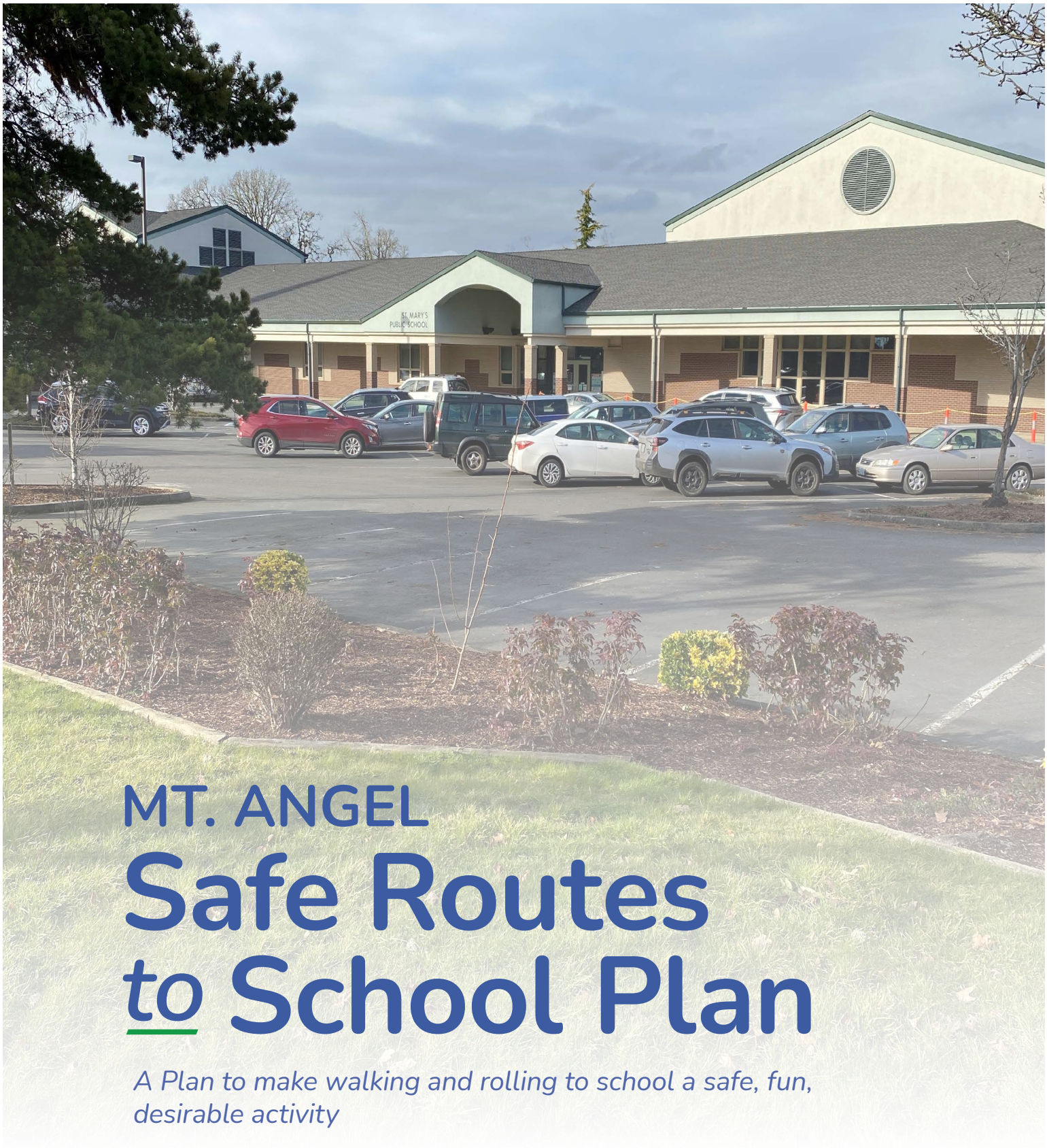

MT. ANGEL
Safe Routes *to* School Plan

A Plan to make walking and rolling to school a safe, fun, desirable activity

CITY OF MT. ANGEL
ST. MARY'S PUBLIC SCHOOL
MT. ANGEL MIDDLE SCHOOL
JOHN F. KENNEDY HIGH SCHOOL
FINAL REPORT / JULY 2022

Oregon Department of Transportation
Safe Routes to School
ALTA · COMMUTE OPTIONS · THE STREET TRUST

ACKNOWLEDGEMENTS

The following key people and their organizations participated in the Safe Routes to School (SRTS) Plan efforts. Their creativity, energy, and commitment were critical to the success of this Plan.

MARK DANIEL
Mt. Angel Police Department

JANELLE SHANAHAN
Marion County

RACHEL STUCKY
Mount Angel School District

MARK BRENDAN
Mount Angel School District

JENNA BERMAN
Oregon Department of Transportation

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01 INTRODUCTION

WHAT IS SAFE ROUTES TO SCHOOL?

*Safe Routes to School (SRTS) is a comprehensive program to **make school communities safer** by combining engineering tools and engagement with education about safety and activities to enable and encourage students to **walk and roll to school**. SRTS programs involve partnerships among municipalities, school districts, transit districts, parks and recreation districts, public health agencies, community members, parent volunteers, and community groups.*

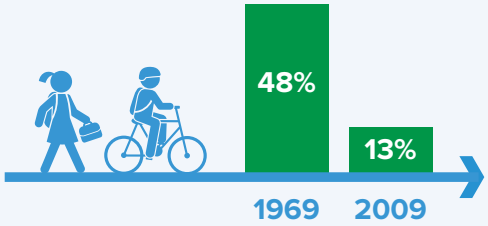
The benefits of implementing a SRTS Plan include improving safety, increasing access, encouraging physical activity, and reducing traffic congestion and motor vehicle emissions near schools. Implementing SRTS programs and projects benefit adjacent neighborhoods as well as students and their families,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

Learn more at: www.oregonsaferoutes.org

Why Safe Routes to School?

THE PROBLEM

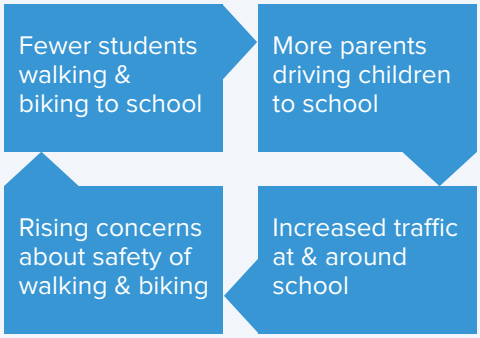
Within the span of one generation, the percentage of children walking or bicycling to school has decreased **73%.**



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 Pedroso. 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
** 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.

Student Benefits of Safe Routes to School

Numerous studies have documented that Safe Routes to School projects and programs can lead to increased walking and bicycling activity among students. But why is it important for communities to make it safer and more convenient for students to walk and bike to school?

INCREASED SAFETY FOR STUDENTS

Even if some caregivers choose to drive their students to and from school, many families don't have this option. Some families have no access to a vehicle and others have work schedules that don't allow them to drop their students off or pick them up at school. When we provide critical SRTS improvements and education to our communities, we make it safer for these (and all) students to travel safely.

REDUCTION IN ABSENCES AND TARDINESS

Especially in historically-disadvantaged communities, lack of transportation can be a considerable barrier to attending school consistently. Programs such as Walking School Buses and Bike Trains provide alternative options for students to get to school on time, and ready to learn[1].

HEALTHIER STUDENTS

Because SRTS programs make it easier to walk, bike, skate, and scoot to school, they directly support increased physical activity for young people[2]. Walking even one mile to school and one mile home gives a student about 40 minutes of physical activity - two-thirds of the recommended amount!

IMPROVED ACADEMIC PERFORMANCE

Staying healthy and getting regular exercise have been shown to improve students' academic performance. In one study, researchers found that after walking for 20 minutes, students responded to test questions with greater accuracy and had more brain activity than students who had been sitting. They also learned tasks faster and more accurately following this physical activity[3].

CLEANER AIR, FEWER ASTHMA COMPLICATIONS

Increasing the number of students walking and biking to school means decreasing the number who have to rely on private vehicles. This improves air quality near schools, decreasing students' exposure to pollution generated by idling vehicles and heavy traffic.

GREATER CONFIDENCE

When young people are able to navigate their neighborhood on their own, they build self-confidence and independence. They may also learn to read signs, monitor time, keep track of their belongings, and other valuable skills.

STRONGER SOCIAL CONNECTIONS

Arriving to school via Walking School Bus, Bike Train, or even just with a friend or sibling fosters community and builds social bonds. Especially when so many students face challenges like bullying and isolation, this opportunity to make connections can be extremely beneficial.

---

1 *Attendance Works. "Springfield: Walking School Bus - Attendance Works." Accessed August 22, 2016. http://www.attendanceworks.org/what-works/springfieldwalking-school-bus/.*

2 *Cooper et al., Commuting to school: Are children who walk more physically active? Amer Journal of Preventative Medicine 2003: 25 (4)*

3 *Hillman CH, Pontifex MB, Raine LB, Castelli DM, Hall EE, Kramer AF. The effect of acute treadmill walking on cognitive control and academic achievement in preadolescent children. Neuroscience. 2009;159(3):1044-1054. doi:10.1016/j.neuroscience.2009.01.057*

Community Benefits of Safe Routes to School

Students and their families are not the only ones who benefit when we encourage and enable young people to walk or bike to school safely. In many ways, Safe Routes to School benefits the whole community. Communities that prioritize active transportation can see improvements such as:

REDUCED TRAFFIC CONGESTION

Reducing the number of families commuting to school in private vehicles reduces traffic around the school. This means improved circulation for people driving, as well as safer conditions for pedestrians and bicyclists. As more people feel comfortable walking and bicycling, this can also foster an environment where community members see active transportation as a viable option and priority, leading to additional shift from driving to active modes.

STRONGER SENSE OF COMMUNITY

Opportunities for social connection and a greater sense of community increase as students and parents participate in collective active transportation (such as Walking School Buses) or get to know neighbors while out walking or biking. Additionally, the common goal of improving conditions for walking and bicycling can bring families, neighbors, school officials and community leaders together.

SAFER STREETS

As the use of private vehicles increases, crash rates tend to increase[1]. Conversely, when higher numbers of people are able to walk and bike safely, communities can see a decrease in crashes. More people engaged in active transportation can also improve personal security and the perception of safety by providing more "eyes on the street."

1 Litman, Todd and Fitzroy, Steven (2021), Safe Travels: Evaluating Transportation Demand Management Traffic Safety Impacts, Victoria Transport Policy Institute

LOWER COSTS

Encouraging and enabling bicycle and pedestrian trips reduces costs for families, communities and school districts. Families save on gas, while communities spend less on building and maintaining roads. Meanwhile, school districts spend less on busing students who live within walking distance of schools.

IMPROVED ACCESSIBILITY

When communities prioritize infrastructure improvements and make walking and biking to school safer, all community members benefit. Improved facilities make it easier for all people to get around, including parents with strollers, senior citizens, residents without cars, and residents with temporary or permanent mobility impairments.

ECONOMIC GAINS

Studies show that businesses in neighborhoods that are walking and bicycle friendly see more business and higher sales[2].

2 Rodney Tolley (2011), Good For Busine$$ - The Benefits Of Making Streets More Walking And Cycling Friendly, Heart Foundation South Australia

ODOT's Project Identification Program

The City of Mt. Angel, ODOT Region 2 representatives, and the school community worked with ODOT's SRTS Technical Assistance Providers- Alta Planning + Design and the Willamette Valley & Coast SRTS Hub- to complete this SRTS Plan.

This SRTS Plan supports Oregon's statewide SRTS construction (infrastructure) and education/ engagement (non-infrastructure) efforts. The Project Identification Program (PIP) Process is an Oregon Department of Transportation (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 partners in 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 Mt.Angel SRTS Plan Process**

*For more information on the program, visit: www.oregon.gov/ODOT/Programs/Pages/SRTS-Project-Identification-Program.aspx
**The COVID-19 pandemic impacted the timeline and approach to the planning process. A detailed summary of the planning process is included in Appendix C.
***Final SRTS Plans can be found at www.OregonSafeRoutes.org

Using this Plan

This Plan lays the foundation for schools, the community, local public agency staff and ODOT to work together on reducing barriers for students walking and biking to school.

These recommendations include both long- and short-term construction improvements as well as education and encouragement program recommendations. It should be noted that not all of these projects and programs need to be implemented right away to improve the environment for walking and bicycling to school. Some projects will require more time, support, and funding than others. It is important to achieve shorter-term successes while laying the groundwork for progress toward some of the larger and more complex projects.

WHO ARE YOU?

Each partner has a key role to play in contributing to this Plan's success.

I AM A STUDENT

- Practice and encourage safe walking and rolling to, from, and near school
- Participate in a Walking School Bus or another education/encouragement idea identified in Chapter 4
- Promote SRTS activities through artwork or school projects

Student submission to Oregon Safe Routes to School Walk + Roll Fall Art Contest, 2021

I AM A CAREGIVER

- Understand the conditions at your student's school in Chapter 2 to plan a walking/rolling route or advocate for improvements
- Help implement many of the educational and encouragement programs suggested in Chapter 4
- Support fundraising for projects and programs (see Appendix E)

I WORK FOR THE SCHOOL DISTRICT

- Distribute information about walking and rolling safely, and SRTS talking points in Appendix B to caregivers and the school community.
- Tackle the SRTS objectives and actions from Chapter 2 that are relevant to the School District and develop Chapter 4 programs that educate and encourage students and caregivers to seek alternatives to single family commutes to school.
- Prioritize facility improvements on District property
- Work with multiple schools, sharing information and bringing efficiencies to programs at each school working on SRTS.

I AM A TEACHER OR OTHER STAFF MEMBER

- Include bicycle and pedestrian safety in lesson Plans and school curriculum (see Chapter 4 and Appendix B).
- Arrange field trips within walking distance of school and teach lessons about safety along the way.
- Be positive and encourage students and families to try walking and rolling!

I AM A COMMUNITY MEMBER

- Learn about walking and bicycling conditions in your neighborhood and how a SRTS program can improve them (see Chapter 2)
- Participate as an advocate to support education and encouragement programs (see Chapter 4)

I WORK FOR THE CITY OR COUNTY

- Identify citywide issues and opportunities related to walking and bicycling and to prioritize construction improvements provided in Chapter 4
- Pursue funding for improvements, using sources listed in Appendix E

I WORK FOR LAW ENFORCEMENT

- Raise awareness of traffic rules, focusing on key SRTS locations that have a history of crashes.
- Focus on traffic safety education, rewarding positive behavior, and supporting school walk and bike events. Be mindful of strategies that may disproportionately and negatively affect children and families of color, low wealth, or marginalized populations.

I WORK IN PUBLIC HEALTH

- Identify specific opportunities to collaborate with schools and local governments to support safety improvements and encourage healthy behaviors (see Chapter 4).

02 VISION AND GOALS FOR SRTS

INTRODUCTION

This chapter includes an overall vision as well as specific actions that city and school leadership can take to support SRTS. It also includes an overview of the public input process that shaped this Plan.

Vision

The Mt. Angel community envisions a future where students 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 PIP team suggested overall goals to support SRTS in the areas of health, safety, equity, or the environment. Participants in the Mt. Angel PIP process selected Safety and Equity as the main priorities for the community. A summary of community engagement activities is included in the following section.

The following are specific recommended objectives and actions based on the community-identified goals, as well as community input from the walk audit and data collected throughout the PIP process. Actions may relate to achieving more than one goal, but each action is only listed once.

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 quarter-mile of the school.

- Action: Mt. Angel School District will integrate on-campus infrastructure improvements into their ongoing planning processes.
- Action: Mt. Angel School District will integrate education and encouragement programs into their school safety curriculum.
- Action: The City of Mt. Angel will consider applying to the ODOT Competitive SRTS Infrastructure Grant in 2022 for infrastructure improvements, outlined in Chapter 4 and prioritize improvements closest to the school for implementation.

