



# Cedar Ridge Middle School and Sandy Grade School Safe Routes to School Plan



Final Report  
February 2020  
OREGON TRAIL SCHOOL DISTRICT  
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## Chapter 1. Introduction

The Oregon Trail School District Safe Routes to School (SRTS) Plan lays the foundation for schools, the community, the City of Sandy, Clackamas County, and the Oregon Department of Transportation (ODOT) to work together on reducing barriers for students walking and biking to school. The SRTS Plan includes both recommendations for short and long-term construction projects, as well as ideas for education and engagement events to promote healthy, active lifestyles. Several infrastructure improvements are potential candidates for the ODOT SRTS Competitive Grant Program, while others could be managed by the school district or integrated into the City's Transportation System Plan (TSP) update for future consideration. Members of the school community, including administration, teachers, parents, and students, can also contribute through education and encouragement activities to make walking or biking easier and more fun for the school commute.

### Oregon Department of Transportation's Project Identification Program

This SRTS Plan supports Oregon's state-wide SRTS construction (infrastructure) and education/engagement (non-infrastructure) efforts. The Project Identification Program (PIP) Process is an ODOT technical grant program that connects communities in Oregon with planning assistance to identify needs and opportunities near one or more schools, **focusing on streets within a quarter-mile of the school, as well as critical issues within a mile of the school.**

The goals of the PIP process are:

- To engage school stakeholders around identifying and prioritizing projects that will improve walking and bicycling routes to schools.
- To identify and refine specific projects that are eligible for the ODOT SRTS Infrastructure Grants and prepare jurisdictions to apply for the funding.

The City, ODOT Region 1 representatives, and the school community worked with a consultant team from Alta Planning + Design to complete this SRTS Plan.

For more information on the program, visit: <https://www.oregon.gov/ODOT/Programs/Pages/SRTS-Project-Identification-Program.aspx>.

### What is Safe Routes to School (SRTS)?

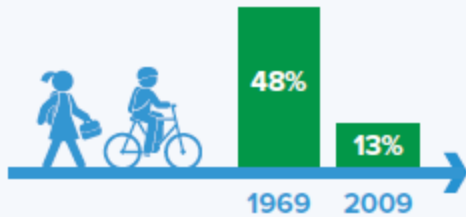
SRTS is a comprehensive program to **make school communities safer** by combining engineering tools and enforcement with education about safety and activities to enable and encourage students to **walk and bicycle to school**. SRTS programs typically involve partnerships among municipalities, school districts, community members, parent volunteers, and law enforcement.

The benefits of implementing a SRTS plan are far-reaching and include improving safety, increasing access, encouraging physical activity, and reducing traffic congestion and motor vehicle emissions near schools. Implementing SRTS programs and projects benefit adjacent neighborhoods as well as students and their families, by reducing traffic conflicts and enabling walking and biking trips for all purposes.

# Why Safe Routes to School?

## THE PROBLEM

Within the span of one generation, the percentage of children walking or bicycling to school has decreased **73%**.



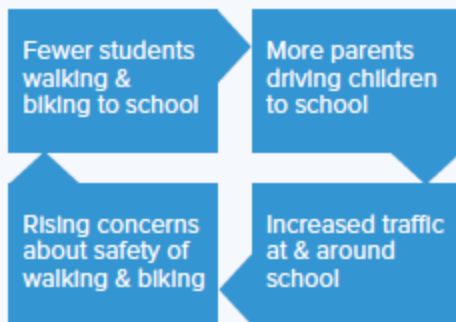
Children and adolescents should have **60 minutes (1 hour)** or more of physical activity daily.



Roads near schools are congested, **decreasing safety and air quality** for children.



This movement away from active transportation is a **self-perpetuating cycle**.



## THE SOLUTION

Safe Routes to School programs and activities help overcome obstacles to walking, biking, and skating by **improving safety** and making it **fun and convenient for everyone**.



SRTS education and encouragement programs can result in a **25% increase** in walking and biking over five years.



When education and encouragement programs are combined with infrastructure improvements, such as sidewalks and safe crossings, SRTS can result in a **45% increase** in walking and biking.



**1 mile** of walking each way to school equals **2/3** of the daily recommended **60 minutes** of physical activity.



\* McDonald, Noreen, Austin Brown, Lauren Marchetti, and Margo Pedrosa. 2011. "U.S. School Travel 2009: An Assessment of Trends." American Journal of Preventive Medicine.  
 + Centers for Disease Control. [www.cdc.gov/physicalactivity/basics/children/index.htm](http://www.cdc.gov/physicalactivity/basics/children/index.htm)  
 \*\* McDonald, N., Steiner, R., Lee, C., Rhoulac Smith, T., Zhu, X., and Y. Yang. (2014). Impact of the Safe Routes to School Program on Walking and Bicycling. Journal of the American Planning Association.

## School Overview

### Cedar Ridge Middle School

<b>Principal:</b>	Nicole Johnston	<b>Address:</b>	17100 Bluff Rd, Sandy, OR 97055
<b>Enrollment:</b>	470	<b>% students eligible for free or reduced lunch:</b>	50.4%
<b>Grades Served:</b>	6-8		
<b>Type of School:</b>	Public		

#### SCHOOL DEMOGRAPHICS

Average Daily Student Enrollment	American Indian/Alaska Native	Asian	Black/African American	Hispanic	Native Hawaiian/Pacific Islander	Multiracial	White, non-Hispanic	Limited English Proficient	Students with Disabilities
384	1%	0	1%	15.1%	1.8%	4.2%	76.8%	4.2%	19.6%

Source: U.S. Department of Education Civil Rights Data Collection

### Sandy Grade School

<b>Principal:</b>	Rachael George	<b>Address:</b>	38955 Pleasant St, Sandy, OR 97055
<b>Enrollment:</b>	350	<b>% students eligible for free or reduced lunch:</b>	58.7%
<b>Grades Served:</b>	K-5		
<b>Type of School:</b>	Public		

#### SCHOOL DEMOGRAPHICS

Average Daily Student Enrollment	American Indian/Alaska Native	Asian	Black/African American	Hispanic	Native Hawaiian/Pacific Islander	Multiracial	White, non-Hispanic	Limited English Proficient	Students with Disabilities
338	1.2%	0.6%	1.2%	16.3%	1.2%	5.6%	74%	8.3%	10.7%

Source: U.S. Department of Education Civil Rights Data Collection

### Oregon Trail School District Languages

TOP 5 LANGUAGES SPOKEN	# STUDENTS
English	4162
Spanish	437
Russian	29
Vietnamese	6
Hmong	6
Total Languages Spoken: 39	4699

Source: U.S. Department of Education, National Center for Education Statistics

## PIP Outreach Process

The City of Sandy and the Oregon Trail School District spread the word about the SRTS Walk Audits and Community Meetings, held on October 10, 2019. Staff posted information about the event and the project in the following locations to encourage participation:

- School websites and social media
- Peachjar digital flyers to parents
- Press release to Sandy Post
- ParentSquare post to parents and staff

During the School Safety Assessment community meetings, consultant staff presented to participants and discussed the SRTS vision and school community's project goals. Their input is reflected in Chapter 2. Vision and Goals for SRTS. In addition, community members were invited to provide feedback via an online map that asked about the best routes to school and challenging locations to walk and bike.

The draft Plan was available for Public Review during two weeks in January 2020 and received no comments.



# Chapter 2. Vision and Goals for Safe Routes to Schools

Stakeholders helped create the following Vision and Goals through the Community Meetings, which were held at each school directly following the walk audit observations.

## Vision

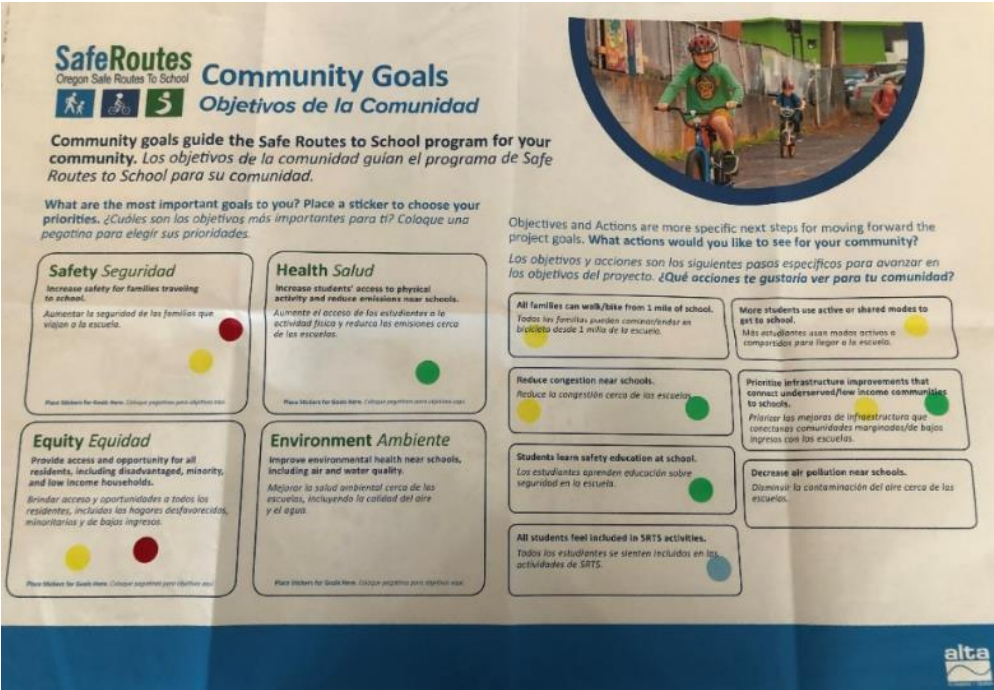
“The Oregon Trail School District community envisions a future where children and their families safely, comfortably, and conveniently walk and bicycle as part of the daily school commute and a healthy lifestyle.”

## Goals, Objectives, and Actions

The ODOT SRTS team suggested goals in the areas of health, safety, equity, or the environment. As shown in Figure 1, the Cedar Ridge Middle and Sandy Grade community meeting participants selected Safety and Equity, followed by Health, as the main priorities for the community. Attendees at the community meetings are included in Chapter 3.

The consultant team drafted the list of specific actions for the community to tackle based on the community-identified vision and goals, as well as community input from the walk audit and data collected throughout the PIP process. These actions describe how the community will work together to tackle the recommendations in Chapter 4. Actions may relate to achieving more than one goal, but each action is only listed once. The recommendations are divided into Infrastructure (construction) and Non-Infrastructure (education and engagement) categories in Chapter 4. Both lists include priority potential funding sources and the jurisdiction responsible for making the change.

Figure 1. Community Goal Prioritization- Oregon Trail School District



## Safety

Goal: Increase safety for families traveling to school, including perceptions of safety, since perceived barriers can have a real impact on whether parents allow their students to walk or bike.

- Objective 1- Students are able to walk and bike to and from campus, between schools, and to homes within a ¼ mile of the school.
  - Action: Cedar Ridge Middle School and Sandy Grade School will integrate on-campus infrastructure improvements into their ongoing planning processes.
  - Action: The Oregon Trail School District and City of Sandy will consider applying to ODOT Competitive SRTS Infrastructure Grant in 2020 for infrastructure improvements, outlined in Chapter 4.
  - Action: The Oregon Trail School District will organize a community-wide School Safety Campaign to increase the visibility of the school speed zones and encourage compliance with reduced speed limits.
- Objective 2- Safe walking or biking access is available to all families within 1 mile of school.
  - Action: The City of Sandy will adopt the long-term infrastructure recommendations as a part of the Transportation System Plan update.
  - Action: The City of Sandy will begin implementing recommendations as funds for capital improvements become available.
  - Action: The Oregon Department of Transportation will adopt infrastructure recommendations relevant to Highway 26 into its planning processes.
- Objective 3- Pedestrian and safety education is integrated into school curriculum.
  - Action: Cedar Ridge Middle School and Sandy Grade School will distribute informational safety materials for families and integrate student pedestrian safety instruction into school day lessons.

## Equity

Goal: Increase access and opportunity for all residents, including disadvantaged, minority, and low-income households.

- Objective 1- Engage with families from historically marginalized groups such as communities of color, households with families with incomes below the poverty line<sup>1</sup>, English-language learners, to hear and learn about their barriers to students walking or biking to school.
  - Action: The Oregon Trail School District will provide information and educational materials in English and Spanish, as needed.
- Objective 2- Prioritize infrastructure and non-infrastructure improvements that connect underserved or low-income communities to schools and improve access on campus.
  - Action: Clackamas County will implement infrastructure recommendations with a consideration for improvements that serve underserved and low-income communities.

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<sup>1</sup> 2019 Federal Poverty Guidelines: [www.ocpp.org/2019/02/19/what-is-poverty-2019/](http://www.ocpp.org/2019/02/19/what-is-poverty-2019/)

- *Action: In coordination with the Clackamas County SRTS program, the Oregon Trail School District will begin a SRTS education and encouragement program focused on benefitting the 50-60% of students eligible for Federal Free and Reduced-Price Lunch.*

## Health

Goal: Increase student access to physical activity and reduce emissions near schools, contributing to better air quality.

