



4.0

CONCEPT DEVELOPMENT AND ANALYSIS

4.0 CONCEPT DEVELOPMENT AND ANALYSIS

The guiding principles for concept development can be summarized into four main groups: safety improvements, expanded capacity, adherence to design standards, and visual quality enhancements. Each of the concept development considerations are detailed in this section along with how they were applied to the Coon Rapids Boulevard/East River Road corridor.

4.1 Safety Improvements

4.1.1 Intersections

Intersections with crash rates greater than the statewide average at a statistically significant level are high priority locations at which to employ appropriate safety improvements. The crash types were further evaluated to determine contributing factors and the appropriate countermeasure.

A high crash rate occurs at the intersection of Coon Rapids Boulevard and 100th Lane. The predominate crash type is right angle. This type of crash can be reduced if the median opening is closed, preventing left turns at the intersection. If this improvement is implemented, 100th Lane would become a right-in/right-out intersection. Anoka County has obtained a Highway Safety Improvement Program (HSIP) grant to close the median. The City of Coon Rapids has developed a concept for a backage road from Egret Boulevard to Avocet Street, on the northeast side of Coon Rapids Boulevard, to help mitigate the impact of the median closure. This concept, or any other which would provide connectivity, would be implemented with future development.

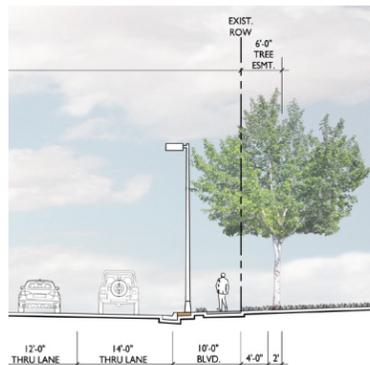
4.1.2 Sidewalks

The existing sidewalk on the northeast side of Coon Rapids Boulevard/East River Road is not continuous. It has been constructed on a parcel by parcel basis as properties have developed. There is evidence of significant pedestrian traffic in the corridor based on the paths worn into the grass where no sidewalk is provided. It is a priority for this study to propose a continuous sidewalk system to enhance pedestrian safety and transit use, consistent with the corridor vision.

The goal of constructing a continuous sidewalk within the Coon Rapids Boulevard/East River Road corridor appears simplest to achieve by filling in the “missing pieces” of the sidewalk system. The challenge for this approach, besides the time required for private development to create a fully functional sidewalk system, is the variety of existing sidewalk widths and locations. Simply connecting the existing sidewalks may not be visually appealing. It may be more appropriate, depending on the visual quality emphasis, to reconstruct much of the existing sidewalk coincident with other improvements to Coon Rapids Boulevard/East River Road. This will achieve uniform sidewalk width and location. In either case, it is clear that the sidewalk system will not be able to remain within the existing right-of-way for the entire corridor. There will be locations where sidewalk will need to be constructed on private property within a public easement. Consideration should be given to reconstructing the sidewalk as a shared use trail.

4.1.3 Trails

The existing trail on the southwest side of Coon Rapids Boulevard/East River Road is continuous through the corridor northwest of the Coon Rapids Boulevard/East River Road split; however, the trail has some undesirable unsignalized at-grade intersections with side roads and for a few miles is located in a narrow boulevard strip between Coon Rapids Boulevard and the frontage road. Consideration should be given to improving the safety for trail users by eliminating or improving at-grade side road intersections and improving the buffer between the trail and the adjacent parallel roadways.



In the City of Anoka, a shared use path should be considered to eliminate the on-street segment of the trail system. The existing East River Road right-of-way width through the City of Anoka is too narrow to add a shared use path without significant impacts. Two alternatives for a trail through Anoka were considered. One option would widen East River Road from a four-lane undivided roadway (66-foot right-of-way) to a four-lane divided roadway with 50-foot boulevard for the shared use path (150-foot right-of-way). The 150-foot right-of-way option would be identical to what is proposed to the southeast, and would result in a more uniform typical section for the project. The second option would require a right-of-way of 100 feet, which would still allow a five-lane roadway (two lanes each direction with a two-way center turn lane) to be built and accommodate a trail, but would result in a roadway character that is different than other parts of the project.

4.1.4 Crosswalks

At proposed and existing signals, the pedestrian crosswalks need to meet ADA standards for pedestrian curb ramps. Crosswalks should allow pedestrians to cross both southeastbound and northwestbound lanes in one pedestrian signal phase. Crosswalks must be clearly delineated to provide guidance to pedestrians and alert motorists to the pedestrian crossing point.

Where additional through lanes are proposed to improve capacity, the impacts to crosswalk length and pedestrian crossing times need to be considered. The intersections from Hanson Boulevard to Avocet Lane are affected by the addition of through lanes. In order to reduce the pedestrian crossing distance, no shoulder will be proposed where there are more than two lanes in one direction. Mn/DOT standards do not require a shoulder for the project, only a two-foot curb reaction distance. The inclusion of a shoulder adjacent to two lanes in the same direction is primarily for bus priority, vehicle breakdowns, dedicated right-turn lanes at major intersections, and deceleration for right-turn movements into driveways.

4.2 Expanded Capacity

The future volume forecasts indicated that only one corridor lane geometry concept would accommodate the projected traffic demand, an additional lane in each direction between Hanson Boulevard and Avocet Street. The four-lane sections to the northwest of Hanson Boulevard and to the southeast of the Coon Rapids Boulevard/East River Road split along with the seven-lane section (four lanes northwestbound, three lanes southeastbound) between Avocet Street and the Coon Rapids Boulevard/East River Road split would continue to handle the traffic load through the 20-year planning horizon of this corridor study. Therefore, all concepts analyzed assumed the current four-lane section between Hanson Boulevard and Egret Boulevard would be widened to six-lanes, and an additional lane would be added between Egret Boulevard and Avocet Street (four lanes northwestbound, three lanes southeastbound). Exhibits illustrating the recommended roadway improvements are found in Section 5, Recommendations.

