APPENDIX J: HAZARDOUS MATERIALS TECHNICAL MEMORANDUM

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I-405, Bellevue to Lynnwood Improvement Project

INTERSTATE 405 Corridor Program

Congestion Relief & Bus Rapid Transit Projects

HAZARDOUS MATERIALS TECHNICAL MEMORANDUM

April 2011

Washington State Department of Transportation

U.S. Department of Transportation
Federal Highway Administration

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TABLE OF CONTENTS

Summary **1**

Why are we considering hazardous materials as part of this Environmental Assessment? 1

Project Description **3**

What is the intent of the Bellevue to Lynnwood project and what are the improvements? 3

Are there related projects? 4

What will the completed project provide? 4

How will this portion of I-405 be operated after the project is completed? 4

Alternative 1: Express Toll and General Purpose Lanes (ETL) 5

Alternative 2: High Occupancy Vehicle and General Purpose Lanes (HOV) 5

What will conditions be like if the project is not built? 5

No Build Alternative 5

Baseline Conditions **26**

Are there contaminated sites of concern in the study area? 26

Which properties are likely to be reasonably predictable? 26

Which properties are likely to be substantially contaminated? 34

Potential Effects **35**

How will the project affect hazardous materials? 35

Build Alternatives 35

No Build Alternative 35

Will project construction affect hazardous materials? 35

Underground storage tanks 36

Utilities 36

Hazardous material sites 36

Construction hazards 36

Asbestos-containing materials/lead-based paint 37

What are the indirect effects of the project on hazardous materials? 37

Measures to Avoid or Minimize Effects **38**

What will be done to avoid or minimize adverse effects from hazardous materials? . 38

What policies, guidance and laws will help to avoid or minimize adverse effects from hazardous materials? 38

What will be done to minimize construction effects? 40

Known or suspected contamination within the proposed study area 40

Known or suspected contamination outside the study area 40
Unknown contamination 41
Worker and Public Health and Safety 41
Hazardous Materials Spills during Construction 41
Hazardous Materials Spills during Operation 41

Unavoidable Adverse Effects.....42
What will be done to mitigate unavoidable adverse effects? 42

Acronyms and Abbreviations 43

Glossary 44

References 47
Geographic Information System (GIS) data sources 47
Base data 47
Text references and verbal communications 47

Appendix A: Methodology A-1
How did we collect information on hazardous materials for this report?..... A-1
How were individual sites considered for in-depth analysis? A-1
Regulatory database review A-2
Historical research A-2
Data validation A-3
Windshield survey A-3

Appendix B: Regulatory Database Report (Environmental Data Resources, Inc.) B-1

LIST OF EXHIBITS

Exhibit 1: Project vicinity 3
Exhibit 2: Project improvements 6
Exhibit 3: Project alternatives 23
Exhibit 4: Express Toll Lanes access locations.....25
Exhibit 5: Summary of reasonably predictable sites.....27
Exhibit 6: Reasonably predictable sites 31
Exhibit 7: Project overview with reasonably predictable sites - sheets 1 to 2 32

SUMMARY

The purpose of this technical memorandum is to identify sites of concern with potential hazardous materials in the I-405, Bellevue to Lynnwood Improvement Project area. Identifying sites of concern with potential hazardous materials prior to construction is important because it decreases the possibility of exposing the public and the environment to these substances. Further, this information can minimize liability to Washington Department of Transportation (WSDOT) with respect to cleanup costs and environmental effects.

Hazardous materials include any material that may pose a threat to human health and the environment because of its quantity, concentration, or physical or chemical characteristics. Identifying and evaluating possible effects during project planning allows WSDOT to identify measures that avoid or reduce environmental effects. Such measures may include changes in alignment, identifying areas that require supplemental investigation before right-of-way acquisition, and measures to contain or reduce exposure of hazardous materials.

The study area contains four sites of concern with the potential for hazardous material effects as identified in Exhibit 5. The sites of concern include a dry cleaning facility, known and suspected contaminated sites (current and historic), sites that have underground storage tanks (USTs) and/or leaking underground storage tanks (LUSTs).

The hazardous material contamination that could potentially be encountered at the sites of concern during project construction includes primarily petroleum-contaminated soil and groundwater. Contaminants are released to the environment by ground-disturbing or dewatering activities during project construction. Other contaminants, such as metals and volatile and semivolatile organic compounds, are also associated with petroleum. Human health and the environment could potentially be affected if contamination is not managed properly and in accordance with existing regulations. However, WSDOT will follow all appropriate local, state and federal rules and regulations to properly mitigate the effects of hazardous materials.

Why are we considering hazardous materials as part of this Environmental Assessment?

Identifying hazardous material sites prior to construction is important because it decreases the possibility of exposing the public and the environment to unidentified substances. Hazardous materials include any material that may pose a threat to human health or the environment because of its quantity, concentration, or physical or chemical characteristics. Further, this information can help minimize cleanup costs and effects on the environment.

The I-405 Team collected information for this environmental assessment by reviewing previous environmental reports completed in the project area, reviewing publicly available environmental records and databases, identifying historical land uses, identifying the groundwater flow direction and conducting a windshield survey to identify sources of hazardous materials. The methodology to conduct this analysis is detailed and included as Appendix A.

The study area specifically evaluated for environmental effects included the area within one-quarter mile of the project corridor. Project improvements in the south project corridor between the NE 6th Street and SR 520 interchanges and in the north corridor between the SR 527 interchange and I-5 are limited to restriping of existing pavement. These corridor sections are not included in the environmental effect evaluation. A portion of the project corridor was previously evaluated for the presence of hazardous materials under the Kirkland Nickel Project. These areas will be mitigated upon completion of the Kirkland Nickel project. These areas were not revisited, considered or reported as part of this effort.

PROJECT DESCRIPTION

What is the intent of the Bellevue to Lynnwood project and what are the improvements?

The Bellevue to Lynnwood Improvement Project is intended to improve safety and reduce congestion along I-405 between NE 6th Street in Bellevue and I-5 in Lynnwood. To accomplish this, WSDOT proposes the following improvements:

- Northbound lane from NE 124th Street to SR 522;
- Braided ramps between the I-405 northbound on-ramp from NE 160th Street and the northbound I-405 off-ramp to SR 522;
- Southbound transit shoulders between SR 522 and NE 160th Street and between SR 527 and NE 195th Street;
- New northbound and southbound structures over NE 132nd Street and a new northbound structure over the railroad for the I-405 northbound off-ramp to NE 124th Street;
- Small amounts of additional widening, between four and eight feet, at several locations for buffers, wider shoulders, tolling equipment, enforcement areas and maintenance pull-outs; and
- Minor upgrades to pedestrian facilities in some areas.