- Objective 1- Students have increased physical activity before and during the school day.
  - *Action: Cedar Ridge Middle School and Sandy Grade School will look for areas of overlap between SRTS efforts and other health initiatives and grants.*



*Photo courtesy of ODOT*

# Chapter 3. Existing Conditions

## Background Data

In advance of the Field Visit, the consultant team collected and compiled existing conditions data and local context information, as well as information about documented community concerns, demographics, travel routes, existing facilities, traffic patterns, school environment, and other relevant details. After the visit, the consultant team added additional contextual details learned during discussions with community members and from in-person observations.

## Plan Review

### CITY OF SANDY TRANSPORTATION SYSTEM PLAN (2011)

The City of Sandy's Transportation System Plan (TSP) focuses on all aspects of the transportation system and identifies infrastructure, safety, and efficiency improvements for all modal networks.

Key modal plans that comprise the TSP include:

- Bike System Plan
- Pedestrian System Plan
- Transit Master Plan
- Motor Vehicle System Plan

The Sandy TSP also provides key frameworks for transportation related improvements. SRTS programs that support these frameworks will address safety concerns aligned with larger City transportation goals, including:

- Neighborhood Traffic Management (NTM)
  - Strategies commonly used to slow down or reduce automotive traffic with the intent of improving safety for pedestrians
- Local Street Connectivity
  - Increasing connectivity between neighborhoods will lower the out-of-direction travel for pedestrians and bikes.
- Transportation Demand Management (TDM)
  - Strategies that decrease single occupant vehicle trips from the roadway network. The City of Sandy Transit Plan offers a list of direct and indirect strategies to achieve TDM goals.

The plan identifies the following specific actions relevant to the SRTS planning process:

- The City will engage ODOT periodically to evaluate the timing of traffic signals to ensure adequate pedestrian crossing time is provided. An emphasis will be placed on crossings where children, the elderly, or people with disabilities are prevalent.
- The City will apply Americans with Disabilities Act (ADA) requirements for curb ramps at intersections to all new crossings.
- The City will continue to require bicycle parking for multi-family, retail, office, and institutional developments per the Sandy Municipal Code (Section 17.98.20).
- The City will work with the School District to improve the quality of bicycle parking facilities at Sandy schools.

- The City will seek opportunities to coordinate transit improvements with bicycle and pedestrian network improvements that enhance the accessibility of transit stops.

For more specific information about the City of Sandy Transit Plan visit: [www.ci.sandy.or.us/transportation-system-plan](http://www.ci.sandy.or.us/transportation-system-plan)

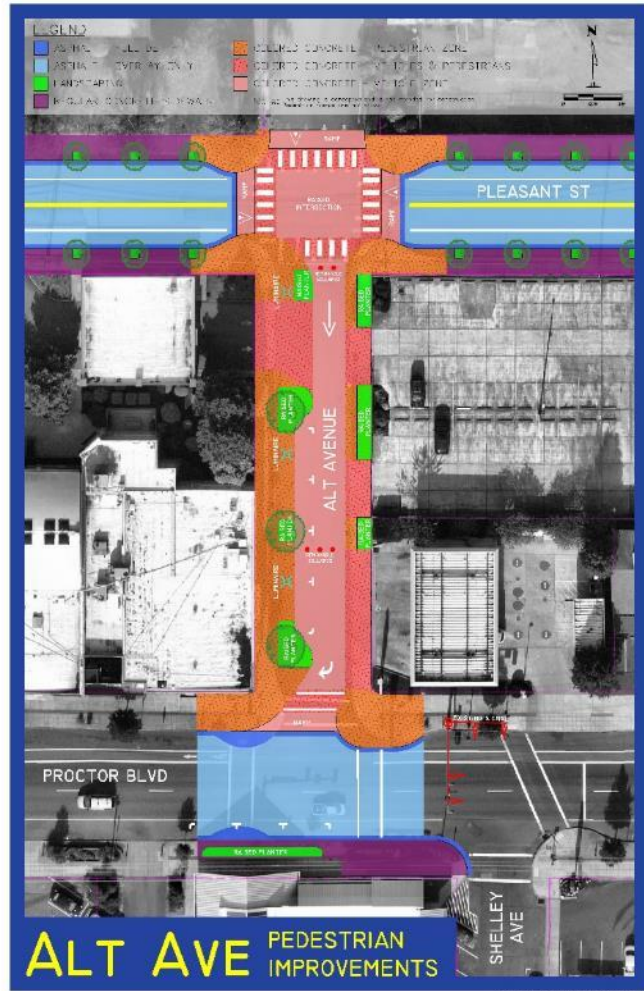
### PLEASANT STREET MASTER PLAN (IN PROGRESS)

The City of Sandy is currently engaged in a long-range planning process for Pleasant St, which runs through the City’s core. The Pleasant Street Master Plan process will focus on the following themes:

- Placemaking
- Undergrounding utilities
- Pedestrian-friendly streetscapes
- Modifications to Alt Ave

Sandy Grade School is located along Pleasant St, and this planning process will have direct impacts on the experience for students walking and biking to school. The planning process, which is currently underway, includes proposals such as a raised intersection at Pleasant St and Alt Ave, a pedestrian plaza along Alt Ave between Pleasant St and Highway 26/Proctor Blvd, and a realignment of Alt Ave. City of Sandy staff and community members have expressed concern with the existing signalized intersection of Proctor Boulevard (westbound US Highway 26) with Alt Ave/Shelley Ave. One of the goals of the Pleasant Street Master Plan process is to explore options to increase bike and pedestrian safety at this intersection, including a proposal to modify Alt Ave to be safer and more comfortable for pedestrians (see Figure 2, from Pleasant St Master Plan).

Figure 2. Alta Ave Pedestrian Improvements, Pleasant St Master Plan



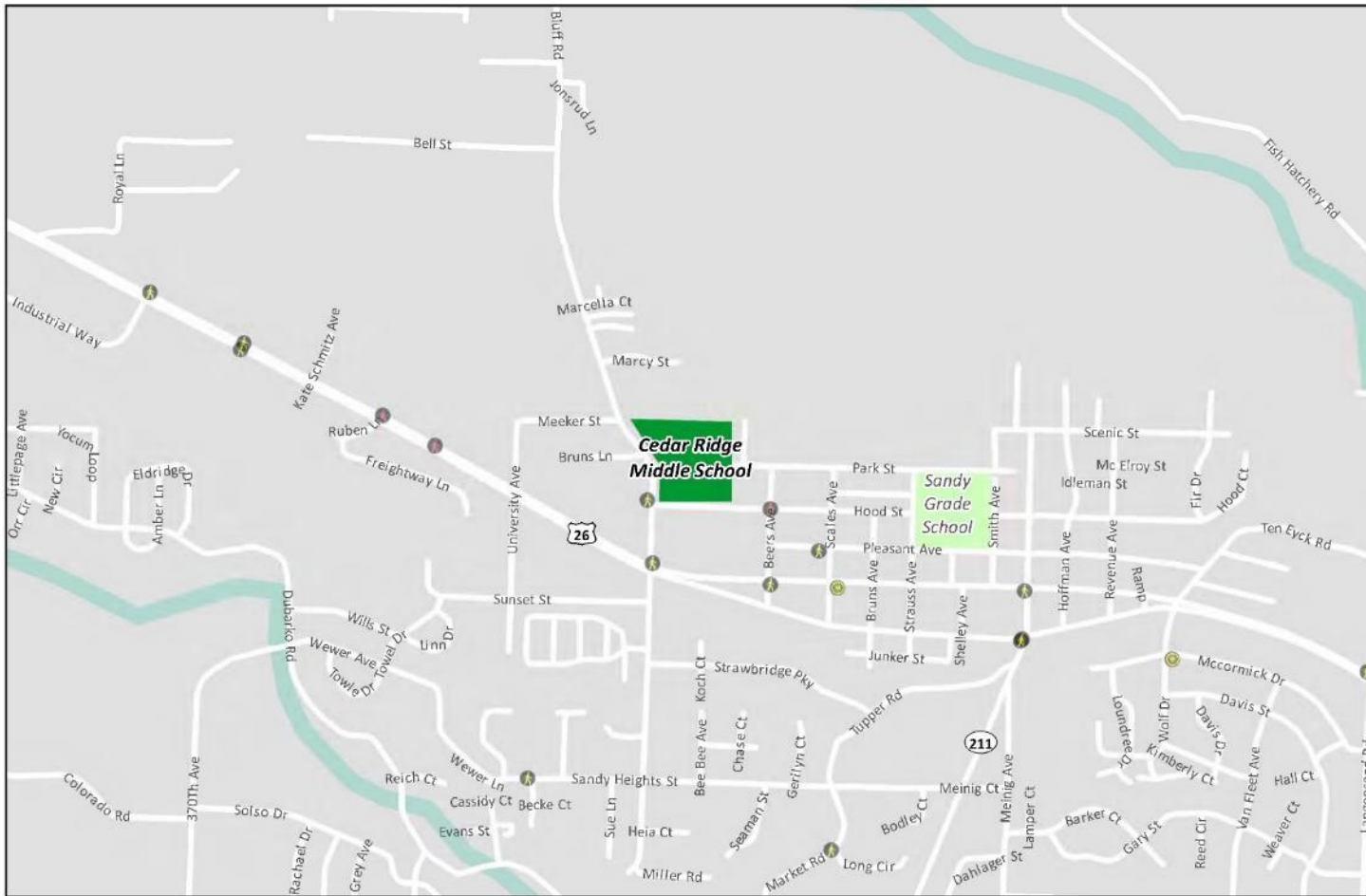
## Previous SRTS Efforts or Walking/Biking Encouragement Activities

Both Cedar Ridge Middle School and Sandy Grade School provide outreach materials to parents and staff at the beginning of each school year that include pick-up/drop-off procedures and travel safety tips. Sandy Grade currently has an informal Walking School Bus program including a guided walk to an afterschool program at Immanuel Lutheran Church.

## Crash History

From 2012 to 2016, there have been several pedestrian crashes and two bicycle crashes documented within a half mile of Cedar Ridge Middle School and Sandy Grade School (see Figure 3 and Figure 4). All of the incidences have occurred along streets south of school grounds. While most crashes can likely be attributed to high traffic volumes and speeds along Highway 26, several have occurred along Bluff Road, Hood St, and Pleasant Ave directly adjacent to the schools, where families are likely to travel.

Figure 3. Crashes Near Cedar Ridge Middle School



### Cedar Ridge Middle School Bicycle and Pedestrian Collisions (2012-2016)

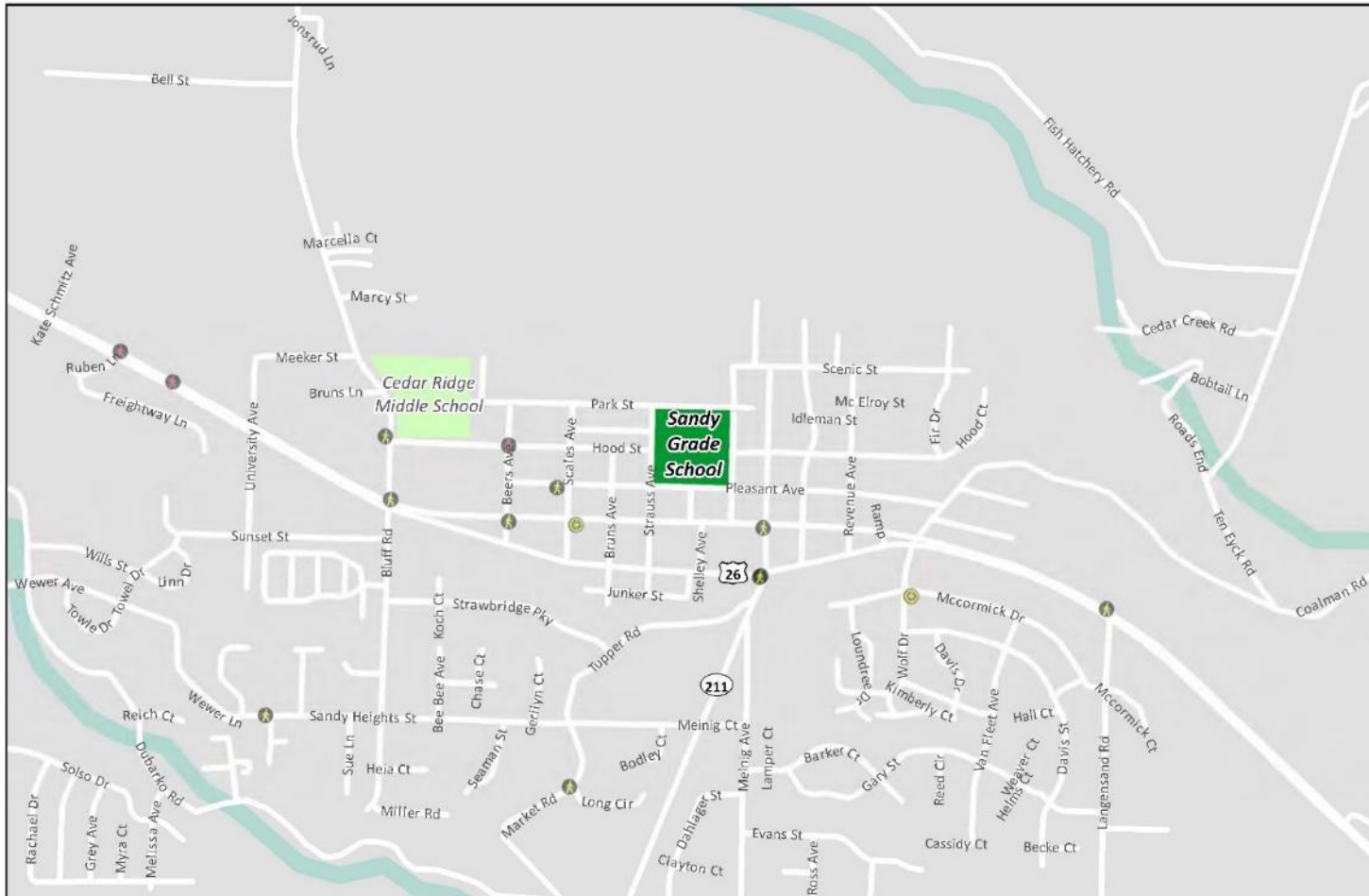
- Pedestrian: Fatal
- Bicycle: Fatal
- ⚡ Pedestrian: Non-Fatal
- ⚡ Bicycle: Non-Fatal

