



MONTGOMERY COUNTY PLANNING DEPARTMENT
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

MCPB
ITEM NO. *6B*
5-08-08

May 1, 2008

MEMORANDUM

TO: Montgomery County Planning Board

VIA: Gwen Wright, Chief *GWR*
Countywide Planning Division

Dan Hardy, Acting Chief *DKH*
Transportation Planning

Sue Edwards, Team Leader *SUE*
Community-Based Planning

FROM: Larry Cole: 301-495-4528, for the Park and Planning Department *LC*

PROJECT: Century Boulevard, From 300 Feet South of Father Hurley Boulevard to
Future Dorsey Mill Road
Subdivision Road Participation Project SRP-71
CIP Project No. 508000
NRI/FSD #4-93023

REVIEW TYPE: Mandatory Referral No. 08803-DPW&T-1

APPLICANT: Montgomery County Department of Public Works and Transportation

APPLYING FOR: Plan Approval

COMMUNITY-BASED PLANNING TEAM AREA: I-270 Corridor

RECOMMENDATIONS:

Staff recommends that the Board approve the proposed project (see Attachment 1: Vicinity Map) with the following conditions to DPWT with the following comments to DPWT:

1. Century Boulevard Alignment Design

- a. A target speed of 30 mph should be used for this project.
- b. Eliminate the reverse curve in the northbound roadway of Century Boulevard.

2. Typical Section

- a. Eliminate the inside roadway shoulders adjacent to the median wherever possible in favor of increasing the width of the median, but reduce the maximum median width to 50 feet outside the station area.
- b. Each half of the dual roadway should be 24 feet wide, exclusive of left turn lanes.
- c. Increase the width of the landscape panel on the west side of the road to 8 feet (min.) north of the Father Hurley Boulevard Bridge.
- d. Increase the width of the sidewalk on the east side of Century Boulevard to ten feet.

3. Kinster Drive

- a. Relocate the crosswalk and median refuge on Kinster Drive to be closer to the Century Boulevard intersection.
- b. Restrict construction traffic on Kinster Drive as much as possible.
- c. Consider implementing traffic-calming measures on Kinster Drive as part of or as a complement to this project.

4. Other ways to improve pedestrian safety

- a. Pave the crossing of the right-in/right-out driveway on the northbound roadway with concrete so that it gives better notice to the driver that the pedestrian has the right-of-way.
- b. Provide median pedestrian refuges on the north and south legs at the southern project limit and providing dual directional handicap ramps.
- c. Provide high-visibility crosswalk striping or alternative pavement treatments that will highlight the crosswalk locations to the driver.

5. Lighting

- a. Provide additional lighting fixtures for the southbound roadway under the Father Hurley Boulevard Bridge so that lighting levels meeting AASHTO standards can be maintained on the roadway and path.
- b. Provide additional lighting fixtures as necessary to ensure adequate lighting levels at the southern project limit.
- c. The design of the proposed lighting should minimize trespass lighting on adjacent residential properties.

6. Landscaping

- a. Provide 2-1/2" caliper Little Leaf Lindens, *Tilia Cordata* 'Greenspire' as the shade trees for this project.
- b. Provide a landscape panel with street trees along the west side of Century Boulevard south of Father Hurley Boulevard to separate the shared use path from the roadway.
- c. Ensure that breaks in the normal spacing of street trees are minimized and that the required offset between trees and light poles is maintained.
- d. Plant street trees at their normal spacing on both sides of the median where they can reasonably be anticipated to remain after construction of the CCT.

PREVIOUS BOARD ACTION AND SITE DESCRIPTION: The Planning Board approved the Cloverleaf Center development in 1993 and required that the developer build his frontage along Century Boulevard as part of Preliminary Plan No. 11981560. (The Planning Board opinion is shown as an attachment to the staff memo on the Forest Conservation Plan Amendment, to be reviewed at the same time as this Mandatory Referral.) The developer has signed a Memorandum of Understanding with DPWT to provide 53% of the funding for the subject project to fulfill their development approval requirement.

The remainder of the project site consists of residential properties, 881 condominiums and townhouses, lining the west side of the proposed Century Boulevard north of Father Hurley Boulevard. These properties do not have frontage directly on Century Boulevard; they front on Shamrock Glen Circle and Mountain Lake Court but face the proposed road.

This area of Germantown is currently undergoing a master plan amendment with proposed mixed uses and density increases in the Cloverleaf North property and properties north of Dorsey Mill Road. No land use changes are contemplated for the residential community west of Century Boulevard.