Exhibit 1 shows the Bellevue to Lynnwood project vicinity. Exhibit 2, sheets 1 through 17, shows more detail of the project improvements in the 17-mile long corridor.

Exhibit 1: Project vicinity

Are there related projects?

The Bellevue to Lynnwood Improvement Project is designed to compliment other projects along I-405 including:

- Kirkland Nickel Stage 1 Project, which added one lane in each direction between NE 85th Street and NE 124th Street and opened to traffic in November 2007;
- NE 195th Street to SR 527 Auxiliary Lane Project, which added one northbound lane between NE 195th Street and SR 527 and opened to traffic in June 2010; and
- NE 8th Street to SR 520 Braided Ramps Project, which creates new multi-level "braided" ramps to separate vehicles entering and exiting northbound I-405 between NE 8th Street and SR 520 and is anticipated to be open to traffic during the summer of 2012.

The Kirkland Nickel Stage 2 Project will reconfigure the NE 116th Street interchange, and northbound and southbound lanes between NE 70th Street and NE 85th Street, and a southbound lane between SR 522 and NE 124th Street, and between NE 70th Street and SR 520. The Kirkland Nickel Stage 2 project has been environmentally cleared and permitted, and, along with the other projects mentioned in this section, is considered part of the baseline conditions for this analysis. The Bellevue to Lynnwood Improvement Project will be constructed at the same time.

What will the completed project provide?

The Bellevue to Lynnwood Improvement Project fills in the remaining gaps and allows WSDOT to provide an improved system on I-405 between NE 6th Street and I-5. WSDOT has designed this project to maximize the use of existing pavement and minimize the need for new pavement. In some areas, small amounts of widening of less than a lane width, together with narrower shoulders and lanes, will allow an additional lane. In other areas, narrowing the shoulders and lanes will allow an additional lane without any pavement widening.

Exhibit 3 shows the configuration in each of the project segments when this project and the related projects described above are complete.

How will this portion of I-405 be operated after the project is completed?

In this environmental document, WSDOT and FHWA are considering two operational alternatives: 1) Express Toll and General Purpose Lanes (ETL); and 2) High Occupancy Vehicle and General Purpose Lanes (HOV). Under both scenarios, the project footprint is the same. The occupancy requirement for HOVs in this portion of the I-405 corridor is the same. It is assumed the occupancy requirement, to maintain HOV performance standards under WSDOT's HOV policy, will be three or more people (HOV 3+). The difference is in how the roadway lanes would be managed.

Alternative 1: Express Toll and General Purpose Lanes (ETL)

This operational alternative will provide two express toll lanes in each direction between NE 6th Street in Bellevue and SR 522 in Bothell, and one express toll lane in each direction between SR 522 and I-5 in Lynnwood. The express toll lane system will be open toll free to all HOV traffic with three or more occupants and all transit operations. The express toll lane system will also be open to single occupant vehicles (SOVs) and HOVs with two occupants through tolling.

The southern end of the express toll lane system will be at the existing direct access ramps at NE 6th Street in Bellevue where one of the two northbound express toll lanes will begin and one of the two southbound express toll lanes will end. South of the NE 6th Street, the other express toll lanes will connect with the existing single northbound and southbound HOV lanes. The northern end of the system would be much like it is today with I-405 becoming SR 525. Access points will be at various locations along the mainline as shown in Exhibit 4. The express toll lanes will be separated from the general purpose (GP) lanes by a two- to four-foot wide buffer. At an access point, the buffer will open and a section of transition lane may be provided between the express toll and general purpose lanes to ease ingress and egress to the system.

Alternative 2: High Occupancy Vehicle and General Purpose Lanes (HOV)

This operational alternative will allow HOV users with three or more occupants and transit vehicles to use the single HOV lane, similar to today's operation. Access between the HOV lane and GP lanes will be allowed throughout the project, except northbound between NE 6th Street and SR 520 where access is not allowed under today's operation. The new northbound lane between NE 124th Street and SR 522 will be operated as a GP lane.

What will conditions be like if the project is not built?

No Build Alternative

A No Build Alternative has been evaluated as the basis for comparing effects associated with the Build Alternatives. No new improvements would be made beyond those constructed as a part of the Kirkland Nickel Project Stage 2, the NE 8th Street to SR 520 Braided Ramps Project, and the NE 195th Street to SR 527 Auxiliary Lane Project.

The No Build Alternative does not include additional stormwater treatment or any roadway improvements that would increase roadway capacity, reduce congestion, or improve safety on I-405. Only routine activities such as road maintenance, repair, and minor safety improvements would occur. As with the two build alternatives, we assume that the occupancy requirement for HOVs in this portion of the I-405 corridor will be three or more people (HOV 3+).

