BUS LOOP CONFIGURATION AND TRAFFIC FLOW

GO Transit utilizes four configurations and four corresponding flows of traffic at bus loops system-wide. The configuration for a bus loop is to be selected based on site constraints and optimal traffic flow patterns (vehicle, cyclists, local services and connections). The following guidelines provide standard requirements and details for each of these options. Refer to the Bus Loop Configuration and Traffic Flow figures for examples of each.

- Linear Configuration – Linear Traffic Flow (Preferred).
- Island Configuration – Clockwise Traffic Flow.
- Teardrop Configuration – Counter-Clockwise Traffic Flow.
- Bi-Directional Configuration – Clockwise and Clockwise Traffic Flow.

LINEAR CONFIGURATION – LINEAR TRAFFIC FLOW (PREFERRED)

The linear configuration has a platform along the passenger side of the bus loop where passengers have access to the bus. In linear bus loops, buses follow a linear flow of traffic to circulate the loop.

When applicable:

- High pedestrian traffic: clear visibility for pedestrians and drivers and pedestrians do not cross the bus loop to access bus/rail platforms.
- At stations with limited real estate.
- At stations with minimal bus-to-bus transfers.
- At stations located in urbanized areas.

Proceed to Island Configuration if:

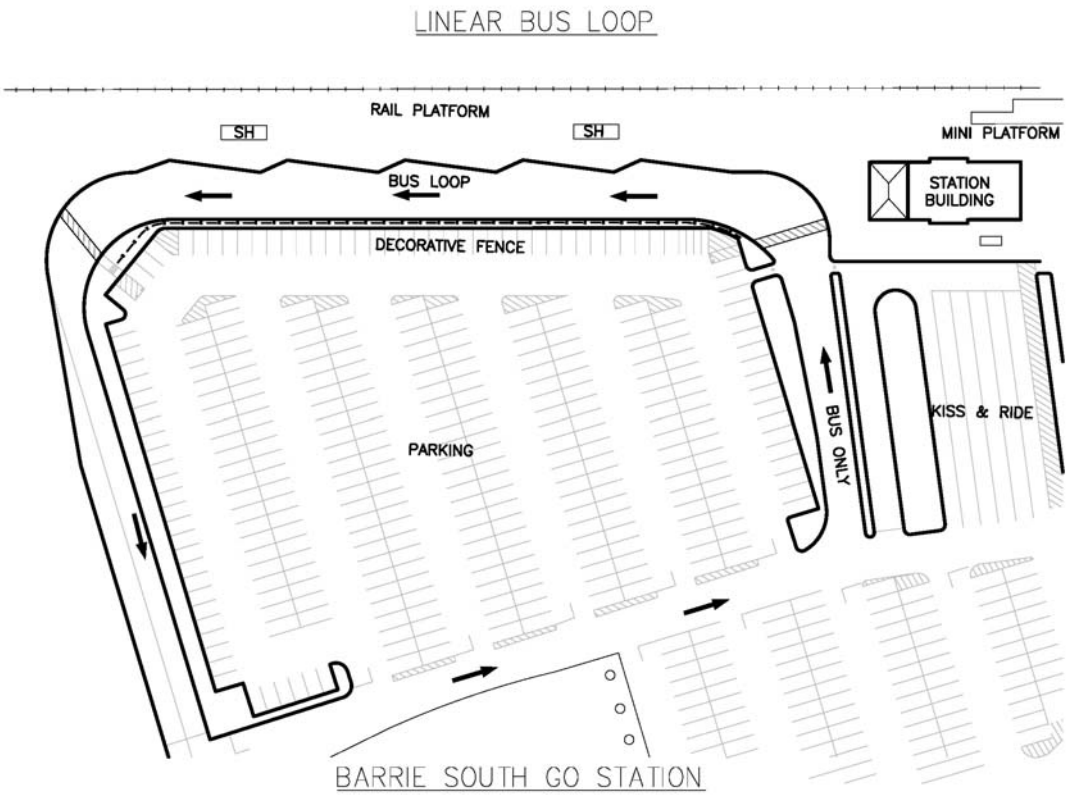
- Anticipate significant volume of bus service (both GO and Municipal) as linear loops have limited space for platform expansion and accessibility concerns (lengthy distances) for bus to bus transfers.