PROJECT DESCRIPTION

The project would extend Century Boulevard from its existing terminus at a commercial driveway 300 feet south of Father Hurley Boulevard to the future Dorsey Mill Road. The proposed roadway would accommodate the proposed Corridor Cities Transitway (CCT) in the median of the proposed Century Boulevard. The median would be 56 feet wide at the proposed Cloverleaf Station in a 150-foot-wide ROW, but narrower outside the station area.

The roadway pavement would be thirty-two feet wide on each side of the median, striped as two eleven-foot-wide travel lanes and a zero- to ten-foot-wide inside shoulder adjacent to the median where no left turn lanes are proposed (see Attachment 2). The pavement would narrow to 26 feet wide on each side of the median south of the Father Hurley Boulevard Bridge.

An eight-foot-wide shared-use path would be provided on the west side of the road. A five-foot wide sidewalk would be constructed along the east side of road.

STAFF ANALYSIS

Master Plan Background and Transitway Project Planning

Century Boulevard (I-1B) is recommended in the 1989 Germantown Master Plan as an Industrial road with a 100-foot-wide right-of-way and a 50-foot-wide transit ROW, for a total ROW width of 150 feet, although flexibility in the median width and ROW is recommended (see Attachment 3).

The original intent was to have the transit line run along the east side of Century Boulevard, which is how the segment of Century Boulevard immediately south of the project limit was built. The Maryland Transit Administration (MTA) is currently studying the CCT and proposes to have the transit line in the center median through this area. The Board has previously concurred with this location and DPWT's proposed project reflects this design.

The CCT starts at the Shady Grove Metro Station and heads north through the King Farm development. King Farm Boulevard has been constructed to accommodate the CCT in a 50-foot-wide median; the roadways on either side of the median are 22 feet wide.

MTA would prefer to maintain the 56-foot-wide median where possible, but agrees that the 50-foot-wide median is acceptable. *We recommend that the proposed Century Boulevard median width be narrowed to 50 feet maximum outside the station area*, consistent with the width at King Farm, to shorten the pedestrian crossing distance.

Because the project shifts from the proposed center-transitway design to the existing side-transitway design, it is not fully consistent with either of the applicable Montgomery County roadway standards and a waiver from the standards should be documented. Our recommendations to modify the typical section should be reflected in that waiver.

Design Speed and Target Speed

Definitions:

Target Speed is the speed at which vehicles should operate on a thoroughfare in a specific context, consistent with the level of multimodal activity generated by adjacent land uses, to provide mobility for motor vehicles and a safe environment for pedestrians and bicyclists.

Design Speed is the selected speed used to determine various geometric features of the roadway.

The project area was designated as Suburban as part of the Road Code changes last year. While there are no height limits with the current zoning, staff will recommend as part of the current Germantown Master Plan update that eight-story buildings front on this segment of Century Boulevard. The current design speed of 40 mph is too high for this density of development, particularly in a transit station area.

The County is currently undertaking a follow-up effort to last year's Road Code update and the Executive's technical consultant has recommended a draft target speed standard, with the intent that the design speed and posted speed would be the same value as the target speed. This standard would support no higher than a 35 mph design speed and a good case could be made for a 30 mph design speed. At build-out, the State statutory speed limit would be 30 mph. **We recommend that a target speed of 30 mph be used for this segment of Century Boulevard.** The general alignment of the roadway would not need to be revised. However, the lower target speed would much more easily accommodate the traffic movements associated with associated with a pedestrian-oriented area.

Typical Section

We make several recommendations below on how to improve the design of the roadway section, but as a general comment, our assessment is that there is a highly unusual amount of variability in the typical section. While there are constraints posed by the station location, a culvert crossing, and a bridge underpass that affect the median width, there is a lot of proposed pavement dedicated to shoulder areas up to ten feet wide adjacent to the median. Only a small proportion of these inside shoulders are proposed to be used as left turn lanes.

Inside shoulders are normally seen in this area only on Interstate highways to accommodate breakdowns on these large, high-speed facilities. In the rare instances where we have shoulders on closed-section roads, we normally have them on the outside where they can be used by bicyclists, deliveries, bus stops, etc. The proposed inside shoulders increase the impervious area of the project, are not useful or efficient, and unnecessarily increase construction costs.

Eleven-foot-wide travel lanes are proposed consistently throughout the project, which is in agreement with the uncodified table in the Road Code update adopted last year. We concur that this is the correct width. The offset between the travel lane and the curb varies between zero and ten feet; we recommend that it be a consistent width of one foot, per standard DPWT practice.

