HOWARD ELEMENTARY SCHOOL

SAFE ROUTES TO SCHOOL STUDY

EUGENE, OREGON

PROJECT PRINCIPAL: KELLY SANDOW PE

PROJECT NO. 2362

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INTRODUCTION

This document has been prepared in coordination with the Eugene School District 4J to provide a Safe Routes to School plan for Howard Elementary School at 700 Howard Avenue, Eugene, Oregon. The parking lots and main entrance to the school are accessed from Howard Avenue to the north. Pedestrian/bicycle access is also available from Emerald Park southeast of campus. The location of Howard Elementary School is illustrated in Figure 1.

The Safe Routes to School program is a national program designed to encourage and provide safe active modes of travel to and from school. The program is designed to examine routes that children take to get to and from school, paying particular attention to roadway crossings, to identify and recommend relatively safe routes, to provide treatment options that improve the safety of the routes, to supply students with route information and safety information, and to encourage the use of active modes of travel.

There are typically five elements in a Safe Routes to School (SRTS) plan that are necessary to meet the goals and improve the success of the program. The five elements of a successful SRTS program include Engineering, Education, Encouragement, Enforcement, and Evaluation, with this report focusing on the engineering component.

The **ENGINEERING** element of a Safe Routes to School program addresses the built environment with an emphasis on safety along active transportation routes and crossings. This element typically identifies locations where safety may be a concern and strategies are identified for implementation to improve upon safety. Such improvements can include maintenance and operational measures as well as construction projects. As safety is the first priority, this element of the SRTS program may be the most essential to a successful program, and a safe active transportation routing has the potential to encourage an increase in walking and biking.

EDUCATION is the process of informing students, parents, neighbors, and other drivers in the community of safe driving, walking, and biking practices while in the school area. Aspects of this element can include classroom activities to teach students how to bike and walk safely and can include informing parents, neighbors, and student drivers to yield at crosswalks, drive safely, and to take other actions to make it safer for pedestrians and bicyclists.

ENCOURAGEMENT strategies generally focus on generating excitement about using active modes safely to school. Activities can include participation in the International Walk to School Days, challenges, and activities to encourage walking and biking to school. Some successful challenges and activities have been “Frequent Rider” challenges and “Ride n’ Seek” treasure hunts. Encouragement can also include school participation activities which can promote the health aspects of walking/biking to school. The 4J School district has a program in place many other district schools to encourage students

to walk and bike to school. Currently there are eight schools that have complete action plans.

ENFORCEMENT activities are designed to help change unsafe behavior of drivers, bicyclists, and pedestrians and to encourage safe behaviors. Enforcement activities commonly include involving local law enforcement agencies to provide help in enforcing traffic laws and school zone speed limits near the site. Enforcement can also be provided by community members to encourage students, parents, and neighbors to follow traffic laws and to yield at crosswalks and along the active transportation routes.

EVALUATION is used to determine if the goals are being met and can identify needed adjustments to the program while it is underway. This process typically consists of the identification of clear goals and objectives, a strategy for achieving goals, and a mechanism in place for measuring the success of the program towards achieving the goals.

As this report focuses on the Engineering aspect of the SRTS Plan, an inventory and analysis of the existing walking/biking facilities along the identified major active transportation routes was performed, followed by a needs assessment which looked at deficiencies and locations where improvements/treatments are necessary.

