

Monroe Street Neighborhood Greenway Concept Plan  
**Project Advisory Committee (PAC) Meeting #3**

Wednesday, February 18, 2015

Community Meeting Room, Public Safety Building – 4:00pm to 6:00pm

## Summary Notes

### GENERAL, PROJECT-WIDE COMMENTS

- **Connection to Trolley Trail**
  - One PAC member proposed including guidance in the final plan for improvements to connect the Trolley Trail along McLoughlin Blvd to the official start of the neighborhood greenway at 21<sup>st</sup> Ave. In particular, the crossing at McLoughlin could be further improved with a bike-activated signal and ensuring that crossing times are adequate for pedestrians.
- **Fire & Emergency Vehicle Access**
  - Clackamas Fire District indicated the need for 20-ft lateral clearance to accommodate fire trucks (26 ft at fire hydrants).
  - Concern about fire trucks needing to pass oncoming cars near chicane areas.
  - Diverters should be mountable.
  - Fire truck turning template should be used to preserve through access.
- **Cost and Phasing Opportunities**
  - Consider the expense of maintaining landscaped areas and/or stormwater swales.
  - Question about the difference in costs of speed bumps versus proposed curb enhancements.
  - Some PAC members expressed concern about potentially high costs for plan implementation. Others encouraged the City to seek creative funding for the plan.
  - Given cost concerns, several PAC members expressed support for prioritizing improvements based on perceived community need.

### SECTION A (21<sup>ST</sup> AVE TO OR 224)

- **Parking modifications**
  - Concern expressed by PAC representative from Historic Milwaukie NDA that more on-street parking be retained in this section.
  - If on-street parking is reduced, what are the tradeoffs for improved pedestrian amenities and stormwater management, especially in constrained right-of-way?

### SECTION B (OR 224 TO CAMPBELL ST)

- **OR 224 Intersection**
  - PAC members were pleased to see that access to the medical offices was maintained by allowing left turns from OR 224 to Monroe St eastbound.
  - The PAC expressed general support for crossing improvements to reduce the sense of OR 224 as a barrier. One PAC member said he didn't experience crossing difficulties with the current configuration; others supported curb extensions and median refuge islands to make crossing easier for the elderly and families with young children. Long signal-cycle lengths were also mentioned as an impediment to crossing; changes to signal timing will need to be coordinated with the Oak St and Harrison St signals.

- One PAC member expressed concern about possible safety issues on OR 224 due to proposed traffic pattern changes such as removing the southbound right-turn lane and installing the median diverter and curb extensions. Drivers who are distracted or unfamiliar with the area may pose safety risks to pedestrians waiting or crossing at the intersection.

### **SECTIONS C&D (CAMPBELL ST TO 42<sup>ND</sup> AVE)**

#### **• Railroad Crossing Vicinity**

- General support among PAC members for proposed improvements along Oak St, including the crossing improvements at Campbell St.
- Desire for continued coordination with ODOT Rail and Union Pacific Railroad during project planning, especially with regard to the feasibility of a traffic signal at the T-intersection of Oak/Monroe/Railroad (e.g., queuing issues).

#### **• 37<sup>th</sup> Ave Intersection**

- Concerns expressed by several PAC members regarding local access impacts due to the proposed median diverter and the potential for diversion onto neighborhood streets. What are the tradeoffs for local access and neighborhood livability?
- One member of the PAC felt that the topic of diversion could be pivotal in determining whether there is overall community buy-in for the project.
- Question about whether traffic calming measures alone could be enough to sufficiently reduce traffic volumes and avoid the need for diversion.
- If diversion is deferred or phased, several PAC members suggested that the City should commit to monitoring traffic conditions to see if project objectives are achieved, or if diversion is still warranted even with the addition of other traffic calming improvements to the street.
- Suggestion to improve visibility at median diverters by installing candlestick bollards or other reflective treatments to reduce the likelihood of diverters being driven over.
- Consider diversion options at 42<sup>nd</sup> Ave, such as a partial closure diverter blocking eastbound auto traffic.

