

### 3.1.4 Full-Corridor Commuter Rail (CRT1)

The intent of this scenario was to test full-corridor commuter rail transit against the goals and objectives established for the study. Full-corridor commuter rail includes both cross-corridor service and Manhattan-bound service via a direct connection to the Hudson Line. Commuter rail could not be constructed on the existing or rehabilitated bridge due to load requirements and the inability of rail to negotiate the existing 3 percent grades. As a result, this scenario tested a replacement bridge (see Subchapter 3.2) that would carry both the highway and the commuter rail. Congestion pricing was also tested as part of this scenario (see Subchapter 3.1.2).

Within the corridor, an alignment to the south side of the highway within the I-87/I-287 right-of-way was examined. Figure 3-8 contains some sample cross sections and Figure 3-9 is a schematic of this alignment. Different alignment choices, however, were examined with different scenarios. For example:

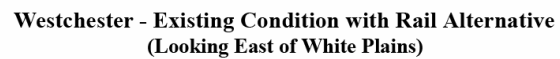
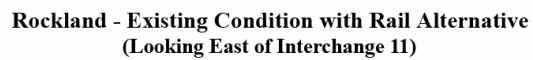
- An alignment on the north side of I-87/I-287 was examined under Scenario M1.
- Use of the Piermont right-of-way, between Suffern and Airmont Road in Rockland County was examined under Scenario M3.
- Three different alignments for connection to the Port Jervis Line (in Rockland County) were developed.

Details on these alignment elements can be found in the corresponding subsections of this chapter.

#### 3.1.4.1 Commuter Rail Alignment

The commuter rail alignment was developed using a set of conceptual guidelines based on Metro-North practices. Generally, track centers would be spaced between 14 feet (minimum) and 18 feet (desirable), centered within a right-of-way width between 48 feet (minimum) and 60 feet (desirable). The steepest grade that would be allowed on the line would be 2.5 percent, at select, relatively short, covered locations only. At select, relatively short, uncovered locations, a maximum grade of 2 percent would be permitted; otherwise, the maximum grade would be 1.5 percent. Within the I-87/I-287 right-of-way, the CRT alignment would generally be parallel/concentric to the highway alignment. Where the desirable design speed (110 mph) would cause the CRT alignment to drift outside the right-of-way, design speed would be relaxed, with a minimum of 45 mph.

Given the highly variable terrain in both counties, a significant part of the alignment would be in tunnel or on viaduct. Table 3-1 contains the overall construction requirements for CRT1. Figures 3-10 and 3-11, respectively, contain the profiles of the alignments in Rockland and Westchester Counties.



### Figure 3-8

Table 3-1

Overall Construction Requirements for CRT1

| Type of Structure                     | Rockland County<br>Linear Feet | Westchester County<br>Linear Feet |
|---------------------------------------|--------------------------------|-----------------------------------|
| Viaduct                               | 18,800                         | 7,200                             |
| Retained Cuts/Retained Fills/At-Grade | 42,000                         | 20,100                            |
| Tunnel                                | 12,200                         | 37,700                            |

Scenario CRT1 would link all five existing north-south rail lines in the corridor by providing either a direct connection (Port Jervis, Hudson, New Haven Lines) or a transfer facility (Pascack Valley and Harlem Lines). CRT1 also includes 11 new stations (with 1,000-foot platforms), 7 with new park-and-ride facilities:

- **Rockland County** – Suffern North, Airmont, Interchange 14/Pascack Valley Line (PVL), and Palisades Mall. Each of these stations would include new park-and-ride facilities.
- **Westchester County** – Tappan Zee, Greenburgh, County Center, White Plains, Westchester Mall, Corporate Park Drive, and Purchase. The stations at Tappan Zee, Greenburgh, and Purchase would include new park-and-rides facilities.

