

INTERSECTION CONTROL & ACCESS

WHAT WE HEARD

What We Heard About Access:

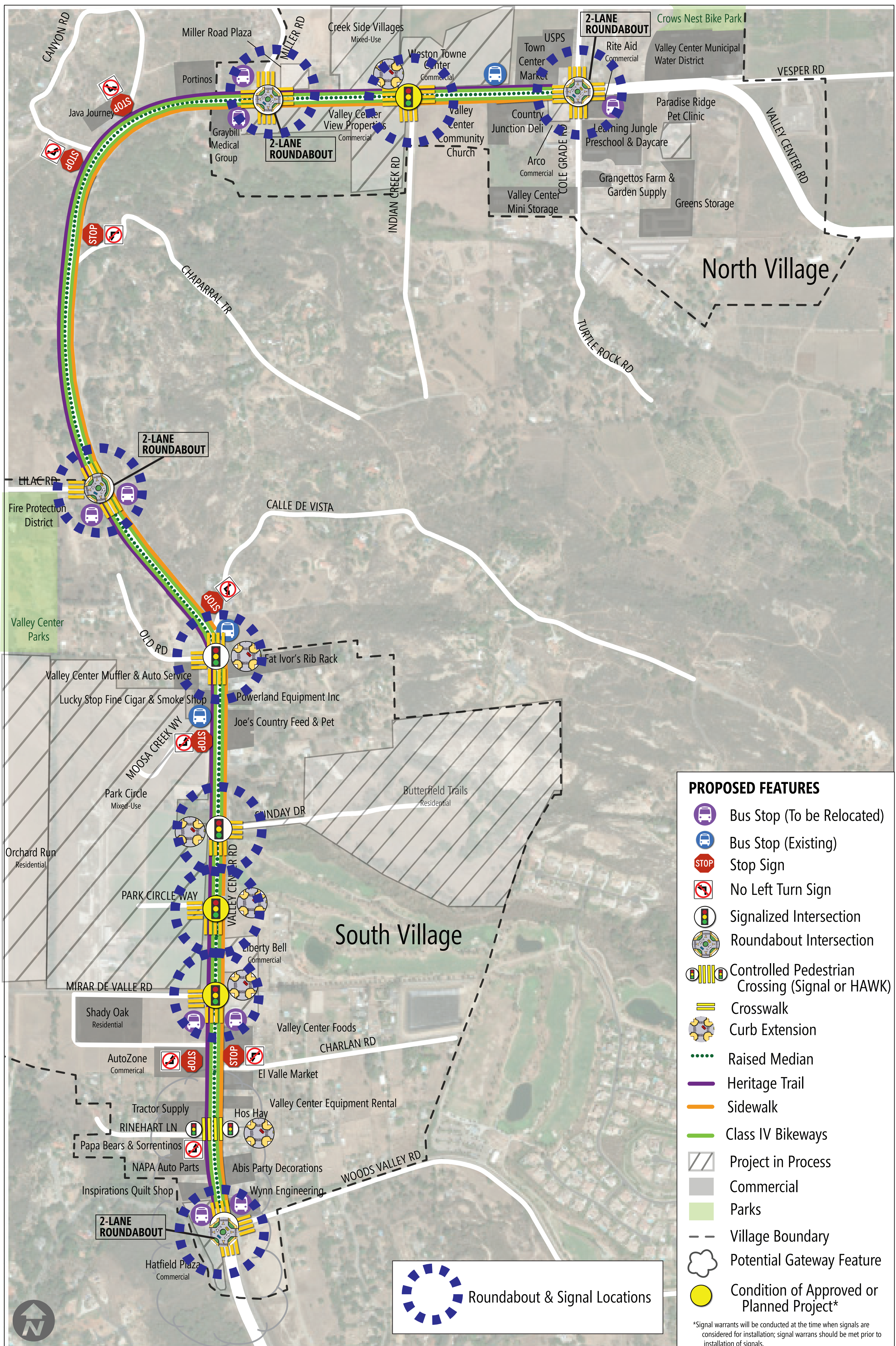
- U-Turns on Valley Center Road are challenging.
- Slowing down to make a right turn from Valley Center Road is scary.
- Turns to and from driveways are hard to navigate.
- Unsafe to turn onto/off of Valley Center Road: it is very hard to see speeding cars.
- Poor line of sight turning left on Valley Center Road from Old Road.
- New development will create more traffic, making it harder to turn onto Valley Center Road.