Reversible lanes were considered as a potential improvement alternative, but their implementation would require a much higher level of access control (the elimination of driveways and intersections). This alternative should continue to be considered in the longer-term planning horizon for the Coon Rapids Boulevard/East River Road corridor.

Additional intersection level needs were developed through future traffic conditions analysis in Synchro/SimTraffic.

4.2.1 Future Traffic Conditions

The projected growth was applied to the existing peak hour turning movement volumes. Year 2030 volumes were evaluated using Synchro/SimTraffic to estimate future LOS at the intersections and along the corridor.

The six-lane section between Hanson Boulevard and Egret Boulevard was assumed in the future conditions analysis; cycle lengths, splits, and offsets were optimized. Five one-hour simulations were run for both the a.m. and p.m. peak periods. The averaged results were used to determine the future year LOS for the facility, segments, and intersections. Levels of service for the facility and segments are based on average travel speed. The overall future year existing facility LOS in the a.m. peak hour for CSAH 1 is LOS C southeastbound and LOS C northwestbound. The overall future year facility LOS in the a.m. peak hour for CSAH 3 is LOS B southeastbound and LOS E northwestbound. **Exhibit 4-1** displays the 2030 LOS by segment and direction for the a.m. peak hour. The overall future year facility LOS in the p.m. peak hour for CSAH 1 is LOS B southeastbound and LOS E northwestbound. The overall future year facility LOS in the p.m. peak hour for CSAH 3 is LOS D southeastbound and LOS D northwestbound. **Exhibit 4-2** displays the 2030 LOS by segment and direction for the p.m. peak hour.

Both Coon Rapids Boulevard and East River Road fail to operate acceptably during the peak periods. There are isolated segments with reduced average travel speed, such as between TH 610 EB and Foley Boulevard on East River Road in both directions during both the a.m. and p.m. peak hours. This is due to the close spacing of the intersections that limits turn lane lengths, insufficient roadway width to accommodate dual left-turn lanes, and uncoordinated timing of the signals. Coon Rapids Boulevard between East River Road and Hanson Boulevard is projected to operate at LOS F in the northwestbound direction during the p.m. peak hour due to heavy congestion at the intersections of Coon Rapids Boulevard and Hanson Boulevard and Coon Rapids Boulevard and Egret Boulevard. Northwestbound queues are projected to spillback through the intersection of Coon Rapids Boulevard and Avocet Street, causing lane blocking problems for turning movements. Northwestbound Coon Rapids Boulevard between TH 610 WB and Foley Boulevard is also projected to operate at LOS F during the p.m. peak hour due to congestion at the intersection of Coon Rapids Boulevard and Foley Boulevard.

Levels of service for the intersections are based on average control delay (seconds of delay per vehicle). **Exhibit 4-3** displays the 2030 LOS for intersections during the a.m. peak hour and **Exhibit 4-4** displays the 2030 LOS for intersections during the p.m. peak hour. The LOS presented for the unsignalized intersection of Coon Rapids Boulevard and TH 610 WB is based on the average delay of the minor movement (left-turn movement onto TH 610).

All of the intersections studied for 2030 conditions operate acceptably during the a.m. peak hour based on overall average control delay with the exception of Coon Rapids Boulevard and Hanson Boulevard. Additionally several individual movements operated at LOS E or F. Many of the LOS E or F movements were not related to operational problems, but are due to relatively low demand and long cycle lengths. Thus, vehicles making a movement that has low volumes will almost always have some delay (i.e., they will not likely arrive during the green phase). Minor lane blocking also occurs at some intersections where through lane queues extend past the entrance to turn lanes. Lane group operational problems were noted at six intersections during the a.m. peak period:

- East River Road (CSAH 1) and 7th Avenue (CSAH 7) - eastbound left-turn and thru movements
- Coon Rapids Boulevard (CSAH 1) and Round Lake Boulevard - southbound left-turn movement
- Coon Rapids Boulevard (CSAH 1) and Pheasant Ridge Drive - southbound left-turn movement
- Coon Rapids Boulevard (CSAH 1) and Crooked Lake Boulevard (CSAH 18) - southbound left-turn movement
- Coon Rapids Boulevard (CSAH 1) and Hanson Boulevard (CSAH 78) - northbound thru movement, southbound left-turn movement

- Coon Rapids Boulevard (CSAH 1) and Egret Boulevard - southbound left-turn, thru, and right-turn movements.

Four intersections do not operate acceptably during the p.m. peak hour based on overall average control delay: East River Road and TH 610 EB, Coon Rapids Boulevard and Foley Boulevard, Coon Rapids Boulevard and Avocet Street, and Coon Rapids Boulevard and Egret Boulevard. In addition, there are several individual movements at other intersections that operate at LOS E or F. Again, most of the LOS E or F movements are not related to operational problems, but relatively low demand combined with long cycle lengths. As with the a.m. peak period, some short periods of lane blocking occur at some of the intersections. Lane group operational problems were noted at three of the same four intersections that exhibited overall LOS issues in addition to five other intersections:

- East River Road (CSAH 1) and 7th Avenue (CSAH 7) - eastbound left-turn movement
- Coon Rapids Boulevard (CSAH 1) and Pheasant Ridge Drive - southbound left-turn movement
- Coon Rapids Boulevard (CSAH 1) and Mississippi Boulevard - northbound left-turn and thru movements
- Coon Rapids Boulevard (CSAH 1) and Hanson Boulevard (CSAH 78) - westbound left-turn, thru, and right-turn movements
- Coon Rapids Boulevard (CSAH 1) and Egret Boulevard - westbound left-turn, thru, and right-turn movements
- Coon Rapids Boulevard (CSAH 1) and Avocet Street - westbound left-turn and thru movements
- East River Road (CSAH 1) and TH 610 EB - northbound thru movement
- Coon Rapids Boulevard (CSAH 3) and Foley Boulevard (CSAH 11) - eastbound left-turn, eastbound thru, northbound left-turn, northbound thru, and southbound left-turn movements.