0 0.25 0.5 Miles



Source: Crash Analysis and Reporting Unit, ODOT (2012-2016)

Figure 4. Crashes Near Sandy Grade School



### Sandy Grade School Bicycle and Pedestrian Collisions (2012-2016)

- Pedestrian: Fatal
- Bicycle: Fatal
- Pedestrian: Non-Fatal
- Bicycle: Non-Fatal

Source: Crash Analysis and Reporting Unit, ODOT (2012-2016)



## Cedar Ridge Middle School Safety Assessment

The School Safety Assessment includes the walk audit observation, community meeting, and a bike and pedestrian facility inventory. During the School Safety Assessment, the team met face-to-face with community members, observed traffic conditions and travel patterns, and discussed potential solutions to identified challenges.

**Date:** October 10, 2019

**Meeting Time:** 7:00 am

**Day of Week:** Thursday

**Weather:** Clear and cold

**Attendees:**

- Emily Meharg, City of Sandy
- Christina Winberry, City of Sandy
- Kelly O’Neill, City of Sandy
- Julia Monteith, Oregon Trail School District
- Nicole Johnston, Cedar Ridge Middle School Principal
- Jim Seipel, Oregon Trail School District
- Hannah Day-Kapell, Alta Planning + Design
- Grace Stainback, Alta Planning + Design
- Maria Sipin, ODOT
- Basil Christopher, ODOT

### Walk Audit Observations

#### SCHOOL LAYOUT

Cedar Ridge Middle School is located along Bluff Road, west of the heart of downtown Sandy. The school is located 700 feet north of US Highway 26. The school grounds include a school building, parking areas on the west and east sides of the building, and sports fields on the south side of the property. Students enter and are dismissed through the main entrance on the west side of the school building, facing Bluff Rd (Figure 5).

Figure 5. Cedar Ridge Middle School Site Plan



## Cedar Ridge Middle School Site Plan



## SITE CIRCULATION

- Vehicles:** School pick-up and drop-off occurs within the Cedar Ridge Middle parking lot at the front entrance to the school. Drivers enter the school through a one-lane driveway from the east side of Bluff Rd just north of the bus stop, circulate in a loop pattern in front of the school entrance and around a section of parking spaces, to exit through a two-lane egress just north of the entrance on Bluff Rd.
- The majority of vehicles traveling to the school reach it by traveling north on Bluff Rd. The intersection of Bluff Rd and Highway 26, the major thoroughfare through Sandy, is located 700 feet south of the school entrance.
- School Buses:** Students load and disembark from buses in a separated area north of the school. Buses enter the school property from Bluff Rd through an entrance 500 feet north of the vehicle entrance/egress. Buses pull up along the south side of the access road, where a newly built sidewalk directs students east to a painted path that leads to a north entrance to the school. Buses then loop around and exit through the same entrance onto Bluff Rd.
- Pedestrians:** During the course of the walk audit, students were observed traveling on-foot via Bluff Rd, Hood St, and Meeker St to access the school. All of the roads include sidewalks with the exception of Meeker, which has no sidewalks at the intersection with Bluff Rd, and sidewalk that picks up on the north side of the street approximately 250 ft west of the intersection with Bluff Rd.
- Bicyclists:** Bluff Rd includes bidirectional standard striped bike lanes. However, several students were observed biking on the sidewalk along Bluff Rd to reach the school. Uncovered bike parking (consisting of 5 staple racks) is located outside the main entrance to the school.
- Transit:** The Sandy Area Metro (SAM) Shopping Shuttle, a local bus route, stops along Bluff Rd at the vehicle entrance to the middle school. The Sandy Local & Gresham Express bus route picks up just south of the school on Highway 26 at Bluff St.

## Cedar Ridge Middle School Walk Audit and Bike and Pedestrian Inventory Photos



*School entrance, where car queuing caused congestion and students were observed walking and biking across the gravel behind bus stop and across corner.*



*School drop-off/pick-up egress, where cars were observed stopped across the sidewalk.*



*Looking north on Bluff Rd, where students were observed biking on the sidewalk instead of using the existing bike lane.*



*Looking north on Bluff Rd, a high volume street where cars were observed not following the school zone speed limit.*



*Southeast corner of Hood St and Bluff Rd, where many students cross. The intersection is lacking crosswalks, curb ramps, and some areas of the sidewalk are obstructed.*



*Hood St and Scales Ave, where many students travel between Cedar Ridge Middle and Sandy Grade School, is lacking crosswalks, curb ramps and sections of sidewalk.*

## Community Meeting

The School Safety Assessment community meeting was an opportunity for school leadership, roadway jurisdiction 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. The consultant team met with a small group to debrief the walk audit in a classroom inside the school immediately following the morning bell.

### KEY THEMES

- Students biking to Cedar Ridge Middle School do not feel comfortable using the existing bike lanes along Bluff Rd. Students were consistently observed biking on the sidewalk to reach the school.
- The bike lane and sidewalks at the family vehicle loading entrance and egress were frequently blocked by cars either queuing up along Bluff Rd to enter the family vehicle loading area, or pulling out to exit.
- Due to school district boundaries, many students who live within walking distance west or north of the Cedar Ridge Middle School attend Boring Middle School, located 7 miles west.

## Bike and Pedestrian Facility Inventory

The bike and pedestrian facility inventory confirmed existing infrastructure conditions, and filled gaps in ODOT and Clackamas County data, focusing on all streets within a quarter mile of the school. The consultant collected the following information about general infrastructure deficiencies and needs:

- **Sidewalk deficiencies** – lack of continuity, insufficient width, poor surface condition, non-compliant cross-slopes and driveways, lack of separation from the travel lane, and obstacles (utility/light poles, signs, and vegetation)
- **School area signs and pavement markings** – presence, placement, and condition
- **Paths** – formal or informal, surface material
- **Bike lanes** – lack of continuity, insufficient width or markings, presence of on-street parking, speed and volume of traffic, poor pavement condition
- **Bicycle, scooter, and/or skateboard parking** – presence, location, visibility, degree of security, and utilization
- **Drop-off/pick-up areas** – designated areas, curb paint, and signs
- **Visibility** – insufficient pedestrian lighting, line of sight obstacles (parked cars, vegetation, signs, and poles)

The following information about street crossings was collected by consultant during the bike and pedestrian facility inventory:

- **Traffic signals** – pedestrian signals, push-button location and reach distance, signing, countdown feature, accessible pedestrian signal feature, and sufficient crossing time.
- **Marked crosswalks** – condition, type, signs, visibility, and whether ramp is contained within crosswalk markings.
- **Curb ramps** – presence at corners, ADA-compliant design (tactile domes, ramp and flare slope, level landing).
- **Connections with neighborhood trails or paths, transit** - signage, bike parking, ease of connection to transit hubs, parks, or schools.

Deficiencies and needs identified in the bike and pedestrian facility inventory inform the construction recommendations described in Chapter 4.

## Sandy Grade School Safety Assessment

The School Safety Assessment includes the walk audit observation, community meeting, and a bike and pedestrian facility inventory. During the School Safety Assessment, the team met face-to-face with community members, observed traffic conditions and travel patterns, and discussed potential solutions to identified challenges.

**Date:** October 10, 2019

**Meeting Time:** 2:00 pm

**Day of Week:** Thursday

**Weather:** Clear and cold

**Attendees:**

- Emily Meharg, City of Sandy
- Kelly O’Neill, City of Sandy
- Julia Monteith, Oregon Trail School District
- Jim Seipel, Oregon Trail School District
- Rachael George, Sandy Grade School Principal
- Maria Sipin, ODOT
- Basil Christopher, ODOT
- LeAnne Ferguson, ODOT
- Hannah Day-Kapell, Alta Planning + Design
- Grace Stainback, Alta Planning + Design

### Walk Audit Observations

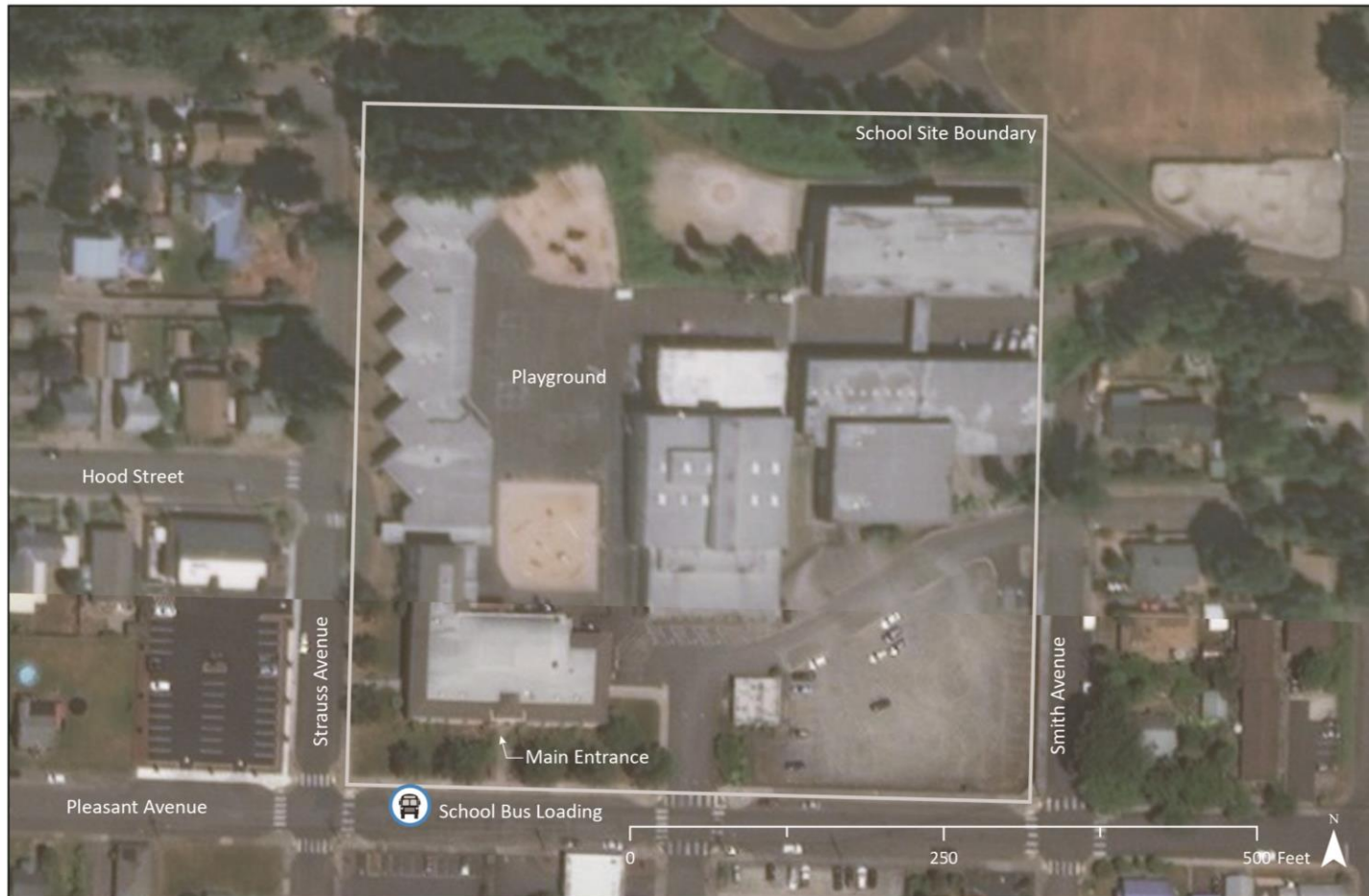
#### SCHOOL LAYOUT

Sandy Grade School is located along Pleasant St, just north of Highway 26. The school grounds include a school building, an unofficial parking area southeast of the building, and sports fields north of the property. Students enter through the main entrance on the south side of the school building facing Pleasant Ave, and are dismissed through the main entrance and through doors on the west side of the building facing Strauss Ave (Figure 6).

