

## **4.0 ALTERNATIVES EVALUATED IN THE SUPPLEMENTAL DRAFT EIS**

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This chapter provides brief introductions to the alternatives being examined in the Supplemental Draft EIS: the No Build Alternative, the Metrorail Alternative previously evaluated in the Draft EIS, and the Locally Preferred Alternative (LPA).

The Metrorail Alternative (Alignment T6, Yard Site 15) evaluated in the Draft EIS was selected as the LPA by the WMATA Board of Directors and the Commonwealth Transportation Board, in late 2002. A Supplemental Draft EIS was prepared to assist decision-makers and the public in understanding how a refined design of the proposed LPA, the adjustment of project opening years, and the decision to construct the project in two phases would compare to the alternative carried forward from the Draft EIS. A comparative evaluation of a No Build Alternative and associated costs is also included. The Supplemental Draft EIS was published in October 2003 and public hearings were held in early December 2003.

If the proposed modifications are approved for the LPA, then the effects will also be further documented in a Final EIS.

### **4.1 NO BUILD ALTERNATIVE**

The No Build Alternative for the Supplemental Draft EIS is the same as the Baseline Alternative defined in the Draft EIS. The alternative includes all existing highway and transit infrastructure and services within the corridor and any that are committed to be implemented by 2025, aside from the Dulles Corridor Rapid Transit Project. The following elements are included:

- Existing highways;
- Existing Metrorail infrastructure;
- Existing Metrobus, Fairfax Connector, and Loudoun County bus services;
- Fairfax and Loudoun counties' planned transit improvements included in Phase II (Enhanced Express Bus) of the Dulles Corridor phased implementation program;
- Planned highway and transit improvements through 2025 included in the Metropolitan Washington Council of Government's (MWCOC's) 2000 financially constrained long-range plan (CLRP);
- Marginal increases in local transit service and capacity commensurate with forecast population growth in the corridor through 2025; and
- Additional capacity improvements to the existing Metrorail system needed to meet forecast increases in travel demand.

Specific projects included in the No Build Alternative will be the subject of other independent environmental review processes to comply with NEPA, as appropriate.

## 4.2 METRORAIL ALTERNATIVE (T6/Y15)

The Metrorail Alternative (T6/Y15) evaluated in the Draft EIS was the original Locally Preferred Alternative. Based on the Draft EIS technical analysis, comments received from the public, and coordination with local, state, and federal agencies, the WMATA Board of Directors selected the Metrorail Alternative, with Alignment T6 through Tysons Corner and Metrorail S&I Yard Site 15, as the LPA on November 21, 2002. On December 19, 2002, the Commonwealth Transportation Board took similar action. The governing bodies of Fairfax County, Loudoun County, the Town of Herndon, and the Metropolitan Washington Airports Authority also endorsed the selection of this LPA. Appendix F also includes a copy of Attachment A from the *Public Hearings Report Supplement* (November 2002), which documents the final Team recommendations.

The Metrorail Alternative was selected as the LPA because it would:

- Provide better access to corridor activity centers;
- Offer shorter travel times for trips within the corridor;
- Attract the highest number of total riders and new riders;
- Better support the comprehensive plans of Fairfax and Loudoun counties;
- Allow for more transit-oriented development;
- Increase overall mobility in the corridor; and
- Conform to the region's air quality plans by providing the greatest contribution to reducing emissions and improving the region's air quality.

In addition, the Metrorail Alternative was the most preferred by those citizens that submitted comments for the public record. While the BRT and BRT/Metrorail Alternatives would perform higher in terms of cost and implementation time, BRT would not provide direct service connections to Tysons Corner, and BRT/Metrorail would require a mode transfer between Tysons Corner and the western portion of the corridor. The Phased Implementation Alternative could be implemented sooner than Metrorail, but would have higher capital costs and no additional ridership or economic development benefits, because it would have the same end state as the Metrorail Alternative.

Metrorail Alignment T6 was selected as the Tysons Corner alignment because it would:

- Provide for the highest ridership, highest number of new riders, and the highest transit mode share for most corridor subareas;
- Be consistent with existing transportation infrastructure and planned improvements;
- Have fewer neighborhood effects, particularly visual effects, than the other alignments, and,
- Offer more operational flexibility due to its pocket tracks and center platform stations.

While Alignment T9 would have the same ridership benefits, it would have more visual effects and may also conflict with transportation improvements planned by VDOT in Tysons Corner. Because Alignment T1 would have fewer stations and would provide less service than Alignment T6, it was eliminated from consideration. Lastly, while Alignment T4 would provide more geographic coverage than the other alignments, some passengers would be required to transfer and then double-back to reach the station within walking distance of their destination because the four stations would be located on one-way lines.

Metrorail S&I Yard Site 15, located on Dulles Airport property, was selected as the preferred site for the storage, repair, maintenance, and inspection of Metrorail trains. This site was selected because it would

be the most consistent with existing land use, future land use plans, and existing zoning requirements. Site 15 would also have fewer economic development effects in Loudoun County, because it would not interfere with local planned development.