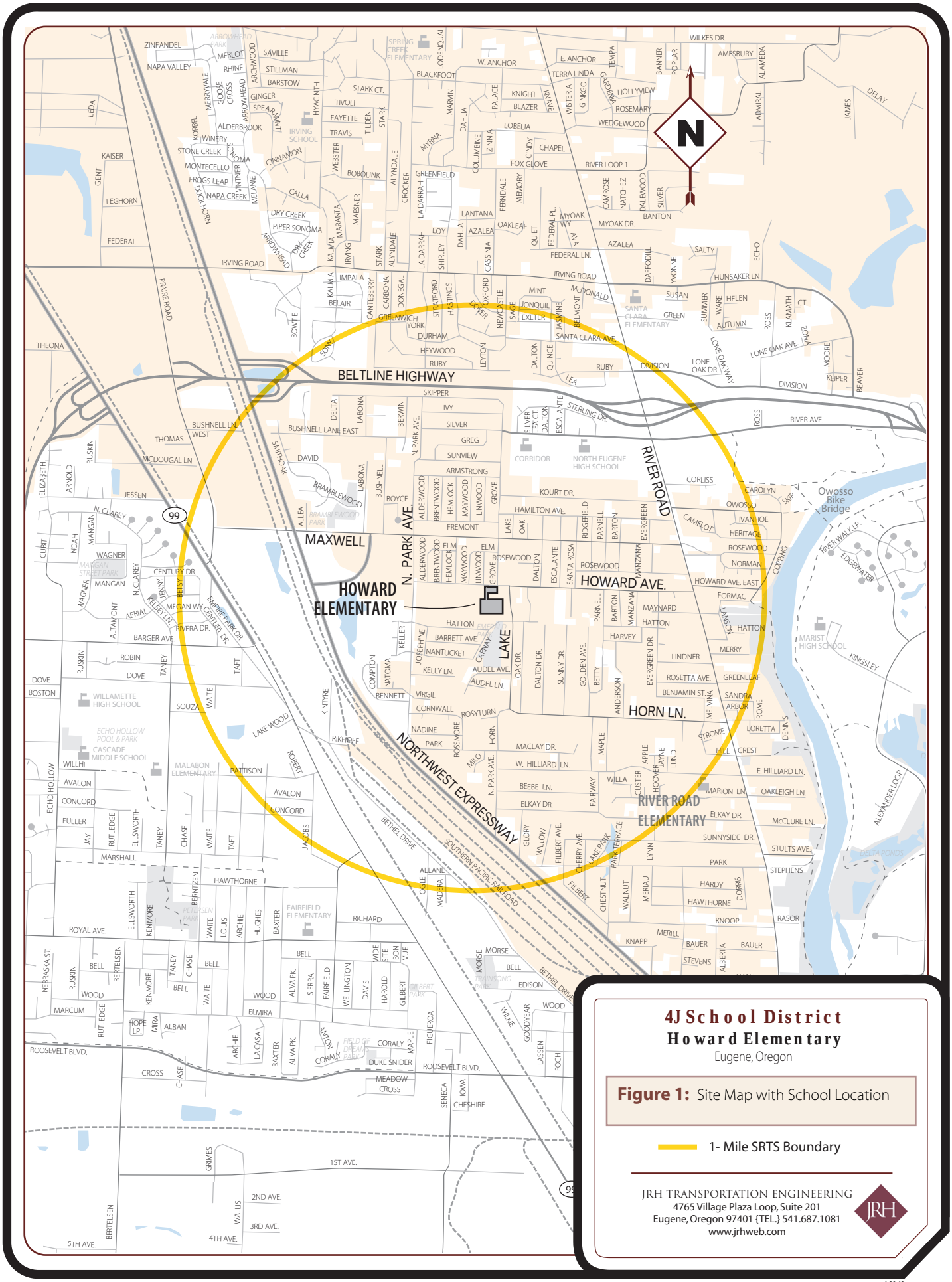

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Figure 1: Site Map with School Location

1- Mile SRTS Boundary

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PEDESTRIAN INVENTORY/PEDESTRIAN ROUTES

It is the Eugene School District 4J's policy to not provide school transportation, busing, to students who reside within 1.0 mile from an elementary school. However, 4J will provide busing to students within a 1.0 mile radius that do not have a safe active transportation route to school or who need the service as part of a special needs program. Students living inside the 1.0 mile perimeter are responsible for their own transportation to school, which may include vehicle and active modes of travel.

The Lane Transit District in cooperation with the Eugene School District 4J has provided a map which illustrates the housing locations of existing students in grades K through 5 within the school district boundaries.