#### SITE CIRCULATION

- Vehicles:** The school has no official family vehicle pick-up/drop off area; rather, parents park along adjacent streets including Hood St, Strauss Ave, Alt Ave and Smith Ave and walk to meet students at the school entrance on Pleasant St.
- School Buses:** Buses conduct westbound pick-up and drop off along Pleasant St in front of the school. Teachers coordinate bus loading outside the school entrance. After most students had boarded a bus or been escorted by parents on foot, two additional buses traveling eastbound on Pleasant Ave turned left on Strauss Ave to load students adjacent to the school.
- Pedestrians:** Many elementary school students were picked up by parents traveling on foot, most accompanying students to cars temporarily parked nearby. Parents used the intersection of Pleasant Ave with Strauss Ave, Alt Ave and Smith Ave to travel to and from the school. Middle school students were observed traveling on-foot along Hood St from Cedar Ridge Middle School to the west to meet siblings at Sandy Grade School. Students were observed crossing Highway 26 at Alt Ave and Strauss Ave.
- Bicyclists:** There are no existing bike racks located at Sandy Grade School; however, bike storage inside the front office is available for students who need it.
- Transit:** Stops that serve the Sandy Area Metro (SAM) Shopping Shuttle, and the Sandy Local & Gresham Express are located south of the school on Highway 26 at Strauss Ave.

Figure 6. Sandy Grade School Site Plan



## Sandy Grade School Site Plan



## Sandy Grade School Walk Audit and Bike and Pedestrian Inventory Photos



*Sidewalk gap on north side of Pleasant St between Strauss Ave and Bruns Ave.*



*Encroaching vegetation along sidewalk on north side of Pleasant St east of Smith Ave.*



*Parked cars, utility poles, recycling bins and cracked sidewalks inhibit sidewalk travel along Strauss Ave, where the majority of students are dismissed.*



*Existing southbound pedestrian crossing signage is difficult to see and placed too close to the intersection at Strauss Ave and Hood St.*



*Pleasant St and Alt Ave is a high volume interchange in front of the school.*



*Signal timing and intersection orientation at Highway 26 and Alt/Shelley Ave create uncertain and unsafe conditions for pedestrians and drivers.*



## Community Meeting

The School Safety Assessment community meeting was an opportunity for school leadership, roadway jurisdiction 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. The consultant team met with a small group to debrief the walk audit in the school library 30 minutes following the dismissal bell.

### KEY THEMES

- Staff coordinated dismissal smoothly by forming students into lines, communicating with two-way radio devices and acting as crossing guards at key intersections.
- The majority of students are dismissed from doors at the west side of the school onto Strauss Ave, where some sections of sidewalk require maintenance, and recycling bins and utility poles obstructed student passage.
- There is a lot of enthusiasm for education and engagement programs at Sandy Grade, including driver awareness programs, and encouragement for students walking and biking.
- The lack of parking at or near Sandy Grade has significant impacts on families' abilities to participate in after-school activities and family events.
- Participants acknowledged that due to demographic and socioeconomic diversity in Sandy, there is a lot of potential to tailor SRTS programming to meet the needs of all students and community members.

## Bike and Pedestrian Facility Inventory

The bike and pedestrian facility inventory confirmed existing infrastructure and filled gaps in ODOT and Clackamas County data, focusing on all streets within a quarter mile of the school. The consultant collected the following information about general infrastructure deficiencies and needs:

- **Sidewalk deficiencies** – lack of continuity, insufficient width, poor surface condition, non-compliant cross-slopes and driveways, lack of separation from the travel lane, and obstacles (utility/light poles, signs, and vegetation)
- **School area signs and pavement markings** – presence, placement, and condition
- **Paths** – formal or informal, surface material
- **Bike lanes** – lack of continuity, insufficient width or markings, presence of on-street parking, speed and volume of traffic, poor pavement condition
- **Bicycle, scooter, and/or skateboard parking** – presence, location, visibility, degree of security, and utilization
- **Drop-off/pick-up areas** – designated areas, curb paint, and signs
- **Visibility** – insufficient pedestrian lighting, line of sight obstacles (parked cars, vegetation, signs, and poles)

The bike and pedestrian facility inventory collected the following information about street crossings:

- **Traffic signals** – pedestrian signals, push-button location and reach distance, signing, countdown feature, accessible pedestrian signal feature, and sufficient crossing time.
- **Marked crosswalks** – condition, type, signs, visibility, and whether ramp is contained within crosswalk markings.

- **Curb ramps** – presence at corners, ADA-compliant design (tactile domes, ramp and flare slope, level landing).
- **Connections with neighborhood trails or paths** - signage, bike parking, ease of connection to transit hubs, parks, or schools.

Deficiencies and needs identified in the bike and pedestrian facility inventory inform the construction recommendations described in Chapter 4.



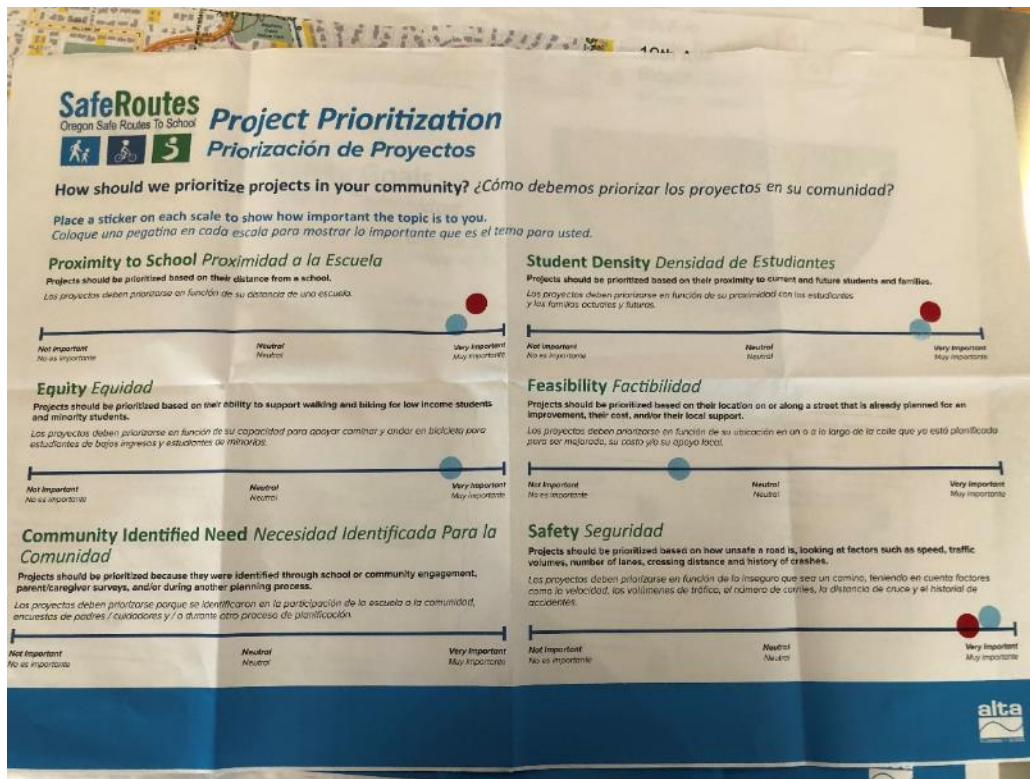
*Photo courtesy of ODOT*

# Chapter 4. Needs & Recommendations

## Prioritization Criteria

Walk audit participants provided feedback on how actions and recommendations should be prioritized in their community on a sliding scale of “Not Important” to “Very Important”. This exercise requires thinking about trade-offs between different goals and actions. As illustrated in Figure 7, safety, proximity to school, and student density were the top prioritization criteria for Cedar Ridge and Sandy Grade walk audit participants, followed by equity and feasibility. Participants discussed the trade-offs between feasibility and safety, deciding that they would be interested in looking at both short-term highly-feasible improvements but also considering a long-term approach that maximized safety. Participants emphasized student density, specifically, the importance of establishing safe walking and biking facilities along the key routes where most students are traveling from home. Participants also emphasized the importance of equity, and ensuring that SRTS programs served all students and nearby residents. To reflect these community priorities, the consultant team will prioritize safety-related projects both within a ¼ mile of the school and within the larger 1-mile radius with a focus on key routes for walking and biking to school. To incorporate the mixed feedback on the “feasibility” criteria, the consultant team will recommend some more creative short-term construction recommendations and programmatic ideas and long-term, higher cost recommendation to address the biggest safety concerns.

Figure 7. Project Prioritization- Oregon Trail School District



## PHASING

The consultant team prioritized recommendations in Tables 1-4 into three time-frames: short term, medium term, and long term:

- Short Term: action to be completed in the semester following Plan development
- Medium Term: the following school year from when the Plan is being developed
- Long Term: two or more years from Plan development

Phasing is based on the community's readiness to accomplish the action, resources available, and other factors.

## Construction (Infrastructure) Recommendations

Circulation and infrastructure needs around the school were identified based on:

- existing conditions data
- community feedback from the walk audits and community meetings
- input from jurisdictions

Table 1 and Table 2 lists the needs identified at each location and ensuing construction recommendations, as well as the relative priority of the recommendation, a high-level associated cost, the agency responsible for implementing the recommendation, and any potential funding source for construction.

Table 1. Cedar Ridge Middle School Construction Needs and Recommendations

ISSUE/ CHALLENGE	RECOMMENDATION	PRIORITY LEVEL	PLANNING	RESPONSIBLE	POTENTIAL
			LEVEL	AGENCY	FUNDING
			COST		SOURCE
<b><i>Cedar Ridge Middle School Grounds</i></b>					
<i>Existing bike parking was observed full.</i>	<i>Install additional bike parking. Provide bikes racks with two points of contact on the rack, such as inverted-U racks. Consider covering bike parking to shelter from rain and add lighting.</i>	<i>Short-term</i>	<i>\$</i>	<i>School District</i>	<i>TBD</i>
<i>The family vehicle loading/unloading entrance is narrow in width and easy to miss.</i>	<i>Replace existing “Enter Here” sign with a larger assembly at entrance to loading/unloading area.</i>	<i>Short-term</i>	<i>\$</i>	<i>School District</i>	<i>TBD</i>
<i>Queuing in the family vehicle loading/unloading area causes congestion along Bluff Rd.</i>	<i>Install multiple “Pull Forward” signs along student loading/unloading area.</i>	<i>Short-term</i>	<i>\$</i>	<i>School District</i>	<i>TBD</i>
<i>Vehicles were observed to be positioned across the sidewalk at the egress from the parking lot, blocking the walking route for students.</i>	<i>Install stop line marking setback further from the sidewalk and continental crosswalk markings across the egress.</i>	<i>Short-term</i>	<i>\$</i>	<i>School District</i>	<i>TBD</i>
<i>Students were observed walking and biking across the gravel to cut the corner at the bus stop south of the school entrance.</i>	<i>Infill sidewalk within the corner adjacent to the bus stop at school entrance.</i>	<i>Short-term</i>	<i>\$\$</i>	<i>School District</i>	<i>TBD</i>

ISSUE/ CHALLENGE	RECOMMENDATION	PRIORITY LEVEL	PLANNING LEVEL COST	RESPONSIBLE AGENCY	POTENTIAL FUNDING SOURCE
<b>Bluff Road in Front of School</b>					
<i>Existing mailboxes along Bluff Rd significantly constrain the sidewalk in various locations, reducing the clearance width to 3.5 feet.</i>	<i>Consolidate the five mailboxes along the school frontage and relocate to the west side of Bluff Rd.</i>	<i>Short-term</i>	\$	<i>City of Sandy and USPS</i>	<i>TBD</i>
<i>Students biking choose to ride on the sidewalk, likely due to perceived safety concerns and vehicles blocking the bike lane. Students were observed walking and biking across the grass to cut the corner at the bus stop south of the school entrance, due to congestion on the sidewalk.</i>	<i>Widen sidewalk to fence along east side of Bluff Rd between Hood St and school vehicle entrance.</i>	<i>Short-term</i>	\$\$	<i>School District/City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>
<i>Existing vegetation along east side of Bluff Rd is overgrown onto sidewalk.</i>	<i>Trim vegetation along east side of Bluff Rd between Hood St and Highway 26.</i>	<i>Short-term</i>	\$	<i>City of Sandy</i>	<i>Maintenance budget</i>
<i>Existing telephone poles on the east side of Bluff Rd north of the school restricts the sidewalk to less than 3 feet of clearance.</i>	<i>Widen sidewalk in the vicinity of telephone poles and move associated utility structures as needed.</i>	<i>Medium-term</i>	\$\$	<i>City of Sandy or PGE</i>	<i>TBD</i>
<i>Drivers tend to ignore or overlook “7AM – 5PM” supplemental speed zone signs, as students are only present during arrival and dismissal times, and the signs do not provide sufficient warning of the school area.</i>	<i>Replace “7AM - 5PM” 20 MPH school zone signs on Bluff Rd with “WHEN FLASHING” 20 MPH school zone signs and flashing beacons (S5-1).</i>	<i>Medium-term</i>	\$\$	<i>City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>

