Monday, January 27, 2020
9:00 am
Knox Mountain Meeting Room (#4A)
City Hall, 1435 Water Street

1. Call to Order

2. Confirmation of Minutes

Regular AM Meeting - January 20, 2020

3. Reports

3.1 Central Okanagan Transit Service Guidelines

To consider the Central Okanagan Transit Service Guidelines.

3.2 Seasonal Transit Service Changes and Transit Operations Facility Capacity

To consider seasonal adjustments to transit service levels and to update Council on efforts to free up space at the current operations facility to allow for expansion of Conventional Transit services to proceed.

3.3 SILGA Call for Resolutions and Call for Nominations, verbal report, Deputy City Clerk

To provide Council with information on the SILGA calls for resolutions and nominations

4. Resolution Closing the Meeting to the Public

THAT this meeting be closed to the public pursuant to Section 90(1) (b) and (d) of the Community Charter for Council to deal with matters relating to the following:

- Municipal Award or Honour
- Security of Municipal Property
5. Adjourn to Closed Session

6. Reconvene to Open Session

7. Issues Arising from Correspondence & Community Concerns
   7.1 Mayor Basran, re: Issues Arising from Correspondence 30 m

8. Termination
City of Kelowna

Regular Council Meeting
Minutes

Date: Monday, January 20, 2020
Location: Knox Mountain Meeting Room (#4A)
          City Hall, 1435 Water Street

Members Present
Mayor Colin Basran, Councillors Ryan Donn, Gail Given, Mohini
Singh, Brad Sieben, Luke Stack and Loyal Wooldridge

Member Participating by Telephone
Councillor Charlie Hodge

Members Absent
Councillor Maxine DeHart

Staff Present
City Manager, Doug Gilchrist; City Clerk, Stephen Fleming,
Deputy City Clerk, Laura Bentley; Divisional Director, Corporate
Strategic Services, Carla Weaden*; Information Services
Department Manager, Rob Entwistle*; Intelligent Cities Manager,
Andreas Boehm*; Legislative Coordinator (Confidential), Arlene
McClelland

(* Denotes partial attendance)

1. Call to Order
Mayor Basran called the meeting to order at 9:04 a.m.

2. Confirmation of Minutes
Moved By Councillor Given/Seconded By Councillor Wooldridge

    R0021/20/01/20 THAT the Minutes of the Regular AM Meeting of January 13, 2020 be
    confirmed as circulated

        Carried

3. Reports

3.1 Information Services Digital and Intelligent City strategies

Staff:
- Displayed a PowerPoint Presentation.
- Spoke to the 2014 Digital Strategy development, background and initiative accomplishments.
- Spoke to the future digital themes that the Information Services Department will focus on which
  encompasses the needs of the City as well as the community.
- Provided comments on the Information Services Department goals and supporting actions for each
  theme.
- Provided comment on the Intelligent City vision and principles.
- Spoke to the Intelligent City Strategies including current and upcoming initiatives.
- Spoke to the Intelligent City focus areas; Community Safety, Transportation and Mobility and Environment protection.
- Responded to questions from Council.

Moved By Councillor Stack/Seconded By Councillor Singh

**R0022/20/01/20** THAT Council receives, for information, the report from the Information Services Department dated January 20, 2020 with respect to an update on the Information Services Digital Strategy and the Intelligent Cities Strategy.

Carried

The meeting recessed at 10:05 a.m.

The meeting reconvened at 10:13 a.m.

4. **Resolution Closing the Meeting to the Public**

Moved By Councillor Wooldridge/Seconded By Councillor Given

**R0023/20/01/20** THAT this meeting be closed to the public pursuant to Section 90(1) (a) and (c) and Section 90(2) (b) of the Community Charter for Council to deal with matters relating to the following:

- Position Appointment
- Employee Relations
- Negotiations between a Municipality and Provincial Government

Carried

5. **Adjourn to Closed Session**

The meeting adjourned to a closed session at 10:13 a.m.

6. **Reconvene to Open Session**

The meeting reconvened to an open session at 12:25 p.m.

7. **Issues Arising from Correspondence & Community Concerns**

There were no issues arising.

8. **Termination**

The meeting was declared terminated at 12:25 p.m.

