

City of Coos Bay – Millicoma School, Eastside School

Baseline Data Evaluation Report



DRAFT June 24, 2020

Introduction

This Case Study Evaluation measures the impacts of Oregon Safe Routes to School (SRTS) 2019-2020 Competitive Construction (Infrastructure) Grants in communities across the state. The evaluation will assess the effectiveness of individual SRTS projects, techniques, and programs designed to reduce barriers to biking and walking to and from school. Evaluation research questions include:

- What are the impacts for standalone construction grants, and combined outreach and education and construction grants?
- How do different combinations of interventions effectively address the barriers identified by communities and affect mode shift, safety and perceptions of safety, program lifespan, and equity?

The Baseline Data Evaluation Report represents the “pre-construction” data and provides an overview of existing travel conditions and school site attributes. The Baseline Data Evaluation Report is intended to contain the majority of the information needed to plan for the post-construction data collection. The baseline report summarizes the funded improvement project, demographics of affected schools, and data from Oregon Department of Transportation (ODOT) and local roadway authority crash records, parent surveys, and student travel hand tallies.

Plan for the Final Case Study Evaluation Report

The Final Case Study Evaluation Report will represent the “post-construction” data. A draft outline for this report is included in Appendix A. For data consistency, the post-construction data will be collected in the spring immediately after construction is complete. This will reduce weather-related impacts and also allow time during the school year for families to establish or change their travel habits. In addition to the standard parent surveys and student travel hand tallies, post-construction data collection methods for the evaluation report may also include: parent focus groups and surveys or interviews with school staff. The Final Case Study Evaluation Report will measure shifts using the evaluation metrics laid out in this document to identify the successes of SRTS projects and provide insight on opportunities for further improvement. SRTS performance metrics measured during this evaluation process will include:

- **Mode split:** Are more students walking and biking to school after a project’s completion than at the time of baseline data collection?
- **Access to safe infrastructure:** Do students have better access to sidewalks, bike lanes, or safe crossing locations on their route to school after the completion of the project?
- **Safety/perception of safety:** Do parents and students feel safer or more comfortable walking and biking to school after the project’s completion?
- **Program lifespan/partnerships:** Is the SRTS program functioning efficiently and providing adequate support for partner jurisdictions, schools, and districts?

- **Equity:** Are students from a diversity of ethnic/racial and socioeconomic backgrounds benefiting from the investments being made?

In addition to reporting on grant effectiveness, data presented in the Baseline Data Evaluation Report and the Final Case Study Evaluation could be used for a variety of transportation and program planning purposes at the local level. Having a comprehensive set of quantitative data and qualitative feedback on transportation conditions and trends around these sites could help inform decisions on school/district policy, SRTS event and program planning by schools/districts/local jurisdictions, planning future infrastructure projects, as well as providing supporting documentation for future grant applications.

Baseline SRTS Snapshot

Summary

Millicoma School is a public school enrolling 506 students ranging from 4th to 7th Grade. The school serves households in the City of Coos Bay and in Coos County, with more than 95% of students eligible for the Free and Reduced-Price Lunch Program. English is the primary language spoken by students, and less than 5% are registered as Ever English Learners.

Eastside School will be a public school enrolling students from Pre-Kindergarten to 2nd Grade. Groundbreaking on this school occurred in April 2019, so at the time of this grant application, the Eastside School had not been constructed yet. As Eastside School opens for students in 2020, Blossom Gulch School will be closed and its students will move to the newly-constructed Eastside School. For this reason, enrollment statistics and survey data will be provided for Blossom Gulch School.

Blossom Gulch School is a public school enrolling 577 students from Kindergarten to 3rd grade. The school serves households in the City of Coos Bay and in Coos County. More than 95% of Blossom Gulch students qualify for the Free and Reduced-Price Lunch Program. English is the primary language spoken by students, and less than 5% are registered as Ever English Learners.

Both Millicoma School and the new Eastside School are located in the Eastside area of the city of Coos Bay. The two schools will have a shared campus that will include a newly constructed drop-off/busing area for the 700+ combined student body. The district has taken careful consideration to create a safer entrance to the school campus for children who walk and bike to school. For example, parking is separate from busing lanes and drop-off lanes. However, District staff report that parents do not feel that their children are safe walking to and from the school because of the lack of sidewalk and crosswalks in the area, as well as high traffic volumes and vehicle speeds.

The Oregon SRTS 2019-2020 Competitive Construction Grant has provided funding for new improvements to this area of the city, including sidewalks, ADA compliant ramps, crosswalks with rapid flashing signs, and bike lanes on the main corridor that children use to walk to Millicoma School and the new Eastside School (starting in 2020).

In terms of education and engagement activities around SRTS, Millicoma will be participating in SRTS with a first-year action plan, integration of bike/ped into the student handbook, and integrating SRTS into the curriculum. Blossom Gulch, in addition to the activities listed above, has an annual School Walk Day where buses drop students off at Mingus Park, and volunteers/teachers help students walk the remaining mile to

school. Students also learn pedestrian safety techniques beginning in kindergarten and then practice as a classroom three times a year when staging for a tsunami evacuation on higher ground 5 blocks from the school.