Objective 2: Safe walking or biking access is available to all families within one mile of the school.

- Action: The City of Mt. Angel will adopt the long-term infrastructure recommendations as a part of its planning processes, including potentially into its Transportation System Plan and continue to prioritize themes from the SRTS Plan's community engagement process.
- Action: The City of Mt. Angel will begin implementing recommendations as funds for capital improvements become available.

Objective 3: Pedestrian and bicycle safety education is available to students.

- Action: Mt. Angel School District and the City of Mt. Angel will coordinate with school leadership to consider applying for the ODOT SRTS Education Grant to fund a Safe Routes to School Coordinator position. This coordinator will organize safety, education and encouragement activities, prioritizing options for activities that take place outside of instructional hours.
- Action: St. Mary's School, Mt. Angel Middle, and John F. Kennedy High will encourage families to walk and bike to school by distributing information regarding safety and suggested routes.

EQUITY

Goal: Increase access and opportunity to walk and bike to school for all residents, with a particular focus on transportation-disadvantaged populations.

Objective 1: Engage with families from historically-disadvantaged groups to hear and learn about their barriers to students walking or biking to school.

- Action: Mt. Angel School District, St. Mary's Public School, Mt. Angel Middle School, John F. Kennedy High School and City of Mt. Angel will provide SRTS information and educational materials in English and Spanish.
- Action: Mt. Angel School District will work with Mt. Angel schools to partner with existing groups and organizations that serve historically disadvantaged groups to help disperse information and better understand needs and barriers.
- Action: Mt. Angel schools will consider how to overcome barriers such as parent work schedules and transportation limitations to enable all parents to participate in SRTS programs and activities.

Objective 2: Prioritize infrastructure and non-infrastructure improvements that connect underserved or low-income communities to schools and improve access for students walking, biking, and taking transit to school campuses.

- Action: The City of Mt. Angel will implement infrastructure recommendations with a consideration for improvements that serve or were requested by underserved and low-income communities.
- Action: The City of Mt. Angel will work with the Mt. Angel School District, students and parents during the City transportation planning process to identify student transportation needs that could be met with public transportation services.

HEALTH

Goal: Increase student access to physical activity and reduce emissions near schools.

Objective 1: Students have increased physical activity before, after, and during the school day.

- Action: St. Mary's Public School will consider adding educational programs, such as a Bike Train and other similar initiatives to encourage students to walk and bike to school.
- Action: Mt. Angel School District, St. Mary's Public School and Mt. Angel Middle School will look for areas of overlap between SRTS efforts, other health initiatives, and P.E. classes.

Objective 2: The school community supports families using active and shared transportation to access school and reach nearby destinations.

- Action: Mt. Angel School District will consider adopting SRTS-supportive language in school wellness policy.
- Action: Mt. Angel School District will work with Mt. Angel schools to share relevant health statistics and messages in school newsletters, during back to school night, or through other communication channels.

ENVIRONMENT

Goal: Increase environmental health near schools, including air and water quality.

Objective 1: Reduce congestion and air pollution near the school campus.

- Action: Mt. Angel County School District will provide parents with education and encouragement materials, including information on carpooling, walking, biking, and school buses.

A Community-Driven Planning Process

The vision, goals, objectives and actions provided here, as well as the detailed construction project and programmatic recommendations to follow in Chapter 4, were shaped by community input. Community group representatives, and community members had the opportunity to participate in the SRTS planning process and provide feedback in the following ways:

- Participation on the Project Management Team (PMT)
- Participation in a school walk audit and community meeting
- Virtual feedback using the online Public Input Map and survey

The City of Mt. Angel and school staff worked diligently to spread the word about the walk audits, community meetings, and the online Public Input Map and survey. City staff presented an overview of the Project Identification Program at the Board Meeting on October 11th, 2021.

Next, school staff, city officials, and community members gathered for school audits. St. Mary's Public School hosted an afternoon walk audit on November 3rd, 2021, and Mt. Angel Middle and John F. Kennedy High hosted an afternoon walk audit on November 10th, 2021. School staff, community members, parents/caregivers, and City staff attended the walk audits, providing feedback about specific barriers and challenging locations near the schools. Following the observation of student arrival/departure, members of the project team met to debrief what they'd observed and provided feedback about specific barriers and challenging locations near the school. The PMT also continued to encourage public participation in Public Input Map and survey, and posted relevant PIP information on the school website.

DEMOGRAPHIC REPRESENTATION

To determine who was being reached through online engagement, the project team collected information about respondents the Public Input Map using a short survey. Of the eight respondents who filled out the survey, all were parents or caregivers of students who attend schools in the study area.

Respondents to the map were majority white, with one respondent selecting "prefer not to say."

COMMUNITY ENGAGEMENT KEY THEMES

The comment heat maps on pages 14 and 15 illustrate specific locations of concern and interest that emerged through the online Public Input Map. Particular areas of the Public Input Map received exceptionally high numbers of comments, indicating that parents and caregivers were more concerned with addressing barriers at these locations:

- Uncomfortable crossing at Main St/Marquam St
- Uncomfortable crossing at Main St/Taylor St/ John St
- Uncomfortable crossing at Main St/College St
- Uncomfortable crossing at Main St and Church St
- Sidewalk and crossing conditions along Marquam St are poor, especially on the eastern side of the high school. Students are forced to travel west to Elm St to access a crosswalk
- Poor sidewalk conditions along Elm St
- Uncomfortable crossing at Elm St/Marquam St
- Uncomfortable crossing at Elm St/Taylor St
- Many students commute to school from the neighborhood west of Railroad Ave. The sidewalk conditions along Railroad Ave are rough and crossing Marquam St at Railroad Ave proves difficult for students.
- Lack of sidewalks on Alder St

MT. ANGEL SRTS

PUBLIC INPUT MAP

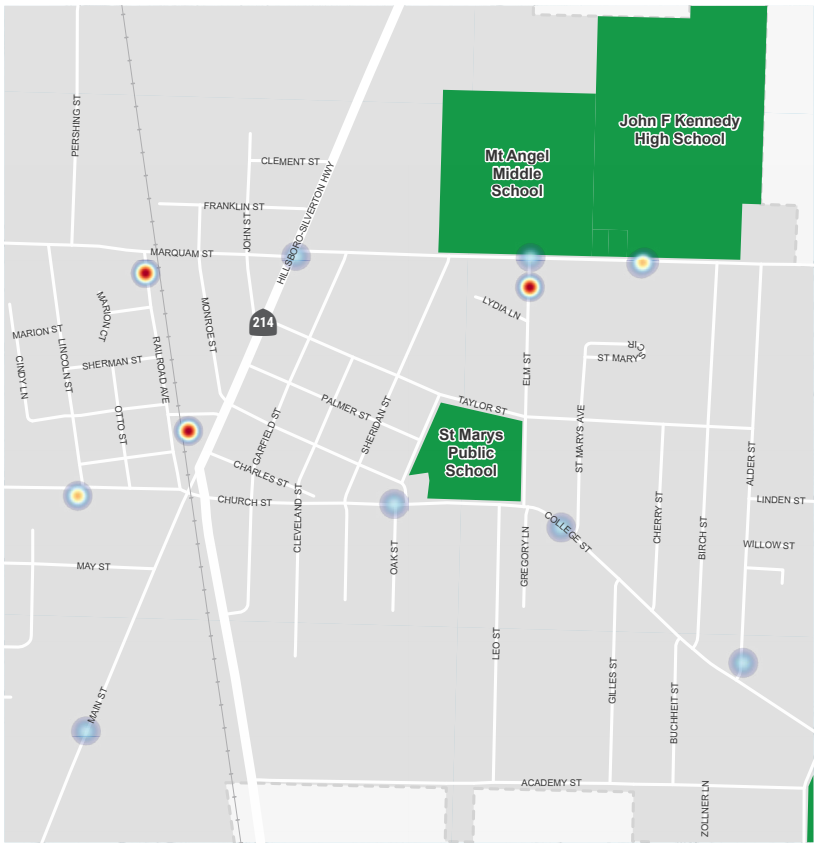
POINT COMMENTS

- High Density of Comments
- Low Density of Comments

MT. ANGEL CONTEXT

- Railroad
- City Boundary
- Parks
- Water
- School Property

12 POINT COMMENTS
7 ENGAGEMENTS (LIKES, DISLIKES)



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Oregon Department of Transportation
Safe Routes to School

MT. ANGEL SRTS

PUBLIC INPUT MAP

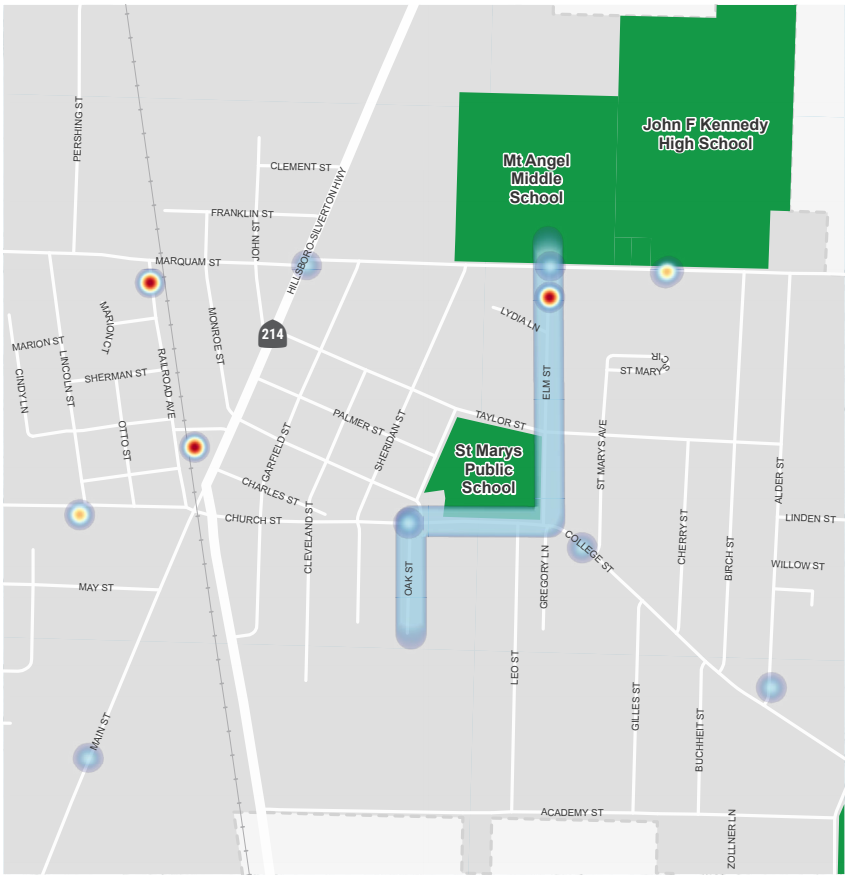
COMMENTS

- High Density of Comments
- Low Density of Comments

MT. ANGEL CONTEXT

- Railroad
- City Boundary
- Parks
- Water
- School Property

12 POINT COMMENTS
1 ROUTE COMMENT
7 ENGAGEMENTS (LIKES, DISLIKES)



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Oregon Department of Transportation Safe Routes to School

03

EXISTING CONDITIONS

INTRODUCTION

This chapter summarizes the key challenges and opportunities for families accessing schools by walking or bicycling that this Plan seeks to address.

The following pages provide contextual information for each of the schools, as well as key themes documented during the walk audits and through community and partner input. A detailed summary of the planning process and activities that took place to support this Plan is included in Appendix C.

Previous planning processes and additional data informed the existing conditions documented in this chapter.

SCHOOL CONTEXT:

St. Mary's Public School

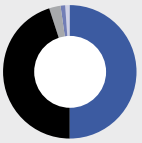
590 E COLLEGE ST.

PRINCIPAL:
Katie Voss

ENROLLMENT:
291

GRADES SERVED:
K-5

51% of students eligible for free or reduced lunch



DEMOGRAPHICS*
- White, non-Hispanic, 50%
- Hispanic/Latino, 45%
- Multiracial, 3%
- Black / African American, 1%
- Asian, 1%

TOP 5 LANGUAGES SPOKEN BY STUDENTS IN DISTRICT*

English	454
Spanish	191

Total Languages Spoken: 4

**Source: Oregon Department of Education 2020-2021 school year*

St. Mary's Public School Safety Assessment

Date: November 2021

SCHOOL LAYOUT

St. Mary's School is a public school located in the central east side of Mt. Angel, comprised of K-5 students. The school is located on E College St, directly across the street from St. Mary Catholic Church. Both Mt. Angel Middle School and John F. Kennedy High School are just one block north of St. Mary's. There is one main school building that students access via the crosswalk on E College St or via the crosswalk on Elm St. Student pick-up/drop-off primarily occurs via the parking lot on Elm St, a side street east of the school building or in the dirt parking lot on the east side of Elm St. There is a covered asphalt play area in the rear of the school, in addition to a playground.

SITE CIRCULATION

Vehicles: During pick-up/drop-off times, vehicles utilize the main parking lot on the southeast side of the school. The entry drive is on Elm St. and the drivers typically exit onto College St. Elm St. is a one-way street southbound, and vehicles were observed lining up to wait to enter the parking lot. Parents navigate a one-way loop, pull up to the front of the school and continue to exit onto Elm St, then turning left/right on College St. Vehicles also were seen parking on College St. in front of the church, waiting for their students at dismissal. Additionally, there is a dirt parking lot on the east side of Elm St where parents were seen dropping off/pickup students.

West of St. Mary's, the College St/Main St intersection experiences high volume traffic during student pick-up/drop-off times as parents head towards to the school.

School Buses: Buses access St. Mary's via Elm St (southbound) and enter the parking lot east of the main building. Buses were observed parking on the west side of Elm St. to load students at dismissal.

St. Mary's Public School

Site Plan

Pedestrians: Students who walk to and from school are encouraged to use the front entrance of the building. Students typically walk along Elm St from the northern neighborhoods, along College St from the west side of town. Many students were observed crossing at College St and Oak St. Students were also observed walking down Elm St (northbound) to the middle school for pick-up.

Bicyclists/Micromobility: Students arriving by bicycle (or students rolling in general) are accessing the school via College St or Elm St. Bike racks are located at the front entrance of the school.

Transit: Route 20x of the Salem Area Mass Transit District serves Mt. Angel and the surrounding Salem area. The nearest stop to St. Mary's Public School is at Church St and Cleveland St, which is 0.2 miles from the school. This route runs Monday through Sunday five times a day from as early as 6:28am and as late as 7:26pm.

SCHOOL CONTEXT:

Mt. Angel Middle School

460 E MARQUAM ST

PRINCIPAL:
Jared Tiecke

ENROLLMENT:
160

GRADES SERVED:
6-8

56% of students eligible for free or reduced lunch

DEMOGRAPHICS*

- Hispanic/Latino, 49%
- White, non-Hispanic, 47%
- Native Hawaiian/Pacific Islander, 2%
- American Indian/Alaska Native, 1%
- Asian, 1%

TOP 5 LANGUAGES SPOKEN BY STUDENTS IN DISTRICT*

English	454
Spanish	191

Total Languages Spoken: 4

Source: Oregon Department of Education 2020-2021 school year

Mt. Angel Middle School Safety Assessment

Date: May 20th, 2021

SCHOOL LAYOUT

Mt. Angel Middle School is located on E Marquam St. in Mt. Angel and is comprised of 6th-8th grade students. The middle school is located just west of John F. Kennedy High School, with the two properties separated by large sports fields. There is one main campus area with multiple buildings for classes and offices. There is a loop (Elm) that is accessed directly from Marquam in front of the school's main entrance. The school is surrounded by fields and open space on both the east and west sides of the building.