Mayor Basran

City Clerk

/acm
Report to Council

Date: January 27, 2020
To: Council
From: City Manager
Subject: Central Okanagan Transit Service Guidelines
Department: Integrated Transportation

Recommendation:

THAT Council receive for information the report from the Integrated Transportation Department introducing the Central Okanagan Transit Service Guidelines;

AND THAT Council endorse the Central Okanagan Transit Service Guidelines.

Purpose:

To inform Council about the Central Okanagan Transit Service Guidelines including their purpose in guiding service planning decisions, monitoring system performance and outlining the relationship between land use and effective public transit.

Background:

As part of the ongoing management of the transit network, the Transit Service Guidelines have been developed as a tool to facilitate service planning decisions and to measure how well the transit system is progressing towards achieving its goals. The information presented in the document is intended to be reviewed regularly and updated based on the evolving conditions, expectations and performance of the transit system.

The Transit Service Guidelines engagement process was combined with the Transit Future Action Plan project. The public was engaged in the process to ensure that the final Transit Service Guidelines reflect the needs and priorities of the community. The Guidelines are meant to ensure resources are used effectively and that an acceptable level of service quality is provided to the customer. Building upon the basic performance standards included within the Central Okanagan Transit Future Plan, the Guidelines provide a consistent and fair approach for guiding investments in existing and new transit services.
Discussion:


Transit Service and Infrastructure Design Guidelines

Transit-supportive land use is critical for the success of the transit system and, conversely, transit (especially fixed-corridor, high-quality transit service) can help to attract and support higher-density, mixed-use development.

Service design guidelines define the characteristics of effective Core and Coverage transit services separating service design based upon the context of the areas of the community it will operate within. Investing in transit service within the Transit Core area helps maximize the people-moving capacity of the road network, improve mobility for most residents and influence land-use. Core services account for the bulk of ridership in the transit system resulting in a higher proportion of costs being recovered through fares. This means more service can to be provided for each dollar of public investment. Since 50% of all trips made in Kelowna begin and end within the Transit Core\(^1\), investment in Core services provides the greatest opportunity to reduce auto trips and contribute to improved air quality and public health among other benefits. While Coverage transit services generally do not attract high ridership, investing in transit service in Coverage areas when warranted serves to connect riders to the Core and provide basic mobility for residents who depend on public transit. It is however important to note that Core Transit services may reach the bulk of residents without other means of transportation. For example, 83% of seniors’ residences and 82% of rental households are located within the Transit Core.

\(^1\) Central Okanagan Household Travel Survey
Transit facilities not only frame the transit user experience but form the most visible fixed indicator of transit service in the community. They are tools to attract riders, improve operational efficiency, build the brand identity of a system and foster local economic development. The infrastructure design guidelines provide a high-level overview of key design considerations found within BC Transit’s more comprehensive transit infrastructure design manual.

Transit Service Standards

The second component of the Transit Service Guidelines, Service Standards define the minimum levels of transit service for Transit Core and Coverage areas. They guide decisions around when transit will operate and how frequently as well as when new transit services may be appropriate for an area. Establishing minimum density targets for the various types of transit service offered in the community increases the likelihood that a proposed service will meet minimum performance targets.

Service Expansion Guidelines

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Average Corridor Density (residents &amp; jobs / km²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid Transit Route</td>
<td>5,000</td>
</tr>
<tr>
<td>Frequent Transit Route</td>
<td>4,000</td>
</tr>
<tr>
<td>Local Transit Route (Ridership)</td>
<td>2,000</td>
</tr>
<tr>
<td>Local Transit Route (Coverage)</td>
<td>1,000</td>
</tr>
</tbody>
</table>

Performance Guidelines

The final component, Performance Guidelines, define thresholds and targets for the transit system and its routes. Working in tandem with Service Standards, they are a tool that can be used to evaluate existing services, identify performance trends and inform how service should be changed to improve the effectiveness and efficiency of the system.

