City of La Grande – Central Elementary School Baseline Data Evaluation Report

FINAL 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 as soon as possible after construction is complete, likely starting in spring 2021. 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: Central Elementary School

Summary

Central Elementary School is a public school enrolling 474 students ranging from Kindergarten to 5th Grade. The school serves populations in the City of La Grande. More than 95% of students are eligible for the Free and Reduced-Price Lunch Program. English is the primary language spoken by students, and 7% are registered as Ever English Learners.

The recently-constructed Central Elementary is located on H Avenue in the western half of La Grande near Eastern Oregon University. Currently, no sidewalk exists on H Avenue from Sunset Drive to Central Elementary School. This means that pedestrians, including children on their way to/from the school, must transverse uncomfortable and unsafe situations or revert to an indirect route in order to get to their destination.

The Oregon SRTS 2019-2020 Competitive Construction Grant funded a project to fill this gap by constructing ADA-compliant ramps as well as a five-foot-wide sidewalk, which will provide continuity from the existing sidewalk at Sunset Drive to the recently constructed walkways on H Avenue in front of the new school.

In 2019, La Grande School District was awarded a ODOT SRTS Non-Infrastructure grant and hired a SRTS coordinator to organize SRTS outreach and education events in the district. The community also created a SRTS Plan through the ODOT Project Identification Program (PIP). The SRTS Plan, completed in the fall of 2019, addressed both additional infrastructure needs and strategies for SRTS outreach and education. The Plan recommended that Central Elementary participate in activities such as information on travel safety for parents, bike and pedestrian route and safety education, an on-campus walking program, a wellness policy, and events including a Bike Rodeo and Walk + Roll to School Days.

Contact Information

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Enrollment and Demographics

Central Elementary School is a public school enrolling 474 students ranging from Kindergarten to 5th grade. The school serves households in the City of La Grande and Umatilla 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 7% are registered as Ever English Learners.[1]

ENROLLMENT: 474	**GRADE LEVELS SERVED AND SCHOOL TYPE: K-5, Public**
STUDENT ETHNIC/RACIAL DEMOGRAPHICS: American Indian/Alaska Native: 1.3% Asian: 1.9% Hispanic or Latino: 4.9% Native Hawaiian/Pacific Island: 4.9% Multiracial: 6.3% Black/African American: 1.7% White: 79.1%	PREDOMINANT LANGUAGES SPOKEN IN LA GRANDE SCHOOL DISTRICT: English 2,378 Spanish: 60
STUDENTS LIVING WITHIN 1-MILE OF SCHOOL: **No info**	TITLE 1 STATUS: Yes[2]
EVER ENGLISH LEARNERS: **7%**[3]	FREE AND REDUCED-PRICE LUNCH ELIGIBILITY: >95%

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

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

[3] 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.[4] 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.

Central Elementary School is located in the City of La Grande, and the block group encompasses a small area in the southern portion of the city limits. According to the Place Type Tool, the area surrounding the Central Elementary School 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 872 people residing and 327 people working within the census block group. The area has a medium level of access to regional employment centers and destinations. The overall level of street connectivity in the area and access to transit 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 La Grande 13,103 people
CENSUS BLOCK GROUP POPULATION (2010):	872 people
NUMBER OF JOBS IN CENSUS BLOCK GROUP (2010):	327 jobs
ACCESS TO DESTINATIONS describes the number of regional jobs within 5 miles:	Medium
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:	Very Low

[4] 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 Central grant application is included in Appendix B.