#### **• Washington St Alternative Route**

- Instead of using Monroe St, many PAC members agreed that Washington St could be a suitable, low-stress route for bicycle riders that may not require additional upgrades besides wayfinding and an improved crossing at 37<sup>th</sup> Ave.
- There was general agreement among PAC members (with one exception) that the safety and viability of a Washington St route depends on guaranteeing that there will be right-of-way reserved for a path through the McFarland site when it is developed. Without the path, there is no safe bicycle access to Washington St.
- A majority of the PAC agreed that pedestrian system upgrades and traffic calming improvements should be included on this section of Monroe St (37<sup>th</sup> Ave to Home Ave) even if bicycle access is provided via a multi-use path connecting to Washington St.
- Concern expressed about the challenge the Washington St alternative presents in maintaining the integrity of the neighborhood greenway vision throughout the Monroe St corridor.

### **SECTION E (42<sup>ND</sup> AVE TO LINWOOD AVE)**

#### **• 42<sup>nd</sup> Ave Intersection**

- One PAC member suggested considering a partial closure diverter at 42<sup>nd</sup> Ave instead of 37<sup>th</sup> Ave, in order to reduce travel volumes eastbound between 42<sup>nd</sup> and Linwood Aves.

- **Design**
  - General approval from PAC on the transformative impact of the proposed improvements, including the new side-path, traffic calming, and stormwater management improvements.
  - Strong desire to install upgrades throughout the entire eastern section, even if Washington St is chosen as the preferred bicycle route.
  - There may be a need to shrink the landscaped buffer or remove the south sidewalk in order to meet fire response access guidelines.
- **Linwood Avenue Intersection**
  - General support for crossing improvements, including user-activated signals, curb extensions, a median refuge island, and improved crosswalks/signage.
  - Concern that, due to the discontinuous street grid in the area, the proposed median diverter would cause access impacts for local residents by eliminating left turns onto Linwood Ave and diverting traffic onto local streets like Home and Stanley Aves.
  - There was a suggestion to explore a different diversion scenario instead, making Monroe St egress-only at Linwood Ave, allowing local residents to continue to make left turns onto Linwood Ave but restrict access into the neighborhood.
  - It was noted that, under some partial closure diversion scenarios, future traffic conditions on Linwood Ave would likely dictate installing a full traffic signal at Monroe St, which could potentially increase traffic volumes unless diversion is used further upstream to block cut-through traffic (either at 37<sup>th</sup> or 42<sup>nd</sup> Ave).

### **COMMENTS RECEIVED FROM PAC MEMBERS AFTER THE MEETING (BY MARCH 2<sup>ND</sup>)**

- **Mark Gamba (City Council Liaison)**
  - Concern with lack of connection to Trolley Trail.
  - Eliminating the right-turn lane from southbound OR 224 (i.e., allowing a right turn but not giving vehicles a chance to decelerate) is asking for rear-end accidents.
  - Crossing Oak St at a new McFarland path along the east side of the railroad tracks will be far more elegant and solve several problems.
  - The McFarland path and Washington St route will create a greenway that more families will be comfortable with while not jamming up auto transportation in Central Milwaukie. This should be Plan A, with a Plan B including diversions at 37<sup>th</sup> and 42<sup>nd</sup> Aves.
  - Diverters should be phased in if the various traffic calming improvements (and 20 mph speeds throughout) don't sufficiently reroute traffic. A timeline should be established up front.
  - In the eastern section (42<sup>nd</sup> Ave to Linwood Ave), neither ped path should take out mature trees but should instead be routed around them.
  - A better solution at Linwood Ave is required than what was presented. Some form of partial diverters might be it.
- **Jon Stoll (Ardenwald NDA)**
  - The suggested alternative route that climbs up Washington St is a great idea if you truly want to make this a family-friendly "bike way." The severe grade on Monroe St between 37<sup>th</sup> and 40<sup>th</sup> Aves is a major deterrent to those who are not bike enthusiasts.
  - I am troubled by the goal of reducing traffic to some unrealistic target. The section on Oak St, and the section of Monroe St from Oak St to 42<sup>nd</sup> Ave, has some higher traffic counts that are going to be difficult to reduce to the "Greenway" threshold. I can't see that using diversions is going to change the traffic count that much, and diversions greatly increase the likelihood of opposition to the plan. Diversions = Divisiveness.