Exhibit 2: Project improvements – sheet 1 of 17

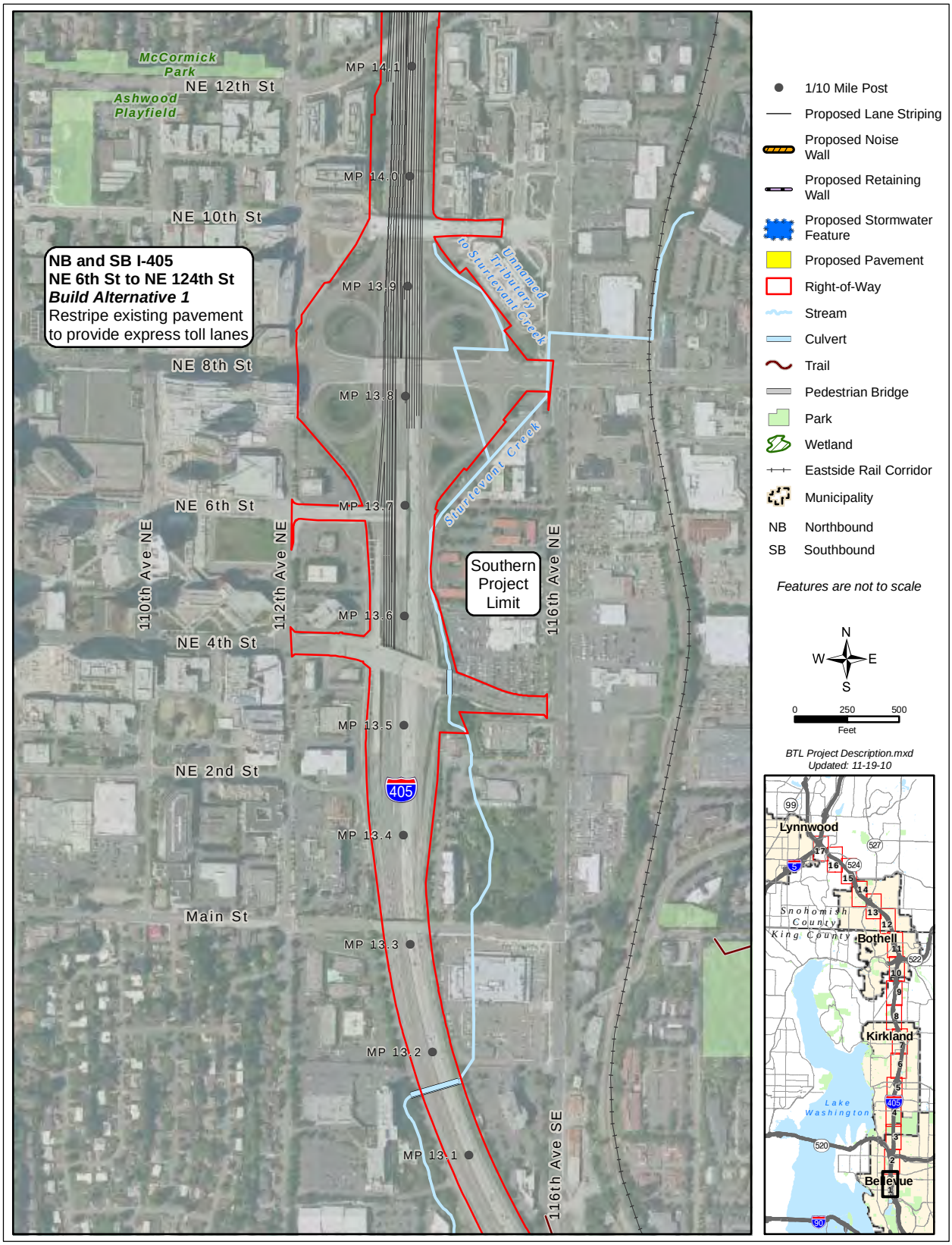


Exhibit 2: Project improvements – sheet 2 of 17