Therefore, *we recommend that the curb-to-curb distance of each half of the proposed dual roadway be a consistent 24 feet, exclusive of left turn lane areas.*

The following staff analysis describes the project from north to south:

Future Dorsey Mill Road to Kinster Drive

The planned Cloverleaf Station will be located in the block between Kinster Drive and the future Dorsey Mill Road, at which point the transitway will turn to the east and cross I-270. The proposed median is 56 feet wide; a 10-foot-wide shoulder is proposed on both sides of the median with the exception of the southwest corner, which has a short left turn lane. Essentially, it's a 76-foot-wide cutout in the middle of the right-of-way, much larger than the 50 feet it needs to be. From the future Dorsey Mill Road to just south of Kinster Drive, we recommend that:

- The proposed southbound outside curb should be shifted 4 feet to the east. The landscape panel width should be increased to 8 feet (min.)
- Four feet of the southbound shoulder area should be incorporated into the median.
- The northbound outside curb should be shifted 8 feet to the west. The proposed landscape panel should remain eight feet wide (min.), but the sidewalk width should be increased to ten feet (see discussion in Pedestrian Accommodation below).

The resulting median would be 50-feet-wide at the southern end and 60 feet wide at the northern end. The roadways would be 24 feet wide, except at the southbound left turn lane where it would be 34 feet wide. The overall outside curb-to-outside curb width of the roadway in this block would be reduced from 120 feet to 104 feet. The plan of this area with our recommended changes is shown on Attachment 4.

Note that the recommended curb shifts would allow greater landscape panel widths, but we have recommended the desirable widths as the minimum value. If the Germantown Master Plan update results in greater density or mixed land use, it may be desirable to use part of the landscape panel on the west side of the road to provide a sidewalk area separate from the proposed path; and if the road is reclassified to a Business District Street, it may be desirable to replace the landscape panel with tree pits and additional sidewalk area. These options are not recommended at this time however.

Kinster Drive to Father Hurley Boulevard Bridge

At Kinster Drive, the proposed median is 56 feet wide and has a 10-foot-wide shoulder adjacent to the median in the southbound direction. There is a left turn lane in the northbound direction. Starting at about 350 feet south of Kinster Drive, the proposed typical section begins to narrow to a median width of 36 feet as it approaches a large culvert under the roadway.

For this segment, we repeat the three bulleted recommendations above and add that the northbound median curb should be moved 10 feet west to provide a 50-foot-wide median. The plan of this area with our recommended changes is shown on Attachment 4.

At the Father Hurley Boulevard Bridge

The median increases in width from 36 feet to 44 feet under the Father Hurley Boulevard Bridge, then narrows again toward the southern project terminus (see Attachment 5). This is problematic for a number of reasons.

In addition to the variable median width, the shoulder width would also vary and an undesirable reverse curve (essentially a kink) is proposed in the alignment of the northbound travel lanes at the bridge. These are conditions more commonly found in temporary maintenance-of-traffic operations rather than permanent construction. The combination could prove confusing and lessen safety for the driver. We recommend that DPWT redesign the northbound roadway to eliminate the reverse curve.

South of the Bridge

The segment between the bridge and the southern project limit is shifted to the west to line up with existing Century Boulevard but has been done in such a way that the landscape panel along the west side of the road is eliminated. The southbound roadway should be shifted east to provide a six-foot-wide (min.) landscape panel with street trees between the curb and sidewalk. In addition, we recommend that:

- The outside curb along the southbound roadway be moved six feet east to provide the a six-foot-wide landscape panel with street trees.
- The median curb along the southbound roadway should be moved four feet to the east to provide a 24-foot-wide roadway.

Pedestrian and Bicyclist Accommodation

The 15-foot width of the curbside areas noted above is consistent with the current County standard, which does not specify how these areas are constructed. DPWT proposes to have an eight-foot-wide bikeway on the west side of the road, separated from the curb by a five-foot-wide landscape panel, and a five-foot-wide sidewalk on the east side of the road with an eight-foot-wide landscape panel. Our recommendations to eliminate unneeded areas in both the roadway and the median would create the opportunity to increase the usable width of these curbside areas.

Off-Road Bike Accommodation

Off-road bike accommodation would be provided via an eight-foot-wide shared use path along the west side of Century Boulevard, separated from the roadway for most of the project length by a five-foot-wide landscape panel.

South of the tracks, the path is proposed immediately adjacent to the curb, a condition that would not meet AASHTO recommendations for the separation of off-road bike facilities from traffic. We recommend that a six-foot-wide landscape panel be provided, as we have recommended elsewhere.

