MCKINLEYVILLE MULTIMODAL CONNECTIONS PROJECT

March 2023

PREPARED FOR

County of Humboldt

MARK THOMAS

Acknowledgements

The McKinleyville Multimodal Connections Project was funded through a Sustainable Transportation Planning Grant provided by the California Department of Transportation (Caltrans). The County of Humboldt, in collaboration with multidisciplinary partner agencies and stakeholders, collaborated to create a plan with concept designs for enhanced walking and bicycling connectivity between McKinleyville and community destinations to south of the Mad River. This project arose from McKinleyville Municipal Advisory Committee public meetings and has strong community support. The study was managed by Tom Mattson of the County's Department of Public Works. Community outreach and engagement was performed by Redwood Community Action Agency (RCAA). A consulting team led by Mark Thomas and RCAA advanced the project and prepared the final report. A Project Task Force (PTF) was established to help identify key issues and guide development of project recommendations.

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Table of Contents

Acknowledgements 1
Executive Summary 4
Project Study Area 5
Background Review 7
Community Demographics 9
Existing Conditions 10
Multimodal Improvements 16
Countermeasure Toolbox 16
Recent and Ongoing Off-Street Improvements 23
Recent and Ongoing On-Street Improvements 26
Planned Land Development Projects 28
Public Engagement 29
Phase 1 29
Phase 2 34
Project Needs and Recommendations 37
Project Area Focus Corridors 37
Azalea Avenue 38
Central Avenue 40
Hiller Road 43
Mad River Road, Miller Lane, and Heindon Road 45
McKinleyville Avenue 47
North Bank Road 49
Ocean Avenue 51
School Road 52
Washington Avenue 53
Transit Access Improvements 54
Central Avenue South Long-Term Alternative Alignments 55
Connectivity to North Arcata 63
Future Planning and Engineering Design Efforts 63
Connectivity to Annie & Mary Trail 64
East-West Connectivity Along the Mad River 64
Benefits to Disadvantaged Communities 64
Recommended Phasing 65
Next Steps 66
Conclusion 67
Appendices 68

List of Figures

Figure 1 McKinleyville Multi-Modal Connections Project – Project Area 6
Figure 2 Study Area Age of Population 9
Figure 3 Study Area Race and Ethnicity 9
Figure 4 Study Area Mode of Transportation to Work 9
Figure 5 Study Area Land Use in McKinleyville 10
Figure 6 Study Area Street Classifications in McKinleyville 11
Figure 7 Study Area Posted Speed Limits in McKinleyville 12
Figure 8 State-Owned Facilities Traffic Volumes (2018) 13
Figure 9 Pedestrian-Involved and Bicycle-Involved Collisions in McKinleyville (2015-2019) 14
Figure 10 HTA Redwood Transit Route, Stops, and Average Ridership (2022) in McKinleyville 15
Figure 11 Demographic results Survey 1: Age 30
Figure 12 Demographic results Survey 1: Race 30
Figure 13 Photovoice Activity Submissions 32
Figure 14 Central Avenue Cross Section Options 42
Figure 15 Central Avenue Between Henry Lane and North Bank Road – Existing Conditions Cross Section 55
Figure 16 Central Avenue South Long-Term Alternative Alignments 60
Figure 17 Central Avenue South Long-Term Alternative Alignments – Evaluation Results 62
Figure 18 Central Avenue Between Henry Lane and North Bank Road – Alternative Alignment 2 Cross Section 62

List of Tables

Table 1 Central Avenue South Long-Term Alternative Alignments Evaluation Metrics and Weighting 61
Table 2: Recommended Project Phasing and Estimated Cost 65
Table 3 Central Avenue South Long-Term Alternatives and Estimated Costs 66
Table 4 Near-Term Project Prioritization 66
Table 5 Medium-Term Project Prioritization 67

Table of Appendices

Appendix A: Existing Conditions Maps
Appendix B: Phase 1 Engagement: Presentations and Materials
Appendix C: Phase 2 Engagement: Presentations and Materials
Appendix D: Project Area Focus Corridors: Concept Cross Sections
Appendix E: Project Area Focus Corridors: Cost Estimates
Appendix F: Central Avenue South Long-Term Alternative Alignment Cost Estimates

Executive Summary

The County of Humboldt (County) and the Redwood Community Action Agency (RCAA) applied for and was awarded a Caltrans Sustainable Transportation Planning Grant in the Fiscal Year 2020-2021 Cycle. The application was submitted in cooperation with the McKinleyville Municipal Advisory Committee (MMAC). The Caltrans grant program encourages local and regional planning that furthers state goals, including, but not limited to, the goals and best practices cited in the Regional Transportation Plan Guidelines adopted by the California Transportation Commission.

The County, RCAA, and a consultant team led by Mark Thomas (MT) collaborated with community members, schools, social service organizations, and project partners to create the McKinleyville Multimodal Connections Project (MMCP). Multimodal improvement concepts were developed to promote connectivity between the unincorporated McKinleyville area, the fastest growing community in Humboldt County, and employment, schools, and community destinations around Humboldt Bay. The project kicked-off in the Spring of 2021 and included a comprehensive site analysis, public engagement, and concept development through the Fall of 2022.

The project team identified locations for enhancements to multimodal user facilities to improve travel by walking, bicycling, or utilizing other wheeled devices (mobility assistance devices, wheelchairs, strollers, etc.) in the project area. The project aims to foster transportation equity for disadvantaged community members, encourage active commuting, and support greenhouse gas reduction goals.

Through public outreach and engagement, a total of nine corridors within the project area were identified for focused improvements:

1. Azalea Avenue
2. Central Avenue
3. Hiller Road
4. Mad River Road, Miller Lane, and Heindon Road
5. McKinleyville Avenue
6. North Bank Road
7. Ocean Avenue
8. School Road
9. Washington Avenue

In addition, the project team performed an evaluation of seven alternative routes to provide a high quality active transportation connection between McKinleyville and the City of Arcata via connection to the existing 101 Mad River Bridge Bike Path from the intersection of Central Avenue and School Road (Central Avenue South Long-Term Alternative Alignments).

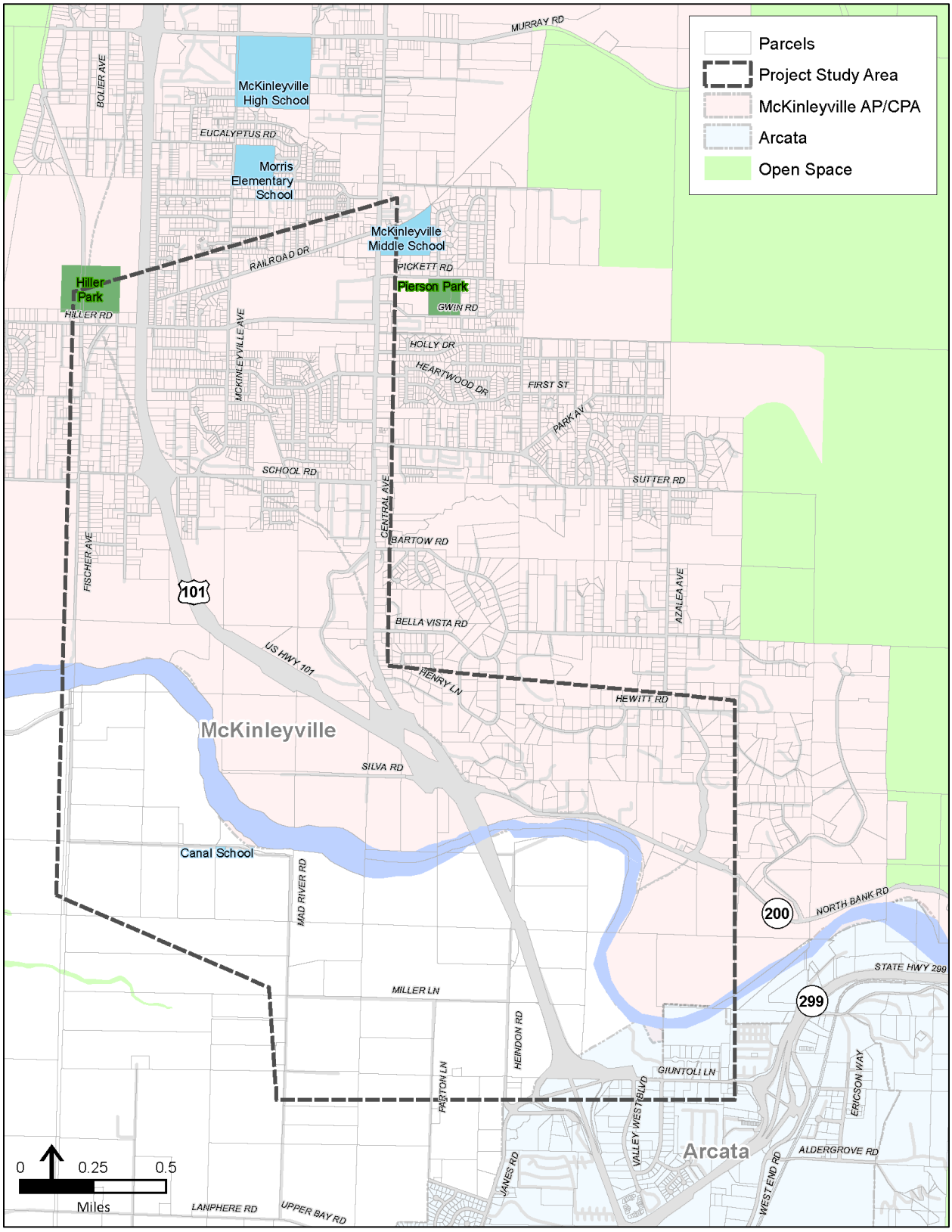
Project Study Area

Situated between California's Pacific Coast and the Klamath Mountains range, the County of Humboldt (County) is the 14th largest county in the State of California. It is surrounded by Del Norte County to the North, Trinity County to the East, Mendocino County to the South, the Pacific Ocean to the West, and is accessible by US-101 from the North and South and State Route 36 (SR-36) and State Route 299 (SR-299) from the East. Over 30% of the County is forested public and/or tribal lands, and less than 1% of the County's land mass is occupied by its incorporated cities including Trinidad, Arcata, Blue Lake, Eureka, Ferndale, Fortuna, and Rio Dell. Approximately 6% of the County land is owned and managed by Native American Tribes and Rancherias.

Approximately 35% of the County's population resides in unincorporated communities, while 65% reside in incorporated cities. The majority of unincorporated communities and incorporated cities within the County are established along US-101, with exceptions to the latter including Blue Lake along State Route 299 and Ferndale along State Route 211. The community of McKinleyville surrounds US-101 and is located just north of the Mad River and 5-miles north of the City of Arcata. McKinleyville approximately measures 4-5 miles east/west by 7-8 miles north/south for a total of 21 square-miles.

McKinleyville has a population of approximately 17,000 residents, or 12% of the County's population. The community is situated on a bluff overlooking the Pacific Ocean to the West, surrounded by Westhaven-Moonstone to the North, Klamath North Coast forests to the east, and the Mad River to the South. McKinleyville provides a variety of parks, trails, and beaches, all of which are enjoyed by residents and visitors.

Figure 1 McKinleyville Multi-Modal Connections Project – Project Area



Background Review

McKinleyville Transit Study (2021)

The McKinleyville Transit Study was prepared in 2021 to inform future investments in public transportation in and around McKinleyville. The study assessed the potential investment in fixed route transit service in McKinleyville. When accounting for public input, current demands, and costs for additional transit service, the study recommends introduction of microtransit service in the area. Monitoring of the microtransit ridership levels can be utilized to determine whether fixed route service could be introduced in the future.
https://www.mckinleyvilletransitstudy.com/uploads/1/3/3/7/133791725/2021_mckinleyville_transit_study_final_report_for_hcaog.pdf

MCSD Parks and Recreation Master Plan (2019)

The McKinleyville Community Services District (MCSD) Parks and Recreation Master Plan was adopted in 2019 to provide recreational facilities and programs to the district. The Plan serves as a planning tool for the MCSD Recreation Advisory Committee and MCSD staff to support development and funding strategies for priority projects used for funding decisions and grant applications. It can also be used by residents as a source of information on recreational opportunities. The Plan includes existing recreational facilities and level of service, opportunities and constraints for future planning, and goals and strategies for recreational projects.
https://www.yumpu.com/en/document/view/5383264/parks-recreation-master-plan-mckinleyville-community-services-

McKinleyville Middle School Walkability Report (2019)

In May 2019, the Humboldt County Department of Health and Human Services and RCAA held a Walkability Assessment attended by multiple stakeholders that identified constraints and barriers regarding walking and biking in the McKinleyville Middle School area. The resulting Walkability Report identifies areas of concern and recommends strategies for pedestrian, bicycle, vehicle, and wayfinding improvements around McKinleyville Middle School.
https://www.hcaog.net/sites/default/files/mck_ms_walkability_assessment_final_outcomes_final_reduced_file_size_.pdf

Humboldt Regional Bicycle Plan (2018)

The Humboldt County Association of Governments (HCAOG) developed the Humboldt Regional Bicycle Plan (HRBP) to facilitate regional projects and programs that support building an enhanced bikeway network throughout the County. The HRBC includes a framework of objectives to measure progress toward increasing quantity and quality of trips made by bicycle within Humboldt County.
https://www.hcaog.net/documents/humboldt-regional-bicycle-plan-2018

Humboldt County Circulation Element (2017)

The 2017 Humboldt County Circulation Element is included as part of Humboldt County's General Plan. The Element describes the existing transportation network and proposes transportation routes, terminals, and other local transportation facilities including bicycle and pedestrian improvements. The Circulation Element provides goals, policies, and implementation measures to reduce vehicle miles

traveled, enhance communities, increase opportunities for active and healthy lifestyles, and reduce greenhouse gas emissions.
https://humboldtgov.org/205/General-Plan

Humboldt County Variety in Rural Options of Mobility (2022-2042)
The Humboldt County Association of Governments adopted Variety in Rural Options of Mobility (VROOM) 2022-2042, its Regional Transportation Plan to facilitate State goals. VROOM advances the California State Transportation Agency's priority toward creating a sustainable multimodal transportation system to reduce individual vehicle trips and total miles traveled. The community was actively involved through public outreach and draft chapters were published as they were ready for stakeholder review. VROOM includes objectives and corresponding projects with a funding source, estimated cost, and implementation timeframe to facilitate better transportation options throughout Humboldt County.
https://www.hcaog.net/documents/regional-transportation-plan-vroom-2022-2042

Humboldt County Regional Trails Master Plan (2012)
The 2011 Regional Trails Master Plan was adopted in response to growing community demands for an enhanced active transportation network in Humboldt County. Input from the community through workshops and a focus group was utilized to create goals and policies that promote active transportation facility connections within and between communities. The plan provides development strategies, funding sources, and trail design guidelines to implement an active transportation network in Humboldt County.
https://www.hcaog.net/sites/default/files/bike_plan_2012_full_final_0.pdf

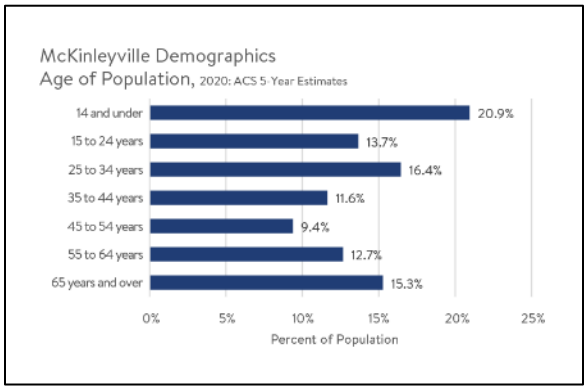
Humboldt County Regional Pedestrian Master Plan (2008)
The 2008 Regional Pedestrian Master Plan was developed to make walking an integral transportation mode within the County. Pedestrian network improvements were identified based on engagement with agency staff, the public, and community-based organizations. Corridor improvements in the McKinleyville area were identified along Washington Avenue, Hiller Road, and School Road.
https://www.hcaog.net/sites/default/files/2008_final_draft_-_hc_regional_ped_plan.pdf

Community Demographics

Age of Population

As the fastest growing unincorporated area of Humboldt County, McKinleyville is home to seventeen thousand (17,000) residents. Of those residents, 20.9% are 14 years old and under, 13.7% are between the ages of 15 to 24 years old, 16.4% are between the ages of 25 to 34 years old, 11.6% are between the ages of 35 to 44 years old, 9.4% are between the ages of 45 to 54 years old, 12.7% are between the ages of 55 to 64 years old, and 15.3% are age 65 years old and over.

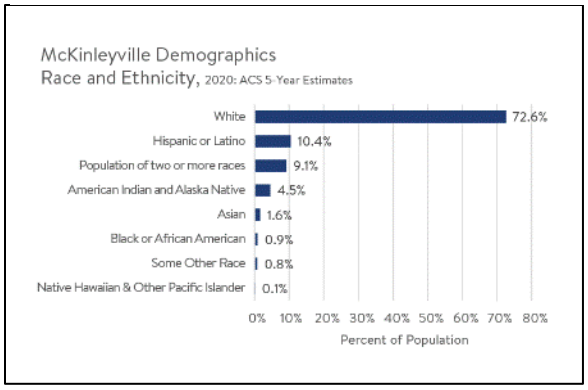
Figure 2 Study Area Age of Population



Race and Ethnicity

The five largest ethnic groups in McKinleyville are White (Non-Hispanic) (73%), Hispanic or Latino (10%), populations of two or more races (9%), American Indian or Alaska Native (Non-Hispanic) (5%), and Asian (Non-Hispanic) (2%).

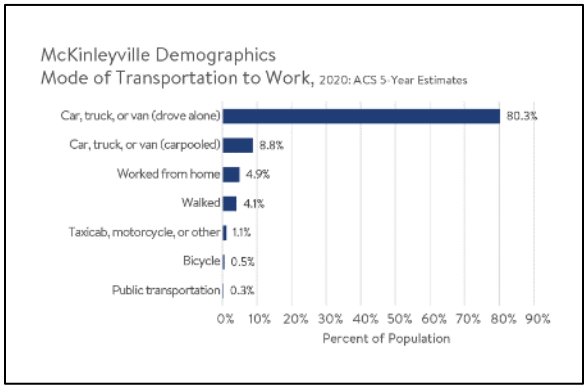
Figure 3 Study Area Race and Ethnicity



Mode of Commute to Work

According to available United States published Census data, 80.3% of persons over the age of 16 years commute alone to work by car, truck, or van and 8.8% carpooled. 4.1% of community members walked to work.

