

PAGE LEFT INTENTIONALLY BLANK

TABLE OF CONTENTS

01

EXISTING CONDITIONS / ALTERNATIVES ANALYSIS

| Introduction | 1 |
|---------------------------------------|----|
| Alternatives | 2 |
| Rhinecliff Road Alternative | 4 |
| Rail with Trail Alternative | 14 |
| Condo ROW Alternative | 16 |
| Utility Corridor Alternative | 18 |
| Utility ROW / Astor Drive Alternative | 20 |



INTRODUCTION

The purpose of this project is to provide a feasibility assessment for the development of a sidewalk or shared use path five feet wide or greater to connect the Village of Rhinebeck to the Rhinecliff Train Station. The sidewalk, or shared use path, is intended to create a safer route for those walking and biking to access the train station, residential areas, and Village amenities.

Up to three feasible alternatives have been identified utilizing existing rights-of-way, including roadway, utility, and railroad rights-of-way. While each alternative is feasible, there are opportunities and challenges associated with each. Next steps will be to revise these alternatives with feedback from the steering committee, stakeholders, and general public, and define a preferred recommended alignment for the trail.



Existing sidewalk on south side of W Market Street (photo facing east)



Existing sidewalk on south side of Astor Drive (photo facing west)

ALTERNATIVES

An existing conditions analysis was conducted to understand opportunities and constraints. Conditions reviewed included right-of-way (ROW), existing road width, posted vehicular speed, topography, and obstacles that lay within the ROW such as utility poles, guide rails, and fencing. Existing sidewalks were identified and incorporated in the proposed routes where feasible.

Alternative routes identified include:

- · Rhinecliff Road Alternative
 - » 2.1 miles of sidewalk or shared use path
- Rail with Trail Alternative
 - » 1 mile of rail with trail (shared use path)
- Condo ROW Alternative
 - » 0.7 miles of shared use path
- Utility Corridor Alternative
 - » 0.5 miles of shared use path
- Utility ROW / Astor Drive Alternative
 - » 1.4 miles of sidewalk and/or shared use path

As evident on the map on the adjacent page, a full connection between the Village of Rhinebeck and the Rhinecliff Train Station may be made up of a combination of these routes. For example, the Rail with Trail Alternative alone does not make a direct connection between the two destinations but, when combined with other alternatives, it helps close a gap in the study area. Further evaluation is required to determine the preferred recommended route.



Bicyclist on Montgomery Street (photo facing north)

