



VINEYARD BICYCLE ADVISORY COMMISSION MEETING

**Vineyard City Hall, 125 S Main Street, Vineyard, Utah
Thursday, March 31, 2022, at 5:30 p.m.**

1. CALL TO ORDER

2. OPEN SESSION

3. MINUTES REVIEW AND APPROVAL

Minutes from December 9, 2022, BAC Meeting

4. BUSINESS ITEMS:

None

5. WORK SESSION:

5.1 Discussion regarding the Alta Planning recommendations for the Active Transportation Plan

Alta Planning has been wrapping up work on Vineyard's Active Transportation Plan. The Commission will review Alta's most recent recommendations listed on their proposed plan.

5.2 Introduction of Orem City's proposed Mountain to Shoreline Trail Project

Orem City is working on a proposal for a trail that leads from Vineyard's Utah Lake Shoreline Trail to the mouth of Provo Canyon. The Commission will discuss the preliminary concepts proposed by Orem City.

5.3 Overview of BYU 510 Student Project regarding Mill Rd and 400 N

The BYU 510 student group led by David Simpson, Department of Geography, has been working on several concepts for improving vehicular circulation, bicycle safety, and walkability along Mill Rd. and 400 N. The Commission will review and discuss their concept designs.

5.4 BAC Participation in Bike Month

The Commission will discuss potential ways that the Commission can be involved in Vineyard City's Bike Month during the month of April 2022.

5.5 Funding for Bike and Skate Park

In the previous BAC meeting held of December 09, 2021, the Commission was asked to research sources of funding and grants for the Vineyard Bike and Skate Park. They were also asked to brainstorm possible locations for this park. The Commission will have a discussion on these topics.

5.6 Holdaway Road Bicycle Boulevard Petition

Resident, David Lauret, shall lead a presentation regarding a petition to turn Holdaway Road into a Bicycle Boulevard with accompanying various traffic calming applications.

6. COMMISSION MEMBERS' REPORTS AND EX PARTE DISCUSSION DISCLOSURE

None.

7. ADJOURNMENT

AGENDA NOTICING COMPLETED ON: March 15, 2022

NOTICED BY: /s/ Briam Amaya Perez

Briam Amaya Perez, Planner II

RECOMMENDATIONS

INTRODUCTION

Approach Used to Develop Recommendations

The Vineyard Active Transportation Plan was initiated to prioritize planning active transportation options for the community as the population and scale of Vineyard both continue to grow. With numerous new developments breaking ground, the addition of a FrontRunner Station, a new UVU Vineyard Campus, and the extension of surrounding regional trails connecting through and to Vineyard, ensuring all areas of town are connected via a safe and accessible active transportation network is critical to making Vineyard a destination for active living.

How Recommendations Align with Plan Goals

The plan goals should guide the recommendations made for both network development and policy/programming recommendations.

GOAL 1: SUPPORT VINEYARD'S FAMILY-FRIENDLY AMENITIES AND WAY OF LIFE

The facilities recommended in Vineyard are connected to existing facilities, destinations that are important for those living in Vineyard (schools, parks, employment centers, etc.), and connect neighborhoods and commercial parts of town to create continuous connections. Having this complete network allows people of all ages and abilities to get around safely in Vineyard, and makes Vineyard a destination for safe bike and walking experiences.

GOAL 2: DEVELOP A DIVERSE AND RESILIENT MULTIMODAL TRANSPORTATION SYSTEM

The Vineyard FrontRunner Station, future Bus Rapid Transit (BRT) routes, various UTA bus routes, and a proposed mobility hub (explored in the [Policy & Program Recommendations](#) section later in this chapter) are all exciting parts of making Vineyard

a more inter- and intra-connected community. A comprehensive active transportation network connecting to these services will make transportation without a personal vehicle a realistic option for Vineyard residents.

In addition to connections to public transportation options, the network will, as mentioned above, connect to critical destinations for those living in and visiting Vineyard, and extend further to connect with surrounding jurisdictions. This makes walking and biking viable choices for transportation, and not just for recreation.

GOAL 3: CREATE A THOUGHTFUL POLICY FRAMEWORK THAT ALLOWS THE ACTIVE TRANSPORTATION SYSTEM TO GROW NATURALLY AS THE CITY MATURES

While Vineyard is growing rapidly now, the community is sure to grow and change even more into the future. Having policies and programs in place that will ensure this growth works alongside the development of the active transportation network will be critical to maintaining Vineyard's identity as a community of active living.

PROPOSED NETWORK

PROPOSED FACILITIES

As discussed in **Chapter 2: Existing Conditions**, Vineyard currently has 18.5 miles of active transportation facilities, comprised of sidepaths & shared use paths, buffered bike lanes, and standard bike lanes. In the network recommendations made for Vineyard, these existing facility types, in addition to several new facility types, are recommended, adding 33.1 miles to the active transportation network. These new facilities are detailed below and shown in **Figure 4.1 and Maps 4.1, 4.2, and 4.3**.

Bike Boulevards

Bike boulevards are low-volume, low-speed neighborhood streets that create safe environments for biking. Minimal physical infrastructure is needed to create a bike boulevard, and they often provide comfortable alternatives to busier roadways, creating safe routes for biking that are also effective in the continuation of a strong active transportation network. Some elements that should be implemented along a bike boulevard corridor include shared lane markings (sharrows), signage, and traffic-calming elements to ensure vehicle speeds are kept in check.

Separated Bike Lanes

Separated bike lanes can take many forms, but are generally similar to buffered bike lanes. They provide a buffer between through traffic and the space for bikes, but unlike a buffered bike lane, there is some type of vertical protection preventing vehicles from entering the bike lane. Separated bike lanes can be at road level with just the buffer being raised, or can be level with the sidewalk.

Unspecified Facilities

An unspecified facility shown on the map is not an actual facility type, but rather a location where future development plans will dictate what facility type is viable in that location. Selection of a facility will depend on roadway design, property lines, and a variety of other factors. Designating these routes as unspecified keep them on the map to consider in future plans, but don't factor in to the overall mileage calculated for the proposed network.

Figure 4.1 Proposed Active Transportation Facilities

33 Miles Proposed + 18.5 Miles Existing
= 51.6 Miles Active Transportation Facilities



Map 4.1 City-Wide Proposed Network

NETWORK RECOMMENDATIONS

Vineyard Active Transportation Plan

SPOT IMPROVEMENTS

- Physical Intersection Improvements
- Midblock Crossing
- Mobility Hub
- Pedestrian Bridge
- Active Transportation Signal or Beacon
- Planned Traffic Signal

PROPOSED FACILITIES

- Bicycle Boulevard
- Bike Lane
- Buffered Bike Lane
- Separated Bike Lane
- Shared Use Path
- Unspecified Facility

EXISTING FACILITIES

- Bike Lane
- Buffered Bike Lane
- Shared Use Path

BASEMAP FEATURES

- 🏫 School
- 🚆 Frontrunner Station
- 🚆 Commuter Rail
- 🚆 Railroad
- 💧 Water Body
- 🌳 Park
- 🏠 Vineyard

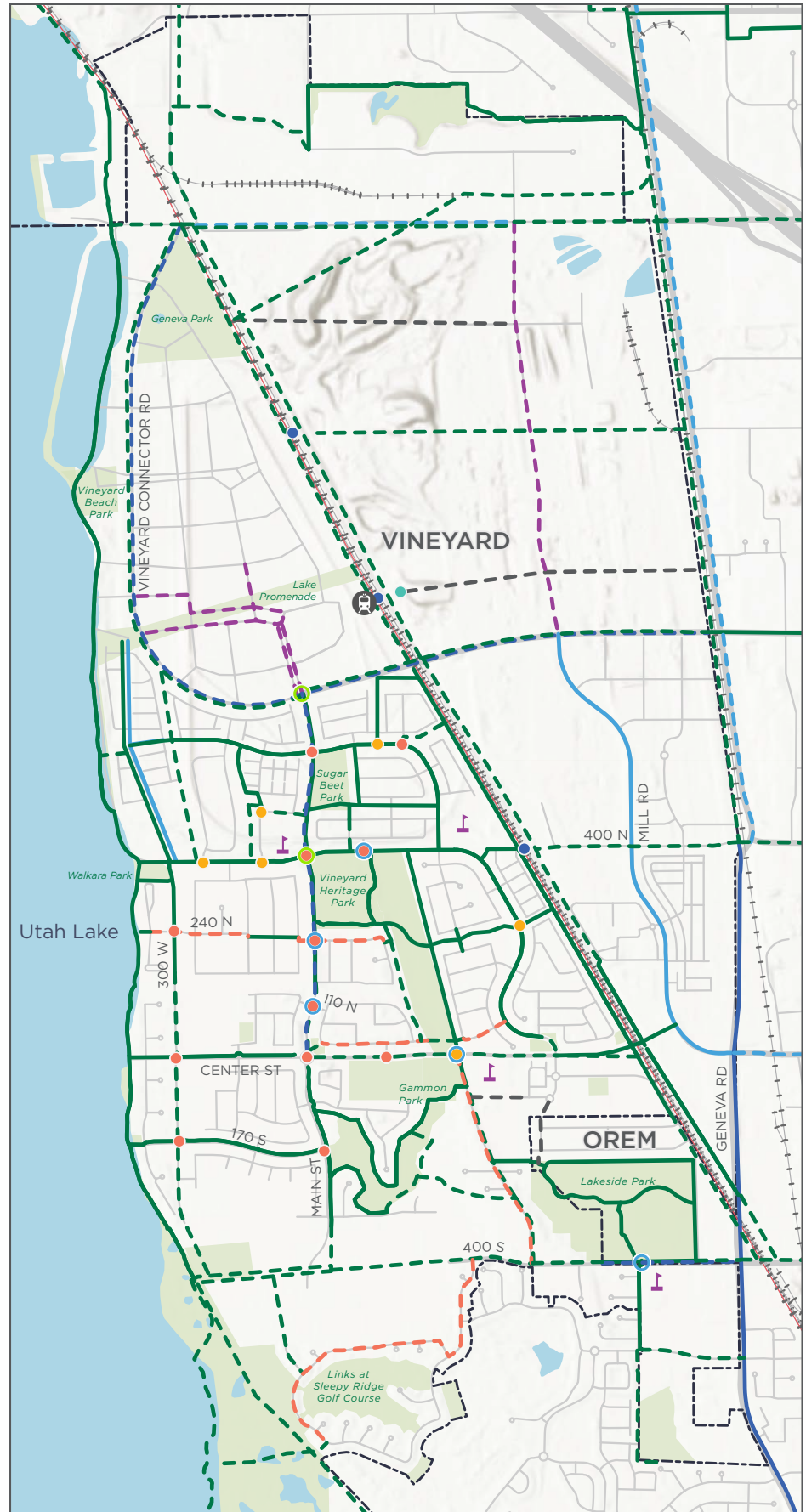


alta

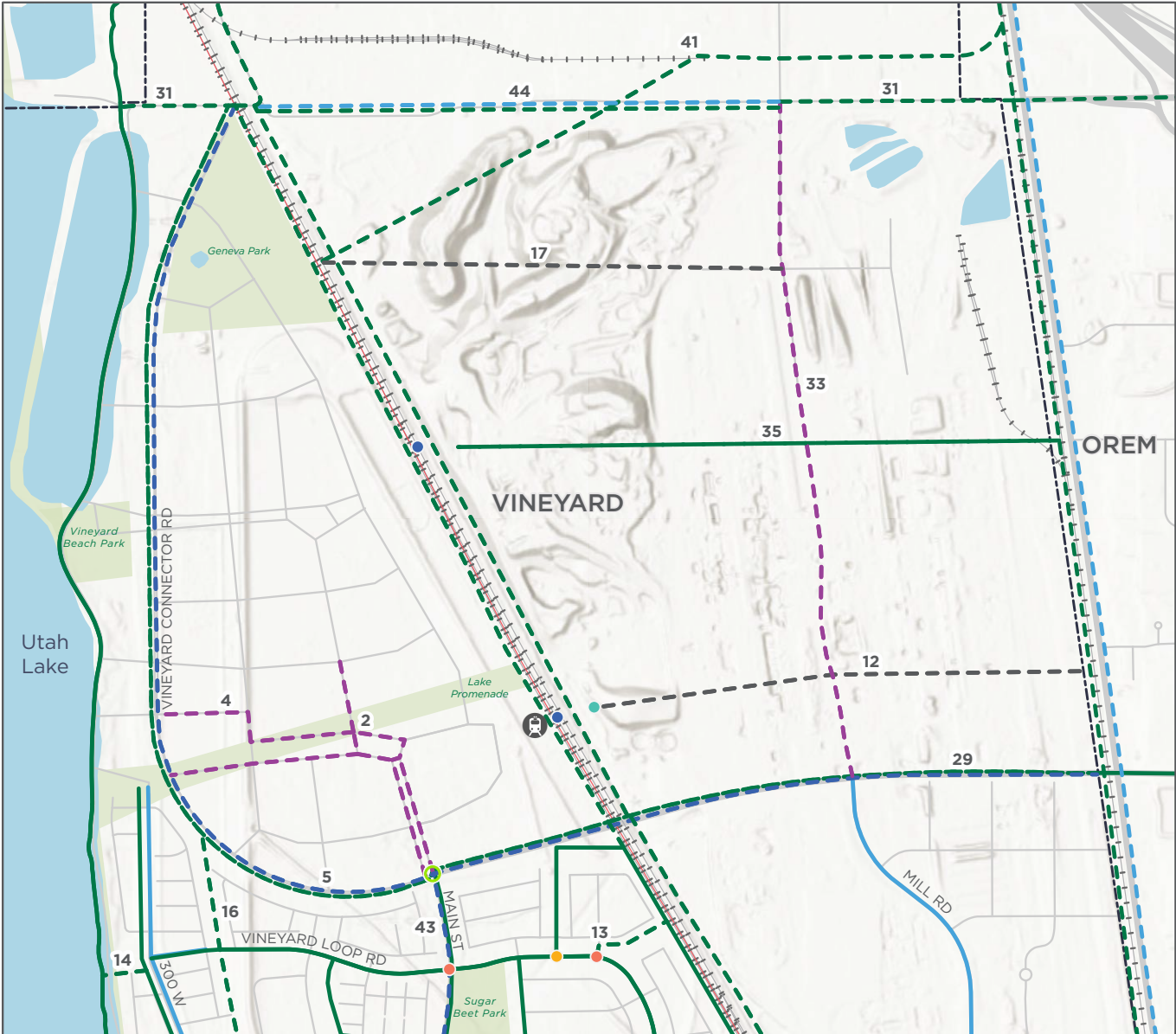
Source: City of Vineyard; Utah County; Utah AGRC; UDOT
Date: February 2022



