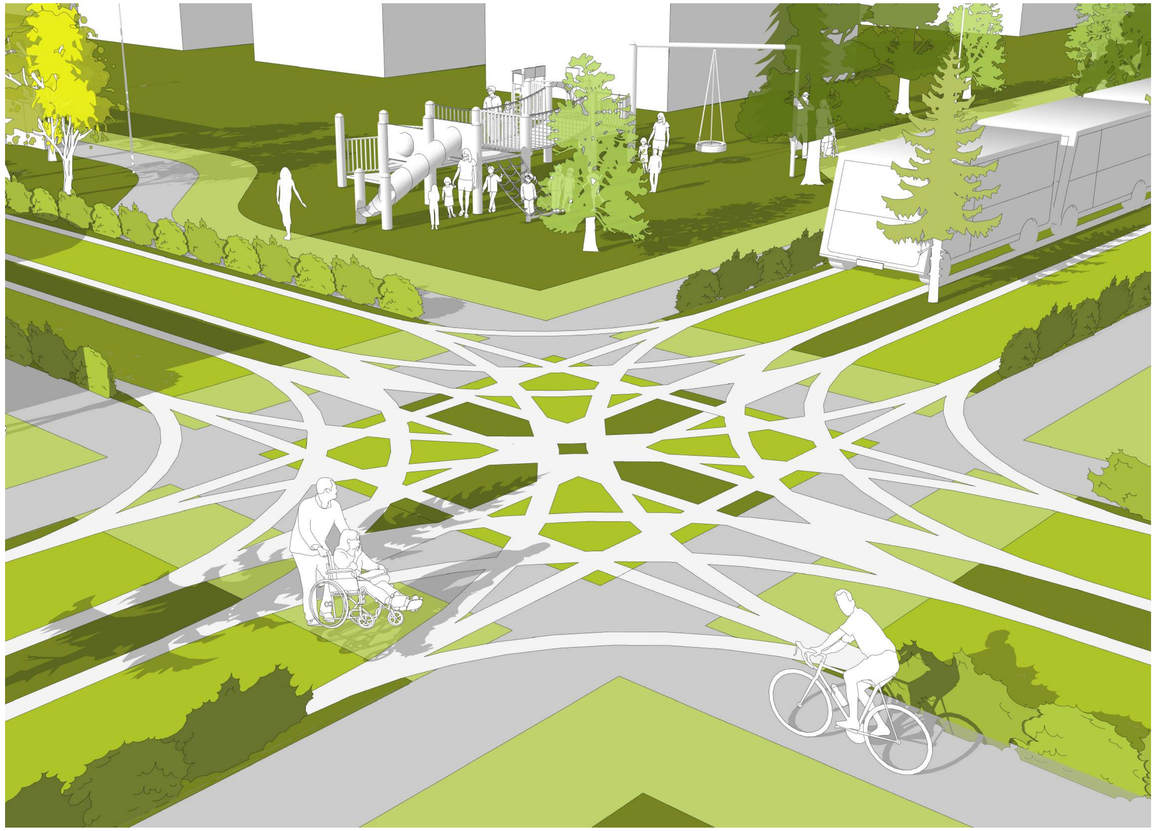

Getting Ready for Shared Autonomous Vehicles

Fleets of shared autonomous vehicles (SAV's) will be on our roads within a decade as part of mobility services offered by both car and technology companies, and this transportation revolution will have a profound effect on our infrastructure and land use as well as on employment, the environment, and the economy. This may seem unprecedented, but we have gone through something like it before. Over a century ago, we switched from horse-drawn vehicles to automobiles because the latter were cheaper, cleaner and safer, and most people will switch to SAV's for the same reasons. The transition from horses to cars in the early 20th century happened within a two-decade period of time, slowed down because of WW I, and the coming transition to SAV's will happen just as fast – or faster, given the greater speed of our economy and the greater cost savings at stake. Which gives this topic some urgency, since the infrastructure and land use decisions we're making right now will be affected by this transition.