SECTION:
Tab 3: Bus Infrastructure

FIGURE:

Linear Bus Loop Configuration

Linear Traffic Flow



ISLAND CONFIGURATION – CLOCKWISE TRAFFIC FLOW

The island configuration has platforms in the centre of the bus loop where passengers follow a defined path for access to the bus. In island bus loops, buses follow a clockwise route to circulate the loop.

When applicable:

- Effective at bus terminals and stations with bus to bus (GO and local transit) transfers.
- At stations with limited real estate.
- At stations with multiple points of access / egress to municipal roads allowing for controlled and predictable movements within the loop.

Proceed to Teardrop Configuration if:

- Anticipate significant level of bus service at location as islands have limited room for platform expansion.
- Anticipate safety concerns from clockwise traffic flow and limited access / egress points (bus route crosses at throat of loop and passengers cross loop to access platforms).

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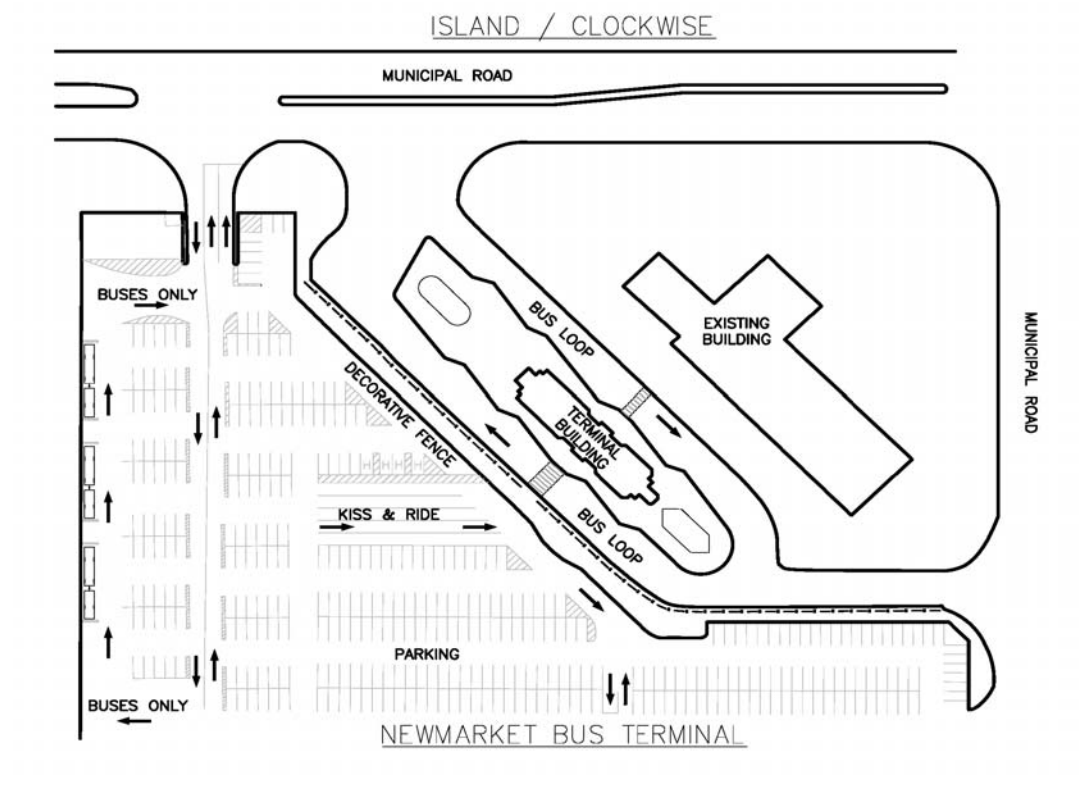
FIGURE:

Island Bus Loop Configuration

Clockwise Traffic Flow



TEARDROP CONFIGURATION – COUNTER-CLOCKWISE TRAFFIC FLOW

The teardrop configuration has platforms on the perimeter of the bus loop where passengers access the bus. The bus follows a counter-clockwise route to circulate the loop.

When applicable:

- At stations with a high volume of GO Bus service.
- At stations anticipating future bus service growth (GO and local transit) as teardrop loops offer some room for platform expansion.
- At stations with high bus-to-rail transfers, but limited bus-to-bus transfers between GO and other operators.
- Anticipate safety concerns resulting from clockwise flow of traffic (bus routes do not cross at throat of loop and platforms are on perimeter).
- No real estate restrictions.