Key information from community surveys¹:

- Survey respondents report that the safety of intersections and crossings is the most common barrier to walking/biking to school. Other barriers include:
 - The distance between home and school,
 - The speed of traffic along the route,
 - Lack of adults to walk/bike with and lack of sidewalks or pathways,
 - Inclement weather, and
 - Traffic congestion along the route.
- Most respondents (86%) view walking/biking to school as healthy for children.

Contact Information

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Enrollment and Demographics

Millicoma School is a public school enrolling 506 students ranging from 4th to 7th grades. The school serves households in the City of Coos Bay and in Coos County, with more than 95% of students eligible for the Free and Reduced-Price Lunch Program. English is the primary language spoken by students, and less than 5% are registered as Ever English Learners.²

Blossom Gulch Elementary School (whose population will be transferring to Eastside School in 2020) is a public school enrolling 569 students ranging from Kindergarten to 3rd grade. The school also serves households in the City of Coos Bay and in Coos County, and more than 95% of students qualify for the Free and Reduced-Price Lunch Program. English is the primary language spoken by students, and less than 5% are registered to have limited English proficiency (See Table 1).

¹ These surveys were administered publicly to the larger community through Survey Monkey. Of the 271 responses received, 144 were from parents of school-age children.

² Unless otherwise noted below, demographic data are from the Oregon Department of Education 19-20 SY, collected October 1, 2019.

Table 1: Demographics by School

	MILLICOMA SCHOOL	BLOSSOM GULCH SCHOOL (EASTSIDE SCHOOL POPULATION ³)
ENROLLMENT	506	577
GRADE LEVELS	4-7	K-3
SCHOOL TYPE	Public	Public
STUDENT ETHNIC/RACIAL DEMOGRAPHICS		
American Indian/Alaska Native:	2.8%	1.2%
Asian:	0.4%	0.7%
Hispanic or Latino:	12.6%	10.4%
Native Hawaiian/ Pacific Island:	0.8%	1.01%
Multiracial:	7.5%	6.2%
Black/African American:	0.6%	0.5%
White:	75.3%	79.9%
PREDOMINANT LANGUAGES SPOKEN IN COOS BAY SCHOOL DISTRICT		English: 3,372 Spanish: 173
STUDENTS LIVING WITHIN 1 MILE OF SCHOOL	Data not Available	Data not Available
TITLE 1 STATUS	Yes ⁴	Yes
EVER ENGLISH LEARNERS	<5% ⁵	<5%
FREE AND REDUCED-PRICE LUNCH ELIGIBILITY	>95%	>95%

³ As Eastside School opens for students in 2020, Blossom Gulch School will be closed and its students will move to the newly-constructed Eastside School. For this reason, enrollment statistics and survey data will be provided for Blossom Gulch School.

⁴ Title 1 schools are schools where 40% or more of students are enrolled in USDA's Free and Reduced-Price Meals Program.

⁵ Number of students who have been served or were eligible for an English language development program during 2018-19 or at any time in the past. Oregon Department of Education 18-19 SY collected May 1, 2019.

Community Context and Place Type

Place type describes attributes of a built environment, including: access to destinations, density, walkability, mixing of uses, and presence of transit. The evaluation team compiled Oregon Department of Land Conservation and Development's (DLCD) measures of [place type](#) for each community studied.⁶ Each attribute is rated as “**Very Low, Low, Medium, or High**” by block group. Place type characteristics provide important context for transportation opportunities and challenges in a community and influence the transportation decisions people make.

The Millicoma and Eastside School campus is located in the City of Coos Bay and serves the city and wider unincorporated Coos County. The block group encompasses a portion of the city limits and a small swath of county jurisdiction. According to the Place Type Tool, the area surrounding the Millicoma and Eastside Schools is categorized as Suburban/Town, meaning it contains low density development and the surrounding census block group generally contains more residential than commercial development, with 1,747 people residing and 485 people working within the census block group. The area has a low level of access to regional employment centers and destinations. Although it has a high mix of uses, the overall level of street connectivity in the area is characterized as “very low.”

AREA TYPE describes the role of each neighborhood district compared to the rest of the region (regional center, close-in community, suburban/town, low density/rural)

Suburban/Town

- Lower densities of jobs and/or housing
- Lower accessibility to regional jobs
- Lower densities decrease multi-modal access to jobs

DEVELOPMENT TYPE describes more detailed physical characteristics of each neighborhood (transit supportive development, mixed use, employment, residential, rural/ low density):

Residential

- Land use is dominated by housing
- Low diversity of land uses
- Jobs/Housing balance: mostly housing
Missing either the density or street design required of mixed use

JURISDICTION POPULATION (ACS 5-YEAR ESTIMATES):	City of Coos Bay 16,176 people
CENSUS BLOCK GROUP POPULATION (2010):	1,747 people
NUMBER OF JOBS IN CENSUS BLOCK GROUP (2010):	485 jobs
ACCESS TO DESTINATIONS - describes the number of regional jobs within 5 miles:	Low
DENSITY LEVEL- jobs and households per acre within ¼ mile:	Low
DESIGN LEVEL- level of street connectivity, pedestrian-oriented street density:	Very Low
DIVERSITY LEVEL- Mix of housing and employment:	High
TRANSIT LEVEL- Afternoon peak hourly transit service within ¼ mile:	Low

⁶ More information about OLCD's Place Type Tool is available at: www.oregon.gov/lcd/CL/Pages/Place-Types.aspx

Project Description

A map of the project improvements from the Millicoma School grant application is included in Appendix B.