Figure 4 Study Area Mode of Transportation to Work



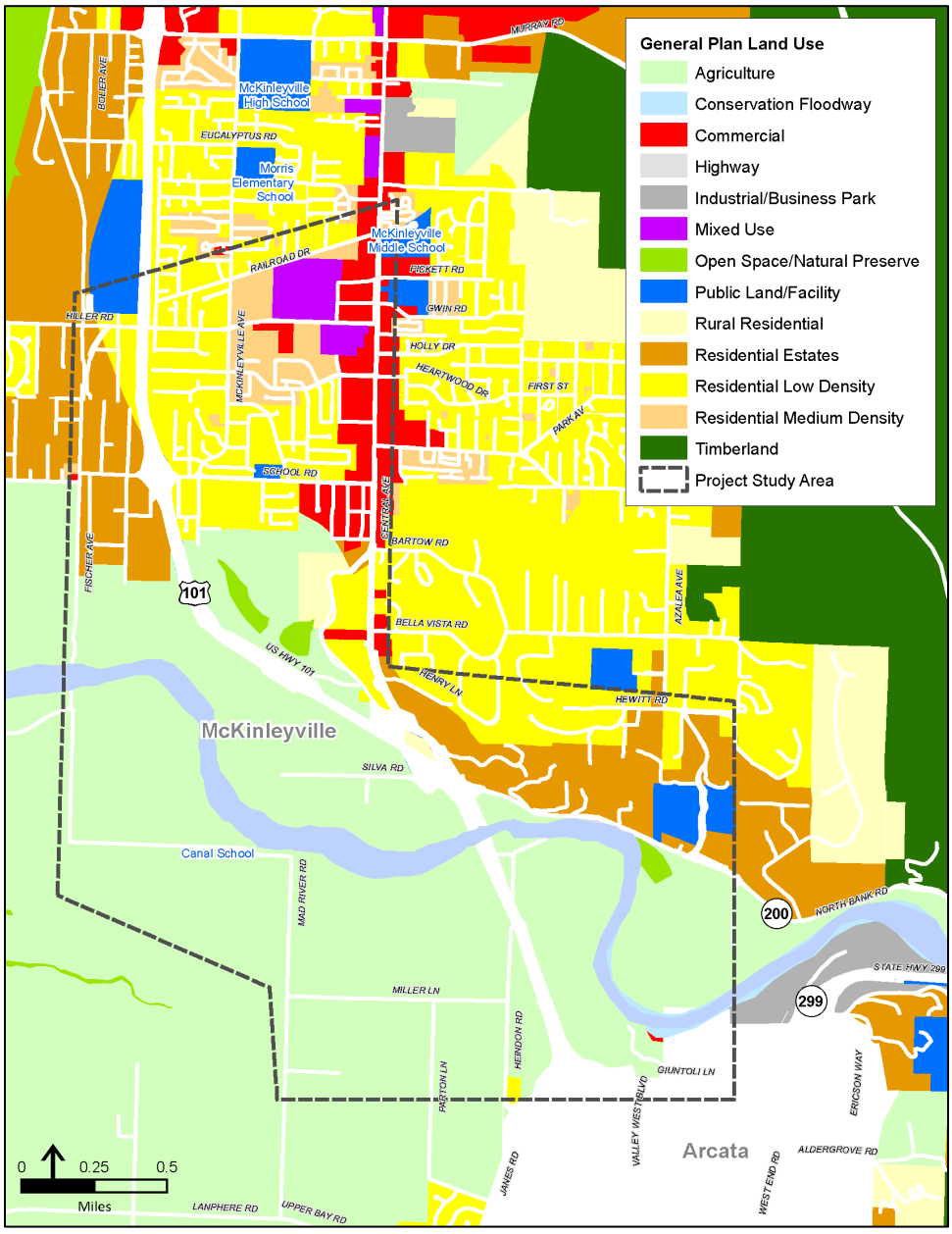
Existing Conditions

Land Use

McKinleyville is characterized by a commercial core along Central Avenue, stretching South from Murray Road to Bartow Road. Immediately surrounding the commercial core is a mixture of medium-density and low-density residential with some mixed-use and public land/facility properties throughout.

The project study area is bound by Railroad Drive, the Hammond Trail, south of Mad River, North Bank to Azalea Avenue and Central Avenue.

Figure 5 Study Area Land Use in McKinleyville



Roadway Classification

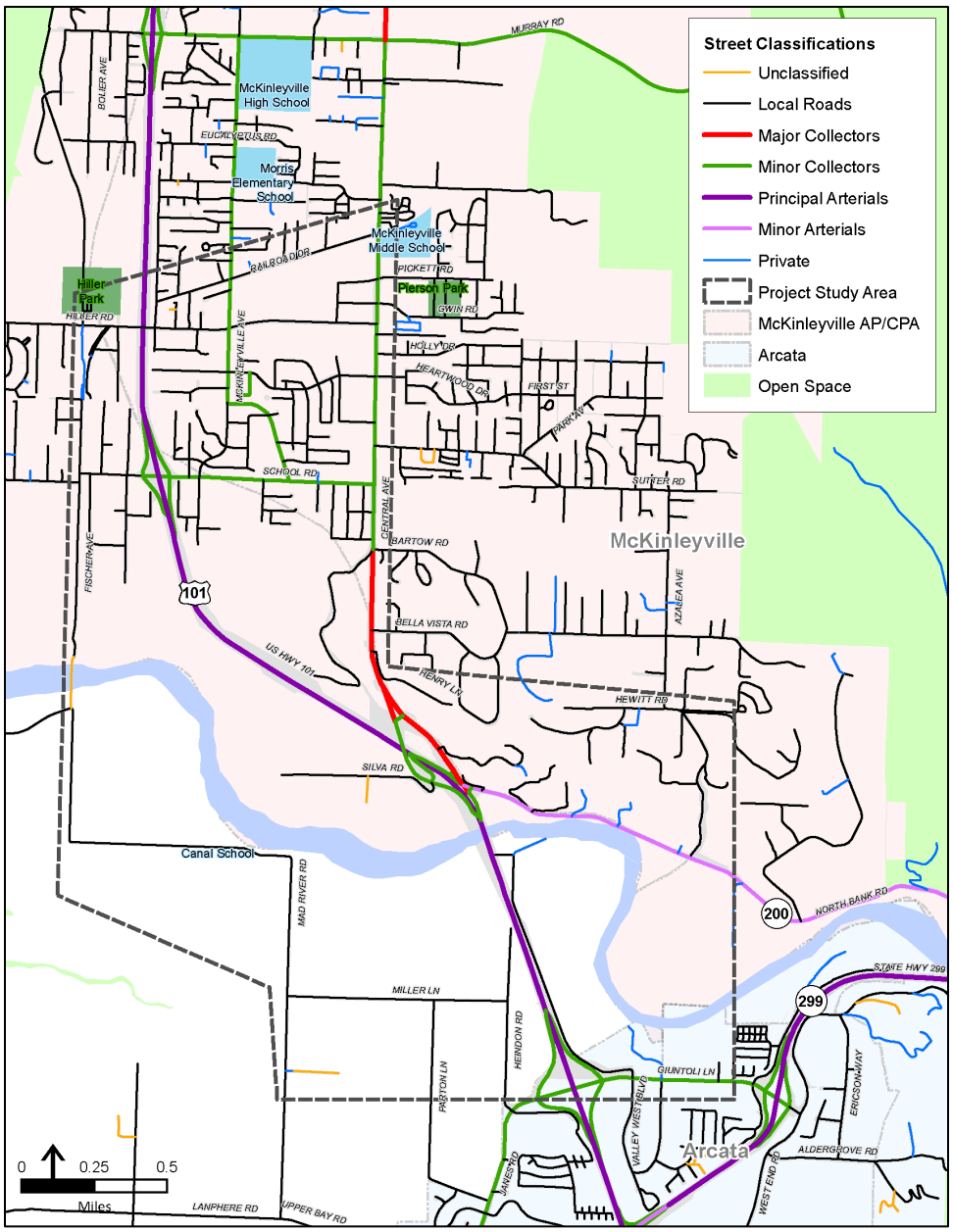
The majority of the roadways throughout McKinleyville and the project study area are classified as Local Roads. As defined by the County's Circulation Element, local roads are intended to provide access or entrance to residences.

Minor Collectors and Major Collectors are intended to move local traffic to and from Arterial Roads. There are four corridors classified as Minor Collectors within the project study area, including School Road, McKinleyville Avenue, Washington Avenue, and Central Avenue (North of Bartow Road). Central Avenue between Bartow Road and US-101/State Route 299 is the only Major Collector in the project area.

Arterials are intended to provide service between major traffic generators, such as Cities, large towns, and Highways. Within the project study area, North Bank Road is the only Minor Arterial and US-101 is the only Principal Arterial.

Caltrans owns and operates US-101 in the project area, as well as North Bank Road (State Route 200), and Central Avenue between North Bank Road and south of Henry Lane.

Figure 6 Study Area Street Classifications in McKinleyville



Posted Speed Limits

The posted speed limit is defined by the assigned roadway classification. Humboldt County assigns maximum speed limits as 25 miles per hour (MPH) for Local Roads, 35 MPH or less for Collectors, and 30-50 MPH for Arterials.

Figure 7 Study Area Posted Speed Limits in McKinleyville

Traffic Volumes

Travel volume data on US-101, North Bank Road [State Route 200 (SR 200)], and State Route 299 (SR 299) was provided by Caltrans in the vicinity of McKinleyville. Based on the available data it is estimated that up to 12,000 vehicles travel on Central Avenue, to and from the access ramp at Central Ave/US-101/SR 200 interchange, throughout a 24-hour period.

Caltrans also collected pedestrian and bicycle counts on the 101 Mad River Bridge Bike Path in 2014 and 2017. In each year counts were conducted on a Thursday, Saturday, and Sunday. The average number of users per day on the 101 Mad River Bridge Bike Path in 2014 was ten pedestrians and twenty-one bicyclists. The average number of users per day on the 101 Mad River Bridge Bike Path in 2017 was seven pedestrians and twenty-three bicyclists.

Figure 8 State-Owned Facilities Traffic Volumes (2018)

Collision History

Between 2015 and 2019, a total of twenty-eight collisions between a vehicle and a pedestrian or between a vehicle and a bicyclist occurred in McKinleyville. Approximately 2.2 collisions involving a bicyclist occurred each year, whereas 18% resulted in severe injury. Approximately 3.4 collisions involving a pedestrian occurred each year, whereas 36% resulted in a severe injury or fatality. All pedestrian fatalities occurred along Central Avenue and US-101 within the project area.

Figure 9 Pedestrian-Involved and Bicycle-Involved Collisions in McKinleyville (2015-2019)

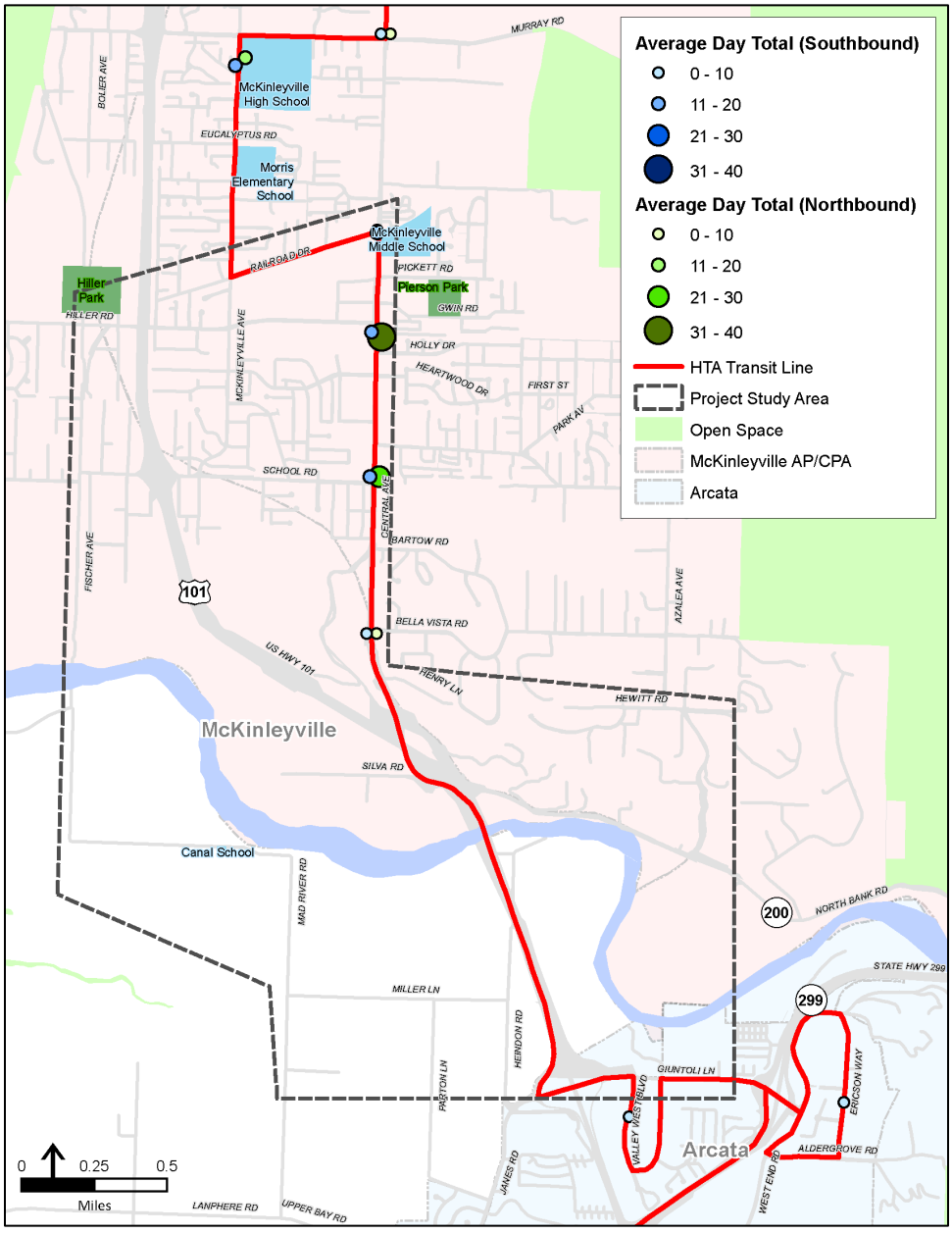
Transit Availability and Ridership

Transit data collected received from Humboldt Transit Authority (HTA) shows there is one transit route serving the project area. The Redwood Transit System (RTS) serves the communities of Scotia, Rio Dell, Fortuna, Fields Landing, King Salmon, Eureka, Arcata, McKinleyville, Westhaven, and Trinidad. The service runs six days of the week, Monday through Saturday. According to HTA, the RTS provides more than 600,000 passenger trips per Year. A total of eight RTS stops are located within the project area.

RTS data was acquired, averaged for daily ridership, and illustrated in Figure 10. The ridership shows that Northbound travel experiences the highest volume of boardings at the Central Ave/Hiller Rd intersection.

The second-highest volume of Northbound boarding is found at the Central Ave/School Rd intersection. There is minor variation of boarding volumes at the Southbound transit stops.

Figure 10 HTA Redwood Transit Route, Stops, and Average Ridership (2022) in McKinleyville



Multimodal Improvements

Countermeasure Toolbox

Based on background review, discussions with agency staff, and feedback from the community, the following improvement types were considered for implementation within the project area. While all improvements within the Countermeasure Toolbox may not be featured in the recommendations, the list will serve as a reference for future roadway improvement projects applicable throughout the County.

Shoulder Widening

Shoulder widening was considered for roadways with constrained conditions, such as limited right-of-way, sight clearances, or which are not owned nor operated by the County. Widening the roadway to include a shoulder or increase shoulder width can improve mobility by creating space for multi-modal users on corridors where standardized bicycle and pedestrian facilities require extensive planning or design.

An alternative to additional roadway paving is a combination of restriping roadway pavement markings and narrowing motor vehicle lane widths to provide widened shoulders. Narrowing motor vehicle lanes is recognized as a traffic calming tool to both slow motor vehicle speeds and increase space for bicyclists and pedestrians.

Class III Shared Arrow (Sharrows)

Class III Bike Routes may also be referred to as Bicycle Boulevards and often are marked with Shared Arrow (Sharrow) pavement markings. The treatment is often utilized for streets with low traffic volumes, low posted vehicle speed limits, and is intended to connect discontinuous segments of bicycle lanes where roadway right of way is not wide enough to provide full bicycle lanes. The sharrows can be complimented with standardized posted signage stating as "BIKES MAY USE FULL LANE".

Advisory Lanes

Advisory lanes may also be referred to as Edge Lanes. The treatment has been implemented nationwide, within the State of California, and has been growing in popularity with local agencies and communities in the past 5-10 years. The treatment creates usable shoulders for bicyclists, pedestrians, etc. on a roadway that is otherwise too narrow to accommodate additional travel lanes. The shoulder is delineated by pavement marking and optional pavement color. Motorists may only enter the shoulder when no bicyclists, pedestrians, etc. are present. Motorists must overtake roadway users traveling on the shoulder with caution, and whichever user is further ahead having right-of-way.

Class II Bicycle Lanes

Class II Bike Lanes, or Bicycle Lanes, are designated lanes defined by pavement striping and signage for bicyclists adjacent to motor vehicle travel lanes. Bike Lanes are one-way facilities that follow the flow of motor vehicle traffic. Bike lanes are typically five- to seven-feet wide and can be enhanced with green paint, including solid, stripes, along roadways as well as through intersections or conflict points to increase motor vehicle awareness of the bicyclists' dedicated space.

Class II Buffered Bicycle Lanes

Class II Buffered Bicycle Lanes are an enhanced version of Class II Bicycle Lanes. This facility includes the addition of a painted buffer area that further separates the bicycle lanes from the adjacent motor vehicle travel lane. Painted buffers can be a minimum of 1.5-feet wide, although 3- to 5-feet wide is desired when located next to a motor vehicle parking lane. The buffer treatment is a low-cost method of enhancing bicyclist and pedestrian travel.

Class IV Separated Bikeways

Class IV Separated Bikeways may also be referred to as Cycletracks and are a more recent facility type having been adopted into roadway design standards in 2018, per the Caltrans published Design Information Bulletin 89 (DIB 89). This facility includes the addition of a buffer area including a vertical element which further separated the bicycle lanes from the adjacent motor vehicle travel lane. Vertical elements may include bollards, landscaping, parked cars, or hardscape medians, and control access at intersections to reduce points of conflict between motor vehicles and bicyclists. The facility can be designed to accommodate one-way bicycle traffic on each side of the roadway, or bi-directional bicycle traffic on one side of the roadway.

Class I Off-Street Trails

Class I Off-Street trails are dedicated facilities for pedestrian, bicycle, and equestrian use and fully separated from motor vehicle traffic by existing on their own dedicated right-of-way. Class I trails provide striped lanes for bicycle travel in both directions, a striped lane for two-way pedestrian travel, and shoulder for equestrian use. Class I trails require the largest amount of right-of-way to construct as they require a minimum designated width to accommodate all user modes. The Hammond Trail is a local example of a Class I trail.

Widened Sidewalk/Multi-Use Trails

Widened Sidewalk/Multi-Use Trails are off-street facilities shared by pedestrians, bicyclists, and other users. The treatment is at curb height, separated from the roadway, and increases the width of existing sidewalk or constructs new sidewalk where none exists. The facility provides excess width of paved surface compared to standard ADA-accessible sidewalks yet and less width compared to Class I Off-Street Trails. Multiple user types can share the space, though bicyclists and other fast-paced modes must travel at slower speeds on widened sidewalk/multi-use trails to avoid conflict with slower-moving user modes.

