

**CENTRAL CORRIDOR LIGHT RAIL TRANSIT
PRELIMINARY DESIGN PLANS**

**TRANSPORTATION AND PUBLIC WORKS COMMITTEE
of the
MINNEAPOLIS CITY COUNCIL**

June 10, 2008

Signal house only: Southeast of I-35W and 4th St Interchange
West of 25th Ave SE and North of UofM Transitway
Northeast of 29th Avenue Station

The Preliminary Design Plans submitted to the City of Minneapolis do not include detailed station designs and do not include specific locations and screening plans for traction-power substations and signal houses. Right of way takings and utility relocations are also not identified in the Preliminary Design Plan submittal.

To address the many areas of design and construction of a project the size of the Central Corridor LRT that will still need coordination and input from project partners and the public beyond the Municipal Consent submittal of Preliminary Design Plans, the Met Council's project staff has created a document titled "Central Corridor LRT Ongoing Coordination and Project Partner Involvement in the Decision Making Process Beyond Municipal Consent" to define their commitment to continued coordination with Project Partners throughout the duration of the project.

B. Hiawatha LRT Connection at 11TH Ave S to Cedar Ave S

Preliminary Design Plans

The Central Corridor LRT connection with the Hiawatha LRT line will occur just east of 11th Ave S. A "pocket track" is created at this connection allowing for train storage or bypass at this location. The CCLRT then utilizes a new bridge to cross over I-35W on a southerly curved alignment and passes beneath the eastbound 4th Street exit to Cedar Ave. Just west of the Cedar Avenue Bridge, the Central Corridor LRT crosses eastbound 4th St South at grade with a signalized crossing and enters the center of 4th Street South as it transitions into Washington Ave SE. CCLRT will occupy the center two traffic lanes of 4th Street South; one traffic lane in each direction will remain on either side of the LRT tracks.

Issues

The proposed alternative for the Central Corridor LRT connection with the Hiawatha LRT requires a retaining wall section along the south side of the existing embankment for the northbound I-35W ramp to Washington Ave. This alignment, however, retains more future flexibility for planned 35W access improvements to alleviate current congestion of the Washington Ave entrances to I-35W and will not preclude the future construction of a northbound entrance ramp onto 35W from eastbound 4th Street South out of downtown.

Between the new I-35W overpass and 11th Avenue, where the CCLRT and HLRT connection takes place, the existing Hiawatha bike trail is displaced from its current location along the north side of the HLRT tracks. A new route for the displaced bike trail is not identified in the Preliminary Design Plans.

Recommendation: Require that the existing Hiawatha bike trail that will be displaced from its current location along the north side of the HLRT tracks be replaced with a satisfactory facility, such as adjacent to the north side of the CCLRT.

C. West Bank/Cedar Riverside Station Area

Preliminary Design Plans

The West Bank/Cedar Riverside Station is a center platform station centered under the 19th Ave S Bridge. Pedestrian access to the station is provided from three locations: vertical circulation from the 19th Ave bridge, vertical circulation from the Cedar Ave bridge with an elevated walkway to the platform, and a signalized pedestrian crossing of Washington Ave to the east side of the station platform.

The entrance and exit ramps from Cedar Ave to Washington Ave are realigned in this location to slow traffic as it approaches the vicinity of the West Bank Station. The northbound I-35W ramp entrance to eastbound Washington Ave is also relocated 600 feet east and aligned as an intersection with 4th St/Washington Ave again to slow the traffic approaching the West Bank Station Area.

The West Bank Station area and currently over designed freeway road section is an opportunity for future transit oriented development.

Recommendation: Approve the Preliminary Design Plan location of the West Bank Station centered under the 19th Ave S Bridge.

D. West Bank Station Area to Pleasant Ave S

Preliminary Design Plans

As the LRT track way leaves the West Bank Station Area, the tracks transition further to the center of the roadway as they approach the Washington Ave Bridge over the Mississippi River. General traffic continues in one lane in each direction with sufficient space allowed for bus drop off and pickup activity close to the current West Bank Campus bus stop locations.

The Preliminary Design Plans show the Central Corridor LRT trains crossing the Mississippi River in the center of the lower deck of the Washington Ave Bridge. The existing two lanes of traffic in each direction on the bridge are narrowed to one lane in each direction.

Issues

The existing Washington Ave Bridge will need reinforcement to support the loads of adding Central Corridor LRT operations to the bridge. The design of the reinforcements is not a part of the preliminary design plans and will be further engineered and explained in the Final Environmental Impact Statement.