As stated in the Section 2.7, the proximity of the BNSF Railway tracks and emergency services facilities to the corridor may cause additional congestion that cannot be accounted for by the Synchro/SimTraffic model. Therefore, the projected operations may be worse than what is predicted by the model.

4.2.2 Coon Rapids Community Center

A sensitivity analysis was performed for the three nearest intersections to the proposed Coon Rapids Community Center: Coon Rapids Boulevard and Mississippi Boulevard, Coon Rapids Boulevard and 111th Avenue, and Coon Rapids Boulevard and Crooked Lake Boulevard. The sensitivity analysis forecasted the impact of the community center development on future corridor recommendations including some redistribution of Anoka-Ramsey Community College trips based on proposed local street improvements as part of the community center development.

Construction of the Coon Rapids Community Center would involve realigning the intersection of Coon Rapids Boulevard and 111th Avenue to the east approximately 450 feet, demolishing the existing Cook Arena, and constructing a new ice center and a future community/recreation center. To determine the effects of the proposed redevelopment, the trips generated by the Cook Arena were rerouted from Mississippi Boulevard to the realigned 111th Avenue. Also, new trips were added for the proposed community recreation center.

An additional analysis was conducted assuming a redistribution of existing Anoka-Ramsey Community College trips from Mississippi Boulevard to 111th Avenue. The increase in trips along 111th Avenue would lead to reductions in the intersection level of service at 111th Avenue, but would not result in significant changes in intersection LOS at the adjacent intersections. The affected intersections would be able to accommodate the increase in trips.