ISSUE/ CHALLENGE	RECOMMENDATION	PRIORITY LEVEL	PLANNING LEVEL COST	RESPONSIBLE AGENCY	POTENTIAL FUNDING SOURCE
<b>Bluff Road in Front of School</b>					
<i>Middle school students cross Bluff Rd at Marcy St during the school day to attend PE classes at Sandy High School. A crosswalk and signage is marked in that location, but it lacks additional visibility.</i>	<i>Replace existing crossing signage on Bluff Rd at Marcy St with a Rectangular Rapid Flashing Beacon (RRFB) with School Crossing Assembly (S1-1 and W16-7P), and high visibility crosswalks across the north and east sides of the intersection.</i>	<i>Medium-term</i>	<i>\$\$</i>	<i>City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>
<i>There is a gap in the sidewalk network on the west side of Bluff Rd adjacent to the school.</i>	<i>Construct approximately 225 LF of sidewalk along west side of Bluff Rd from Meeker St north to existing sidewalk.</i>	<i>Long-term</i>	<i>\$\$\$</i>	<i>City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>
<i>Currently, students living west of Bluff Rd attend another school. If redistricting occurs and students west of the school begin to attend Cedar Ridge, there will be no safe route for students to walk and bike between Meeker St and the school.</i>	<i>If redistricting occurs, install marked crosswalk with curb ramps, tactile domes, HAWK beacon and median refuge island across north leg of the Meeker St at Bluff Rd intersection.</i>	<i>Long-term</i>	<i>\$\$\$</i>	<i>School District and City of Sandy</i>	<i>N/A</i>
<i>There is a gap in the sidewalk network along Meeker St, one of the few streets connecting to the school.</i>	<i>If redistricting occurs, construct sidewalk along the north side of Meeker between Bluff Rd and the existing sidewalk west of Bluff Rd.</i>	<i>Long-term</i>	<i>\$\$</i>	<i>City of Sandy</i>	<i>N/A</i>

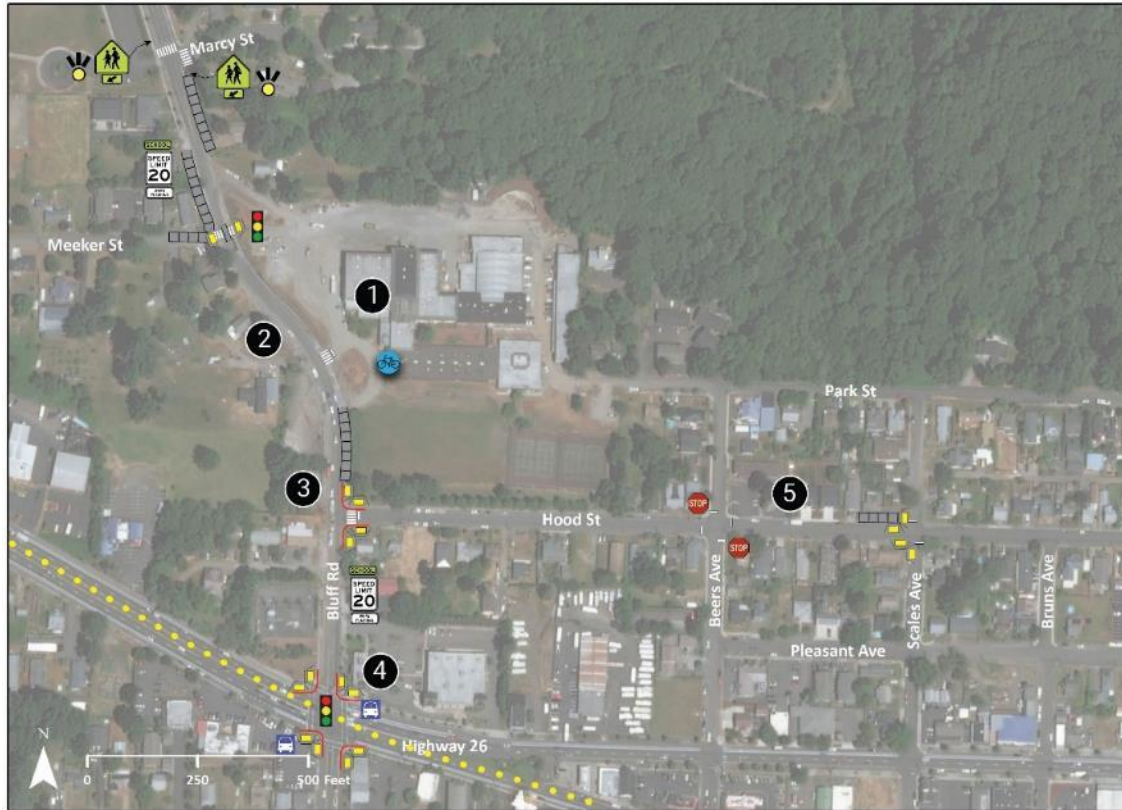
ISSUE/ CHALLENGE	RECOMMENDATION	PRIORITY LEVEL	PLANNING LEVEL COST	RESPONSIBLE AGENCY	POTENTIAL FUNDING SOURCE
<b>Bluff Road at Hood Street</b>					
<i>Many students were observed crossing Hood St at Bluff Rd, which does not have safe crossing infrastructure or stop controls.</i>	<i>Install a curb extension including perpendicular curb ramps and tactile domes at northeast corner of Hood St.</i>	<i>Medium-term</i>	<i>\$\$</i>	<i>City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>
	<i>Install a curb extension to provide clearance from existing pole, including perpendicular curb ramps and tactile domes, at southeast corner.</i>	<i>Medium-term</i>	<i>\$\$</i>	<i>City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>
	<i>Mark crosswalk and stop bar across the east leg of intersection.</i>	<i>Medium-term</i>	<i>\$</i>	<i>City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>
<b>Bluff Road at Highway 26</b>					
<i>During the facility inventory it was observed that the pedestrian signal crossing time across Highway 26 is insufficient for youth, seniors and people with disabilities.</i>	<i>Increase pedestrian signal crossing time to be based on a walking rate of 3.0 feet per second.</i>	<i>Short-term</i>	<i>\$</i>	<i>ODOT</i>	<i>TBD</i>
	<i>Reconfigure crossing to provide perpendicular curb ramps with tactile domes and reduce curb radius at all corners. Add pedestrian-scale lighting.</i>	<i>Medium-term</i>	<i>\$\$</i>	<i>City of Sandy and ODOT</i>	<i>TBD</i>



ISSUE/ CHALLENGE	RECOMMENDATION	PRIORITY LEVEL	PLANNING LEVEL COST	RESPONSIBLE AGENCY	POTENTIAL FUNDING SOURCE
<b>Bluff Road at Highway 26</b>					
<i>Given speed and heavy traffic along Highway 26, a standard striped bike lane is not sufficiently safe or comfortable to accommodate youth riding bicycles.</i>	<i>Reallocate existing roadway space to provide buffered bike lanes along Highway 26 and consider the use of green pavement markings in the vicinity of Bluff Rd. Consider installing vertical delineators with buffered bike lanes contingent on city maintenance agreement, or construct a fully grade-separated bicycle facility</i>	<i>Long-term</i>	<i>\$\$\$</i>	<i>City of Sandy and ODOT</i>	<i>TBD</i>
<b>Hood Street</b>					
<i>Many students travel along Hood St between Cedar Ridge Middle School and Sandy Grade School. Several areas were identified where improved crossings and sidewalk infrastructure will enhance the safety and comfort of students walking.</i>	<i>At Beers Ave, repaint stop bars on west and east sides of intersection. Consider installation of a 4 way stop at Beers Ave, which experiences higher traffic volume than other north-south streets in Sandy</i>	<i>Short-term</i>	<i>\$</i>	<i>City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>
	<i>Consolidate mailboxes along Hood St between Beers Ave and Scales Ave.</i>	<i>Short-term</i>	<i>\$</i>	<i>City of Sandy and USPS</i>	<i>TBD</i>
	<i>Reconstruct and widen 60 ft of sidewalk in front of 38641 Hood St.</i>	<i>Medium-term</i>	<i>\$\$\$</i>	<i>City of Sandy</i>	<i>TBD</i>
	<i>Install 100 ft of new sidewalk on north side of street between 38661 Hood St and Scales Ave.</i>	<i>Medium-term</i>	<i>\$\$\$</i>	<i>City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>

ISSUE/ CHALLENGE	RECOMMENDATION	PRIORITY LEVEL	PLANNING LEVEL COST	RESPONSIBLE AGENCY	POTENTIAL FUNDING SOURCE
<b><i>Hood Street</i></b>					
<i>Many students travel along Hood St between Cedar Ridge Middle School and Sandy Grade School. Several areas were identified where improved crossings and sidewalk infrastructure will enhance the safety and comfort of students walking.</i>	<i>Install perpendicular curb ramps with tactile domes at northwest and southwest corners of the intersection of Hood St and Scales Ave. Install tactile domes at the northeast and southeast corners. Repaint stop bars.</i>	<i>Medium-term</i>	<i>\$\$</i>	<i>City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>
	<i>Install tactile dome at southwest corner of Bruns Ave and Hood St</i>	<i>Medium-term</i>	<i>\$</i>	<i>City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>
	<i>Remove unutilized pipe causing sidewalk slope between 38795 and 38785 Hood St.</i>	<i>Medium-term</i>	<i>\$\$</i>	<i>City of Sandy</i>	<i>TBD</i>
	<i>Require 6 ft-wide sidewalk infill as part of future development.</i>	<i>Long-term</i>	<i>\$\$</i>	<i>City of Sandy</i>	<i>N/A</i>

Figure 8. Cedar Ridge Middle School SRTS Improvements Map



**Legend**

Proposed Improvements

- Crosswalk
- Sidewalk Improvements
- Buffered Bike Lane/Green Pavement
- Stop Bar

- Stop Sign
- Signalization Improvements
- Curb Ramp
- Curb Extension
- RRFB

- S1-1, W16-7P
- S4-39, RR-1, S4-4P with flashing lights
- Bike Parking
- Existing Bus Stop

**alta**  
PLANNING • DESIGN  
Map produced Nov 2019

**Cedar Ridge Middle School  
Improvement Recommendations**



- 1 Cedar Ridge Middle School Grounds**
  - a. Install additional bike parking. Provide bikes racks with two points of contact on the rack, such as inverted-U racks. Consider covering bike parking to shelter from rain and add lighting.
  - b. Replace existing "Enter Here" sign with a larger assembly at entrance to loading/unloading area.
  - c. Install multiple "Please Pull Forward" signs along student loading/unloading area.
  - d. Install stop line marking setback further from the sidewalk and continental crosswalk markings across the egress.
  - e. Infill sidewalk within the corner adjacent to the bus stop at school entrance.
- 2 Bluff Road in Front of School**
  - a. Consolidate the five mailboxes along the school frontage and relocate to the west side of Bluff Rd.
  - b. Widen sidewalk to fence along east side of Bluff Rd between Hood St and school vehicle entrance.
  - c. Construct approximately 225 LF of sidewalk along west side of Bluff Rd from Meeker St north to existing sidewalk.
  - d. Widen sidewalk in the vicinity of telephone poles and move associated utility structures as needed.
  - e. Replace "7AM - 5PM" 20 MPH school zone signs on Bluff Rd with "WHEN FLASHING" 20 MPH school zone signs and flashing beacons (S5-1).
  - f. Replace existing crossing signage on Bluff Rd at Marcy St with a Rectangular Rapid Flashing Beacon (RRFB) with School Crossing Assembly (S1-1 and W16-7P), and high visibility crosswalks across the north and east sides of the intersection.
  - g. Trim vegetation along east side of Bluff Rd between Hood St and Highway 26.
  - h. If redistricting occurs, install marked crosswalk with curb ramps, tactile domes, HAWK beacon and median refuge island across north leg of the Meeker St at Bluff Rd intersection.
  - i. If redistricting occurs, construct sidewalk along the north side of Meeker between Bluff Rd and the existing sidewalk west of Bluff Rd.
- 3 Bluff Road at Hood Street**
  - a. Install a curb extension including perpendicular curb ramps and tactile domes at northeast corner.
  - b. Install a curb extension to provide clearance from existing pole, including perpendicular curb ramps and tactile domes, at southeast corner.
  - c. Mark crosswalk and stop bar across the east leg of intersection.
- 4 Bluff Road at Highway 26**
  - a. Increase pedestrian signal crossing time to be based on a walking rate of 3.0 feet per second.
  - b. Reconfigure crossing to provide perpendicular curb ramps with tactile domes and reduce curb radius at all corners. Add pedestrian-scale lighting.
  - c. Reallocate existing roadway space to provide buffered bike lanes along Highway 26 and consider the use of green pavement markings in the vicinity of Bluff Rd. Consider installing vertical delineators with buffered bike lanes contingent on city maintenance agreement, or construct a fully grade-separated bicycle facility.
- 5 Hood Street**
  - a. At Beers Ave, repaint stop bars on west and east sides of intersection. Consider installation of a 4 way stop at Beers Ave, which experiences higher traffic volume than other north-south streets in Sandy.
  - b. Consolidate mailboxes between Beers Ave and Scales Ave.
  - c. Reconstruct and widen 60 ft of sidewalk in front of 38641 Hood St. Install 100 ft of new sidewalk between 38661 Hood St and Scales Ave.
  - d. Install perpendicular curb ramps with tactile domes at northwest and southwest corners of the intersection of Hood St and Scales Ave. Install tactile domes at the northeast and southeast corners. Repaint stop bars.
  - e. Install tactile dome at southwest corner at Bruns Ave.
  - f. Remove unutilized pipe causing sidewalk slope between 38795 and 38785 Hood St.
  - g. Require 6 ft-wide sidewalk infill as part of future development.

