

Appeal of PTF2019-0004 – Murray/Walker Road Improvements

Appeal filing document – July 22, 2020

Marc San Soucie, Mark Fagin

Case File No. under appeal:

PTF2019-0004

Specific approval criteria / condition being appealed:

Facilities Review, 40.03.2.A

Facilities Review, 40.03.2.B

Facilities Review, 40.03.2.C

Facilities Review, 40.03.2.E

PTF 40.57.15.1.C.4

All findings related to these.

Specific reasons why a finding / condition is in error as a matter of fact, law, or both:

Previously provided testimony (included in the Notice of Decision) identified numerous ways in which the proposed intersection design, and so the City's approval of that design, is (a) an exercise of discretionary judgement and (b) in conflict with numerous established city policies that call for a different outcome when exercising that discretion. Those conflicts remain in spite of the city staff decision.

Additional testimony to be provided by the appellants will extend and amplify the assertions made in prior testimony, and illustrate further why the decision is not supported by the city's established policies.

Specific evidence relied on to allege error:

As noted in prior testimony, the proposed intersection design is not identified in any of the city's transportation plans or engineering design manuals. The evidence is captured in the proposed design diagrams, and in the fact that that city's (and county's) published transportation documents do not include this design. The error in the decision rests in the choice by city staff to bypass numerous established city policies in order to make the decision it has made and approve this design.

Additional testimony to be provided by the appellants will include additional evidence, and illustrate further why the decision is not supported by the city's established policies.

Appeal APP2020-0005 – Marc San Soucie

PTF2019-0004 - The Issue

City staff have issued a decision to allow Washington County’s design for a major intersection expansion at Murray and Walker. I previously lived near NW Walker Rd and NW 180th Ave. Now I live walking distance from the Murray / Walker intersection. I have used the intersection far more times than I can count – literally thousands. There are unnecessary features in the proposed intersection design that reduce convenience and possibly safety for pedestrians, in order to provide a surplus of added convenience for vehicles. This tradeoff is not consistent with the City of Beaverton’s adopted policies.

Let me make my request clear. I am asking you to overturn the City decision, and return it to the County with a requirement that the channelized right-turn lanes (called “slip lanes” in this document) and pedestrian “refuges” on the NW and SE corners of the intersection be removed from the design. If the County were to re-submit their application without those features and their related land use and hardware requirements, my opposition to the project would cease. My specific arguments can be found below. Please note that I am not objecting to the long, dedicated right-turn lanes that are part of the design, just the “slip lane” features at the end of two of those dedicated turn lanes.

This decision is about a judgement call between values. Does the city value maximizing vehicle convenience at the expense of pedestrian convenience (and safety), or does the city respect its own policies that call for increasing pedestrian convenience, even if it reduces by a small amount the added convenience being developed for vehicles? Who is harmed by approving the design? Who is harmed by rejecting the design?

Please find, as I do, that this design does not improve the intersection for pedestrian use – it makes pedestrian life worse, while providing an unnecessary extra level of convenience for vehicles.

Please require that the County re-model the intersection design more closely along the lines of the successful, less complex, and much more pedestrian-friendly design of the Murray / Farmington intersection.

Please uphold this appeal and deny this application, without prejudice.

Marc San Soucie
1965 SW Latitude Way
Beaverton OR 97005-2350
503-819-0714
marc@sansoucie.com

Basis for Denial

My request for denial is based on the City of Beaverton's development code, comprehensive plan, and related planning and policy documents.

I am aware that the City has adopted or updated plans and policies that are intended to improve the city's respect for the rights, safety, and convenience of pedestrians in transportation and development projects. These include an Active Transportation Plan, a Context-Sensitive Design Policy, the Comprehensive Plan Land Use Element, ADA requirements, and the Engineering Design Manual.

The latter document is interesting because there is nothing in the EDM or its appendices that specifies the configuration and design proposed for this particular intersection, especially the inclusion of slip lanes on two corners. The design submitted by Washington County cannot be found in the City's standards, nor in the County's. What has been submitted is an assemblage of transportation features that the County asserts is an appropriate selection of features for the functionality of the intersection.

Theirs is an assertion, not a requirement. The County may *want* this design, but this is a land use decision to be made by the city. The assemblage of features proposed is in conflict with several of the city's plans and policies, and the development code puts the decision about appropriateness in the hands of the City, not the County.

Your Authority

The County (and maybe the City) may argue that you do not have the authority to deny this design. State law gives counties significant authority with respect to many roads in the state. But in Oregon, Senate Bill 100 and subsequent case law made it clear that transportation facilities are indeed land uses, and that transportation projects have to go through land use procedures for approval. Personally, I find that using a Type 2 procedure for a project of this magnitude and impact is incongruous with other parts of the city's development code, but here we are regardless.

The fact is that the County does have to submit its plans to the City for land use approval, and any such approval is subject to potential appeal. That, in turn, brings the matter to you for consideration. If the Legislature wished for county road projects to be immune to city development codes, it could pass such a law, but it has not, and so the City – and now you – have authority to consider the request and any arguments against it.

Your Discretion, or Theirs

The most relevant city development code provision is:

40.57.15.1.C.4: "The proposal meets all applicable design standards for the classification of the subject road as specified by the Engineering Design Manual and Standard Drawings unless the applicable provisions have been modified by the City Engineer by separate process."

Regardless of whether this constitutes a "clear and objective" criterion, there is inherent in this criterion a significant element of discretion on the part of the City (Traffic) Engineer and the city, especially in a complex case such as this one. Exercise of that discretion requires that matters other than the EDM and Standard Drawings be taken into account, and that a judgment call be made as to the appropriateness of the proposed aggregation of design elements. As a result, the City's adopted policies and plans should be consulted and respected in making the decision.

The Facilities Review criteria are these:

40.03.2.B: There are safe and efficient vehicular and pedestrian circulation patterns within the project boundaries.

40.03.2.E: The proposed transportation facility connects to the surrounding circulation systems in a safe, efficient, and direct manner. (Underscore added)

The City Engineer should not use the discretion afforded by 40.57.15.1.C.4 to undo the clear direction given by 40.03.2.B and E: safe, efficient, and direct. Instead, the decision about appropriateness should be driven by established policies of the City.

In this instance, City staff, in particular the City traffic engineer, have decided after review that this particular assemblage of transportation design elements is satisfactory.

From the Staff Report, page PTF-2: “Engineers consider all these factors including applying their experience and engineering judgement in choosing a design.”