SITE CIRCULATION

Vehicles: Vehicles primarily pickup/dropoff students via the Elm loop in front of the school. There are parking spaces on the outside portion of loop and vehicles are also parking if they are waiting for their student. Vehicle congestion often occurs as parents try to exit onto E Marquam St. Vehicles in the queue line often block parking spots on the loop (Elm) and make it difficult for vehicles to back up and exit.

Vehicles were also observed parked directly on E Marquam St while waiting for students. Additionally, it should be noted that high traffic volumes occurred at Main St/Taylor St during pick-up, as vehicles head east to campus.

School Buses: Buses access Mt. Angel Middle School via E Marquam St, turning onto the Elm loop. Buses arrive shortly after parents begin to arrive. Upon completing pick-up/drop-off, buses make a right or left directly back onto E Marquam St.

Pedestrians: Students who walk to and from school are using multiple points of entry. There are multiple gates to access campus, though students are encouraged to use the front entrance. Middle school students are often observed crossing through the fields and not using the crosswalks on Marquam St. Students also cross the fields to reach parked vehicles

on E Marquam St (not using crosswalks). High foot traffic occurs on Main St & E Marquam St as students access the campus from the western neighborhoods.

Bicyclists/Micromobility: Students arriving by bicycle (or students rolling in general) are accessing the school via Marquam St from surrounding neighborhoods. Bike racks are located at the front entrance of the school.

Transit: Route 20x of the Salem Area Mass Transit District serves Mt. Angel and the surrounding Salem area. The nearest stop to St. Mary's Public School is at Church St and Cleveland St, which is 0.2 miles from the school. This route runs Monday through Sunday five times a day from as early as 6:28am and as late as 7:26pm.

SCHOOL CONTEXT:

John F Kennedy High School

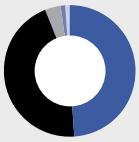
890 E MARQUAM ST

PRINCIPAL:
Dale Pedersen

ENROLLMENT:
204

GRADES SERVED:
9-12

53% of students eligible for free or reduced lunch



DEMOGRAPHICS*

- White, non-Hispanic, 49%
- Hispanic/Latino, 45%
- Multiracial, 4%
- American Indian/Alaska Native, 1%
- Asian, 1%

TOP 5 LANGUAGES SPOKEN BY STUDENTS IN DISTRICT*

English	454
Spanish	191

Total Languages Spoken: 4

**Source: Oregon Department of Education 2020-2021 school year*

John F Kennedy High School Safety Assessment

Date: November 2021

SCHOOL LAYOUT

John F. Kennedy High School is located on E Marquam St and is comprised of 9th-12th grade students. It is located just east of Mt. Angel Middle School and an asphalt path, between large open athletic fields, connects the two school campuses. There is a parking lot located directly in front of the main building for staff and student parking, as well as school bus pick-up/drop-off.

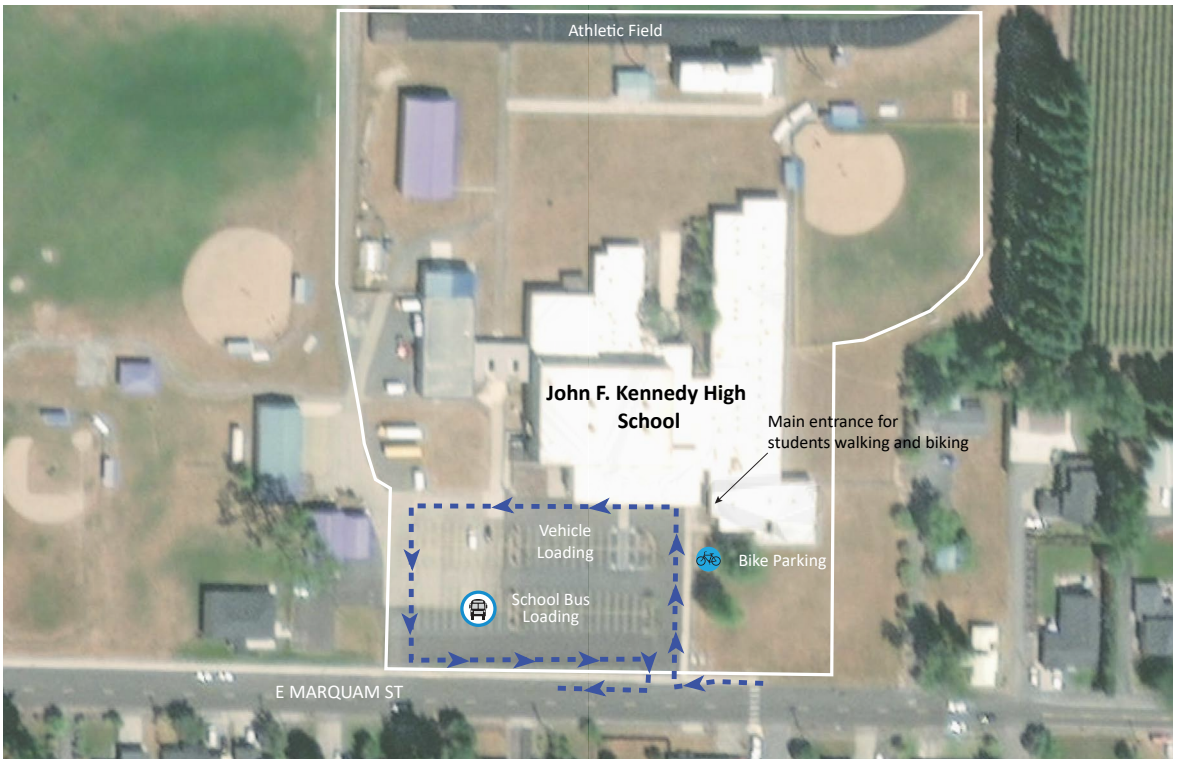
SITE CIRCULATION

Vehicles: Vehicles access the main building via Marquam St, turning directly into the parking lot. If students are being dropped off/picked up, vehicles pull up to the curb in front of the main building. There are two entrances to the parking: one of the west side and one on the east side.

School Buses: Buses arrive from the east driveway on Marquam St and line up along the grass area in front of the school. The PMT doesn't recall the flow of buses. The high school is the final stop for school buses, having stopped at the elementary and middle schools prior. Buses exit back onto Marquam St.

Pedestrians: There are multiple gates to access campus, though students are encouraged to use the front entrance. Some students were observed crossing through the fields after being dropped off at the middle school. Students were observed crossing E Marquam St at multiple points and at areas without crosswalks. Students often travel north on Elm St to access the high school after being dropped off at St. Mary's Public School.

Bicyclists/Micromobility: Students arriving by bicycle (or students rolling in general) are accessing the school via E Marquam St from surrounding neighborhoods. Bike racks are located on the east side of the front entrance under a large tree.



John F. Kennedy High School

Site Plan

Transit: Route 20x of the Salem Area Mass Transit District serves Mt. Angel and the surrounding Salem area. The nearest stop to St. Mary's Public School is at Church St and Cleveland St, which is 0.2 miles from the school. This route runs Monday through Sunday five times a day from as early as 6:28am and as late as 7:26pm.

Bike and Pedestrian Facilities Inventory

The crosswalk at E Church St and Hwy 214 is faded and lacks ADA-compliant curb ramps. Vehicles are often traveling into town at high speeds on the Hwy 214.

There are no safe pedestrian facility along E Church St between Hwy 214 and S Main St.

The intersection of E Church St, Hwy 214, and Main St is uncomfortable for pedestrians and confusing for drivers. The crosswalks are faded and not highly visible.

The crosswalk is faded and the road is damaged at the Main St/Railroad Ave/Hwy 214 intersection.

Sidewalks gaps exist throughout Mt. Angel, as seen here along Railroad Ave.

The intersection of Railroad Ave and Marquam St is a popular route for students traveling from the western neighborhoods as they walk or bike to Marquam St.

Key Themes

- The intersection of Main St. and Marquam St has high pedestrian traffic as students from the western neighborhoods access school campuses. There is a need for enhanced crossings and enhanced lighting at this location.
- The intersection of John St/Taylor/Hwy 214 is uncomfortable for pedestrians and confusing for drivers. There is a definite need for improved crossings, ADA-complaint ramps, and improved lighting in this area. Additional analysis should be considered to reconfigure the intersection.
- The intersection of Monroe St/Hwy 214/E College St is uncomfortable for pedestrians and confusing for drivers. There is a definite need for improved crossings, ADA-complaint ramps, and improved lighting in this area.
- The intersection of E Church St/Main St/Hwy 214 is uncomfortable for pedestrians and confusing for drivers. There is a definite need for improved crossings, ADA-complaint ramps, and improved lighting in this area.
- Sidewalk conditions are incomplete along Marquam St west of Main St. The priority is to get students safely across Main St and down Marquam St to the two school campuses (middle and high).
- There is a desire for an enhanced crossing mid-block crossing on Marquam St to provide students with more direct route to access both the middle school and the high school.
- Elm St is a popular north/south route for students traveling between school campuses. The sidewalks along Elm St are incomplete and/or damaged and the road is in need of enhanced crossings for students.
- Railroad Ave is frequently used by students, and many have expressed interest in enhanced crossings.
- Overall, throughout Mt. Angel, there is a need for improved crossings and sidewalks for improved student travel. Many sidewalks are damaged or incomplete. Additionally, many crosswalks are faded, lack adequate lighting and are not the shortest distance (or square) with the intersection.

Main St and Marquam St is a busy intersection with lots of pedestrians and high speed traffic entering into town. There is a definite need for safety improvements at this crossing.

There are incomplete sidewalks along the north side of Marquam St, east of Main St.

Crosswalk is faded with poor visibility leading from the parking lot to the main entrance of the middle school.

Remnants of the old crosswalk on Marquam St in front of the high school may cause confusion for both drivers and students, as this is no longer a crosswalk.

The crossing and signage on Marquam St east of the high school are not highly visible to drivers who frequently speed in the area. There is a need for traffic calming measures and/or crosswalk enhancement and improved lighting.

The intersection of Elm St and Taylor St is frequently used by students. The crosswalks are not high-visibility and lack ADA-compliant curb ramps.

There are damaged curb ramps at the intersection of Elm St and Taylor St.

There are incomplete sidewalks along Elm St, south of Taylor St.

There is faded striping along the bus loading zone at St. Mary's Public School. Students travel south on Elm St to access campus also walk along this route to reach the front entrance.

There are covered bike racks at St. Mary's Public School.

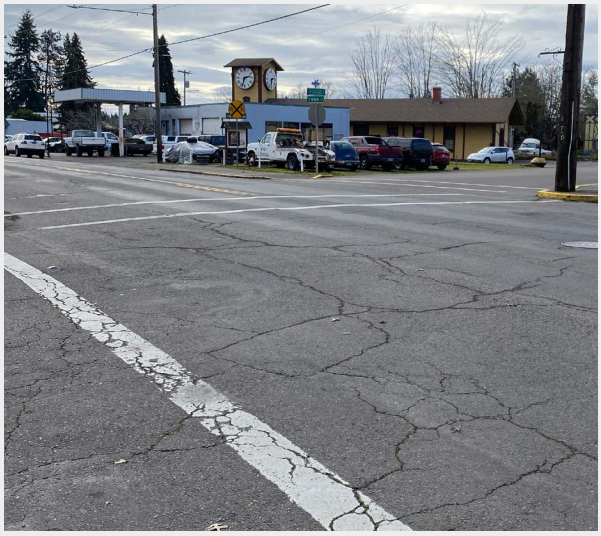
Existing crossing from the gravel lot (parent drop off area) to the school and main parking lot. There is a need to restripe as high visibility continental crosswalk to improve student safety at this crossing.

Crosswalks at College St and Elm St are faded and lack high-visibility markings. Student frequently walk in this area and cross both College St and Elm St (from the dirt parking lot across from the school) to reach the St. Mary's School campus.

The crosswalks at Oak St and College St are uncomfortable for pedestrians. Two crosswalks are very close together across Oak St, and there are poor sightlines.

The intersection of Taylor/John St/Hwy 214 is uncomfortable for pedestrians. Vehicles parked at the northeast corner of the intersection on Main St block sight lines. There is a need for enhanced high-visibility crosswalks with improved illumination at this intersection.

The crosswalk at E College St/Hwy 214/Monroe St is faded and lacking ADA-compliant curb ramps.



Crosswalks at the intersection of College St and Main St are faded and poorly visible.

04 NEEDS AND RECOMMENDATIONS

INTRODUCTION

This chapter outlines recommendations for construction projects as well as education and encouragement programs that address the issues identified in Chapter 3.

Changes to the streetscape are essential to making walking and rolling to school safer and more comfortable. Infrastructure improvements make it safer and more comfortable for families to walk and bike to school – and benefit everyone who travels to school and through the school area.

In addition, education and encouragement programs are a necessary component of any successful SRTS Plan. Often, programs that get more youth walking and rolling lead to increased public support for infrastructure projects – they can be an important first step towards building out the physical elements that make walking, biking, and rolling safer and more comfortable. Also, relative to many construction projects, most education and encouragement programs are very low cost.

The recommendations for construction projects and education and encouragement programs contained in this chapter were informed by existing conditions and input from school and district staff, caregivers, students, community members, and city and county staff, and are tailored to meet the needs and interests of the school community.

Construction Project Recommendations

Construction project recommendations are shown and described on the following pages. The Improvement Recommendations Map is a guide to the location of recommendations described in detail in Table 1. A more detailed table is included in Appendix F that includes 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.

This Plan does not represent a comprehensive list of every project that could improve conditions for walking and bicycling in the neighborhood. Instead, it calls attention to key conflict points and potential improvements near the schools. Recommendations range from simple striping changes and signing to more significant changes to the streets, intersections, and school infrastructure. All construction projects need to be reviewed and designed by engineers and approved by the local road authority.

The recommendations are categorized into implementation timelines based on existing conditions, input from local partners, readiness of the school or community to accomplish the recommendation, resources available and other factors:

- **Short term:** within a year
- **Medium term:** 1-3 years
- **Long term**: 3-5 years

Implementation takes place continuously over time, with cooperation amongst partners and often, new sources of funding. Appendix F lists a variety of funding sources that can be used to implement the recommendations outlined in this section.

PEDESTRIAN FACILITIES

Pedestrian facilities offer an alternative solution to create safe space for people walking and rolling. In rural contexts, complete sidewalks with curb and gutter can prove cost prohibitive.

Pedestrian facilities can offer temporary or permanent solutions that that are appropriate on roads with low to moderate speeds and volumes. A pedestrian lane, for example, is a designated space on the roadway for exclusive use of pedestrians.[1] The lane may be on one or both sides of the roadway and can fill gaps between important destinations in a community.