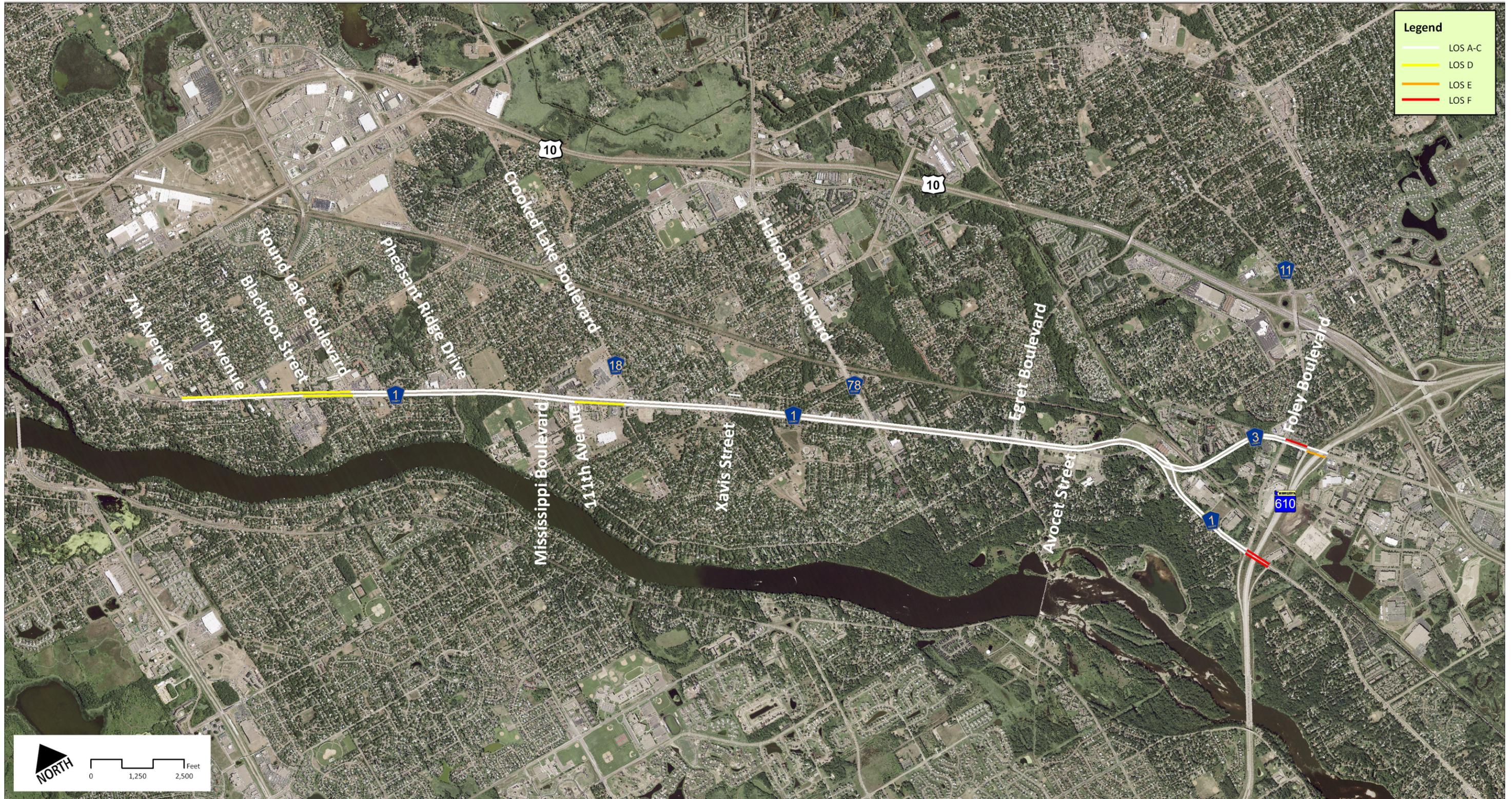


EXHIBIT 4-1 Year 2030 AM Peak Hour Arterial Level of Service

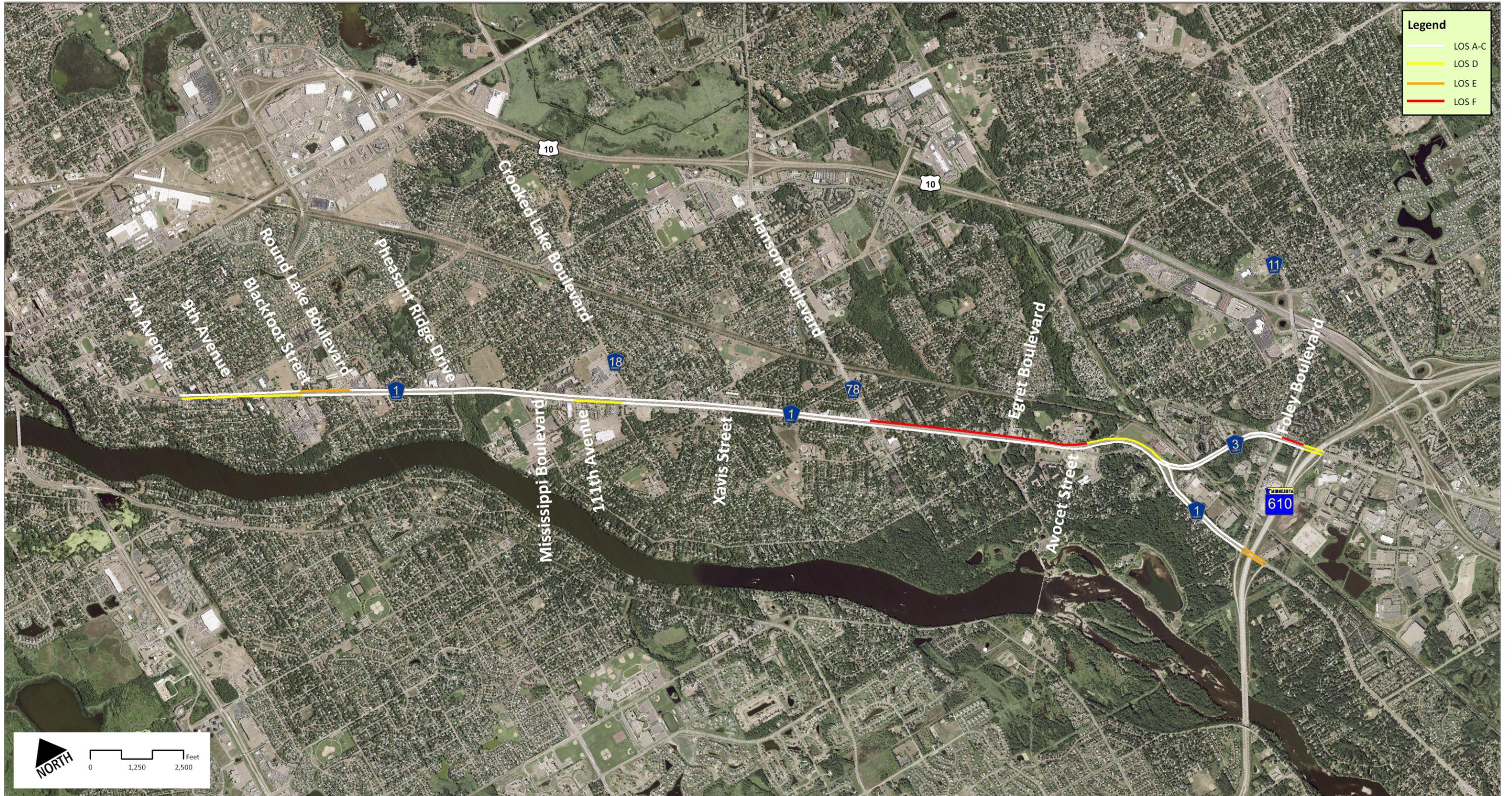


EXHIBIT 4-2 Year 2030 PM Peak Hour Arterial Level of Service

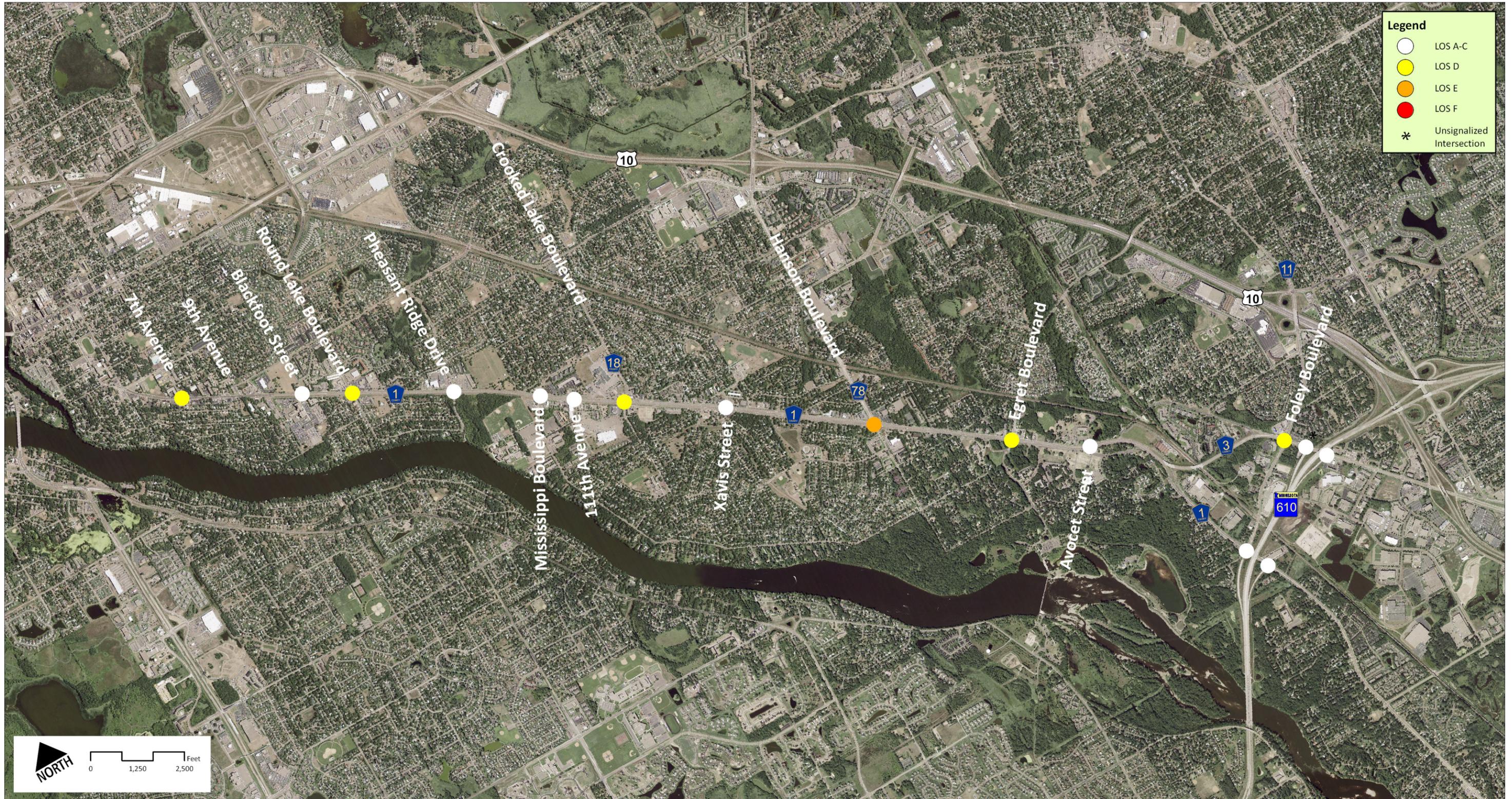


EXHIBIT 4-3 Year 2030 AM Peak Hour Intersection Level of Service

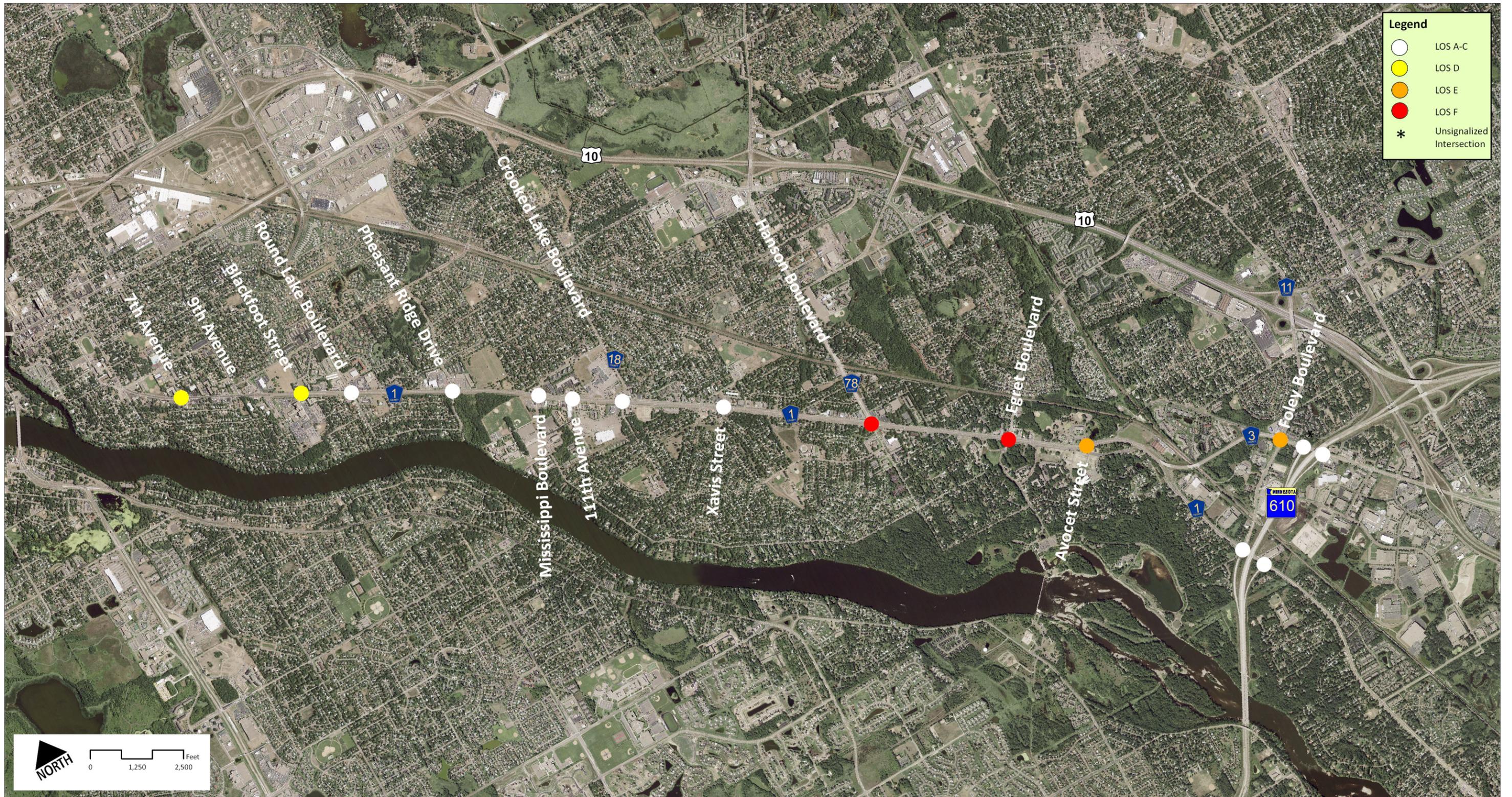


EXHIBIT 4-4 Year 2030 PM Peak Hour Intersection Level of Service

An analysis on future queue lengths was conducted for the two proposed future scenarios to determine if the existing turn lanes will be sufficient to accommodate the future queues. Since the proposed uses generate more p.m. peak hour trips, only the p.m. peak hour queues were analyzed. There are a few key locations where the queue length is projected to exceed the storage length. Under the first scenario the storage length would be exceeded for the northbound left-turn lanes along Mississippi Boulevard and 111th Avenue. Under the second scenario the storage length would be exceeded for the northwestbound and northbound left turns at 111th Avenue and the northwestbound right turns at Crooked Lake Boulevard.

The proposed realignment of 111th Avenue, construction of the proposed Coon Rapids Community Center, and relocation of the Anoka-Ramsey Community College main entrance will not have a significant impact on intersection LOS. However, the northwestbound left turn lane at 111th Avenue will not be sufficient to contain the queue resulting from the redistribution of entering community college traffic from the Mississippi Boulevard intersection. As the development moves forward, a reduction in southeastbound left-turn storage at Crooked Lake Boulevard may accommodate the necessary increase in northwestbound left-turn storage at 111th Avenue. Three other alternatives could be not re-signing the Anoka Ramsey Community College entrance to the relocated 111th Avenue, maximizing on-site circulation to allow ingress and egress to be distributed to Crooked Lake Boulevard and Mississippi Boulevard in addition to 111th Avenue, or not relocating 111th Avenue. These concepts should continue to be studied as the Coon Rapids Community Center moves through project development.

