



I – INTRODUCTION

The 29th Street and Southwest Corridors extend from 5th Avenue in Hopkins to Hiawatha Avenue in Minneapolis (see Figure 1). Across the city of Minneapolis, the 29th Street Corridor parallels Lake Street connecting to the Southwest Corridor which then proceeds in a southwesterly direction to Hopkins. These corridors are approximately 8.4 miles in length serving a population of nearly 120,000.

This study was undertaken to determine the feasibility, defined in terms of ridership forecasts and cost assumptions, of constructing and operating a limited-stop exclusive busway in these corridors and to determine whether this would be a reasonable interim step towards light rail transit (LRT). The determination of feasibility is based solely on ridership and costs. Design, aesthetic, and environmental issues were outside the scope of this study, but will be analyzed in future studies assuming the busway concept moves forward. Study components included market assessment, ridership forecasts, cost estimates and an analysis of issues relating to transit service provision.

CORRIDOR HISTORY

The Hennepin County Regional Railroad Authority (HCRRA) was established in 1980, in part to purchase and preserve railroad rights-of-way for future transit use. In 1988, a Stage I LRT Plan was completed by the HCRRA and the 29th Street and Southwest Corridors were identified as a potential LRT alignment. In the early 1990s, the HCRRA purchased the entirety of the 29th Street Corridor right-of-way through the City of Minneapolis as part of a broader initiative to preserve opportunities for LRT. At the same time, the HCRRA purchased a portion of the Southwest Corridor. Within Hopkins and St. Louis Park, the HCRRA owns the northern half, and Canadian Pacific Rail owns the southern half. Freight rail service continues to operate on these southern tracks through Hopkins and St. Louis Park.



Throughout the 1980s the HCRRA continued to plan for LRT in the Metro Area. However, as opportunities to implement LRT seemed unlikely in the short term, making interim use of the rights-of-way as bicycle/pedestrian trails seemed an attractive option to many communities and neighborhood and civic groups. A Land Use Management Plan adopted by the HCRRA in 1995 specified that permits granted to public agencies for park or trail use on HCRRA property could be granted on an interim use basis until such time that the corridors were needed for LRT or other transportation purposes.