On-Road Bike Accommodation

No on-road bike accommodation is recommended in either the Germantown Master Plan or the Countywide Bikeways Functional Master Plan, nor is it recommended in the uncodified Road Code table for an Industrial street. If the roadway is successfully designed with a target speed of 30 mph (discussed above), bicyclists should be able to safely operate with traffic on this road.

Pedestrian Accommodation

We believe that the proposed five-foot-wide sidewalk would be barely functional in a mixed-use area where we intend to encourage pedestrian activity. We recommend that a ten-foot-wide concrete sidewalk be constructed on the east side adjacent to the commercial property.

The pedestrian crossing of Century Boulevard would be shortened by up to 13% by following our recommendations to narrow the proposed median and to eliminate unnecessary shoulder widths.

The pedestrian accommodation at intersections would also be improved by:

- Relocating the existing crosswalk and median refuge on Kinster Drive to be closer to the proposed Century Boulevard intersection.
- Paving the crossing of the right-in/right-out driveway on the northbound roadway with concrete so that it gives better notice to the driver that the pedestrian has the right-of-way.
- Extending the median on the north leg at the southern project limit toward the intersection to provide a median pedestrian refuge and providing directional ramps to cross both the north and south legs of this intersection. The existing median on the south leg should be similarly reconstructed to provide a median pedestrian refuge.
- Providing high-visibility crosswalk striping or alternative pavement treatments that will highlight the crosswalk location to the driver.

Lighting

Ornamental bronze rectilinear light fixtures would be provided along Century Boulevard at an approximate spacing of 125 feet apart. Lighting at the southern project limit appears insufficient, particularly adjacent to the southbound lanes, and should be checked for adequacy.

Four light fixtures are also proposed under Father Hurley Boulevard, mounted on the bridge pier that is adjacent to the northbound lanes. While this would be adequate for the northbound roadway, they would be too far removed from the southbound roadway to be effective – about 50 feet from the southbound lanes and 70 feet from the shared-use path. We recommend that additional fixtures be provided for the southbound roadway so that lighting levels meeting AASHTO standards can be maintained on the roadway and path.

Landscaping/Streetscaping

The proposed project would provide street trees on both sides of Century Boulevard except for the west side of the roadway south of the bridge (see Attachment 6). We have recommended above that six-foot-wide landscape panels with street trees be provided in this area to complete the streetscape.

No trees are proposed in the median of Century Boulevard but the transitway will likely not be built for about a decade. We recommend that shade trees be planted at their normal spacing on both sides of the median where these trees are likely to remain after the CCT's construction.

The proposed tree species and size should be changed to achieve a more compatible relationship with the potential overhead lines of a light rail system. The proposed tree, a Silver Linden, has a very broad canopy ultimately of 50 to 60 feet in width that would require significant pruning to keep away from any overhead transit lines. The species should be changed to the Little Leaf Linden that has a narrower canopy. The proposed planting size of 1 ½" caliper also needs to be increased to the 2 ½" standard typically planted as a street tree. A larger caliper tree is less susceptible to vandalism and damage by severe weather.

PUBLIC OUTREACH

A public hearing for this project was held on January 14, 2008. A summary of the comments and our analysis is shown below.

Comments: Century Boulevard should be opened with no connection to Kinster Drive because of a concern about cut-through traffic on a road with multiple school bus stops, and a concern with construction vehicles using the road when the students are being picked up and dropped off. There regularly are collisions at the corner of Crystal Road Drive and Kinster Drive, the next intersection to the west, with commercial vehicles blocking sight distance at that intersection. Commercial and industrial vehicles should not be using residential streets.

Analysis: Kinster Drive is classified as an Arterial road in the 1989 Germantown Master Plan and is part of the basic network of roadways in this area. Therefore, a connection to Century Boulevard is necessary, but we will be recommending to the Board as part of our Master Plan work that Kinster Drive be reclassified to a Minor Arterial, a new classification that was added in the recent Road Code update. We will also recommend that Century Boulevard and the segment of Crystal Rock Drive from Dorsey Mill Road to Kinster Drive be reclassified as Business District Streets. Both of the Minor Arterial and Business District Street classifications would permit the use of traffic-calming techniques such as raised crosswalks and raised intersections, traffic circle, medians, pedestrian refuge islands, chokers, smaller centerline radii, parking cut-outs, and special paving and streetscaping in central business districts or other commercial areas. Commercial and industrial would not be prohibited from traveling on residential streets, but if traffic-calming is implemented, they will be less likely to do so.

Comment: Question whether there's enough traffic to justify the project.