Sidewalk Gap Closure

Sidewalk Gap Closure provides continuous sidewalks and routes for pedestrians, people with wheelchairs, strollers, and youth on bicycles. The treatment constructs sidewalks between locations of existing sidewalks where gaps exist. It helps to remove pedestrians from motor vehicle travel lanes, parking lanes, and roadway shoulders to reduce conflicts with motor vehicles. Sidewalk Gap Closure focuses on providing an all-weather pavement where pedestrian access otherwise is a dirt or unpaved area that is subject to the elements. Priority corridors considered for this treatment were those which provide connections to schools and community centers.

Sidewalk Parkways

Sidewalk parkways, also known as sidewalk strips or tree buffers, are buffer areas to increase separation between the curb and the sidewalk. The treatment can be enhanced with trees and/or landscaping to improve curb appeal and increase urban tree canopy. Sidewalk parkways enhance comfort for pedestrians on the sidewalk visual relief and sound buffer from the impacts of motor vehicular traffic. The preferred minimum width for a sidewalk parkway is 5-feet to 7-feet to ensure adequate distance between pedestrians and motor vehicles.

ADA-Accessible Curb Ramps

Americans with Disabilities Act (ADA) Accessible Curb Ramps, provide an accessible route between the sidewalk, or curb, and roadway for people using wheelchairs, strollers, walkers, crutches, and other mobility devices. ADA-Accessible Curb ramps are installed at intersections and midblock locations where there are pedestrian crosswalks. The treatment enhances mobility for pedestrians with visual impairments by directing them towards the crosswalk and indicating a change between curb and roadway through truncated domes. Mobility is also enhanced for pedestrians with physical restrictions by eliminating the need to step between the curb and roadway and providing adequate slope and landing area to accommodate the change in grade.

Curb Extensions

Curb Extensions may also be referred to as bulb-outs. The treatment provides an extension of existing curbs at intersections or mid-block crossings through concrete or pavement striping. The facility visually and physically narrows the roadway, reduces the turning radius for motor vehicles, and shortens street crossing distances for pedestrians while increasing their visibility to drivers. On roadways that permit on-street parking, curb extensions typically extend to the edge of the vehicle parking lane. The treatment also serves as a traffic calming measure by providing a visual cue to drivers that they are entering a restrictive street requiring slower vehicle speeds.

Continental Crosswalks

Continental Crosswalks are also referred to as High-Visibility. The treatment enhances standard crosswalks (longitudinal striping perpendicular to travel lanes) with interior transverse stripes 6-inches to 24-inches wide. The treatment provides a visual cue for motorists and bicyclists of upcoming pedestrian crossing activity and helps to increase visibility of people within the crosswalk from a further distance. Studies indicate higher yielding to pedestrians by motorists at continental crosswalks compared to standard crosswalks. Crosswalks are painted white, and yellow when nearby a school.

Pedestrian Refuge Islands

A pedestrian island is typically constructed in the middle of a 2-way street and provides a higher comfort level when crossing the roadway and can provide a place for pedestrians to stand and wait for motorists to stop or yield. This countermeasure is highly desirable for midblock pedestrian crossings on roads with four or more lanes. Design typically will create a two-stage crossing with the island to encourage pedestrians to cross one direction of traffic at a time and look towards oncoming traffic before completing the second part of the crossing.

Rectangular Rapid Flashing Beacons

Rectangular Rapid Flashing Beacons (RRFB's) enhance crossing activity for pedestrians and bicyclists crossing at unsignalized locations. Users activate flashing light emitting diode (LED) advanced signage and/or in-ground crosswalk LED lights through use of a push-button to notify drivers of intention to cross at a marked crosswalk. Flashing LED lights are visible to motorists in both night and day conditions for 24-hour benefits. The treatment is often recommended for high-activity crossings locations such as at schools, parks, trails, civic buildings, etc. RRFB's are effective at multi-lane crossings with speed limits less than 40 mph to increase pedestrian crossing visibility and cue for motorists to yield. RRFB's are provided locally along Central Avenue and multiple locations north of School Road.

Leading Pedestrian Intervals

Leading Pedestrian Intervals (LPI's) are traffic signal modifications that provide pedestrians an advanced "WALK" indication prior to motor vehicles in the parallel travel lane during the equivalent green light phase. The treatment provides pedestrians a three- to seven-second head start to enter the intersection, enhancing their visibility to drivers and reinforcing their right-of-way ahead of motorists making a right-turn on green. The treatment may be prioritized at intersections near schools or senior centers where crosswalk users may need additional time to cross. Assembly Bill 2264 (2022) requires state-owned or operated traffic signals to include the LPI treatment upon initial construction or replacement of the signal.

Bicycle Signals

Bicycle Signals are a traffic signal modification to help facilitate bicyclist crossings at intersections. The treatment enhances crossing activity for bicyclists by clarifying when to enter an intersection and by restricting conflicting motor vehicle movements. Bicycle signals follow the traditional three-lens traffic signal with green, yellow, and red indicator lights and can be employed at standard signalized intersections.

Bike Box

Bike Boxes minimize collisions involving bicycles by positioning bicyclists in front of motor vehicle drivers at an intersection. The treatment designates an area at the head of a traffic lane at a signalized intersection to provide bicyclists with a dedicated and visible position ahead of queuing motor vehicle traffic during the red signal phase. The treatment prioritizes bicyclists transitioning from a right-side bicycle lane to the left turn lane and prevents conflict with motor vehicles turning right. Bike boxes are applied at intersections with frequent bicyclist left-turns and/or motor vehicle right-turns.

Bikeway Conflict Zone Marking

Bikeway Conflict Zone Markings provide green pavement striping within the bicycle lane or bicycle crossing-area to highlight typical conflict zones (weaving areas) between motor vehicle and bicycle traffic. The green pavement color alerts motorists of delineation between motor vehicle and bicycle travel lanes, and highlights the intended paths of bicyclists through intersections, merging lanes, and across driveways. The treatment may also be applied at retail center driveways to alert motorists to look for bicyclists before entering a roadway. The markings enhance bicyclists' visibility and encourage yielding behavior of motorists at conflict points.

Speed Feedback Signs

Speed-Feedback Signs (SFS) are treatments oriented toward motorists while providing benefits for other users of the roadway. The treatment provides drivers with a digital display of their moving speed compared to the posted speed limit. When complemented with enforcement, speed-feedback signs can be effective in reducing speeds at desired locations, such as streets in proximity to schools and parks.

Lane Reduction

A lane reduction reconfigures the roadway. A frequently-implemented lane reduction involves converting a 4-lane, undivided roadway into a 3-lane roadway with a center turn lane. This is a candidate treatment for any undivided road with wide travel lanes or multiple lanes that can be narrowed or repurposed to improve pedestrian crossing safety.

By reducing the width of the roadway, pedestrians benefit from shorter crossing distances and often bike lanes or streetscape features can be added. Lane reductions are often effectively accomplished during pavement resurfacing.

New Traffic Signal

Installation of a traffic signal at busy intersections can help to organize travel by multi-modal users. The traffic signal helps to limit interactions between vehicles, pedestrians, and bicyclists with conflicting movements. Inclusion of push-buttons on the signal pole helps provide right-of-way for pedestrians and bicyclists, simplifying the crossing movement for multi-modal users.

Vehicle Travel Lane Narrowing

Vehicle travel lane narrowing can be achieved depending on the classification of a roadway and the County's circulation plan. With additional right of way created from narrowing vehicle travel lanes, space can be redistributed to serve bicycle lanes, cycle tracks, transit lanes, widened sidewalks, sidewalk parkways, and curb extensions. The treatment helps slow motor vehicle speeds, further enhancing travel for multi-modal users. The width of travel lanes identified in this report range between 11-feet and 12-feet in width. Local agency staff can further evaluate lane widths to address the context of the roadway conditions and based on applicable design standards. For example, Caltrans designs typically require 12-feet wide lanes and the County may be willing to implement 11-feet wide lanes to help manage travel speeds. Where lanes are wider than 12-feet in width, we recommend shoulder striping to provide a defined 12-feet width.

Intersection Narrowing

Intersection narrowing is a method of simplifying the intersection to benefit multi-modal users. The treatment realigns acute or obtuse angles between roadways to improve intersection sight angles and distances. The treatment increases motorists' ability to see pedestrians and bicyclists.

Advanced Stop Lines

Advance stop lines are pavement markings in advance of the marked crosswalk at a stop sign or traffic signal. The treatment increases the distance between pedestrians in a marked crosswalk and motor vehicles. It may be supplemented with a "Stop Here for Pedestrians" sign only where the law specifically requires that a driver must stop for a pedestrian.

Roundabout Modification

Roundabouts are circular intersections designed to manage vehicular speeds and help to reduce pedestrian exposure at intersections. Modifications may involve designated lanes or travel areas for bicyclists and enhancing visibility of pedestrian and bicyclist at the street crossings.

Stop Signs

Converting from a two-way stop to an all-way stop prevents motorists, bicyclists, and pedestrians from having to cross free-flowing lanes of traffic at a side-street stop-controlled intersection. The intersection treatment may be considered at locations with high pedestrian and bicyclist volumes and implementation of all-way stop-control must satisfy traffic engineering warrant requirements. The treatment reduces the risk of collision and enhances travel comfort for multi-modal users.

Transit Stop Enhancements

Transit Stop Enhancements improve transit users' access, comfort, and mobility at the transit stop by providing additional amenities and features. Examples include benches, shelters, trash receptacles, bicycle parking/storage, schedule information, next-bus real-time data, and informational materials, etc. Examples of features include lighting, emergency call buttons, ADA-compliant landings, etc. Bus stop placement can also enhance accessibility, such as co-locating bus stops downstream of adjacent crosswalks (far-side) to complement pedestrian crossings. Far-side stop location enhances visibility by removing the transit vehicle from view of right-turning motor vehicle traffic, where the transit vehicle may block view of pedestrians in the crosswalk.

Implementation of transit stop enhancement are under the purview of the Humboldt Transit Authority (HTA). The HTA continues to provide enhancements where possible and conduct studies to identify focus locations. The County can provide enhancements to accommodate transit stops, such as ADA-compliant landings and providing pedestrian and bicycle routes to access the transit stops.

Recent and Ongoing Off-Street Improvements

Hammond Trail

The Hammond Trail is a former railroad corridor that serves recreational, commute, and utilitarian active transportation trips in McKinleyville. The 5.5-mile Hammond Trail connects between a bridge over the Mad River northerly to Clam Beach and is a segment of the larger California Coastal Trail. The trail serves as the community's primary walking, bicycling, and equestrian facility and is often used as the alternative to US-101 via the Hammond Trail Bridge to cross the Mad River. The design and maintenance of the Hammond Trail is a partnership effort by County of Humboldt and the California State Coastal Conservancy. The historic trail offers coastal views for hikers and bicyclists and is separated from vehicular traffic apart from a few roadway crossings.

Mid-Town Trail

The Mid-Town Trail is planned as a paved off-street facility, located east of US-101, for pedestrians and bicyclists traveling in the north-south direction. It currently exists as a 0.5-mile segment that connects residential neighborhoods from Parkside Drive to Railroad Avenue. Smaller segments of the Mid-Town Trail also exist north of Washington Avenue, connecting Heartwood Drive, Elmwood Place, and Sagewood Way.

The McKinleyville Town Center Master Plan (Town Center) is anticipated to provide mixed-use zoning to reduce dependency on motor vehicles and encourage pedestrian and bicycle travel. Coordination with the Town Center is expected to connect the Mid-Town Trail between Railroad Avenue and Hiller Avenue.

The 2017 McKinleyville Community Plan proposes extensions to the Mid-Town Trail to connect to additional trails and roadways in the community. Such proposals include connecting to the Hammond Trail, extending the Mid-Town Trail to Murray Road, continuing the trail east to connect to Central Avenue, and extending the Mid-Town Trail south to School Road. The proximity of Mid-Town Trail to Morris Elementary School and McKinleyville High School allows for parents and students to use the trail as an active transportation corridor to travel to and from school.

Central Avenue Bridle Trail

The Central Avenue Bridle Trail is located within a 20-feet wide area of public right of way on the easterly side of Central Avenue, maintained by the McKinleyville Community Services District (MCSD) which includes planter beds, sidewalk, and a 5-feet wide bridle trail originally intended to serve equestrian travel.

The Bridle Trail is a meandering landscaped route composed of decomposed granite (DG) created for equestrian use, although pedestrians, bicyclists, and others using wheeled devices may use the trail. The community of McKinleyville's slogan is: "Where Horses Have the Right of Way", and the Bridle Trail is a source of local pride commemorating the community's past and historic roots. Given the strong local preference to support equestrian activity, we recommend maintaining the current design of the Bridle Trail along Central Avenue.

Boyd Draw

The Boyd Draw is a US-101 underpass previously used by farmers to transport cattle from one grazing pasture to another. Although no longer used by farmers, the underpass is obstructed by boulders which prevent accessible travel underneath the highway. Caltrans is completing a project to enhance the underpass to support pedestrian and bicycle access between Wymore Road and Heindon Road (south of Mad River). The Caltrans-led Boyd Draw Project will provide a 470-feet long paved trail for travel by bicyclists and pedestrians under the existing US-101 overpass. Once finished, the facility will connect Wymore Road to Heindon Road. According to Caltrans staff, the project is currently in the Environmental Analysis phase.

Recent and Ongoing On-Street Improvements

School Road Multimodal Improvements

A residential subdivision, planned adjacent to School Road, was approved by the County in 2011 and expected to increase traffic volumes along School Road. To accommodate higher volumes of traffic, a roundabout was constructed on School Road in 2014 at the junction of School Road/Salmon Avenue/McKinleyville Avenue. The roundabout facilitates motor vehicle throughput and slows vehicle speeds entering and exiting US-101 via School Road. Subject to future private sector development, additional pedestrian and bicycle facilities may be constructed near the roundabout to facilitate multi-modal travel.

In 2015 the County reconstructed School Road between US-101 and Washington Avenue. Within the project, the County added Class II bike lanes, a center median with landscaping, and posted "share the road" signage to enhance visibility of bicyclists within the corridor. The County will incorporate additional enhancements through land developments discretionary approvals.

In 2016 the County reconstructed School Road between Fisher Avenue and Anderson Avenue to include sidewalks, twelve ADA curb ramps, and continental crosswalks at stop-controlled intersections. Other roadway improvements included designated on-street parking, Class III bike routes, and curb extensions to increase visibility of pedestrians crossing School Road. The addition of an off-street multi-use/widened sidewalk trail from Ocean Avenue to School Road, on the southerly side of the roadway, provides off-street connection to the Hammond Trail. Improvements to the intersection of Fischer Avenue and School Road included brick inlay curb extensions, raised median, and ADA accessible sidewalks to enhance separation between vehicles and multimodal users. An updated wayfinding signage directs pedestrians and bicycles to key destinations accessible from the Hammond Trail.

Central Avenue Roadway Improvements

Central Avenue is a north-south Minor/Major Collector road in McKinleyville and the primary connection to US-101 to the South. Central Avenue is the former alignment of US-101, prior to the construction of the highway's new alignment 0.8-miles further west, at which time Central Avenue was dedicated to the County of Humboldt. Due to high traffic volumes and high vehicle speeds, 46% of pedestrian-involved and bicycle-involved collisions within the project area (2015-2019) have occurred on Central Avenue. The County's Department of Public Works has invested efforts toward enhancing travel on Central Avenue and received funding from the State of California in 2016 to construct improvements along Central Avenue between Anna Sparks Way and Hiller Road.

The 2016 County led Improvements to Central Avenue included the addition of green paint at conflict areas along the existing Class II bike lanes, mid-block pedestrian crossings with refuge islands and user-activated rapid rectangular flashing beacons (RRFB's), and continental crosswalks at the intersections. Additional improvements to slow vehicle speeds within the multi-modal corridor included "35 MPH" painted pavement markings, and speed feedback signs installed north of School Road for northbound traffic and south of Sutter Road for southbound traffic. Traffic signals along Central Avenue were also updated to include emergency vehicle preemption devices to improve response times during emergency events.

Community feedback received during MMCP engagement expressed appreciation for the Central Avenue improvements and interest toward extending the green paint in Class II bike lanes north of Railroad Avenue.

McKinleyville Avenue Bicycle Lanes

McKinleyville Avenue is a two-lane, 25 MPH residential street in the project area and provides connection to McKinleyville High School and Morris Elementary School. As part of a Safe Route to School project, the County Public Works Department has implemented pedestrian and bicycle improvements to McKinleyville Avenue between Murray Road and Hiller Road. Improvements include Class II striped bicycle lanes, high-visibility crosswalks, reflective school zone signage, continuous crosswalks, and speed feedback signs.

Washington Avenue On-Street Parking

A residential subdivision has been approved by the County of Humboldt, located between Oakdale Drive, Washington Avenue, and School Road. The Washington Avenue residential project is conditioned to provide roadway enhancements on Washington Avenue to enhance bicycle and pedestrian travel. Improvements will include restriction of on-street parking to provide Class II bike lanes on the west side of Washington Avenue and sidewalk gap closure along the project frontage on Washington Avenue.

Planned Land Development Projects

McKinleyville Town Center

The Town Center project is a planned private sector land development within the project study area located between Railroad Drive, Central Avenue, Heartwood Drive, and McKinleyville Avenue. The project was introduced to the community in Fall 2019 and is incorporating public feedback with agency planning to develop the anticipated streetscape design, land uses, and zoning regulations. The project is intended to create a town center within McKinleyville and provide housing, dining and retail, and space for community social interactions. Streetscape design and site access to the Town Center continues to evolve; therefore, the MMCP provides recommendations that are consistent with the current Town Center plans.

MCSD BMX Track and Park

MCSD is working with consultants to plan a BMX Track and Park north of School Road and west of Washington Avenue. The project has received State of California, Parks & Recreation Proposition 68 grant funding for the design and construction. The new BMX Track and Park is expected to increase multi-modal demands in the vicinity of the Washington Avenue/School Road intersection.

Public Engagement

Public engagement for MMCP occurred in two phases throughout 2021 and 2022. Phase 1 involved efforts to understand community concerns and needs throughout the project area between Spring and Fall of 2021. The project team developed draft design concepts and returned to the community in Phase 2 to collect feedback and inform changes to the concepts between Spring and Fall of 2022.

Promotion of public engagement activities was facilitated through distribution of flyers at local civic buildings such as the McKinleyville Library, Azalea Hall, McKinleyville Activity Center, and the McKinleyville Resource Center. Additionally, flyers were posted in receptive businesses to promote the survey and engagement activities. RCAA worked with County staff to host a project webpage that included project information and status and an opportunity for providing feedback and input. The events described below were promoted by the MMAC and involved stakeholders were encouraged to promote the project further with their established networks.

Phase 1

MMAC Presentation #1

The project team presented to the MMAC on March 31, 2021, to provide an overview of the MMCP, study area boundaries and project timeline.

Project Task Force Meeting #1

The first Project Task Force (PTF) meeting was held on May 17, 2021, with a total of twenty-seven people attending the virtual meeting. The PTF is composed of members of the community that have shown interest in improving transportation within the McKinleyville area, members of the MMAC, and agency representatives. PTF members discussed their interests in the project outcomes, and the project background, timeline, goals, objectives, and roles. The project's Community Outreach Plan was reviewed by the PTF, and the meeting included discussion to identify the most challenging areas for people to walk or bike in the project area and project next steps.