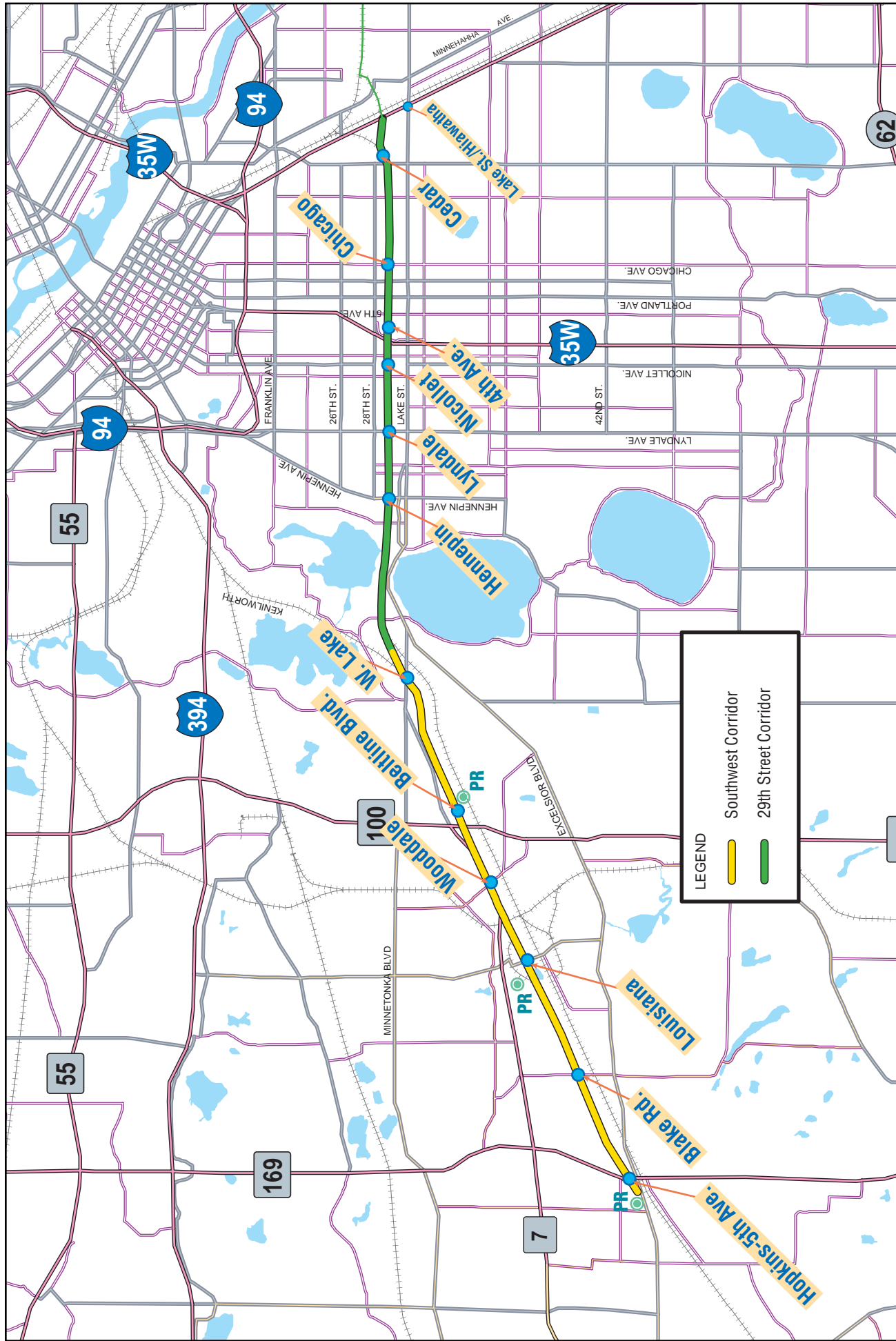


FIGURE 1

29TH STREET AND SOUTHWEST CORRIDOR

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In 1999, Suburban Hennepin Parks constructed the Southwest LRT Corridor bicycle and pedestrian trail within the HCRRA's right-of-way from 11th Avenue in Hopkins to Beltline Boulevard in St. Louis Park. Negotiations are currently underway to continue this trail east to Minneapolis. Within the 29th Street Corridor, a paved bicycle and pedestrian trail (the Midtown Greenway) is under construction from Chowen Avenue to 5th Avenue in Minneapolis with the cooperation of Minneapolis Public Works and the HCRRA. Other phases of this trail project will eventually connect the Midtown Greenway to the Mississippi River. An integral part of the vision for the 29th Street and Southwest Corridors is to become a user-friendly, multi-modal facility serving the needs of transit riders while accommodating pedestrians and bicyclists.

STUDY PURPOSE

This busway feasibility study was undertaken jointly by Hennepin County and Metro Transit, a division of the Metropolitan Council, to determine whether adequate ridership exists for busway service, to estimate its capital and operating costs, and to determine if a busway is a reasonable first step to future LRT. It also identified unresolved issues relating to the construction and operation of a busway in the 29th Street and Southwest Corridors. Building on previous studies, such as the HCRRA's 1980 Phase 1 LRT Plan, Mn/DOT's 1991 study of exclusive bus transitways in the metro area, the Midtown Greenway Master Plan (1996) and studies for both LRT and busway in the Hiawatha and Riverview corridors, this study identifies issues and constraints unique to providing busway transit service in the 29th Street and Southwest Corridors.