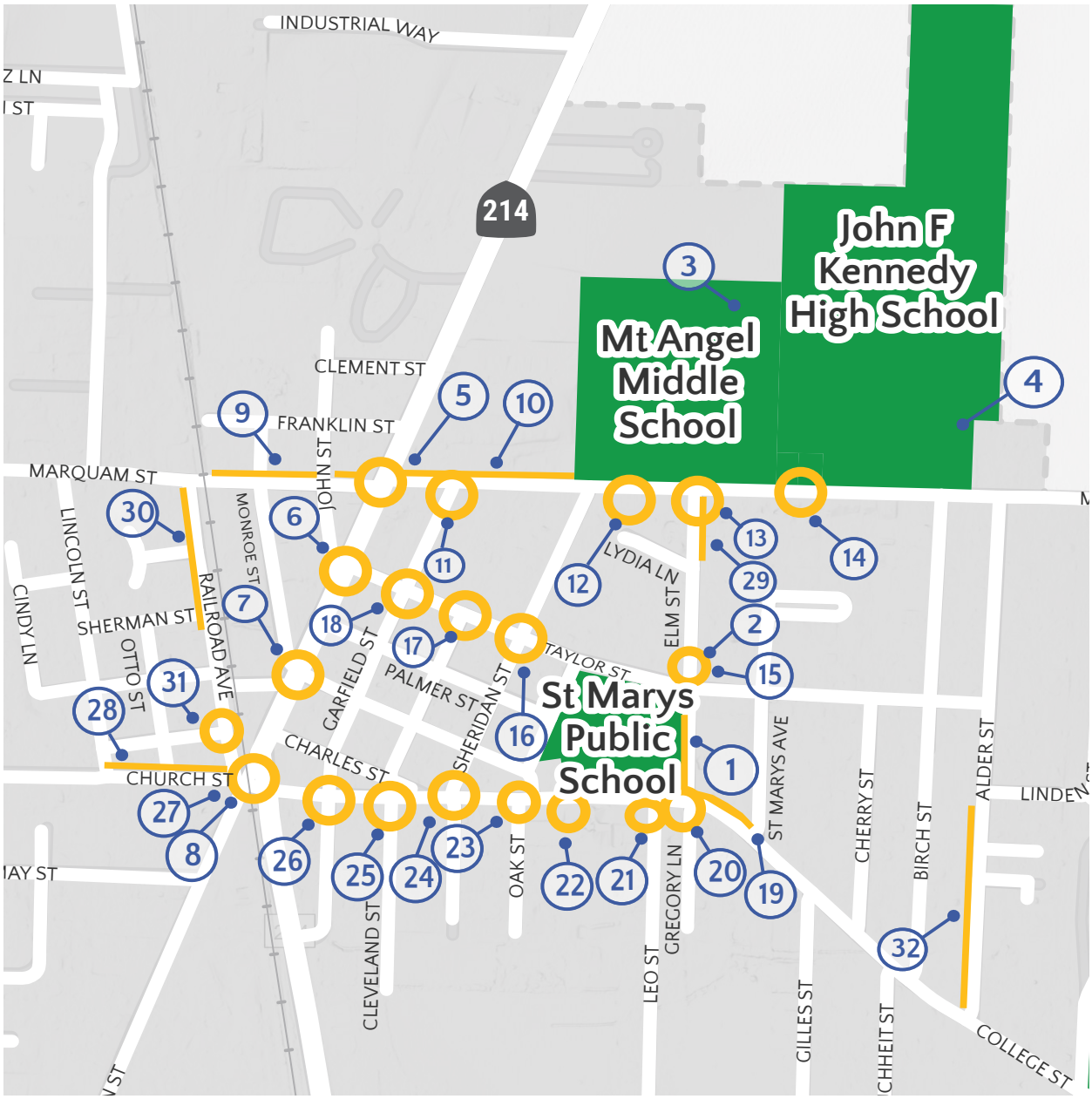
Other types of pedestrian facilities include curb or bollard-protected shoulders, striped buffers, or curb-protected sidewalks. Importantly, these facilities should still include tactile strips and remain ADA-accessible.

BENEFITS

- Provide a stable surface off of the roadway for pedestrians to use when sidewalks or side paths are deemed impractical or otherwise undesirable.
- Can provide visual indication of prioritized connection to community amenity.
- Require minimal roadside infrastructure and no impacts to stormwater management if existing pavement is used.
- May reduce "walking along roadway" crashes.
- Lack the built curb and gutter infrastructure of a sidewalk or other facility.

See Appendix E for examples.

1 Small Town and Rural Design Guide. Center for Prevention at Blue Cross and Blue Shield of Minnesota. https://ruraldesignguide.com/introduction



IMPROVEMENT RECOMMENDATIONS

- Sidewalk/Street Improvement
- Crossing Improvement
- Railroad
- School Property
- Parks
- Water
- City Boundary

Table 1. Mt. Angel Infrastructure Needs and Recommendations

Map #	Recommendation	Timeline	Responsible Party
	General		
*	When installing crosswalks square them with the street to create the shortest crossing distance.	Medium term	City
	St Mary's Elementary School Grounds		
*	Upgrade student bike parking to U-shaped or staple bike parking, and add covered bike parking if possible.	Short term	School District
01	Restripe paint along Elm St and bus drop off area. Define area with new asphalt and painted curb. Upgrade crosswalks to high-visibility crosswalk marking and ADA-compliant ramps at entry to school. Consider adding sidewalk to west side of Elm St.	Long term	City
02	Add additional one-way signs and curb extensions at southeast corners of Elm and Taylor to better define one-way street access.	Short term	City
	Mt Angel Middle School Grounds		
03	Replace existing bike racks with covered, U-style bike racks. Consider adding space for additional bikes, as racks were nearly full during the November walk audit.	Medium term	School District
	John F Kennedy High School Grounds		
04	Restripe parking lot.	Short term	School District
	Main Street/ HWY 214		
05	Pursue RRFB (at existing marked crosswalk across Main St) and curb extensions at the intersection of Main St and Marquam St. Improve illumination, and install ADA-compliant ramps at all corners with marked crosswalks.	Medium term	City/ODOT
06	Eliminate parking on east side of Main St north of Taylor St.to allow vehicles clear sight lines when turning onto Main St. from Taylor St. Add curb extension at northeast corner of Main St and Taylor St. Add a traffic island to channelize traffic on John St. Install ADA compliant ramp at all corners with crosswalks. Shift crosswalk on John St closer to Main St. Add sidewalk at northwest corner to shorten crosswalk distance at north leg. Add crosswalk markings across John St, Main St and Taylor St. Realign to be perpendicular to intersection. Add/improve illumination.	Long term	City/ODOT

* Project recommendation not shown on map

Map #	Recommendation	Timeline	Responsible Party
07	Pursue crosswalk markings across College St, Main St and Monroe St. Align northern crosswalk leg to be perpendicular. Add curb extension to northwest corner. Add/improve illumination. Install ADA-compliant ramps at all corners with crosswalks.	Long term	City/ODOT
08	Pursue RRFB at south leg of Hwy at intersection with Church St and Main St. Eliminate the crosswalk on Main St between Charles St and Church St to reduce driver confusion and promote safer options for pedestrians. Add crosswalk markings across E Church St, Hwy 214, Main St, and W Church St. Add/improve illumination. Install ADA-compliant ramps at all corners with crosswalks. Define southwest corner of Church and Main with a curb and gutter.	Long term	City/ODOT
*	Fill in missing sidewalk along Main St.	Long term	City
	Marquam Street		
09	Add or improve sidewalks along north side of Marquam St between Railroad Ave and Main St. The priority is to get kids safely across Main St and down Marquam St to two school campuses.	Long term	County
10	Add sidewalk along the south side of Marquam St between Main St and Sheridan St and along the north side of Marquam St between Sheridan St and the middle school.	Long term	County
11	Add high-visibility continental crosswalk markings, add stop line before crosswalk, and install ADA-compliant ramps at corners of the intersection.	Medium term	County
12	Repaint crosswalk on Marquam St east of Sheridan St to be perpendicular to Marquam St in order to create the shortest crossing distance.	Short term	County
13	Add high-visibility continental crosswalk markings on the south leg across Elm St. Add a stop line before the Elm St crosswalk. . Install ADA-compliant ramps on the southwest and southeast corners of intersection. Improve pedestrian lighting along Marquam St.	Long term	County
14	Add midblock crossing with west of the high school on Marquam St leading to alley north of St. Marys Circle.	Medium term	County

Map #	Recommendation	Timeline	Responsible Party
*	Remove remnants of crosswalk paint west of Birch St and Marquam St intersection. Relocate sign closer to crosswalk.	Short term	County
*	Consider implementing traffic-calming measures, such as curb extensions, restriping, and signage along Marquam St.	Short term	County
	Taylor Street		
15	Upgrade crosswalks at the intersection of Elm St and Taylor St to high-visibility continental crosswalk markings, add stop lines before crosswalks, and install ADA-compliant ramps on all four sides of the intersection.	Medium term	City
16	Upgrade crosswalks at intersection of Sheridan St and Taylor St to high-visibility continental crosswalk markings, add stop lines before crosswalks, and install ADA-compliant ramps on all four sides of the intersection.	Medium term	City
17	Upgrade crosswalk at Cleveland St and Taylor St to high-visibility continental crosswalk markings, add stop lines before crosswalk, and install ADA-compliant ramps.	Medium term	City
18	Upgrade crosswalk at Garfield St and Taylor St to high-visibility continental crosswalk markings, add stop lines before crosswalk, and install ADA-compliant ramps.	Medium term	City
	College Street / Church Street		
19	Install new sidewalk to fill gap on north sidewalk between Elm St and St. Mary's Ave.	Long term	City
20	Upgrade crosswalks at Elm St and College St to high-visibility continental crosswalk markings, add stop lines before crosswalks, and install ADA-compliant ramps at northern and southeastern corners of the intersection.	Medium term	City
21	Upgrade crosswalks at intersection of Leo St and College St to high-visibility continental crosswalk markings, add stop lines before crosswalks, and install ADA-compliant ramps at northwestern and southern corners of the intersection.	Medium term	City
22	Upgrade crosswalk north of St. Mary's Catholic Church to high-visibility continental crosswalk markings and install ADA-compliant ramps.	Medium term	City
23	Upgrade crosswalks at intersection of Oak St and College St/Church St to high-visibility continental crosswalk markings, add stop lines before crosswalks, and install ADA-compliant ramps at four crosswalks along Oak St/E College St. Reconfigure curb line along northeast corner of Oak St and E College St (near bench) to direct westward traffic on College St. Remove second crosswalk (just northeast of White Corner Inn building). Remove path leading to crosswalk and replace with plantings.	Medium term	City

Map #	Recommendation	Timeline	Responsible Party
24	Upgrade crosswalks at intersection of Sheridan St and Church St to high-visibility continental crosswalk markings, add stop lines before crosswalks, and install ADA-compliant ramps at corners of the intersection.	Medium term	City
25	Upgrade crosswalks at the Cleveland St and Church St intersection to high-visibility continental crosswalk markings, add stop lines before crosswalks, and install ADA-compliant ramps at corners of the intersection. Establish pedestrian refuge island and enhance landscaped median island along eastern leg of intersection.	Medium term	City
26	Upgrade crosswalks at the Garfield St and Church St intersection to high-visibility continental crosswalk markings, add stop lines before crosswalks, and install ADA-compliant ramps at corners of the intersection.	Medium term	City
27	Pursue RRFB at the crossing of Hwy 214 and Church St. Upgrade crosswalks to high-visibility continental crosswalk markings, add stop lines before crosswalks, and install ADA-compliant ramps at corners of the intersection. Remove crosswalk just north of intersection leading from fountain to hardware store.	Long term	City
	Upgrade crosswalks at intersection of Main St and Church St to high-visibility continental crosswalk markings, add stop lines before crosswalks, and install ADA-compliant ramps at corners of the intersection.	Long term	City
28	Add sidewalks to fill in gaps on Church St, west of Main St.	Long term	City
	Elm Street		
29	Install sidewalk on the west side of Elm St between Marquam St and Lydia Ln.	Long term	City
	Railroad Ave		
30	Add or improve pedestrian facility along west side of Railroad Ave to fill in gaps. Add high visibility crosswalks and ADA-compliant ramps	Long term	City
31	Remove crosswalk across Railroad Ave, as it is an uncomfortable crosswalk at the intersection of W Charles St and Railroad Ave.	Medium term	City
	Alder Street		
32	Add sidewalks to fill in gaps on Alder St, south of John B Humpert Park.	Long term	City

Education and Encouragement Program Recommendations

The programs outlined in this section are intended to increase awareness, understanding, and excitement for walking and rolling to school. Table 2 includes additional details about each recommended program including a brief description, suggested leads, timeline, and resources.

Suggested walking routes were also developed with project partners, based on community input and findings from the bike and pedestrian facility inventory. The Suggested Route Map provided on page 54 encourages students and families to consider walking and biking to school. It also provides a School Commute network for the City to focus future infrastructure investments along the most important routes to school.

The Oregon Department of Transportation (ODOT) SRTS Program provides technical assistance to support local SRTS efforts. This support includes:

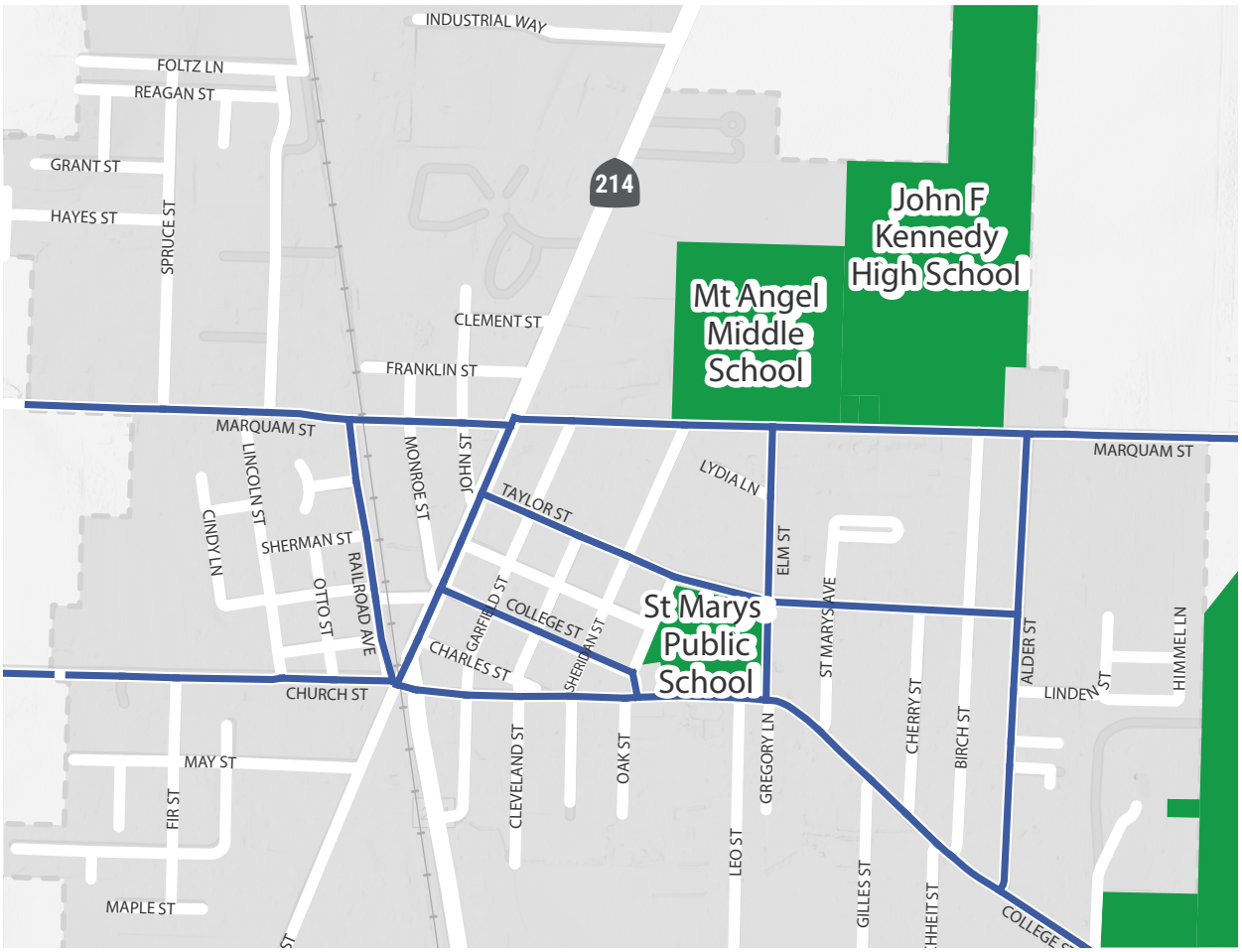
1. Coordination between practitioners through Regional Hubs (see call-out below) https://www.oregonsaferoutes.org/contact
2. Trainings and resource guides, which can be found on the Oregon SRTS website https://www.oregonsaferoutes.org/resources/
3. Incentives, activities, and messaging for monthly Walk+Roll events https://www.oregonsaferoutes.org/walkroll/
4. Bicycle and pedestrian safety trainings and a loaner bike fleet - coming in 2022

Learn more and keep in touch by signing up for the ODOT SRTS Newsletter: https://www.oregonsaferoutes.org/

CONNECT WITH YOUR ODOT SRTS REGIONAL HUB COORDINATOR

The ODOT SRTS Program can provide free resources, materials, and guidance to implement education and encouragement programs. The ODOT SRTS Education team is working in parallel with the Construction team to help communities across the state implement education and encouragement efforts. The team holds Regional Hub meetings to discuss statewide and regional SRTS strategies and efforts. Regional Hub Coordinators are a resource for local SRTS coordinators and regions without a coordinator to help create and sustain successful SRTS programs.

