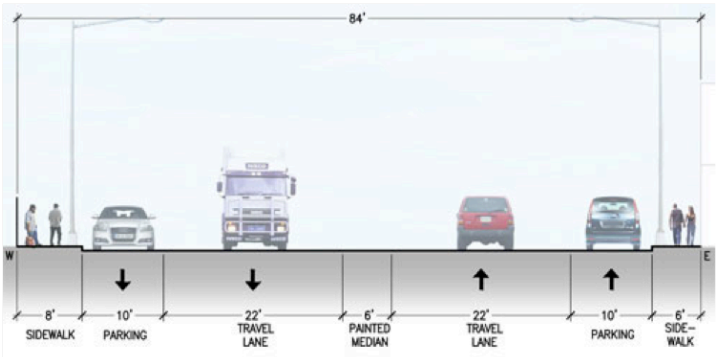
ROADWAY SITE

MAIN STREET CROSS SECTION

The below road serves a "Main Street" section of a medium sized city. It currently features a travel lane, parallel parking, and a sidewalk in each direction. There is also a painted median in the center that is not wide enough for traffic. There is frequent bus service, even during off peak periods.

Automated vehicles have different needs when it comes to streetscape. The higher latidudinal precision and accuracy allow for narrower lanes. Will narrower lanes allow for reallocation of street width for different modes or road features? Below represents a typical roadway section between intersections. Also considering allocating space vertically (guideways/stations).



NOW

FUTURE

MAIN STREET BLOCK

The same road as shown above is below, but with a plan view.

NOW

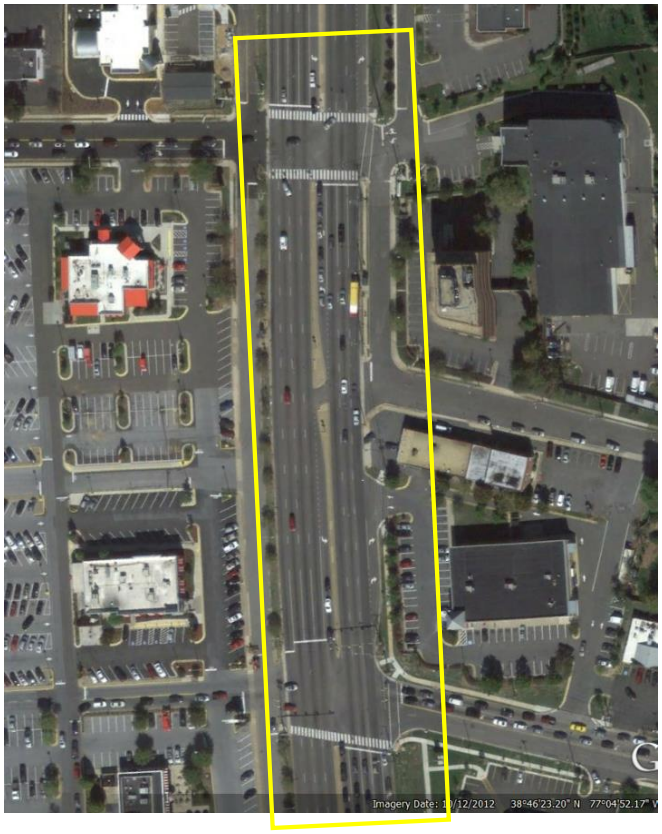
Improved longitudinal precision/accuracy and automatic parking enables vehicles to park and operate much closer to each other. Will the cross section stay uniform between the intersections? How will this affect intersections? Will automated functionality require certain space (drop off/pick up zones)?

FUTURE

ARTERIAL BLOCKS

Arterial roadways are designed to favor mobility over accessibility supply capacity for vehicles to drive by at the expense of accessing adjacent land uses. This particular road (in the yellow rectangle) has 6 or more lanes, and frontage roads to access shopping centers, driveways, and minor streets. This road is challenging for pedestrians to cross. There is frequent bus service on the corridor, though its operations often interrupt traffic flow.

How can space be reallocated on this arterial to accommodate automated vehicles? Can accessibility be improved without compromising mobility? Is there enough space for other amenities? Can this redesign be a catalyst to revitalize a neighborhood?



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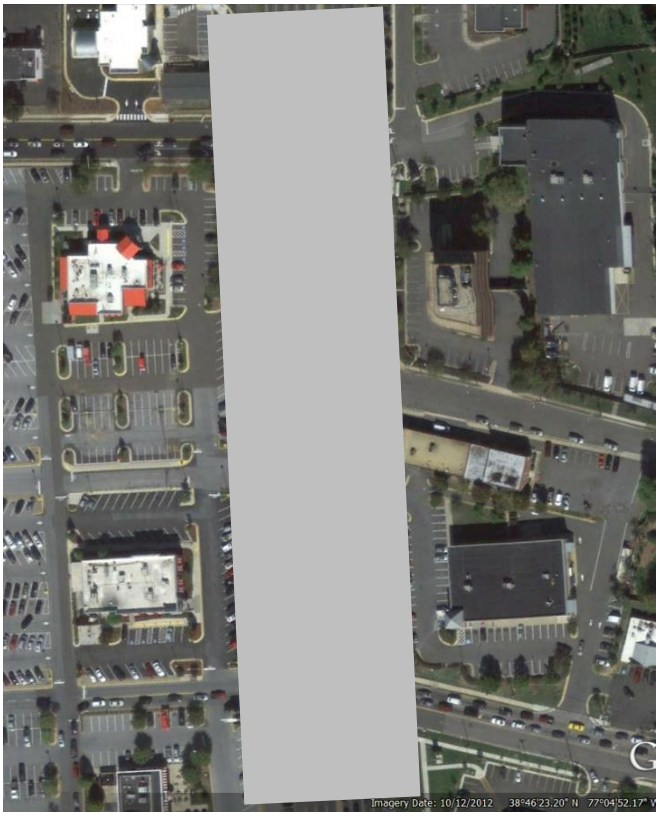

FUTURE