STUDY ASSUMPTIONS

Key study assumptions were that busway infrastructure elements such as transit stations, park-and-ride lots, fare collection systems and communications would be compatible with LRT. The exception to this assumption was for those infrastructure elements unique to LRT, namely guideway, traction and electrification, and LRT signal equipment. All estimates of costs were derived from previous studies in this region completed for the Hiawatha and Riverview corridors.

Busway rapid transit is distinguished from regular urban bus service by its ability to provide significantly faster operating speeds, greater service reliability, and increased convenience by operating in an exclusive corridor separated from other traffic. Service elements include fixed station stops, and faster boarding provided by implementing a "proof-of-payment" fare system and level boarding. Busway vehicles are assumed to be low-floor, hybrid diesel-electric operating on pavement.

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LRT is assumed to be lightweight passenger rail cars operating on fixed rails driven electrically with power drawn from an overhead electric line. Light rail typically requires its own infrastructure independent of both commuter and freight rail, although it may use shared rights-of-way.

General assumptions are as follows:

Busway Assumptions

Right-of-way requirements for a busway were assumed to be 28 feet (see Figure 2). The right-of-way for the Midtown Greenway under construction varies from 20 to 30 feet, depending on whether the pedestrian path is separated from the bicycle path or whether it is combined. The Southwest LRT Corridor trail is 12 feet in width. It is anticipated that a fence separating the bicycle/pedestrian trail from the busway right-of-way will be in place for the entirety of the 29th Street and Southwest Corridors if the busway is constructed.

LRT Assumptions

Right-of-way requirements for LRT were assumed to be 30 feet (see Figure 3). It is anticipated that a fence separating the bicycle/pedestrian trails from the LRT right-of-way will need to be in place for the length of both corridors.

Transit Station Assumptions

Identical station assumptions were made for both busway and LRT. Twelve potential new station locations were identified on the corridors, with the Hiawatha station built during LRT construction. In all instances, 300-foot, center-platform stations 15-feet in width were assumed (see Figure 4). Station platform widths differ from the 20-foot width assumed for Hiawatha due to the lower passenger-boarding numbers for the 29th Street and Southwest Corridors stations.

A single center platform located between either the LRT tracks or the busway lanes will be more efficient and cheaper than twoside platforms, eliminating the need to have duplicate design elements such as fare collection systems and elevators. Fares would be collected off-board and a "proof-of-payment" fare system would be used, thereby facilitating passenger boarding. These center platform stations may require contra-flow operation for the busway due to the location of passenger-loading doors. Due to siting issues and ADA requirements, many of these stations will need provisions for vertical circulation. These instances and other design and operational issues are noted in Chapter VI under the section titled "Issues at Station Locations."