- We have been considering the various options (chicanes, speed bumps, diversions) in the absence of understanding how much all of this will cost. Someone observed that we have “champagne tastes, but a beer budget.” **To me, the primary purpose of the Greenway is to improve safety for bicycles and pedestrians.** With that in mind, our focus should be on a flashing crosswalk at Linwood Ave and Monroe St, a flashing crosswalk at Oak St, and some sort of pedestrian improvements in the eastern section (42<sup>nd</sup> Ave to Linwood Ave). Then, to the extent the budget will support it, some traffic circles and perhaps some speed bumps can be included to work towards traffic “calming.”

- **Greg Baartz-Bowman (Historic Milwaukie NDA)**

- Overall it’s not a bad design, but I think the consultants missed not just the realities of what Milwaukie can afford but the need for gradual improvements for a skeptical and cost-conscious public. I feel we got the newest iteration of Greenway technology, and from the Historic Milwaukie perspective the design does not reflect the neighborhood’s wishes.
- Our hope and to a certain extent our understanding was that no on-street parking would be lost. Within that statement is an understanding that parking would also not shift to other locations along Monroe St. We also did not request or anticipate the narrowing of Monroe St along the Historic Milwaukie section.
- The section of the Greenway in Historic Milwaukie has some of the lowest traffic counts on Monroe and barely registered above the Greenway threshold. Signage and sharrows are the universal request from the Historic Milwaukie NDA, not a narrow road, lost parking, and chicanes. It would be great to see a design for the Monroe Neighborhood Greenway that reflects these wishes.

**Greg’s individual comments (outside of his NDA role):**

- I think the consultant team did a fair job of executing a difficult project. I do believe the team went overboard in design in an effort to give us the latest and greatest. A balance point was missed in the conversations between the PAC and the team.
- I like the design of Section 3 (42<sup>nd</sup> Ave to Linwood Ave), minus the chicanes. The presence of chicanes heightens the loss of the rural feel in this section and from Day 1 ‘Rural Feel’ has been part of the conversation for this section. I really like the design improvements at Linwood Ave, especially the Activated Signal. It’s fantastic to know that Clackamas County received a grant for east of Linwood.
- Section 2 (Hwy 224 to 42<sup>nd</sup> Ave) is the most challenging area of the Greenway. Diverters are the stumbling block in this section and the reps from Ardenwald and Hector Campbell stressed the point. I hope the consultant team heard that diverters at 37<sup>th</sup> and/or 42<sup>nd</sup> Ave are a real problem for the success of the project. The alternative path offered by members of the PAC is really the diverter we need disguised as the Greenway itself. I hope the consultant team has had the necessary time to realize this.
- In Section 1 (21<sup>st</sup> Ave to Hwy 224), the design decision to narrow Monroe St, eliminate on-street parking, and add chicanes was a serious misread by the consultants as to how best to implement this project. Somehow the neighborhood’s intentions got lost in translation. This section is best served by signage and sharrows. The elimination of the left turn from Hwy 224 on to Monroe St westbound is an excellent decision. Bravo if this can be accomplished.
- Conclusion: In my opinion this project should not be viewed as the Taj Mahal of Greenways. Limited but effective change and improvement will ensure an approving public and reasonable budget. The team from CH2M Hill in their initial proposal highlight that “They will take their lead from the public,” and that is a statement that has resonated with me since Day 1. Now is the opportunity for CH2M Hill to fulfill the vision.