Route-Level Performance targets

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Boardings per Service Hour</th>
<th>On-time Departures (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid Transit Network</td>
<td>45</td>
<td>70%</td>
</tr>
<tr>
<td>Frequent Transit Network</td>
<td>45</td>
<td>70%</td>
</tr>
<tr>
<td>Local Transit Network (Ridership)</td>
<td>25</td>
<td>70%</td>
</tr>
<tr>
<td>Local Transit Network (Coverage)</td>
<td>15</td>
<td>80%</td>
</tr>
<tr>
<td>Targeted Services</td>
<td>20</td>
<td>70%</td>
</tr>
</tbody>
</table>

2 The boardings per service hour metric standardizes ridership performance between routes according to the amount of service provided on each.

3 Proportion of trips that depart within 1 minute early and 3 minutes late of the scheduled departure time at each timing point.
### System-Level Performance Targets

<table>
<thead>
<tr>
<th>Measure</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rides per service hour</td>
<td>35</td>
</tr>
<tr>
<td>Cost per passenger trip</td>
<td>$2.85*</td>
</tr>
<tr>
<td>Cost recovery</td>
<td>35%</td>
</tr>
</tbody>
</table>

### Service Improvement Prioritization

The Transit Service Guidelines outline the approach for prioritizing transit service expansion which focuses on ensuring that the existing transit system is performing effectively ahead of expanding service to new areas.

**Approach to Transit Service Improvement Priorities**

![Diagram of transit service improvement priorities]

**Conclusion:**

The Central Okanagan Transit Service Guidelines contain useful tools to facilitate service planning and to measure transit system performance. The Guidelines serve to help existing customers and residents better understand the decision-making process for the transit system while clearly defining the relationship between land use and effective public transit.

**Internal Circulation:**

- Infrastructure
- Community Communications

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* This metric was set at $2.50 in the 2012 Transit Future Plan. The new metric accounts for a 2% annual inflation rate between 2012 and 2019.
Policy and Planning
Real Estate Department

Considerations not applicable to this report:

Legal/Statutory Authority:
Legal/Statutory Procedural Requirements:
Existing Policy:
Financial/Budgetary Considerations:
External Agency/Public Comments:
Communications Comments:

Submitted by:
M. Kittmer, Transit Service Coordinator

Approved for inclusion: A. Newcombe, Divisional Director, Infrastructure

Attachment 1: Central Okanagan Transit Service Guidelines
Attachment 2: Central Okanagan Transit Service Guidelines Presentation

cc: Alan Newcombe, Divisional Director, Infrastructure
    Rafael Villarreal, Integrated Transportation Department Manager
    Jerry Dombowsky, Transit and Programs Manager
    Kelly Isaak, Infrastructure Administration Manager
    Stephanie Trenholm, Communications Advisor
    Johannes Saufferer, Real Estate Department Manager
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INTRODUCTION

What are Transit Service Guidelines?

As part of the ongoing management of the conventional transit network, Transit Service Guidelines contain useful tools to facilitate service planning decisions and to measure how well the transit system is progressing towards achieving its goals. There are three key components to the Central Okanagan Region’s Transit Service Guidelines.

Design Guidelines

The design guidelines identify the broad characteristics of effective transit service and infrastructure design. Since effective transit service design is often context dependent, these service design guidelines have been separated into core and coverage areas.

Service Standards

Service standards identify the recommended minimum service levels for transit services by service layer and the minimum characteristics for considering transit service expansion to new areas.

Performance Guidelines

Performance guidelines identify transit service performance targets for the Kelowna Regional Transit System. These guidelines include system-wide performance targets as well as route-specific targets separated by service layer.

Purpose

As part of the ongoing management of the transit network, the Transit Service Guidelines have been developed as a tool to help make service planning decisions and measure how well a transit system is progressing towards achieving its vision, goals and targets in the Central Okanagan. The information summarized in this document is intended to be revisited and updated over time based on the evolving conditions, expectations and performance of the transit system.

This document is meant to achieve the following purposes:

1. To ensure resources are used effectively and that an acceptable level of service quality is provided to the customer
2. Along with the Transit Future Plan, to provide a consistent and fair approach for guiding investments in existing and new transit services

This is one of the tools that will be used by BC Transit, the local partners, and the Operating Companies to guide the allocation of resources for transit services. In combination with the strategic objectives and policies of BC Transit and the local partners, these guidelines will be used to assess and improve existing transit services and to determine the feasibility of new transit services.

