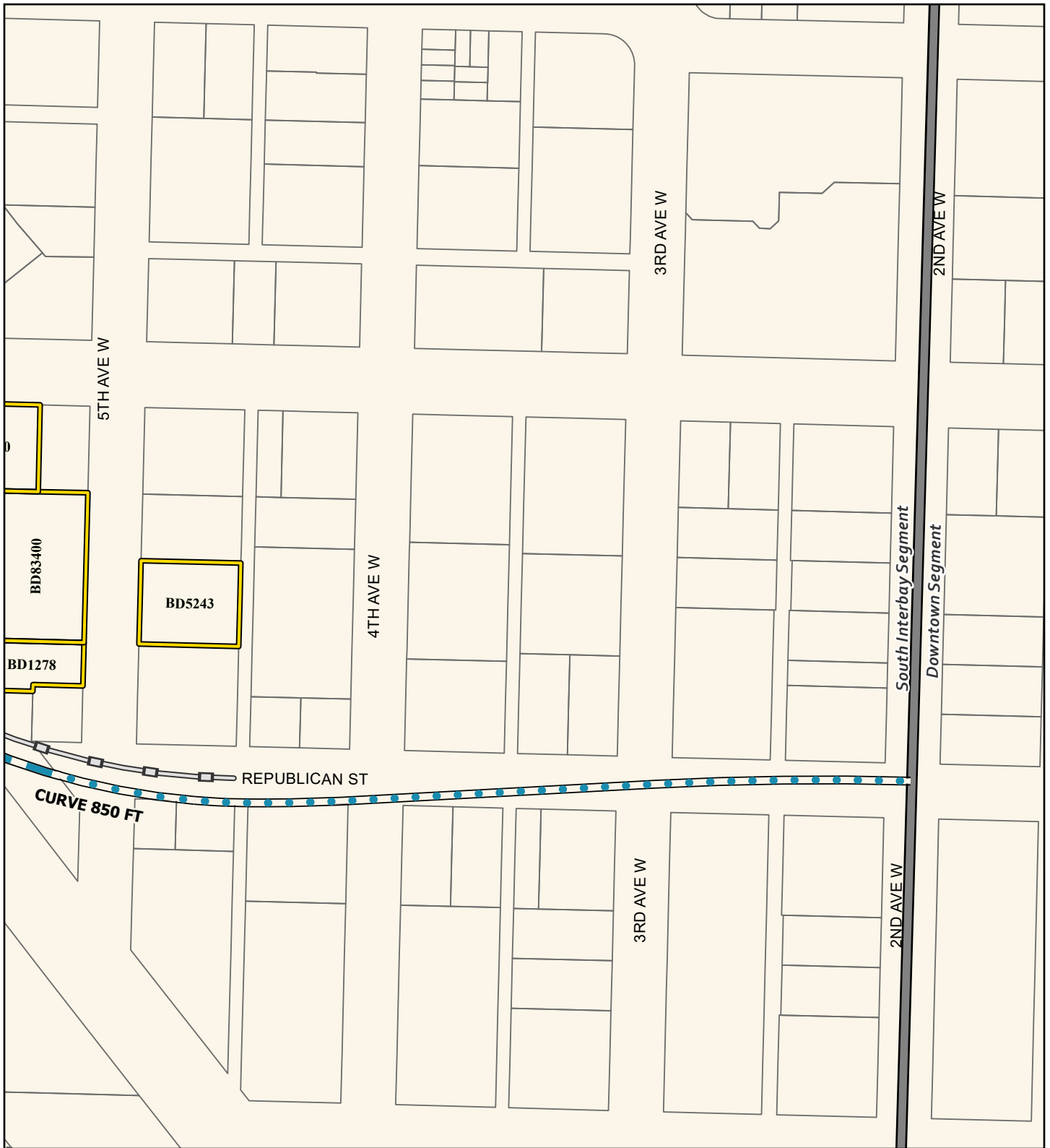


Source: City of Seattle, King County (2019, 2020, 2021).

- Alternatives**
- Preferred Alternative
 - Preferred Alternative with Third-party Funding
 - Other Alternatives
- Alternative Profile**
- Elevated
 - At-Grade
 - Tunnel
 - Retained Cut
- Station**
- New
 - Existing
- Segment Line
 - Railroad
 - Proposed Sound Wall
 - Parcel
 - Park
 - Noise Impacts
 - Moderate Impact

FIGURE N.3D-18i
Alternative SIB-1
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

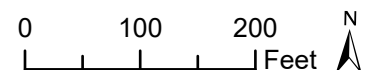
- Elevated
- At-Grade
- Tunnel
- Retained Cut

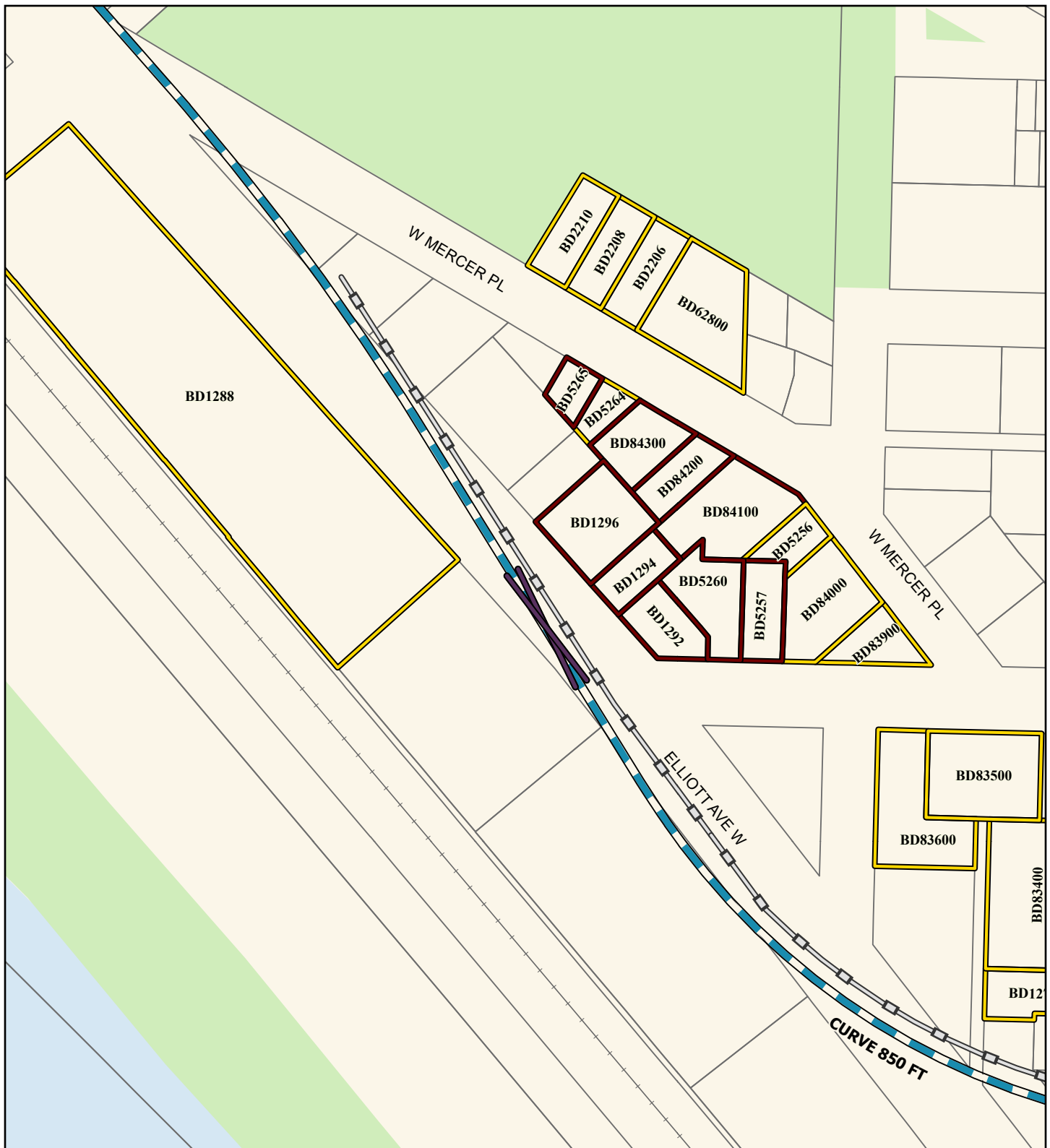
Station

- New
- Existing

- Segment Line
- Proposed Sound Wall
- Parcel
- Noise Impacts
- Moderate Impact

FIGURE N.3D-19a
Alternative SIB-2
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

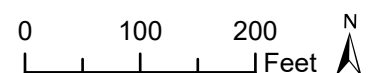
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- Park
- Water Body
- Crossover
- Noise Impacts
- Severe Impact
- Moderate Impact

FIGURE N.3D-19b
Alternative SIB-2
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

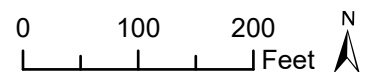
- Elevated
- At-Grade
- Tunnel
- Retained Cut

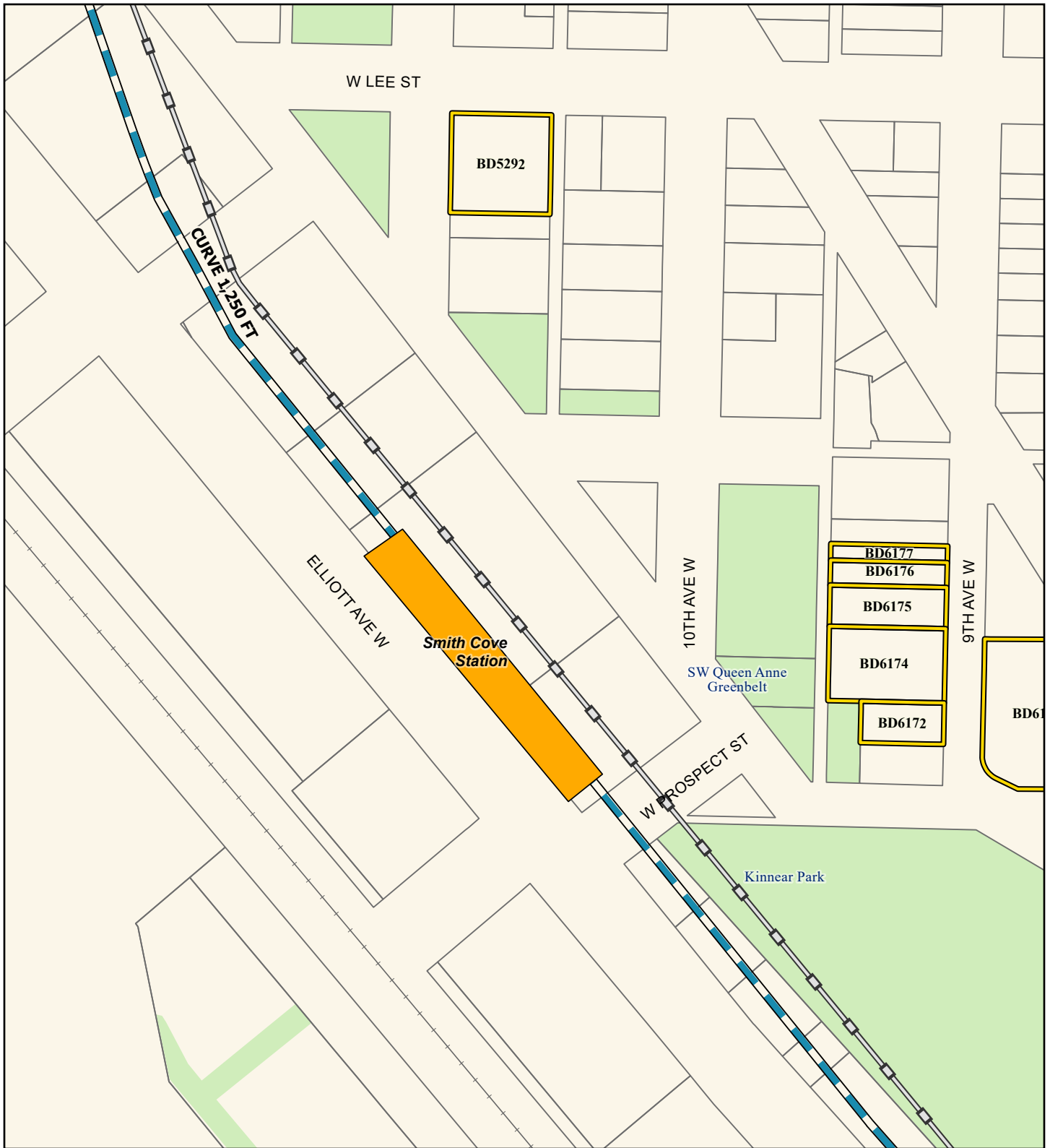
Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Moderate Impact

FIGURE N.3D-19c
Alternative SIB-2
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

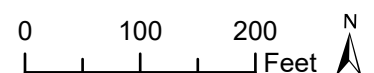
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts**
- Moderate Impact

FIGURE N.3D-19d
Alternative SIB-2
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

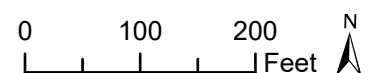
- Elevated
- At-Grade
- Tunnel
- Retained Cut

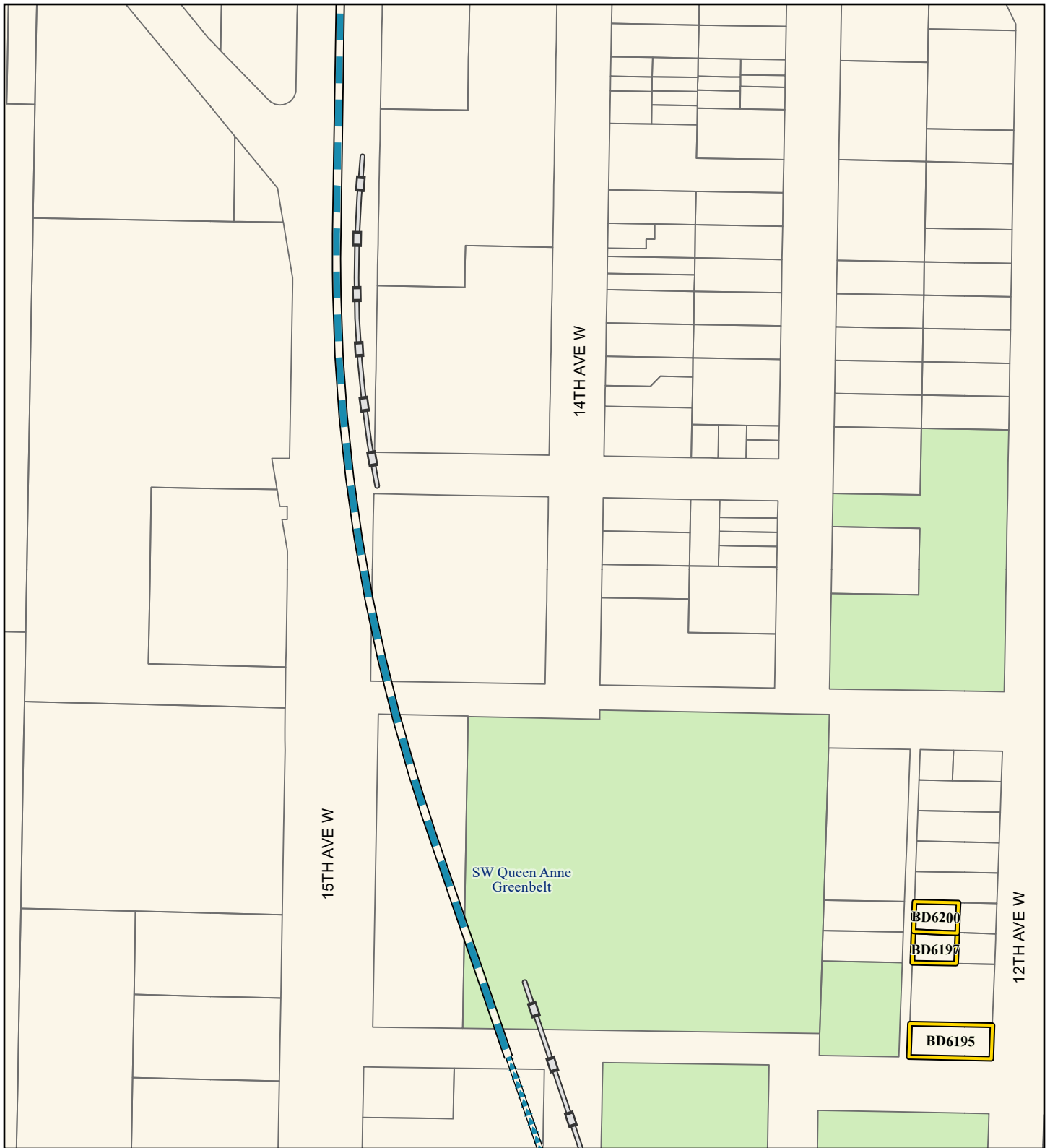
Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Moderate Impact

FIGURE N.3D-19e
Alternative SIB-2
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

— Proposed Sound Wall

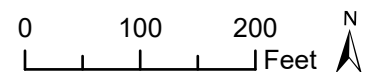
 Parcel

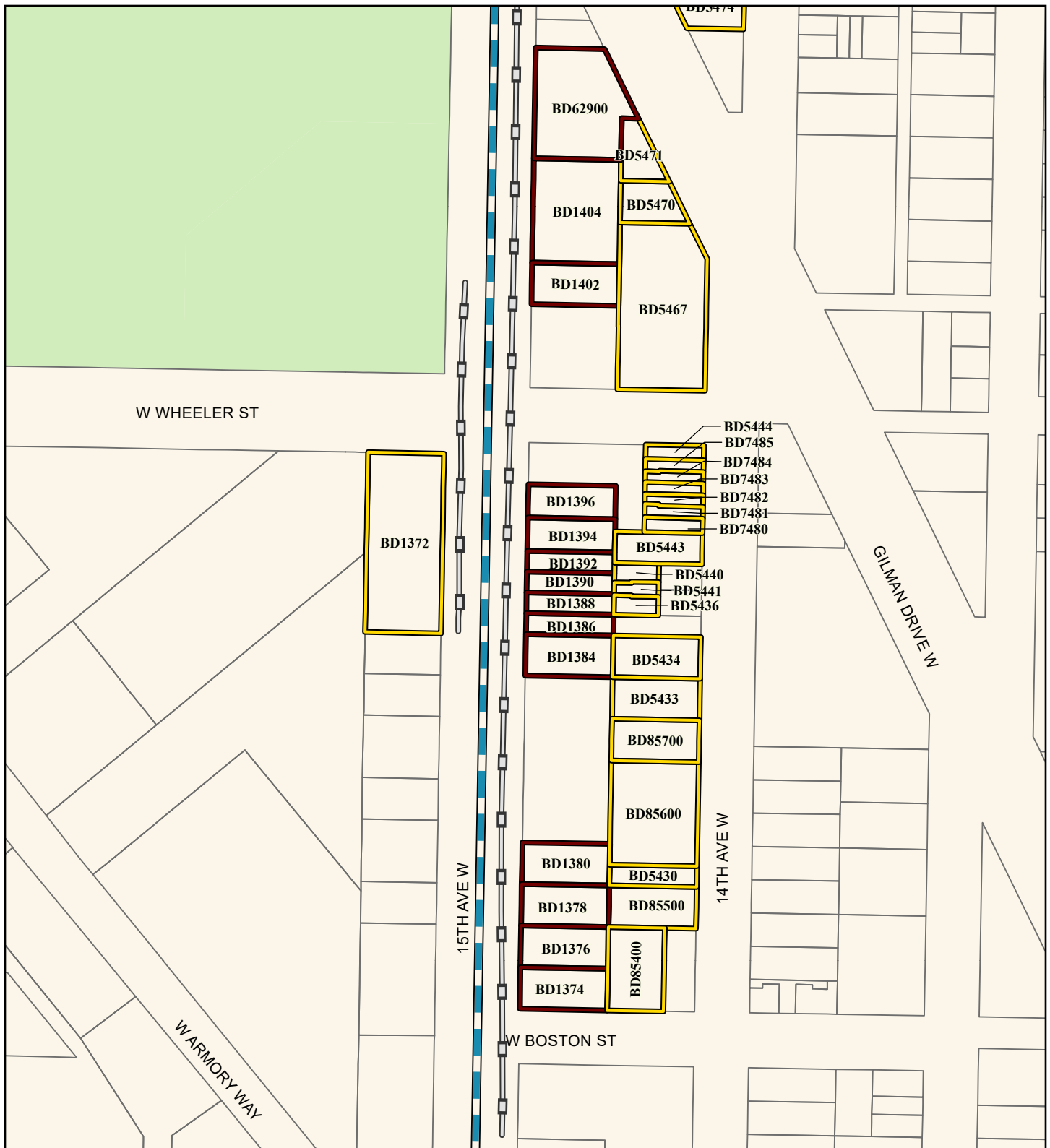
 Park

Noise Impacts

 Moderate Impact

FIGURE N.3D-19f
Alternative SIB-2
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

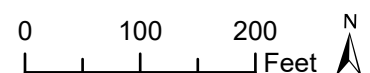
- █ Elevated
- █ At-Grade
- █ Tunnel
- █ Retained Cut

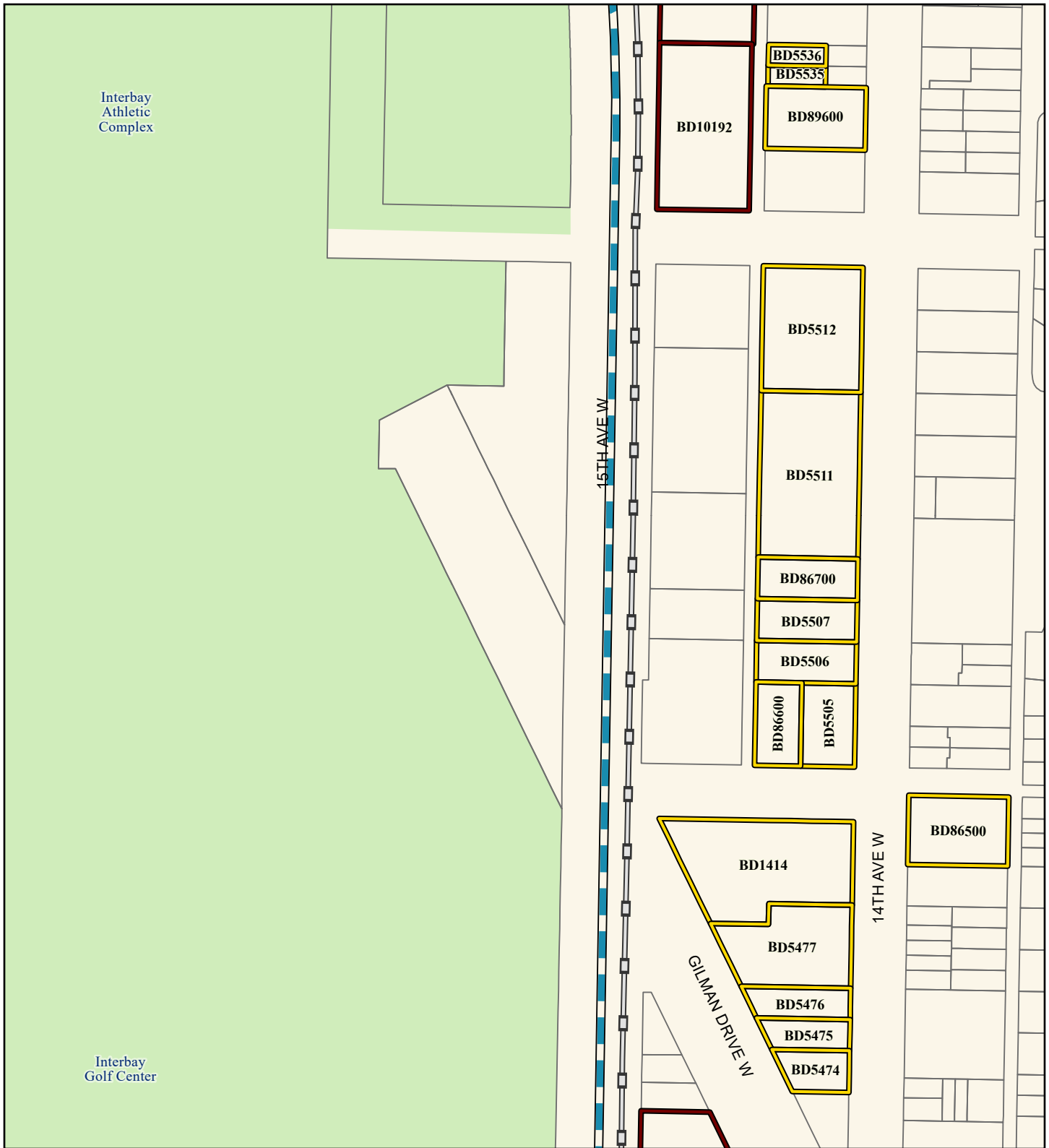
Station

- █ New
- █ Existing

- █ Proposed Sound Wall
- █ Parcel
- █ Park
- Noise Impacts**
 - █ Severe Impact
 - █ Moderate Impact

FIGURE N.3D-19g
Alternative SIB-2
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

- █ Elevated
- █ At-Grade
- █ Tunnel
- █ Retained Cut

Station

- █ New
- █ Existing

█ Proposed Sound Wall

█ Parcel

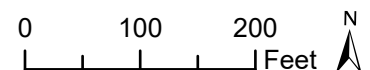
█ Park

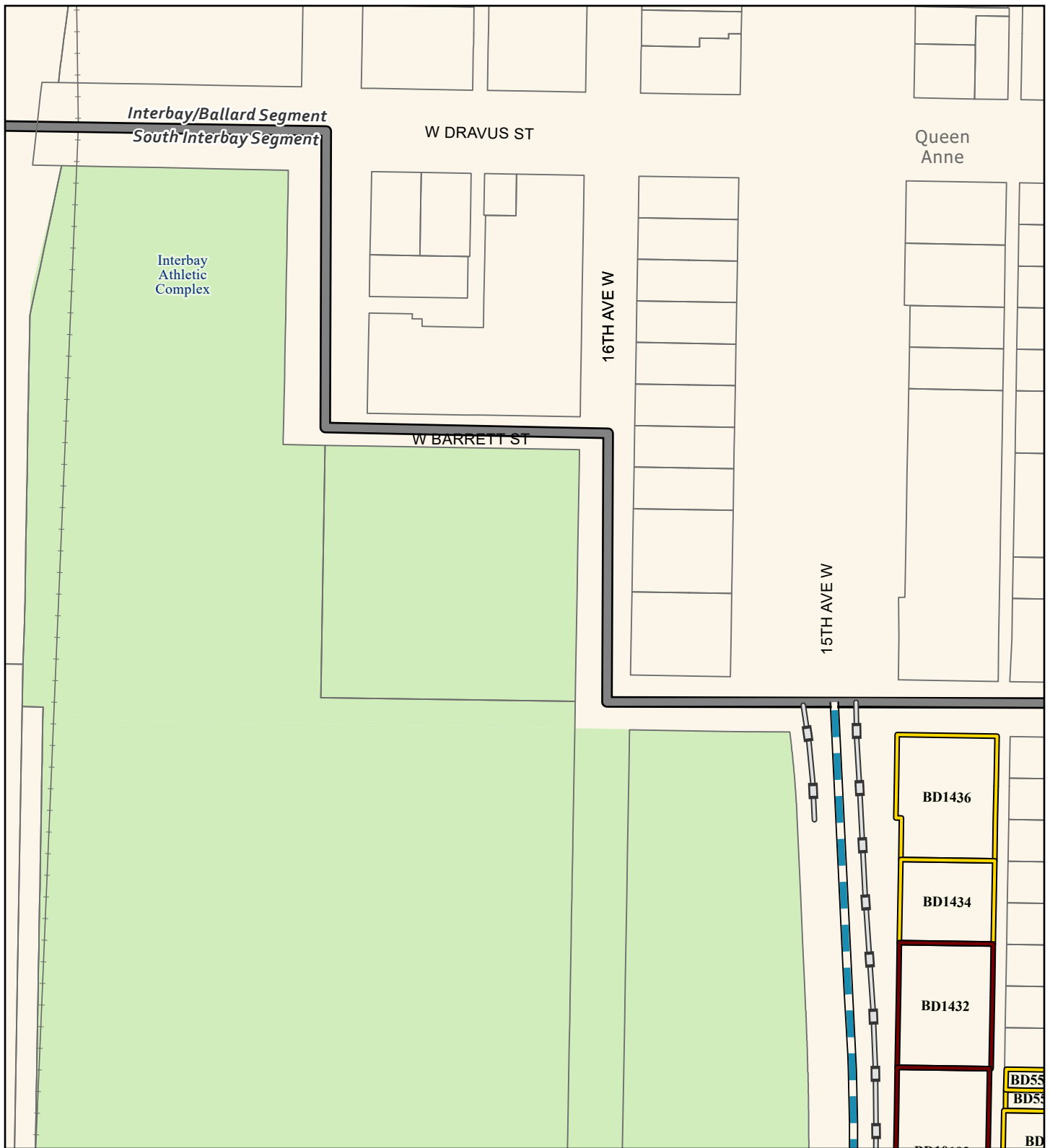
Noise Impacts

█ Severe Impact

█ Moderate Impact

FIGURE N.3D-19h
Alternative SIB-2
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

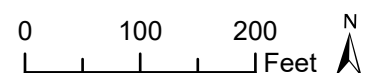
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Segment Line
- Railroad
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Severe Impact
- Moderate Impact

FIGURE N.3D-19i
Alternative SIB-2
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

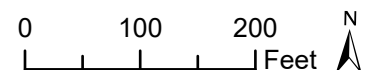
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Segment Line
- Parcel

FIGURE N.3D-20a
Alternative SIB-3
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

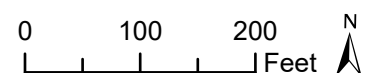
- Elevated
- Tunnel
- At-Grade
- Retained Cut

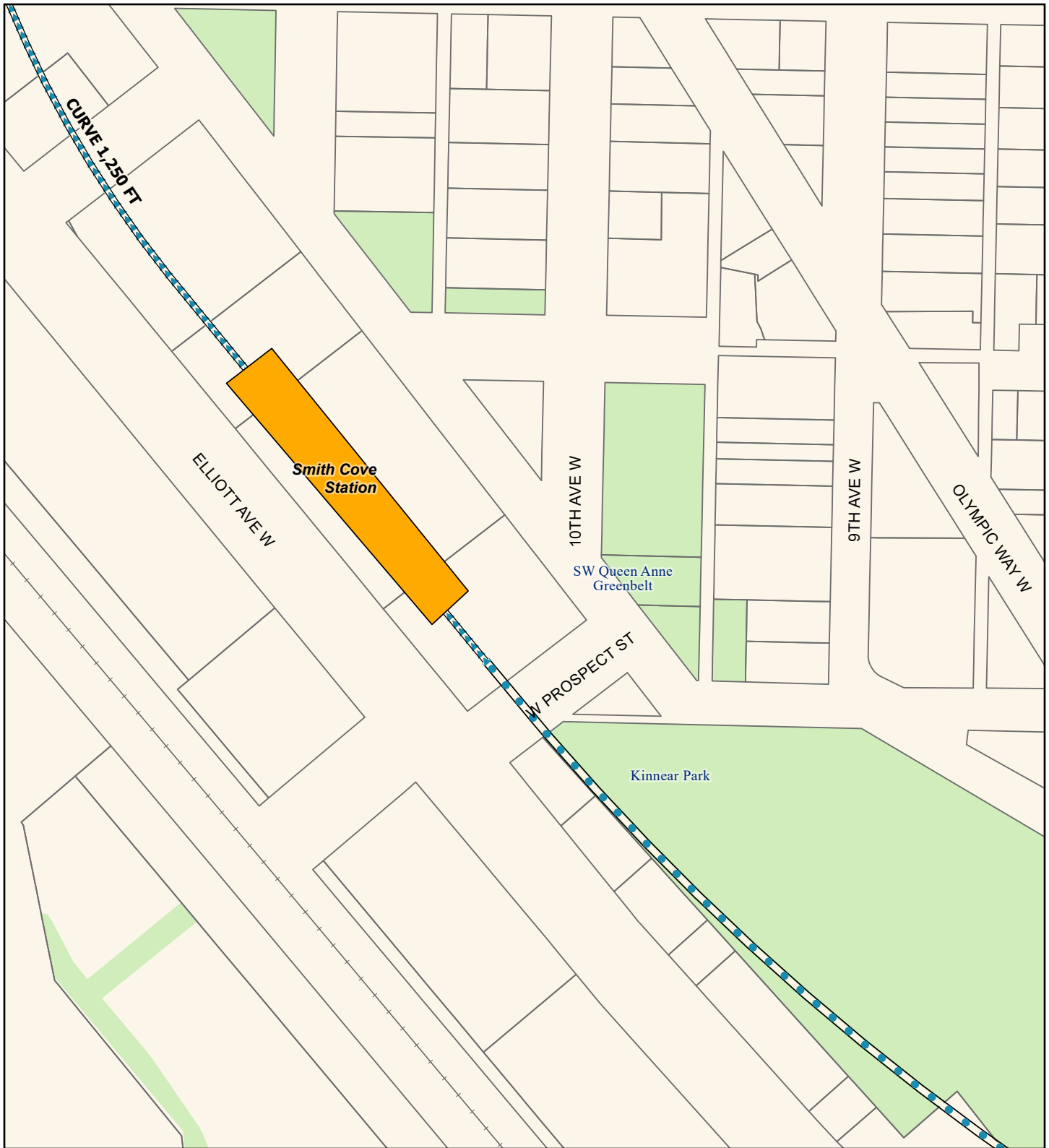
Station

- New
- Existing

- Railroad
- Parcel
- Park

FIGURE N.3D-20b
Alternative SIB-3
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

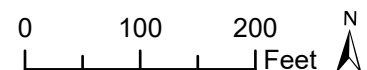
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Parcel
- Park

FIGURE N.3D-20c
Alternative SIB-3
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

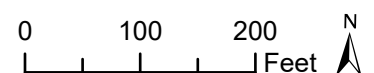
- Elevated — Tunnel
- At-Grade — Retained Cut

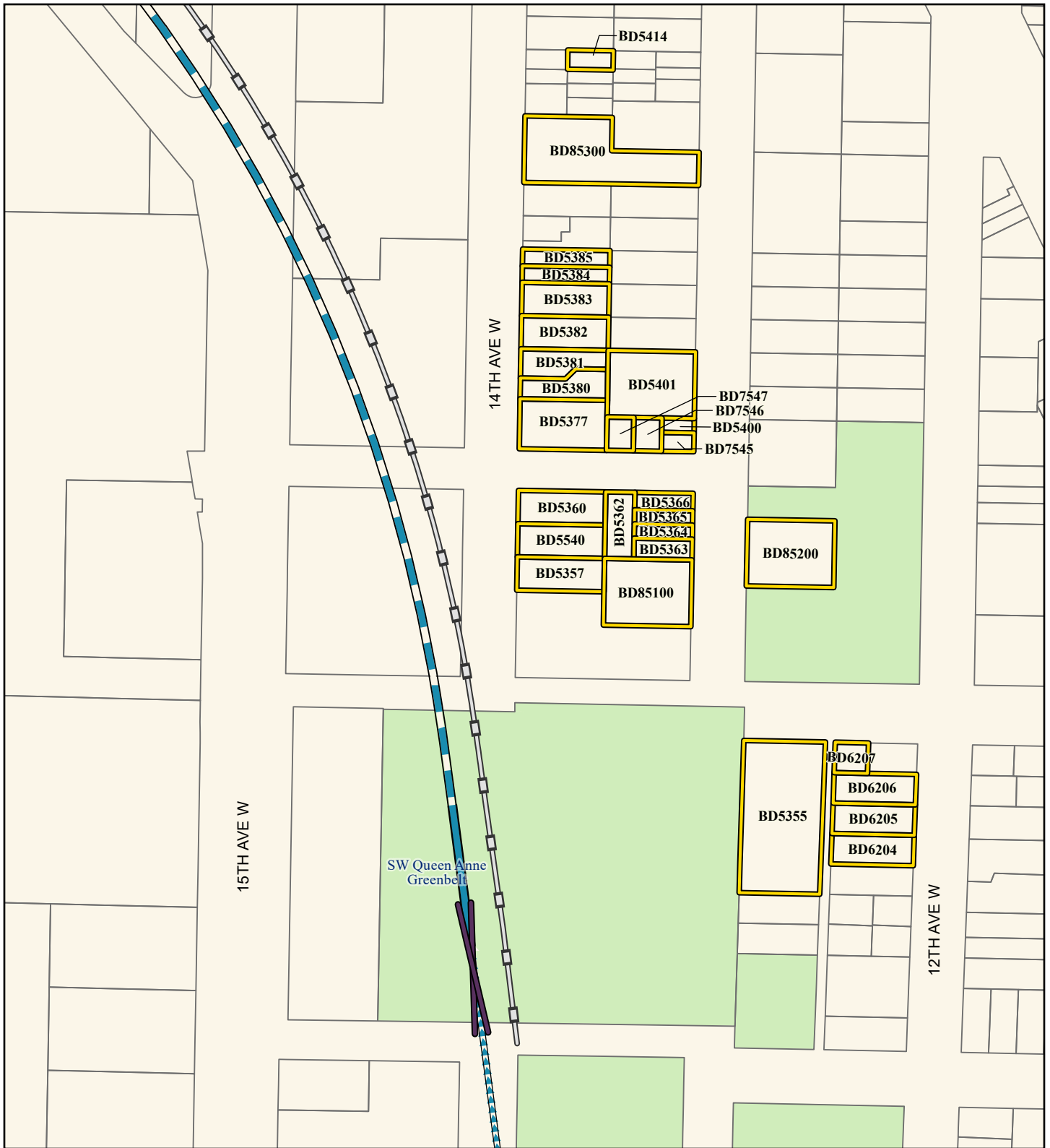
Station

- New
- Existing

- Railroad
- Parcel
- Park

FIGURE N.3D-20d
Alternative SIB-3
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

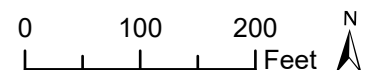
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Proposed Sound Wall
- Parcel
- Park
- Crossover
- Noise Impacts
- Moderate Impact

FIGURE N.3D-20e
Alternative SIB-3
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

Proposed Sound Wall

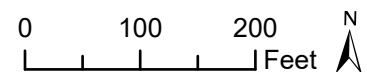
Parcel

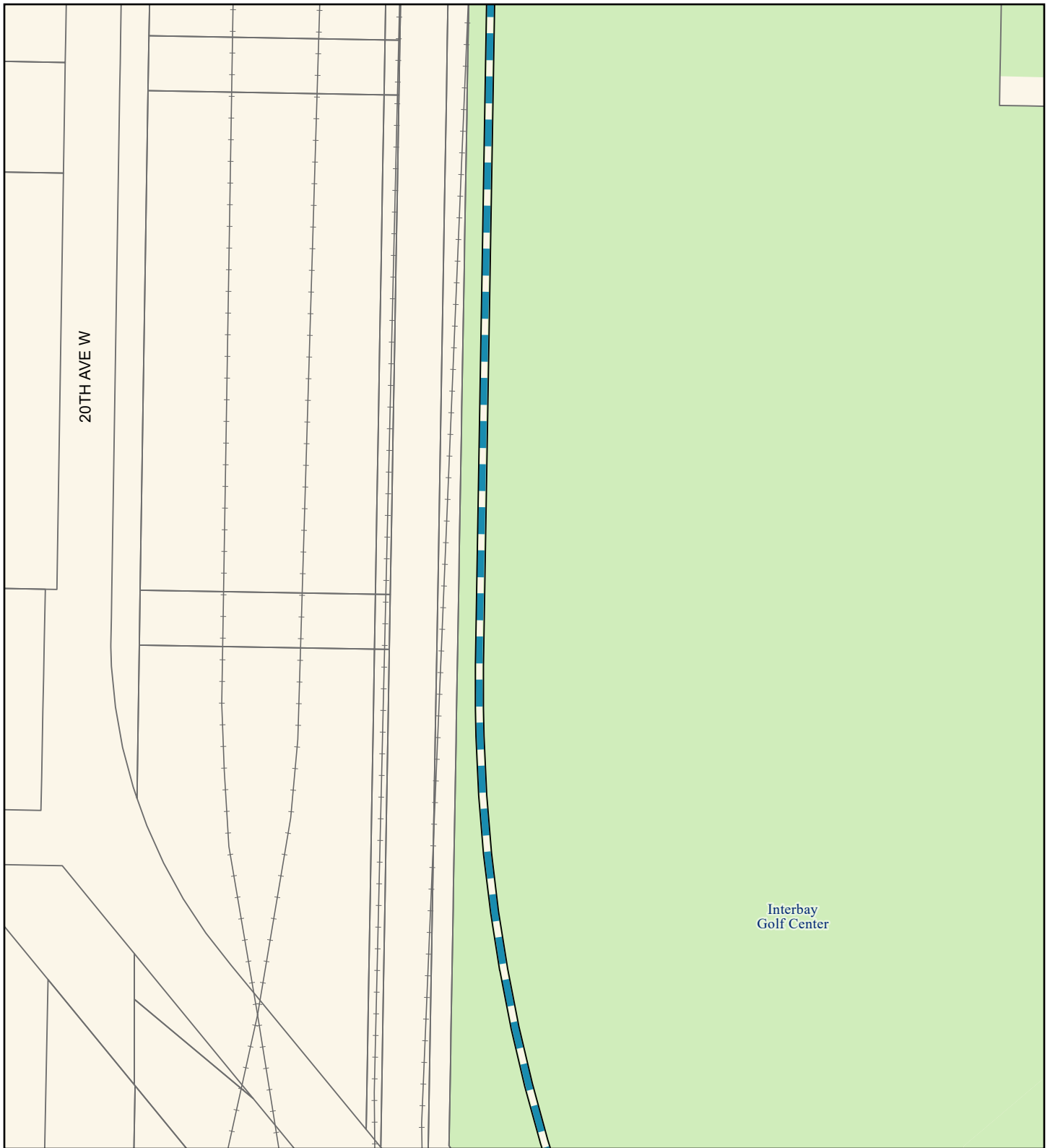
Park

Noise Impacts

Moderate Impact

FIGURE N.3D-20f
Alternative SIB-3
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

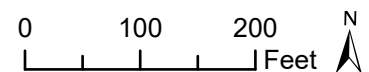
- Elevated
- At-Grade
- Tunnel
- Retained Cut

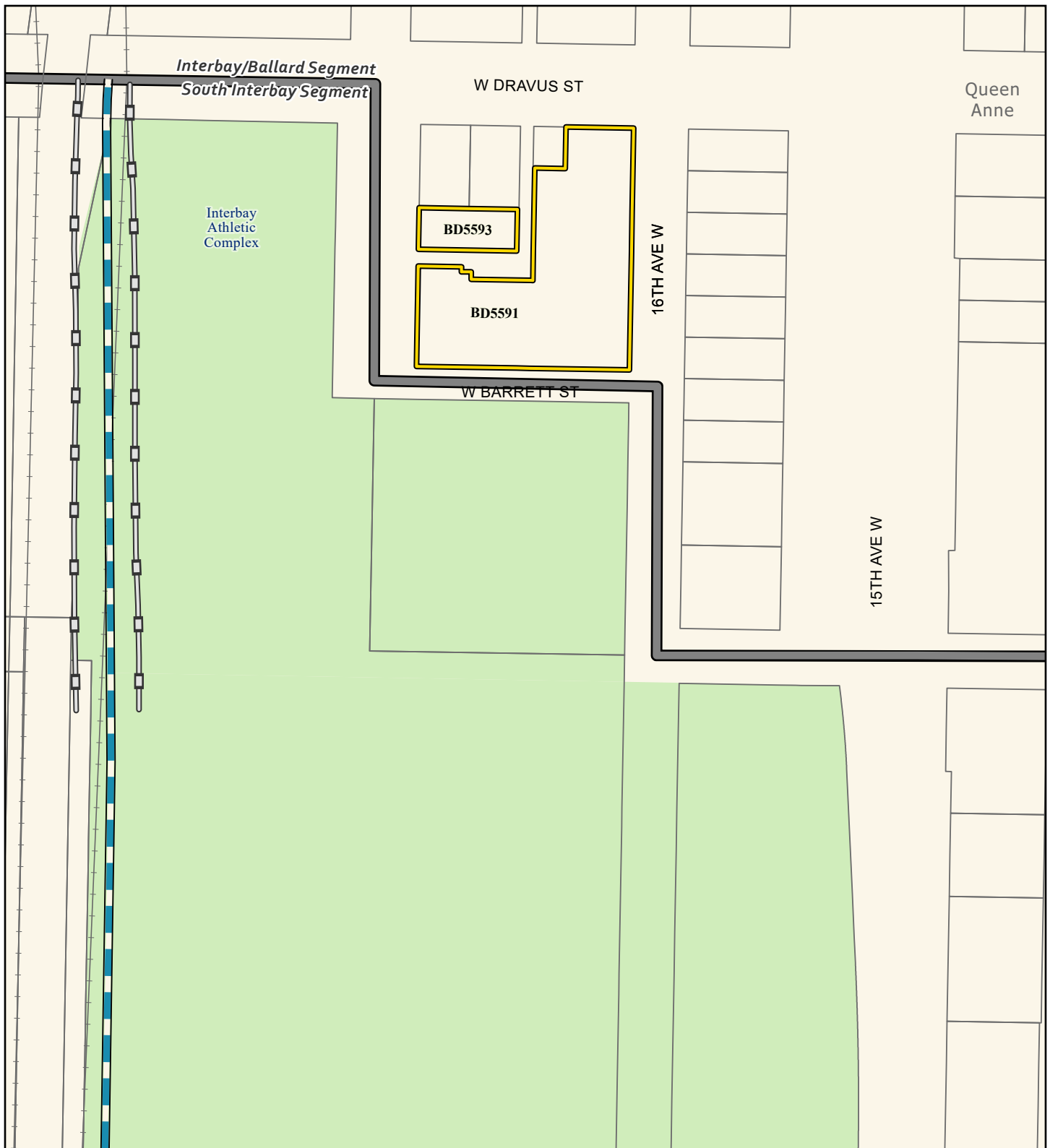
Station

- New
- Existing

- Railroad
- Parcel
- Park

FIGURE N.3D-20g
Alternative SIB-3
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

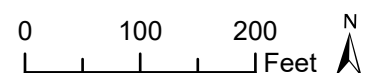
- Elevated
- At-Grade
- Tunnel
- Retained Cut

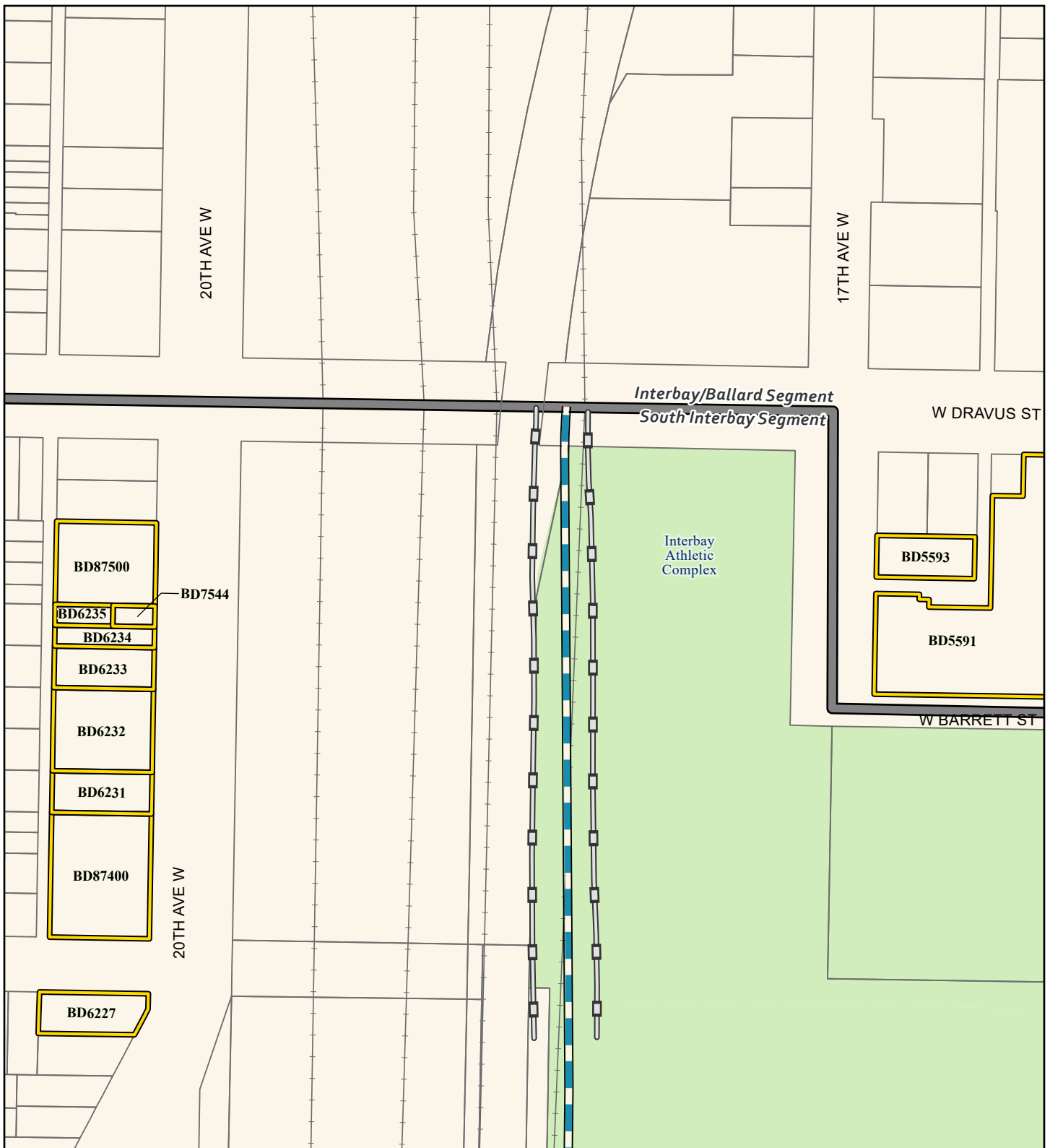
Station

- New
- Existing

- Segment Line
- Railroad
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Moderate Impact

FIGURE N.3D-20h
Alternative SIB-3
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

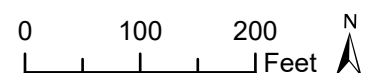
- Elevated
- At-Grade
- Tunnel
- Retained Cut

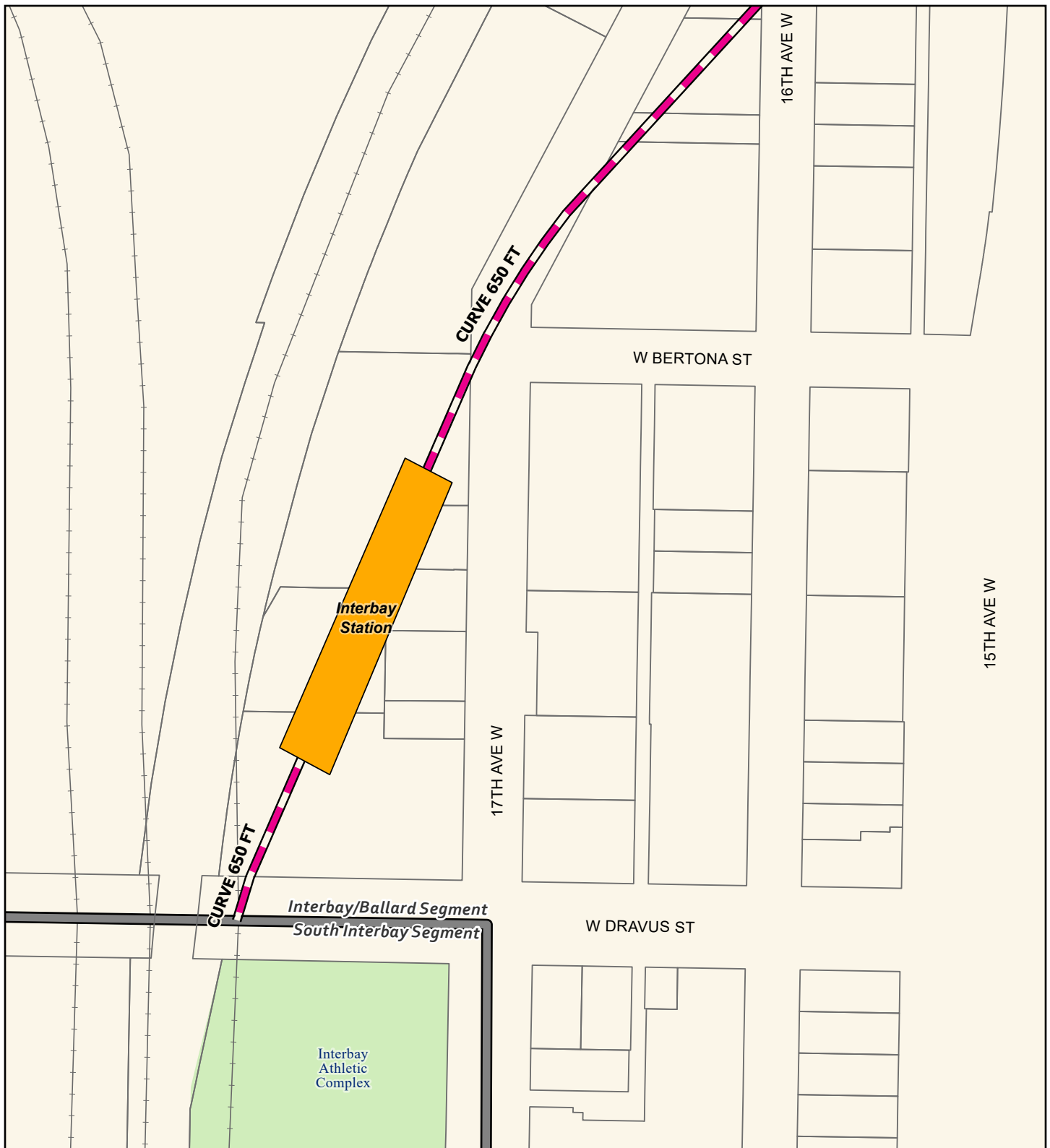
Station

- New
- Existing

- Segment Line
- Railroad
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Moderate Impact

FIGURE N.3D-20i
Alternative SIB-3
Noise Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

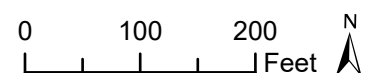
- Elevated
- At-Grade
- Tunnel
- Retained Cut

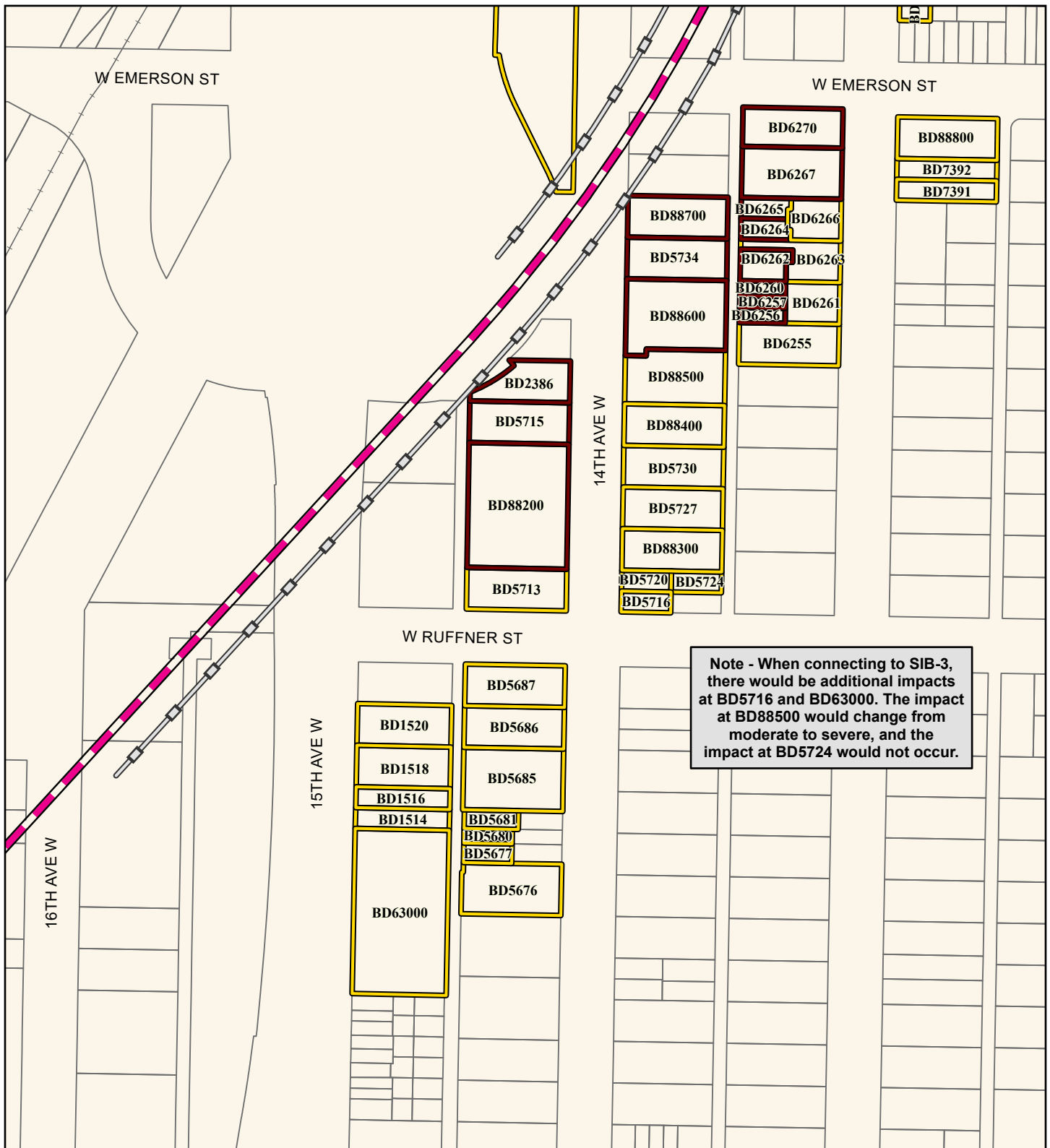
Station

- New
- Existing

- Segment Line
- Railroad
- Parcel
- Park

FIGURE N.3D-21a
Alternative IBB-1a
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

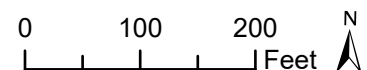
- Elevated
- At-Grade
- Tunnel
- Retained Cut

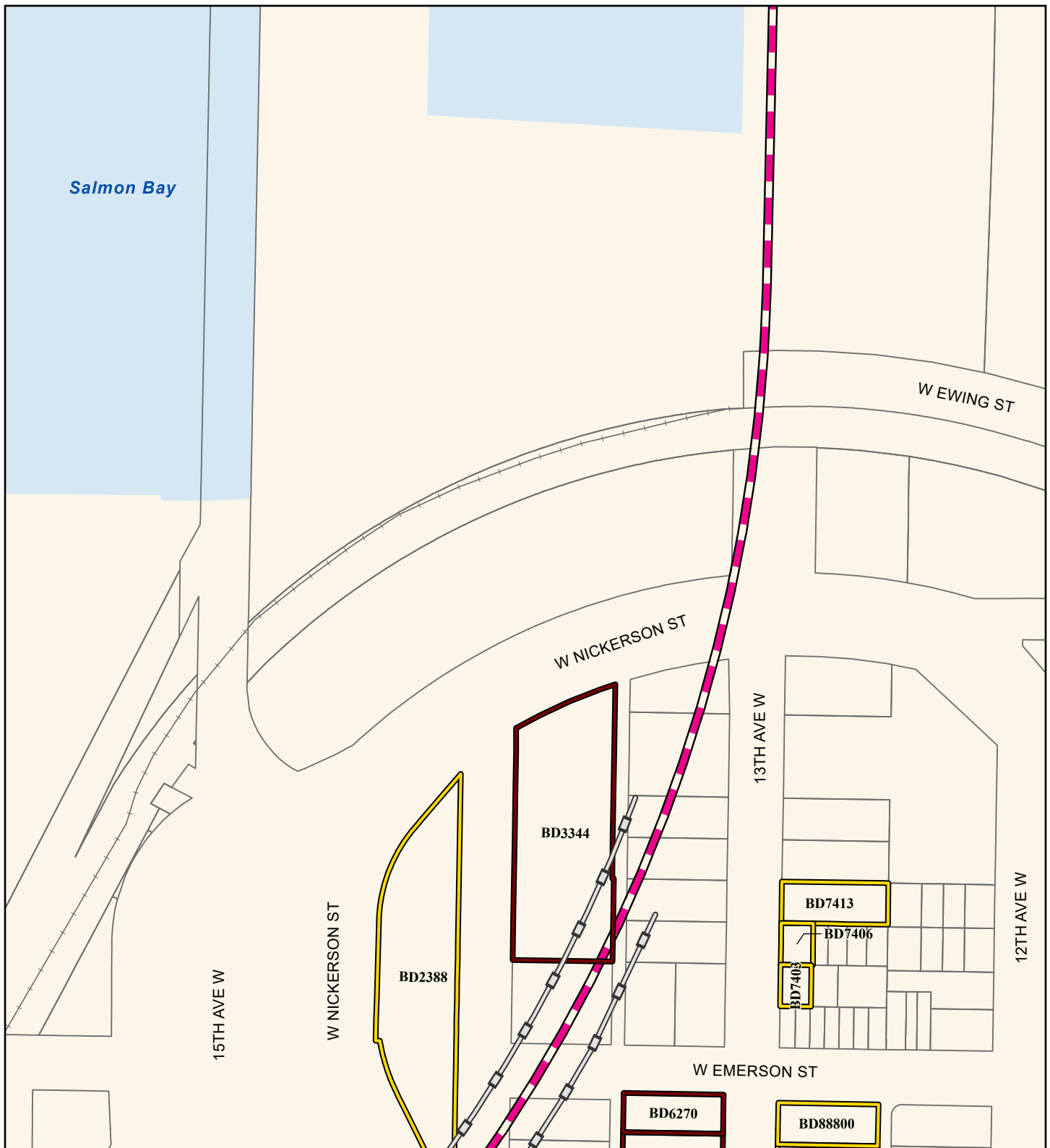
Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- Noise Impacts
 - Severe Impact
 - Moderate Impact

FIGURE N.3D-21b
Alternative IBB-1a
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

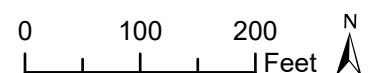
- Elevated
- At-Grade
- Tunnel
- Retained Cut

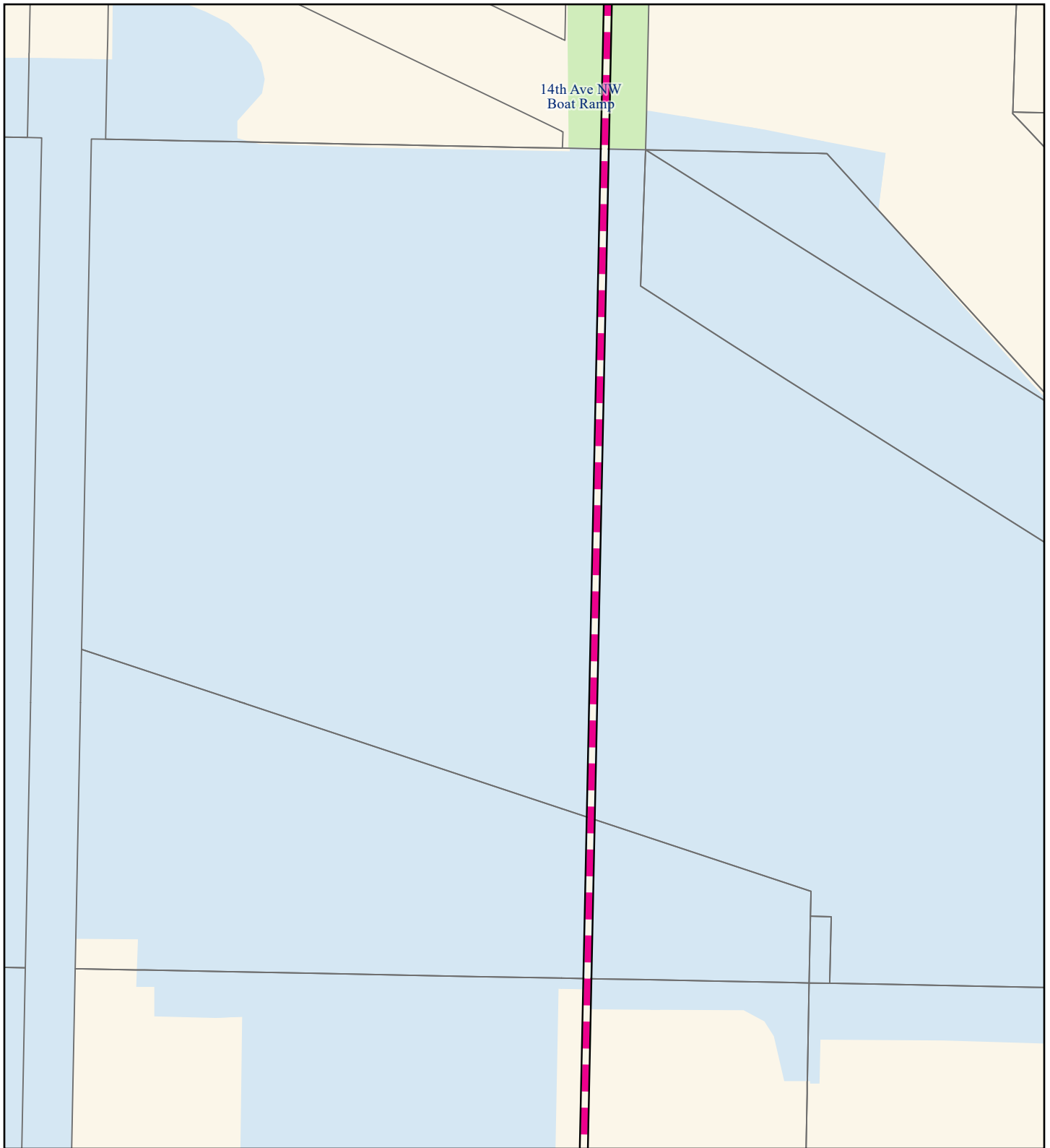
Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- Water Body
- Noise Impacts**
- Severe Impact
- Moderate Impact

FIGURE N.3D-21c
Alternative IBB-1a
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

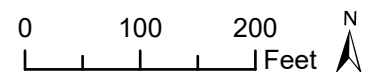
- Elevated — Tunnel
- At-Grade — Retained Cut

Station

- New
- Existing

- Parcel
- Park
- Water Body

FIGURE N.3D-21d
Alternative IBB-1a
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

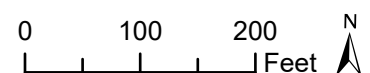
- Elevated
- At-Grade
- Tunnel
- Retained Cut

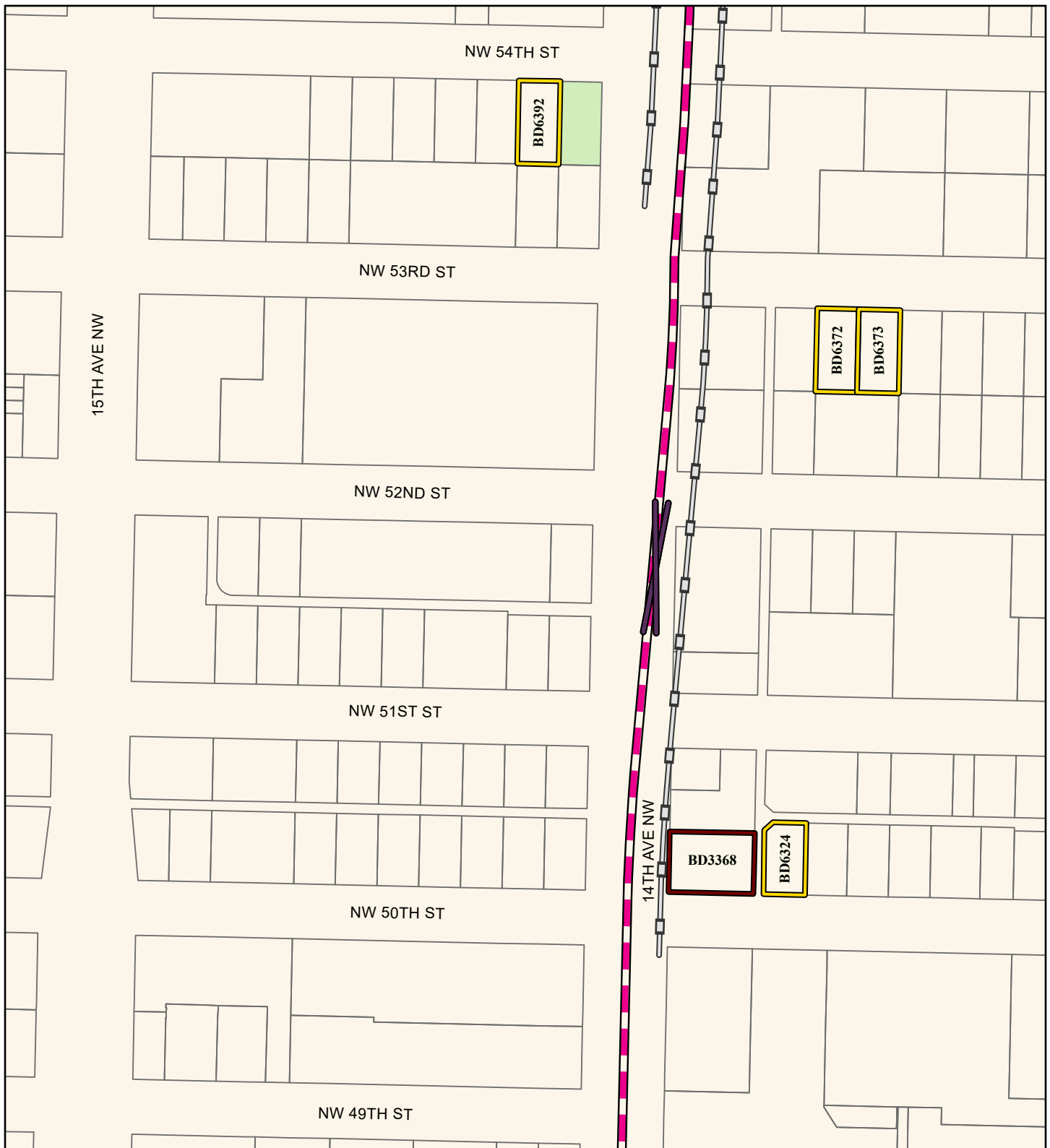
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3D-21e
Alternative IBB-1a
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

— Proposed Sound Wall

□ Parcel

■ Park

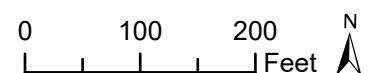
— Crossover

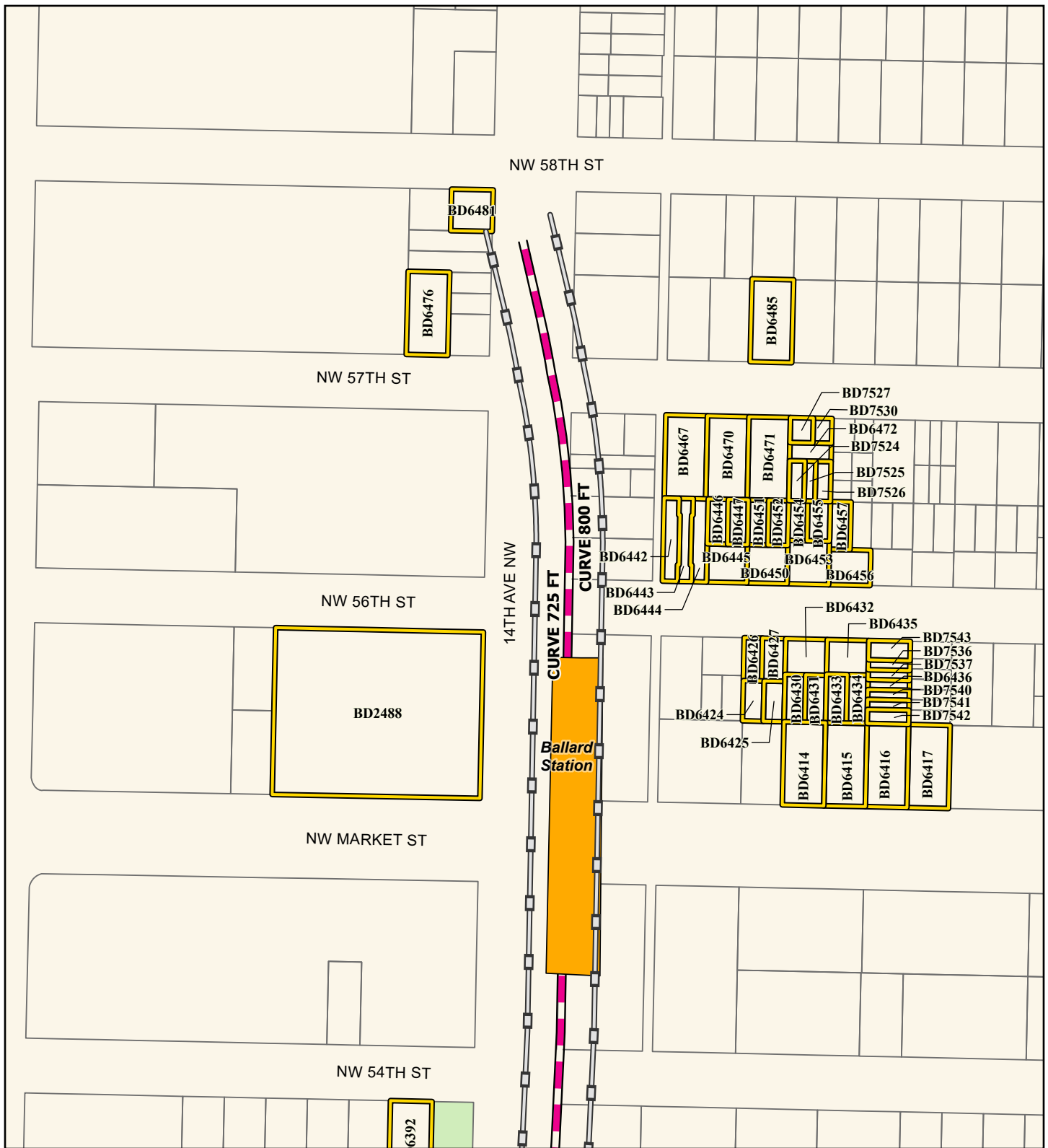
Noise Impacts

□ Severe Impact

□ Moderate Impact

FIGURE N.3D-21f
Alternative IBB-1a
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

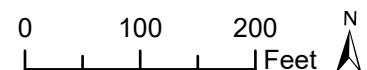
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Moderate Impact

FIGURE N.3D-21g
Alternative IBB-1a
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

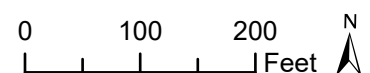
- Elevated
- At-Grade
- Tunnel
- Retained Cut

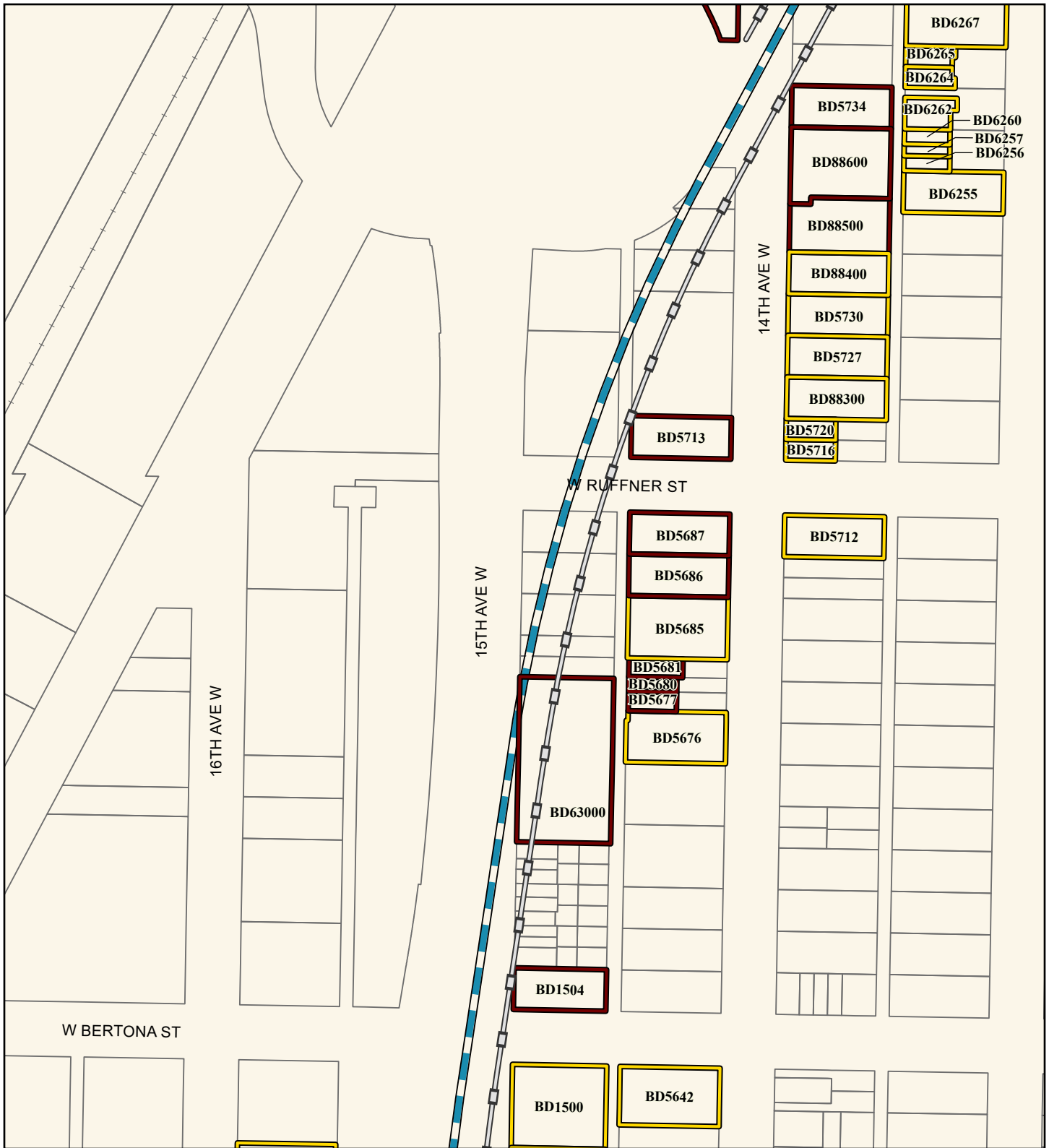
Station

- New
- Existing

- Segment Line
- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Moderate Impact

FIGURE N.3D-22a
Option IBB-1b
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

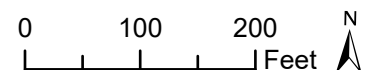
- Elevated
- At-Grade
- Tunnel
- Retained Cut

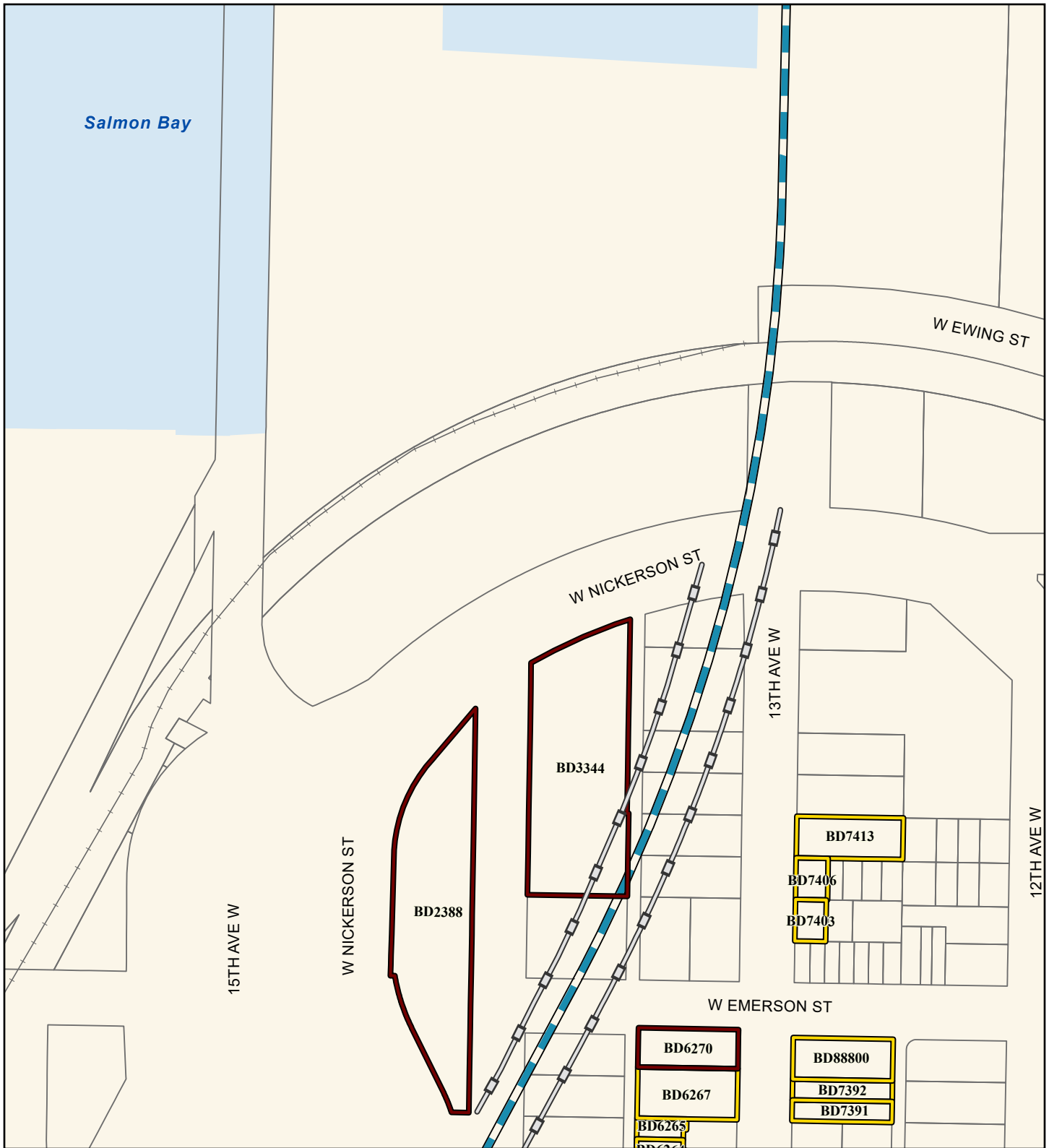
Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- Noise Impacts**
 - Severe Impact
 - Moderate Impact

FIGURE N.3D-22b
Option IBB-1b
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

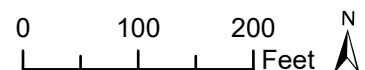
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- Water Body
- Noise Impacts**
- Severe Impact
- Moderate Impact

FIGURE N.3D-22c
Option IBB-1b
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

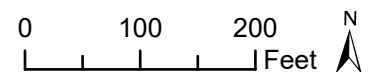
- Elevated
- Tunnel
- At-Grade
- Retained Cut

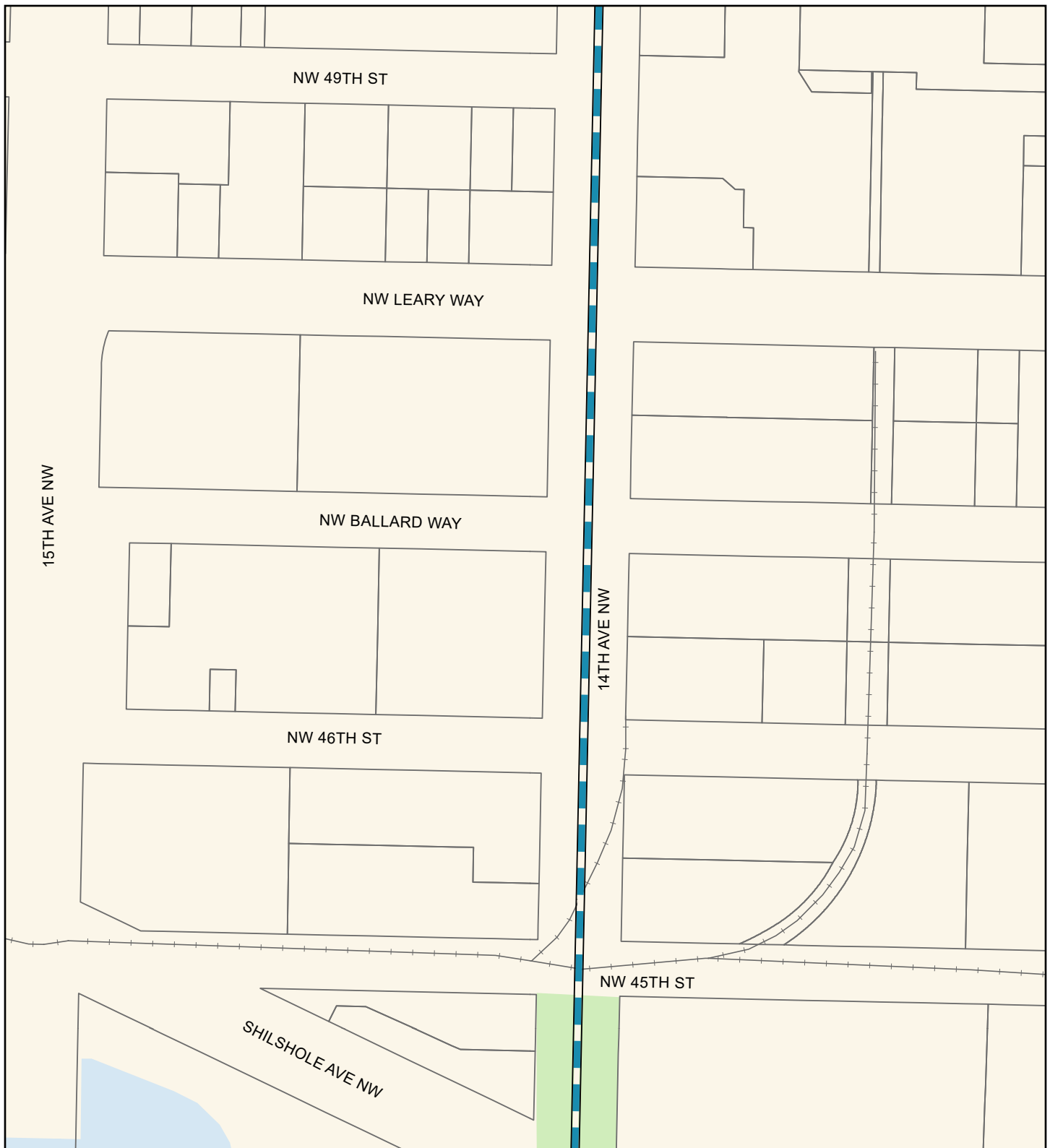
Station

- New
- Existing

- Parcel
- Park
- Water Body

FIGURE N.3D-22d
Option IBB-1b
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