The first step in the plan is to identify the routes that pedestrians and bicyclists will likely take to/from school. The student map provided illustrates the origin (housing location) of each student for the most recent school year. From the point of origin a walking/biking route is developed which takes the student to school. These routes are based on a shortest distance to school and type of roadway traveled. Once all of the routes are created they are classified as a minor active transportation route or a major active transportation route. A minor active transportation route is a route that will typically be traveled by few students and are on lower traffic volume roadways. A major active transportation route is a route that a larger number of students will travel or are routes along higher traffic volume roadways. The major routes are typically a section of roadway into which several minor routes connect or funnel. These routes are illustrated in Figure 2.

The major active transportation routes have been identified along North Park Avenue, Howard Avenue, Grove Street, and Lake Drive. There is unpaved pedestrian access to the southeast corner of campus from Emerald Park and Lake Drive.

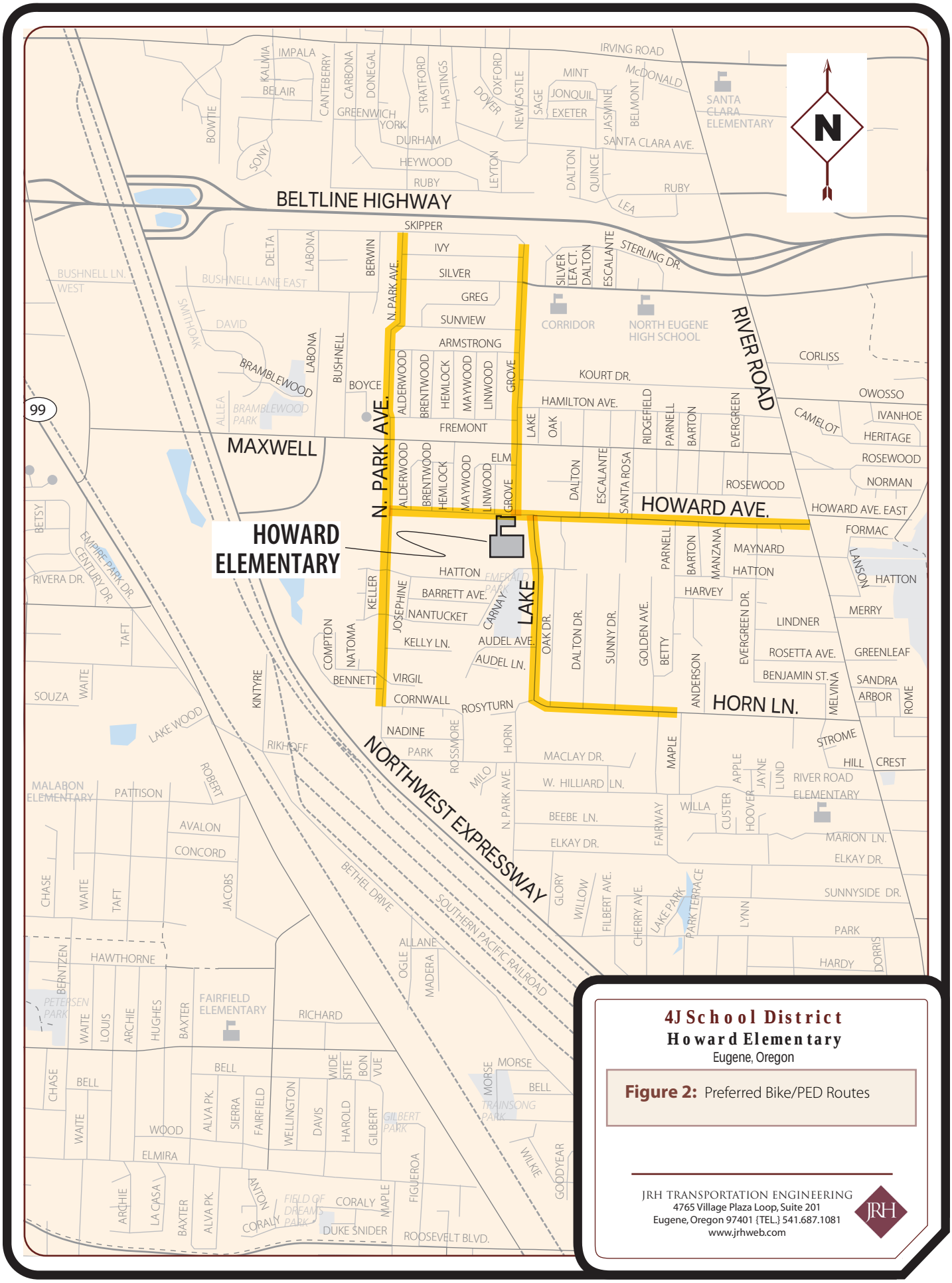

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Figure 2: Preferred Bike/PED Routes