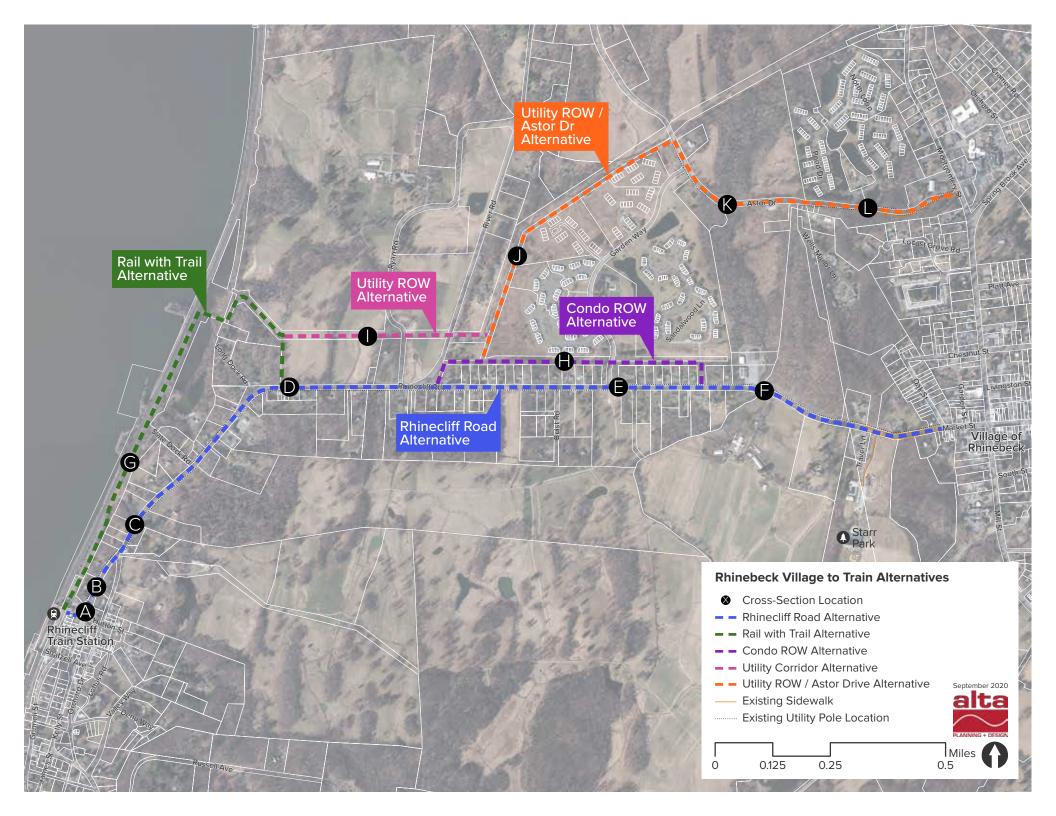
CROSS-SECTIONS

(See map on page 3 for lettered crosssection locations)

The cross-sections shown on the following pages all show a shared use path of at least eight feet in width. This is the minimum width to comfortably accommodate both pedestrians and bicyclists separate from traffic. There are instances where the ROW is narrow on one side of the road or the other, making it a challenge to fit an eightfoot wide facility. A sidewalk of five feet can be constructed in place of the eight-foot shared use path if preferred.

It should also be noted that many locations show a proposed facility on both sides of a road (Charles Street, Rhinecliff Road, Astor Drive). This section of the Feasibility Study intended to show all the options based on information available. Any future preferred route will specify which side of the street a facility should be constructed.

The graphics illustrate planning-level concepts. Additional analysis and preliminary engineering will be needed to determine an appropriate cross-section and treatment.



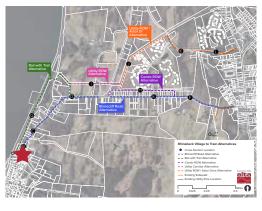
RHINECLIFF ROAD ALTERNATIVE

This alternative begins in the Village of Rhinebeck and heads down W Market Street/Rhinecliff Road. It travels the length of Rhinebeck Road for approximately 2 miles before merging onto Charles Street turning onto Hutton Street, ending at the trail station. On the eastern end of the route, in the Village, pedestrians may utilize the existing sidewalk that begins at Oak Street and ends at Traver Lane. If widened to at least eight feet, the facility can also be used by bicyclists.

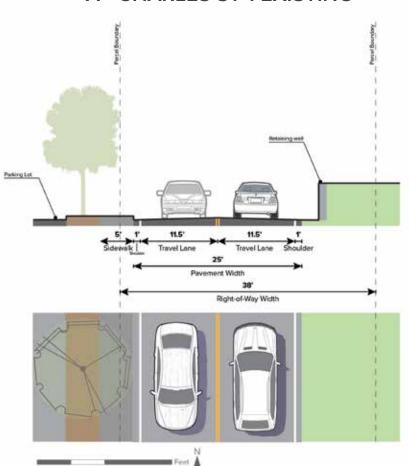
The Rhinebeck Road Alternative provides a direct route to the train station. The road has a posted speed limit of 45MPH and an average speed of 43MPH, requiring separate sidewalk or shared-use path facilities to create a safe connection for those walking or biking. Challenges associated with this route include to topography and limited right-of-way (ROW) ranging from approximately 38 feet to 70 feet along the road. The entire route is also lined with utility poles that are stationed close to the edge of the pavement, thus creating pinch points and requiring utility pole relocation to construct a sidewalk or shard use path along some portions of the route.