SRTS champions or involved staff in or near Mt. Angel are a part of the Coast/Willamette Valley Hub. Register for the meetings and office hours here or fill out the contact form to be connected with your Regional Hub Coordinator. Review Table 2 to identify educational and encouragement priorities and discuss with the Regional Hub Coordinator.



SUGGESTED WALKING AND BIKING ROUTES

The purpose of the Suggested Routes Map is to encourage students and families to consider walking and biking to school and to provide a network for the City to focus future SRTS infrastructure investments along the most important routes to school. The consultant team created the maps with input from walk audit participants and findings from the bike and pedestrian facility inventory.

- Suggested Route
- Railroad
- School Property
- Parks
- Water
- City Boundary

Table 2. Mt. Angel Education and Encouragement Recommendations

Activity	Responsible Party	Description (Additional details provided on following page)	Timeline	Resources Needed	Inclusion Considerations	Measures of Success
Expand opportunities to promote biking and walking safety	Teachers	Consider incorporating activities related to active transportation into classes to promote greater awareness of travel by these modes. For example, math classes may help with pedestrian counts, and art classes may make creative walking route maps.	Short term	Lesson plans	Incorporating wheelchair users into pedestrian counts	More conversation and curiosity from students about active transportation in Mt. Angel
Safe Routes to School Coordinator Position	City of Mt. Angel, Mt. Angel School District	Apply for funding for a Safe Routes to School Coordinator for Mt. Angel through the ODOT Competitive Education Grant. Determine the advisory group for this position consisting of staff from the City and School District	Short term	Example job description and application materials	Include in the scope of this grant funds for translation of materials and programs where necessary	Receipt of funding from ODOT, and hiring of a SRTS Coordinator
Pedestrian Safety Education	ODOT SRTS Team, PE Teachers	Pedestrian Safety Education can be incorporated into any class but is typically a part of PE for grades K-5. Starting in fall 2022, the ODOT SRTS team will be training PE teachers across the state with a new curriculum.	Medium term	Curriculum (Neighborhood Navigators 2.0 is a good place to start)	Communicate with families ahead of time to learn about what needs their children may have	Number of students walking to school, excitement to engage with the curriculum
Bike Skills Education	ODOT SRTS Team, PE Teachers	Bike skills is typically for grades 6-8. The ODOT SRTS team will be training PE teachers in 2022-2023 to facilitate bike education and increasing access to bike fleets.	Long term	Curriculum (Neighborhood Navigators 2.0 is a good place to start)	Communicate with families ahead of time to learn about what needs their children may have related to riding bikes	Number of students biking to school, excitement to engage with the curriculum
Communication and Outreach with Parents and Caregivers	Administration	Send a letter to parents at the beginning of the year with travel safety tips and how they can add to their children's learning about active transportation through walking with them and volunteer opportunities.	Short term	Letter template, travel tips flyer	Provide materials in Spanish, or other languages as needed.	Parents are interesting in volunteering and are asking questions
SRTS Demonstration Projects	SRTS Coordinator, City of Mt. Angel	Organize demonstration projects to engage students and families in opportunities to improve the built environment. Cooperate with road jurisdictions to ensure that these projects are compliant with permitting regulations.	Medium term	Cones, barricades, paint, signage	Provide parent engagement materials in Spanish, or other languages as needed.	Feedback from families

Activity	Responsible Party	Description (Additional details provided on following page)	Timeline	Resources Needed	Inclusion Considerations	Measures of Success
Host a Crossing Guard Appreciation Event	Administration	Students can write thank you cards upon arrival or during the school day, families can be invited to bring a gift or treat for the crossing guard.	Short term	Outreach materials about the event (i.e. posters, emails), art supplies	Offering multiple ways of expressing thanks. If some students don't want to draw, they could sing a song or ask the crossing guard if they want a hug instead.	Crossing guard feels appreciated, many students participate
Student Crossing Guard Program	Crossing Guard	Student volunteers can sign up to help the adult crossing guard at arrival and dismissal. Jobs may include waving flags to stop traffic, waving at cars as they pass, and guiding students across the street.	Long term	Safety vests, signs or flags, adult crossing guard	Offer multiple ways for students to participate. If students aren't able to help with the crossing itself, they can greet students after they cross the street safely.	Students are excited to volunteer and feel safe, adult crossing guard approves of program.
Walk+Roll to School Day	ODOT SRTS Team, Administration	Participate in International Walk+Roll to School Day in October to encourage and incentivize walking and rolling. The ODOT SRTS team can provide materials and activities to help support the event including flyers, activity sheets, stickers, and more.	Medium term	Printer, adult volunteers to pass out incentives	Ensure that students who live too far to walk or bike are able to participate on campus. Consider having a remote drop off site.	Number of students and community members participating
Lunchtime or After School Walking Club	Teacher, or After school Staff	To get students moving during the school day or after school, parent or teacher volunteers could lead students in small groups on walks to familiarize themselves with what routes they may be able to take the school and practice safe walking.	Medium term	Parent or teacher volunteers, safety vests optional	Consider how students with mobility challenges may need extra support participating	Number of interested volunteers, number of interested students, increase in students walking and biking to school outside the club

Activity	Responsible Party	Description (Additional details provided on following page)	Timeline	Resources Needed	Inclusion Considerations	Measures of Success
Community School Safety Campaign	Administration	A school safety zone campaign can be used to share simple safety messages and increase the visibility of the school zone.	Medium term	Outreach materials	Provide materials in Spanish or other languages as needed.	Feedback from families, observations from school staff.
Walking School Bus and Bike Train	Parent volunteers, administration	Walking school buses and bike trains are ways for students to meet up while walking and biking in order to travel together. These typically include adult volunteers or a SRTS coordinator to walk with students.	Medium term	Communication with families, signs, volunteers, designated meet up points	Consider how students with mobility challenges can participate.	Number of students participating.

PARENT EDUCATION AND OUTREACH

Parents are the primary decision-makers about how their students 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 include:

- The Oregon SRTS website has a host of safety tips for parents who are interested in their student walking and biking to school. Also, sign up for the newsletter to get current materials and seasonal safety tips
- The National Center for SRTS offers tools and training to provide communities the technical support they need to make community-enhancing decisions.

SAFE ROUTES TO SCHOOL COORDINATOR POSITION

A designated individual who is tasked with coordinating and championing Safe Routes to School can greatly increase the likelihood of program success. A SRTS coordinator is usually charged with scheduling, publicizing, and administering SRTS programming, including encouragement events, educational activities, safety campaigns, Walking School Buses and Bike Trains for students and their families. This person is also responsible for coordinating between various involved jurisdictions, community groups, and community stakeholders to promote SRTS as a priority.

Funding for SRTS Coordinators is available through ODOT's competitive Education Grant process, as well as some regional and local governments.

TRAFFIC SAFETY CAMPAIGN

A school traffic safety campaign can share simple safety messages and increase the visibility of the school zone and families traveling in the area. Focus outreach during back to school time, as the weather turns and time changes in the late fall, and during the early spring months, to address seasonal visibility issues. Resources include:

- The Oregon SRTS website has a host of banners, brochures, and other materials that schools can use to raise drivers' awareness of students traveling in a school area. Order materials from the ODOT Storeroom and check the www.oregonsaferoutes.org website for current incentives and outreach materials available.
- The Drive Like It campaign offers yard signs, safety kits, and other materials with a simple, clear message.

PEDESTRIAN AND BIKE SAFETY EDUCATION

Pedestrian and bike safety education teaches students basic traffic laws and safety rules. Lessons are usually during PE classes or after school and may be one-time Bike Rodeos or multi-day courses.

Resources include:

- The ODOT SRTS Neighborhood Navigators 2.0 Curriculum includes a flexible in-class and on-bike Walk and Roll Safety Education lesson Plans and workbooks. The ODOT SRTS technical assistance team are piloting bike fleets and new Train-the-Trainer materials in 2022. Sign up for the Oregon SRTS newsletter or join the Regional Hub meetings to learn when these will launch.
- 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.

WALKING SCHOOL BUS/BIKE TRAIN

In a walking school bus, a group of students walks together to school, accompanied by one or two adults (usually parents or guardians of the students on the "bus"). As the walking school bus continues on the route to school, they pick up students at designated meeting locations. Similar to walking school buses, bike trains involve a group of students biking together with adults.

Bike trains and walking school buses for elementary school students are typically led by a parent, however, middle school students can become leaders, act as role models, and practice and teach safe bicycling behaviors. Bike trains may be more appropriate for middle school students, as they enable students to feel independent in their mobility, while also providing the safety and comfort of riding in a group.

ODOT's SRTS Website has resources and tips to get started, including a 2021 webinar on the topic

WALK + ROLL TO SCHOOL DAYS

Walk+Roll events encourage and celebrate students walking and rolling to school.

Keep the momentum going year-round with ODOT SRTS' monthly themes:

September: Back to School

October: International Walk to School Day

November: Ruby Bridges Walk to School

February and March: Winter Walk+Roll

April: Earth Month

May: Bike Month

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 include:

- Schools in Oregon can order incentives to support and promote Walk + Roll to School Day.
- King County Metro in the Seattle area has a Tool Kit with resources to plan a Walk + Roll to School Day event.
- 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.

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05

IMPLEMENTATION

INTRODUCTION

This chapter identifies high priority projects and provides guidance for implementation, including information about the ODOT SRTS Competitive Grants.

One of the goals of the PIP Process is to identify and refine specific projects that are eligible for the ODOT SRTS Infrastructure Grant and prepare jurisdictions to apply for the funding. This chapter describes the community-driven process to prioritize recommendations for the Competitive ODOT SRTS Infrastructure Grant Application, as well as additional project-related details that will be needed to complete the application.

Project Prioritization Process

Walk audit and community meeting 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. Participants generally felt that most of the prioritization measures were quite important to consider for SRTS projects in the community.

Participants found safety to be the most important factor, while also recognizing that equity, student density, and proximity to school was essential when considering projects. 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.

Prioritization Criteria

How should we prioritize projects in your community?

PROXIMITY TO SCHOOL
Projects should be prioritized based on their distance from a school.

EQUITY
Projects should be prioritized based on their ability to support walking and biking for all students regardless of age, ability, race, or income.

COMMUNITY-IDENTIFIED NEED
Projects should be prioritized because they were identified through school or community engagement, parent/caregiver feedback, or during another Planning process.

STUDENT DENSITY
Projects should be prioritized based on their proximity to current and future students and families.

FEASIBILITY
Projects should be prioritized based on their location on or along a street that is already Planned for improvements, their cost, or other feasibility measures that make them most achievable in the short term.

SAFETY
Projects should be prioritized based on how unsafe a road is, looking at factors such as speed, traffic volumes, number of lanes, crossing distance or history of crashes.

High Priority Construction Projects

The following are top priority improvements recommended for the Competitive ODOT SRTS Infrastructure Grant Application. 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 schools. The City of Mt.Angel and the Mt. Angel School District will be the relevant parties to prepare the Competitive ODOT SRTS IN Grant and ODOT Community Path Applications for these projects.

Appendix E includes more detailed project cost estimates, as well as a graphical guide to the grant eligibility process.

Table 3. City of Mt. Angel Implementation Priority Projects

PROJECT DESCRIPTION
Main Street/ HWY 214
Add RRFB (at existing marked crosswalk across Main St), curb extensions, and high visibility continental crosswalk markings to the intersection of Main St and Marquam St. Improve illumination and install ADA-compliant ramps at all corners with marked crosswalks.
Add high-visibility continental crosswalk markings across College St, Main St and Monroe St. Align northern crosswalk leg to be perpendicular. Add curb extension to northwest corner. Add/improve illumination. Install ADA-compliant ramp at all corners with crosswalks.
Marquam Street
Add or improve sidewalks along north side of Marquam St. between Railroad Ave and Main St. (Priority is to get kids safely across Main St. and down Marquam to two school campuses.)
Add sidewalk along the south side of Marquam St between Main St and Sheridan St and along the north side of Marquam St between Sheridan St and the middle school.
Add high-visibility continental crosswalk markings, add stop line before crosswalk, and install ADA-compliant ramps at corners of the intersection.
Repaint crosswalk to be perpendicular to Marquam St – creates the shortest crossing distance
Add high-visibility continental crosswalk markings on the south leg across Elm St. Add a stop line before the Elm St crosswalk. Install ADA-compliant ramps on the southwest and southeast corners of intersection. Improve pedestrian lighting along Marquam St.
Add midblock crossing west of the high school on Marquam St leading to alley north of St. Mary's Circle.
Remove remaining paint. Relocate sign closer to crosswalk.

Next Steps

With an SRTS Plan in place, it's time to shift attention to implementation.

The strategies identified in this Plan may seem overwhelming at first. Just remember that anything you can do to make walking, biking, and rolling to school safer, easier, and more fun for students is a step in the right direction. Here are some things to remember:

START SMALL

Small actions can have a big impact, especially when it comes to building support, interest, and momentum for bigger initiatives.

FOCUS ON EQUITY

Not everyone has equal opportunities to walk and bike to school. Identify and prioritize strategies to address and overcome barriers that disproportionately impact the most vulnerable students.

BUILD PARTNERSHIPS

Look for opportunities to strengthen existing partnerships and build new ones. Reach out to caregivers, community members, local agencies and community organizations, and other partners to expand capacity and support for SRTS initiatives.

EMPOWER STUDENTS AS LEADERS

Student-led initiatives can generate enthusiasm and improve social conditions for SRTS. Empower students to take ownership of programs to raise awareness, build excitement, and expand opportunities for their peers to walk and bike to school.

TRACK PROGRESS

Continue to track trips and survey caregivers and students about their experiences walking, biking, and rolling to school. Conducting regular evaluation will help your team understand what works and what doesn't work and allocate resources accordingly. Consider reporting annually on progress.

CELEBRATE SUCCESS

Take time to recognize efforts and celebrate progress. Whether it's changing travel habits, achieving a major milestone, implementing an infrastructure improvement, launching a new program, or hosting a successful event, recognize and celebrate success.

06

APPENDICES

APPENDICES

APPENDIX A. FOR MORE INFORMATION

This appendix provides contact information for state and national SRTS program resources as well as school partners.

NATIONAL RESOURCES

Safe Routes to School Data Collection System

http://www.saferoutesdata.org/

Pedestrian and Bicycle Information Center

http://www.pedbikeinfo.com/

National Center for Safe Routes to School

http://www.saferoutesinfo.org/

Safe Routes to School Policy Guide

http://www.saferoutespartnership.org/sites/default/files/pdf/Local_Policy_Guide_2011.pdf

School District Policy Workbook Tool

https://www.changelabsolutions.org/product/safe-routes-school-district-policy-workbook

Safe Routes to School National Partnership State Network Project

http://www.saferoutespartnership.org/state/network

Bike Train Planning Guide

http://guide.saferoutesinfo.org/walking_school_bus/bicycle_trains.cfm

10 Tips for SRTS Programs and Liability

http://apps.saferoutesinfo.org/training/walking_school_bus/liabilitytipsheet.pdf

Tactical Urbanism and Safe Routes to School

http://www.saferoutespartnership.org/resources/fact-sheet/tactical-urbanism-and-safe-routes-school

STATE RESOURCES

The Oregon Department of Transportation (ODOT) SRTS Program provides technical assistance to support local SRTS efforts. This support includes:

1. Coordination between practitioners through Regional Hubs that meet monthly https://www.oregonsaferoutes.org/contact
2. Trainings and resource guides, which can be found on the Oregon SRTS website https://www.oregonsaferoutes.org/resources/
3. Incentives, activities, and messaging for monthly Walk+Roll events https://www.oregonsaferoutes.org/walkroll/
4. Bicycle and pedestrian safety trainings and a loaner bike fleet - coming in 2022

Learn more and keep in touch by signing up for the ODOT SRTS Newsletter: https://www.oregonsaferoutes.org/

APPENDIX B. SRTS TALKING POINTS

To ensure a successful SRTS program, it is crucial to get school principals and other school administration leaders the communications resources they need to share the importance of SRTS with caregivers. To get these leaders involved initially, in-person meetings are a great start and opportunity to share SRTS goals and potential activities for the year. This gives school leaders a chance to learn more about the program, but also share thoughts and ideas unique to their school. Share with them the academic benefits: students that walk or bike to school arrive awake, alert, and ready to learn, and physical activity before school increases academic performance and reduces student absences.