Table 2. Sandy Grade School Construction Needs and Recommendations

ISSUE/ CHALLENGE	RECOMMENDATION	PRIORITY LEVEL	PLANNING LEVEL COST	RESPONSIBLE AGENCY	POTENTIAL FUNDING SOURCE
<b>Sandy Grade School Grounds</b>					
<i>There is no existing bike parking at the school.</i>	<i>Install bike parking that provides two points of contact for a bicycle frame, positioned underneath a covered area with lighting.</i>	<i>Short-term</i>	<i>\$</i>	<i>School District</i>	<i>TBD</i>
<i>The vehicle entrance to the east of the front of the school results in conflicts with bus routes and creates safety issues for pedestrians.</i>	<i>Close driveway to Olin Bignall Aquatic Center at Alt Ave and Pleasant St intersection as part of Pleasant Street Master Plan process.</i>	<i>Long-term</i>	<i>\$\$\$</i>	<i>City of Sandy</i>	<i>N/A</i>
<b>Pleasant Street in Front of School</b>					
<i>Vehicles were observed coming to a stop blocking the existing marked crosswalks along Pleasant St in front of the school.</i>	<i>Mark stop bars in advance of crosswalks at all STOP control approaches at the intersections of Pleasant St at Strauss Ave, Alt Ave, and Smith Ave.</i>	<i>Short-term</i>	<i>\$</i>	<i>City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>
<i>There are holes in the existing fence along Pleasant St that encircles the parking area adjacent to the school, which are large enough for small children to get through.</i>	<i>Repair holes in bottom of fence along north side of Pleasant St approaching Smith Ave.</i>	<i>Short-term</i>	<i>\$\$</i>	<i>City of Sandy</i>	<i>Funded</i>
<i>Encroaching vegetation blocks the sidewalk, reducing it to less than 3 feet of clearance in locations.</i>	<i>Trim encroaching vegetation along north side of Pleasant St immediately east of intersection with Smith Ave.</i>	<i>Short-term</i>	<i>\$</i>	<i>City of Sandy</i>	<i>N/A</i>
<i>A gap in the sidewalk network exists along Pleasant St one block west of the school entrance.</i>	<i>Construct approximately 125 LF of sidewalk along the north side of Pleasant St between Bruns Ave and Strauss Ave.</i>	<i>Medium-term</i>	<i>\$\$</i>	<i>City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>

ISSUE/ CHALLENGE	RECOMMENDATION	PRIORITY LEVEL	PLANNING	RESPONSIBLE AGENCY	POTENTIAL
			LEVEL COST		FUNDING SOURCE
<b>Pleasant Street in Front of School</b>					
<i>Vehicles were observed speeding along Pleasant St, and walk audit participants noted speeding in this location as a recurring challenge.</i>	<i>Consider installation of advanced school warning signage with flashing beacons (S5-1) to raise awareness of school speed zone on both sides of Pleasant St approaching school.</i>	<i>Medium-term</i>	<i>\$\$\$</i>	<i>City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>
<i>School leadership indicated that some children feel uncomfortable walking past barking dogs in neighboring yards</i>	<i>Consider approaches to managing student comfort walking past barking dogs in yards adjacent to school.</i>	<i>Medium-term</i>	<i>\$</i>	<i>School District</i>	<i>N/A</i>
<b>Pleasant Street and Strauss Avenue</b>					
<i>Vehicle congestion was observed at the intersection of Pleasant St at Strauss Ave, particularly for cars traveling north- and southbound along Strauss Ave</i>	<i>Consider revising the intersection of Pleasant St and Strauss Ave to be a four-way stop (currently STOP control north- and southbound only).</i>	<i>Medium-term</i>	<i>\$\$</i>	<i>City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>
<b>Pleasant Street and Alt Avenue</b>					
<i>The intersection of Pleasant St and Alt Ave is located at the front of the school and experiences the most multimodal traffic, with significant potential conflicts.</i>	<i>Replace existing diagonal curb ramps at all four corners with perpendicular curb ramps with tactile domes at the intersection of Pleasant St at Alt Ave.</i>	<i>Medium-term</i>	<i>\$\$</i>	<i>City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>
	<i>Support proposal to construct a raised intersection at Pleasant St at Alt Ave as part of Pleasant Street Master Plan process.</i>	<i>Long-term</i>	<i>\$\$\$</i>	<i>City of Sandy</i>	<i>N/A</i>

ISSUE/ CHALLENGE	RECOMMENDATION	PRIORITY LEVEL	PLANNING LEVEL COST	RESPONSIBLE AGENCY	POTENTIAL FUNDING SOURCE
<b><i>Pleasant Avenue and Smith Avenue</i></b>					
<i>Existing school signage along Smith Ave is located 70 feet from the intersection with Pleasant St</i>	<i>Relocate southbound school advance crossing assembly (S1-1 &amp; W16-9P) and school speed limit assembly (S4-3P &amp; R2-1) along Smith Ave to approximately 100 ft and 175 ft north of intersection, respectively.</i>	<i>Short-term</i>	\$	<i>City of Sandy</i>	<i>N/A</i>
<b><i>Strauss Avenue and Hood Street</i></b>					
<i>Poor visibility along Straus Ave prohibits drivers from anticipating school zone signage on Hood St.</i>	<i>Trim vegetation on west side of Strauss Ave north of the intersection with Hood St, and on the NW corner of Strauss Ave at Hood St to enhance southbound sign and intersection visibility.</i>	<i>Short-term</i>	\$	<i>City of Sandy</i>	<i>N/A</i>
	<i>Relocate southbound school advance crossing assembly (S1-1 &amp; W16-9P) and school speed limit assembly (S4-3P &amp; R2-1) along Strauss Ave to approximately 100 ft and 175 ft north of intersection, respectively.</i>	<i>Short-term</i>	\$	<i>City of Sandy</i>	<i>N/A</i>

ISSUE/ CHALLENGE	RECOMMENDATION	PRIORITY LEVEL	PLANNING	RESPONSIBLE AGENCY	POTENTIAL
			LEVEL COST		FUNDING SOURCE
<b><i>Strauss Avenue and Hood Street</i></b>					
<i>The school uses Strauss Ave as a staging area for students waiting for buses at dismissal. Substandard crossings, degraded sidewalks, and clutter from recycling bins on the sidewalk made the area unsafe.</i>	<i>Prohibit parking along east side of Strauss Ave for 10 ft north and 30 ft south of the marked crosswalk at the intersection with Hood St.</i>	<i>Short-term</i>	<i>\$</i>	<i>School District and City of Sandy</i>	<i>TBD</i>
	<i>Repair approximately 150 LF of degraded sidewalk along the east side of Strauss Ave at the intersection with Hood St, and widen sidewalk at encroaching utility pole.</i>	<i>Short-term</i>	<i>\$\$</i>	<i>City of Sandy</i>	<i>TBD</i>
	<i>Identify alternative location for recycling bins to keep the sidewalk clear along the east side of Strauss Ave at Hood St.</i>	<i>Short-term</i>	<i>\$</i>	<i>School District and City of Sandy</i>	<i>N/A</i>
	<i>Install a curb ramp on the east side of the south leg of the intersection of Strauss Ave at Hood St. Add tactile domes and a stop bar associated with the crosswalk across the west leg of the intersection.</i>	<i>Medium-term</i>	<i>\$\$</i>	<i>City of Sandy</i>	<i>ODOT SRTS Competitive Grant</i>

ISSUE/ CHALLENGE	RECOMMENDATION	PRIORITY LEVEL	PLANNING	RESPONSIBLE AGENCY	POTENTIAL
			LEVEL		FUNDING SOURCE
<b>Alt Ave and Highway 26</b>					
<i>During the facility inventory it was observed that the pedestrian signal crossing time across Highway 26 is insufficient for youth, seniors and people with disabilities. Furthermore, due to signal timing at Shelley Ave the existing crosswalk creates an uncertain and unsafe environment for pedestrians crossing Highway 26.</i>	<i>Increase pedestrian signal crossing time to be based on a walking rate of 3.0 feet per second. Upgrade pedestrian push-buttons to meet current standards with audible indications.</i>	<i>Medium-term</i>	<i>\$\$</i>	<i>ODOT</i>	<i>TBD</i>
	<i>Consolidate the two existing crosswalks across Highway 26 at Alt Ave with one high visibility continental crosswalk on the east side of the intersection including advance stop bar, bulbouts, curb ramps, and pedestrian scale lighting</i>	<i>Medium-term</i>	<i>\$\$\$</i>	<i>City of Sandy and ODOT</i>	<i>TBD</i>
	<i>Support modification of Alt Ave to enhance pedestrian safety and comfort as part of the Pleasant Street Master Plan process.</i>	<i>Long-term</i>	<i>\$\$\$</i>	<i>City of Sandy and ODOT</i>	<i>TBD</i>
<i>Given speed and heavy traffic along Highway 26, a standard striped bike lane is not sufficiently safe or comfortable for users.</i>	<i>Reallocate existing roadway space to provide buffered bike lanes along Highway 26 and consider the use of green pavement markings in the vicinity of Alt Ave. Consider installing vertical delineators with buffered bike lanes contingent on city maintenance agreement, or construct a fully grade-separated bicycle facility</i>	<i>Long-term</i>	<i>\$\$\$</i>	<i>City of Sandy and ODOT</i>	<i>TBD</i>



Figure 9. Sandy Grade School SRTS Improvements Map



### Sandy Grade School Improvement Recommendations



- 1 Sandy Grade School Grounds**
  - a. Install bike parking that provides two points of contact for a bicycle frame, positioned underneath a covered area with lighting.
  - b. Close driveway to Olin Bignall Aquatic Center at Alt Ave and Pleasant St intersection as part of Pleasant Street Master Plan process.
- 2 Pleasant Street in Front of School**
  - a. Mark stop bars in advance of crosswalks at all STOP control approaches at the intersections of Pleasant St at Strauss Ave, Alt Ave, and Smith Ave.
  - b. Repair holes in bottom of fence along north side of Pleasant St approaching Smith Ave.
  - c. Trim encroaching vegetation along north side of Pleasant St immediately east of intersection with Smith Ave.
  - d. Construct approximately 125 LF of sidewalk along the north side of Pleasant St between Bruns Ave and Strauss Ave.
  - e. Consider installation of advanced school warning signage with flashing beacons (S5-1) to raise awareness of school speed zone on both sides of Pleasant St approaching school.
  - f. Consider approaches to managing student comfort walking past barking dogs in yards adjacent to school.
- 3 Pleasant Street and Strauss Avenue**
  - a. Consider revising the intersection to be a four-way stop (currently STOP control north- and southbound only).
- 4 Pleasant Street and Alt Avenue**
  - b. Replace existing diagonal curb ramps at all four corners with perpendicular curb ramps with tactile domes at the intersection of Pleasant St at Alt Ave.
  - c. Support proposal to construct a raised intersection at Pleasant St at Alt Ave as part of Pleasant Street Master Plan process.
- 5 Pleasant Street and Smith Avenue**
  - a. Relocate southbound school advance crossing assembly (S1-1 & W16-9P) and school speed limit assembly (S4-3P & R2-1) along Smith Ave to approximately 100 ft and 175 ft north of intersection, respectively.
- 6 Strauss Avenue and Hood Street**
  - b. Trim vegetation on west side of Strauss Ave north of the intersection with Hood St, and on the NW corner of Strauss Ave at Hood St to enhance southbound sign and intersection visibility.
  - c. Relocate southbound school advance crossing assembly (S1-1 & W16-9P) and school speed limit assembly (S4-3P & R2-1) along Strauss Ave to approximately 100 ft and 175 ft north of intersection, respectively.
  - d. Prohibit parking along east side of Strauss Ave for 20 ft south of the marked crosswalk at Hood St.
  - e. Repair approximately 150 LF of degraded sidewalk along the east side of Strauss Ave at the intersection with Hood St, and widen sidewalk at encroaching utility pole.
  - f. Install a curb ramp on the east side of the south leg of the intersection of Strauss Ave at Hood St. Add tactile domes and a stop bar associated with the crosswalk across the west leg of the intersection.
  - g. Identify alternative location for recycling bins to keep the sidewalk clear along the east side of Strauss Ave at Hood St.
- 7 Alt Ave and Highway 26**
  - a. Increase pedestrian signal crossing time to be based on a walking rate of 3.0 feet per second. Upgrade pedestrian push-buttons to meet current standards with audible indications.
  - b. Consolidate the two existing crosswalks across Highway 26 at Alt Ave with one high visibility continental crosswalk on the east side of the intersection including advance stop bar, bulbouts, curb ramps, and pedestrian scale lighting.
  - c. Support modification of Alt Ave to enhance pedestrian safety and comfort as part of the Pleasant Street Master Plan process.
  - d. Reallocate existing roadway space to provide buffered bike lanes along Highway 26 and consider the use of green pavement markings in the vicinity of Alt Ave. Consider installing vertical delineators with buffered bike lanes contingent on city maintenance agreement, or construct a fully grade-separated bicycle facility.