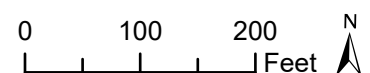
- Elevated
- At-Grade
- Tunnel
- Retained Cut

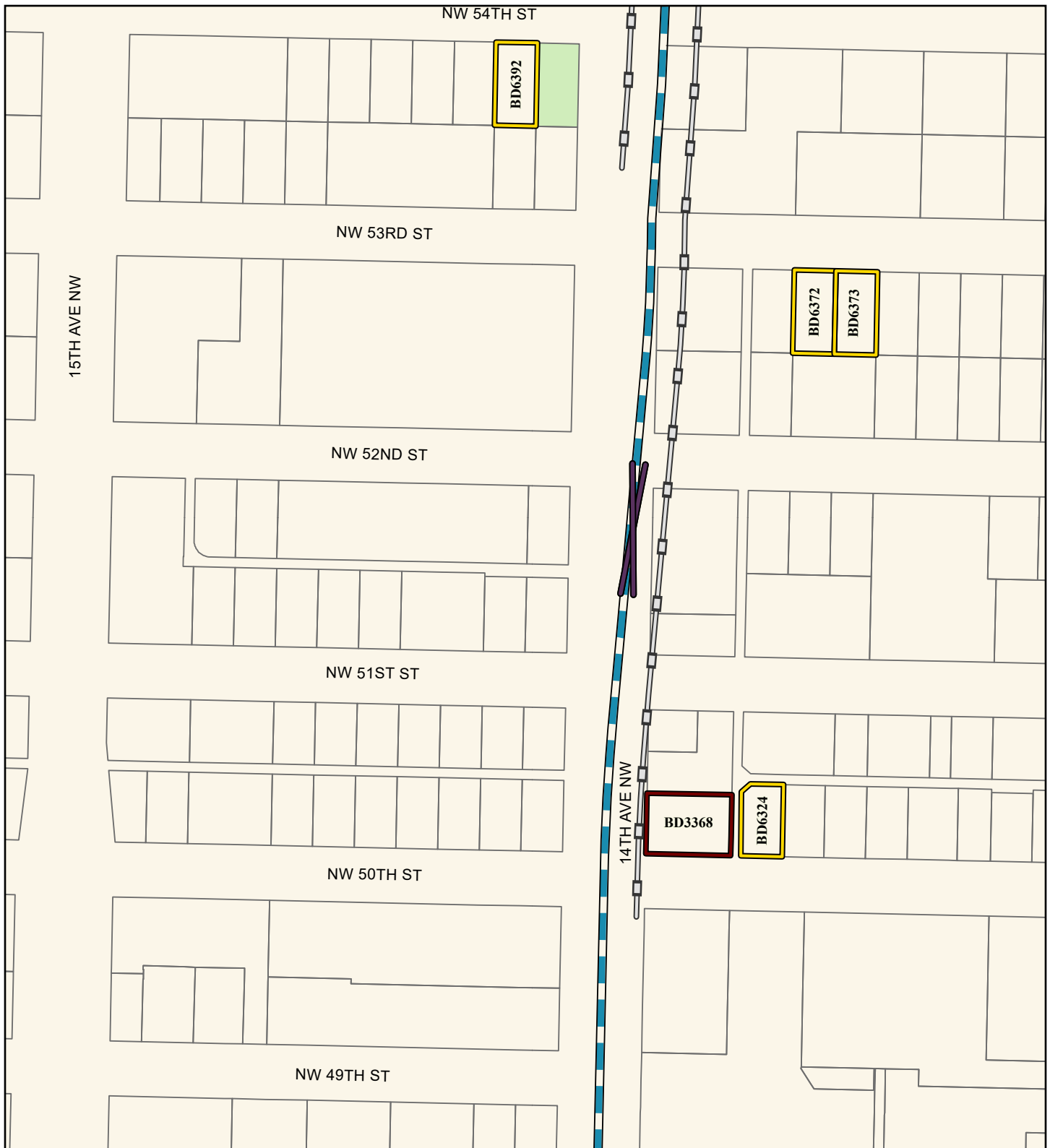
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3D-22e
Option IBB-1b
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

- █ Elevated
- █ At-Grade
- █ Tunnel
- █ Retained Cut

Station

- █ New
- █ Existing

█ Proposed Sound Wall

█ Parcel

█ Park

█ Crossover

Noise Impacts

█ Severe Impact

█ Moderate Impact

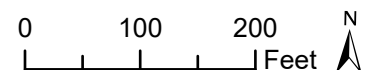
FIGURE N.3D-22f

Option IBB-1b

Noise Impacts (before mitigation)

**Ballard Link Extension -
Interbay/Ballard Segment**

*West Seattle and
Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

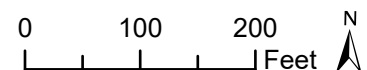
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Proposed Sound Wall
- Parcel
- Park
- Noise Impacts
- Moderate Impact

FIGURE N.3D-22g
Option IBB-1b
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

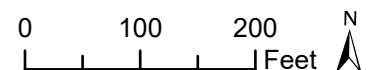
- Elevated
- At-Grade
- Tunnel
- Retained Cut

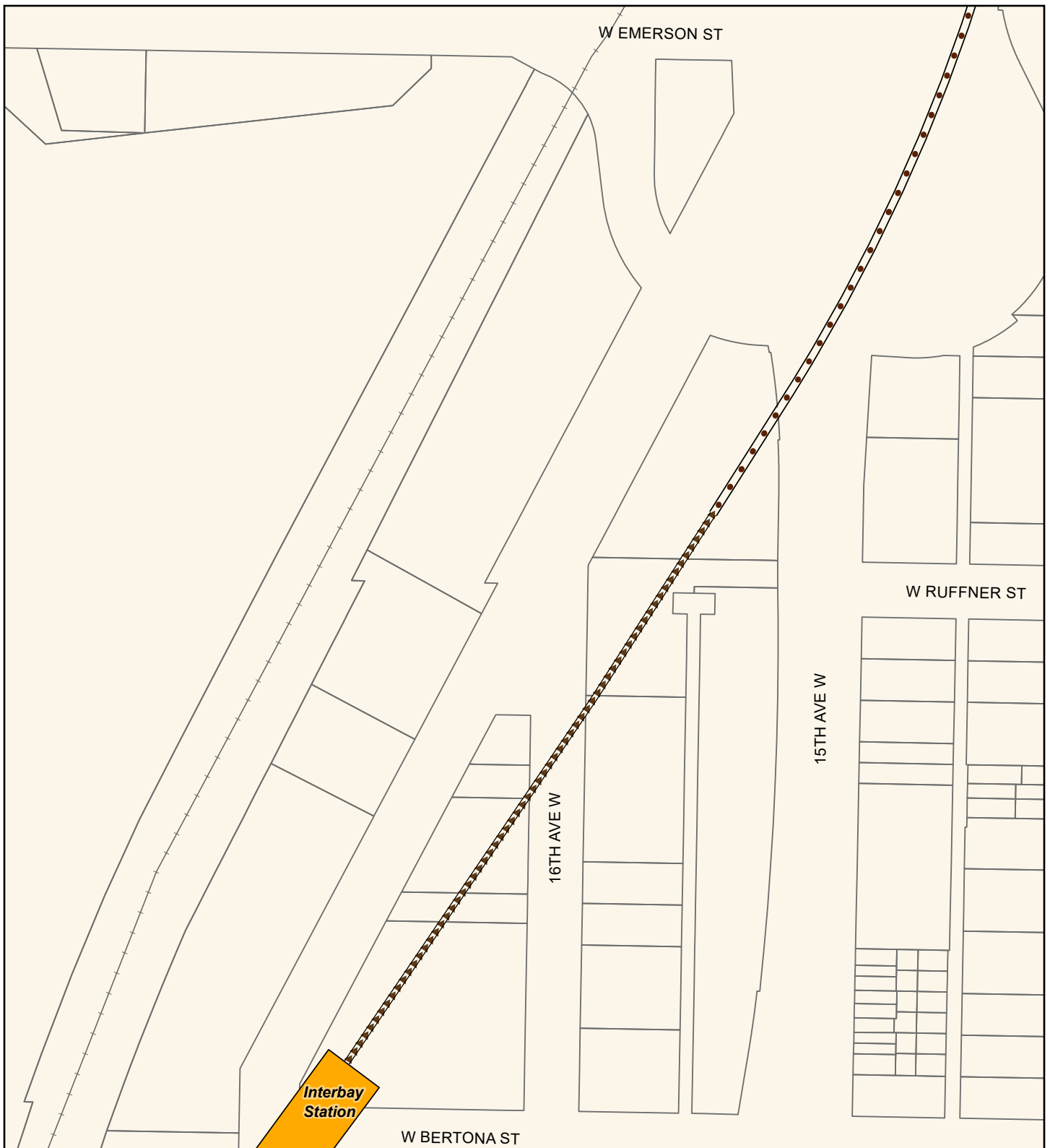
Station

- New
- Existing

- Segment Line
- Railroad
- Parcel
- Park

FIGURE N.3D-23a
Alternative IBB-2a
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

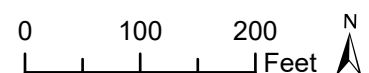
- Elevated
- At-Grade
- Tunnel
- Retained Cut

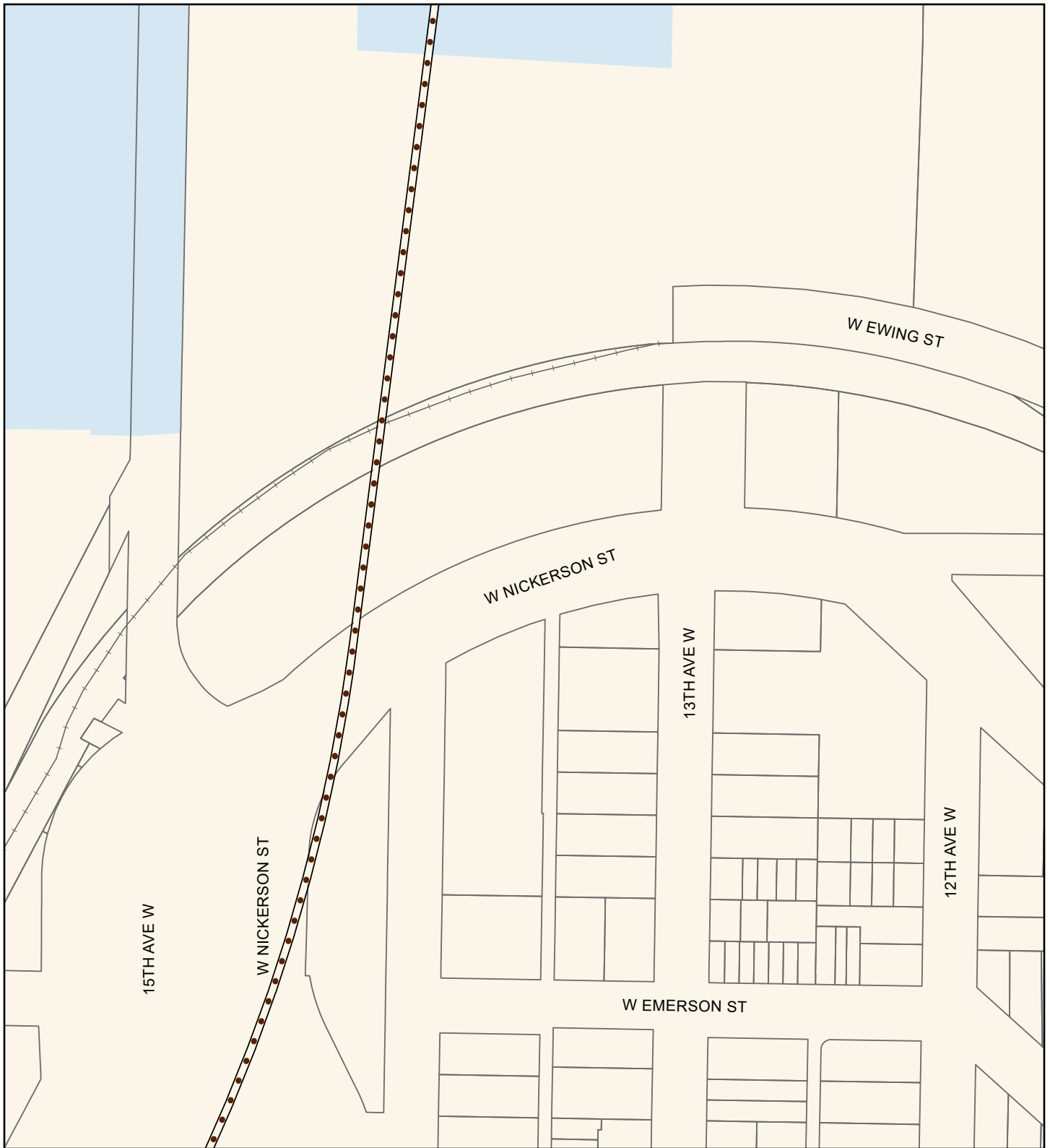
Station

- New
- Existing

- Railroad
- Parcel

FIGURE N.3D-23b
Alternative IBB-2a
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

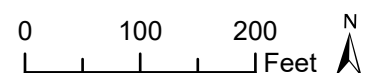
- Elevated
- At-Grade
- Tunnel
- Retained Cut

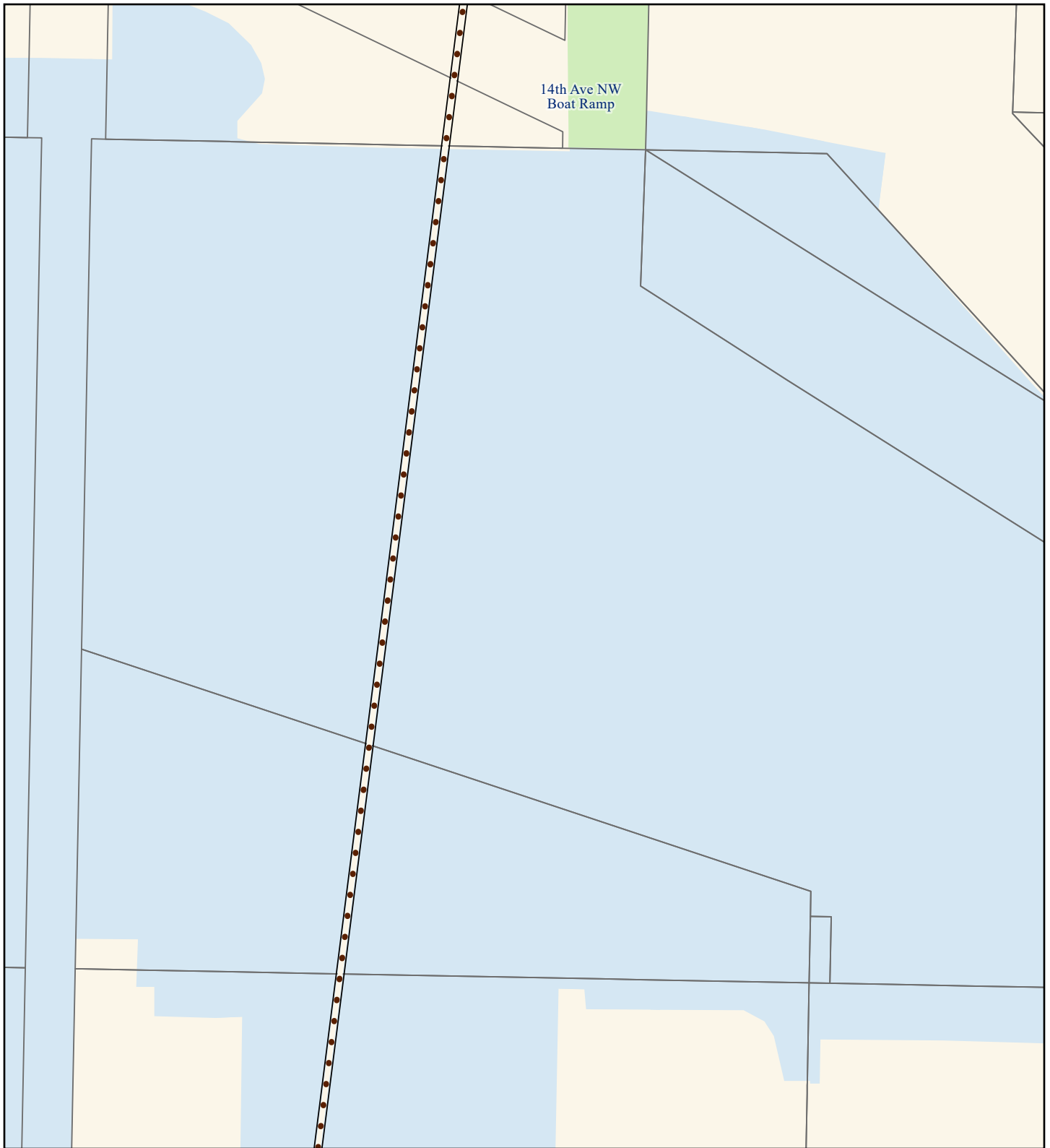
Station

- New
- Existing

- + + Railroad
- Parcel
- Water Body

FIGURE N.3D-23c
Alternative IBB-2a
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel

 Tunnel
- Retained Cut

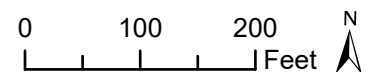
 Retained Cut

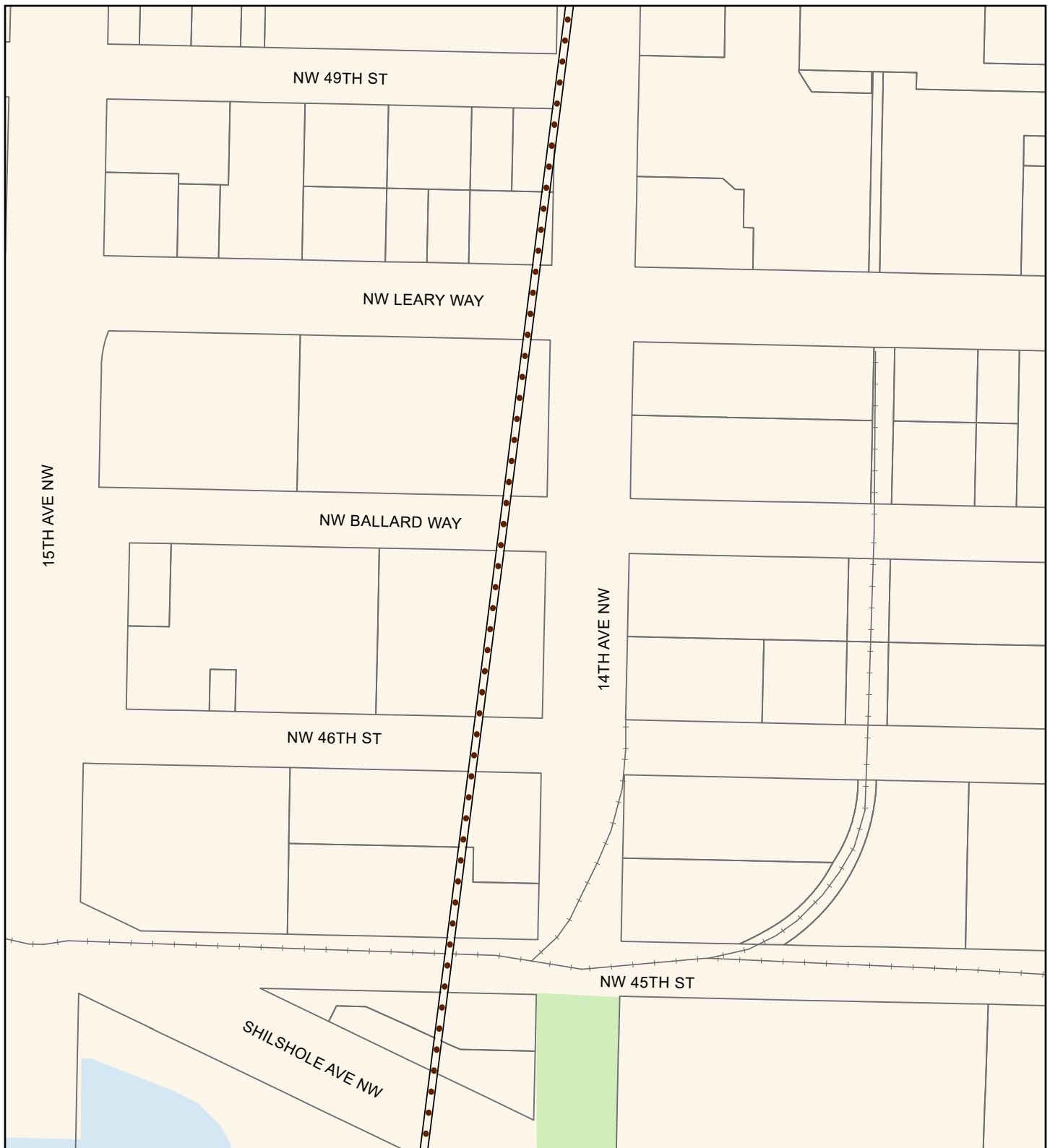
Station

- New
- Existing

- Parcel
- Park
- Water Body

FIGURE N.3D-23d
Alternative IBB-2a
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

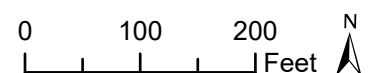
- Elevated
- At-Grade
- Tunnel
- Retained Cut

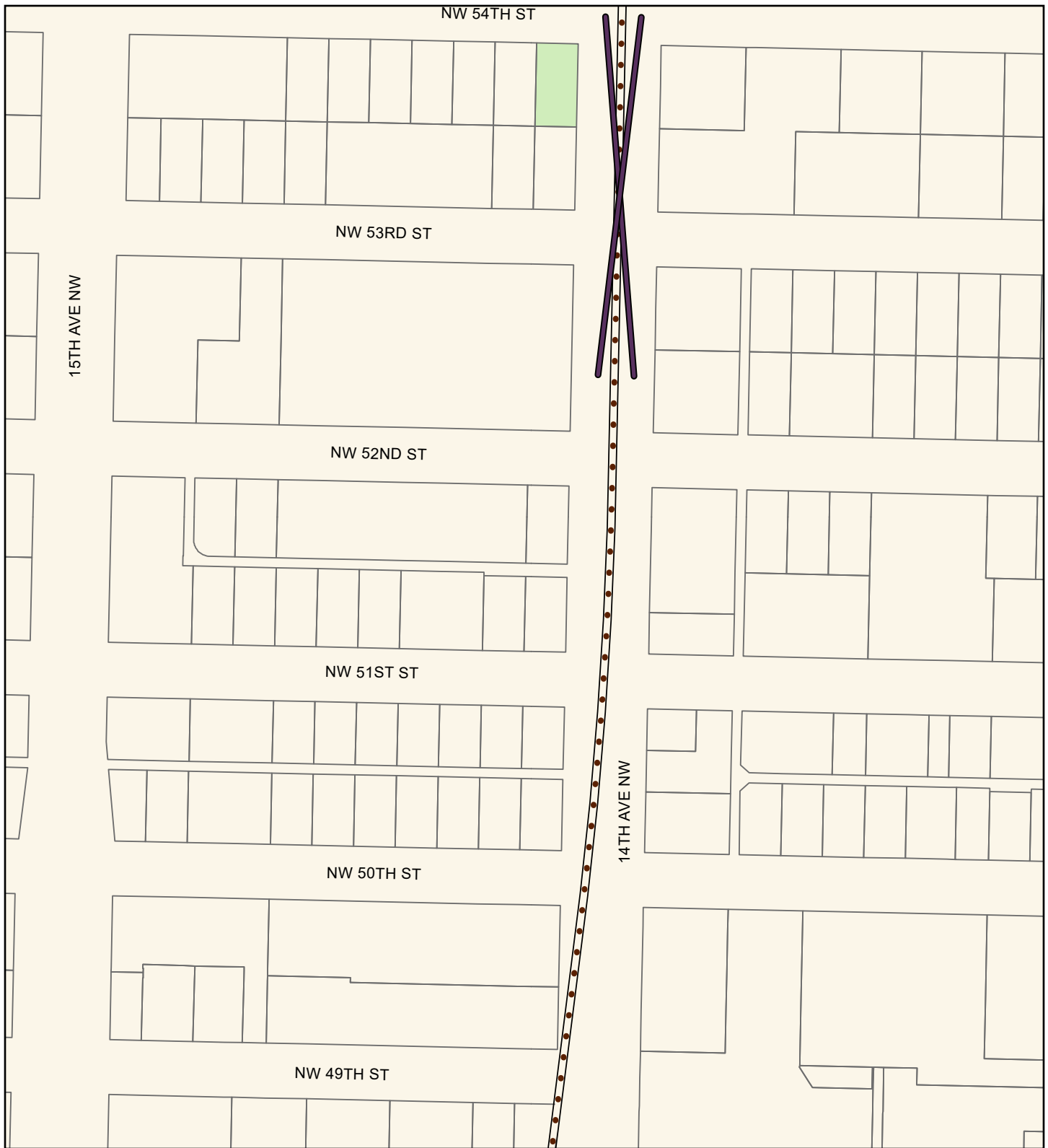
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3D-23e
Alternative IBB-2a
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

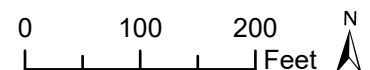
- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

- Parcel
- Park
- Crossover

FIGURE N.3D-23f
Alternative IBB-2a
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

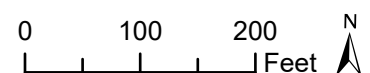
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Parcel
- Park
- Crossover

FIGURE N.3D-23g
Alternative IBB-2a
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

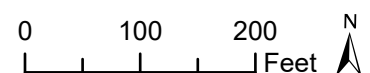
- Elevated
- At-Grade
- Tunnel
- Retained Cut

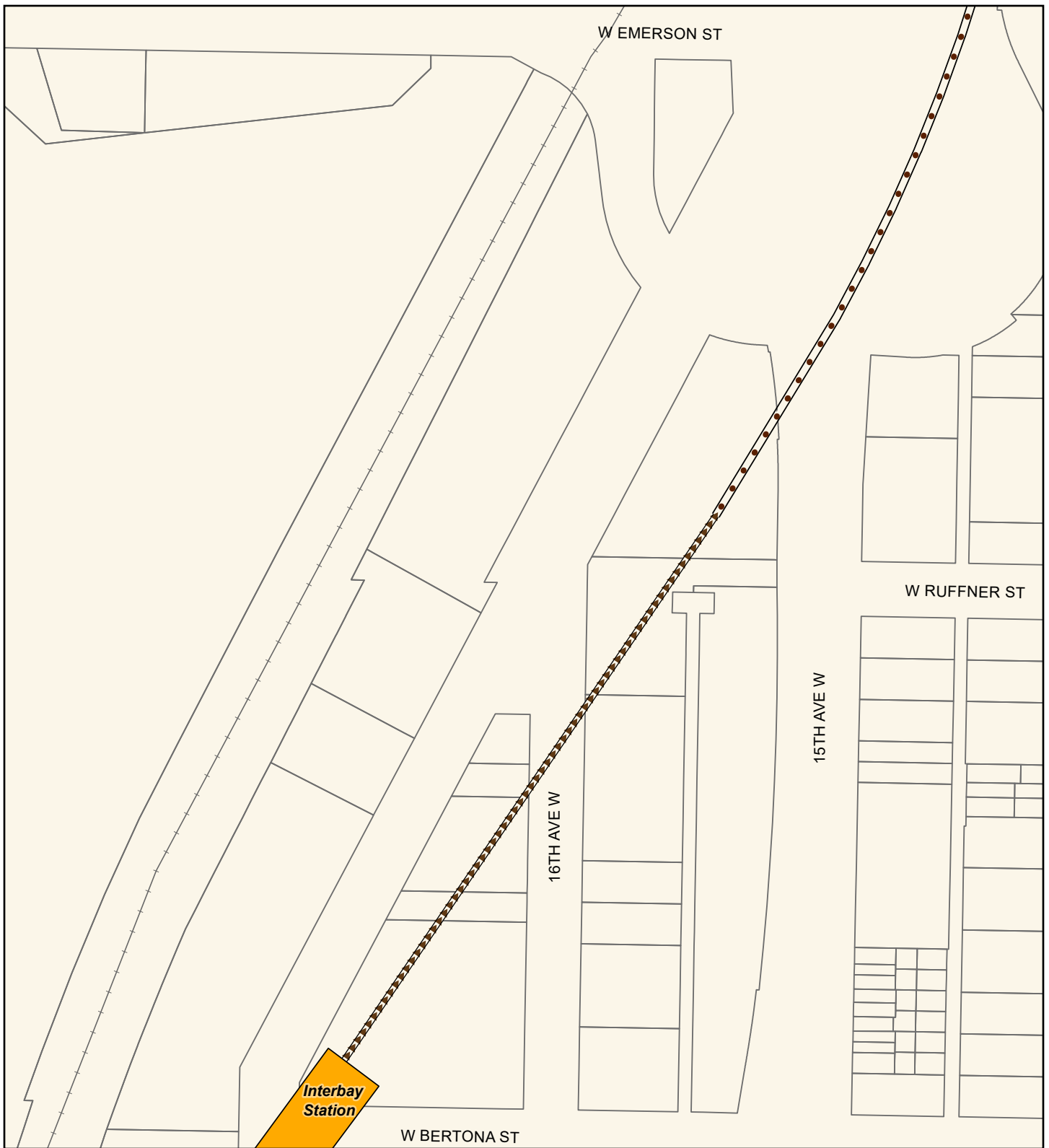
Station

- New
- Existing

- Segment Line
- Railroad
- Parcel
- Park

FIGURE N.3D-24a
Option IBB-2b
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

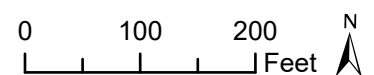
- Elevated
- At-Grade
- Tunnel
- Retained Cut

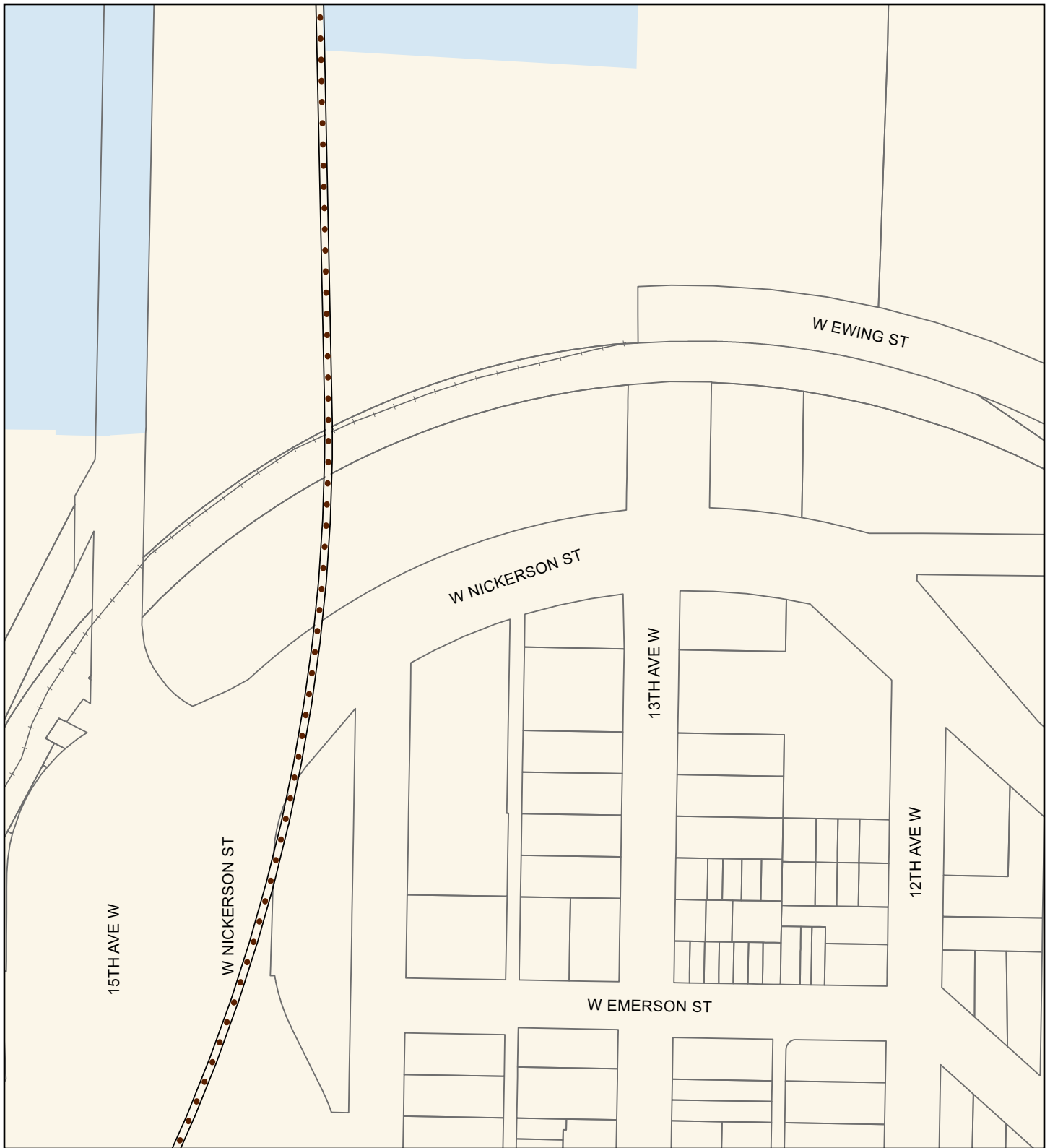
Station

- New
- Existing

- Railroad
- Parcel

FIGURE N.3D-24b
Option IBB-2b
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Parcel
- Water Body

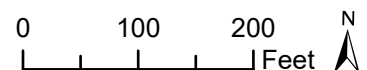
FIGURE N.3D-24c

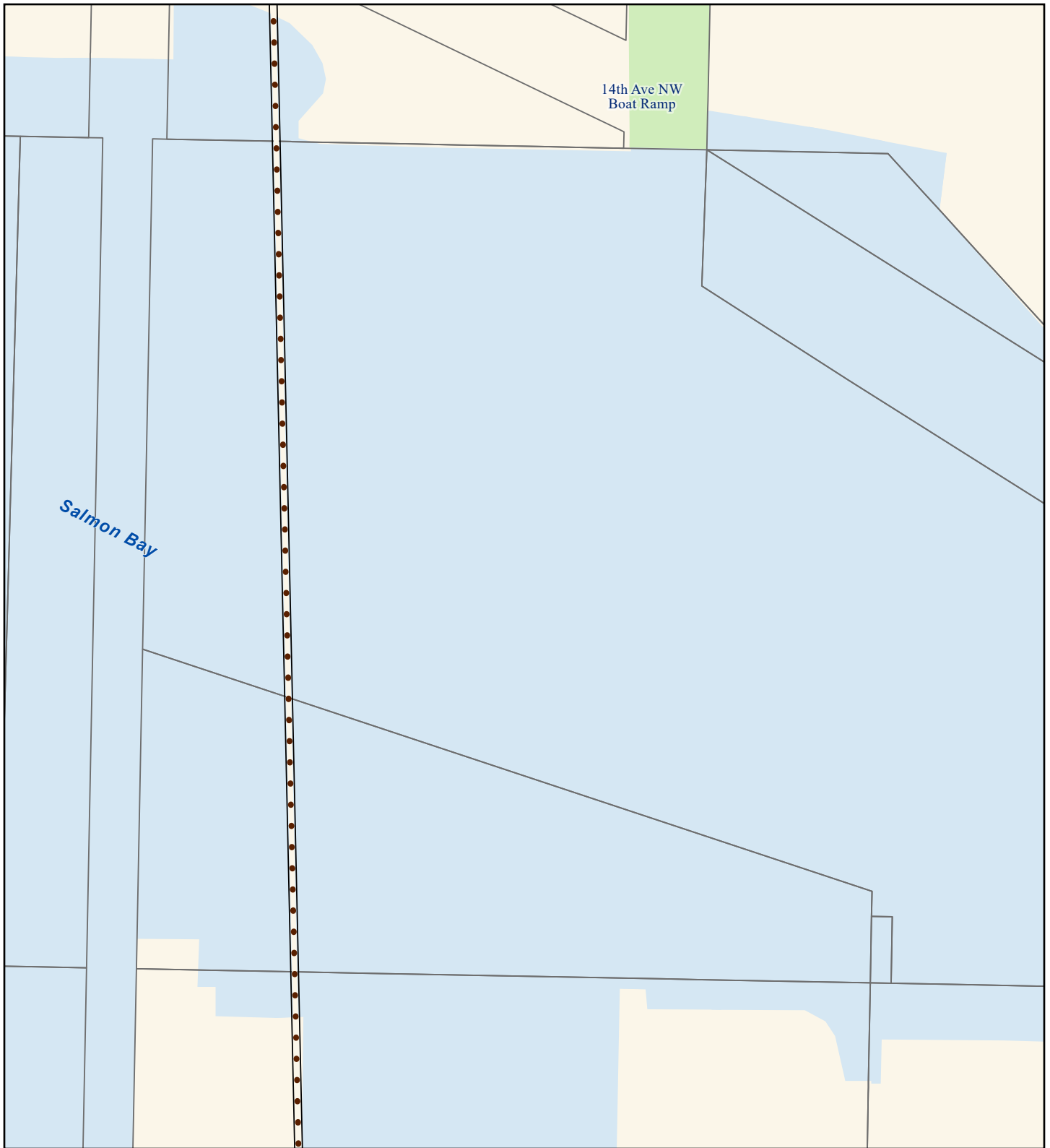
Option IBB-2b

Noise Impacts (before mitigation)

**Ballard Link Extension -
Interbay/Ballard Segment**

*West Seattle and
Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

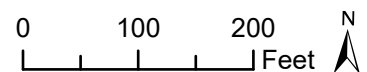
- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

- Parcel
- Park
- Water Body

FIGURE N.3D-24d
Option IBB-2b
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

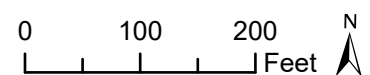
- Elevated
- At-Grade
- Tunnel
- Retained Cut

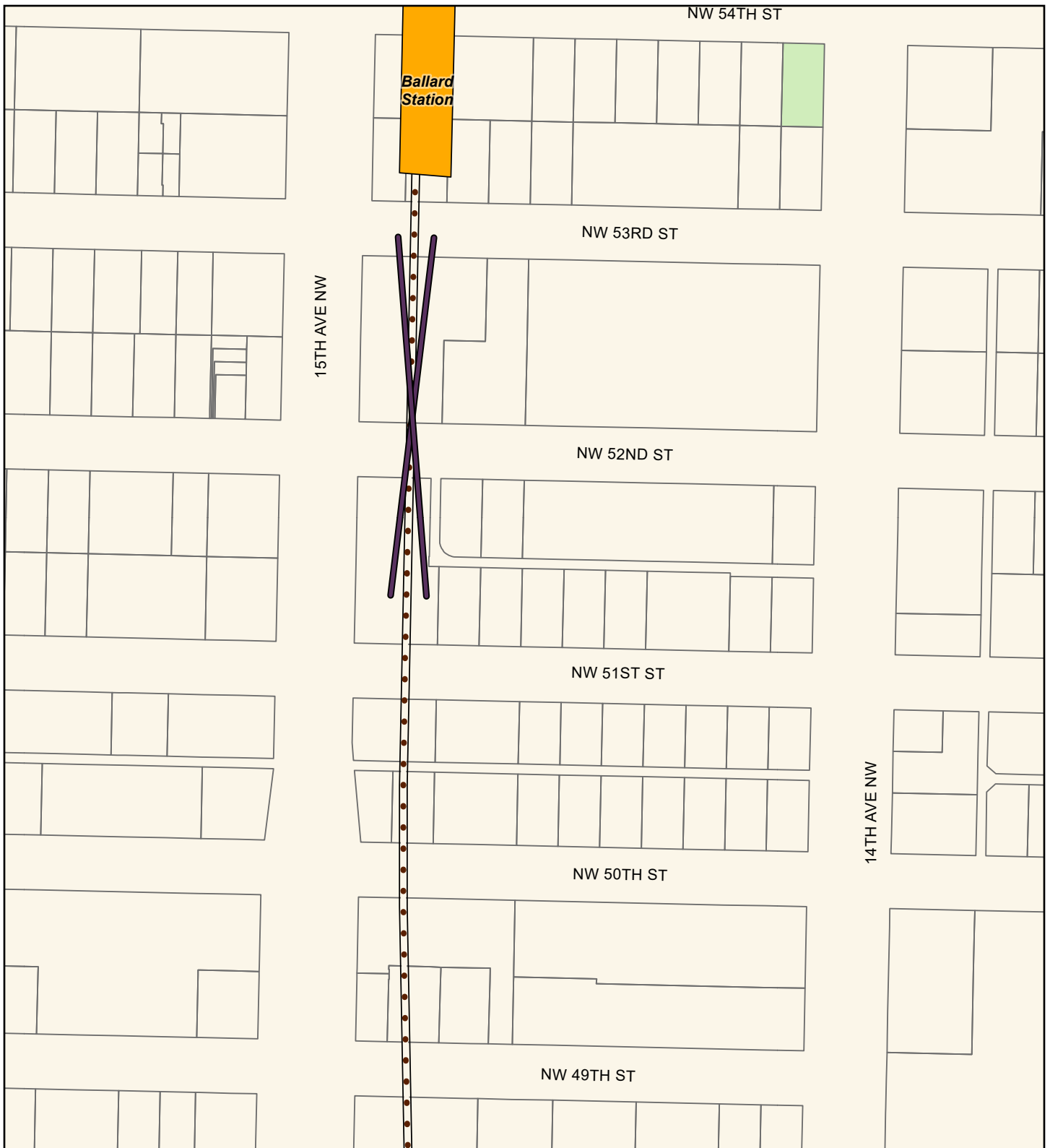
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3D-24e
Option IBB-2b
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

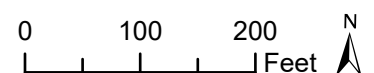
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Parcel
- Park
- Crossover

FIGURE N.3D-24f
Option IBB-2b
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

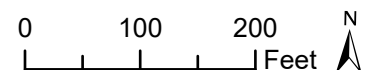
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Parcel
- Park

FIGURE N.3D-24g
Option IBB-2b
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*



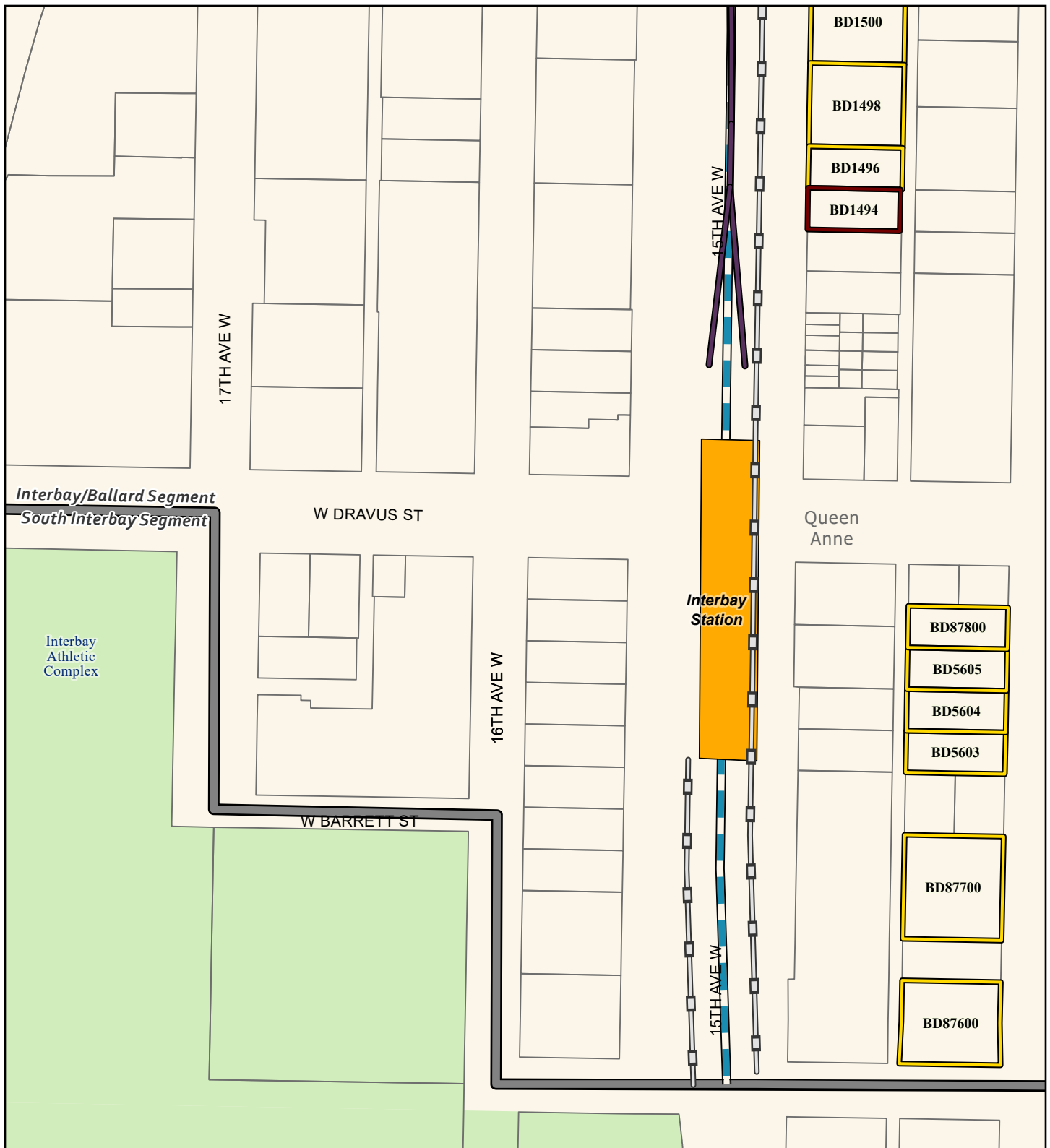
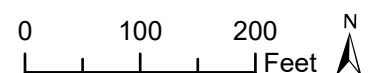
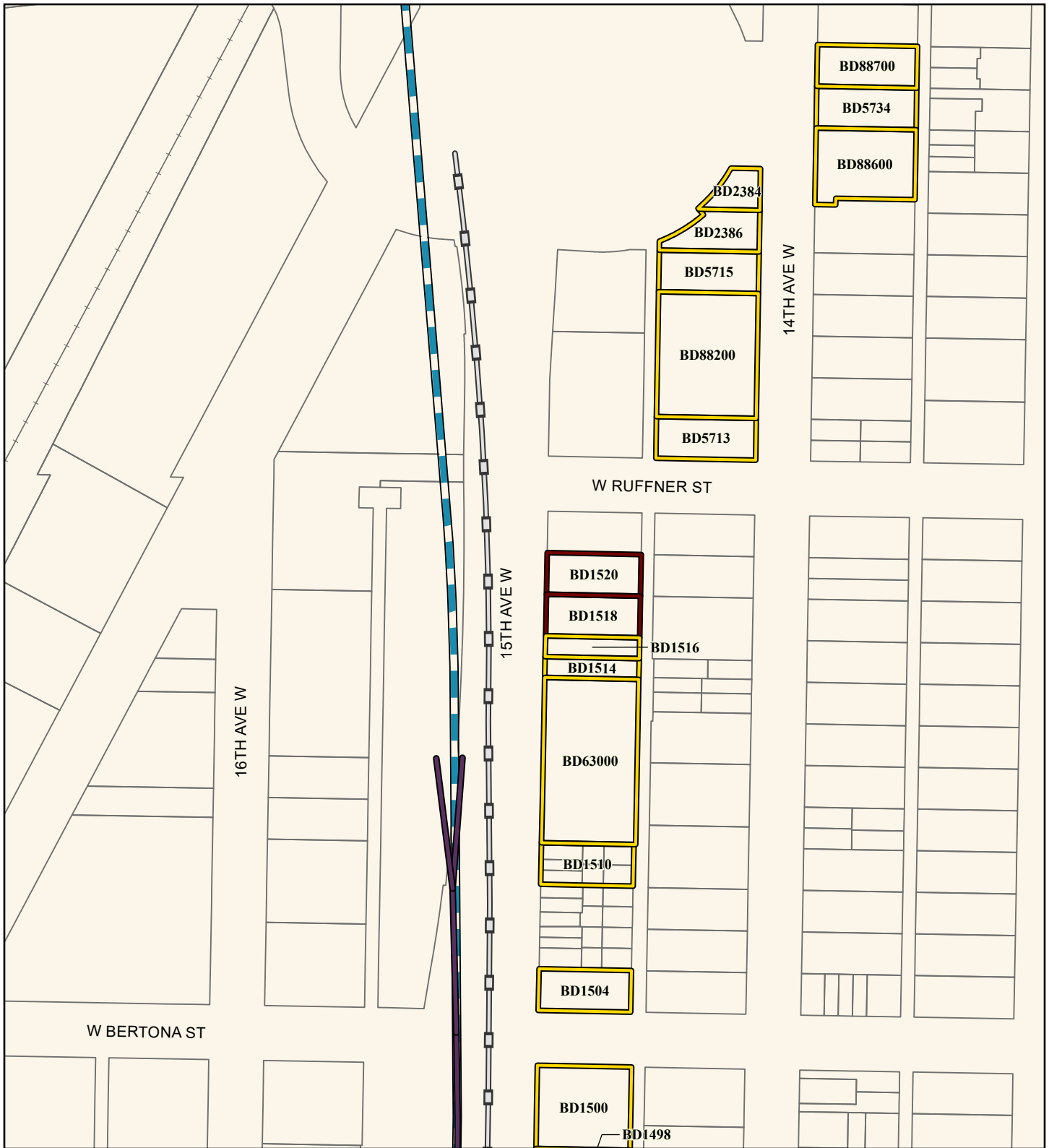


FIGURE N.3D-25a
Alternative IBB-3
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

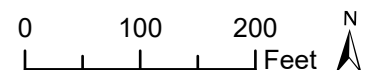
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Proposed Sound Wall
- Parcel
- Crossover
- Noise Impacts**
- Severe Impact
- Moderate Impact

FIGURE N.3D-25b
Alternative IBB-3
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

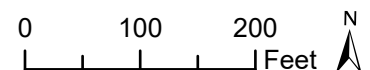
- Elevated
- At-Grade
- Tunnel
- Retained Cut

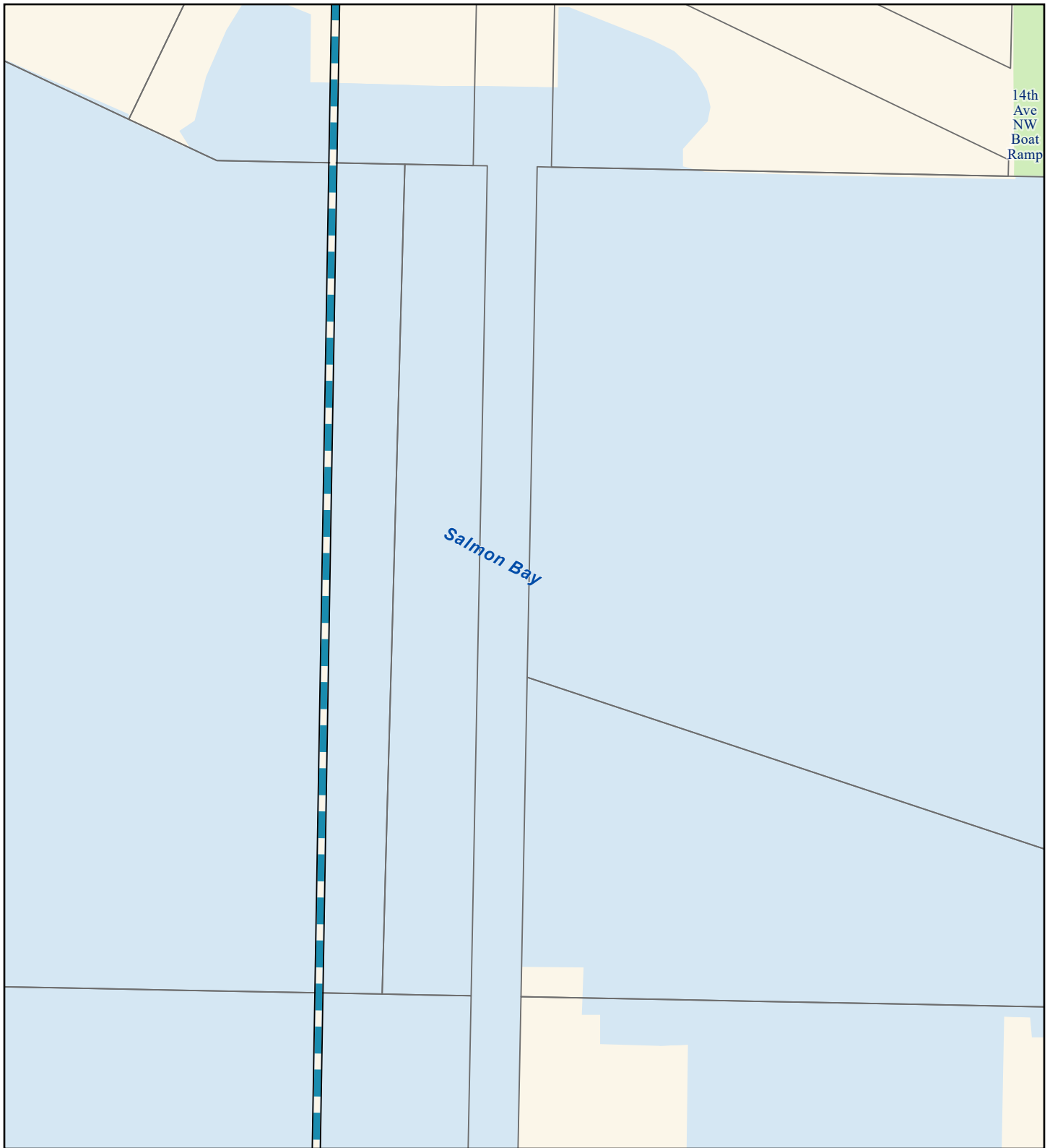
Station

- New
- Existing

- Railroad
- Parcel
- Water Body

FIGURE N.3D-25c
Alternative IBB-3
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

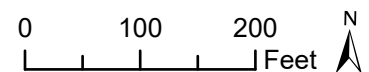
- Elevated
- At-Grade
- Tunnel
- Retained Cut

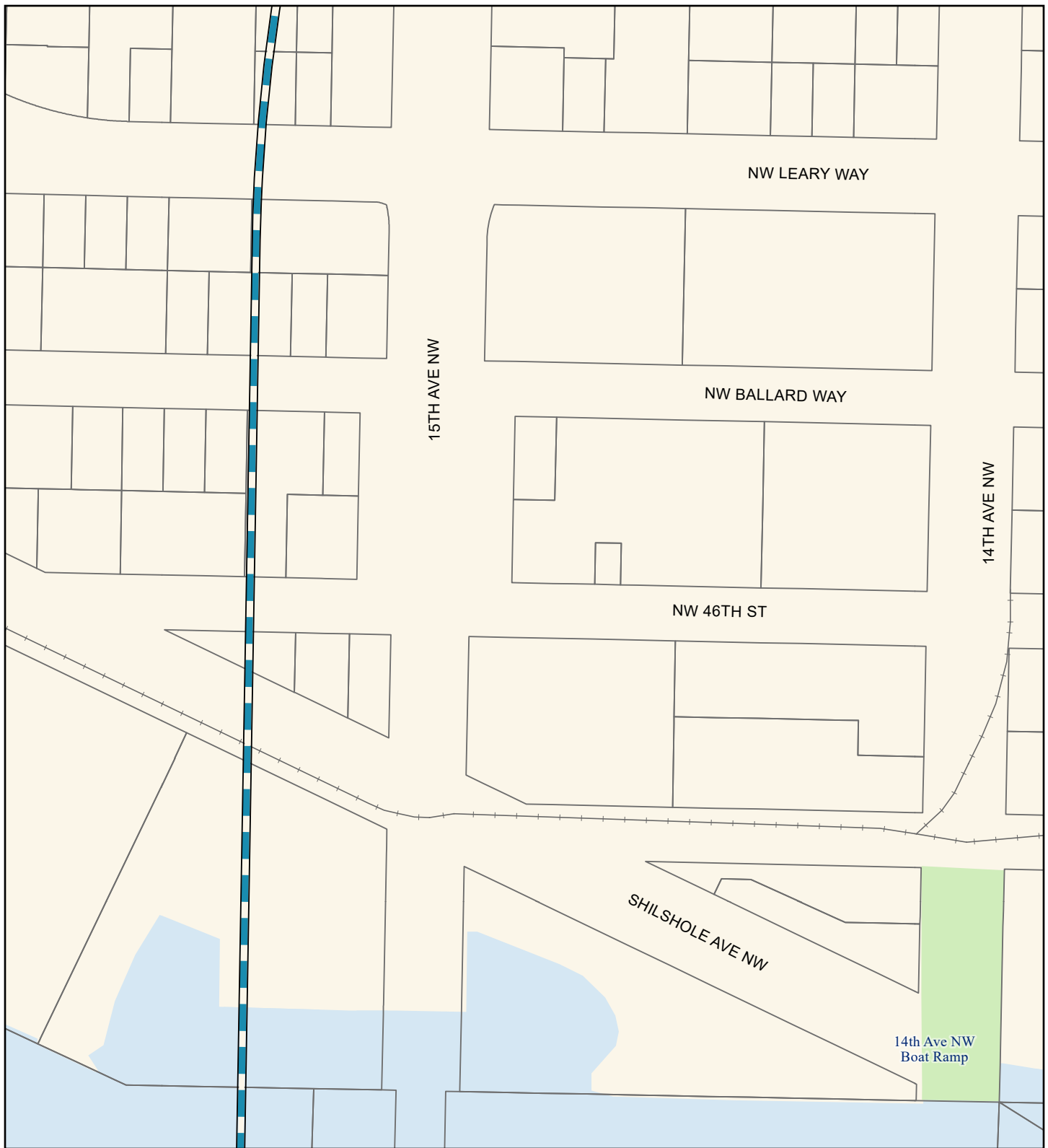
Station

- New
- Existing

- Parcel
- Park
- Water Body

FIGURE N.3D-25d
Alternative IBB-3
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

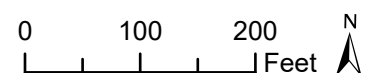
- Elevated
- At-Grade
- Tunnel
- Retained Cut

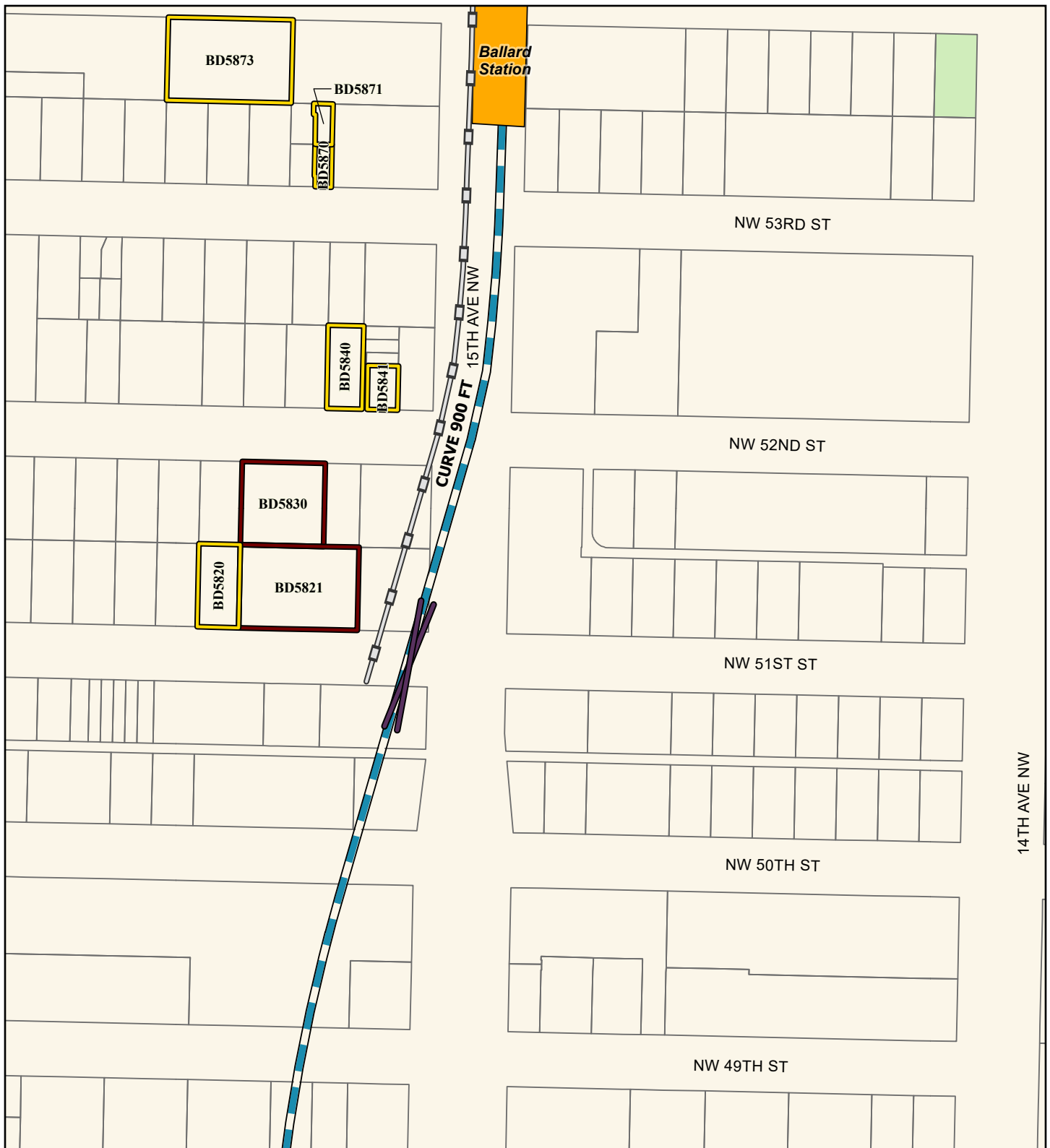
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3D-25e
Alternative IBB-3
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

- █ Elevated
- █ At-Grade
- █ Tunnel
- █ Retained Cut

Station

- █ New
- █ Existing

█ Proposed Sound Wall

█ Parcel

█ Park

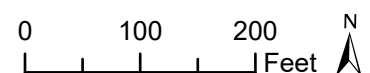
█ Crossover

Noise Impacts

█ Severe Impact

█ Moderate Impact

FIGURE N.3D-25f
Alternative IBB-3
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

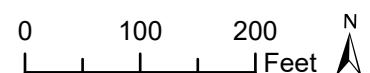
- █ Elevated
- █ At-Grade
- █ Tunnel
- █ Retained Cut

Station

- █ New
- █ Existing

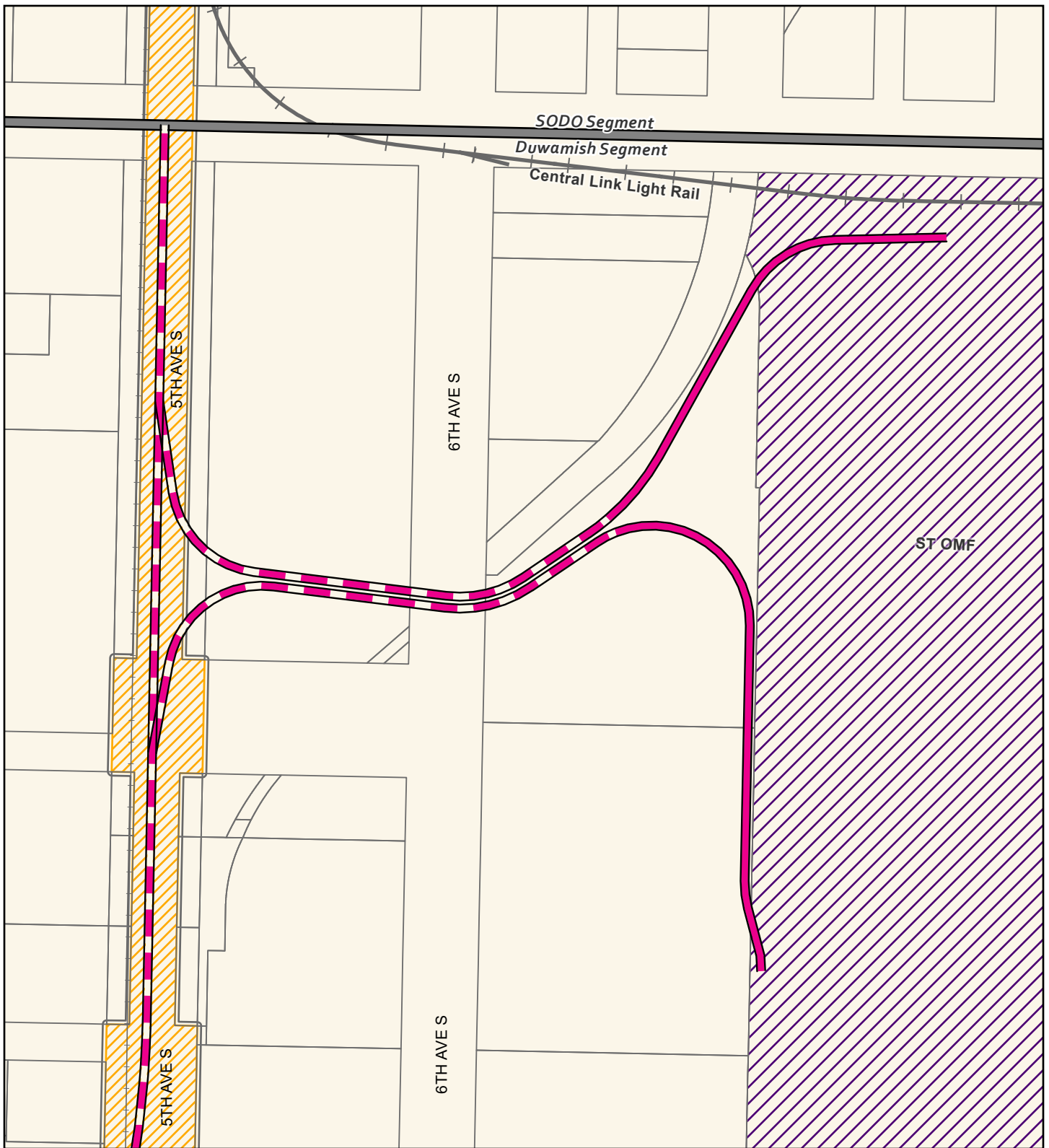
- █ Proposed Sound Wall
- █ Parcel
- █ Park
- █ Noise Impacts
- █ Moderate Impact

FIGURE N.3D-25g
Alternative IBB-3
Noise Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
*West Seattle and
 Ballard Link Extensions*



Attachment N.3E
Maps of Vibration Impact Assessment

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Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

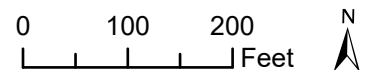
- Elevated
- At-Grade
- Tunnel
- Retained Cut

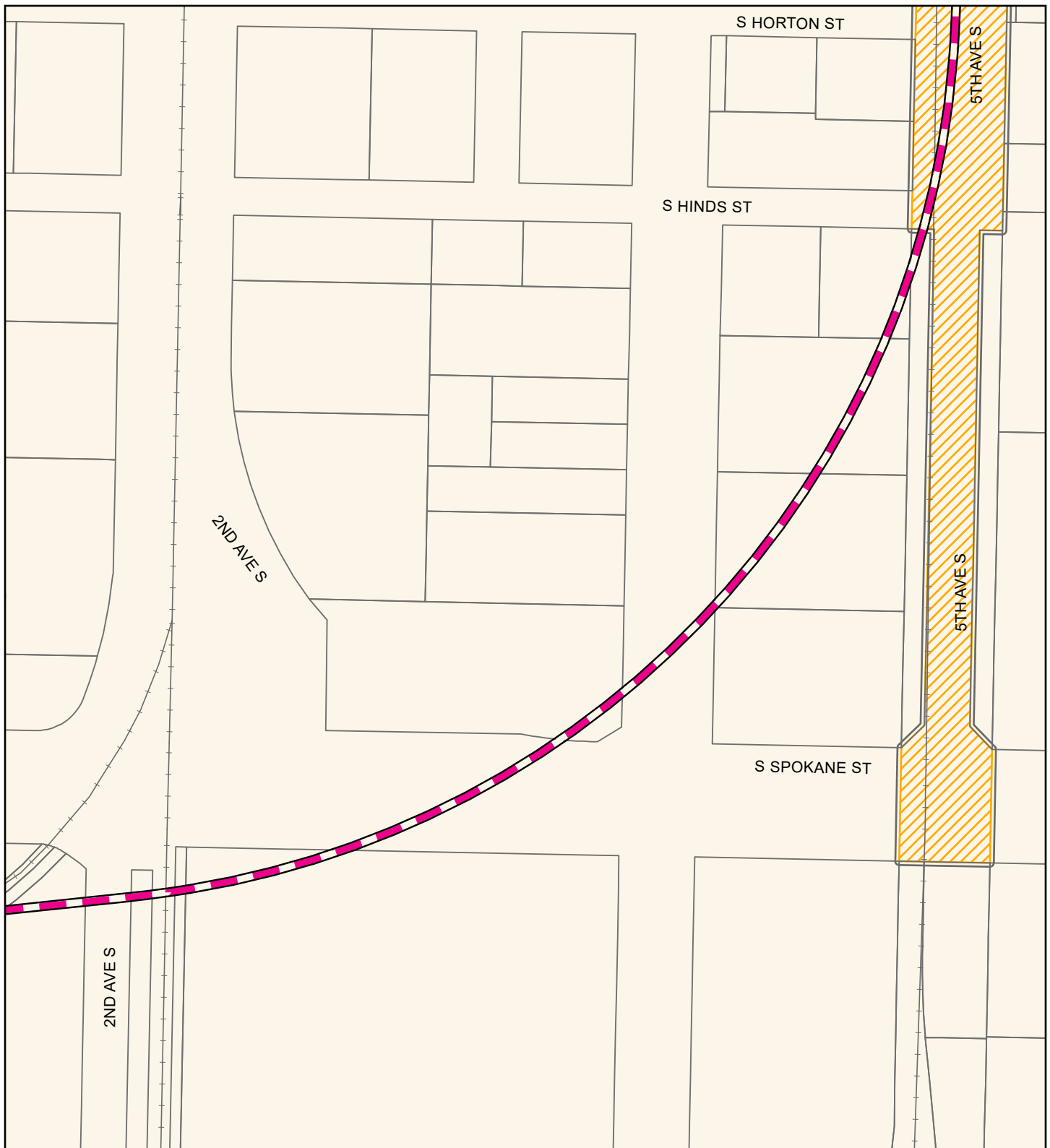
Station

- New
- Existing

- Segment Line
- Existing Link Light Rail
- Railroad
- Parcel
- Sound Transit Operations and Maintenance Facility (ST OMF)
- SODO Busway

FIGURE N.3E-1a
Alternative DUW-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

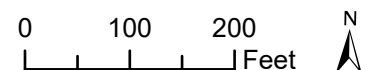
- Elevated
- Tunnel
- At-Grade
- Retained Cut

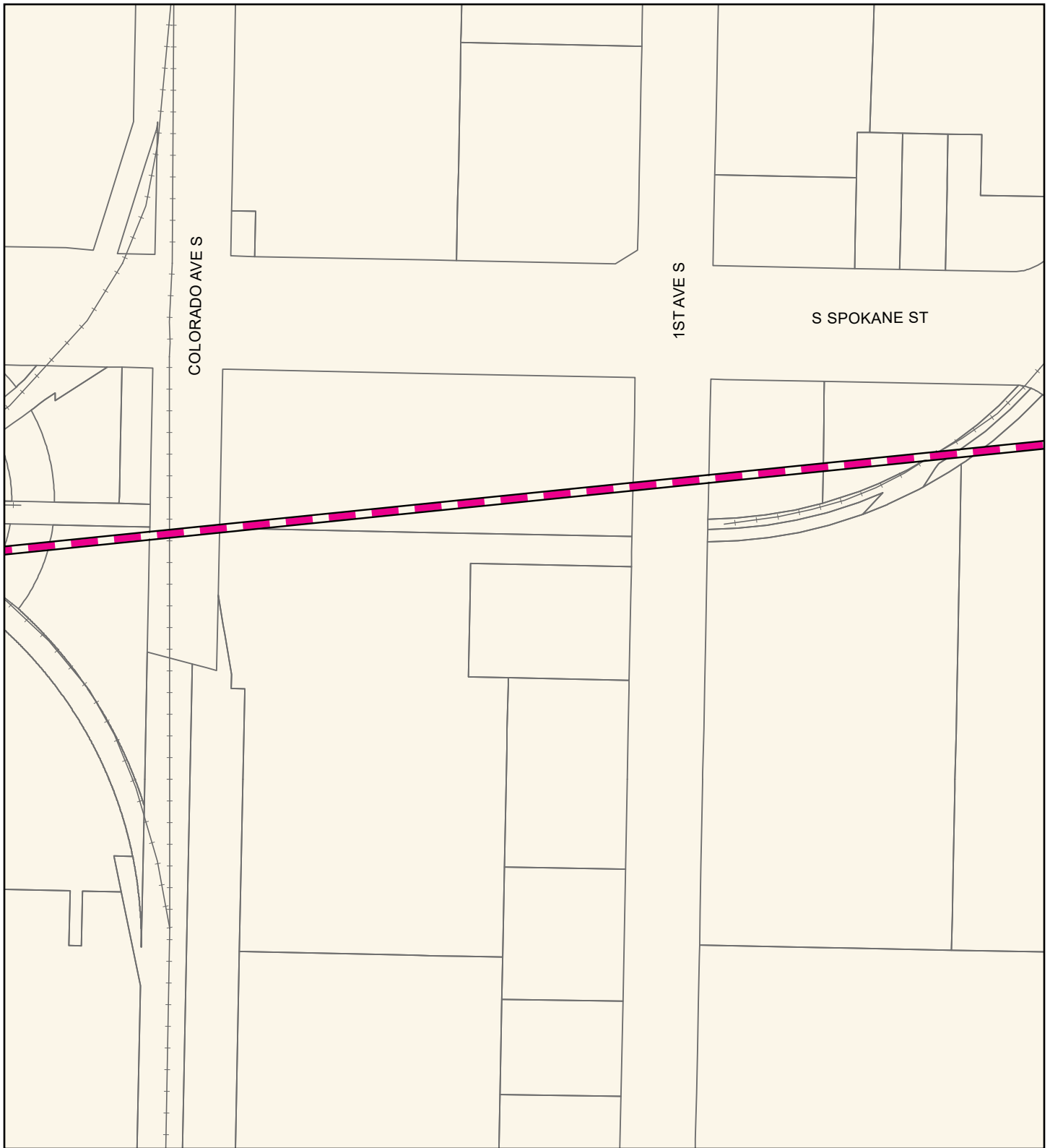
Station

- New
- Existing

- Railroad
- Parcel
- SODO Busway

FIGURE N.3E-1b
Alternative DUW-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

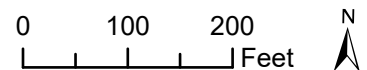
- Elevated
- At-Grade
- Tunnel
- Retained Cut

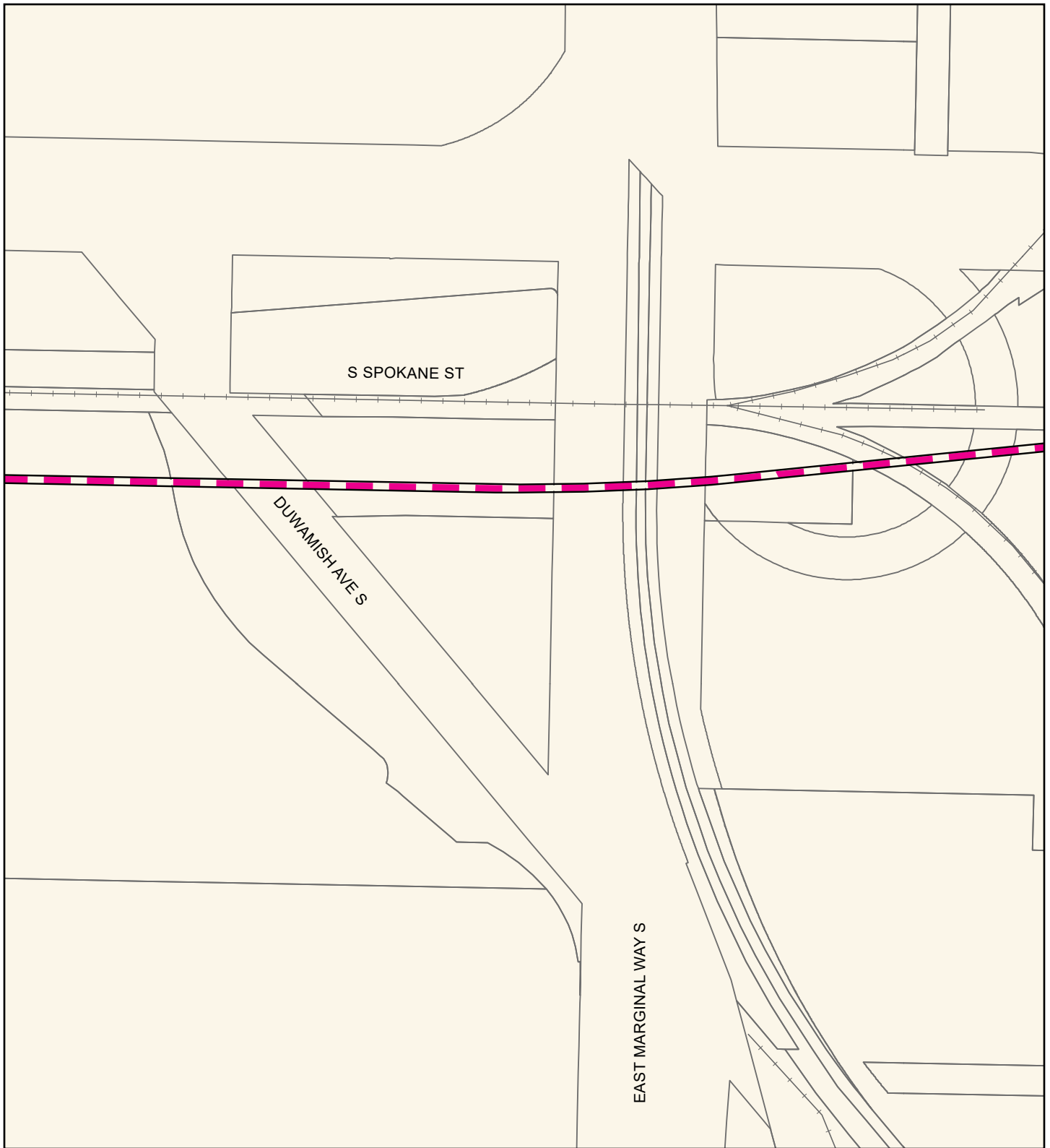
Station

- New
- Existing

- Railroad
- Parcel

FIGURE N.3E-1c
Alternative DUW-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

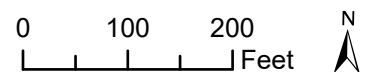
- Elevated
- Tunnel
- At-Grade
- Retained Cut

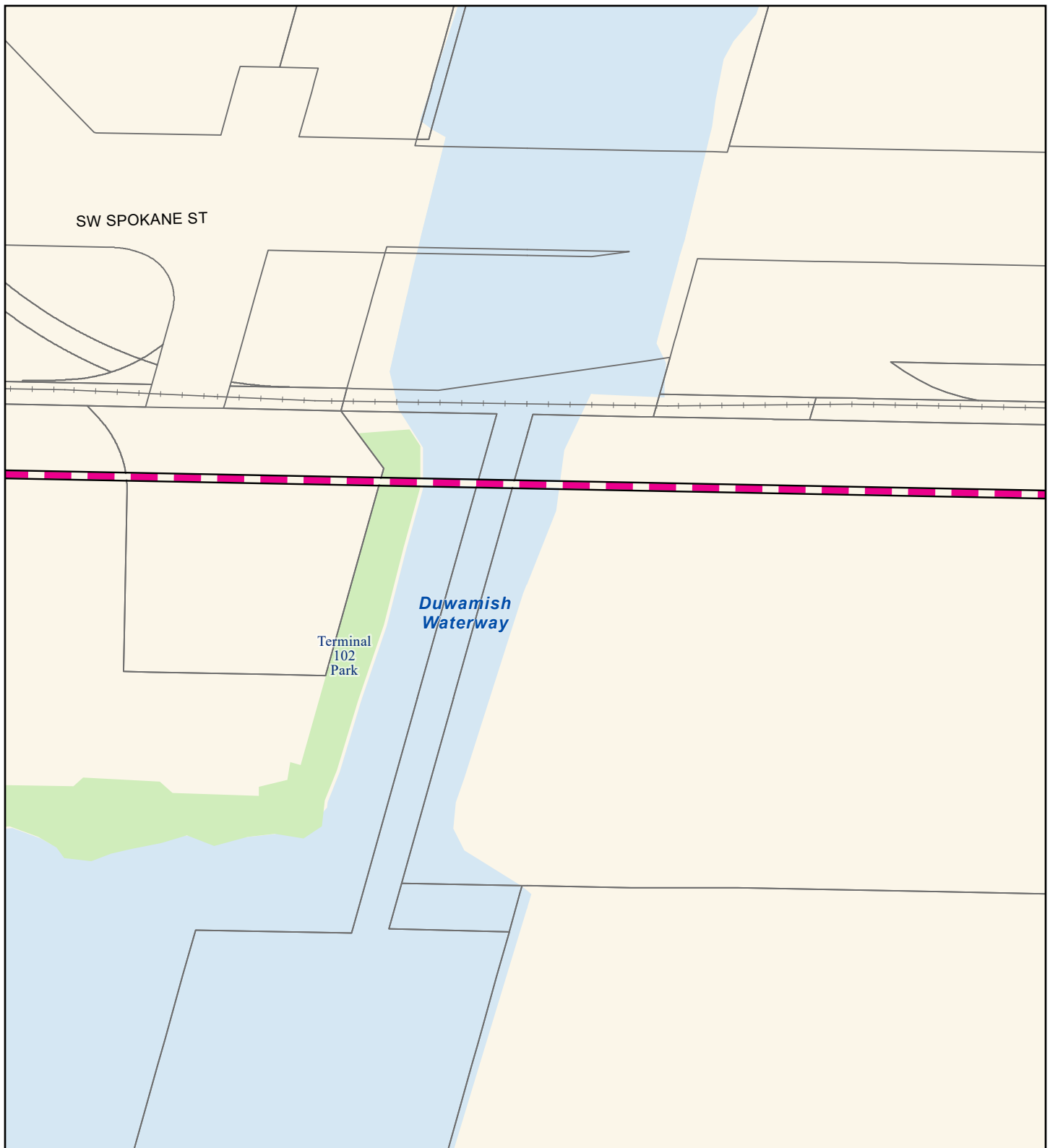
Station

- New
- Existing

- Railroad
- Parcel

FIGURE N.3E-1d
Alternative DUW-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

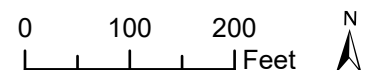
- Elevated
- At-Grade
- Tunnel
- Retained Cut

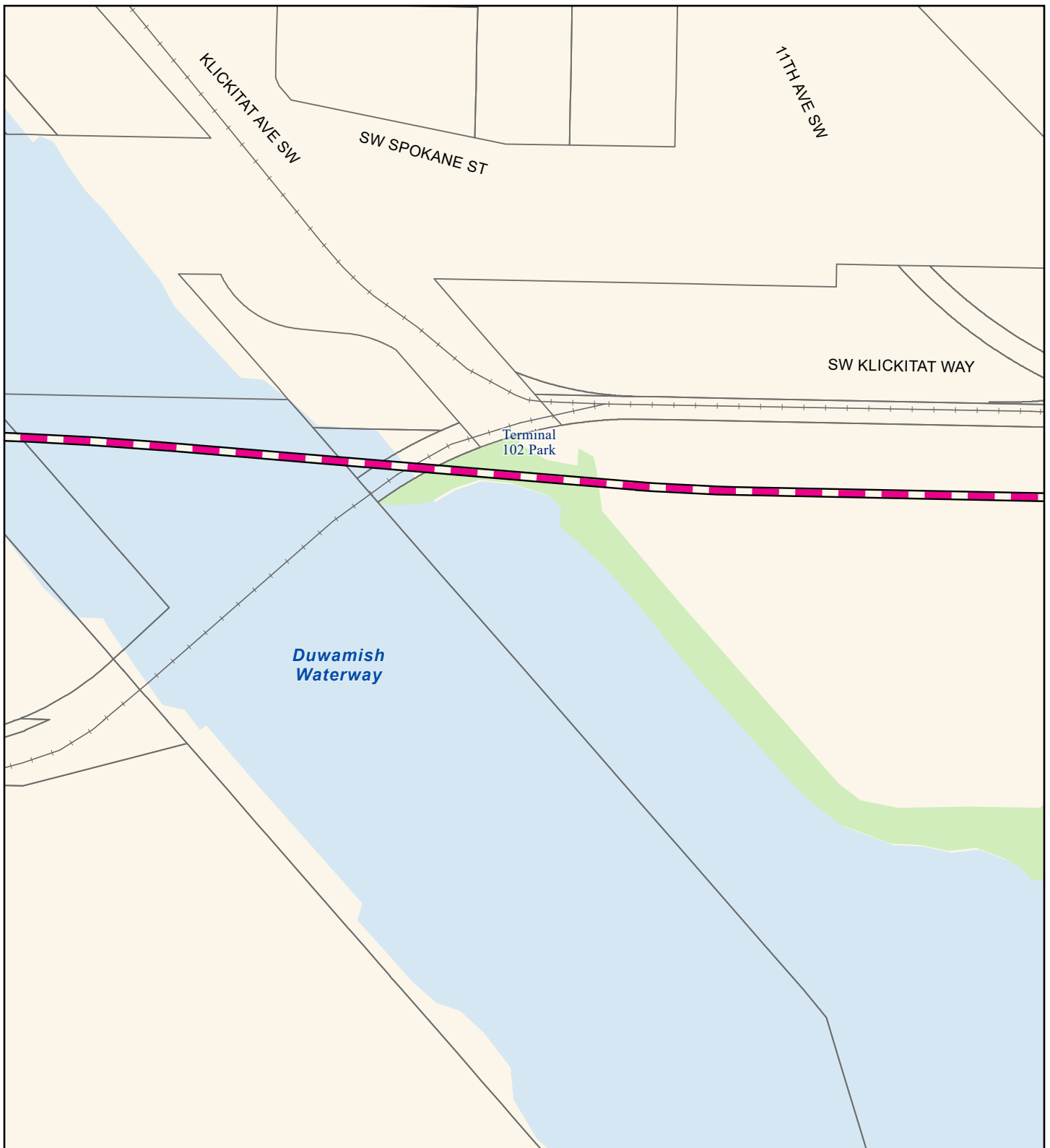
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3E-1e
Alternative DUW-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