These Transit Service Guidelines build upon the basic performance standards included within the Central Okanagan Transit Future Plan. These guidelines were developed to better enable the Kelowna Regional Transit System to meet the goals outlined in the 2012 Central Okanagan Transit Future Plan including:
• Attracting new riders
• Delivering operational excellence
• Improving transit sustainability

Further, these Transit Service Guidelines were developed with the following key principles and themes:
• Moving people more efficiently
• Enable access for all
• Connecting urban centres

Although all three of these themes are important, they are often in conflict with one another. Transit Service Guidelines can help public officials make informed, transparent, and consistent decisions about how best to allocate resources when faced with trade-offs between objectives.

PUBLIC ENGAGEMENT

The development of the Transit Service Guidelines was highly collaborative and included BC Transit, the Central Okanagan District, the local governments of the City of Kelowna, District of Lake Country, City of West Kelowna, Westbank First Nation and the District of Peachland, transit system staff, the public, and representatives from a wide array of stakeholder organizations.

The Transit Service Guidelines engagement process was combined with the Transit Future Action Plan project, and the process was designed to reach riders and non-riders alike. Members of the public were engaged in the process to ensure that the final Transit Service Guidelines reflect the needs and priorities of the community.

A summary of the key findings from the public engagement process are included in the Transit Future Action Plan Phase 2 Engagement Summary Report.
DESIGN GUIDELINES

These service design guidelines provide broad design considerations for developing effective transit services and within the Central Okanagan Region. Although certain transit service design considerations can be applied within any context, other design considerations are most effective within specific contexts shaped by surrounding land uses, density, and road network design; consequently, aspects of the service design guidelines have been categorized into Core and Coverage areas.

Service Design Guidelines

Integrated Land Use and Transportation Planning Principles

There is a strong relationship between transit and land use. Transit-supportive land use is critical for the success of the transit system and, conversely, transit (especially fixed-corridor, high-quality transit service) can help to attract and support higher-density, mixed-use development. Therefore, land use planning and transportation must be integrated in order to best serve people, as illustrated in Figure 3.

For example, higher-density developments can better support transit because a greater number of potential transit users are located within walking distance of a transit stop, thus maximizing the potential transit customer base and leading to increased ridership. A transit stop in an area with a density of 1000 people per square kilometer\(^1\) would have approximately 500 potential customers within a 400-

\(^1\) Characterized by a low-density neighbourhood of detached single-family residences
metre walking distance, while a transit stop in an area with a density of 5,000 people per square kilometer would have approximately 2,500 potential customers within a 400-metre walking distance.

Some examples of how integrated land use and transportation planning can be achieved in the Central Okanagan region include:

- **Ensure new residential development in the region, especially in the Transit Core, is medium- to high-density infill development, in order to be able to serve more people with transit more efficiently.**

- **Develop non-residential density**: Employment and other non-residential destinations can be much more efficiently served by transit when they are located together, particularly for the Transit Core.

- **Develop mixed-use sites**: Combining people and amenities, especially in medium- and high density developments, will enable efficient access by preferred modes of transportation like transit, walking, and cycling. Providing transit access to and from these concentrated areas can reduce single-occupancy vehicle dependence in the Central Okanagan region.

### Core and Coverage Areas

Effective transit service design depends on the context of the community they operate within. Some of these contextual factors include the surrounding land uses and density. For that reason, the service design guidelines have been separated into Core and Coverage areas (Figure 1).

- **Transit Core Area**: These are areas of the region where transit is most efficient, competitive, and sustainable. The Transit Core is defined as contiguous areas with concentrations of activity above 3,000 residents and jobs per square kilometer, which is high enough to support more frequent transit service throughout the day. The Transit Core areas are primarily served by the Rapid Transit and Frequent Transit Networks. That being said, for accessibility reasons, local nodes or lower density corridors within the Core Area could still be served by the Local Transit Network.

- **Transit Coverage Area**: These are areas outside the Transit Core which are unlikely to generate high ridership but where some level of service may be warranted to connect riders to the core or provide basic mobility for residents who depend on transit. For planning purposes, potential coverage areas are defined as contiguous areas outside of the Transit Core with concentrations of activity above 1,000 residents and jobs per square kilometer, which is BC Transit’s minimum threshold for recommending fixed-route transit service. Additionally, these coverage areas should have road and pedestrian infrastructure that enables safe access and efficient operation of any proposed transit service. The Transit Coverage area is primarily served by the Local Transit Network and Targeted Services.

