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Sent: Wednesday, September 13, 2017 11:01 AM
To: kotlyar@a2gov.org; Hutchinson, Nicholas; Allen, Jane (Project Management); Bradley Parsons
Cc: Coleman, Kayla; Linda Diane Feldt
Subject: Pauline Blvd Resurfacing Feedback

Igor, Jane and Nick:

Thank you for meeting with Brad and I last week to discuss the Pauline Boulevard Resurfacing project. It was an informative meeting, and a fruitful beginning to be augmented by future public engagement sessions and Transportation Commission presentations.

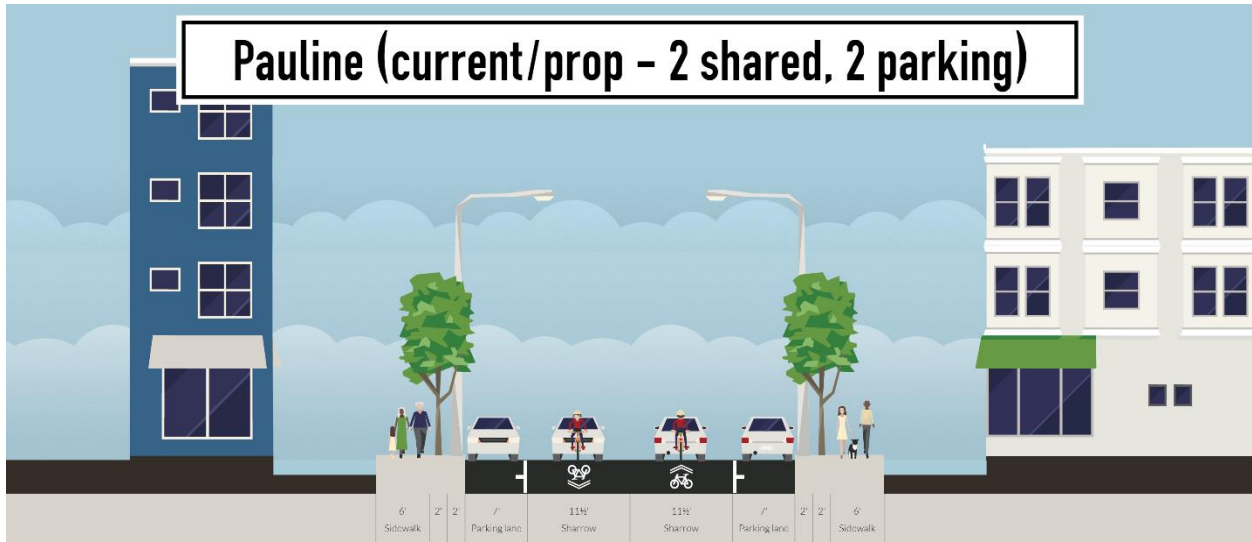
Brad and I separately had some additional feedback that we would like to provide to city staff. Brad's recommendation is that the necessary city staff members should revisit the city's Non-motorized Transportation Plan concerning Pauline Blvd.

My feedback focuses on the extent we discussed at more length during our meeting, between Redeemer and Seventh. According to my notes, one of the proposed ideas would include 1 parking lane (7'), 2 painted bike lanes (5' each), and 2 travel lanes (10' each). That would make the width of this segment 37'. Using an online tool called [StreetMix](#), I came up with a few street designs - for a street that is 37' wide - to compare/contrast the two options that we discussed during the meeting, as well as a third alternative.

A few caveats:

1. I realize that the street width changes over the course of the entire extent, and that other considerations will need to be taken into account that are not accounted for here. This isn't meant to be an exhaustive engineering analysis but to spark some debate and discussion, which further analysis (including a potential parking study) can help shape in more detail.
2. Along those lines, please ignore the sidewalks/buildings - I didn't want to assume the sidewalk widths and didn't spend time changing anything outside the curb-to-curb roadway.