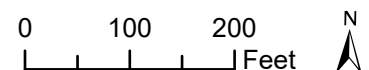
- Elevated
- At-Grade
- Tunnel
- Retained Cut

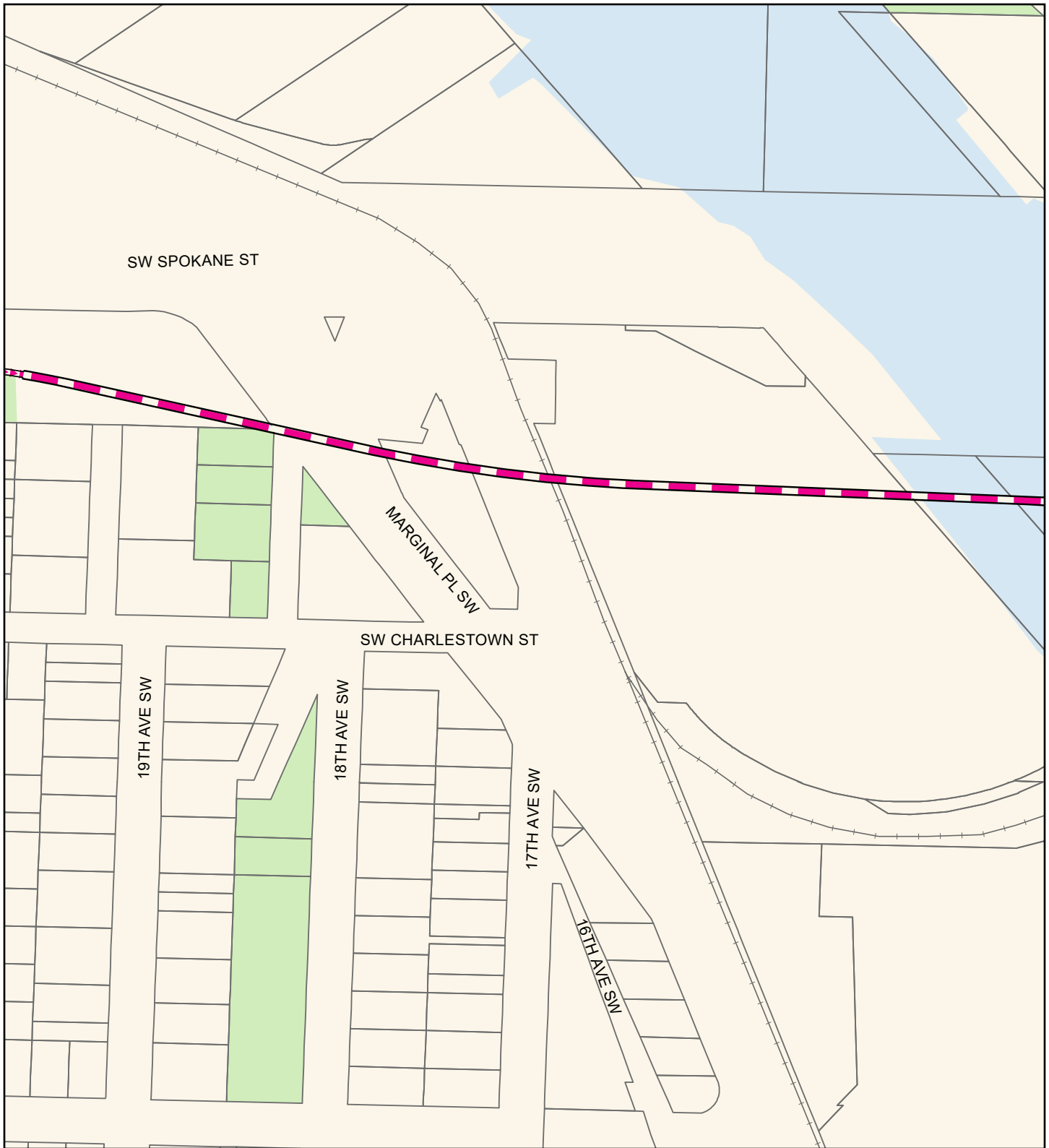
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3E-1f
Alternative DUW-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

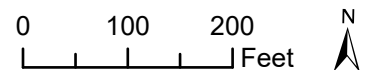
- Elevated
- At-Grade
- Tunnel
- Retained Cut

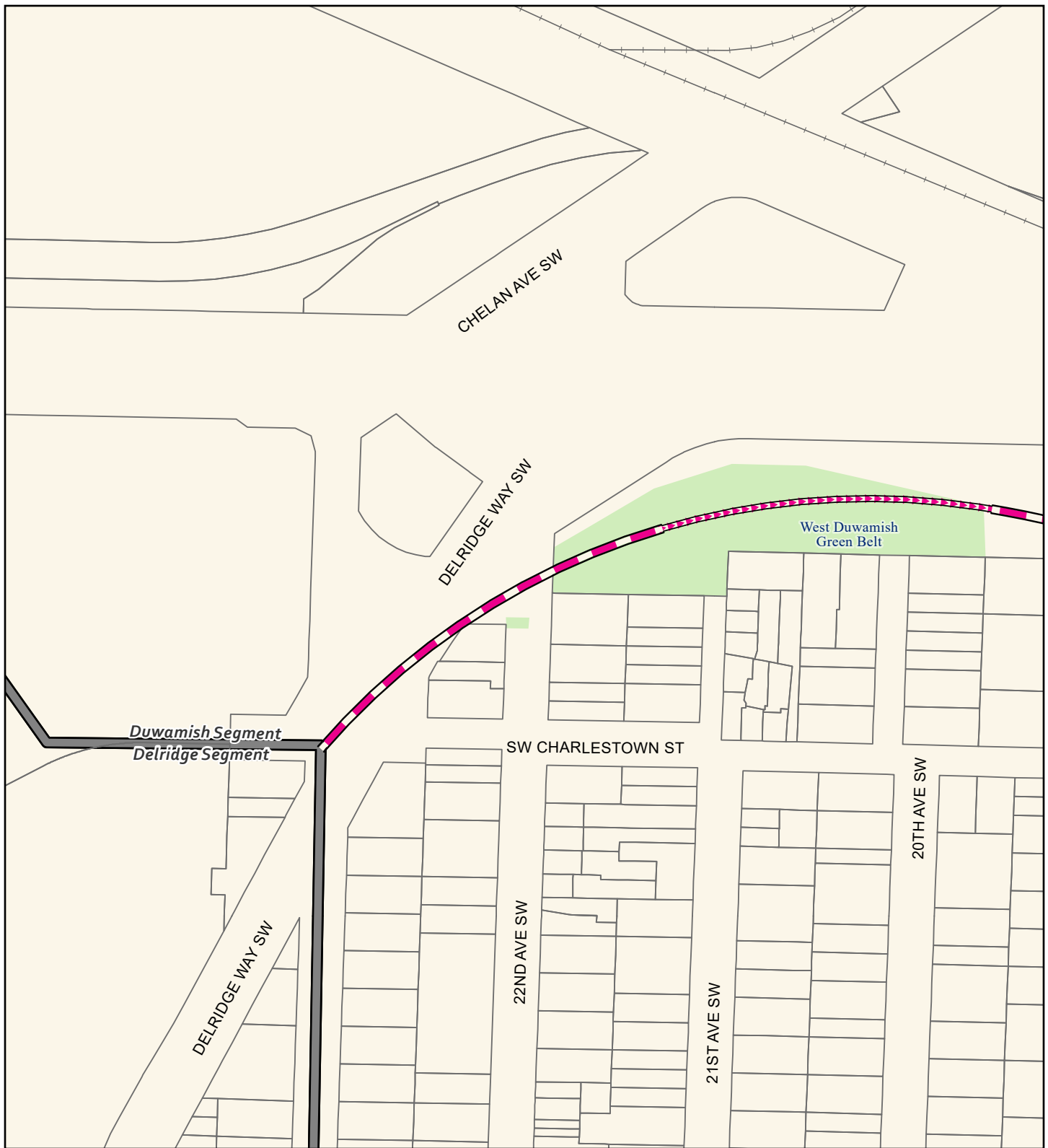
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3E-1g
Alternative DUW-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

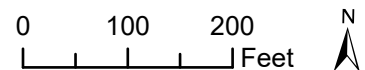
- Elevated
- At-Grade
- Tunnel
- Retained Cut

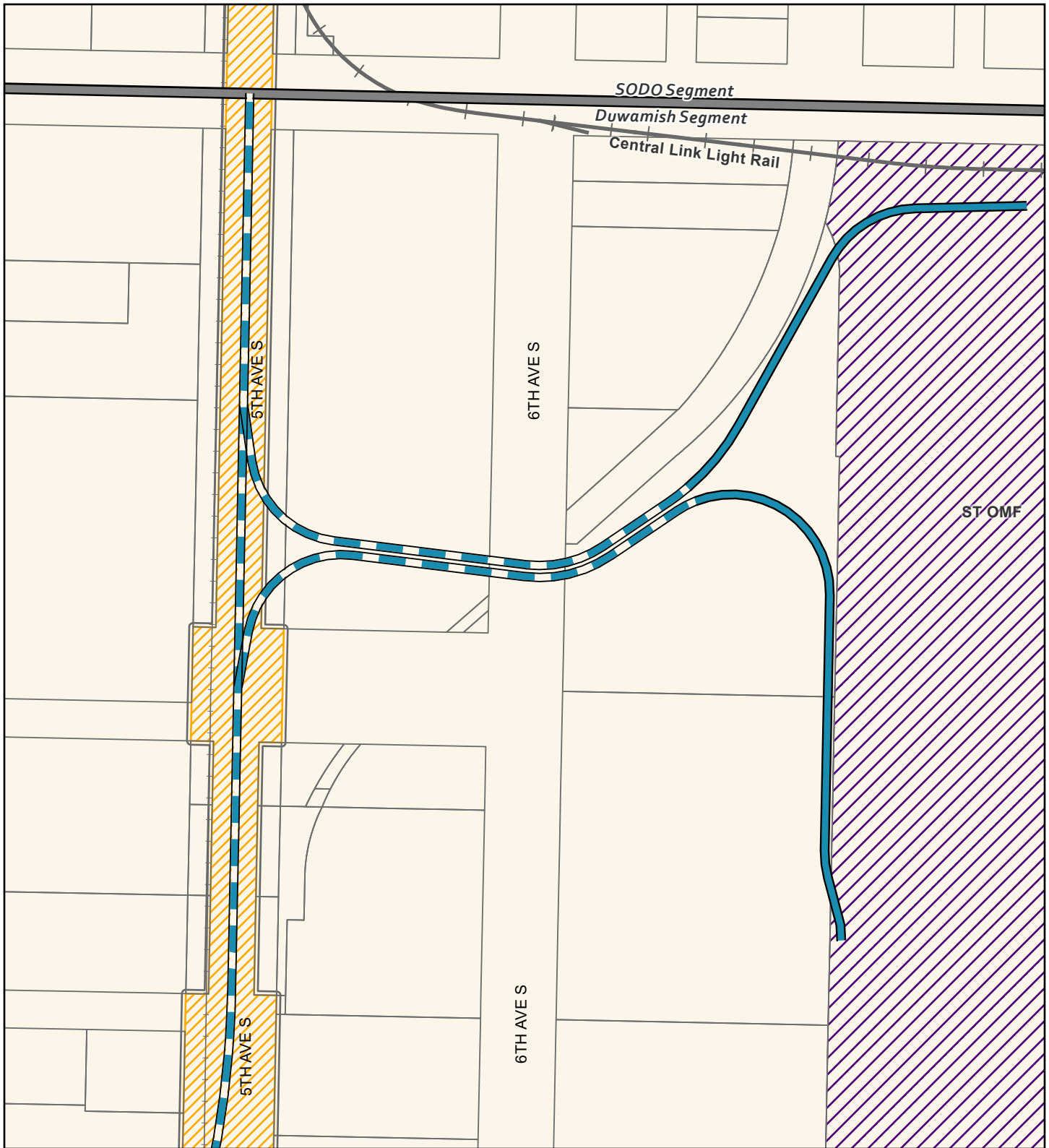
Station

- New
- Existing

- Segment Line
- Railroad
- Parcel
- Park

FIGURE N.3E-1h
Alternative DUW-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

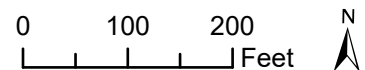
- Elevated
- At-Grade
- Tunnel
- Retained Cut

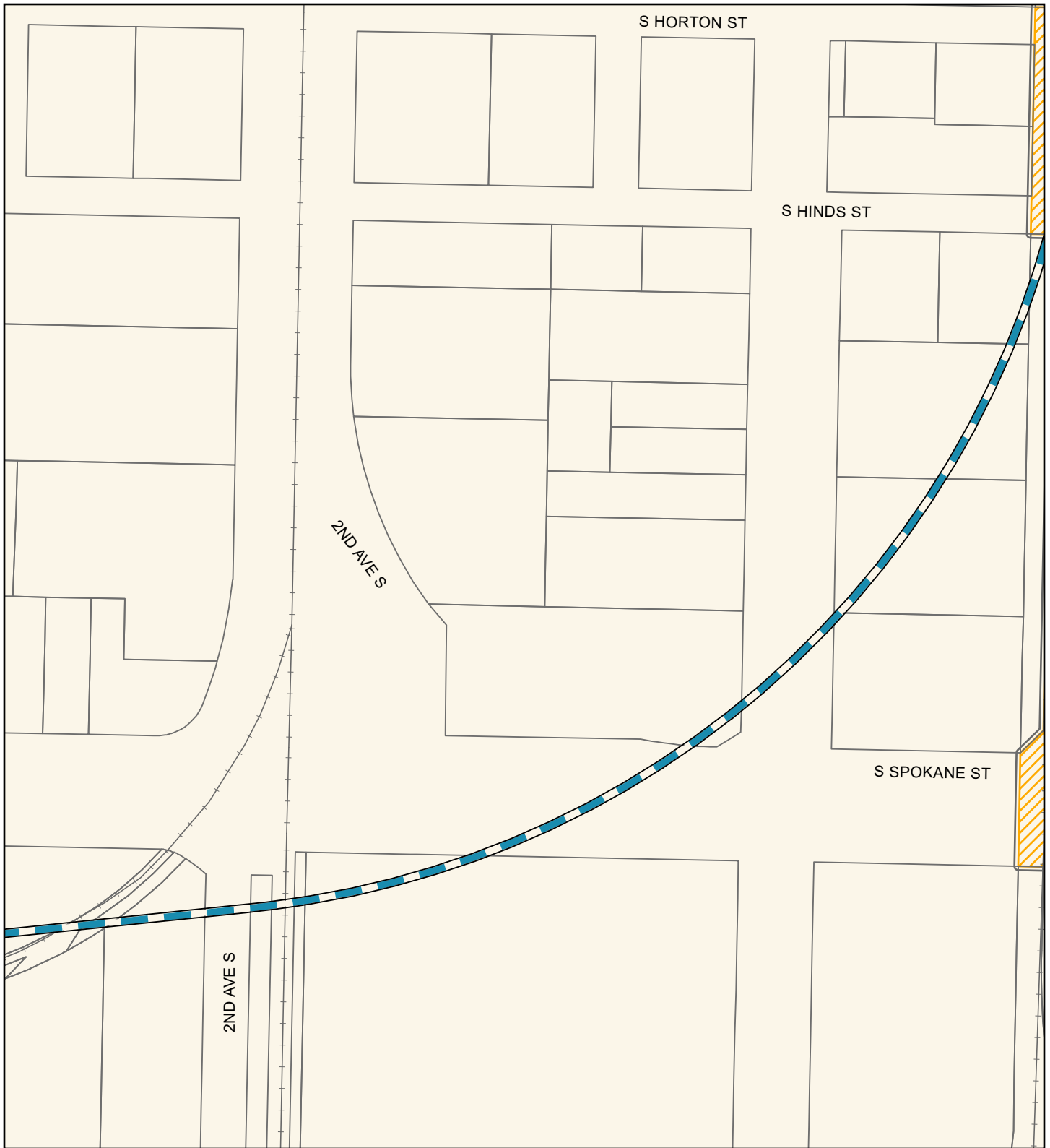
Station

- New
- Existing

- Segment Line
- Existing Link Light Rail
- Railroad
- Parcel
- Sound Transit Operations and Maintenance Facility (STOMF)
- SODO Busway

FIGURE N.3E-2a
Option DUW-1b
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

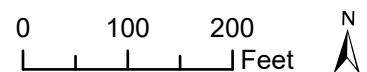
- Elevated
- At-Grade
- Tunnel
- Retained Cut

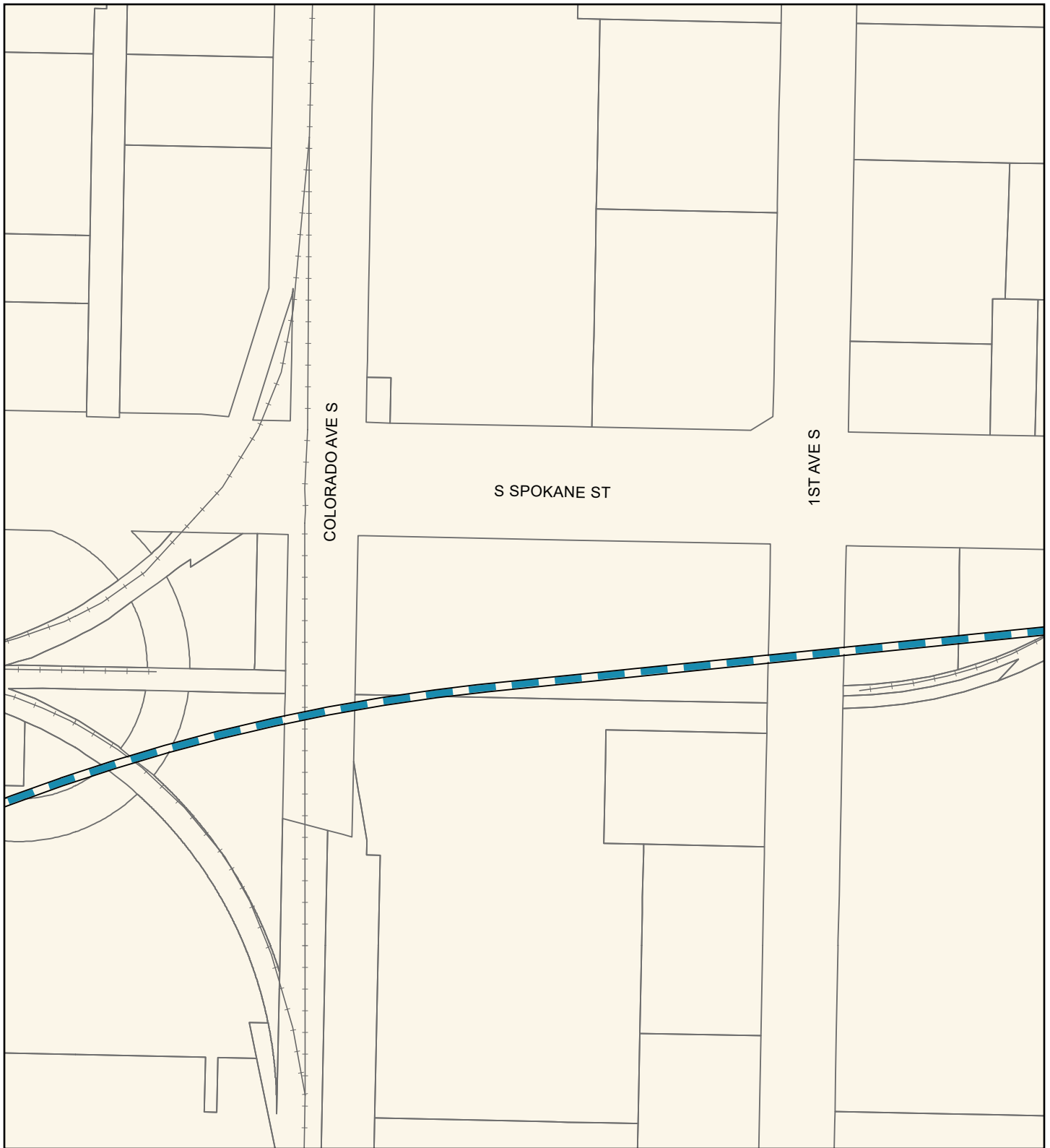
Station

- New
- Existing

- Railroad
- Parcel
- SODO Busway

FIGURE N.3E-2b
Option DUW-1b
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- - - Other Alternatives

Alternative Profile

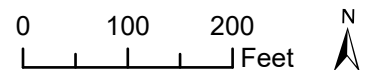
- Elevated
- At-Grade
- Tunnel
- Retained Cut

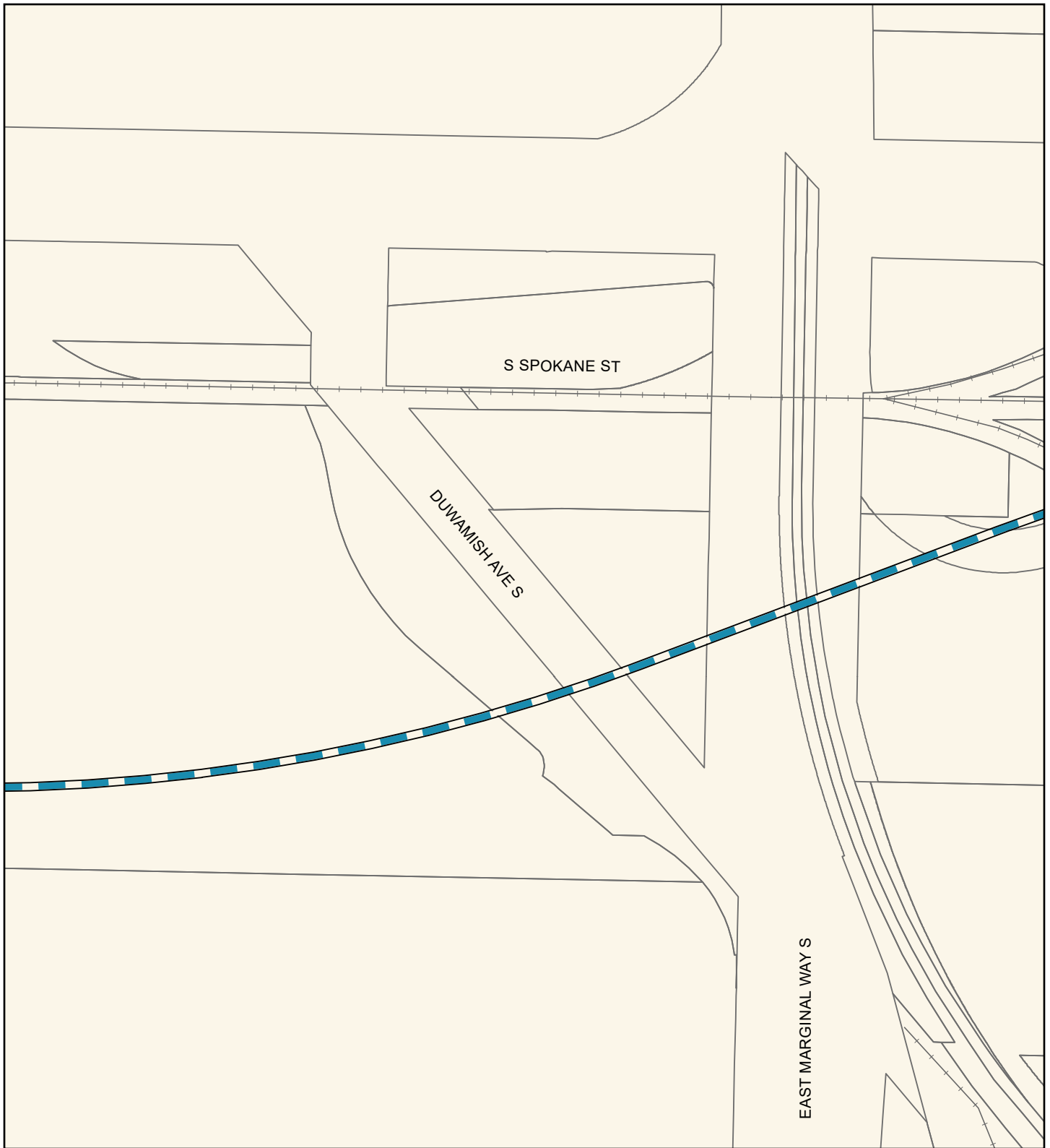
Station

- New
- Existing

- Railroad
- Parcel

FIGURE N.3E-2c
Option DUW-1b
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

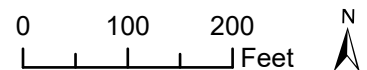
- Railroad
- Parcel

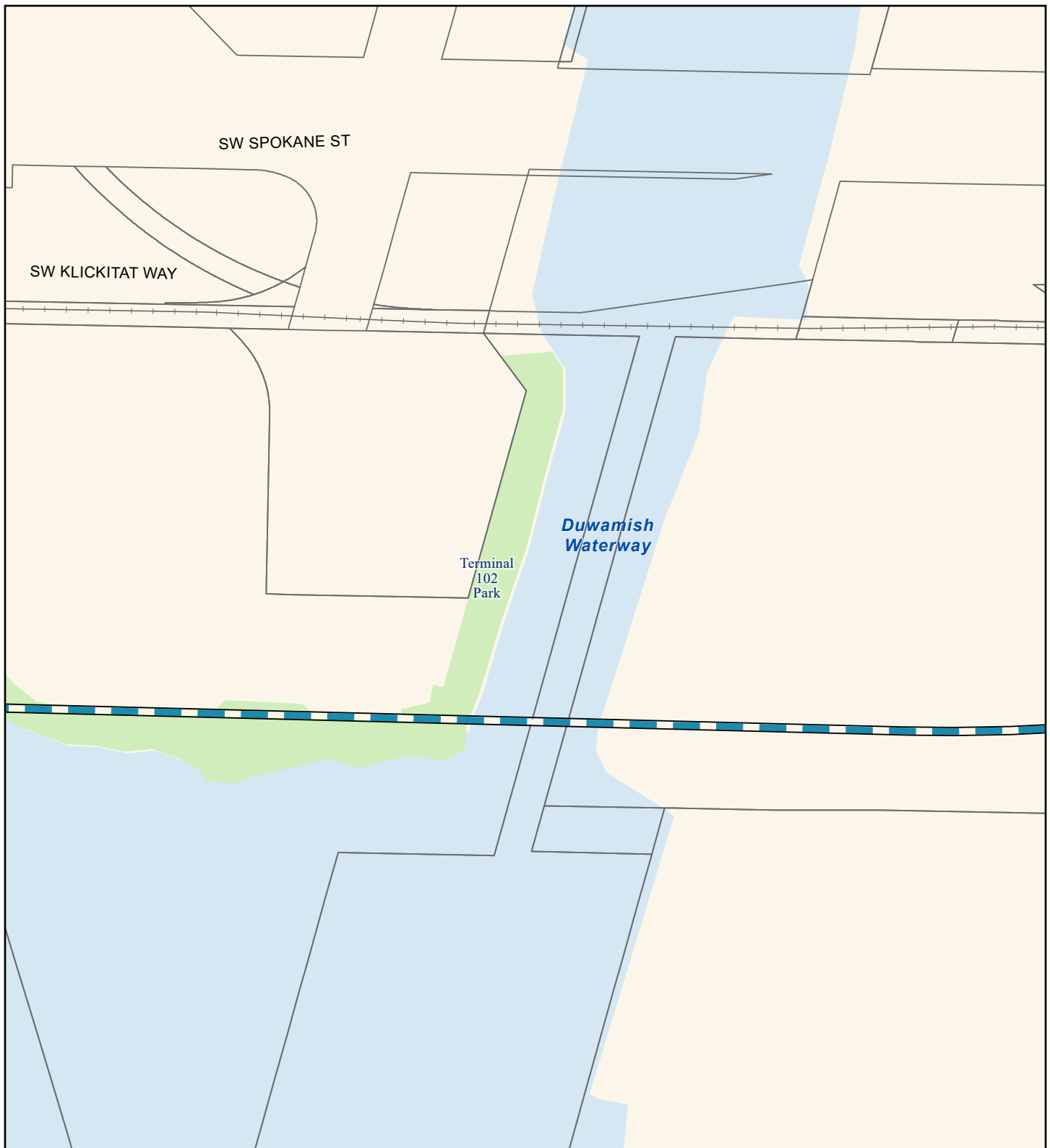
FIGURE N.3E-2d

Option DUW-1b

Vibration and Groundborne Noise Impacts (before mitigation)

West Seattle Link Extension -
Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

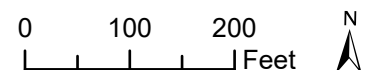
- Elevated — Tunnel
- At-Grade — Retained Cut

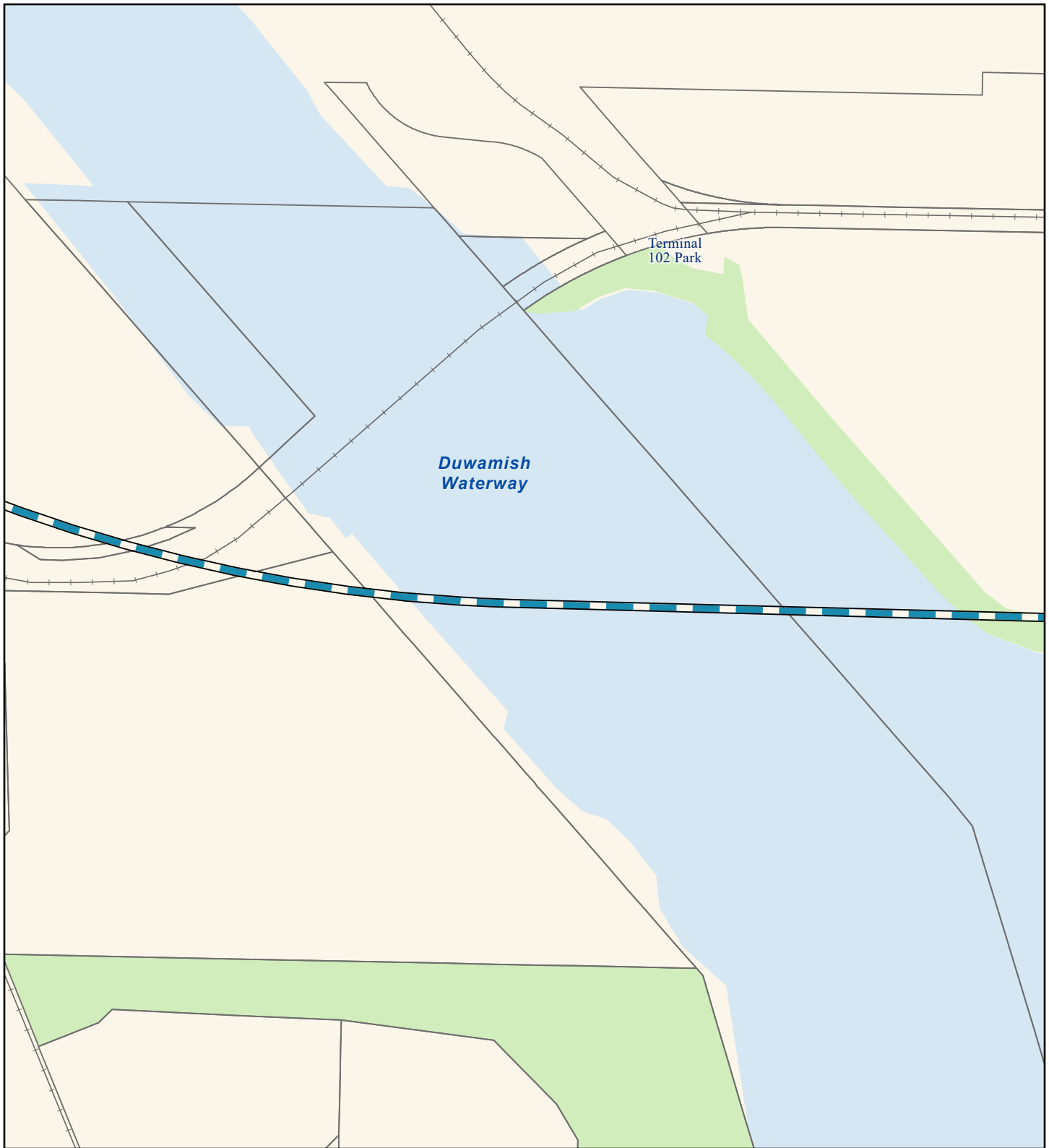
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3E-2e
Option DUW-1b
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

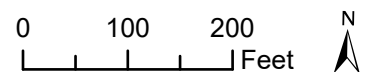
- Elevated
- At-Grade
- Tunnel
- Retained Cut

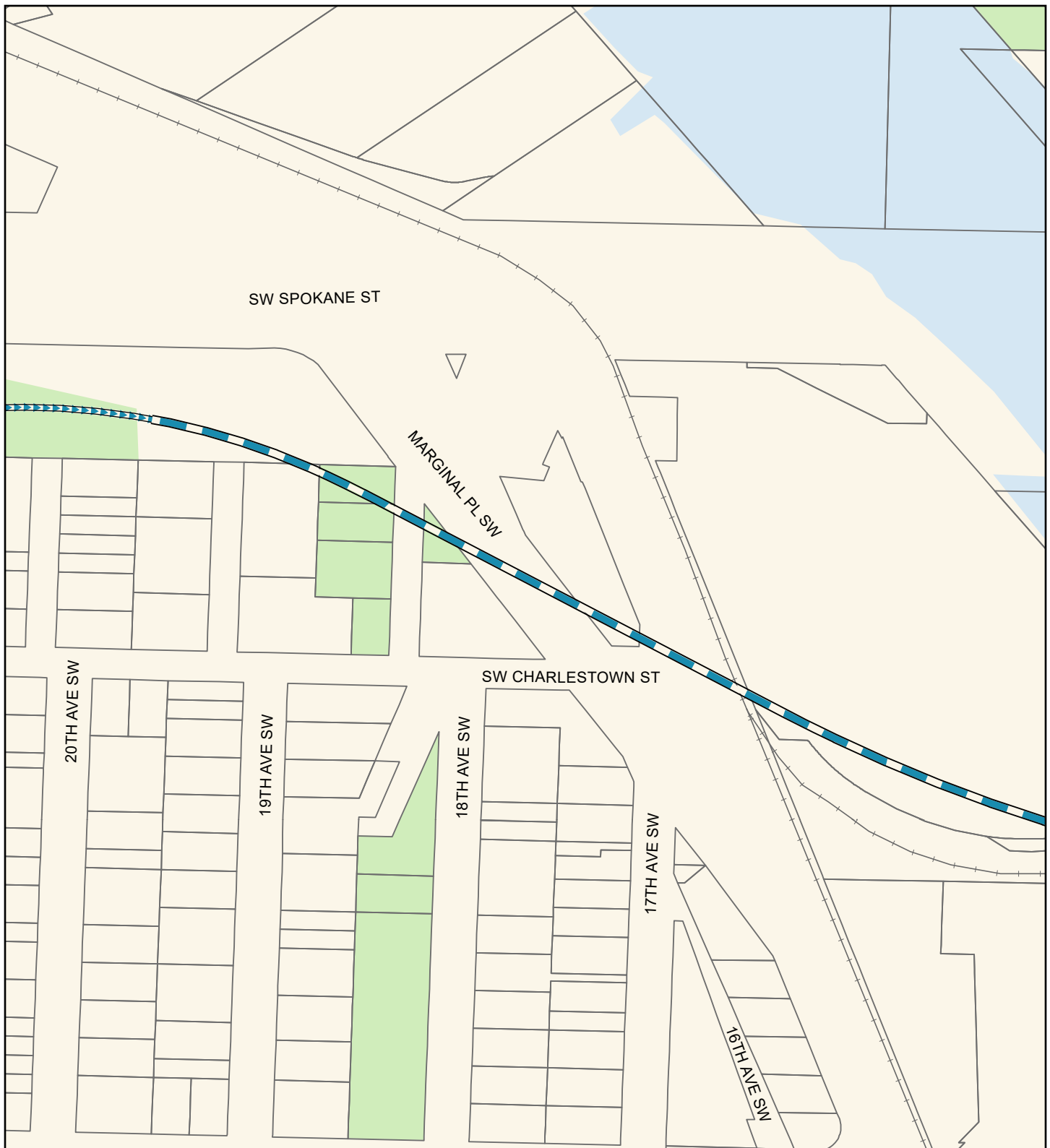
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3E-2f
Option DUW-1b
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

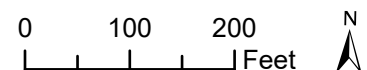
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3E-2g
Option DUW-1b
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

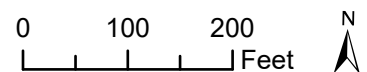
- Elevated
- At-Grade
- Tunnel
- Retained Cut

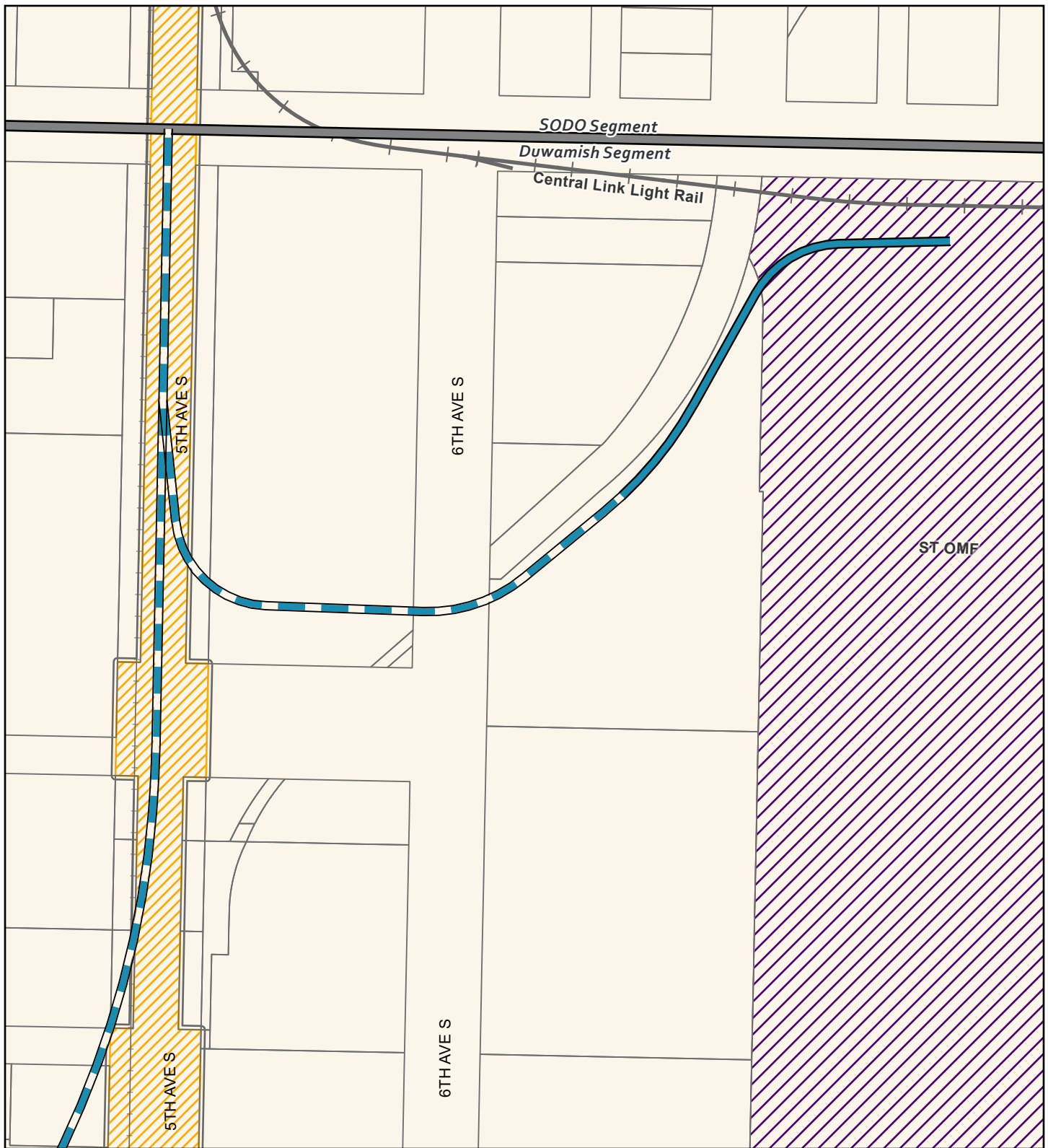
Station

- New
- Existing

- Segment Line
- ++ Railroad
- Parcel
- Park

FIGURE N.3E-2h
Option DUW-1b
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

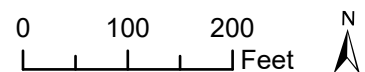
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Segment Line
- Existing Link Light Rail
- Railroad
- Parcel
- Sound Transit Operations and Maintenance Facility (ST OMF)
- SODO Busway

FIGURE N.3E-3a
Alternative DUW-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

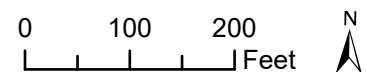
- Elevated
- At-Grade
- Tunnel
- Retained Cut

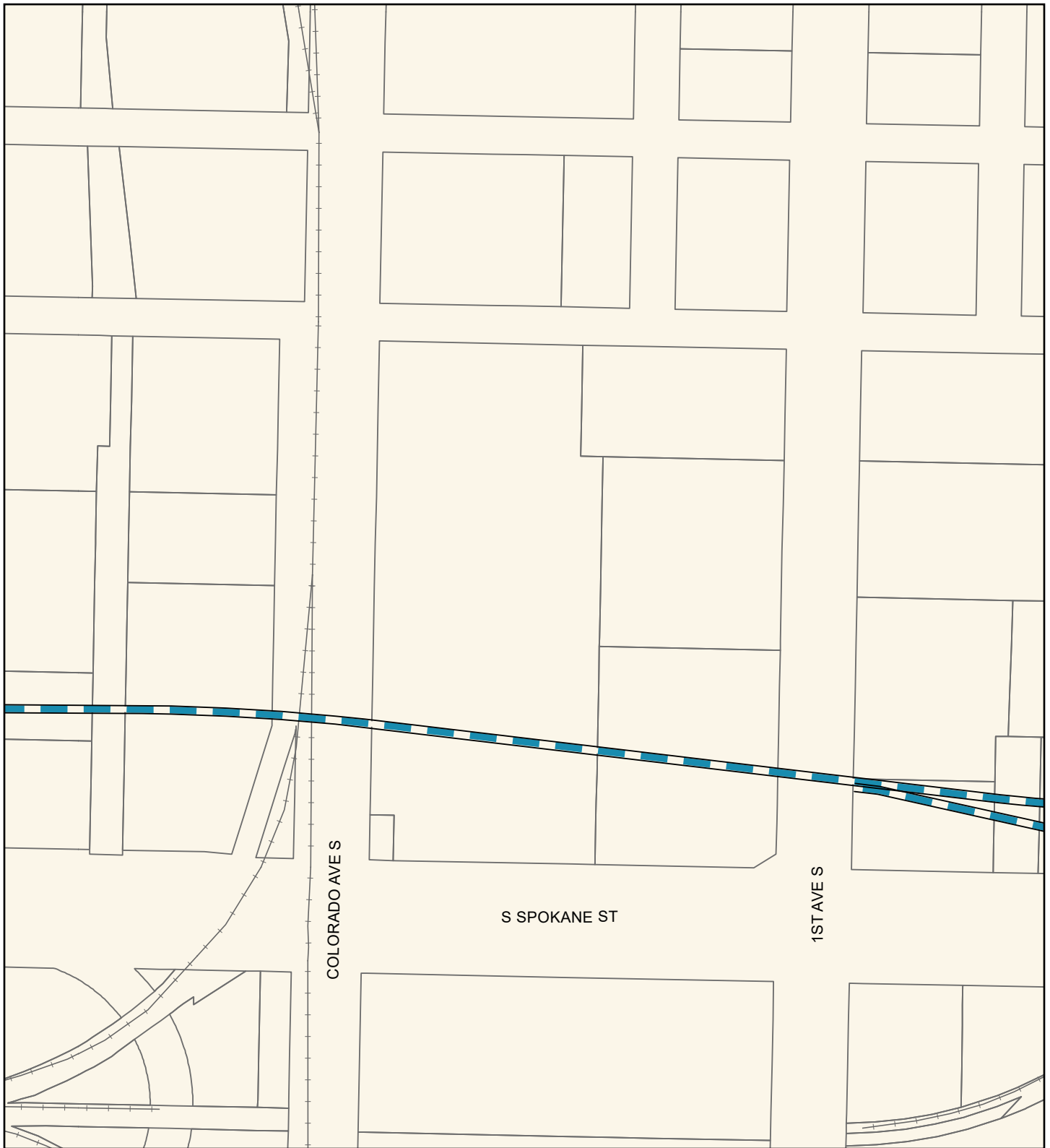
Station

- New
- Existing

- Railroad
- Parcel
- SODO Busway

FIGURE N.3E-3b
Alternative DUW-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

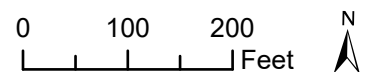
- Elevated
- At-Grade
- Tunnel
- Retained Cut

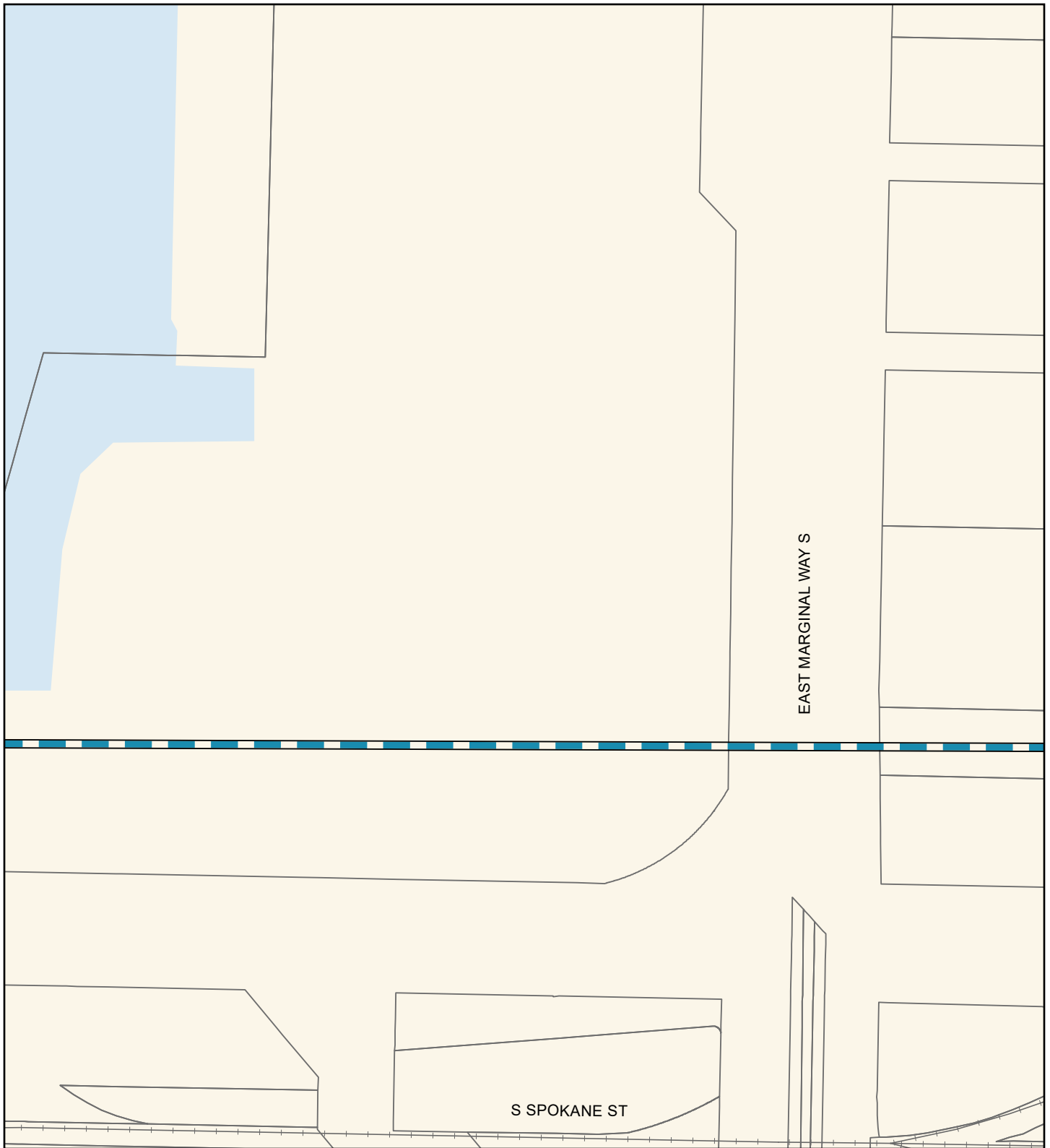
Station

- New
- Existing

- Railroad
- Parcel

FIGURE N.3E-3c
Alternative DUW-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

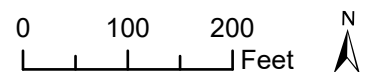
- Elevated
- At-Grade
- Tunnel
- Retained Cut

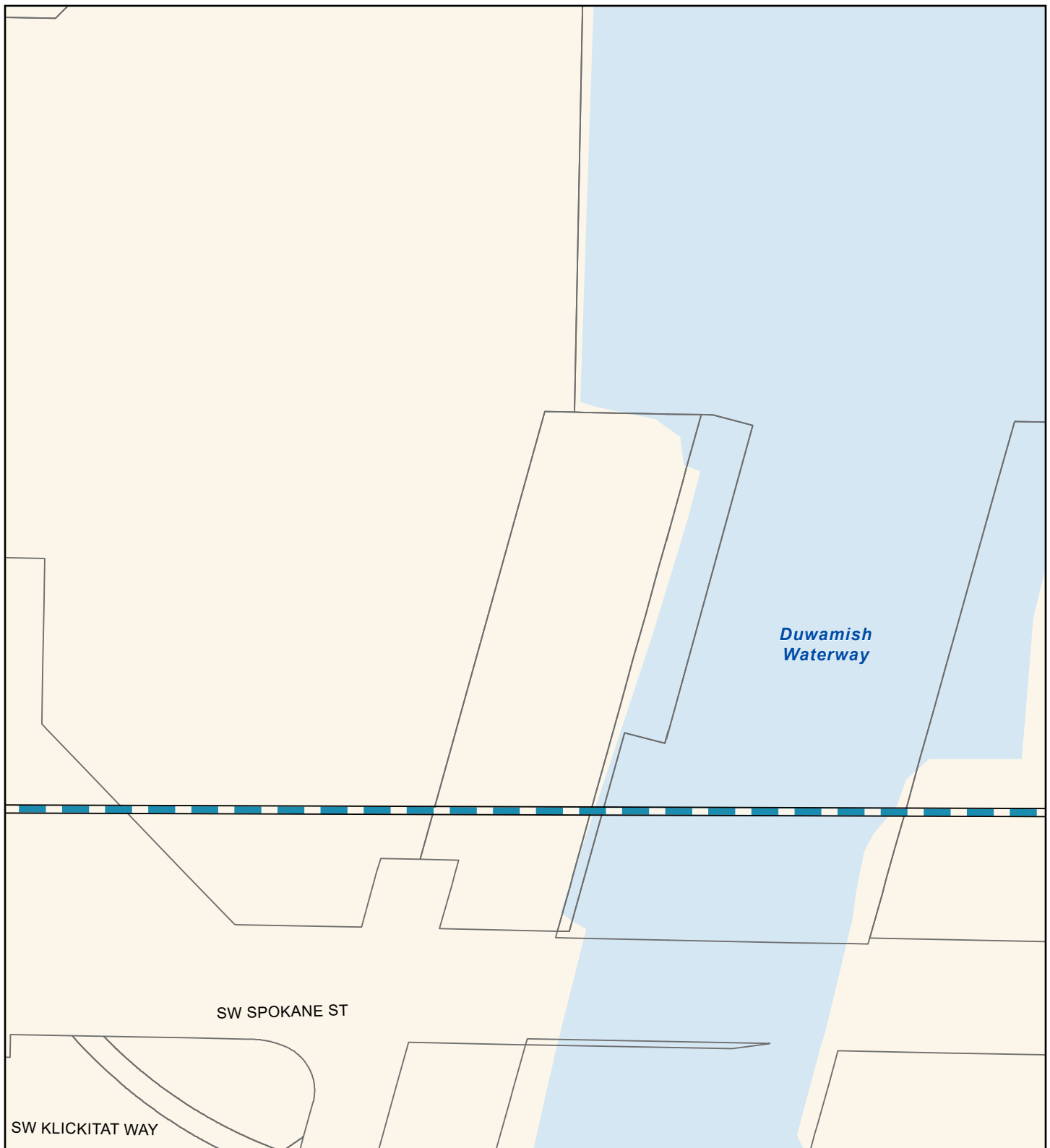
Station

- New
- Existing

- Railroad
- Parcel
- Water Body

FIGURE N.3E-3d
Alternative DUW-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

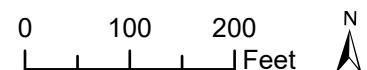
- Elevated
- At-Grade
- Tunnel
- Retained Cut

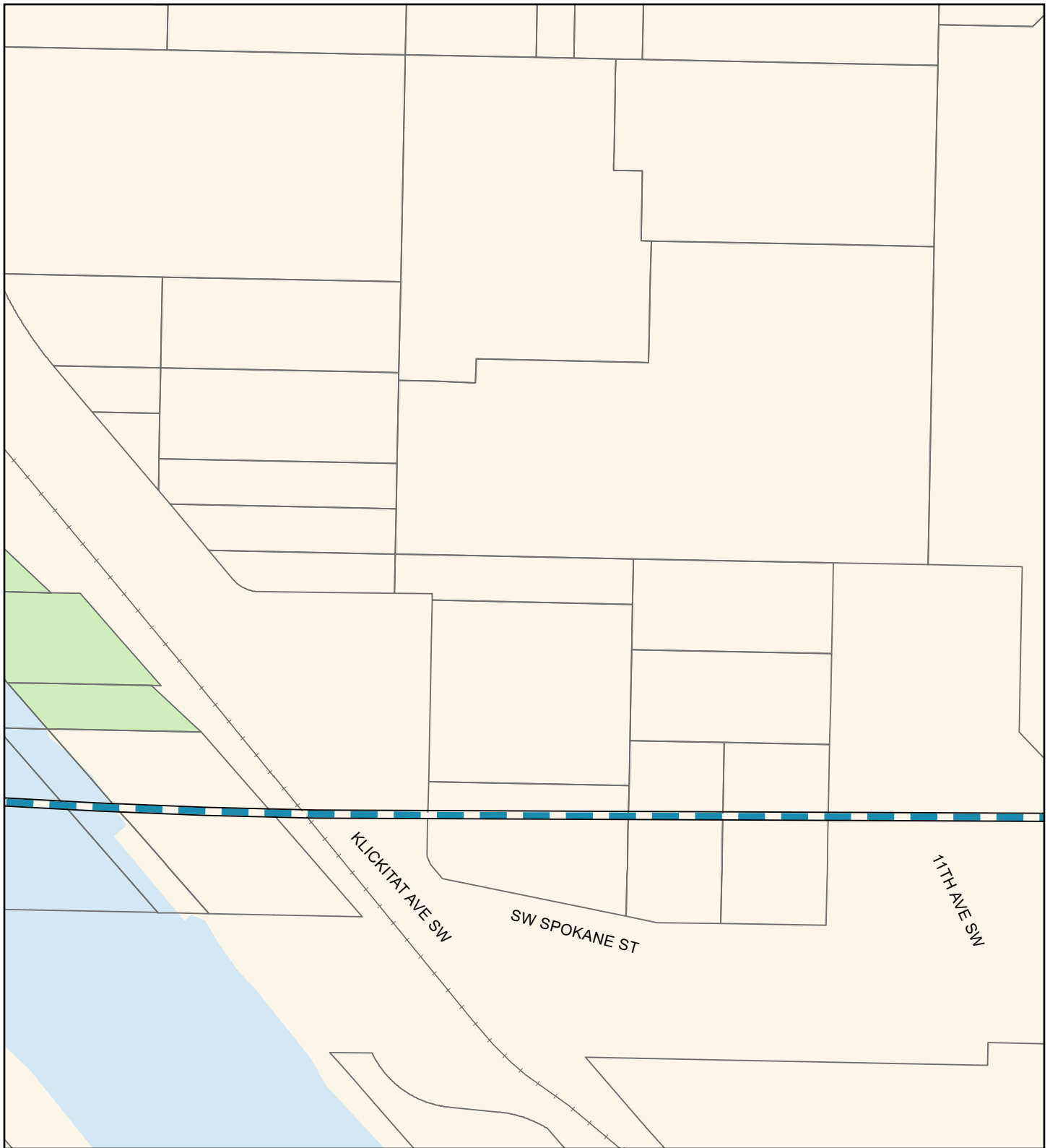
Station

- New
- Existing

- Parcel
- Water Body

FIGURE N.3E-3e
Alternative DUW-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

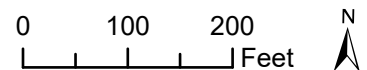
- Elevated
- At-Grade
- Tunnel
- Retained Cut

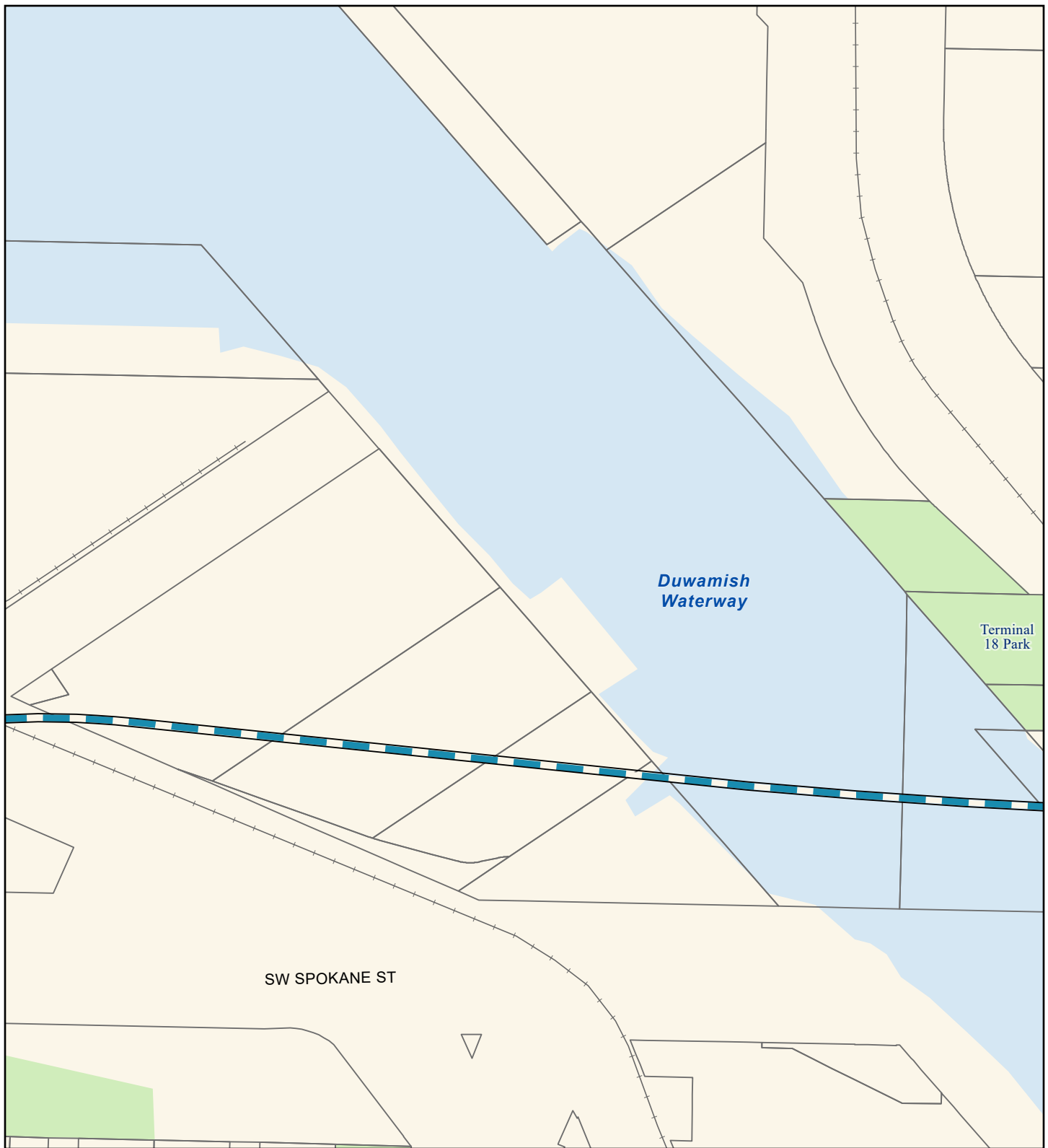
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3E-3f
Alternative DUW-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

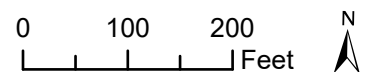
- Elevated
- At-Grade
- Tunnel
- Retained Cut

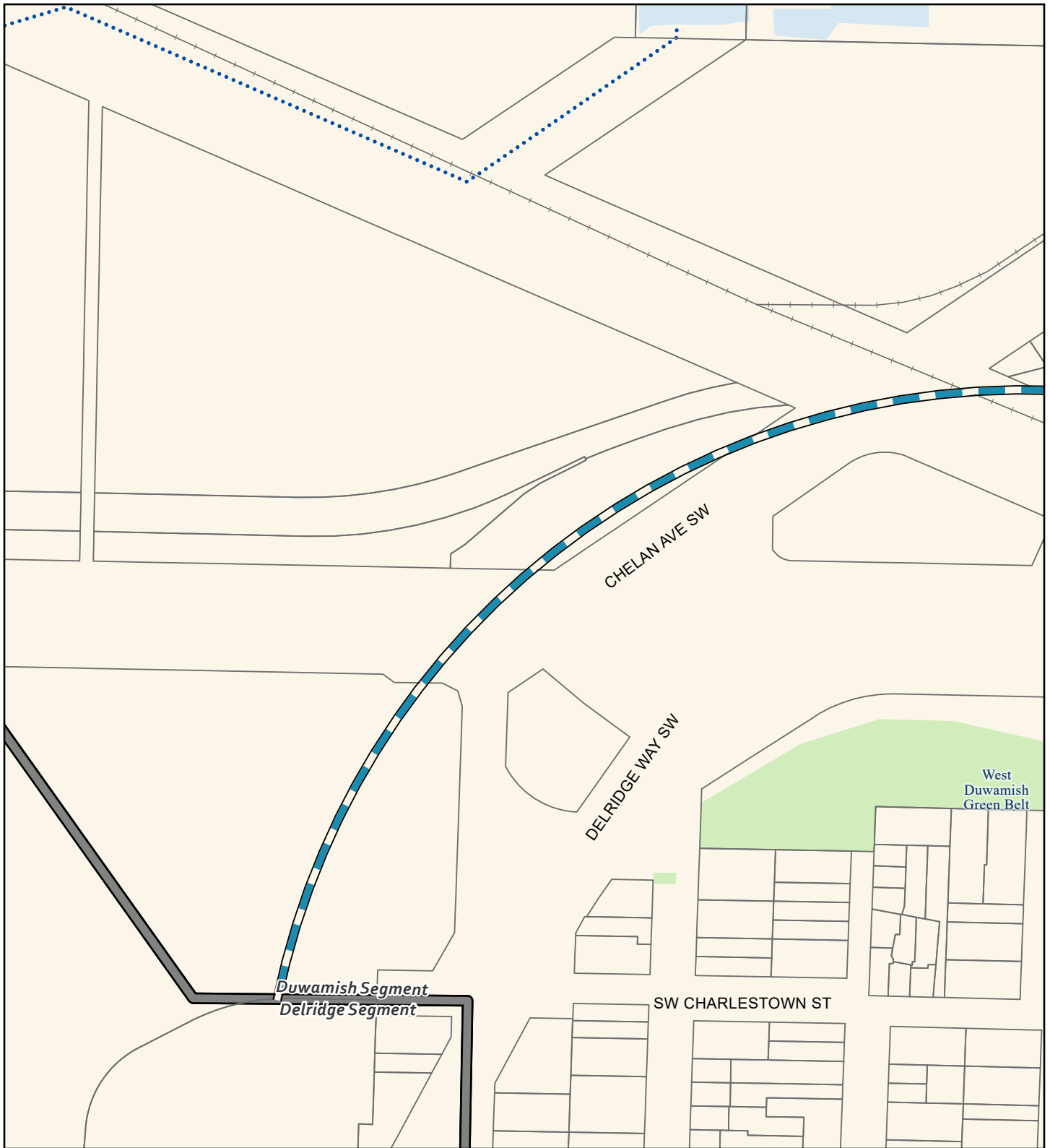
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3E-3g
Alternative DUW-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

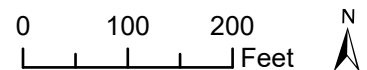
- Elevated
- At-Grade
- Tunnel
- Retained Cut

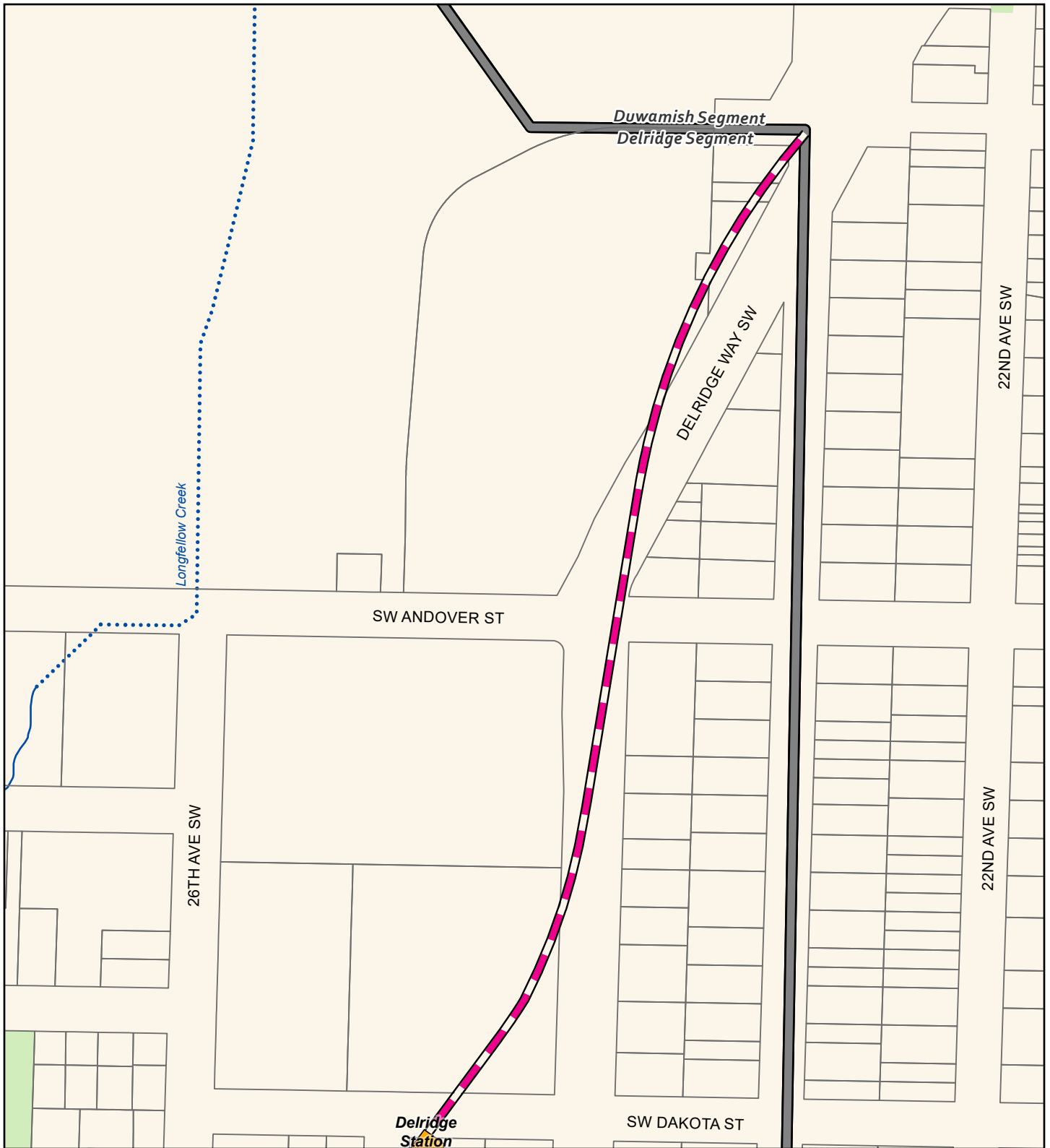
Station

- New
- Existing

- Segment Line
- Railroad
- Piped Stream
- Parcel
- Park
- Water Body

FIGURE N.3E-3h
Alternative DUW-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Duwamish Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

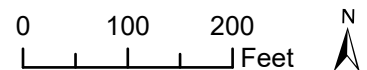
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Segment Line
- Stream
- ... Piped Stream
- Parcel
- Park

FIGURE N.3E-4a
Alternative DEL-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

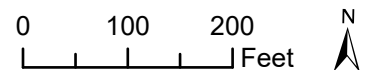
- Elevated
- At-Grade
- Tunnel
- Retained Cut

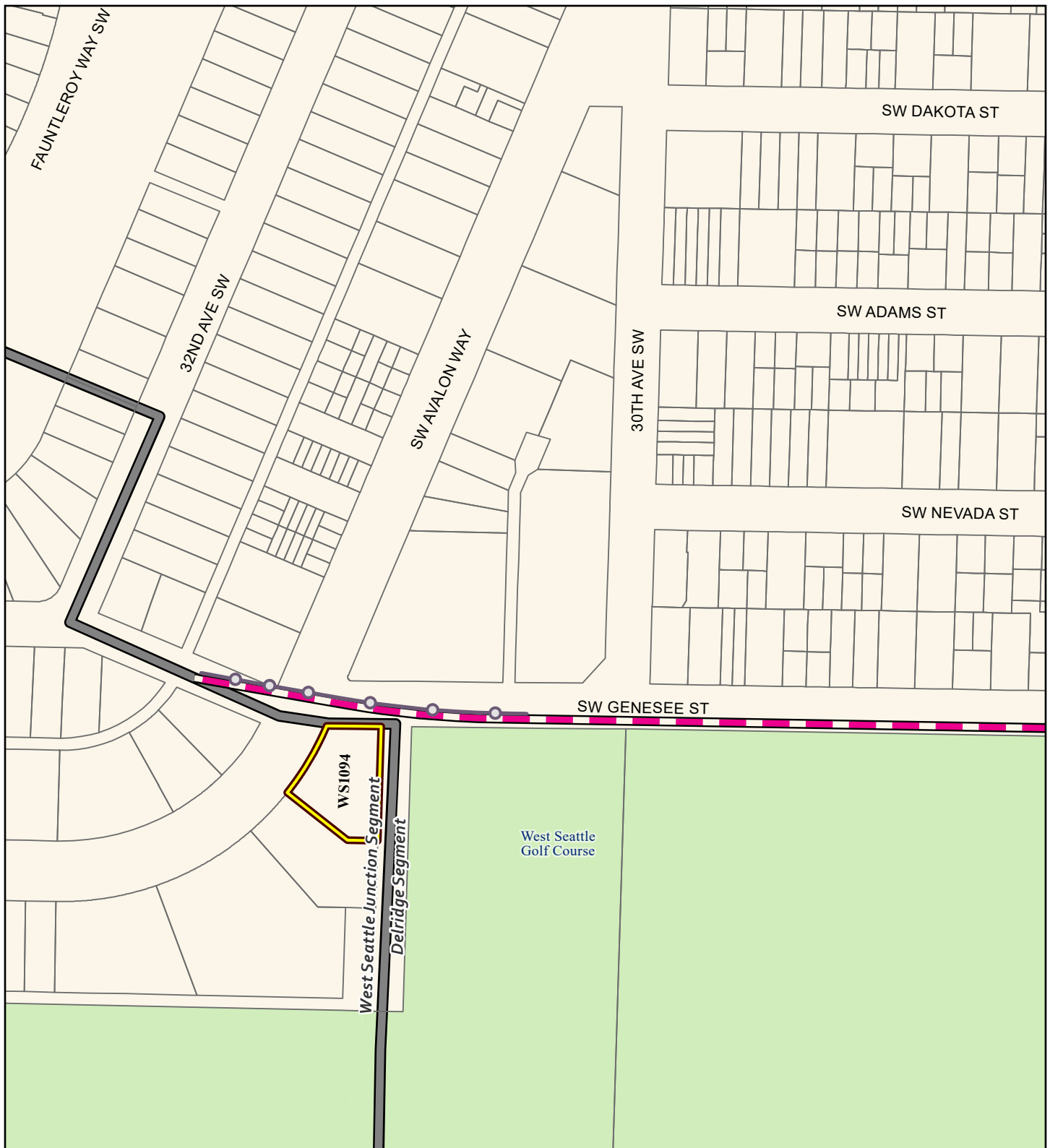
Station

- New
- Existing

- Stream
- ... Piped Stream
- Parcel
- Park

FIGURE N.3E-4b
Alternative DEL-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

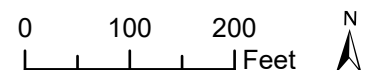
- Elevated
- At-Grade
- Tunnel
- Retained Cut

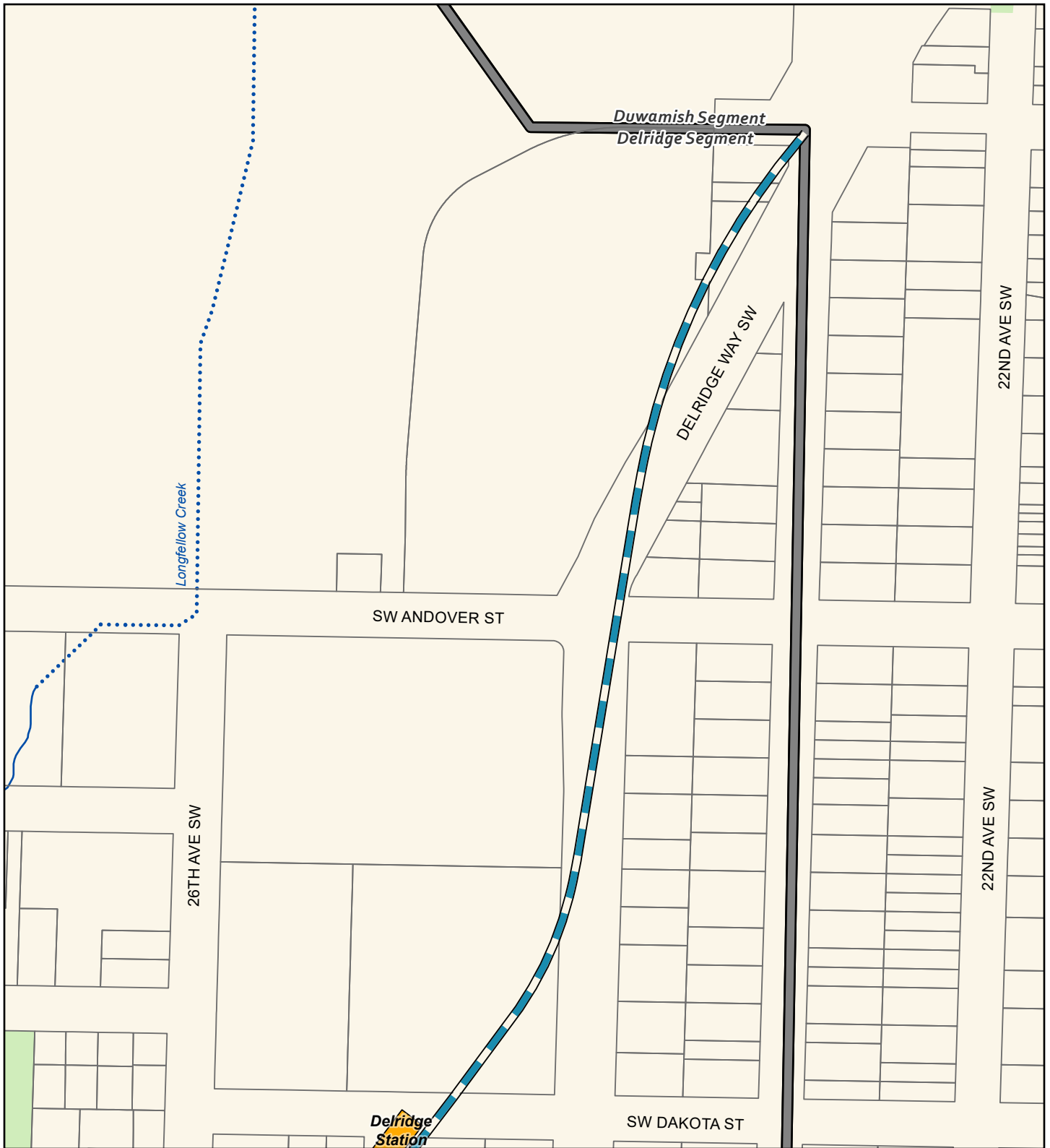
Station

- New
- Existing

- High Resilience Fastener
- Segment Line
- Parcel
- Vibration Impact
- Park

FIGURE N.3E-4c
Alternative DEL-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- - - Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

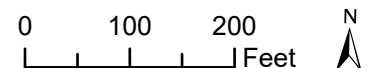
- New
- Existing

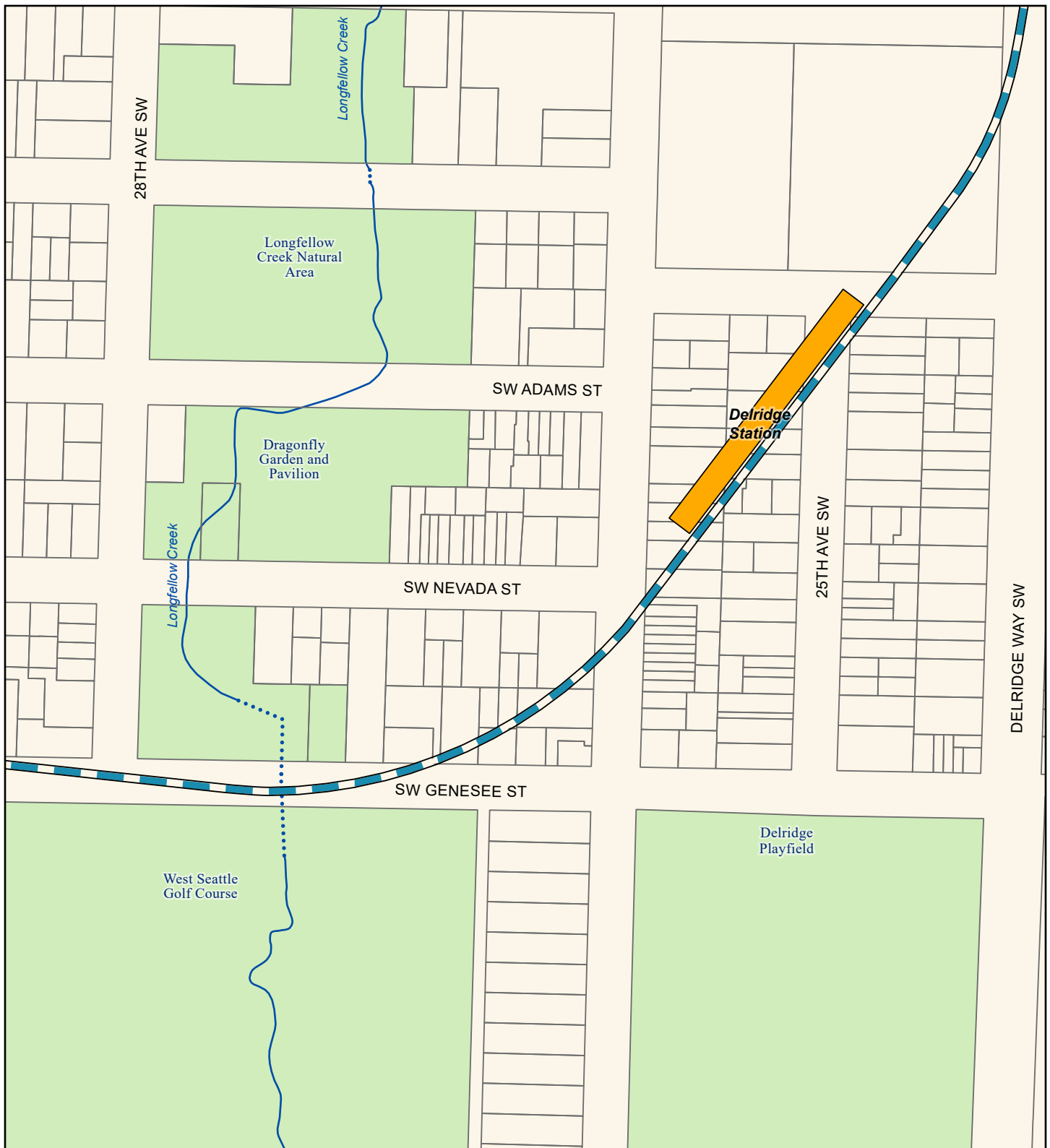
- Segment Line
- Stream
- - - Piped Stream
- Parcel
- Park

FIGURE N.3E-5a Option DEL-1b

Vibration and Groundborne Noise Impacts (before mitigation)

West Seattle Link Extension -
Delridge Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

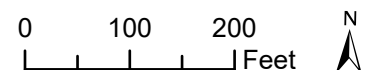
- Stream
- - - Piped Stream
- Parcel
- Park

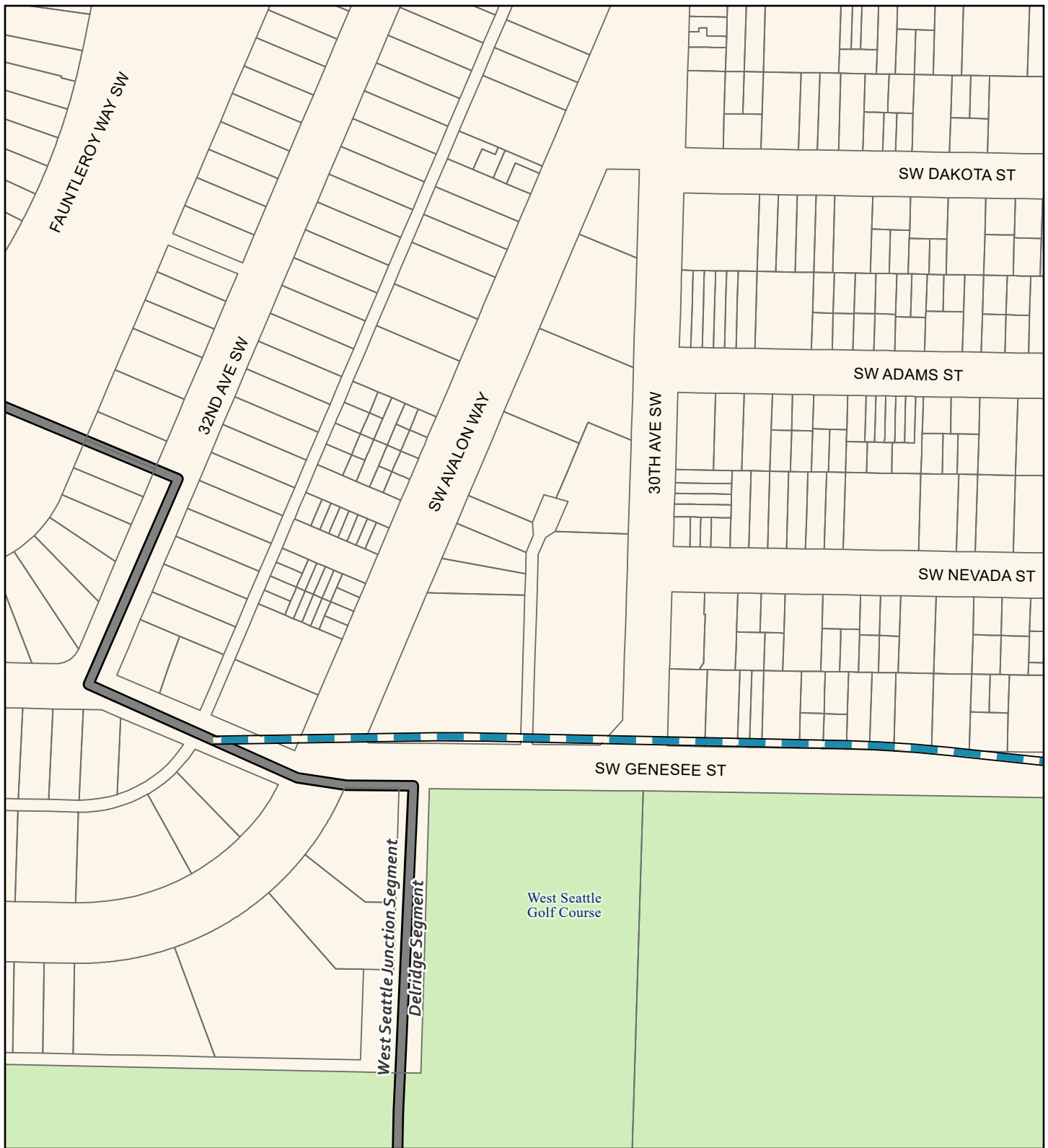
FIGURE N.3E-5b

Option DEL-1b

Vibration and Groundborne Noise Impacts (before mitigation)

West Seattle Link Extension -
Delridge Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

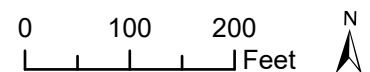
- Elevated
- At-Grade
- Tunnel
- Retained Cut