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2 Characterized by a medium-density neighbourhood with a mix of low-rise and medium-rise apartments
The Transit Core and Coverage Areas map was originally produced for the Central Okanagan Transit Future Action Plan, and through that process, the Transit Core Boundary was developed. The Transit Core Boundary was developed around areas meeting the Transit Core density threshold, but modified slightly to account for existing service levels and to ensure it accommodated a large enough contiguous area and reflected areas of the community in which development was being focused. This revised map shows the original Transit Core Boundary along with an update of the areas meeting the density thresholds for Core and Coverage based on the recent development context within the Kelowna Region (2020 data for City of Kelowna and 2016 Census data for the regions outside City of Kelowna).
**GUIDING PRINCIPLES FOR CORE TRANSIT NETWORK DESIGN**

- Routes should be direct, consistent, and easy to remember. This improves the speed and efficiency of them as well as making customer wayfinding easier.
- Routes should have strong ‘anchors’ or centres of activity at both ends. This can help balance ridership in each direction and reduce the amount of buses operating with limited passengers.
- Service should be bi-directional, with large one-way loops being avoided wherever possible. Deviations from corridors shorter than 200 meters are also discouraged.
- Routes should be designed to a grid pattern where the street network allows. Grids increase the connectivity of the transit network and make it easier to access all destinations, not just a central hub.
- Routes should connect residents to centralized amenities within a neighborhood or community, and transit trips between neighborhood centres should be transit-accessible by no more than one transfer.

**GUIDING PRINCIPLES FOR COVERAGE TRANSIT NETWORK DESIGN**

- Routes should be reasonably direct, remaining on arterial and collector streets and avoiding local streets, cul-de-sacs and parking lots wherever possible.
- Routes should be as direct, consistent, and easy to remember as possible. This improves the speed and efficiency of them as well as making customer wayfinding easier.
- Routes should attempt to connect to centres of activity. This can help increase ridership on the service.
- Routes should connect directly into the Core Transit Area to provide access to the frequent or rapid transit network.

**GUIDING PRINCIPLES FOR REGIONAL AND INTERREGIONAL TRANSIT NETWORK DESIGN**

- Routes should be direct, consistent, and easy to remember. This improves the speed and efficiency of them as well as making customer wayfinding easier.
- Routes should have strong ‘anchors’ or centres of activity at both ends. This can help balance ridership in each direction and reduce the amount of buses operating with limited passengers.
- Routes should connect directly into the Core Transit Area to provide access to the frequent or rapid transit network.
- Routes should have limited bus stops, with stops placed at key, accessible locations to facilitate connections to the broader transit network.
On-Time Performance Principles

Transit schedules should provide the most reliable service possible. In the event that service is consistently unreliable, one of the following measures should be undertaken to address the issue:

- The best strategy to deal with on-time performance issues is to schedule running times that are reflective of actual operating conditions. This means that schedules should be built in consideration of known delays. Additional strategies include:
  - Regular system monitoring to enforce balanced and consistent intervals between trips
  - Additional on-street supervision to monitor transit schedules
  - The coordination of passenger loads to avoid poor departure spacing of buses and overcrowding.
  - When all-mode traffic volumes warrant it, the implementation of traffic signal priority and transit-only lanes or queue jump lanes at congested intersections can also help to reduce the variability in running times and balance headways to reduce the occurrence of bunches and gaps in service.

- The recovery time is a planned time allowance between the arrival time of a just-completed trip and the departure time of the next trip in order to allow the route to return to schedule if traffic, loading or other conditions have made the trip arrive late. Recovery time is a concept that is included in all transit scheduling and, on average, best practice is to include approximately 12-15% recovery time across a whole transit system.
Infrastructure Design Guidelines

Design principles for transit facilities should conform to the BC Transit Infrastructure and Design Guidelines, as well as the federal and provincial guidelines for transportation and transit infrastructure. Guidance in this section is condensed from that detailed within the BC Transit Infrastructure Design Guidelines which should be reference for more complete information.