#### Legend

Proposed Improvements

Crosswalk Improvement

Sidewalk Repair

Buffered Bike Lanes

Curb Ramp

Stop Bar

Stop Sign

Signalization Improvements

Bike Parking

S1-1, W16-9P

S4-3P

S5-1

Existing Bus Stop



## Education and Engagement Program Recommendations

The Oregon Trail School District currently does not take a very active role in SRTS encouragement or education activities due to the lack of facilities and existing challenges accessing the school via walking or biking.

The activities outlined in Tables 3 and 4 are recommended for Cedar Ridge Middle School and Sandy Grade School, respectively, to improve and promote safe walking and bicycling to and from school and in the community in conjunction with the construction recommendations in Table 1 and Table 2. Programmatic activities and events complement construction improvements by empowering students and their families to try walking and bicycling, and by making it safer for them to do so. They can be implemented by the Oregon Trail School District, school administrators, teachers, parents, or even school clubs.

Table 3. Cedar Ridge Middle School Education and Engagement Recommendations

ACTIVITY	RESPONSIBLE PARTY	DESCRIPTION	TIMELINE	RESOURCES NEEDED	INCLUSION CONSIDERATIONS	MEASURES OF SUCCESS
<i>Parent Education and Outreach</i>	<i>Cedar Ridge Middle School</i>	<i>Include reminder not to block entrance and exit driveways in Principal’s yearly circulation information to parents, as well as general pick-up and drop-off procedure reminders and safety tips.</i>	<i>Medium-term</i>	<i>Outreach material included in e-mail, print and social media outreach</i>	<i>Provide materials in Spanish, or other languages, as needed.</i>	<i>Reduction in traffic congestion and driving behaviors that hinder safe walking and biking to school</i>
<i>Pedestrian and Bike Safety Education</i>	<i>Cedar Ridge Middle School</i>	<i>Travel safety tips for students and parents aimed at people walking, biking or riding the bus. Could begin with limited scope and build to a more robust curriculum.</i>	<i>Medium-term</i>	<i>Travel Safety Hand-out, messaging, curriculum</i>	<i>Focus on walking safely to/from school and in students’ neighborhoods, even if not near the school; Provide materials in Spanish, or other languages, as needed.</i>	<i>Number of students participating; feedback from families</i>
<i>Walk + Roll to School Day or Community Walk</i>	<i>Cedar Ridge Middle School</i>	<i>Consider organizing a Walk + Roll to School Day with remote drop-off options.</i>	<i>Long-term</i>	<i>Food, music, decorations, activities, volunteers</i>	<i>Consider how students or community members with mobility challenges could participate. Provide materials in Spanish, or other languages, as needed.</i>	<i>Number of students and community members participating.</i>

ACTIVITY	RESPONSIBLE PARTY	DESCRIPTION	TIMELINE	RESOURCES NEEDED	INCLUSION CONSIDERATIONS	MEASURES OF SUCCESS
<i>Support Enhanced Bike Facilities on Highway 26</i>	<i>Oregon Trail School District/City of Sandy</i>	<i>Support buffered and separated bike lanes along Highway 26 within City boundaries</i>	<i>Long-term</i>	<i>ODOT staff time and planning processes</i>	<i>Consider key connections to underserved areas; consider how students or community members from diverse background can participate in the statewide planning process.</i>	<i>Increase in students biking to school</i>
<i>Revise School District Boundary</i>	<i>Oregon Trail School District</i>	<i>When routine redistricting occurs, consider revising School District boundary to allow adjacent residents to attend Cedar Ridge Middle School.</i>	<i>Long-term</i>	<i>Redistricting planning process</i>	<i>Ensure that redistricting serves all student populations.</i>	<i>All middle school age students living within ½ mile of Cedar Ridge Middle have the option to walk or bike to school</i>

Table 4. Sandy Grade School Education and Engagement Recommendations

ACTIVITY	RESPONSIBLE PARTY	DESCRIPTION	TIMELINE	RESOURCES NEEDED	INCLUSION CONSIDERATIONS	MEASURES OF SUCCESS
<i>Parent Education and Outreach</i>	<i>Sandy Grade School</i>	<i>Include vehicle pick-up and drop-off procedure reminders, as well as seasonal safety tips in school emails.</i>	<i>Medium-term</i>	<i>Outreach material included in e-mail, print and social media outreach</i>	<i>Provide materials in Spanish, or other languages, as needed.</i>	<i>Reduction in traffic congestion and driving behaviors that hinder safe walking and biking to school</i>
<i>Pedestrian and Bike Safety Education</i>	<i>Sandy Grade School</i>	<i>Travel safety tips for students and parents aimed at people walking, biking or riding the bus. Could begin with limited scope and build to a more robust curriculum.</i>	<i>Medium-term</i>	<i>Travel Safety Hand-out, messaging, curriculum</i>	<i>Focus on walking safely to/from school and in students' neighborhoods, even if not near the school; Provide materials in Spanish, or other languages, as needed.</i>	<i>Number of students participating; feedback from families</i>
<i>Pedestrian and Bike Encouragement</i>	<i>Sandy Grade School</i>	<i>Consider encouragement programs, such as Bike Fairies, to congratulate students who walk and bike to school</i>	<i>Medium-term</i>	<i>Outreach materials (such as notes), treats (such as candy).</i>	<i>Consider how students with ambulatory disabilities might participate or receive recognition; Provide materials in Spanish, or other languages, as needed.</i>	<i>Number of students walking and biking to school</i>

ACTIVITY	RESPONSIBLE PARTY	DESCRIPTION	TIMELINE	RESOURCES NEEDED	INCLUSION CONSIDERATIONS	MEASURES OF SUCCESS
<i>Walk + Roll to School Day or Community Walk</i>	<i>Sandy Grade School</i>	<i>Consider organizing a Walk + Roll to School Day with remote drop-off options.</i>	<i>Long-term</i>	<i>Food, music, decorations, activities, volunteers</i>	<i>Consider how students or community members with mobility challenges could participate. Provide materials in Spanish, or other languages, as needed.</i>	<i>Number of students and community members participating.</i>
<i>Crossing Guard Training and Support</i>	<i>Sandy Grade School</i>	<i>Develop training materials and provide safety equipment for crossing guards.</i>	<i>Short-term</i>	<i>Curriculum, reflective vests, handheld flag or stop sign. Volunteers.</i>	<i>Ensure that curriculum considers students and community members with disabilities; Consider signage in Spanish, or other languages as needed.</i>	<i>Formalization of crossing procedures at arrival and dismissal times</i>
<i>Parent Travel Options Education</i>	<i>Sandy Grade School</i>	<i>Create outreach material for parents that highlights all transportation options to extracurricular events and meetings at the school, including all car and bike parking options, bus schedules, safe walking routes and safety reminders.</i>	<i>Medium-term</i>	<i>Outreach material included in e-mail, print and social media outreach</i>	<i>Provide materials in Spanish, or other languages, as needed.</i>	<i>Increase in parent participation at extracurricular events at the school</i>

## Education Programs

### PARENT EDUCATION AND OUTREACH

Parents are the primary decision-makers about how their children get to school. Informing parents about their options for walking and bicycling, as well as communicating the benefits of active transportation, can encourage more families to walk and bike. This can occur through school e-news or announcements, and other informational resources. After high-priority construction recommendations are implemented, suggested route maps can show parents the best walking or biking route to the school and help overcome concerns about barriers.



Resources and innovative program ideas include:

- Oregon SRTS provides offers safety and fun tips for parents who are interested in their student [walking](#) and [biking](#) to school.
- The [National Center for SRTS](#) offers tools and training to provide communities the technical support they need to make community-enhancing decisions.

### PEDESTRIAN AND BIKE SAFETY EDUCATION

Pedestrian and bike safety education teaches students basic traffic laws and safety rules.

Resources and innovative program ideas include:

- The Street Trust's [SRTS Curriculum](#) includes a flexible in-class and on-bike [bike safety curriculum](#) and [pedestrian safety lesson plans](#).
- Oregon SRTS provides [curriculum for activities and lessons](#) that teach the knowledge and skills necessary to be safe road users, including bike and pedestrian [education videos](#).
- The National Highway Traffic Safety Administration offers a [child pedestrian safety curriculum](#) and [Cycling Skills Clinic Guide](#) to help organizations plan bike safety skills events.
- The [Girls in Gear](#) curriculum is a girls-specific bicycling program designed to empower adolescent girls by creating self-reliance and building confidence. It is also the first program to creatively integrate STEM — Science, Technology, Engineering and Mathematics — activities, physical exercise and nutrition education by way of the bicycle.



## COMMUNITY SCHOOL SAFETY CAMPAIGN

A school zone safety campaign can be used to share simple safety messages and increase the visibility of the school zone.

Resources and innovative program ideas include:

- The Oregon SRTS website has a host of [banners, brochures, and other materials](#) that schools can use to raise awareness of students travelling in a school area.
- The [Drive Like Your Kids Live Here](#) campaign offers yard signs, safety kids, and other materials with a simple, clear message.



## ON-CAMPUS WALKING PROGRAM

In situations where distance, safety concerns, or a disability prevents a child from walking or biking to school, communities can encourage walking on the school campus. For example, school officials can establish walking activities before or after school or during recess, physical education or health class. Walk routes on the school grounds provide all students an opportunity to walk a safe route and increase their physical activity.

Resources and innovative program ideas include:

- Safe Routes Info provides [ideas for on-campus walking activities](#), including a step-by-step strategy and examples from schools around the country.

## Encouragement Programs

### WELLNESS POLICY

SRTS programs allow children to bike and walk to school safely and easily. By walking or bicycling to school, children can easily incorporate exercise into their day and increase their overall physical activity. Incorporating SRTS into school wellness policies helps parents, teachers, and school district staff understand how helping students bike and walk to school can increase their physical activity and create a healthier school environment. Cedar Ridge Middle and Sandy Grade could show that school leadership prioritizes and sees the benefit of SRTS and start to build community momentum for additional SRTS programming.

Resources and innovative program ideas include:

- Change Lab Solutions offers [model policy language](#) for rural community school districts that are interested in demonstrating strong support for SRTS in their local school wellness policy. This resource is specifically targeted to California, but examples are relevant to Oregon as well.
- The National Safe Routes Partnership offers [best practices for school wellness policies](#) that support SRTS, including local models and state recommendations.



## WALK + ROLL TO SCHOOL DAY OR COMMUNITY WALK

The Oregon Walk + Roll to School Challenge Month celebrates students walking and bicycling to school. Oregon Walk to School Day is held the first Wednesday in October, to correspond with International Walk + Roll to School Day. Bike to School Day takes place the second week in May. Parents can set up a table on the event day to provide refreshments and small rewards for families who participate, as well as maps, lights, and safety information to encourage more students and families to join in the fun.

Even families who live too far from school to walk and bike can participate by driving to a designated central location and walking together from there. Coffee and breakfast can be provided, and students can dress up or hold posters to make a fun, parent-supervised parade to school. Walks could also take place as a part of another health-related event or to benefit a cause.

Resources and innovative program ideas include:

- Schools in Oregon can order incentives to support and promote [Walk + Roll to School Day](#).
- [Walk and Bike to School](#) suggests event ideas and planning resources for encouraging active transportation at schools.
- The National Center for SRTS maintains a [national database of walk and bike to school day events](#), as well as event ideas and planning resources.



## High Priority Improvements for the ODOT Infrastructure Grant Application

The following are top priority improvements recommended for the Competitive ODOT SRTS IN Grant Application.