- **Andy Schmidt (Bike Milwaukie)**

- I’m fully on board about the “alternate” McFarland site/Washington St route. I think it should be the preferred route. It solves car vs bike problems and makes the route more 8-80 (years old) accessible...at least for bikes.
- I’m all for maxing out diverters but fear that diverters at 37<sup>th</sup> and/or 42<sup>nd</sup> Aves will mobilize the opposition. The traffic diverters at Hwy 224 and Linwood Ave seem integral to this project. I don’t think we should budge on those.

- **Matt Menely (Bike Milwaukie)**

Two points from the 100,000-ft level of the project:

- The bigger conversation is about how to phase this project in, and there are various ways do that. Examples of different approaches to phasing in could include (a) Only installing sharrows, signage, and key diverters, and filling in with other elements later; (b) Building each section out in its entirety; (c) Building certain elements as small grants are found (which may be the least effective strategy to building a functioning system).
- One way to think about how a plan like this is done is that we need to throw every element into it that we can, and then cut out the ‘fat’ later in the engineering/funding phases so that we are not cutting the ‘bone.’

- **Chris Ortolano (PSAC)**

- As we move out of the idea stage, into the design evaluation phase, it is important that community support be measured using a consistent standardized approach. This could be done with a hard copy survey form that is distributed at the public workshop], PAC meetings, and to the groups we represent. Simple surveys are common at public hearings, and many of us are accustomed to using them.
- Many of us are familiar with providing input in a standardized manner, that includes both a narrative and a scoring element. Although unscientific, the scoring element provides a better way of measuring community support than simple narrative alone, which is buried in spreadsheets, hard to quantify, and even harder to link to changes in the visual design. If a scored level of community support were added to the Monroe Criteria Evaluation.pdf, it would be beneficial to Council, PAC members, and others in the community to evaluate the project.
- For each key intersection, the survey could measure:
  - 1) Public Safety
  - 2) Traffic Calming
  - 3) Cost-Effectiveness
  - 4) Connectivity to amenities such as parks, schools, shopping
- In addition the survey could also score the comprehensive design elements that are common to most/all sections:
  - 1) Chicanes
  - 2) Bio-swales
  - 3) Street Narrowing
  - 4) Proposed Diverters (at specific intersections)
- A scorecard to rate intersection treatments and design elements would help the PAC to evaluate and recommend a phased-in approach to Council. As funding for this type of infrastructure improvement will be limited well into the foreseeable future, *it is important to recommend cost-effective solutions that have the most community support.*
- I would highly encourage the Planning Team to create a survey of this type before the next public workshop on March 18. Perhaps a draft version of this survey could be tested at the next PAC meeting, on March 4, and then results evaluated to consider its effectiveness.

- **Janet Cartmill (alternate for Linwood NDA)**

- First, the only comment I heard at our last neighborhood meeting was an attendee didn't like diversions. I have heard that mentioned by others as well, so to get community support we may need to limit diversions at first and to hope the calming devices do great job at encouraging motorists to use King Rd or Railroad Ave.
- **Section A:** Is the distance between the existing island and the bump-outs adequate for vehicles to turn?
- **Section B:** The circle at Penzance St – traffic calming and improving the turns to and from Penzance?
- **Section C:** Crossing Monroe St at Campbell St is better than crossing at Railroad Ave.

- **Section D:** The diversion at 37<sup>th</sup> Ave, in particular, puts traffic at Harrison St and 37<sup>th</sup> Ave, at the top of the hill where visibility of uphill traffic on Harrison St is poor.

I don't understand why there is a right turn onto Monroe St from 37<sup>th</sup> Ave northbound.

The choice between Option 1 and 2 of Section C/D would depend on whether the Washington St bike path idea can be developed. The idea of having bikes go up Washington St is an excellent idea. As has been noted, it is a much easier ride and has much less traffic. Hopefully, a path through the undeveloped property or on 37<sup>th</sup> Ave from Monroe St to Washington St can be worked out.

- **Section E:** Is a 4-way stop and a traffic circle necessary at Home Ave? I'm aware there seems to be a lot of running stops (non-stops) at that intersection so maybe both are needed. Also at 42<sup>nd</sup> Ave.