PROBLEM STATEMENT:	H Avenue pedestrian infrastructure is inadequate for safe access for students.
DESCRIPTION OF BARRIERS TO WALKING AND BIKING:	No sidewalk exists on H Avenue from Sunset Drive to Central Elementary School. Pedestrians, including children, must traverse uncomfortable and unsafe situations or revert to an indirect route to access the new Central Elementary School.
PROJECT DESCRIPTION:	This project will construct ADA-compliant ramps and a five-foot-wide sidewalk providing continuity from the existing sidewalk at Sunset Drive to the recently-constructed walkways on H Avenue in front of the new school.
PROJECT TIMELINE:	Completed September 2016
PRIORITY SAFETY CORRIDOR?[5]	Yes
OUTREACH AND EDUCATION:	At this time, Central Elementary School does not participate in any SRTS encouragement or engagement activities. However, the City of La Grande created a SRTS Plan through the ODOT Project Identification Program (PIP). The SRTS Plan, completed in the fall of 2019, addressed both additional infrastructure needs and strategies for SRTS outreach and education. The Plan recommended that Central Elementary participate in activities such as information on travel safety for parents, bike and pedestrian route and safety education, an on-campus walking program, a wellness policy, and events including a Bike Rodeo and Walk + Roll to School Days.

[5] 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 Central Elementary 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 45 students, or 11% of the Central Elementary School student body living within a mile of the school, would gain safer walking or biking access to the school.

Table 1. Access Analysis Results[6]

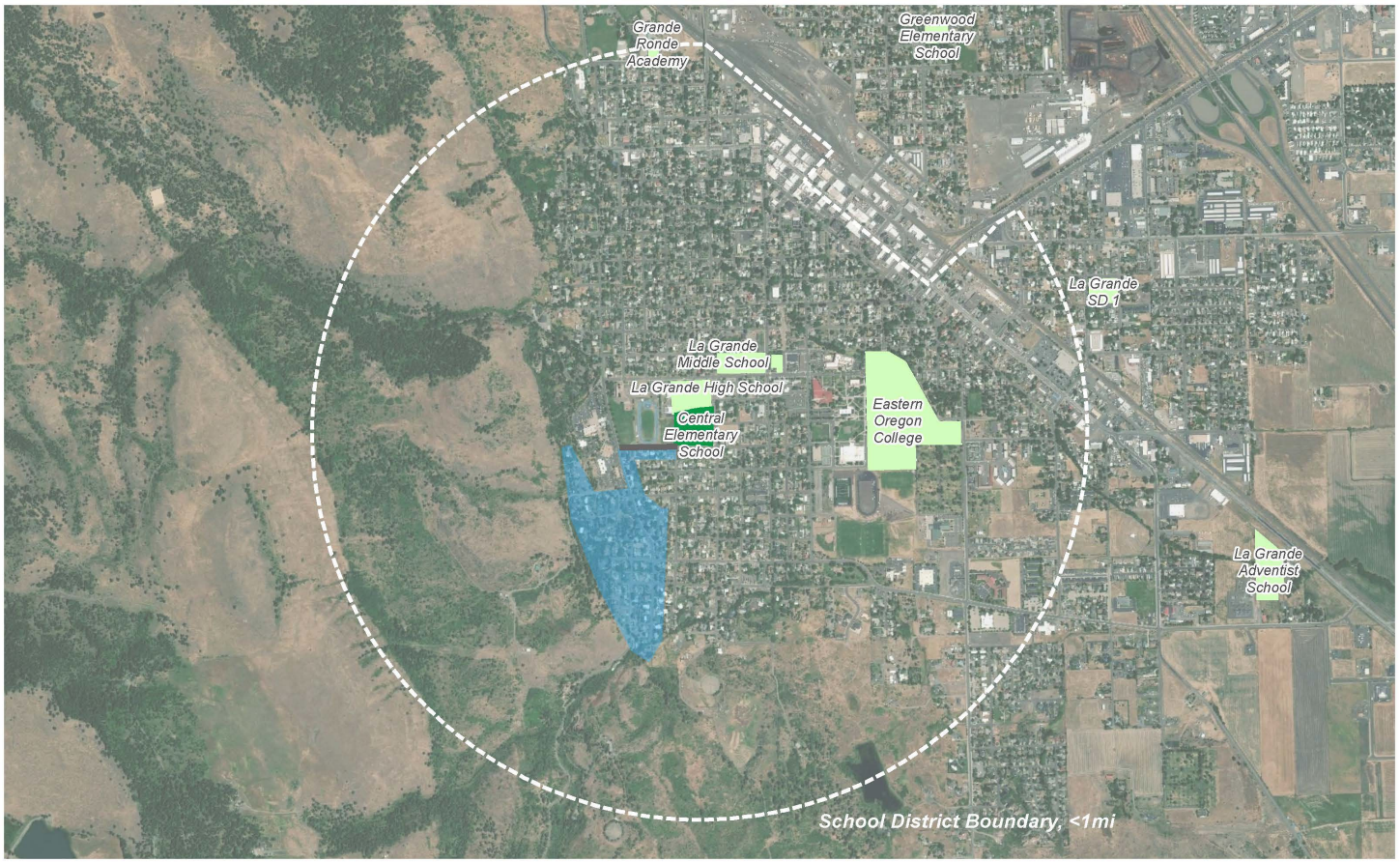
METRIC	VALUE
Total Population of New Access Areas	285
School Age Population of New Access Areas[7]	45
Percentage of Students within the School Areas Gaining Access[8]	11%