What We Heard About Intersection Safety:

- Pedestrians have a hard time trying to cross Valley Center Road.
- More crosswalks are needed at intersections.
- More signals will not make the intersections safer.
- Roundabouts slow down traffic, cause fewer serious accidents, and allow more cars to get out in case of a fire.
- The intersection at Cole Grade Road is very confusing.

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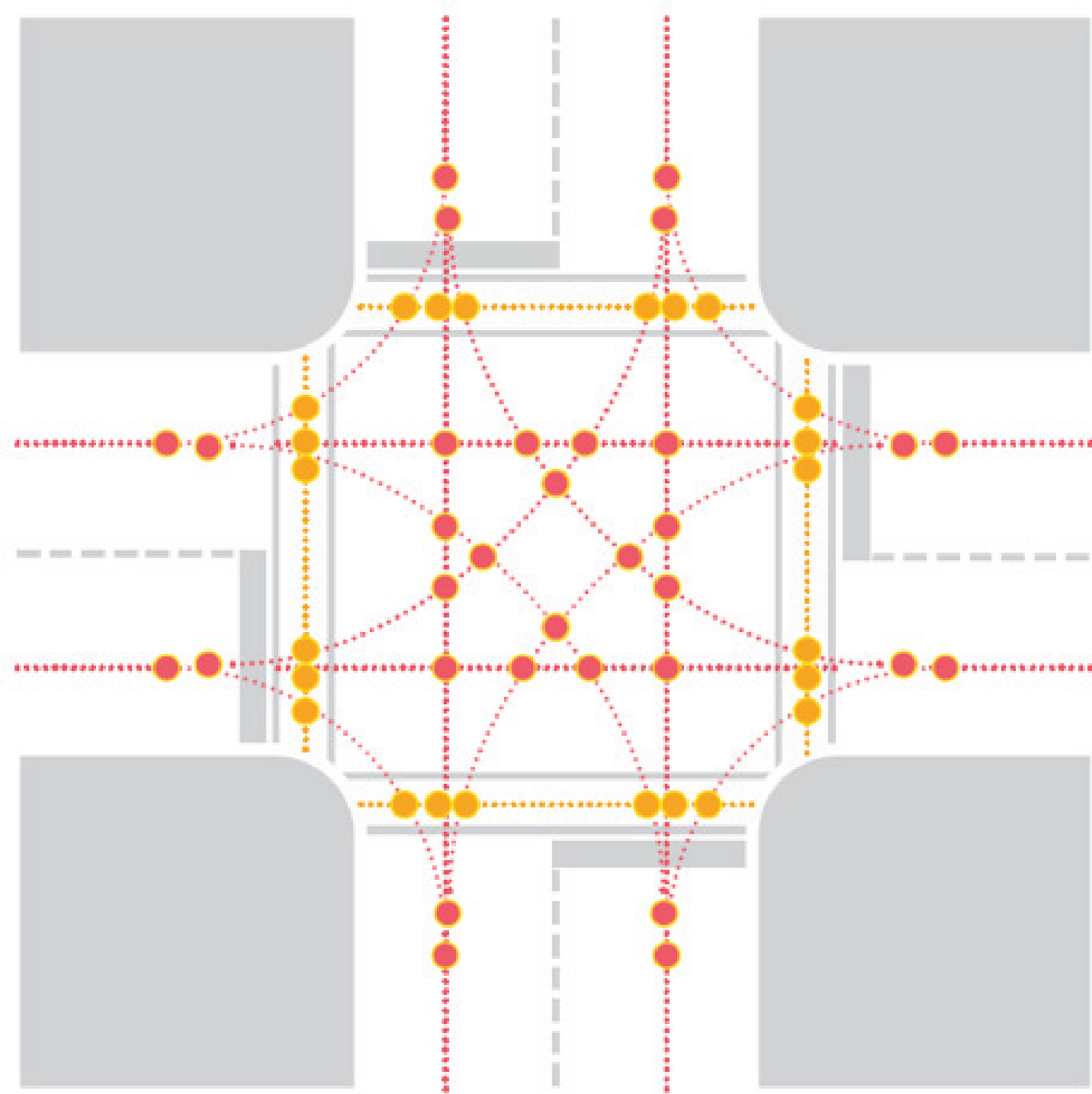
ROUNDBABOUT & SIGNAL LOCATIONS