Because the City traffic engineer could not point to specific plans or diagrams that call for this design objectively, professional judgement had to be used to come to a decision. Because of that use of individual judgement, apart from prescribed plans, you as the appeals body have to use your own judgement in deciding whether that discretionary decision was correct for the city.

As you well know, exercise of discretion in Planning Commission decisions allows and requires that you consult the guiding documents that lay out the priorities and values of the city.

What the Plans Say, and Don't Say

The City's TSP (Transportation System Plan) has a few specific intentions called out for this intersection:

TSP project 10570: “Widen from two to five lanes with bike lanes and sidewalks”
Intersection #17: “Add right turn lanes on all approaches” and
“Add double left turn lanes on NW bound Walker approach to match SE bound leg”

The County's project design addresses each of these planning intentions. However, it adds the slip lane elements on two corners (NW and SE), which are part of no standard diagram of intersections in any of the city's transportation documents, and which are not mentioned in the City's TSP or appendices. The County TSP does not say this intersection must have exactly this configuration. This configuration represents the County Engineer's professional judgment that this is an appropriate response to existing conditions and the predictions of modeling. But is it actually appropriate?

The city has for more than two decades been resisting including these “slip lane” elements in intersection designs in the city. In fact, there have been discussions of removing them in places where they were installed long ago, such as the TV Highway / Hall Blvd intersection and the Western Ave / Allen Blvd intersection. In addition, ODOT itself, working with Washington County, removed one of these “features” from the intersection of SW 185th Ave and TV Highway a few years ago. (See attached ODOT materials.)

The justification that I have heard for these elements appears to be based entirely on intersection geometry, which, given the negatives, is a poor argument in their favor. Considering that the recent Murray / Farmington intersection rebuild has similar non-perpendicular geometry, it seems difficult to justify a substantially different design here at Murray / Walker.

What City Policies Say

The primary objection that you and the City should have to the inclusion of these slip lane elements is based on pedestrian safety and convenience. These are two very important doctrines for the City in all of its plans (Comp Plan Land Use element, TSP, Active TP, Development Code). And it is important to consider both – safety *and* convenience.

Section 60 of the Development Code has additional language that is pertinent:

60.55.20.4.E.2: Geometric design and operational improvements including but not limited to acceleration lanes, deceleration lanes, turning lanes, traffic signals, and channelization shall be considered, evaluated, and recommended when determined necessary by standards and practices adopted by ODOT, Washington County, the City or approved by the City Engineer.

Here we get to argue about necessity. I believe it is impossible for the County to claim necessity for these features. The Murray / Farmington intersection design, now constructed and with considerable live experience, addressed a similar intersection geometry situation with a design that does not inconvenience or reduce safety for pedestrians. This successful counter-example makes the inclusion of slip lanes at Murray / Walker merely a County “nice-to-have”, which doesn’t meet the “necessary” threshold. To date there has been no comment from the County or from the City as to why the Murray / Farmington example isn’t being followed here.

60.55.25.1: All streets shall provide for safe and efficient circulation and access for motor vehicles, bicycles, pedestrians, and transit. Bicycle and pedestrian connections shall provide for safe and efficient circulation and access for bicycles and pedestrians.

Once again, the City’s own development code emphasizes that efficiency is as important as safety.

As backing for a decision based in part on discretionary judgment, guidance should come from the Comprehensive Plan (Land Use and Transportation elements, underscore added):

3.1.1.a: Emphasize pedestrian convenience and safety in all developments and transportation facilities.

3.1.1.c: Ensure that new development is designed to provide safe, comfortable, and direct pedestrian and bicycle connections for all, regardless of ability or age, to and through the development, including to reach nearby points of interest.

6.2.1.g: Provide convenient direct pedestrian and bicycle facilities to promote the health and physical well being of Beaverton residents, to reduce traffic congestion, to provide commuting and recreational alternatives to the motor vehicle, and to support local commerce.

6.2.2.d: Design sidewalks and the pedestrian access systems to City standards to enhance walkability: complete the accessible pedestrian network, provide safe direct access to transit and activity centers, and provide safe crossings at intersections with pedestrian friendly design.

Actions:

- Adjust parking lot design standards to be more pedestrian-friendly.
- Develop a performance measure for pedestrian facilities, and develop targets for different areas of the city. Consider factors such as long wait times at selected stop lights, closed

crosswalks, noise and pollution, debris and obstacles on sidewalks, speed of traffic, and other factors reducing pedestrian friendliness.

While the County claims (with disagreement from many other sources) that its design supports pedestrian safety, what little it may do is at the expense of a huge amount of pedestrian convenience and directness. The tradeoff the County requests is clear – massive improvement in convenience for vehicles, substantial degradation in convenience for pedestrians, and arguably reduced safety as well.

Is it Necessary?

A deep dive into the County's traffic count study raises more questions about necessity.

As you well know, the intersection in its current configuration has been operating for years. During those years, cars, pickups, and trucks have been making right turns from Murray onto Walker, both northbound and southbound, without notable difficulties. The motivations for this intersection expansion are primarily to benefit through traffic and left turns. Failure to complete successful right turns has not been one of those factors.

The most common argument in favor of slip lanes is that they help truck traffic negotiate turns at intersections with acute angles. I already noted that this has not been an issue at Murray / Farmington. It is also not an issue here. The County's traffic counts (Traffic Report, Appendix D) show, at peak AM, only 4 heavy trucks turning right SB from Murray to Walker, and zero turning right NB from Murray to Walker. Exactly the same number show up in the PM peak hour. The same report shows a larger number of pedestrians than heavy trucks during those hours combined!

In addition, note that thru truck traffic is not permitted on Walker Rd. east of the intersection. The signs are still up indicating that restriction. And to the west, there is no industry, only office buildings, retail, and residences. Turning truck traffic at this intersection is modest. So why are the slip lanes necessary? Well, they aren't.

The Missing Pedestrian Data

One of the valuable aspects of the City's emphasis on pedestrian convenience and safety in its many plans is that, in principle, it requires the City to place the needs of pedestrians at a greater level of priority than has been the practice in the past for arterial designs. Unfortunately, this intersection design appears to remain rooted in that past.

As one key indicator, consider that the traffic report captures pedestrian data only during the AM and PM peak commuting hours, and the data is only counts. This is typical of major road projects, unfortunately, and leaves out consideration of the nature of pedestrian traffic in this area, a core principle of context-sensitive design.