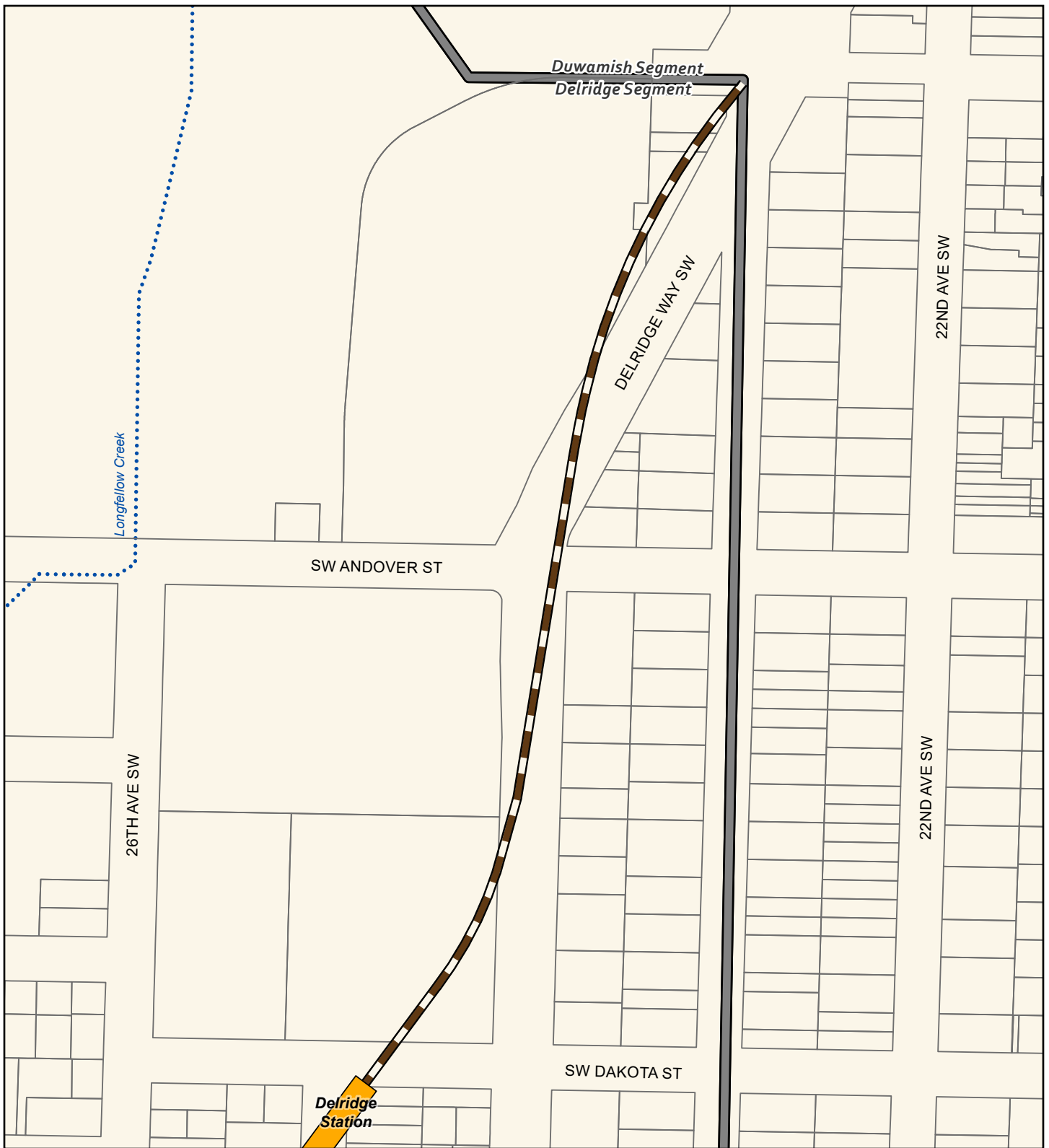
Station

- New
- Existing

- Segment Line
- Parcel
- Park

FIGURE N.3E-5c
Option DEL-1b
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

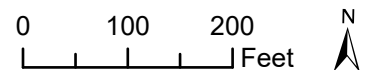
- Elevated
- At-Grade
- Tunnel
- Retained Cut

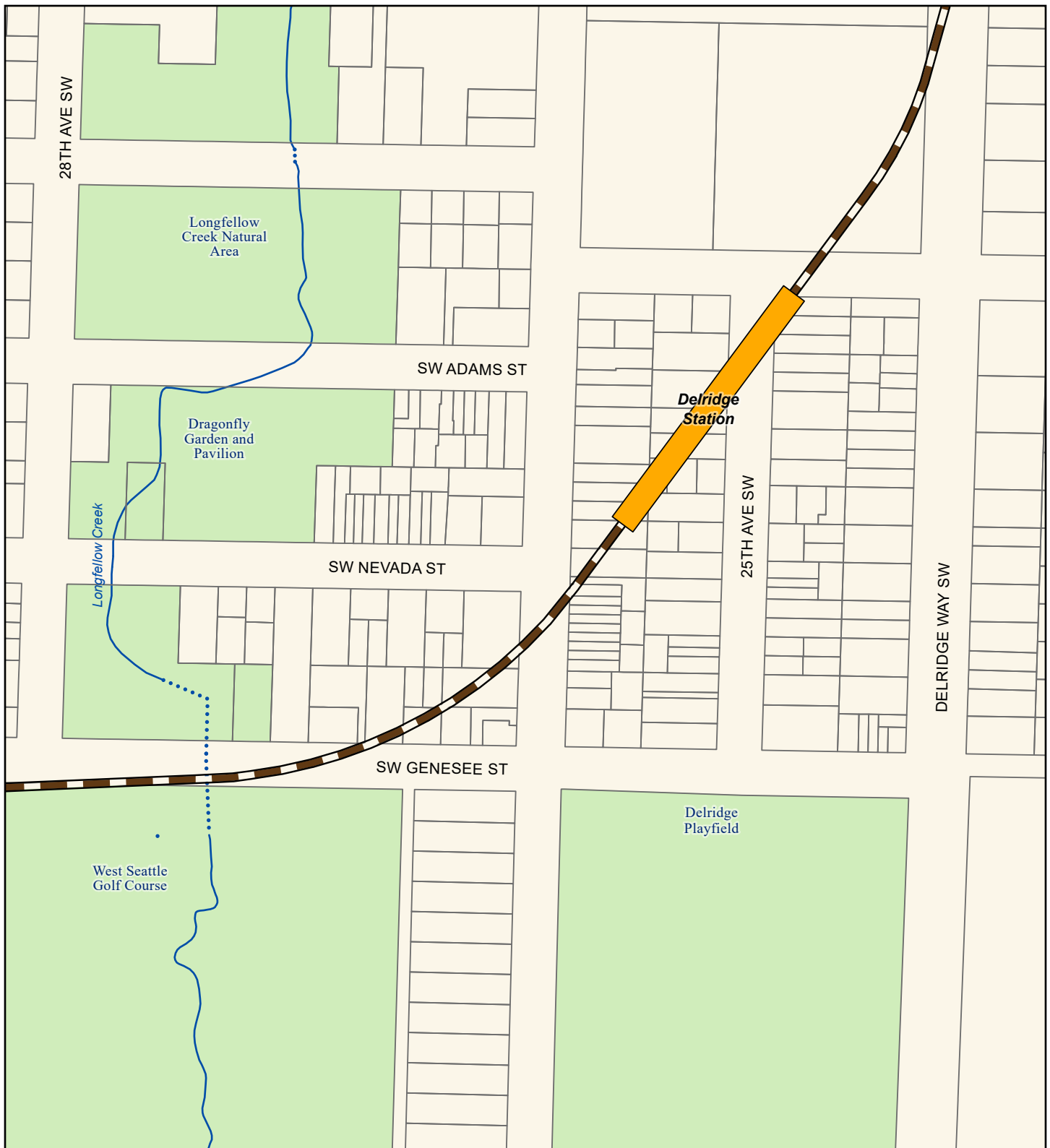
Station

- New
- Existing

- Segment Line
- Piped Stream
- Parcel

FIGURE N.3E-6a
Alternative DEL-2a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

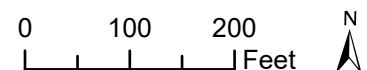
- Elevated
- At-Grade
- Tunnel
- Retained Cut

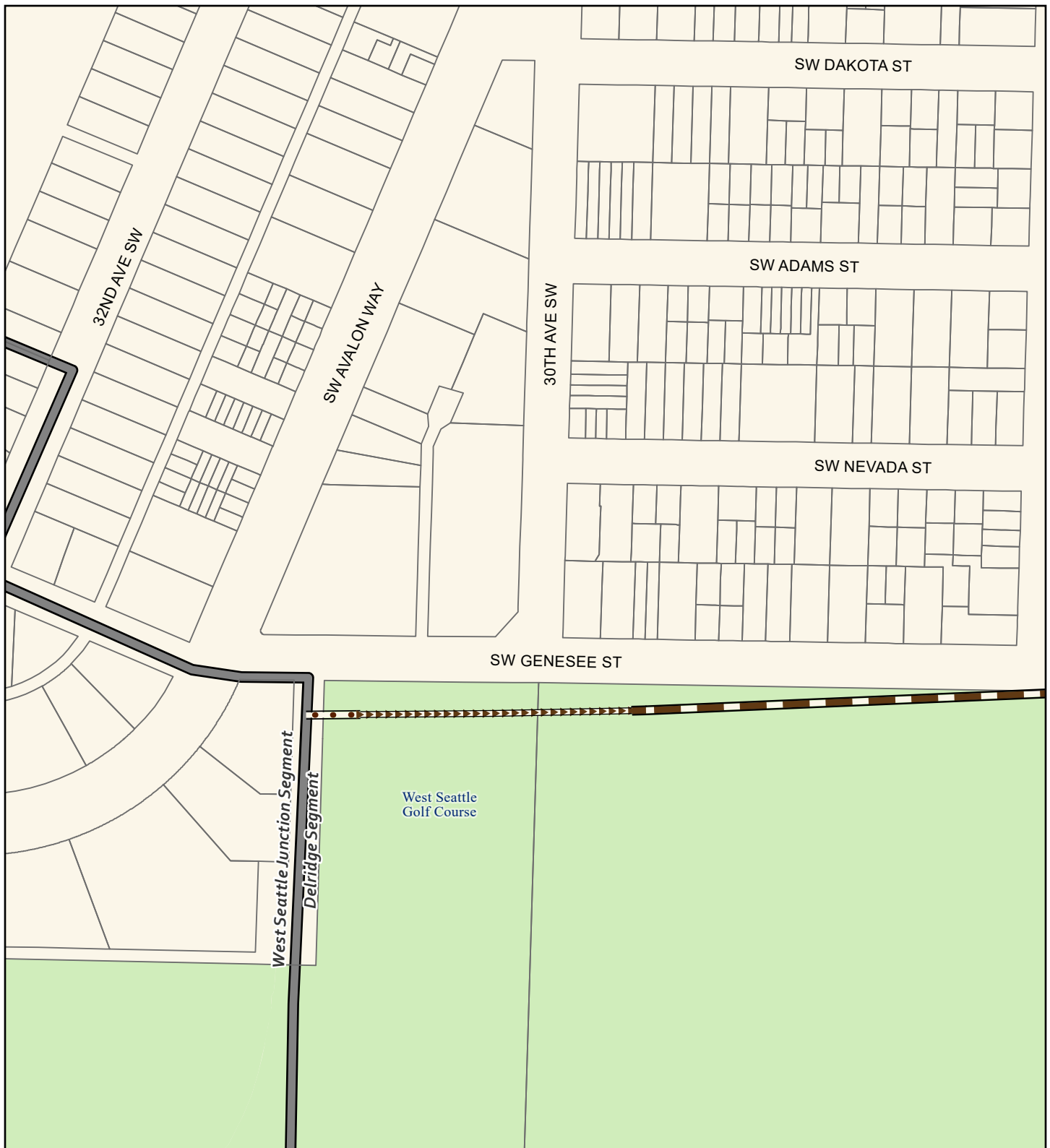
Station

- New
- Existing

- Stream
- ... Piped Stream
- Parcel
- Park

FIGURE N.3E-6b
Alternative DEL-2a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

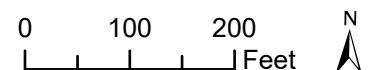
- Elevated
- At-Grade
- Tunnel
- Retained Cut

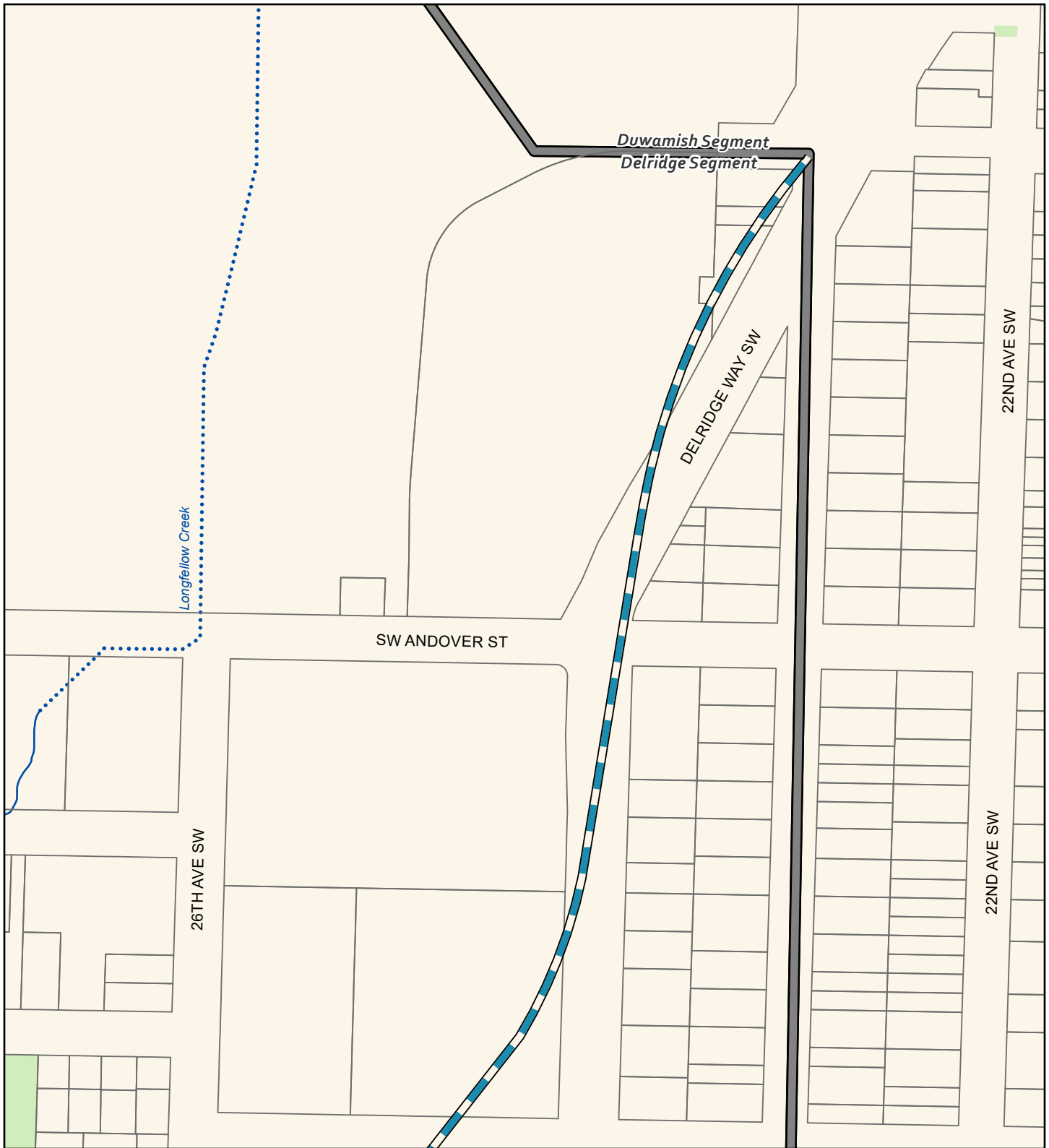
Station

- New
- Existing

- Segment Line
- Parcel
- Park

FIGURE N.3E-6c
Alternative DEL-2a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

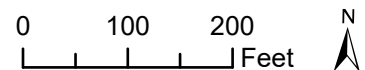
- Elevated
- At-Grade
- Tunnel
- Retained Cut

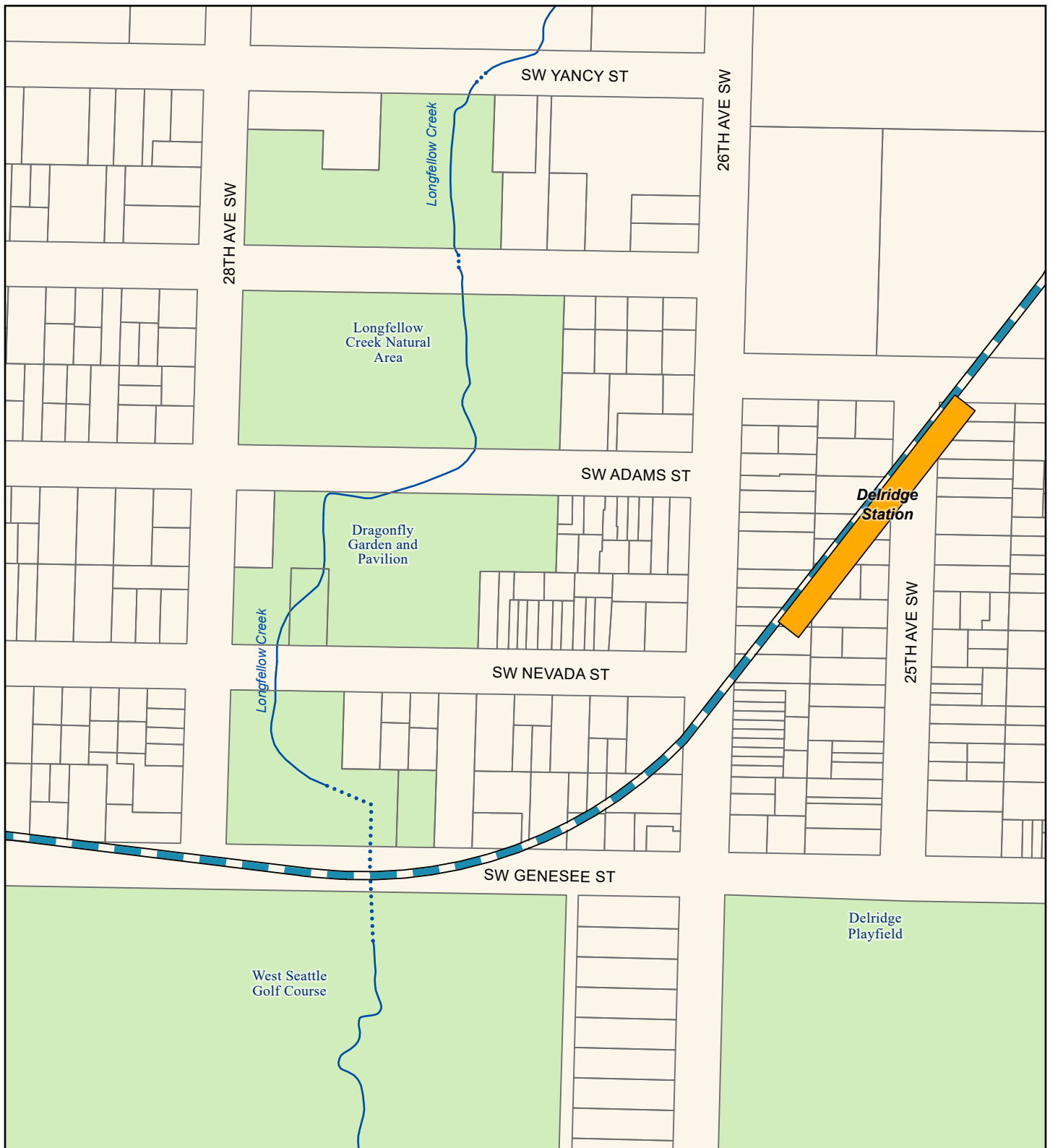
Station

- New
- Existing

- Segment Line
- Stream
- ... Piped Stream
- Parcel
- Park

FIGURE N.3E-7a
Option DEL-2b
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

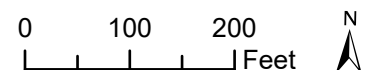
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Stream
- - - Piped Stream
- Parcel
- Park

FIGURE N.3E-7b
Option DEL-2b
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

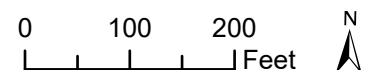
- Segment Line
- Parcel
- Park

FIGURE N.3E-7c

Option DEL-2b

Vibration and Groundborne Noise Impacts (before mitigation)

West Seattle Link Extension -
Delridge Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- - - Other Alternatives

Alternative Profile

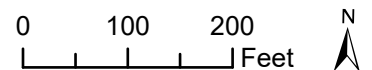
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Segment Line
- Stream
- - - Piped Stream
- Parcel
- Park

FIGURE N.3E-8a
Alternative DEL-3
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

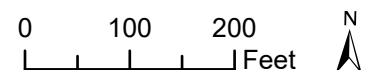
- Elevated
- At-Grade
- Tunnel
- Retained Cut

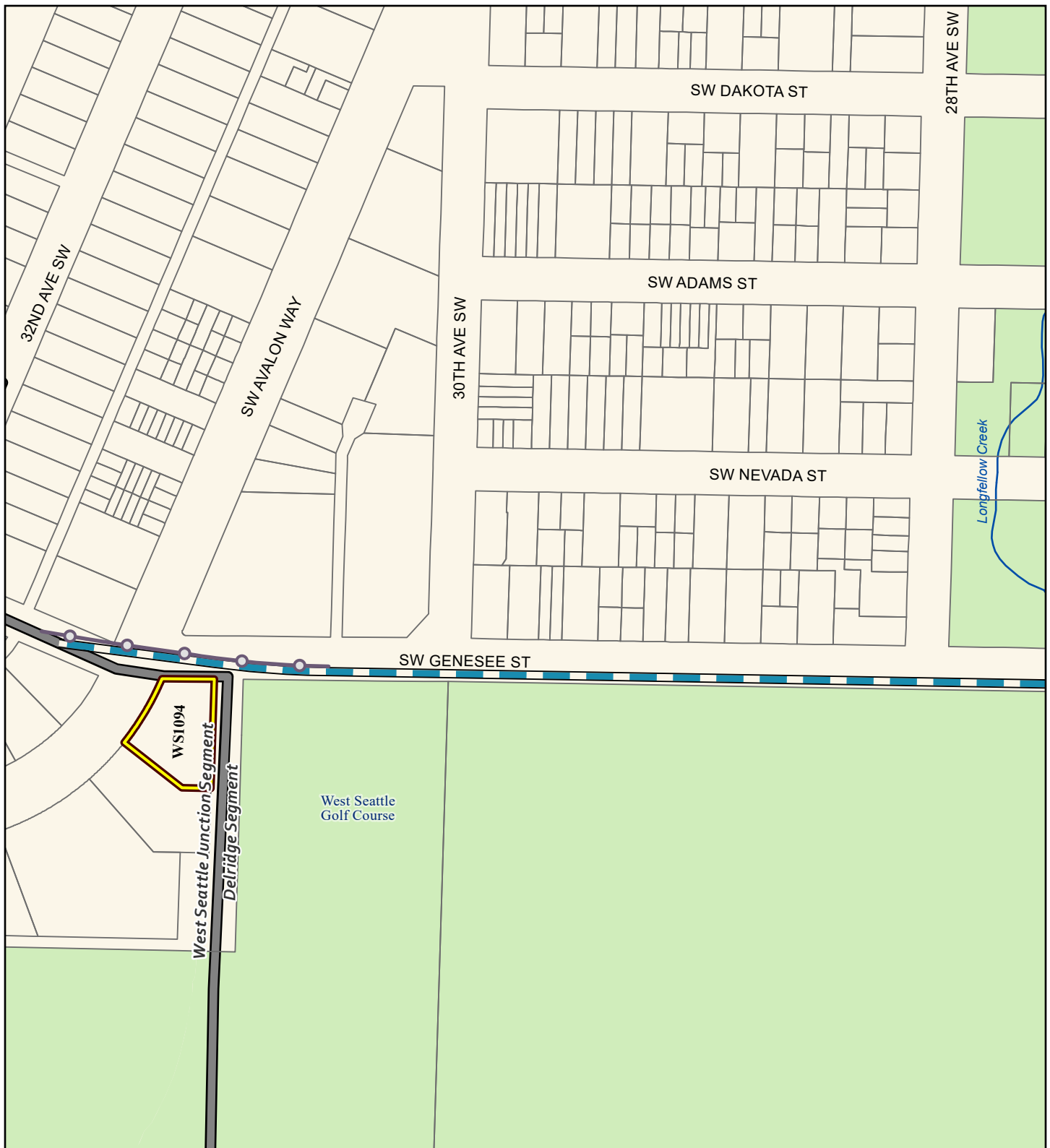
Station

- New
- Existing

- Segment Line
- Stream
- ... Piped Stream
- Parcel
- Park

FIGURE N.3E-8b
Alternative DEL-3
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- High Resilience Fastener

- Segment Line

- Stream

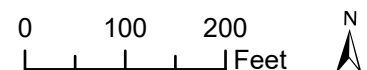
- Piped Stream

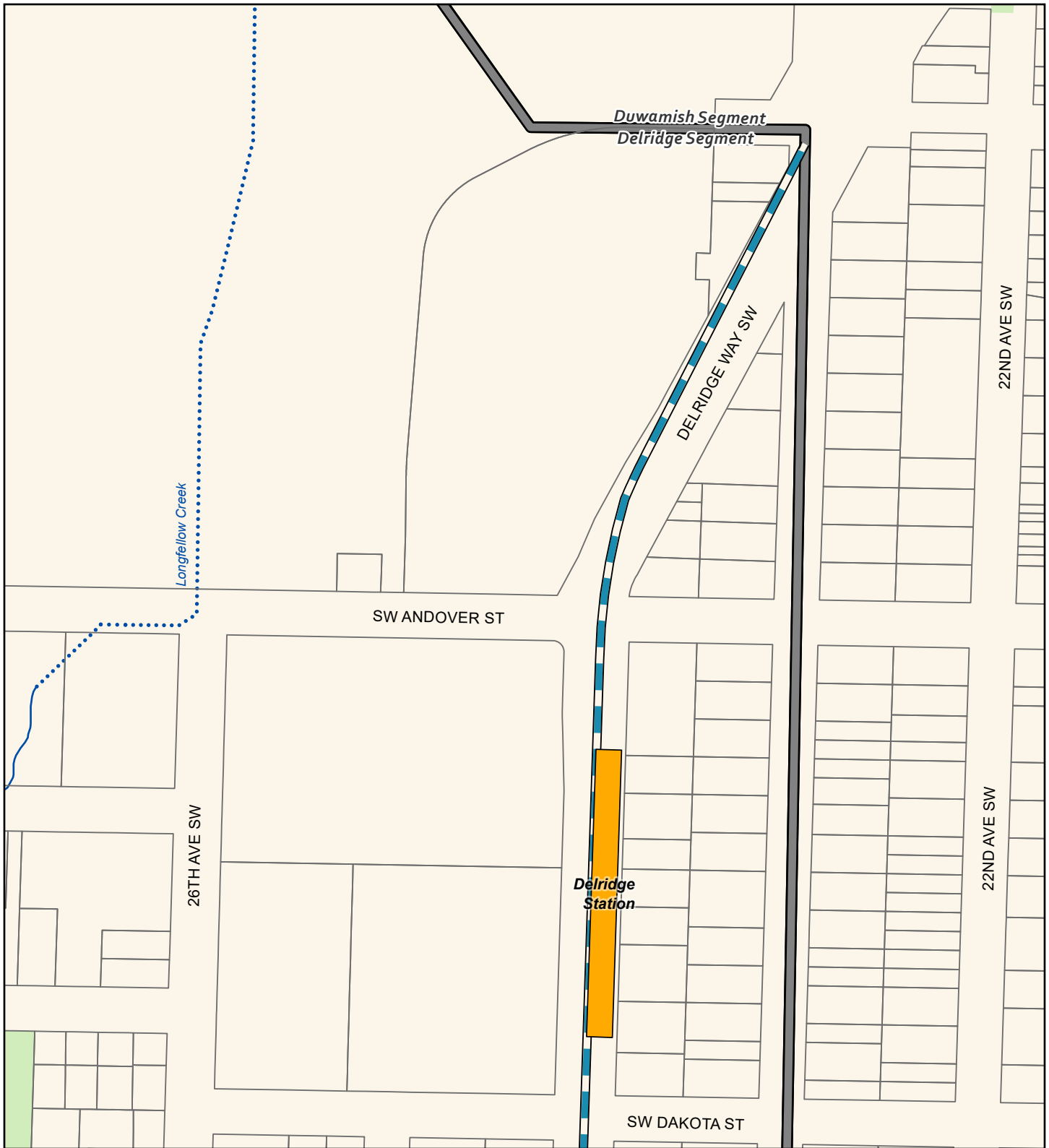
- Parcel

- Vibration Impact

- Park

FIGURE N.3E-8c
Alternative DEL-3
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

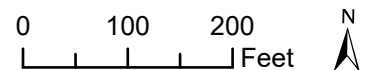
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Segment Line
- Stream
- ... Piped Stream
- Parcel
- Park

FIGURE N.3E-9a
Alternative DEL-4
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

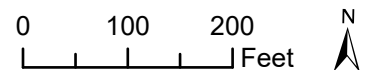
- Elevated
- At-Grade
- Tunnel
- Retained Cut

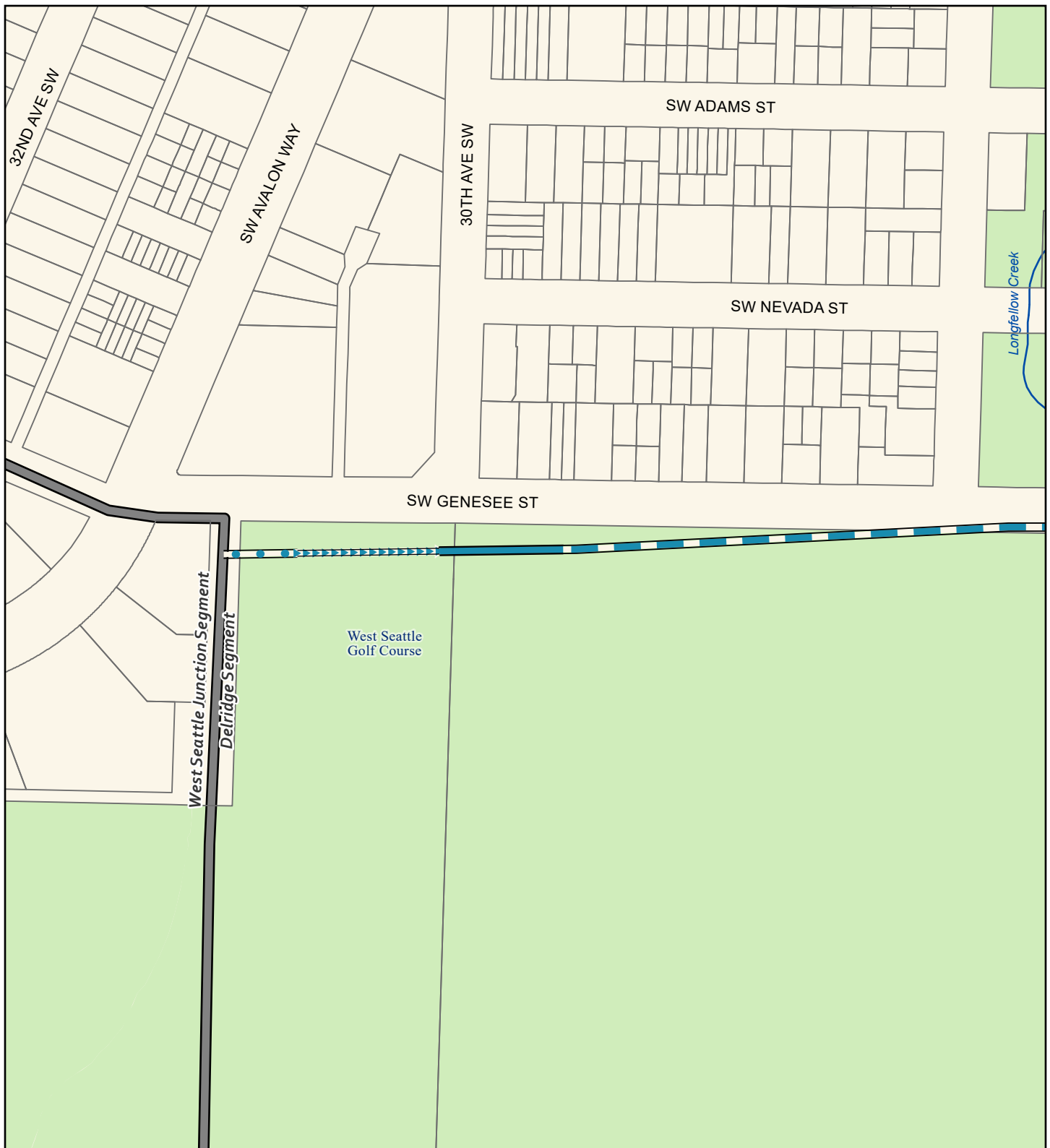
Station

- New
- Existing

- Stream
- ... Piped Stream
- Parcel
- Park

FIGURE N.3E-9b
Alternative DEL-4
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

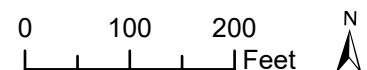
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Segment Line
- Stream
- Parcel
- Park

FIGURE N.3E-9c
Alternative DEL-4
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

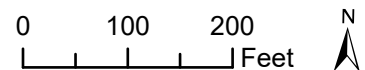
- Elevated
- At-Grade
- Tunnel
- Retained Cut

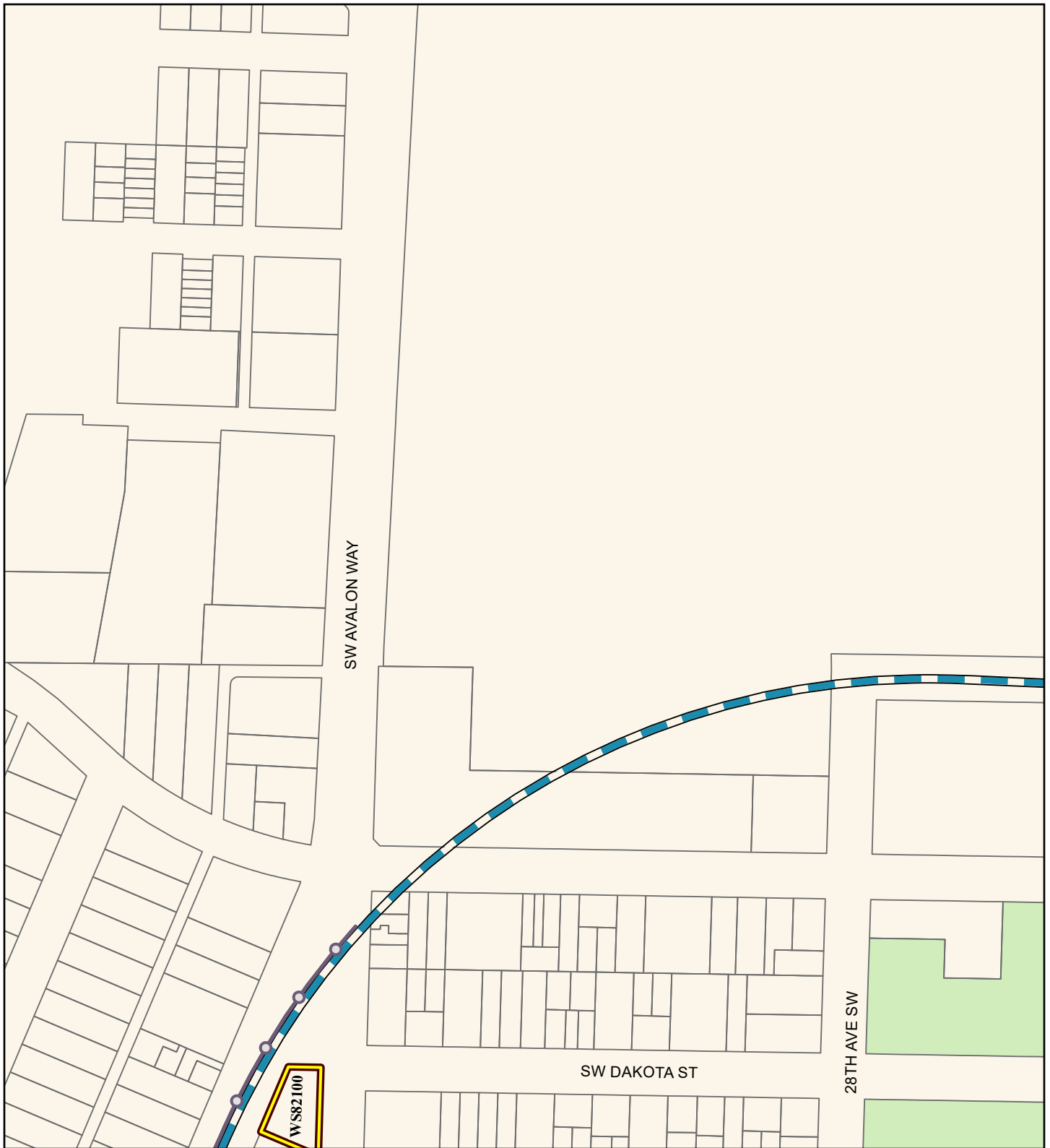
Station

- New
- Existing

- Segment Line
- Stream
- ... Piped Stream
- Parcel
- Park

FIGURE N.3E-10a
Alternative DEL-5
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

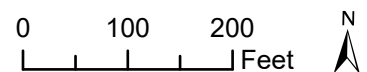
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- High Resilience Fastener
- Parcel
- Vibration Impact
- Park

FIGURE N.3E-10b
Alternative DEL-5
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

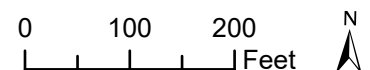
- Elevated
- At-Grade
- Tunnel
- Retained Cut

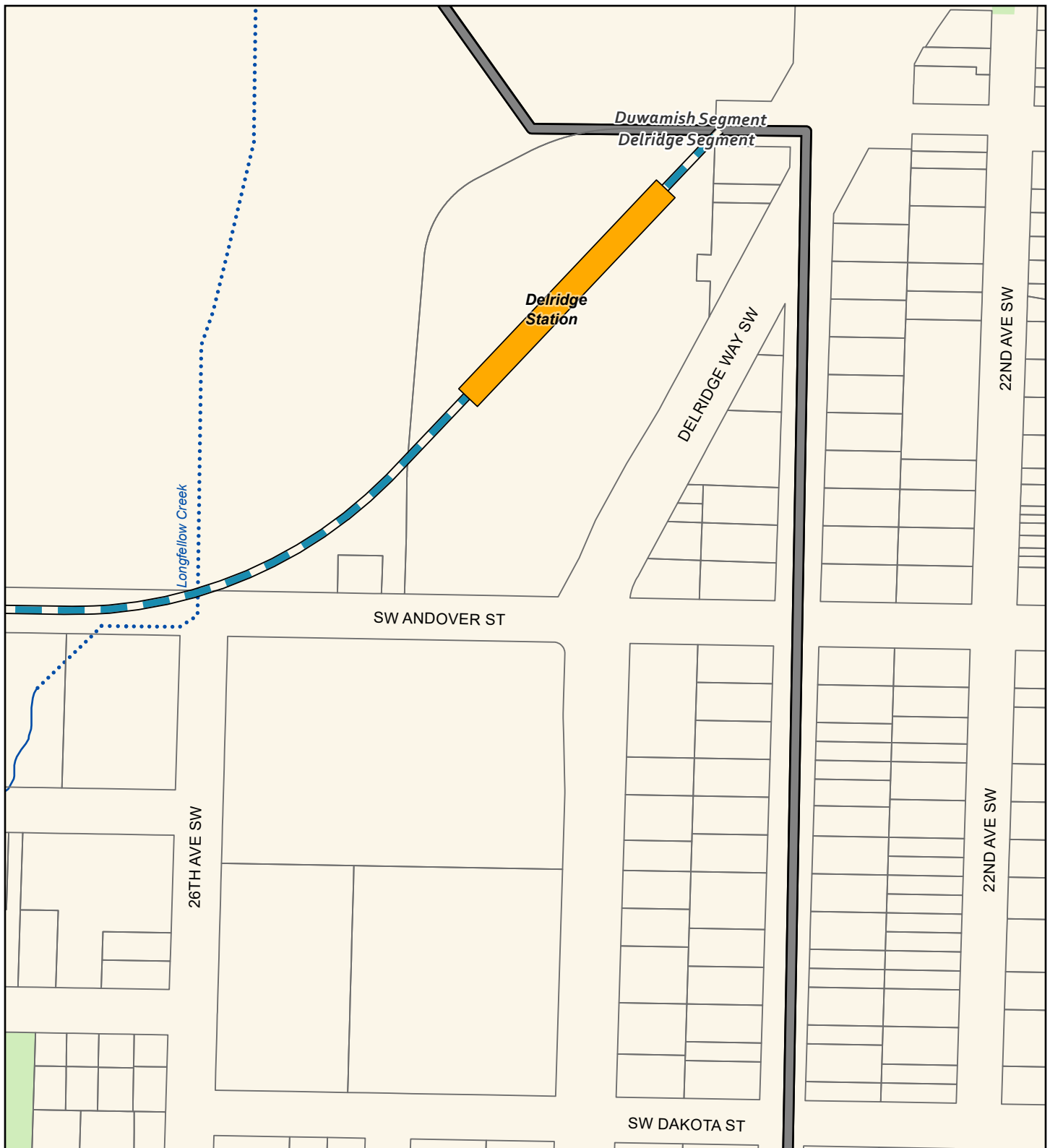
Station

- New
- Existing

- High Resilience Fastener
- Segment Line
- Parcel
- Vibration Impact
- Park

FIGURE N.3E-10c
Alternative DEL-5
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

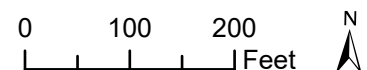
- Elevated
- At-Grade
- Tunnel
- Retained Cut

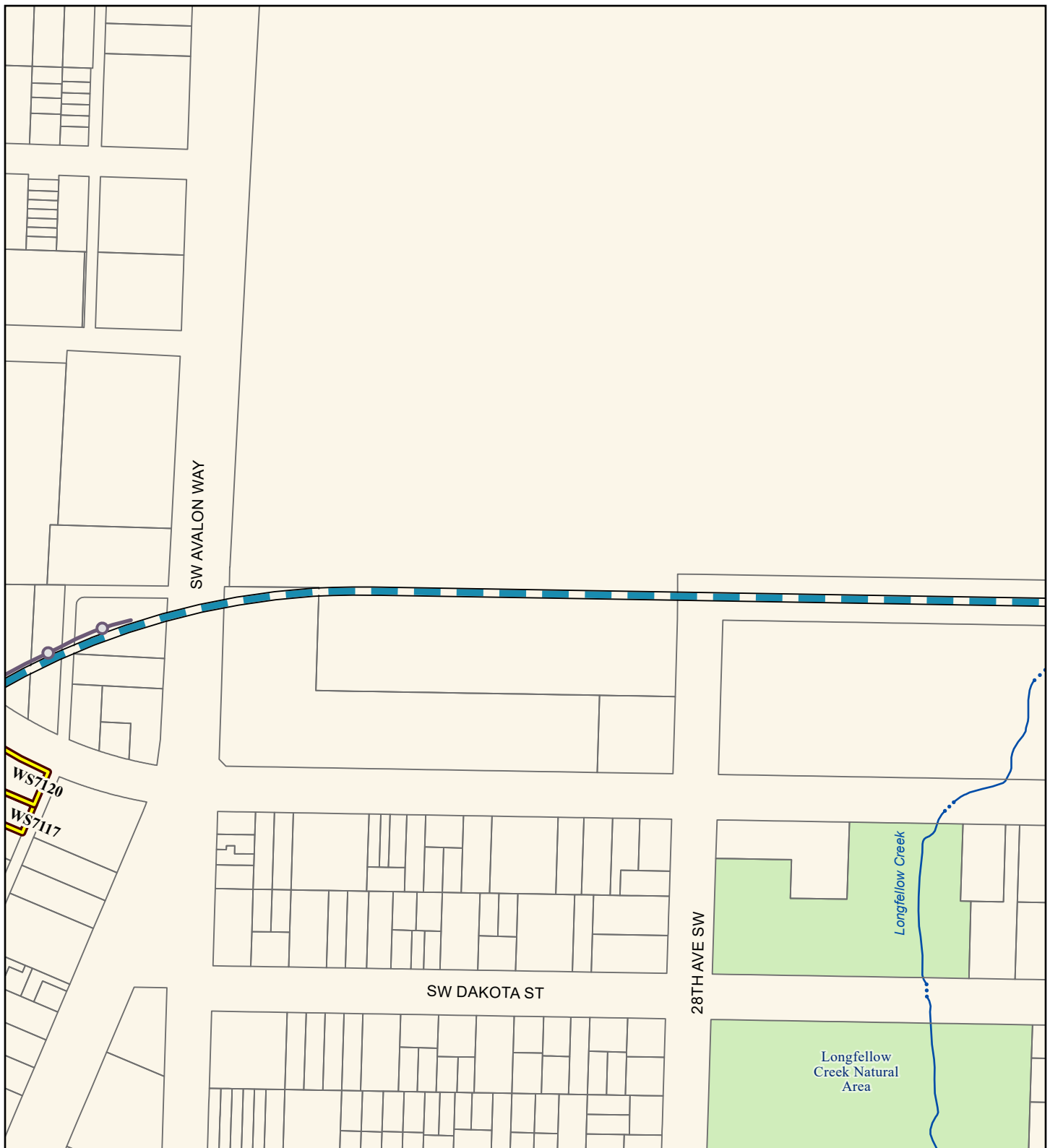
Station

- New
- Existing

- Segment Line
- Stream
- ... Piped Stream
- Parcel
- Park

FIGURE N.3E-11a
Alternative DEL-6
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

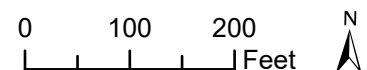
- Elevated
- At-Grade
- Tunnel
- Retained Cut

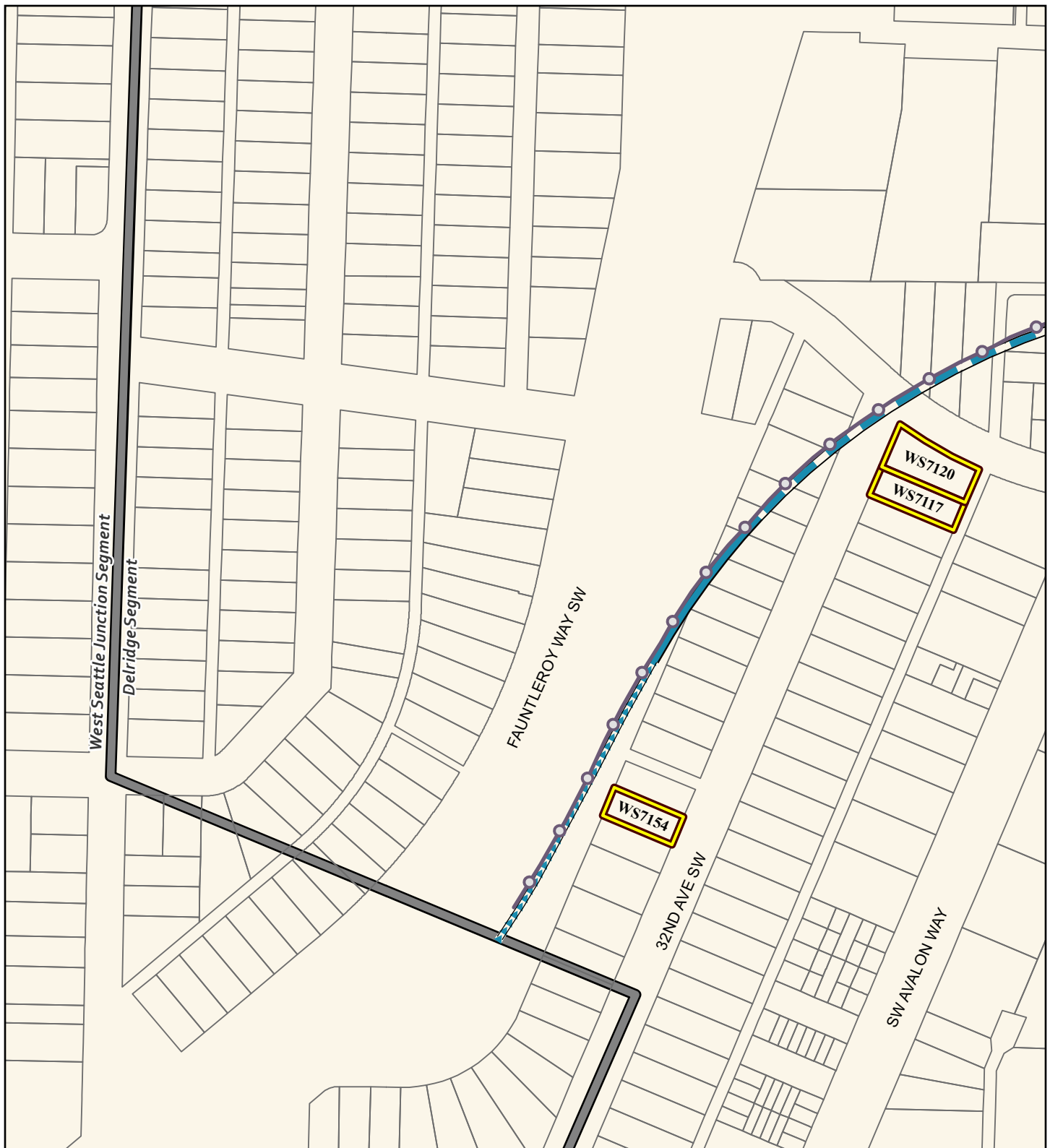
Station

- New
- Existing

- High Resilience Fastener
- Stream
- ... Piped Stream
- Parcel
- Vibration Impact
- Park

FIGURE N.3E-11b
Alternative DEL-6
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

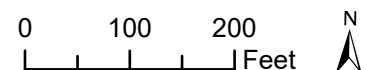
- Elevated
- At-Grade
- Tunnel
- Retained Cut

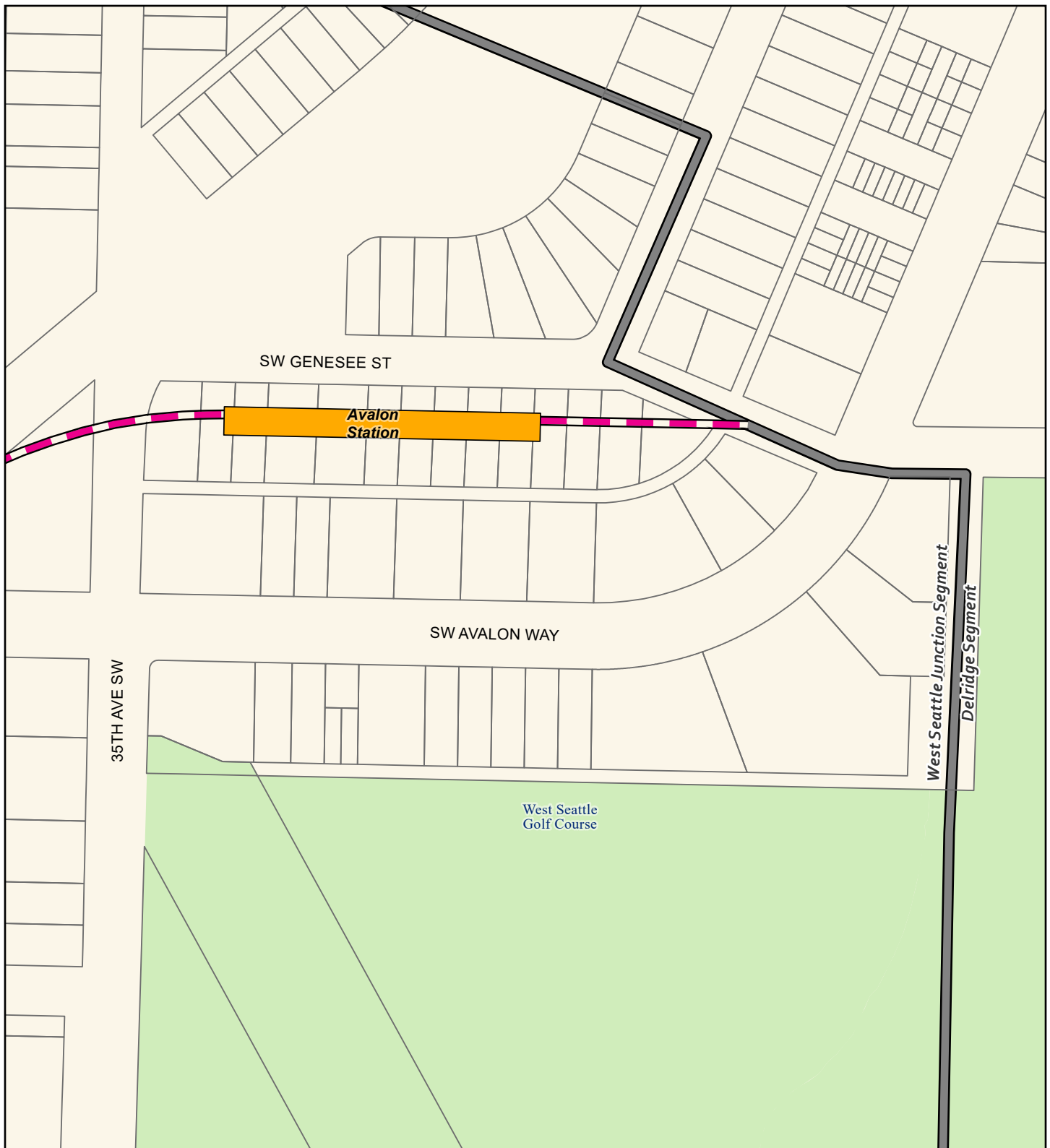
Station

- New
- Existing

- High Resilience Fastener
- Segment Line
- Parcel
- Vibration Impact

FIGURE N.3E-11c
Alternative DEL-6
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 Delridge Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

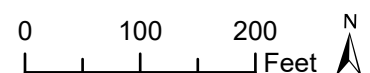
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Segment Line
- Parcel
- Park

FIGURE N.3E-12a
Alternative WSJ-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

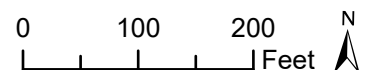
- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

- Parcel
- Park

FIGURE N.3E-12b
Alternative WSJ-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

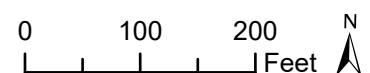
- Elevated
- Tunnel
- At-Grade
- Retained Cut

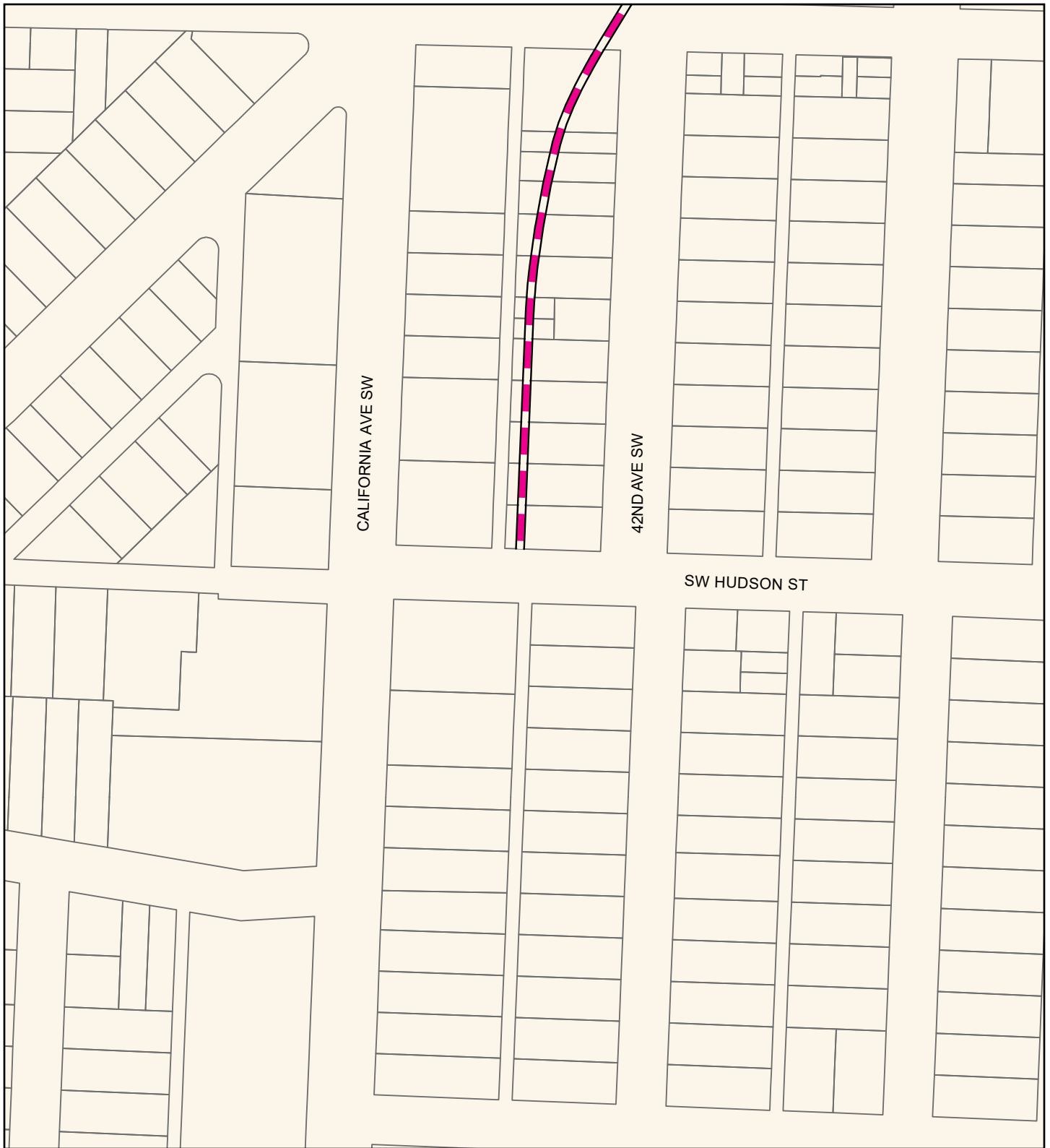
Station

- New
- Existing

- X Low-Impact Frog
- Parcel
- Vibration Impact
- Park

FIGURE N.3E-12c
Alternative WSJ-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

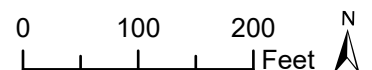
- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

Parcel

FIGURE N.3E-12d
Alternative WSJ-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

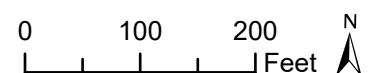
- Elevated
- At-Grade
- Tunnel
- Retained Cut

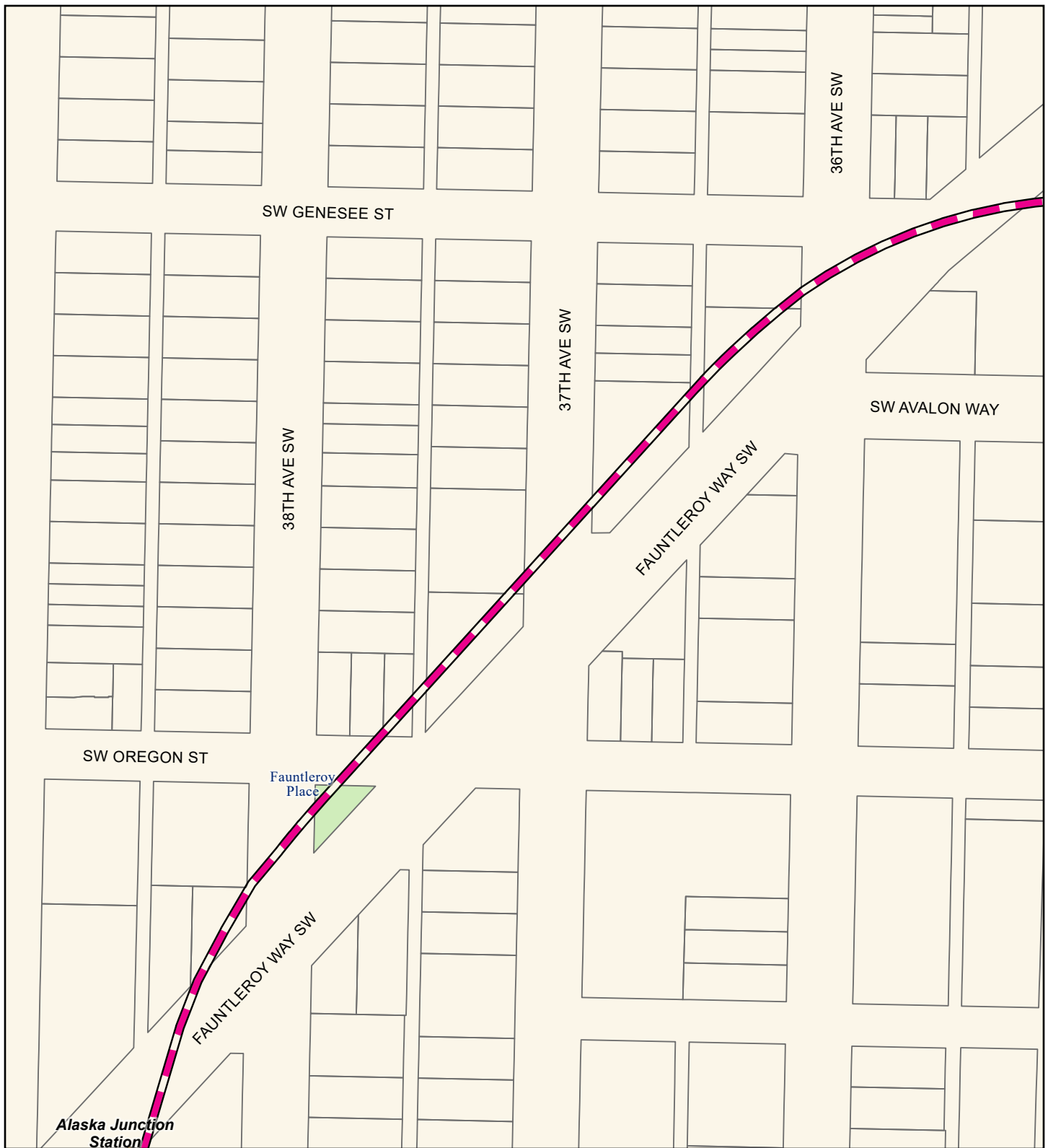
Station

- New
- Existing

- Segment Line
- Parcel
- Park

FIGURE N.3E-13a
Alternative WSJ-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

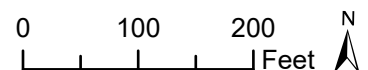
- Elevated
- Tunnel
- At-Grade
- Retained Cut

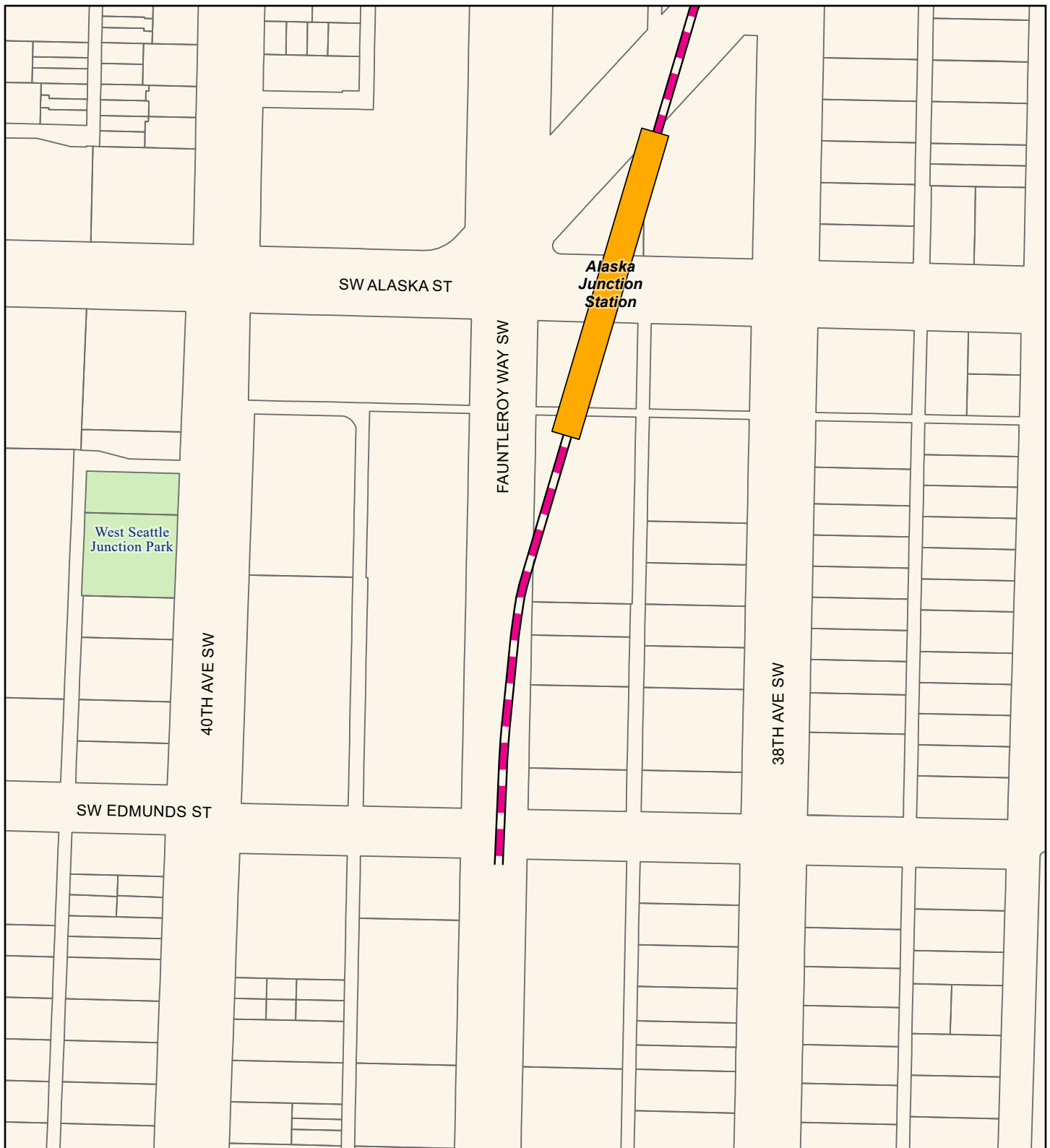
Station

- New
- Existing

- Parcel
- Park

FIGURE N.3E-13b
Alternative WSJ-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

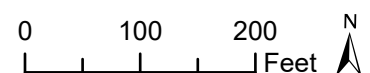
- Elevated
- Tunnel
- At-Grade
- Retained Cut

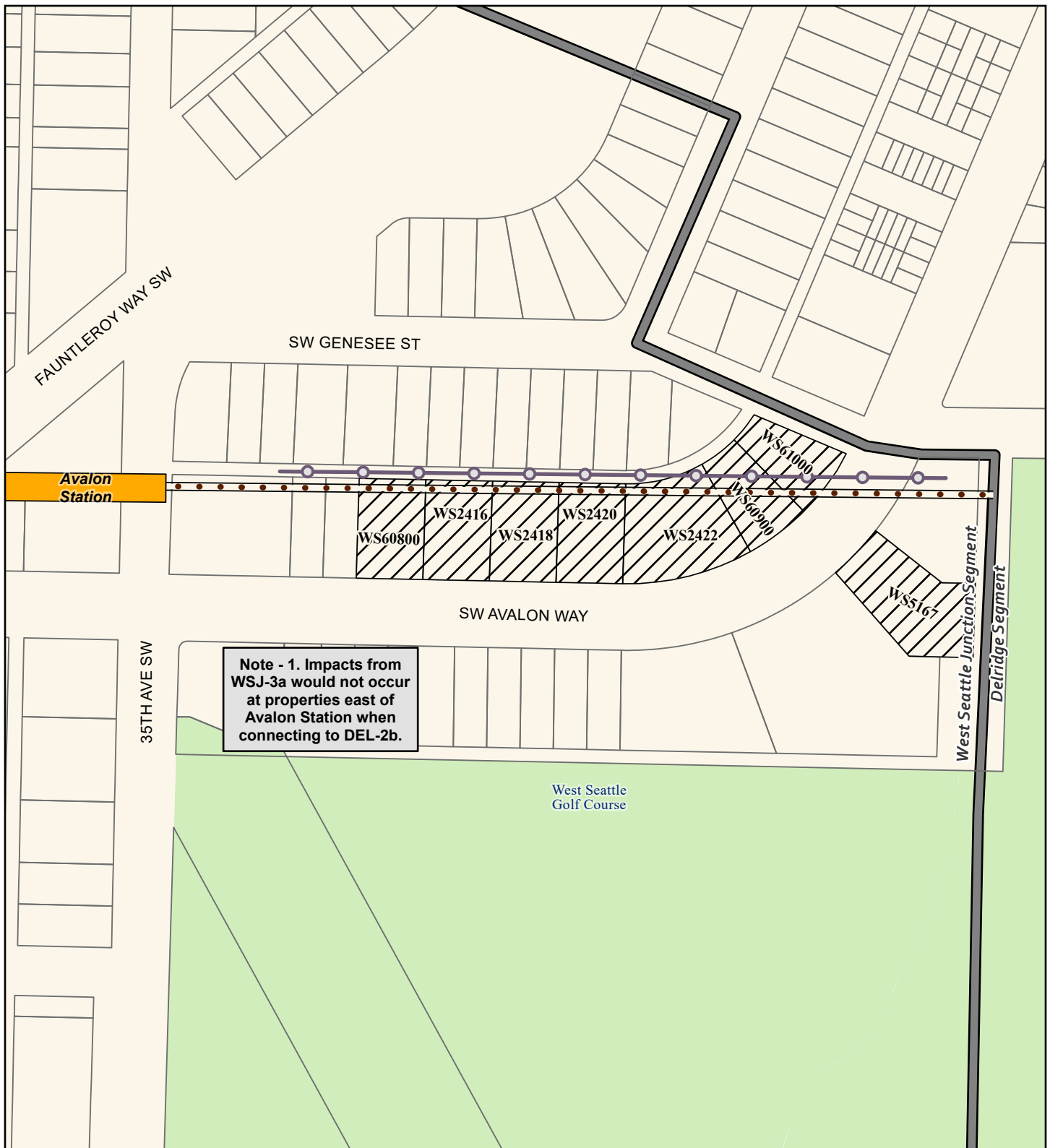
Station

- New
- Existing

- Parcel
- Park

FIGURE N.3E-13c
Alternative WSJ-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

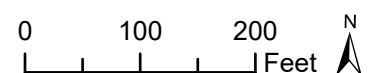
- Elevated
- At-Grade
- Tunnel
- Retained Cut

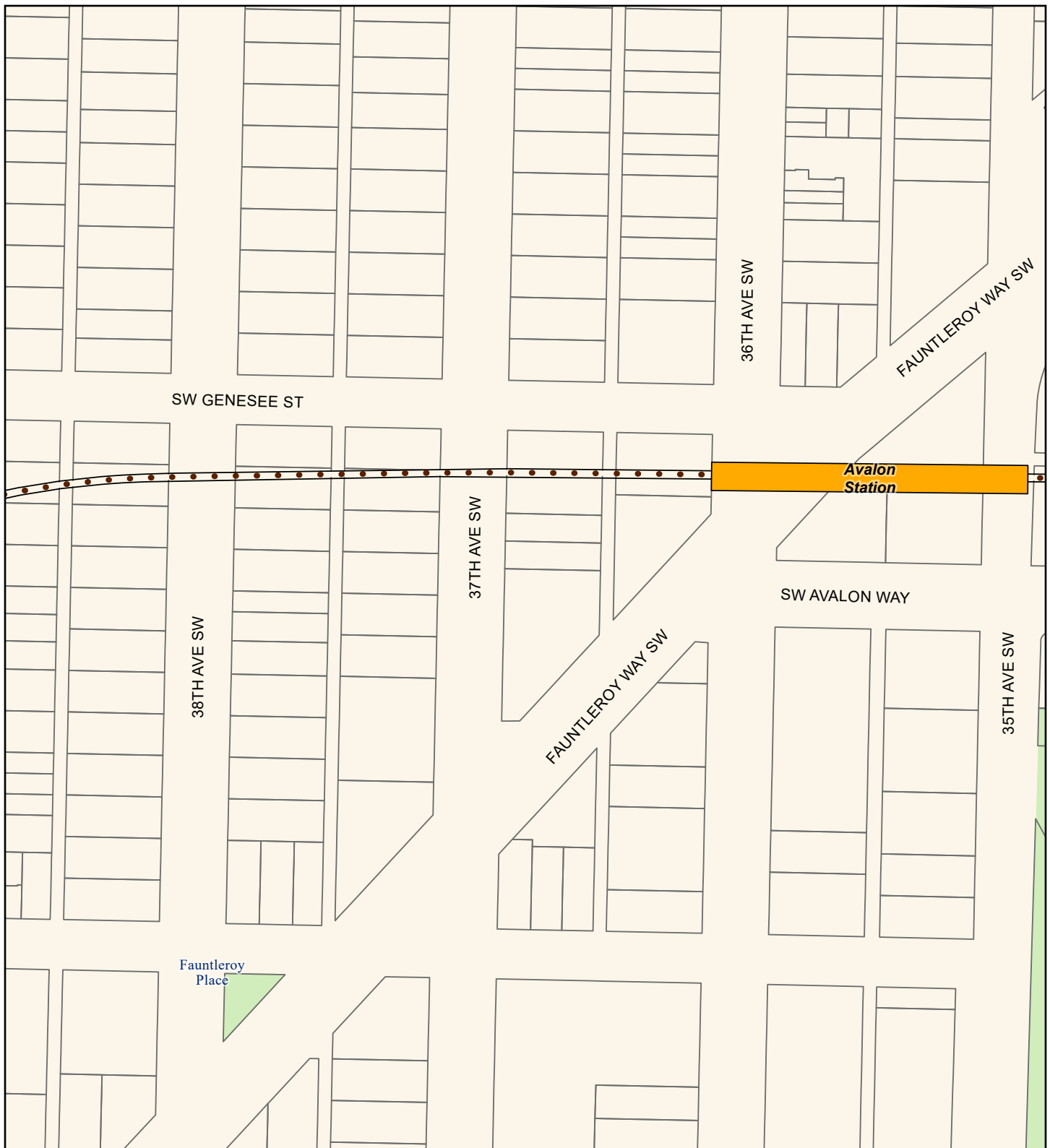
Station

- New
- Existing

- High Resilience Fastener
- Segment Line
- Parcel
- Groundborne Noise Impact
- Park

FIGURE N.3E-14a
Alternative WSJ-3a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

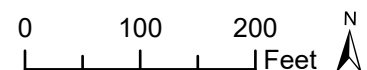
- Elevated — Tunnel
- At-Grade — Retained Cut

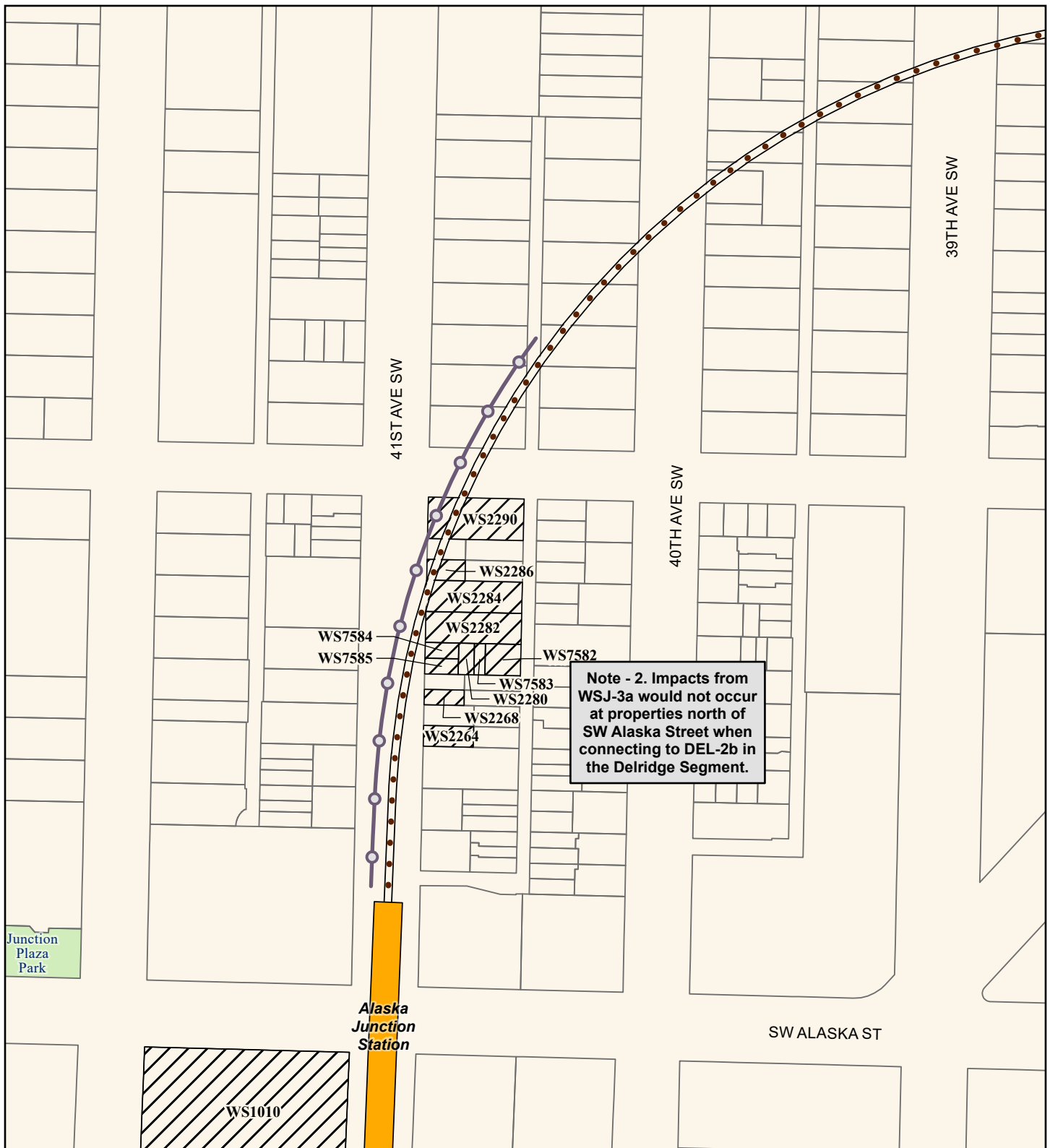
Station

- New
- Existing

- Parcel
- Park

FIGURE N.3E-14b
Alternative WSJ-3a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

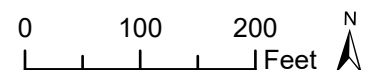
- Elevated
- Tunnel
- At-Grade
- Retained Cut

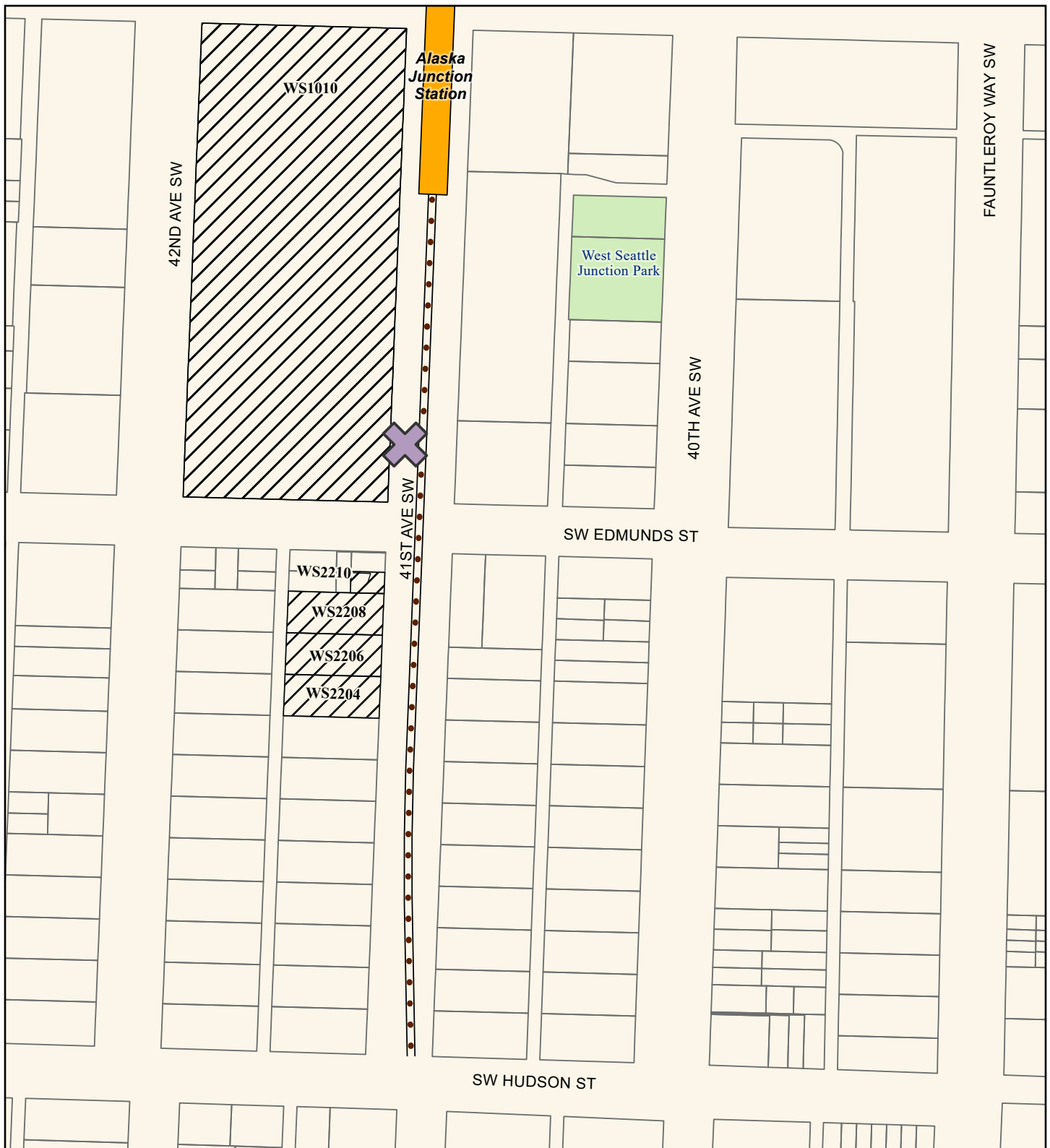
Station

- New
- Existing

- High Resilience Fastener
- Parcel
- Groundborne Noise Impact
- Park

FIGURE N.3E-14c
Alternative WSJ-3a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

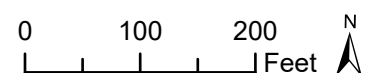
- █ Elevated
- █ At-Grade
- █ Tunnel
- █ Retained Cut

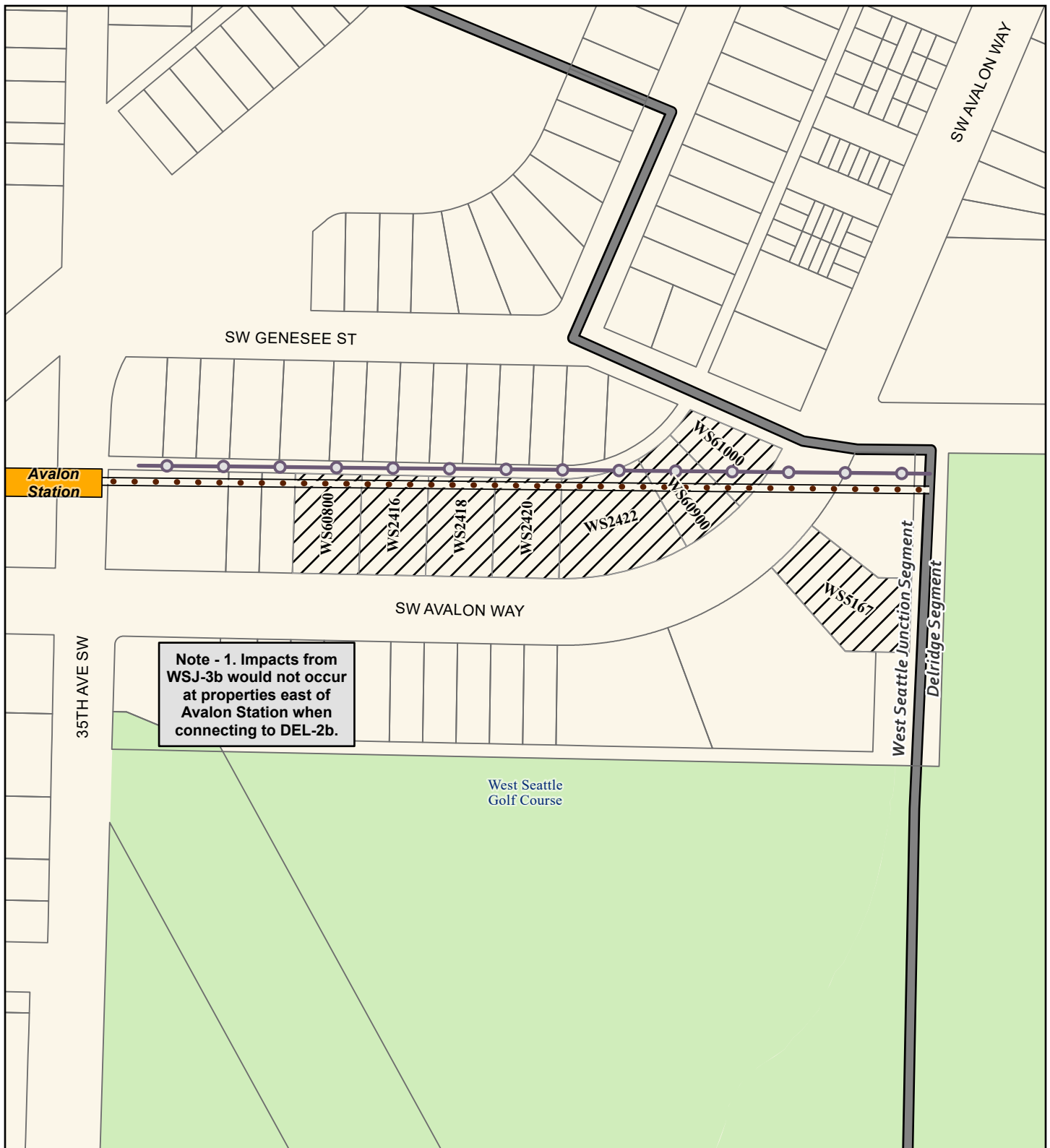
Station

- █ New
- █ Existing

- ✕ Low-Impact Frog
- Parcel
- Groundborne Noise Impact
- Park

FIGURE N.3E-14d
Alternative WSJ-3a
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