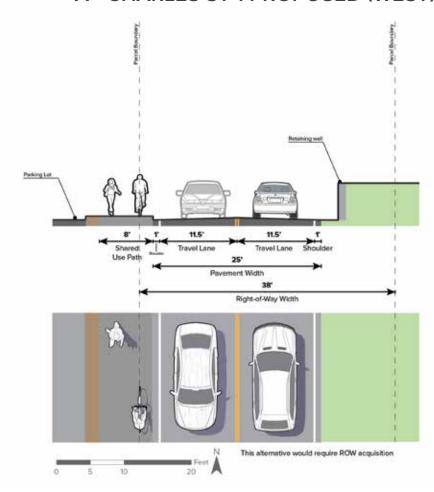
Existing sidewalk on west side and existing retaining wall on the east side of Charles Street (photo facing north - cross-section location A)



A - CHARLES ST 1 EXISTING

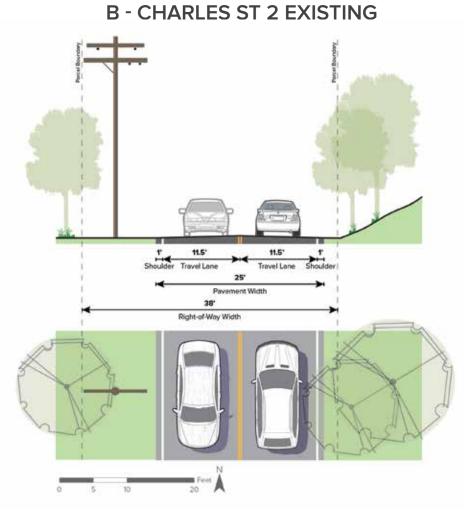


A - CHARLES ST 1 PROPOSED (WEST)





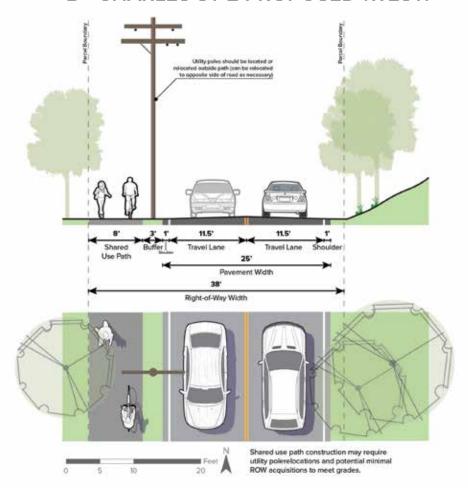
Topography challenges on the east side of Charles Street (photo facing north - cross-section location B)



B-CHARLES ST 2 PROPOSED (EAST)

rempval as necessary 11.5" Shoulder Travel Lane Travel Lane Shared Use Path 25" Pavement Width 38" Right-of-Way Width Shared use path construction may require construction of some retaining walls if minimum slopes cannot be accommodated and ROW acquisition 20

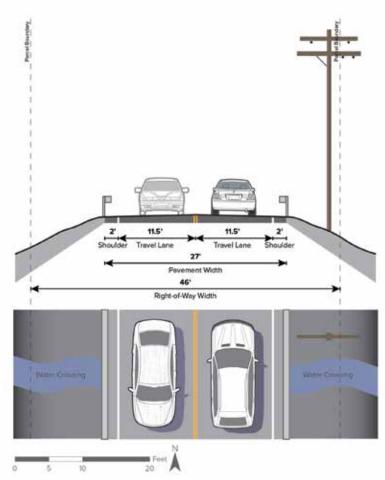
B-CHARLES ST 2 PROPOSED (WEST)



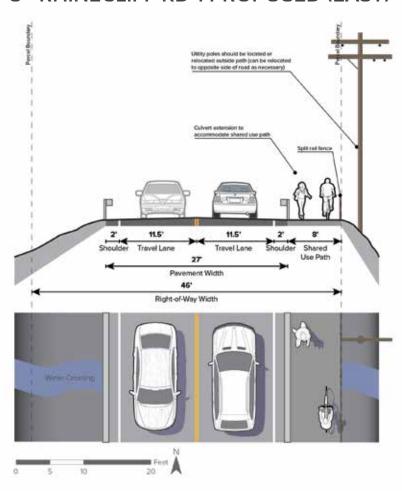


Rhinecliff Road culvert (photo facing north - cross-section location C)

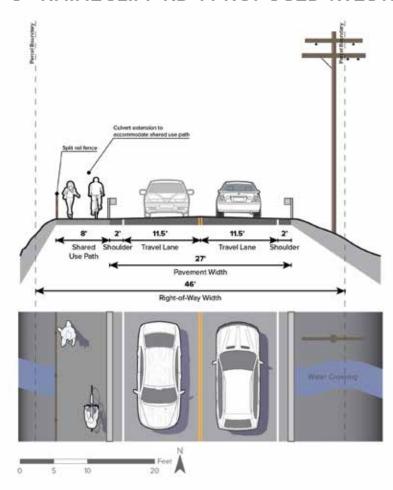
C - RHINECLIFF RD 1 EXISTING



C - RHINECLIFF RD 1 PROPOSED (EAST)