4.3 Adherence to Design Standards and Guidelines

4.3.1 Access Management

The corridor as a whole meets the Anoka County Access Management spacing guidelines on average, but several accesses do not meet the strict interpretation of the rule. To meet the access spacing guidelines some access points will need to be considered for closure. Additionally, several access points have a high number of conflict points due to the lack of separation between Coon Rapids Boulevard/East River Road and the frontage road. The desirable separation between the mainline and frontage road at cross streets is 250 feet according to the Mn/DOT Traffic Engineering Handbook. To provide adequate intersection spacing, frontage road realignment will need to be considered. If realignment is not feasible, the frontage road intersection will need to be considered for closure.

Median openings and frontage road access points were categorized as high-, medium- and low-priority for closure based on crash history, intersection conflicts, access spacing guidelines, and opportunities for improved visual quality. High-priority closures are intersections that have a high crash rate. Medium-priority closures are intersections that do not meet access spacing guidelines, but do not have a high crash rate. Additionally, access modifications were noted as medium priority where frontage road intersections were closely spaced with Coon Rapids Boulevard intersections such that additional conflicts were present due to the overlap of the functional area of the intersections. Low-priority closures are intersections that do not have a high crash history, meet access spacing guidelines, but would have a visual quality benefit if closed. It is anticipated that the city