0 0.4 0.8
Miles



Map 4.2 North Vineyard Proposed Network



NETWORK RECOMMENDATIONS - NORTH VINEYARD
Vineyard Active Transportation Plan

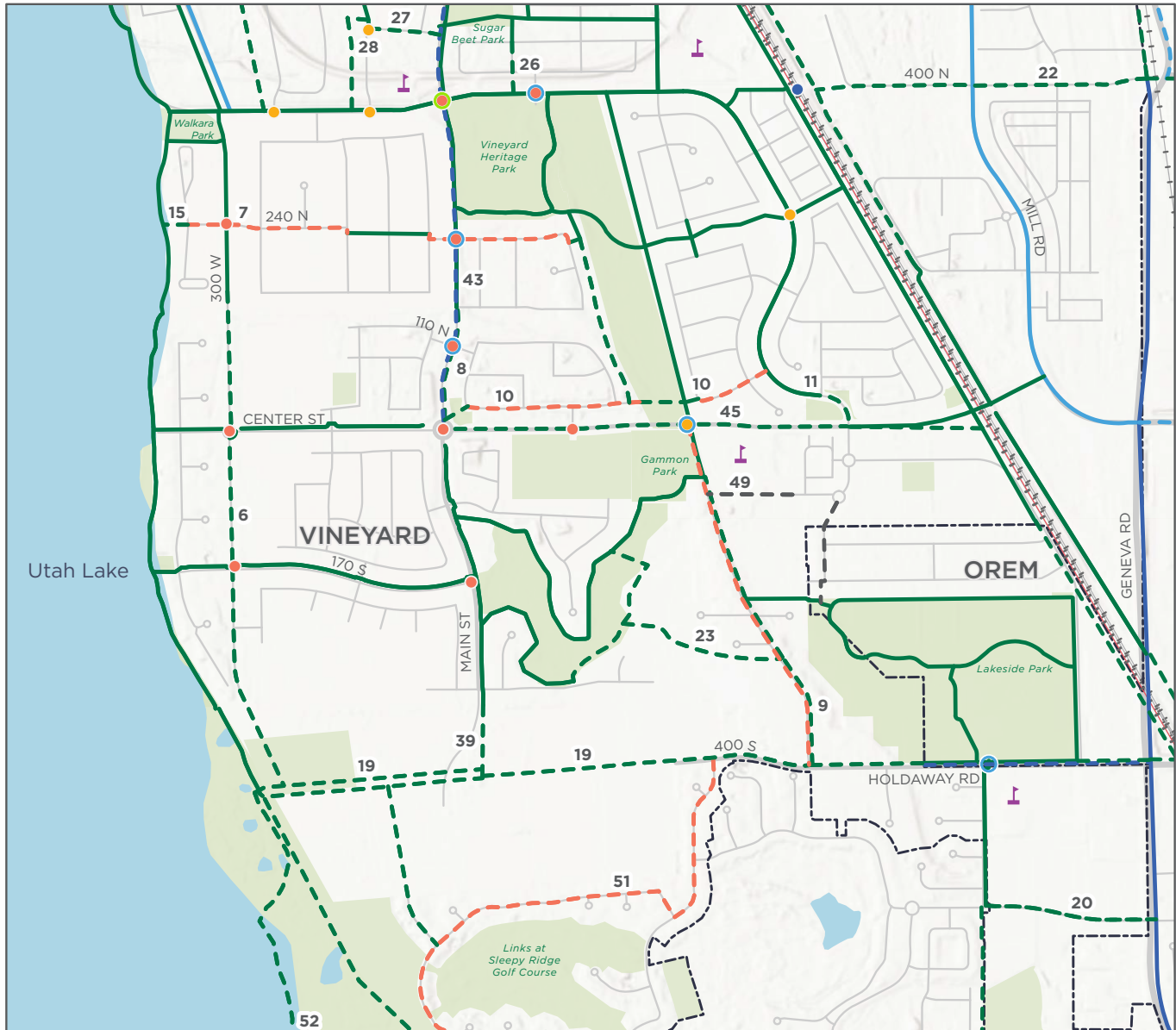
SPOT IMPROVEMENTS	PROPOSED FACILITIES	EXISTING FACILITIES	BASEMAP FEATURES
Physical Intersection Improvements	Bicycle Boulevard	Bike Lane	School
Midblock Crossing	Bike Lane	Buffered Bike Lane	Frontrunner Station
Mobility Hub	Buffered Bike Lane	Shared Use Path	Commuter Rail
Pedestrian Bridge	Separated Bike Lane		Railroad
Active Transportation Signal or Beacon	Shared Use Path		Water Body
Planned Traffic Signal	Unspecified Facility		Park
			Vineyard



Source: City of Vineyard; Utah County; Utah AGRC; UDOT
Date: February 2022



Map 4.3 South Vineyard Proposed Network



NETWORK RECOMMENDATIONS - SOUTH VINEYARD

Vineyard Active Transportation Plan

SPOT IMPROVEMENTS

- Physical Intersection Improvements
- Midblock Crossing
- Mobility Hub
- Pedestrian Bridge
- Active Transportation Signal or Beacon
- Planned Traffic Signal

PROPOSED FACILITIES

- Bicycle Boulevard
- Bike Lane
- Buffered Bike Lane
- Separated Bike Lane
- Shared Use Path
- Unspecified Facility

EXISTING FACILITIES

- Bike Lane
- Buffered Bike Lane
- Shared Use Path

BASEMAP FEATURES

- T School
- T Frontrunner Station
- Commuter Rail
- Railroad
- Water Body
- Park
- Vineyard



Source: City of Vineyard; Utah County; Utah AGRC; UDOT
Date: February 2022

0 0.25 0.5 Miles



SPOT IMPROVEMENT HIGHLIGHTS

Physical Intersection Improvements

CURB EXTENSIONS

Curb extensions minimize pedestrian exposure during crossing by shortening the crossing distance and giving pedestrians a better chance to see and be seen before beginning to cross. Curb extensions are appropriate at any crosswalk where it is desirable to shorten the crossing distance and there is a parking lane adjacent to the curb.

The width of curb extensions should be between 6'-8' when located next to a parallel parking lane or 15' when next to an angled parking lane. Curb extension length can be adjusted to accommodate bus stops or street furniture.



Curb Extensions

MARKED CROSSWALKS

Marked crosswalks signal to motorists that they must stop for pedestrians, and encourage pedestrians to cross at designated locations.

Crosswalks should be located to align as closely as possible to the pedestrian zone of the sidewalk corridor. While parallel markings are the least visible and wear the quickest of all crosswalk markings, transverse lines or continental markings provide additional visibility and may last longer if located outside of the wheel path. The MUTCD states that crosswalks should not be less than 6 feet wide. Solid white lines that mark the crosswalk should not be less than 6 inches or greater than 24 inches wide.



Marked Crosswalk

PEDESTRIAN REFUGES

Pedestrian refuge islands are located at the mid-point of a marked crossing and help improve safety by increasing visibility and allowing pedestrians to cross one direction of traffic at a time.

Refuge islands can be applied on any roadway with a left turn center lane or median that is at least 6' wide. Islands should be at least 6' wide (to allow a 2' gap between detectable warnings) and at least 20' long (40' minimum preferred). On streets with posted speeds above 25 mph, provide double centerline marking, reflectors, and "KEEP RIGHT" signage in the island. Refuge islands must be ADA accessible.



Pedestrian Refuge

Mid-block Crossings

Mid-block crossings should be considered along long blocks (longer than 600 ft.) where destinations and locations with heavy pedestrian traffic

A pedestrian crossings at a mid-block location may consist of curb extensions, pedestrian refuges, marked crosswalks, pedestrian warning signage assemblies. Pedestrian hybrid beacons or rectangular rapid flashing beacons, described below, may also be utilized.

Pedestrian Bridge

The city of Vineyard is bisected diagonally by Frontrunner and Union Pacific railroad tracks, interrupting connectivity from east to west. Several locations along the railroad corridor have been identified as strong candidates for a pedestrian bridge to allow both bike and pedestrian traffic to safely and easily cross the railroad tracks, even when trains are present.

Active Transportation Signal or Beacon

ACTIVE WARNING BEACONS (RRFBS)

An active warning beacon is an appropriate treatment when 2-3 lane roads have more moderate vehicle speeds (25-40 mph). This treatment consists of high visibility crosswalks and pedestrian warning signage with Rectangular Rapid Flashing Beacons (RRFBs) mounted to the sign post. RRFBs are typically push-activated, but can also include passive detectors that recognize pathway users and immediately activate the RRFB. When possible, pedestrian refuge islands should be included.

PEDESTRIAN HYBRID BEACON (PHB)

Hybrid beacons are used to improve non-motorized crossings of major streets. A hybrid beacon consists of a signal-head with two red lenses over a single yellow lens on the major street, and a pedestrian signal head for the crosswalk.

These are typically applied at unsignalized intersections or mid-block crossings with high volumes of pedestrian traffic. When used at intersections, no right-turn blankout signs may be used to control side-street traffic.



Mid-block Crossing



Pedestrian Bridge



Rectangular rapid flashing beacon



Pedestrian Hybrid Beacon

Mobility hub

Mobility hubs are places where a variety of transportation options are concentrated in a strategic location. In the last decade, these options have grown from incorporating traditional modes of public transit, walking and bicycling, to now including a wide variety of options include bikeshare, shared services such as a Uber or Lyft, Mobility hubs provide nodes where people can easily and confidently access these modes and transfer between them. Mobility hubs especially provide places to transfer between longer distance transit service, such as Frontrunner, to local services such as bus or “first-last mile” connections. Mobility hubs can also provide community services and amenities, like public wi-fi, restrooms, meeting

spaces, and other features that are tailored specifically to the community.

With planning or construction in progress for the Vineyard Frontrunner Station, Downtown Vineyard, and UVU Vineyard Campus, a mobility hub could promote access and integrate with each of these projects. A potential Vineyard mobility hub could be programmed with a number of potential features such as:

- » Pedestrian bridge over the Frontrunner line and connecting to the planned UVU campus
- » End-of-line UTA bus infrastructure such as bus bays, driver restrooms, and trip-planning services
- » Integrated, TOD mixed use development
- » Convenient access to regional trails

TRANSIT AND TRIP-MAKING SERVICES



Micro-transit
pick up & drop
off area



Transit ticket
and integrated
payment kiosks



Bus, shuttle, or
light rail stop



Real time transit
information &
other shared
mode information

PARKING AND CHARGING SERVICES



Electric vehicle
charging
(including
bicycles &
scooters)



Short term bike
parking



Long term bike
parking



Bikeshare &
scooter share
parking



Freight
loading/
unloading area



Carshare
parking and
access points

PRIORITY ACCESS



Prioritized
walkways



Prioritized
bike and
micromobility
access



Safe bicycle
and pedestrian
crossings

AMENITIES



Community
space



Complementary
retail



Activated
furnishing
zone with
appropriate
support
infrastructure

MOBILITY HUB CASE STUDY: UNIVERSITY OF DENVER

The University of Denver is a mid-size private college in suburban Denver with adjacency to the University of Denver Light Rail Station. The University has served as a partner to the City in supporting incremental mobility upgrades

to the station area since 2016. Geography students of the University have received the opportunity to participate in station area upgrades as a component of certain courses. The station was completed in 2016, and additional improvements may occur.

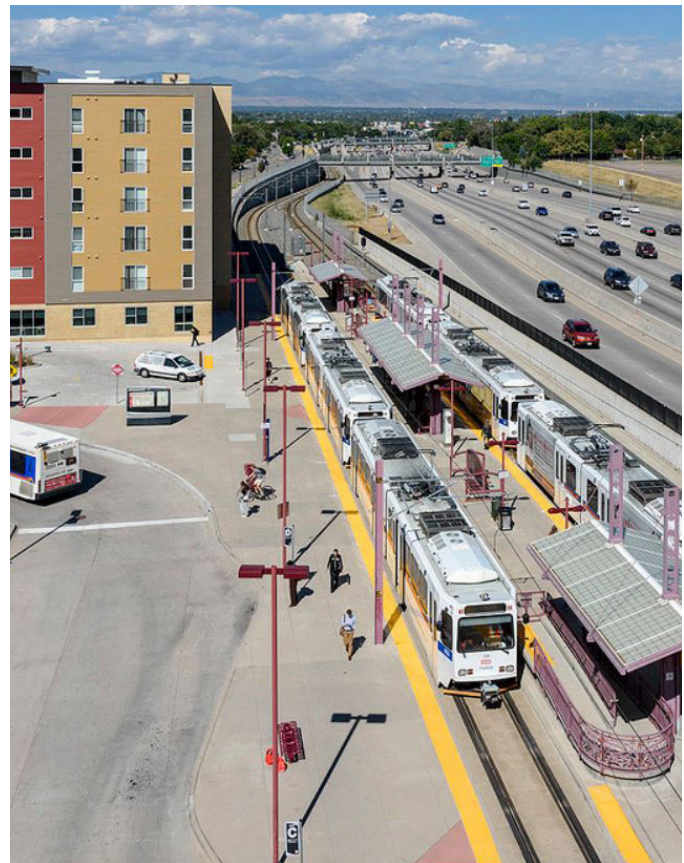
MOBILITY HUB ATTRIBUTES:

Partnership between the University, the City of Denver, and the Regional Transit District (RTD) has culminated in the following improvements to the station area:

- » Pedestrian upgrades to the intersection of University and Buchtel
- » Pedestrian upgrades to the intersection of University and Evans
- » Bikeway improvement to Buchtel
- » Car2Go carshare availability
- » Adjacency of modes including bus, light rail, carshare, bike, and pedestrian paths
- » Shared Mobility Pilots emphasizing light rail connection, including car-share and micro mobility pilots



wikipedia.com



flickr.com/photos/rtd-denver

VINEYARD'S MAIN STREET CORRIDOR

The Main Street corridor plays a key role in Vineyard's broader active transportation network. With several parks, schools, club houses, civic buildings, and other destinations along the corridor there is high demand for robust biking and walking connections. In addition, Vineyard's compact size and adjacency of numerous residential neighborhoods could allow for convenient and short biking and walking trips to most Main Street destinations. The corridor possesses many characteristics which are supportive of active transportation including an existing sidepath, attractive streetscape, landscaped medians, and frequent street trees. Despite these positive traits, there are some notable deficiencies in the current configuration of Main Street that pose challenges to people walking and biking.