The speed bumps at the curve at 52<sup>nd</sup> Ave should reduce speeds in that area where visibility is limited.

At the north side of Monroe St at 55<sup>th</sup> Ave, drainage has been an issue—perhaps additional bioswales would help.

A speed bump near 60<sup>th</sup> Ave would slow westbound traffic as it approaches the park at the top of the hill.

The effect of the diversions at Linwood Ave and Monroe St on residential streets, especially Stanley Ave (a future bike way), is a concern. There are few streets that allow traffic into the neighborhood from King Rd and Railroad Ave, and none from Linwood Ave that go east/west. East of Home Ave, there are no east/west streets that go through more than a block or two.

- **Scott Hoelscher (Clackamas County Planning Dept)**

- Conceptually, the County likes the improvements/changes shown in the concept plan for the Monroe St-Linwood Ave intersection. However, it would be nice to see results of the traffic analysis in order to confirm that the proposed solution will work from a traffic circulation standpoint.
- General comment: What are implications of the traffic diversion on King Rd, which is at about 15,000 ADT (or near capacity)? Also, changes could impact traffic management efforts such as signal timing on King Rd. Is the consultant preparing horizontal and vertical profiles for this intersection? Our Traffic Engineering Department would be interested in seeing these.
- General comment: Turn radius – will need to look at this to verify that turn movements for different type of vehicles will be possible through the intersection.
- Type of beacon? – is there more detail/information on the proposed beacon [at the Linwood-Monroe intersection]?
- In sum, concept looks good but the County can't say Yay or Nay 'till we see results of traffic analysis.

- **Russ Stoll (Ardenwald NDA)**

- I think in general the current proposal is a good concept document. Since none of it is funded, and if funds can be acquired only part of this concept can be implemented, I think it is important to set priorities. Whatever we do in Phase 1 will change the conditions for Phase 2. We should decide what parts of this concept are most important and should be Phase 1. This is what our discussion should be focused on. Other parts of the plan can stay as-is until Phase 1 is completed and we see how things have changed. These Phase 2 discussions should be postponed.
- The Monroe Greenway can be divided into two sections, downtown to 42<sup>nd</sup> Ave, where infrastructure such as bike lanes and sidewalks already exist, and 42<sup>nd</sup> Ave to Linwood Ave, where there is nothing. While the infrastructure in Downtown/42<sup>nd</sup> may be inadequate for our dreams, Phase 1 must be focused on 42<sup>nd</sup>/Linwood. There is much to discuss here. The addition of four speed bumps alone on the 42<sup>nd</sup>/Linwood route may make a substantial reduction in cut-through traffic. A pedestrian path is absolutely essential. How much we can afford of other traffic calming measures in Phase 1 is an unknown, so we should prioritize those.
- The “Washington St Alternative” seems very bike-centric and not as friendly for pedestrians and limited-mobility scooters who are more likely to seek a direct route. It also seems to subtract from the concept of Monroe St as a green corridor. Perhaps some signage as an alternate bike route would suffice.