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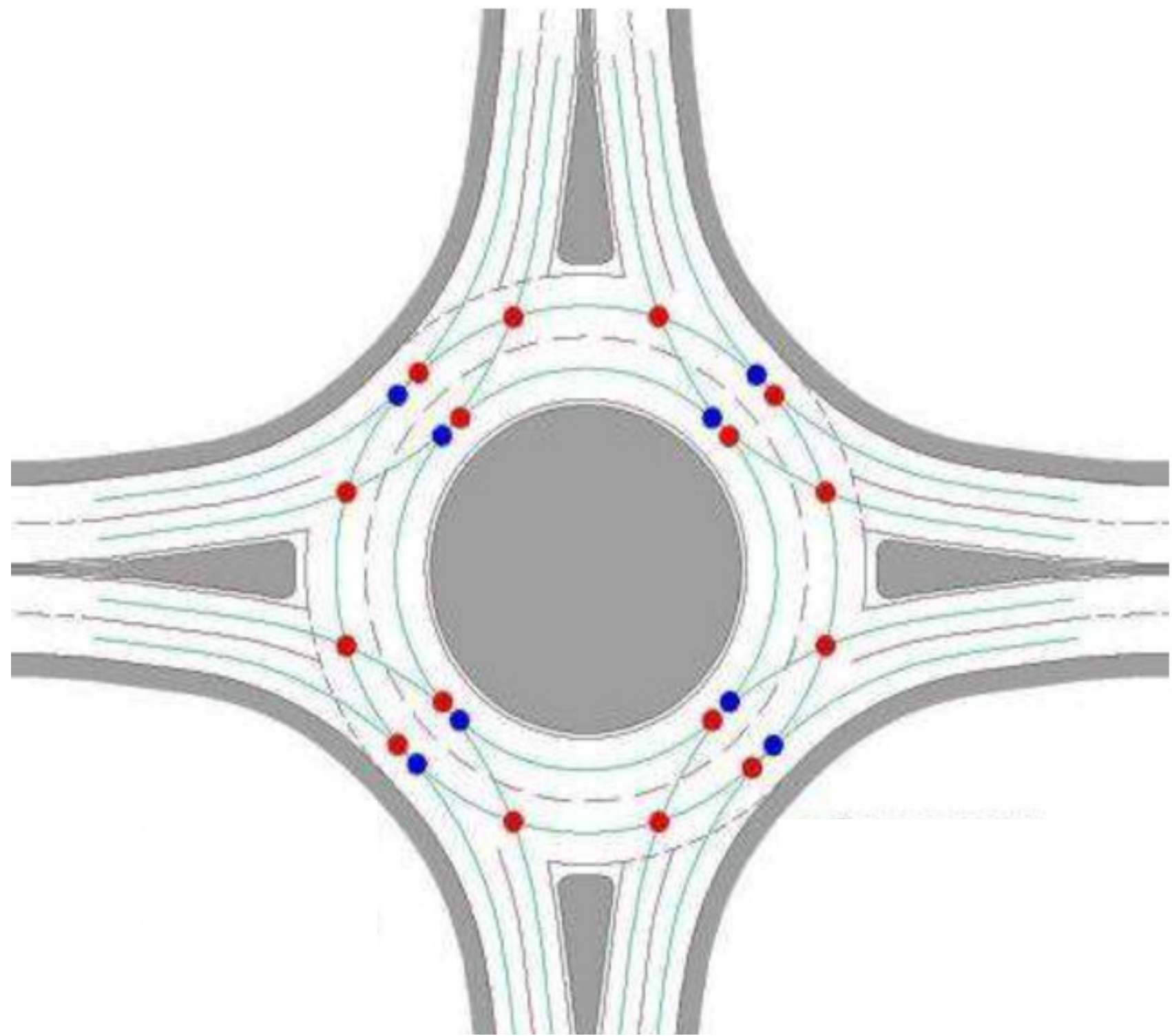
ROUNDBABOUTS & TRAFFIC SIGNALS