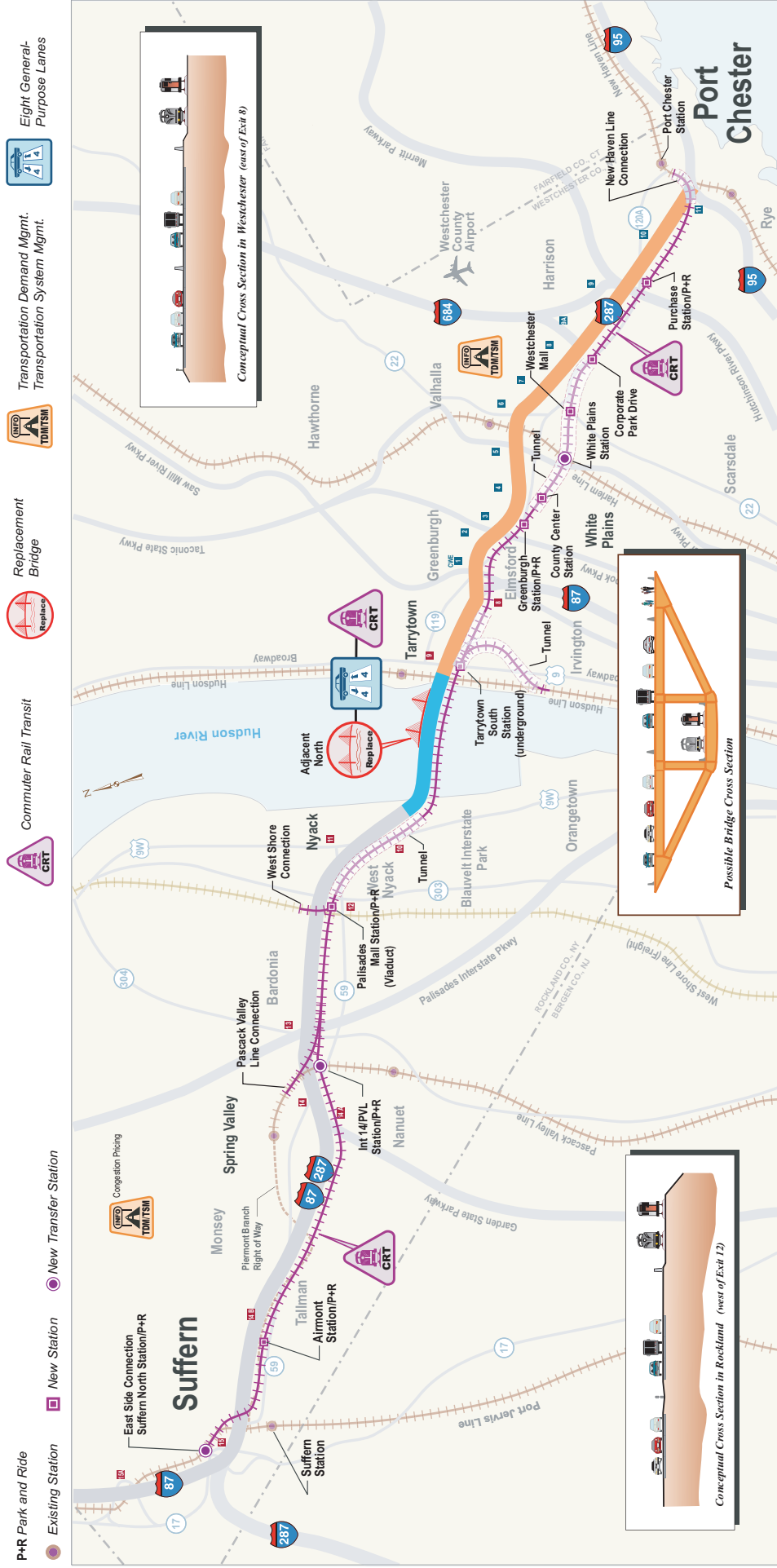
## Port Jervis Line

The existing Port Jervis Line between Suffern and Port Jervis is approximately 65 miles long, with stations located at Port Jervis, Otisville, Middletown, Campbell Hall, Salisbury Mills-Cornwall, Harriman, Tuxedo, Sloatsburg, and Suffern. The existing line is currently a non-electrified single-track railroad with passing sidings at select locations (the double-track configuration currently extends north as far as Sloatsburg). The line could be double-tracked between Sloatsburg and Harriman to accommodate the additional service that could be scheduled on the Port Jervis Line.