E. Pleasant Avenue to Walnut Street

Preliminary Design Plans

The Preliminary Design Plans show LRT operating at-grade from Pleasant Avenue to Walnut Street with a Transit Mall configuration. The LRT tracks are located in the center of the roadway with one transit lane on each side of the tracks for buses, emergency vehicles and bikes. All other traffic will be directed to turn off of Washington at either Pleasant Ave or Walnut Street. Bus pullouts are provided at the current Coffman Union location and at Walnut Street to allow buses to stop outside of the one moving lane on the Transit Mall.

Issues

The closure of Washington Ave to general traffic through this segment will require significant traffic mitigation. This traffic mitigation is discussed in more detail in Section III of this report.

Washington Ave from west of the Washington Ave Bridge to University Ave is currently designated a County State-Aid Highway. The closure of a portion of this roadway to general traffic may necessitate a change in jurisdiction of the roadway and likely the Washington Ave Bridge. An MOU discussing the jurisdictional and other issues related to the Transit Mall is being developed separately from this report.

The block between Harvard St and Walnut St currently has on-street parking during off-peak hours and a commercial loading zone. The introduction of LRT to Washington Ave will require the removal of all the parking and the loading zone on this block. Parking impacts and mitigation solutions will continue to be analyzed in the next phase of design. The current loading zone could be relocated to an adjacent side street if required by the businesses.

Recommendation: Approve the preliminary design plans with a Transit Mall configuration between Pleasant Avenue and Walnut Street. Request project staff to continue to working on parking and loading zone impacts at this location.

F. East Bank Station Area

Preliminary Design Plans

The East Bank Station proposed in the Preliminary Design Plans has split side platforms located on Washington Ave SE between Church St and Harvard St on the east bank of the University of Minnesota Campus. Access to the station will be provided by signalized grade crossings at Church St, Union St and Harvard St. The selection of split side platforms was intended to reduce the amount of right of way required on either side of the station.

Issues

The location of the East Bank station will still require a significant widening of the existing street and right of way. Adjacent to the station platforms the road will be wider than the existing road by as much as 14ft. Additional impacts to University property behind the existing sidewalks will be required in order to provide new sidewalks adjacent to the wider roadway. The University has stated their position is to develop an alternative design to the one currently in the PDP which would transition the LRT tracks to the outside of the roadway at this station location in order to reduce the overall impacts to the existing sidewalks and adjacent University property with the additional goal to provide better access to the station. The effects of this request will not be fully analyzed prior to the deadline for the City's approval of these plans.

Recommendation: Approve the station location as currently shown in the Preliminary Design Plans and request the Met Council and City staff to continue to work with the University on potential improvements to this station location with the understanding that any alternative station design would come back to the City Council for approval before being incorporated into the official project plans.

G. Walnut Street to Huron Boulevard.

Preliminary Design Plans

East of Walnut Street, the CCLRT will run in the center of the roadway with one traffic lane remaining in each direction on either side of the tracks. The intersections of Washington Avenue with Walnut Street, Oak St, and Ontario Street are signalized intersections. A left turn lane is provided for westbound Washington to Oak St only. Left turns are allowed from Oak St to Washington, but not from Ontario to Washington. A westbound right turn lane is located on the north side of Washington between Oak St and Ontario St. Washington Ave is currently 50 ft wide in this section and will be widened to as much as 68 ft in the sections requiring right turn lanes.

Issues

Because of the introduction of LRT to Washington and the additional lane required for right turns on Washington between Oak St and Ontario St, the project will require additional right of way on the north side of Washington Ave and on the south side of Washington Ave just west of Huron Boulevard. The Preliminary Design Plans do not specify the exact amount of right of way required by the CCLRT project, but depict widening the right of way approximately 8 feet to the north. The project and the Minnesota Department of Transportation will need to work with the affected property owners to acquire this right-of-way and compensate the property owners for the loss.

Washington Ave between Walnut Street and Huron Boulevard currently has on-street parking during off-peak hours. The introduction of LRT to Washington Ave will require the removal of all the parking on these blocks. Parking impacts and mitigation solutions will be continue to be analyzed in the next phase of design.

The Preliminary Design Plan submittal depicts the Transit Mall extended to Oak St. In order to provide better access from the east end of the Transit Mall, the traffic studies have shown Walnut Street to be the preferred location for the Transit Mall to end.

Recommendation: Request project staff to continue working on parking and loading zone impacts at this location. Approve the Preliminary Design Plans with the Transit Mall revised to terminate at Walnut Street not Oak Street.