Walk Audits

Concurrent walk audits in three locations were held on August 16, 2021, on three key corridors in the McKinleyville area (Hiller Road, Central Avenue, and the 101 Mad River Bridge Bike Path between Wymore Road and North Bank Road), with the participation of 33 community stakeholders. Over thirty comments were made

at each location, highlighting improvements to landscaping, bike facilities, ADA access, and other priorities. In a debrief session, fifty-eight comments were submitted which offered solutions or concerns on the comfort level of walking and bicycling. Concerns about motor vehicle traffic and the ability to cross streets comfortably were amongst the most discussed topics.

Community Workshop #1

The first Community Workshop was held in an online format on August 23, 2021, with a total of twenty-six participants attending virtually. A slideshow presentation was led by the consultant team and included opportunities to receive feedback from attendees. The major priorities identified by the community included enhancements for cycling and rolling, ability to cross the streets comfortably, improving bicycle facilities, and improving walking and biking conditions along Central Avenue within McKinleyville's commercial area. The event included a breakout session among four groups where participants' comments were recorded digitally using Google's My Maps geo-comment feature. A total of fifty comments were collected during the breakout session. Participant comments were shown densely near Hiller Park, the Central Avenue commercial area, and near School Road. Comments received were specific to locations within the study area and covered topics including addressing traffic and comfort while bicycling and walking.

Public Survey #1

Public survey #1 was hosted online between July 12th and September 24th, 2021. A total of eighty-four participants completed the survey and provided input around their priorities toward transportation within McKinleyville. Figure 11 illustrates the age of the public survey #1 participants with 65% of participants ranging in age from 40 to 69 years of age.

Figure 11 Demographic results Survey 1: Age

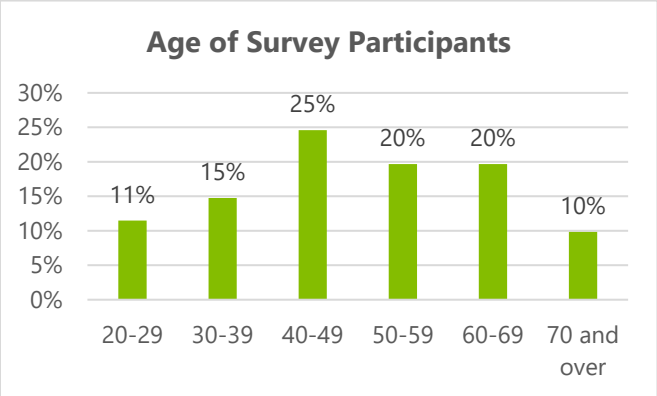
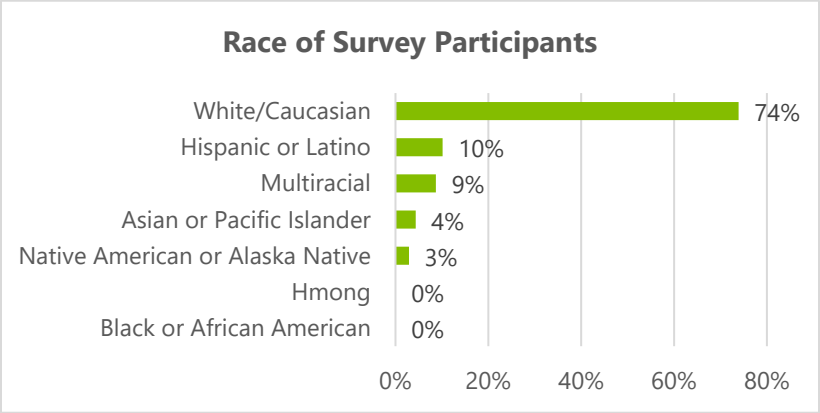


Figure 12 illustrates the race of the public survey #1 participants with 74% of participants identifying as White or Caucasian. The goal for participation by race was achieved with the remaining 26% identifying as Hispanic, Latino, Multiracial, Asian or Pacific Islander, Native American, or Alaska Native.

Figure 12 Demographic results Survey 1: Race



One participant completed the public survey #1 in Spanish language. Approximately 70% of public survey #1 participants resided in the 95519 zip code which encompasses the McKinleyville area, and over 75% of the participants were age 40 and older. The primary mode of transportation used by participants to travel in the project area was a personal motor vehicle (80%). Most of the concerns about walking or bicycling within the project area referenced missing sidewalks, bicycle lanes, high motor vehicle speeds, and not enough separation from motor vehicles. Most participants wanted to see dedicated paths for walking and bicycling, bicycle infrastructure improvements, enhanced transit route coverage and increased availability of transit shelters, and general improvements to enhance pedestrian and bicycle travel.

Project Task Force Meeting #2

A second PTF meeting was held on November 8th, 2021, with a total of 27 PTF members attending the virtual meeting. PTF members reviewed the results of outreach and engagement to date and observations specific to focus areas of the project. PTF members provided input toward prioritization metrics to evaluate routing alignments for crossing the Mad River and accessing the US-101 Mad River Bridge Bike Path. PTF members also discussed and prioritized potential locations for the pop-up demonstration event. The meeting included an overall project status and next steps discussion.

Photovoice Activity

Photovoice is a community input-gathering method for ethnographic and behavioral research that allows people to share images and ideas. A photovoice submission activity was launched with an announcement on October 26th, 2021. The announcement called for members of the public to email one or more photos showing a need for improved walking, bicycling, or access to transit within the project area and include a narrative describing the issues shown in submitted photos. Photovoice submissions were accepted between November 1st and 20th, 2021. Ten members of the community submitted Photovoice contributions. Narratives submitted included requests for off-street paths, bicycle locks and shelters, programming, and infrastructure oriented toward youth, and general infrastructure improvements to the existing conditions in McKinleyville.

Figure 13 Photovoice Activity Submissions

Washington Avenue discontinous sidewalk and lack of bicycle facilities.

School Road constrained access over Highway 101

Hiller Road discontinuous sidewalk

Central Avenue sidewalk barriers

Phase 1 Summary of Feedback Received

Input from the walk audits, first community workshop, and public survey indicated a strong concern for the needs of pedestrians, bicyclists, and particularly vulnerable roadway users throughout the project area. Participants noted that Central Avenue in particular poses a significant challenge for all roadway users.

Priorities from the community:

- Improving comfort while walking or bicycling throughout the project area
- Enhancing ability to cross streets with intersection treatments
- Slowing traffic in areas near schools, parks, and shopping centers
- Addressing ADA access constraints including sidewalk gaps, narrow sidewalks, and curb connection improvement needs
- Enhancing connectivity for children and seniors using sidewalks as a primary route of transportation
- Identifying and developing a route of travel separated from motorized vehicles for bicycles and pedestrians along Central Avenue, particularly south of Bartow Road

Phase 2

MMAC Meeting #2

In January 2022, the project team presented an update to the MMAC that included dates for the upcoming Pop-up Demonstration Event, dates and community flyer for Community Workshop #2, and a project schedule update. The results of the Photovoice submission activity were presented to the MMAC at this meeting.

Pop-up Demonstration Event

A Pop-up Demonstration event was held on April 1st and 2nd, 2022, along Hiller Road just west of Central Avenue. A two-way separated bikeway was shown using temporary materials to allow people to see and experience a new form of bike infrastructure not yet deployed within Humboldt County. A total of fifty-two people walked or bicycled in the pop-up demonstration event area. These community members provided feedback about the infrastructure demonstration, along with comments about walking and biking in McKinleyville. The project team had two questionnaire boards for participants to vote on their preferred bikeway types and provide input on where they live within Humboldt County. The project team collected comments on informational boards including a map of the project area and renderings of bikeways. Approximately sixty-eight comments were collected over the two-day event.

Community Workshop #2

A second Community Meeting was held on April 28th, 2022, with a total of twenty-two participants. The meeting was held in-person at Azalea Hall and online via Zoom to allow participants to attend either in-person or via video conference. A total of ten people participated online and twelve people participated in person. Both online and in-person participants received the same presentation from the project team and submitted feedback in different methods. Online participants used an online survey tool and commented using the microphone feature, while in-person participants held roundtable discussions and commented using handwritten notes posted on display boards. A total of twenty-two handwritten comments were received from the in-person meeting. Feedback received from both online and in-person meetings provides input toward draft concepts of improvements on key corridors within the project study area.

Public Survey #2

A second online public survey was hosted between May 10th and 24th, 2022 and received a total of sixty-six responses. The online survey featured an abbreviated version of the presentation from the Community Meeting on April 28th and received input from the public on their preferred types of improvements for key corridors throughout the project study area.

Project Task Force Meeting #3

A third PTF meeting was held on June 30, 2022, with a total of five PTF members attending the virtual meeting. PTF members reviewed outreach and engagement conducted in Phase 2 of the MMCP, feedback on draft concepts for key project area corridors, and seven alternative alignments for multi-modal access to the 101 Mad River Bridge Bike Path from Central Avenue/School Road intersection. The meeting included an overall project status and next steps discussion.

MMAC Meeting #3

On September 28, 2022, the project team presented to the MMAC in their monthly hybrid meeting format. The MMAC received a detailed presentation about the proposed recommendations and alternatives for representative segments of roadway throughout the project area. The MMAC provided feedback about how to make the content clearer to local roadway users and decision-makers and which alternatives they preferred in certain portions of the project area. The MMAC also shared their passion for roadway improvements in McKinleyville and their desire for this project to advance to future design and implementation stages.

Small Group and One-on-One Outreach

Throughout the project, the project team has held small group or one-on-one discussions and received communications from individuals about the project. In addition to the other forms of outreach described here, the project team received emailed input from sixteen individual community members. The project team met with two community groups comprised primarily of Spanish-speaking families and parents in the project area to discuss their concerns. The project team also held a discussion with landowners and the County Planning Director about the McKinleyville Town Center project to understand how the projects can complement one another. The project team met with HTA, and the MMAC subcommittee focused on trails and transportation to understand their concerns and history of the project. Early in the project, the project team also met with representatives from the Boys and Girls Club to hear youth and caregiver ideas.

Phase 2 Summary of Feedback Received

Input from the Photovoice project, pop-up demonstration, second community workshop, and public survey helped refine the project recommendations and prioritize roadway improvement concepts. Highlighted themes include providing bicycle routes and maintaining access to key destinations for all roadway users.

Priorities for improvement identified during public engagement include:

- Integrating Central Avenue roadway and transportation improvements with the future Town Center development
- Addressing missing infrastructure in specific locations throughout the project area
- Providing short-term improvements to the Central Avenue corridor while maintaining momentum on long-term improvements, such as a separate facility to serve as a major transportation corridor for active transportation travelers
- Evaluating and conducting further analysis of a lane reduction concept on Central Avenue, in addition to the preferred widened sidewalk multi-use trail concept which preserves the current number of travel lanes.
- Providing improvements to lower-volume roadways to ensure that all users can use the road, including in areas with limited right-of-way

Throughout the project, the PTF and MMAC provided feedback that helped to guide the outreach efforts and ensure as many voices as possible were heard. This guidance resulted in launching additional online surveying tools, hosting small group meetings to understand project ideas and concerns, and redistributing Spanish-language outreach to the community.

Project Needs and Recommendations

Public feedback collected throughout Phase 1 of the engagement process helped focus the project on areas within McKinleyville that the community prioritized for multi-modal enhancements including transit access improvements. A total of nine corridors within the project area were identified for focused transportation improvements. A needs analysis was performed for each of the corridors to review detailed existing conditions, collision histories, and opportunities for improvements. Feedback from the public and PTF collected in Phase 2 of the engagement process helped refine the recommendations for the nine corridors. The following section details existing conditions and recommendations for the nine Project Area Focus Corridors.

Project Area Focus Corridors

1. Azalea Avenue
2. Central Avenue
3. Hiller Road
4. Mad River Road, Miller Lane, and Heindon Road
5. McKinleyville Avenue
6. North Bank Road
7. Ocean Avenue
8. School Road
9. Washington Avenue

Azalea Avenue

Existing Conditions

Azalea Avenue is a two-lane local road that connects to Cochran Road to the north and North Bank Road to the south. It is primarily fronted by single-family residential driveways and provides access to Azalea State Natural Reserve near North Bank Road. The corridor is characterized by street trees, vertical and horizontal curves, a steep elevation change between Hewitt Road and North Bank Road, and a lack of pedestrian and bicycle facilities.

On-street parking is prohibited along Azalea Avenue, and intermittent access to grass pathways fronting property lines is the informal walking facility. The lack of separated bike facilities requires bicyclists to travel in the motor vehicle lanes, and the parking lot for Azalea State Natural Reserve is separated from the reserve's trailheads by Azalea Avenue. Access between the reserve parking lot and trails is provided by one marked pedestrian crossing with advanced warning signs north of the parking lot.

While no collisions involving pedestrians or bicyclists have been reported on the corridor, Azalea Avenue has been frequently cited in both public feedback and in meetings with the Project Task Force as a corridor for improvement. There is an opportunity to enhance bicycle and pedestrian travel along and crossing the corridor.

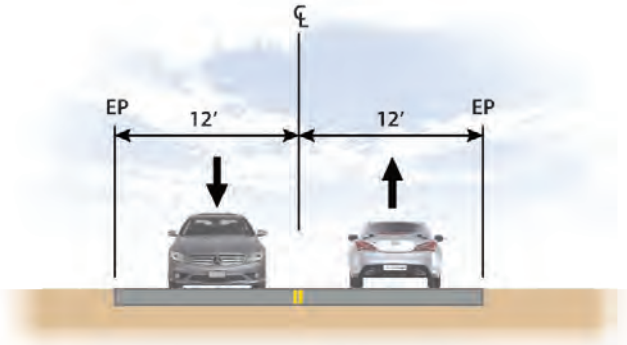
0.8
Miles

1
Parks

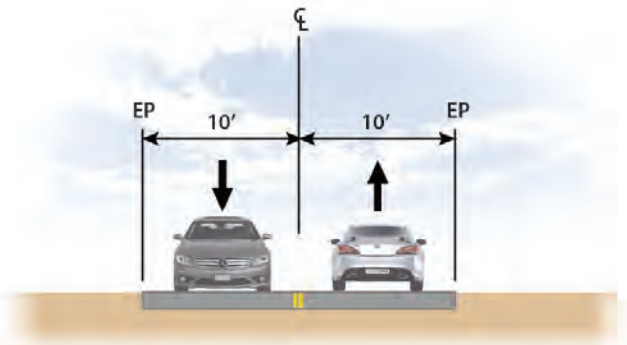
SPEED LIMIT 35

Local Road

3
Trail Access Points



AZALEA AVENUE - EXISTING
Cochran Road to Hewitt Road



AZALEA AVENUE - EXISTING
Hewitt Road to North Bank Road

Azalea Avenue

Recommendations

The Azalea Avenue corridor was first identified in Project Task Force meetings to discuss focused corridors in the study area. Throughout the community engagement process, public comments were submitted related to Azalea Avenue specifically at the corridor connection to Sutter Road and near the Azalea Avenue Cochran Road intersection.

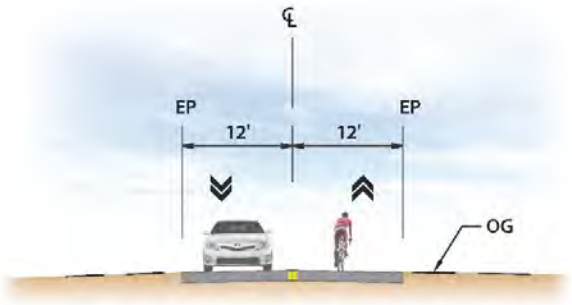
*** Cost Estimate: $4,874,000**

* Cochran Road to Hewitt Road

This segment focuses on improving bicycle signing and striping within the existing right of way. Recommendations include Class III bikeway sharrows and R4-11 signs (bicycle may use full lane) where the roadway is mostly flat and without curves.

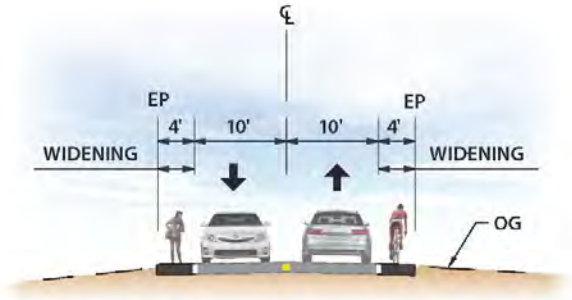
* Hewitt Road to North Bank Road

This segment focuses on improving bicycle infrastructure between Hewitt Road and North Bank Road. Recommendations include shoulder widening where the roadway descends and features curves. The 4 feet wide shoulder will provide north-south travel paths for bicyclists and pedestrians on both sides of Azalea Avenue.



AZALEA AVENUE - PROPOSED

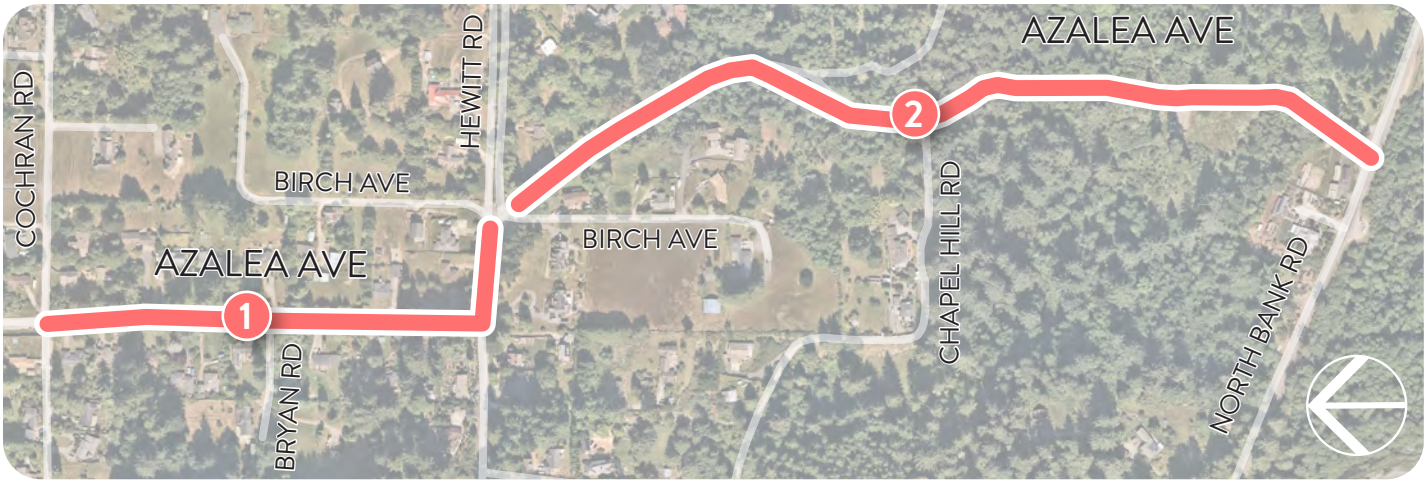
Cochran Road to Hewitt Road



AZALEA AVENUE - PROPOSED

Hewitt Road to North Bank Road

1. Class III Bikeway
2. Shoulder Widening



Central Avenue

Existing Conditions

Central Avenue is a five-lane major/ minor collector road that provides a connection between Clam Beach to the north and North Bank Road to the south while serving as a primary access route to Highway 101 to the south. The corridor is primarily fronted by commercial land use with access to six transit stops serving the Redwood Transit System for Humboldt Transit Authority. The Bridle Trail on the roadway's easterly side provides a semi-separated multi-use pathway for people walking, bicycling, and on horseback. Central Avenue provides access to schools, civic intuitions, community centers, and shops, restaurants, and other retail destinations.