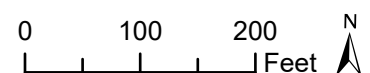
- Elevated
- At-Grade
- Tunnel
- Retained Cut

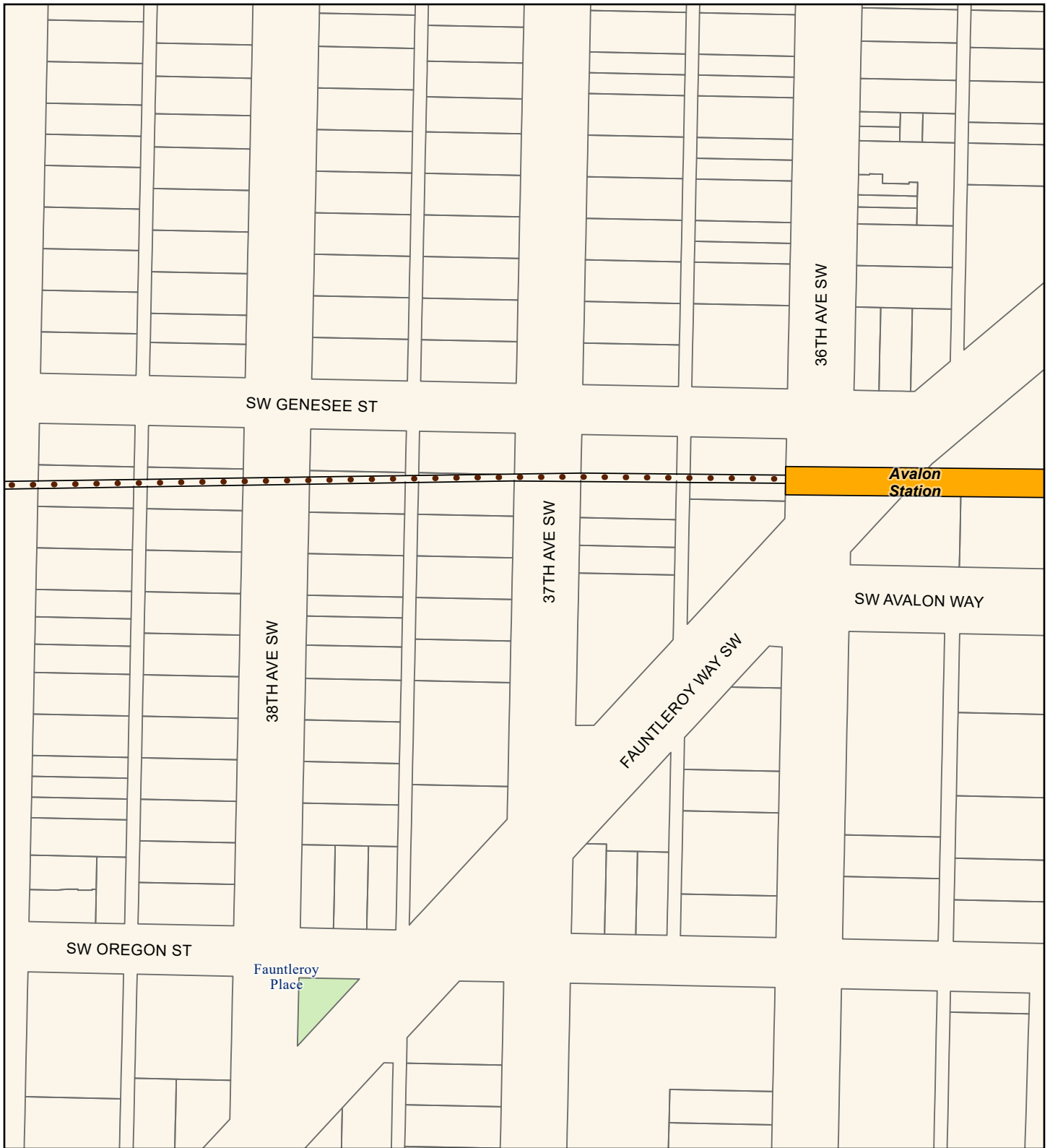
Station

- New
- Existing

- High Resilience Fastener
- Segment Line
- Parcel
- Groundborne Noise Impact
- Park

FIGURE N.3E-15a
Option WSJ-3b
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated Tunnel
- At-Grade Retained Cut

Station

- New
- Existing

- Parcel
- Park

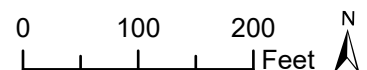
FIGURE N.3E-15b

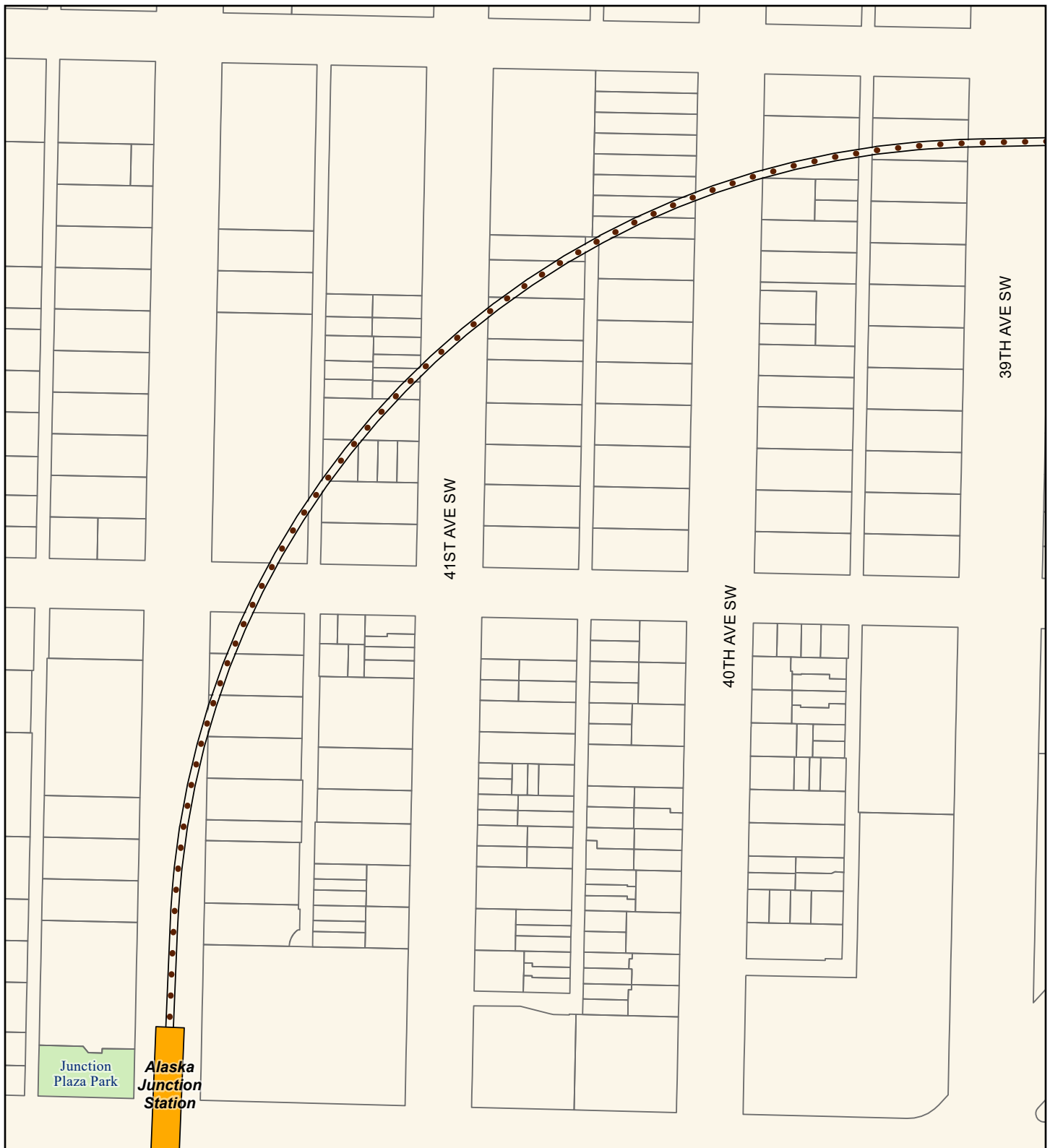
Option WSJ-3b

Vibration and Groundborne Noise Impacts (before mitigation)

West Seattle Link Extension -
West Seattle Junction Segment

*West Seattle and
Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

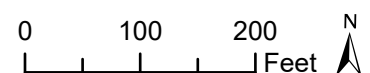
- Elevated
- Tunnel
- At-Grade
- Retained Cut

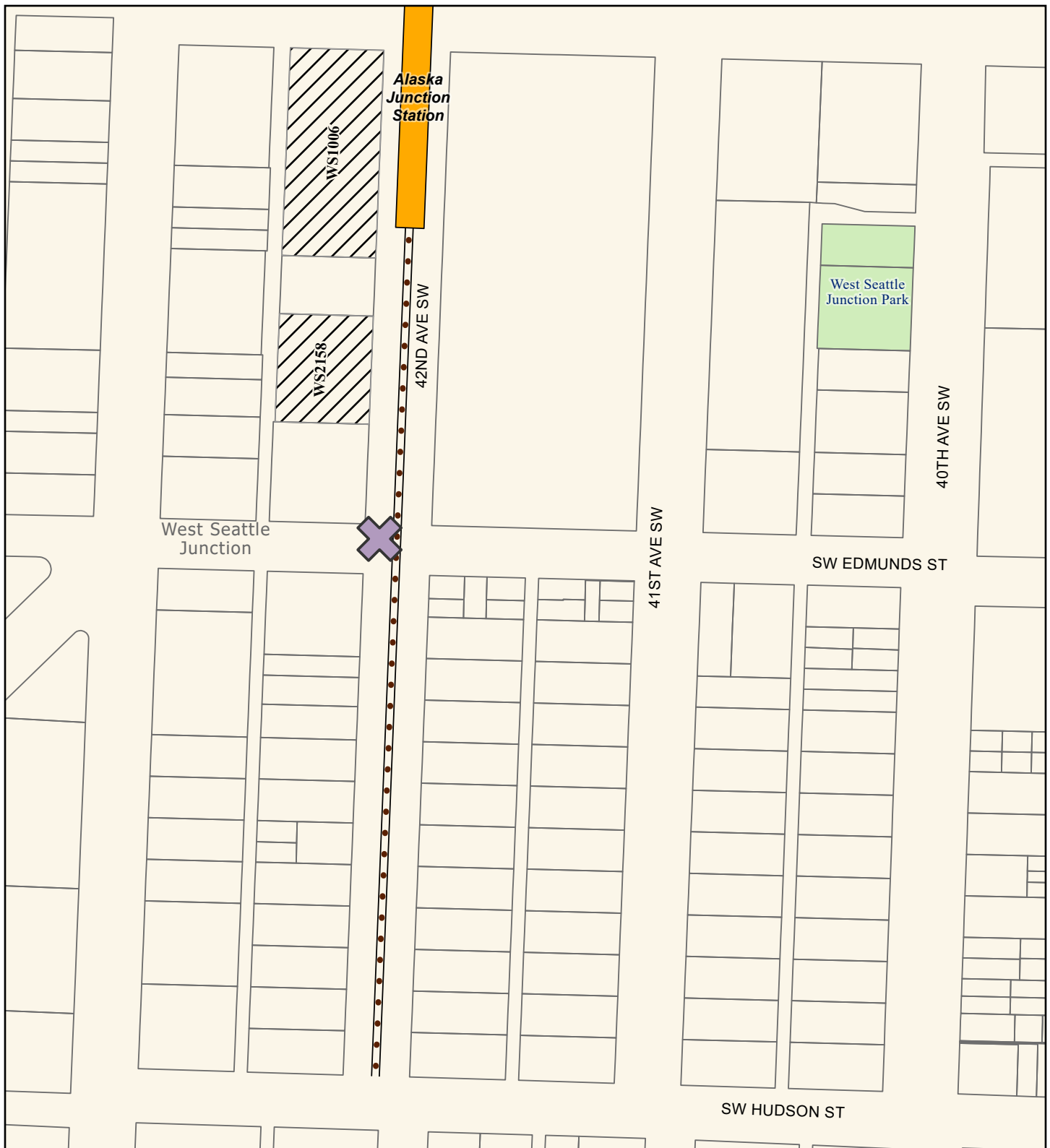
Station

- New
- Existing

- Parcel
- Park

FIGURE N.3E-15c
Option WSJ-3b
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

- █ Elevated
- █ At-Grade
- █ Tunnel
- █ Retained Cut

Station

- █ New
- █ Existing

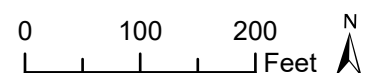
X Low-Impact Frog

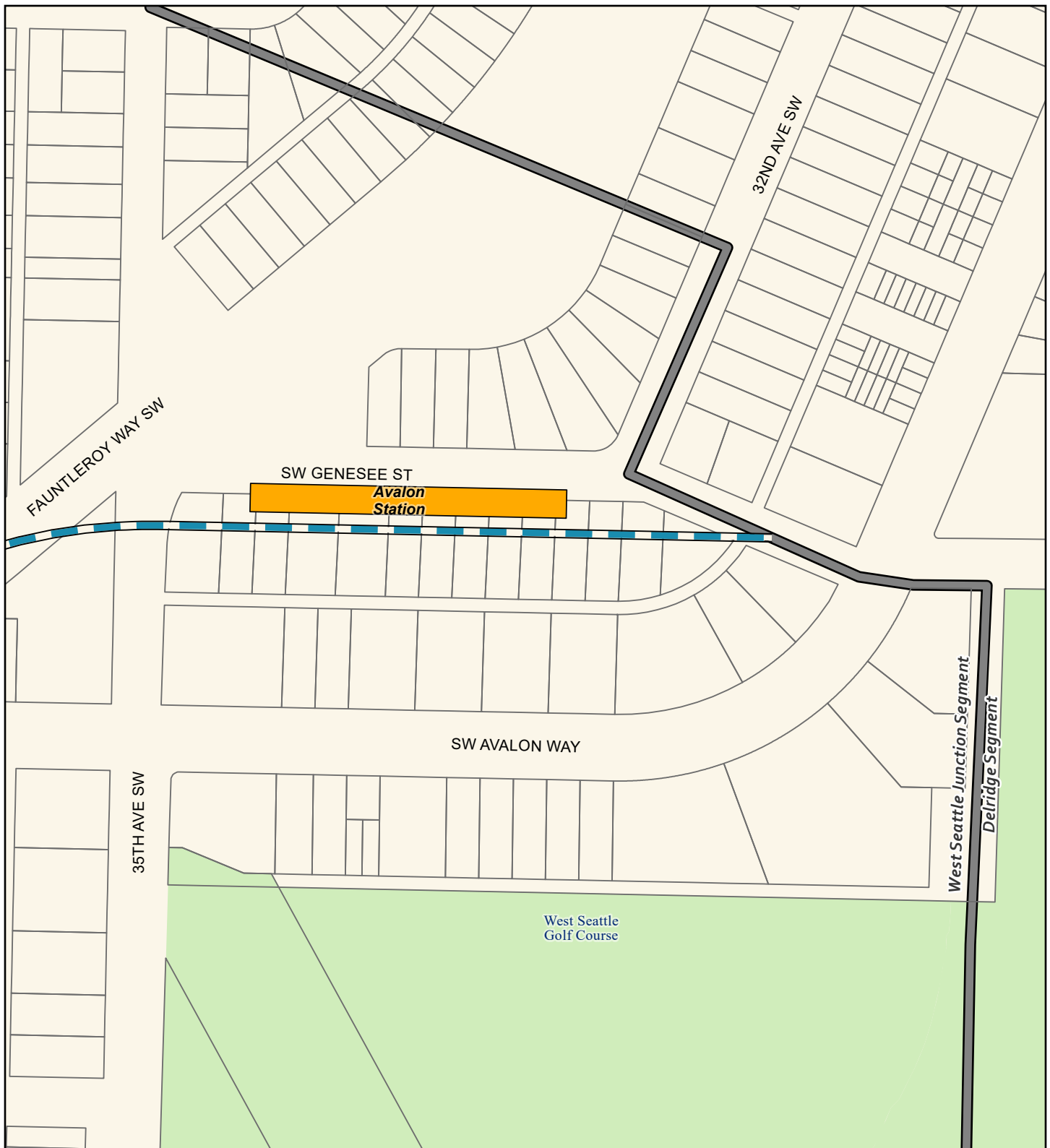
Parcel

Groundborne Noise Impact

Park

FIGURE N.3E-15d
Option WSJ-3b
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

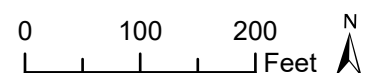
- Elevated
- At-Grade
- Tunnel
- Retained Cut

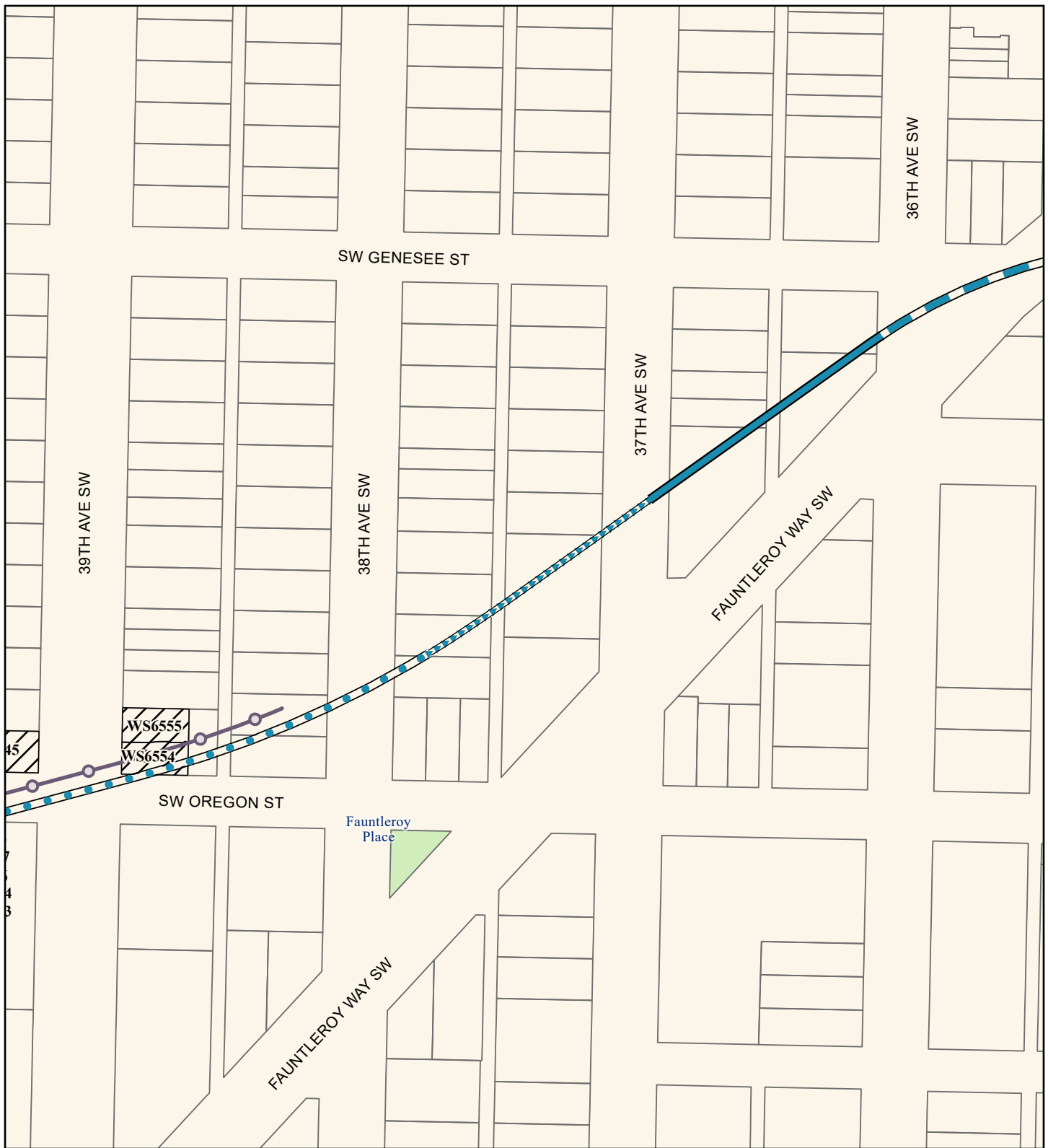
Station

- New
- Existing

- Segment Line
- Parcel
- Park

FIGURE N.3E-16a
Alternative WSJ-4
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

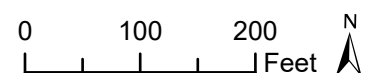
- Elevated
- Tunnel
- At-Grade
- Retained Cut

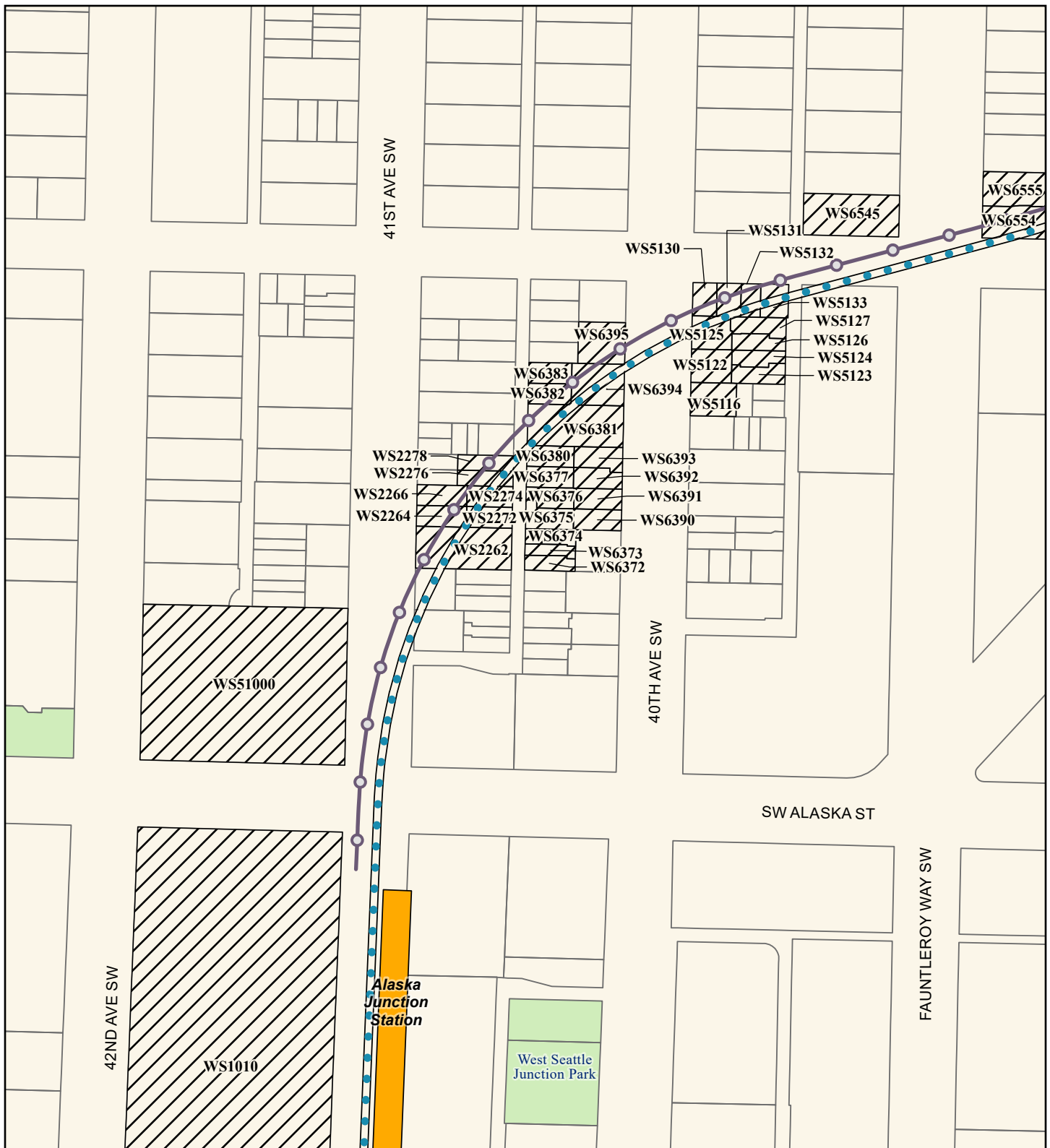
Station

- New
- Existing

- High Resilience Fastener
- Parcel
- Groundborne Noise Impact
- Park

FIGURE N.3E-16b
Alternative WSJ-4
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

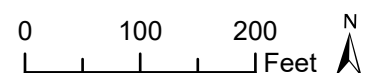
- Elevated
- At-Grade
- Tunnel
- Retained Cut

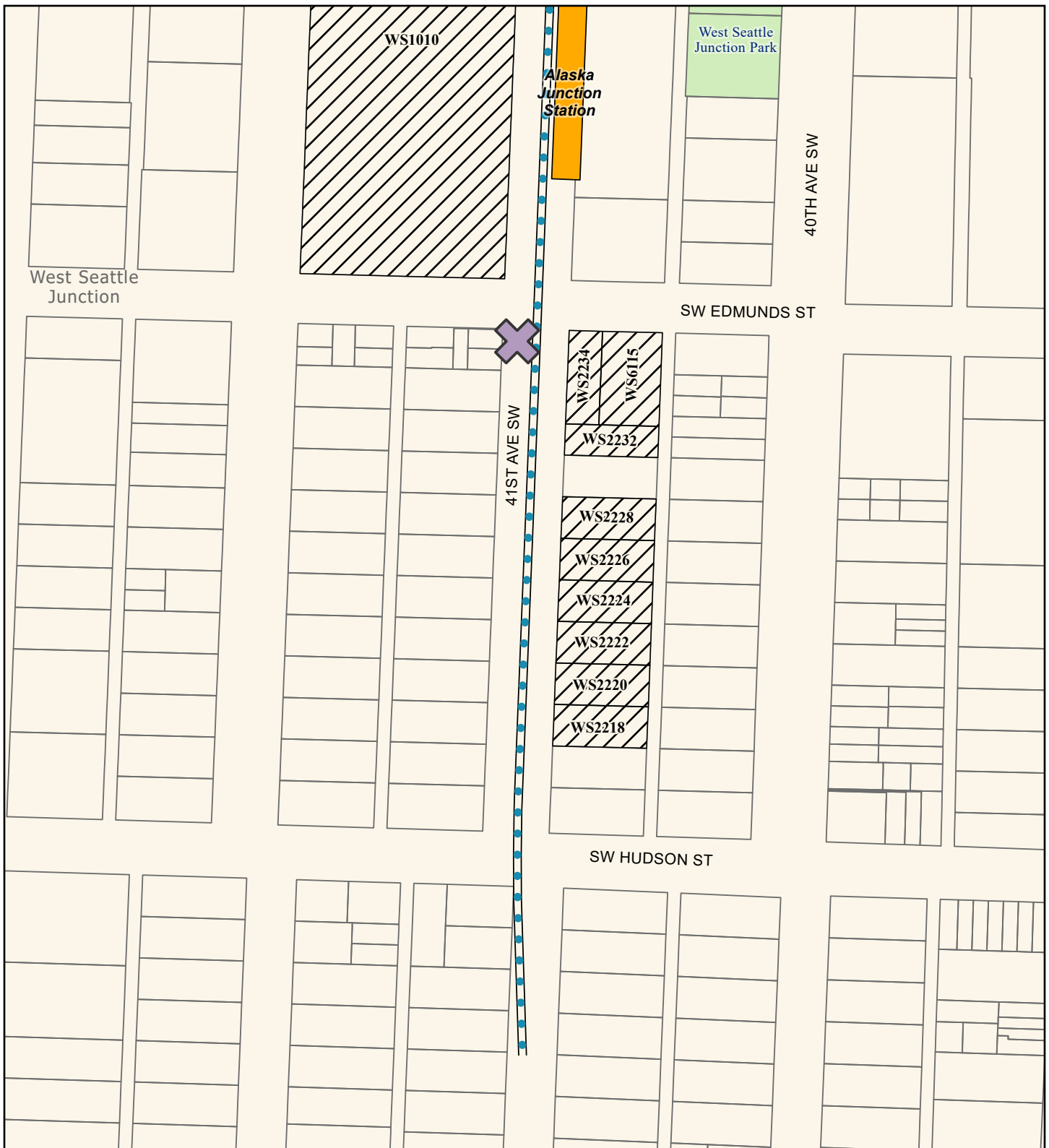
Station

- New
- Existing

- High Resilience Fastener
- Parcel
- Groundborne Noise Impact
- Park

FIGURE N.3E-16c
Alternative WSJ-4
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

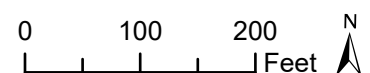
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- X Low-Impact Frog
- Parcel
- Groundborne Noise Impact
- Park

FIGURE N.3E-16d
Alternative WSJ-4
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

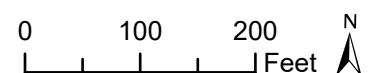
- Elevated
- At-Grade
- Tunnel
- Retained Cut

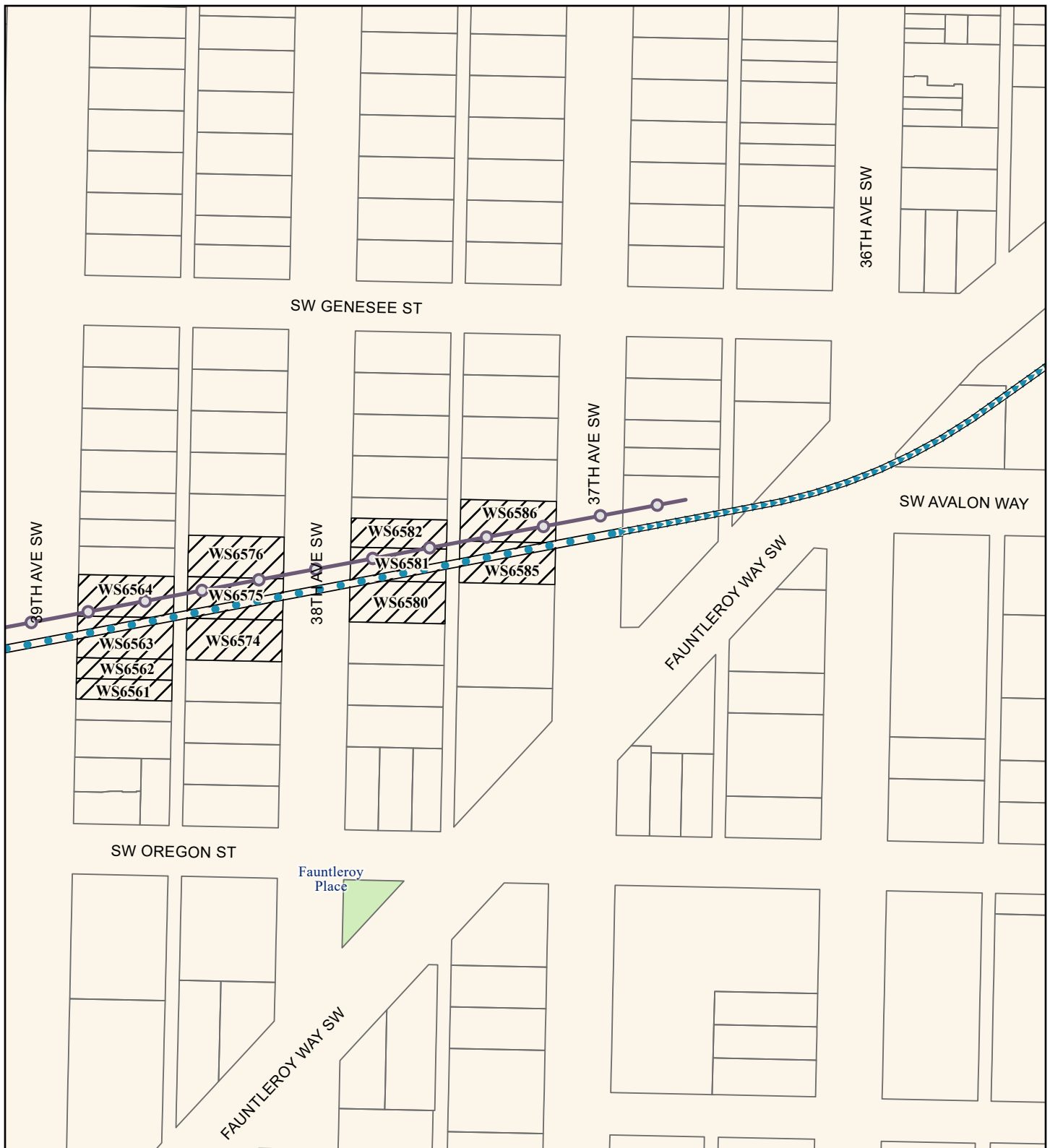
Station

- New
- Existing

- High Resilience Fastener
- Segment Line
- Parcel
- Groundborne Noise Impact
- Park

FIGURE N.3E-17a
Alternative WSJ-5
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

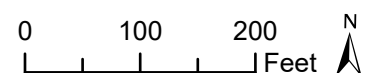
- Elevated — Tunnel
- At-Grade — Retained Cut

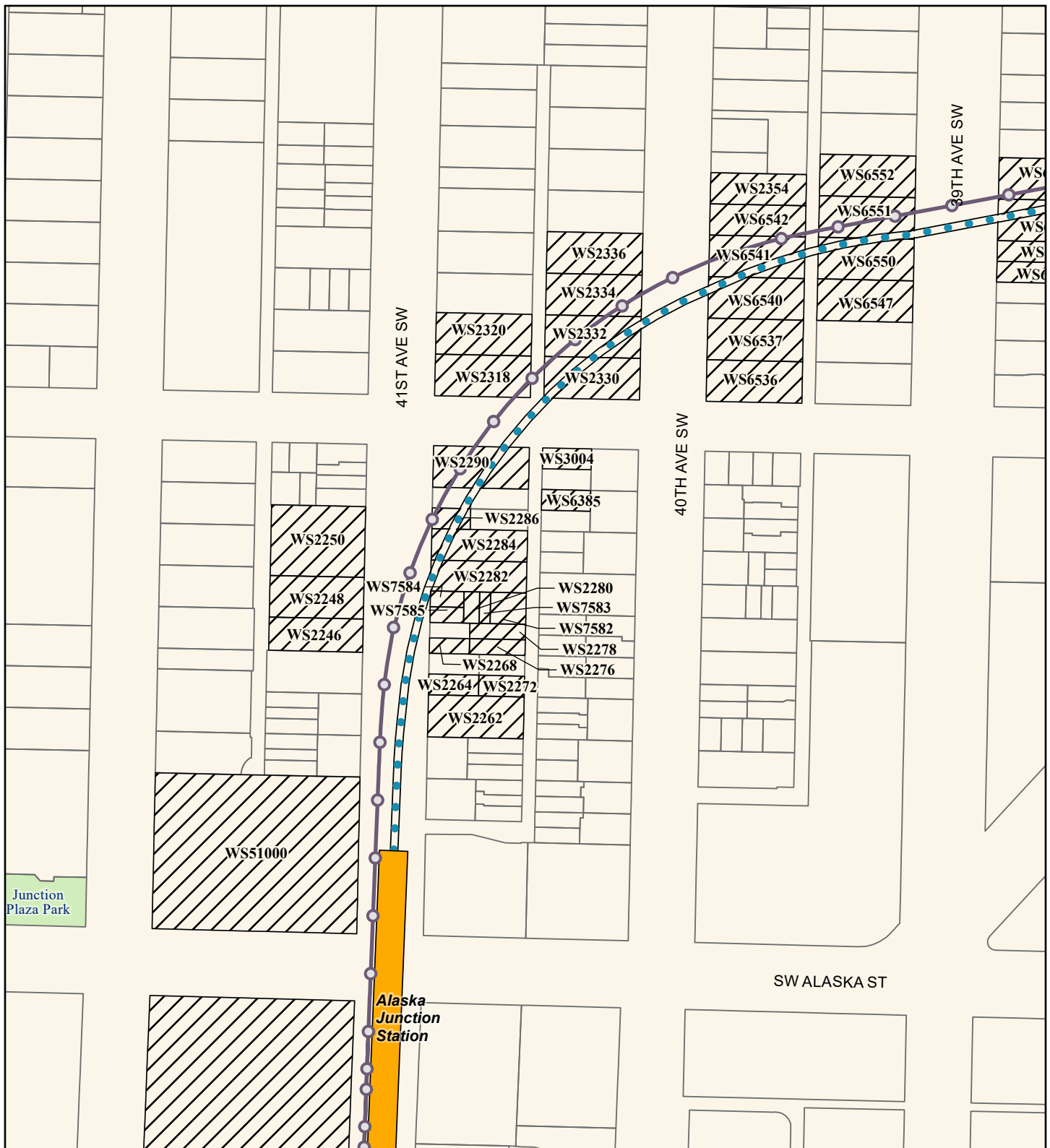
Station

- New
- Existing

- High Resilience Fastener
- Parcel
- Groundborne Noise Impact
- Park

FIGURE N.3E-17b
Alternative WSJ-5
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- - - Other Alternatives

Alternative Profile

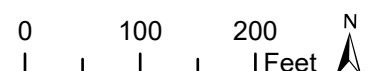
- Elevated
- Tunnel
- At-Grade
- Retained Cut

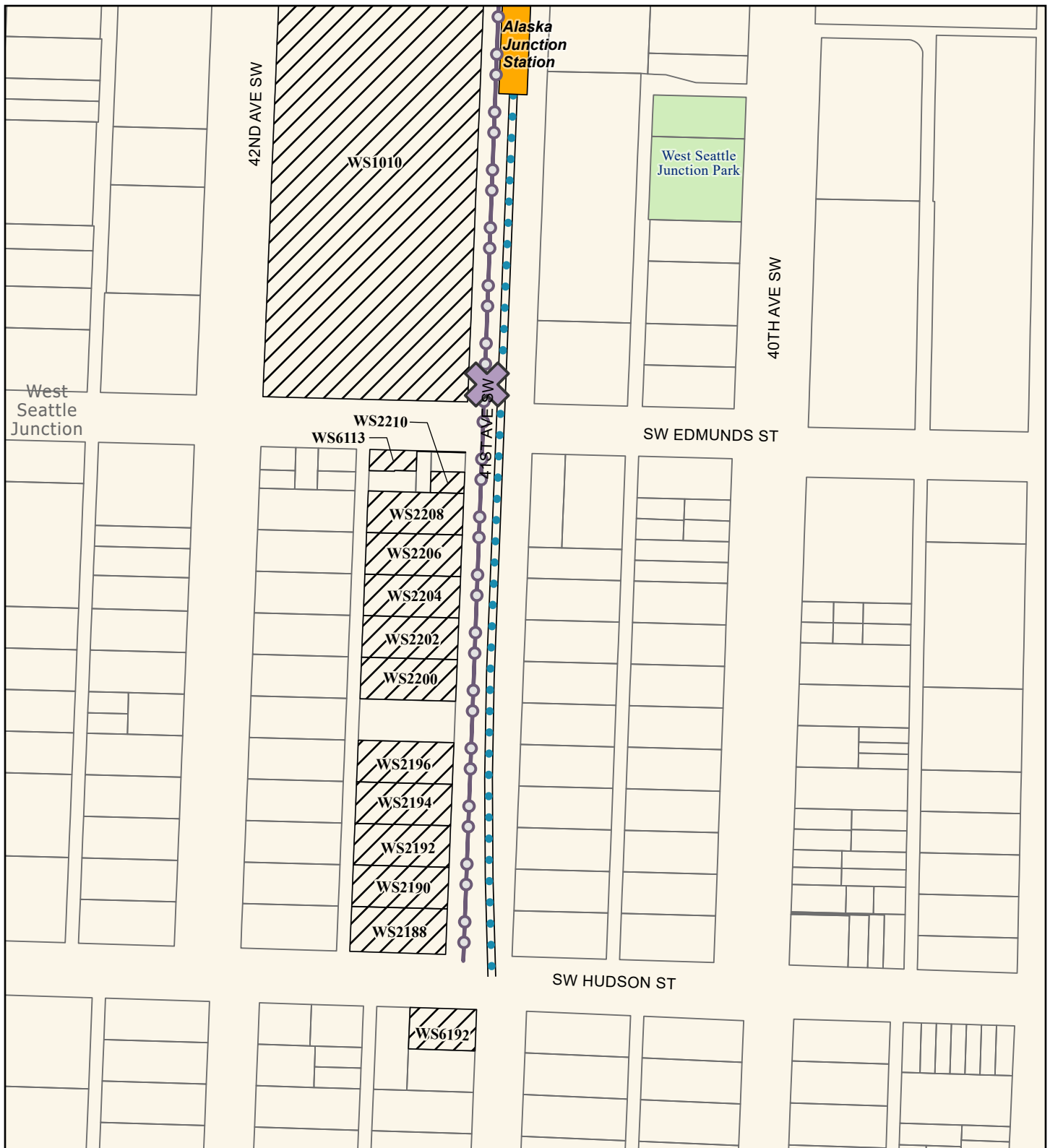
Station

- New
- Existing

- High Resilience Fastener
- Parcel
- Groundborne Noise Impact
- Park

FIGURE N.3E-17c
Alternative WSJ-5
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

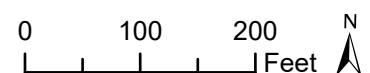
- Elevated
- At-Grade
- Tunnel
- Retained Cut

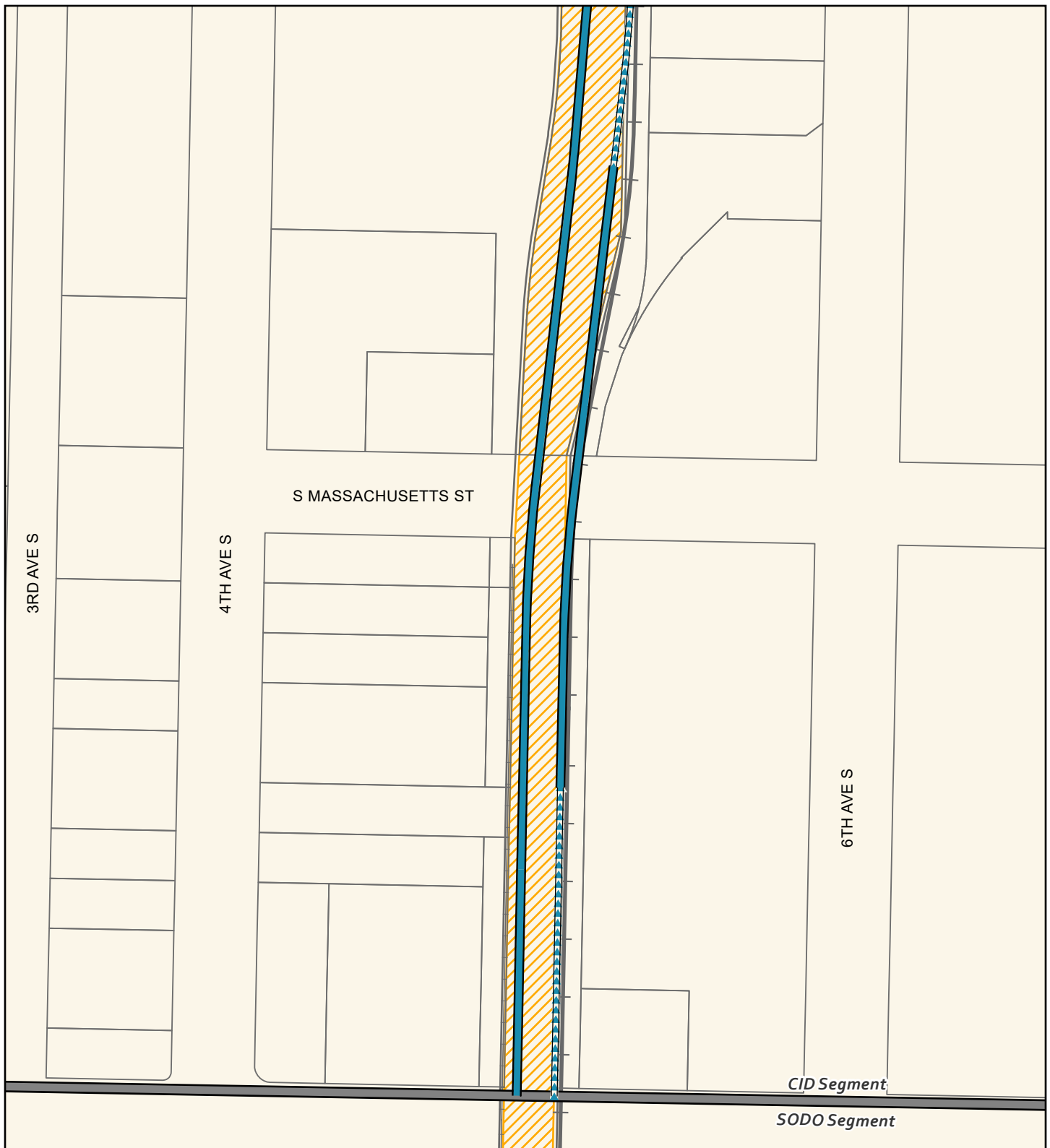
Station

- New
- Existing

- ✕ Low-Impact Frog
- High Resilience Fastener
- Parcel
- Groundborne Noise Impact
- Park

FIGURE N.3E-17d
Alternative WSJ-5
Vibration and Groundborne Noise
Impacts (before mitigation)
 West Seattle Link Extension -
 West Seattle Junction Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

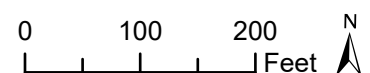
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Segment Line
- Existing Link Light Rail
- Railroad
- Parcel
- SODO Busway

FIGURE N.3E-18a
Alternative CID-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

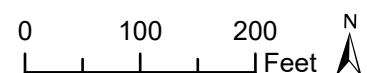
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Existing Link Light Rail
- East Link Light Rail (Under Construction)
- Parcel
- ▨ SODO Busway

FIGURE N.3E-18b
Alternative CID-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

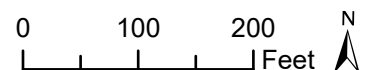
- Elevated
- Tunnel
- At-Grade
- Retained Cut

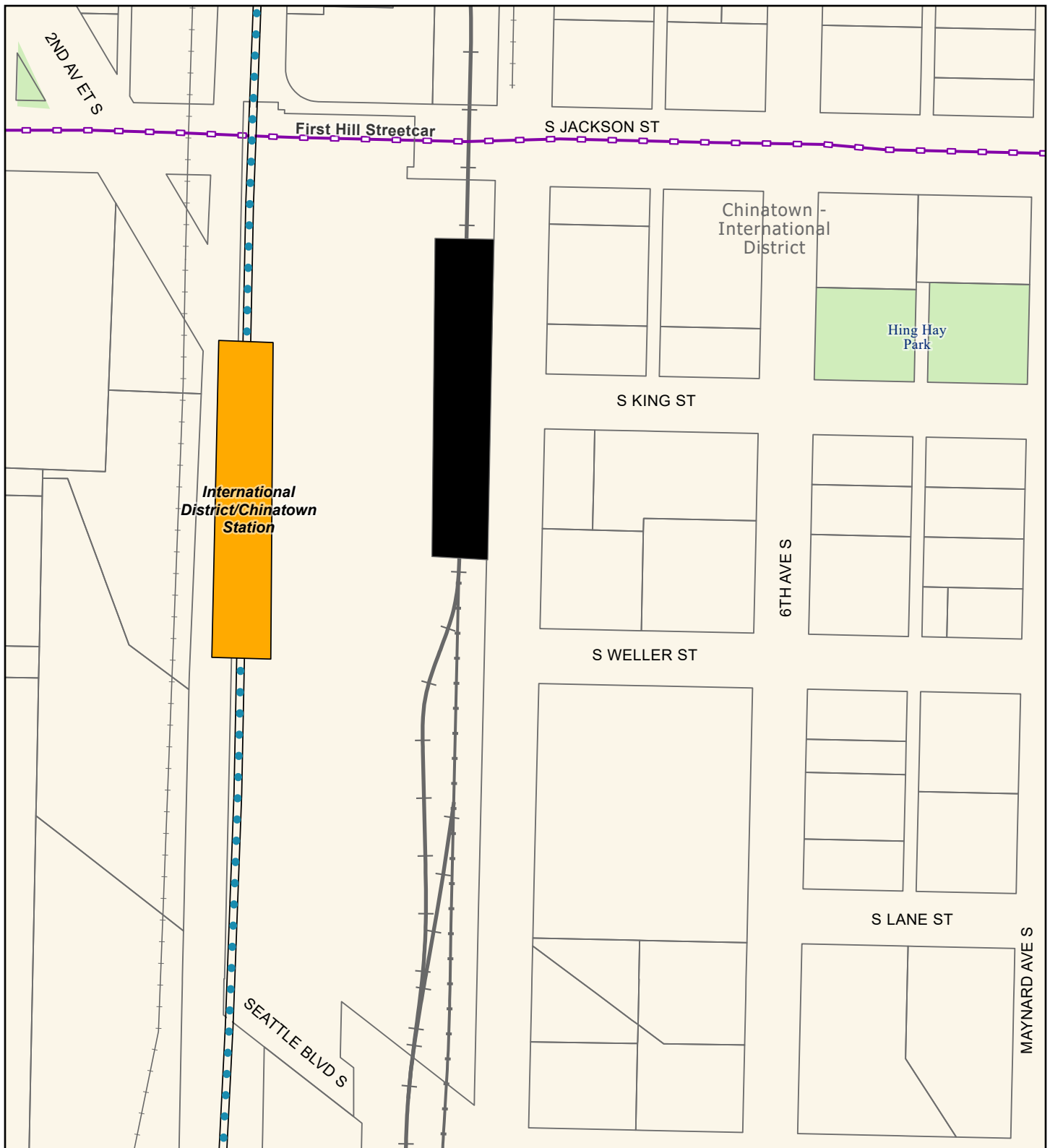
Station

- New
- Existing

- Existing Link Light Rail
- East Link Light Rail (Under Construction)
- Railroad
- Parcel

FIGURE N.3E-18c
Alternative CID-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives
- Existing Streetcar
- Existing Link Light Rail
- East Link Light Rail (Under Construction)

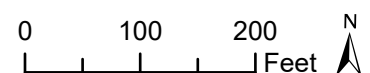
Alternative Profile

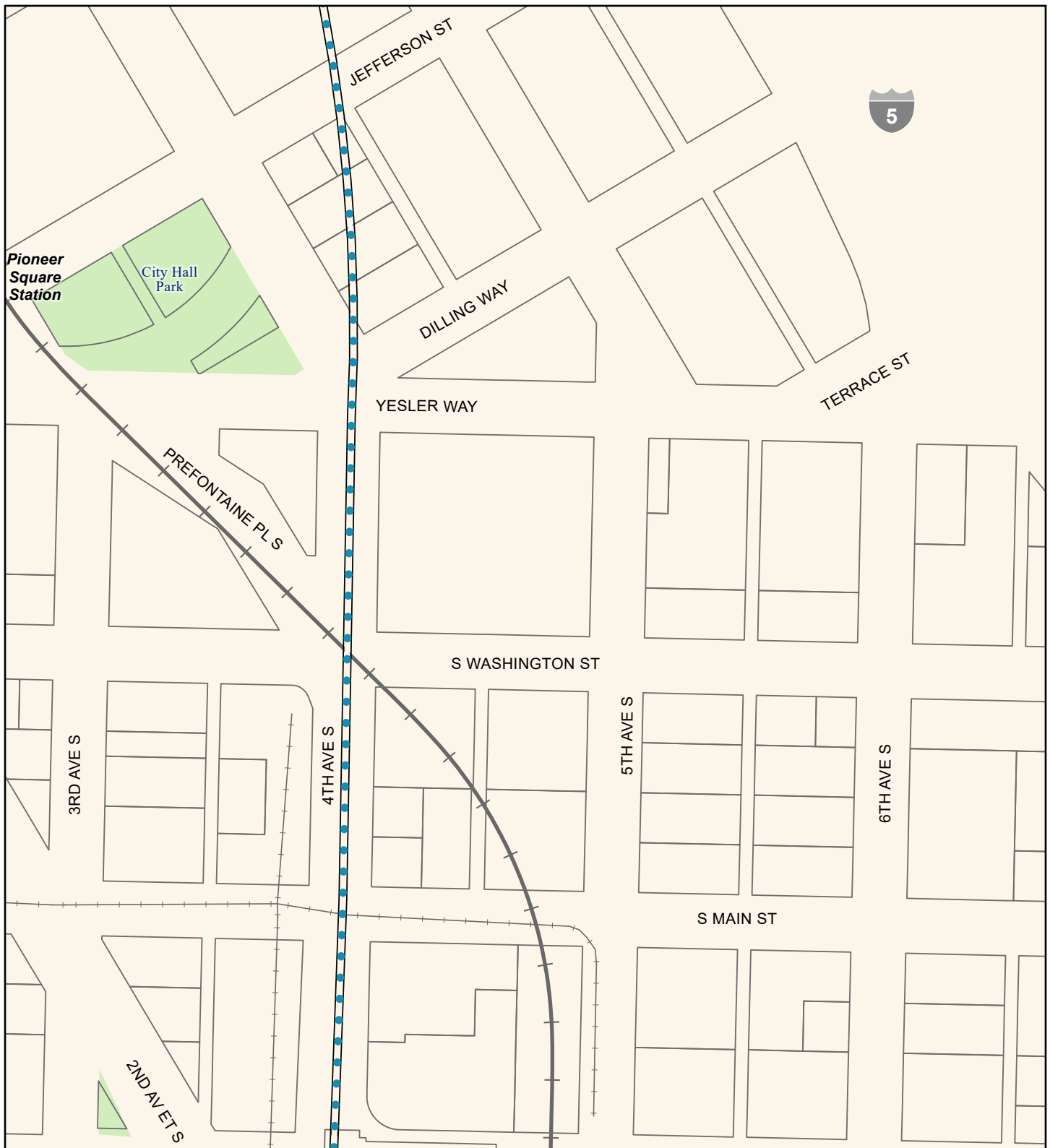
- Elevated
- At-Grade
- Tunnel
- Retained Cut
- Railroad
- Parcel
- Park

Station

- New
- Existing

FIGURE N.3E-18d
Alternative CID-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

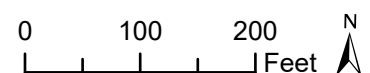
- Elevated
- Tunnel
- At-Grade
- Retained Cut

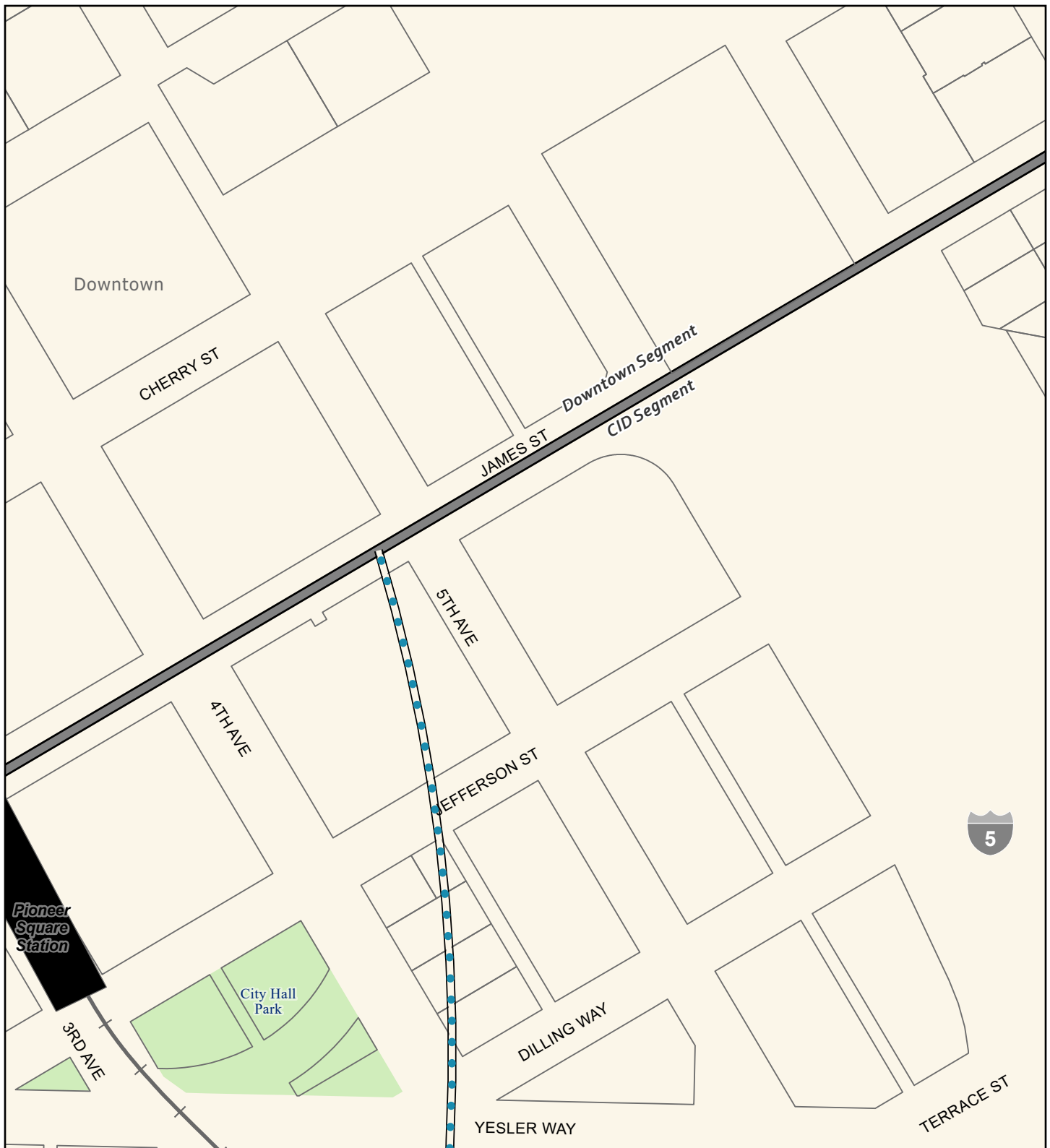
Station

- New
- Existing

- +— Existing Link Light Rail
- +— Railroad
- Parcel
- Park

FIGURE N.3E-18e
Alternative CID-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

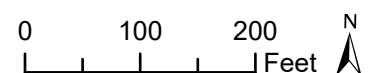
- Elevated
- At-Grade
- Tunnel
- Retained Cut

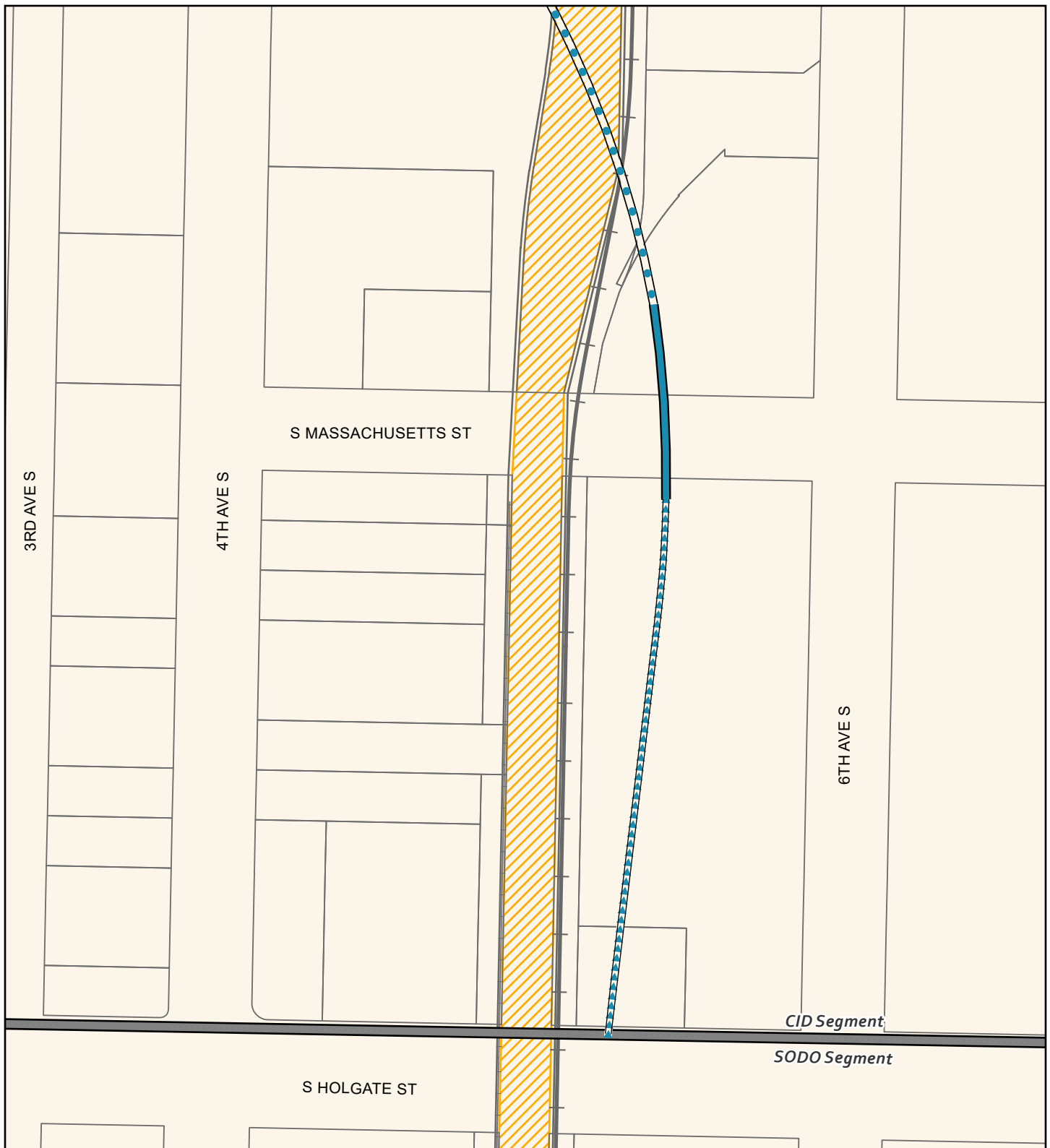
Station

- New
- Existing

- Segment Line
- + Existing Link Light Rail
- Parcel
- Park

FIGURE N.3E-18f
Alternative CID-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

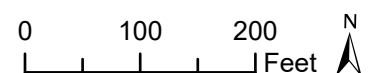
- Segment Line
- + Existing Link Light Rail
- + Railroad
- Parcel
- ▨ SODO Busway

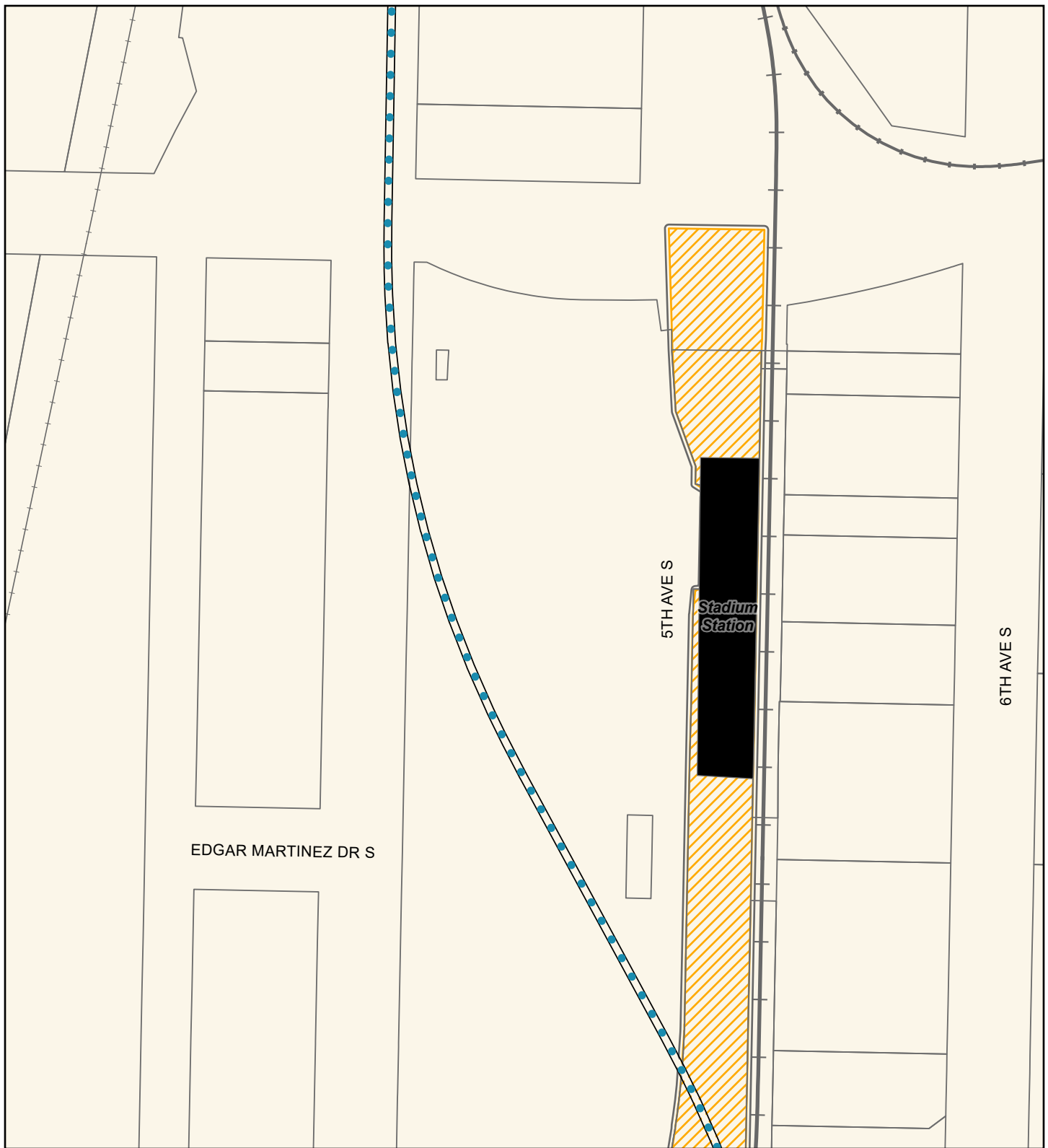
FIGURE N.3E-19a

Option CID-1b

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Chinatown-International District Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

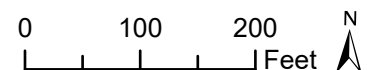
- Elevated
- At-Grade
- Tunnel
- Retained Cut

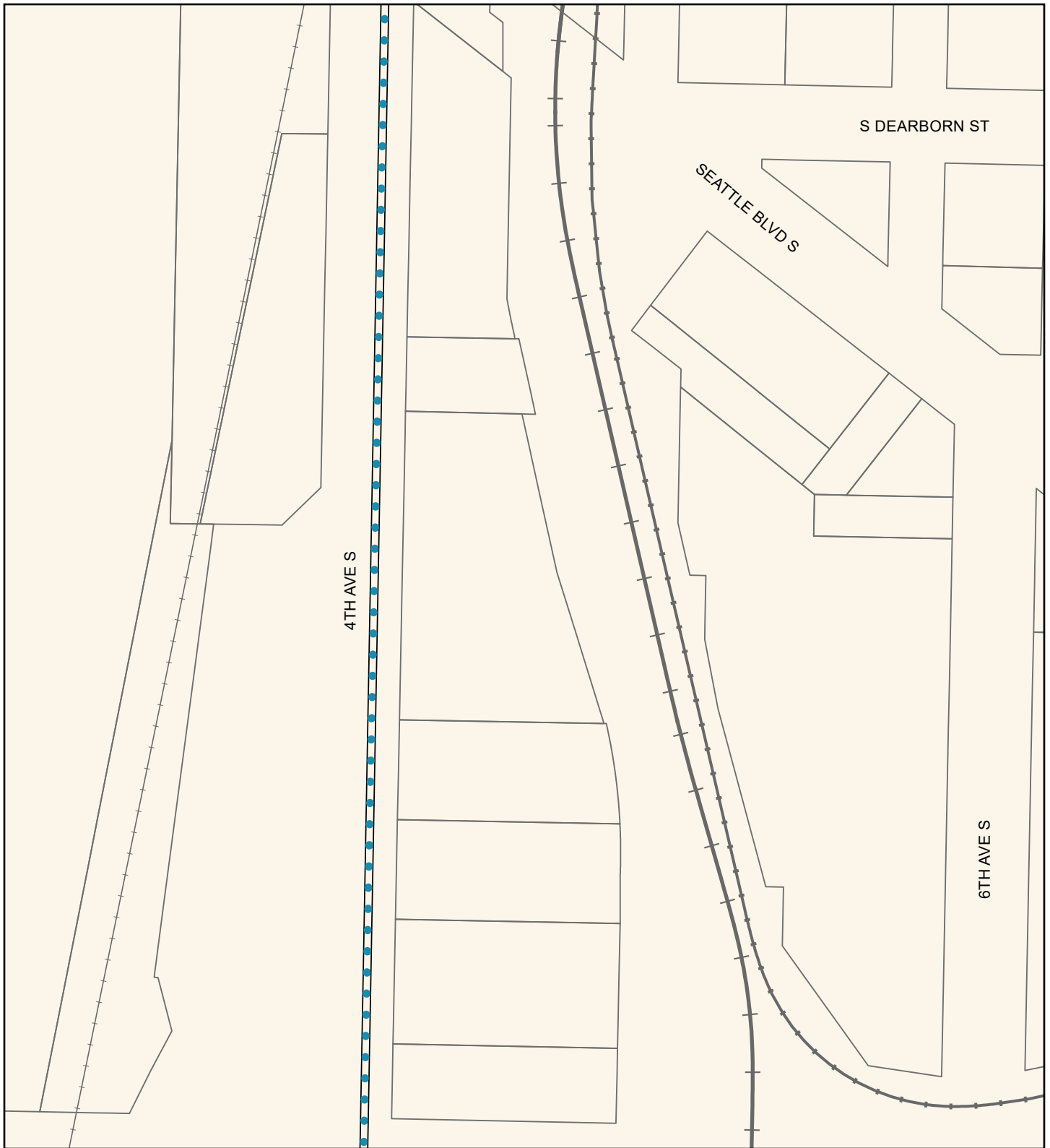
Station

- New
- Existing

- Existing Link Light Rail
- East Link Light Rail (Under Construction)
- Railroad
- Parcel
- SODO Busway

FIGURE N.3E-19b
Option CID-1b
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

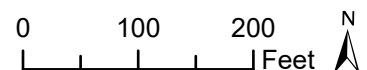
- Elevated
- At-Grade
- Tunnel
- Retained Cut

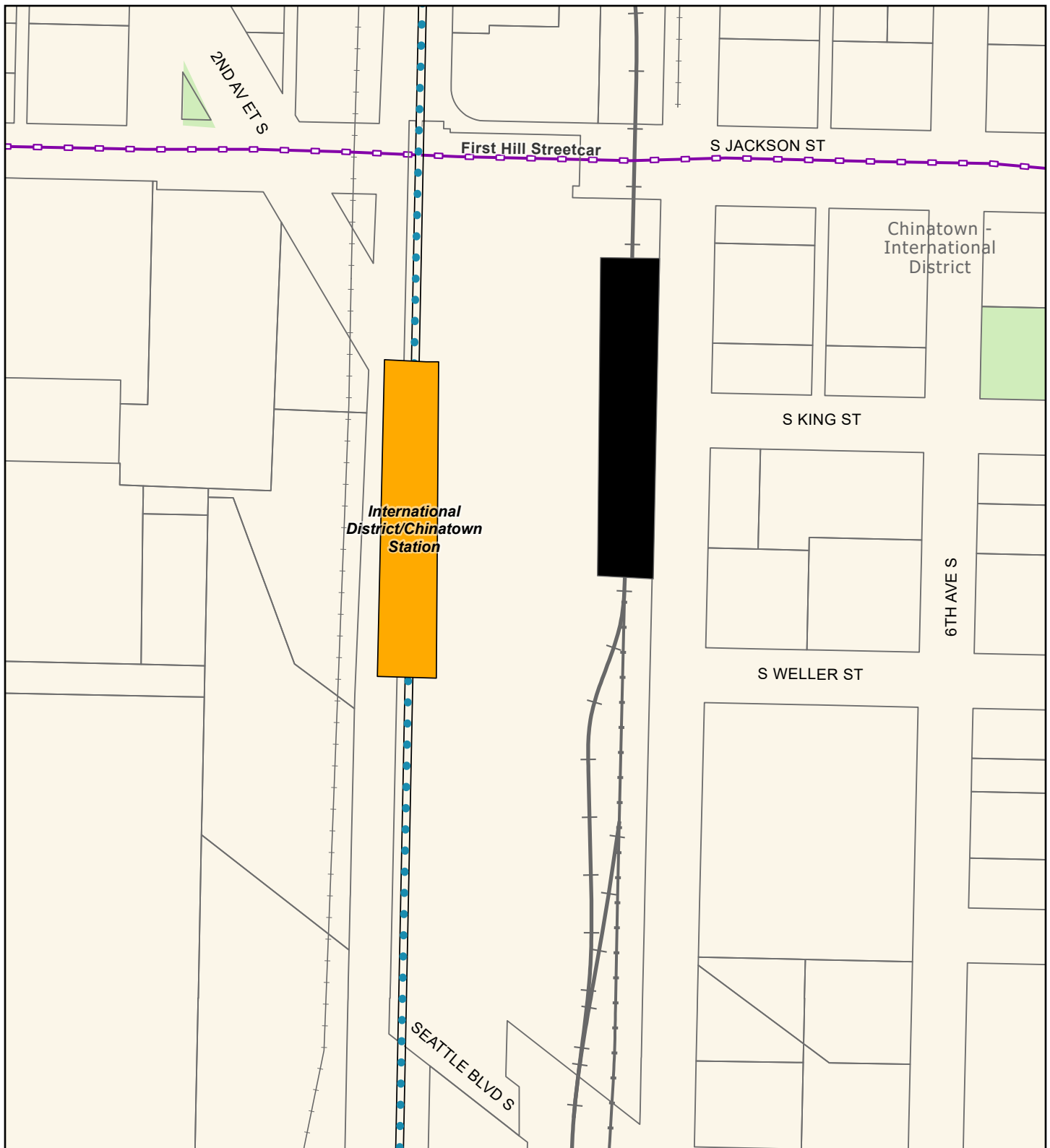
Station

- New
- Existing

- Existing Link Light Rail
- East Link Light Rail (Under Construction)
- Railroad
- Parcel

FIGURE N.3E-19c
Option CID-1b
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

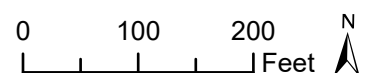
- Existing Streetcar
- Existing Link Light Rail
- East Link Light Rail (Under Construction)
- Railroad
- Parcel
- Park

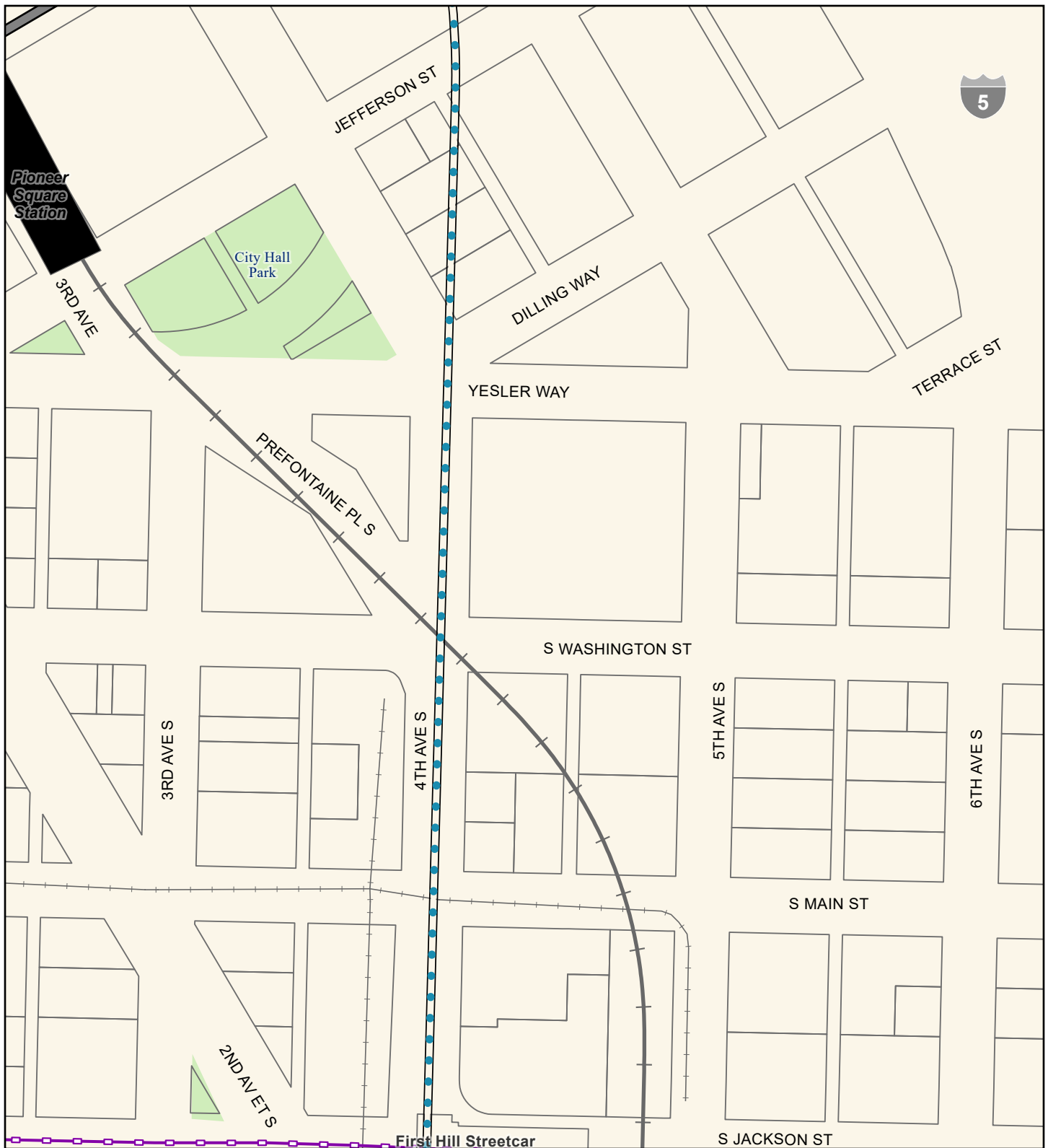
FIGURE N.3E-19d

Option CID-1b

Vibration and Groundborne Noise Impacts (before mitigation)

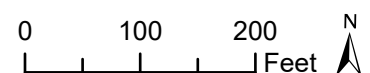
Ballard Link Extension -
Chinatown-International District Segment
West Seattle and
Ballard Link Extensions

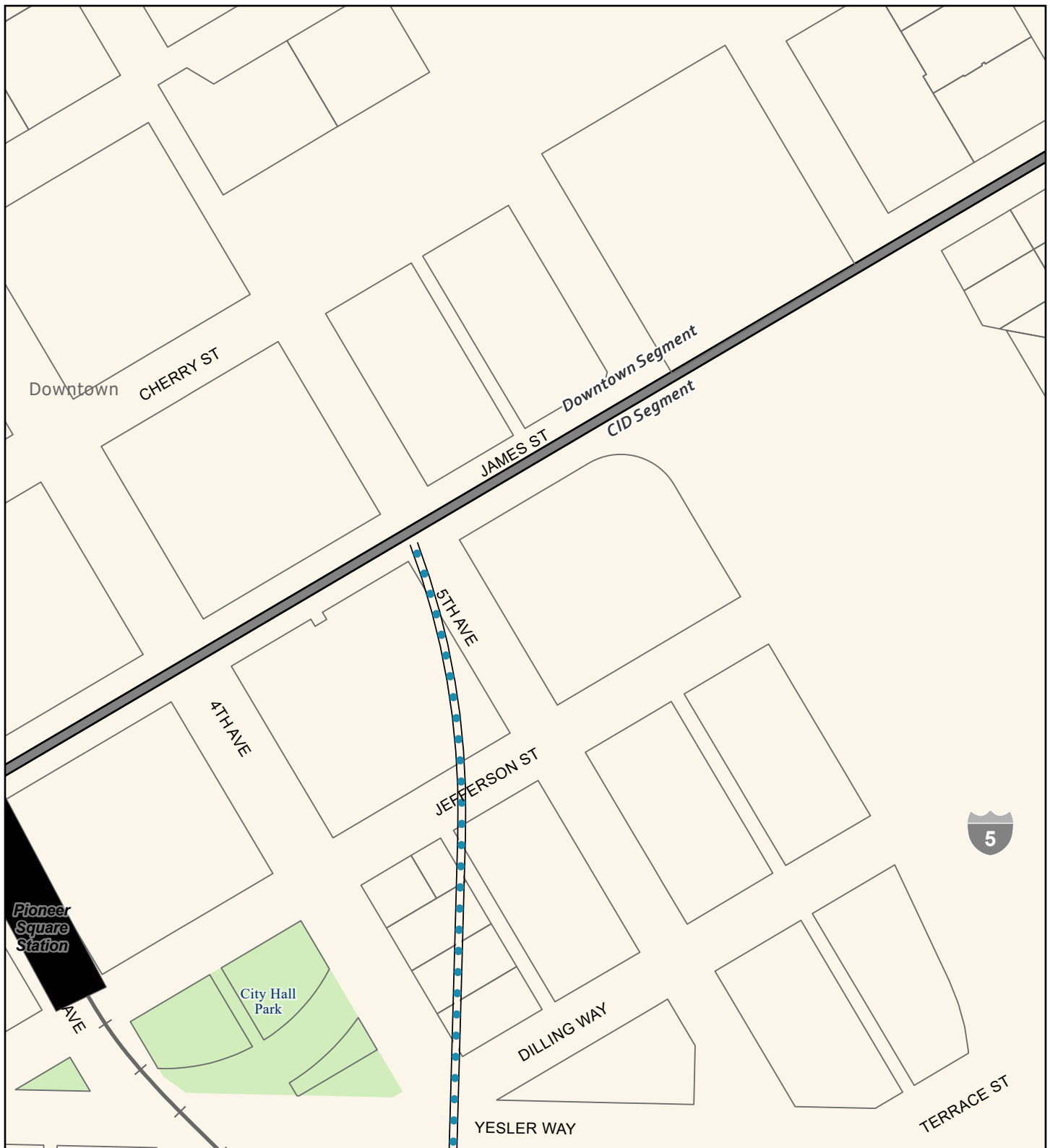




Source: City of Seattle, King County (2019, 2020, 2021).