The Metrorail Alternative is being presented in the Supplemental Draft EIS for comparison against the proposed LPA. The alternative generally follows an alignment between the Metrorail Orange Line near West Falls Church Station and Route 772 in Loudoun County, using the median of the Dulles Connector Road, the DIAAH, and the Dulles Greenway. The alignment diverges from these routes to serve Tysons Corner and Dulles Airport. The alternative would include 11 new stations, as well as ancillary facilities, such as a new Metrorail S&I Yard at Site 15, traction power substations, tie-breaker stations, and stormwater management ponds.

The Metrorail Alternative would include 8-car trains operating at headways of 6 minutes during the peak period, and a mix of 4- and 6-car trains operating at 12-minute headways in the off-peak period. The alternative would also include operating plans for bus routes feeding into Metrorail stations within the corridor, as well as regional routes running the full length of the corridor.

### 4.3 LOCALLY PREFERRED ALTERNATIVE

Based on public and agency coordination following the completion of the Draft EIS, DRPT and WMATA have identified a series of refinements to the Project to resolve outstanding design issues, reduce environmental and community impacts, and allow for construction of the Project in two phases.

#### 4.3.1 CHANGES FROM METRORAIL ALTERNATIVE OF THE DRAFT EIS

As indicated earlier, the Metrorail Alternative advanced from the Draft EIS has undergone several design refinements. The differences between the alternative evaluated in the Draft EIS and the proposed LPA are outlined below.

- Dulles Connector Road to Tysons East Station: the alignment would be shifted to the north side of Route 123 soon after diverging from the Connector Road to avoid the excessive use of bents on a long oblique crossing of Route 123.
- Tysons East Station: the station platform would be shifted 100 feet west along the alignment. The pocket track at this station would be removed. In place of the pocket track, a #10 crossover would be added inbound of station.
- Tysons Central 123 Station: Three bus bays would be added on the north side of Route 123, parallel to the station platform. Tysons Boulevard would be widened to accommodate a bus-only turn lane at the station. The number of bus bays on the south side of Route 123 would be reduced from five to three, and the location would be moved to the lower level.
- Tysons West Station: The park-and-ride structure at this station would be eliminated. Kiss & Ride and bus facilities would remain at the same location, but would be reconfigured on the site. A 500-space park-and-ride facility would be constructed at the station through a joint development effort. The cost would be assumed as part of project, but design specifics are not yet known.
- Wiehle Avenue Station: The park-and-ride structure at this station is no longer assumed to be a part of joint development project. Instead, it would be constructed as part of the Dulles Corridor Rapid Transit Project. Two design options are under consideration. Option A would use the self-

storage site near Reston East Park-and-Ride for temporary parking while the new facility is constructed in the existing lot. The self-storage site would be available for redevelopment when the structure is complete. Option B would construct the new facility on the self-storage site, and then convert the existing lot to joint development use when the structure is complete. Both options would include a second access from the private road and would require widening of Sunset Hills Road.

- **Reston Parkway Station:** The access for the north side station facilities would be moved to the west end of the Kiss & Ride lot, opposite an existing median break. Access is now from Sunset Hills Road, rather than through the TRW parking lot.
- The western portal of the underground section at Dulles Airport would be shifted 350 feet north to avoid effects upon the Dulles Marriott.
- **Route 606 Station:** The second stage park-and-ride structure identified in the Draft EIS would not be constructed, but access to the site would be preserved. Total parking at the station would be reduced to 2,750 spaces (including existing parking at Dulles North Transit Center).
- **Route 772 Station:** Both options considered for station facilities in the Draft EIS were selected. As a result, long-term parking, Kiss & Ride, and bus facilities would be included on the north and south sides of the Dulles Greenway. The layout of the Kiss & Ride and bus facilities would be reconfigured. Total long-term parking would be 3,300 spaces.
- **West Falls Church S&I Yard:** A sound attenuation box would be constructed over the loop track and a portion of the new yard lead to mitigate a noise impact identified in the Draft EIS. Four additional storage tracks would be constructed in the northeast portion of the yard (for a total of eight new storage tracks). The maintenance building would be modified to accommodate four additional maintenance bays.
- The number of traction power substations and tie-breaker stations would remain the same, but some locations at the western end of corridor would be shifted.

#### 4.3.2 CONSTRUCTION PHASING

Based on agency coordination conducted subsequent to the selection of the LPA, DRPT and WMATA modified the selected LPA to allow for construction of the project in two phases. Guidance on federal funding limitations and the timing of local funding availability were considered in determining the proposed phasing.

The first phase, the Wiehle Avenue Extension, would construct the first segment of the LPA to the Wiehle Avenue Station, which would function as an interim end-of-line station until remainder of the LPA is completed. In addition, corridor express bus service would be provided in the western end of the corridor in the interim. The Wiehle Avenue Extension, labeled Phase 1 in the SDEIS, is expected to be complete in 2009, and completion of the full LPA is anticipated by 2015.

As discussed in the technical memorandum included in Appendix C, extending the initial portion of the LPA to Wiehle Avenue would provide a logical interim terminal for the initial Dulles Corridor line, allowing it to provide the maximum benefit possible with the available resources. This segment would be able to accommodate a substantial amount of the projected ridership demand for the LPA, at approximately half the cost, and would be possible to fund at both the local and federal levels. In addition, it is possible to accommodate an interim terminal at Wiehle Avenue without constructing a new Metrorail S&I yard, although major modifications would be required at West Falls Church S&I Yard.

A more detailed evaluation of the proposed construction phasing is documented in a technical memorandum included in Appendix C.