PROBLEM STATEMENT:	The Millicoma School (3rd - 6th grades) and newly built Eastside School (pre K - 2) in 2020 is unsafe for all students to walk/bike to school. Few students walk to school due to lack of sidewalks, crosswalks, high traffic volume, and vehicle speed.
DESCRIPTION OF BARRIERS TO WALKING AND BIKING:	The mile radius from Eastside and the Millicoma School campus extends deep into a densely residential neighborhood. The perimeter minor collector street of 2 nd Avenue runs along the western perimeter of Millicoma and the new Eastside School (2020) campus. The roadway lacks crosswalks in front of the school, sidewalks, and bike lanes. D Street runs along the southern perimeter of the new Eastside School and has a narrow/substandard sidewalks with no ADA ramps, no crosswalks, and is inaccessible for students with disabilities. 6 th Avenue is a minor arterial that bifurcates the east and westerly neighborhoods in Eastside and lack sidewalk and bike lanes. It is unsafe for all students.
PROJECT DESCRIPTION:	The Eastside SRTS will provide new sidewalks, ADA compliant ramps, crosswalks with rapid flashing signs, and bike lanes on the main corridor that children use to walk to Millicoma School and the newly built Eastside School (2020).
ESTIMATED PROJECT TIMELINE:	Within 2 years of execution of IGA (Contractor chosen March 2020)
PRIORITY SAFETY CORRIDOR? ⁷	Yes
OUTREACH AND EDUCATION:	Millicoma School will be participating in SRTS with a first-year action plan, integration of bike/ped into the student handbook, and integrating SRTS into the curriculum. Millicoma students also learn pedestrian skills in their classrooms and practice a building evacuation several times a year. Students and the community utilize the track and field for Boys and Girls Club sports activities, competitive track events, and estuary classes. Millicoma School also has an extensive amount of estuary trails that are used by students and the community. Millicoma School helps to encourage physical exercise with school dances held on Saturday for students and families. The school works closely with Coos Bay police to help enforce traffic safety around the school.

⁷ A road where the posted speed or 85th percentile speed of traffic is 40 mph or greater OR if and two of the following apply: posted speed limit of 30 mph or greater, more than two lanes or a crossing distance greater than 30 feet, 12,000 AADT or greater, has a demonstrated history of crashes related to school traffic.

Access Analysis for Students Walking and Biking to School

The project team conducted an analysis to estimate the number of people who would gain walking and biking access to Millicoma School when the project improvements are constructed, shown in Table 1 and Figure 1. First, the project improvements were evaluated to understand the geographic areas that would gain safe access to the school once the funded project was constructed. Next, American Community Survey (ACS) data was combined with zoning data to estimate the number of people and school-age children that live within the new access areas.

This analysis estimates that approximately 70 students, or 38% of the Millicoma School student body living within a mile of the school, would gain safer walking or biking access to the school (See Table 2 and Figure 1).

Table 2. Access Analysis Results⁸

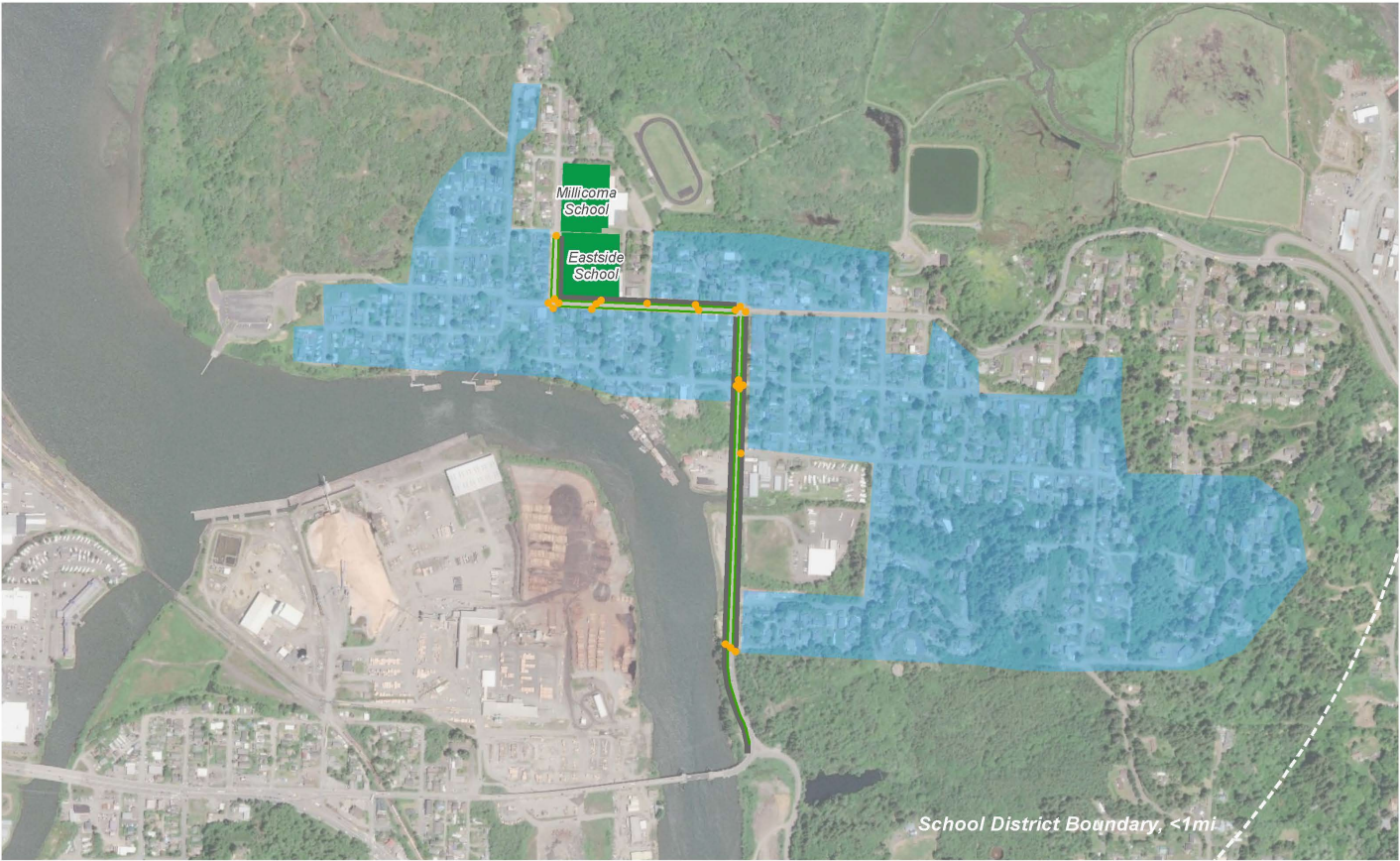
METRIC	VALUE
Total Population of New Access Areas	468
School Age Population of New Access Areas ⁹	70
Percentage of Students within the School Areas Gaining Access ¹⁰	38%

