

PINEWOOD ROAD & PINE GLEN ROAD ROUNDABOUT



October 23, 2017

Presentation Overview

General Information and Benefits of Roundabouts

Why use Roundabouts?

Conflict Points

How to Drive in a Roundabout

Traffic Volumes and Design Checks

Sketch of Truck Path through Roundabout

Impacts on Property/Access

Sketch of Proposed Roundabout



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General Information and Benefits of Roundabouts

- Roundabouts are a type of intersection engineered to maximize safety and reduce congestion.
- All vehicles entering the roundabout must yield to pedestrians and the traffic already in the roundabout. Traffic in the roundabout has the right-of-way.

Benefits

- Decrease in traffic delays and congestion, due to reduced stopping.
- Fewer injury collisions and reduction in collision severity, caused by fewer conflict points and lower angles.
- Reduces braking, idling, engine noise, fuel consumption and air pollution.
- Reduction in maintenance and energy costs compared to a signalized intersection.
- An area for communities to provide green space and landscape architecture.

Why use Roundabouts?

Roundabouts are efficient traffic control measures that reduce vehicle travel speed and provide a safer environment for users.

Many municipalities throughout the Atlantic Provinces are using roundabouts for intersections, interchanges and traffic calming in residential neighborhoods.

Roundabouts provide an option for an aesthetic feature in the central island and provide additional landscaping opportunities.

Comparison of Roundabouts per country:

- 30,000 in France
- 20,000 in United Kingdom
- 15,000 in Australia
- 3,000 in United States
- **300 in Canada**



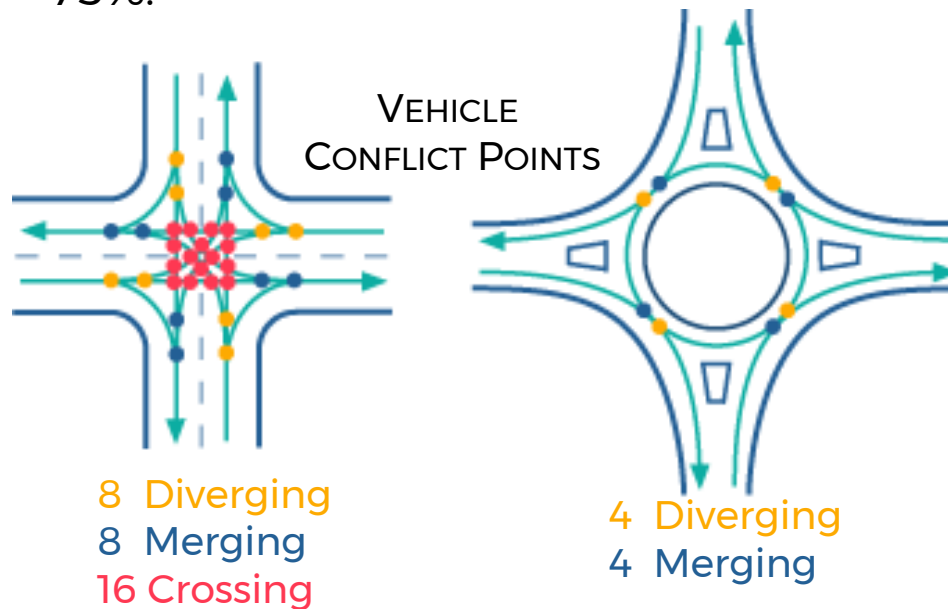
Conflict Points

Roundabouts have 75% fewer vehicle conflicts points compared to a conventional intersection.