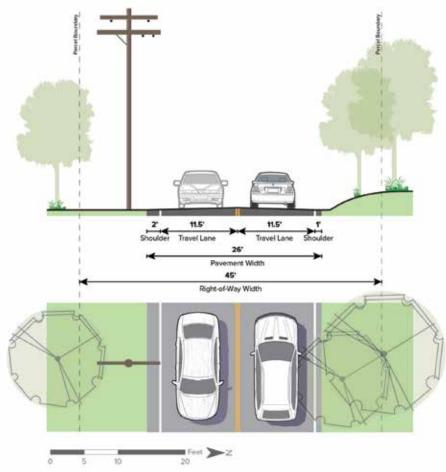
C - RHINECLIFF RD 1 PROPOSED (WEST)





Rhinecliff Road intersections with Ryan Road (foreground) and River Road (photo facing east)

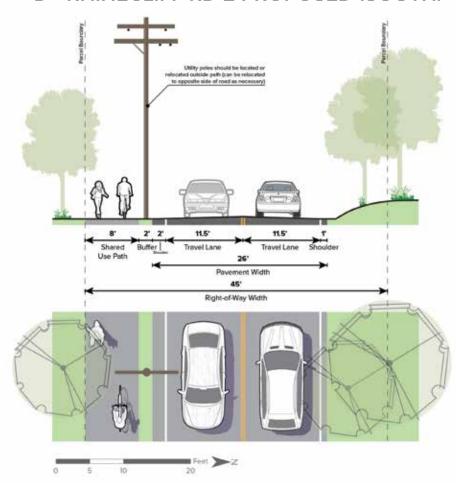
D - RHINECLIFF RD 2 EXISTING



D - RHINECLIFF RD 2 PROPOSED (NORTH)

Regrading and tree removal as necessary 11.5 11.5 Travel Lane Travel Lane Shared Use Path Pavement Width Right-of-Way Width Narrowing the roadway (1 ft shoulders and 10 ft travel lanes) would allow the shared use path to be constructed further from the edge of ROW

D - RHINECLIFF RD 2 PROPOSED (SOUTH)

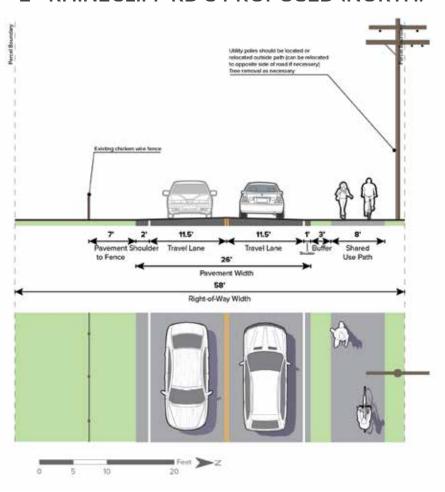




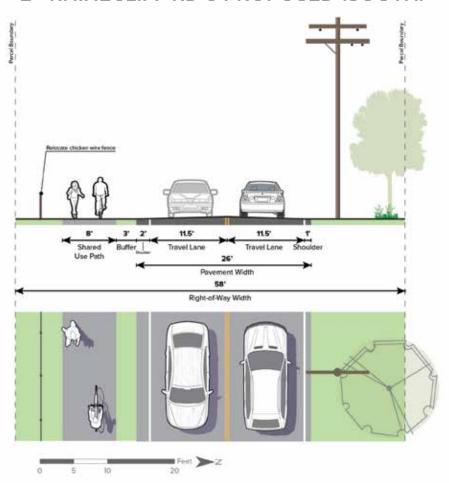
Fence along south side of Rhinecliff Road at the intersection of Garden Way (photo facing east - cross-section location E)

Pavement Width 58* Right-of-Way Width

E - RHINECLIFF RD 3 PROPOSED (NORTH)



E - RHINECLIFF RD 3 PROPOSED (SOUTH)