Your appellants are residents of Beaverton who have used this intersection many times, at many times of day, over many years. While we do not have data, we have observations.

Let's look at this intersection. Residences on the NE and SE corners. Residences on the NW corner behind the small retail buildings. A major office use on the SW corner, populated by many employees who walk, run, or cycle to and from work, and during breaks in the day. Two schools in walking distance to the east on Walker Road. One not far to the northwest. Transit (bus) stops at the intersection and nearby on Walker Rd. The similarities to the Murray / Farmington area are striking. The pedestrian use is almost as high, possibly higher.

Pedestrian use of this intersection is not at its peak at the peak vehicle commuting times. It peaks later in the morning, at lunchtime, and at the end of the school day. It consists of people walking to bus stops, of residents walking to and from the retail shops at the corner, of groups of school children on various types of outings, of runners getting in some miles during a break from work at Nike. There are often large clusters of pedestrians, and there are often quiet times. What you cannot say is that the County's traffic report captures any of this. What you cannot say is that the County considered this in designing this intersection.

We ask you to do so.

The Sidewalk Compromise

Of note as well is that the County has, in its Sidewalk Design Modification application, requested narrower sidewalks and no planter strips along large sections of the roadways leading to the intersection. This is a trade-off of pedestrian space (and comfort) in order to gain the extra left and right turn lanes that are key features of this expansion.

We are not appealing the City's decision to approve that modification, but want to point out that this is yet another piece of evidence that the safety, convenience, and comfort of pedestrians take second place to the convenience of vehicles in this design.

Is it Safer?

The safety issue is complex, as studies can be found to support or to refute the claim that slip lanes and pedestrian refuges are safer. All planning documents I have found, including those from ODOT, the Federal DOT, and numerous transportation institutes, say that these designs can be less safe, and for some audiences (the elderly and disabled) are almost always less safe.

<https://safety.fhwa.dot.gov/intersection/conventional/signalized/fhwasa13027/ch11.cfm#s1121>

Channelized right-turn lanes apply for intersections with a high volume of right-turning vehicles that experience excessive delay due to the traffic signal. The larger the turn radius, the higher vehicle speeds can be. An important consideration is the desired speed of the turning vehicles as they enter the crossroad. The turn radius can be used to control speed, especially if the speed varies greatly from the road the vehicle is turning from. Additionally, larger turn radii and higher speeds can pose a pedestrian safety issue.

<https://www.fhwa.dot.gov/publications/research/safety/04091/12.cfm>

Longer pedestrian crossing distance, time, and exposure. Higher speed of right-turning vehicles increases risk to pedestrians. May require transit stop relocation.

It is worth noting that some years ago, ODOT did some work with the County to *remove* a slip lane from the SE corner of TV Highway and 185th Avenue. When asked, an ODOT representative said that this was done as a safety improvement for pedestrians who use that intersection. Note that the TV / 185th intersection has far more truck traffic than Murray / Walker. See attached Appendix C describing this in more detail.

Truck versus Pedestrian Convenience: Tradeoffs

The County's design will require either dual separate signals for pedestrians, or a combined signal cycle that will be longer because of the extra required travel distance (some of it out-of-direction) for pedestrians. In the worst case, a pedestrian trying to get across the diagonal of the intersection could have to wait through four separate signal sequences. This would be intolerable. And the signal settings could be changed in the future even if set "optimally" today.

The County's initial argument is likely that the pedestrian refuge islands reduce the distance a pedestrian is exposed to traffic. But this is done at the expense of increasing overall crossing distance and requiring pedestrians to cross the slip lane, in which drivers are (a) moving quickly because they are in dedicated right-turn lane and (b) looking to their left to see if they can continue moving quickly (ref. ODOT analysis above). The City's aim should be to reduce the total length of the pedestrian crossing and eliminate the out-of-direction travel needed to cross to and from the islands.

Let's not forget the driver attention issue. Once in a dedicated right-turn lane, a driver seeing a slip lane ahead will know that nothing prevents their turning right at speed except for traffic coming from the left. Oh, and maybe a pedestrian, but essentially this design gambles that drivers will carefully review both locations. At speed, in a dedicated turning lane. I don't think the City should make that gamble.

As for convenience, which is almost as vital as safety, the City should be giving the pedestrian users of this intersection the benefit of the doubt, prioritizing directness and convenience over the *extra* convenience of slip lanes for vehicles.

Yes, *extra* convenience. All four approaches, under the new design, will have dedicated right-turn lanes. I am not disputing those (although they are a luxury). So how is the added convenience of vehicles reduced by removal of the slip lanes? A little. Drivers will have to slow down and make their turns more carefully. But drivers will see pedestrians waiting to cross their path of travel, right next to their lane, instead of partially around a curve.

Large trucks will have to execute more cautious turning movements given the angles at these corners, as they are already doing today. However, large trucks are not routinely allowed on Walker Road east of Murray, and Walker Road is not a freight route, so large trucks will not be regular users of either the NW or SE corners. The slip lanes are designed for a larger truck profile than is common in this area. A smaller design truck profile would support a design without slip lanes.

It is worth noting that the angle at which Murray and Farmington intersect is about the same as at Murray and Walker. The Murray / Farmington intersection is working fine, and pedestrians don't have complex, possibly multi-signal movements to navigate.

The County has designed many arterials intersections over the last 10 years, and few of them have slip lanes (see Appendix D). Those which do are not at highly residential corners with documentable regular pedestrian traffic. The County's design seems to be meant for some other type of location, not this particular place. An acceptable design would have single-signal direct crossings for pedestrians in all four directions, such as at Murray / Farmington.

Conclusion - So, Why?

This design is not in the County's TSP for this intersection. It is not to be found in their catalog of standard design drawings. Similar designs have been used at other major arterial intersections in the County, but in recent years none have been located at intersections with mostly residential and office uses adjacent. So why here? Why would the City of Beaverton allow this?

This design has plenty of features to increase convenience for vehicles. Most of those features reduce comfort and convenience for pedestrians. The engineers who have designed this prioritize vehicle convenience over pedestrian comfort and convenience. In Beaverton, our plans, policies, and community values say it should be the other way around. The upshot: Unnecessary extra convenience for right-turning vehicles that already get dedicated right-turn lanes, in exchange for out-of-direction travel, non-linear travel, multiple signals, and pork chop pauses for the pedestrians. This is a bad trade, and is not consistent with City of Beaverton plans and policies.