[6] New Access Area assumptions: The access area assumes that the residents included are able to navigate safely to the Sunset Drive sidewalk despite an incomplete sidewalk network in the neighborhood. It also assumes that residents to the east of the access area would access school via the sidewalks on Second Street. It also assumes residents on the north side of the school campus would access school via the sidewalks on K Avenue and Second Street. Note that for this analysis the zoning densities were approximated using La Grande's zoning map, as there wasn't digital data available.

[7] Calculated using the proportion of school-age children (5-17 years old) within the City of La Grande.

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

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



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 Feedback

DATE COLLECTED:	October, 2019
DATA COLLECTION PROCESS:	In-person meetings, online comments on public input map
NUMBER OF RESPONSES:	125 online responses, 80 geolocated comments

SUMMARY OF DATA COLLECTION AND METHODOLOGY

Conducted through the Project Identification Program (PIP), the School Safety Assessment community meetings were an opportunity for school leadership, City staff, teachers, parents, and other stakeholders to gather and discuss barriers to walking and biking to school and brainstorm ideas for how to overcome them. Meetings occurred directly after each walk audit at Central Elementary and La Grande Middle School. Responses were also received via email, and respondents were able to create geolocated comments that referenced particular locations on the map. The City of La Grande was not able to coordinate hand tally and parent survey data collection before the funded construction project was completed.

SUMMARY OF KEY THEMES:

Driver awareness and education is a big priority, as well as enforcement of school speed zones along 2nd Street and 4th Street. Traffic calming and walking/biking infrastructure improvements on 2nd St are also a high priority. While there was enthusiasm for establishing an alternative north/south route to reach the schools (i.e., a neighborhood greenway), it was acknowledged that 2nd Street is a popular travel choice because it is one of the only direct connections across the railroad tracks to reach neighborhoods in north La Grande, and that students tend to travel on the most direct route despite conditions.

In addition, there is major concern around the sidewalk gaps immediately surrounding Central Elementary School, particularly to the east of the school where traffic from the elementary school, middle school, and Eastern Oregon University converges.

Finally, there was a lot of enthusiasm for student, staff, and parent SRTS education and encouragement.