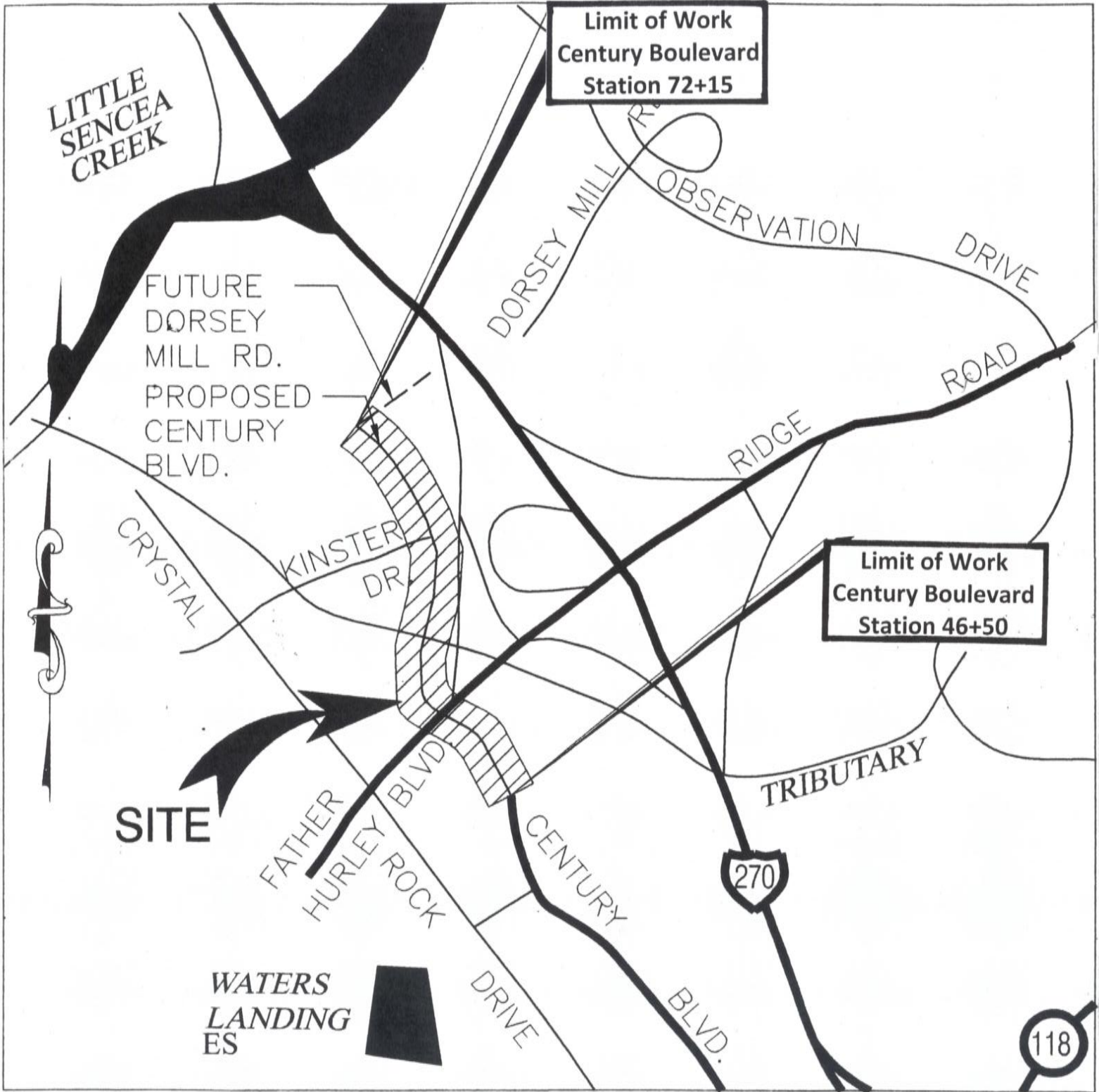
Analysis: Traffic forecasts performed for the Germantown Master Plan update confirm that a four-lane Century Boulevard with the transitway is needed to support existing and future development.

Comments: Concern about drivers exiting I-270 being able to slow down to an appropriate speed in a short distance after leaving the freeway. Street trees are not enough to protect pedestrians from traffic.