Please – pay a visit to the Murray / Farmington intersection, and insist on the best for Beaverton. If the county can do what they propose at Murray / Walker, this easily, they can do so anywhere in Beaverton.

Let's set some better precedent. Please respect pedestrians. Please send this back for further work.

Marc San Soucie
September, 2020

Specific Issues with the City's Findings

In the Notice of Decision, city staff outlined their rationale for supporting the County's application. Here are counter-arguments.

Facilities Review:

FR-1, A (bottom): "The City's TSP reflects the City's priorities. For Washington County-funded projects, design or prioritization may differ from the City's priorities, based on the County's long-term transportation plans."

This statement may be accurate, but it does not justify complete deference to the County's TSP. We can insist on better, as this is our city.

FR-2: "In the absence of a specific mention, the City reviews the methodology and the engineering judgement which the applicant's engineers used in proposing the design and determines if it meets the intent of the TSP. Staff cite the findings in Facilities Review Criterion E (below) as applicable to this criterion. Based on the information provided by the applicant, the City Traffic Engineer concurs with the applicant's project team that the proposed project design is consistent with the goals of the transportation system plan for this intersection."

This should be stated differently: "... the proposed project design is consistent with some of the goals of the transportation system plan for this intersection." The City Traffic Engineer decided to test alignment with portions of the City's TSP, but not with all of it, as alignment with pedestrian comfort and convenience is not demonstrated, or apparently prioritized.

FR-3: Criterion B is NOT met. "Safe and efficient ... pedestrian circulation patterns ..." are not part of the design. Safety is an arguable point. Efficiency for pedestrians has been outright sacrificed in favor of extra added efficiency for vehicles.

FR-4: Top paragraph: "The City Traffic Engineer concurs with the applicant's engineer's reasoning with respect to the intersection design, including the channelized right-turn lanes."

It is important that the community perspective be considered here, not just an engineering perspective. Note that the performance measures in 60.55.10.7 are entirely about vehicle movements, not pedestrians. Satisfying those requirements alone is not sufficient.

Second paragraph: "The applicant states the proposal is to provide traffic capacity and safety improvements through the SW Walker Road and SW Murray Boulevard intersection that will provide for safer pedestrian and bike access to the area."

Staff provides no finding to support this assertion. It also fails to address pedestrian efficiency. Note the specific requirements of Section 60.55.25, consideration of which is called for in 60.55.10.4 (emphasis added):

60.55.25: Street and Bicycle and Pedestrian Connection Requirements. [ORD4302; June2004]

1. All streets shall provide for safe and efficient circulation and access for motor vehicles, bicycles, pedestrians, and transit. Bicycle and pedestrian connections shall provide for safe and efficient circulation and access for bicycles and pedestrians.

2. The Comprehensive Plan Transportation Element Figures 6.1 through 6.23 and Tables 6.1 through 6.6 shall be used to identify ultimate right-of-way width and future potential street, bicycle, and pedestrian connections in order to provide adequate multi-modal access to land uses, improve area circulation, and reduce out-of-direction travel.

On this basis, it does not appear that Criterion C is met.

FR-5, Criterion E:

“Minimizing the skew of the intersection and reducing the corner radii to a minimum while still accommodating delivery trucks;”

Skew is not a substantive issue, as demonstrated by the Murray / Farmington intersection. And the Murray / Farmington intersection, as well as years of unexciting performance at Murray / Walker, demonstrate that the few delivery trucks that use the intersection manage just fine without slip lanes.

“... refuge islands are still needed in the NW and SE corners due to their larger radii;”

Again, proven not to be true by the Murray / Farmington example.

“Signalize the right-turn movement and added ‘No Turn on Red’ restriction;”

If implemented as such, this will last only until enough complaints are filed by impatient vehicle drivers who have to wait.

“Pedestrian crossings between the curb and pedestrian refuge island will be raised approximately 3 inches (a flatter speed hump);”

This is a fascinating assertion. The crossings cannot be considered “speed humps” if pedestrians are expected to walk on them! The time to slow vehicles is well before the crossings, not at the point of crossing.

Paragraph 3: “In determining the appropriateness of the design detail, intersection performance standards adopted within BDC 60.55.10.7 and as required in state and regional planning rules must be met to ensure the efficient operations of proposed intersection designs.”

And in addition, as noted above, approval criterion 60.55.10.4 requires that the standards in section 60.55.25 also be met, and this section is our own local City Development Code.

“The City Engineer also weighs the safety of the proposed design details for all modal users.”

But not efficiency, as called for in the City’s many plans and policies.

FR-6: County response to concerns about slip lanes:

“We used the following considerations:

1. From the FHWA Guidance

(http://pedbikesafe.org/PEDSAFE/countermeasures_detail.cfm?CM_NUM=24)

Well-designed right-turn slip lanes slow turning vehicles, allow drivers and pedestrians to easily see each other, reduce pedestrian exposure in the roadway, reduce the complexity of an intersection by breaking it into manageable parts, ...”

Breaking the intersection into manageable parts, for the pedestrian, means multiple stages and changes of direction in order to cross even in a single direction. Directness is removed, simplicity is removed. Efficiency is reduced. Pedestrians must make more decisions than they would otherwise. Vehicle drivers do not.

In any case, all of the desired outcomes are available and in plain sight at the Murray / Farmington intersection, but without the slip lanes and pork chops.

Also on FR-6:

“By signaling the channelized right turn lane, pedestrians can cross the right-turn lane on 3 of the 4 signal phases.”

This implies that for a number of pedestrian crossings, there will be a two-signal wait. One to get to the refuge (pork chop), another for the main crossing at a different signal phase. Please ask the City Traffic Engineer how many vehicles will have to wait for two separate signals to get through this intersection.

Also on FR-6, staff comments:

“The comments noted ODOT’s removal of the slip lane from the SE corner of TV Highway and SW 185th Avenue due to safety concerns. That slip lane was different. Unlike the intersection proposed here, it did not include a signal or turning restrictions.”

Please note that ODOT had the option of adding a signal or turning restrictions to the 185th/TV Hwy slip lane. ODOT chose outright removal.

FR-7, second paragraph: “Based on the information provided by the applicant, staff concurs with the choice to develop channelized right turn lanes for this project and finds the design incorporates features that improve pedestrian crossing for a busy intersection with eight vehicle travel lanes and two bike lanes. While the design may add some additional distance to the overall crossing, the additional distance is inconsequential when weighed against the safety provided by the pedestrian refuge by (a) shortening the distance in which a pedestrian is in the roadway and (b) requiring vehicles to stop in these channelized turn lanes.”