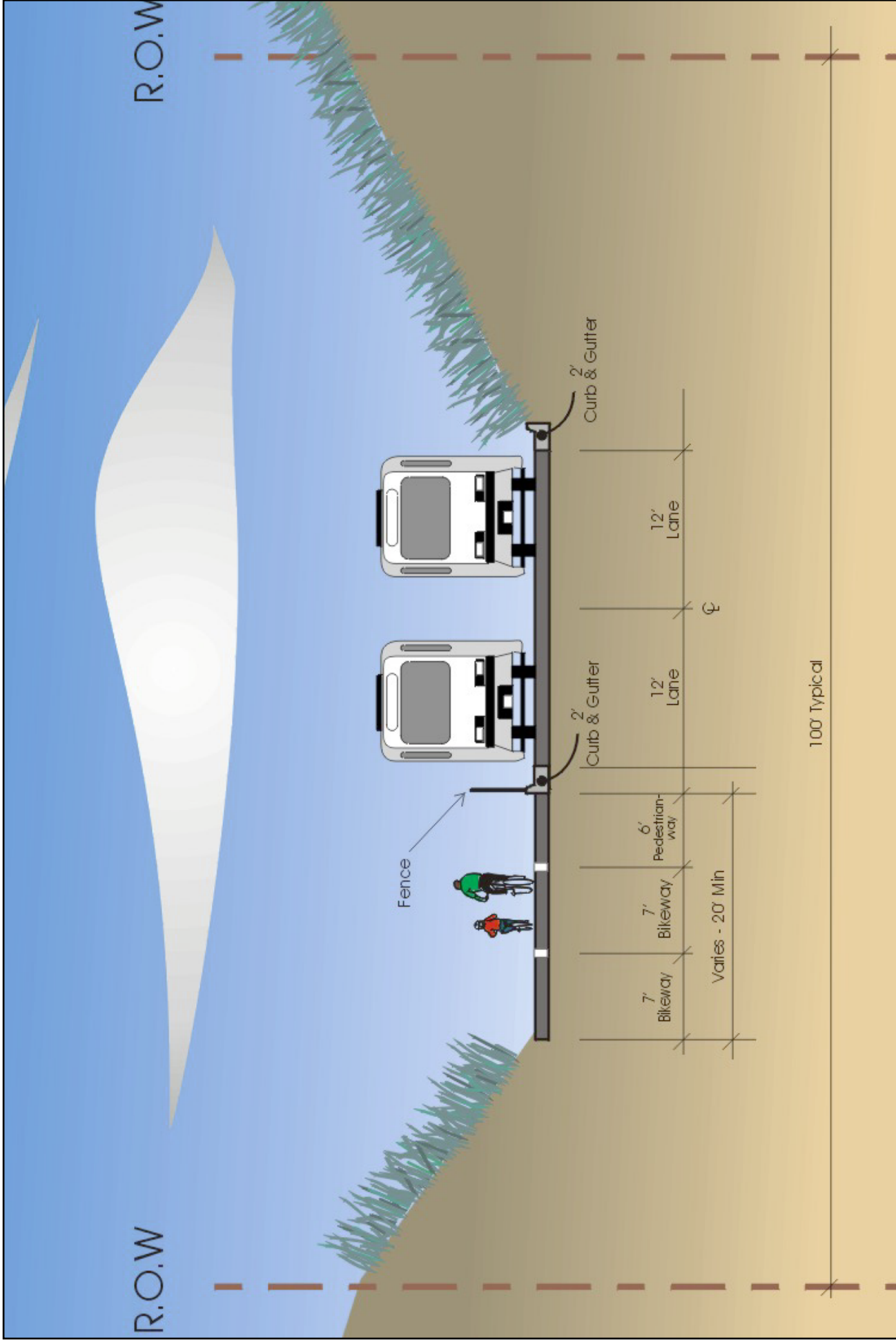


FIGURE 2

BUSWAY RIGHT-OF-WAY REQUIREMENTS

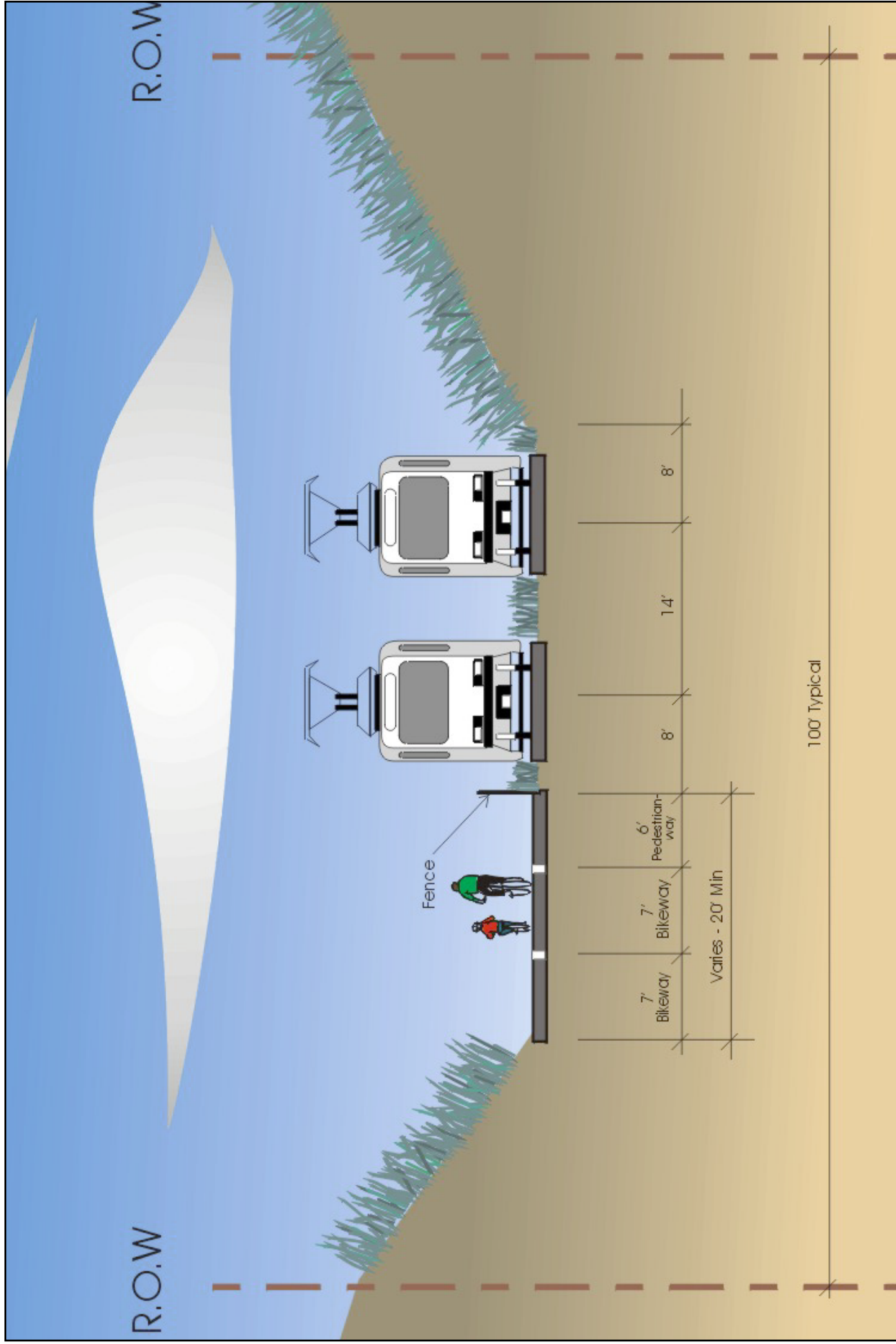


FIGURE 3

LRT RIGHT-OF-WAY REQUIREMENTS

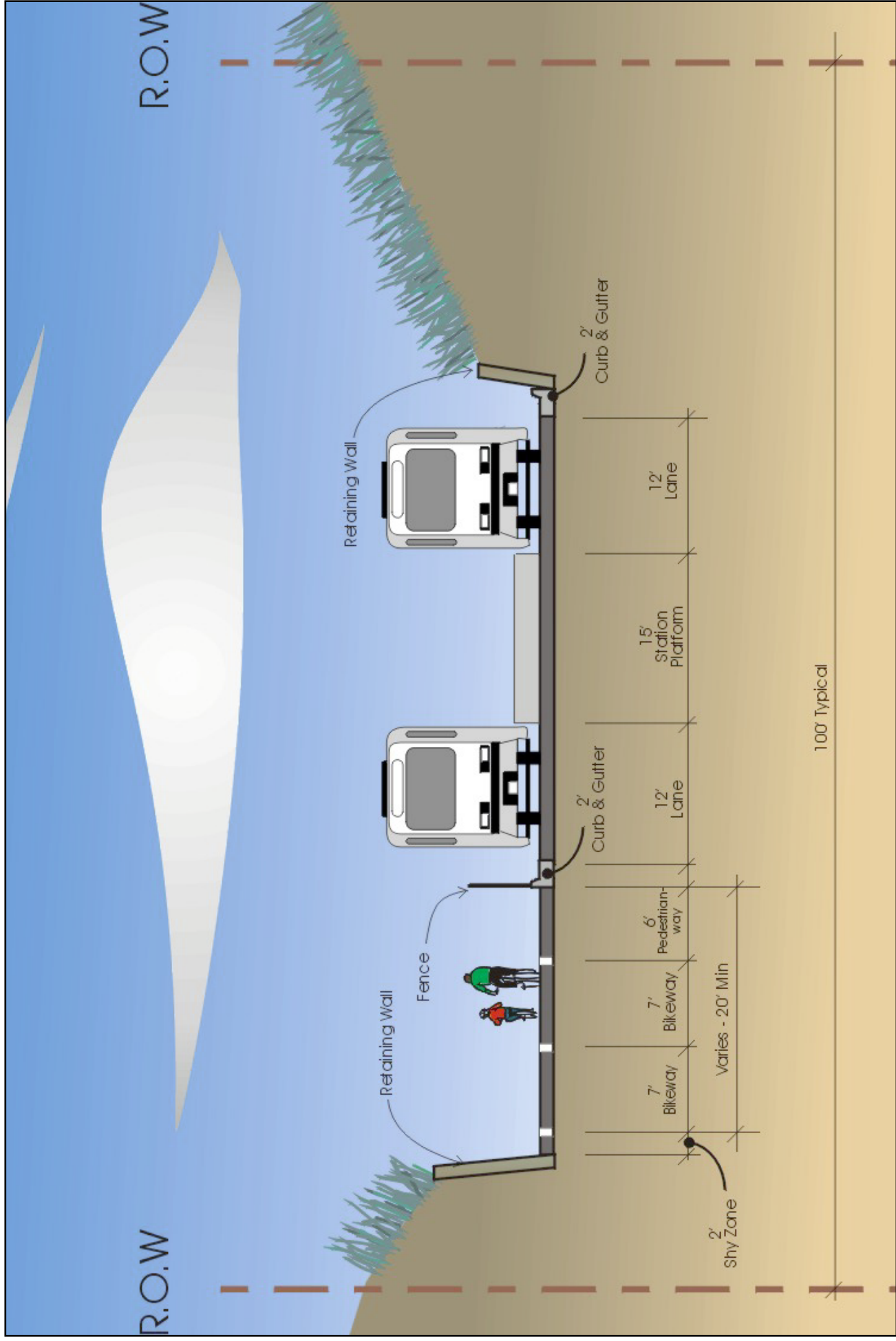


FIGURE 4

TRANSIT STATION RIGHT-OF-WAY REQUIREMENTS

Alignment Assumptions

29th Street – Service would begin at West Lake Street and conclude at Hiawatha Avenue providing a connection to the proposed Hiawatha LRT service. Almost all right-of-way, with the exception of the Hiawatha passenger connection, would be exclusive. Much of this alignment would be grade-separated, running in the "trench" from Hennepin Avenue to Cedar Avenue.

29th Street and Southwest Avenue – Service would begin at 5th Avenue in Hopkins and conclude at Hiawatha Avenue providing a connection to the proposed Hiawatha LRT service. Again, almost all right-of-way would be exclusive with at-grade service through portions of the Southwest Corridor.

Southwest Corridor to Minneapolis CBD – Service would begin at 5th Avenue in Hopkins and conclude in downtown Minneapolis. Downtown alignments were not identified definitively at this concept-level analysis but include options via exclusive right-of-way, a major arterial surface street, or a local surface street. Figure 5 depicts alignment alternatives.

ACKNOWLEDGEMENTS

A Study Management Team composed of representatives from Hennepin County, Metro Transit, the Metropolitan Council and the City of Minneapolis guided this study and provided input on analysis and study findings. The Study Management Team reviewed technical materials prepared by the consultant, provided information on appropriate methodologies and provided technical support.