H. Huron Boulevard to Stadium Village Station

Preliminary Design Plans

As the LRT alignment moves through the intersection of Washington Avenue and Huron Boulevard it turns north and runs adjacent to Huron Boulevard where it then crosses University Ave SE east of the intersection of Huron Boulevard and University Ave as it heads to the Stadium Village Station location. The intersections of Washington and University Avenues with Huron Boulevard are signalized intersections with the same lane configuration that currently exists today with the exception that left turns will no longer be allowed from eastbound Washington Ave to northbound Huron Boulevard.

Issues

The Preliminary Design Plans show the sidewalk along the east side of Huron Boulevard relocated to the east of the LRT alignment. This creates a situation where the sidewalk does not align with the crosswalks at the intersections. This will create confusion about where to cross roadways.

Because of the close proximity of the intersections of University and Washington Avenues along Huron Boulevard, The LRT trains will be required to clear both of these intersections in sequence because there is not enough space for a train to stop between the two crossings. This will increase the amount of time other traffic is required to wait for the trains to cross. Although traffic modeling indicates an acceptable level of service at this intersection is expected, additional modeling that includes signal timing is necessary before City staff can agree that this intersection can be expected to function satisfactorily, or determine what mitigation will be necessary to make it function satisfactorily.

Recommendation: Request the project reconfigure the sidewalk as shown east of Huron Boulevard to provide clear walking paths through this area and require that traffic operations of this intersection continue to be analyzed as design proceeds to ensure that all parties are satisfied that the intersection will operate satisfactorily as planned or make changes necessary to achieve a satisfactory level of service.

I. Stadium Village Station Area

The proposed station location requires closing 4th St SE to traffic. The University of Minnesota has previously requested to vacate this segment of 4th St SE in order to develop a multi-modal transit station co-located with the LRT station. This request was not brought forward at the time because the implications to the Central Corridor LRT project were not fully understood.

Recommendation: Approve closure of 4th St to accommodate a three car platform and multimodal facility at the Stadium Village Station location. Vacation of the remainder of 4th St will need to follow the City's process for vacations to ensure all other related issues including property access and utilities are properly addressed. Since 4th St is currently a designated truck route connecting to 23rd Ave SE, the truck route will need to be designated one block to the east on 25th Ave SE to connect 4th St SE to University Ave. This is consistent with the realignment of roadways near the University's new TCF Bank Stadium and East Gateway District.

J. 23rd Ave SE to 29th Ave SE

Preliminary Design Plans

North of the Stadium Village station the LRT alignment turns and follows the south side of the UofM Transit way to 29th Ave SE. The Transit way is relocated approximately 12 feet to the north to accommodate space for the LRT. The Preliminary Design Plans show the LRT crossing 25th Ave SE at grade with a signalized gated crossing. The LRT will also cross the future alignment of the extension of 27th Ave SE.

At 29th Ave SE, the LRT alignment turns off the transit way and enters the center of 29th Ave SE headed towards University Ave SE. Both the East and West bound tracks are required to cross over the south lane of 29th Ave SE with a crossing signal gate.

Issues

25th Ave SE and 27th Ave SE are future connections to the planned Granary Road. 25th Ave SE is planned to carry significant traffic to Granary Road and to serve the UofM TCF Bank Stadium and East Gateway District. The placement of a gated crossing of a cross street is inconsistent with the rest of the Central Corridor LRT alignment.

The Preliminary Design Plans do not include a pocket track along this segment of the line, which was discussed during meetings with project partners. With the close proximity of the Stadium Village Station to the University of Minnesota Sports Facilities, a pocket track would allow valuable flexibility for additional train capacity at the conclusion of sporting and other events at the University.

Recommendation: Request the Met Council work with City staff to incorporate crossing control for LRT at 25th Ave SE that will be appropriate for the future expected traffic on 25th Ave SE with the opening of the new TCF Bank Stadium and the future construction of Granary Road both planned for completion prior to the start of operations for CCLRT and request the project ensure satisfactory event service is possible upon opening of the CCLRT without the pocket track or include the pocket track east of the Stadium Village Station if is necessary to ensure satisfactory event service.

K. 29th Avenue Station Area

Preliminary Design Plans

The 29th Ave Station is located between 4th St SE and University Ave SE. This station is a center platform station with LRT running on either side of the platform. There is one 16 ft lane for traffic on either side of the track way and sidewalks on both sides of the street. The street and sidewalks will provide one way access to adjacent properties and also access to and from the north to future Granary Road and planned redevelopment areas.