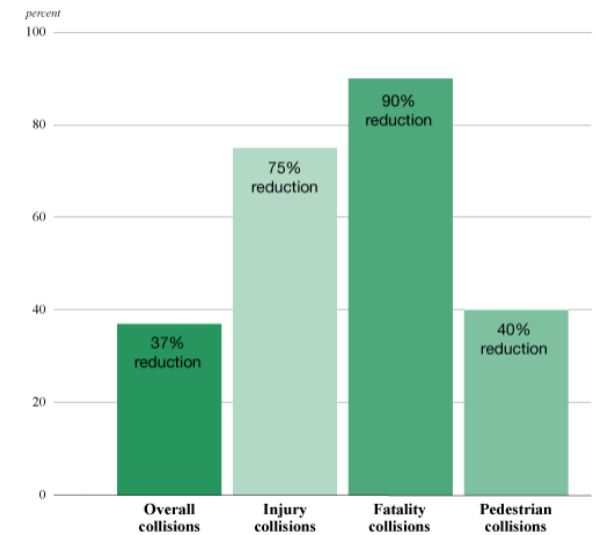
The conflict points for a roundabout are only merging and diverging conflicts compared to an intersection that also has crossing conflicts.

Crossing conflicts are the most severe and carry the highest public cost.

Fatality collisions typically reduce by 90% and injury collisions reduce by 75%.



Reduction in collisions



Source: Federal Highway Administration and Insurance Institute for Highway Safety (FHWA and IIHS)

How to Drive in a Roundabout

For single lane roundabouts:

Approach: Slow down, yield to pedestrians in the crosswalk, they have the right-of-way.

Enter: Yield to vehicles in the roundabout.

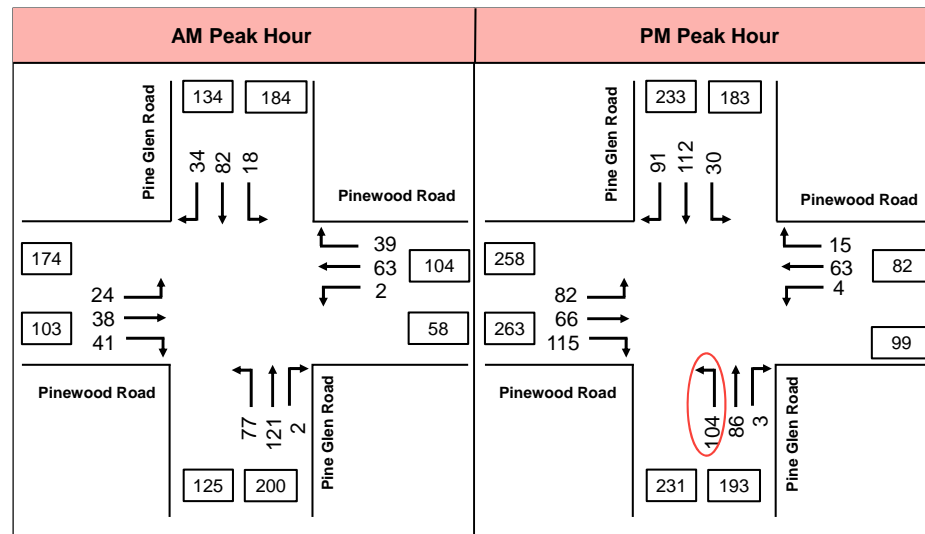
Proceed: Continue through the roundabout until you reach your street.

Exit: Signal, then exit the roundabout to your right.



Traffic Volumes and Design Checks

- The roundabout was modelled using observed traffic volumes and the traffic analysis indicates that the single lane roundabout intersection will operate well with minimal delay.
- There is a significant volume of left turns on Pine Glen Road (Northbound).
- Approach volumes on Pinewood Road (Eastbound) are significant and expected to increase as commercial development in the area expands.



Traffic Volumes and Design Checks

- Upgrading the intersection to a roundabout, will reduce the collision potential and severity for vehicles making a left-turn across traffic.
- Analysis indicates a single lane roundabout will accommodate traffic demands at the intersection of Pine Glen Road with Pinewood Road.