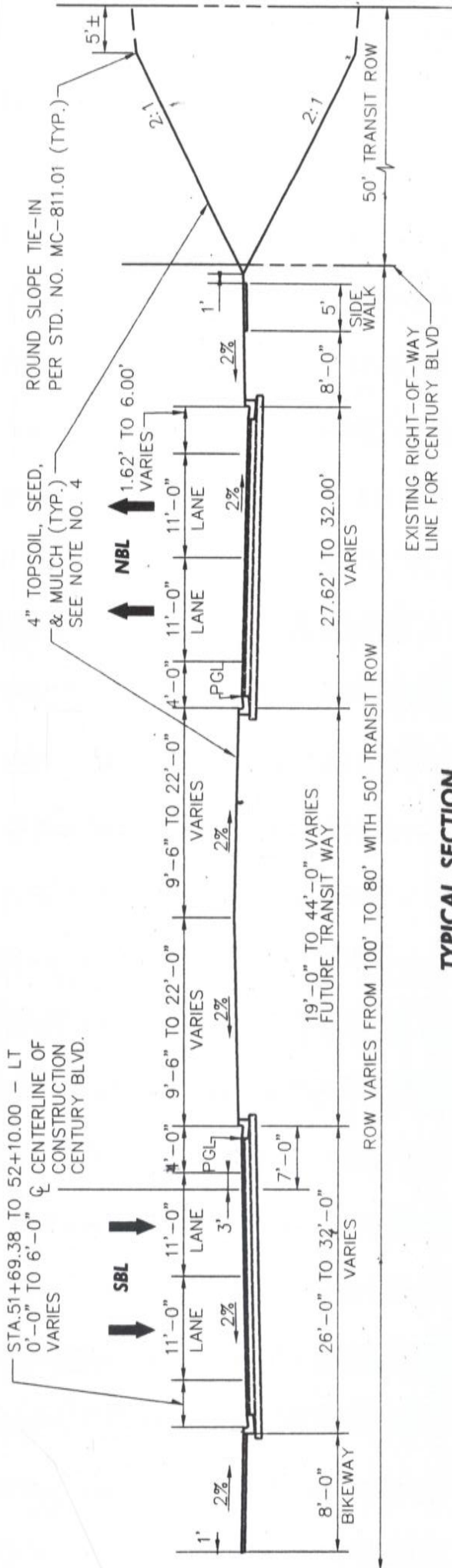
Analysis: We have addressed the need for a lower target speed in the Staff Analysis above. While street trees do not provide much physical protection from errant vehicles for pedestrians, having traffic travel at the staff-recommended 30 mph target speed would mean that errant vehicles are very unlikely to leave the roadway.

Comment: Concern with trespass lighting.

Analysis: We note that the County is working on a requirement to use only cut-off fixtures that limit trespass lighting in response to "dark sky" concerns, but have included in our comments that DPWT should consider this issue in their design.



VICINITY MAP
 SCALE: 1" = 2000'



TYPICAL SECTION
STATION 46+50 TO 52+10



TABLE 17 (Cont'd.)

Roadway Number	Route Number	Name	Limits	Minimum Right-of-Way Width	Recommended Number of Lanes	Other Recommendations
I-1	A	Crystal Rock Drive	Park Access Road to New Road (I-4)	100'	4	<ul style="list-style-type: none"> Construct as divided arterial with landscaped median and street trees on both sides Provide bikepath on the west side and sidewalk on the east side
	B	Century Boulevard	New Road (I-4) to Waters Landing Drive (I-2)	100'	4	<ul style="list-style-type: none"> Construct as divided arterial with landscaped median and street trees on both sides Flexibility should be provided in the width of right-of-way (to an 80-foot minimum) and in the width of the median (to its elimination) particularly where the roadway passes under Father Hurley, across wetlands and at intersection Provide bikepath on the west side and sidewalk on the east side
	C	Century Blvd.	Waters Landing Drive (I-2) to Crystal Rock Drive (M-84)	80'	4	<ul style="list-style-type: none"> Add street trees and sidewalks to both sides of constructed segment and provide the same along extension
I-2		Waters Landing Drive	Crystal Rock Drive (M-84) to Century Blvd. (I-1)	100'	4	<ul style="list-style-type: none"> Construct as a divided arterial with landscaped median and street trees on both sides Provide sidewalks on both sides
I-3	A	Goldenrod Lane	MD 118 (M-61) to end, approximately 1,000 feet north of MD 118	100'	4	<ul style="list-style-type: none"> Construct as a divided arterial with landscaped median and street trees on both sides Provide sidewalks on both sides
	B	Goldenrod Lane	MD 118 (M-61) to end, approximately 1,000 feet south of MD 118	80'	4	<ul style="list-style-type: none"> Construct sidewalk only on north side Preserve existing trees within right-of-way on south side
I-4		New Road	Crystal Rock Drive/ Century Blvd. (I-1) to Observation Drive (A-19)	100'	4	<ul style="list-style-type: none"> Construct as divided arterial with landscaped median and street trees on both sides Provide sidewalks on both sides
I-5		Aircraft Drive	Century Boulevard (I-1) to Crystal Rock Drive (M-84)	100'	4	<ul style="list-style-type: none"> Construct as divided arterial with landscaped median and street trees on both sides Provide sidewalks on both sides



Relocate crosswalk and pedestrian refuge to be closer to Century Blvd



Move curbs 4' toward the center of the southbound roadway.