Once again, the emphasis here is entirely on (alleged) safety. Note that the obvious and clearly stated intent of this intersection overhaul is to improve traffic efficiency for vehicles, while the only consideration given to pedestrians is safety, with a reduction in efficiency due to required changes of direction of travel and attention, and possible two-signal waits for a crossing. Staff’s finding that this criterion is met is not supported by the City’s own plans and policies, and it is surprising that the requirements of the City’s own development code have not been met or adequately addressed.

PTF-2:

“Staff concurs that these policies help to guide development towards the goals a variety of transportation options, enhancing livability, and a balanced multimodal system. However, they do not provide specific engineering standards to implement these policies. When specific engineering design standards or requirements are not available or are silent on a design feature, the City reviews the methodology and the engineering judgement that the applicant’s traffic engineer uses to determine the appropriateness of the design and asks if it meets the adopted intersection performance standards, as well as the intent of the TSP and EDM.”

“Based on the information provided by the applicant, the City Traffic Engineer concurs with the applicant’s project team that, as designed, the proposal is consistent with the goals of the City’s TSP to improve this intersection for not only vehicles, transit, and bicycles, but for pedestrian use.”

The key point here is not about engineering standards, but “the intent of the TSP and EDM”. If you review the application through this lens, you can choose to look only at dimensions and traffic management performance, or you can look at the intent of the TSP, which is clearly laid out in the policy statements and actions. This is not an engineering-only problem. This is a community problem, and all of the important community factors have to be considered.

The City has weighed and prioritized those factors in making its decision. I am asking you to weigh them differently, with due consideration for pedestrians and their efficiency of travel. The vehicles will receive plenty of new benefits without the slip lanes.

Appendix A - From the City TSP Appendices

Beaverton has a history of *not* including slip lanes in modern intersection designs. And note that a slip lane will be removed from the Western / Allen intersection as part of that City project.

<https://www.beavertonoregon.gov/DocumentCenter/View/1500/2035-Appendix-H>

Solutions Report Appendix H: “Walker Road/Murray Boulevard Intersection Improvements: A number of improvements at Walker Road/Murray Boulevard are included in the 2015 TSP for this intersection of two arterials. Right turn demand is generally high and supports the addition of right turn lanes on each approach. Dual left turn lanes are already provided on the eastbound Walker Road approach, and the westbound approach already has an empty median that shadows the opposing left turn movement. Northbound and southbound left turn movements on Murray Boulevard are projected to be 200 vehicles or less during the 2035 PM peak hour, indicating that the volume levels are not sufficient to support the widening required to align the Murray Boulevard approaches after the addition of turn lanes.”

Note that there is no mention of slip lanes (channelization) for this intersection.

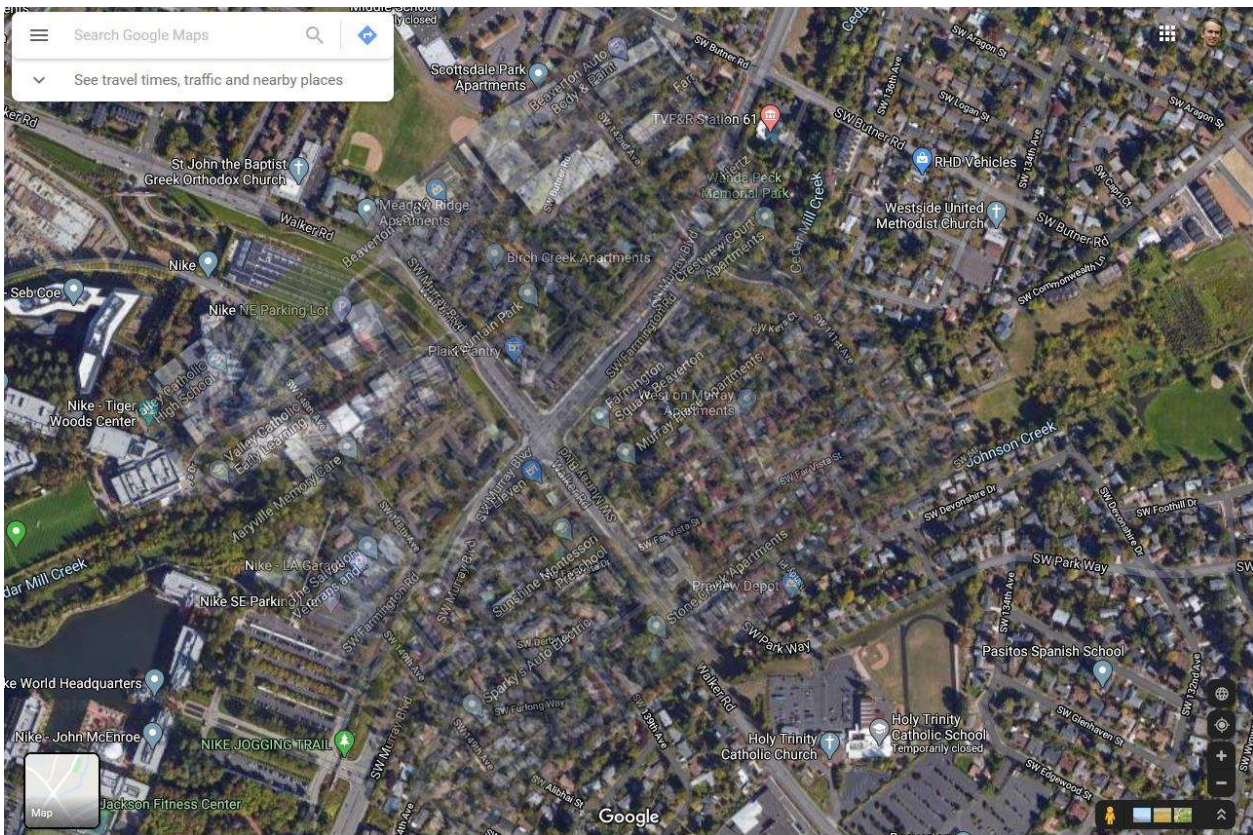
Re Murray / Farmington: “Murray Boulevard/Farmington Road Intersection Improvements: The 2015 TSP included several lane channelization improvements at this intersection of arterial roads. Providing double left turn lanes on all approaches would require widening each side of each approach, and is currently under design. The left turn volumes are approaching levels that would support dual left turn lanes, and right turns are suitable for additional turn lane channelization as well. While widening approaches may be difficult and require access modification, such improvements would increase the capacity of this critical intersection of two focus corridors.”