Proceed to Bi-Directional Configuration for:

- Largest stations or bus terminals with highest volumes of GO and Local bus service.

SECTION:
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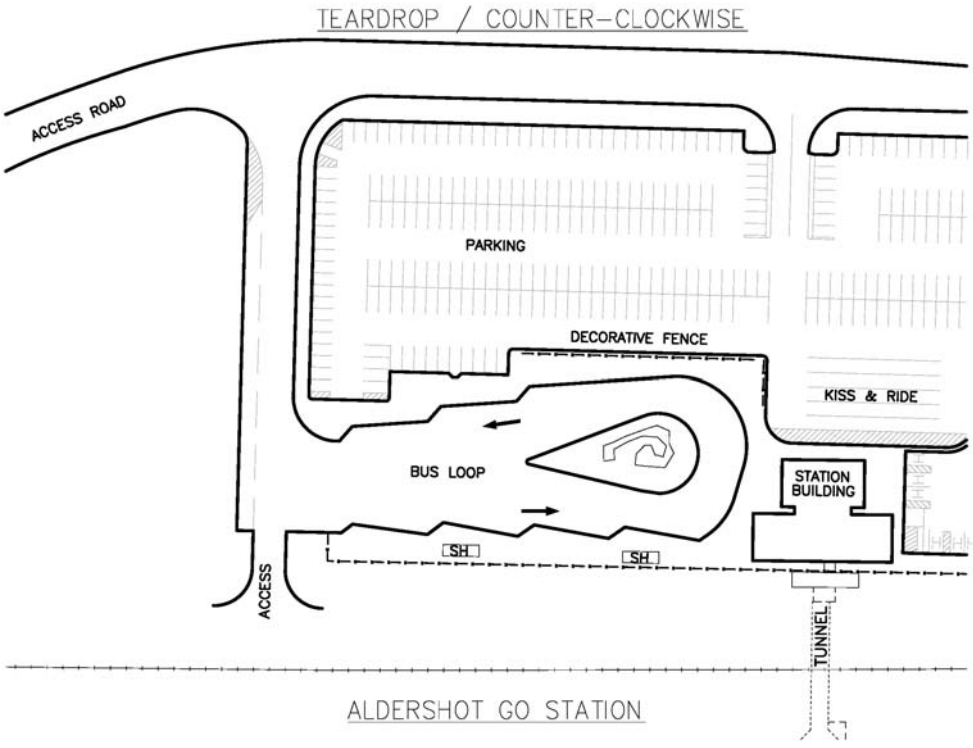
FIGURE:

Teardrop Bus Loop Configuration

Clockwise Traffic Flow



BI-DIRECTIONAL CONFIGURATION – CLOCKWISE AND COUNTER-CLOCKWISE TRAFFIC FLOW

Bi-Directional bus loops include an island platform and a perimeter platform with bus traffic moving in both a clockwise and counter-clockwise direction. Passengers board from platforms on the perimeter of the outer teardrop loop and platforms from the inner island.