Challenges

Main Street's current lane configuration, two travel lanes in each direction and dedicated left- and right-turn lanes at most intersections, creates a challenging environment for pedestrians and bicyclists. These challenges include:

HIGH TRAFFIC SPEEDS

With up to 74' of continuous pavement at intersections, high traffic speeds were noted multiple times by the public during the initial round of public outreach.

LACK OF ON-STREET BIKEWAYS

While a sidepath exists along the east side of Main Street for much its length, it does not completely serve the needs of people biking. First, there is a gap in the sidepath between Center Street and 150 N that forces bicyclists to either share the lane with higher speed traffic or ride on the sidewalk where conflicts with pedestrians may exist. Second, Vineyard's future downtown is planned to include on-street bike lanes on Main Street. While sidepath users could feasibly navigate between a Main Street sidepath south of Vineyard Connector to Main Street bike lanes in Downtown, it does require a more complex maneuver, especially for southbound bicyclists who would need to cross to the other side of Main Street. Unfortunately, this maneuver would occur at the Main Street / Vineyard Connector intersection, one of the busiest intersections in the city.

LACK OF SAFE PEDESTRIAN CROSSINGS

The most frequently reported comments from the initial round of public engagement focused on pedestrian crossings of Main Street. Several public comments were received in relation to the Center Street, Vineyard Loop Road, and Vineyard Road intersections of Main Street. While the Vineyard Road intersection does have an existing pedestrian hybrid beacon, many of the other locations have little infrastructure to support pedestrians trying to cross Main Street. This results in a nearly half-mile gap between the pedestrian crossings at Vineyard Connector, Vineyard Loop Road, and Center Street. Additionally, with left-turn lanes and right-turn pockets present at many intersections this forces pedestrians to cross approximately 74' of roadway and requires nearly 25 seconds at the average pedestrian speed of 3 ft/second. Problems with the pedestrian crossings at the Vineyard Road pedestrian hybrid beacon (PHB) and the pedestrian crossings at the Center Street roundabout were also been identified through public engagement and conversations with City staff.



Main Street / Vineyard Loop Road Pedestrian Crossing

The Case for Right-Sizing Main Street

In response to the challenges and public feedback described previously, one potential solution for Main Street would be to reconfigure the existing street to remove one travel lane in each direction. This strategy would address many of the previously described challenges that exist along the corridor while having minimal impact on traffic operations. The following sections describe the benefits of "right-sizing" Main Street.

EXCESS CAPACITY AND OPERATIONAL BENEFITS

During the Spring of 2021, the Planning Team conducted turning movement counts at the major intersections along Main Street. Based on comparisons to previous counts in the area, the Planning Team determined that traffic patterns in the area were at a normal condition and not reduced due to the COVID-19 pandemic. While a complete summary of the methods and results can be found in the appendix, the traffic analysis found that removing a travel lane in each direction on Main Street would still allow the corridor to function at an acceptable

level of service (LOS). The table below illustrates the intersection level of service for each intersection along the corridor for three scenarios:

- » Existing (2021) volumes
- » Future (2040) no-build volumes
- » Future (2040) build volumes which assumes removal of one travel lane in each direction from Center Street to Vineyard Connector

As the table below indicates, there is projected to be little impact on LOS with the build condition. Findings for some of the failing segments and nuances of the analysis are described below:

- » The Vineyard Loop Rd / Main Street intersection currently operates at a poor LOS due to difficulties in turning left onto Main Street during peak hours. No mitigation measures were recommended as the intersection is too close to Vineyard Connector for a traffic signal but may work with a roundabout.
- » The Vineyard Road / Main Street intersection is anticipated to operate at LOS F in the 2040 condition. A traffic signal is currently planned for

Intersection		Level of Service (Sec. Delay per Vehicle)		
		Existing (2021)	Future (2040)	
			No-Build	Build
1	Vineyard Loop Road / Main Street	e (42.4) / EBL	f (>50) / EBL	f (>50) / EBL
2	470 North / Main Street	a (3.4) / EBR	a (4.8) / EBR	a (6.8) / EBR
3	Vineyard Road / Main Street	c (21.7) / WBT	f (>50) / EBL	B (14.0)
4	230 North / Main Street	b (10.1) / EBT	b (12.8) / EBT	b (11.6) / EBT
5	150 North / Main Street	a (6.6) / WBL	a (8.7) / WBL	a (8.9) / WBL
6	110 North / Main Street	a (8.3) / WBL	b (12.0) / EBT	b (11.7) / EBL
7	Center Street / Main Street	A (3.9)	A (5.1)	A (5.3)
8	Silver Oak Road / Main Street	a (6.5) / WBT	a (8.0) / EBT	a (6.9) / WBT
9	170 South / Main Street	a (4.3) / EBL	a (5.7) / EBL	a (5.4) / EBL
10	Zinfandel Lane / Main Street	a (5.6) / EBT	a (6.7) / WBT	a (7.2) / EBT

1. Intersection LOS values represent the overall intersection average for roundabout, signalized, and all-way stop-controlled (AWSC) intersections (uppercase letter) and the worst movement for all other unsignalized intersections (lowercase letter)

2. LOS (Delay) / Worst Movement; delay = seconds of delay per vehicle

Source: Hales Engineering, March 2022

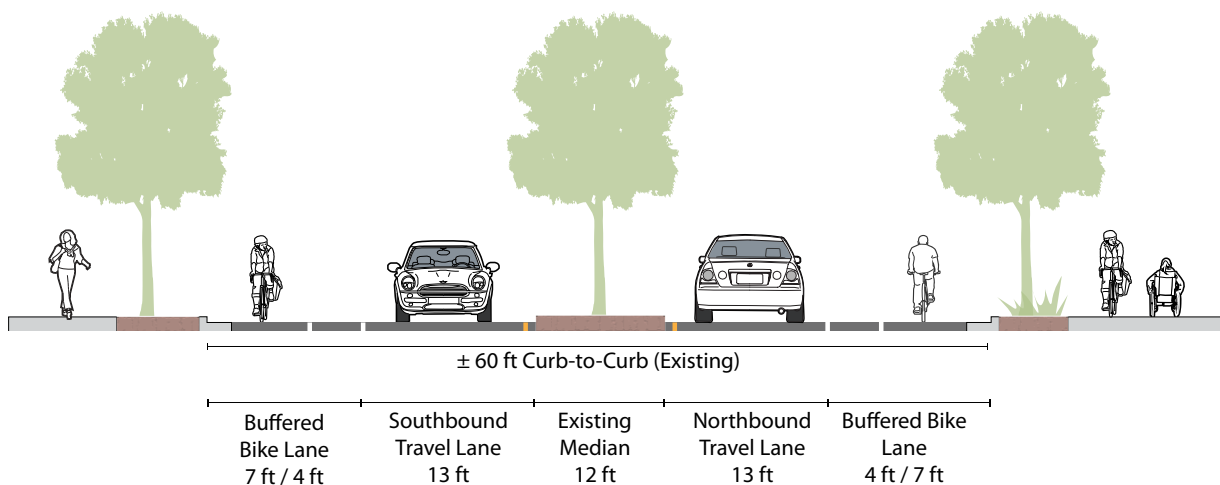
this intersection and would address this issue as shown in the 2040 build condition.

- » While the build condition assumes one travel lane in each direction for the majority of the Main Street corridor, the segment between Vineyard Connector and Vineyard loop road was analyzed with two southbound lanes to accommodate the dual westbound left-turn lanes from Vineyard Connector.

HIGH COMFORT BIKEWAY CONNECTION TO FUTURE DOWNTOWN.

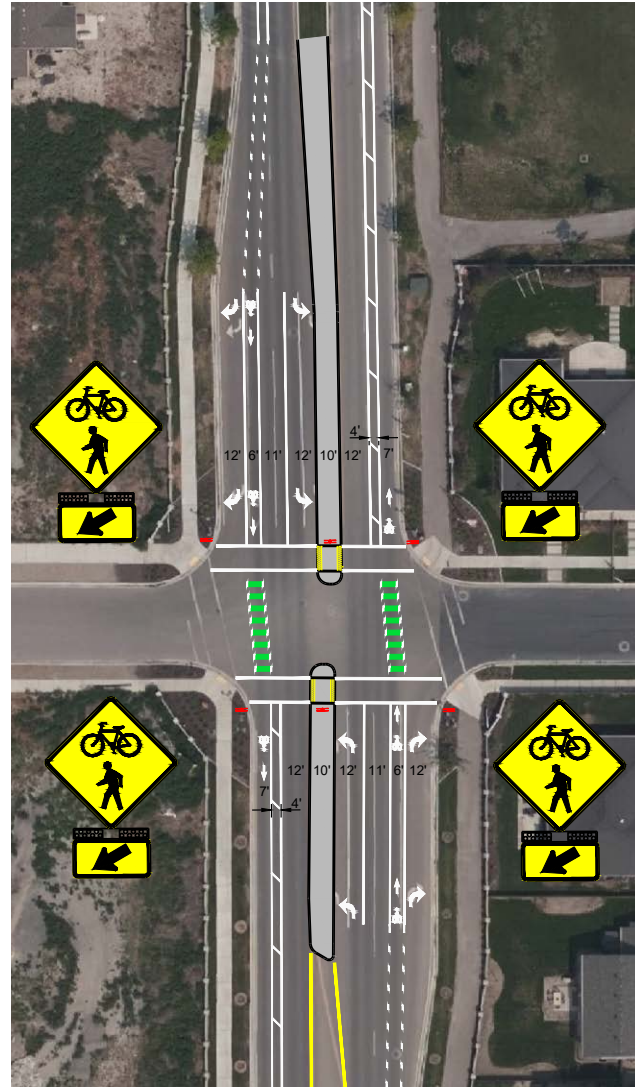
Removing a travel lane in each direction on Main Street would allow for the inclusion of on-street buffered bike lanes. This would create a seamless and convenient connection for commuting bicyclists traveling to and from Downtown. Main Street bike lanes would also limit conflicts with bicyclists who prefer to ride faster and sidepath users who may be traveling at slower speeds.

Proposed Main Street Cross-section (mid-block)



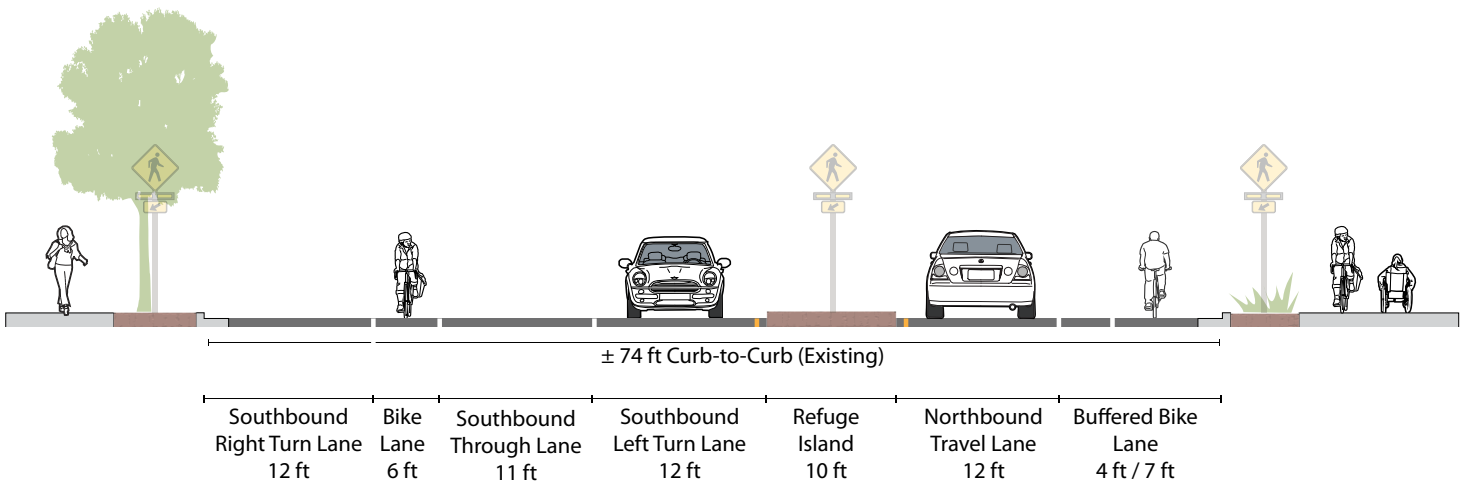
ENABLES SAFE PEDESTRIAN CROSSINGS:

Potentially the most important benefit of removing a travel lane from Main Street would be the improved safety and crossing opportunities for pedestrians. At unsignalized intersections such as Vineyard Loop Road, 230 N, and 110 N intersections, space could be reallocated to create a pedestrian refuge with RRFB's. With three RRFB's (two on the outside of the ROW and one in the pedestrian refuge) these pedestrian crossings are likely to exhibit good yielding compliance and create safe, controlled places for pedestrians and bicyclists to cross Main Street. In addition, instead of crossing 74' of uninterrupted roadway pedestrians would be able to cross approximately 19-40' of roadway before pausing (if necessary) in a pedestrian refuge before crossing the remaining lanes.