Note that the TSP did contemplate possible slip lanes for the Murray / Farmington intersection, but the end product does not include them. The City worked closely with the County on that design, and came up with a better design. The end product more accurately reflects City policies than does the proposal for Murray / Walker.

Appendix B – Murray / Farmington

In prior testimony, as in this document, I have suggested that the new Murray / Farmington intersection is the right model for the City and County to follow for Murray / Walker. It is curious that neither the County nor City have responded in writing to that suggestion. In any case, the Murray / Farmington intersection has angles very similar to those at Murray / Walker, yet the new design there did not include slip lanes as proposed for Murray / Walker. The result, as I'm sure most of you know from personal experience, is a completely functional intersection that does not appear to pose any meaningful challenges to turning truck traffic (which is much higher than at Murray / Walker), and is much simpler for pedestrians to approach, understand, and use. There is no opportunity for confusion on the part of either drivers or pedestrians at Murray / Farmington.

The County offers as one of its arguments in favor of slip lanes the angles at which Murray and Walker meet. I keep writing that Murray / Farmington is similar. So below I have included an image which is an overlay of two Google satellite images. The Murray / Farmington image has been rotated and made a bit translucent, so you can, in theory, see that the two intersections are, indeed, almost identical in their angularity. If you can't see this clearly, try it yourself with images from Google maps, or break out that old angle tool. I've also posted an animation of this overlay, showing a gradually revealed superimposition, on my personal website at www.sansoucie.com/Animated.gif.



Appendix C – ODOT Slip Lane Removal

It is worth noting that some years ago, ODOT did some work with the County to *remove* a slip lane from the SE corner of TV Highway and 185th Avenue. When asked, an ODOT representative said that this was done as a safety improvement for pedestrians who use that intersection. Note that this intersection has far more truck traffic than Murray / Walker. The state could have added a signal to the slip lane to “improve safety”, as in this proposal. But instead they took it out altogether (“makes the crossing easier and safer for pedestrians”). Better choice!

From: BURNS Katherine S <Katherine.S.BURNS@odot.state.or.us>
Sent: Thursday, September 14, 2017 11:05 AM
To: Marc San Soucie
Cc: JOVANOVIC Ana
Subject: RE: Request for information about TV Hwy / 185th Ave. project

Hi Marc,

The existing northbound right turn slip lane was removed for several reasons. Vehicles making that right turn had to look back over their shoulder to look for eastbound vehicles because of the configuration of the slip lane but they also needed to be looking forward for pedestrians crossing the slip lane. Removing the slip lane improves turning sight distance, makes the crossing easier and safer for pedestrians and allowed for an eastbound bus pull out. Also, there were crashes associated with northbound right turns, both rear ends and conflicts with eastbound traffic on OR8.

Our June 2013 counts show the NB right turn movement is about 16% during the AM peak and about 19% of the PM peak of the NB approach counts. AM peak is 158 NB right turns and PM peak is 144 NB right turns. So that's about 2-3 cars per minute. The storage for the right turn slip lane was only a few cars so as soon as the thru lane had a few cars in it then people wanting to turn right couldn't even get over to it.

Please let me know if you have further questions.

Katherine Burns, P.E.
Interim Traffic Operations Engineer
Oregon Department of Transportation
Region 1 Traffic



OR-8 ROAD SAFETY AUDIT
Tualatin Valley Highway at SW 185th Avenue

Mile Point 6.45 – 6.73
Audit Date: December 5-7, 2011



Appendix "B" – RSA Field Observations

| Field Observation | Risk Potential | Suggestion | Suggested Time Frame |
|---|---|---|----------------------|
| Westbound TV Highway traffic turning right to northbound 185th has limited visibility of pedestrians because of the bus shelter and a tall fence on the Leif's property. Drivers stop suddenly. | Sudden stops may contribute to rear-end crashes. | Improve pedestrian visibility by removing fence and bus shelter. | Project |
| Northbound 185th traffic turning right has a skewed channelized right-turn lane, resulting in poor sight distance for drivers scanning for a gap and high speeds on green. Improper use of stop bar and lack of crosswalk striping. | Current geometry of the northbound right turn slip lane results in poor scanning behavior and varying points where motorists stop before entering TV Highway. The design of the slip lane encourages higher speeds and unpredictable driver behavior that presents additional safety concerns related to pedestrian movements across the slip lane. | Improve the island geometry or install a typical right turn lane. | Project |
| Shrubs obscure view of pedestrians crossing to the right turn island refuge. | | Clear shrubbery to improve pedestrian visibility. | Ongoing |
| CATEGORY 2: OPERATIONS & CAPACITY | | | |
| Congestion during the peak period is not isolated to the subject intersection. Many drivers entering the subject area have already been in traffic and exhibit frustration and impatience. For example, drivers "cut" into the shoulder and sidewalk to enter the southbound right-turn lane. | The traffic data confirms that the intersection is over-capacity. When an intersection is over-capacity, people do unexpected things, including unsafe behavior that may result in crashes. | The RSA team considered the addition of a variety of turn lanes and changes to existing lane configurations, but does not advance any suggestions. See comprehensive solutions in Category 4. | Not Advanced |
| During the peak hours, the queue of vehicles extends indefinitely on all approaches. On the east side, the queue extends to the signal at 170th. By the time that vehicles are stopping at the end of the queue, the front of the queue is moving again. Vehicles stop more than once for the same traffic signal, especially if they are in a turn lane. | Vehicles reach a high speed before being required to stop again. The stop locations are not predictable and often result in sharp braking maneuvers, which could result in crashes. | Option: ITS solution (i.e. stopped vehicles ahead when flashing). | Project |
| Vehicles stopping as a result of the 185 th /TV Highway signal are too far from the signal to see it. The effective length of the queue is also longer than the 35 mph speed zone. | Vehicles in a 45 mph speed zone are stopping for a traffic signal that is in a 35 mph speed zone. | Extend the 35 mph speed zone further west. | Project |

Appendix D – Slip Lanes in the Vicinity

Are slip lanes always used in County intersection designs? No, they are not. While they are typically proposed where there are severe acute angles, they are sometimes also included in perpendicular intersections (Cornelius Pass / Evergreen, for example). And not all angled intersections have them – Murray / Farmington is a notable example.