and county will develop an agreement for each construction project that describes the access modifications the city will deliver in exchange for the county modifying portions of the county landscape guidelines. Access management priority rankings of existing median openings and frontage road access points are discussed further in Section 5.

There are three Coon Rapids Boulevard “slip ramps” that provide non-standard access to the frontage road system. These intersections are located just southeast of Mississippi Boulevard, southeast of Crooked Lake Boulevard, and southeast of Egret Boulevard. The frontage road through traffic must stop at the intersection and make a 90-degree turn at the intersection to continue along the frontage road. These three “slip-ramps” should be closed to eliminate the non-standard frontage road intersections. The traffic will redistribute to nearby signalized intersections to access the frontage road.

Frontage Road

There is a well developed frontage road system along the southwest side of Coon Rapids Boulevard from Avocet Street to Mississippi Boulevard. At signalized intersections, the frontage road system achieves the desirable 250-foot side road intersection spacing. However, there are numerous unsignalized intersections that have little or no separation from Coon Rapids Boulevard creating an unsafe intersection with upwards to 60-plus conflict points, which dilutes the access management safety benefit of a frontage road. If the unsignalized frontage road intersections are not closed or reconstructed to provide 250-foot intersection spacing, the frontage road could be considered compromised to a degree that it could be eliminated. Elimination of the frontage road would result in direct driveway access to Coon Rapids Boulevard by many residential and commercial properties, but would have the benefit of creating additional space within the right-of-way for the existing trail and proposed visual quality enhancements.