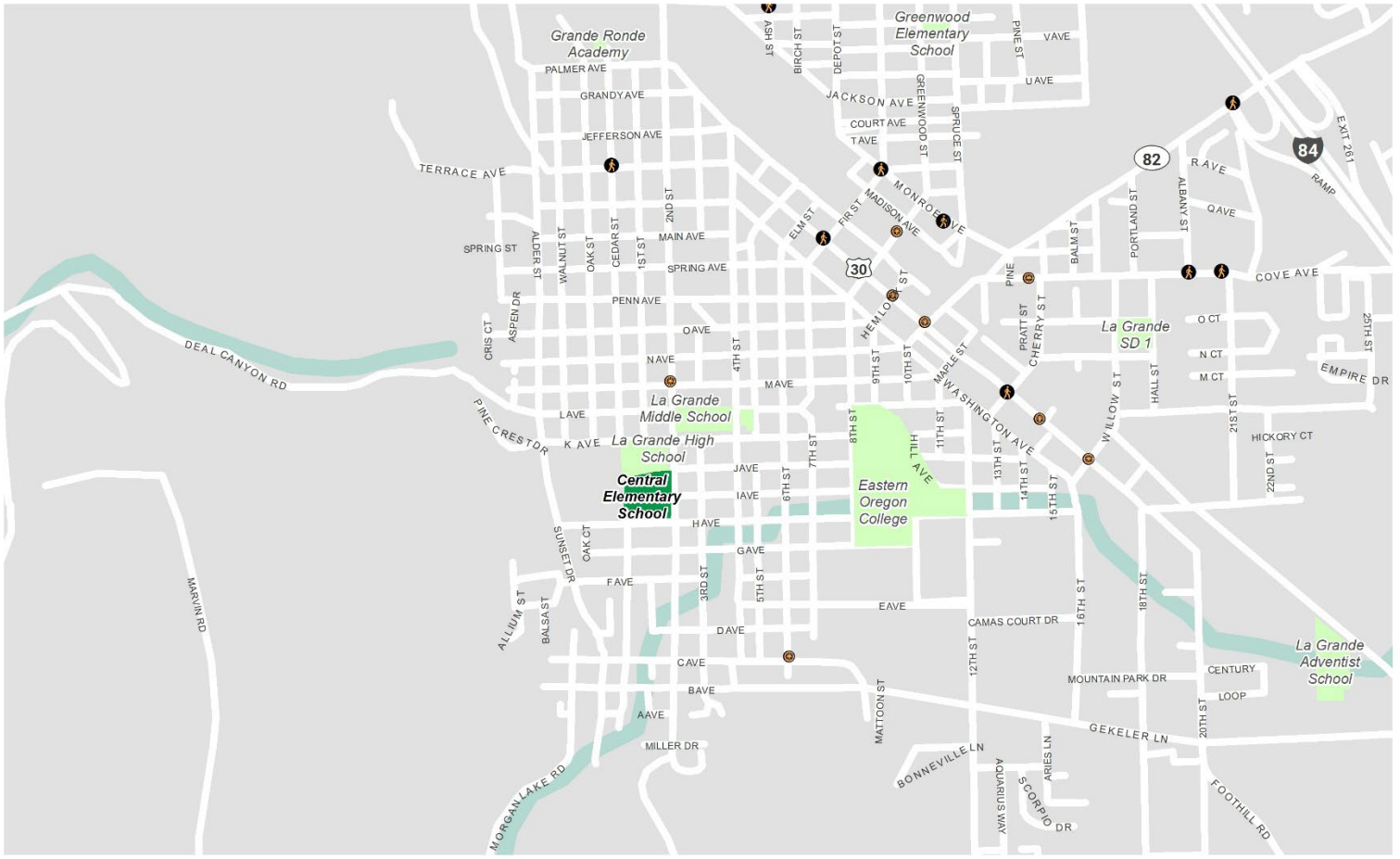
Crash Data

DATE COLLECTED:	2012-2016
DATA COLLECTION PROCESS:	Crash data included in this report originates from relevant roadway jurisdictions, as well as the ODOT SRTS Web Map Application. 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, 13 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, 11 occurred during school commuting hours; the majority 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 13 of these reported crashes involved an injury to a bicyclist or pedestrian. All eight of the injuries involving a bicyclist were non-fatal. All five of the injuries involving a pedestrian were non-fatal. Figure 2 illustrates the location of the crashes by type and injury severity.
ADDITIONAL CRASH DATA CONSIDERATIONS:	The majority of the crashes occurred along Adams Ave/Highway 30. One non-fatal bicyclist injury was recorded along 2nd Avenue in proximity of the school, involving a School District employee. The current Central Elementary building was not yet constructed during the time period that the crash data was recorded.

Notes on Community Context or other Relevant Information:

None.

Figure 2: **Central** Elementary 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 project was completed in September 2019.