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NEEDS ASSESSMENT

EXISTING CONDITIONS

All of the routes illustrated in Figure 2 were inventoried to examine existing pedestrian/bicycle treatments. These treatments include locations where sidewalks and crosswalks are present and intersections which are stop-controlled or signalized. Along major active transportation routes the characteristics are examined to determine if additional treatments are necessary to improve safety. The route characteristics are illustrated in Figure 3.

The major pedestrian routes have been identified along North Park Avenue, Howard Avenue, Grove Street, and Lake Drive. There is unpaved pedestrian access to the southeast corner of campus from Emerald Park and Lake Drive.

North Park Avenue

There is a short segment sidewalk on the west side which runs the length of the first property south of Maxwell. The remainder of North Park Avenue south to Cornwall Avenue has approximately four-foot wide shoulders for bicycles or pedestrians to use. There is one marked pedestrian crossing at Howard Avenue. Northbound vehicles on North Park Avenue have "School Zone" pavement markings and signage, but no advance indication of the crosswalk at Howard. Southbound vehicles on North Park have a school zone indication and advance signage to indicate the crosswalk at Howard.

North Park Avenue Looking North from Howard

North Park Avenue Looking South from Howard

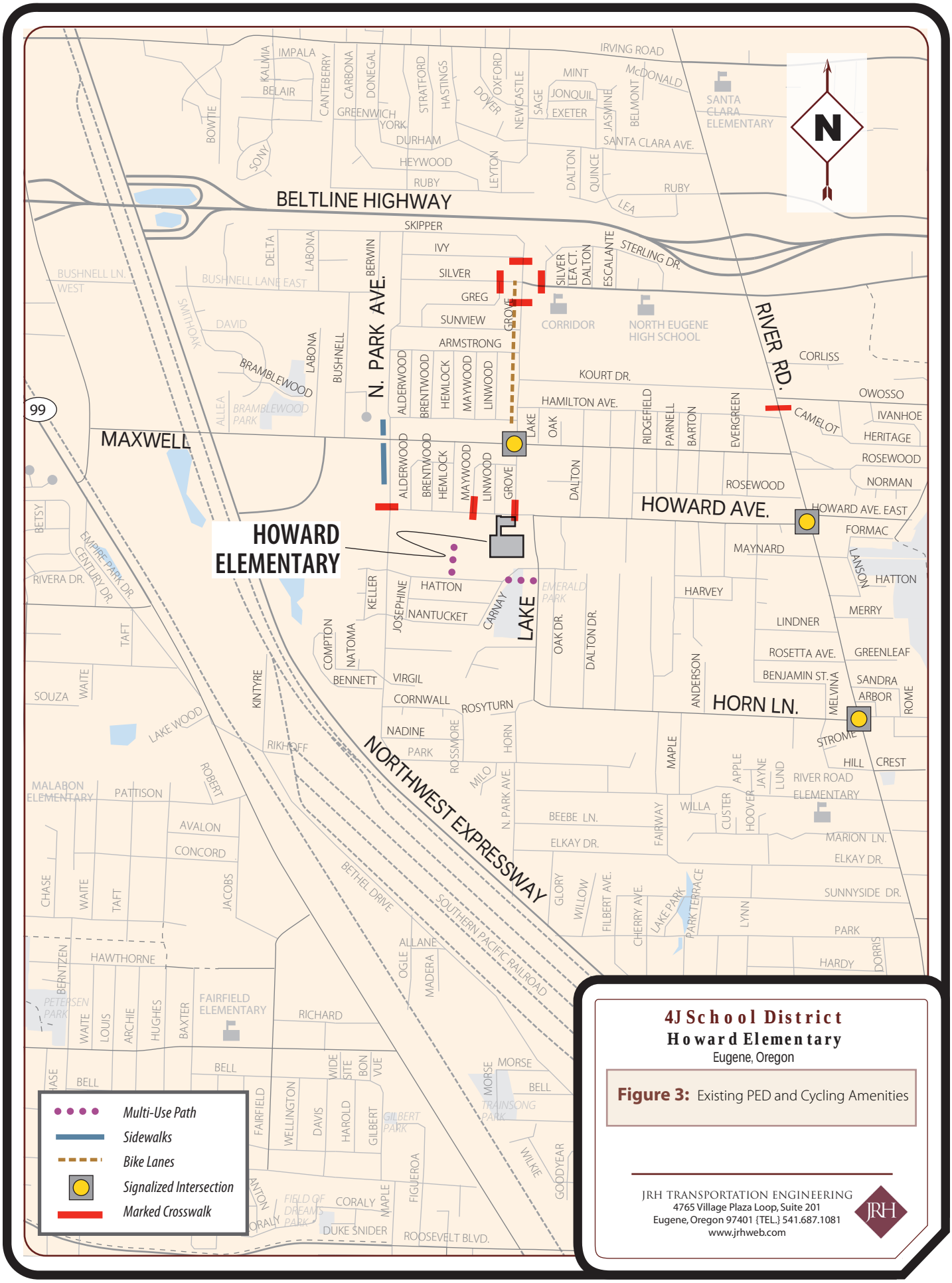

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Figure 3: Existing PED and Cycling Amenities

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Howard Lane Looking West from Grove Street

Howard Avenue

There are no sidewalks along Howard Avenue between North Park Street and River Road. Active transportation along this segment utilizes a paved shoulder of approximately four feet in width although it varies. These shoulders are on both sides of the road. The school zone is marked and signed. There are also marked and signed pedestrian crossings at Maywood Avenue and at Grove Street.

Grove Street

Grove Street north of Maxwell has no sidewalks. There is a bike lane on the west side of Grove that runs from Silver Lane to Maxwell Road. From Maxwell south to Howard there are no sidewalks or bike lanes on Grove. There is a traffic signal at the intersection of Maxwell Road and Grove Street. There is a marked pedestrian crossing at the intersection of Grove Street with Howard Avenue.