Proposed Main Street Cross-section at intersections

Proposed Main Street Plan View at Intersections



POLICY + PROGRAM RECOMMENDATIONS

POLICIES

The following policies are general recommendations that can provide Vineyard with guidance for adopting policies tailored specifically to the community's needs. In addition to adding new policies, Vineyard should consider revisiting existing city policies to add up-to-date best practices and opportunities to improve active transportation conditions.

Roadway Design + Features

CURB RAMPS

Currently, Vineyard has many diagonal curb ramps, which direct pedestrians diagonally into the intersection instead of directly into the crosswalk. Although diagonal (apex) curb ramps might seem more efficient, as they only require one facility per corner, they create potential safety and mobility problems for pedestrians, particularly those using wheelchairs and vision-impaired pedestrians.

Instead, directional and perpendicular ramps should be included in the addition of new and repair of existing sidewalks. These ramps allow users to transition directly from the sidewalk into the crosswalk without having to realign themselves. Desirable curb ramp design is shown in **Figure 4.1**.

Vineyard should consider modifying their standards to promote the use of directional ramps and only allow diagonal ramps in retrofit situations or where ROW is limited.

STREET CONNECTIVITY STANDARDS

The most simple aspect of a positive active transportation experience is strong street and pathway connectivity. Streets form the bones of a community and influence its basic character. While Vineyard is a fast-growing community with many opportunities to build out active transportation facilities alongside the growing street network, having a connected network of streets makes active transportation trips more viable and convenient. In addition to supporting active transportation, good street connectivity can also provide a variety of benefits to emergency response times, reductions in vehicle miles traveled, improved air quality, and improved access to destinations.

In larger undeveloped portions of the City, such as the northeast quadrant north of Vineyard Connector and east of the railroad tracks, the City may consider implementing street connectivity requirements. Communities such as Lehi have implemented similar street connectivity standards and resources can be found below:

- » [Utah Street Connectivity Guide](#)
- » [Lehi Connectivity Standards](#)

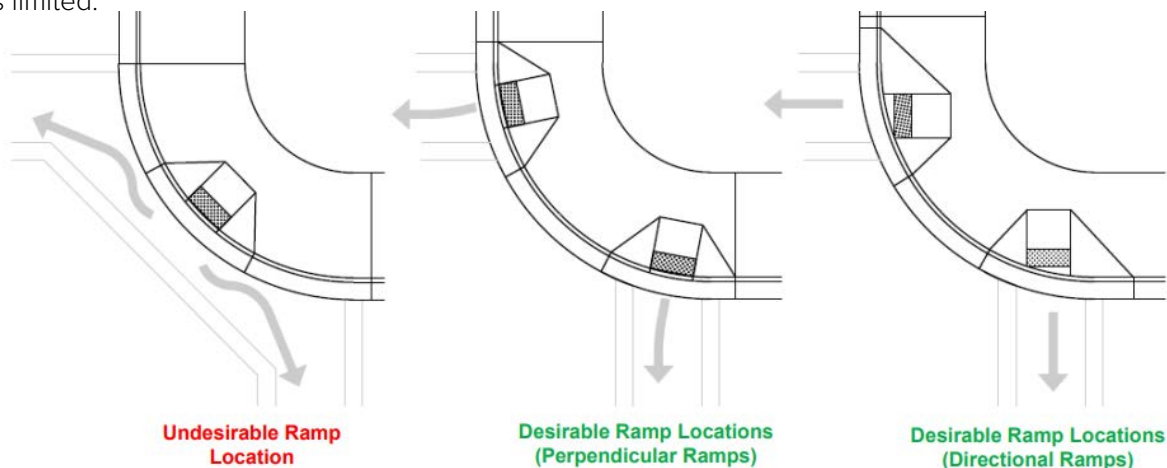


Figure 4.1 Curb Ramp Types. Source: CDOT Curb Ramp Designers Resource

BIKE PARKING

Bicyclists need a safe and convenient place to secure their bicycles when they reach their destination. This may be short- or long-term parking for employees, students, residents, and commuters.

In general, bike racks should be placed at least 2 feet from the curb face to avoid door swing from parked cars. At least 4 feet of space should be provided between racks to provide maneuvering room. Additionally, a minimum clear distance of 6 feet should be provided between the bike racks and adjacent property lines, and should typically be placed in the amenity zone. Recommended bike rack styles are shown in [Figure 4.2](#).

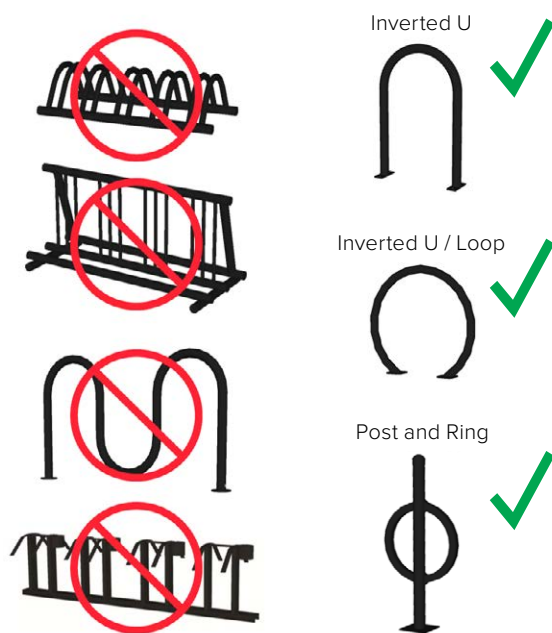


Figure 4.2 Bike Rack Recommendations

Vineyard currently requires bicycle parking as part of their parking code but they do not differentiate between short-term and long-term bicycle parking. With multi-family development, office, and retail uses expected to grow in Vineyard, further refinement to the bicycle parking code could address resident and employee needs for secure, long-term bike parking.

Long-term bicycle parking is for those spending longer amounts of time at a place – i.e. a workday or work shift, or at a multi-family residential building. Long term bicycle parking is designed to be more secure than short term parking and provides enclosed space for one or more bikes. Types of long-term bicycle parking include lockers, cages, and bike rooms.

Rates for long term bicycle parking are generally 1 space per 10,000 square feet for office, 1 space per 12,000 square feet for general retail, or 0.5 spaces per bedroom for multi-family residential. Detailed information on codifying long-term bicycle parking can be found in the Association of Pedestrian & Bicycle Professionals Bicycle Parking Guidelines, 2nd edition.

Wayfinding

Wayfinding is an essential element of an accommodating and accessible active transportation network. Wayfinding is a system of signs, pavement markings, and maps to inform system users of recommended routes and to increase overall orientation and comfortability within the active transportation network. Vineyards' regional trails including the Utah Lakeshore Trail, Lehi Historic Rail Trail, and Lindon Heritage Trail are important regional routes that could benefit from complimentary wayfinding systems.

MOUNTAINLAND ASSOCIATION OF GOVERNMENTS (MAG) WAYFINDING GUIDE

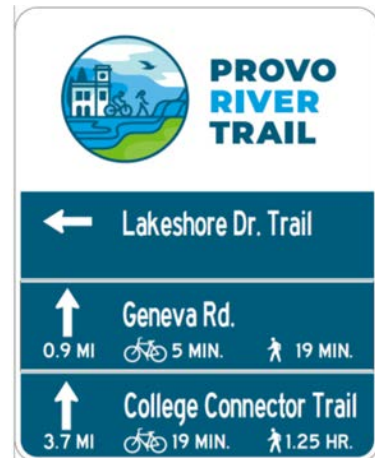
MAG developed a Wayfinding Guide for Multi-Use Paths along with a series of sign templates in 2020. This guide outlines the two goals of wayfinding for Utah County: increase awareness of the connectivity of trails and their amenities; and contribute to placemaking through branding and connectivity.

The guide details the components of a successful wayfinding system as well as style guidance and pricing on common multi-use path signage, such as:

- » Decision Signs – located at trail intersections informing users of the intersecting route as well as other destinations with travel times (see Figure 5.2)
- » Fingerboards – useful for trail intersections, especially when several destinations are available from multiple directions or when trails do not intersect at right angles
- » Turn Arrows – direct users to trail from on-road facilities
- » Confirmation Signs – located after complex intersections
- » Mile Markers – placed at every ¼ mile, mile markers reconfirm the trail route, locate emergencies, and help track progress
- » Street Labels – indicate upcoming streets to help users orientate themselves



Jordan River Trail Wayfinding Example from Salt Lake City, Utah. Source: SLC.gov



Decision Sign Example. Source: MAG

PROGRAMS

Bike Utah's Youth BEST Program

The Youth Bicycle Education and Safety (BEST) Program teaches kids how to safely and confidently experience their communities by bicycle. The program is a 5-hour, in-class and on-bike program taught at schools around Utah. Bike Utah provides trained instructors, bicycles, helmets and all other equipment for the program. Through this program, students learn:

- » The benefits of riding a bicycle
- » Rules of the road
- » Helmet fitting
- » Bicycle safety checks
- » Navigating intersections
- » Right of way
- » To avoid hazards
- » Confidence and independence

If kids have the confidence to safely ride a bike and a safe, connected active transportation network is in place, kids will have independent access to their school, after school activities, and any other destinations they need to reach in Vineyard.

Adopt a Trail Program

Many communities, including communities throughout Utah like Farmington and Provo, have programs in place for "adopting a trail" segment. This program works differently from place to place; In some communities, "adopting" a segment refers to an individual, family, or organization paying a sponsorship fee that helps to cover the costs of maintenance and improvements to the trail system.

"Adopting" a trail segment in other communities means that an individual or group take temporary ownership of basic maintenance and cleanup of the segment. This relieves city maintenance staff of simple maintenance work, and builds land stewardship among those who volunteer to take on the task for their designated segment.

For either type of program, if a person or group "adopts" a trail segment, communities will often install signage indicating who adopted the trail, giving recognition to their generosity and/or hard work, and passion for the trail system.



Bike Utah Youth BEST event. Source: BikeUtah

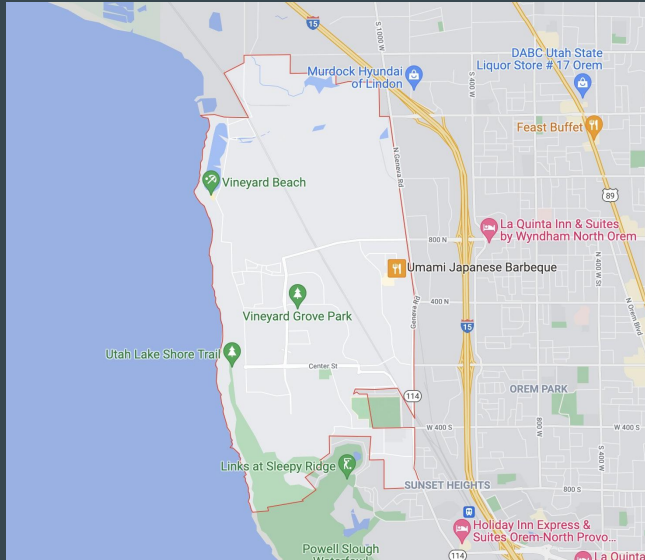
400 N

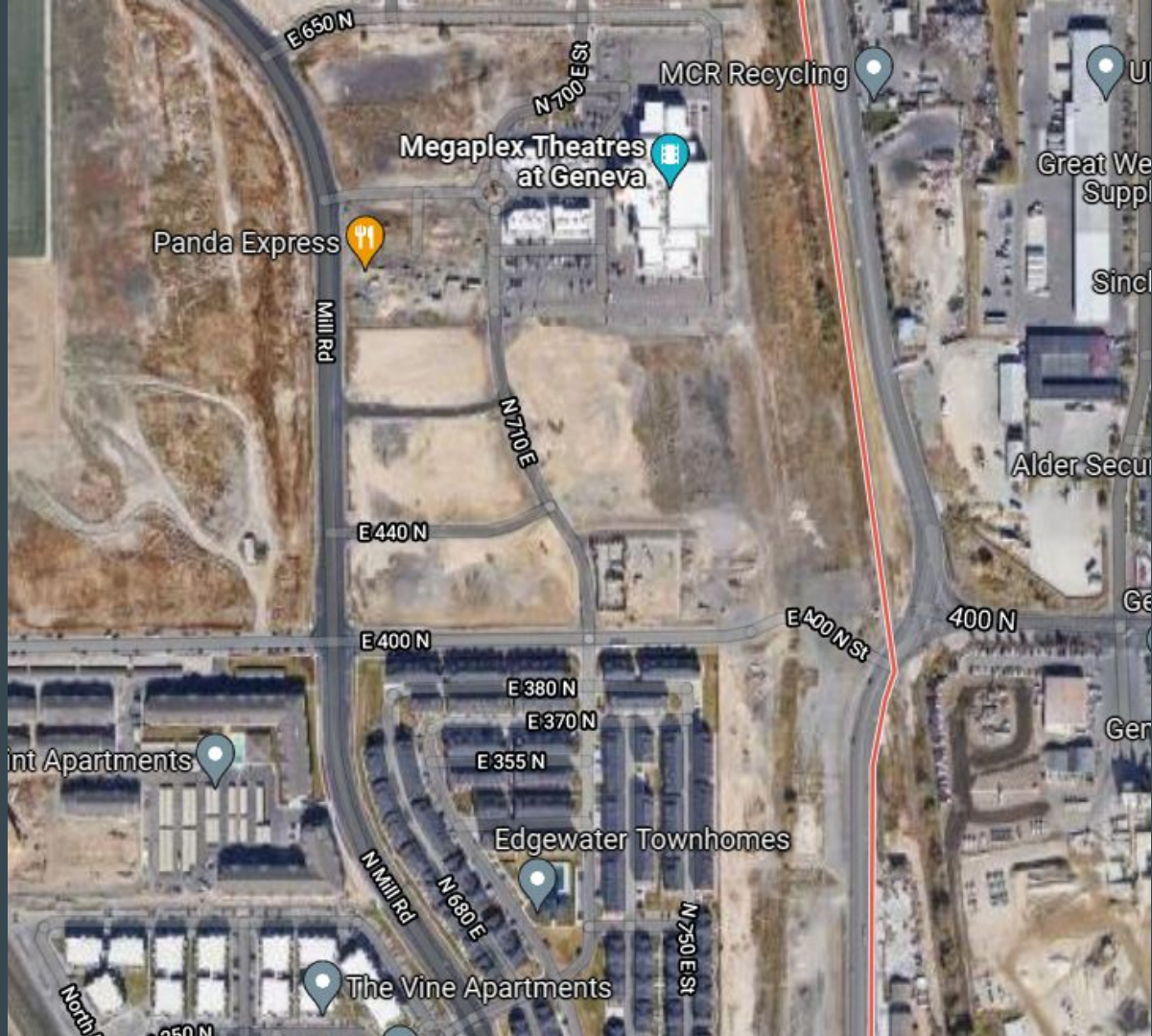
...