## Suffern

A new Suffern North Station to serve the new service across Rockland County as well as to provide for transfers from the Hoboken service would be located north of the existing Suffern Station. The location of the existing Suffern Station is too far south to accommodate direct rail connections from the Port Jervis Line to the I-287 Corridor.

Several alignments were developed to connect to the Port Jervis Line (Figure 3-12). The East Side Option was assumed for CRT1. The East Side Option would take the commuter rail from the south side of the I-87/I-287 right-of-way onto a curved alignment on viaduct, crossing above existing Route 59 (Orange Turnpike) and curving under the existing I-87/I-287 structures. The CRT alignment would continue along the east side of the Port Jervis Line and descend at a grade of approximately 2 percent to meet existing rail elevations of the existing tracks.

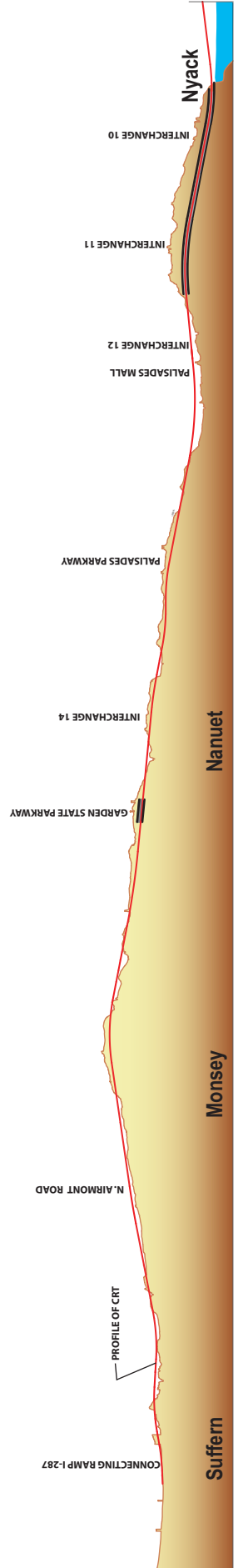
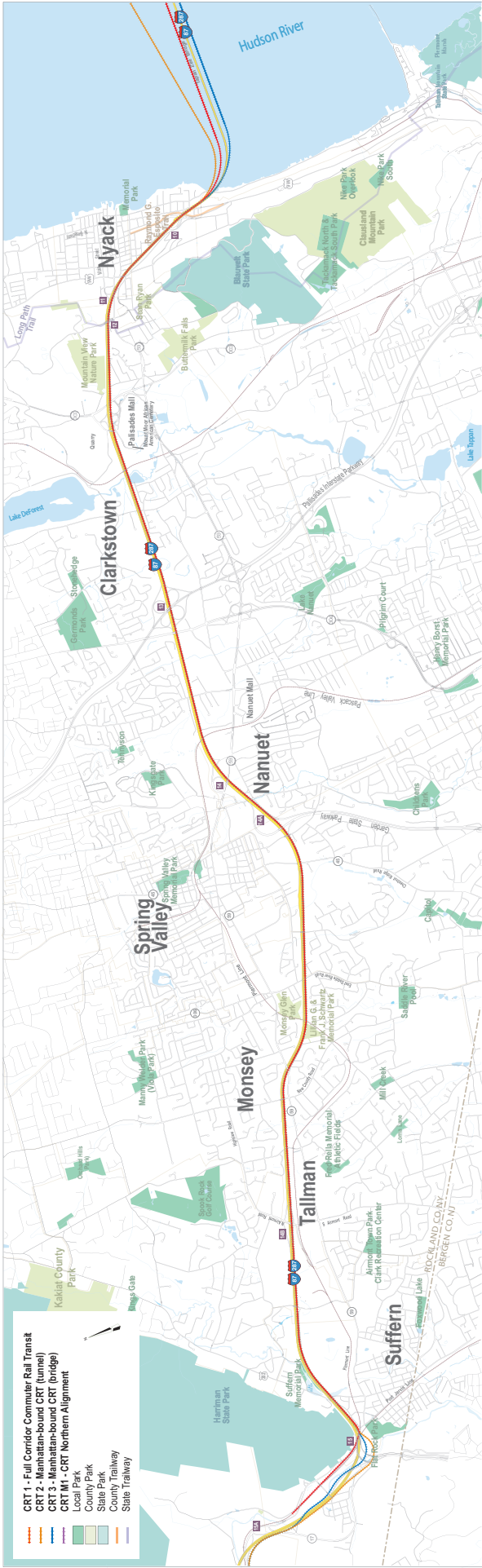