Class II bicycle lanes with green paint and accessible sidewalks are available between Hiller Road and Anna Sparks Way on both sides of the roadway. At the five signalized intersections within this segment, pedestrian crossing facilities include continental crosswalks and ADA accessible curb ramps, and mid-block crossings between Hiller Road and Bartow Road provide pedestrian refuge islands in addition to continental crosswalks and reflective pedestrian crossing signage. The 0.3 mile segment between Bartow Road and Bella Vista Drive is a two-lane roadway with access to road shoulders on both sides of the roadway. The lack of pedestrian and bicycle facilities south of Bartow Road prompts pedestrians and bicyclists to use the road shoulder as informal walking and bicycling facilities.

Between 2015 and 2019, eight pedestrian collisions and three bicycle collisions were reported along Central Avenue, and of these eleven collisions, eight were concentrated between Heartwood Drive and Anna Sparks Way where there is a density of surrounding retail land uses. The retail density introduces high volumes of driveways and people movement thus increasing interactions and conflict points between vehicles and active transportation users. There is an opportunity to extend walking and bicycling facilities south of Anna Sparks Way and improve the visibility of pedestrians and bicyclists along Central Avenue.

Public commenter input:

"The addition of bike lanes along Central Ave a few years ago was great. I would feel safer having my children ride their bikes in the bike lane if there was a barrier between the bike lane and the car lane."

2.1
Miles

SPEED LIMIT 35-45

Major/Minor Collector Road

8
Bus Stops

3
Schools

1
Parks

9
Civic Institutions

4
Grocery Stores

5.7
Pedestrian Collision per Mile

1.4
Bicyclist Collision per Mile

1
Trail Access Point

Central Avenue

Recommendations

The Central Avenue Corridor was first identified in Project Task Force meetings to discuss focused corridors in the study area. Throughout the community engagement process, public comments were submitted related to Central Avenue specifically at the Central Avenue/ Railroad Drive intersection, in the downtown area, and near McKinleyville Middle School. While the complete corridor extends from Railroad Drive to Bella Vista Drive, improvements are categorized in segments due to the future Town Center Development Project.

✱ School Road to Railroad Drive

This project is anticipated to be conditioned by the future Town Center Development Project or otherwise completed by the County of Humboldt. Three concepts were presented to the public and project task force for the segment between Railroad Drive and School Road including a road diet lane reduction, buffered bike lanes, and a multi-use trail on the roadway's westerly side making it easier for users to safely walk and bike in the area. Based on public feedback, the preferred concept was the multi-use trail. Implementation provides pedestrians and bicyclists with a 10 feet wide, physically separated path for north-south travel on Central Avenue's westerly side.

✱ Total Cost: $4,830,000

✱ North Bank Road/Reserve Road to School Road

A series of interim pedestrian and bicycle improvements are recommended between School Road and Bella Vista Drive. Implementation of a buffer treatment between northbound travel lanes and the shoulder/ bike lanes, where feasible, would provide separated walkways and bikeways along Central Avenue. Additional supportive infrastructure includes paving pedestrian and bicycle travel paths on the shoulder between School Road and Bartow Road where the existing footpath is well defined. Improvement to Central Avenue/ Bella Vista Drive includes the consideration of roadway restriping to remove the secondary northbound through lane. On the corridor's southern terminus, pedestrian improvements include an RRFB crosswalk and other enhancements at Reserve Road/ North Bank Road where frequent crossing occurs; it also includes shoulder widening south of Henry Lane to provide a 4 to 5 feet travel path. Additional improvements include landscaping maintenance to prevent plant overgrowth into useable support facilities which will help with visibility and possible sight line issues thus making the area safer for users.

1. Rectangular Rapid Flashing Beacon
2. Shoulder widening
3. Roadway Restriping (Northbound)
4. Paved Pedestrian and Bicycle Path
5. Multi-Use Widened Sidewalk Trail

Public commenter input:

"There should be a sidewalk or footpath installed along Central Avenue between Bella Vista Ave. and the Mill Creek Shopping Center."

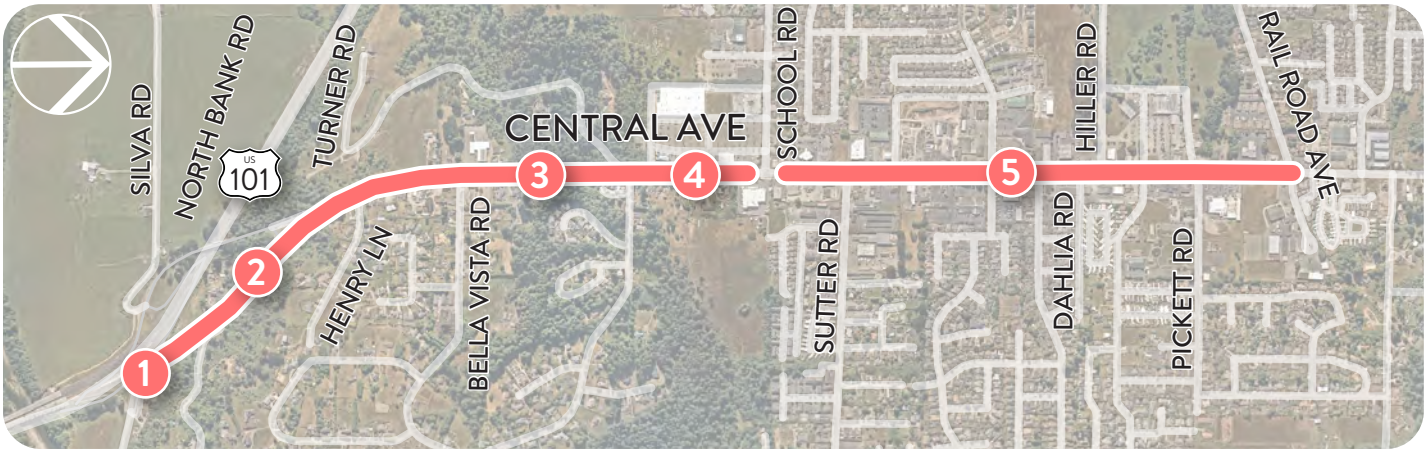
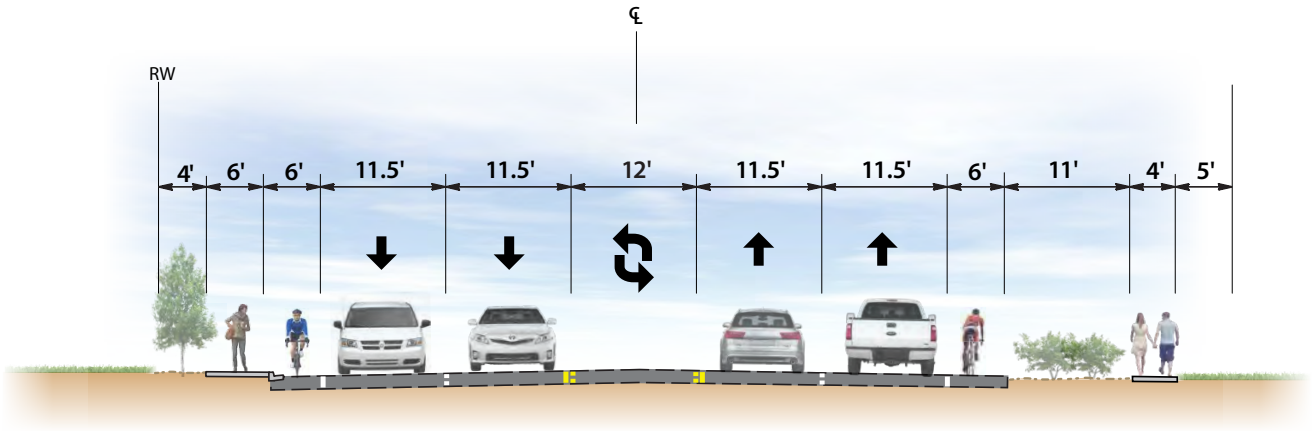


Figure 14 Central Avenue Cross Section Options

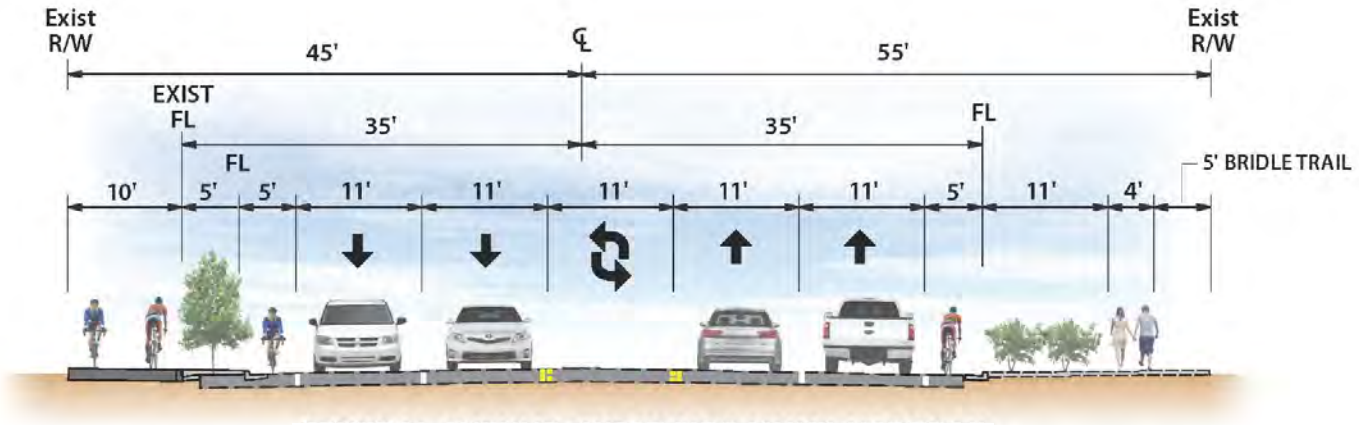
Existing Cross Section



CENTRAL AVENUE - EXISTING

School Road to Railroad Drive

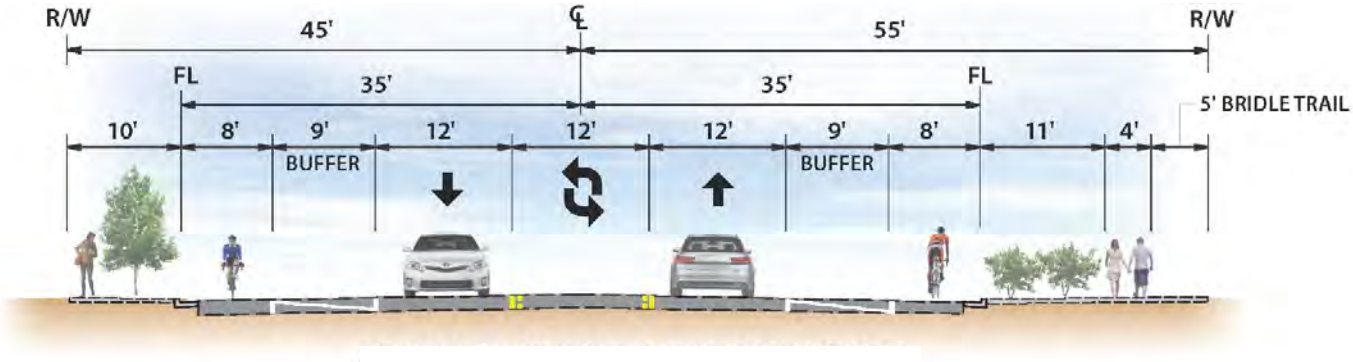
West-Side Multi Use Trail Cross Section



CENTRAL AVENUE - PROPOSED ALTERNATIVE 1

Bella Vista Avenue to Railroad Drive

Lane Reduction Cross Section



CENTRAL AVENUE - PROPOSED ALTERNATIVE 2

Bella Vista Avenue to Railroad Drive

Hiller Road

Existing Conditions

Hiller Road is a two-lane local road providing connections between residential and park land uses on the west to retail and schools to the east. Hiller Road is primarily fronted by residential homes with street-facing private driveways. Hiller Road connects to recreational and commercial destinations such as Hiller Park, Hammond Trail, and the future Town Center development.

While on-street parking is available on both sides of the roadway throughout the corridor, the corridor is characterized by intermittent sidewalk availability; this prompts pedestrians and bicyclists to walk and bicycle in on-street shoulders and cross Hiller Road at undesignated mid-block crossings to access supportive facilities. For example, the Highway 101 overpass provides a narrow sidewalk shared by pedestrians and bicyclists but only on the facility's northerly side. Pedestrians and bicyclists on the southerly side must cross Hiller Road to access the Highway 101 overpass sidewalk for a path separated from vehicles.

Between 2015 and 2019, two pedestrian and bicycle collisions have been reported along Hiller Road at the intersections of Hiller Road/Walker Avenue and Hiller Road/McKinleyville Avenue. The corridor offers a total of 0.20 miles of sidewalk. There is an opportunity to provide sidewalk gap closures and marked crosswalks at stop-controlled intersections.

1.0
Miles

SPEED LIMIT 25
Local Road

1
Grocery Stores

1.0
Pedestrian Collision per Mile

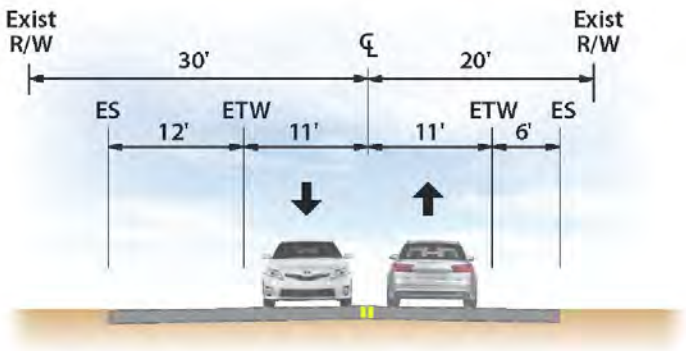
1.0
Bicyclist Collision per Mile

1
Parks

1
Trail Access Point

Public commenter input:

"The bike lane is okay on Hiller, but the intersection at Hiller Rd and McKinleyville Ave is too large, with no crosswalks. Redesigning this intersection should be a high priority."



HILLER ROAD - EXISTING
Fischer Avenue to US-101

Hiller Road

Recommendations

The Hiller Road corridor was first identified in Project Task Force meetings in order to discuss focused corridors in the study area. Throughout the community engagement, public comments were submitted related to Hiller Road specifically near Hiller Park and the uncontrolled crossing at Fisher Road. While the full corridor includes Fisher Road to Central Avenue, recommendations vary east and west of McKinleyville Avenue due to the future Town Center Development Project which influences recommendations east of McKinleyville Avenue.

✱ Fisher Ave to Highway 101

This segment focuses on improving pedestrian and bicycle infrastructure within the existing right of way. Improvements include installing a mixed-use widened sidewalk trail on the roadway's northerly side. The proposed 12 feet wide facility will provide a separated area for people to walk and bicycle. The project will retain a parking/shoulder on the roadway's northerly side and remove parking on the roadway's southerly side.

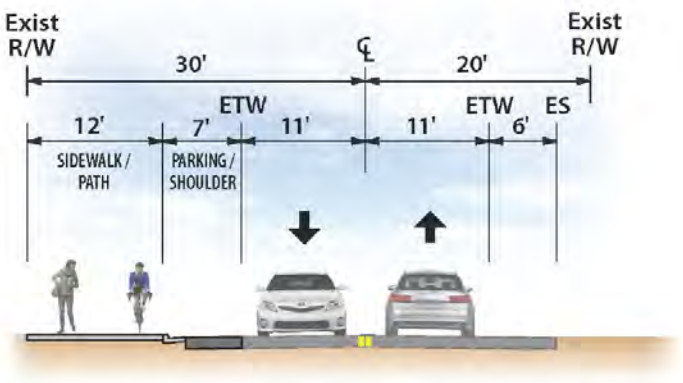
✱ Highway 101 to McKinleyville Ave

This segment proposes widening the pedestrian and bicyle facility on the northerly side of the Highway 101 overpass, installing a mixed-use widened sidewalk trail on the roadway's northerly side between the overpass and McKinleyville Ave, and reconstruction of the intersection at Hiller Rd/McKinleyville Ave to provide narrower motor vehicle lanes, widen pedestrian and bicycle facilities, and reduce the crossing distance.

✱ McKinleyville Ave to Central Ave

This segment is anticipated to be conditioned by the future Town Center Development Project or otherwise completed by the County of Humboldt. Recommendations include a sidewalk gap closure and a one-way cycle track in both directions.

✱ Cost Estimate: $8,073,000

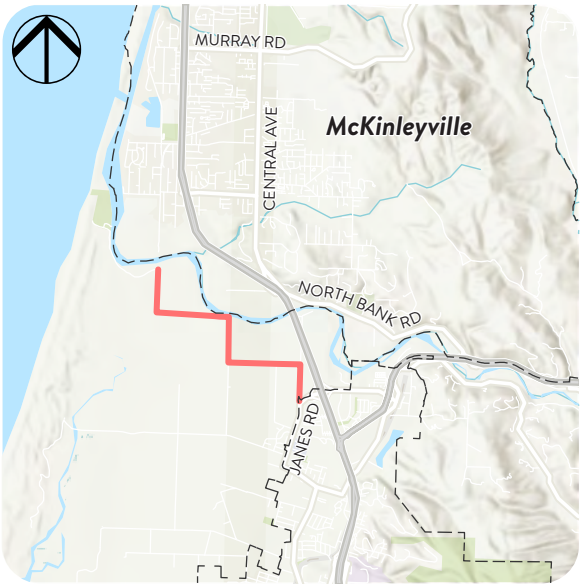


HILLER ROAD - PROPOSED
Fischer Avenue to US-101

1. Mixed-Use Widened Sidewalk Trail
2. Sidewalk Gap Closure
3. Sidewalk Gap Closure and Cycletrack

Public commenter input:

"Better signage on Hiller for the Hammond Trail. Easy to miss the connection. Better, fill the gap!"



Mad River Road, Miller Lane, Heindon Road

Existing Conditions

The corridor consists of three roadways which are commonly used as bicyclist's and equestrians' routes to travel between McKinleyville and the City of Arcata: Mad River Road, Miller Lane, and Heindon Road. Mad River Road and Heindon Road are striped for two travel lanes while Miller Lane does not have a centerline stripe yet functions as a bidirectional roadway. The corridor is primarily fronted by agricultural land use and frequently used by motor vehicle farming equipment such as tractors and heavy trucks. Furthermore, it connects to the Hammond Trail Bridge, Mad River County Park, and the Mad River Beach.