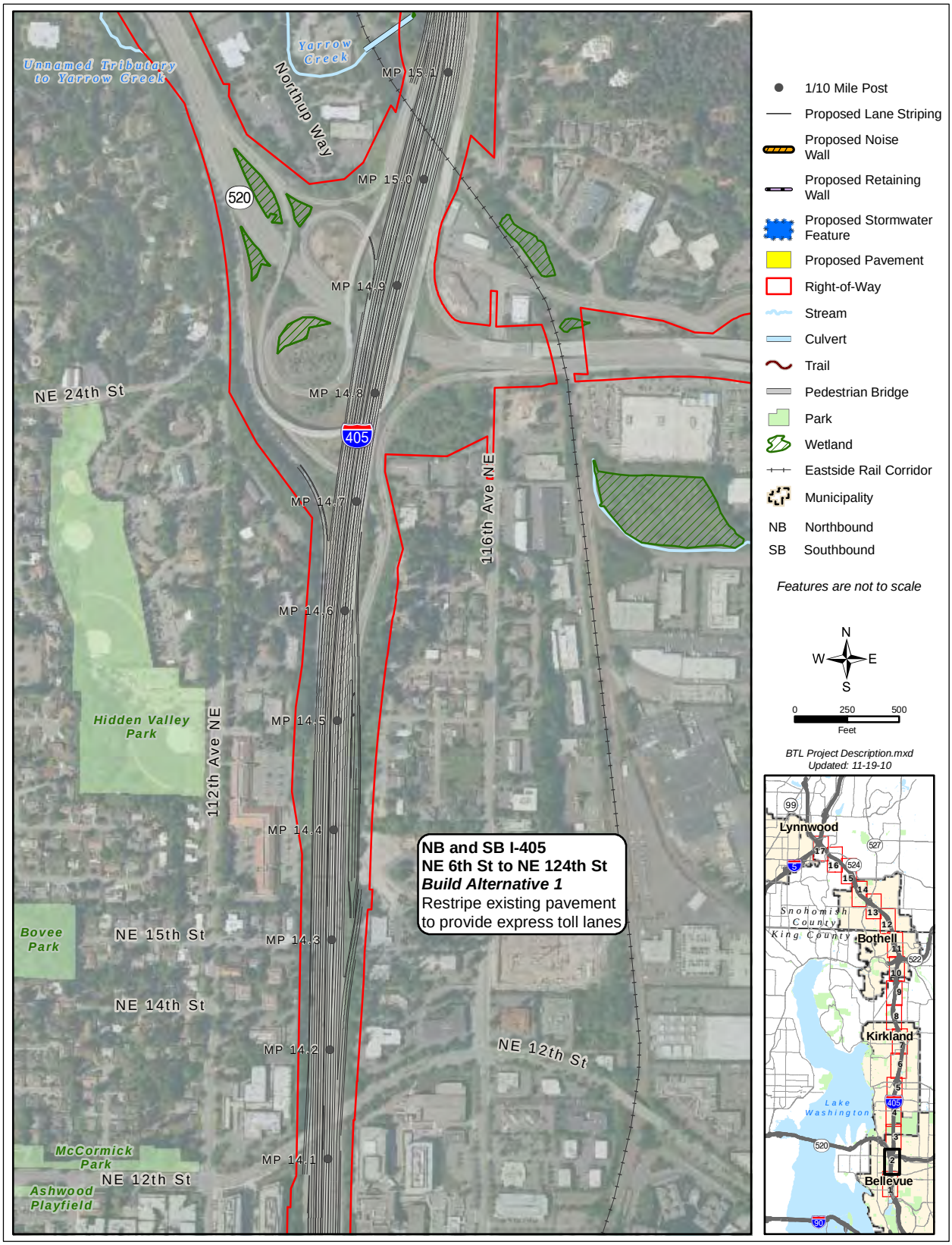


Exhibit 2: Project improvements – sheet 3 of 17

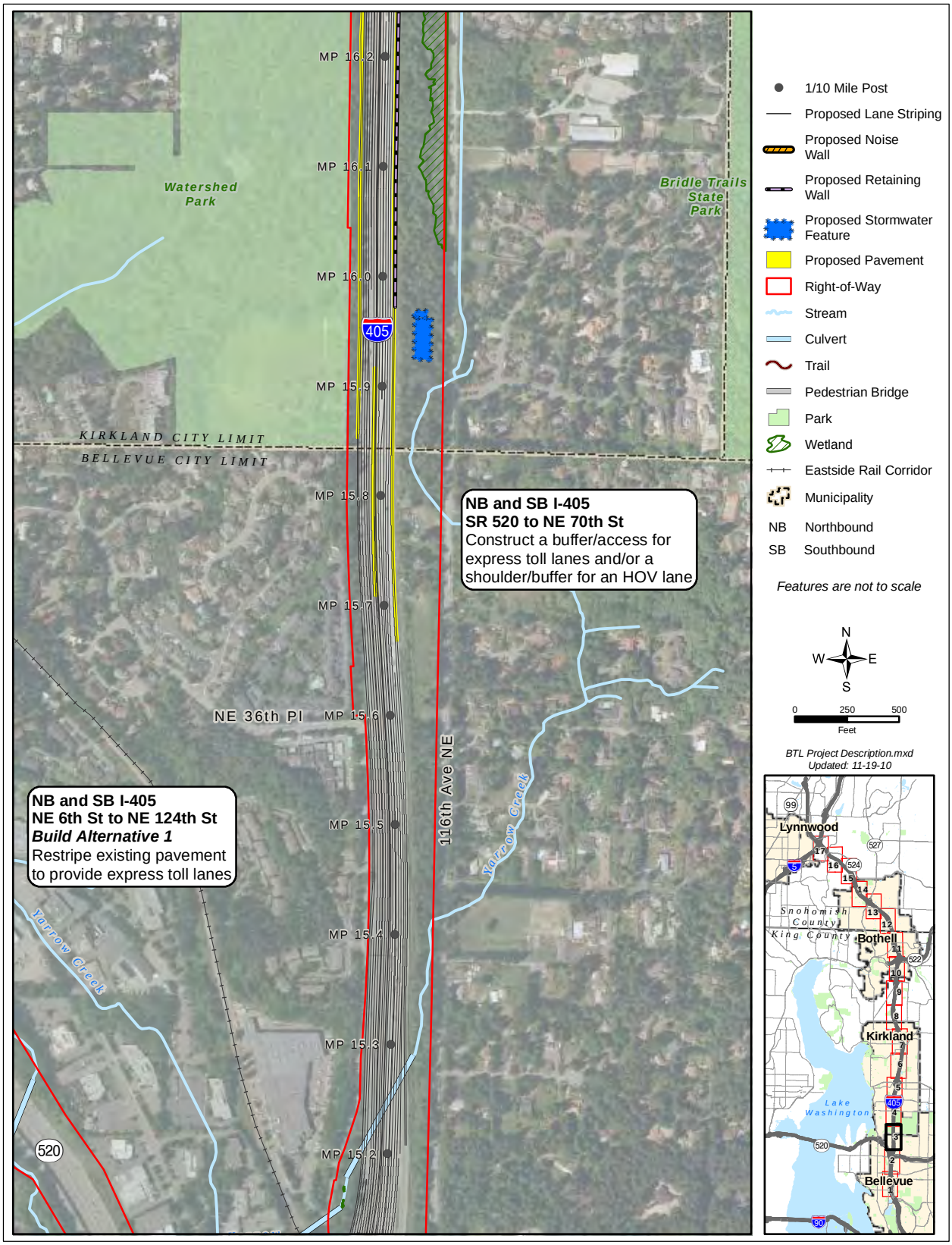
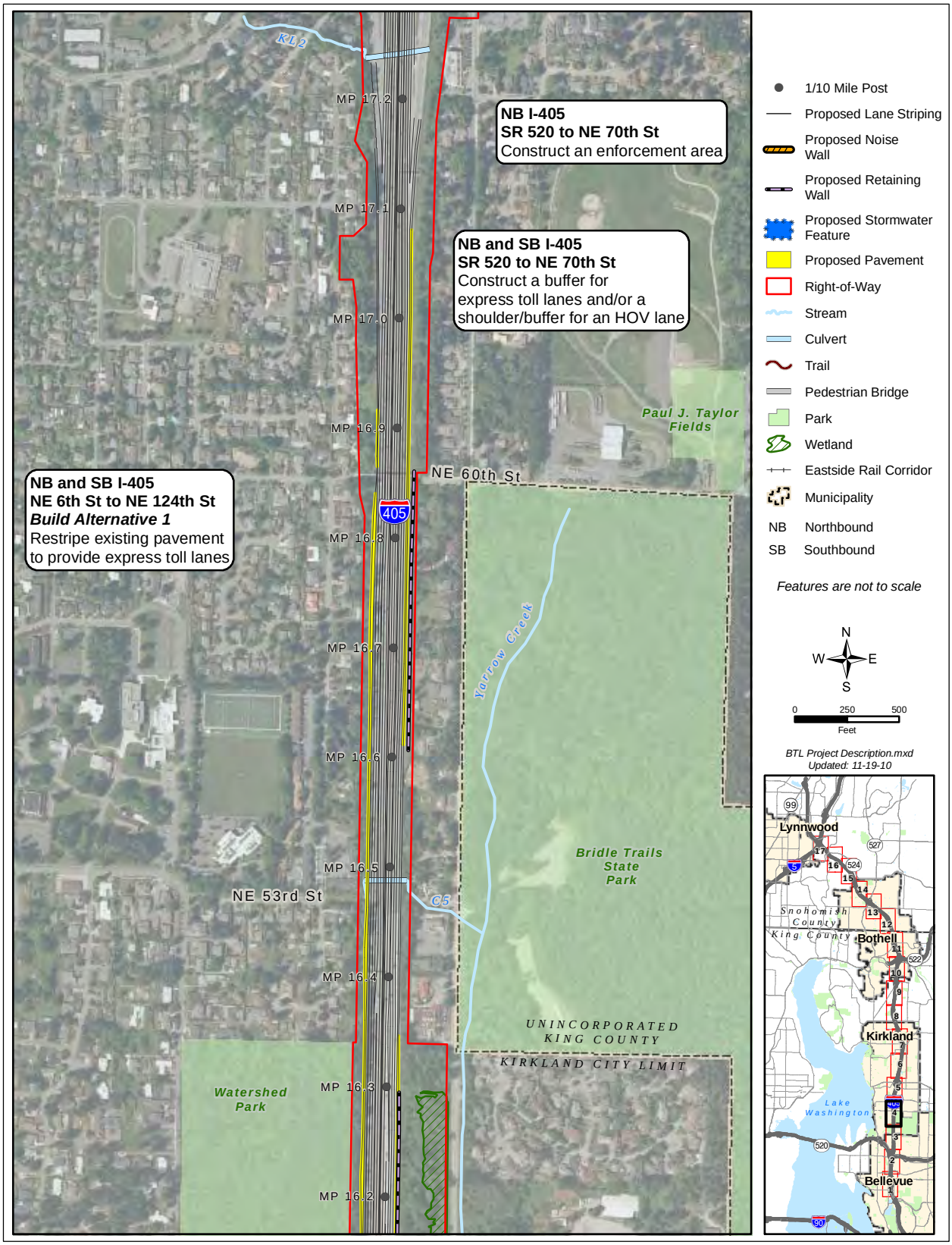