Grove Drive Looking South Through Maxwell Street to Howard Elementary

Lake Drive
Between Howard Avenue and the pedestrian shortcut at Emerald Park there are no sidewalks, bike lanes or shoulders. From the pedestrian shortcut south to Horn Lane there is a paved and marked three- to four-foot shoulder on both sides.

Path Through Emerald Park From Lake Drive to School

Looking Towards Howard Elementary from Emerald Park Path

BARRIERS AND DEFICIENCIES

Barriers located along the major active transportation routes may be viewed as a deterrent to walking and biking. Barriers are any physical or perceived obstacle/concern along a route that would deter a student from walking or biking to school. Barriers may include locations where sidewalks are not present, unsafe road crossing locations or conditions, and the speed/high volume of traffic along the roadways. Figure 4 illustrates the location of the Barriers and Deficiencies.

Maxwell Road
Maxwell Road is one of the locations identified as a barrier. While Maxwell itself has sidewalks and bike lanes, there are limited opportunities for pedestrians to comfortably cross Maxwell. There is a traffic signal at the intersection of Maxwell Road at Grove Street. North Park Avenue which provides the most direct route to school from the north is stop-controlled on North Park Avenue. There is one painted crosswalk here, but there is no indication to drivers on Maxwell (pavement markings or signage) of the crossing.

North Park Avenue
The intersection of North Park Avenue at Howard Avenue is another area of concern. There is a short segment of sidewalk on the west side which runs from Maxwell Road the length of the first property. The remainder of North Park Avenue south to Cornwall Avenue has approximately four-foot wide shoulders for bicycles or pedestrians to use. There is one marked pedestrian crossing at Howard Avenue. Northbound vehicles on North Park Avenue have "School Zone" pavement markings and signage, but no advance indication of the crosswalk at Howard. Southbound vehicles on North Park have a school zone indication and advance signage to indicate the crosswalk at Howard. For students south of Howard and west of Park there is no sidewalk on the west side of Park, no sidewalk along the school frontage of Park and no marked crossing of Park until north of Howard Avenue.