| Name | Channel | Channel Signal | Left | Straight | Right | |
|-----------------------------------|---------|----------------|------|----------|-------|---------------|
| Cornelius Pass / Evergreen | | | | | | |
| CPR Nb | | | 2 | 3 | | |
| CPR Sb | Yes | No | 2 | 3 | 1 | |
| Evergreen Eb | | | 2 | 2 | | |
| Evergreen Wb | | | 1 | 2 | 1 | |
| Cornelius Pass / Cornell | | | | | | |
| CPR Nb | | | 1 | 3 | | |
| CPR Sb | | | 1 | 2 | 1 | |
| Cornell Eb | | | 2 | 2 | | |
| Cornell Wb | | | 2 | 2 | | |
| Cornelius Pass / Baseline | | | | | | |
| CPR Nb | | | 1 | 2 | | |
| CPR Sb | | | 1 | 2 | 1 | |
| Baseline Eb | Yes | No | 2 | 2 | 1 | |
| Baseline Wb | Yes | No | 2 | 2 | 1 | |
| Brookwood / Evergreen | | | | | | |
| Brookwood Nb | | | 2 | 3 | | |
| Brookwood Sb | Yes - 2 | Yes - separate | 2 | 3 | 2 | |
| Evergreen Eb | Yes | No | 2 | 2 | 1 | |
| Evergreen Wb | Yes | No | 2 | 2 | 1 | |
| Brookwood / Baseline | | | | | | |
| Brookwood Nb | | | 1 | 2 | | |
| Brookwood Sb | | | 1 | 2 | | |
| Baseline Eb | | | 1 | 2 | | |
| Baseline Wb | | | 1 | 2 | | |
| 185th / Evergreen | | | | | | |
| 185th Nb | | | 1 | 3 | 1 | |
| 185th Sb | Yes | Yes - separate | 2 | 3 | 1 | Huge porkchop |
| Evergreen Eb | | | 2 | 2 | | |
| Evergreen Wb | | | 2 | 2 | 1 | |
| 185th / Cornell | | | | | | |
| 185th Nb | | | 1 | 3 | | |
| 185th Sb | | | 1 | 2 | 1 | |
| Cornell Eb | | | 2 | 2 | | |

| | | | | | | |
|----------------------------|-----|----|---|---|---|---------------------------------------|
| Cornell Wb | | | 2 | 2 | | |
| 185th / Walker | | | | | | |
| 185th Nb | Yes | No | 1 | 2 | | No dedicated lane |
| 185th Sb | Yes | No | 1 | 2 | | No dedicated lane |
| Walker Eb | | | 1 | 2 | 1 | |
| Walker Wb | | | 1 | 2 | | |
| 185th / Baseline | | | | | | |
| 185th Nb | Yes | No | 1 | 2 | 1 | |
| 185th Sb | Yes | No | 1 | 2 | 1 | |
| Baseline Eb | | | | 3 | | |
| Baseline Wb | | | 1 | 2 | | |
| 185th / TV Hwy | | | | | | |
| 185th Nb | | | 1 | 2 | | Channel removed by ODOT |
| 185th Sb | | | 1 | 2 | 1 | |
| TV Hwy Eb | | | 1 | 2 | | |
| TV Hwy Wb | | | 1 | 2 | | |
| 185th / Farmington | | | | | | |
| 185th Nb | | | 1 | 1 | 1 | |
| 185th Sb | | | 1 | 1 | 1 | |
| Farmington Eb | Yes | No | 1 | 1 | 1 | Quite acute angle |
| Farmington Wb | Yes | No | 1 | 1 | 1 | Quite acute angle |
| 170th / Farmington | | | | | | |
| 170th Nb | | | 1 | 2 | | Almost as acute as 185th / Farmington |
| 170th Sb | | | 1 | 2 | | 4 wide-radius turns, no channels |
| Farmington Eb | | | 1 | 2 | 1 | |
| Farmington Wb | | | 1 | 2 | 1 | |
| Murray / Farmington | | | | | | |
| Murray Nb | | | 2 | 2 | | |
| Murray Sb | | | 2 | 2 | | |
| Farmington Eb | | | 2 | 2 | | |
| Farmington Wb | | | 2 | 2 | 1 | |
| Murray / TV Hwy | | | | | | |
| Murray Nb | | | 1 | 2 | | |
| Murray Sb | Yes | No | 1 | 2 | 1 | |
| TV Hwy Eb | | | 1 | 3 | | |
| TV Hwy Wb | | | 1 | 3 | | |
| Murray / Millikan | | | | | | |
| Murray Nb | Yes | No | 1 | 2 | | Quite acute angle - no dedicated lane |
| Murray Sb | Yes | No | 1 | 2 | 1 | Quite acute angle |
| Millikan Eb | | | 1 | 1 | 1 | |
| Millikan Wb | | | 1 | 1 | | |
| Murray / Jenkins | | | | | | |
| Murray Nb | | | 2 | 2 | | |
| Murray Sb | | | 1 | 2 | | |

| | | | | | | |
|--------------------------|-----|---------------|---|-----|---|---------------------|
| Jenkins Eb | | | 1 | 1 | 1 | |
| Jenkins Wb | | | 1 | 2 | | |
| Murray / Walker | | | | | | Wheelchair photo |
| Murray Nb | | | 1 | 2 | | Wide radius |
| Murray Sb | | | 1 | 2 | | Wide radius |
| Walker Eb | | | 2 | 2 | | |
| Walker Wb | | | 1 | 2 | | |
| Murray / Cornell | | | | | | |
| Murray Nb | Yes | Yes - synched | 2 | 1 | 1 | |
| Murray Sb | | | 1 | 1 | | |
| Cornell Eb | | | 1 | 1 | 1 | |
| Cornell Wb | | | 1 | 2 | | |
| Cornell / Bethany | | | | | | |
| Bethany Sb | Yes | No | 2 | (1) | 1 | Joint left/straight |
| Bethany Nb | | | 1 | 1 | | |
| Cornell Eb | | | 1 | 2 | | |
| Cornell Wb | | | 1 | 2 | 1 | |

Appendix E – Pedestrians and Pork Chops

Life on a pork chop. While not at issue today, this is another slip lane of very low value, at 185th and Walker (185th southbound). How many pedestrians will fit onto the proposed pork chops at Murray / Walker? How many school groups will exceed that capacity?