The following list of facts and statistics can be used by principals and other SRTS advocates in communications materials to share the benefits of a SRTS program. These points have been collected from national sources, and apply to all schools and school districts: big or small, urban or rural, etc.. They are intended to be used in communication materials such as school newsletters, emails, school websites, social media posts, signs, videos, and direct communications with caregivers (including handouts, emails, texts, automated calls, etc.). Except where otherwise noted, the following are based on research summarized by the National Center for Safe Routes to School. More information, including primary sources, can be found at http://guide.saferoutesinfo.org.

Traffic: Costs, Congestion, and Safety

- In 1969, half of all US students walked or biked to school; by 2009, that number had dropped to just 13 percent.
- In the United States, 31 percent of students in grades K–8 live within one mile of school; 38 percent of these students walk or bike to school. You can travel one mile in about 20 minutes by foot or six minutes by bicycle.
- Personal vehicles taking students to school accounted for 10 to 14 percent of all personal vehicle trips made during the morning peak commute times. Walking, bicycling, and carpooling to school reduces the numbers of cars dropping students off, reducing traffic safety conflicts with other students and creates a positive cycle—as the community sees more people walking, biking, and rolling, more people feel comfortable walking and bicycling.
- Reducing the miles caregivers drive to school by just one percent would reduce 300 million miles of vehicle travel and save an estimated $50 million in fuel costs each year.
- Did you know that as more people bicycle and walk, biking and walking crash rates decrease? This is also known as the ‘safety in numbers’ principle. As more families walk and bike to school, streets and school zones become safer for everyone.

Health: Physical Activity and Obesity

- The U.S. Department of Health and Human Services recommends that children do one hour or more of physical activity each day. Walking just one mile each way to and from school would meet two-thirds of this goal.
- Studies have found that students who get regular physical activity benefit from healthy hearts, lungs, bones, and muscles; reduced risk of developing obesity and chronic diseases; and reduced feelings of depression and anxiety. Teachers also report that students who walk or bike to school arrive at school alert and "ready to learn."
- Researchers have found that people who start to include walking, biking, and rolling at part of everyday life (such as the school commute trip) are more successful at sticking with their increased physical activity in the long term than people who join a gym.
- One recent study showed that students who joined a "walking school bus" ended up getting more physical activity than their peers. In fact, 65 percent of obese students who participated in the walking program were no longer obese at the end of the school year.
- Childhood obesity rates have more than tripled in the past 30 years, while the number of students walking, biking, and rolling to school has declined. According to the 2009 National Household Travel Survey, 13 percent of students between the ages of five and 14 walked or biked to or from school, compared to 48 percent in 1969.

Environment: Air Quality, Climate Change and Resource Use

- Did you know? When you walk, bike, or carpool, you're reducing auto emissions near schools. Students and adults with asthma are particularly sensitive to poor air quality. Approximately 5 million students in the U.S. suffer from asthma, and nearly 13 million school days per year are lost due to asthma-related illnesses.
- Did you know that modern cars don't need to idle? In fact, idling near schools exposes students and vehicle occupants to air pollution (including particulates and noxious emissions), wastes fuel and money, and increases unnecessary wear and tear on car engines. If you are waiting in your car for your student, please don't idle – you'll be doing your part to keep young lungs healthy!
- Families that walk two miles a day instead of driving will, in one year, prevent 730 pounds of carbon dioxide from entering the atmosphere.
- Short motor-vehicle trips contribute significant amounts of air pollution because they typically occur while an engine's pollution control system is cold and ineffective. Thus, shifting 1 percent of short automobile trips to walking or biking decreases emissions by 2 to 4 percent.
- Eight bicycles can be parked in the space required for just one car.

APPENDIX C. PLANNING PROCESS

The Mt. Angel SRTS Plan Process

Project Initiation

The first step in the Planning process was to collect data and information to support evaluation of existing conditions. This included two meetings with the Project Management Team (PMT) to identify issues and opportunities related to SRTS. Existing Conditions information is included in Chapter 3 and Appendix D.

School Safety Assessment

The School Safety Assessment included the walk audit observations, community meetings, and a bike and pedestrian facility inventory.

WALK AUDIT

During each walk audit, the PMT and community participants observed traffic conditions, travel patterns, and behaviors for all modes of travel during arrival or dismissal at each school. Before each walk audit, the team gathered to identify key routes and locations for observation.

COMMUNITY MEETING

The School Safety Assessment community meeting was an opportunity for school leadership, roadway jurisdiction staff, teachers, and parents to discuss barriers to walking and biking to school, and brainstorm ideas for how to overcome them. The meetings were held directly after each walk audit. Meeting participants discussed the typical routes that students who walk and bike take to and from school, points of conflict between people driving and walking/biking, ongoing SRTS programming and some additional ideas for education and engagement events at the school.

BIKE AND PEDESTRIAN FACILITY INVENTORY

The bike and pedestrian facility inventory documented existing infrastructure, focusing on all streets within a quarter mile of all schools. The inventory 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 infrastructure recommendations described in Chapter 4.

Review Process

Following the School Safety Assessments, initial recommendations were prepared and shared with the PMT for review. The PMT met to discuss the recommendations, and to identify priority projects for the Competitive ODOT SRTS Infrastructure Grant. Once this was complete, a Draft SRTS Plan was prepared and underwent both PMT review as well as Public Review in the form of an online interactive PDF document.

APPENDIX D. EXISTING CONDITIONS

Plan Review

CITY OF MT ANGEL PARKS MASTER PLAN (UPDATED 2011)

This document identifies operation, development and funding strategies for parks in Mt Angel. The parks master plan includes other community recreation assets such as open space areas, natural areas, pathways, and trails. The plan notes a lack of internal pathways and on-street sidewalks, which pose safety and accessibility issues. The Parks Master Plan was adopted into the Comprehensive Plan in 2011 (Ordinance 729).

In Mt Angel, school facilities serve as a community recreation asset. Mt Angel's school facilities offer recreation opportunities to residents, including playgrounds, tennis courts, sports fields and tracks. Facilities owned by the school district are typically available for public use after school operating hours or with the approval of a "public use form."

The following goals and objectives from the Parks Master Plan are highlighted as they align with SRTS initiatives.

Goal 1 - Planning: Establish a coordinated process for parks planning and development that involves residents and community groups.

Objective 1.3: Coordinate with other Plans, such as the Mt Angel Transportation Systems Plan, which are intended to enhance and develop infrastructure related to the parks system (e.g., the development of sidewalks and multi-use pathways).

Goal 2 - Funding: Establish new and diverse funding mechanisms for the maintenance and development of existing parks.

Objective 2.1: Develop partnerships with public and private entities, such as the School District and Oktoberfest, which have an interest in enhancing the parks system.

Goal 5 - Accessibility: Improve access to park and recreation facilities.

Objective 5.3: Improve bike and pedestrian routes (e.g., sidewalks, multi-use pathways) in accordance with the Mount Angel Transportation Systems Plan (Revised 2003).

Goal 6 - Stewardship and Community Pride: Through the coordination of a Parks Board increase community awareness, involvement, and stewardship of the parks system.

Objective 6.3: Develop a park stewardship education and outreach action plan to involve schools and community groups in the development and maintenance of the parks system.

CITY OF MT ANGEL TRANSPORTATION SYSTEM PLAN (REVISED 2003)

The primary goal of the Transportation Plan is "To provide and encourage a safe, convenient, and economic transportation system to serve the needs of the citizens of Mt Angel." It is a 20-year document that was last updated in 2003. The TSP seeks to identify a safe and convenient system of streets, bike routes, and walkways that connect the destinations that attract the majority of bicycle and pedestrian traffic, including schools. The TSP was adopted into the Comprehensive Plan in 1997 (Ordinance No. 645) and later revised in 2003.

Pedestrian System

Sidewalks are present on only about one-half of the streets in the city. Sidewalks are required on all streets concurrent with new development. The Mt Angel Downtown Plan notes that sidewalks and crosswalks are present on Highway 214 in the downtown area. However, traffic volumes, including truck traffic, and speeds make it difficult for pedestrians to cross the highway. This is particularly evident at the Highway 214, Main Street, Church Street intersection where design problems contribute to the problem. Downtown Mt Angel has eight unapproved marked crosswalks.

Bicycle System

There are no bicycle lanes on any of the streets in Mt Angel. Most of the streets in Mt Angel are "shared roadway" bikeways, where bicyclists and motor vehicles share a travel lane. According to the TSP, this type of facility is appropriate in Mt Angel due to its small size and low traffic volumes.

Elm Street, between Taylor Street and College Street, is designated as a city bikeway. This section of Elm Street provides access to St Mary's School and is closed to vehicular traffic during school hours.

The Oregon Bicycle/Pedestrian Plan identifies Highway 214 as a state bikeway. As an identified bike route, Highway 214 should be designated by striping and/or pavement markings for the preferential or exclusive use of bicyclists.

Minor improvements to the arterial and collector streets would result in improved conditions for bicyclists without requiring the purchase of additional right-of-way. The Bicycle/Pedestrian Plan, Figure 1, represents the city's priorities for bicycle/pedestrian facility improvements. The low volumes on local streets will enable pedestrians and bicyclists to safely share streets with automobiles during the interim as the city pursues improvements.

Recommended Bicycle and Pedestrian Improvement projects include:

Proposed multi-use path locations:

- From Birch Street, crossing East College Road NE, and connecting to South Cleveland Street. This route takes advantage of an old railway and utility easement for part of its length.
- From Highway 214 to just east of Oak Street just south of E Church Street.
- Connecting Lincoln Street to Alder Street from College Street to Taylor Street.
- From the Oktoberfest site to Birch Street with the potential for continuation as a Marion County facility.

Proposed bicycle and pedestrian improvements on arterial and collector streets:

- Alder Street from Taylor Street to Marquam Street
- S. Main Street from Church Street to City Limits
- W. Marquam Street from N. Main to Railroad Avenue
- W. Marquam Street from Railroad Avenue to City Limits
- W. Church Street from Fir Street to City Limits

To further encourage safe bicycle and pedestrian activity the TSP supports the provision of related facilities such as well marked crossings and secure bicycle parking. The TSP also recognizes education is an important means of encouraging bicycling and walking and of informing citizens of important safety issues. The city should encourage the development of educational programs promoting bicycle/pedestrian/motorist safety. The city could work with the school district and local police to promote safety and use.

Recommended Intersection Improvement projects include:

1. **Intersection Improvement (Highway 214 and Marquam Street)**

2. **Railroad Crossing Improvement (Marquam Street NW)-** Marquam Street is designated as a collector street. It is one of two primary east-west routes within the urban area. Marquam Street is designated as a bikeway/pedestrian way because it provides access to parks and schools. As a primary east-west transportation route, it is essential for safety that the city work with the ODOT Rail Division and the Willamette Valley Railway Company to signalize the railroad crossing. In addition, the city should work with the railroad and Marion County to improve the surface quality of the crossing when the street is resurfaced.

3.Intersection Improvement (Church Street/Main Street/Highway 214/ Railroad Avenue) The city will continue to actively pursue reconstruction of this intersection. Design and construction of this project should involve a partnership between all affected parties, including ODOT, ODOT Rail Division,

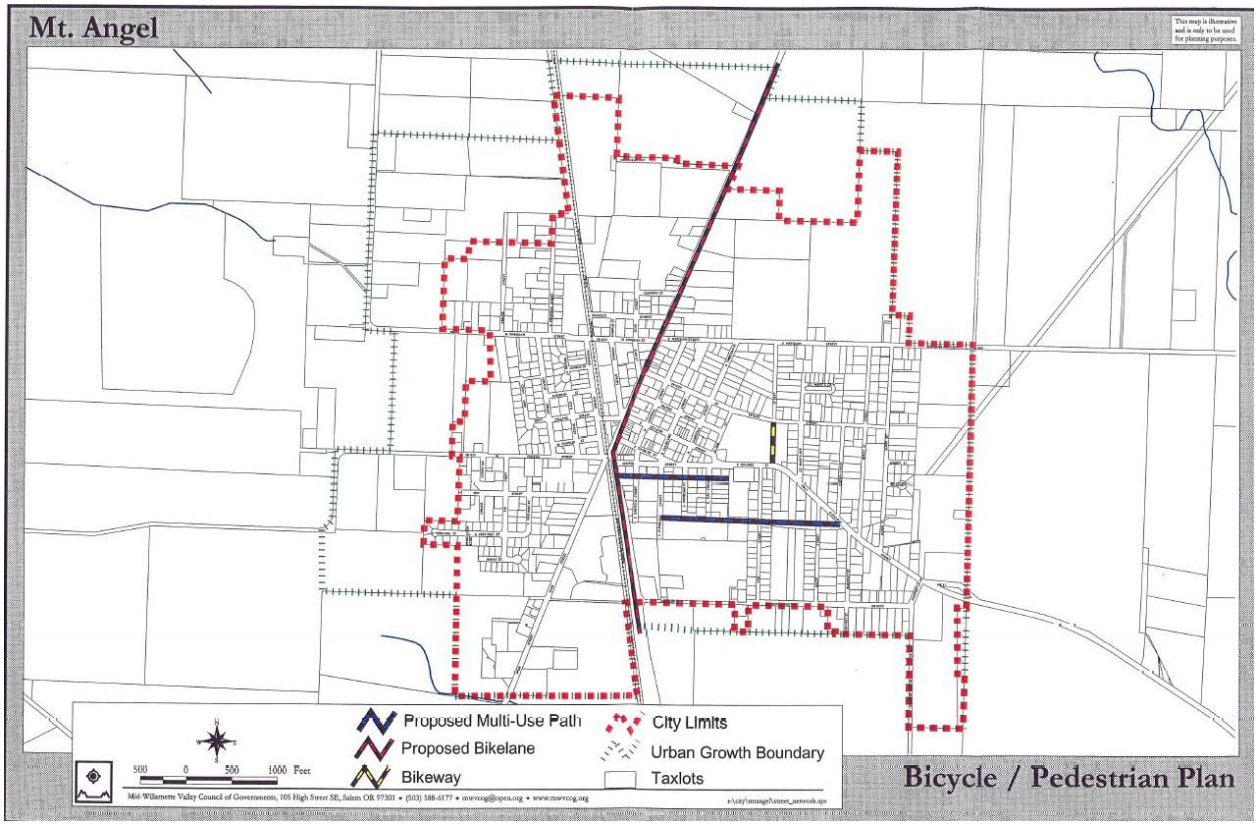
Willamette Valley Railway Company, Marion County and the city of Mt Angel.

- No-Build Alternative: The No-Build alternative leaves the intersection in its existing configuration, which includes four stop control intersections.
- Signalized Intersection Alternative: This alternative includes realigning Main Street and Railroad Avenue to west of the existing intersection, extending the existing island, channelizing the Highway 214 southbound right turns from Highway 214 onto Church Street
- Roundabout Alternative(s): This alternative includes two options both of which close off Railroad Avenue. Option One is a five leg/single-lane roundabout with the railroad crossing through it while Option Two is a four leg/single lane roundabout offset to east of the railroad.