⁸ New Access Area assumptions: The western access area assumes that the residential streets west of 2nd Avenue experience low enough traffic volumes that the intersection of D Street and 2nd Avenue are still accessible without a complete sidewalk network. The northeast access area assumes that the sidewalk on the north side of D Street is acceptable for accessing the new infrastructure improvements at 6th Avenue and D Street. The eastern access area assumes that E, F, and H Streets are navigable without sidewalks. Finally, no residential areas were included across the river because the bridge sidewalks are not ADA compliant. Note also that this analysis does not account for residents living across the bay who are within a one-mile radius of the schools; it only considers residents living on the east side. Even still, the proportion of residents with new access is likely an undercount.

⁹ Calculated using the proportion of school-age children (5-17 years old) within the City of Coos Bay.

¹⁰ The School Area is defined as the area within the school enrollment area that is within one mile of the school.

Figure 1. Millicoma School New Access Area for Students Walking and Biking









Millicoma and Eastside Schools

Students with New Access to Walking and Biking

Estimated Number of Students: **70**
Proportion of Students within 1 Mile: **38%**

To view the methods for this analysis, please see Appendix

-  New Crossing Improvement
-  New Sidewalks
-  New Bike Lanes
-  Applicant School
-  Other School
-  New Access Area



Baseline Data

The following section presents pre-construction data, which will be compared against similar data collected after the project has been construction, in order to estimate the impact of the improvements.

Community Surveys¹¹

DATE COLLECTED: September 2018

DATA COLLECTION PROCESS: The National Center for SRTS's parent/caregiver survey was distributed to the Coos Bay community (including both parents of school-age children and the greater public in general) to assess perceptions about school travel options and behavior. The survey was available in English and Spanish.

NUMBER OF SURVEYS: 271

SUMMARY OF DATA COLLECTION AND METHODOLOGY

The parent/caregiver survey data included in this report was administered publicly online. The survey collected responses from 271 participants, 232 of whom lived in the City of Coos Bay. Of these respondents, 144 (54%) had school age children at the time of the survey.