By KIM Co

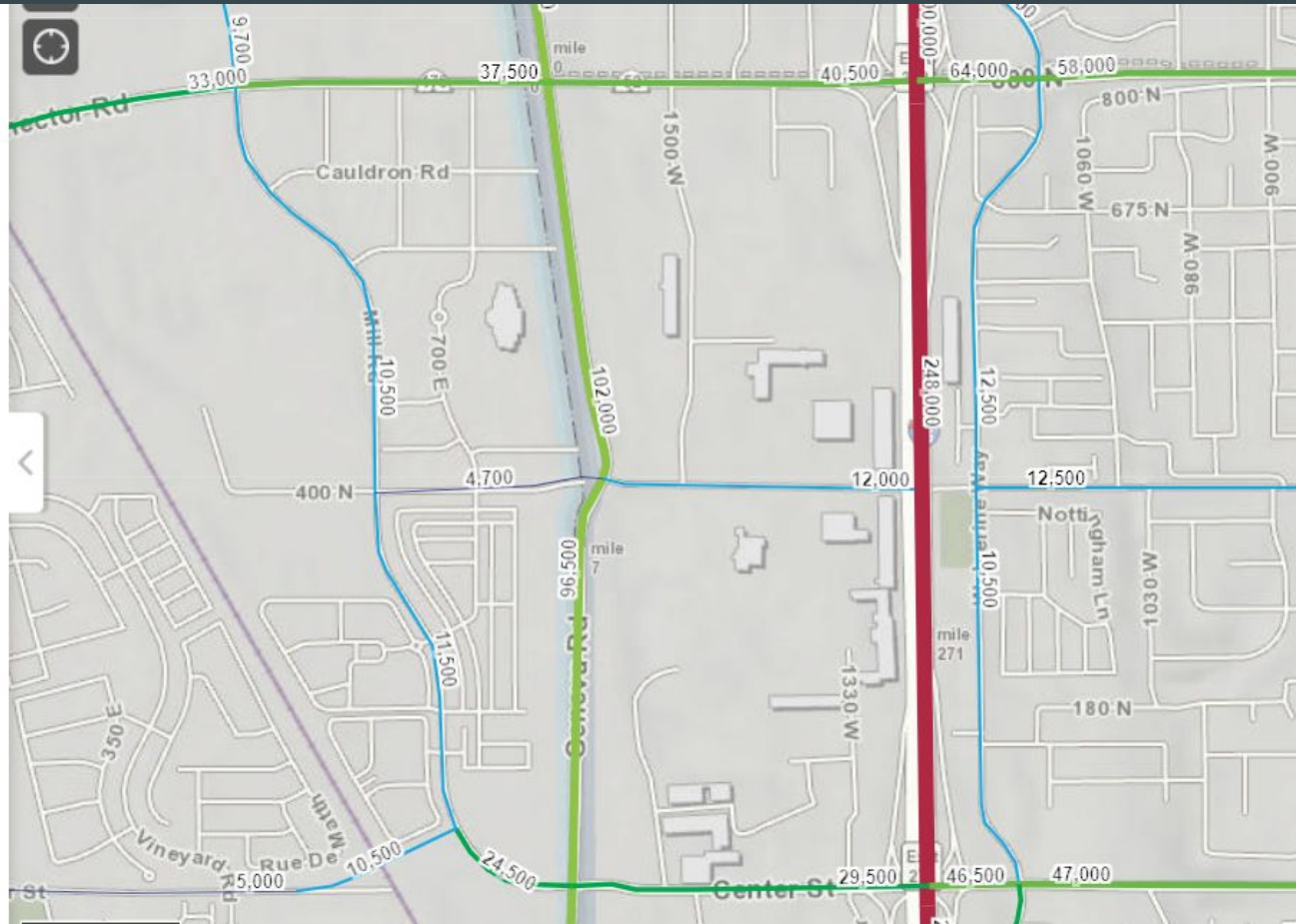
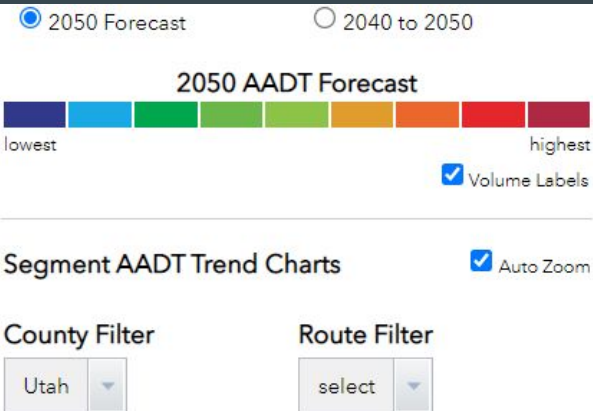
City Profile

- Population around 20k
- Higher Density, Mainly townhomes.
- Average age is mid twenties.
- Commuter community, many students.
- Extremely Fast Growing



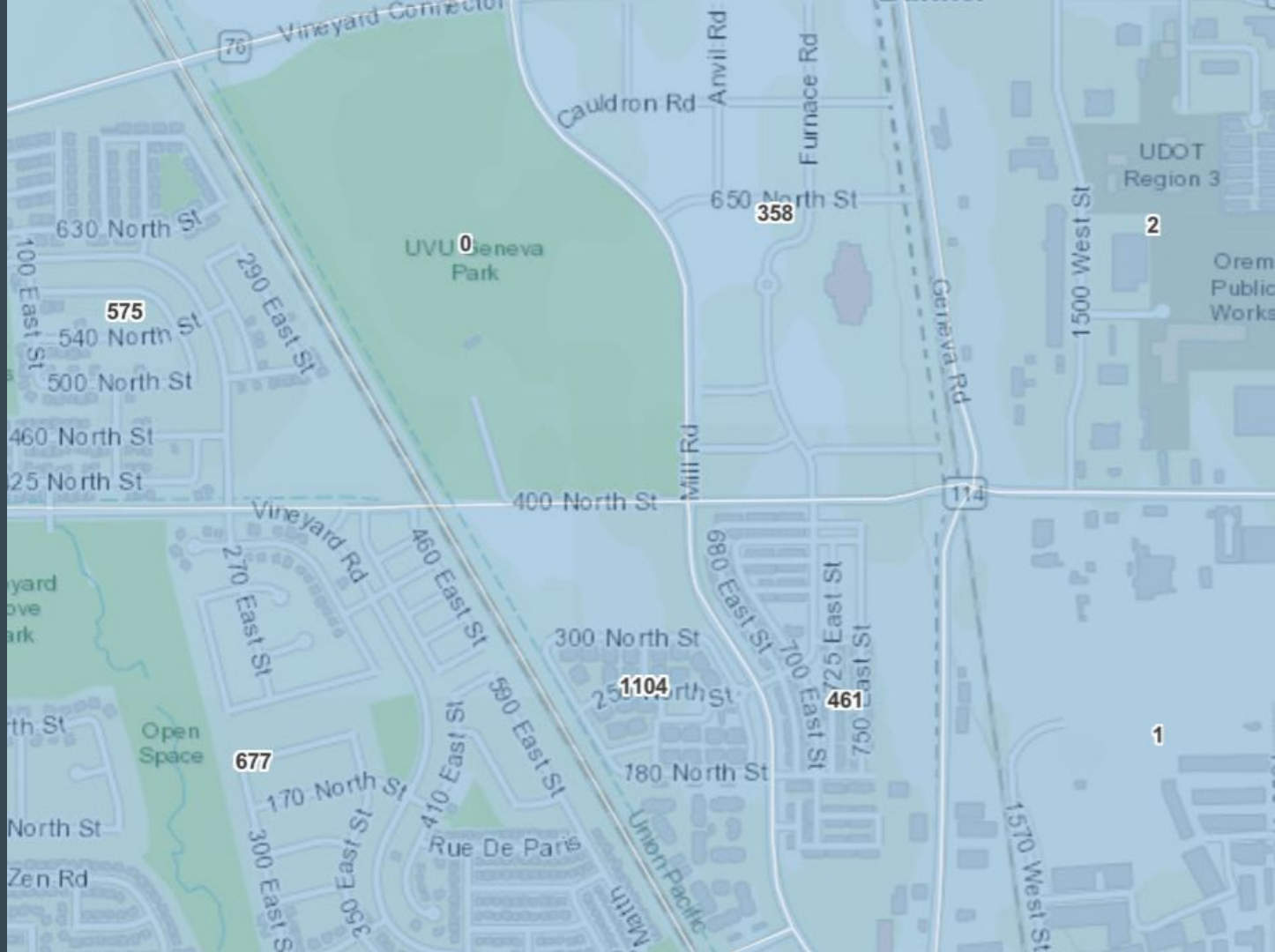


Traffic Forecasting

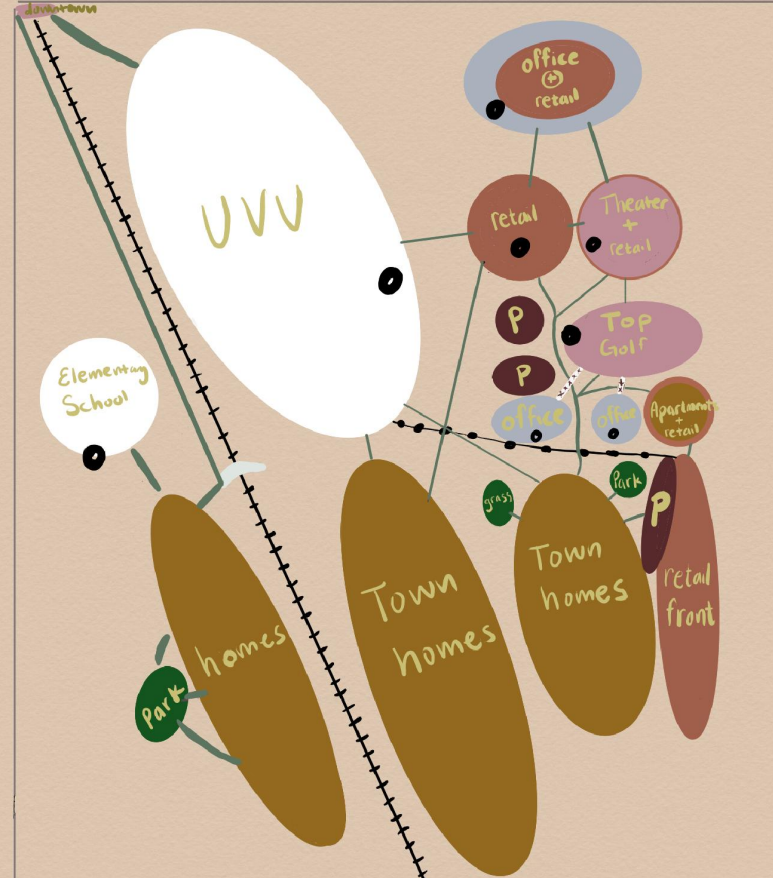
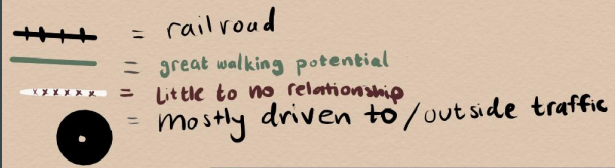