4. East-West Street from Pershing Street NW to Marquam Street NW (Gervais-Mt Angel Highway)- Movement on the west side of the city. The street will provide an important connection between the city's two east-west collectors and would serve the access needs for the planned for low-density residential development.

5. North-South Street from Marquam Street NW to new north-south connection between Marquam Street NW and N. Pershing Street - This street is important for north-south traffic in the northwest portion of the UGA and will serve low density residential development in this portion.

Figure 1: Mt Angel Bicycle/Pedestrian Plan



MT ANGEL DOWNTOWN PLAN (2001)

Developed in 2001, the Mt Angel Downtown Plan sought to coordinate and expand upon several existing plans. It largely focuses on revitalization efforts, strengthening the connection between the downtown and the highway (mainly through intersection improvements). The Downtown Plan was adopted into the Comprehensive Plan and integrated into the Development Code in 2001 (Ordinance No. 679).

The plan identifies that despite sidewalks and crosswalks on Highway 214 and Main Street throughout the downtown study area, traffic volumes and speeds reportedly make it difficult to cross the street as a pedestrian, particularly at the following intersections:

- Highway 214/Main/Church intersection
- Main and Charles streets
- Main and College streets

The Downtown Plan Task Force identified the following issues:

- Connectivity to and across Main Street, particularly for pedestrians
- Local street/highway intersections
- Downtown accessibility for bicyclists

Recommended Improvements:

Improve access and connectivity downtown

- Close College St between Railroad Ave. & Main St.
- Despite of a low actual crash rate, the intersection of Main Street/College Street/ Monroe Street is confusing and uncomfortable for motorists and pedestrians.

Improve pedestrian access across Highway 214.

- Use more visible continental striping at intersections.

Improve Charles St and Highway 214 pedestrian crossing.

- Extend textured concrete across Highway 214. Include curb extensions to shorten crossing distances and increase pedestrian visibility to motorists.
- The advantage of this improvement is that it could have a strong slowing effect on highway traffic, increase pedestrian comfort and safety and emphasize the presence of downtown

Add missing sidewalk on Highway 214, between Charles Street and Railroad Avenue.

- Infilling this section of sidewalk is important to completing the pedestrian network through downtown Mt Angel.

Increase bicycle access downtown

- Add bike lanes to Highway 214 (Main St)
- Highway 214 is the main route through the area. The TSP mentions the need for bike lanes on the Highway. Adding bike lanes would also conform with state policy to include them on urban highway sections.
- Note: Based on traffic speed and volume and according to current guidance from ODOT's Blueprint for Urban Design, including a shared lane bike facility on Highway 214 may not be recommended. Additionally, Mt Angel's SRTS Task Force indicated concern that Highway 214 has too much traffic to safely accommodate a bike lane.

MARION COUNTY SAFE ROUTES TO SCHOOL ENGINEERING SOLUTIONS

Mt Angel Middle and JFK High School Data Evaluation Summary: Needs, gaps and barriers to students walking or bicycling to school.

Missing sidewalk locations (excluding cul-de-sac locations, short dead ends, NCR's and private roads)

- North side Marquam Rd east from Main St. to 1020 Marquam Road NE (2701')
- South side Marquam Rd east from Alder St. to 1075 Marquam Road NE (320')

- North side Marquam Rd west from Monroe to 455 Marquam Rd (385')
- North side Marquam Rd west from 895 Marquam to Mt Angel-Gervais Rd (1240')
- South side Marquam Rd west from Main St to 640 Marquam Rd (1235')
- South side Marquam Rd west from 12494 to 12464 Mt Angel-Gervais Rd (1200')
- East side Hwy 214 north from S. Garfield St to 105 N. Main St. (465')
- East side Hwy 214 north from 765 N Main to UGB (820')
- West side Hwy 214 south from 11341 Hwy 214 to 830 N Main St. (2240')
- West side Hwy 214 south from 570 Hwy 214 to Johns St. (580')
- West side Hwy 214 south from 190 S Main to Academy St. (1530')

Crosswalk needs

- Marquam Road NE at west entrance to High School parking lot
- Elm St at Marquam Road NE

Missing or inadequate ADA ramps

Bike lane needs (on collectors and arterials only)

- North side Marquam Rd east from Main St to 1020 Marquam Rd (2700')
- South side Marquam Rd east from Main St to 1075 Marquam Rd (2850')
- North side Marquam Rd west Mt Angel-Gervais Rd (3087')
- South side Marquam Rd west to Mt Angel-Gervais Rd (3025')
- East side Hwy 214 north from Academy St to the north UGB (3080')
- West side Hwy 214 north from Academy St to the north UGB (3530')

Sign needs

- Flashing crosswalk signs at Marquam and Main St.

Other

- Need crossing guard at Marquam and Main St.
- Need crossing guard at SR 214 and Church St.
- Separate bus zone away from parking lot for loading and unloading students
- Nowhere for a child to find help nearby.

Task 3.B Project Identification Summaries (2010)

County Projects

- Construct sidewalks on the north side of E Marquam St from N Main St east to east city limits. Project is within City limits. City Collector.
- North Side: Sidewalk 2700' (curb exists 2500'); Widening required 200'; R/W appears to be inadequate especially at cemetery; Possible major utility relocation; No ditch.
- Construct sidewalks on south side on E Marquam St from Alder St east to 1075 E Marquam St. Project is within City limits. City Collector.
- South Side: Sidewalk 320'; Widening required 320'; R/W appears adequate; No ditch.
- Construct bike lanes on E Marquam St from N Main St east to 1075 E Marquam St. Project is within City limits. City Collector.
- South Side: Bike lane 2850'; Widening required 320'; R/W appears adequate; No ditch. City Collector.
- North Side: Bike lane 2700'; Widening required 200'; R/W appears to be inadequate especially at cemetery; Possible major utility relocation; No ditch.
- Construct sidewalks and bike lanes where needed on E Marquam St from Railroad tracks west to 12464 Mt Angel-Gervais Rd. Project is within city limits. City Collector.
- South Side: Sidewalk 1675'; Bike lane 2150'; Widening required 1875'; R/W appears to be

inadequate; Possible major utility relocation & tree removal; No ditch. North Side: Sidewalk 1100' (curb exists 150'); Bike lane 2150'; Widening required 1850'; R/W appears to be inadequate on north end; Possible retaining wall relocation; No ditch.

- Install School Speed 20 Zone Flashing Lights on E Marquam St on the school frontage. City Collector.
- Evaluate crosswalks on E Marquam St near the schools. City Collector.
- Construct sidewalks and bike lanes where needed on W Marquam St from Main St west to Railroad tracks. Project is within City limits. City Collector.

State Projects

- Install School Speed 20 Zone Flashing Lights on SR 214/N Main St at E Marquam St. Project is within city limits. City Arterial.
- Construct 1000' of sidewalk on the west side of SR 214/N Main St from Industrial Way to existing sidewalks near 830 N Main St. R/W appears adequate, no ditch. Project is in City limits. City Arterial.
- Construct bike lanes on SR 214/N Main St from north city limits to south city limits. It appears that there is adequate pavement, but parking would need to be removed. City Arterial.
- East Side: Bike lane 3430'; Widening required 475'; R/W appears adequate; No ditch.
- West Side: Bike lane 4250'; No ditch.
- Construct 350' of sidewalks on the west side of SR 214/N Main St from Marquam St NE to Johns Street. Relatively flat, no ditches, mature landscaping. Project is in City limits. City Arterial.
- Construct sidewalks on the east side of SR 214/N Main St from north City limits to existing sidewalks near 765 N Main Street. Project is within city limits. City Arterial.
- East Side: Sidewalk 820'; R/W appears adequate; No ditch.
- Construct sidewalks on the east side of SR 214 from existing sidewalks south of Church Street to existing sidewalks near S Garfield Street. Project is within city limits. City Arterial.
- East Side: Sidewalk 580'; R/W appears adequate; No ditch.
- Construct sidewalks on the west side of SR 214 from Church Street to the south city limits. Project is within city limits. City Arterial.
- West Side: Sidewalk 2750'; adjacent to RR tracks; no development in this area.

Previous SRTS Efforts or Walking/Biking Encouragement Activities

EDUCATION AND ENGAGEMENT ACTIVITIES

Mt Angel has a significant student population that could walk or bike to school with the right combination of infrastructure investments and education or outreach programs. The subject area has many intersections that are not ADA -compliant and create barriers for access to schools and other public agencies.

Education and Engagement Activities

The City of Mt Angel School Resource Officer (SRO) has provided bike safety education classes to the school district. The SRO program is currently on hold as a result of the COVID-19 pandemic. The Mt. Angel Police Department is considering alternative programming to fill the need in the community.

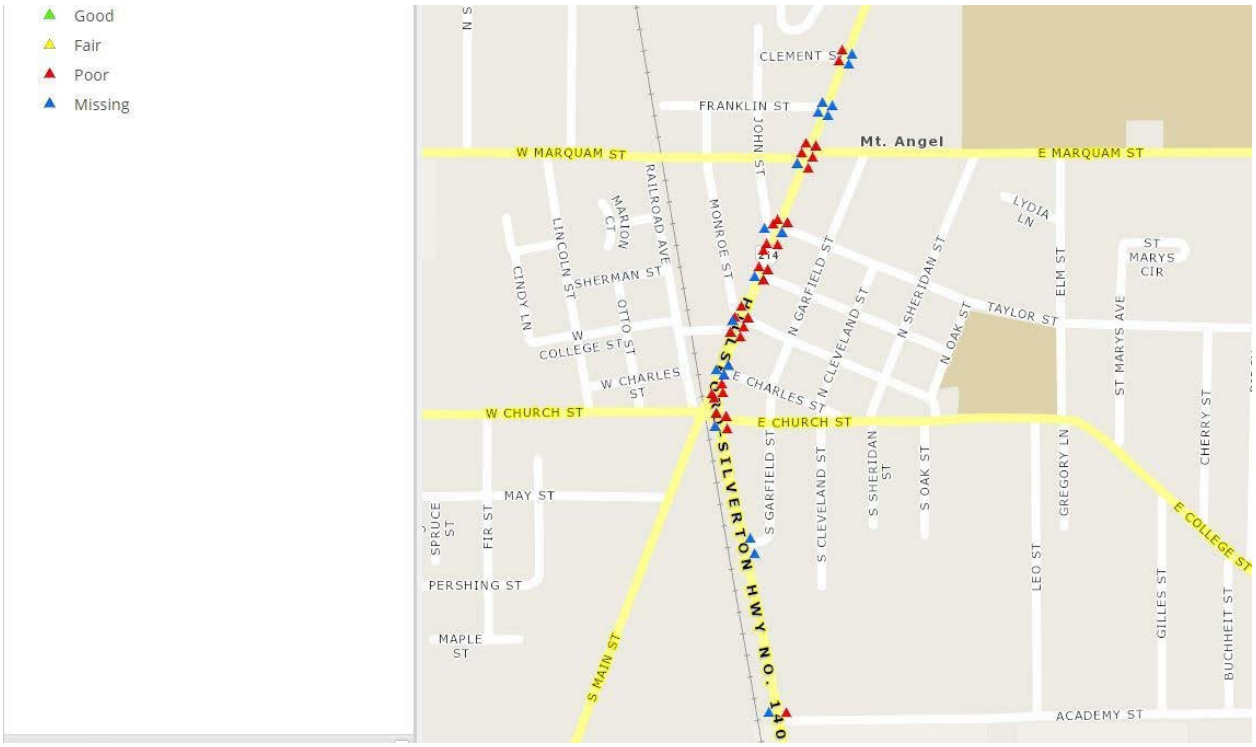
Construction Activities

The City will be reformulating a sidewalk repair program and align new program criteria with a focus on safe routes to schools. The program is a "carrot and stick" approach of matching funds and enforcement of sidewalks in poor condition. The City installed sidewalks on city owned properties in 2020 that was part of a citywide sidewalk inventory conducted in March 2020. In addition, the City was awarded a Small Cities Allotment (SCA) grant.

Crash History

From 2014 to 2018, there were three reported crashes involving a bike or pedestrian in the vicinity of the focus schools. However, it's important to note that this does not account for near-misses and hazards that may result in future collisions.

Figure 1: Mt Angel ADA Curb Ramp Conditions Map



VEHICLE COLLISIONS WITH PEOPLE WALKING AND BIKING

2014 - 2018

MT ANGEL MIDDLE SCHOOL

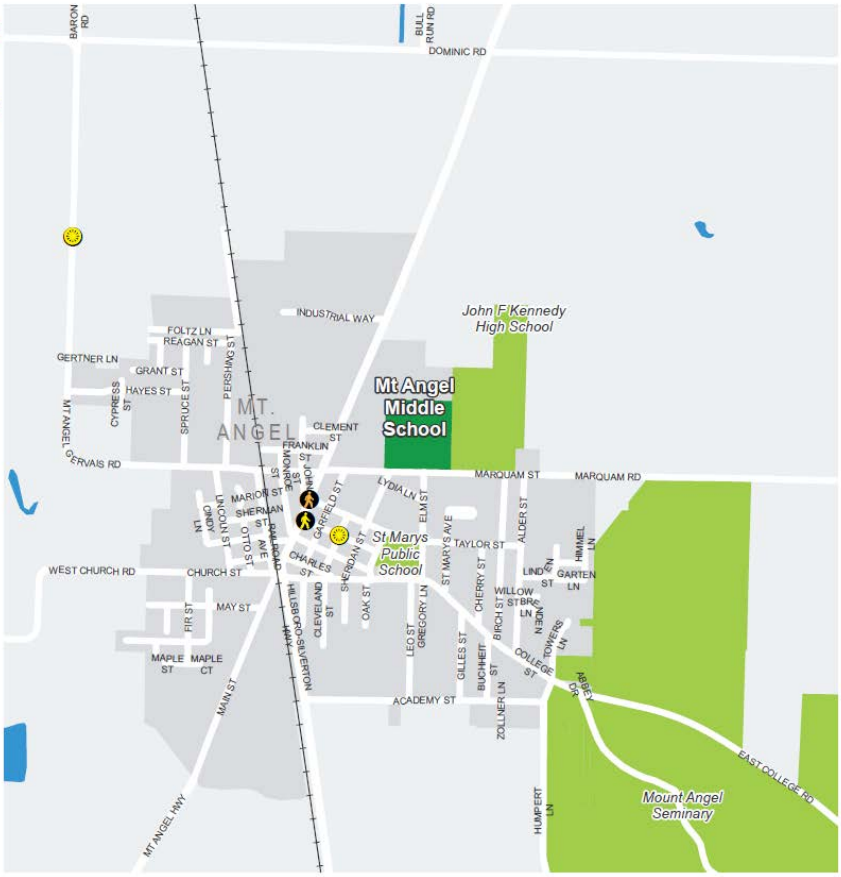
School
Other School
Water
City Boundary
Railroad

Pedestrian Collisions

Pedestrian Injury
2 or more Pedestrian Injuries
Pedestrian Fatality

Bicyclist Collisions

Bicyclist Injury
2 or more Bicyclist Injuries
Bicyclist Fatality



Data Source: Oregon Spatial Data Library, Crash Analysis and Reporting Unit, ODOT 2008-2018

APPENDIX E. FUNDING AND IMPLEMENTATION

This section lists a variety of funding sources that can be used to implement the recommendations outlined in Chapter 4. These funding sources are accurate as of July 2021, but may change over time. Please refer to ODOT or other funding jurisdictions website for the most up to date information.

This section also includes a table outlining planning-level cost estimates for the recommended priority projects.

Statewide Funding Opportunities

ODOT SRTS 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, a rapid response infrastructure grant, and an education (non-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 students 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-Competitive-Infrastructure-Grant.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-Rapid-Response-Grant-Program.aspx.