FIGURE N.3E-19e
Option CID-1b
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

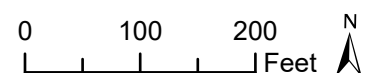
- Segment Line
- + Existing Link Light Rail
- Parcel
- Park

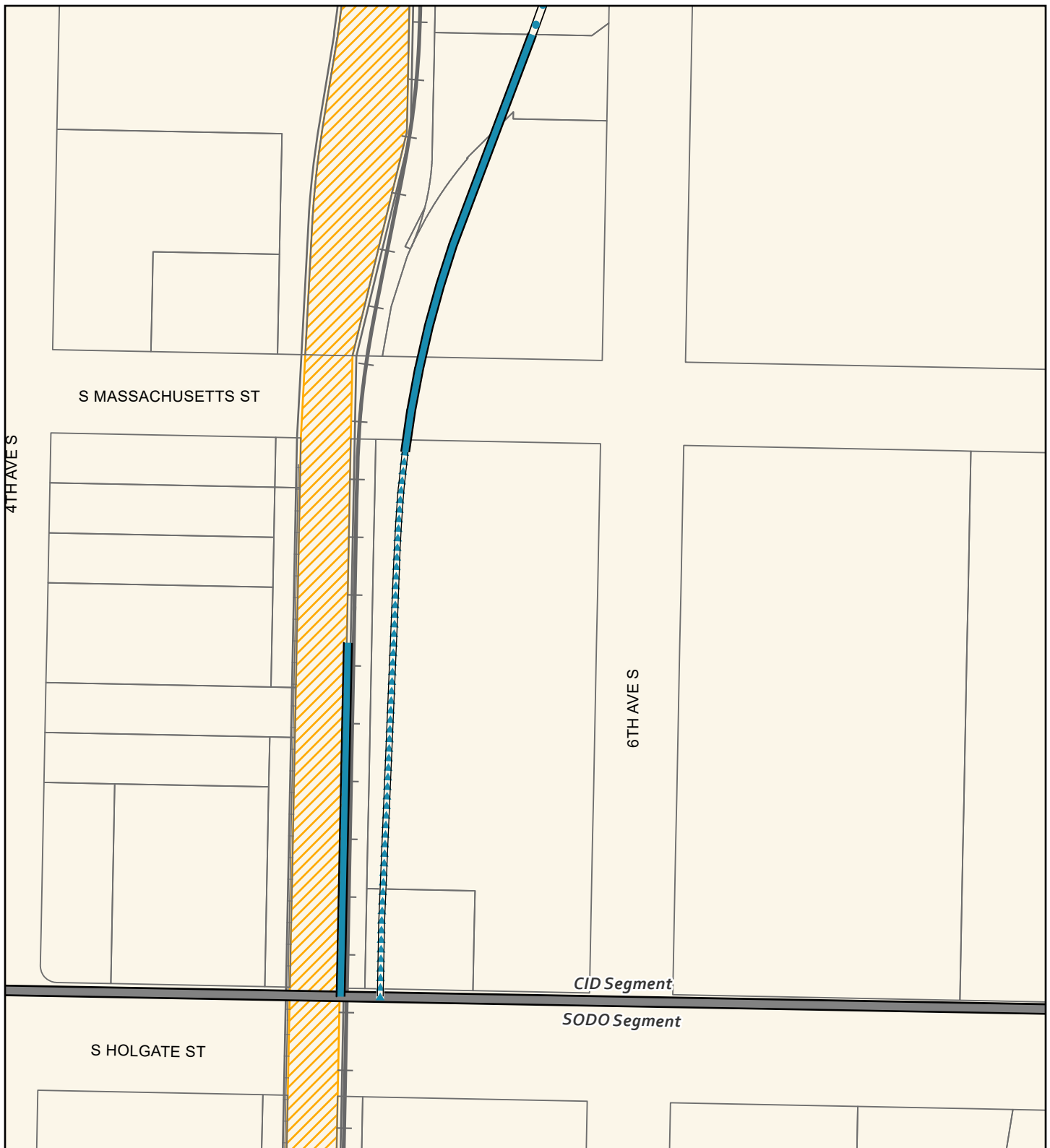
FIGURE N.3E-19f

Option CID-1b

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Chinatown-International District Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

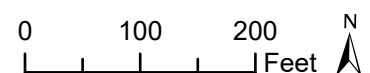
- Elevated
- At-Grade
- Tunnel
- Retained Cut

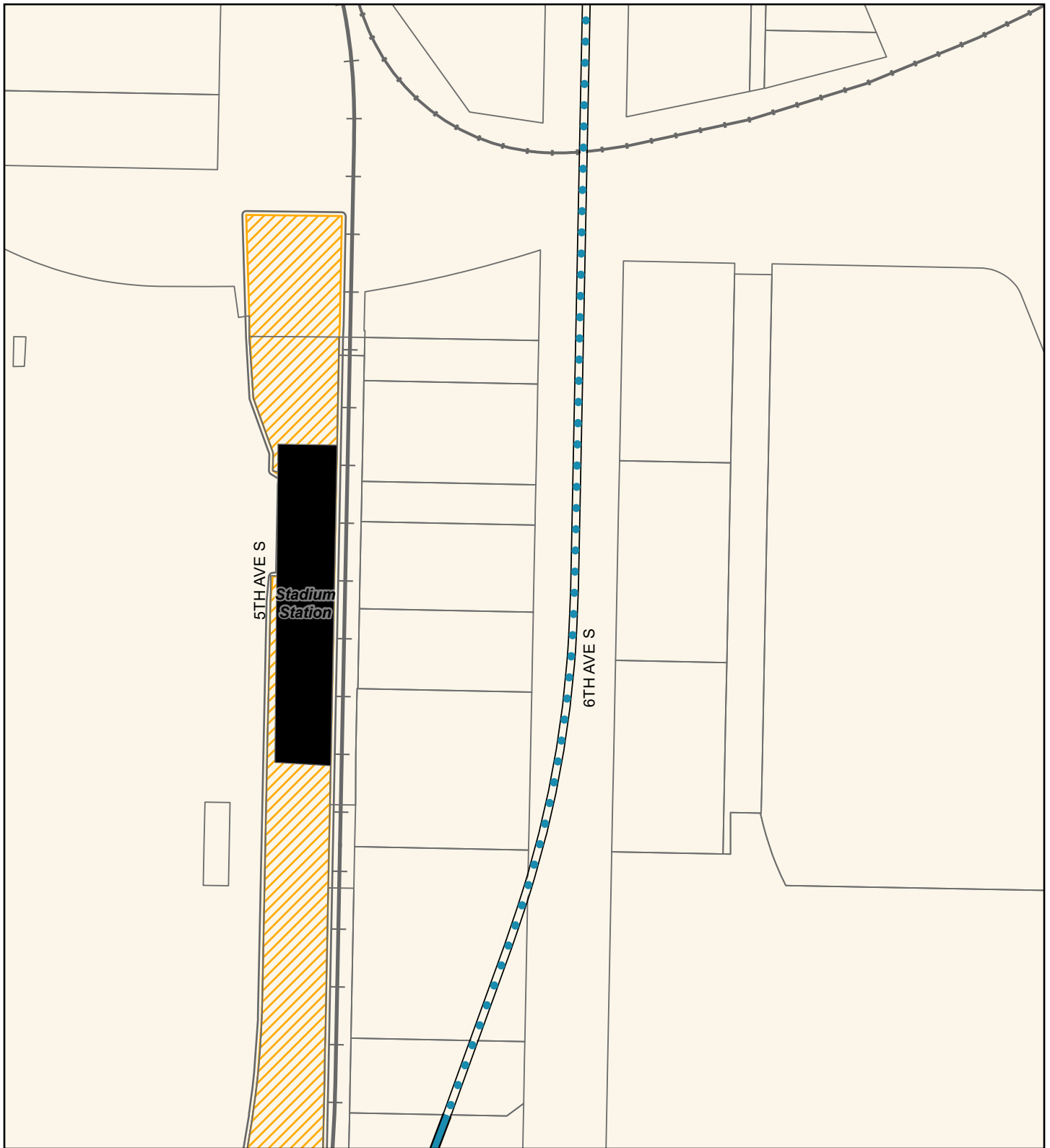
Station

- New
- Existing

- Segment Line
- + Existing Link Light Rail
- + Railroad
- Parcel
- ▨ SODO Busway

FIGURE N.3E-20a
Alternative CID-2a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

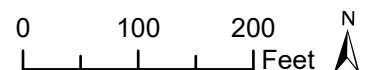
- █ Elevated
- █ At-Grade
- █ Tunnel
- █ Retained Cut

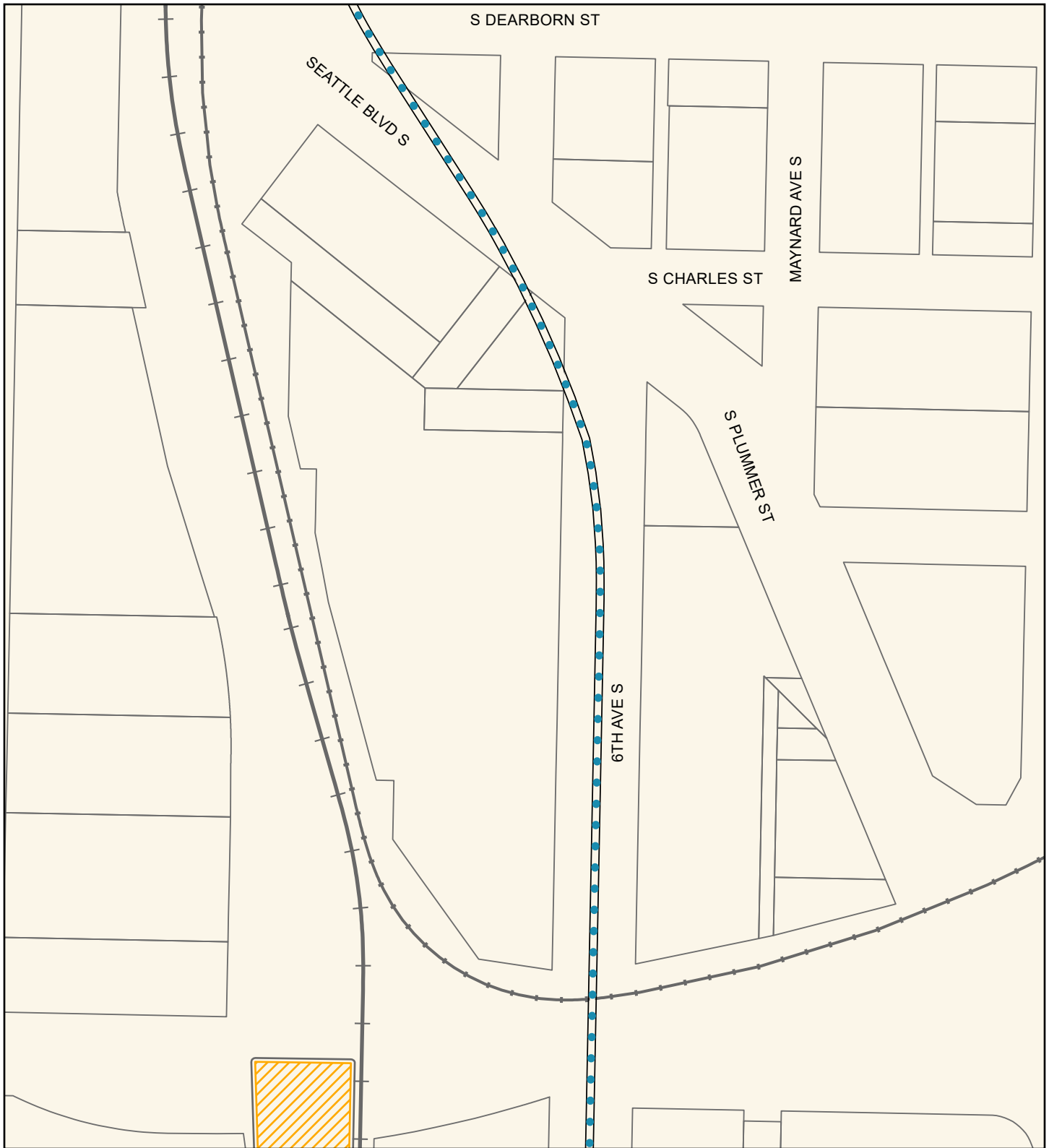
Station

- █ New
- █ Existing

- + Existing Link Light Rail
- + East Link Light Rail (Under Construction)
- Parcel
- ▨ SODO Busway

FIGURE N.3E-20b
Alternative CID-2a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

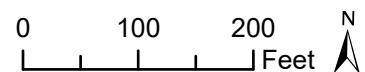
- Elevated
- At-Grade
- Tunnel
- Retained Cut

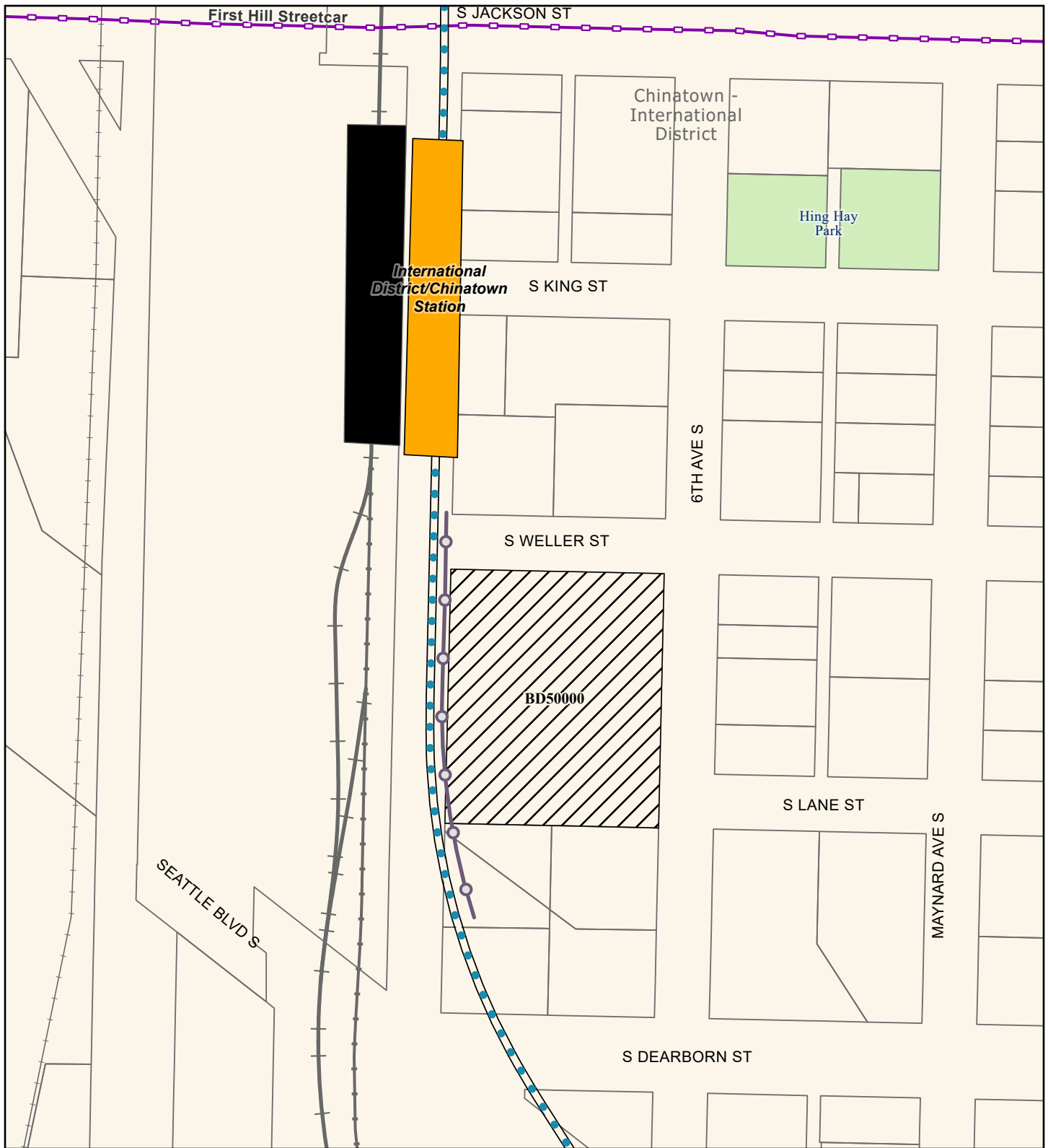
Station

- New
- Existing

- Existing Link Light Rail
- East Link Light Rail (Under Construction)
- Parcel
- ▨ SODO Busway

FIGURE N.3E-20c
Alternative CID-2a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

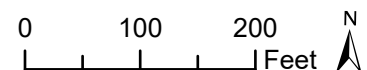
- █ Elevated
- █ At-Grade
- █ Tunnel
- █ Retained Cut

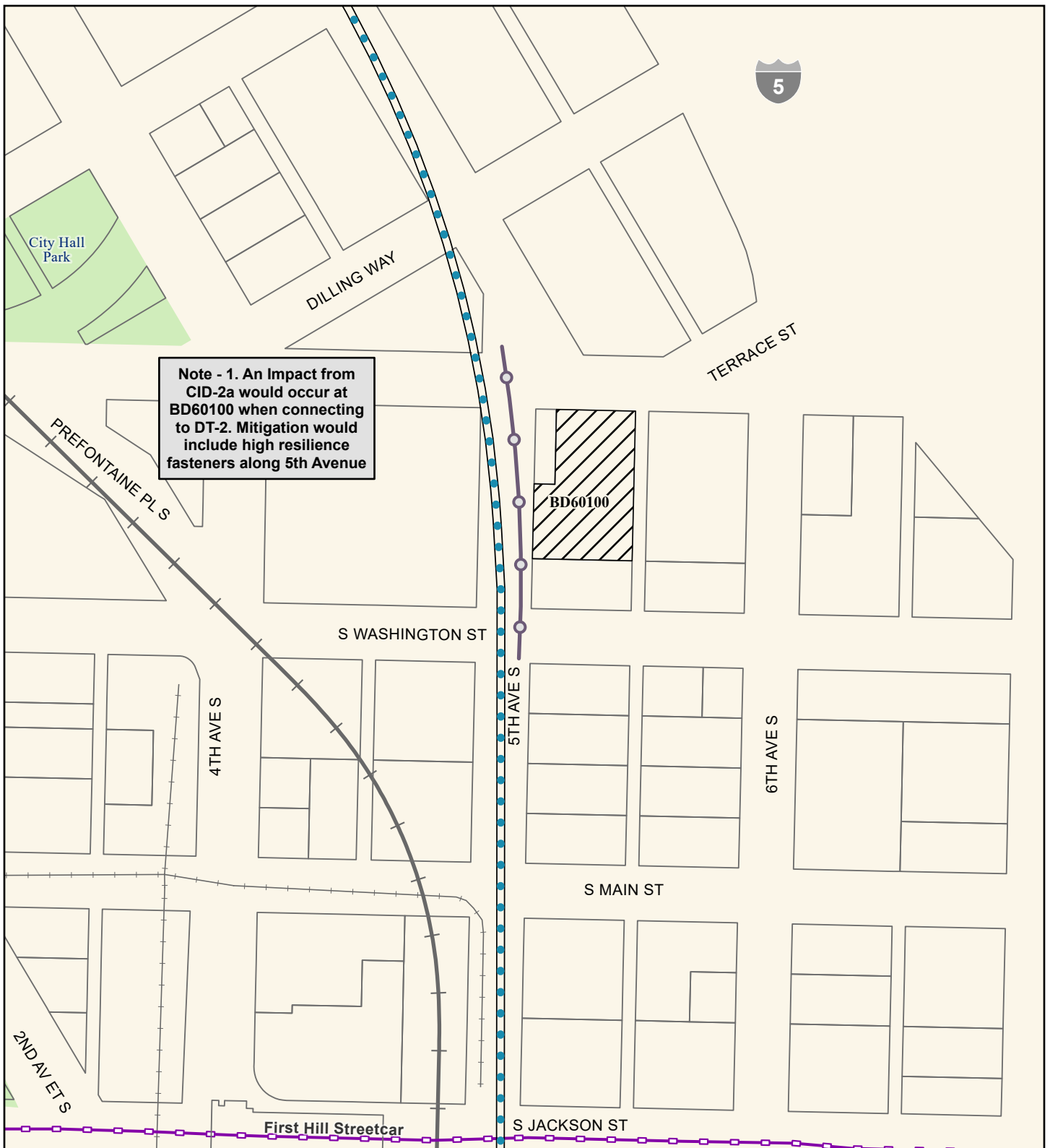
Station

- █ New
- █ Existing

- High Resilience Fastener
- Existing Streetcar
- Existing Link Light Rail
- East Link Light Rail (Under Construction)
- Railroad
- Parcel
- ▨ Groundborne Noise Impact
- █ Park

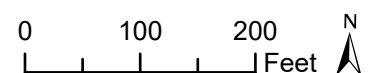
FIGURE N.3E-20d
Alternative CID-2a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
 West Seattle and
 Ballard Link Extensions

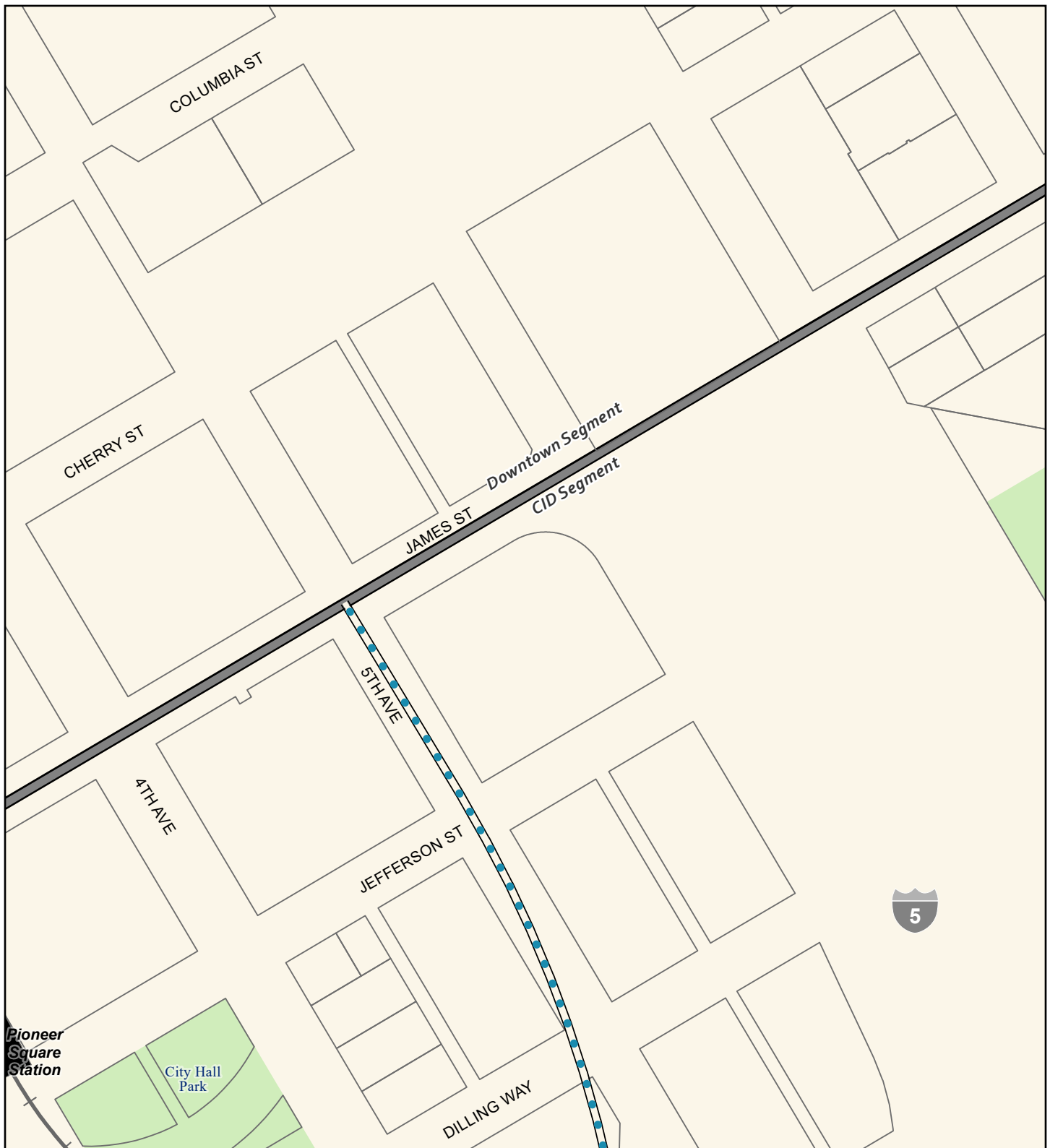




Source: City of Seattle, King County (2019, 2020, 2021).

FIGURE N.3E-20e
Alternative CID-2a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

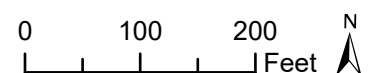
- Elevated
- At-Grade
- Tunnel
- Retained Cut

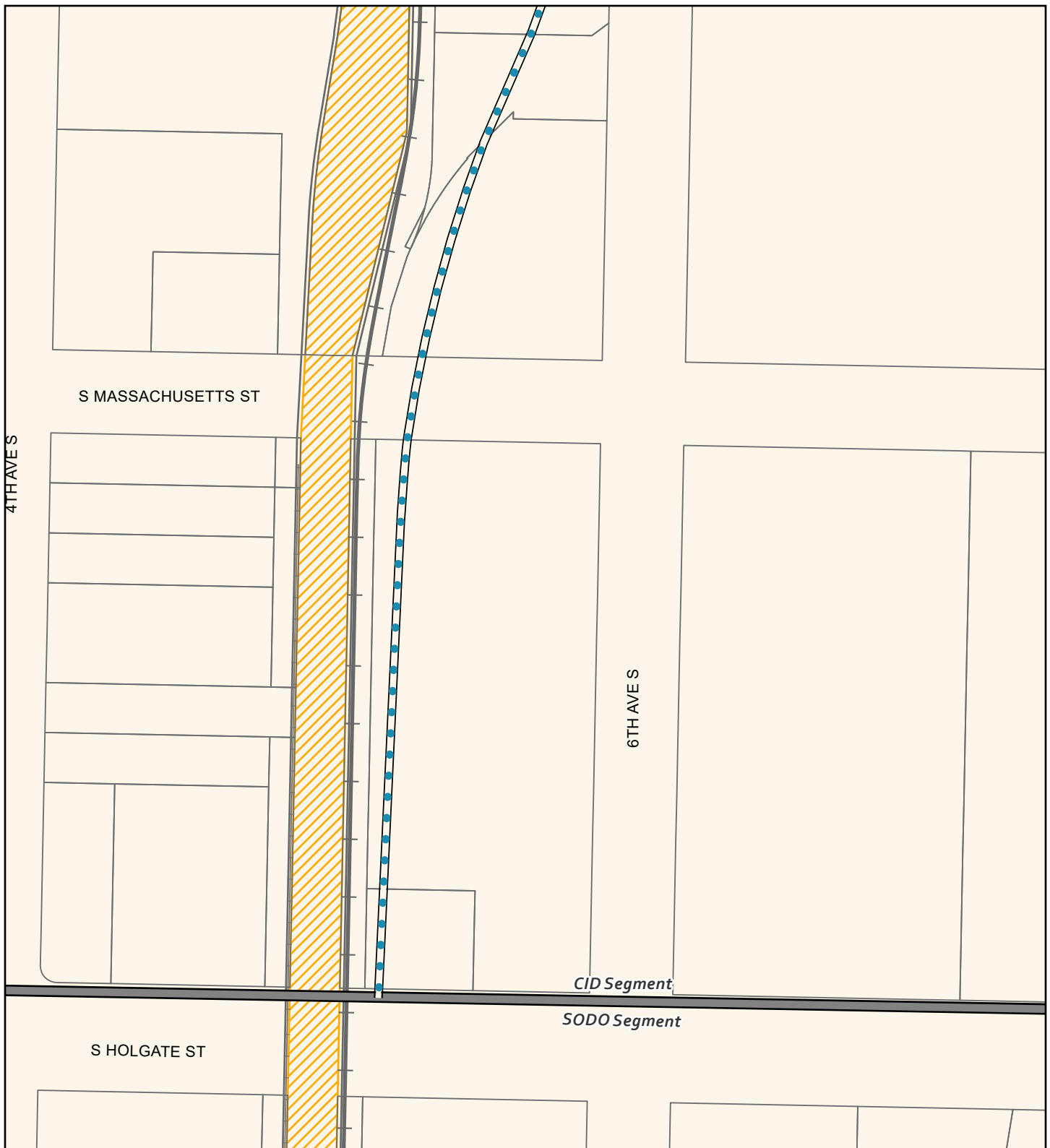
Station

- New
- Existing

- Segment Line
- Existing Link Light Rail
- Parcel
- Park

FIGURE N.3E-20f
Alternative CID-2a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

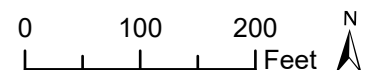
- █ Elevated
- █ At-Grade
- █ Tunnel
- █ Retained Cut

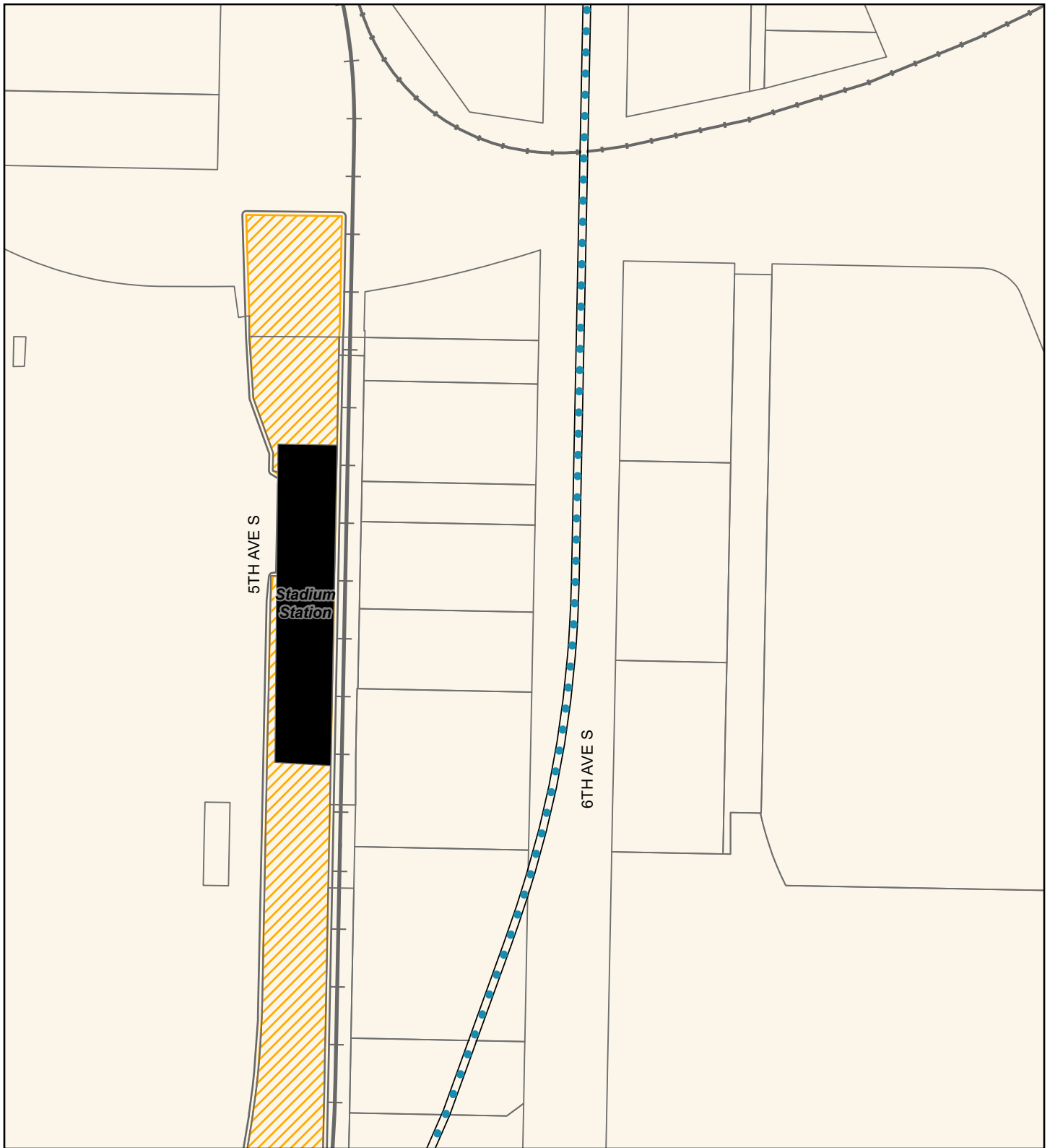
Station

- █ New
- █ Existing

- █ Segment Line
- + Existing Link Light Rail
- + Railroad
- █ Parcel
- █ SODO Busway

FIGURE N.3E-21a
Option CID-2b
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

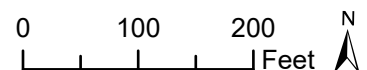
- Elevated
- Tunnel
- At-Grade
- Retained Cut

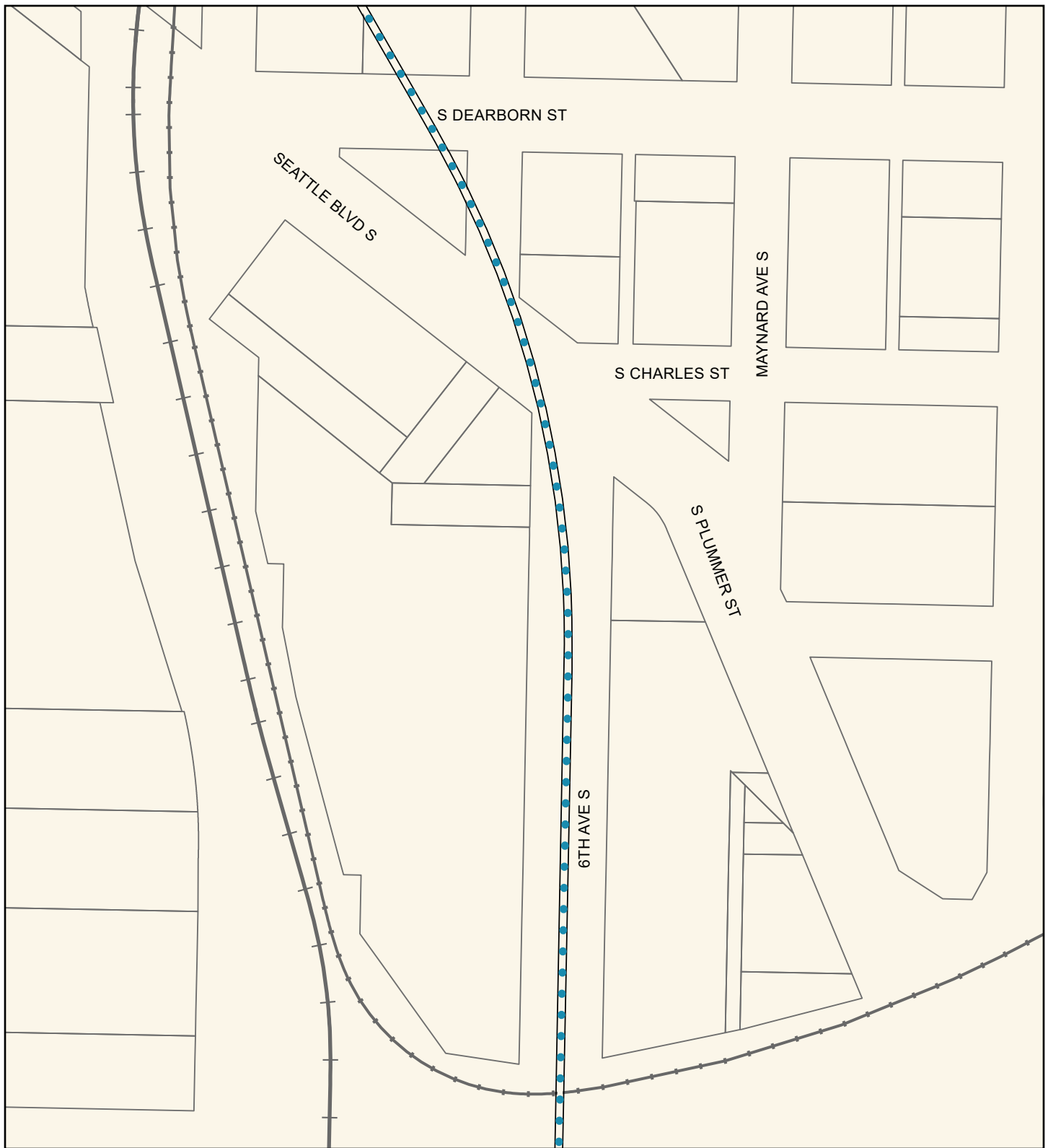
Station

- New
- Existing

- Existing Link Light Rail
- East Link Light Rail (Under Construction)
- Parcel
- SODO Busway

FIGURE N.3E-21b
Option CID-2b
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

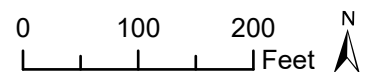
- Elevated
- Tunnel
- At-Grade
- Retained Cut

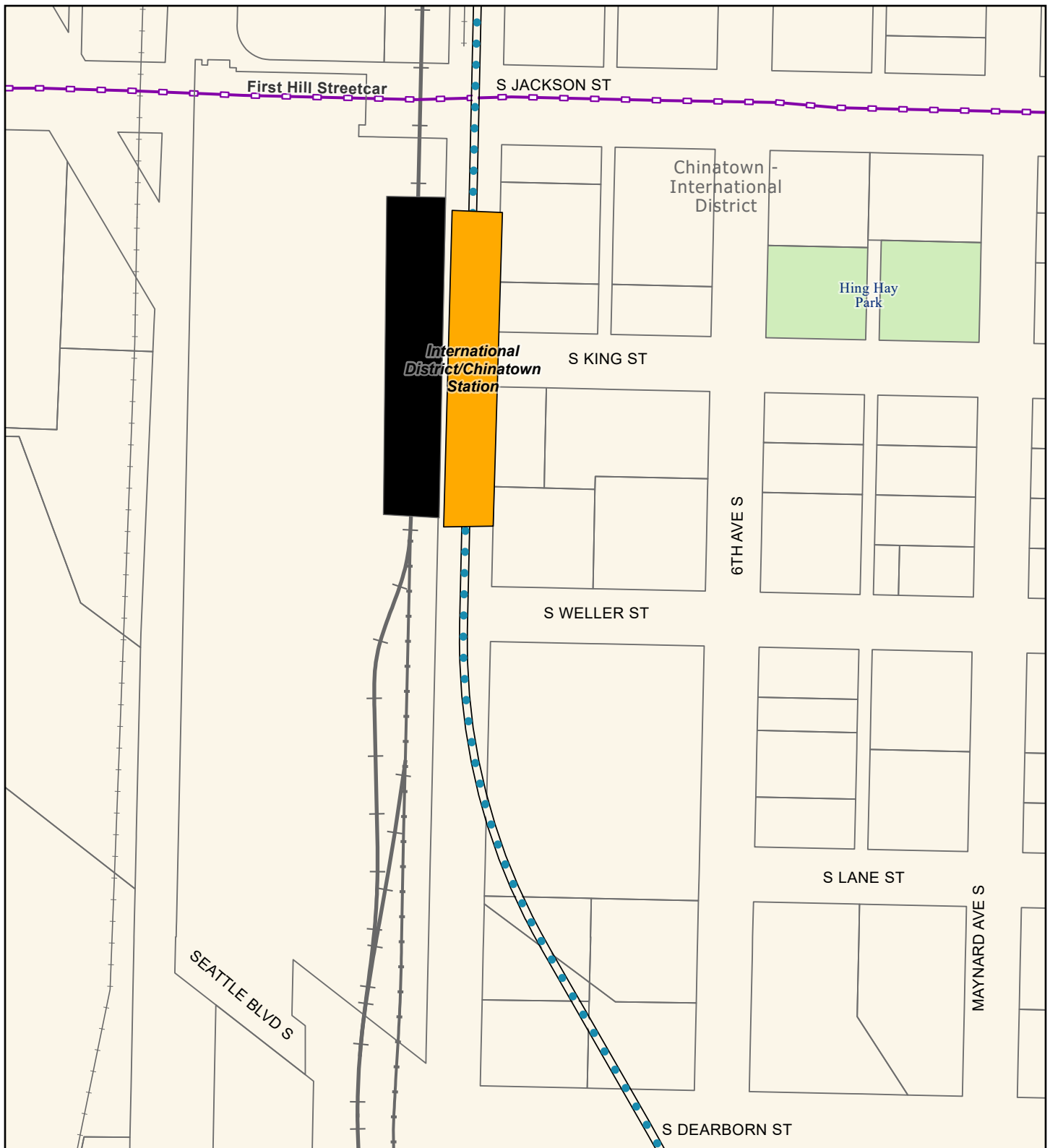
Station

- New
- Existing

- +— Existing Link Light Rail
- +— East Link Light Rail (Under Construction)
- Parcel

FIGURE N.3E-21c
Option CID-2b
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Chinatown-International District Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

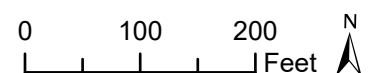
- Existing Streetcar
- Existing Link Light Rail
- East Link Light Rail (Under Construction)
- Railroad
- Parcel
- Park

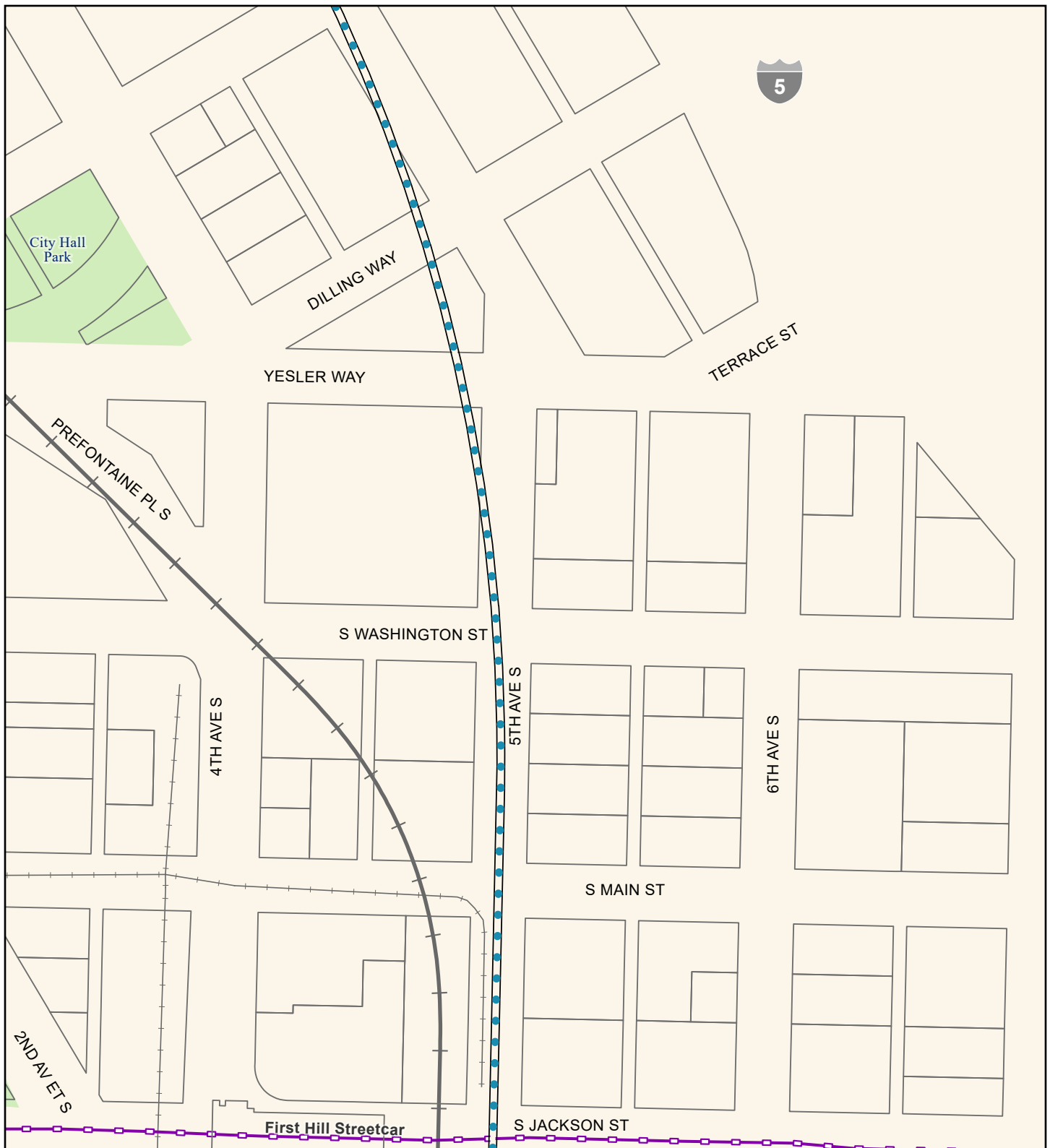
FIGURE N.3E-21d

Option CID-2b

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Chinatown-International District Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

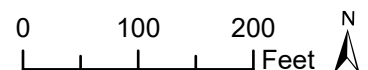
- Existing Streetcar
- Existing Link Light Rail
- Railroad
- Parcel
- Park

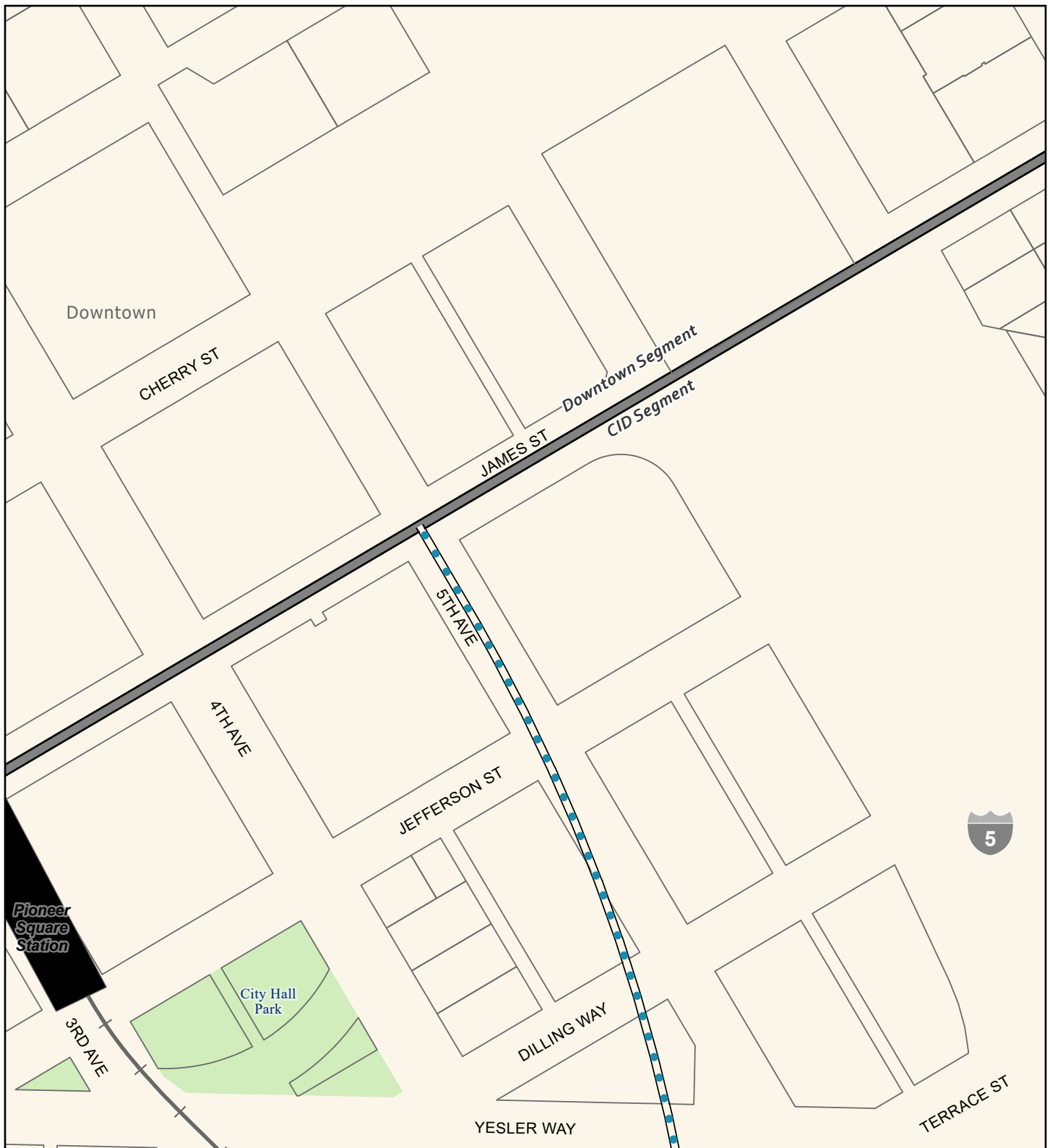
FIGURE N.3E-21e

Option CID-2b

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Chinatown-International District Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

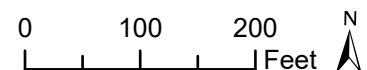
- Segment Line
- Existing Link Light Rail
- Parcel
- Park

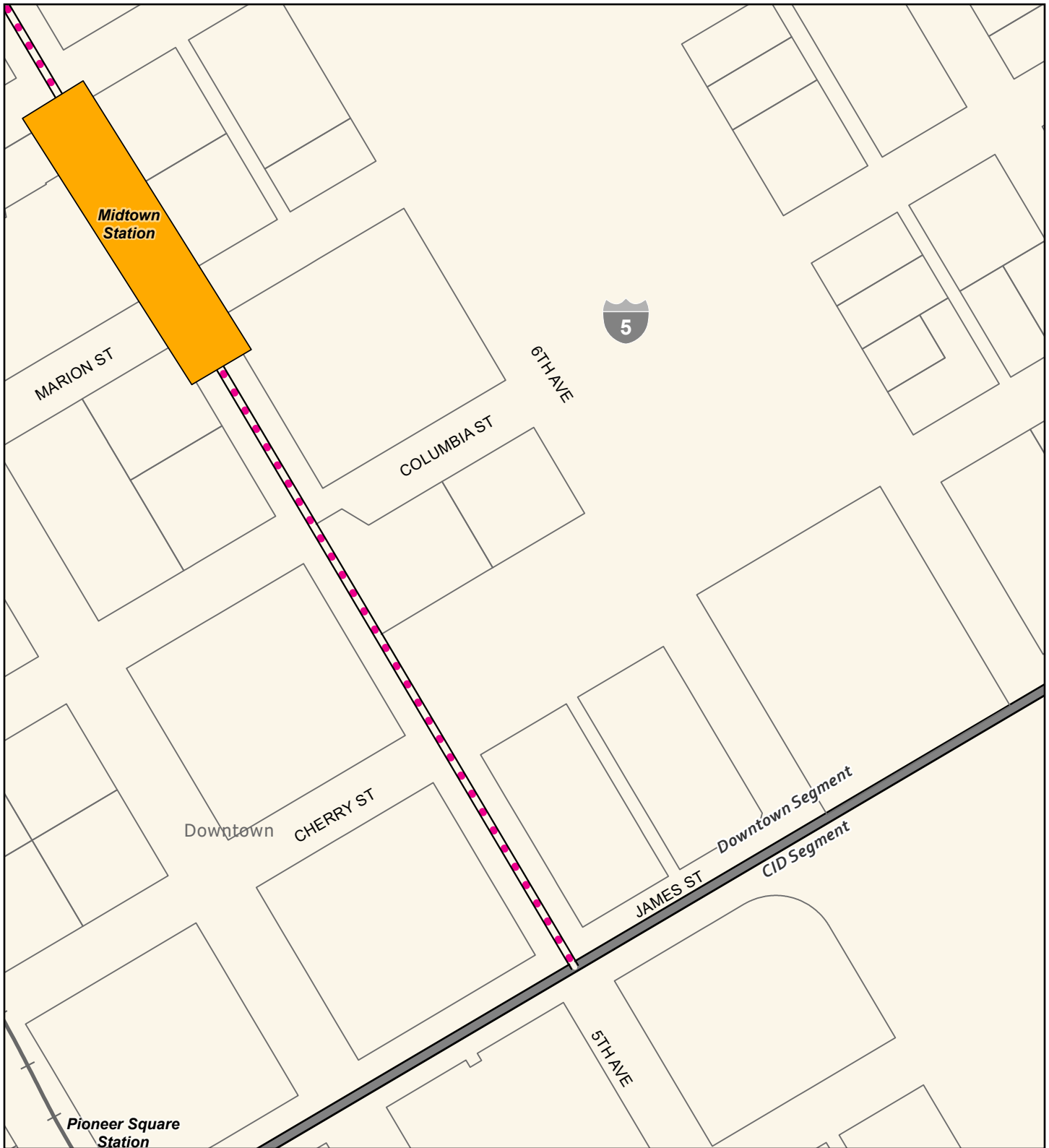
FIGURE N.3E-21f

Option CID-2b

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Chinatown-International District Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

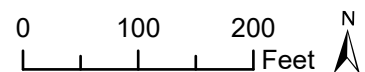
- Elevated
- Tunnel
- At-Grade
- Retained Cut

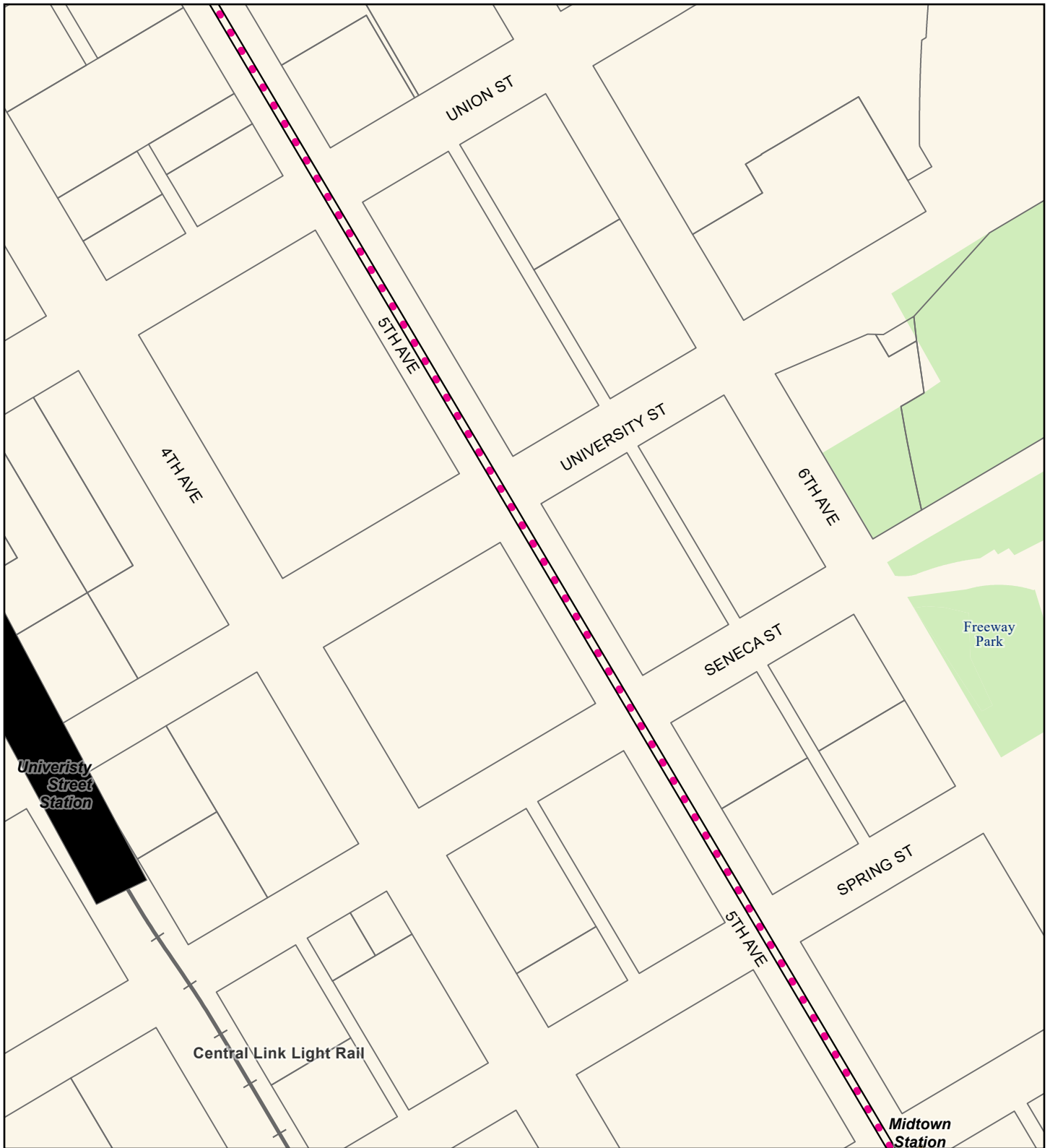
Station

- New
- Existing

- Segment Line
- Existing Link Light Rail
- Parcel

FIGURE N.3E-22a
Alternative DT-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Downtown Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

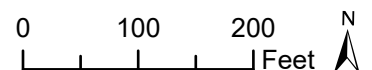
- Existing Link Light Rail
- Parcel
- Park

FIGURE N.3E-22b

Alternative DT-1

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Downtown Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

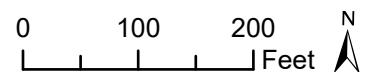
- Elevated
- At-Grade
- Tunnel
- Retained Cut

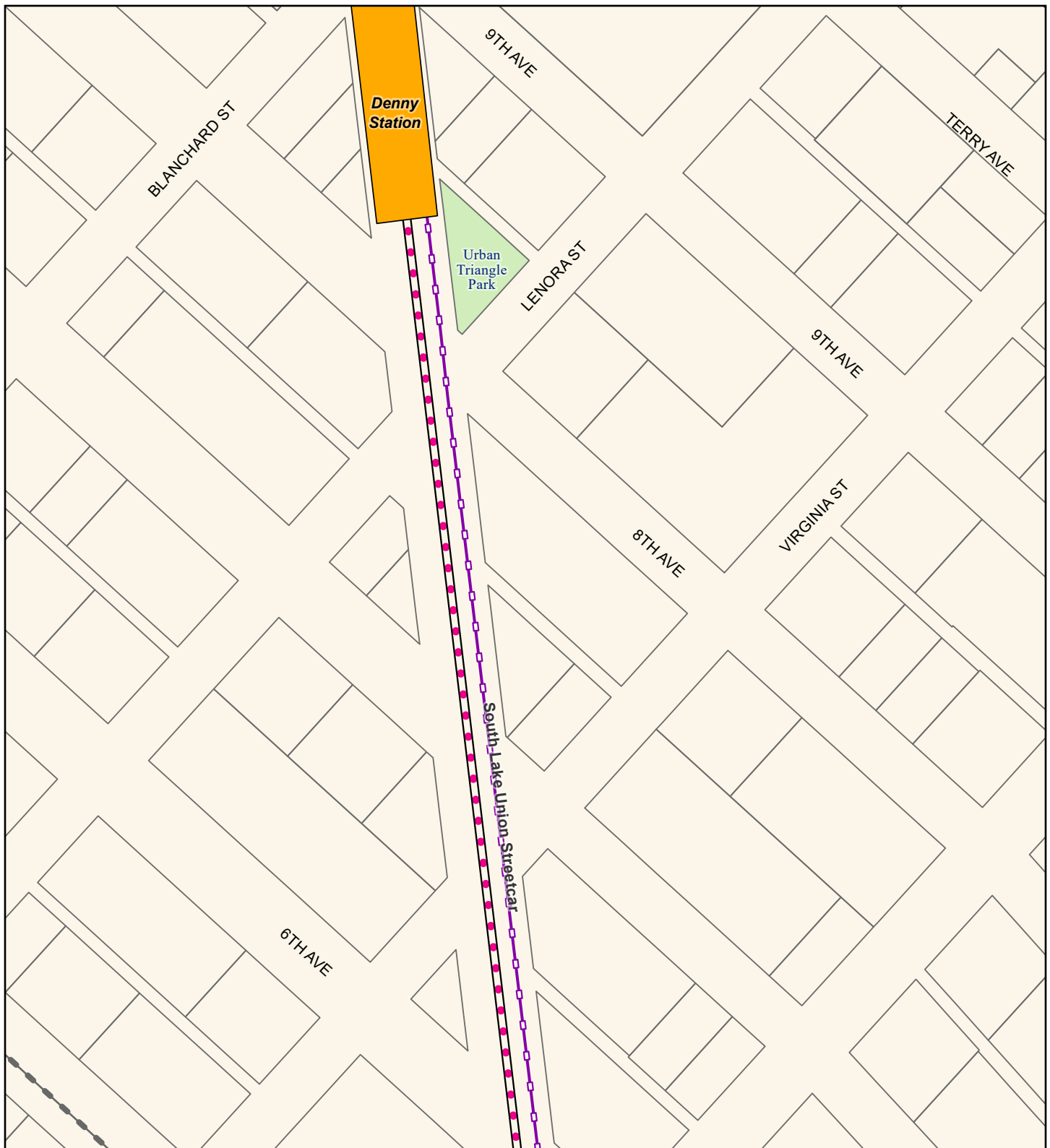
Station

- New
- Existing

- Center City
- Connector Streetcar (Construction Paused)
- Streetcar Line
- Existing Link Light Rail
- Monorail
- Parcel
- Park

FIGURE N.3E-22c
Alternative DT-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Downtown Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

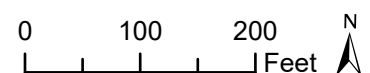
- Elevated
- Tunnel
- At-Grade
- Retained Cut

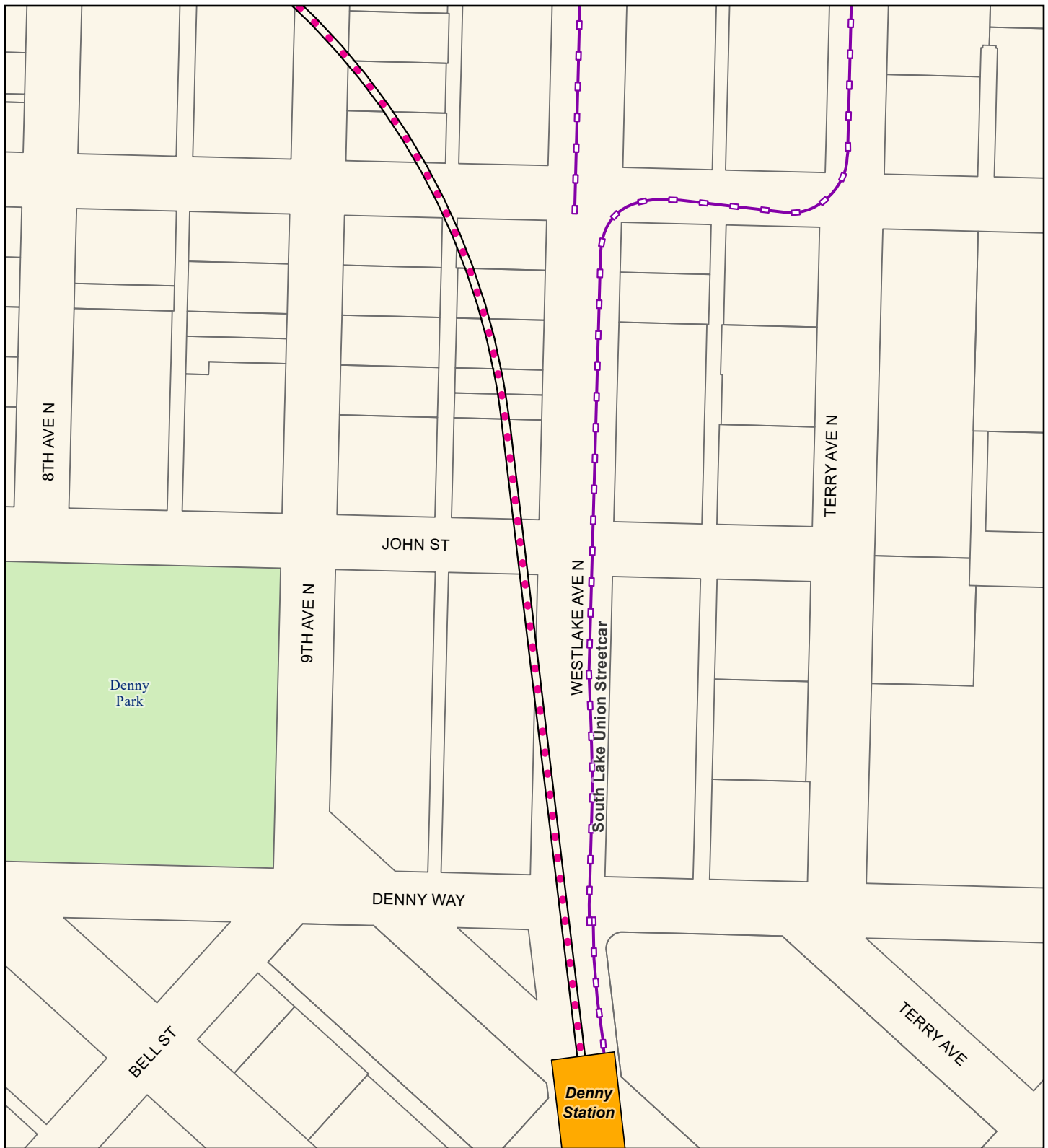
Station

- New
- Existing

- Streetcar Line
- Monorail
- Parcel
- Park

FIGURE N.3E-22d
Alternative DT-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Downtown Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

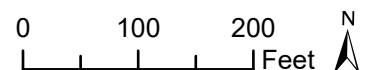
- Existing Streetcar
- Parcel
- Park

FIGURE N.3E-22e

Alternative DT-1

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Downtown Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

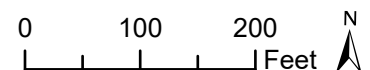
 Parcel

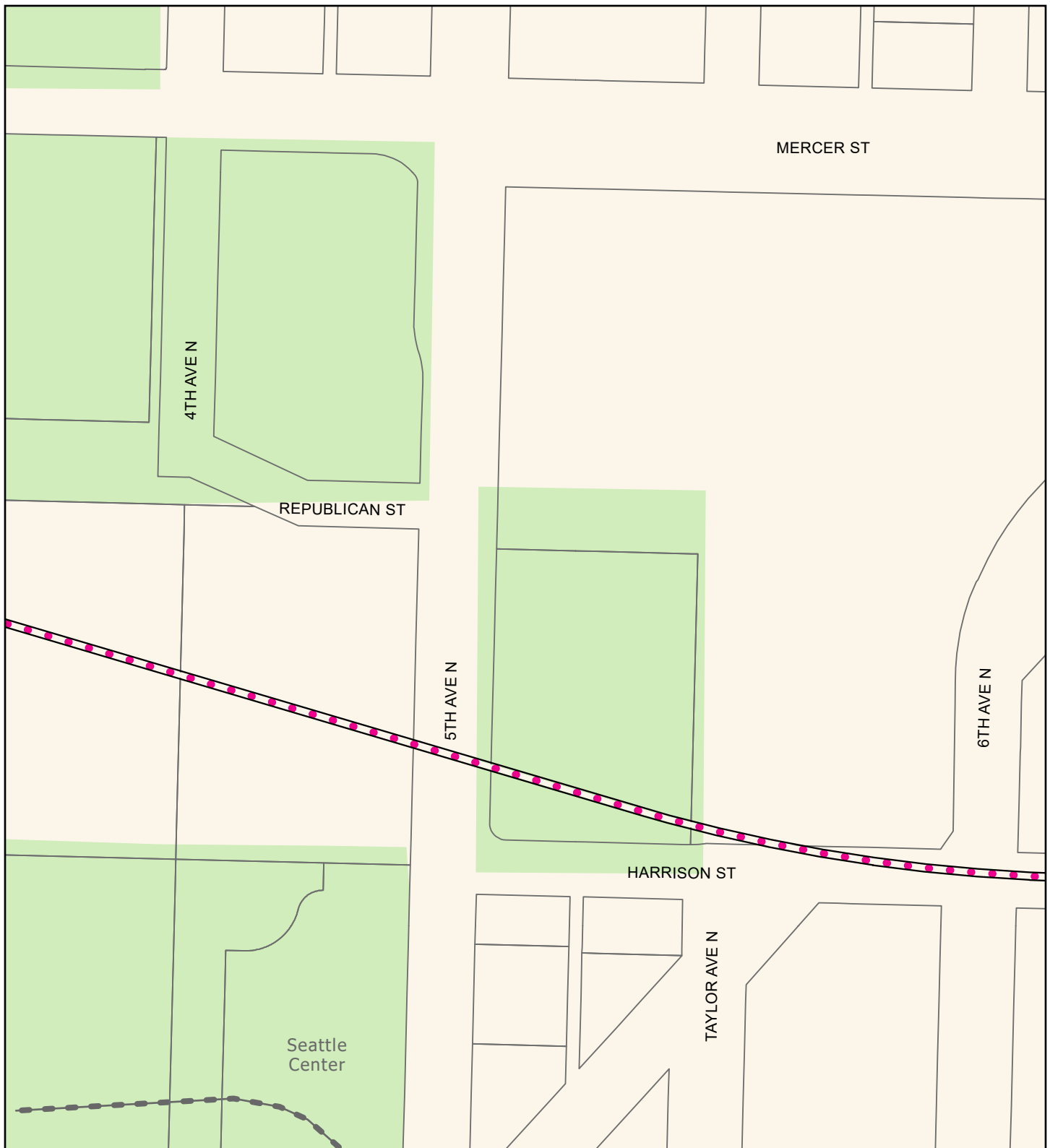
FIGURE N.3E-22f

Alternative DT-1

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Downtown Segment
*West Seattle and
Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

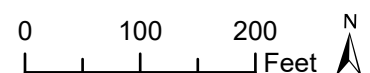
- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

- Monorail
- Parcel
- Park

FIGURE N.3E-22g
Alternative DT-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Downtown Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

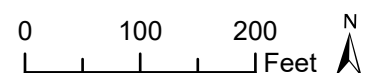
- Elevated
- At-Grade
- Tunnel
- Retained Cut

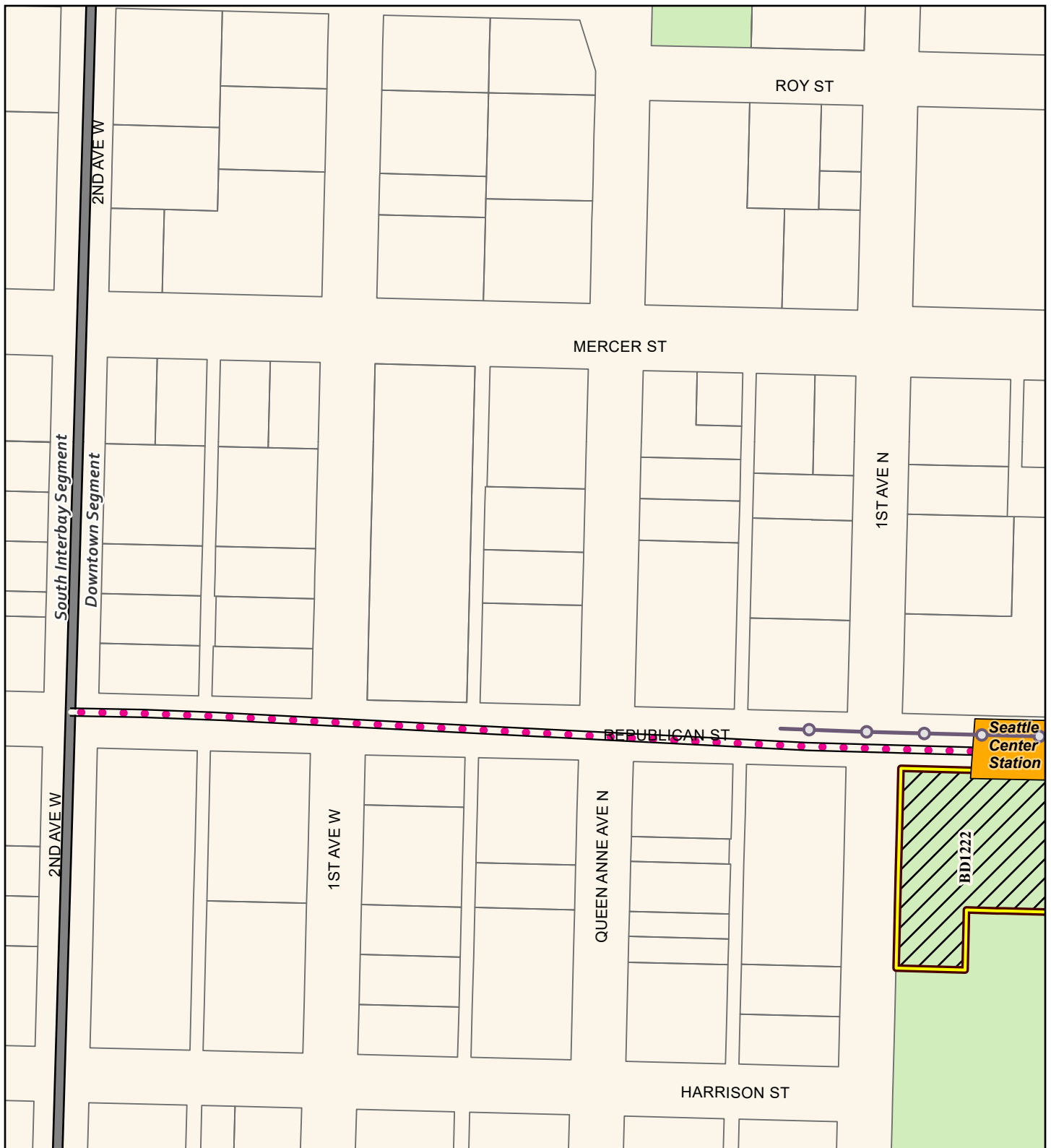
Station

- New
- Existing

- High Resilience Fastener
- Parcel
- Vibration Impact
- Groundborne Noise Impact
- Park

FIGURE N.3E-22h
Alternative DT-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Downtown Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

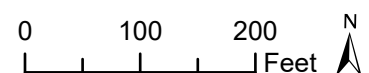
- Elevated
- At-Grade
- Tunnel
- Retained Cut

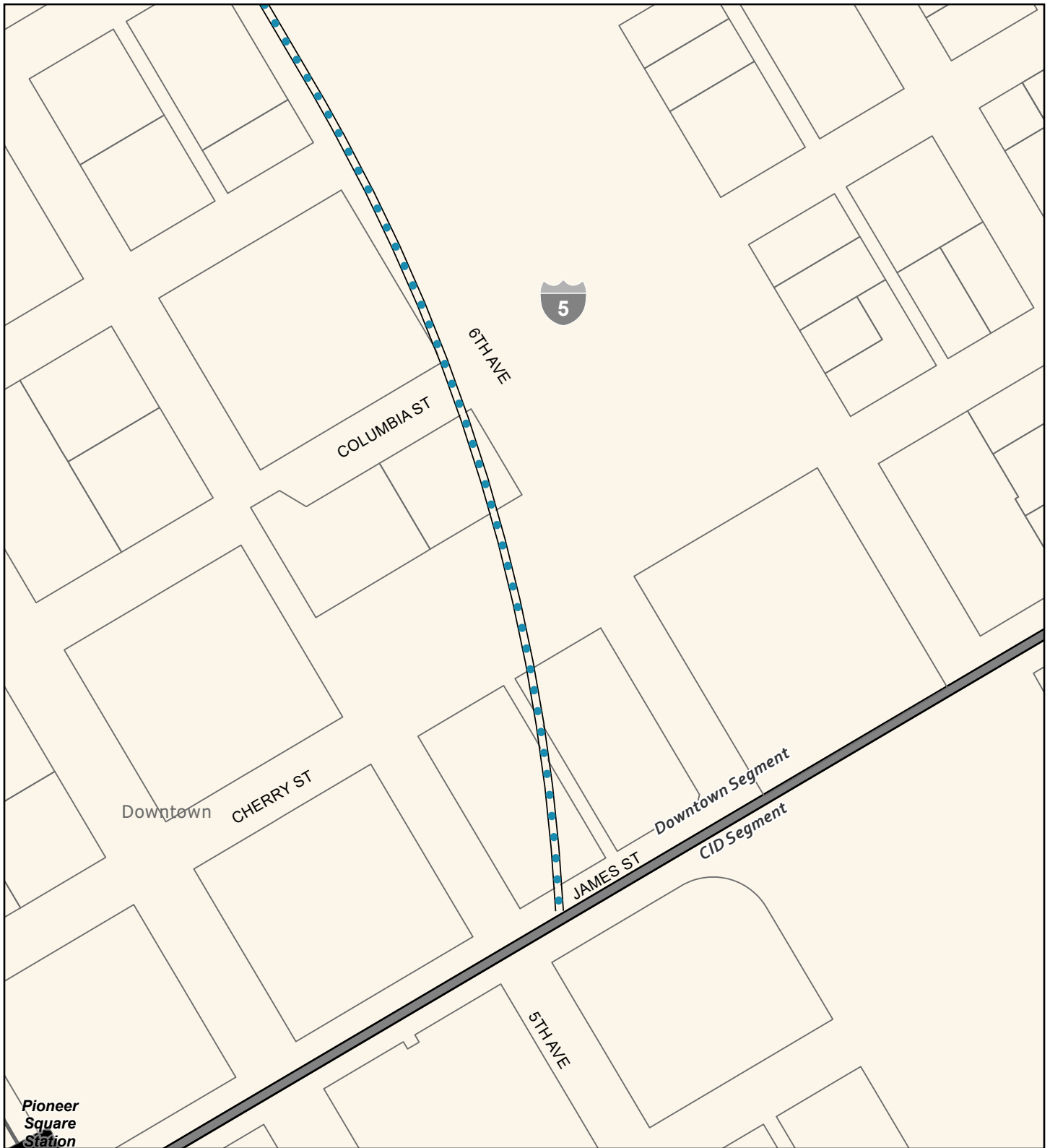
Station

- New
- Existing

- High Resilience Fastener
- Segment Line
- Parcel
- Vibration Impact
- Groundborne Noise Impact
- Park

FIGURE N.3E-22i
Alternative DT-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Downtown Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

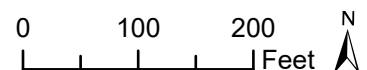
- Elevated
- Tunnel
- At-Grade
- Retained Cut

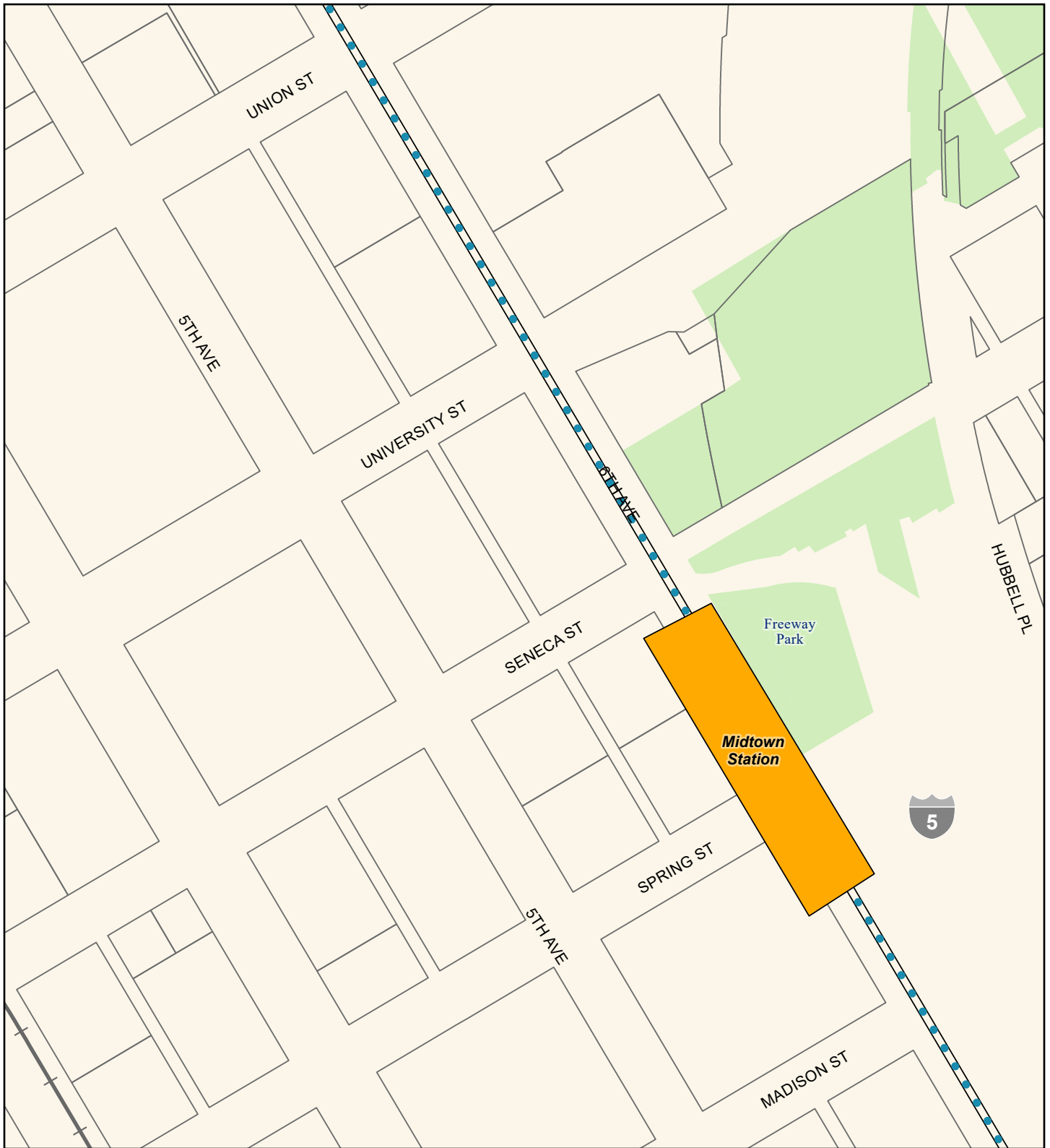
Station

- New
- Existing

- Segment Line
- + Existing Link Light Rail
- Parcel

FIGURE N.3E-23a
Alternative DT-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Downtown Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

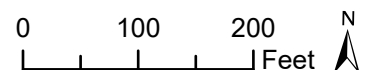
- Existing Link Light Rail
- Parcel
- Park

FIGURE N.3E-23b

Alternative DT-2

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Downtown Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

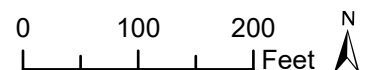
- Elevated
- At-Grade
- Tunnel
- Retained Cut

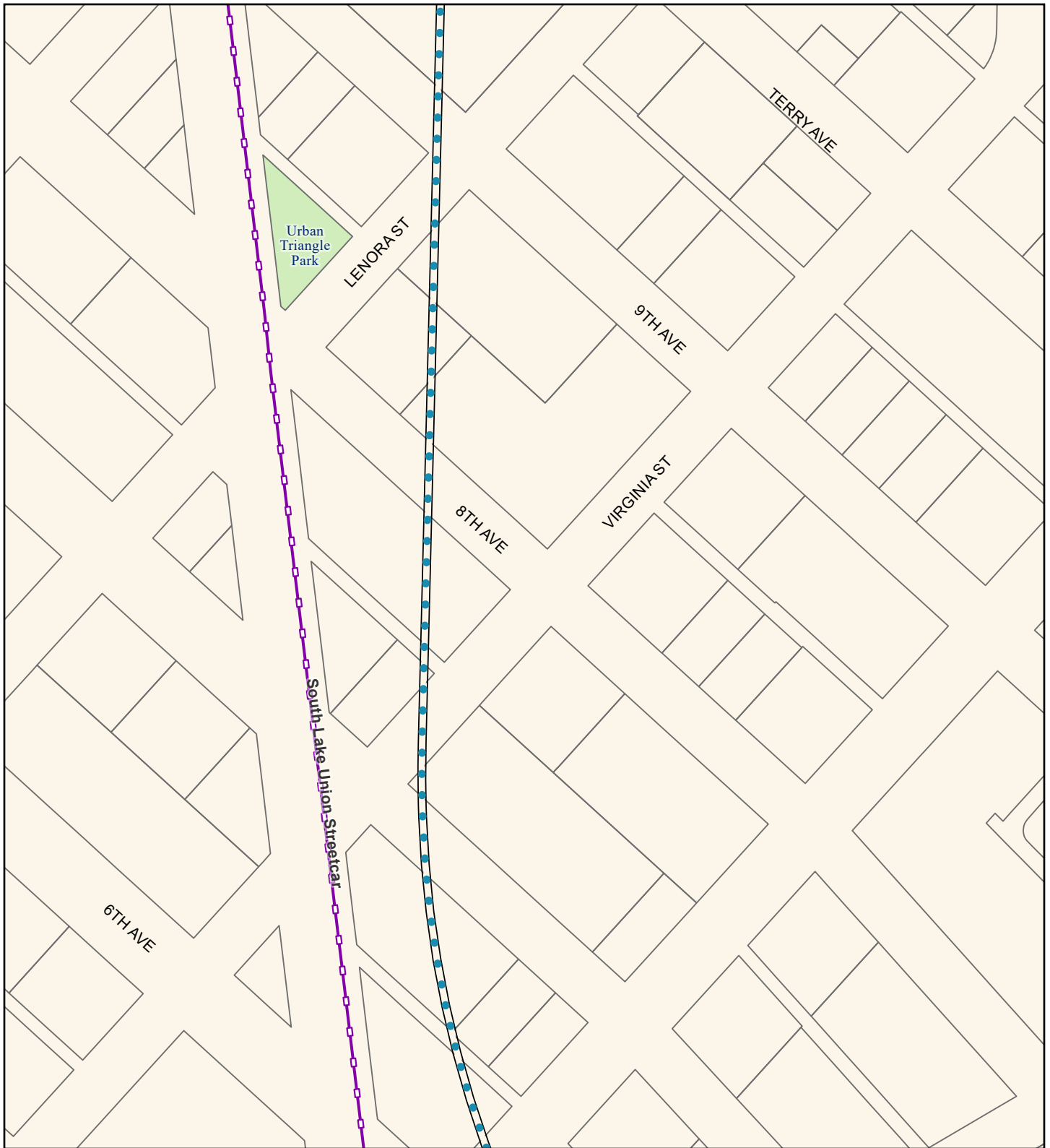
Station

- New
- Existing

- Center City Connector Streetcar (Construction Paused)
- Streetcar Line
- Existing Link Light Rail
- Monorail
- Parcel
- Park

FIGURE N.3E-23c
Alternative DT-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Downtown Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

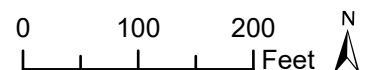
- Elevated
- Tunnel
- At-Grade
- Retained Cut

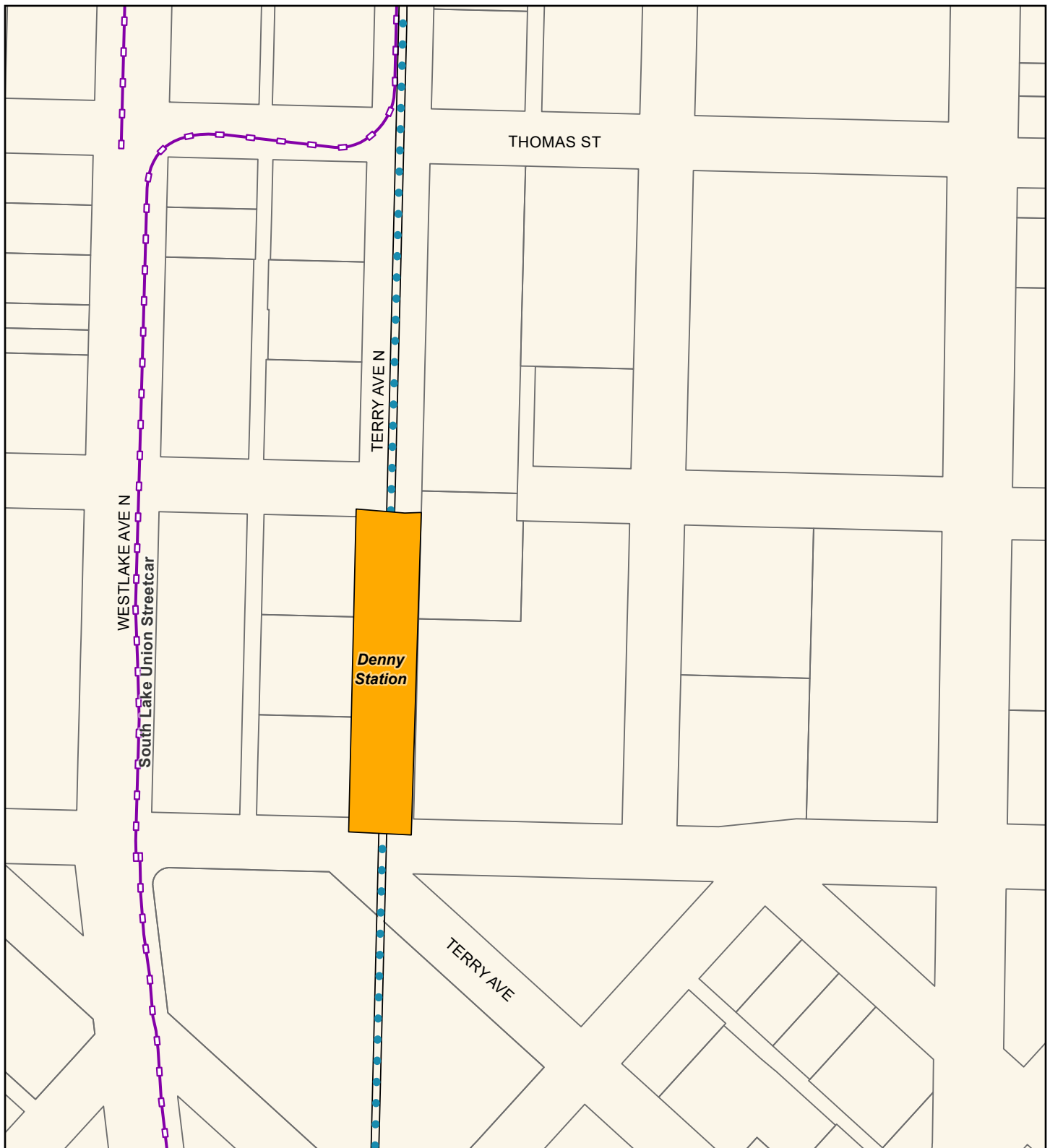
Station

- New
- Existing

- Streetcar Line
- Parcel
- Park

FIGURE N.3E-23d
Alternative DT-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Downtown Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