Streets and Roads

Rather than have multiple wide travel lanes needed for drivered vehicles, SAV's only require one, eight-foot-wide travel lane in each direction, with the occasional pull over for dropping off and picking up riders. That drop-off lane can also be shared with bicycles. This leaves a lot of space for other uses, from widened sidewalks that allow for outdoor eating or commerce to green infrastructure that can shade walkways and accommodate storm water before it reaches the storm-sewer system.

Residential Streets

SAV's present opportunities in residential districts for homeowners and renters. As people increasingly share mobility services, the land devoted to driveways and the interior space taken up by garages becomes available for other uses such as bike and pedestrian access, community garden space, and drop-off and pick-up pullovers for passengers. And as garages are no longer needed to park vehicles – as opposed to storing other possessions – they might be able to be converted to such uses as accessory dwelling units, working space, and recreational or retail activities. This may require greater flexibility in terms of zoning to allow for mixed uses and more shared open space.

Parking Lots

The dramatic decrease in the demand for parking with SAV's will free up a lot of the land now devoted to storing drivered vehicles. After the transition to shared mobility services, commercial, residential, and industrial properties will need street access and adequate curb space for dropping off and picking up people, allowing a majority of surface parking lots to get converted to other uses, from green infrastructure strategies such as constructed wetlands, parks, and recreation space to additional buildings to accommodate the need for more affordable housing, mixed-use facilities, and production-oriented activities.

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Plan

Existing (Yr 2018)

Transition (Yr 2025)

Proposed (Yr 2050)

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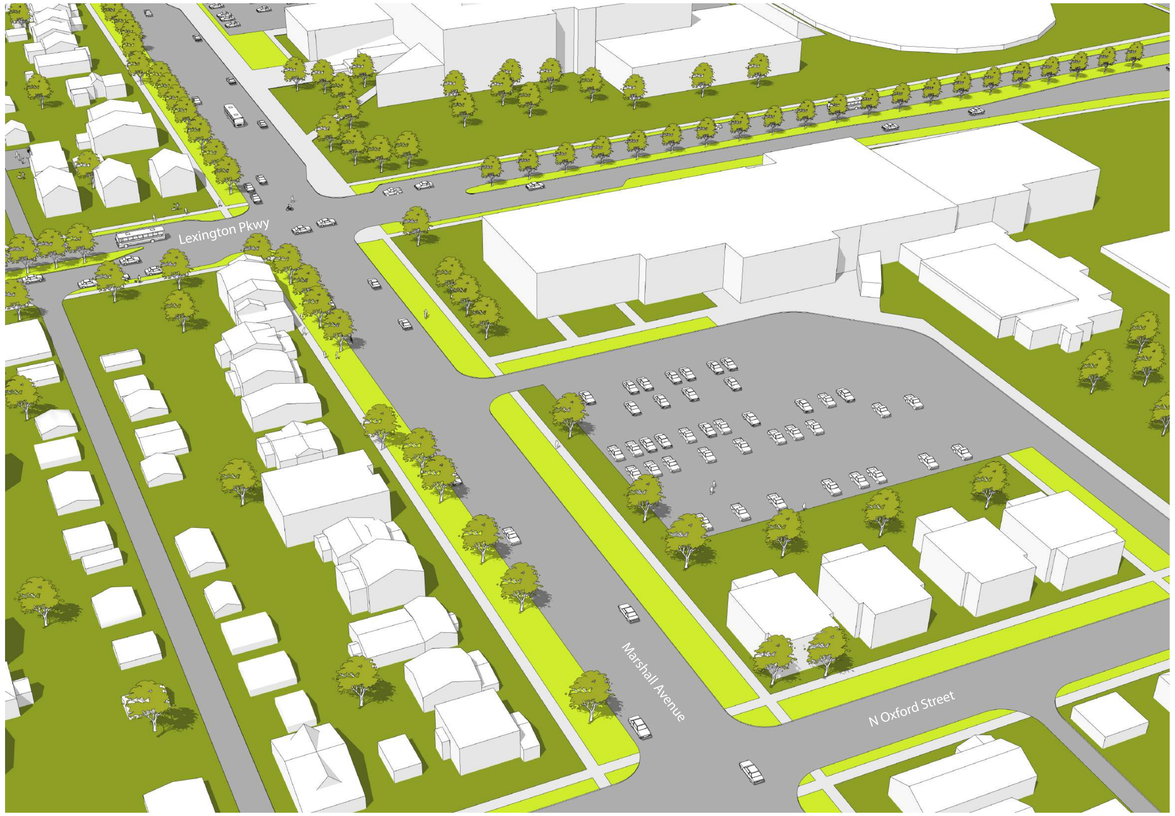
Aerial Perspectives