Analysis Criteria	Control Delay (sec/veh), Level of Service, v/c Ratio and 95 th % Queue (m) by Approach Leg							
	Pinewood Road		Pine Glen Road		Pinewood Road		Pine Glen Road	
	EB-LTR	WB-LTR	NB-LTR	SB-LTR	EB-TR	WB-LT	NB-LR	SB-LTR
	Weekday AM Peak Hour				Weekday PM Peak Hour			
Delay	3.74	4.02	4.15	3.97	4.73	4.03	4.38	4.61
LOS	A	A	A	A	A	A	A	A
v/c	0.11	0.11	0.20	0.14	0.28	0.09	0.21	0.25
Queue	0.8	0.9	1.8	1.1	2.7	0.7	1.8	2.3

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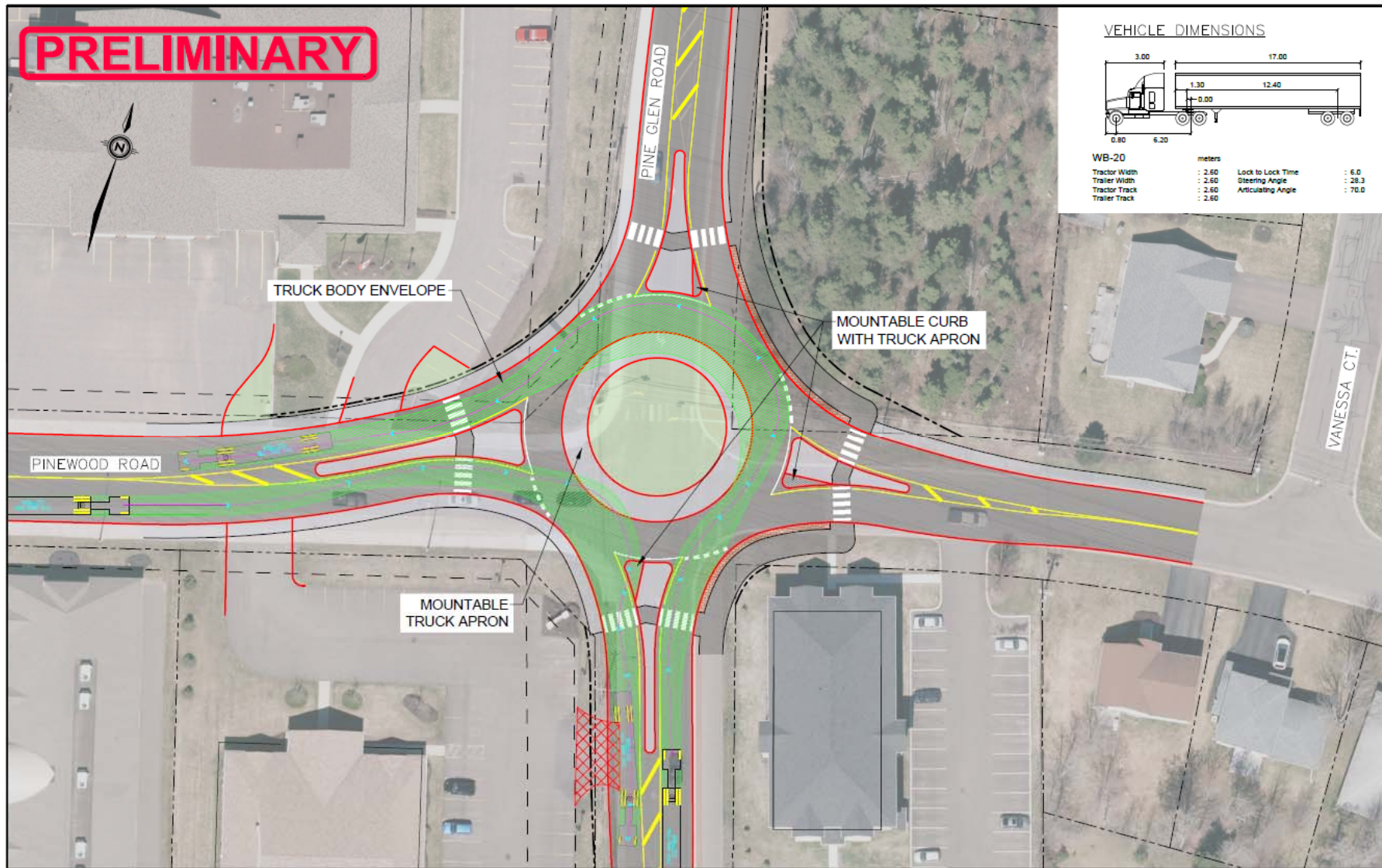