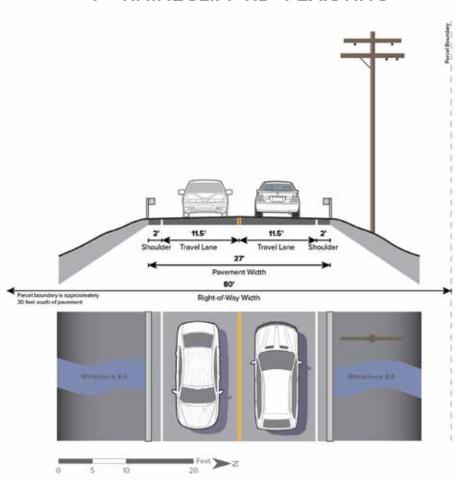




Rhinebeck Kill crossing on Rhinecliff Road (photo facing west - cross-section location F)

(Source: Google)

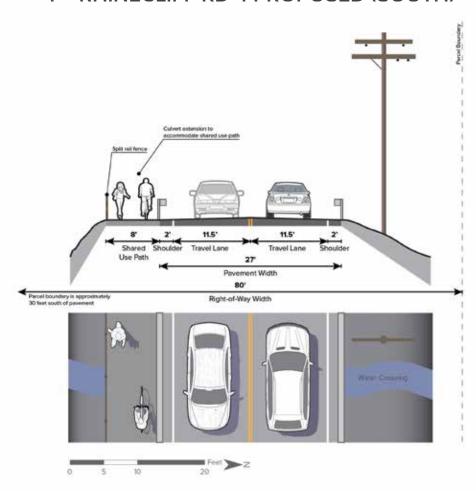
F-RHINECLIFF RD 4 EXISTING



F - RHINECLIFF RD 4 PROPOSED (NORTH)

Utility poles should be located or relocated outside path (can be relocated to apposite side of road as necessary) Culvert extension to accommodate shared use path Split red fence 11.5" Shoulder Travel Lane Travel Lane Shoulder Shared Use Path 27 Pavement Width Parcel boundary is approximately 30 feet south of pavement Right-of-Way Width

F - RHINECLIFF RD 4 PROPOSED (SOUTH)



RAIL WITH TRAIL ALTERNATIVE

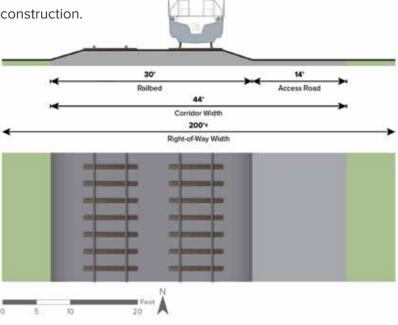
The Rail with Trail Alternative departs from Rhinebeck Road just before Long Dock Road and follows a utility corridor to the Amtrak rail line. The alternative will follow the eastern side of the rail corridor for less than one mile until reaching the train station. The rail with trail will need to utilize another alternative, such as Rhinebeck Road or Astor Drive to make a full connection between the two project endpoints.

The rail with trail segment will be completely separate from the road and will provide a direct route to the station for pedestrians and cyclists. There is some steep topography between the rail corridor and Rhinecliff Road that will need

to be addressed during design. The rail corridor and utility corridor are adjacent for a short distance and may be able to provide a connection for a shared use path. Significant outreach will need to be conducted due to the route using at least one parcel that is privately owned. Coordination with and permission of the railroad will also be required, however, a trail along this right of way has been supported by many local and regional plans. Time and cost will need to be considered for major trail construction.