### CEDAR RIDGE MIDDLE SCHOOL

*Widen sidewalk to fence along east side of Bluff Rd between Hood St and school vehicle entrance.*

*Replace "7AM - 5PM" 20 MPH school zone signs on Bluff Rd with "WHEN FLASHING" 20 MPH school zone signs and flashing beacons (S5-1).*

*Replace existing crossing signage on Bluff Rd at Marcy St with a Rectangular Rapid Flashing Beacon (RRFB) with School Crossing Assembly (S1-1 and W16-7P), and high visibility crosswalks across the north and east sides of the intersection.*

*Construct approximately 225 LF of sidewalk along west side of Bluff Rd from Meeker St north to existing sidewalk.*

*Install a curb extension including perpendicular curb ramps and tactile domes at northeast corner of Bluff Rd at Hood St.*

*Install a curb extension to provide clearance from existing pole, including perpendicular curb ramps and tactile domes, at southeast corner of Bluff Rd at Hood St.*

*Mark crosswalk and stop bar across the east leg of intersection of Bluff Rd at Hood St.*

*At Beers Ave and Hood St, repaint stop bars on west and east sides of intersection. Consider installation of a 4 way stop at Beers Ave, which experiences higher traffic volume than other north-south streets in Sandy.*

*Install 100 ft of new sidewalk on north side of street between 38661 Hood St and Scales Ave.*

*Install perpendicular curb ramps with tactile domes at northwest and southwest corners of the intersection of Hood St and Scales Ave. Install tactile domes at the northeast and southeast corners. Repaint stop bars.*

*Install tactile dome at southwest corner of Bruns Ave and Hood St.*

### SANDY GRADE SCHOOL

*Mark stop bars in advance of crosswalks at all STOP control approaches at the intersections of Pleasant St at Strauss Ave, Alt Ave, and Smith Ave.*

*Construct approximately 125 LF of sidewalk along the north side of Pleasant St between Bruns Ave and Strauss Ave.*

*Consider installation of advanced school warning signage with flashing beacons (S5-1) to raise awareness of school speed zone on both sides of Pleasant St approaching school.*

*Consider revising the intersection of Pleasant St and Strauss Ave to be a four-way stop (currently STOP control north- and southbound only).*

*Replace existing diagonal curb ramps at all four corners with perpendicular curb ramps with tactile domes at the intersection of Pleasant St and Alt Ave.*

*Install a curb ramp on the east side of the south leg of the intersection of Strauss Ave at Hood St. Add tactile domes and a stop bar associated with the crosswalk across the west leg of the intersection.*

These projects were chosen due to their emphasis on safety, proximity to school, and ability to serve a large number of students walking and biking both to and from and between Cedar Ridge and Sandy Grade. Safety, student density, and proximity to school were identified as high priority project elements by school leadership and City staff during the walk audits and community meetings. The recommendations for Highway 26 were not included in the grant prioritization for this project because, at this time, traveling on Highway 26 is not critical for school travel, nor would the proposed facilities be used primarily by school students. During the field visit, ODOT staff indicated that safety improvements for walking and biking on Highway 26 for the community is an important issue that they are addressing in planning process outside the scope of SRTS.

The City of Sandy will be the relevant party to prepare the Competitive ODOT SRTS IN Grant Application. Additional details that will be needed to complete the application are provided in Table 5.

**Table 5. Project Details for ODOT Competitive Infrastructure Grant**

GRANT CRITERIA/QUESTION	RESPONSE FOR CITY OF SANDY
Relevant Right of Way ownership	Not affected
Utility implications and opportunities to mitigate	There are several utility poles obstructing sidewalks that will require coordination.
Environmental resource implications	Not affected
Stormwater management implications	Not affected
Near a rail road? Or bridge, tunnel, retaining wall affected?	Not affected
AADT	Bluff Rd Hood St Pleasant St (AADTs not publicly available)
Priority Safety Corridor	Yes (Bluff Rd); More than 2 lanes or a crossing distance greater than 30 feet, has a demonstrated history of crashes related to school traffic

Table 6. Cedar Ridge Prioritized Project Cost Estimates

ITEM DESCRIPTION	MEASUREMENT	COST/UNIT	UNITS	ESTIMATE
Widen existing sidewalk and match grade	SF	\$25	1000	\$25,000
Install side-mounted school zone flashing beacons with signage	EA	\$7,500	2	\$15,000
Install RRFB sign assembly	EA	\$10,000	2	\$20,000
Install high visibility continental crosswalk markings at 3 crosswalk locations	SF	\$8	342	\$2,736
Install 5' wide sidewalk	SF	\$25	1625	\$40,625
Demo existing concrete sidewalk	SF	\$4	200	\$800
Install perpendicular curb ramp	EA	\$5,000	8	\$40,000
Install 2 curb extensions	SF	\$25	400	\$10,000
Install STOP bar at 7 intersection approaches	SF	\$8	210	\$1,680
Install STOP sign and post	EA	\$1,000	2	\$2,000
Install tactile warning surface	SF	\$75	40	\$3,000
Traffic Mobilization (10%)	EA	\$16,084	1	\$16,084
Traffic Control (15%)	EA	\$24,126	1	\$24,126
Erosion Control (2%)	EA	\$3,217	1	\$3,217
			<b>Subtotal</b>	<b>\$204,268</b>
<b>Total Costs</b>				
Preliminary Engineering/Design Costs (12%)				\$24,512
Construction Costs (Subtotal + 40% Contingency + 15% CE)				\$316,616
Right of Way Costs				\$0
Utility Costs				\$0
Other Costs				\$0
<b>Total Project Cost:</b>				<b>\$341,128</b>

Table 7. Sandy Grade Prioritized Projects Cost Estimates

ITEM DESCRIPTION	MEASUREMENT	COST/UNIT	UNITS	ESTIMATE
Install STOP bars at 13 intersection approaches	SF	\$8	390	\$3,120
Install 8' wide sidewalk	SF	\$25	1000	\$25,000
Install side-mounted school zone flashing beacons with signage	EA	\$7,500	2	\$15,000
Install STOP sign and post	EA	\$1,000	2	\$2,000
Demo existing concrete sidewalk	SF	\$4	400	\$1,600
Install perpendicular curb ramp	EA	\$5,000	9	\$45,000
Install curb extension	SF	\$25	400	\$10,000
Install tactile warning surface	SF	\$75	8	\$600
Traffic Mobilization (10%)	EA	\$10,232	1	\$10,232
Traffic Control (15%)	EA	\$15,348	1	\$15,348
Erosion Control (2%)	EA	\$2,046	1	\$2,046

**Subtotal    \$129,946**

**Total Costs**

Preliminary Engineering/Design Costs (12%)	\$15,594
Construction Costs (Subtotal + 40% Contingency + 15% CE)	\$201,417
Right of Way Costs	\$0
Utility Costs	\$0
Other Costs	\$0
<b>Total Project Cost:</b>	<b>\$217,010</b>

## Chapter 5. Potential Funding & Implementation

This chapter lists a variety of funding sources that the City of Sandy, Sandy Grade School District, or other partners could use to implement the recommendations outlined in Chapter 4.

### Statewide Funding Opportunities

#### ODOT SRTS Infrastructure Grants:

ODOT currently offers Safe Routes to School specific funding pools for local jurisdictions interested in improving walking and biking conditions near schools, including a competitive infrastructure grant program and a rapid response infrastructure grant.

##### COMPETITIVE INFRASTRUCTURE GRANT

ODOT's SRTS Competitive Infrastructure Grant program funds roadway safety projects located within a one-mile radius of an educational facility that improves walking and biking conditions for children on their way to school. Funding requests may range between \$60,000 and \$2 million, with a 40% local match (special circumstances may allow a 20% reduction in match requirements). These funds are awarded on a competitive application basis to cities, counties, transit districts, ODOT, any other roadway authority, and tribes are in compliance with existing jurisdictional plans and receive school or school district support.

Learn more about the 2021-2022 grant cycle at

<https://www.oregon.gov/ODOT/Programs/Pages/SRTS.aspx>.

##### RAPID RESPONSE INFRASTRUCTURE GRANT

Up to 10% of state SRTS funding will be reserved for projects that can demonstrate serious and immediate need for safety improvements within a one-mile radius of schools. This funding would be awarded outside of the Competitive Infrastructure Grant cycle as a Rapid Response Infrastructure Grant. Eligibility requirements for Rapid Response Infrastructure grants can be found at

<https://www.oregon.gov/ODOT/Programs/Pages/SRTS.aspx>.

#### ODOT Enhance Program

Outside of Safe Routes to School specific programs, ODOT offers more general funding opportunities for bicycle and pedestrian improvement projects through the development of ODOT's State Transportation Improvement Program (STIP). ODOT's "Enhance" program within the STIP allocates funds for enhancing and expanding transportation system, which can include bicycle, pedestrian, and transit improvements. To learn more about ODOT's Enhance program, visit <https://www.oregon.gov/ODOT/STIP/Pages/About.aspx>

## ODOT All Roads Transportation Safety Program (ARTS)

ODOT's STIP process also funds safety improvement projects that reduce traffic related deaths and injuries through the All Roads Transportation Safety Program, which utilizes data collection and analysis to select projects that will maximize traffic safety benefits per investment dollar. For more information on ARTS, visit <https://www.oregon.gov/ODOT/Engineering/Pages/ARTS.aspx>

## ODOT Connect Oregon Funds

Local jurisdictions are eligible to receive state lottery funds for bicycle and pedestrian projects (including those that otherwise would be ineligible for highway funds) via ODOT's Connect Oregon grant program. While there will not be funding for new Connect Oregon projects in the 2017-2019 biennium, applications for future Connect Oregon funds may be opened in the 2019-2021 or 2021-2023 biennium. Learn more about Connect Oregon here <https://www.oregon.gov/odot/programs/pages/connectoregon.aspx>

### Oregon Parks and Recreation Grants

Oregon Parks and Recreation have a number of grants that may help in completing a Safe Routes to School off-road project like the Local Government Grant Program, the Land and Water Conservation Fund, and the Recreational Trails Program. <https://www.oregon.gov/OPRD/GRANTS/pages/index.aspx>

### Oregon Community Paths Program (OCP)

In 2020, ODOT will open solicitation for an off-system path grant program called the Oregon Community Paths Program (OCP) and will fund awarded projects (in 2021) with either the state Multimodal Active Transportation fund or the federal Transportation Alternatives Program funds. Through the OCP, ODOT strives to fund projects for pedestrian and bicycle transportation projects including the development, construction, reconstruction, resurfacing, or other capital improvement of multiuse paths, bicycle paths, and footpaths that improve access and safety for people walking and bicycling.

### Oregon Transportation Infrastructure Bank (OTIB)

Oregon Transportation Infrastructure Bank (OTIB) provides low cost loans for transportation related projects by: reducing total up-front costs; reducing overall interest costs; no prepayment penalties; draw funds only as needed. OTIB loans are processed quickly and a decision is typically received within 60 days, with loan closing between 90-120 days. [www.oregon.gov/odot/cs/fs/pages/otib.aspx](http://www.oregon.gov/odot/cs/fs/pages/otib.aspx)

## Federal Funds

- Some federal funding sources may be available to certain communities and can be used for Safe Routes to School projects. Community Development Block Grant Program, <https://www.orinfrastructure.org/Infrastructure-Programs/CDBG/>
- Rural Development Grant Assistance Program, <https://www.usda.gov/topics/farming/grants-and-loans>

## Local Funding Opportunities

### Potential School Bond Opportunities

Localities can leverage school bonds to collect funding for transportation educational programming and school-zone pedestrian/bicycle infrastructure improvements. School bonds may be sufficient to cover the cost of low to mid cost projects or could be utilized to collect local match dollars for state awarded grants.

### SRTS Projects & the TSP

Cities and counties undergoing transportation system plan updates should consider including a section on their plans and priorities for Safe Routes to School infrastructure upgrades and programming to identify project expenses well in advance and allow ample time to gather project funding.

### Demonstration Projects

Demonstration projects are temporary roadway improvement installments that utilize temporary barriers (such as traffic cones, planters, hay barrels, etc.) to test and demonstrate how a street would operate with bicycle and/or pedestrian infrastructure improvements. These low-cost projects can serve as an immediate term temporary solution to traffic issues while local jurisdictions build support and funding for permanent infrastructure improvements. Depending on specific site conditions and the nature of materials used, demonstration projects can last for several hours to several months.

## Non-Infrastructure Programs Funding Opportunities

### ODOT SRTS Non-Infrastructure Grant

In addition to funding infrastructure improvements for Safe Routes to School programs, ODOT reserves \$300,000 annually for funding of non-infrastructure SRTS projects that encourage children in grades K-8 to walk and bike to school. This competitive grant program distributes funding to a project over the course of three years (to allow for advanced planning) with a maximum award of \$50,000 per year with a 12% match requirement. For more information, visit <https://www.oregon.gov/ODOT/Programs/Pages/SRTS.aspx>