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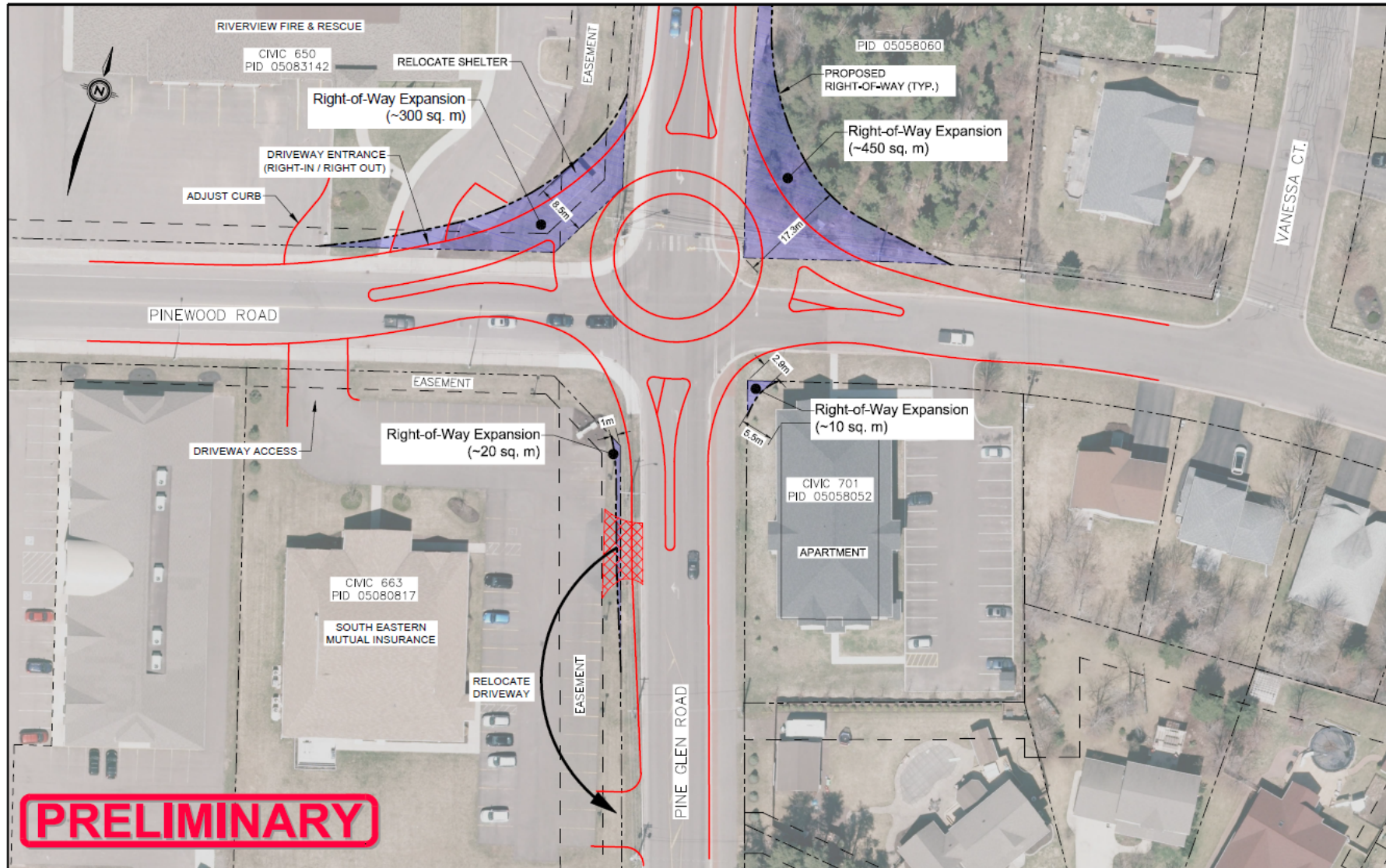
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Impacts on Property/Access

The proposed roundabout will have impact on adjacent properties and accesses including the following:

- Driveway Relocation
- Property Acquisition
- Utility Pole Relocation
- Relocation of the historic fire hose located on the Riverview Fire & Rescue property.