The corridor is characterized by narrow roadways (20-feet, 15-feet, and 25-feet wide, respectively) and a scenic farmland drive and contains no on-street parking or shoulders. The lack of walking facilities along Mad River Road, Miller Lane, and Heindon Road prompts pedestrians to use grass pathways thereby fronting property lines as an informal walkway. Regarding bicyclists, they are required to travel in the motor vehicle travel lane.

Between 2015 and 2019, one bicycle collision occurred on Miller Lane. There is an opportunity to provide a formalized route for pedestrians, bicyclists, and equestrians who currently use the corridor and encourage the use of others by enhancing visibility of multi-modal users throughout.

1.8
Miles

SPEED LIMIT 25

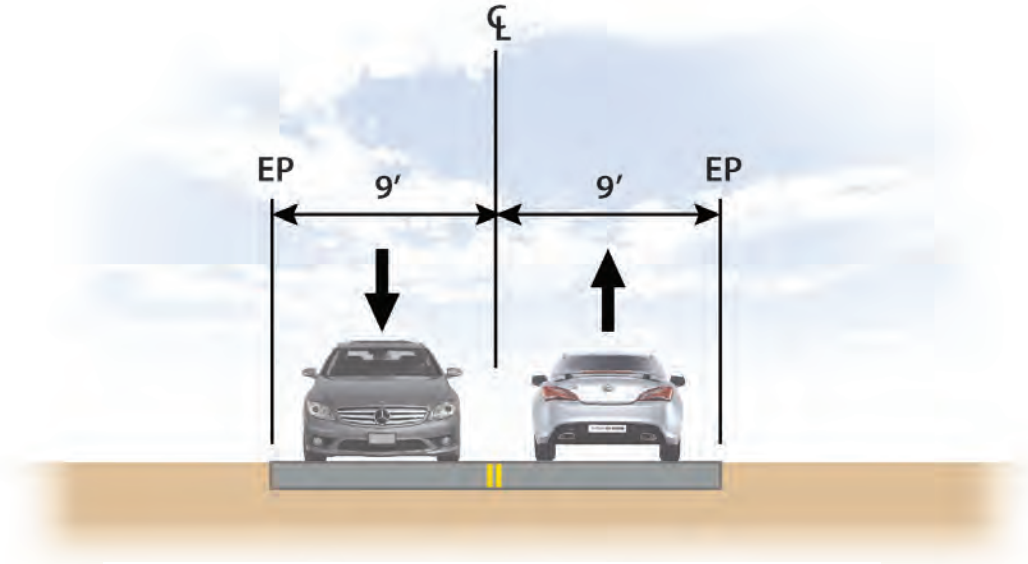
Local Road

1
Trail Access Point

0.4
Bicyclist Collisions per Mile

Public commenter input:

"The southbound shoulder needs to open up to Heindon Rd S of the Mad River for those who must walk against traffic and bicycles that travel with the flow of traffic southbound."



MAD RIVER ROAD, MILLER LANE, AND HEINDON ROAD - EXISTING

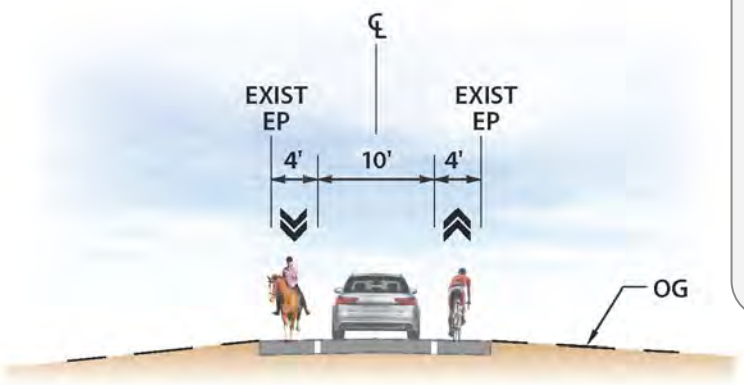
Mad River Road, Miller Lane, Heindon Road

Recommendations

The Mad River-Miller Lane-Heindon Road corridor was identified in a public survey and at the community workshop to discuss priority corridors in the study area. Throughout the community engagement process, public comments were submitted related to the corridor specifically near Mad River Bridge, the southern trailhead of the Hammond Trail, and at the Heindon Road connection to the City of Arcata.

This project focuses on improvements to bicycle, pedestrian, and equestrian infrastructure within the existing right of way. Two concepts were presented to the public and project task force including advisory lanes and Class III bikeways with the preferred concept based on public feedback were advisory lanes. Implementation would reconfigure roadway stripping to create useable shoulders on a roadway that is otherwise too narrow to accommodate bicyclists, pedestrians, and equestrians. The shoulder would be 4 feet wide and delineated by pavement marking. Motorists may only enter the shoulder when no other users are present and must overtake these users with caution. With these improvements, bicyclists, pedestrians, and equestrians will have a safer space further removed from motorists.

*** Total Cost: $429,000**



MAD RIVER ROAD, MILLER LANE, AND HEINDON ROAD - PROPOSED

Hammond Trail Bridge to Giuntoli Lane

Public commenter input:

"The Hammond trail south of the Mad River Bridge needs improvements instead of being part of a country road."

1. Hammond Trail Bridge
2. Advisory Lanes

McKinleyville Avenue

Existing Conditions

McKinleyville Avenue is a two-lane minor collector road, primarily fronted by residential use, that provides connections to residential neighborhoods east of Highway 101. McKinleyville Avenue supports connections to nearby destinations such as Morris Elementary School, McKinleyville High School, segments of the Mid-Town Trail, and two religious institutions.

On-street parking is available between Railroad Drive and Hiller Road on the roadway's westerly side. Although parking is not prohibited by signage between Hiller Road and Heartwood Drive on the roadway's easterly side, the right-of-way is too narrow to accommodate on-street parking. Class II bicycle lanes exist on both sides of the roadway between Railroad Drive and Hiller Road, and there are no bikeway facilities on McKinleyville Avenue south of Hiller Road. Accessible sidewalk is on the west side of the roadway between Railroad Drive and Hiller Road and intermittently on both sides of the roadway between Hiller Road and Chelsea Way.

Between 2015 and 2019, two pedestrian and bicycle collisions were reported along McKinleyville Avenue at the intersections of Railroad Drive/McKinleyville Avenue and Hiller Road/McKinleyville Avenue. While pedestrians must cross at unmarked crosswalks, bicyclists must travel in the motor vehicle lane or in on-street parking lanes due to the lack of continuous bicycling facilities. There is an opportunity to extend the Class II bicycle lane from Hiller Road to Chelsea Way, improve sidewalk gap closure, and provide marked crosswalks at all stop-controlled intersections.

0.6
Miles

Minor Collector Road

1.8
Bicyclist Collisions per Mile

1.8
Pedestrian Collisions per Mile

Public commenter input:

"There is also a lot of vegetation encroaching on the sidewalks on McKinleyville Avenue that should be trimmed."

Public commenter input:

"There is a field on the East side of McKinleyville Ave that would be great for a separate bike/walk path."

McKinleyville Avenue

Recommendations

The McKinleyville Avenue corridor was identified in a public survey and at the community workshop regarding priority corridors in the study area. Throughout the community engagement, public comments were submitted related to McKinleyville Avenue specifically near Morris Elementary and at the stop-controlled Hiller Road/ McKinleyville intersection. While the complete corridor is from Railroad Drive to Chelsea Way, improvements are categorized in segments due to the future Town Center Development Project which influences recommendations north of Hiller Road.

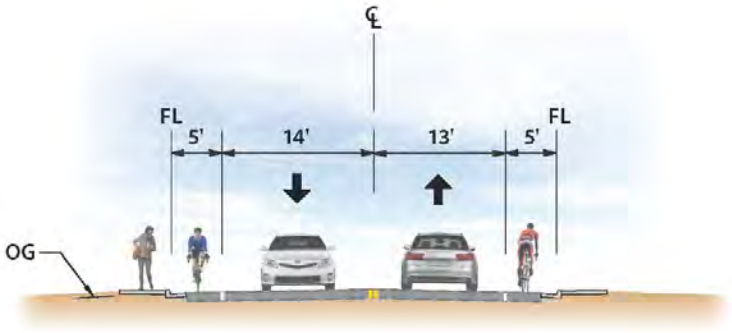
* Hiller Road to Chelsea Way

This project focuses on improving bicycle facilities from Hiller Road to Chelsea Way. Two concepts were presented to the public and project task force including on-street bicycle lanes and Class III bikeways. Based on public feedback, the preferred concept was Class II on-street bicycle lanes. Implementation would provide 5 feet-wide bicycle lanes and require the removal of up to 17 on-street parking spaces on the roadway's westerly side limiting vehicular parking facilities which would simultaneously create a safer space for bicyclists and encourage more residents to bike.

* Railroad drive to Hiller Rd

This project is anticipated to be conditioned by the future Town Center Development project or otherwise completed by the County of Humboldt. There are recommendations to improve pedestrian and bicycle facilities including sidewalk gap closures, enhanced signing, roadway striping, and street crossings. These improvements will not only develop walking and bicycling capabilities throughout the corridor but will also bolster nighttime visibility making it easier for all users to navigate throughout this space.

* Total Cost: $1,968,000

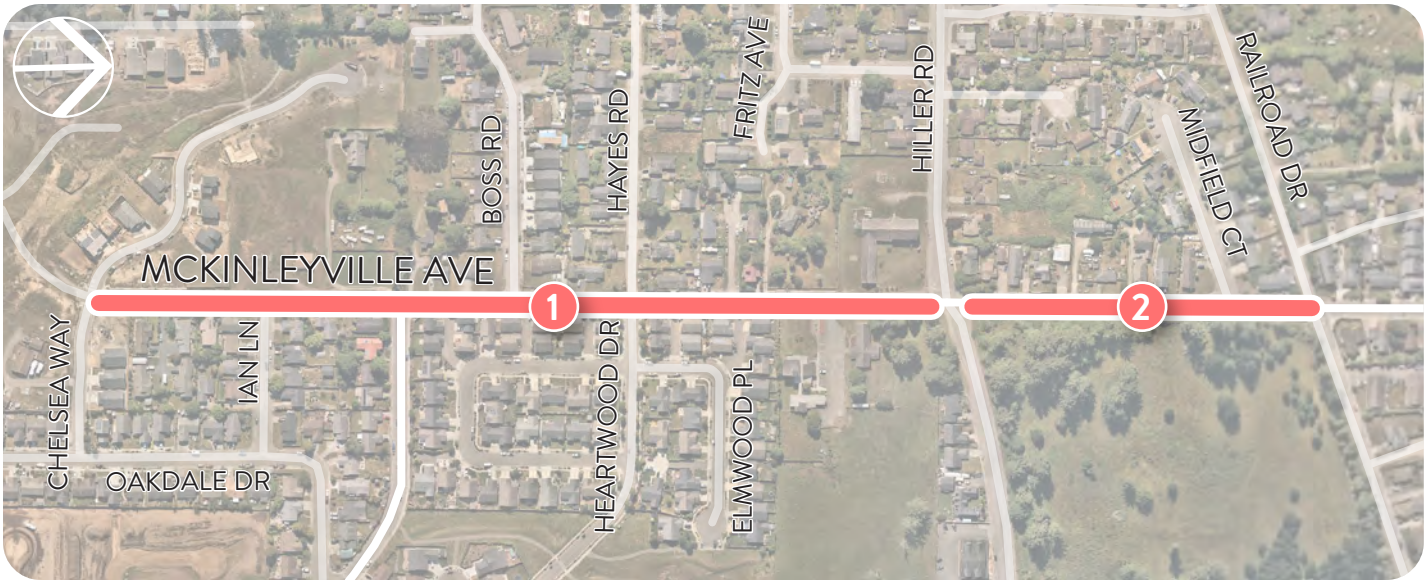


MCKINLEYVILLE AVENUE - CLASS 2 BIKEWAY

Hiller Road to Heartwood Drive

1 Class II Bike Lanes

1 Sidewalk Gap Closure, Signing, and Striping



North Bank Road

Existing Conditions

North Bank Road is a two-lane, East-West Caltrans-owned facility (State Route 200) connecting to State Route 299 freeway to the east and Central Avenue/Highway 101 to the west. The corridor runs along the north bank of the Mad River and is primarily fronted by residential and agricultural land use. North Bank Road connects to recreational destinations such as the 101 Mad River Bridge Bike Path and Azalea State Reserve.

The corridor is characterized by white edgelines, solid double yellow centerline stripe, and a lack of shoulders. While intermittent access to turnouts is available on roadway's southerly side allowing for motor vehicle passing, the corridor lacks formal pedestrian and bicycling facilities, and the lack of shoulders require bicyclists to travel in the motor vehicle travel lane.

Between 2015 and 2019, one fatal pedestrian collision occurred at the interchange of Central Avenue/Highway 101 and North Bank Road. The at-grade intersection lacks crossing facilities for pedestrians and bicyclists to travel from the 101 Mad River Bridge Bike Path to the northerly side of North Bank Road and Central Avenue. There is an opportunity to provide supportive facilities for bicyclists and pedestrians along North Bank Road and to enhance pedestrian and bicycle crossings from the 101 Mad River Bridge Bike Path.

2.1
Miles

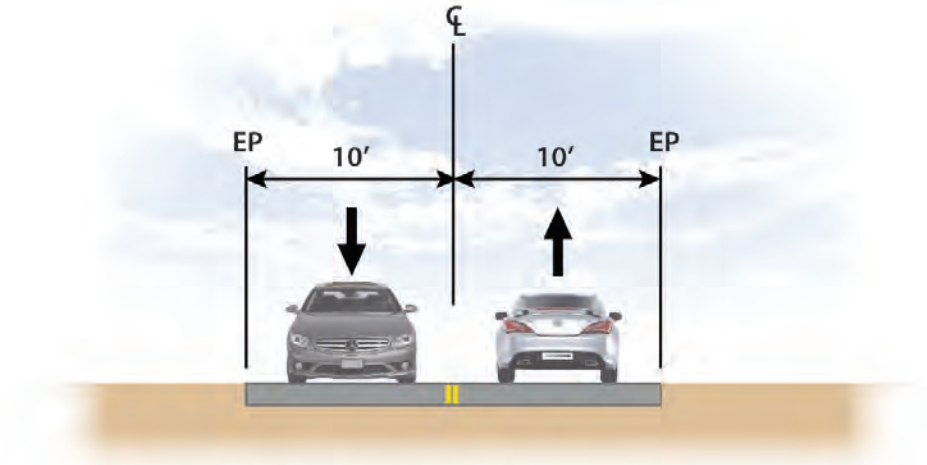
SPEED LIMIT
50

Major Collector

1
Parks

Public commenter input:

"North Bank Road going north towards Central Avenue and the Central Avenue Exit off the 101 intersections are both concerns. There are often near misses with pedestrians making a right turn onto the hill going to Central Avenue."



NORTH BANK ROAD - EXISTING

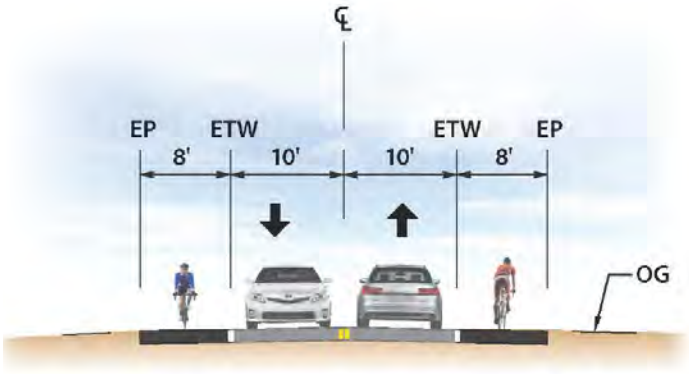
Highway 101 to SR 299

North Bank Road

Recommendations

The North Bank Road corridor was identified in a public survey and at the community workshop to discuss priority corridors in the study area. Throughout the community engagement process, public comments were submitted related to North Bank Road specifically at the Central Avenue/North Bank Road/Highway 101 intersection and at the corridor connection to Azalea Avenue.

✱ Cost Estimate: $13,094,000



NORTH BANK ROAD - PROPOSED

1. Roadway Widening (Phase 1)
2. Roadway Widening (Phase 2)

✱ Central Ave/Hwy 101 intersection to Azalea Avenue

This project focuses on enhancing support facilities such as shoulder widening between Central Ave/Hwy 101 intersection and Azalea Avenue. The reccommended 8 foot wide shoulders will provide east-west travel paths for bicyclists and pedestrians on both sides of North Bank Road.

✱ Azalea Avenue to State Route 299

The segment of Azalea Avenue to State Route 299 is outside of the project area which requires a separate study to evaluate the potential of a phase 2 project. Implementation of a phase 2 project could extend shoulder widening improvements along North Bank Road east to State Route 299. It is recommended the County work with Caltrans and the Humboldt County Association of Governments (HCAOG) to consider if SR-200 (North Bank Road) can be considered for a Highway to Boulevard concept and if appropriate, include in the future RTIP.

Public commenter input:

"Need for better lighting (corner of North Bank Road and Azalea Rd.)"

Ocean Drive

Existing Conditions

Ocean Drive is a two-lane local road, primarily fronted by residential homes with street-facing private driveways, connecting to Hiller Road to the north and School Road to the south. The corridor provides access to the Mad River Access and Mad River Bluffs recreational trails and the Hammond Trail and it is characterized by intermittent accessible sidewalks and on-street parking.

On-street parking is permitted on both sides of the roadway where the right-of-way is wide enough to support parking facilities. Sidewalk availability is intermittent throughout corridor requiring pedestrians to use gravel or grass pathways as the informal walking facility. The lack of bicycle facilities prompts bicyclists to travel in the motor vehicle lanes which are not marked for Class III bikeways.

While no collisions involving pedestrians or bicyclists have been reported on along Ocean Avenue, there is an opportunity to enhance travel for multi-modal users to support recreational access throughout the corridor.

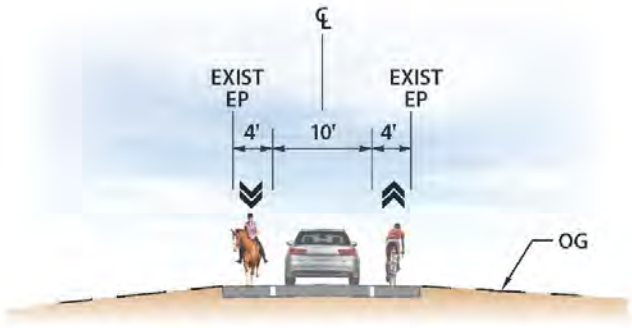
Recommendations

The Ocean Drive corridor was identified in a public survey and at the community workshop to discuss priority corridors in the study area. Throughout the community engagement process, public comments were submitted related to Ocean Drive specifically near the School Road/ Ocean Drive intersection.