Existing (Yr 2018)



Proposed (Yr 2050)

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Sidewalk

Existing (Yr 2018)

Proposed (Yr 2050)

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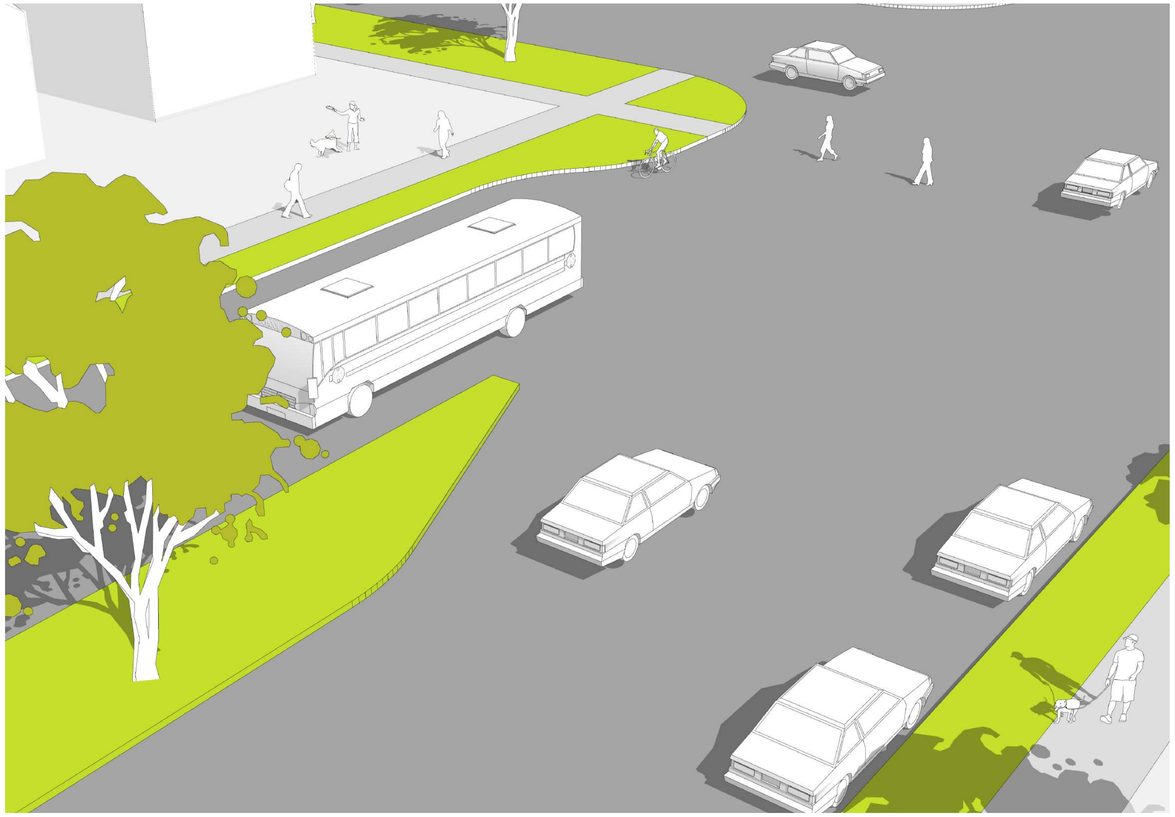
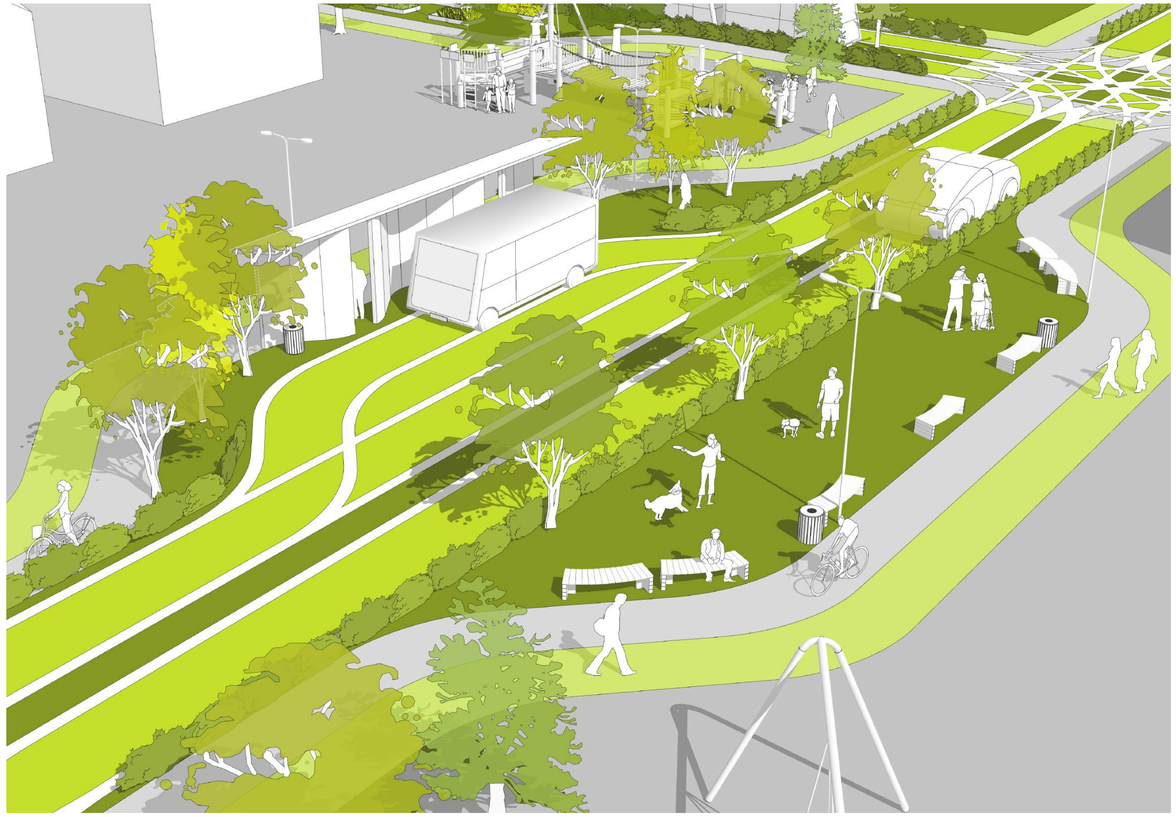
Streets