Issues

The existing right of way for 29th Ave SE is only 60 feet wide. In order to place the station at this location and provide the other required infrastructure, additional right of way will need to be acquired by the project. The Preliminary Design Plans do not specify the exact amount of right of way required by the CCLRT project, but depict widening the right of way approximately 30 feet to the east. This will have significant impact to the parcels on the east side of the roadway, impacting their existing parking lots, a storm water pond, and potentially some buildings. The project and the Minnesota Department of Transportation will need to work with the affected property owners to acquire this right-of-way and compensate the property owners for the loss. The final configuration of this parcel and the location of new access points will need to be determined and approved by the project and the City during advanced preliminary and final design of the Central Corridor LRT project.

A number of other configurations and locations for this station were considered during preliminary design and through working with the community and adjacent property owners. The configuration presented in the Preliminary Design Plans was determined to be the optimal location because it retained the station's proximity to University Ave and continued to provide access to adjacent properties and future development areas. The other alternatives either significantly limited access through the area and required takings from multiple parcels or located the station further from the desired high density location close to University Ave.

Recommendation: Approve the Preliminary Design Plan location of the 29th Ave Station on 29th Ave SE between 4th St and University Ave with a center platform configuration.

L. 29th Ave S to Emerald St (City Limits with St. Paul)

Preliminary Design Plans

East of the 29th Ave SE, the LRT alignment turns to run down the center of University Ave SE towards St Paul. The intersections of 29th Ave SE, Malcolm Ave, and Bedford Street will be signalized intersections. The cross section of University Ave SE will include two-way LRT, two traffic lanes in each direction and left turn lanes at the signalized intersections. The overall section is 8 to 30 feet wider than the current section. The alignment retains the south curb location where possible.

The next station on the alignment, the Westgate Station, is located just east of the Border to St Paul at Emerald St. A secondary platform access will connect the westbound station platform to the Bedford intersection allowing access to this station from points west of the station without having to first walk to Berry St and then double back onto the platform.

Issues

The non-signalized intersections of University Ave with Arthur Ave, 30th Ave, Clarence Ave, and Emerald Street will become right in right out only because of the inability to cross the tracks between signalized intersections.

The existing parking lanes are removed to accommodate LRT, but parking bays will be introduced in some locations to reduce lost parking.

Some of the proposed sidewalks in the Preliminary Design Plans are less than those required by the Minneapolis Design Standards.

The width of the roadway will require removal of the existing boulevard trees. The project will replace the boulevard trees with the project.

Recommendation: Request the Met Council commit to meeting minimum requirements for sidewalks, boulevards and turning movements. Also request that all ongoing Westgate Station design and planning include the participation of City of Minneapolis staff and neighborhoods.

III. TRAFFIC MITIGATION

A. Direct Project Impacts included in the CCLRT Project Scope

Preliminary Design Plans

The Preliminary Design Plan submittal identifies improvements to Delaware Street between Pleasant Street and E River Road. A new traffic signal is installed at E River Parkway and Delaware Street. Delaware St is widened to 37 feet and converted to a two-way street. Turn lanes are added to north and south bound E River Road.

Intersections identified for mitigation but not included in the Preliminary Design Plans

The CCLRT project is underway with completing a Supplemental Draft Environmental Impact Statement, which will disclose traffic impacts of an at-grade Washington Ave alignment. Certain intersections have been identified as needing mitigation, but designs have not been fully developed at the time of the Preliminary Design Plan Submission. These intersections are the following:

Cedar Ave and Riverside Ave
19th Ave and Riverside Ave.
20th Ave and Riverside Ave.
Pleasant Ave and Arlington St.
E River Road and Arlington St.
Pleasant Ave and Delaware St.
E River Road and Harvard St.
Harvard St and Delaware St.
4th St SE and 17th Ave SE

Part of the solution for mitigation to streets on the East Bank of the UofM Campus is planned to include converting Beacon St from Union St to Harvard St and Harvard St from Beacon St to Washington Ave. to two-way streets. In addition, a new roadway extension of Beacon St between Walnut St and Harvard St as well as a more direct connection of Harvard St to Church St are both planned to mitigate traffic impacts due to the Washington Ave Transit Mall.

Recommendation: Approve the traffic mitigation currently included in the Preliminary Design plans and further require that all additional traffic mitigation plans that will be constructed by the CCLRT project be approved by the City Council for consent prior to inclusion in the final project plans.