Grove Street
Grove Street also presents a couple barriers. Grove Street north of Maxwell has no sidewalks. From Maxwell south to Howard there are no sidewalks or bike lanes on Grove. Grove Street would provide a more comfortable pedestrian route if there were at least one sidewalk on one side leading south to Howard Avenue. The traffic signal at the intersection of Maxwell Road and Grove Street provides a safe crossing across Maxwell.

Lake Drive
Lake Drive provides a convenient connection to the campus from the south and east. There is pedestrian shortcut to campus at Emerald Park. It is currently a bark/gravel path through the park and from Lake Drive which could be improved to encourage pedestrian/bike access. There is no path from the edge of the school property to the building.

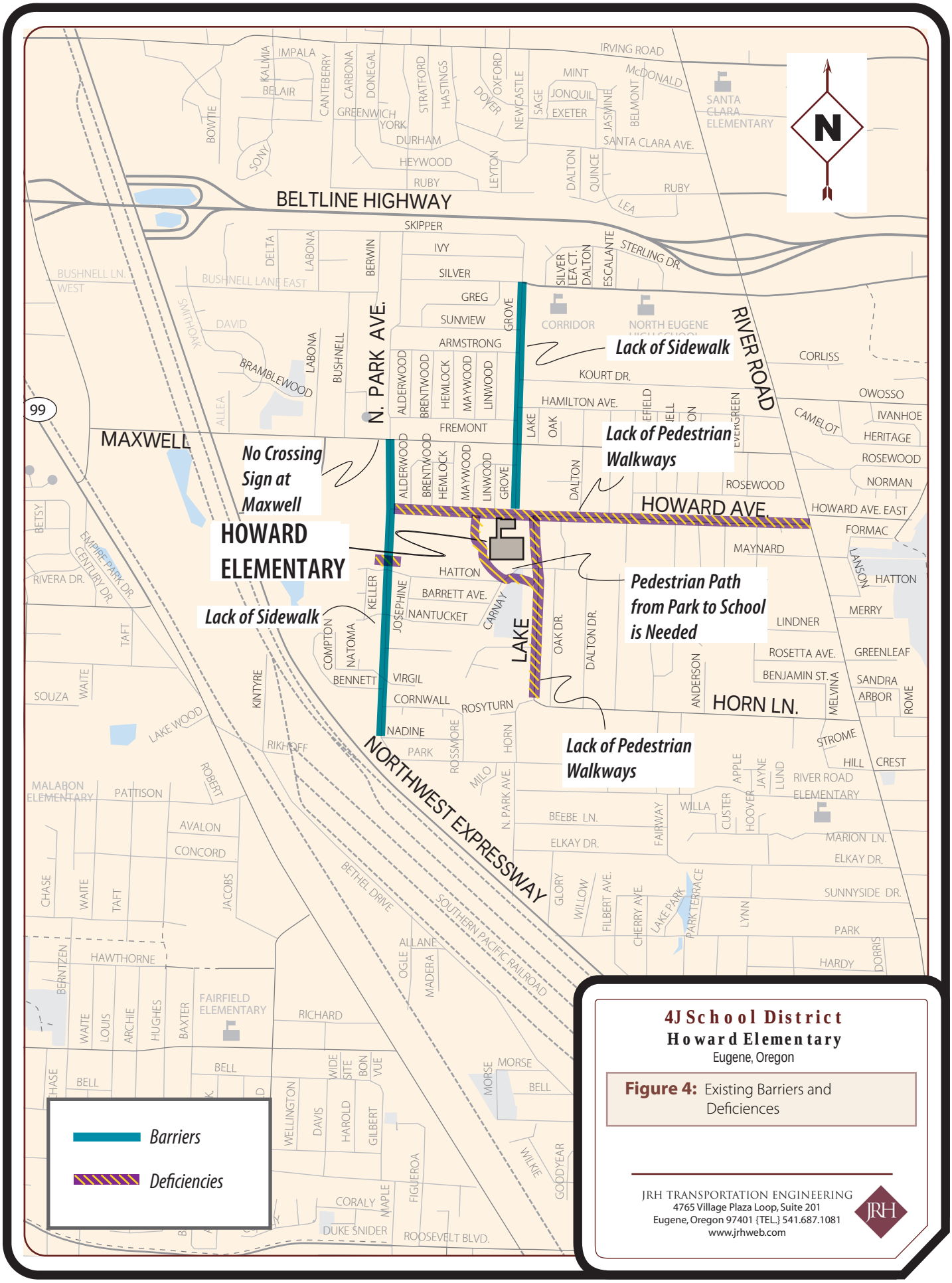

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Figure 4: Existing Barriers and Deficiences

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ENGINEERED SOLUTIONS

There are a variety of treatments that are engineered solutions to enhance safe routes to school including the following:

- **Sidewalk improvements**: new sidewalks, sidewalk widening, sidewalk gap closures, sidewalk repairs, curbs, gutters, and curb ramps.
- **Traffic calming and speed reduction improvements**: roundabouts, bulb-outs, speed humps, raised crossings, raised intersections, median refuges, narrowed traffic lanes, lane reductions, full- or half-street closures, automated speed enforcement, and variable speed limits.
- **Pedestrian and bicycle crossing improvements**: marked crossings, median refuges, raised crossings, raised intersections, traffic control devices (including new or upgraded traffic signals, pavement markings, traffic stripes, in-roadway crossing lights, flashing beacons, bicycle-sensitive signal actuation devices, pedestrian countdown signals, vehicle speed feedback signs, and pedestrian activated signal upgrades), and sight distance improvements.
- **On-street bicycle facilities**: new or upgraded bicycle lanes, widened outside lanes or roadway shoulders, geometric improvements, turning lanes, channelization and roadway realignment, traffic signs, and pavement markings.
- **Off-street bicycle and pedestrian facilities**: exclusive multi-use bicycle and pedestrian trails and pathways that are separated from a roadway.