Unit Forecasting

Total future Unit
Count: 3,175



Bubble Diagram

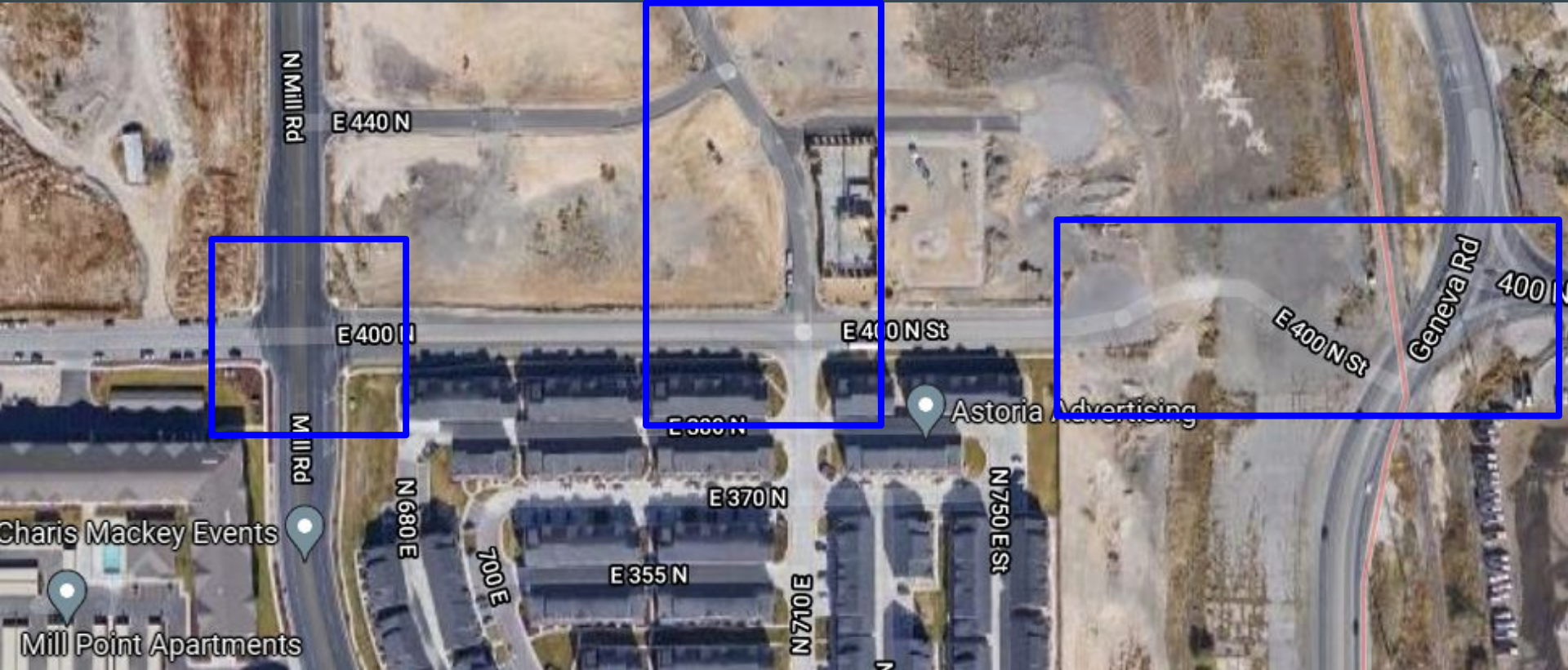


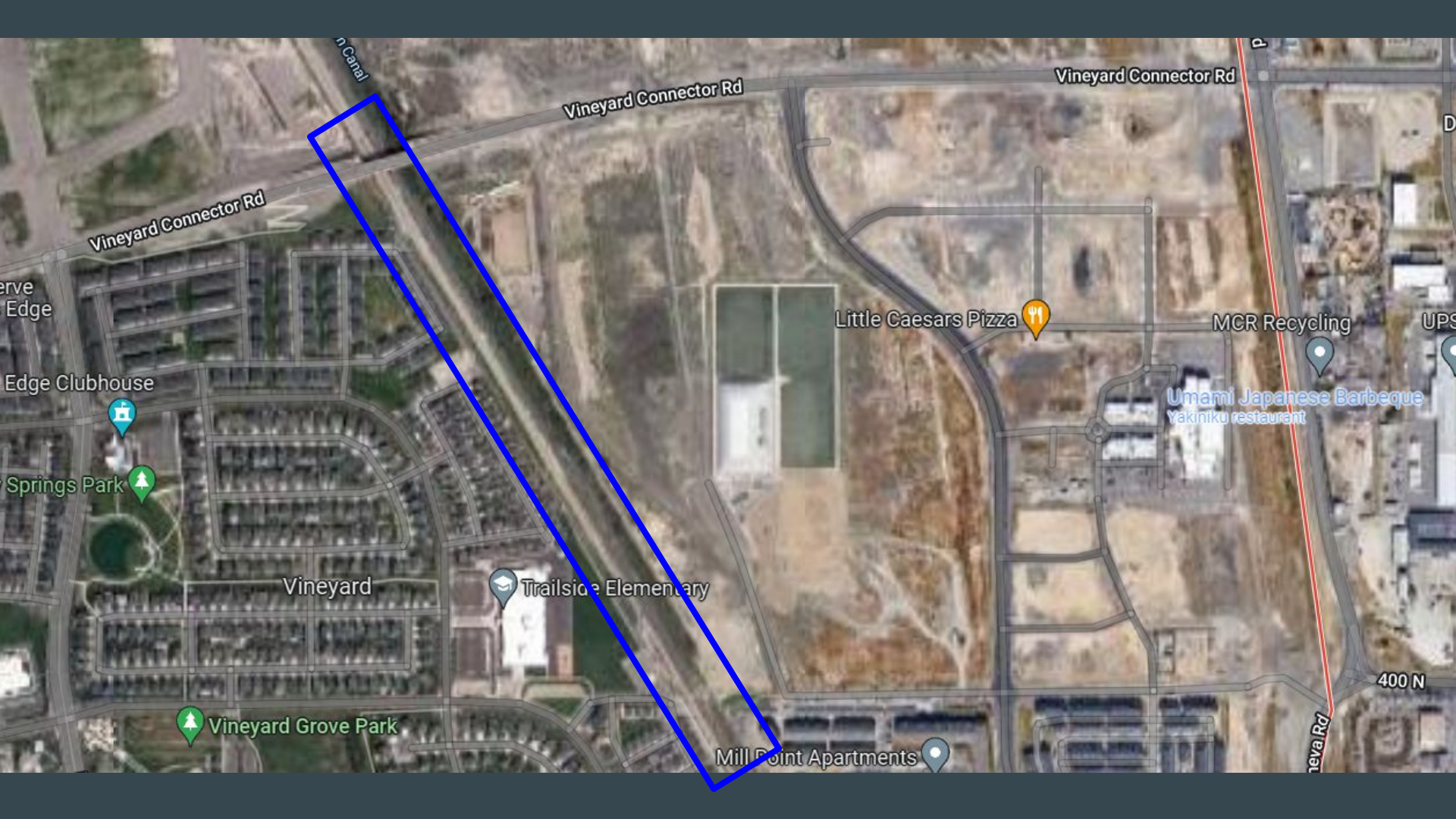
Areas

Intersection

Walkway

Future Connection





Problems We Saw

Unwalkable

- Nothing to excite in pedestrians

No Crosswalks

Low Greenspace

Fast Speed limit



Key Ideas

Wider Sidewalks

Extended Curb into intersection to slow traffic

Colors/Design to help inform

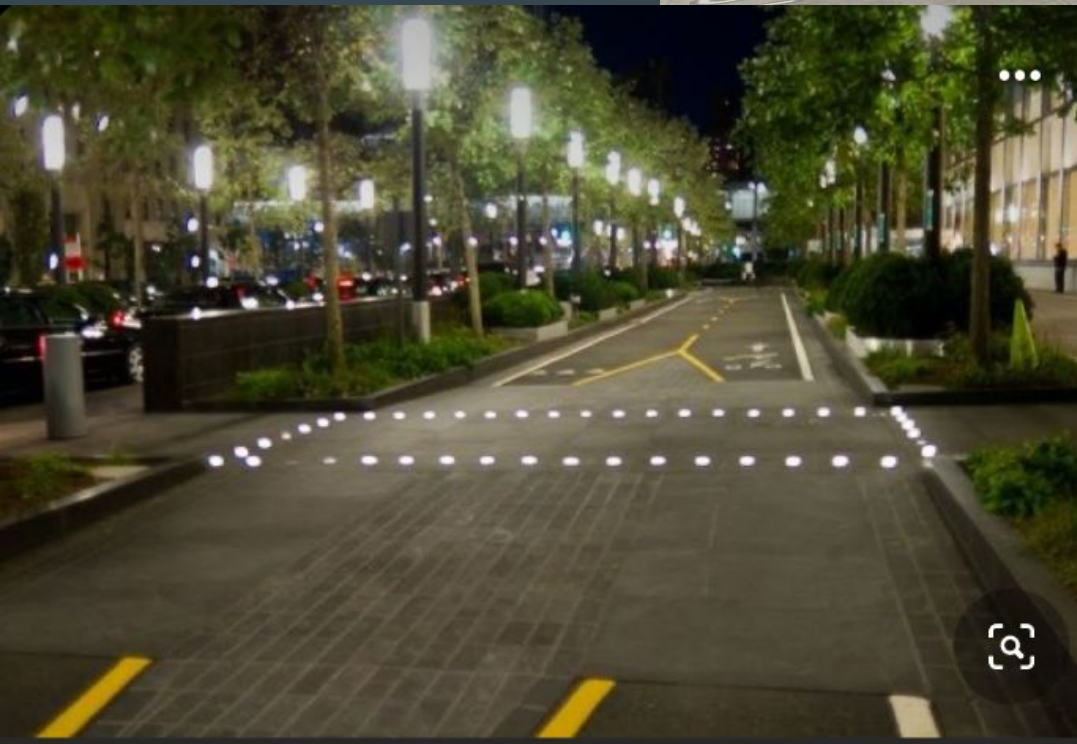
Green Space/ Unique Areas local plants, visual help



Inspiration



Inspiration Continued



Inspiration Continued



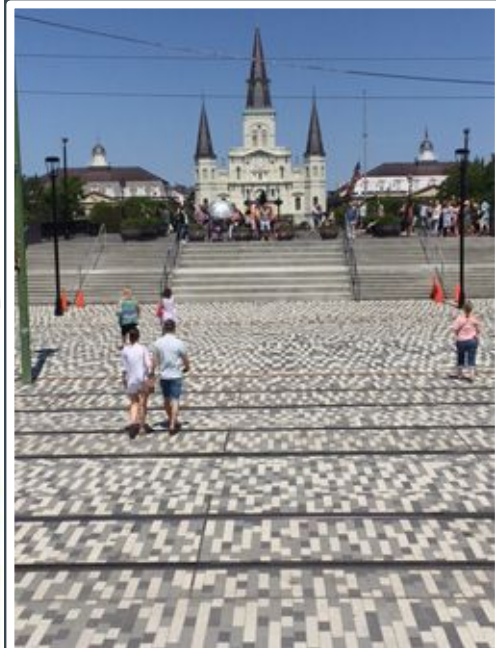
Walkway/ greenway



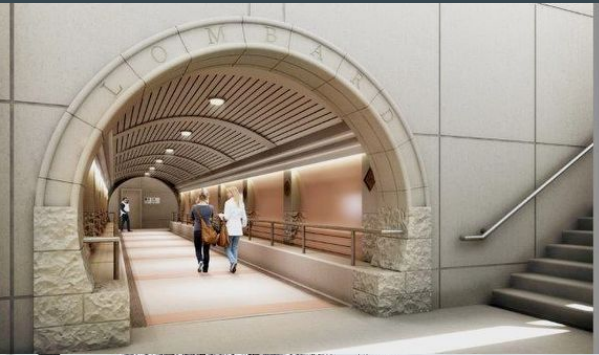
Rail Crossing



Source: New Jersey Department of Transportation



Rail Crossing



Existing Rail Crossing at 400 N



Trail Along Railroad Inspiration



400 N to Downtown Bike Lane





Mill Road

Salamander Design Group

MAG Projection

	Population				*Employment			
	2020	2030	2040	2050	2020	2030	2040	2050
Utah County	679,188	861,852	1,080,082	1,297,515	325,797	405,681	493,054	593,648
Vineyard	14,887	24,017	33,870	36,265	3,757	8,900	13,381	18,505

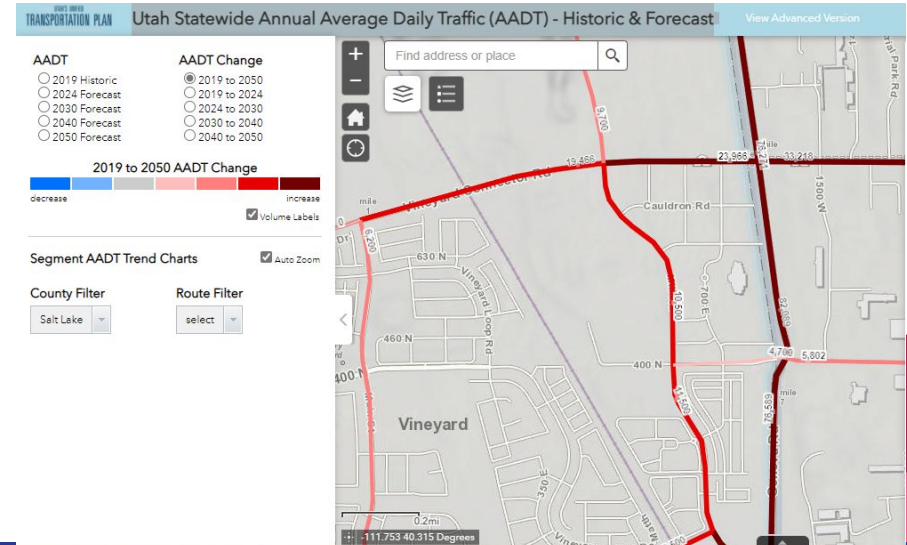
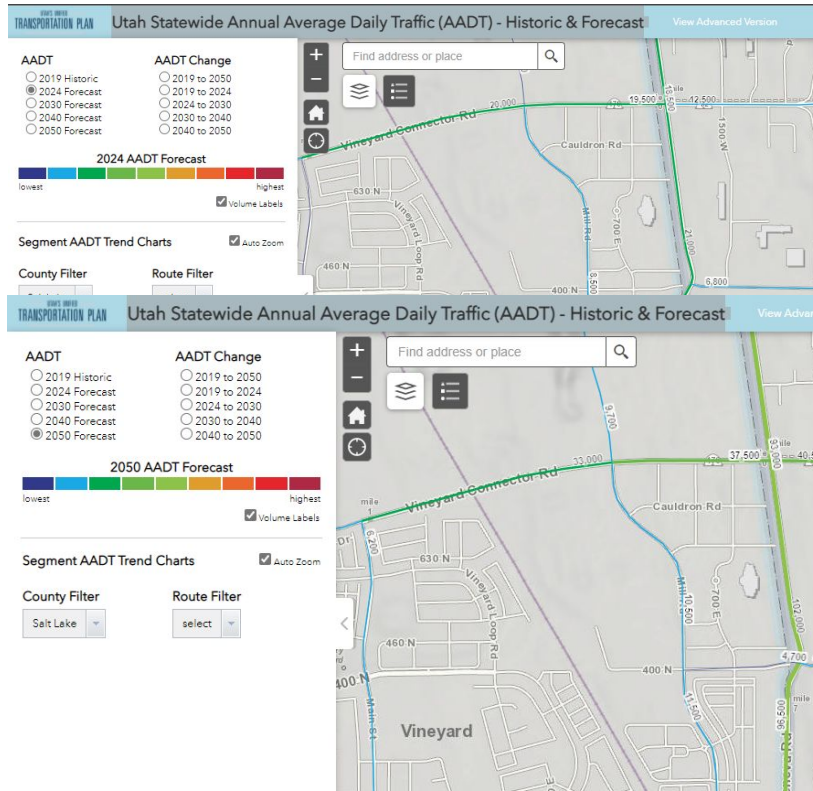
According to the MAG Small Area Population and Employment Projections pdf available on their website, Vineyard's population will reach 36,000 by 2050 and Utah County as a whole will increase to 1.2 million.