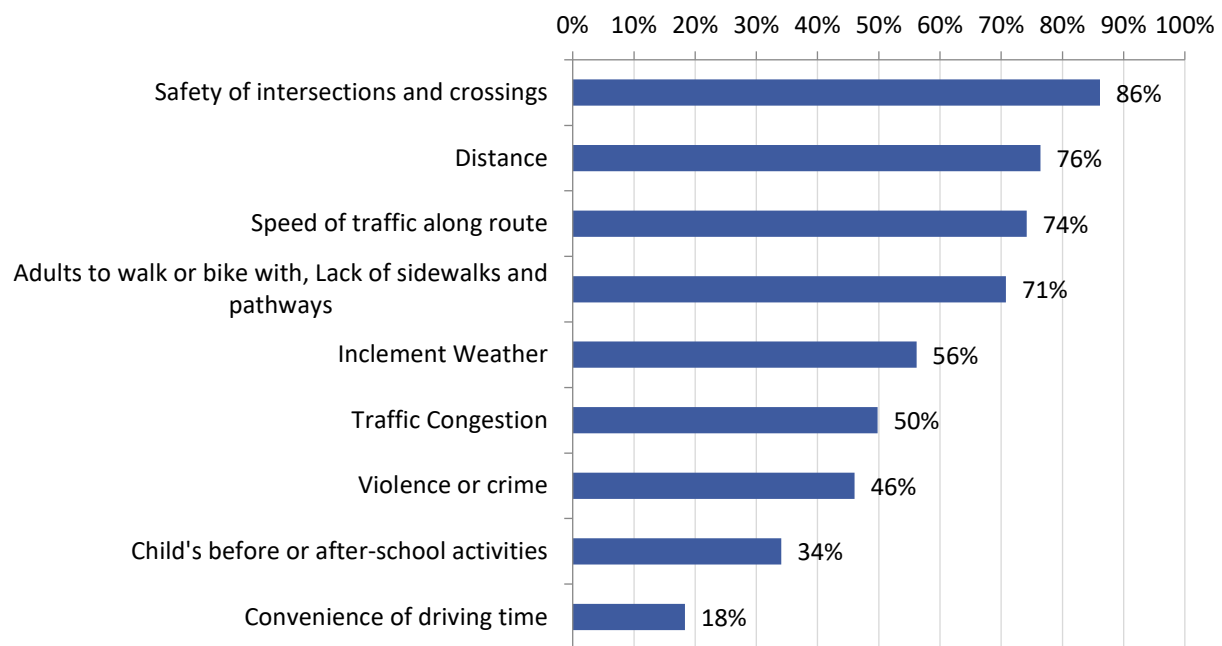
SUMMARY OF RESULTS:

Survey analysis found that while respondents reported varying concerns that limit their student's ability to use active transportation modes, some were more commonly expressed than others (see Figure 3). The following were top concerns for survey respondents:

- The safety of intersections and crossings
- The distance from home to school
- The speed of traffic along the route
- Lack of adults to walk/bike with, and the lack of sidewalks and pathways
- Weather or climate
- The amount of traffic congestion along the route

¹¹ Hand Tally data was not collected from classrooms in these schools and is therefore not included in this report.

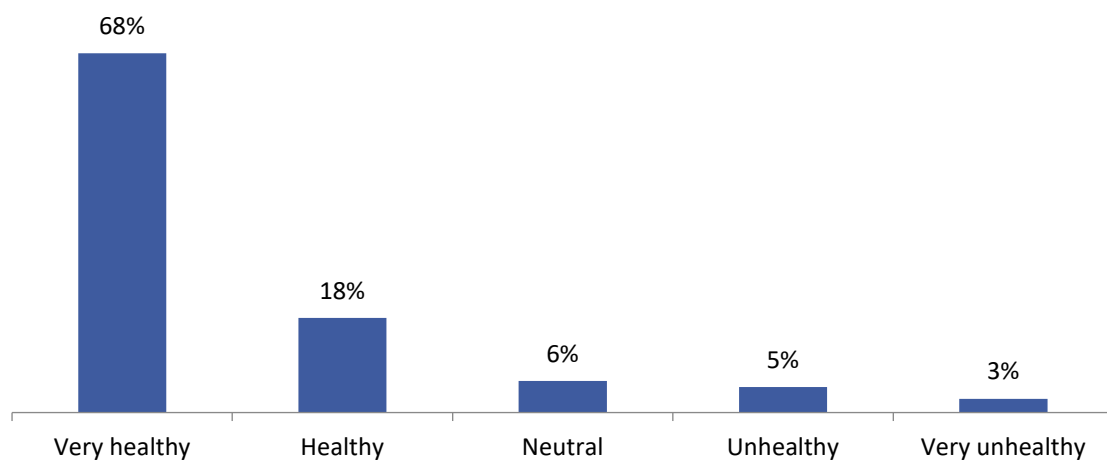
Figure 2. Which of the following issues in Coos Bay affects whether children are allowed, or not allowed, to walk or bike to/from school?, 2018 Survey



]

A majority of respondents recognized the health benefits of active transportation for children, with 86% reporting that walking or biking to school would be healthy or very healthy. An additional 6% were neutral regarding the health benefits of walking and biking, and 8% didn't believe these activities would be healthy for children (see Figure 4).

Figure 3: How healthy is walking/biking to school for children?, 2018 Survey



Crash Data

DATE COLLECTED:

2012-2016

DATA COLLECTION PROCESS:

Crash Data included in this report originates from the ODOT SRTS Web Map Application, with supplemental data from roadway jurisdictions as available. This analysis does not determine whether the grant intervention caused any change in the occurrence of crashes, due to small sample size. Additionally, due to insufficient mode split data to calculate crash rates, this report offers a count and description of reported incidents.

NUMBER OF REPORTED CRASHES INVOLVING BIKES AND PEDESTRIANS WITHIN 1 MILE OF SCHOOL:

Between 2012 and 2016, eight crashes involving a bicyclist or pedestrian were reported within one mile of the school.

TIME OF REPORTED CRASHES INVOLVING BIKES AND PEDESTRIANS WITHIN 1 MILE OF SCHOOL*:

Of these reported crashes, seven occurred during school commuting hours; the majority of these occurred during PM commuting hours.

** For these purposes school commuting hours were defined as 6 AM to 9 PM.*

NUMBER OF REPORTED INJURIES BY SEVERITY WITHIN 1 MILE OF THE SCHOOL:

All eight of these reported crashes involved an injury to a bicyclist or pedestrian. All four of the reported crashes involving a bicyclist were non-fatal. Of the four reported crashes involving a pedestrian, three were non-fatal and one was fatal. Figure 4 illustrates the location of the crashes by type and injury severity.