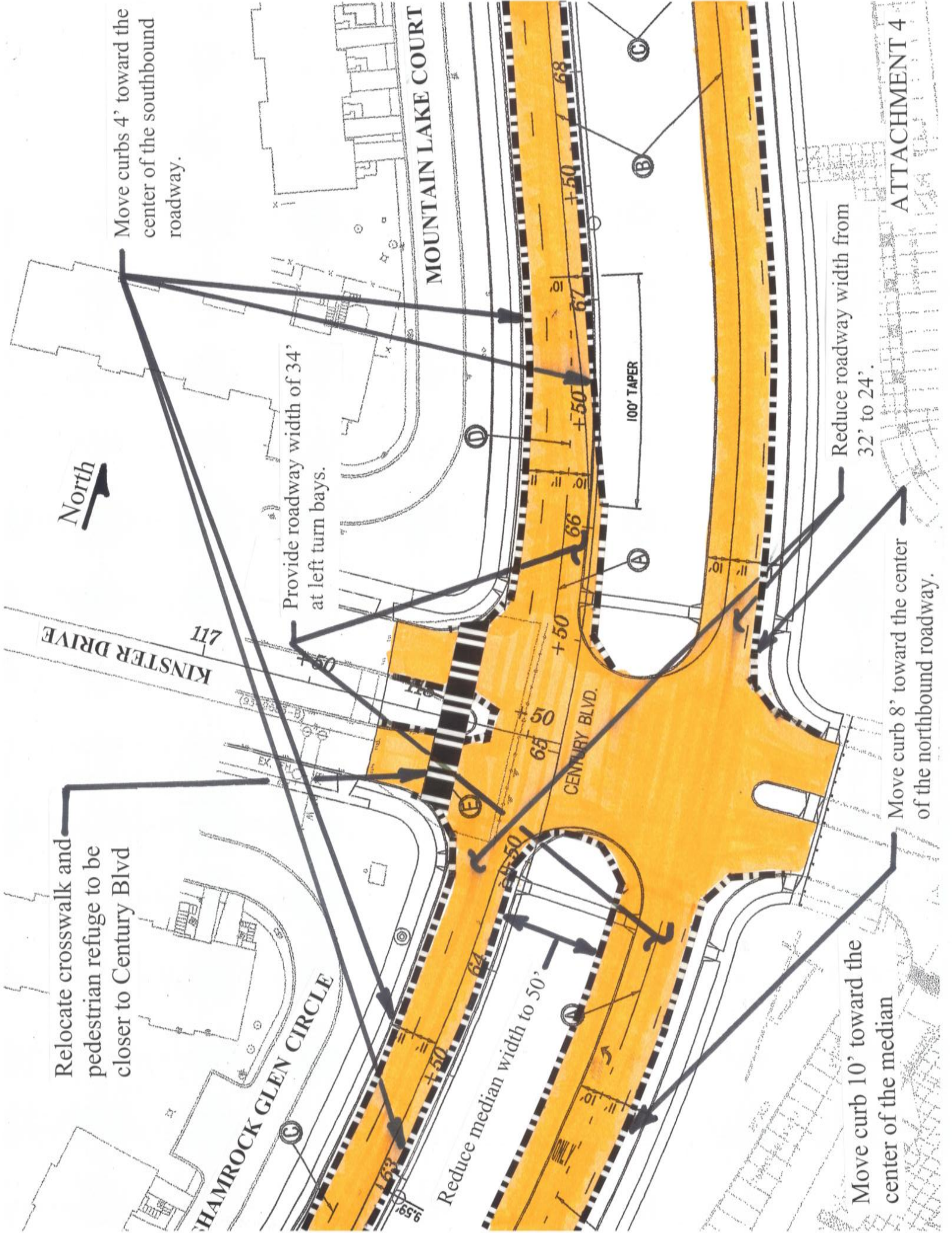
Provide roadway width of 34' at left turn bays.

Reduce median width to 50'

Move curb 10' toward the center of the median

Reduce roadway width from 32' to 24'.

Move curb 8' toward the center of the northbound roadway.



North

Proposed Century Boulevard
would go under existing Father
Hurley Boulevard Bridge

FATHER HURLEY BOULEVARD

Proposed median width
varies to 19' min.