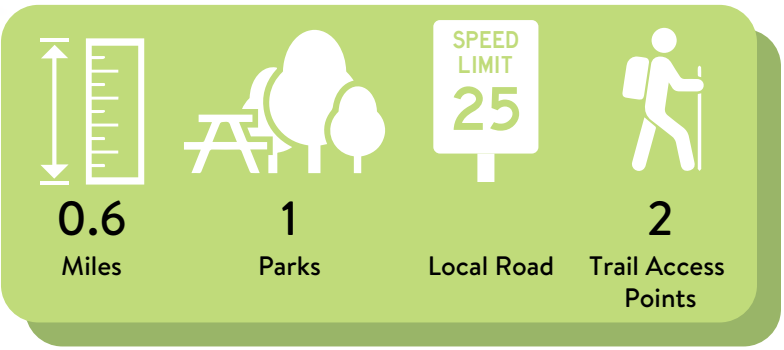
*** Total Cost: $441,000**

* Hiller Road to School Road

This project focuses on improvements to bicycle, pedestrian, and equestrian infrastructure within the existing right of way. The recommendation includes advisory lanes which would reconfigure roadway stripping to create useable shoulders on a roadway that is otherwise too narrow to accommodate bicyclists, pedestrians, and equestrians. The shoulder would be 4 feet wide and delineated by pavement marking and optional pavement color. The center lane is dedicated to two-way motor vehicle traffic and motorists may only enter the shoulder when no other users are present and must overtake these users with caution. Similar to developments along Mad River Road to Heindon Road, these improvements will encourage various active transportation modes and create a safer space bicyclists, pedestrians, and equestrians as they are further removed from motorists.



OCEAN DRIVE - PROPOSED
Hiller Road to School Road



School Road

Existing Conditions

School Road is a three-lane minor collector road that links residential areas west of US-101 to Central Avenue commercial corridor to the east. The roadway is primarily fronted by residential driveways and connections to neighborhood streets. The corridor is characterized by Class II bicycle lanes on both sides of the roadway, intermittent accessible sidewalk connectivity, and the sidewalk parkways.

On-street parking is permitted on the roadway's southerly side throughout the corridor and is prohibited on the northerly side between US-101 and Washington Avenue The roundabout at School Road/Salmon Avenue/McKinleyville Avenue includes splitter islands, continental crosswalks, and sidewalks. Due to gaps in the sidewalk, pedestrians travel in the shoulder in some segments between US-101 and Cerntral Avenue.

Between 2015 and 2019, three pedestrian and bicycle collisions were reported along School Road, two of which occurred at the intersection of School Road and Central Avenue. There is an opportunity to enhance bicycle facilities at signalized intersections and improve sidewalk gap closure.

Recommendations

The School Road corridor was identified in a public survey and at the community workshop regarding priority corridors in the study area. Throughout the community engagement, public comments were submitted related to School Road specifically east of Highway 101 and near the roundabout.

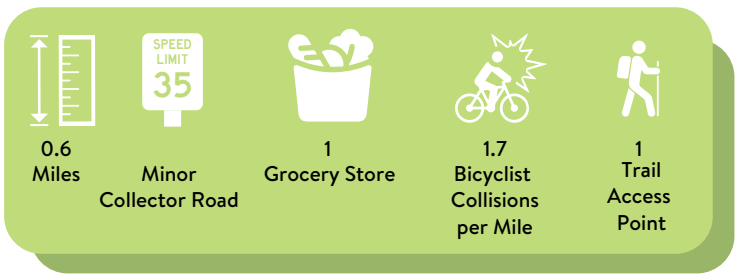
✱ Cost Estimate: $3,379,000

✱ Anderson Avenue to Central Avenue

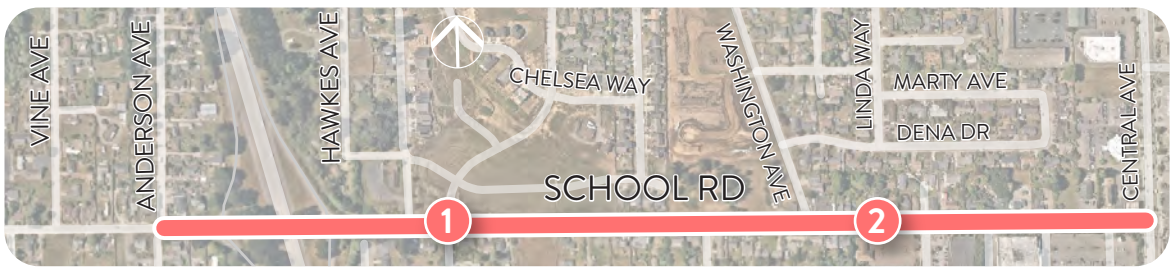
This segment focuses on enhancing pedestrian facilities including sidewalk gap closure on the roadway's northerly side from Anderson Avenue to the Central Avenue intersection. This improvement will enhance the area's walkability, make it more accessible for all users, and thus encourage walking throughout the area.

✱ Roundabout at Salmon Avenue

This segment focuses on modifying the roundabout to include pedestrian and bicycle support facilities such as an off-street trail/widened sidewalk to allow cycling outside of the circulating vehicular traffic for less confident bicyclists.



1. Roundabout Modification
2. Sidewalk Gap Closure



Washington Avenue

Existing Conditions

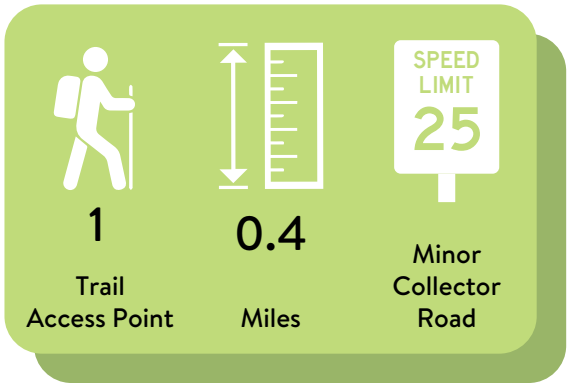
Washington Avenue is a two-lane minor collector road that connects between McKinleyville Avenue and School Road and is entirely fronted by single-family residences. The corridor provides access to an existing segment of the Mid-Town Trail, with off-street connection to Heartwood Drive, Elmwood Place, and Sagewood Way.

The section between McKinleyville Avenue and 3 Cabins Lane is characterized by accessible sidewalks and ADA ramps on the northerly side of the roadway. There are four one-way stop-controlled T-intersections between McKinleyville Avenue and Dena Drive, with a total of three ADA-accessible curb ramps, and no marked crosswalks. A parcel development fronting Washington Avenue is constructing sidewalk gap fill on the westerly side of the roadway, consisting of 10-feet wide sidewalk and 5-feet wide sidewalk parkway. No collisions involving pedestrians or bicyclists were reported on Washington Avenue during the study period.

Recommendations

Washington Avenue has been cited by the community during the public engagement process as a corridor needing improvements for pedestrian and bicycle facilities. In the concept development phase of this project, community feedback identified sidewalk gap fill and Class II Bike Lane improvements as preferred treatments. As of July 2022, the County of Humboldt Planning Commission received an ordinance to prohibit on-street parking on Washington Avenue to relieve right-of-way for Class II bicycle lanes. Sidewalk gap fill is recommended on the easterly side of Washington Avenue between School Road and Oakdale Drive. If the planned parcel development does not complete sidewalk gap fill on the westerly side of Washington Avenue, the improvements are recommended to be completed by the County of Humboldt.

*** Total Cost: $1,043,000**



1
Trail Access Point

0.4
Miles

Minor Collector Road

Transit Access Improvements

Based on collaborative discussions with HTA, improvements to transit stops are recommended. HTA operates the Redwood Transit System (RTS) which is a fixed-route bus route that serves the McKinleyville community. The RTS route travels primarily on Central Avenue with a segment on McKinleyville Avenue traveling adjacent Morris Elementary School and McKinleyville High School. This study recommends pursuit of transit stop improvements to include the following during capital projects led by the County, MCSD, Caltrans, or other applicable agencies:

- All-weather paved loading zone measuring at least 8-feet wide and 5-feet deep with 2% slope or less.
- A desired transit loading zone would measure 10-feet wide and 5-feet deep and meet ADA standards.
- Consider green infrastructure and hardscape improvements to highlight the transit stop.
- Provision of seating, trash receptables, shelter, bicycle parking, and passenger information and wayfinding.
- Consider other amenities such as real-time transit arrival information.

Subject to advancement the Town Center Development project, HTA will evaluate potential route modification of RTS and potentially consider routing along Hiller Road with transit stops serving the new land use and potential transit riders.

Central Avenue South Long-Term Alternative Alignments

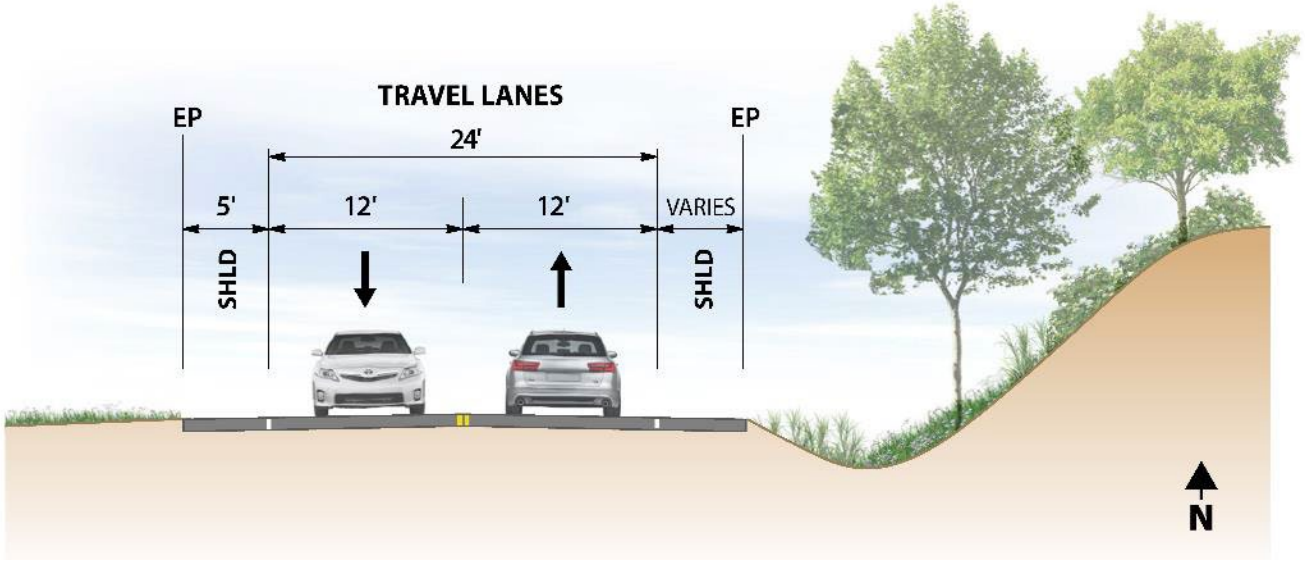
Throughout development of the MMCP, the need to provide bicycle and pedestrian connection to the 101 Mad River Bridge Bike Path was repeatedly raised as a need during community engagement. The existing route on Central Avenue, south of School Road, is direct yet challenging and not a comfortable solution for active transportation users of all ages and abilities. Contra flow walking and cycling often occurs given the complexity of the Central Avenue couplet and crossings near North Bank Road. Crash history between 2015 and 2019 show five fatalities involving a pedestrian or a bicyclist on Central Avenue between School Road and the 101 Mad River Bridge Bike Path.

Central Avenue between School Road and North Bank Road is managed by Caltrans for approximately 2,500-feet north of North Bank Road and managed by the County of Humboldt for the rest of the roadway to the north.

Interim or near-term solutions have been presented in this report to improve conditions along Central Avenue between School Road and North Bank Road. The interim improvements identified earlier in this report include items such as shoulder widening and paving an off-street path where possible. Parallel with the interim improvements, this report recommends advancing a long-term solution to provide a high quality/high comfort facility for people walking and cycling along Central Avenue between School Road and North Bank Road as discussed below.

As shown on Figure 16, the project team, in coordination with key project stakeholders, identified a series of seven alternatives along existing and potential right-of-way. All seven routes were conceptualized to connect between the intersection of Central Avenue/School Road and the US-101 Mad River Bridge Bike Path for comparative analysis using a uniform set of evaluation metrics.

Figure 15 Central Avenue Between Henry Lane and North Bank Road – Existing Conditions Cross Section



Alternative 1
Alternative 1 is a 3.0-mile route that diverts east of Central Avenue to travel through low density residential areas. The route would be a combination of bikeway facilities along Central Avenue, Bartow Road, Cochran Road, Azalea Avenue, and North Bank Road.

The detailed alignment for Alternative 1 is as follows: Class I off-street shared-use path on the easterly side of Central Avenue traveling south toward Bartow Road. Along Bartow Road the facility continues east as a Class III bikeway, continues east along Cochran Road, and continues south along Azalea Avenue to the Azalea Avenue/Hewitt Road intersection. From here the facility transitions to Class II bike lanes continuing south on Azalea Avenue toward North Bank Road. At the Azalea Avenue/North Bank Road intersection an RRFB (or similar) would be installed to facilitate crossing to the southerly side of North Bank Road. A Class I off-street shared-use path would be constructed along the southerly side of North Bank Road connecting westerly to the 101 Mad River Bridge Bike Path.

Alternative 2
Alternative 2 is a 1.2-mile route traveling along the easterly side of Central Avenue. The facility would be a Class I off-street shared-use path along the easterly side of Central Avenue and continue along the northerly side of North Bank Road to the North Bank Road/Reserve Road intersection. An RRFB (or similar) would be installed at the North Bank Road/Reserve Road intersection to facilitate crossing to the southerly side of North Bank Road to connect to the 101 Mad River Bridge Bike Path. Alternative 2 would serve desired travel routes as shown in the photograph below where a cyclist is riding contraflow along Central Avenue.

Alternative 3
Alternative 3 is a 1.5-mile route traveling along the westerly side of Central Avenue. The facility would be a Class I off-street shared-use path along the westerly side of Central Ave. A new bridge facility would be constructed adjacent to the existing southbound Central Avenue bridge over US-101 to facilitate crossing to the westerly side of US-101 to reach Silva Road. The Caltrans maintenance access road located west of US-101 would be improved for public access which currently travels under US-101 near the Mad River and links to the easterly side of US-101 and connects to the 101 Mad River Bridge Bike Path.

Alternative 4
Alternative 4 is a 2.0-mile route traveling along the westerly side of Central Avenue to Turner Road before diverting along Mill Creek on a new Class I off-street shared use path to US-101. A new over or underpass facility would be constructed to cross to the west side of US-101 in the vicinity of Mill Creek. The Class I would continue along the westerly side of US-101 to reach Silva Road. The Caltrans maintenance access road located west of US-101 would be improved for public access which currently travels under US-101 near the Mad River and links to the easterly side of US-101 and connects to the 101 Mad River Bridge Bike Path. The photograph below shows the context of Turner Road.

Alternative 5

Alternative 5 is a 2.5-mile route that diverts west of Central Avenue to travel on existing bicycle facilities and along US-101. The facility would utilize the existing Class II bike lanes on School Road, then travel along Class III along local roads including Salmon Avenue and Griffith Road, and Class I off-street shared-use path along the easterly side of US-101. A new over or underpass facility would be constructed to cross to the west side of US-101 in the vicinity of Mill Creek. The Class I would continue along the westerly side of US-101 to reach Silva Road. The Caltrans maintenance access road located west of US-101 would be improved for public access which currently travels under US-101 near the Mad River and links to the easterly side of US-101 and connects to the 101 Mad River Bridge Bike Path. The photograph below shows the US-101 bridge as it crosses over Mad River from the north bank.

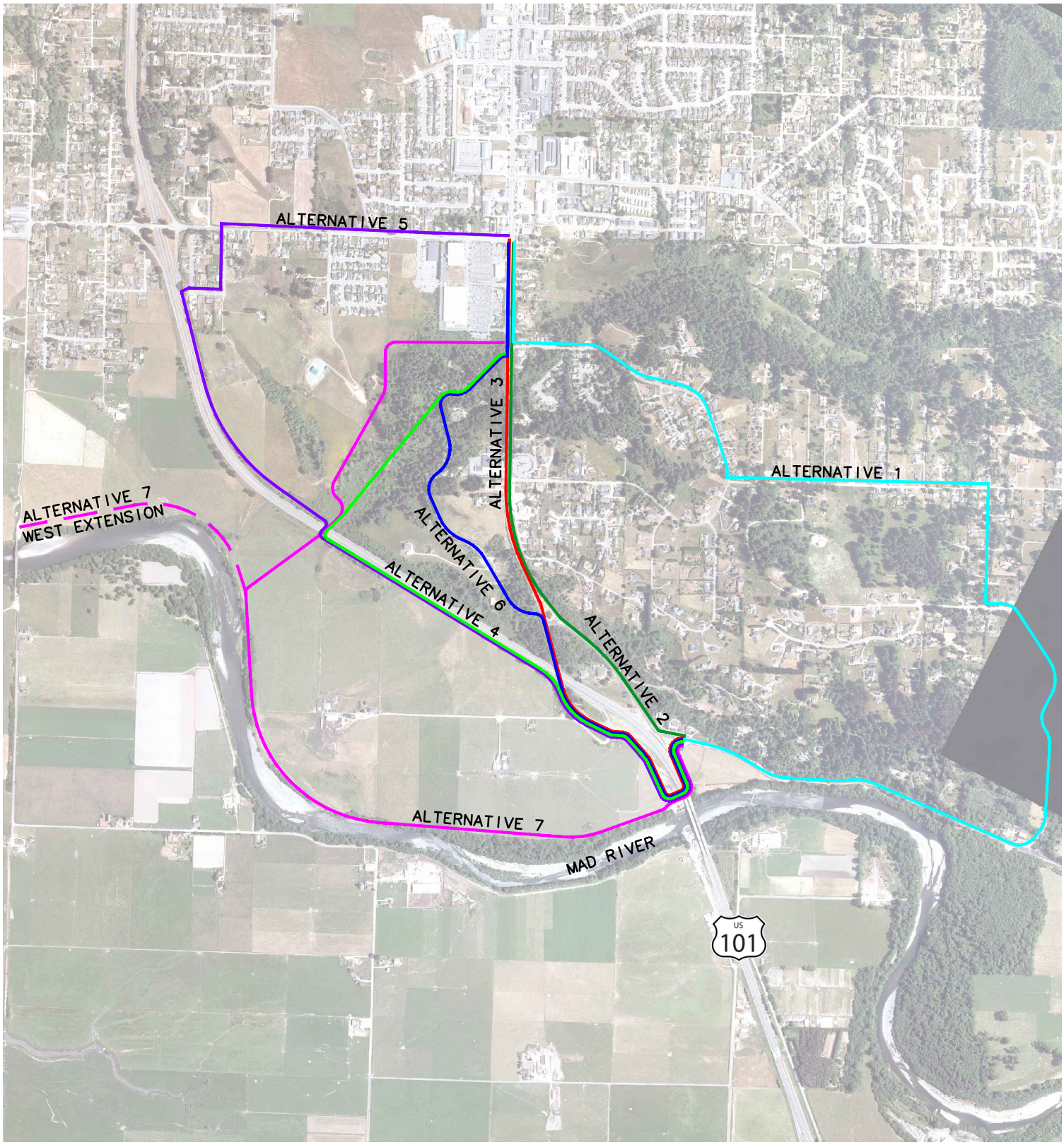
Alternative 6

Alternative 6 is a 1.6-mile route traveling along the westerly side of Central Avenue to Turner Road which serves residential land uses. A Class III along Turner Road is proposed with improvements to the roadway for pavement, signage and striping. Right of way would need to be secured at the terminus of the existing Turner Road for approximately 600 to 800-feet to connect to US-101. A new over or underpass facility would be constructed to cross to the west side of US-101. The Class I would continue along the westerly side of US-101 to reach Silva Road. The Caltrans maintenance access road located west of US-101 would be improved for public access which currently travels under US-101 near the Mad River and links to the easterly side of US-101 and connects to the 101 Mad River Bridge Bike Path.