CONFLICT POINTS



Signalized Intersection

32 Vehicle Conflict Points



Roundabout

24 Vehcile Conflict Points

BENEFITS BY CONTROL TYPE

	Roundabouts	Traffic Signals	Why?
# of Injury Collisions	✓		Vehicles must slow down to enter roundabouts
Collision Severity	✓		Vehicles in roundabouts travel in the same direction
Roadway Space		✓	Traffic signals require less space
Traffic Flow	✓		Vehicles yield at roundabouts but are not required to stop
Comfort		✓	People are familiar with how traffic signals work
Placemaking	✓		Roundabout center islands present opportunities for gateways/landscaping
Construction Cost		✓	Traffic signals require less to build
Operational Cost	✓		Roundabouts cost less to operate long-term

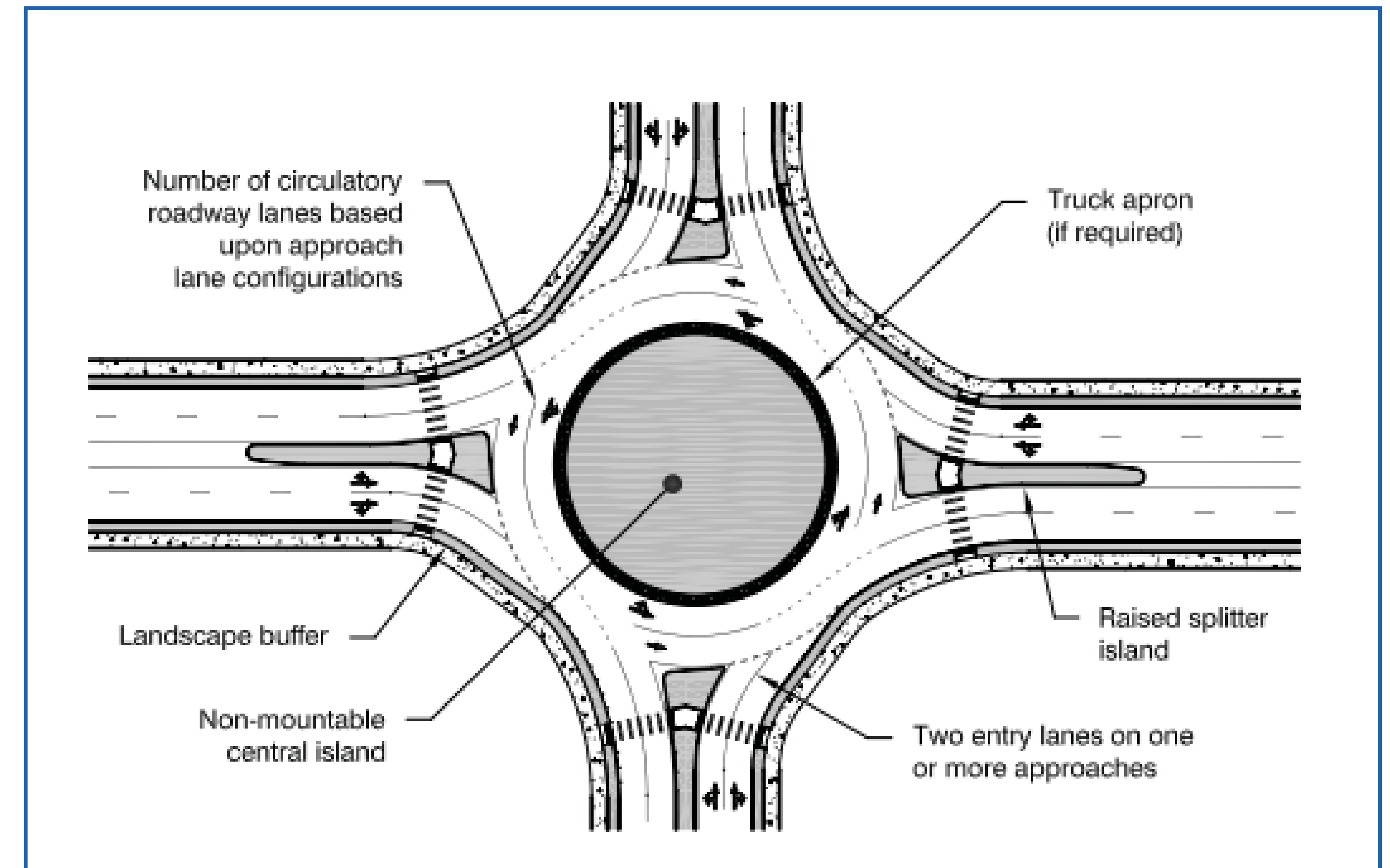


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TWO-LANE ROUNDABOUTS CAPACITY AND OPERATIONS

Design Element	Mini-Roundabout	Single-Lane Roundabout	Multilane Roundabout
Desirable maximum entry design speed	15 to 20 mph (25 to 30 km/h)	20 to 25 mph (30 to 40 km/h)	25 to 30 mph (40 to 50 km/h)
Maximum number of entering lanes per approach	1	1	2+
Typical inscribed circle diameter	45 to 90 ft (13 to 27 m)	90 to 180 ft (27 to 55 m)	150 to 300 ft (46 to 91 m)