Existing Bridge Abutment

Proposed 44' -wide median

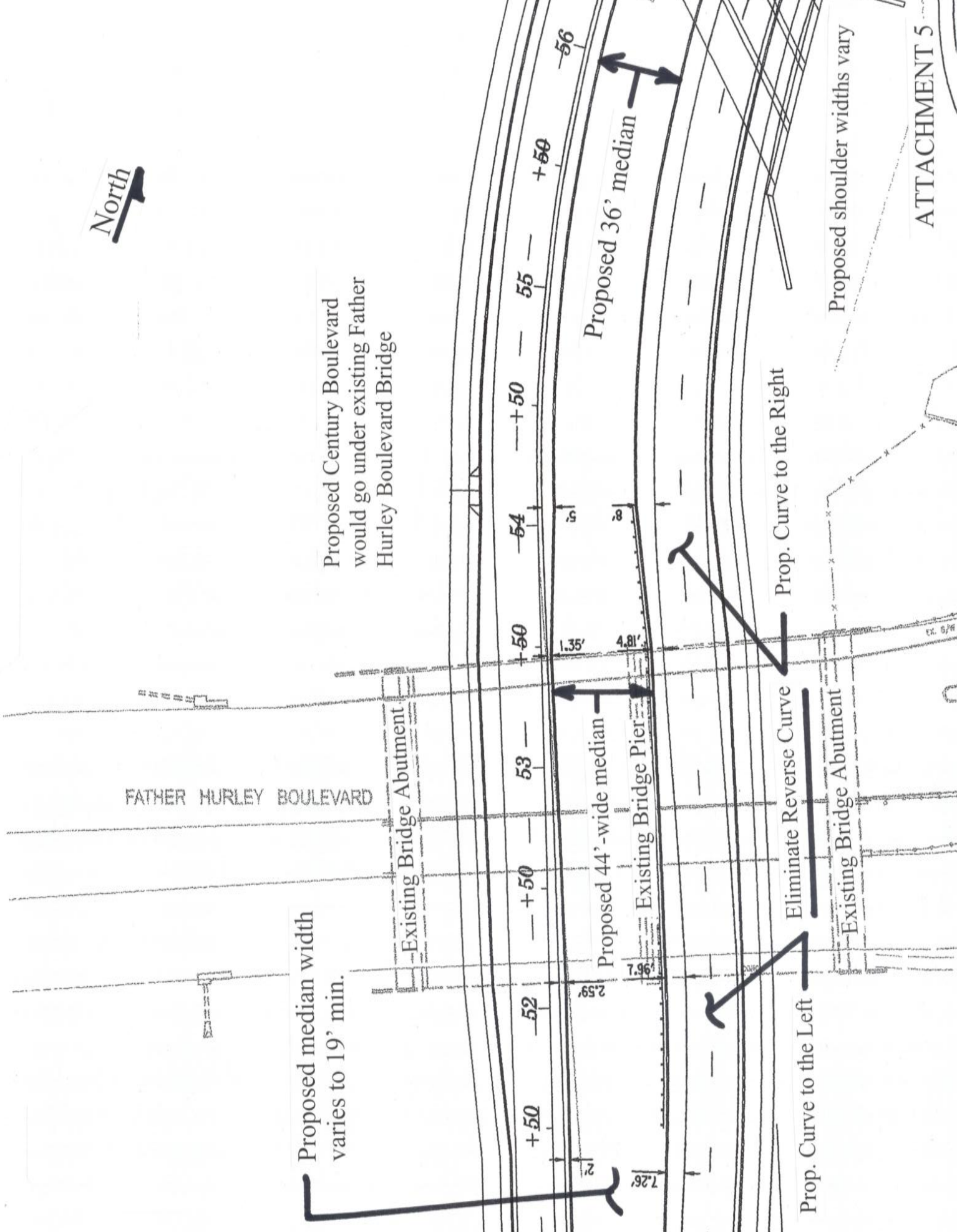
Existing Bridge Pier

Eliminate Reverse Curve

Existing Bridge Abutment

Proposed 36' median

Proposed shoulder widths vary



**SOUTHERN
PROJECT
LIMIT**

LIMIT OF WORK
CONTR. NO. 85244
CENTURY BLVD.

Staff recommends that additional fixtures be provided to adequately light the southbound roadway and sidewalk under the bridge

Staff recommends that a landscape panel with street trees be provided in this segment.

Provide dual handicap ramps at corners and provide pedestrian refuges in medians.

Reduce roadway width from 26' to 24'.

Proposed culvert