Exhibit 2: Project improvements – sheet 4 of 17



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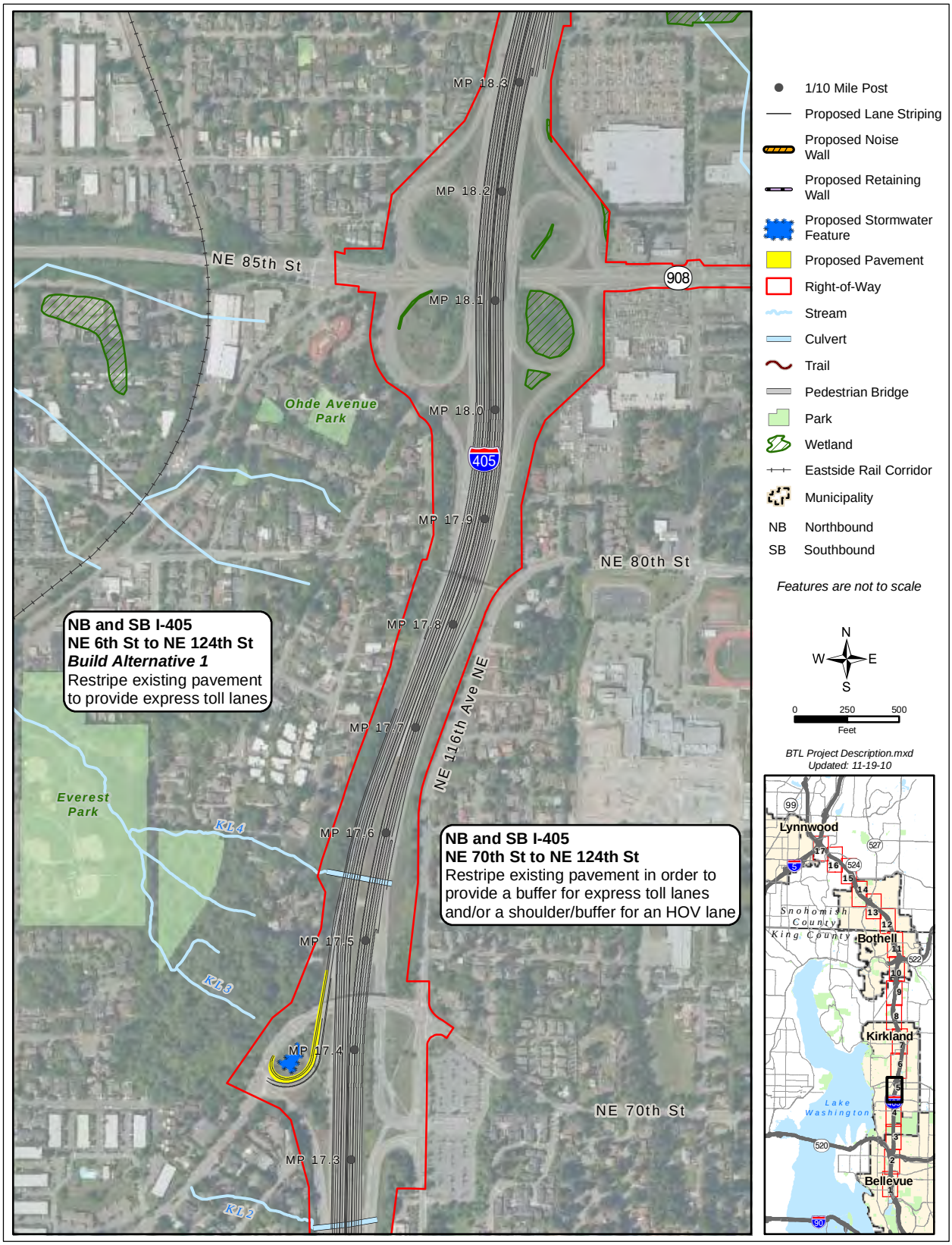

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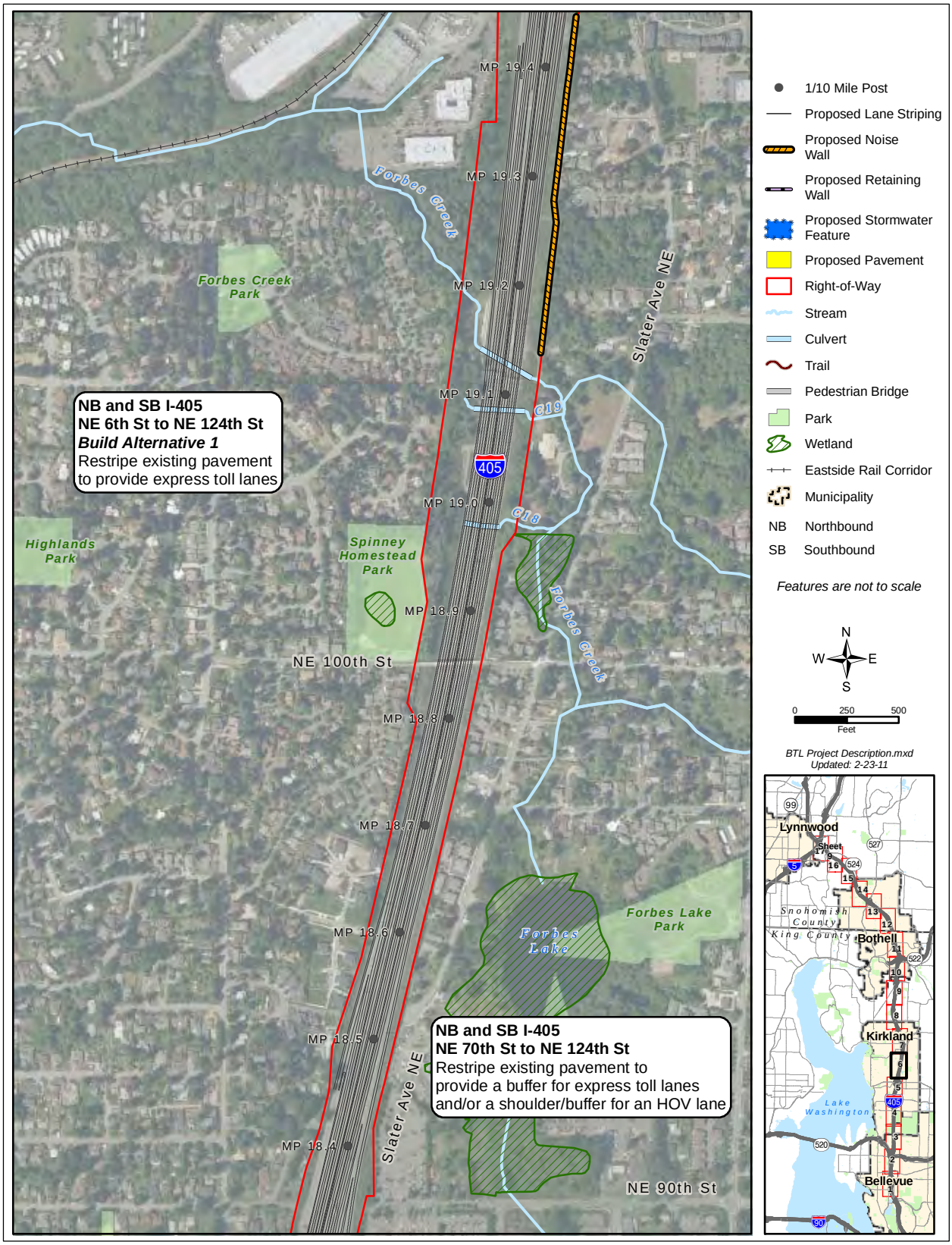