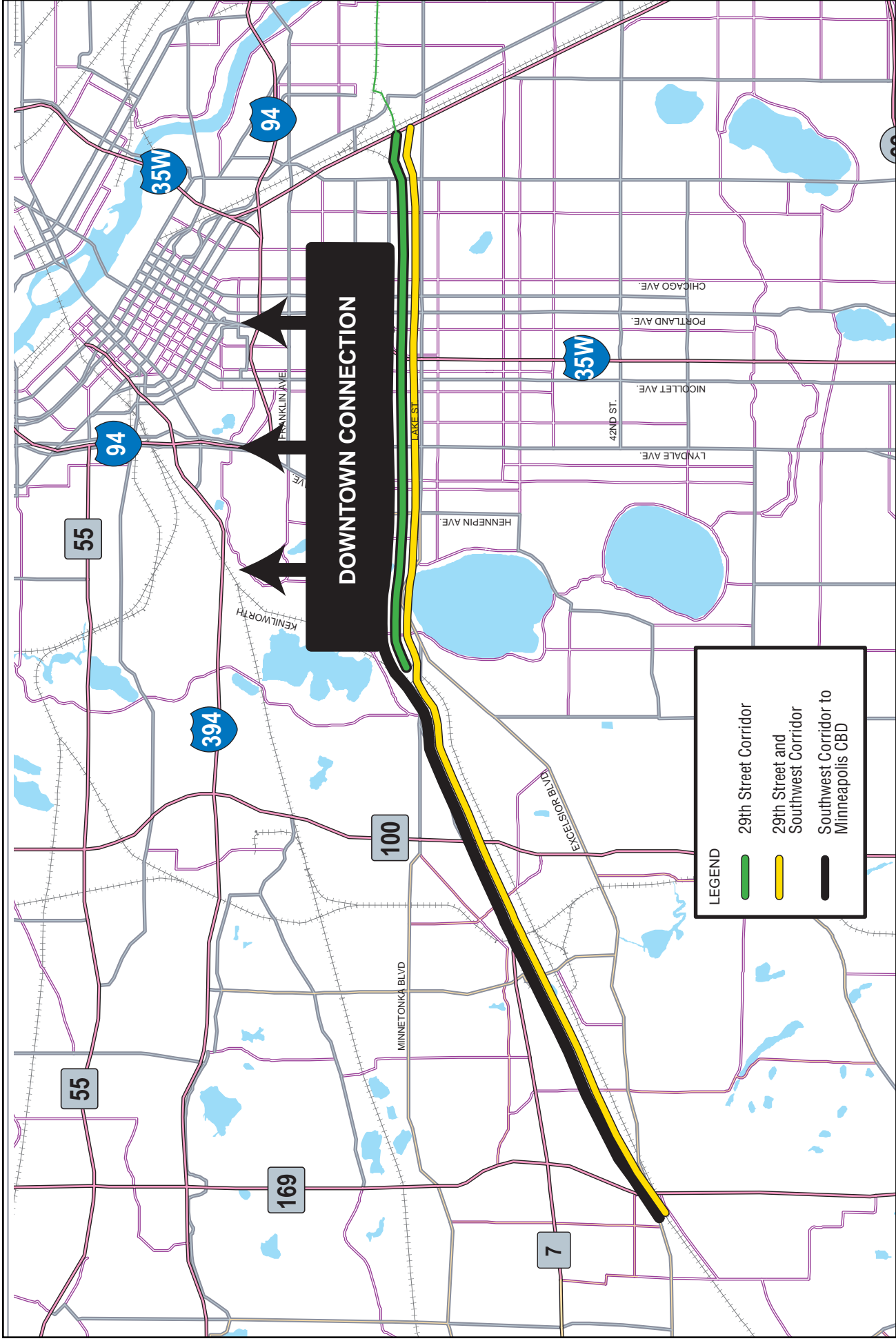


FIGURE 5

ALIGNMENT ALTERNATIVES