Scenario CRT1 - Full Corridor Commuter Rail

Figure 3-9



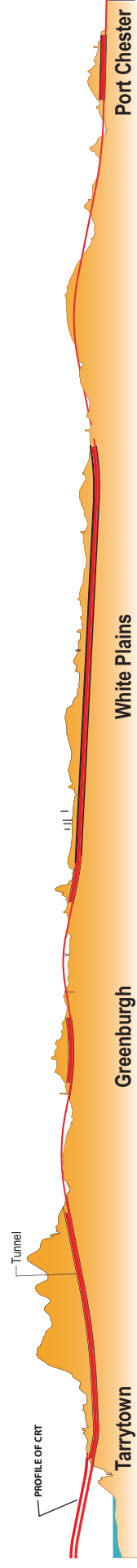
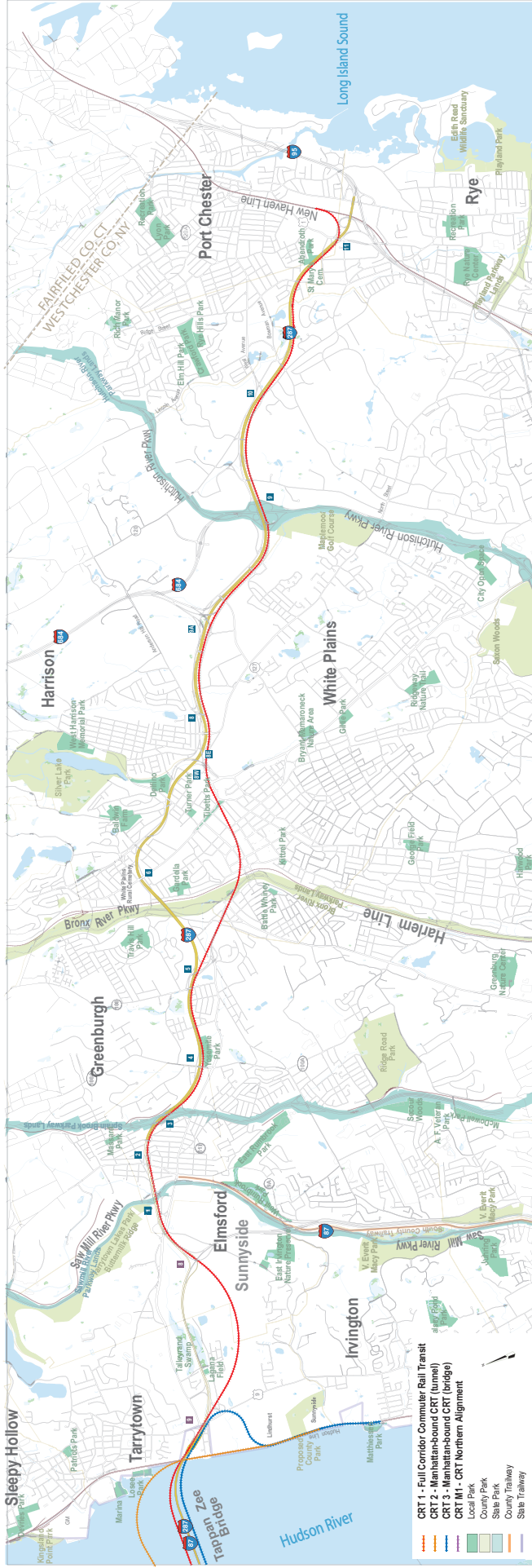




Rockland Plan and Profile with Commuter Rail Transit

Figure 3-10





Legend  
 CRT in Tunnel

Westchester Plan and Profile

Figure 3-11