- I think the only two things worth discussing on the Downtown/42<sup>nd</sup> stretch are the Hwy 224 and Oak/UP crossings, but most of the funds for Phase 1 should be spent on the 42<sup>nd</sup>/Linwood side.
- **Jason Start (Linwood NDA)**
  - I've got zero problems with the Washington St route as a recommended or alternate bike route, but I've got to agree with Russ' earlier statement that the route feels very bike-centric. If the focus shifts from Monroe St to Washington St in this zone I'm afraid we may lose some of the “complete” greenway we're seeking. Pedestrians, disabled persons, etc., won't be using the Washington St route—really, only cyclists will. And, as mentioned in the PAC meeting, it's fairly ready-made as a cycling route. All Washington St really may need is signage—maybe some sharrows—and a flashing crosswalk at 42<sup>nd</sup> Ave. I'd support that, but I'm not sure it falls under the scope of this project. If Washington St diverts attention or resources from Monroe St, I feel the project could lose some of the multimodal nature that a greenway is all about. I sincerely doubt we will get more than one shot to build a greenway that is a jewel of the community in the next 20 years or so.
  - I fully understand that diversions are going to be very unpopular with some of the neighborhood residents. I think if we can get one diversion at Monroe St and Linwood Ave, that will cut down enough entry traffic to have the desired effect. The proper treatment at Monroe St and Linwood Ave will still make it terribly inconvenient to cut through the neighborhood whether you're traveling east or west and should make it faster to travel via Railroad Ave or King Rd (which is the desired result). Speed bumps between 37<sup>th</sup> Ave and 42<sup>nd</sup> Ave and on the curve by 52<sup>nd</sup> Ave, coupled with chicanes, swales, and other treatments, should make Monroe St pretty undesirable to non-neighborhood drivers. I think it's worth the risk to get community buy-in.
  - I think it's important to remember that Monroe St as it is today (highly flawed) is still a far worse corridor for pedestrians than cyclists. Effectively, you walk in the street. Disabled person on a scooter—in the street. Push a baby stroller—in the street. Walk your dog—in the street. There are zero effective east/west through streets for a pedestrian to travel other than Monroe St. The neighborhood is a warren of cul-de-sacs, dead-ends, zig-zags, etc. The choices are Monroe St on the street or King Rd on the 18-in “sidewalks” next to 45-mph traffic. It's a pretty dismal experience to walk down to Safeway, let alone trying to stroll downtown. What we need to make Monroe St pedestrian friendly will serve cyclists as well.
- **Brad Albert (COM Engineering Dept)**
  - **Section A1**
    1. Would need to look at the turning movement from large truck exiting Milwaukie Lumber onto Monroe St heading west. The chicanes shown may prohibit proper turning movement.
    2. Are chicanes needed if the street is narrowed to 20 ft of driving width? It would seem the narrowing of the road may reduce vehicle volume and speed to greenway levels alone. Chicanes should be phased in.
    3. Do the chicanes allow larger emergency and delivery vehicle movements, especially around the existing island at 29<sup>th</sup> Ave?
  - **Section B1**
    1. Will ODOT allow the right turn lane from Hwy 224 southbound to be eliminated? Few right turns happen there, but still want to make sure that it is safe for rear-end collisions on Hwy 224.
    2. Should look at the level of service for the Washington St and Harrison St intersections if we divert traffic from Monroe St. We don't want to cause another intersection to fail because of the diversion.
    3. Traffic circle at Penzance St may not be needed. I believe volume is low in this stretch and not sure if a circle will make any additional impact, especially with the diversion in place.
    4. May want to remove the two chicanes as shown to allow for more parking on the north side of Monroe St by the medical office. Again, volumes in this section are low and will probably be lower with the diversion.

– **Section C1**

1. Median on Oak St on south/west side of tracks is shown incorrectly. I don't believe the rail would allow us to shorten and still have a quiet zone.
2. Pedestrian signal may work better at the south side of the Campbell St/Oak St intersection. The crosswalk is currently in place and further away from the track. Would need to coordinate with UPRR and ODOT Rail.
3. Signal at Monroe St/Oak St would need to be coordinated with UPRR and ODOT Rail. Would need to study to see if it met traffic warrants to install a signal.

– **Section D2**

1. An in-depth study should be performed prior to placing a diversion at 37<sup>th</sup> Ave and Monroe St. Would need to see how much traffic is diverted to 37<sup>th</sup> Ave/Harrison St. Also would need to know how it would impact the west bound Railroad Ave traffic. This is a treatment that should be phased in when other aspects of the greenway have been constructed.
2. Not sure we need a traffic circle at 42<sup>nd</sup> Ave. It is already a 4-way stop and not sure what benefit the traffic circle will add.