ADDITIONAL CRASH DATA CONSIDERATIONS:

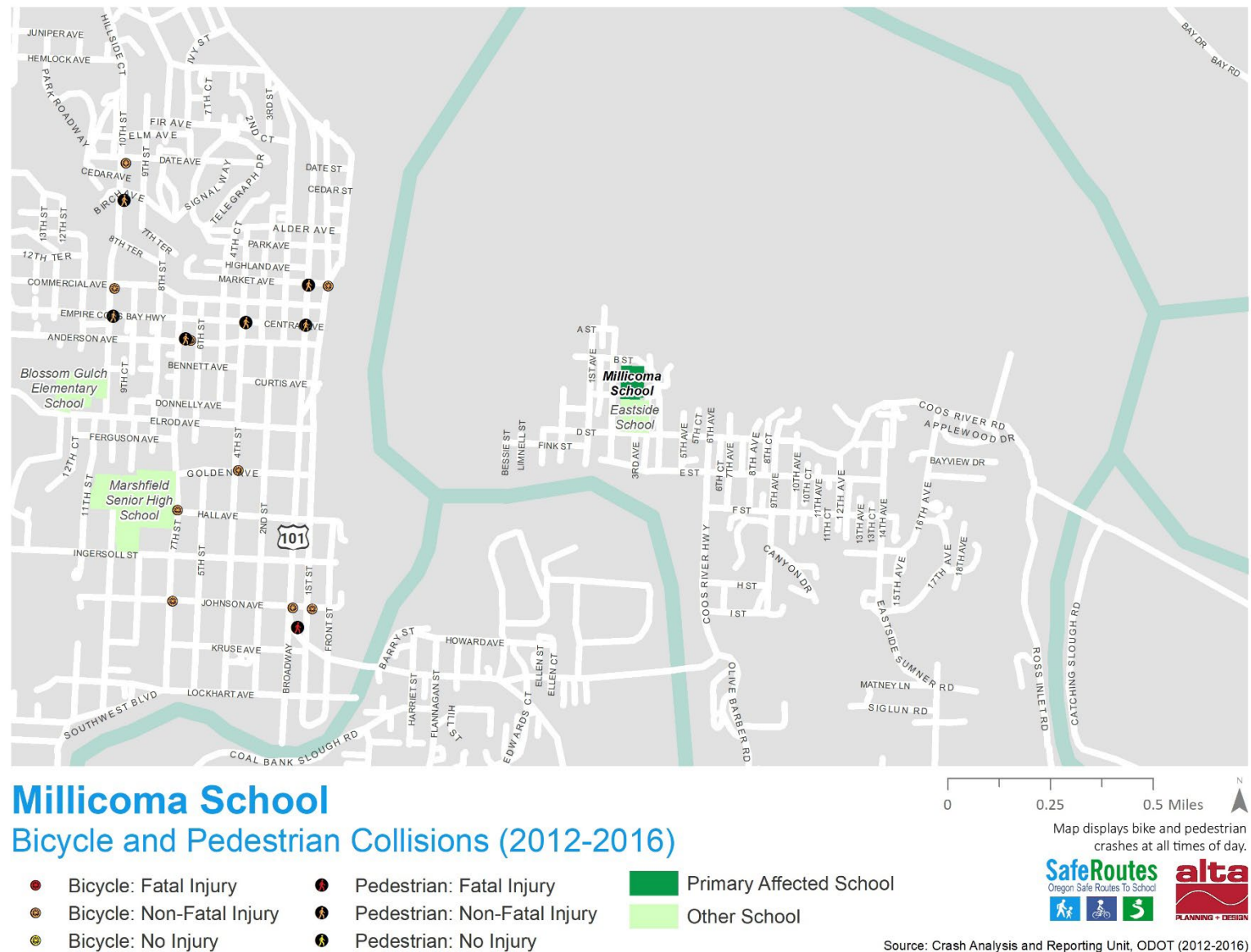
In addition to the crashes between 2012-2016 illustrated on the map, in its application the City of Coos Bay identified the following incident adjacent to the schools: A fatal collision with an 8-year-old boy occurred at the intersection of 6th Avenue/Coos River Hwy and E Street. The student was biking through the neighborhood at 4 pm and used the crosswalk, but the opposing lane of traffic failed to yield.

Bike lanes, sidewalk infill, crossing improvements, and flashing traffic signs are planned for the area around this intersection.

Notes on Community Context or other Relevant Information:

None.

Figure 4: Millicoma School Bicycle & Pedestrian Collisions (2012-2016)



Follow-Up Data Collection Plan

Timeline

Post-grant field visits to collect follow-up data will be scheduled to take place the spring following the completion of each grant intervention. The City of Coos Bay estimates project completion for May 2020.