EDUCATION GRANT

In addition to funding construction improvements for Safe Routes to School programs, ODOT reserves approximately $300,000 annually for funding of SRTS Education programs and projects that encourage students in grades K-8 to walk and roll to school. This competitive grant program distributes funding to a project over the course of two to three years with a 12% match requirement. Grant funds are traditionally used for capacity building and innovation. For more information, visit https://www.oregon.gov/ODOT/Programs/Pages/SRTS.aspx.

SMALL CITY ALLOTMENT PROGRAM (SCA)

The Small City Allotment Program is available to communities with less than 5,000 residents. One application may be submitted per city per year, and successful projects may receive up to $100,000. Successful applicants may request an advance of up to 50% of their award and will receive the remainder of their award upon submission of project invoices. An awardee may not have more than two active SCA projects at any given time; if the awardee has two active projects, another application cannot be submitted until one is completed. SCA funds can be used as a match for SRTS grant funding, but the SRTS grant has to have already been awarded prior to the request for SCA funds as match. SCA projects must be completed within two years from the agreement execution date. For example, if a community receives a SRTS grant award and an SCA grant for matching funds, chances are they may need to extend the SCA grant to coordinate with the SRTS project work. This is permitted, but the SCA award would be considered an open project until the SRTS project was closed out. Also important to note, the SCA program does not require any matching funds. The state cannot reimburse for any right of way or utility costs, and all work must be performed within the public road right of way. For more information, visit https://www.oregon.gov/ODOT/LocalGov/Documents/SCA-Guidelines.pdf

OREGON COMMUNITY PATHS PROGRAM

The Oregon Community Paths Program (OCP) is funding 21 off-road Active Transportation projects totaling $15 million in 2021. Through the OCPP, ODOT strives to fund projects for pedestrian and bicycle transportation projects including the development, construction, reconstruction, resurfacing, or other capital improvement of multi-use paths, bicycle paths, and footpaths that improve access and safety for people walking and bicycling. The program is funded through FHWA Transportation Alternatives funds, and state Multi-modal Active Transportation funds. For more information visit https://www.oregon.gov/ODOT/Programs/Pages/OCP.aspx

TRANSPORTATION AND GROWTH MANAGEMENT (TGM) FUNDS

TGM supports community efforts to expand transportation choices by linking land use and transportation Planning. TGM services include an annual competitive grant program for Planning work leading to local policy decisions for transportation facilities and services or for land uses with supportive transportation changes. The grant application period opens in the Spring and closes in the Summer. In addition to grants, TGM provides several other non-competitive services to help resolve land use and transportation Planning issues: Quick Response to bridge the gap between long range Planning and development of specific properties, Code Assistance to identify and remove barriers to smart growth, Transportation System Plan (TSP) Assessments to evaluate local TSPs, and Education and Outreach projects to move community conversations forward. For more information visit https://www.oregon.gov/lcd/TGM

STATE TRANSPORTATION IMPROVEMENT FUND (STIF)

Walking and biking connections to transit are eligible under ODOT's STIF Discretionary and Statewide Network Program, a new fund for transit started in 2018. STIF formula and discretionary funds may be used to support projects that connect pedestrians and bikers to public transit. This fund program was created in response to HB 2017 and funds are dispersed every two years. For more information visit https://www.oregon.gov/odot/RPTD/Pages/Funding-Opportunities.aspx

CONGESTION MITIGATION AND AIR QUALITY (CMAQ) PROGRAM

The CMAQ program is jointly administered by the FHWA and FTA, with projects selected by local jurisdictions designated as high pollution areas. Bike/pedestrian projects make up a significant portion of the funded projects, which must focus on air quality improvement. For more information visit www.fhwa.dot.gov/environment/air_quality/cmaq/

Federal Funds

Some federal funding sources may be available to certain communities and can be used for Safe Routes to School projects. Such as:

- 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 programing 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 AND THE TSP

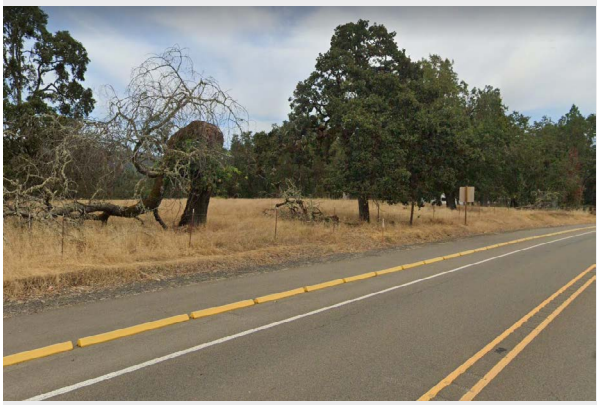
Cities and counties undergoing transportation system Plan updates should consider including a section on their Plans and priorities for Safe Routes to School infrastructure upgrades and programming to identify project expenses well in advance and allow ample time to gather project funding.

QUICK BUILDS

Quick Builds 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 Quick Build 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, Quick Builds can last for several hours to several months.

PEDESTRIAN FACILITY EXAMPLES

Curb-separated pedestrian facility 1175 Coos Bay-Roseburg Hwy, Winston Oregon. Source: Google Maps



Curb and bollard separated sidewalk (at grade) 211 N Thielson St, Echo Oregon. Source: Google Maps

For more information regarding pedestrian lane design, see the Small Town and Rural Design Guide Facilities for Walking and Biking

https://ruraldesignguide.com/

Priority Project Cost Estimates

The following pages include Planning-level cost estimates for the recommended projects in Mt. Angel. While these projects are not the focus of the 2022 safe routes to school grant application cycle, they are a priority for the City of Mt. Angel to complete in the future.

Table 4. City of Mt. Angel Prioritized Project Cost Estimates

ITEM DESCRIPTION	MEASUREMENT	COST/UNIT	UNITS	ESTIMATE
Project				
MOBILIZATION	10%	$117,900	1	$117,900
TRAFFIC CONTROL	15%	$176,800	1	$176,800
EROSION CONTROL	2%	$23,600	1	$23,600
1) INTERSECTION PEDESTRIAN CROSSING IMPROVEMENTS (MAIN ST AT MARQUAM ST)				
REMOVE ASPHALT PAVEMENT	SF	$5	1240	$6,200
REMOVE CONCRETE CURB	LF	$6	140	$840
REMOVE CONCRETE SIDEWALK	SF	$7	290	$2,030
REMOVE CATCH BASIN	EA	$500	1	$500
RELOCATE EXISTING SIGN & POST	EA	$200	4	$800
INSTALL CATCH BASIN	EA	$10,000	2	$20,000
INSTALL AGGREGATE BASE	CY	$60	3	$180
INSTALL CONCRETE CURB	LF	$40	180	$7,200
INSTALL ASPHALT PAVEMENT	TON	$230	27	$6,210
INSTALL CONCRETE SIDEWALK	SF	$20	120	$2,400
INSTALL ADA CURB RAMP	EA	$6,000	6	$36,000
INSTALL MARKED CROSSWALK	SF	$15	360	$5,400
INSTALL SET OF RRFB ASSEMBLIES - POST-MOUNTED	EA	$25,000	1	$25,000
INSTALL STREET LIGHT	EA	$10,000	3	$30,000
2) INTERSECTION PEDESTRIAN CROSSING IMPROVEMENTS (MAIN ST AT COLLEGE/MONROE ST)				
REMOVE ASPHALT PAVEMENT	SF	$5	1125	$5,625
REMOVE CONCRETE CURB	LF	$6	180	$1,080
REMOVE CONCRETE SIDEWALK	SF	$7	800	$5,600
INSTALL CATCH BASIN	EA	$10,000	2	$20,000
INSTALL CONCRETE CURB	LF	$40	180	$7,200

ITEM DESCRIPTION	MEASUREMENT	COST/UNIT	UNITS	ESTIMATE
INSTALL ASPHALT PAVEMENT	TON	$230	27	$6,210
INSTALL CONCRETE SIDEWALK	SF	$20	1140	$22,800
INSTALL ADA CURB RAMP	EA	$6,000	10	$60,000
INSTALL MARKED CROSSWALK	SF	$15	900	$13,500
INSTALL STREET LIGHT	EA	$10,000	5	$50,000
3) SIDEWALK INFILL AND RECONSTRUCTION (NORTH SIDE OF MARQUAM ST, RAILROAD AVE TO MAIN ST)				
REMOVE ASPHALT PAVEMENT	SF	$5	338	$1,690
REMOVE CONCRETE CURB	LF	$6	71	$426
REMOVE CONCRETE SIDEWALK	SF	$7	218	$1,526
INSTALL CONCRETE CURB	LF	$40	71	$2,840
INSTALL CONCRETE SIDEWALK	SF	$20	355	$7,100
INSTALL ASPHALT PAVEMENT	TON	$230	11	$2,530
4) SIDEWALK INFILL (SOUTH SIDE OF MARQUAM ST, MAIN ST TO SHERIDAN ST)				
REMOVE ASPHALT PAVEMENT	SF	$5	480	$2,400
REMOVE CONCRETE CURB	LF	$6	160	$960
REMOVE CONCRETE SIDEWALK	SF	$7	1280	$8,960
INSTALL CONCRETE CURB	LF	$40	160	$6,400
INSTALL CONCRETE SIDEWALK	SF	$20	1280	$25,600
INSTALL ASPHALT PAVEMENT	TON	$230	24	$5,520
5) SIDEWALK INFILL (NORTH SIDE OF MARQUAM ST, SHERIDAN ST TO MIDDLE SCHOOL)				
INSTALL AGGREGATE BASE	CY	$60	55	$3,300

ITEM DESCRIPTION	MEASUREMENT	COST/UNIT	UNITS	ESTIMATE
INSTALL CONCRETE SIDEWALK	SF	$20	2220	$44,400
6) INTERSECTION PEDESTRIAN CROSSING IMPROVEMENTS (MARQUAM ST AT GARFIELD ST)				
REMOVE ASPHALT PAVEMENT	SF	$5	175	$875
REMOVE CONCRETE CURB	LF	$6	10	$60
REMOVE CONCRETE SIDEWALK	SF	$7	50	$350
REMOVE PAVEMENT MARKING	SF	$5	10	$50
RELOCATE EXISTING SIGN & POST	EA	$200	1	$200
INSTALL AGGREGATE BASE	CY	$60	7	$420
INSTALL CONCRETE CURB	LF	$40	50	$2,000
INSTALL ASPHALT PAVEMENT	TON	$230	8	$1,840
INSTALL CONCRETE SIDEWALK	SF	$20	150	$3,000
INSTALL ADA CURB RAMP	EA	$6,000	4	$24,000
INSTALL MARKED CROSSWALK	SF	$15	120	$1,800
INSTALL 1' WIDE STOP LINE	LF	$15	12	$180
INSTALL STREET LIGHT	EA	$10,000	1	$10,000
7) INTERSECTION PEDESTRIAN CROSSING IMPROVEMENTS (MARQUAM ST AT SHERIDAN ST)				
REMOVE ASPHALT PAVEMENT	SF	$5	364	$1,820
REMOVE CONCRETE CURB	LF	$6	41	$246
REMOVE CONCRETE SIDEWALK	SF	$7	90	$630
REMOVE PAVEMENT MARKING	SF	$5	150	$750
RELOCATE EXISTING SIGN & POST	EA	$200	2	$400
INSTALL AGGREGATE BASE	CY	$60	13	$780
INSTALL CONCRETE CURB	LF	$40	38	$1,520
INSTALL ASPHALT PAVEMENT	TON	$230	564	$129,720

ITEM DESCRIPTION	MEASUREMENT	COST/UNIT	UNITS	ESTIMATE
INSTALL CONCRETE SIDEWALK	SF	$20	50	$1,000
INSTALL ADA CURB RAMP	EA	$6,000	2	$12,000
INSTALL MARKED CROSSWALK	SF	$15	260	$3,900
INSTALL 1' WIDE STOP LINE	LF	$15	10	$150
INSTALL STREET LIGHT	EA	$10,000	1	$10,000
8) INTERSECTION PEDESTRIAN CROSSING IMPROVEMENTS (MARQUAM ST AT ELM ST)				
REMOVE ASPHALT PAVEMENT	SF	$5	120	$600
REMOVE CONCRETE CURB	LF	$6	40	$240
REMOVE CONCRETE SIDEWALK	SF	$7	150	$1,050
RELOCATE EXISTING SIGN & POST	EA	$200	3	$600
INSTALL AGGREGATE BASE	CY	$60	2	$120
INSTALL CONCRETE CURB	LF	$40	40	$1,600
INSTALL ASPHALT PAVEMENT	TON	$230	6	$1,380
INSTALL CONCRETE SIDEWALK	SF	$20	200	$4,000
INSTALL ADA CURB RAMP	EA	$6,000	3	$18,000
INSTALL MARKED CROSSWALK	SF	$15	96	$1,440
INSTALL 1' WIDE STOP LINE	LF	$15	13	$195
INSTALL STREET LIGHT	EA	$10,000	3	$30,000
9.1) PEDESTRIAN LIGHTING (MARQUAM ST SOUTH SIDE, MAIN ST TO SHERIDAN ST)				
INSTALL STREET LIGHT	EA	$10,000	11	$110,000
9.2) PEDESTRIAN LIGHTING (MARQUAM ST NORTH SIDE, SHERIDAN ST TO ELM ST)				
INSTALL STREET LIGHT	EA	$10,000	6	$60,000
9.3) PEDESTRIAN LIGHTING (MARQUAM ST NORTH SIDE, ELM ST TO BIRCH ST)				
INSTALL STREET LIGHT	EA	$10,000	13	$130,000
9.4) PEDESTRIAN LIGHTING (MARQUAM ST NORTH SIDE, RAILROAD AVE TO MAIN ST)				
INSTALL STREET LIGHT	EA	$10,000	11	$110,000

ITEM DESCRIPTION	MEASUREMENT	COST/UNIT	UNITS	ESTIMATE
10) MIDBLOCK PEDESTRIAN CROSSING IMPROVEMENTS (MARQUAM ST WEST OF HIGH SCHOOL)				
REMOVE ASPHALT PAVEMENT	SF	$5	90	$450
REMOVE CONCRETE CURB	LF	$6	30	$180
REMOVE CONCRETE SIDEWALK	SF	$7	150	$1,050
INSTALL AGGREGATE BASE	CY	$60	4	$240
INSTALL CONCRETE CURB	LF	$40	30	$1,200
INSTALL ASPHALT PAVEMENT	TON	$230	5	$1,150
INSTALL CONCRETE SIDEWALK	SF	$20	150	$3,000
INSTALL ADA CURB RAMP	EA	$6,000	2	$12,000
INSTALL MARKED CROSSWALK	SF	$15	160	$2,400
INSTALL CROSSWALK WARNING SIGN	EA	$500	2	$1,000
INSTALL STREET LIGHT	EA	$10,000	2	$20,000
11) INTERSECTION PEDESTRIAN CROSSING IMPROVEMENTS (MARQUAM ST AT BIRCH ST)				
REMOVE PAVEMENT MARKING	SF	$5	24	$120
RELOCATE EXISTING SIGN & POST	EA	$200	1	$200
SUBTOTAL				**$1,496,633**
Additional Costs				
CONSTRUCTION ENGINEERING	15% of SUBTOTAL	$224,500	1	$224,500
CONTINGENCY	30% of SUBTOTAL & CONSTRUCTION ENGINEERING	$516,400	1	$516,400
TOTAL CONSTRUCTION COST				**$2,237,533**
SOFT COSTS (DESIGN ENGINEERING)	15% of SUBTOTAL	$224,500	1	$224,500
ROW	-	$-	0	$-
TOTAL PROJECT COST				**$2,462,033**

Note that for many of the prioritized projects in Mt. Angel, stormwater management systems are included in the cost estimates which can be expensive relative to other components of the recommended infrastructure. The benefits of stormwater management are not explicitly listed in this Safe Routes to School plan but their positive impact may help to justify the costs associated with the recommended improvements.

Additionally, for projects greater than $2.5M, design fee estimates could be modified to 12% of the total due o efficiencies on large projects (However, the table above uses a conservative estimate of 15% of the total).