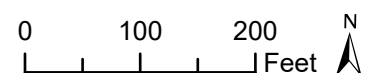
- Elevated
- Tunnel
- At-Grade
- Retained Cut

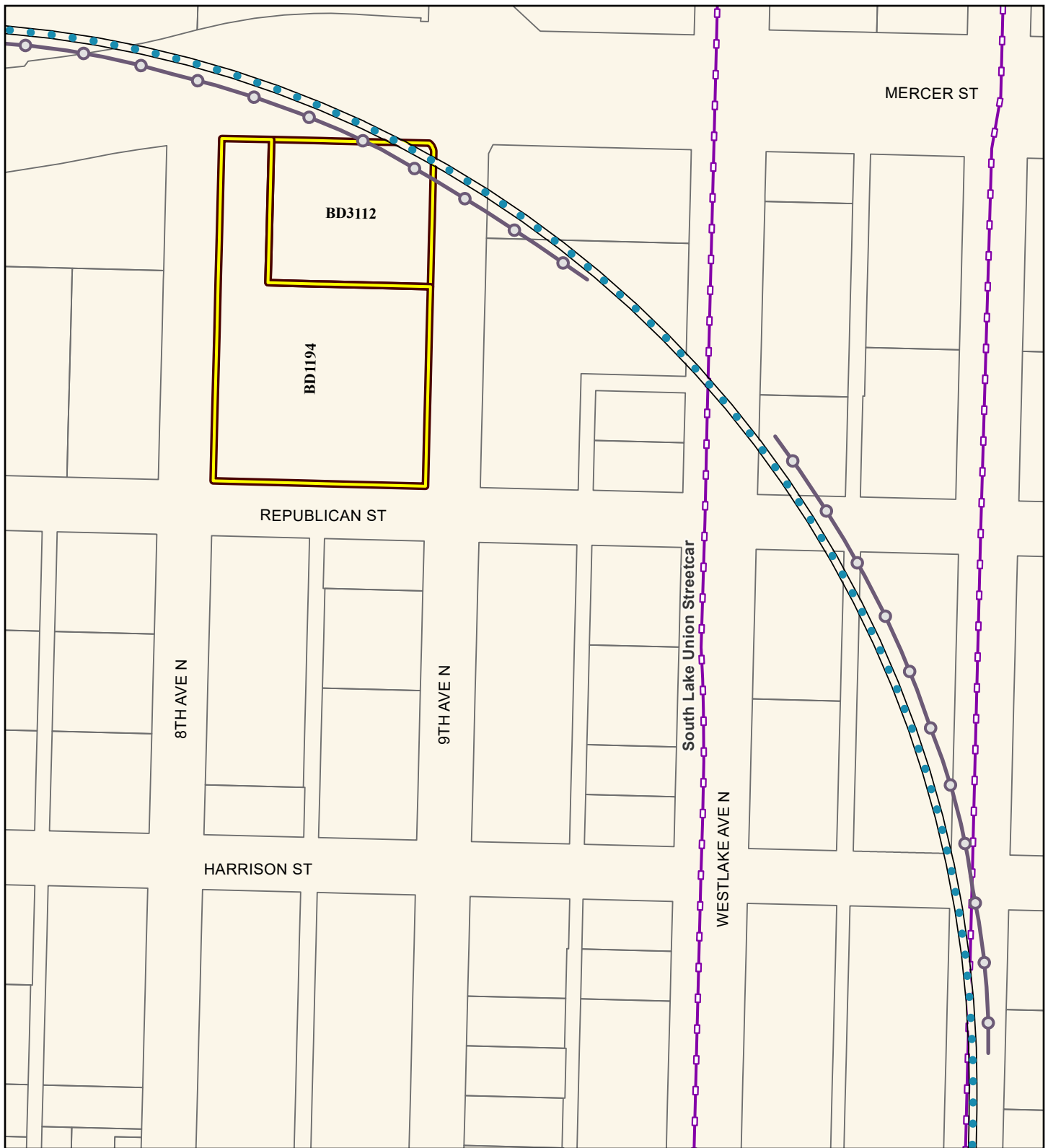
Station

- New
- Existing

- Existing Streetcar
- Parcel

FIGURE N.3E-23e
Alternative DT-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Downtown Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

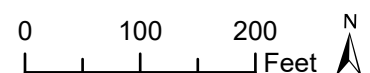
- Elevated — Tunnel
- At-Grade — Retained Cut

Station

- New
- Existing

- High Resilience Fastener
- Existing Streetcar
- Parcel
- Vibration Impact

FIGURE N.3E-23f
Alternative DT-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Downtown Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

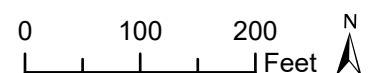
- Elevated
- Tunnel
- At-Grade
- Retained Cut

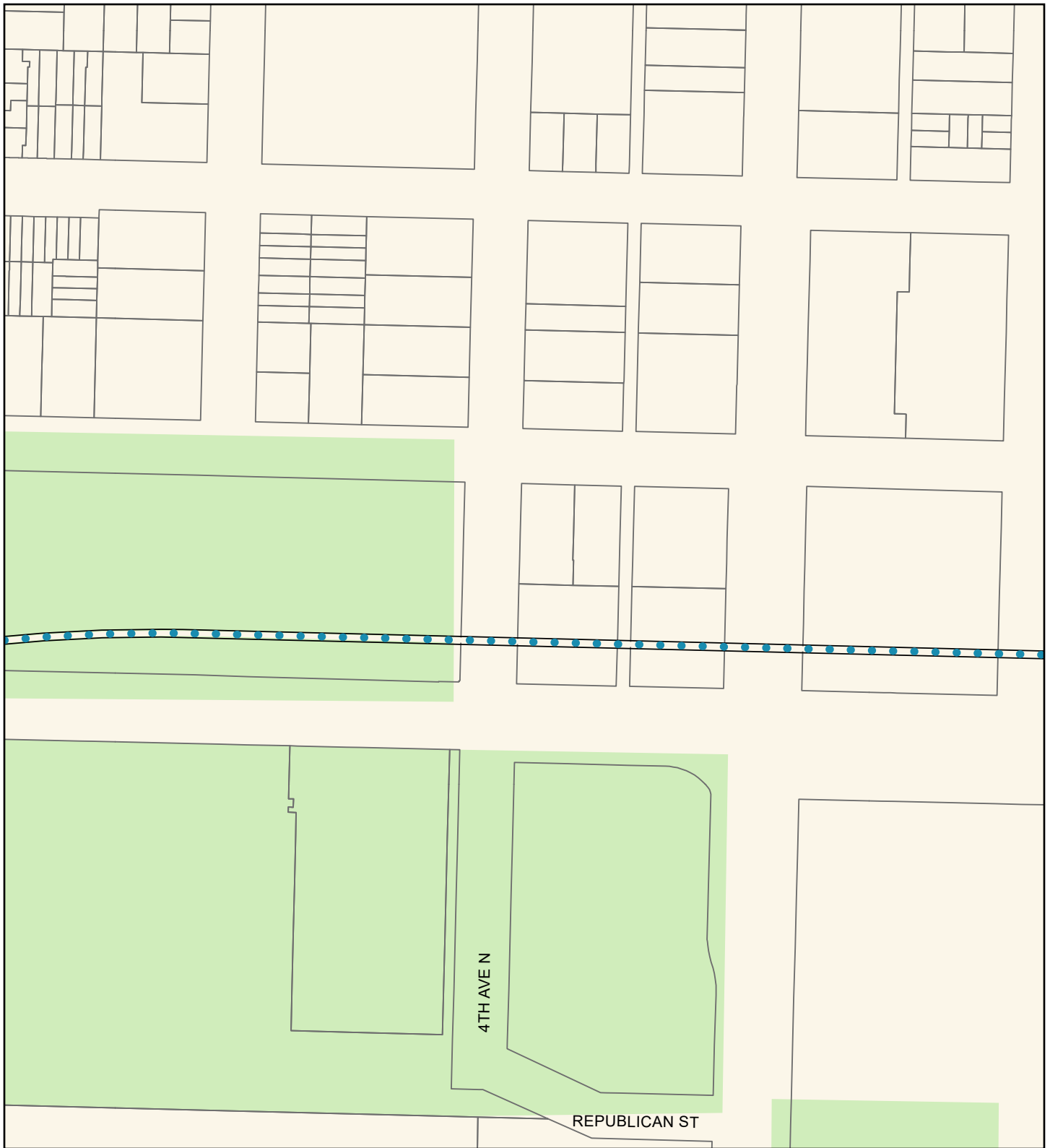
Station

- New
- Existing

- High Resilience Fastener
- Parcel

FIGURE N.3E-23g
Alternative DT-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Downtown Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

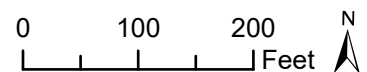
- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

- Parcel
- Park

FIGURE N.3E-23h
Alternative DT-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Downtown Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

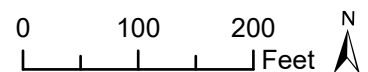
- Elevated
- Tunnel
- At-Grade
- Retained Cut

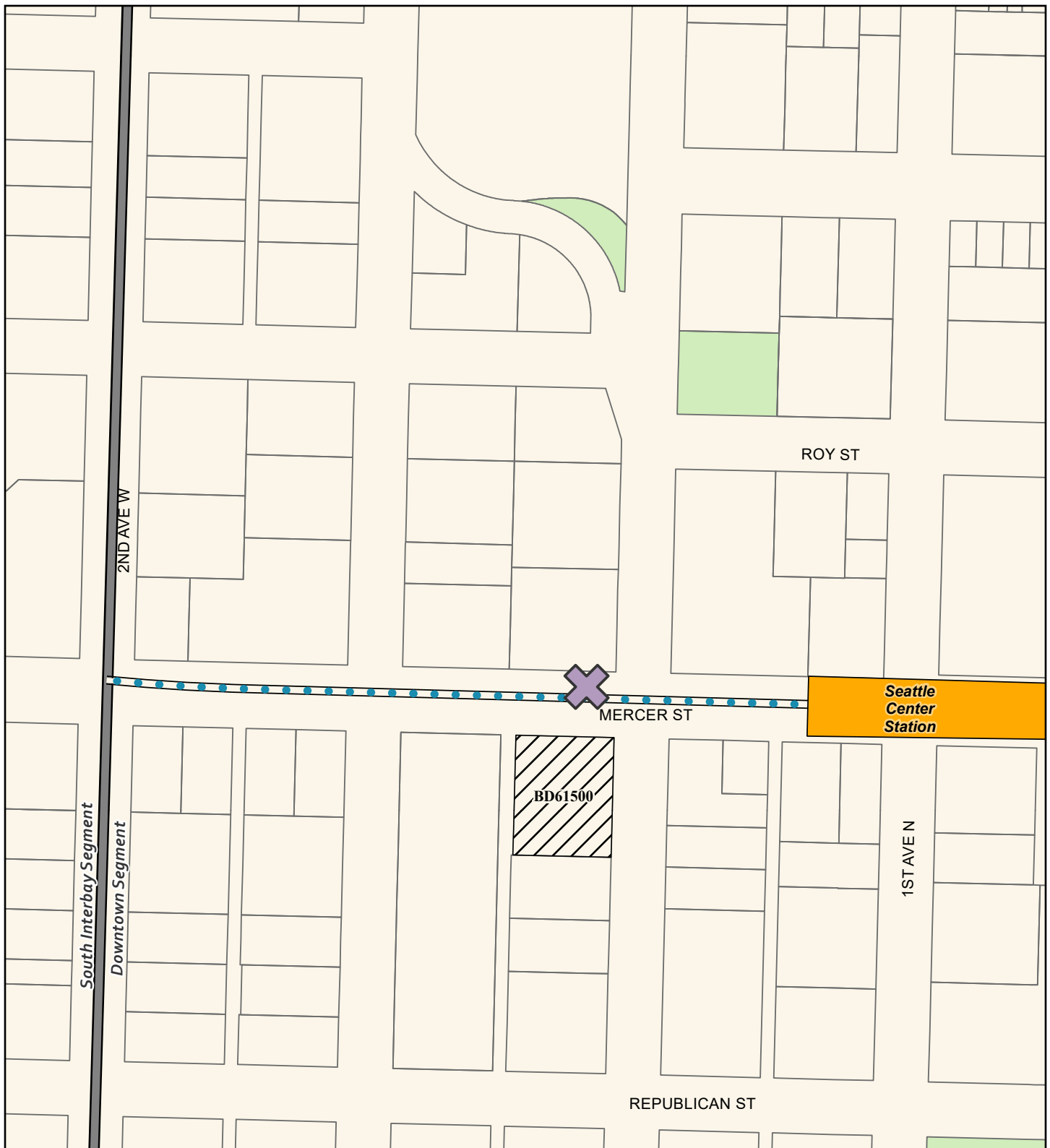
Station

- New
- Existing

- Parcel
- Park

FIGURE N.3E-23i
Alternative DT-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Downtown Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

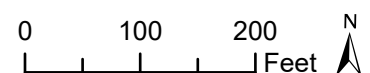
- Elevated
- At-Grade
- Tunnel
- Retained Cut

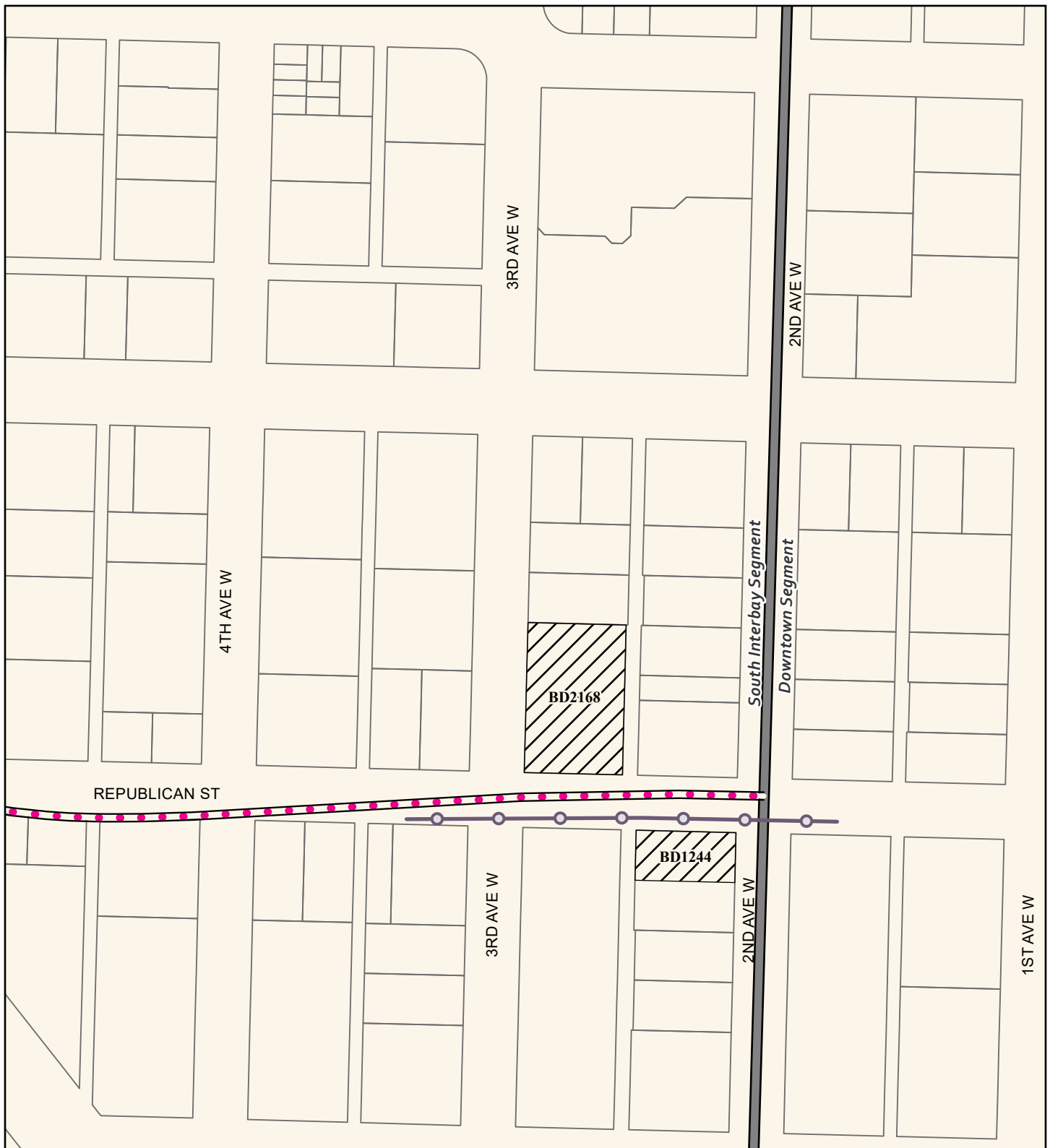
Station

- New
- Existing

- X Low-Impact Frog
- Segment Line
- Parcel
- ▨ Groundborne Noise Impact
- Park

FIGURE N.3E-23j
Alternative DT-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Downtown Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

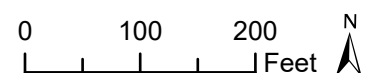
- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

- High Resilience Fastener
- Segment Line
- Parcel
- Groundborne Noise Impact

FIGURE N.3E-24a
Alternative SIB-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

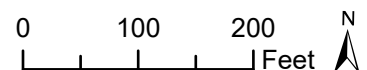
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- X Low-Impact Frog
- High Resilience Fastener
- Railroad
- Parcel
- Vibration Impact
- Park
- Water Body

FIGURE N.3E-24b
Alternative SIB-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

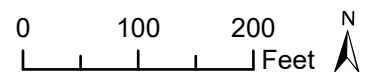
- Elevated
- At-Grade
- Tunnel
- Retained Cut

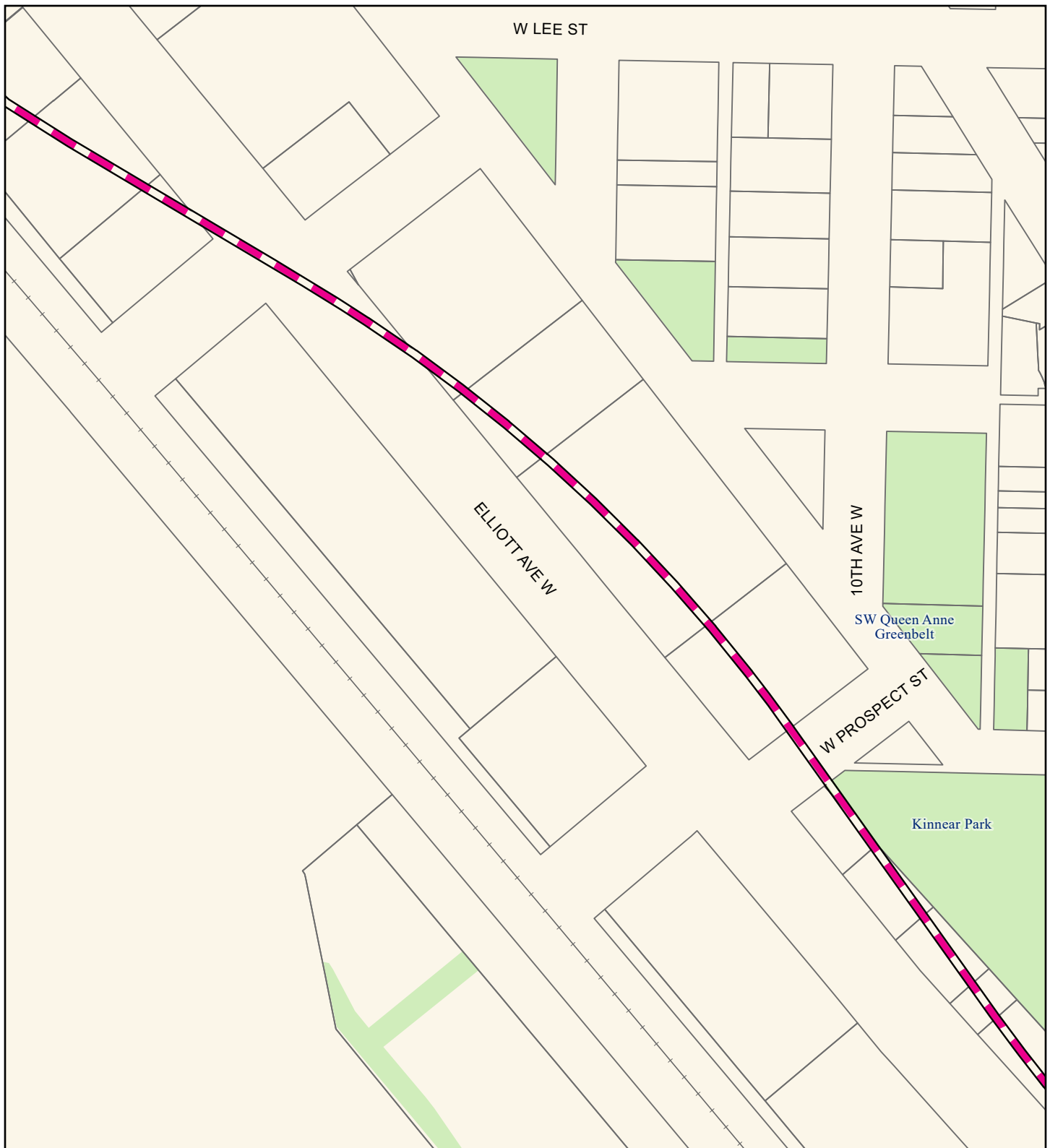
Station

- New
- Existing

- Railroad
- Parcel
- Park

FIGURE N.3E-24c
Alternative SIB-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

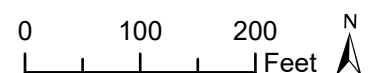
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Parcel
- Park

FIGURE N.3E-24d
Alternative SIB-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

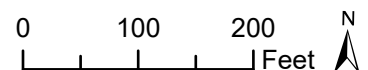
- Elevated
- At-Grade
- Tunnel
- Retained Cut

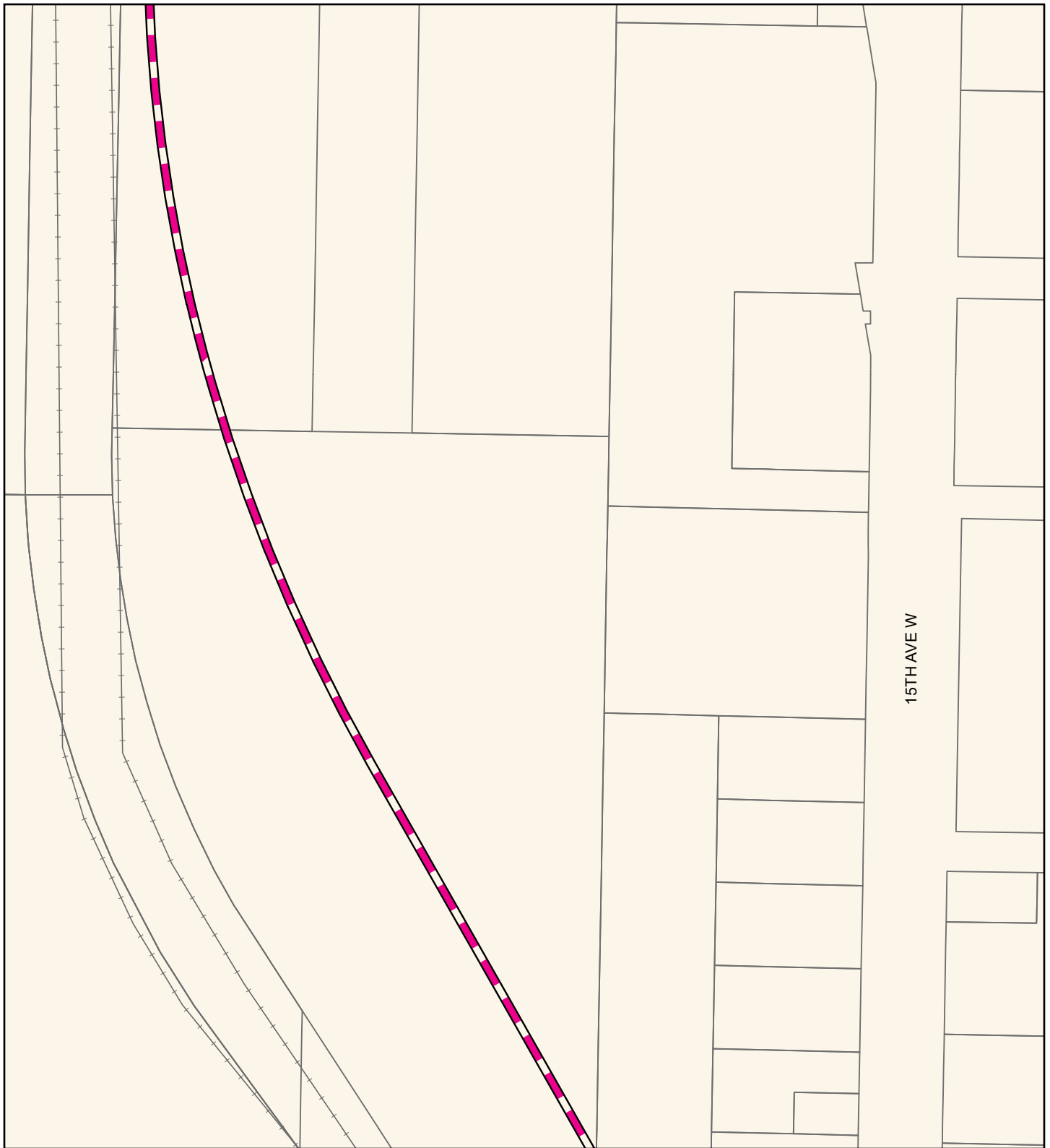
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3E-24e
Alternative SIB-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

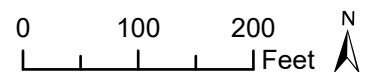
- Elevated
- Tunnel
- At-Grade
- Retained Cut

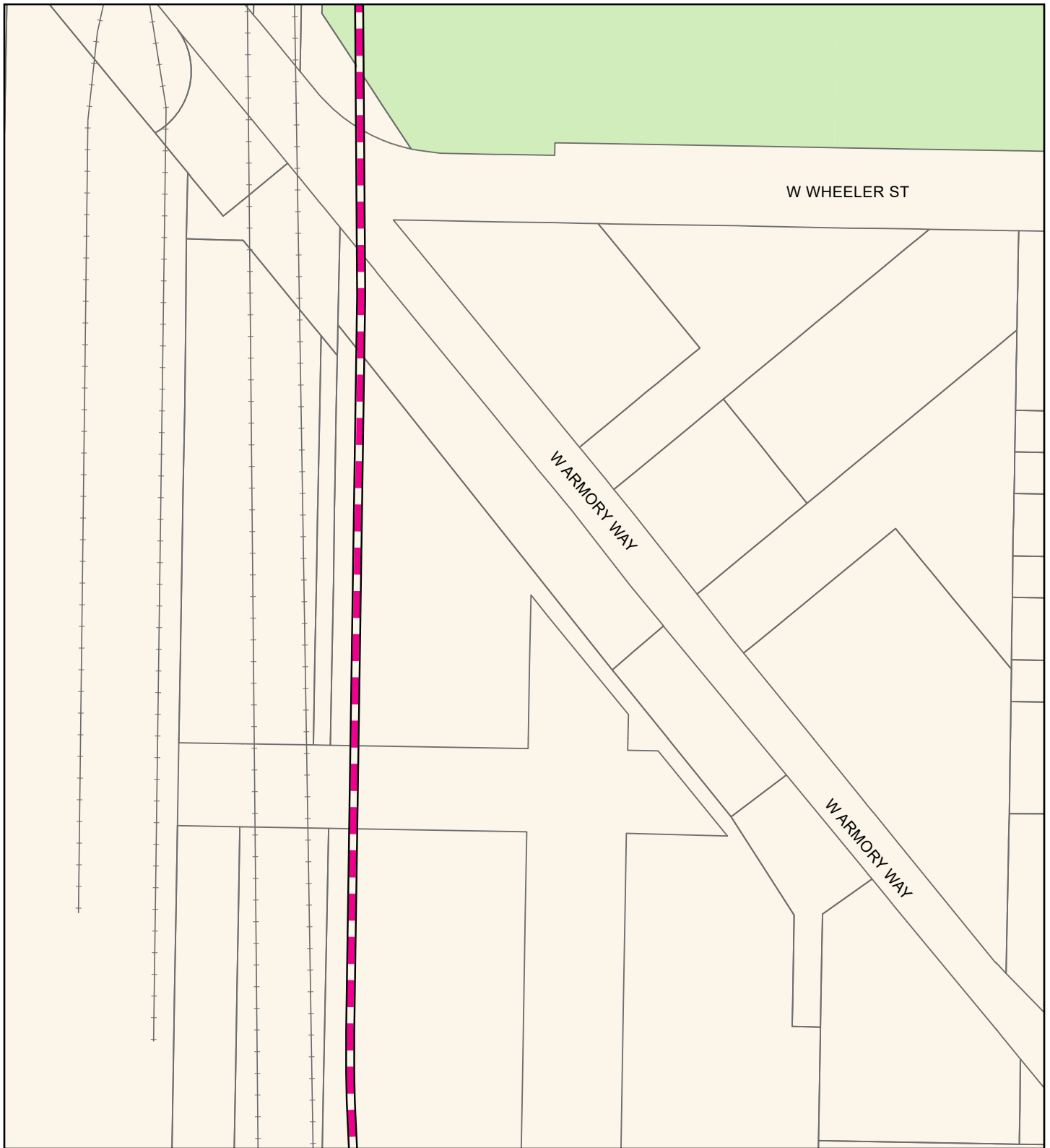
Station

- New
- Existing

- Railroad
- Parcel

FIGURE N.3E-24f
Alternative SIB-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

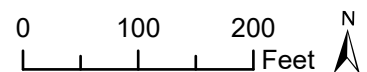
- Elevated
- At-Grade
- Tunnel
- Retained Cut

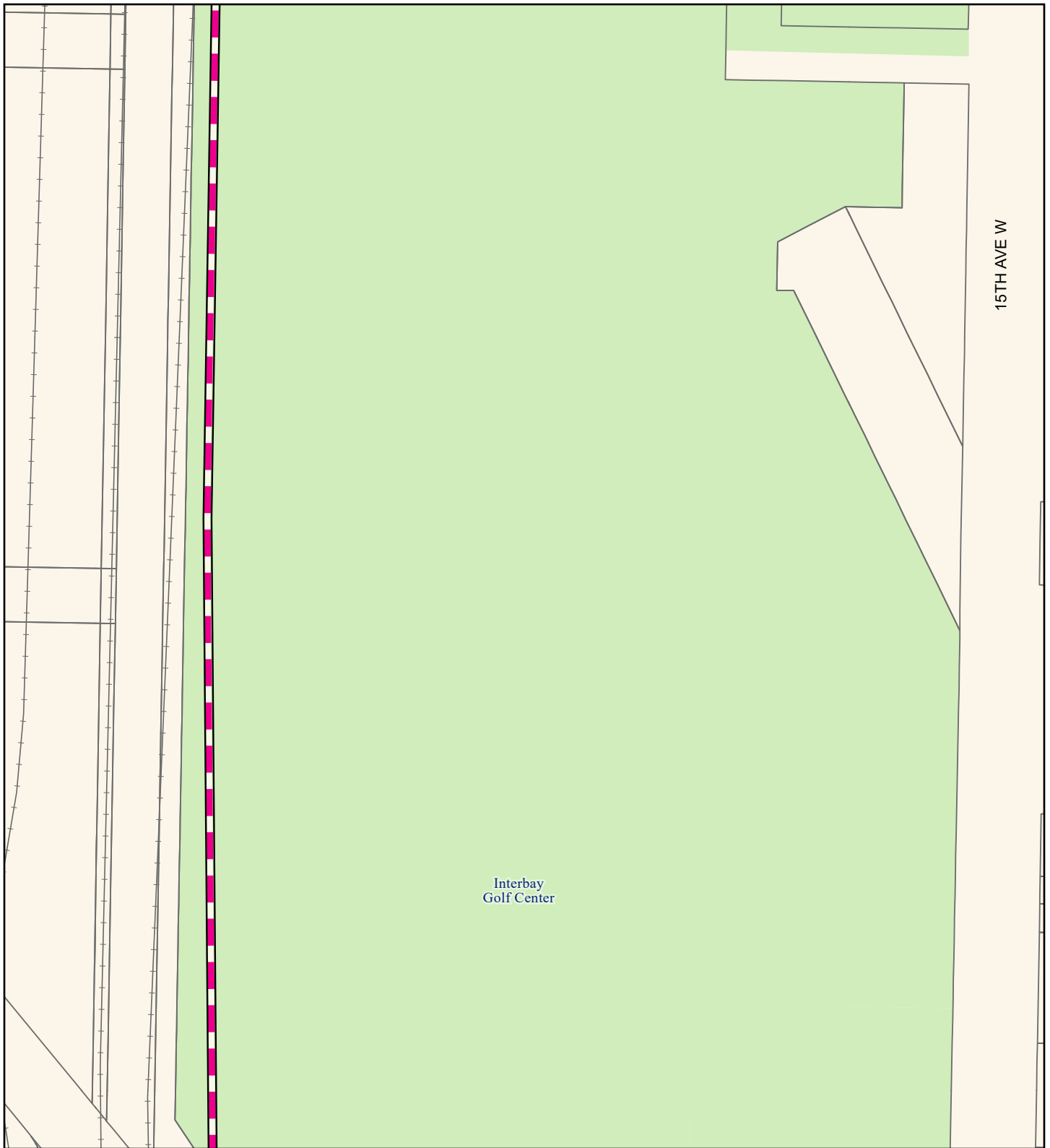
Station

- New
- Existing

- Railroad
- Parcel
- Park

FIGURE N.3E-24g
Alternative SIB-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

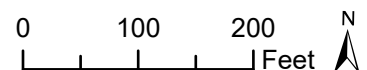
- Elevated
- At-Grade
- Tunnel
- Retained Cut

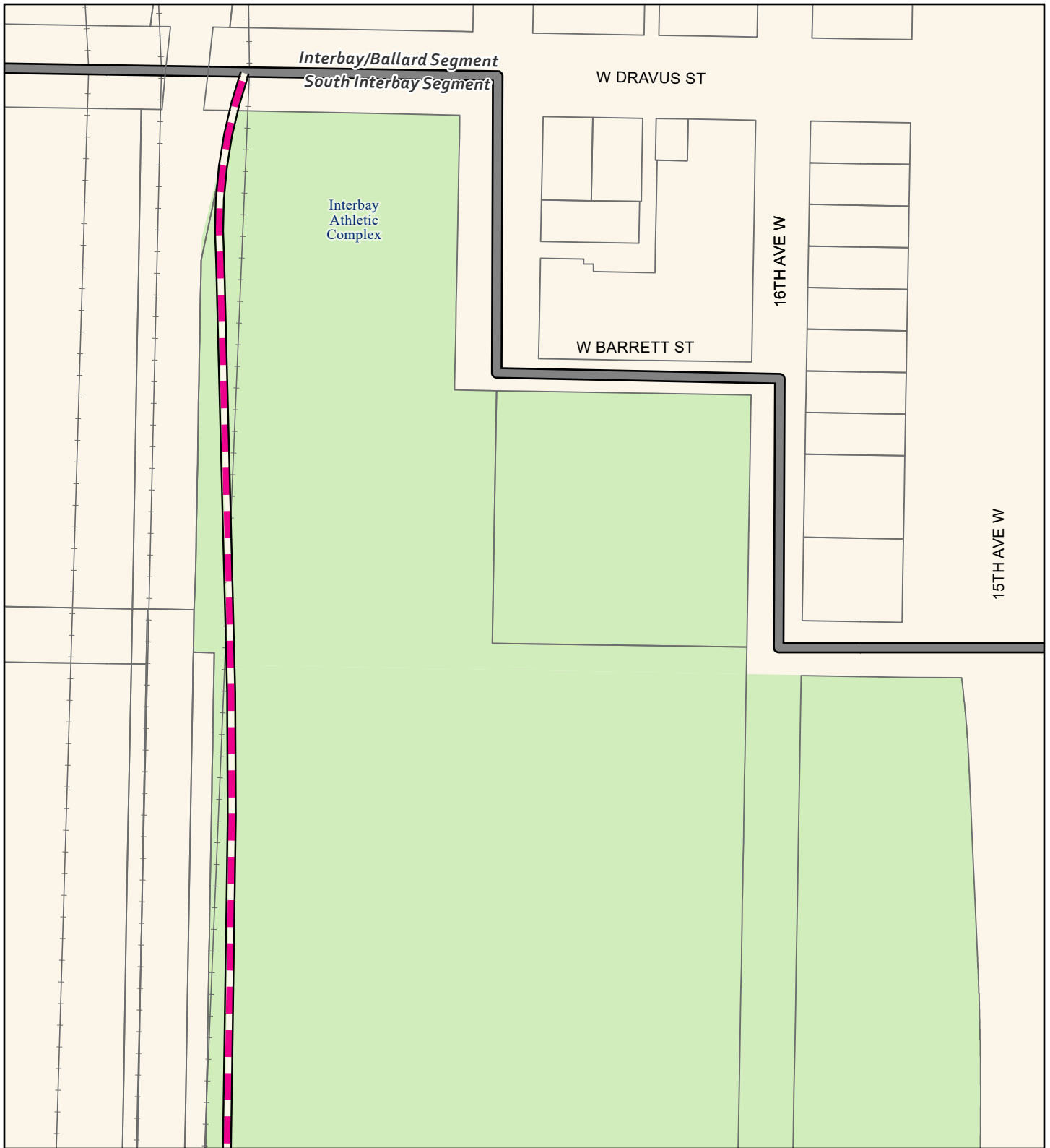
Station

- New
- Existing

- Railroad
- Parcel
- Park

FIGURE N.3E-24h
Alternative SIB-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

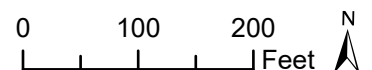
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Segment Line
- Railroad
- Parcel
- Park

FIGURE N.3E-24i
Alternative SIB-1
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

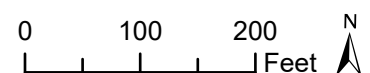
- Elevated
- At-Grade
- Tunnel
- Retained Cut

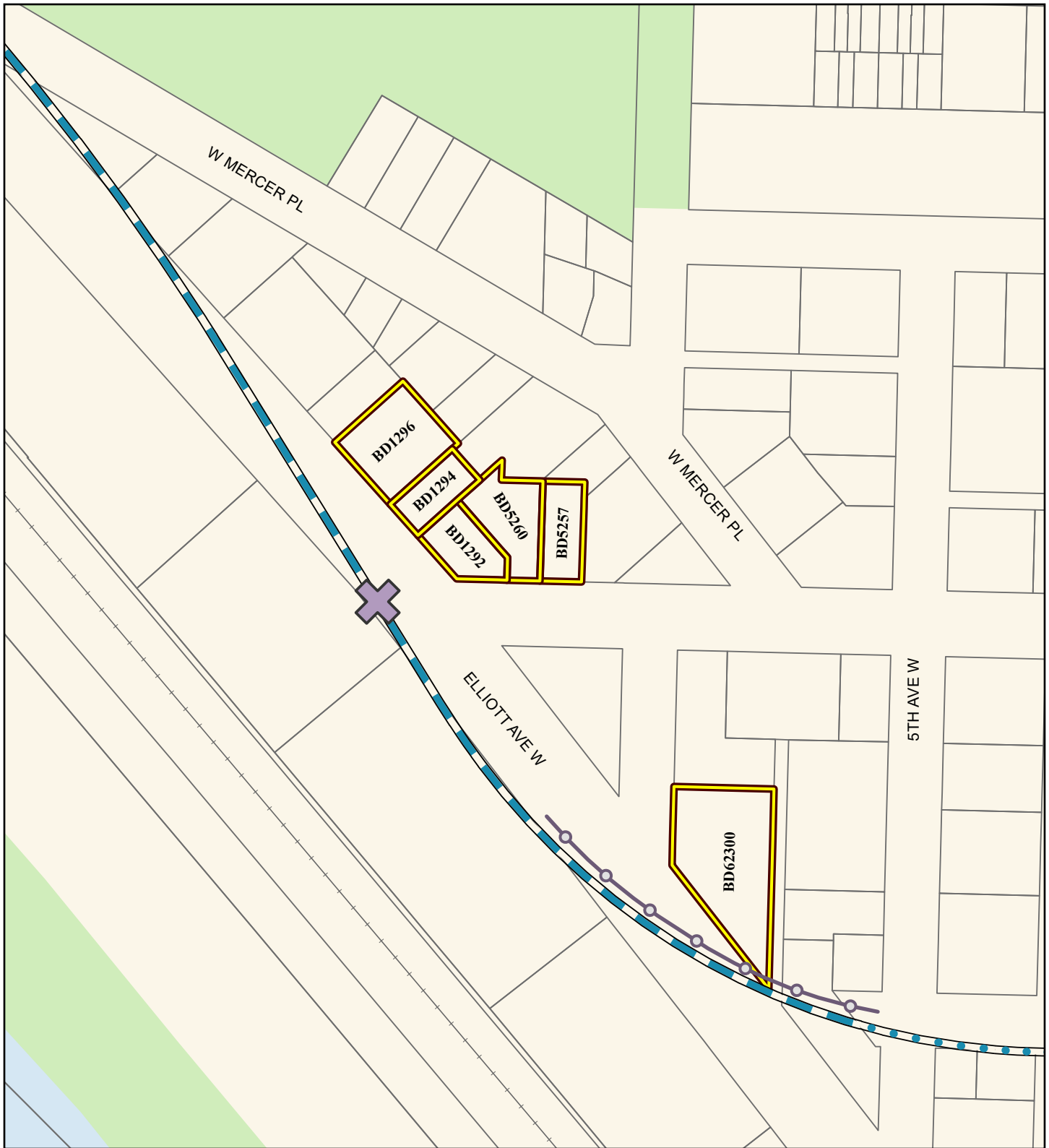
Station

- New
- Existing

- High Resilience Fastener
- Segment Line
- Parcel
- Groundborne Noise Impact

FIGURE N.3E-25a
Alternative SIB-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

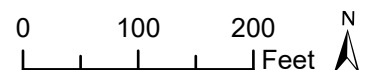
- Elevated
- At-Grade
- Tunnel
- Retained Cut

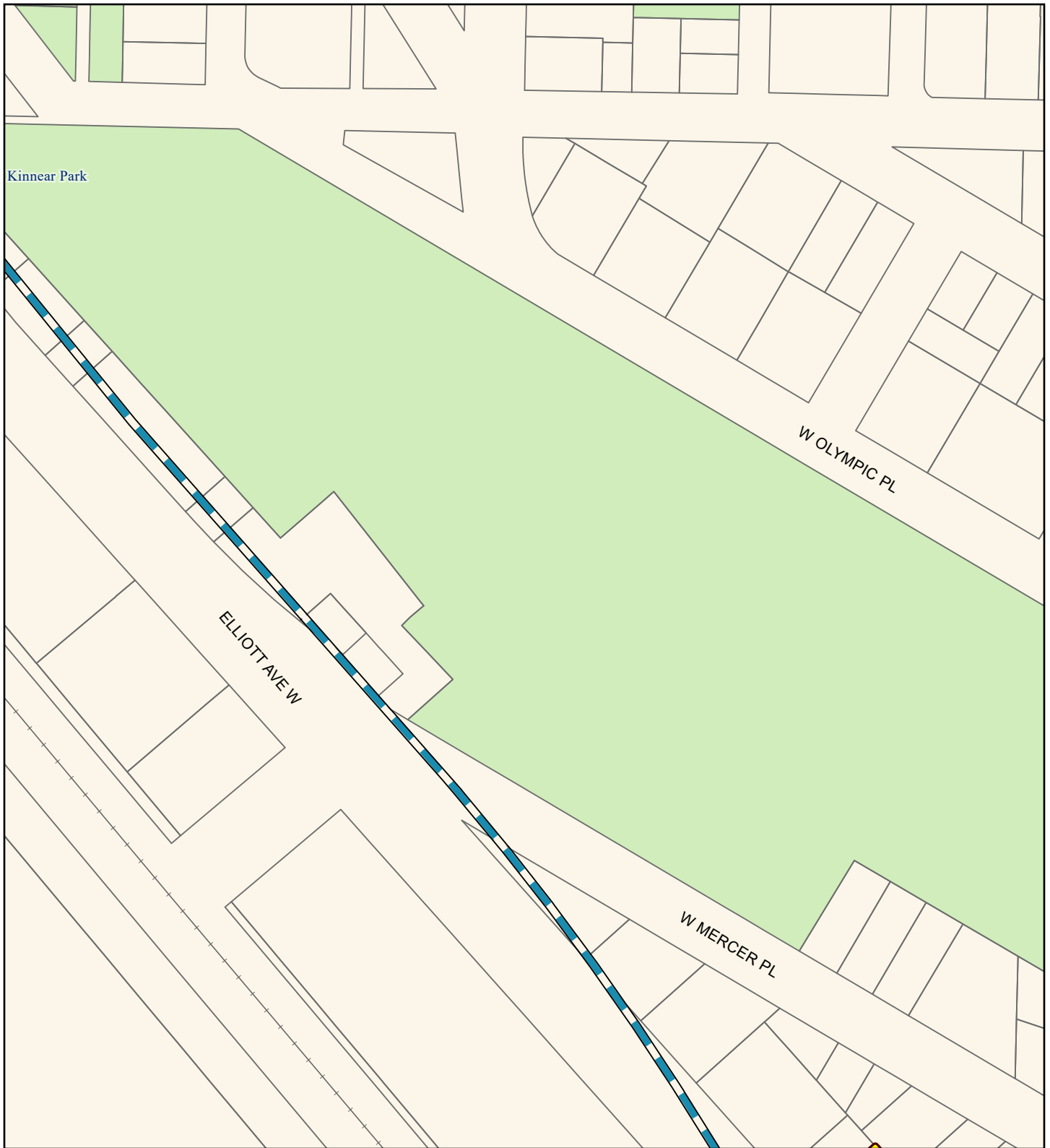
Station

- New
- Existing

- X Low-Impact Frog
- High Resilience Fastener
- Railroad
- Parcel
- Vibration Impact
- Park
- Water Body

FIGURE N.3E-25b
Alternative SIB-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

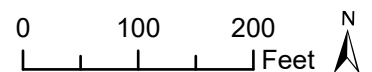
- Elevated
- Tunnel
- At-Grade
- Retained Cut

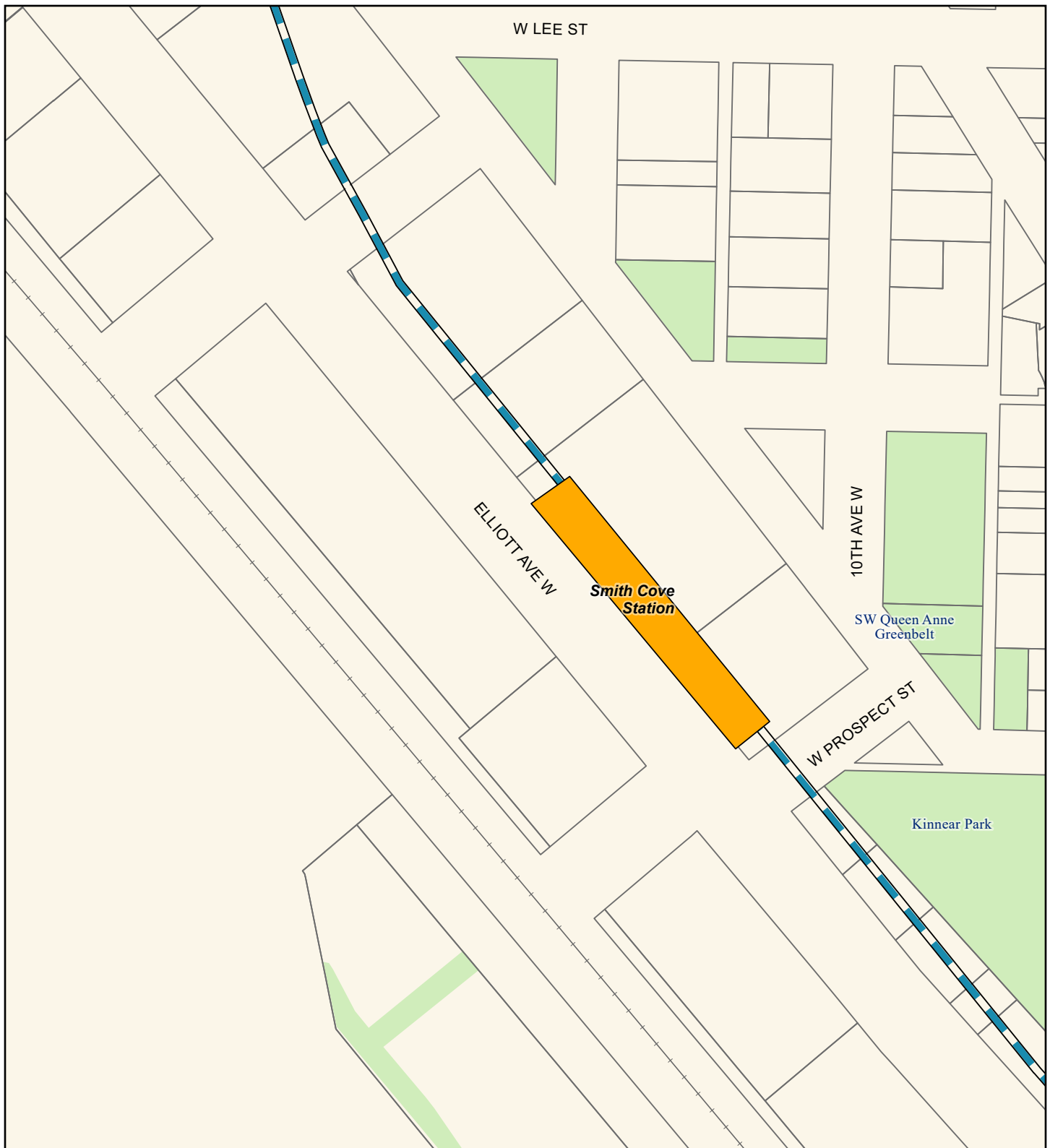
Station

- New
- Existing

- Railroad
- Parcel
- Vibration Impact
- Park

FIGURE N.3E-25c
Alternative SIB-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

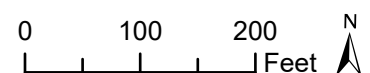
- Elevated
- At-Grade
- Tunnel
- Retained Cut

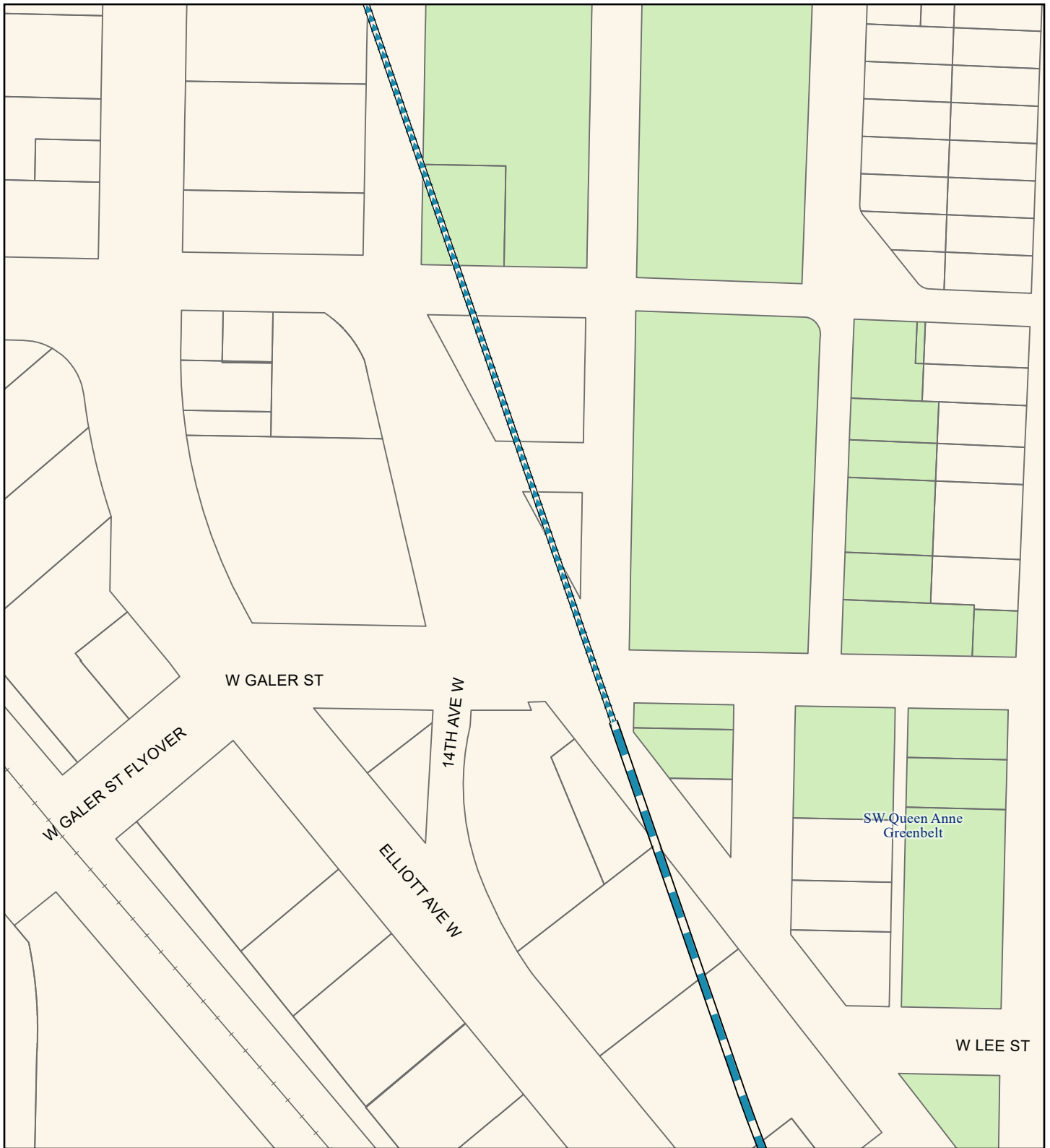
Station

- New
- Existing

- Railroad
- Parcel
- Park

FIGURE N.3E-25d
Alternative SIB-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated — Tunnel
- At-Grade — Retained Cut

Station

- New
- Existing

- Railroad
- Parcel
- Park

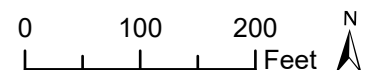
FIGURE N.3E-25e

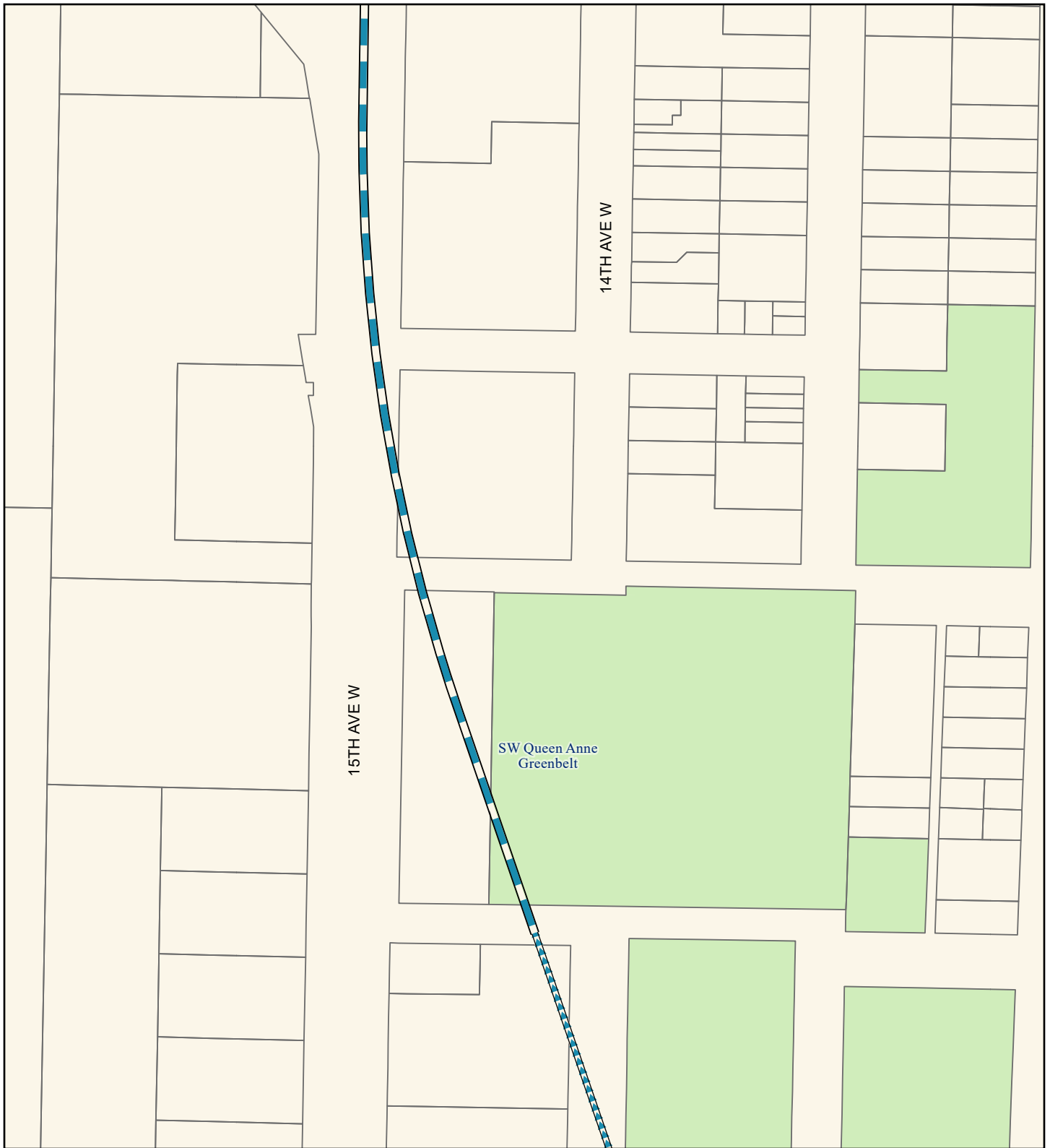
Alternative SIB-2

Vibration and Groundborne Noise Impacts (before mitigation)

**Ballard Link Extension -
South Interbay Segment**

*West Seattle and
Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

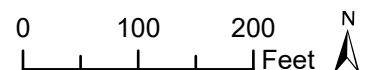
- Elevated
- Tunnel
- At-Grade
- Retained Cut

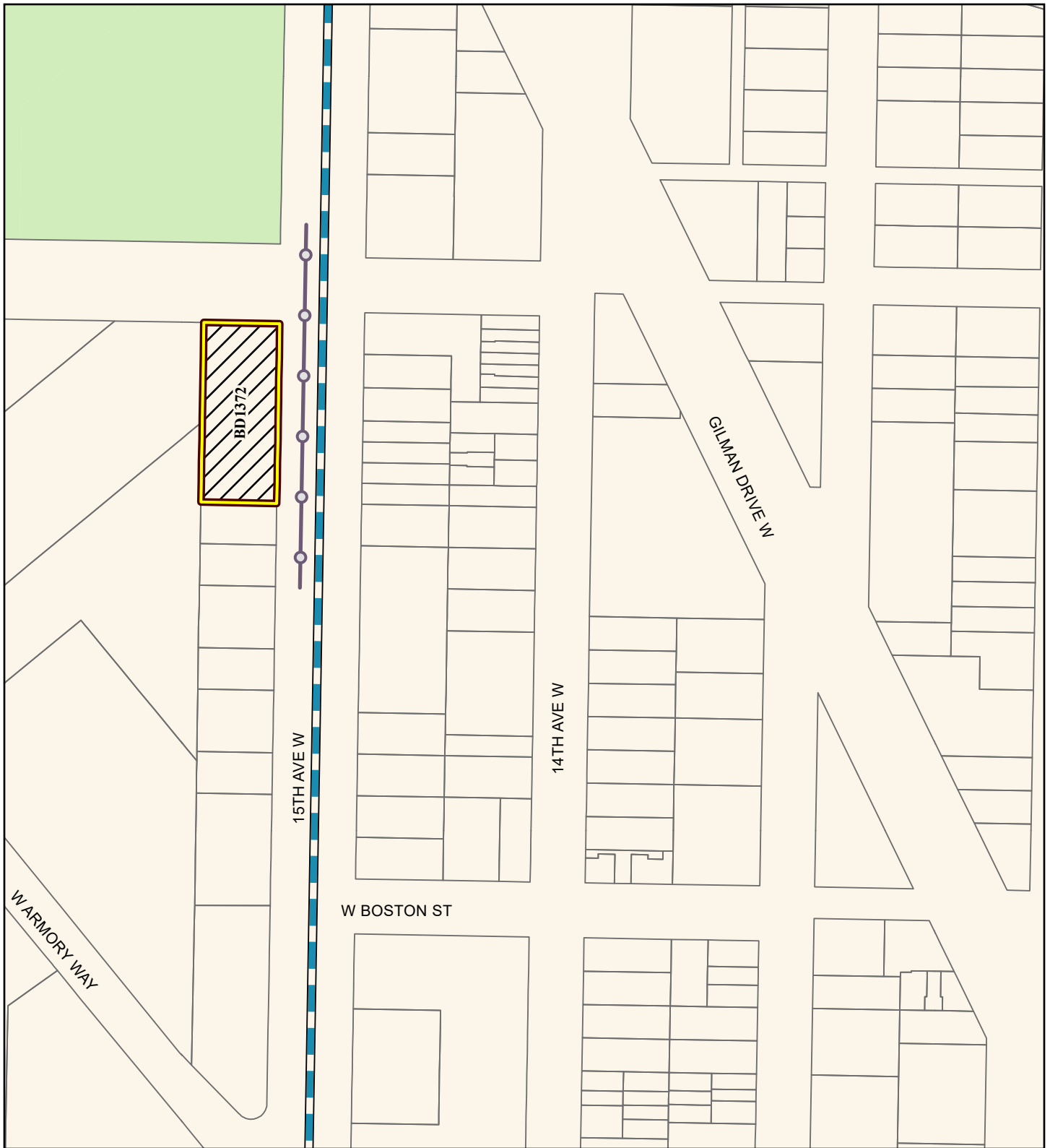
Station

- New
- Existing

- Parcel
- Park

FIGURE N.3E-25f
Alternative SIB-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

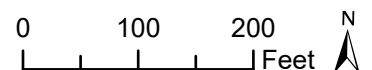
- █ Elevated █ Tunnel
- █ At-Grade █ Retained Cut

Station

- █ New
- █ Existing

- High Resilience Fastener
- Parcel
- Vibration Impact
- Groundborne Noise Impact
- █ Park

FIGURE N.3E-25g
Alternative SIB-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

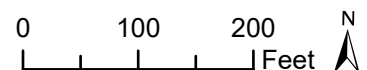
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Parcel
- Park

FIGURE N.3E-25h
Alternative SIB-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

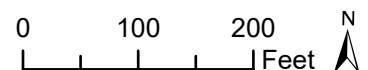
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Segment Line
- Railroad
- Parcel
- Park

FIGURE N.3E-25i
Alternative SIB-2
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

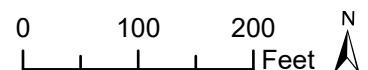
- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

- Segment Line
- Parcel

FIGURE N.3E-26a
Alternative SIB-3
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

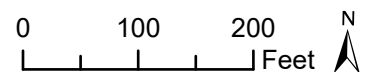
- Elevated — Tunnel
- At-Grade — Retained Cut

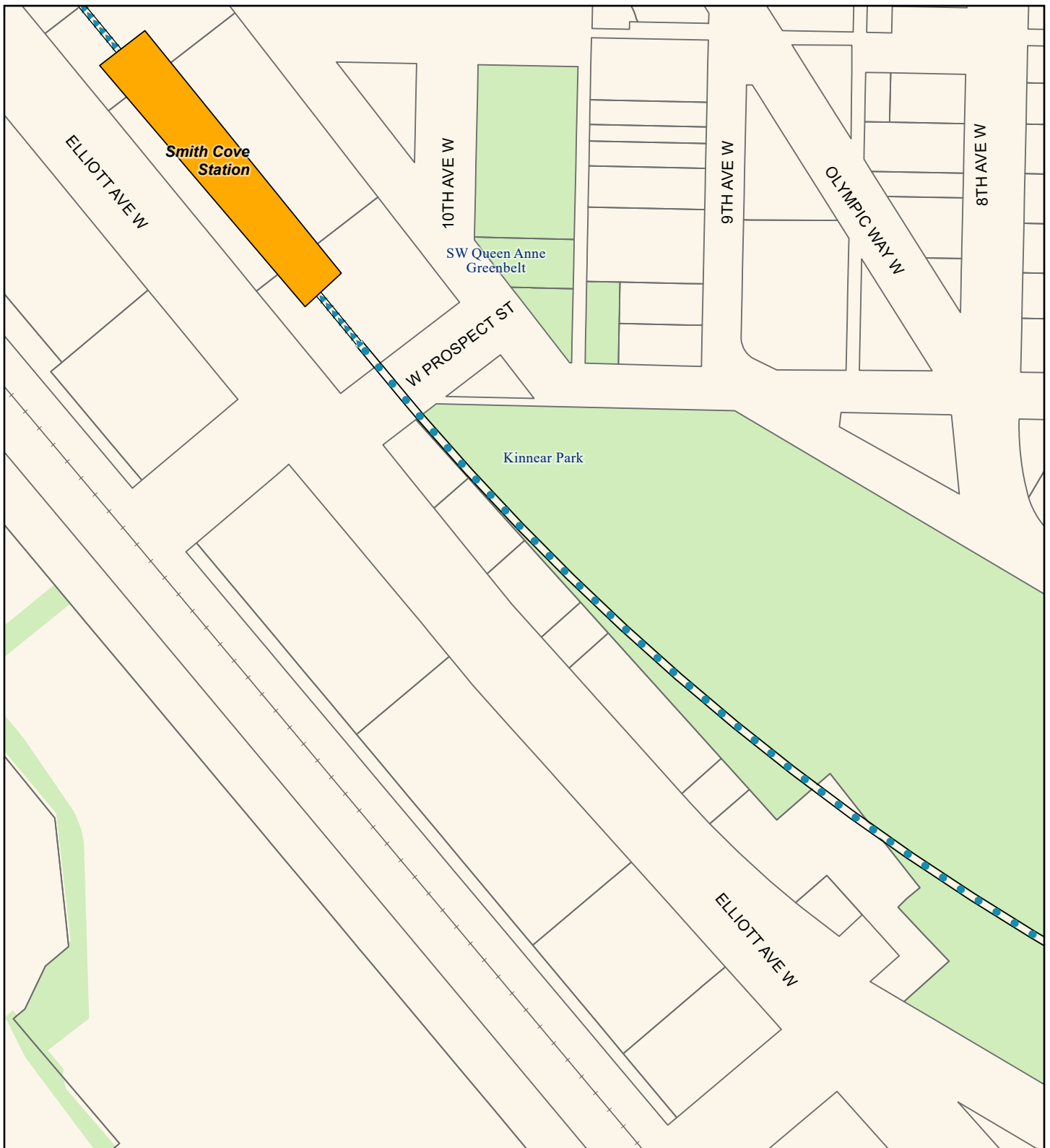
Station

- New
- Existing

- Railroad
- Parcel
- Park

FIGURE N.3E-26b
Alternative SIB-3
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

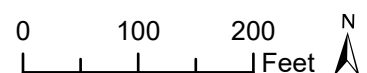
- Elevated
- At-Grade
- Tunnel
- Retained Cut

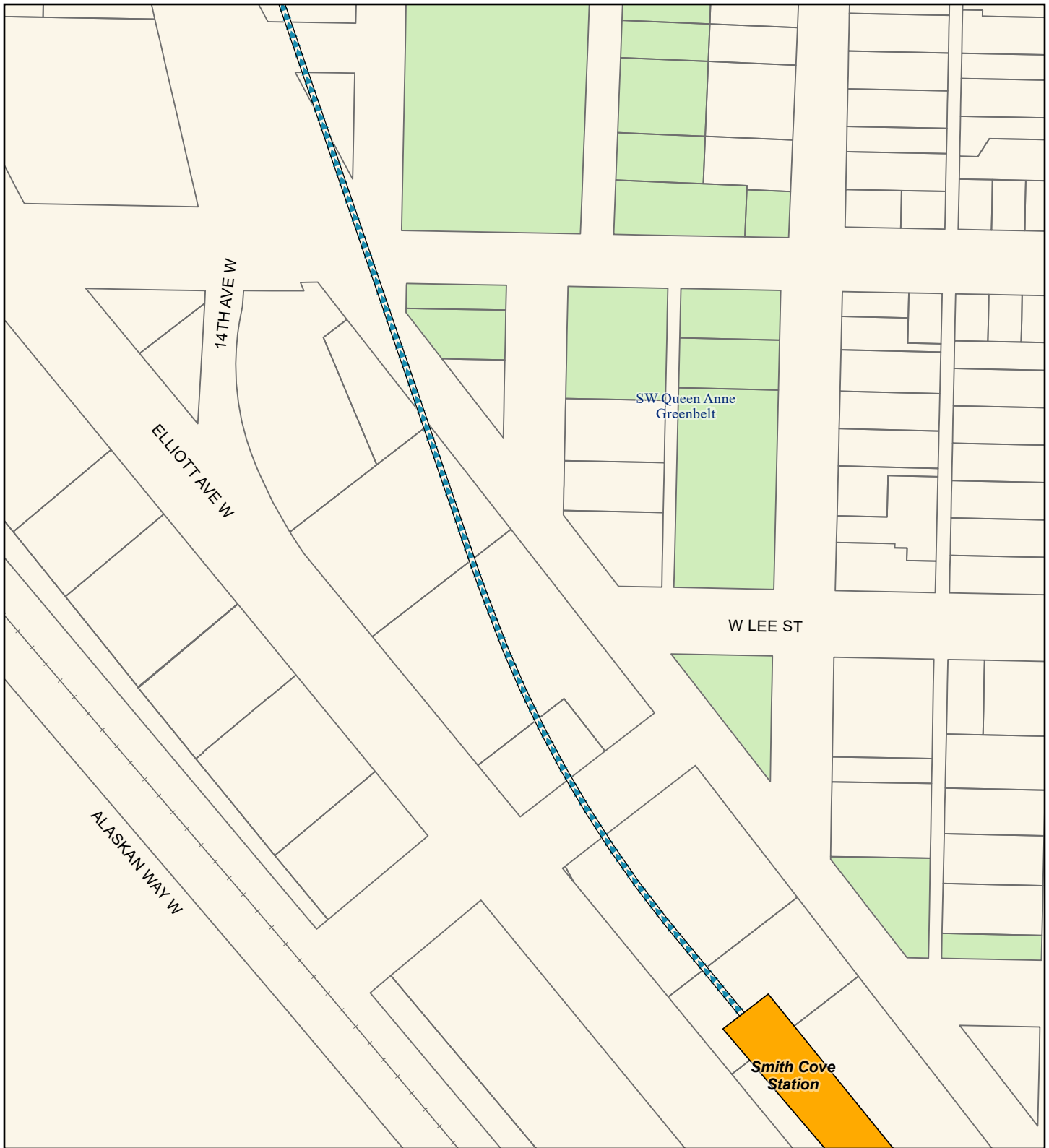
Station

- New
- Existing

- Railroad
- Parcel
- Park

FIGURE N.3E-26c
Alternative SIB-3
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

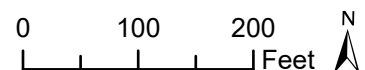
- Elevated
- Tunnel
- At-Grade
- Retained Cut

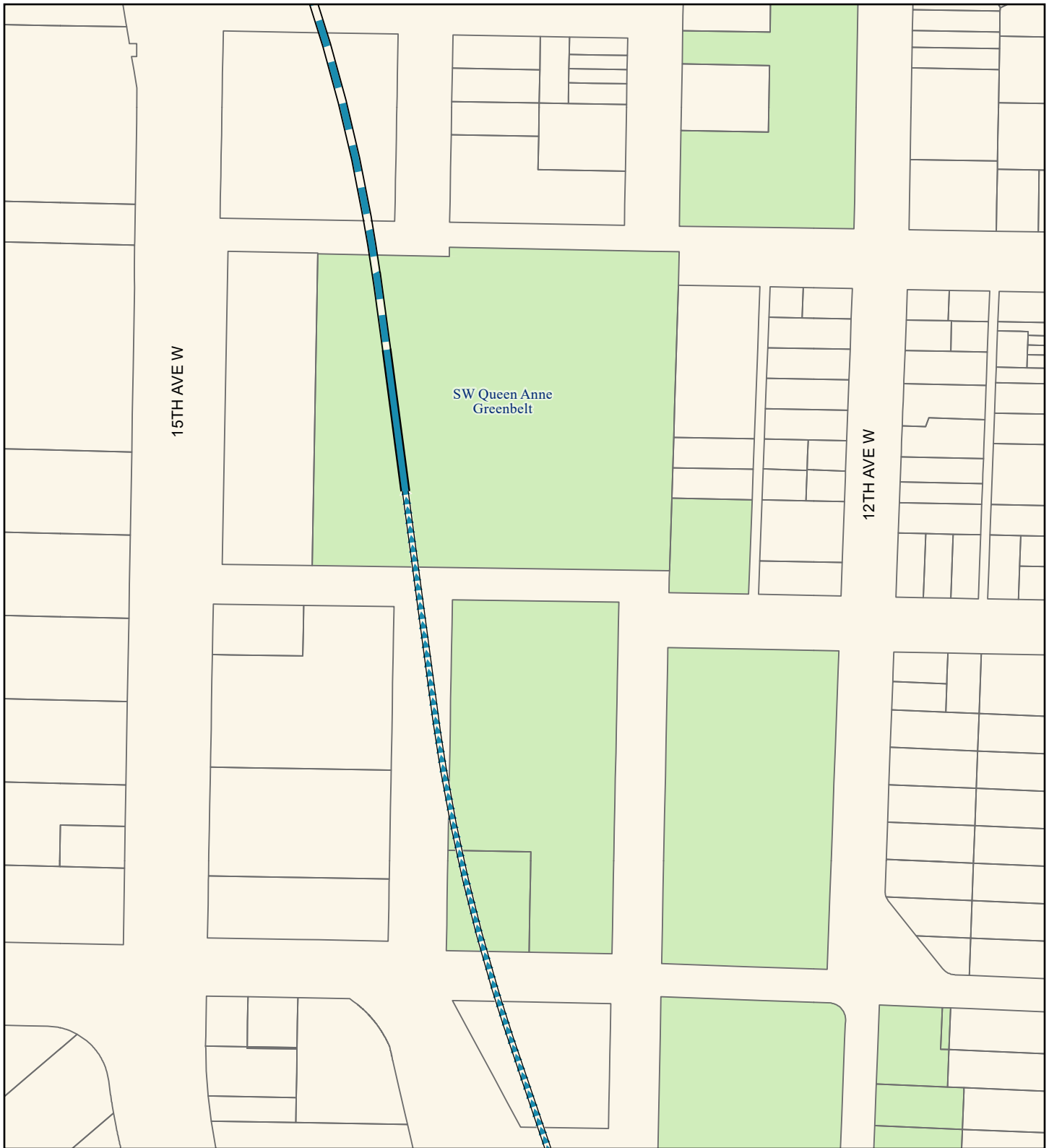
Station

- New
- Existing

- Railroad
- Parcel
- Park

FIGURE N.3E-26d
Alternative SIB-3
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

- █ Elevated █ Tunnel
- █ At-Grade █ Retained Cut

Station

- █ New
- █ Existing

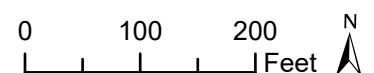
- █ Parcel
- █ Park

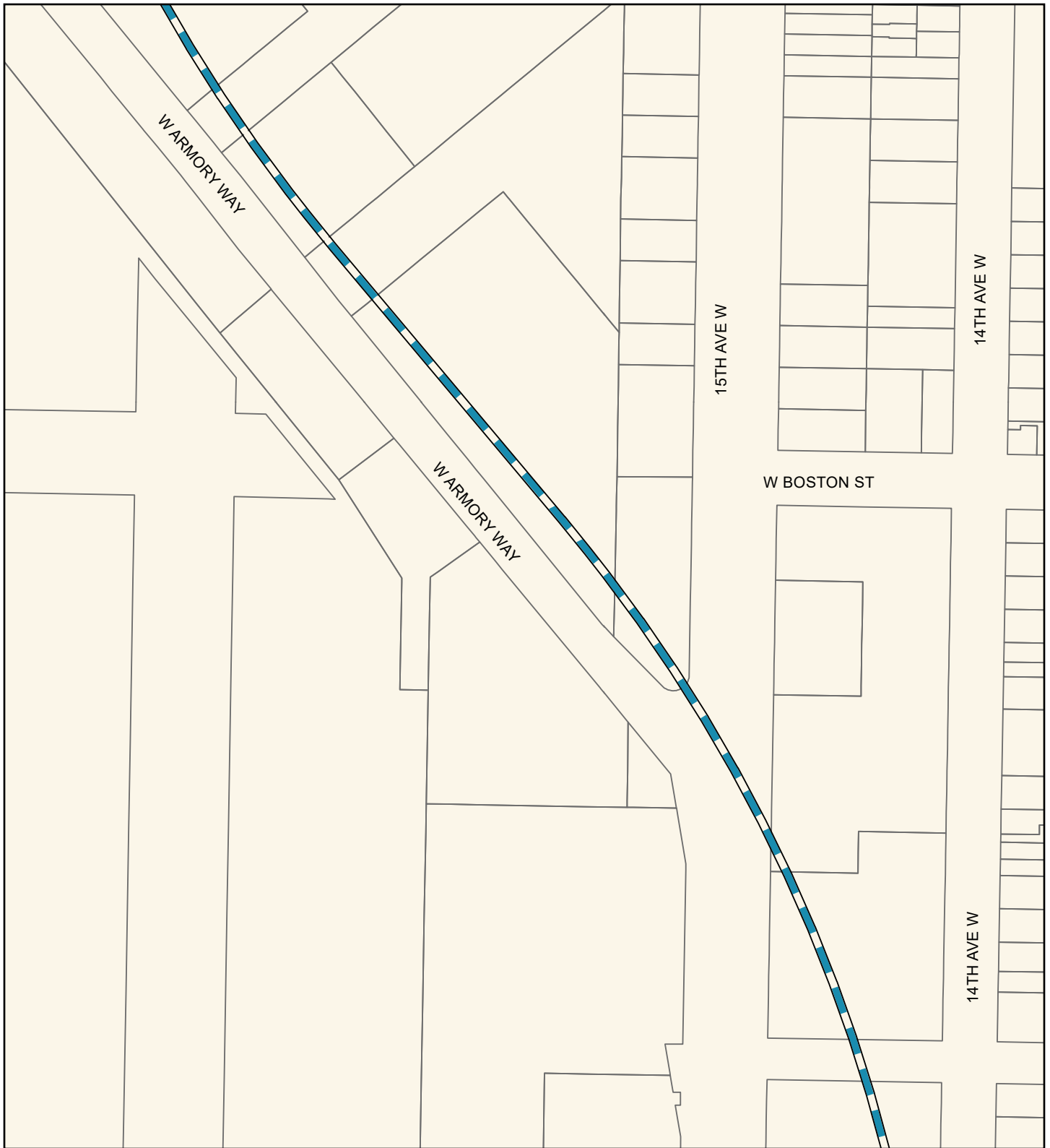
FIGURE N.3E-26e

Alternative SIB-3

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- - - Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

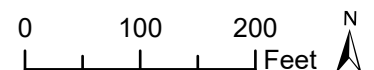
 Parcel

FIGURE N.3E-26f

Alternative SIB-3

Vibration and Groundborne Noise Impacts (before mitigation)

**Ballard Link Extension -
South Interbay Segment**
*West Seattle and
Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

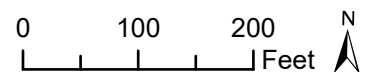
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Parcel
- Park

FIGURE N.3E-26g
Alternative SIB-3
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

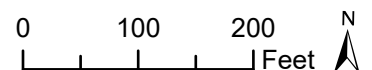
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Parcel
- Park

FIGURE N.3E-26h
Alternative SIB-3
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

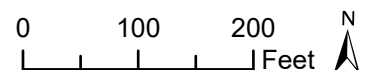
- New
- Existing

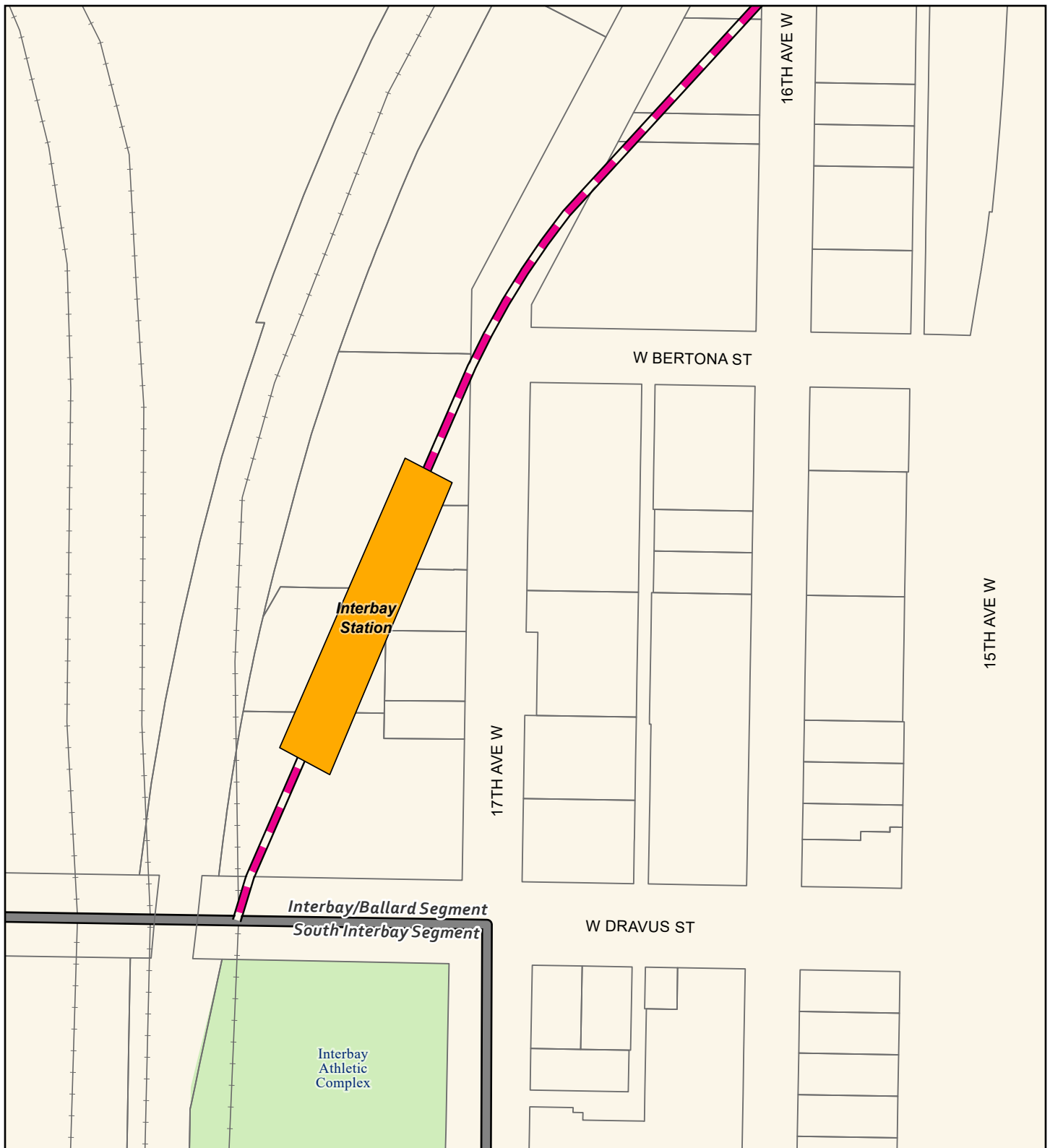
- Segment Line
- +

+

 Railroad
- Parcel
- Park

FIGURE N.3E-26i
Alternative SIB-3
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 South Interbay Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

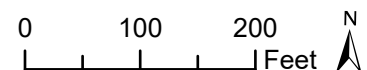
- Elevated
- Tunnel
- At-Grade
- Retained Cut

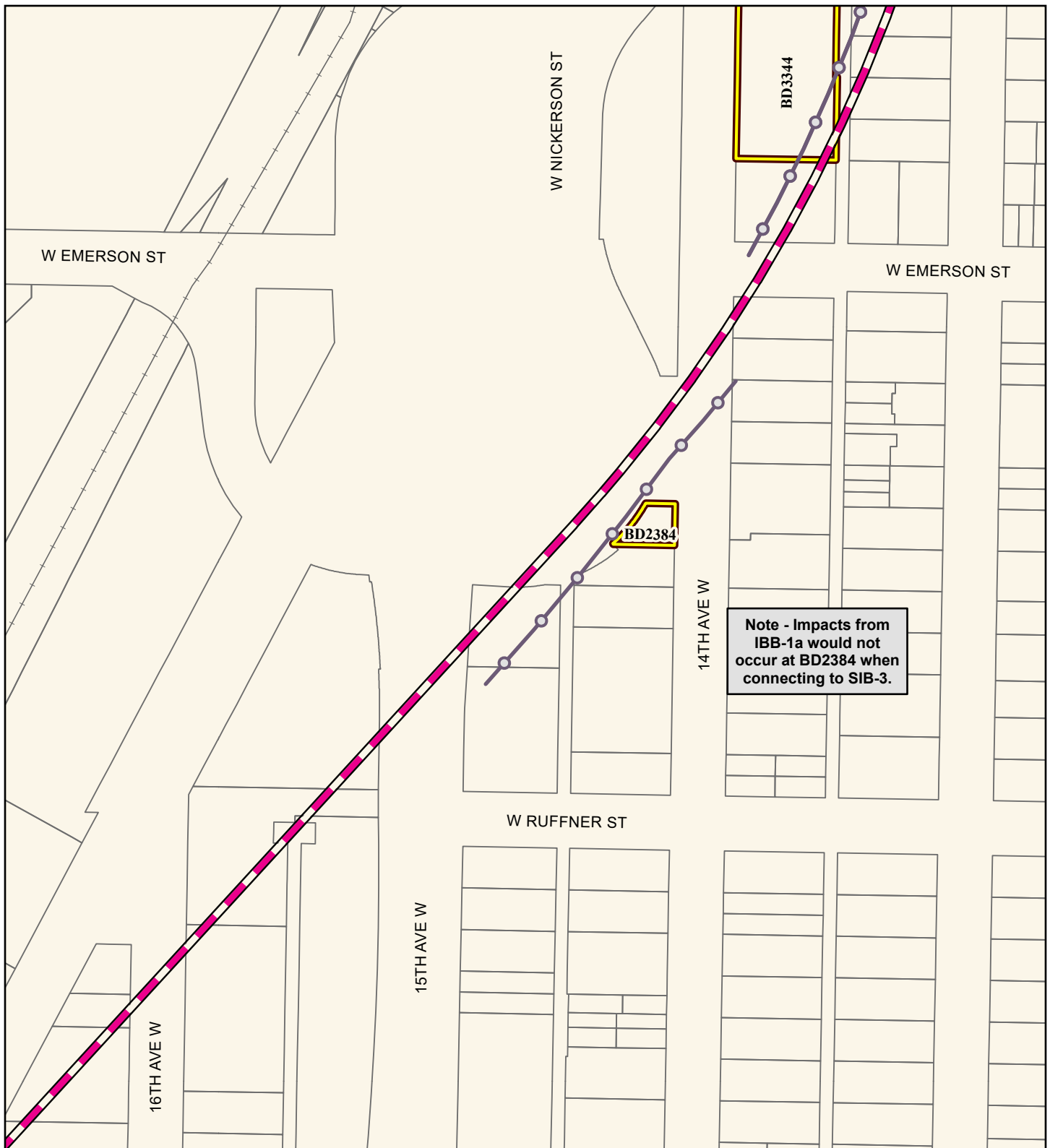
Station

- New
- Existing

- Segment Line
- Railroad
- Parcel
- Park

FIGURE N.3E-27a
Alternative IBB-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