- **Traffic diversion improvements**: separation of pedestrians and bicycles from vehicular traffic adjacent to school facilities, and traffic diversion away from school zones or designated routes to a school.

RECOMMENDED TREATMENTS

Based on the current inventory of roadway conditions and routes to school, there are key locations that would benefit from improved pedestrian treatments. These locations are Maxwell Road at North Park Avenue; crossing at North Park Avenue and Howard Avenue; North Park Avenue crossing at Hatton Avenue; North Park Avenue from Maxwell Road to Nantucket Avenue; Grove Street form Silver Lane south to Howard Avenue and the crossing across Howard Avenue; Howard Avenue in front of the school; and the shortcut at Lake Drive and Emerald Park.

The following discusses the recommended treatment options at these locations. Figure 5 illustrates the recommended treatment locations.

Maxwell Road at North Park Avenue
It is recommended that an improved pedestrian crossing treatment be provided across Maxwell Road at North Park Avenue in order to facilitate and emphasize this route to school. This intersection operates as a two-way stop control with the north- and southbound approaches stopped. A rectangular rapid flashing beacon (RRFB) assembly with standard pavement markings and signage or equivalent warning system could be installed.

Crossing at North Park Avenue and Howard Avenue
It is recommended that the visibility of the existing pedestrian crossing at North Park Avenue and Howard Avenue be improved by including advanced warning signs south of the crossing.

North Park Avenue
It is recommended that pedestrian treatments be provided along North Park Avenue between Nantucket Avenue and Howard Avenue. These treatments would include a sidewalk along North Park Avenue between Nantucket Avenue and Hatton Avenue. A standard marked and signed school crossing of North Park Avenue at Hutton Avenue should also be installed. North of Hutton along North Park it is also recommended that a sidewalk be provided on the east side of the road along the campus frontage extending to Howard Avenue.

Grove Street
It is recommended that a sidewalk be provided along the west side of Grove Street extending from Silver Lane to Howard Avenue.

Howard Avenue
It is recommended that a paved walking surface be provided along the south side of Howard Avenue in front of the school.