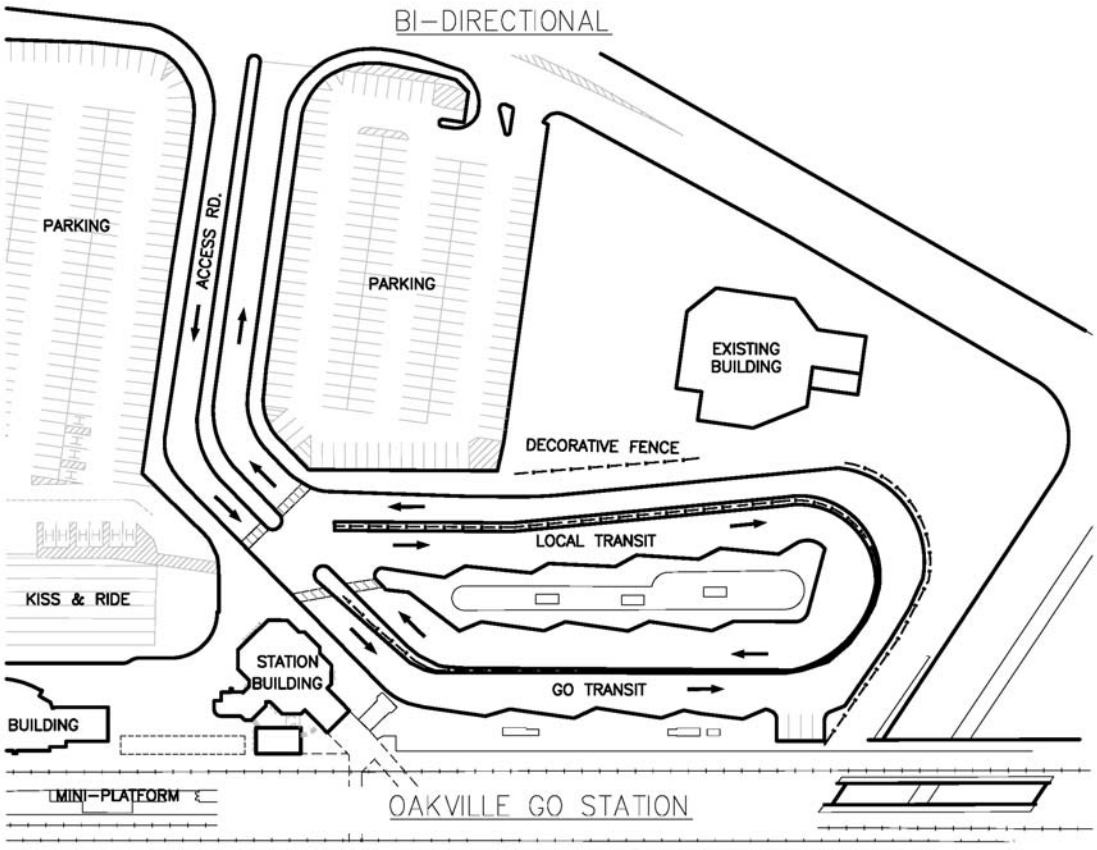
When applicable:

- Effective at high volume stations and bus terminals with both GO bus and local bus service as the island and teardrop configuration offer an intuitive separation and easy transfer between services while accommodating a higher number of platforms.
- Availability of tunnels to connect pedestrians to island platforms without crossing bus loops.
- No real estate restrictions, although this configuration offers an efficient use of real estate

Tab 3: Bus Infrastructure

FIGURE:

Bi-Directional Bus Loop Configuration and Traffic Flow



COMMON GUIDELINES FOR ALL BUS LOOP CONFIGURATIONS

- Bus loops to be designed and located to allow a natural pedestrian flow where possible.
- Decorative Fencing and / or Landscaping is to be used to control pedestrian traffic and limit pedestrian access through the bus loop where not desired.
- If pedestrian traffic must go through the bus loop, design for predictable flow in accordance with DRM requirements as they relate to pedestrian crosswalks.
- Provide separate access for bus, segregated from other vehicular traffic, from bicycle routes and from pedestrian routes. If not possible to fully segregate bus access / egress, a risk assessment should be completed to ensure the safety of the public and passengers.
- Dedicated “Bus Only Out” lanes to be planned for to speed up public transport and avoid traffic congestion.
- Lighting levels to be in accordance with section CI-0703 – Lighting Requirements.
- Incorporate Bioswales in the centre of bus loops wherever possible.
- Bus loop configuration to be designed and located to accommodate for a layover.
- Maintain clearance requirements at platforms as defined in section CI-0303 – Bus Platforms and Design Guideline – Clearances.
- Bus access and egress must allow clearances necessary to accommodate both Single Deck (MCI) and Double Deck (MDL) coaches. Consultant may have to accommodate local transit or other carriers which may have their own design requirements.

MATERIALS

Bus loop area and bus bay area shall be concrete with final texturing meeting OPSS 350 recommendations to achieve desired skid resistant surface.

Bus access roads shall be asphalt.

Passenger waiting bus platform shall be hard, level materials that are resistant to slipping and capable of clearing during winter months by motorized equipment.

Concrete Curbs to be painted yellow (top and side) along the entire length of the bus loop. Additional elements, which might be difficult for bus drivers and passengers to see in the bus loop area to be reviewed for potential to be painted yellow. Additional painted elements will be determined at the discretion of GO Transit.

Walkways or sidewalks shall not be located where buses may require back up movements.