– **Section E1**

1. Sections E1-E3 should be of high priority due to the lack of pedestrian facilities in this section. Other sections have at least some pedestrian facilities.
2. Echoing comments from earlier regarding the use of chicanes. Want to make sure emergency and delivery vehicles can navigate. Not sure they are needed if the road is narrowed.
3. Not sure of the benefit of a traffic circle at Home Ave provides. Large delivery trucks use that intersection to access the corner market. Would want the market to have adequate delivery access.

– **Section E2**

1. Doesn't seem that speed humps need to be installed if other treatments (especially the diversion at Linwood) are installed.
2. Center islands at 55<sup>th</sup> Ave need to be designed to allow proper turn movements.

– **Section E3**

1. Would need to study the diversion at Linwood Ave a bit. Not a lot of connectivity for local residents on Monroe St in that area (King Rd to Stanley Ave, or Railroad Ave to Stanley Ave). We don't want a large increase in traffic on Stanley Ave if it were to become a greenway as well.

– **Washington St Alternative**

1. This would take some negotiation or possibly some exaction through development. Property owner may not be willing to reduce the size of useable area for development.
2. Would require crosswalk treatment at 37<sup>th</sup> Ave and Washington St. At least Monroe St and 37<sup>th</sup> Ave is a 4-way stop currently.
3. Would require a crosswalk treatment at 42<sup>nd</sup> Ave and Washington St. 42<sup>nd</sup> Ave seems to have a fair amount of traffic in peak hours. 42<sup>nd</sup> Ave and Monroe St is at least a 4-way stop currently.
4. Would Monroe St receive a greenway treatment if the alternative is chosen? Seems as though it wouldn't be needed if we have an alternative route. This may not be the desired option to keep all sections of Monroe St a greenway.
5. This seems like it may be a longer route for bikes and pedestrians trying to move east/west through the city than staying on Monroe St.

• **Kenny Hill (COM Streets/Stormwater Divisions)**

- With chicanes in general, will want to see the transition in the curve coming back to the non-chicane curb line, to be sure that street-sweeping equipment will be able to get in there and not have debris left behind. The transitions will need to be smooth.



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- If some chicanes end up not being stormwater facilities, we will want to figure out where the water will go. This could be an issue especially where driveway approaches lead to a driveway lower than the street grade and stormwater could create flooding.
  - It goes without saying that more stormwater swales mean more maintenance costs. The same is true with pavement markings, though placement location can reduce wear.
  - Where there are traffic circles, if there are to be trees in the middle then there may be clear vision concerns and maintenance costs (i.e., for pruning).
  - For the bike-activated signals, who will maintain them? The City currently has no staff trained to service or maintain these types of signals, and the ones we have already are maintained by the County. Would the County take on responsibility for new ones as well?
  - Planting detail—we'll of course want to use street trees that grow straight up, to avoid maintenance problems and obstruction of vehicles.
  - The pavement-treatment material used in the green bike boxes is expensive to maintain.
  - The City won't want to incur the ongoing costs of maintaining painted curbs for "No Parking" areas, so hopefully that is not part of the design detail.
  - Will irrigation be needed for new landscape strips (non-stormwater swales), and will the City be mowing those that are not clearly adjacent to an occupied property that would be responsible for them?
  - For the chicanes proposed near 40<sup>th</sup> Ave, that hill is one that gets sanded by the City during snow/ice events to improve traction—this is one spot where vehicles can slide in those conditions, and the chicanes and narrowed street could make this a little more dangerous in those conditions.
  - There is some ponding of stormwater at Campbell St and Oak St that should be addressed one way or another with the engineered design.
  - With Option 1 at Oak St/Monroe St, where the asphalt ramp drops into the street, it would be good to see some bollards or something there, since there could be a safety issue from westbound cars approaching the intersection on Monroe St (the curve of the road could make it easy for folks to veer up onto the path).
  - Not a fan of pervious materials for paths, due to maintenance issues. This has been the City's experience with keeping pervious concrete on Logus Rd clean and free of moss.
  - There are ponding issues at 44<sup>th</sup> Ave and Wood Ave that should be addressed, perhaps with swales.