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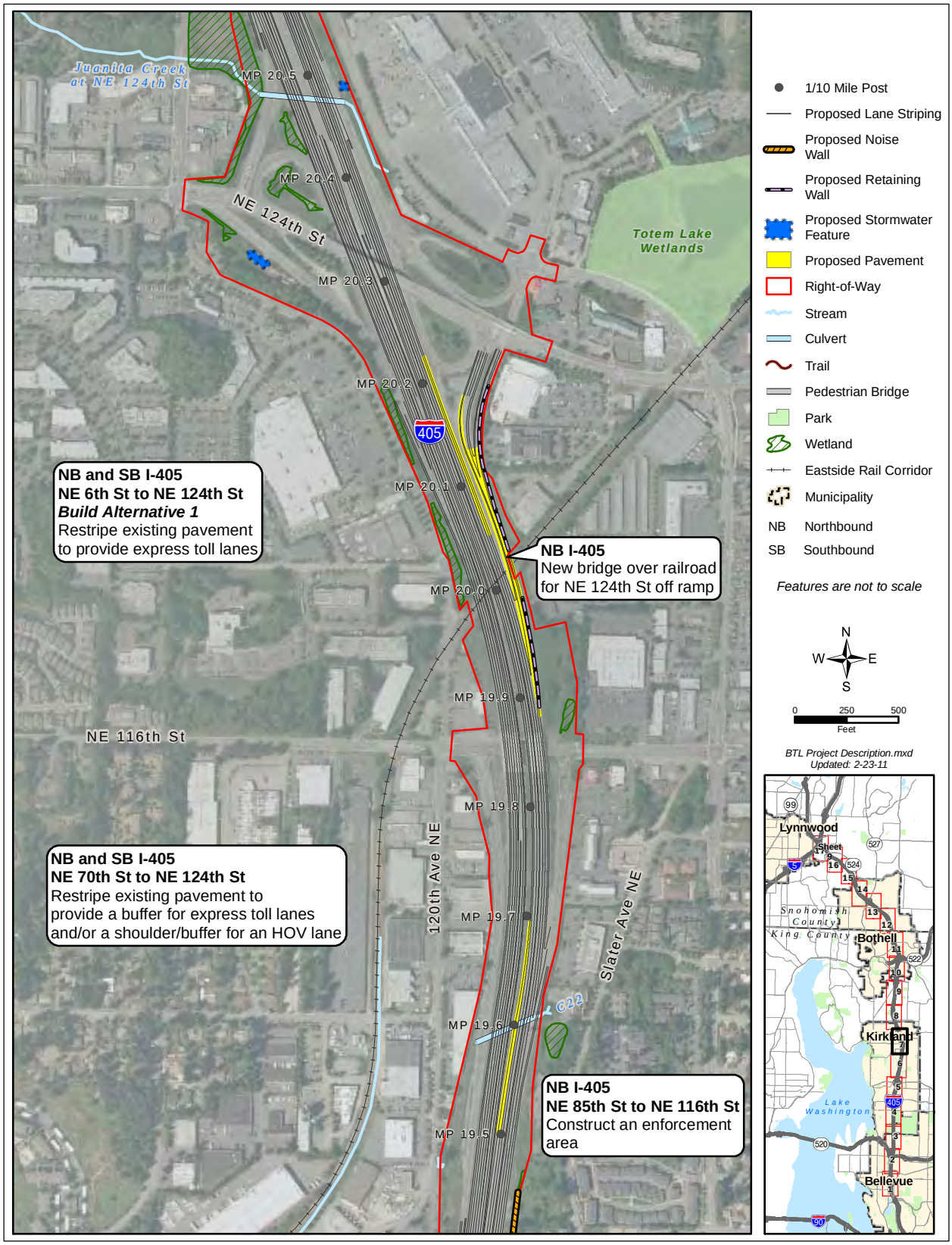

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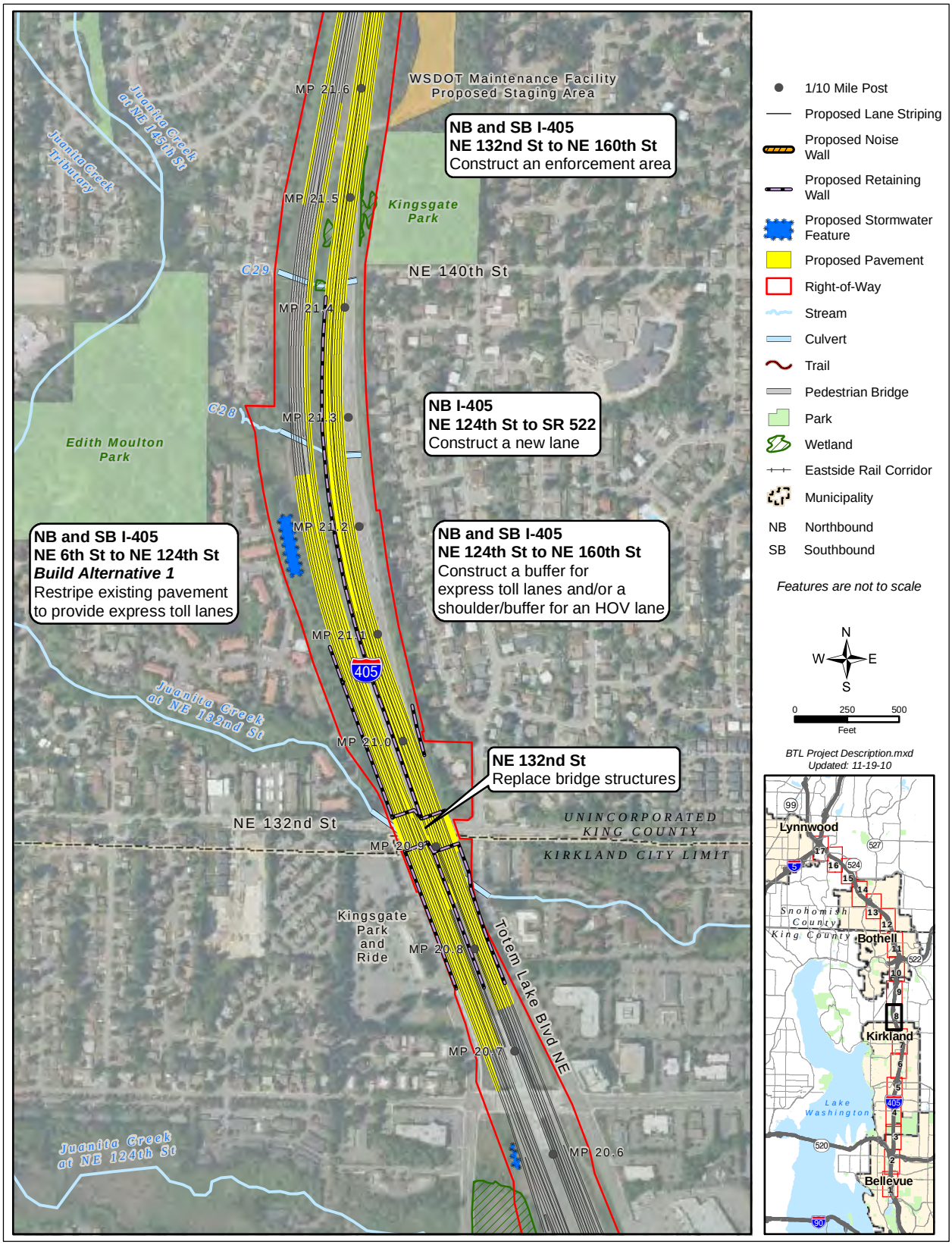