Follow-up Data Collection Process

METHOD	PLANNED AT THIS SITE?	TARGET SAMPLE SIZE	TARGET FIELD WORK DATE
STUDENT HAND TALLIES:	Yes	At least 2 classrooms per grade per school	Late spring 2021 (assuming project completion)
PARENT SURVEYS:	Yes	At least 30 parents per school	Late spring 2021 (assuming project completion)
PARENT FOCUS GROUPS:	Yes	4-10 parents	Late spring 2021 (assuming project completion)
STAFF SURVEYS:	Yes	1-3 school staff and administration	Late spring 2021 (assuming project completion)
CRASH DATA:	Yes	N/A	N/A
OTHER (LIST):	None	N/A	N/A

Appendix A. Final Report DRAFT Outline

Note: The following Final Report outline is subject to change.

Chapter 1. Introduction

- Description of SRTS IN Grant Program
- Description of Final Report purpose and contents

SUMMARY OF FUNDED INFRASTRUCTURE IMPROVEMENTS

- Project description
- Map of improvements
- Project timeline

BACKGROUND

- School demographics
- Summary of Non-Infrastructure SRTS Work
- Place Type

Chapter 2. Data Collection and Results

HAND TALLY DATA

- Data Collection Methods
- Change in walking and biking rates

PARENT SURVEY DATA

- Data Collection Methods
- Change in mode split by distance from school
- Change in barriers to walking and biking
- Change in perceptions of walking and biking
- Other observations

FOCUS GROUPS

- Data Collection Methods
- Change in barriers to walking and biking
- Change in perceptions of walking and biking

CRASH DATA

- Data included in analysis
- Change in crash data (*If available, otherwise this will provide updated baseline crash data from ODOT*)

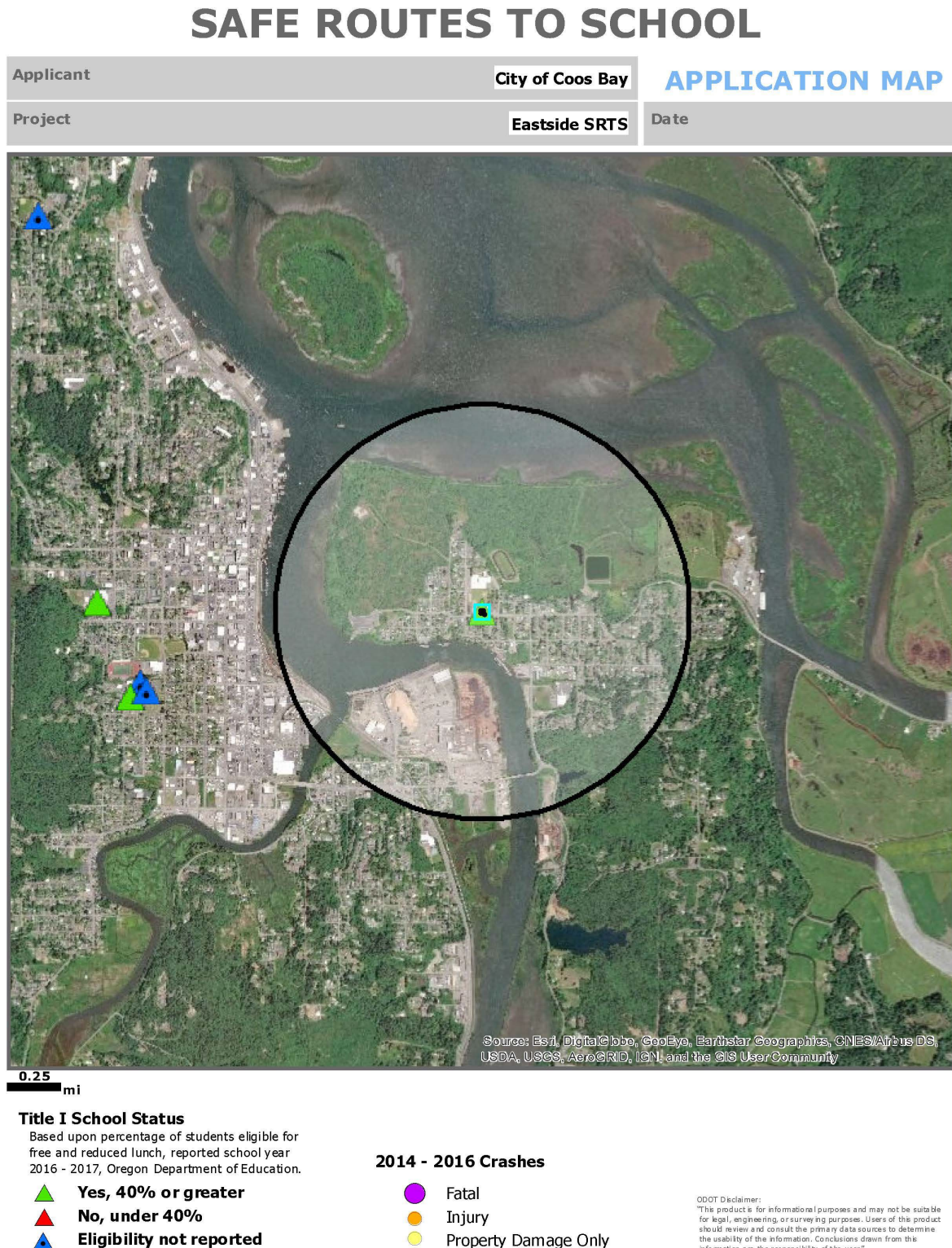
Chapter 3. Findings

- Impact of Infrastructure improvements on mode split
- Impact of Infrastructure Improvements on Access to Safe Infrastructure