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
PARENT SURVEYS:	Yes	At least 30 parents per school	Late spring 2021
PARENT FOCUS GROUPS:	Yes	4-10 parents	Late spring 2021
STAFF SURVEYS:	Yes	1-3 school staff and administration	Late spring 2021
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)*

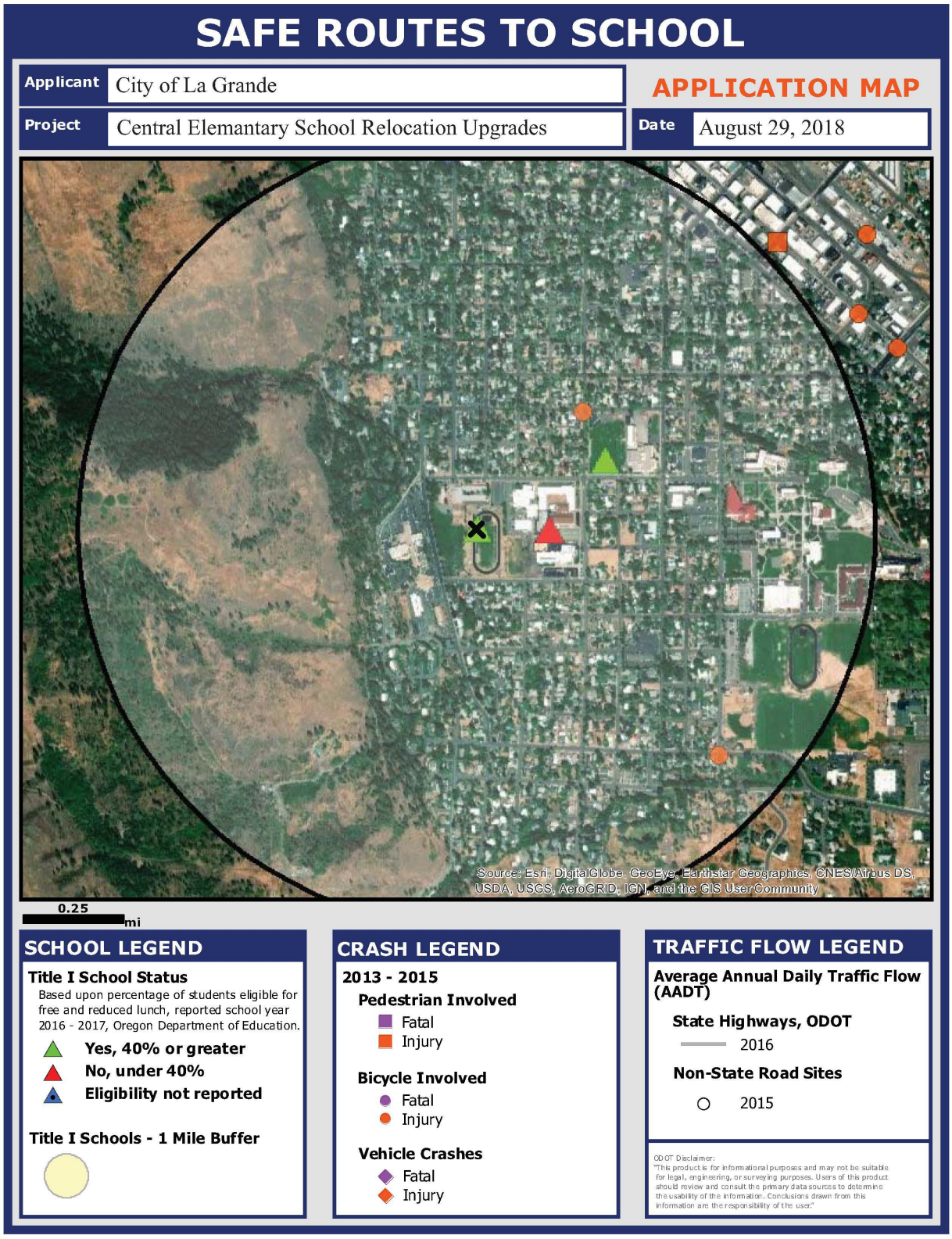
Chapter 3. Findings

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

- impact of infratructure 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 3. Central Elementary 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.