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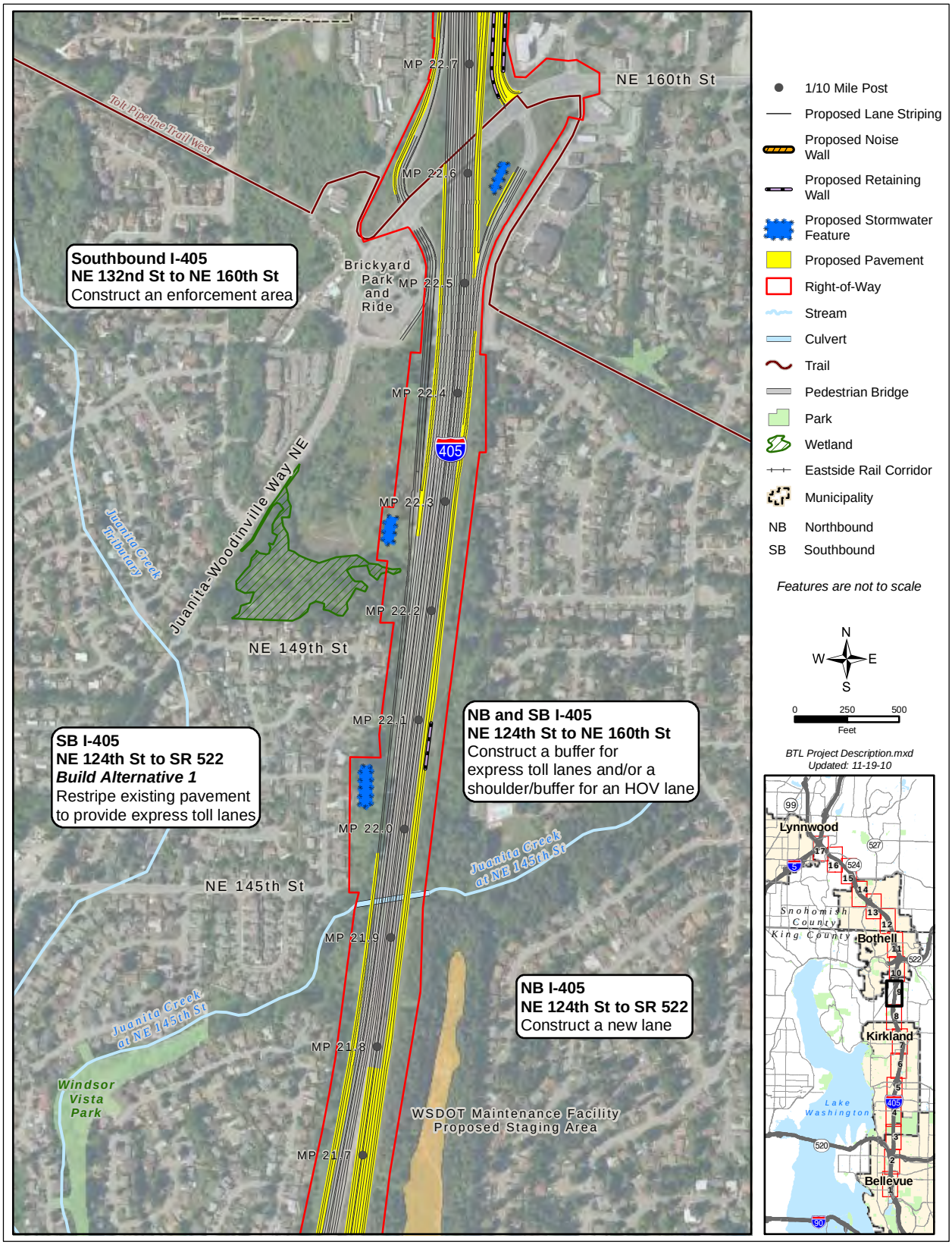