G-RAIL WITH TRAIL EXISTING

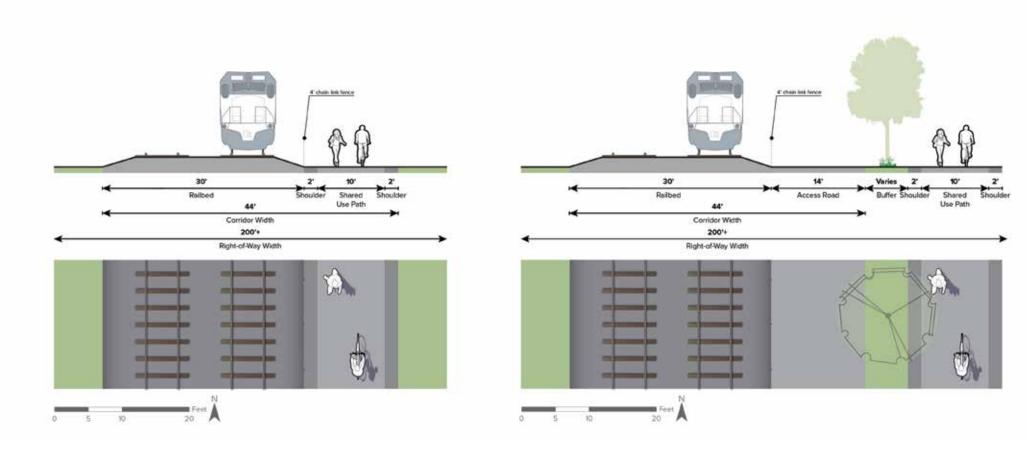




Rail corridor with space for an adjacent shared use path (photo facing south)

G-RAIL WITH TRAIL PROPOSED 1

G-RAIL WITH TRAIL PROPOSED 2



CONDO ROW ALTERNATIVE

This alternative will branch off of Rhinebeck Road at Sandalwood Lane. From there it will follow a small corridor that is owned by the Gardens at Rhinebeck. It connects back to Rhinebeck Road at River Road.

The vacant corridor provides a width of 100 feet, which is ample space for a shared use path. This alternative would provide a safe route for cyclists and pedestrians that is completely separated from the traffic along Rhinebeck Road while also avoiding the constraints due to ROW and utility poles. Development of this alternative will require coordination with the Gardens at Rhinebeck condominiums. The area appears to contain wetlands so design of the trail will need to include coordination with NYSDEC and avoid impacts to these areas.



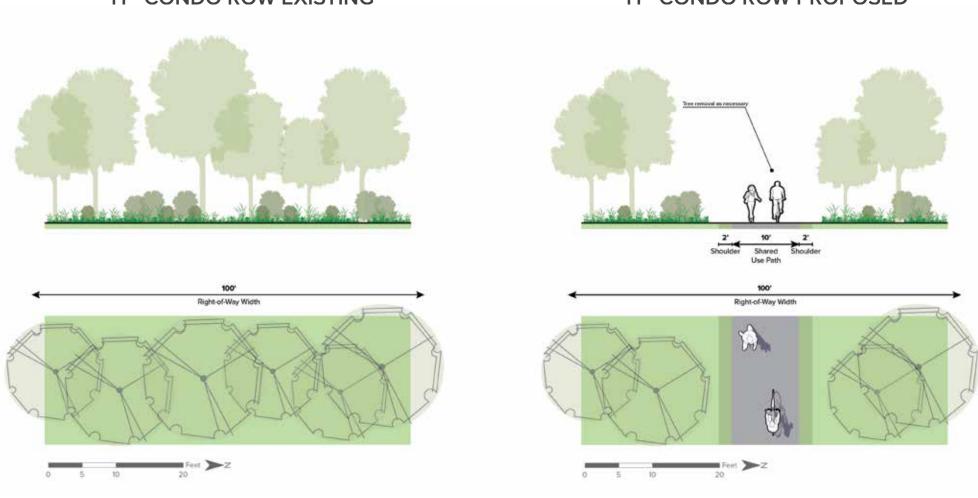
Wooded parcel owned by Gardens at Rhinebeck shown from Garden Way (photo facing west)

(Source: Google)



H - CONDO ROW EXISTING

H - CONDO ROW PROPOSED



UTILITY CORRIDOR ALTERNATIVE

This alternative follows an existing utility corridor for approximately half a mile from the Utility ROW/Astor Drive Alternative to the Rail with Trail Alternative. If implemented, this alternative will require two safe roadway crossings (River Road and Ryan Road) for path users.

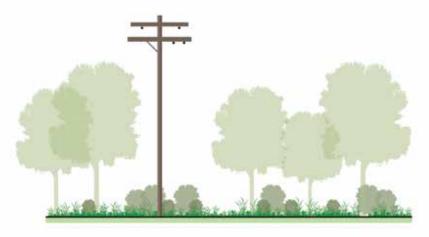
Similar to the Condo ROW Alternative, this segment will run through a vacant corridor that provides nearly 100 feet of ROW. The treatment will allow those walking and biking to comfortably travel along the route completely separated from traffic. The proposed design will require ROW coordination with the utility company. Accessing the corridor on the west side Ryan Road may be challenging due to the presence of rock outcroppings.