Existing (Yr 2018)



Proposed (Yr 2050)



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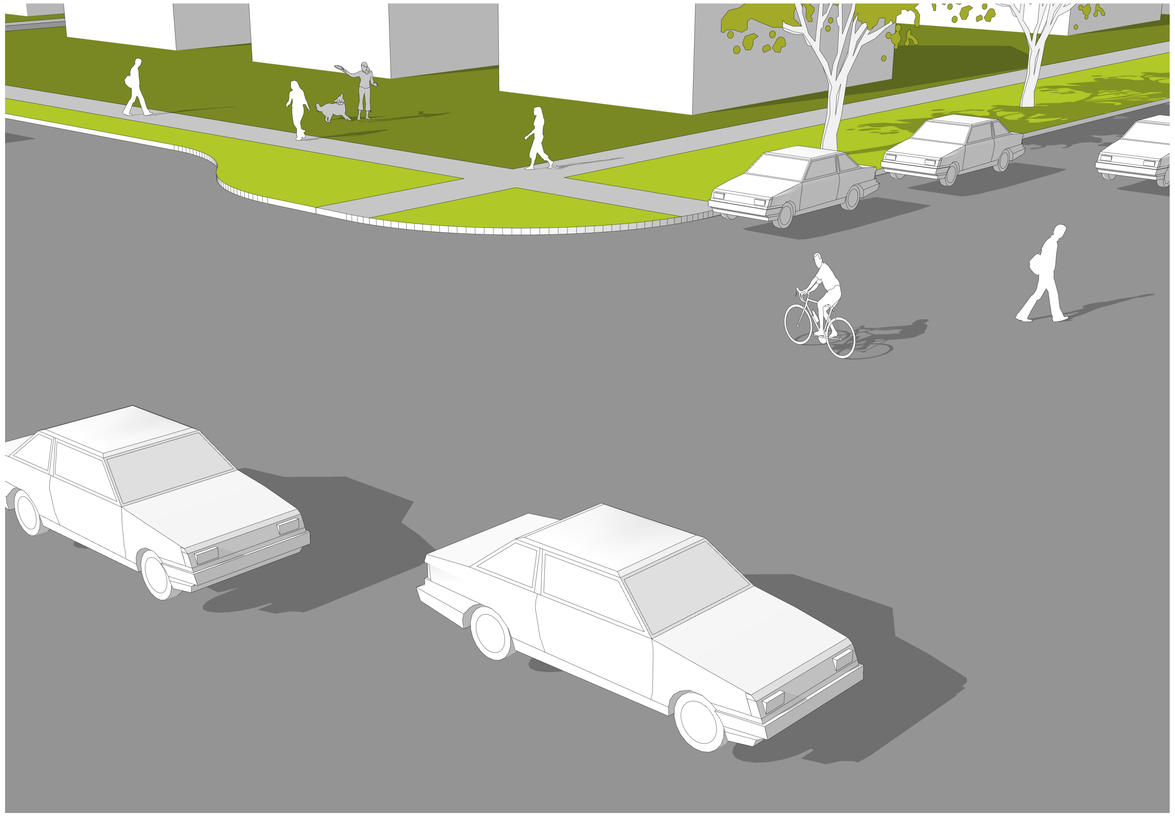
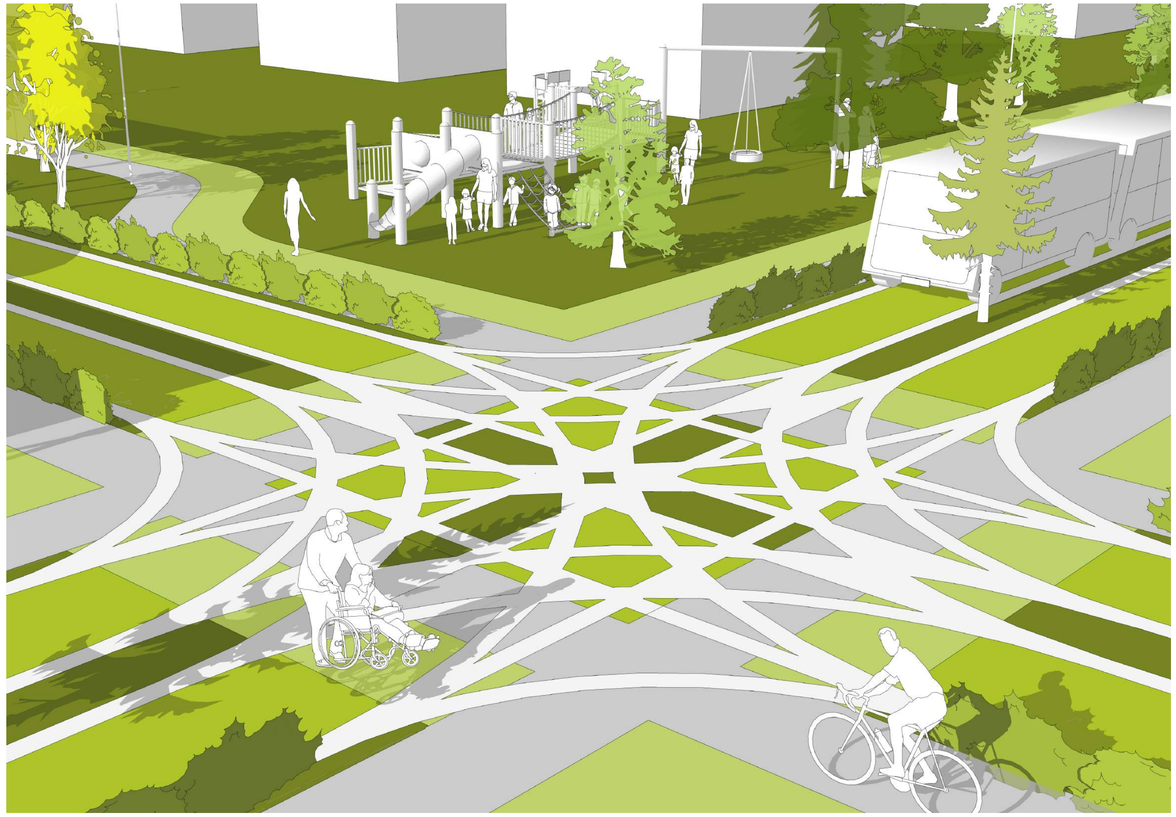
Intersection