Appendix F - Prior Board of Commissioners Comments

To my knowledge, the current Board of Commissioners for the County has not discussed the details of this project or offered opinions about it. However, in response to my original raising of concerns in 2016, several members of the Board did offer opinions. What is fascinating is to see the Chair at that time compare this intersection to an intersection in a rural part of the county, which sees a great deal of truck traffic and almost no pedestrians (highlighted). This is symptomatic of the root problem I am hoping to address in this appeal. Murray / Walker is not a rural intersection, nor located in an industrial area. In fact, the then-chair was basically making my point for me.

In Beaverton, pedestrians are to be given convenience, safety, and directness of travel.

Sent: Friday, July 15, 2016 10:26 AM
To: Greg Malinowski; Dick Schouten; Gary Stockhoff
Cc: Andy Duyck; 'RoyR@rascpas.com'; Bob Terry; Marc San Soucie
Subject: RE: Comments and request regarding Murray/Walker intersection - Road Design Standards

Everyone, sorry for the delay in getting back to you. Walker Road is not a designated freight route in our TSP. However, Murray is an "Over-Dimensional" truck route. I've attached a map from the TSP that shows truck routes throughout the county. I appreciate Marc's comments, however we believe that we've addressed the "sweeping turn" intersection issue with a pedestrian island. The comment does raise broader policy issues, however.

We have been talking with the Port of Portland about their interest in conducting a Washington County freight study. Perhaps this could be a venue to explore some of those policy issues. The issues relate back to our standard road cross sections, design speeds within the UGB, pedestrian treatments on truck routes and others.

Thanks again, and let me know if you have any questions.

Andrew

Andrew Singelakis, AICP | Director, Land Use & Transportation
Andrew_singelakis@co.washington.or.us

From: Greg Malinowski
Sent: Monday, July 11, 2016 5:30 PM
To: Dick Schouten; Andrew Singelakis; Gary Stockhoff
Cc: Andy Duyck; 'RoyR@rascpas.com'; Bob Terry; msansoucie@beavertonoregon.gov
Subject: RE: Comments and request regarding Murray/Walker intersection - Road Design Standards

Folks,

Have we developed a map of freight routes for the urban part of the county? Walker road to 217 is currently not a good freight route between Murray and 217, too narrow for now. It is continuing to be uncertain when we can widen it to handle freight. At the intersection of Walker and 158th, 158th provides pretty good access to HWY 26 both east and west, Murray provides pretty good through way to HWY 26, and TV and Farmington Routes, since we have good through routes on 158th, Murray, and Cedar Hills, I am not sure why we need to get trucks on to Walker in either direction at Murray?

I am pretty sure the Nike is not going to have large freight trucks just turn into their headquarters on any entrance the driver wants. What are the key entrances Nike will direct freight haulers it use?

Thanks, Greg

Greg Malinowski
Commissioner District 2
greg_malinowski@co.washington.or.us

From: Dick Schouten
Sent: Monday, July 11, 2016 1:10 PM
To: Andrew Singelakis; Gary Stockhoff
Cc: Andy Duyck; 'RoyR@rascpas.com'; Greg Malinowski; Bob Terry; msansoucie@beavertonoregon.gov
Subject: FW: Comments and request regarding Murray/Walker intersection - Road Design Standards

Andrew or Gary:

I believe both Murray Blvd. and Walker Road are freight routes? But I am sure there is analysis beyond that with respect to the dimensions/design of a particular intersection.

Dick

From: Roy Rogers <RoyR@RASCPAS.com<<mailto:RoyR@rascpas.com>>>
Date: July 6, 2016 at 2:31:27 PM PDT
To: Andy Duyck <Andy_Duyck@co.washington.or.us>
Cc: Andrew Singelakis <Andrew_Singelakis@co.washington.or.us>, Dick Schouten <Dick_Schouten@co.washington.or.us>, Greg Malinowski <Greg_Malinowski@co.washington.or.us>, Bob Terry <Bob_Terry@co.washington.or.us>, Robert Davis <Robert_Davis@co.washington.or.us>, Gary Stockhoff <Gary_Stockhoff@co.washington.or.us>
Subject: Re: Comments and request regarding Murray/Walker intersection - Road Design Standards

Agreed

Roy

Sent from my iPhone

On Jul 6, 2016, at 2:16 PM, Andy Duyck <Andy_Duyck@co.washington.or.us> wrote:

I am reminded of other intersections such as Corn-Schefflin/Zion church where this same discussion was had. The intersection was constrained, and then because it didn't function for freight, the county had to come in later and add a sweeping right turn lane at considerable expense. Marc's point would be appropriate on a neighborhood street, but not on a major freight route.

Andy

Sent from my iPhone

On Jul 6, 2016, at 1:28 PM, Marc San Soucie <msansoucie@beavertonoregon.gov> wrote:

Andrew:

Again, thank you for taking the time to carefully review the initial proposal and help develop this alternative. It is a significant improvement, from my point of view, with a reduced impact on the area around the intersection.

I hope that as future large intersection projects come up in the denser urban areas of the county, particularly those with significant residential communities alongside and in walking distance, that this configuration would be just another option to be considered, not "an exception". I think this should be the starting point, not the endpoint, of any design alternatives analysis.

Also, please consider reviewing other major intersection designs-in-progress with this lens!

I will continue to disagree about the sweeping turns at this intersection. Perhaps you have data that suggest otherwise, but as a frequent user of this corridor I can't agree that this intersection is used by a large number of large trucks that would need such turn profiles. We have hundreds of intersections in this county which do not have sweeping right turns, and trucks have been managing to turn at those intersections for years - decades. I think that design should be reserved for proven high-use freight intersections, of which this is not one.

In addition, please note that the design attempts to afford a measure of convenience to large trucks at the cost of convenience, and possibly safety, for pedestrian users. The turns and islands make for two separate crossings for pedestrians moving in any direction (it would be three if all four corners were to retain the islands). If the turn crossing is signalized, you are now asking pedestrians to wait through two separate light cycles to make a crossing, unless the signals are synchronized, in which case the crossing delay is even longer. If the turn crossing is not signalized, it becomes unsafe for pedestrians for the reasons I originally noted.

The design already gives right-turning traffic in all directions a dedicated turn lane. The small improvement in turning convenience for a modest number of large trucks doesn't seem to justify the extra investment in land, asphalt, concrete, signs, signals, and pedestrian impact. I still suggest you drop all of the sweeping right turns.

Thank you,

Marc