Bittersweet Street

There is a very short segment of frontage road approximately 300 feet long on the northeast side of Coon Rapids Boulevard, starting at Bittersweet Street and extending to the west. The intersection spacing at Bittersweet Street does not meet the desirable distance of 250 feet. The west end of the frontage road terminates at a right-in/right-out connection to northwestbound Coon Rapids Boulevard. There are two commercial driveways served by the frontage road, one of which is located in the turning movement area for the right-in/right-out connection at the west end of the frontage road, creating an intersection that functions like a three-way intersection without any traditional intersection control devices. Crash data does not indicate any significant existing safety problem.

One option to address the right-in/right-out intersection geometry at the west end of the frontage road would be to close the right-in/right-out through the introduction of a frontage road cul-de-sac. The two commercial driveways would have access from the cul-de-sac. The drawback of this option would be significant impacts to the westernmost business. Another option would be to close the right-in/right-out intersection, vacate the frontage road right-of-way, and create a shared private driveway for the two businesses.

Direct River Drive/Yukon Street

An analysis was conducted to assess the impacts of modifying the existing full-access Direct River Drive/Yukon Street intersection with Coon Rapids Boulevard. At this intersection, Direct River Drive is the northbound approach and Yukon Street is the southbound approach; it is unsignalized. The analysis considered the LOS at the Direct River Drive/Coon Rapids Boulevard intersection as well as the intersections of Coon Rapids Boulevard and Crooked Lake Boulevard and Coon Rapids Boulevard and Xavis Street which are both signalized.

Three different access modifications, in addition to the existing condition, were analyzed for the Direct River Drive/Yukon Street intersection at Coon Rapids Boulevard:

1. Construction of a median along Coon Rapids Boulevard that would eliminate left-turn movements to and from Direct River Drive and Yukon Street, making both approaches right-in/right-out only.
2. Close all access to Direct River Drive from Coon Rapids Boulevard (i.e., create a cul-de-sac), creating a full-access T-intersection of Coon Rapids Boulevard at Yukon Street.
3. Close all access to and from both Direct River Drive and Yukon Street at Coon Rapids Boulevard (create cul-de-sacs on both streets).
4. Leave as is, continue observation/analysis of intersection safety.

Peak hour traffic movements eliminated by the proposed change in each of the scenarios were then redistributed from the Direct River Drive/Yukon Street/Coon Rapids Boulevard intersection to either the Crooked Lake Boulevard or Xavis Street intersections as appropriate.

Traffic modeling of the three potential access modifications, including the redistributed traffic, showed that the adjacent intersections can accommodate the increase in trips with minimal change in LOS. The Direct River Drive/Yukon Street intersection currently has very few left turns onto Coon Rapids Boulevard – five northbound left turns and two southbound left turns were observed during the p.m. peak hour. The more significant traffic volumes were observed to be left-turn movements from Coon Rapids Boulevard onto Direct River Drive/Yukon Street (21 southeastbound and 83 northwestbound during the p.m. peak hour), but these only account for three to six percent of the approach volumes, respectively. The intersection essentially functions as a 3/4-access intersection today, with right-in, right-out, and left-in movements. Therefore, implementing any of the proposed modifications would result in minor redistribution of traffic and minimal changes in traffic operations at adjacent intersections.

In the event land uses change or safety becomes compromised, this intersection will need to be reevaluated.

Funeral Home Access

The existing median opening between Hanson Boulevard and Jay Street serves a funeral home and is a candidate for closure. If this median opening is closed, consideration should be given to preserving the left turn exit out of the funeral home parking lot. The median could be channelized to discourage southeastbound traffic from turning left into the funeral home parking lot.

Jay Street, Ibis Street, Hummingbird Street and 103rd Ave

There is an opportunity to consolidate residential street access to Coon Rapids Boulevard from Jay Street to Hummingbird Street. The intersection spacing between the intersection of Hummingbird Street with 103rd Avenue and the intersection of Hummingbird Street with Coon Rapids Boulevard is about 50 feet. The intersection of Hummingbird Street and Coon Rapids Boulevard could be closed to create a through movement from Hummingbird Street to 103rd Avenue. This change would redirect Coon Rapids Boulevard traffic to Ibis Street. Jay Street could be converted to a cul-de-sac, redirecting traffic to Ibis Street. Ibis Street already functions as a significant access point due to the large right-turn radius for the southbound right-turn movement. If Hummingbird Street and Jay Street intersections with Coon Rapids Boulevard are closed, consideration should be given to reconfiguring access for the residence between Hummingbird Street and Ibis Street. Some right-of-way acquisition would be required for a right-turn lane.

Coon Rapids Boulevard Extension

The intersection of Coon Rapids Boulevard and Coon Rapids Boulevard Extension is currently signed to prohibit southeastbound left turns to Coon Rapids Boulevard Extension. One of the recommendations from the corridor study TAC was that Coon Rapids Boulevard Extension be relocated to Avocet Street so that the Coon Rapids Boulevard Extension intersection with Coon Rapids Boulevard could be closed. The realignment of Coon Rapids Boulevard Extension to Avocet Street would require a design that would adequately address potential impacts to an existing Metropolitan Council lift station, a structure over Coon Creek, and potential impacts to the historic clay quarry. This study did not develop any specific alignments or costs for this realignment.

The median opening at the Coon Rapids Boulevard Extension intersection with Coon Rapids Boulevard could be considered for closure, converting Coon Rapids Boulevard Extension to right-in/right-out. This may be an alternative to relocating Coon Rapids Boulevard Extension to Avocet Street. This area of the corridor would benefit from more detailed analysis by the City of Coon Rapids and Anoka County.