Existing (Yr 2018)



Proposed (Yr 2050)



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Midstreet Crossing

Existing (Yr 2018)

Proposed (Yr 2050)

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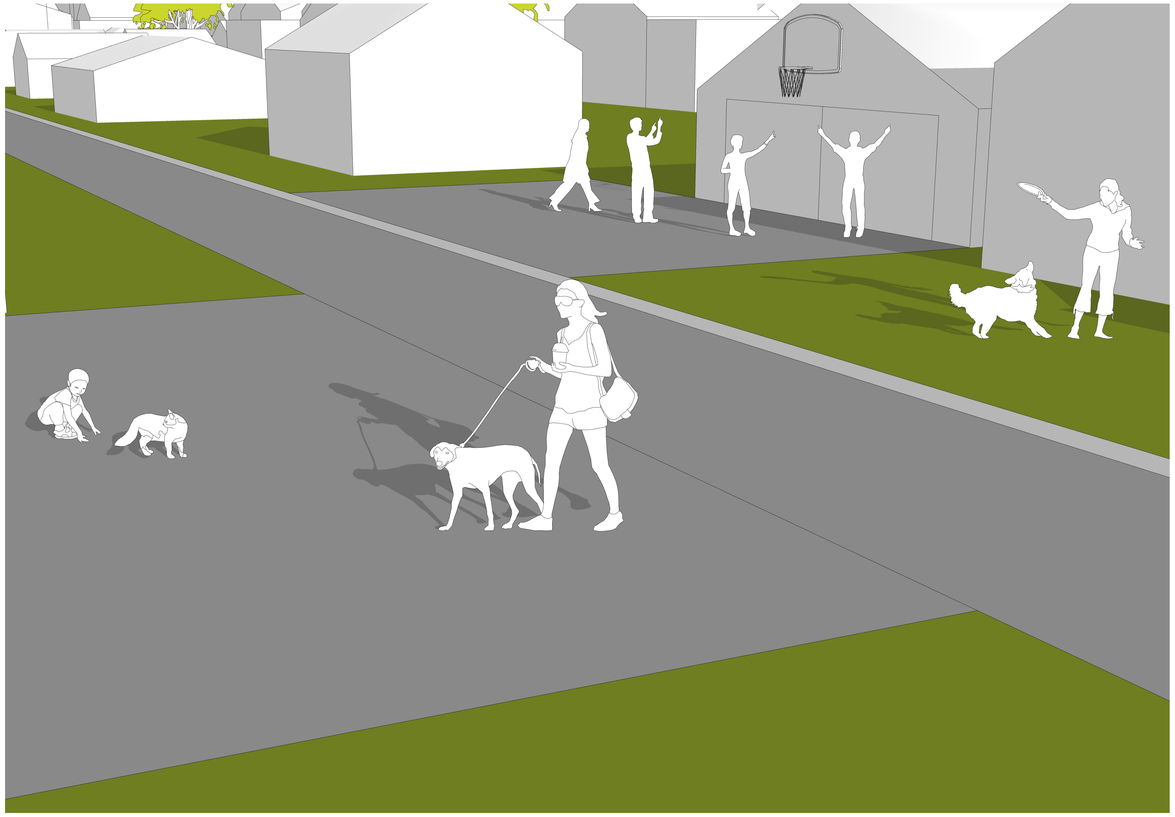