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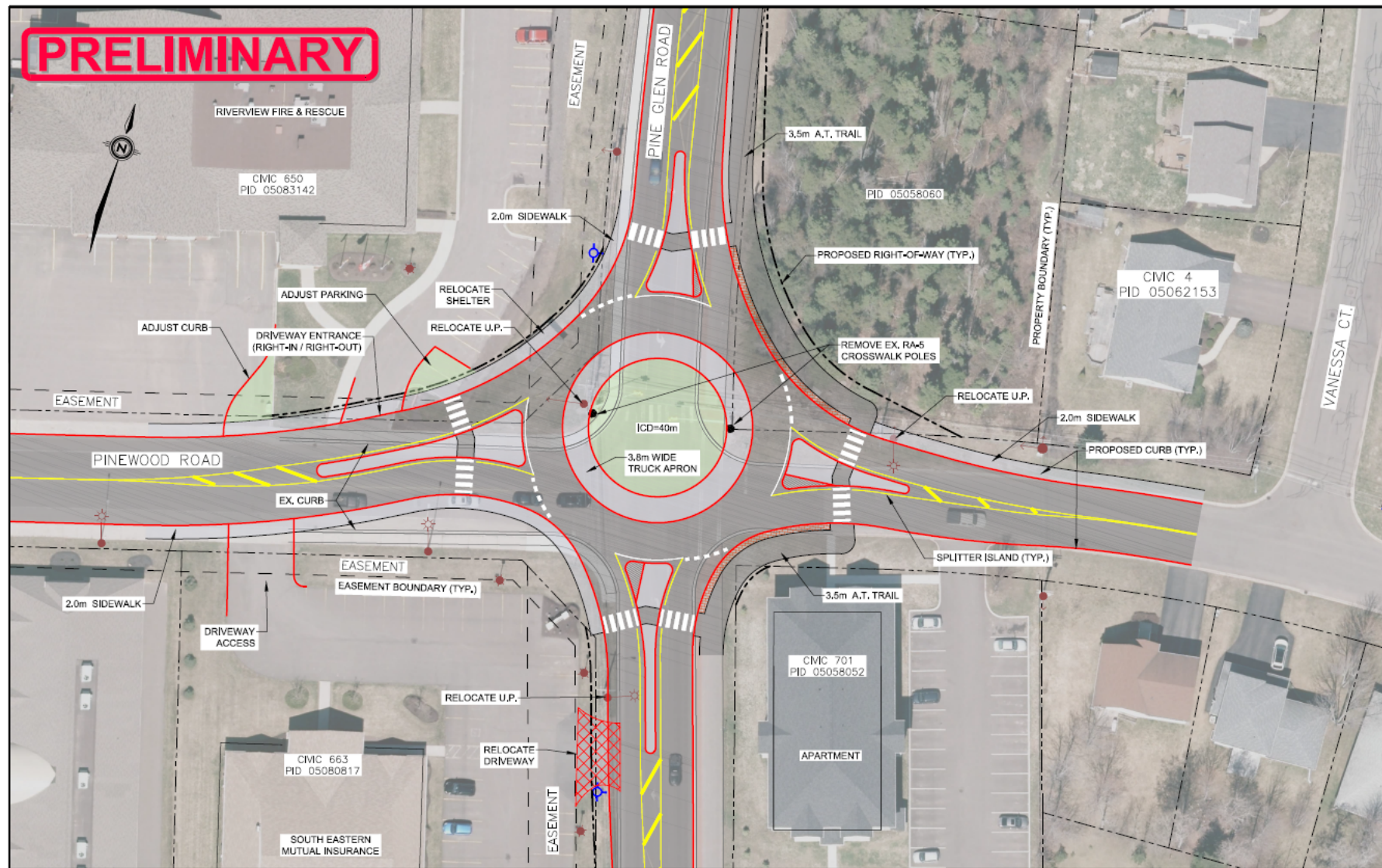
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Thank you!