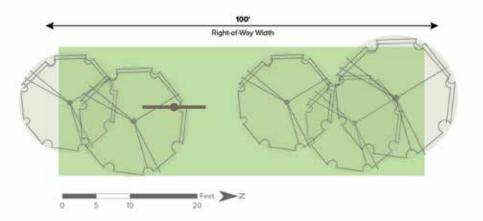


View of Utility Corridor from Ryan Road (photo facing east)

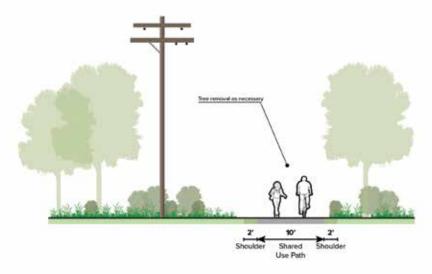


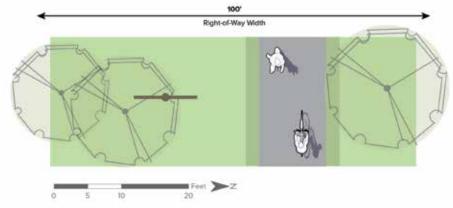
I - UTILITY CORRIDOR EXISTING





I - UTILITY CORRIDOR PROPOSED





UTILITY ROW / ASTOR DRIVE ALTERNATIVE

This alternative will begin at Montgomery Street and head west on Astor Drive where it will follow an existing sidewalk for a quarter mile. It will continue west for approximately half a mile before turning left onto the utility corridor that runs behind the Gardens at Rhinebeck condominiums for approximately three-quarters of a mile. This alternative will terminate at either the Rail with Trail Alternative or the Condo ROW alternative depending on the final preferred route.

Astor Drive is a residential road that has speed posted at 30MPH with low volume traffic and the utility corridor will provide a shared use path that is completely separate from traffic. Astor Drive is moderately lined with utility poles and minor pinch points with guide rails on either side that need to be considered during sidewalk or shared use path design. There are 2 parallel off-road corridors connecting between Astor Drive and River Road, one owned by the utility company and one owned by the Gardens at Rhinebeck condominiums. Though

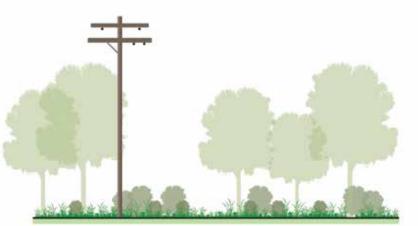


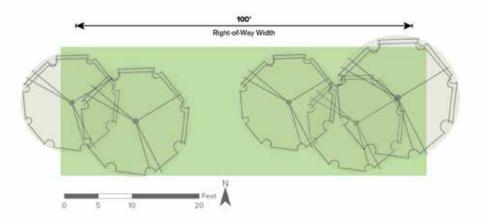
View of Utility ROW from Astor Drive (photo facing south)

the ROW appears to be informally used, the proposed shared use path in this area will require coordination with the utility company as well as the Gardens at Rhinebeck condominiums.