Alternative 7

Alternative 7 is a 2.3-mile route that diverts west of Central Avenue near Mill Creek and along the north bank of the Mad River. The facility would be a Class I off-street shared-use path constructed along the northerly side of Mill Creek and connect to the westerly side of US-101. A new over or underpass facility would be constructed to cross to the west side of US-101. The Class I facility would continue south until reaching Mad River with a Class I off-street shared-use path along the north bank of the Mad River until reaching the US-101 Mad River overpass. The Caltrans maintenance access road located west of US-101 would be improved for public access which currently travels under US-101 near the Mad River and links to the easterly side of US-101 and connects to the 101 Mad River Bridge Bike Path. Alternative 7 includes the concept of a west extension to link to the existing Hammond Trail Bridge. The photograph below shows the existing Hammond Trail Bridge over the Mad River.

Figure 16 Central Avenue South Long-Term Alternative Alignments



ALTERNATIVE 1	3.0 MI
ALTERNATIVE 2	1.2 MI
ALTERNATIVE 3	1.5 MI
ALTERNATIVE 4	1.7 MI
ALTERNATIVE 5	2.5 MI
ALTERNATIVE 6	1.6 MI
ALTERNATIVE 7	2.3 MI

SCALE: 1" = 1500'

CENTRAL AVENUE SOUTH LONG-TERM ALTERNATIVE ALIGNMENTS

MARK THOMAS

Central Avenue South Long-Term Alternative Alignments Evaluation

Evaluation metrics were developed to compare the Central Avenue South Long-Term Alternative Alignments in a prioritization matrix. The PTF and the County met to identify evaluation metrics for the seven alternative alignments. Input received helped refine the metrics and determining evaluation weighting, including capital cost, bicycle level of stress, route directness, intersection crossings, operations and maintenance, right-of-way, and topography change. Descriptions of the metrics and the final weight assigned are shown in Table 1, below.

Table 1 Central Avenue South Long-Term Alternative Alignments Evaluation Metrics and Weighting

Metric	Description	Weight
Capital Cost	Capital construction costs to build alignment (bridges, asphalt, etc.) Environmental Impacts (potential impacts to environment to construct.) Engineering Design Complexity (measure complexity of design plans and challenges to overcome.)	1.7
Bicycle Level of Stress	Review if route is adjacent high volume/high speed traffic or not.	1.7
Route Directness	Review if out of the way travel is needed; reducing attractiveness of route.	1.6
Intersection Crossings	Complexity and volume of car traffic that bicycle and pedestrian users need to cross.	1.4
Operations & Maintenance	Costs for labor and materials to maintain high quality facility.	1.4
Right of Way / Easements	Need to secure property rights or easements to advance alignment.	1.2
Topography	Steepness of the route, in which a greater slope would present more burden on bicycle and pedestrian users.	1.0

Each corridor was independently evaluated to assign a score of 1 (low), 2 (medium), or 3 (high) with higher numbers reflecting higher performance per metric. Weighting was then applied to each score to develop a composite result for each of the seven alternatives. The results of the prioritization matrix are illustrated in Figure 17, where greater sum values indicate greater performance.

Alternatives 2, Alternative 4, and Alternative 6 scored highest in the performance evaluation. We recommend the County advance to a Project Report to narrow the preferred alternative and subsequently Preliminary Design and Environmental Documentation in collaboration with local partners and the public to determine right-of-way needs, probable construction costs, and identification of key items needed for future implementation. Given the engineering design, permitting, construction complexity, potential right-of-way acquisition needs, and availability of funding, this is expected to have a long-term schedule for implementation.

Figure 17 Central Avenue South Long-Term Alternative Alignments – Evaluation Results

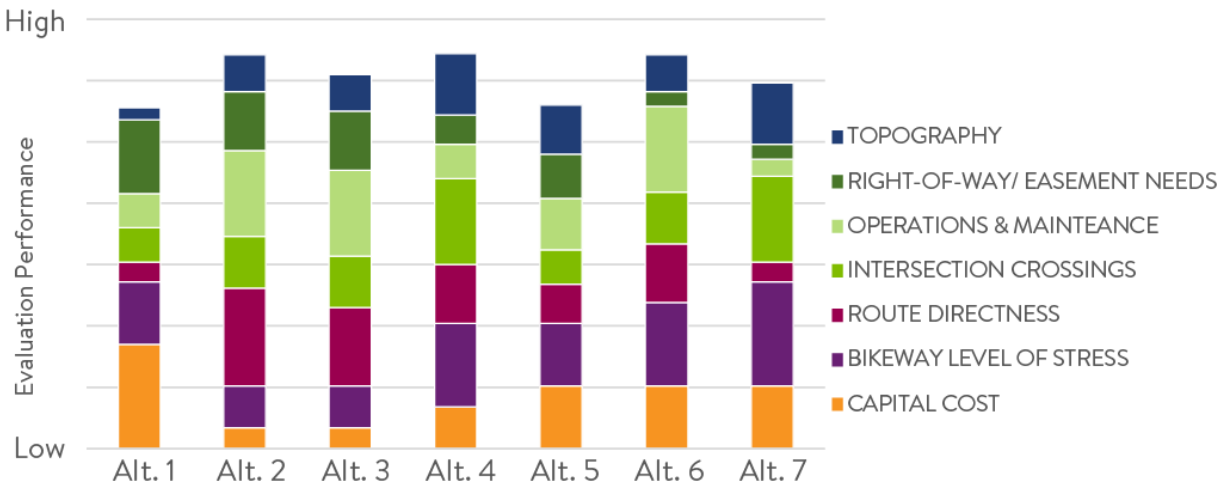
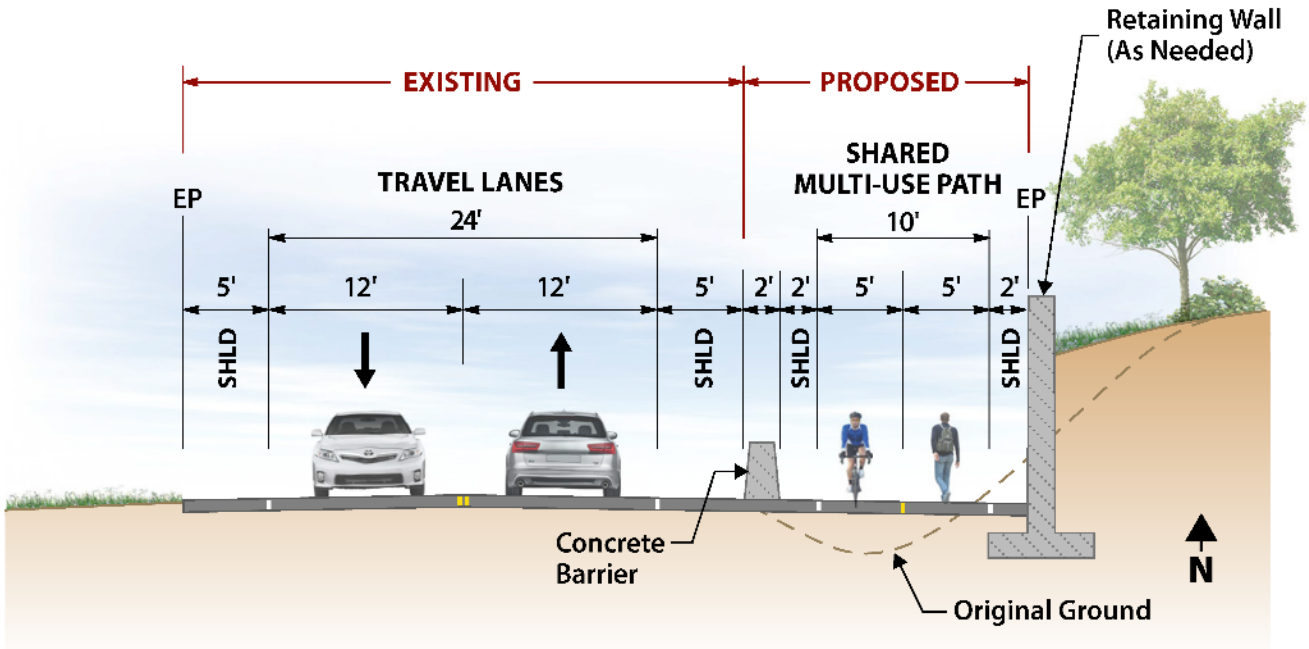


Figure 18 Central Avenue Between Henry Lane and North Bank Road – Alternative Alignment 2 Cross Section



Connectivity to North Arcata

The McKinleyville area is physically separated from North Arcata via the Mad River which travels east-west, with two well-established connections crossing the Mad River:

1. Hammond Trail bridge over Mad River west of US-101 (former railroad trestle)
2. US-101 Mad River Bridge Bike Path (serving both bicycle and pedestrian traffic)

The following additional project recommendations are provided to enhance connectivity to North Arcata:

1. Provide Class III bike route improvements along Wymore Road between the southern terminus of the US-101 Mad River Bridge Bike Path and Caltrans planned Boyd Draw connection under US-101.
2. Provide Class III bike route improvements along Wymore Road between Caltrans planned Boyd Draw and Giuntoli Lane (which includes on-street bike lanes).
3. Provide Class III bike route improvements along Heindon Road between Boyd Draw and Giuntoli Lane (which includes on-street bike lanes).
4. Improve Fischer Avenue with all-weather pavement and Class III bike route or advisory bike lanes improvements between School Road and the existing Hammond Trail bridge over Mad River.
5. Reconstruct and widen the Hammond Trail bridge over Mad River consistent with preliminary design federal funding secured by County of Humboldt.
6. Provide Class III bike route or advisory bike lanes improvements along Mad River Road, Miller Lane, and Heindon Road to Giuntoli Lane.

Future Planning and Engineering Design Efforts

This evaluates specific multimodal improvements within the study area with McKinleyville. Future planning efforts might include the following:

1. Evaluate potential for "Highways to Boulevards" review of SR-200 (North Bank Road). The evaluation would consider modifications to the roadway to better accommodate multimodal needs.
2. Continue public engagement within McKinleyville through development of an Active Transportation Plan that includes a larger geographic area including areas north of Railroad Drive such as Murray Road and the Hammond Trail connectivity which was identified often during public engagement for additional improvements.
3. We recommend the County advance the Central Avenue South connectivity options to Project Report to narrow the preferred alternative and subsequently Preliminary Design and Environmental Documentation. Those efforts would be conducted in collaboration with local partners and the public to determine right-of-way needs, probable construction costs, and identification of key items needed for future implementation. Develop a funding program to address engineering design, permitting, construction complexity, potential right-of-way acquisition needs and maintenance.

Connectivity to Annie & Mary Trail

This project provides a potential connection to a new trail alignment along the Arcata & Mad River Railroad (known as the Annie & Mary Trail). The railroad corridor is publicly owned and has long been considered for implementation as a off-street trail for people to travel by walking, rolling, and cycling. The alignment of the Annie & Mary Trail would extend westerly from the City of Blue Lake along SR-299 and terminate around West End Road near the SR-299/Giuntoli Lane interchange. Providing improved connectivity to Giuntoli Lane will allow linkage to the Annie & Mary Trail when completed.

East-West Connectivity Along the Mad River

During the preparation of the report, improvements to the north bank of the Mad River was identified by agency staff. Upon implementation improvements such as a levee or maintenance access road, we recommend inclusion of a Class I off-street paved trail. The Class I along the northern bank of the Mad River could better link between two well-established connections crossing the Mad River; the Hammond Trail Bridge and the US-101 Mad River Bridge Bike Path.

Benefits to Disadvantaged Communities

The project recommendations benefit disadvantaged and historically underserved communities in the project area. Per statewide mapping, the McKinleyville area is designated as a low-income community. Per Assembly Bill 1550 (2016), low-income communities and households are defined as the census tracts and households, respectively, that are either at or below 80 percent of the statewide median income. Census Tracts 6023010501 and 6023010502 both are identified as low-income communities and encompass the project study area north of the Mad River. Therefore, the recommended project improvements will benefit disadvantaged community members.

Recommended Phasing

Conceptual projects developed for the MMCP range from low-cost improvements, such as signing and striping, to high-cost capital projects, such as bridge structure construction. The County of Humboldt can phase implementation of projects throughout McKinleyville to continue momentum towards improvement to the transportation network. Projects have been divided into three phasing categories based on estimated time to complete:

1. Near-Term (0-2 Years)
2. Medium-Term (2-5 Years)
3. Long-Term (5+ Years)

Table 2 summarizes recommended project concepts, likely phasing, and estimated engineering construction cost.

Table 2: Recommended Project Phasing and Estimated Cost

#	Corridor	Recommendation	Phasing	Estimated Cost
1	Azalea Avenue	Class III Bikeway	Near-Term	$314,000
2	Azalea Avenue	Shoulder Widening	Medium-Term	$4,560,000
3	Central Avenue	Widened Sidewalk Trail	Medium-Term (one alternative advanced)	$4,830,000
		Lane Reduction		$1,024,000
4	Central Avenue South	Interim Improvements	Near-Term	$975,000
5	Hiller Road	Widened Sidewalk Trail	Medium Term	$1,153,000
6	Hiller Road	Sidewalk Gap Closure	Medium-Term	$2,432,000
7	Hiller Road	Sidewalk Gap Closure/Cycletrack	Near-Term	$4,488,000
8	Mad River/Miller/Heindon	Advisory Lanes	Medium-Term	$428,000
9	McKinleyville Avenue	Class II Bike Lanes	Near-Term	$1,124,000
10	McKinleyville Avenue	Sidewalk Gap Closure/Signing/Striping	Medium-Term	$844,000
11	North Bank Road	Shoulder Widening (Phase 1)	Long-Term	$7,598,000
12	North Bank Road	Shoulder Widening (Phase 2)	Long-Term	$5,496,000
13	Ocean Drive	Advisory Lanes	Medium-Term	$441,000
14	School Road	Roundabout Modification	Medium-Term	$608,000
15	School Road	Sidewalk Gap Closure	Medium Term	$2,771,000
16	Washington Avenue	Sidewalk Gap Closure	Medium-Term	$1,043,000

Table 3 summarizes the estimated engineering construction cost for each Central Avenue South Long-Term Alternative. One of the seven alternatives identified is anticipated to advance for connection over the Mad River between McKinleyville and the City of Arcata.

Table 3 Central Avenue South Long-Term Alternatives and Estimated Costs

Alt	Alternative	Estimated Cost
1	Central Avenue South Long-Term Alternative 1	$2,590,000
2	Central Avenue South Long-Term Alternative 2	$13,631,000
3	Central Avenue South Long-Term Alternative 3	$12,790,000
4	Central Avenue South Long-Term Alternative 4	$10,749,000
5	Central Avenue South Long-Term Alternative 5	$8,433,000
6	Central Avenue South Long-Term Alternative 6	$8,961,000
7	Central Avenue South Long-Term Alternative 7	$6,942,000

Next Steps

The County will continue partnership with stakeholders and public engagement to advance conceptual project designs to enhance multi-modal connectivity throughout McKinleyville.

Near-Term Project Prioritization

The County of Humboldt will coordinate among departments and local organizations as needed to program conceptual project elements into annual maintenance and capital improvement programs. Funding may be required to complete preliminary and final design, environmental review, right-of-way acquisition, permitting, and construction. Table 4 summarizes recommended prioritization of near-term projects.

Table 4 Near-Term Project Prioritization

Corridor	Recommendation	Phasing	Estimated Cost
Central Avenue South	Interim Improvements	Near-Term	$975,000
Azalea Avenue	Class III Bikeway	Near-Term	$314,000
Hiller Road	Sidewalk Gap Closure/Cycletrack	Near-Term	$4,488,000
McKinleyville Avenue	Class II Bike Lanes	Near-Term	$1,124,000
NEAR TERM IMPROVEMENTS - GRAND TOTAL			**$6,901,000**

Medium-Term and Long-Term Projects

The County of Humboldt will coordinate among departments, organizations, and local, regional, and state agencies as needed to apply or co-apply for funding resources or grant opportunities. Funding may be required to complete preliminary and final design, environmental review, right-of-way acquisition, permitting, and construction. Table 5 summarizes recommended prioritization of medium-term projects.

Table 5 Medium-Term Project Prioritization

Corridor	Recommendation	Phasing	Estimated Cost
Hiller Road	Widened Sidewalk Trail	Medium Term	$1,153,000
Hiller Road	Sidewalk Gap Closure	Medium-Term	$2,432,000
Ocean Drive (Hiller Road to School Road)	Advisory Lanes	Medium-Term	$441,000
McKinleyville Avenue	Sidewalk Gap Closure/Signing/Striping	Medium-Term	$844,000
Mad River/Miller/Heindon	Advisory Lanes	Medium-Term	$428,000
Azalea Avenue	Shoulder Widening	Medium-Term	$4,560,000
School Road	Roundabout Modification	Medium-Term	$608,000
School Road	Sidewalk Gap Closure	Medium-Term	$2,771,000
Washington Avenue	Sidewalk Gap Closure	Medium-Term	$1,043,000
MEDIUM-TERM IMPROVEMENTS - GRAND TOTAL			**$14,280,000**

Conclusion

The McKinleyville Multimodal Connections Project developed network recommendations to enhance multimodal connectivity based on feedback from the public, community stakeholders, project task force, and the County of Humboldt during an eighteen-month long engagement process. A total of sixteen Near-Term and Medium Term, and seven Long-Term conceptual projects and cost estimates have been developed for nine corridors within the project study area. The conceptual projects have been prioritized based on feedback and evaluation metrics. Preliminary engineering cost estimates were developed using the state funding program format for project concepts evaluated in this study, and are included in Appendix E.

The estimated total cost to construct prioritized conceptual projects is $40 million. Next steps for the County of Humboldt and project partners includes confirming or refining conceptual projects and moving toward implementation. There is an opportunity to implement low-cost projects through coordination with the County's recurring roadway maintenance programs, such as projects involving signing and striping. Larger projects may be submitted to State and Federal grant programs with match funding from the County to receive funds for design and construction.

Appendices

Appendix A: Existing Conditions Maps
Appendix B: Phase 1 Engagement: Presentations and Materials
Appendix C: Phase 2 Engagement: Presentations and Materials
Appendix D: Project Area Focus Corridors: Concept Cross Sections
Appendix E: Project Area Focus Corridors: Cost Estimates
Appendix F: Central Avenue South Long-Term Alternative Alignment Cost Estimates

SAFEWAY

STOP
Madrone