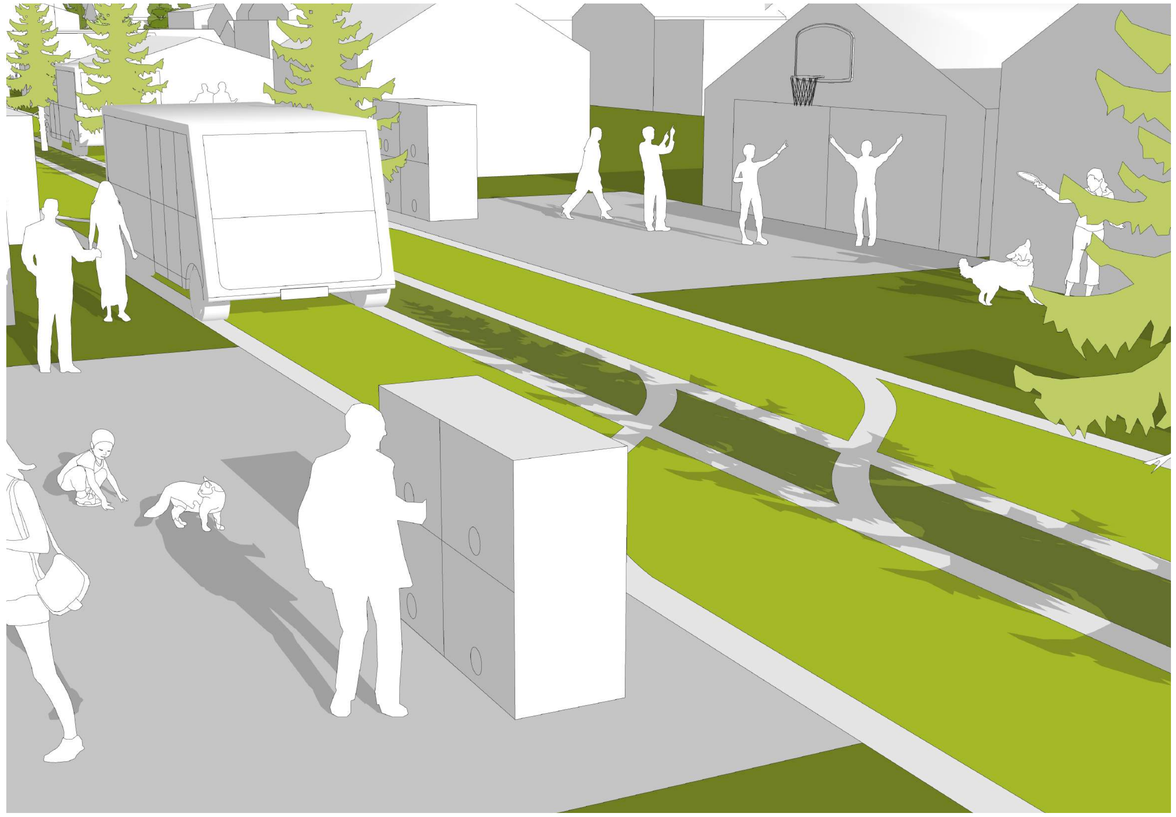
Alley

Existing (Yr 2018)



Proposed (Yr 2050)



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Parking Lot

Existing (Yr 2018)

Proposed (Yr 2050)