Exhibit 2: Project improvements – sheet 10 of 17

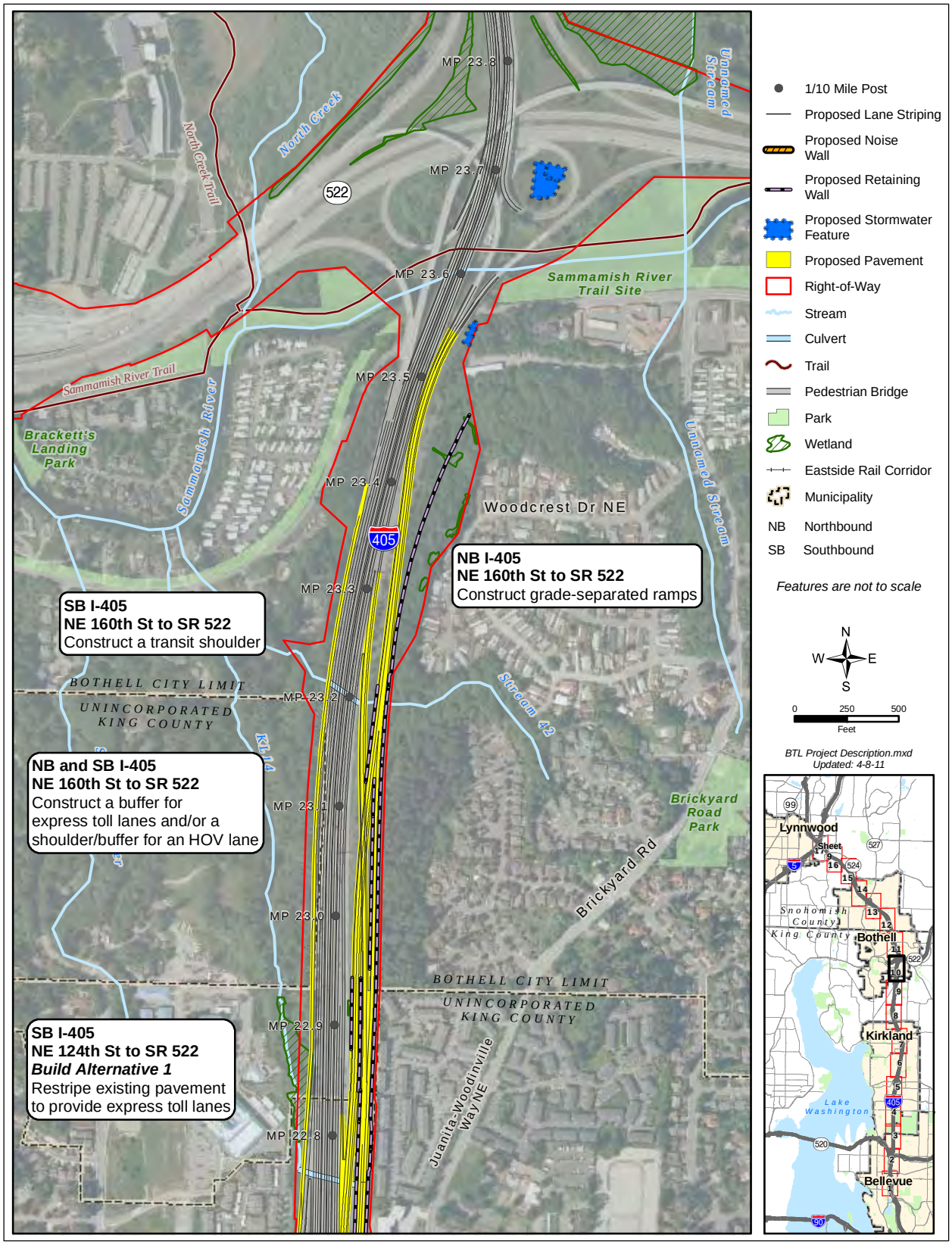
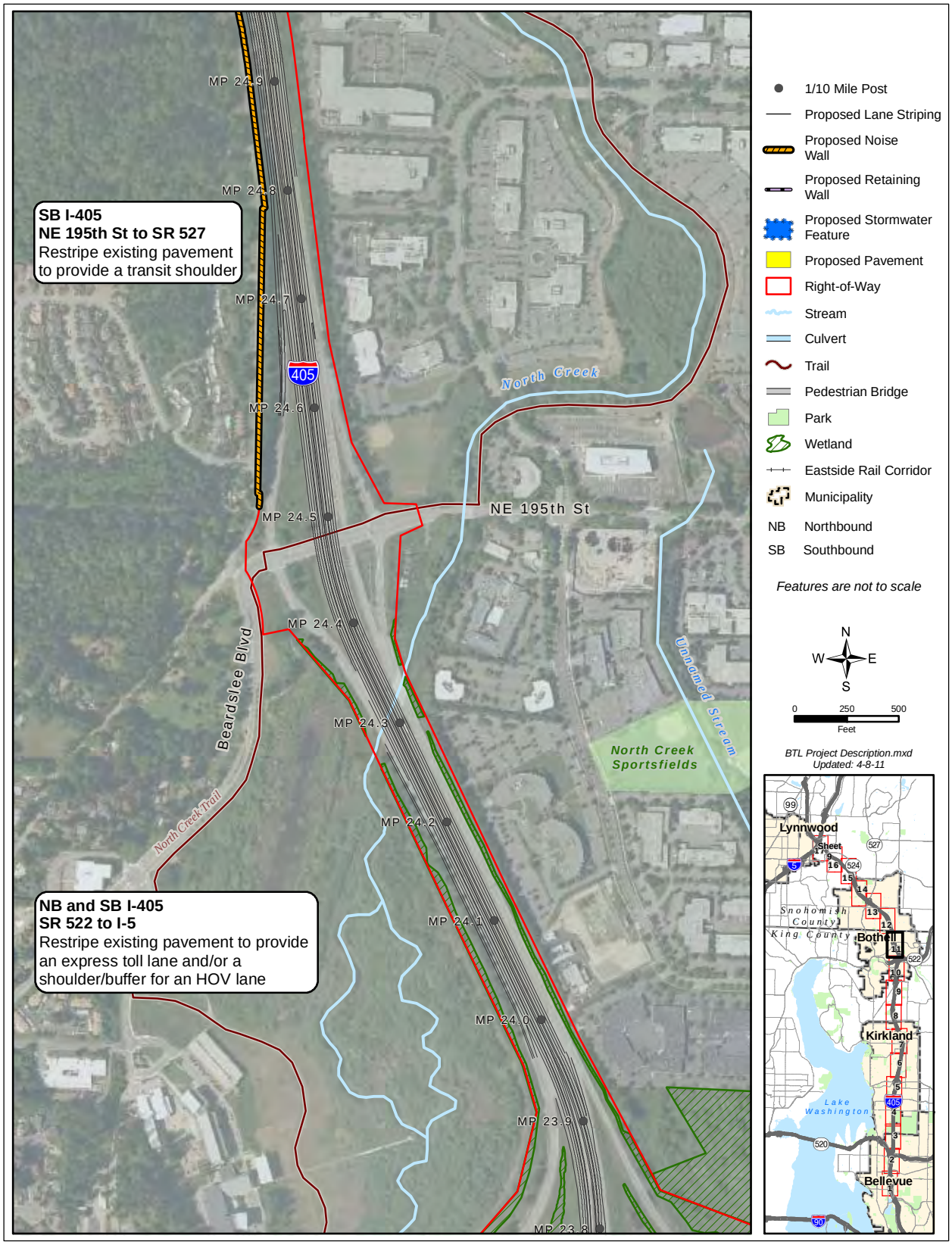
Exhibit 2: Project improvements – sheet 11 of 17