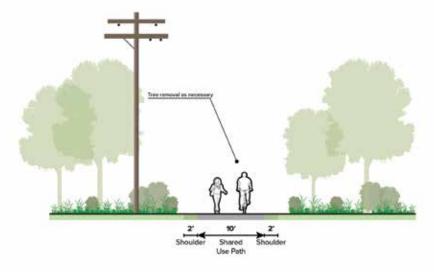


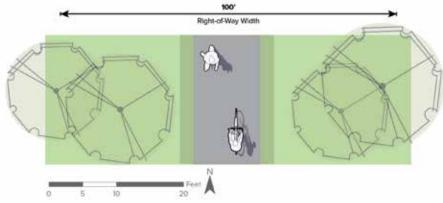
J - UTILITY ROW / ASTOR DR 1 EXISTING





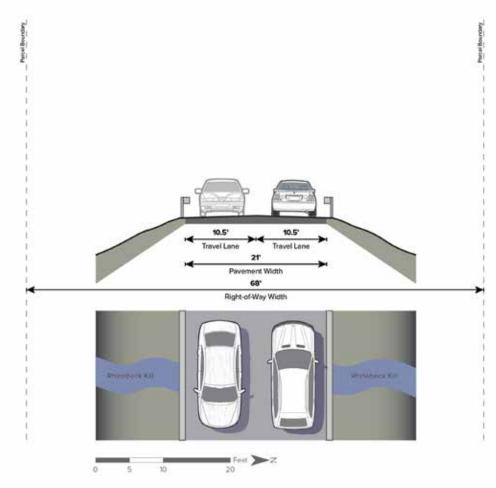
J - UTILITY ROW / ASTOR DR 1 PROPOSED



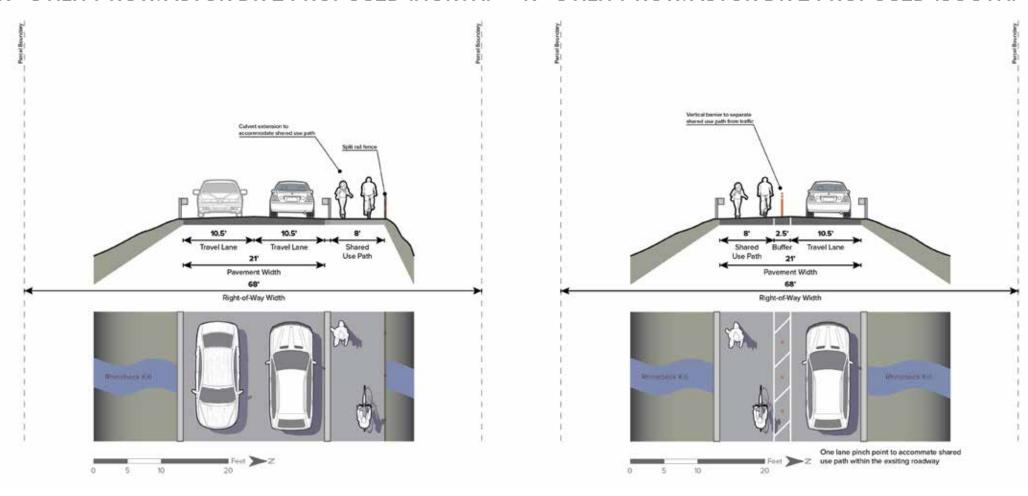




K - UTILITY ROW / ASTOR DR 2 EXISTING

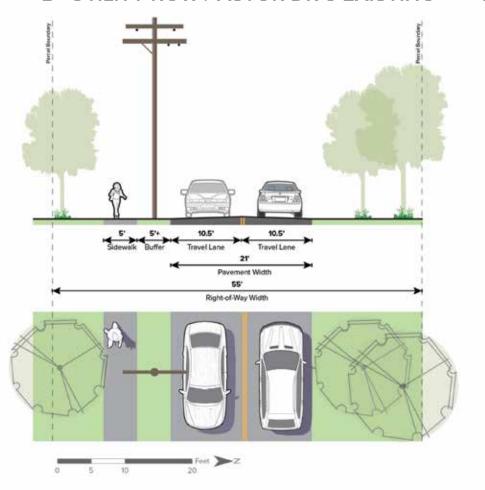


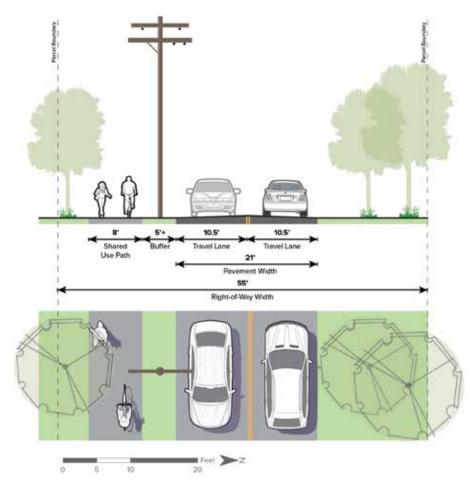
KUTILITY ROW/ASTOR DR 2 PROPOSED (NORTH) K - UTILITY ROW/ASTOR DR 2 PROPOSED (SOUTH)





L - UTILITY ROW / ASTOR DR 3 EXISTING L - UTILITY ROW / ASTOR DR 3 PROPOSED (SOUTH)







Existing sidewalk on the south side of Astor Drive (photo facing west)