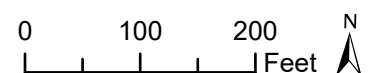
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- High Resilience Fastener
- +— Railroad
- Parcel
- Vibration Impact

FIGURE N.3E-27b
Alternative IBB-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Allard Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

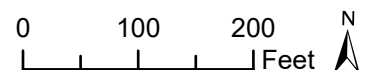
- Elevated
- Tunnel
- At-Grade
- Retained Cut

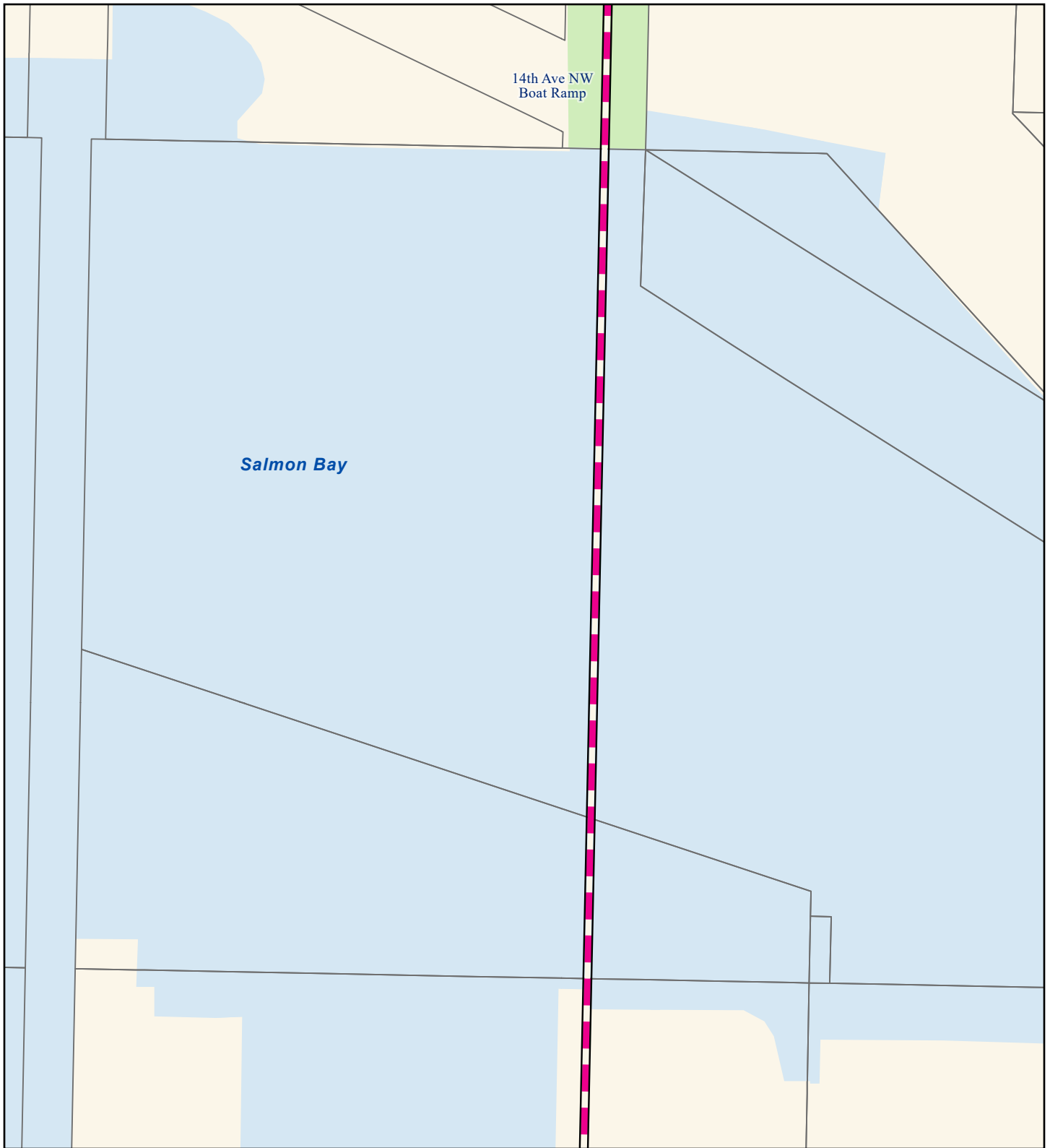
Station

- New
- Existing

- High Resilience Fastener
- + Railroad
- Parcel
- Vibration Impact
- Water Body

FIGURE N.3E-27c
Alternative IBB-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

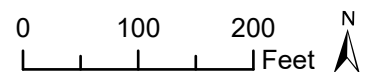
- Elevated — Tunnel
- At-Grade — Retained Cut

Station

- New
- Existing

- Parcel
- Park
- Water Body

FIGURE N.3E-27d
Alternative IBB-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

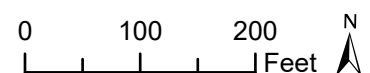
- Elevated
- At-Grade
- Tunnel
- Retained Cut

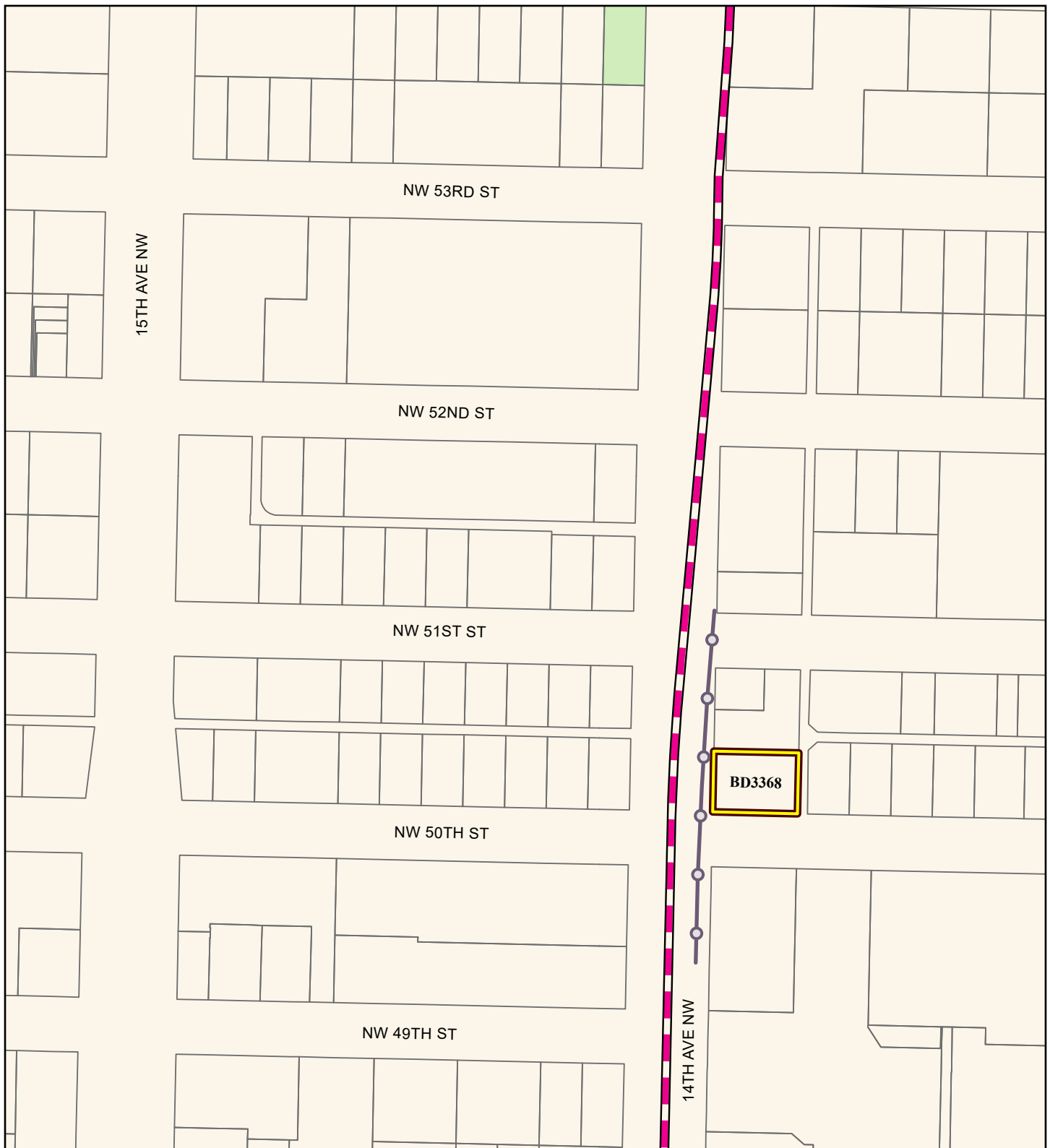
Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3E-27e
Alternative IBB-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

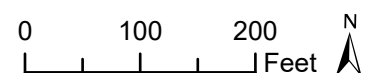
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- High Resilience Fastener
- Parcel
- Vibration Impact
- Park

FIGURE N.3E-27f
Alternative IBB-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

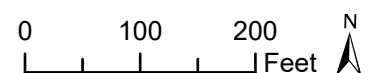
- Elevated — Tunnel
- At-Grade — Retained Cut

Station

- New
- Existing

- Parcel
- Park

FIGURE N.3E-27g
Alternative IBB-1a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

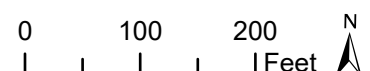
- Segment Line
- ++ Railroad
- Parcel
- Park

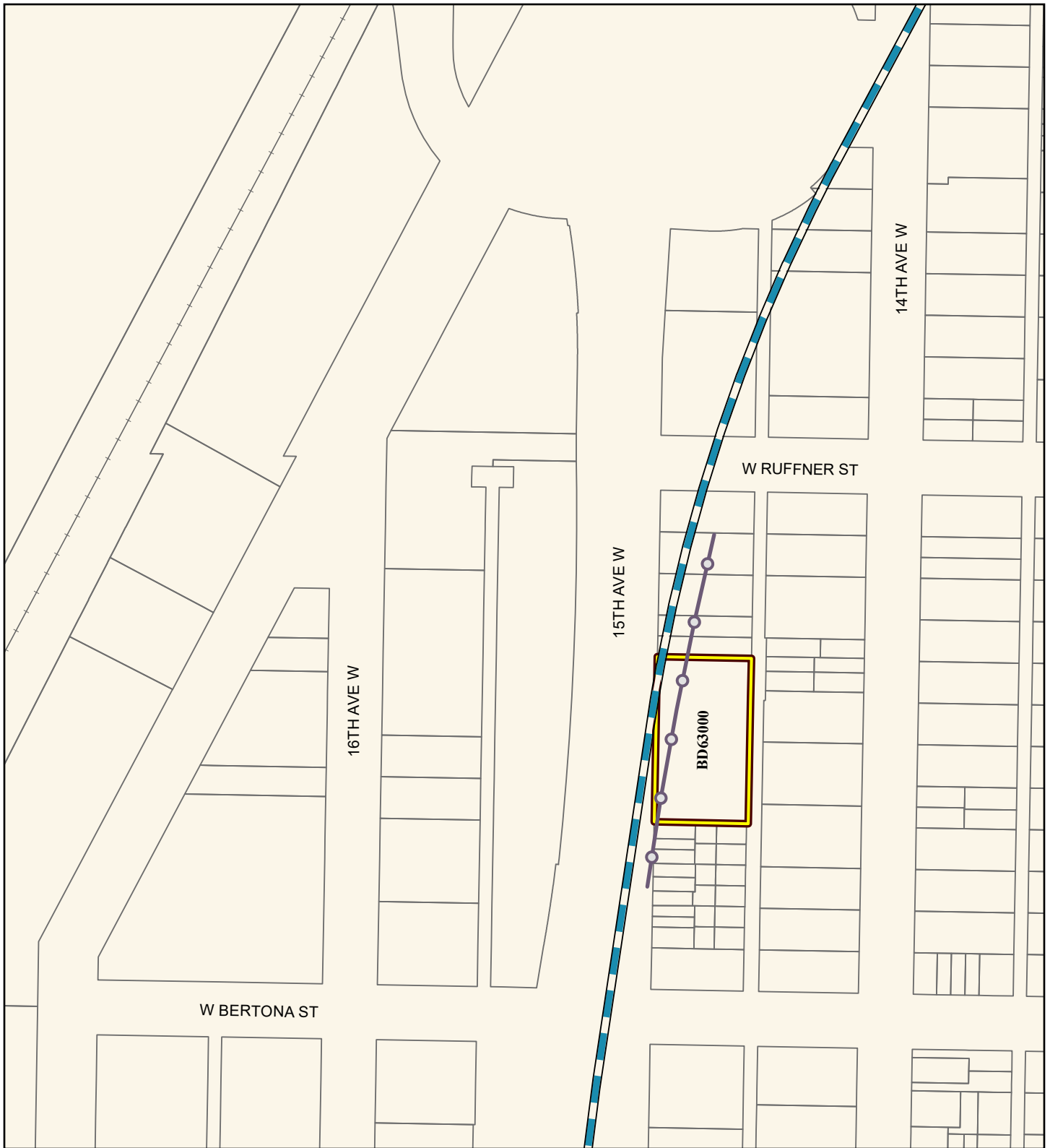
FIGURE N.3E-28a

Option IBB-1b

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- High Resilience Fastener
- Railroad
- Parcel
- Vibration Impact

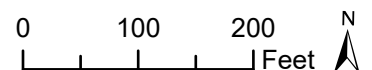
FIGURE N.3E-28b

Option IBB-1b

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Interbay/Ballard Segment

West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

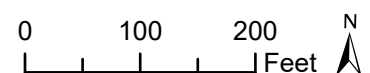
- High Resilience Fastener
- +— Railroad
- Parcel
- Vibration Impact
- Water Body

FIGURE N.3E-28c

Option IBB-1b

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

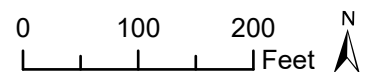
- █ Elevated █ Tunnel
- █ At-Grade █ Retained Cut

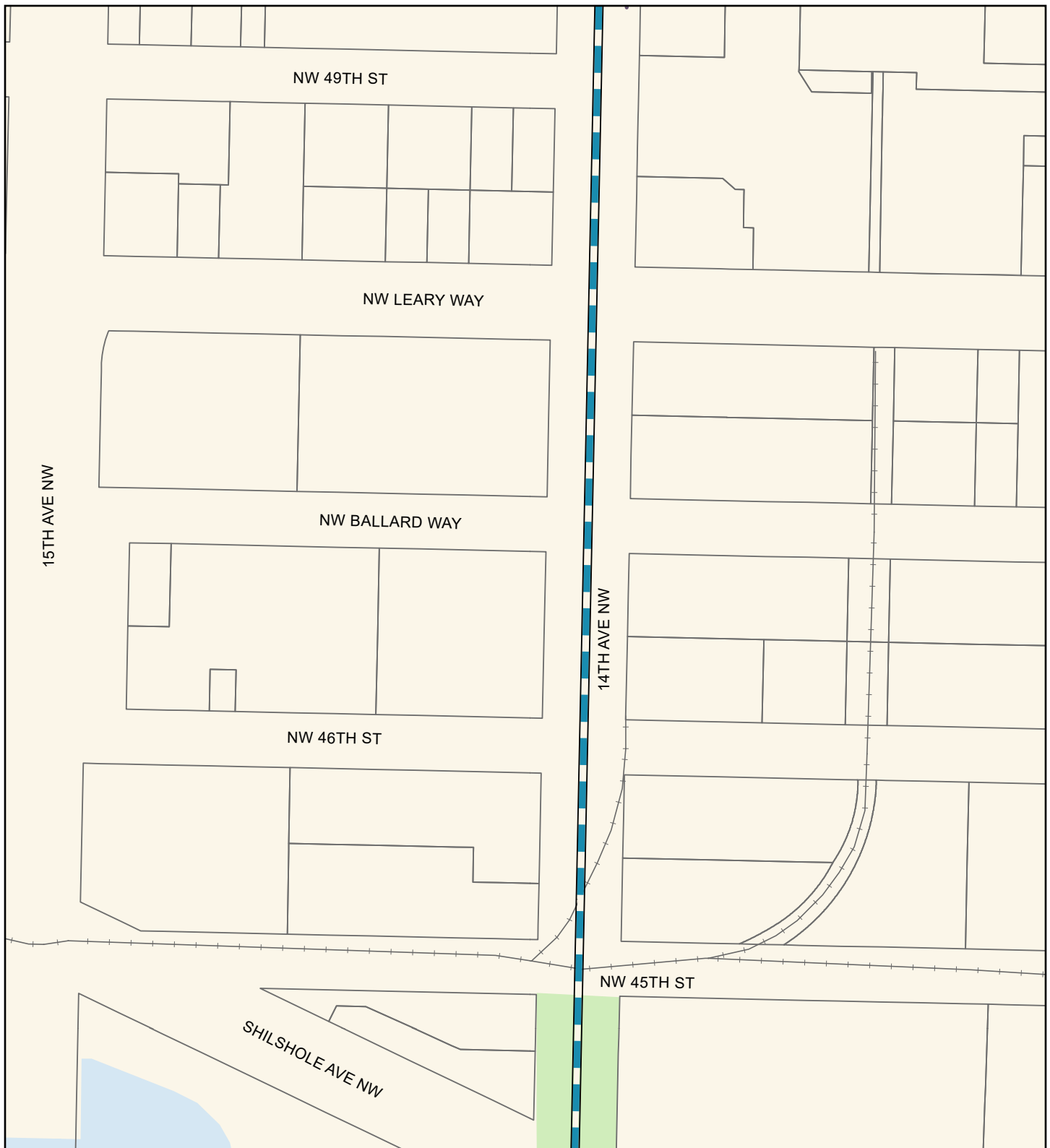
Station

- █ New
- █ Existing

- █ Parcel
- █ Park
- █ Water Body

FIGURE N.3E-28d
Option IBB-1b
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

- █ Elevated
- █ At-Grade
- █ Tunnel
- █ Retained Cut

Station

- █ New
- █ Existing

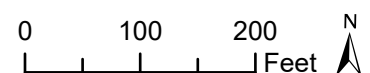
- High Resilience Fastener
- + Railroad
- Parcel
- █ Park
- █ Water Body

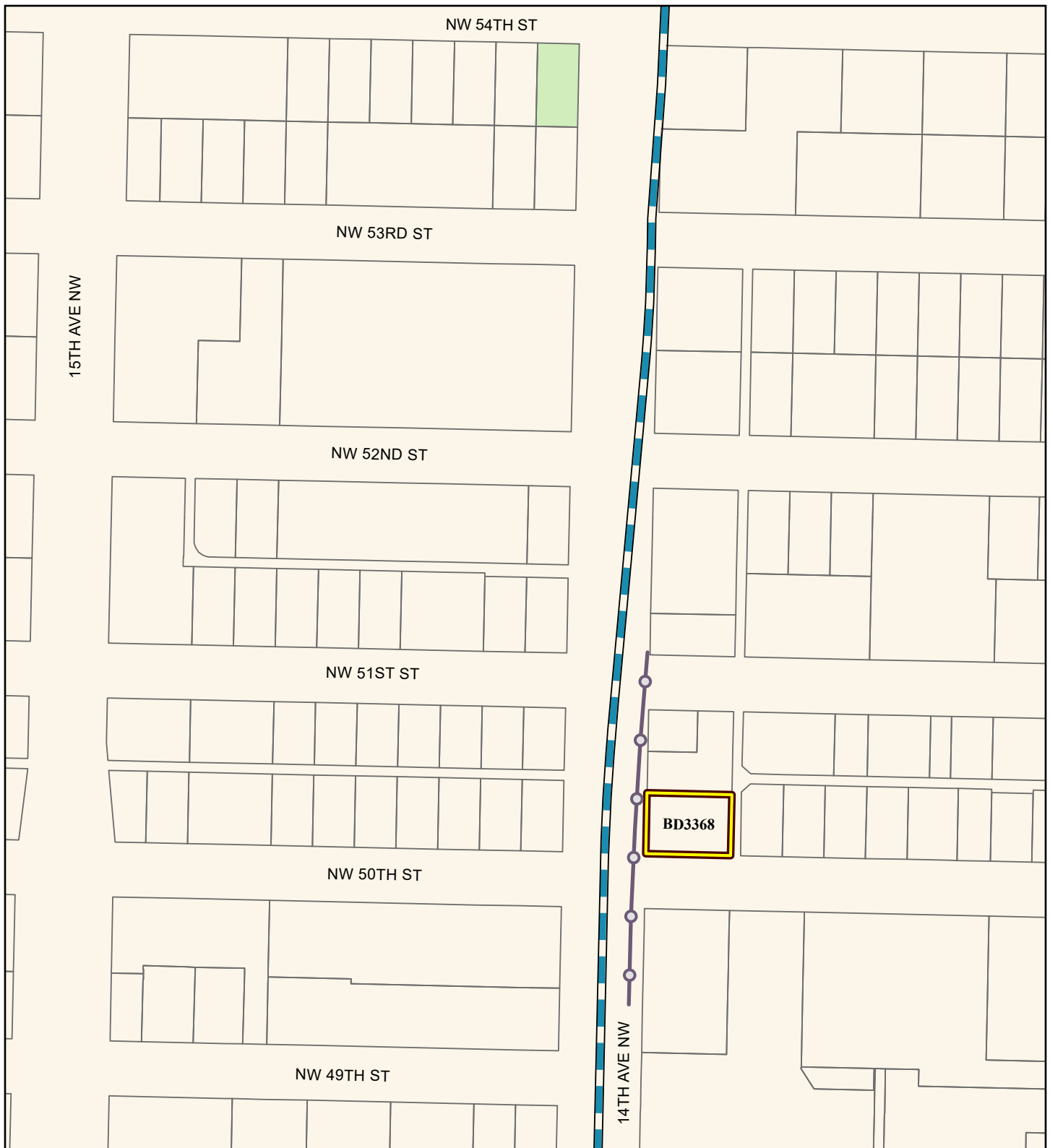
FIGURE N.3E-28e

Option IBB-1b

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- High Resilience Fastener
- Parcel
- Vibration Impact
- Park

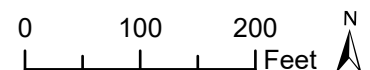
FIGURE N.3E-28f

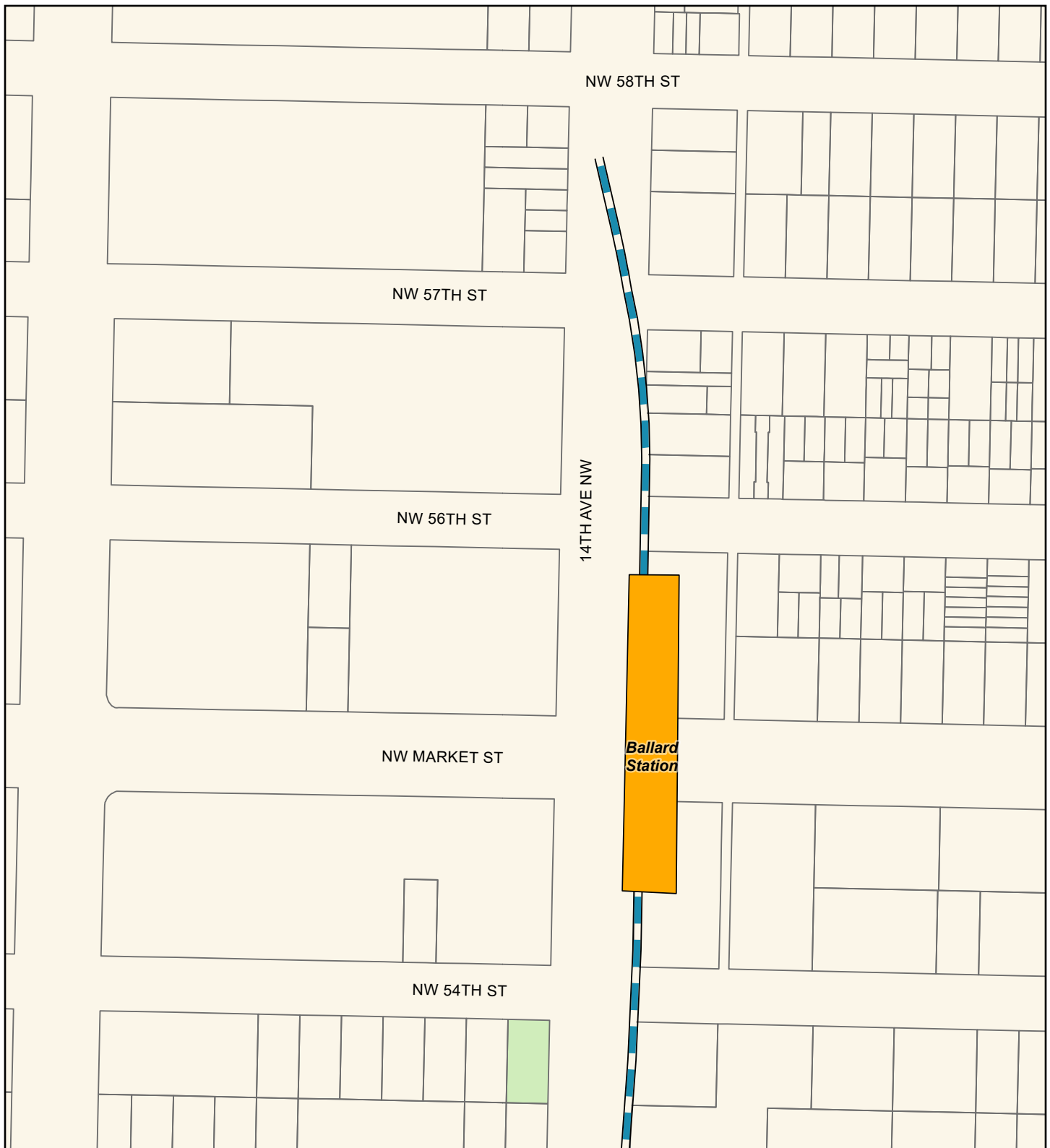
Option IBB-1b

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Interbay/Ballard Segment

West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

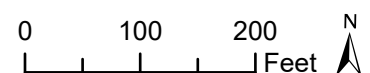
- █ Elevated █ Tunnel
- █ At-Grade █ Retained Cut

Station

- █ New
- █ Existing

- Parcel
- Park

FIGURE N.3E-28g
Option IBB-1b
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

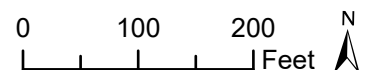
- Elevated
- At-Grade
- Tunnel
- Retained Cut

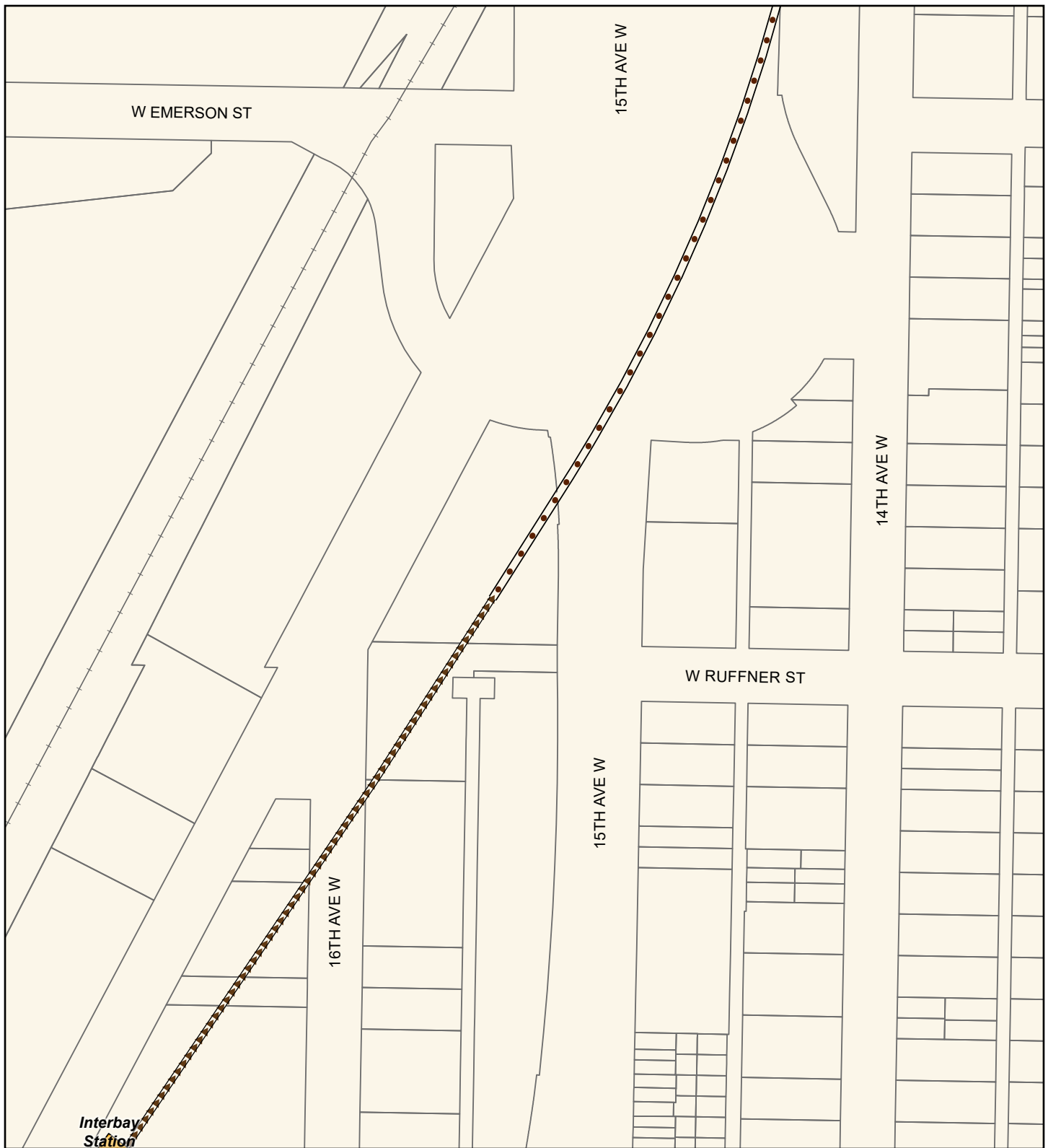
Station

- New
- Existing

- Segment Line
- Railroad
- Parcel
- Park

FIGURE N.3E-29a
Alternative IBB-2a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

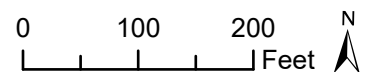
- Elevated
- At-Grade
- Tunnel
- Retained Cut

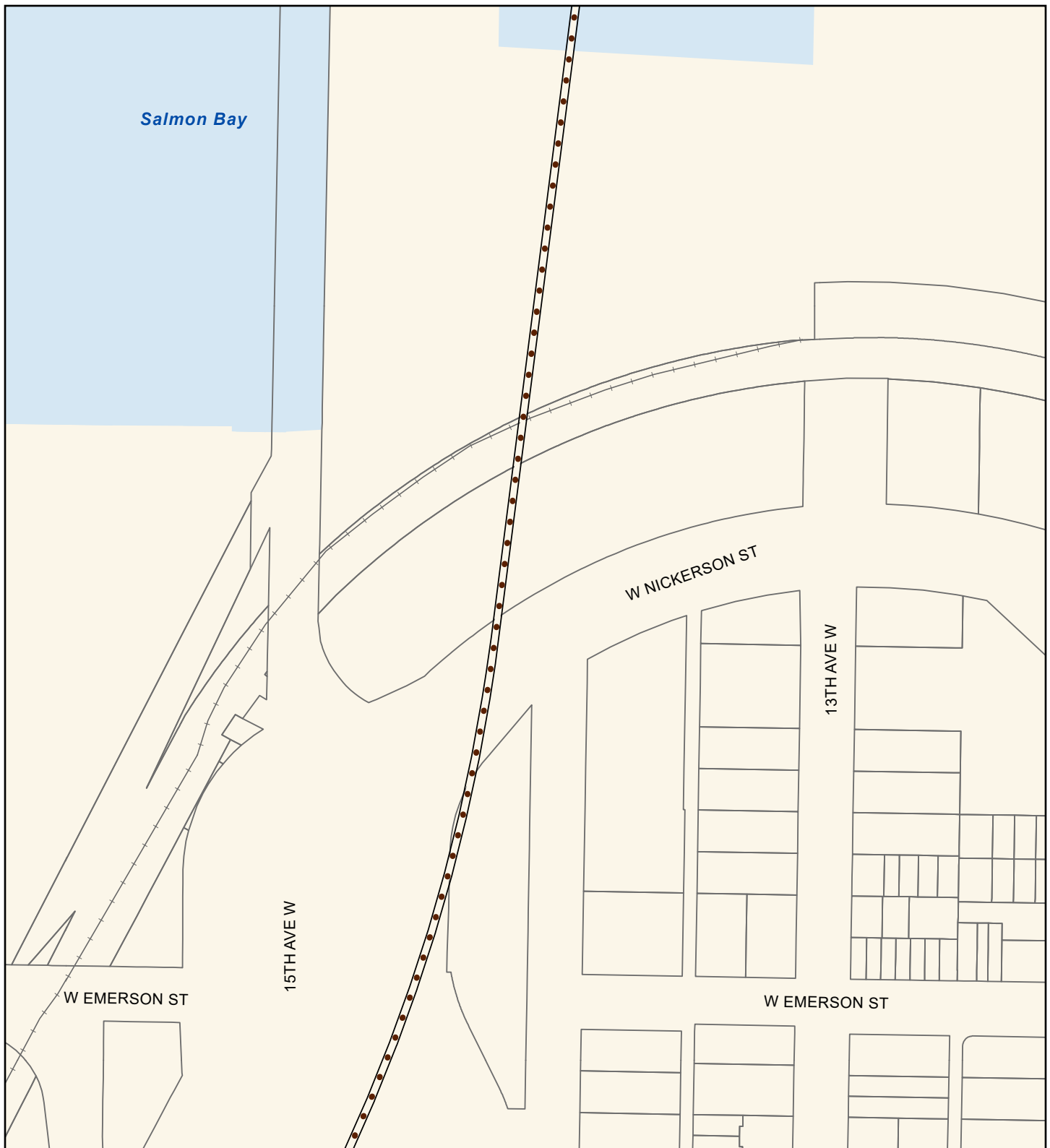
Station

- New
- Existing

- Railroad
- Parcel

FIGURE N.3E-29b
Alternative IBB-2a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

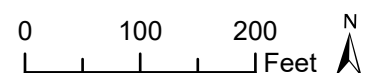
- Elevated
- At-Grade
- Tunnel
- Retained Cut

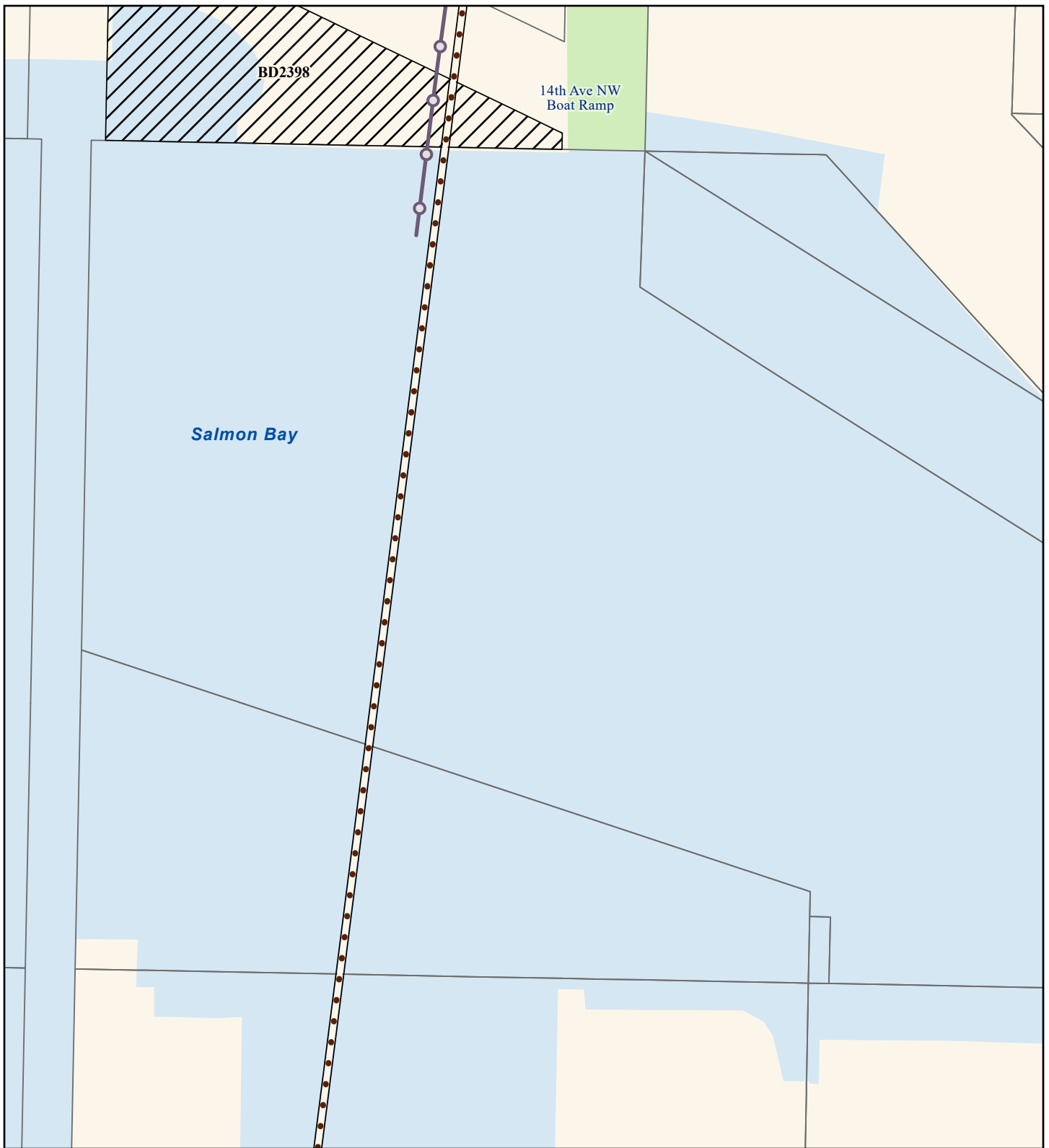
Station

- New
- Existing

- Railroad
- Parcel
- Water Body

FIGURE N.3E-29c
Alternative IBB-2a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

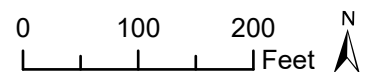
- █ Elevated █ Tunnel
- █ At-Grade █ Retained Cut

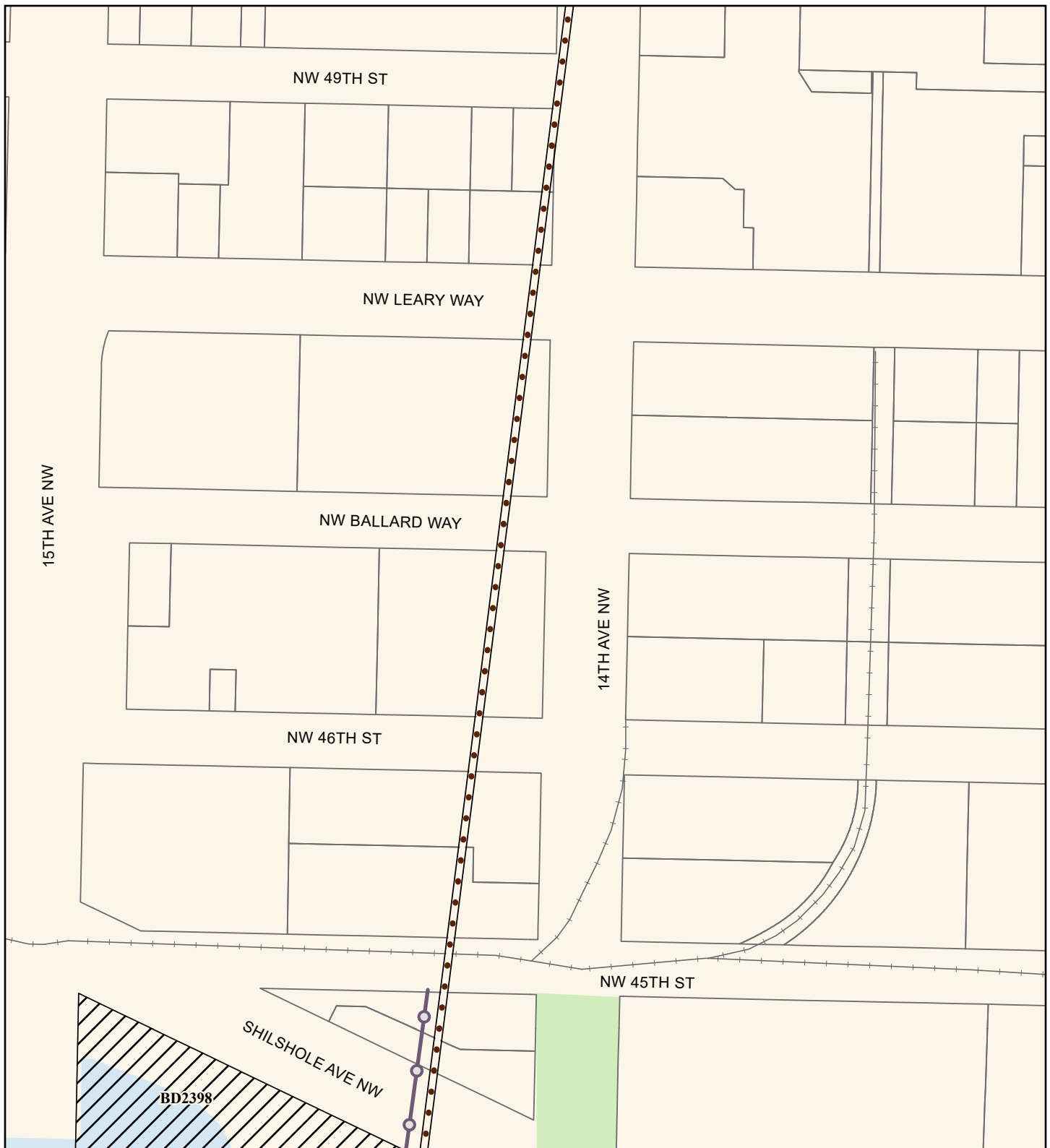
Station

- █ New
- █ Existing

- High Resilience Fastener
- Parcel
- Groundborne Noise Impact
- █ Park
- █ Water Body

FIGURE N.3E-29d
Alternative IBB-2a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

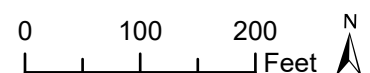
- Elevated
- At-Grade
- Tunnel
- Retained Cut

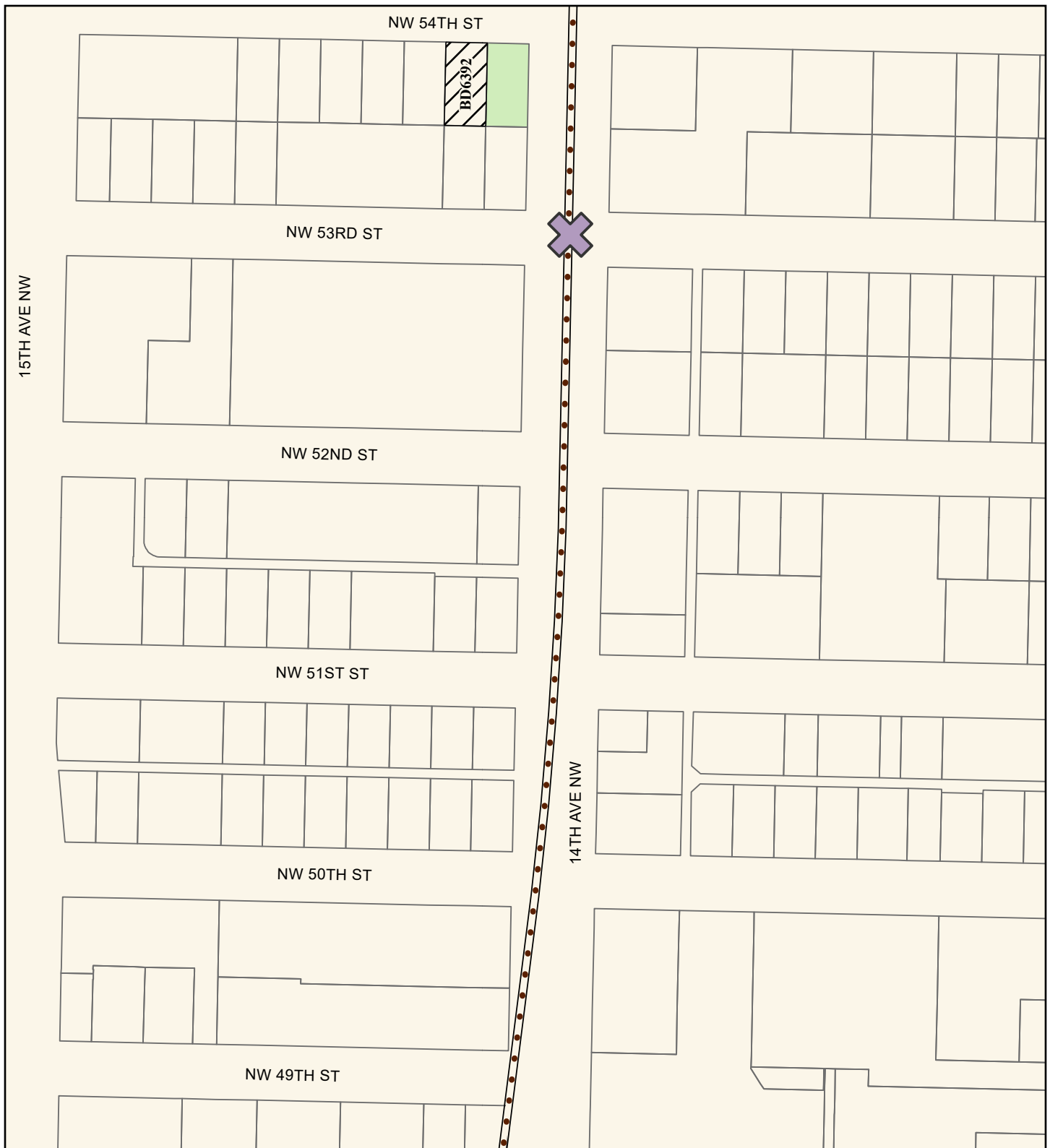
Station

- New
- Existing

- High Resilience Fastener
- Railroad
- Parcel
- Groundborne Noise Impact
- Park
- Water Body

FIGURE N.3E-29e
Alternative IBB-2a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

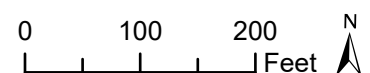
- █ Elevated █ Tunnel
- █ At-Grade █ Retained Cut

Station

- █ New
- █ Existing

- ✕ Low-Impact Frog
- Parcel
- Groundborne Noise Impact
- █ Park

FIGURE N.3E-29f
Alternative IBB-2a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

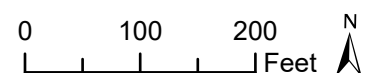
- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

- Parcel
- Groundborne Noise Impact
- Park

FIGURE N.3E-29g
Alternative IBB-2a
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

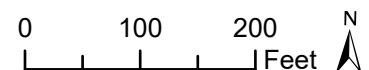
- Segment Line
- Railroad
- Parcel
- Park

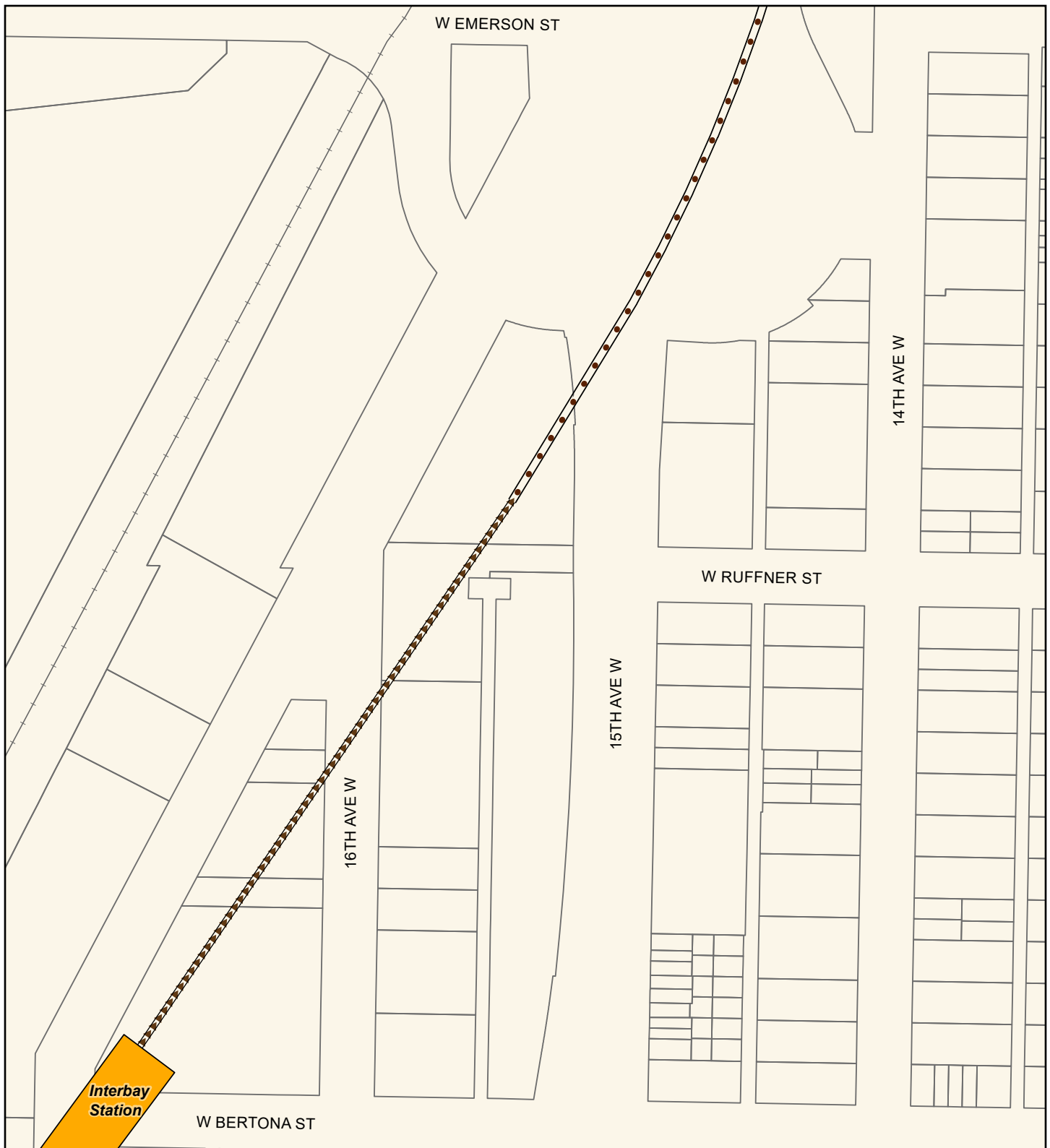
FIGURE N.3E-30a

Option IBB-2b

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

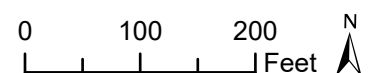
- Railroad
- Parcel

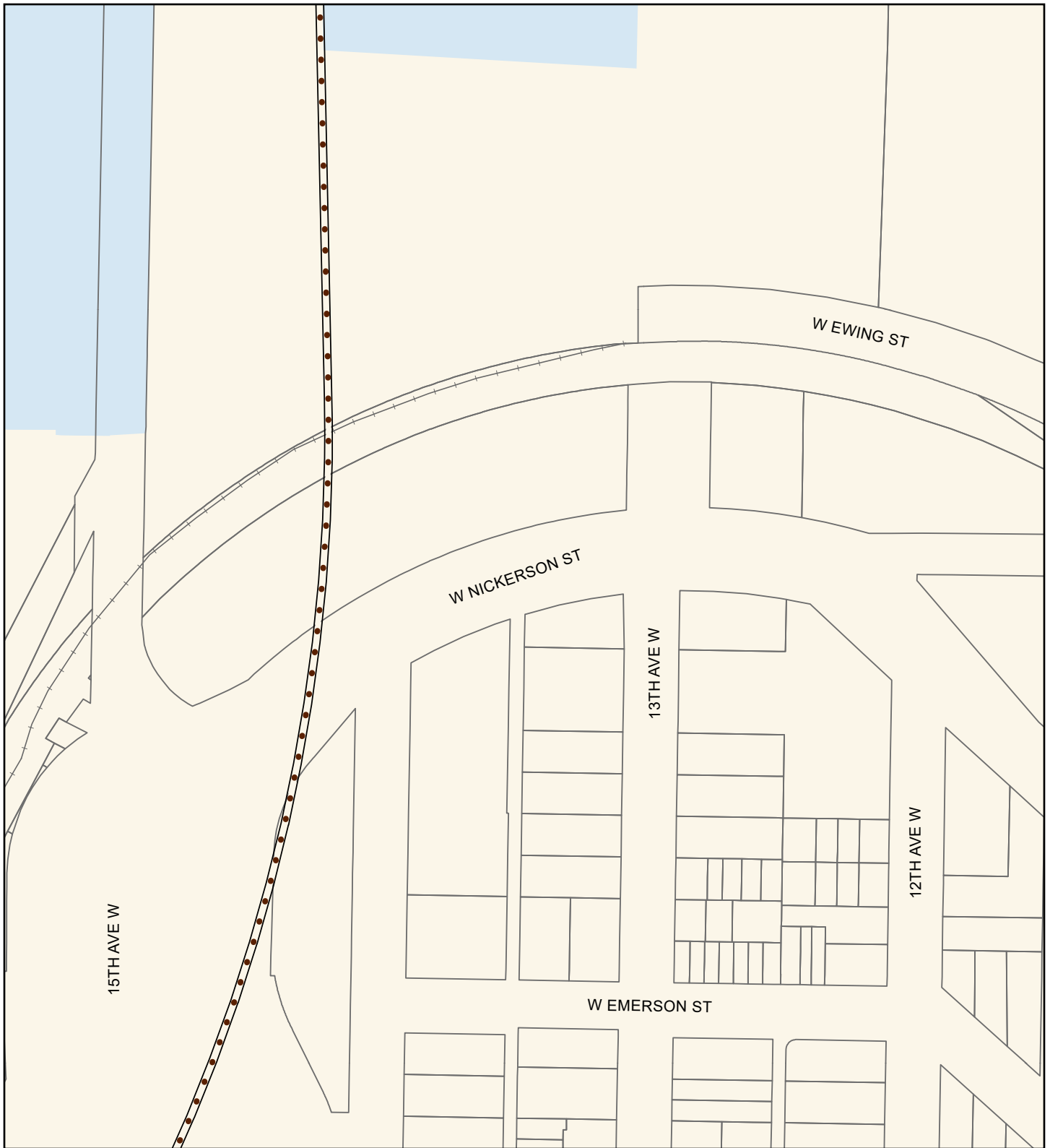
FIGURE N.3E-30b

Option IBB-2b

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Parcel
- Water Body

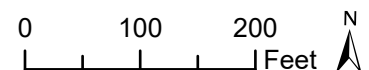
FIGURE N.3E-30c

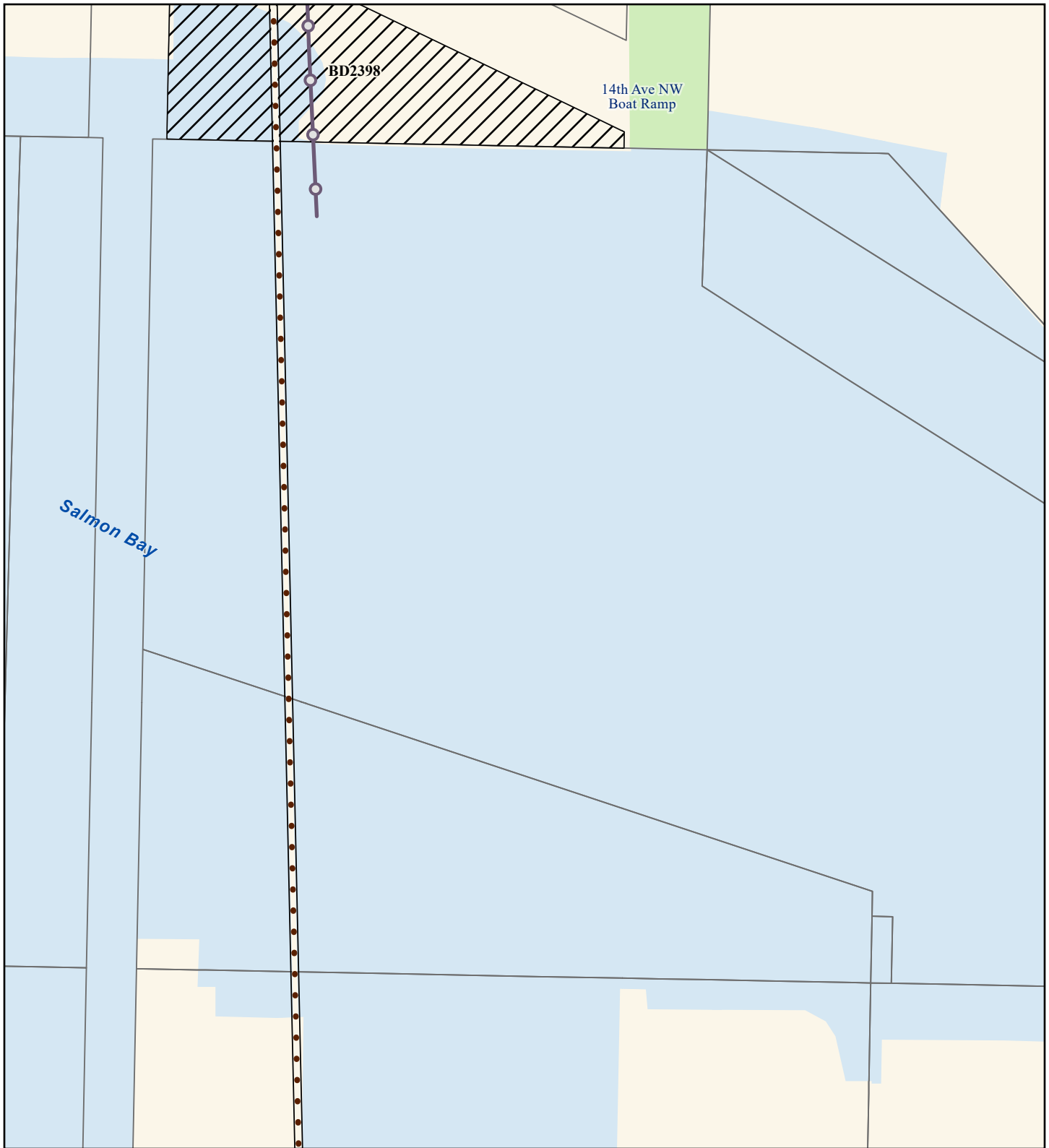
Option IBB-2b

**Vibration and Groundborne Noise
Impacts (before mitigation)**

Ballard Link Extension -
Interbay/Ballard Segment

*West Seattle and
Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

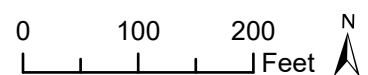
- Elevated
- Tunnel
- At-Grade
- Retained Cut

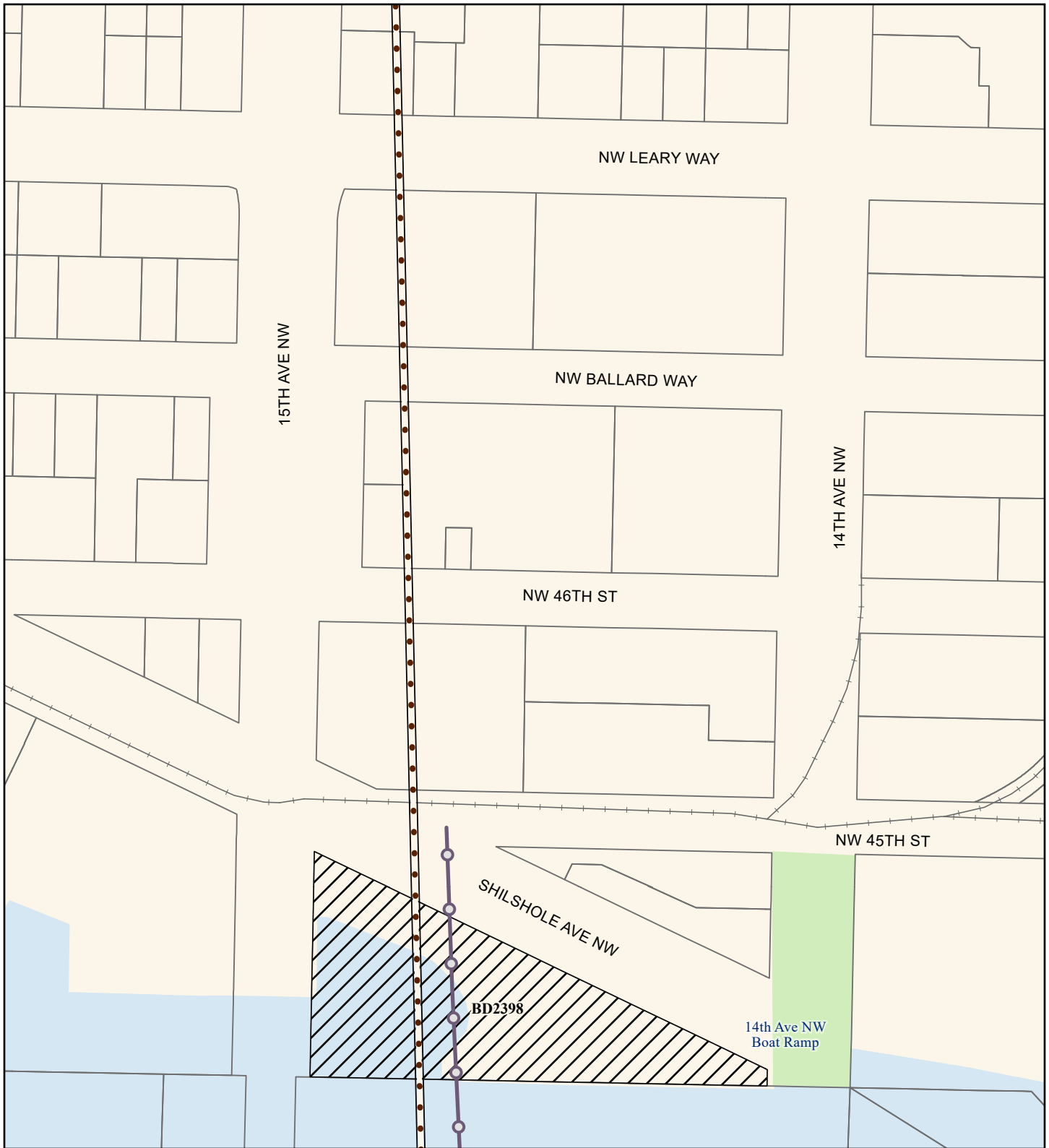
Station

- New
- Existing

- High Resilience Fastener
- Parcel
- Groundborne Noise Impact
- Park
- Water Body

FIGURE N.3E-30d
Option IBB-2b
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

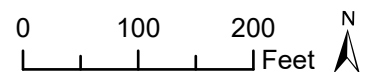
- █ Elevated █ Tunnel
- █ At-Grade █ Retained Cut

Station

- █ New
- █ Existing

- High Resilience Fastener
- + Railroad
- Parcel
- Groundborne Noise Impact
- Park
- Water Body

FIGURE N.3E-30e
Option IBB-2b
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

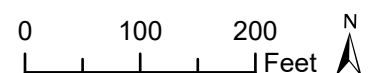
- Parcel
- Park

FIGURE N.3E-30f

Option IBB-2b

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

- █ Elevated █ Tunnel
- █ At-Grade █ Retained Cut

Station

- █ New
- █ Existing

- Parcel
- Park

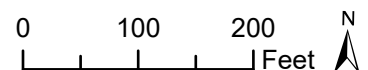
FIGURE N.3E-30g

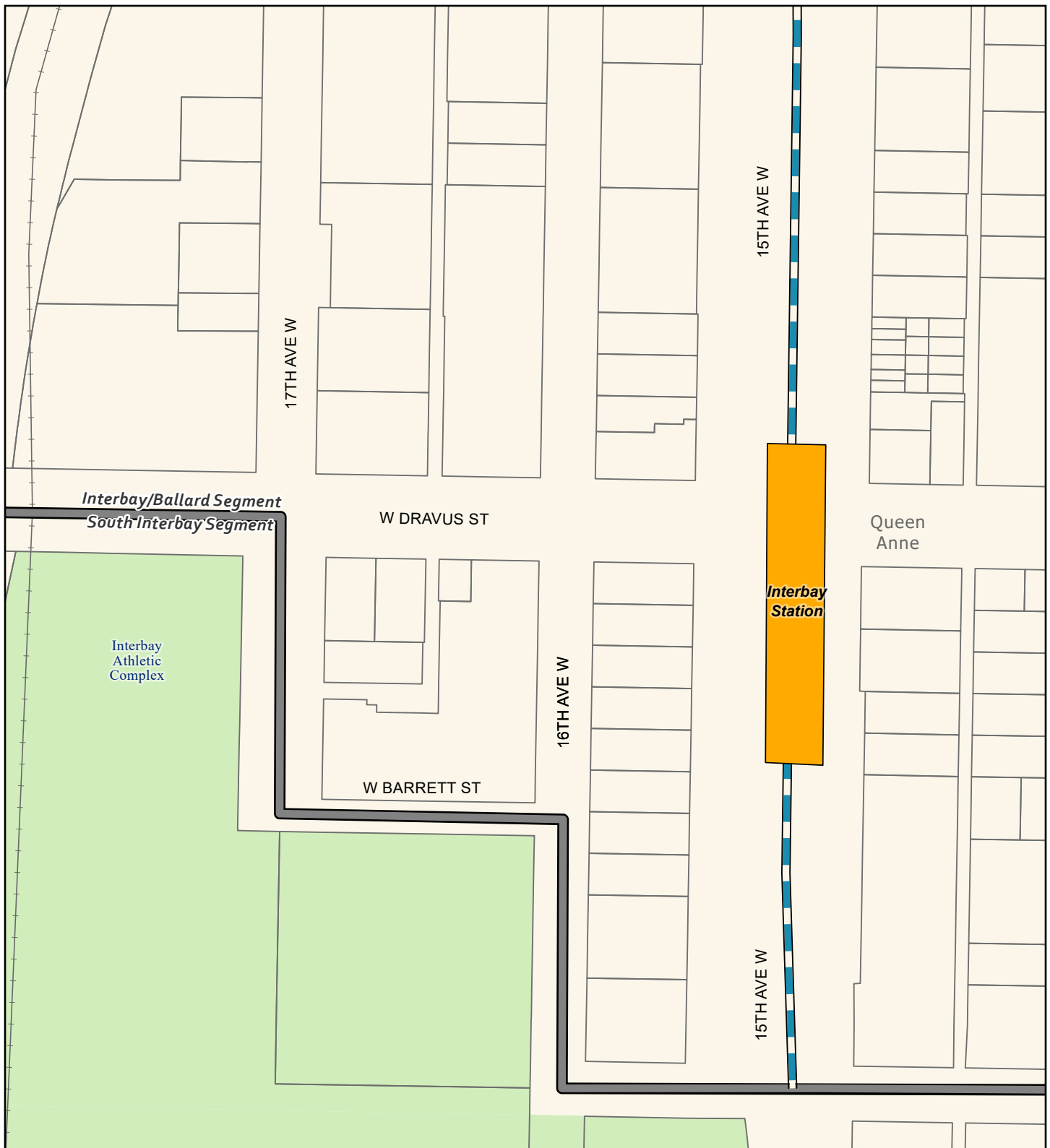
Option IBB-2b

**Vibration and Groundborne Noise
Impacts (before mitigation)**

Ballard Link Extension -
Interbay/Ballard Segment

*West Seattle and
Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

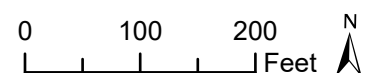
- Elevated
- At-Grade
- Tunnel
- Retained Cut

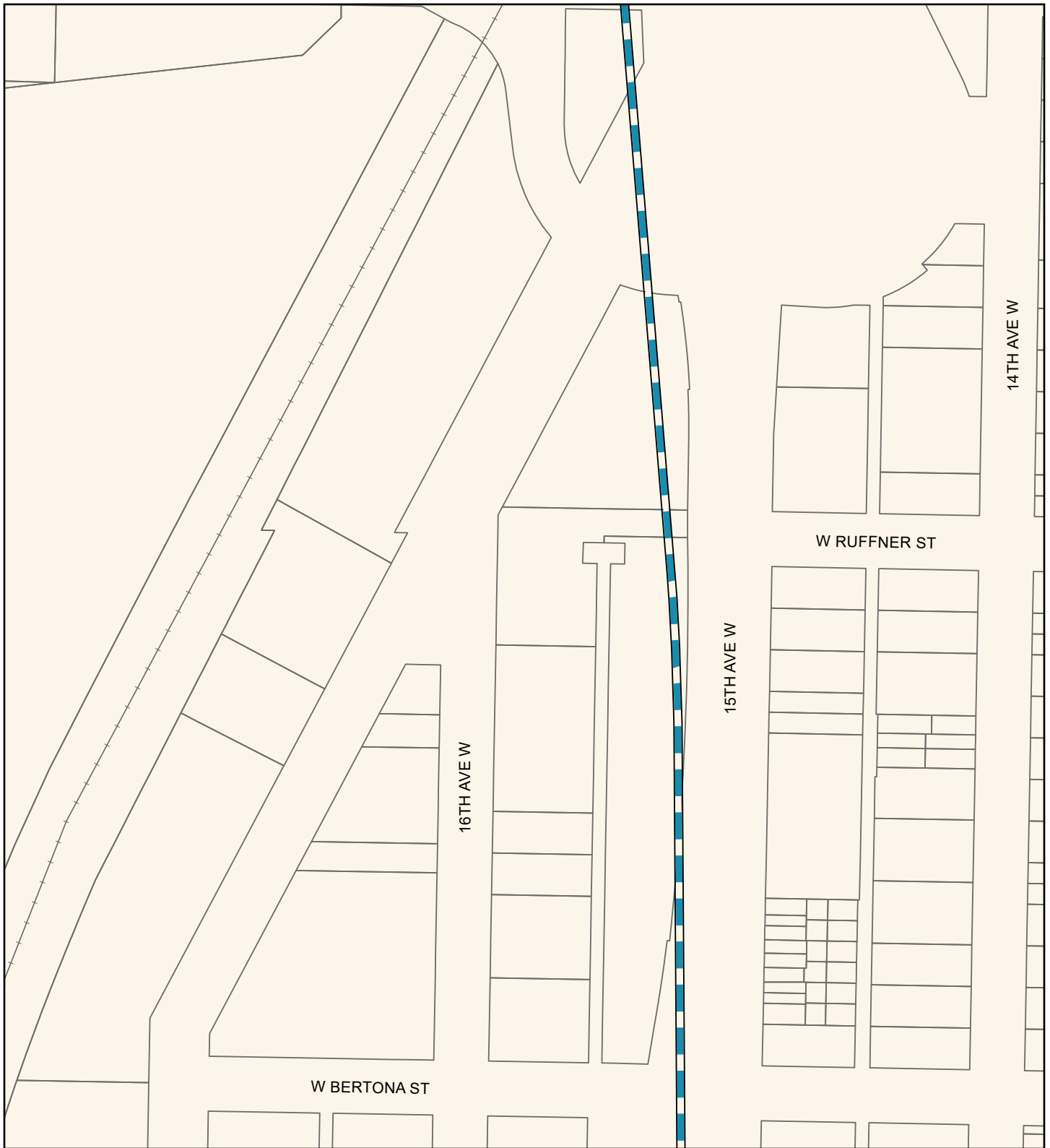
Station

- New
- Existing

- Segment Line
- Railroad
- Parcel
- Park

FIGURE N.3E-31a
Alternative IBB-3
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
 West Seattle and
 Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

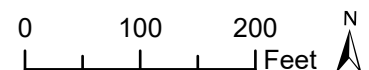
- Railroad
- Parcel

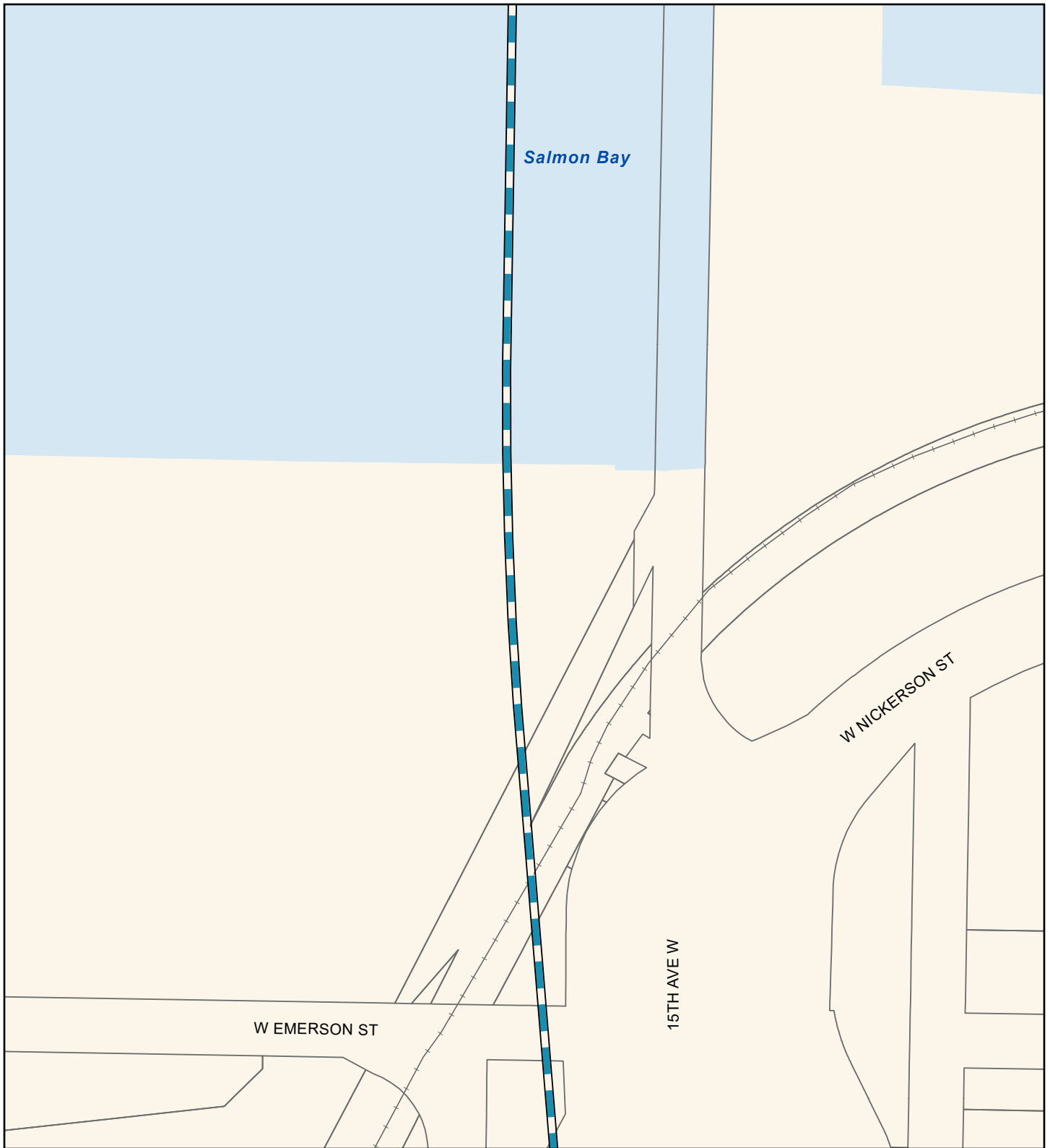
FIGURE N.3E-31b

Alternative IBB-3

Vibration and Groundborne Noise Impacts (before mitigation)

Ballard Link Extension -
Interbay/Ballard Segment
*West Seattle and
Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

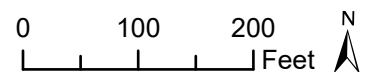
- Elevated
- At-Grade
- Tunnel
- Retained Cut

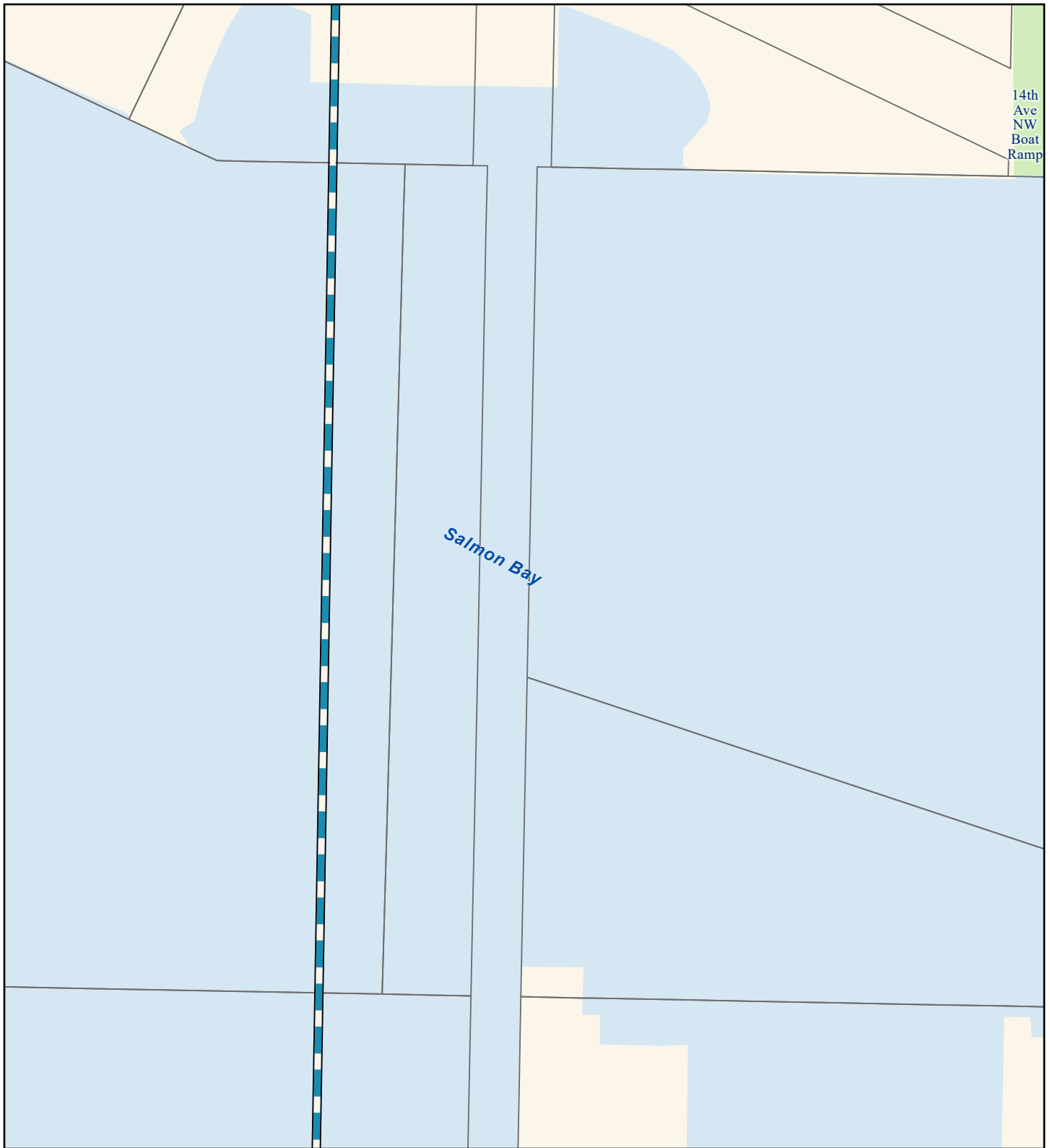
Station

- New
- Existing

- Railroad
- Parcel
- Water Body

FIGURE N.3E-31c
Alternative IBB-3
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

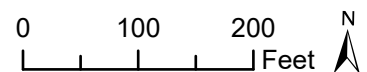
- Elevated — Tunnel
- At-Grade — Retained Cut

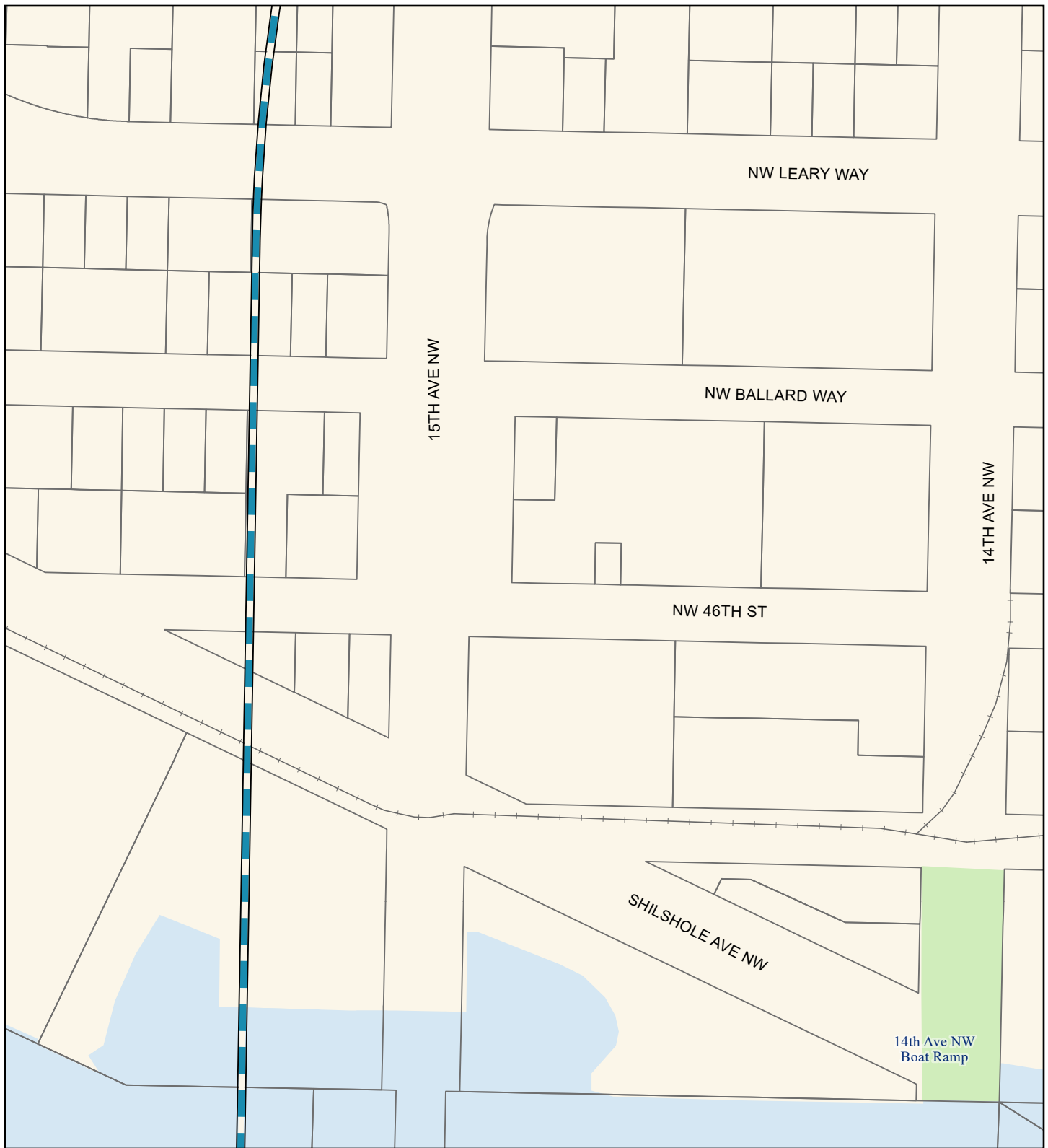
Station

- New
- Existing

- Parcel
- Park
- Water Body

FIGURE N.3E-31d
Alternative IBB-3
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

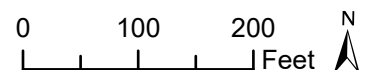
- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

- Railroad
- Parcel
- Park
- Water Body

FIGURE N.3E-31e
Alternative IBB-3
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

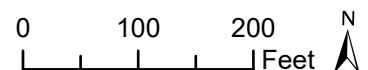
- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New
- Existing

- Parcel
- Park

FIGURE N.3E-31f
Alternative IBB-3
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- █ Preferred Alternative
- █ Preferred Alternative with Third-party Funding
- █ Other Alternatives

Alternative Profile

- █ Elevated █ Tunnel
- █ At-Grade █ Retained Cut

Station

- █ New
- █ Existing

- Parcel
- Park

FIGURE N.3E-31g
Alternative IBB-3
Vibration and Groundborne Noise
Impacts (before mitigation)
 Ballard Link Extension -
 Interbay/Ballard Segment
West Seattle and
Ballard Link Extensions