- impact of infrastructure improvements on safety/perception of safety
- Impact of Infrastructure Improvements on Program lifespan/partnerships
- impact of infrastructure improvements on equity
- Other Findings
- Next Steps and Recommendations

Appendix B. Competitive SRTS IN Grant Funded Project Map

Figure 5. Millicoma School Competitive SRTS IN Grant Funded Project Map



Appendix C. Access to SRTS Detailed Methodology

Purpose

The access map analysis was designed to estimate the number of students with new or significantly improved access to school upon the implementation of a proposed walking or biking facility. While determining the number of students who benefit from a proposed project is not an exact science, this analysis provides a common approach that utilizes school district boundaries, census population data and local zoning codes to generate rough estimates. These estimates lend greater insight into the impact of a particular Safe Routes to School project, allowing facility improvements to be compared and thus aid in prioritizing investments. This memo outlines the data sources, methods, and assumptions that inform the access map analysis described in this report.

Data Sources

Three primary data sources were used in this analysis in conjunction with the information provided in each project application:

Name	Source
American Community Survey (ACS) Population Estimates	US Census Bureau
Oregon School District Boundaries	Oregon Department of Education
2017 Oregon Statewide Zoning Map	Oregon Department of Land Conservation and Development

Methods

The analysis establishes two geographical areas in which census block population data are apportioned to: 1) the school area and 2) the access area. The school area is defined as the area that is within a 1-mile radius of the applicant school or within the enrollment boundary, whichever is closer. This area covers residents within reasonable walking or biking distance of the to school. The access area is the area that covers all residents who would experience new or significantly improved access to school upon the implementation of the proposed walking or biking facility.

Once both of these areas have been established, the consultant team identified the census blocks that intersect each. We then apportioned the population data from the census blocks to the school area and the access area, based on the relative coverage of each census block. To account for varying residential densities in each census block, we used residential zoning data to determine the proportion of the population that should be attributed to the school area and access area.

After the estimated populations of both the school area and the access area are calculated, the local jurisdiction's youth rate is applied to each to get the number of people ages 5-17 in those areas, which we refer to as the 'school age population'. Finally, the school age populations of the access area and the school area are compared. The percentage of school age students with new or improved access to school represents the proportion of students impacted by the project out of all the students in the school area who could reasonably walk or bike to school.

Defining the Access Area

The boundary of the school area is readily calculable using GIS and the rules described above. By contrast, the access area boundary was determined manually based on the project description and professional judgement of impact. While this method inherently includes subjective judgement, the high variability and nuance in the transportation context surrounding the proposed project makes this method more suitable for determining the residential areas would benefit from its implementation than a purely GIS-based workflow. The following assumptions and rules of thumb were adopted in order to make the assessment of the access areas as uniform as possible:

1. The analysis assumes people are willing to "walk around the block" half the distance of their street in the opposite direction of school in order to utilize a safe path to school.
2. The analysis assumes that Google Earth street view imagery is up to date, as this was used to determine sidewalk connectivity and condition, which informed the access areas.
3. Places without sidewalks, particularly in small towns, are considered walkable if the street is narrow, residential, and designed for a low volume of traffic (i.e., lacks a centerline)
4. The access areas consider ADA accessibility and account for those in wheelchairs or other mobility devices.
5. The access areas may include residents who have to walk more than one mile to school, based on the available street network.
6. Even if some residents may have already had access to school, they might be included in the access area if the proposed project would significantly improve their access to school.

Apportioning Census Population Data

As described above, census population data was apportioned to both the school area and the access area based on how much a census block covered them. However, to account for varying population densities across census blocks, residential zones in the census blocks were identified.

The statewide zoning data provided by the Oregon Department of Land Conservation and Development groups residential zones across all jurisdictions in the state into 13 categories of increasing density. Our team further consolidated these categories into just 4: Low Density, Medium-Low Density, Medium-High Density, and High Density. We then weighted these categories by their relative density compared to Low Density:

Residential Zone Group	Population Density Factor
Low Density	1
Medium-Low Density	2
Medium-High Density	5
High Density	15

These factors serve to more accurately distribute the population data across the residential zones within the census block. In other words, if the census block contained only Low Density residential zones, then the population of any given area within that census block is equal to the proportion of the census block that that area covers. By contrast, if a census block contains Low Density residential zones and High Density zones, we attribute 15 times the population of the census block to the High Density zones than the Low Density zones. The density factors were determined using the typical number of dwellings per acre in in each zone.

The analysis uses these four zoning categories to identify the spatial distribution of the population of the census block and apportion it to the overlaying school area and access areas based on how much those areas cover the residential zones of the census block.

General Assumptions

- This analysis assumes that the Oregon Statewide Zoning code reflects the actual residential densities of the current built environment.
- Areas that were zoned for housing that had no development on them according to the latest satellite imagery (and significantly impacted the output) were removed from the analysis in order to improve the accuracy of the estimates. This was only utilized in a few low-population jurisdictions.
- This analysis assumes that families are evenly distributed between each of the four residential zone groups.
- The reported number of school-age students includes all students ages 5-17, not just elementary or middle school students. Thus, the number of students who actually attend the applicant school is likely much lower than the reported figure.