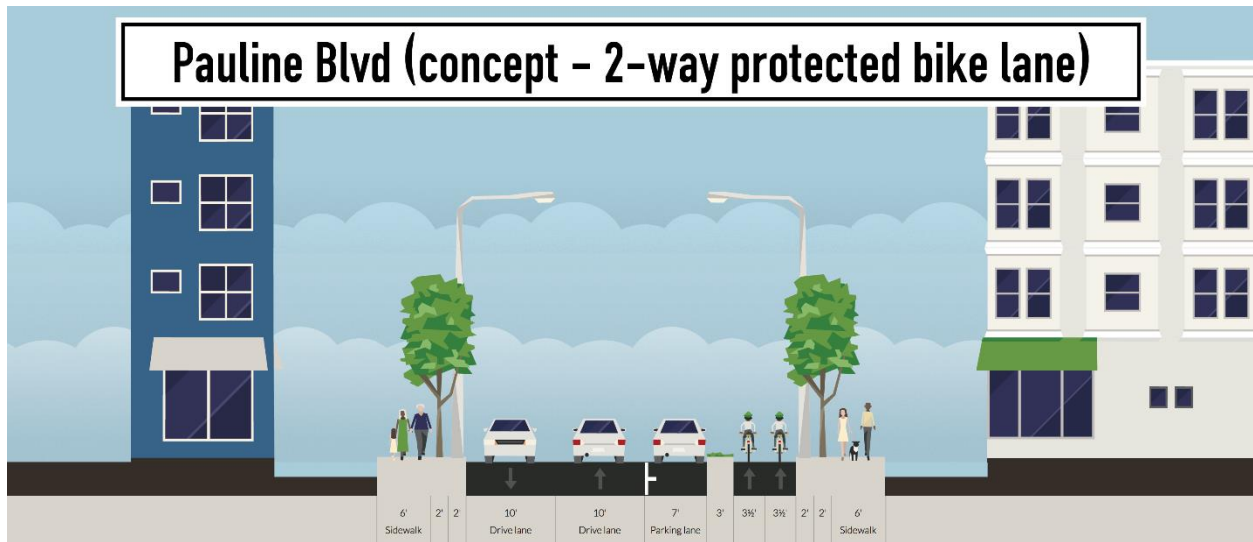
The first alternative is the current condition, and one that staff has proposed to keep: 2 parking lanes (7' each), and 2 shared travel lanes (11.5' each).



The second alternative is one the city has also discussed: removing the north parking lane to create 2 painted bike lanes (5' each), 2 vehicle travel lanes (10' each), and retaining the south parking lane (7').



The third alternative is one we did not discuss but that I wanted to share as a concept to consider. Instead of 10' of separate painted bike lanes, it would use the parking lane to protect a 2-way bike lane (3.5' each direction), with a 3' buffer lane (NACTO's recommended buffer distance between a parking lane and bike lane to help prevent dooring).



Parking protection would only be able to be applied between Redeemer and Seventh, as Redeemer to Stadium is narrower and doesn't have parking. It would require a different treatment if the city wanted to maintain the protected bike lane for the project's entire extent, which would be a more meaningful distance. One option would be to use pylons. I came across an example this weekend while traveling to Pittsburgh. My hotel overlooked a 2-way protected bike lane on Penn Avenue in the Strip District neighborhood:



I didn't take exhaustive notes or measurements, but notice that the buffer is relatively narrow - possibly 1' - but the vertical pylons add significant protection nonetheless (FWIW: this street appears to have 1 curbside parking lane, 1 vehicle lane, and the 2-way protected bike lane).

To reiterate, I created these graphics in the spirit of sparking discussion: more engineering analysis would be required to decide what treatments could be applied to areas with different street widths. The left-turn bay at Seventh/Pauline would require a different treatment, for instance.

Other issues would also need consideration: how to handle curbside trash/recycling/compost pickup? (Anecdotally, from New York and Pittsburgh: bins could be placed parallel to the parked cars offset from the curb, rather than directly at the curb). How does the number of curb cuts affect treatment options? Many more too, I'm sure. But given how prevalent bike infrastructure is now in North America, including cities with similar conditions to Ann Arbor (including snow removal), none of those considerations would need to be answered starting from scratch.

Some additional notes:

1. I consulted NACTO's website to determine potential bike lane/buffer widths: <https://nacto.org/publication/urban-bikeway-design-guide/cycle-tracks/two-way-cycle-tracks/>
2. As outlined to the CIP committee last week, the extents of the project are from Seventh to Stadium. If the remaining extent east of there (Seventh to Main) is redesigned/restriped with upgraded bike infrastructure, there would also be potential to link to the future Treeline Trail, as Pauline dead-ends near Hoover/Greene. This intersection is part of the recently proposed alignment in the Treeline Master Plan.

Thank you again for your presentation last week - we look forward to hearing more about Pauline Blvd as the project progresses. and to working on future transportation projects together.

Sincerely,
Cyrus Naheedy + Brad Parsons