Also, Employment should quintuple between now and 2050--putting roads through many more trips per day

(The MAG Population Projection document referenced here is from 2017, so it isn't entirely accurate, but it is a good indicator of how quickly growth is expected)

What that means for Mill Rd

According to the WFRC, Mill Rd traffic in 2019 was 0, and is projected to reach about 10,000 trips a day by 2050. However, Mill Rd. is already at 5 lanes--which is incredibly large for both its present and future use



Goals

- Improve pedestrian connectivity from the east to the west side of Mill Road
- Create a balance between multimodal and car travel moving north south on Mill Road
- Provide continuity with pedestrian friendly developments at The Forge and Downtown Vineyard



Streetscape Design Elements

- Wider sidewalks (8 to 10 feet)
- Grade separated protected bike lanes
- Landscaped median in the center turn lane
- On-street parking near retail and commercial developments
- Possible BRT alignment along Mill Road
- Shrinking the number of lanes from five to three



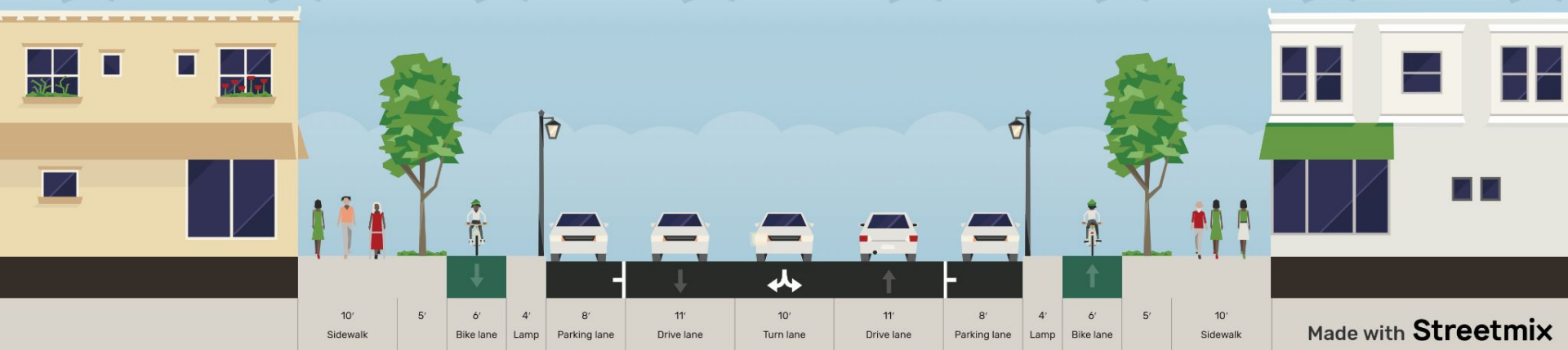


High Walkability Design



Road Diet Concept

Mill Road Road Diet



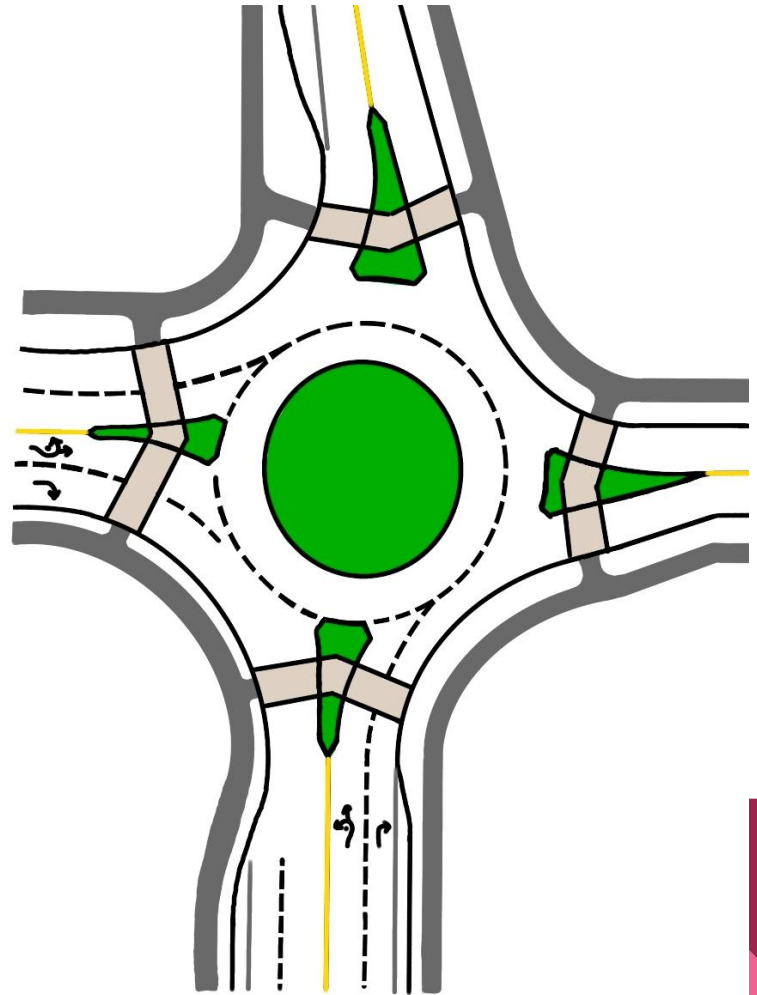
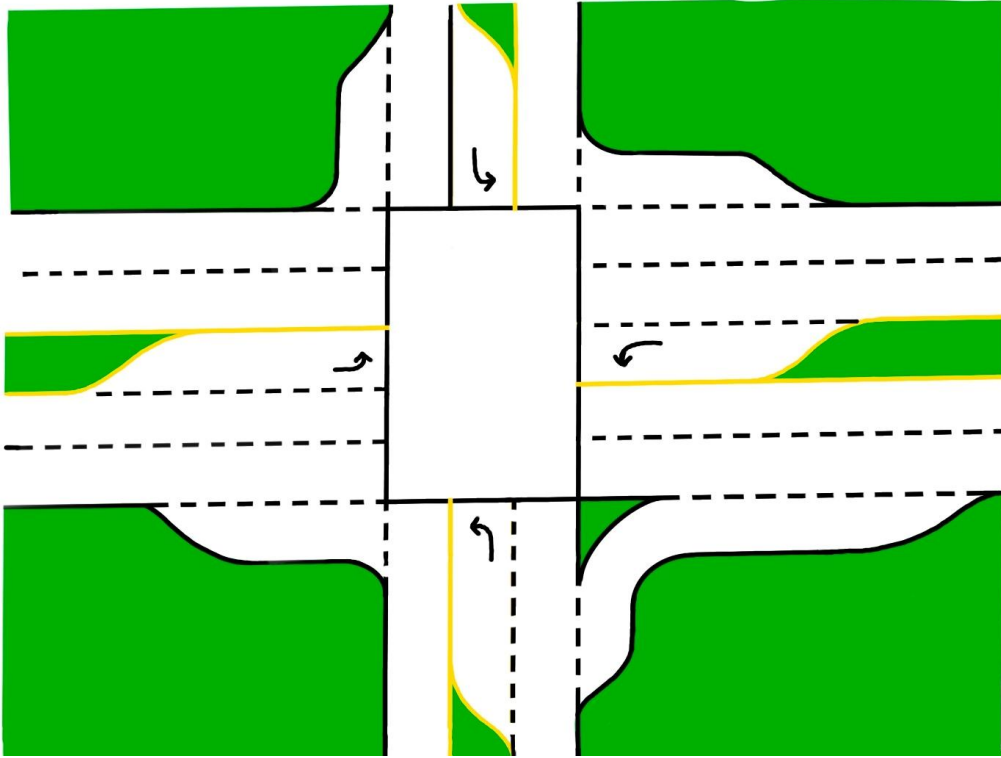
Bus Rapid Transit Concept

Mill Road Bus Rapid Transit



Made with **Streetmix**

Intersection Design



Strategies for Intersection Walkability & Accessibility

- Pedestrian islands
- Pedestrian lights/crosswalk signs with audio
- Reducing the speed limit
- Reducing roundabout decoration height
- Setting sidewalks back from the road



Questions

- Vineyard City wants to make Mill Rd an arterial, but what is an “arterial”? What is the goal for this road?





Vineyard | 125 South Main Street | 801.226.1929

Application for Preliminary Assessment of Traffic Conditions

Applicant Information

This application is designed to establish a process to evaluate the need for and implementation of traffic calming in Vineyard. It emphasizes the need to mitigate the effects of traffic in local neighborhoods and indicates that the traffic calming program will give priority to streets and neighborhoods where traffic impacts are most serious.

Committee Information

Designate a two or three person citizen committee to act as the official spokesperson for the neighborhood.

Committee Member #1 Name:	David Lauret
Home Address:	320 So. Holdaway Rd., Vineyard, UT 84059
Phone Number:	801-362-9960
Email:	DrDTLauret@yahoo.com

Committee Member #2 Name:	Jamie Holdaway
Home Address:	338 So. Holdaway Rd., Vineyard, UT 84059
Phone Number:	801-420-7285
Email:	JamieHoldaway123@gmail.com

Committee Member #3 Name:	Jeff Thomsen
Home Address:	180 So. Holdaway Rd., Vineyard, UT 84059
Phone Number:	801-836-8342
Email:	Jeffreytboardrider@gmail.com

Committee Member #4 Name:	Laura Gillespie
Home Address:	350 So. Holdaway Rd., Vineyard, UT 84059
Phone Number:	801-227-4788
Email:	luvmtnsun@live.com

Describe the specific location of the traffic problem

Street	So. Holdaway Rd.	From	East Holdaway Rd (400 South)	To	Center St (Gammon Rd)
--------	------------------	------	---------------------------------	----	-----------------------

Identify the affected neighborhood area

All addresses on South Holdaway Road, Park View Circle, Glade's Garden Circle, and Holdaway Ln.

Application for Preliminary Assessment of Traffic Conditions

Briefly describe the type of traffic problem(s) and any observations made by residents

- 1) Because of traffic conditions, the Holdaway Rd. neighborhood is unsafe.
 - a) It is the only unprotected neighborhood in the city.
 - i) Holdaway Rd. is not surrounded by a wall. Almost all others are.
 - ii) Holdaway Rd. has no sidewalk or trail to separate pedestrians from vehicle traffic. All others do.
 - iii) The entrance and exit to the Holdaway Rd. neighborhood are not built to make it harder for traffic to use the road than to go around it, thus avoiding the residential area. All others are.
 - iv) The city continues to allow Holdaway Rd. to be used as if it were a collector-class road (even though all maps, plans, and specifications on Vineyard web sites list it as a neighborhood/residential road). No other residential road is used this way.
- 2) Holdaway Rd is unsafe for active transportation. (Cyclists, pedestrians are regularly squeezed off the road surface to avoid being hit by cars who do not yield to them.) This needs to be repaired if we are to maintain Vineyard as a truly "Walkable" city.
- 3) There are too many cars traversing the neighborhood for a residential road (> 500 per day).*
- 4) Many cars travel over the posted speed limit (> 25 mph).
- 5) Over 10 years ago, the Vineyard Town Council, at the behest of the residents, determined that as the only remaining 'original Vineyard' road in town, Holdaway Rd., would remain unchanged. That is, it would not be developed. It would retain its original "farm road" status, flavor, and charm. Although it started out that way, the road's character has since been overcome as an unintended consequence of the development it was supposed to escape. People chose to use Holdaway Rd rather than the designated collector route: Vineyard Rd. Holdaway Rd. needs to be repaired and restored to its intended status and character as a sleepy farm road—as much as possible. Making it into a bicycle boulevard would go a long way towards remediating and restoring the road so as to meet the original intent of the Town Council.

* Vineyard. (May 2019). General Plan Update. Vineyard, UT: Author, p.77

1) Have you contacted law enforcement to request additional enforcement in the affected neighborhood?