Central island treatment	Fully traversable	Raised (may have traversable apron)	Raised (may have traversable apron)
Typical daily service volumes on 4-leg roundabout below which may be expected to operate without requiring a detailed capacity analysis (veh/day)*	Up to approximately 15,000	Up to approximately 25,000	Up to approximately 45,000 for two-lane roundabout

*Operational analysis needed to verify upper limit for specific applications or for roundabouts with more than two lanes or four legs.

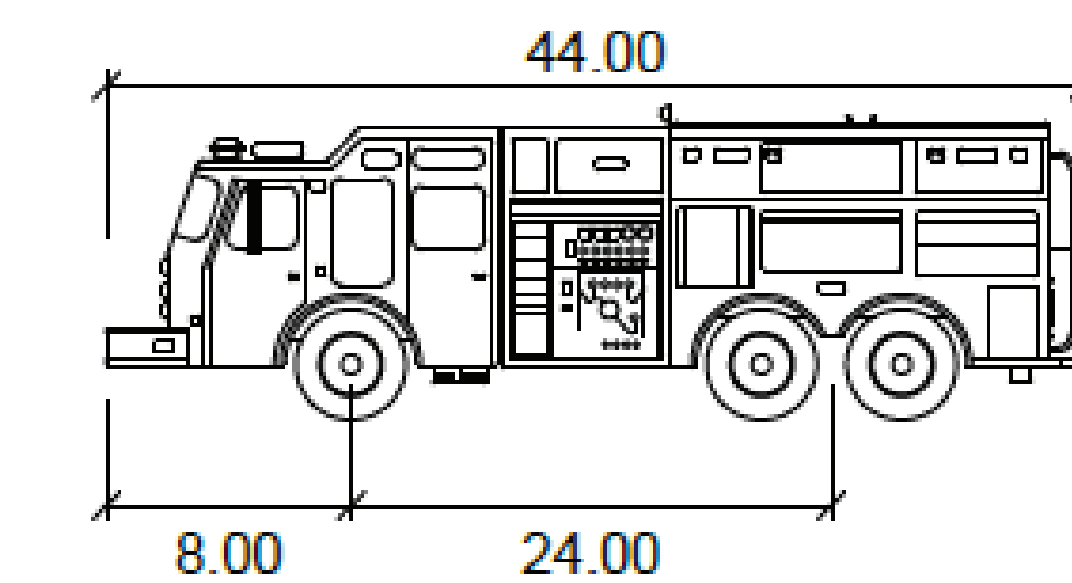
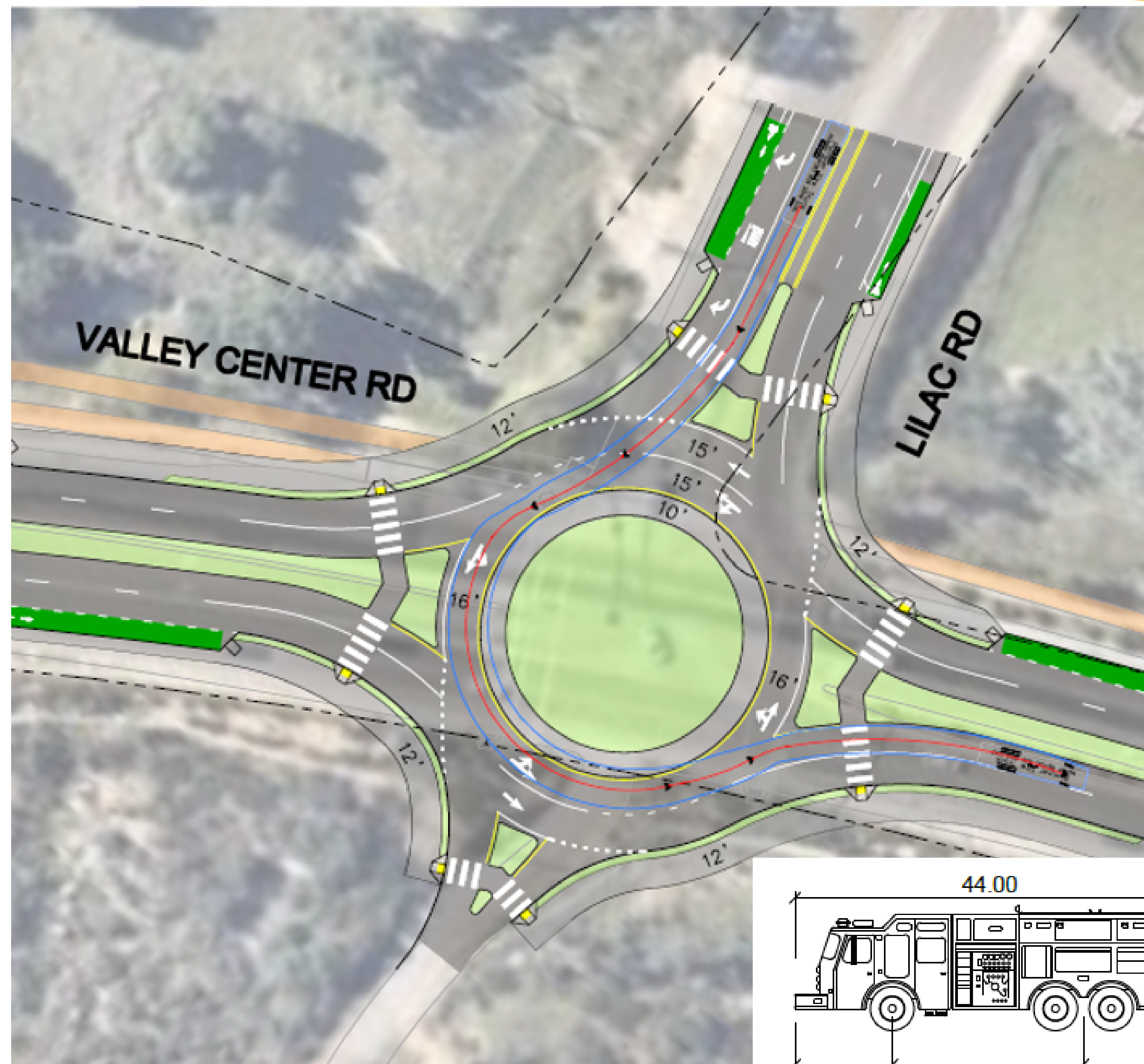