Lake Drive at Emerald Park
It is recommended that the gravel path extending from Lake Drive along the north side of Emerald Park to the campus be upgraded to a concrete path. It is also recommended that a pathway from the school property to the school building be provided.

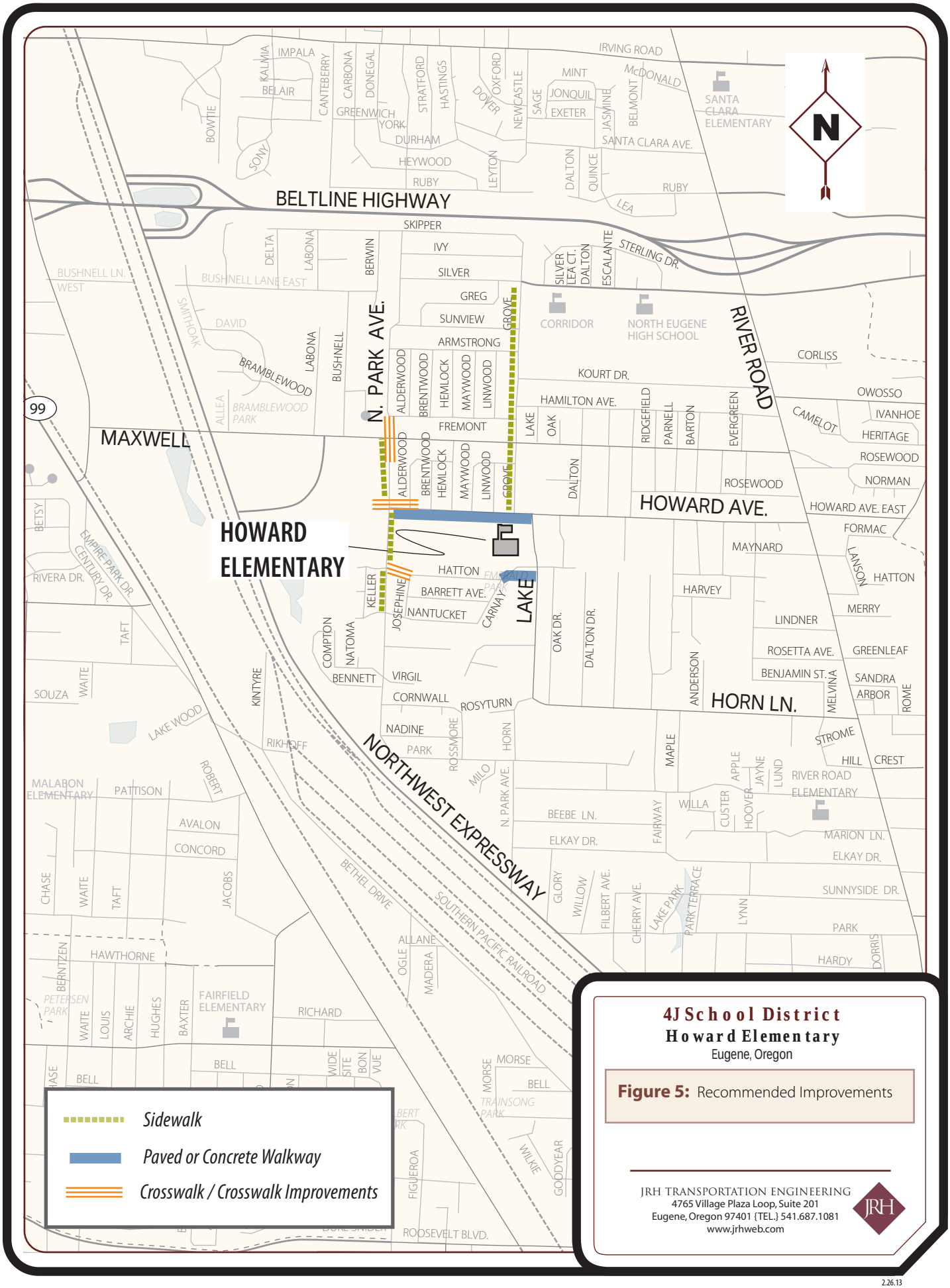

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Figure 5: Recommended Improvements

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