Yes **XXXX**

No

Comment

- 1) When we last used this traffic calming procedure, we were promised a deputy would periodically park along Holdaway Rd to stop speeding vehicles to issue warnings or citations to offenders. This has happened occasionally, but the time between visits from a Deputy has increased. So has the number and frequency of offending vehicles.
- 2) It has started to appear to us (residents) that the only time a Deputy will visit to perform this service is when we call the Sheriff's office to complain. As this is an ongoing problem, it needs an ongoing traffic enforcement presence to maintain pressure on those choosing to speed along this residential road. This is what we were promised. This needs to be scheduled by the Sheriff's office so it will happen automatically, not just upon complaint.
- 3) Whenever someone from Holdaway Rd. has approached city officials seeking a workable solution, they have been told the city is unwilling to close the road or use any other traffic calming methods that would physically slow or inhibit traffic flow.
- 4) Several residents from Holdaway Rd. are prepared to testify they have notified the city of serious traffic problems and been 'given the brush-off'.

Application for Preliminary Assessment of Traffic Conditions

Have you reviewed Chapter 2? What traffic calming measures would you find effective?

Yes. We have reviewed Chapter 2.

Although not in the traffic calming chapter, we believe converting Holdaway Rd. into a bicycle boulevard (See our petition and NACTO documentation, <https://nacto.org/publication/urban-street-design-guide/>, <https://nacto.org/wp-content/uploads/2012/06/mutcd2009edition.pdf> Part 9) with appropriate signage, lane striping for two-way bicycle traffic plus a dedicated pedestrian lane, and a 17.5 MPH speed limit would bring Holdaway Rd. into a condition more like that originally intended by the Town Council. See our petition for more details.

Describe any pedestrian related safety issues in the affected neighborhood. (ie lack of sidewalk, narrow street, etc)

Holdaway Road—

1. Is a narrow road, 26 feet wide blacktop-edge-to-blacktop-edge
2. Has no sidewalks
3. Has no curbs
4. Has no shoulders or buffers
5. Is not striped
6. Is the least safe neighborhood road in Vineyard. All others have limited access, have sidewalks, are not habitually mis-used as thoroughfares and/or have carefully designed entrances and exits which make them unattractive for use as a shortcut.
7. Has no room for adding sidewalks, curbs or buffers (many houses are already too close to the street)
8. School children are required to walk on the black-topped road bed in both directions during high volume traffic periods to get to a bus stop or school.

Additional reasons Traffic Calming Measures on Holdaway Road should be addressed:

9. Holdaway Rd. is shown on the map on p. 70 of the Vineyard City General Plan as an existing *local* street.
10. By definition, it should conform to the definition of a "Local Street" found in the General Plan, p. 77.
 - A. Should serve "as a means of access to abutting property"
 - B. Should "serve low speeds"
 - C. Should "serve ... short trip routes"
 - D. Should support "less than 500 vehicles per day"
 - E. Has always been marked on city-maintained maps as a local road, not a collector or arterial.

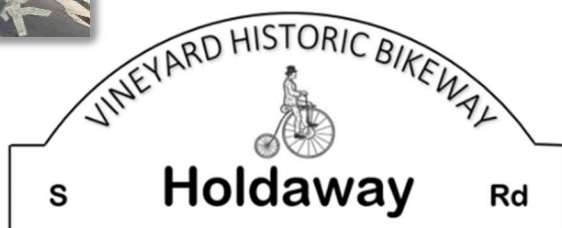
Note: Holdaway Rd. does not meet the definition of a Boulevard Street (arterial) or a Parkway Street (collector), as access to and from these classes of streets should be "limited from ... individual driveways". Holdaway Rd provides the only access to and from neighborhood residents' driveways. Traffic flow alone exceeds Vineyard's own limitation for a local street and provides evidence that Vineyard City government continues to allow Holdaway Rd. to be treated as an arterial or collector, and not as a local street, as intended.
11. Holdaway Rd. was intended, designed and constructed as a rural-style local road by direction of the Vineyard Town Council. Commitments were made to residents at that time that Holdaway road would remain a rural-style local road. That contract with the residents has been broken by allowing increased traffic and speed.

could be shared by local-only vehicle traffic, a one-foot-wide double line separator (future barrier) to isolate a five-foot wide pedestrian trail to accommodate foot travel.

Signage would include new street signs, speed limit signs, bike lane signs, access signs ("local vehicles only"), etc., as described by NACTO. Additional signage denoting historical features along the road may be considered at a future date by the Vineyard Heritage Commission.



(Proposed Bicycle Boulevard street striping)



(Proposed Bicycle Boulevard logo and street sign)

As honoring our heritage is one of the themes of our city (Vineyard Heritage Days Festival, J. Rulon Gammon Vineyard Heritage Park, Walter's Way, Holdaway Rd., Penny Springs Park), it is proposed we name this bicycle boulevard "Vineyard Historic Bikeway". It seems a fitting name as it will connect historic Walter's Way and J. Rulon Gammon Vineyard Historic Park. This historic bikeway also passes four of the oldest and most historic homes in the region, the Shadrach Holdaway home, the Ray Holdaway home, the Francis Marion (Frank) Holdaway home and the original Robbins home. It also passes the only remaining grain silo complex in the city.

VINEYARD HISTORIC BIKEWAY	
	Miles
City Center	2.1
Train Station	1.9
Utah Lake Trail	0.7
Wakara Way	0.5

(Proposed street sign format)

For these and other reasons, we petition Vineyard City to create a bicycle boulevard, as described herein, on Holdaway Road.

Petition to make Holdaway Rd a Bikeway



Bikeways, or as they are more formally known, bicycle boulevards, are city streets that have been converted through the use of specially marked traffic lanes, street signs and dedicated trails to be used by bicycles, scooters, skateboards, joggers, and pedestrians. Local-only automotive traffic is allowed, but a bicycle boulevard is not intended to be a through street for automobiles. Trails and traffic lanes are clearly marked for each mode of transportation. Lane widths, speed limits, intersections, barriers, traffic signs, and other features are optimized for bicycle traffic.



By designating Holdaway Rd as a safe space for bicyclists and encouraging the use of only “active transportation” (non-automotive traffic) on this bikeway, we would be linking the southern portion of the Vineyard City trail system with the dedicated trails north of Center

Street. We would also be linking trails from Lakeside Sports Park on the east with trails at the Elms and Meadows neighborhoods on the west, which are all currently disconnected. This would create a safe corridor for bicyclists and pedestrians from the neighborhoods in the south to the Transit-Oriented Development (TOD) and UTA hub currently under construction in the north and from Utah Lake to Lakeside Park and Vineyard Elementary School on the east.

Bicycle boulevards are not a new concept. They have been created in other cities with and without TODs, such as San Francisco, Oakland, Berkeley, Portland, Albuquerque, Chicago, and New York City. Salt Lake City is also currently testing the concept in their down-town.

Bicycle boulevards are often built to highlight historical development within a city, paralleling important historical or cultural sites, as in Albuquerque, New Mexico, where “the public spaces, neighborhoods, and commercial centers through which the bike route passes are rich in history, culture, art, architecture, and politics, each with important stories about how [their] city came to be and who [they] are today.” <http://www.cabq.gov/parksandrecreation/documents/Bicycle%20Boulevard%20Long%20Version.pdf>

Other Bicycle Boulevards are built along greenbelts, waterways, and other features where they help to preserve the natural ambiance of the land and waterscapes.

Bicycle boulevards are relatively inexpensive and politically popular options for creating connected networks of roads and paths which protect cyclists’



and pedestrians’ safety and provide for their well-being (Wikipedia). Bicycle boulevards have become so popular and successful that the National Association of City Transportation Officials (NACTO)—“the” authority on road design and construction—has posted a dedicated web page for bicycle boulevard standards ([Urban Bikeway Design Guide](#)).



Holdaway Rd is the perfect opportunity to create a bicycle boulevard in Vineyard. It meets many of the criteria mentioned in the NACTO Bikeway Design Guide, including:

- Direct access to destinations - There are two large parks at either end of the road. Several existing and planned trails branch off Holdaway Rd. They connect to neighborhoods, boardwalks, and parks to the north and east, as well as trails to the lake shore on the west. The south end connects to the Sleepy Ridge neighborhood. There are Elementary schools within a block of either end of the road.
- Minimal bicyclist delay - There are no stop signs or controlled crossings and minimal traffic from connecting streets (They are all cul-de-sacs).
- Safe and convenient crossings - Both ends of Holdaway Road end in a ‘T’ intersection where cyclists would re-join standard traffic flow.
- Clear and safe navigation - Holdaway road has few turns and a clear straight-away—little chance to get lost.
- Green Infrastructure – Holdaway Road is the oldest and most historic road in the city. It travels along several historic farms and passes some of the oldest and most historic homes in the region. The south end features excellent views of the only remaining grain silos in the city. Views include old growth mature trees, open fields, wetlands, and birds of all sorts.

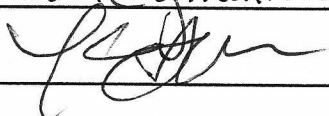
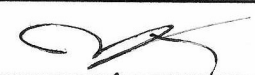
The cost to the city for creating one of the first bike boulevards in the area would be minimal. The main costs would be striping and upgraded signage. Striping would include striping/painting the 26-foot-wide road surface to accommodate two 10-foot-wide bike lanes that

Yes: 31/37 = 84%

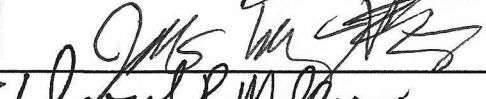
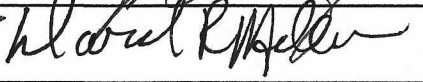
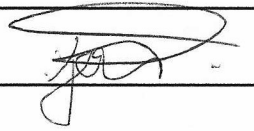
No: 1/37 = 3%

Abstain: 5/37 = 14%

2/14/2022

Address	Name	Email	Support (yes/no)	Signature
70 S. Holdaway Rd Rental	Baagii Badrakh, Oogii	Ch.OegonJargal@gmail.com	Yes	
86 S. Holdaway Rd	Robins, David & Debbie	Danil Robins	Yes	drobins57@gmail.com
100 S. Holdaway Rd Rental	(vacant) Tyler Smith	art.life435@gmail.com	Yes	
100B S. Holdaway Rd Rental 100B	(vacant)			
180 S. Holdaway Rd	Thomsen, Jeff & Kellie	Kelliethomson@gmail.com	Yes	Kell Thomsen
188 S Holdaway Rd	Teschner, Bill & Sherry			
220 S Holdaway Rd	Beck, Hans & Brook J	Holdaway.brook@gmail	Yes	Brook Hanning
285 S Holdaway Rd	Holdaway, Jack & Katherine	Kath... Holdaway@gmail.com	Yes	Jack & Katherine
315 S Holdaway Rd	Holdaway, Norm SNOW BIRD		Yes	Norm Holdaway
320 S Holdaway Rd	Lauret, David & Claudia	DrDTLauret@yahoo.com	Yes	Lauret
320B S Holdaway Rd ADU	Jacob, Wight	Jmig5474@gmail.com	Yes	
325 S Holdaway Rd	Dean, Lamont & Susanna	Stencza@hotmail.com	Yes	Lamont & Susanna
329 S Holdaway Rd ADU	Cheeseman, Pat	patricia.cheeseman@icloud.com	Yes	Pat Cheeseman
332 S Holdaway Rd.	Holdaway, Wayne	WTHOLDAWAY@gmail.com	Yes	Wayne Holdaway
338 S Holdaway Rd	Holdaway, Jeffery & Jamie	Jamieholdaway123@gmail	Yes	Jeffery & Jamie
120 S. Holdaway Rd	Todd Robins	todd.robins@gmail.com	Yes	Todd Robins

2/14/2022

Address	Name	Email	Support (yes/no)	Signature
345 S Holdaway Rd	Fernandez, Sean & Besilyne	SFERIANDEZ@UTAH.GOV	YES	
343 S Holdaway Rd ADU	Hillman, Nathan & ^{Meckell} Lauren	meckellhillman@gmail.com	yes	
350 S Holdaway Rd	Gillespie, Jeff & Laura	timptwolves182@hotmail.com	yes	
355 S Holdaway Rd	Purinton, David; Alex			
364 S Holdaway Rd	Cosney, Susan Jane			
367 S Holdaway Rd	Holdaway, Keith & Joni	holdawayshuntwings@gmail.com	yes	
368 S Holdaway Rd ADU	Hill, Katelyn Vacant			
380 S. Holdaway Rd.	Holdaway, Jacob Walter & Noelia	JacobHoldaway@gmail.com	yes	
385 S Holdaway Rd	Miller, David R. & Sherrie Kaye	davidmiller0604@gmail.com	Y	
395 S Holdaway Rd				
364 Holdaway Rd				
380 So. #C	Fernandez, David	MUNOZ.FERNANDA.A@gmail.com	Y	

2/14/2022

Address	Name	Email	Support (yes/no)	Signature
377 E Parkview Cir	Henry, Chris & Stacie	Stacieh2009@hotmail.com	Yes	Stacie Henry
386 E Parkview Cir	Gillman, Philip & Jamie	jamie.gillman@hotmail.com	yes	Gillman
395 E Parkview Cir	Thurman, Grant & Danetta	Danetta@comcast.net	no	Thurman
408 E Parkview Cir	Smith, David & Laurel Young, James & Janet	JR 4 951 6 Mail.com	Yes	Young
411 E Parkway Cir	(?) Hobbly, Carl Anne	choddy@ancestry.com	yes	Carney Hobbly
418 E. Parkway Cir	Blair, Gary & Cynthia	GARY.BLAIR54@GMAIL	yes	Henry Blair
301 Glade's Garden Cir	Burke, Doug & Carrie	carrieburke1@hotmail.com	yes	Carrie Burke
338 Glade's Garden Cir	Maria Rojas	montanpcarmen80@gmail.com	yes	MR
318 Glade's Garden Cir	Tim Sederberg	timseiderberg@gmail.com	yes	Tim Sederberg
319 Glade's Garden Cir	ENI TUMANUKAS	enitbsia@gmail.com	Yes	ENI Tumanukas

2/14/2022

[illegible]