East River Road

East River Road from Foley Boulevard to 96th Lane has six residential street access points on the southwest and three business access points on the northeast. These streets have no other outlet than East River Road. There is no history of crashes that would suggest a current safety problem. This area was studied to determine if there is an opportunity to consolidate access. A frontage road from 93rd Lane to 96th Lane to consolidate the residential access was studied. This frontage road would have significant impacts on approximately 12 residences, if East River Road is not shifted northeast. The impacts to residential property would be reduced to approximately eight if East River Road were to be shifted northeast. Six of the residential property impacts would be a result of achieving the 250-foot desirable side road intersection spacing at a new consolidated access point with East River Road. This access point could be aligned roughly with the commercial access point between 95th Avenue and 95th Lane. This segment should be monitored as the area redevelops for opportunities to consolidate streets and access.

4.3.2 Four Lane Undivided Section

East River Road through the City of Anoka, from 9th Avenue to 7th Avenue, is an undivided four-lane typical section in a 66-foot right-of-way. There are many left-turn movements into business driveways and side roads. Although there are no significant safety problems revealed in the analysis of the crash data, a four-lane undivided roadway has undesirable safety characteristics. Without a median, there is no refuge for left-turning vehicles waiting to turn, leaving more vehicles subject to rear-end crashes. Also, without a median, there is little recovery area for errant vehicles before entering oncoming traffic lanes.

In the 1990's, Anoka County developed preliminary plans for widening East River Road through the City of Anoka to add a center two-way left-turn lane. This design envisioned widening both equally on the north and south sides of East River Road. Final design for the project was not completed.

This study evaluated three typical section options through the City of Anoka. One option would continue the wider Coon Rapids Boulevard typical section through the City of Anoka to 7th Avenue. The wider typical section would require acquisition of approximately 84 feet of right-of-way to achieve a total 150-foot wide right-of-way. Within the 150-foot right-of-way, a four-lane roadway with raised median and 50-foot boulevard area with a shared use path could be constructed. The impact to existing properties would be significant. If the acquisition was focused on the southwest side of East River Road, the residual parcels would most likely not conform to the zoning code, and would need to be total right-of-way takes.

The second typical section studied for the City of Anoka section of the corridor was a 100-foot right-of-way that would compress the elements of the 150-foot typical section into a narrower typical section. A raised median and shared use path could still be accommodated. Significant private property impacts would still result from this typical section, but the residual parcels would likely be conforming and would have the potential to be redeveloped. However, the impacts would require total right-of-way takes.

The third typical section studied for the City of Anoka section of the corridor was an 80-foot right-of-way that is similar to the preliminary design completed by Anoka County in the 1990's. This typical section adds a center two-way left turn lane, but is different from the Anoka County preliminary design because the widening would be all on the southwest side. This typical section does not provide a space for the shared use path. This typical section is shown in Section 5. Some business impacts would require total right-of-way takes.

Two options for the 7th Avenue intersection were evaluated. One option would reconfigure the intersection such that the primary movement would be from the north leg of 7th Avenue to the southeast leg of East River Road, and the northwest leg of East River Road would be the minor leg of a new three leg intersection. The



south leg of the existing intersection would be turned into a right-in/right-out. Based on county engineering staff input on this intersection geometry, the county directed that the intersection remain as a four-way intersection. The four-way intersection concept will require the 7th Avenue south leg to be realigned to improve the intersection geometry. Prior to this study, Anoka County developed a preliminary plan for the realignment of 7th Avenue south of East River Road. The county’s plan addresses impacts to the adjacent businesses parking and access.

4.4 Visual Quality Enhancements

For the purposes of this study, visual quality is defined as the measure of how pleasing a visual perception is to someone. Descriptions of the existing Coon Rapids Boulevard/East River Road corridor as provided by the public and business owners through project review meetings and open houses included many comments such as: “Ugly, dreary, and uninviting; the boulevard looks tired; no consistency; looks ‘hodge-podge’; and needs landscaping.” Therefore, based on these comments the Coon Rapids Boulevard/East River Road corridor has a poor visual perception, or poor visual quality.

Improvements to visual quality were evaluated, and a list of roadway elements were generated that could provide a more uniform, comprehensive, and improved visual perception of the corridor. These elements generally include:

- Street lighting and signal systems
- Pavements (intersections, sidewalks, boulevard and median maintenance edges)
- Walls, pylons, and fencing
- Signage (corridor/district monuments, business and facility, and regulatory)
- Street furnishings (benches, litter receptacles, bicycle racks and lockers, newspaper dispensers)
- Plantings (street trees, hedges and shrub massings, and seasonal color).

Existing roadway design criteria and Anoka County Highway Department Landscape/Streetscape Guidelines limit the inclusion and placement of certain corridor elements. Landscape materials are the best example of this. The county guidelines define a minimum operational clear zone for safety, signs, and snow storage. The operational clear zone for this corridor is 10 feet. Operational clear zone guidelines and current maintenance practices restrict the planting of median and boulevard trees. Of the two locations, medians provide the best opportunity for planting street trees, primarily due to limited snow removal operations and fewer sight line obstructions that occur in the medians. Planting trees in medians also reduces conflicts with corridor user’s ability to view business signage located adjacent to the boulevards.

However, the existing corridor’s medians are not continuous and have many breaks for cross streets and driveway access to businesses and residential properties. Long tapers and dedicated turn lanes, while not median openings, do create insufficient median widths in which to plant street trees or place other corridor elements. Strategies for cross street closures and consolidation of driveways were evaluated, such that increased and more continuous wide medians could be provided as a benefit to these consolidations. Providing additional wide medians sufficient to provide and sustain street tree plantings and other corridor elements through driveway consolidations and median closures will require further discussions with property owners, county and city staff. It is anticipated that the city and county will develop an agreement for each construction project that describes the access modifications the city will deliver in exchange for the county modifying portions of the county landscape guidelines.