Features of a typical 2-lane roundabout

Source: NCHRP Report 672 - Roundabouts: An Informational Guide, Second Addition.

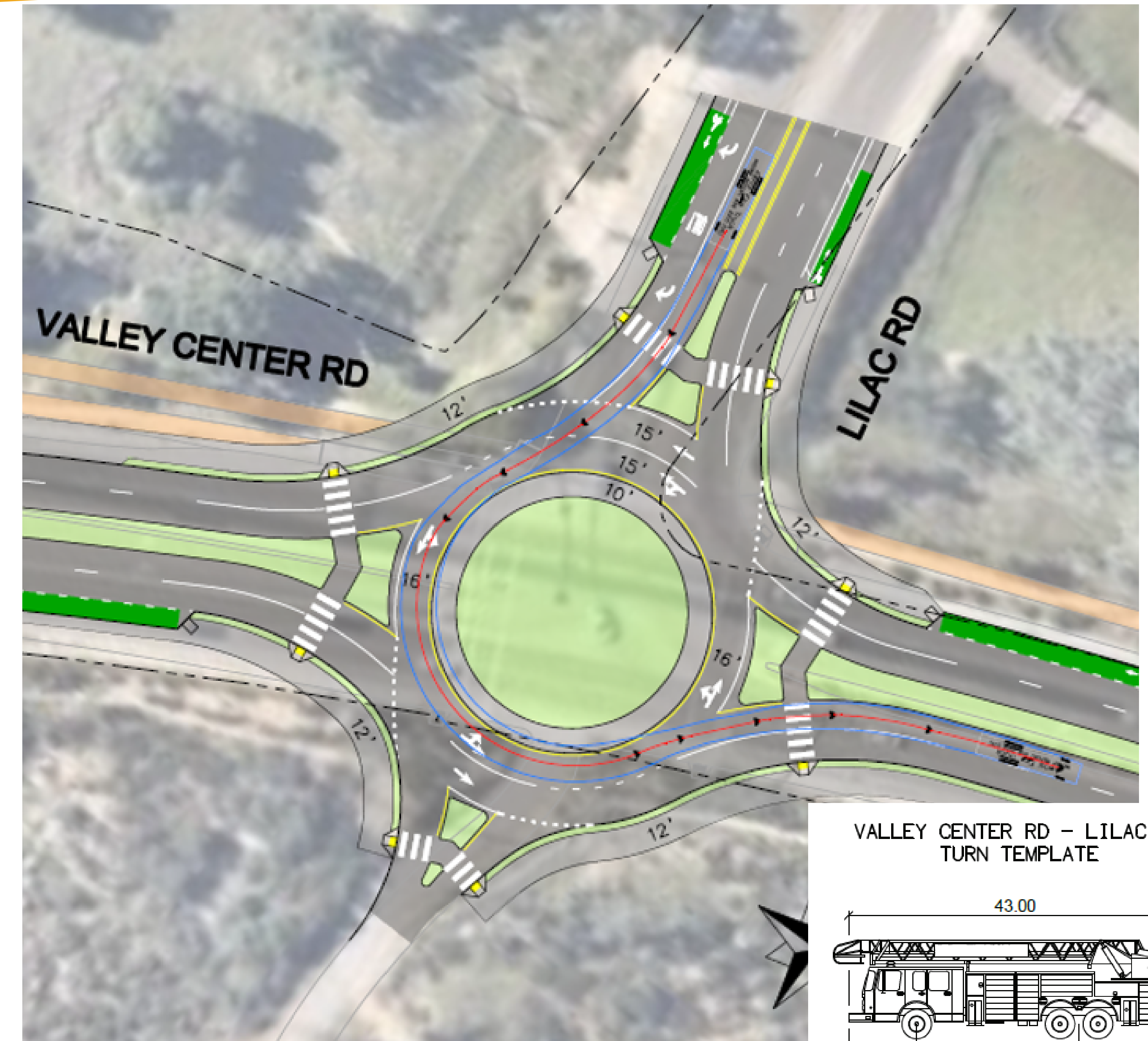
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EMERGENCY VEHICLE ACCESS

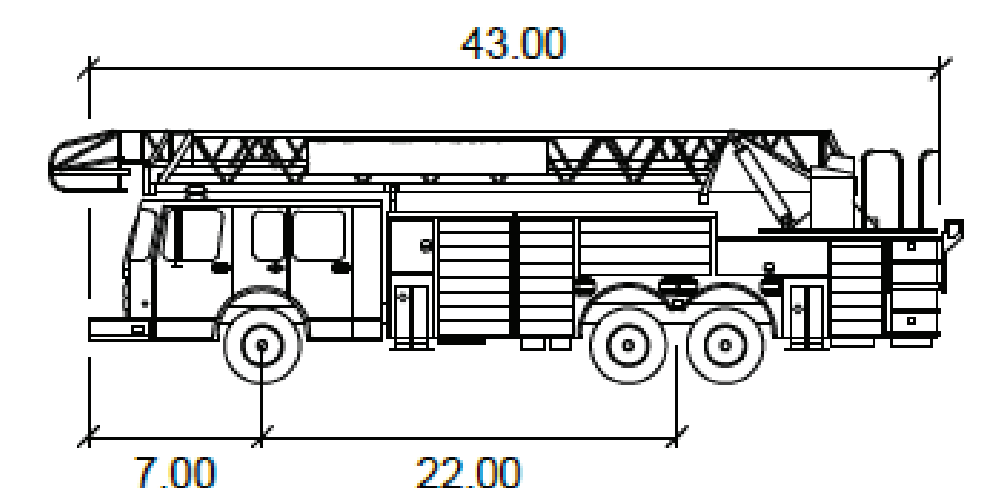


Pumper Fire Truck

	feet
Width	: 8.50
Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 37.8



VALLEY CENTER RD – LILAC RD
TURN TEMPLATE



Aerial Fire Truck

	feet
Width	: 8.50
Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 33.3

Center line of vehicle

Wheel tracking