Bus Stops

Bus stops and facilities for waiting passengers should include a hard-surfaced landing/waiting area and be universally accessible in urban areas. In rural areas, universal bus accessibility should be based on request. Local governments are responsible for continuous improvement of on-street passenger facilities, including the provision of bus benches, shelters, lighting, waste receptacles, and route/schedule information where warranted.

- Bus stops should be located in areas that are safe to board and alight passengers – ideally near intersections to minimize walking distances to transit. Bus stops should be convenient to major activity centres and transfers to other forms of transportation. Bus stop should be located on the far-side of intersections where feasible, with mid-block stops at key centres of activity. Far-side bus stops help with service reliability and safety, as fewer pedestrians are likely to cross in front of the bus. Near-side bus stops may be considered where high transfer volumes to and intersecting bus route that services a far-side stop on the cross street occur.

- Direct pedestrian and cycling connections should be provided to bus stops via sidewalks, pathways and crosswalks, with curb ramps and barrier-free access.

- Bus stops should be located on the far side of crosswalks, or at least 20m in advance of a crosswalk.

- Adequate sight distances should be achieved for motorists approaching the bus stop as well as transit passengers crossing the road from the bus stop. Passenger amenities at transit stops can enhance the quality of service for customers and can also have a significant impact on attracting new users.

- Bus stop should be located to minimize duplication of coverage along routes. Placing stops further apart increases the speed and reliability of transit service as well as reduces maintenance costs. While the initial walk to the bus stop may be slightly longer, the net result is a service which is quicker for everyone.

- All bus stops should be universally accessible, with additional amenities such as shelters, seating, and bicycle storage provided according to passenger volumes.

- Where possible, transit routes and bus stops should be generally within:
  - 400m walking distance of 90% of the residences
  - 250m of all medium and high-density residential developments
  - 250-300m for stops on a route with greater than 10% grade
  - 150m walking distance of all designated senior’s residences and major institutional facilities (e.g. trip-generating educational, healthcare and religious developments)
**Bus Stop Spacing**

Transit stops should be spaced along a corridor at an appropriate interval. In urban areas, this is typically between 300m - 400m. Transit stops that are spaced too closely together lead to slower transit trips and higher transit stop maintenance costs, while stops that are too far apart limit passenger access to the system. Outside the urbanized area, bus stops should be limited to major activity centres and trip generators such as residential concentrations. Bus stop intervals should be limited on select type of service. Table 1 provides the appropriate standard for each service type.

Table 1 - Service Type and Appropriate Stop Intervals

<table>
<thead>
<tr>
<th>Service</th>
<th>Stop Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid Transit</td>
<td>• Limited stops at key locations. Stops are typically spaced 800m to 2km apart.</td>
</tr>
<tr>
<td></td>
<td>• Ideally, Rapid Transit stops should meet a minimum node density of 5,000 activity units within a 400m buffer.</td>
</tr>
<tr>
<td>Frequent Transit (Transit Core Area)</td>
<td>Frequent stops along a corridor, 300-500 meters apart.</td>
</tr>
<tr>
<td>Local Transit (Transit Coverage Area)</td>
<td>Frequent stops along a corridor, 250-300 meters apart.</td>
</tr>
<tr>
<td></td>
<td>Gradient &gt; 10%, 250-300 meters apart.</td>
</tr>
</tbody>
</table>

**Transit Shelters**

Transit shelters can improve the customer experience and overall visibility and perception of the transit system. Shelter are however not warranted at all bus stops and consideration must be given to the cost to provide and maintain them.

A transit shelter may be considered for installation at stops when any of the following criteria are met:

- The bus stop experiences a high volume of boardings
- The bus stop is a major connection point to other modes of transportation
- The bus stop is exposed to regular inclement weather
- The installation of a transit shelter could encourage increased ridership

**Transit Exchanges and Park & Rides**

Transit exchanges are typically located within the activity centres of the community in order to maximize transit accessibility, efficiency and visibility. When properly planned and designed, transit exchanges can become effective multi-modal exchanges and pedestrian-oriented sites. Transit exchanges should include weather protection, seating, transit route and schedule information, bicycle parking and other amenities as shown in the passenger amenities section below.

Park & Ride sites should be located in suburban and semi-rural areas to provide residents who live in areas with limited or no transit service an access point to higher-quality transit services. Below, the basic functional requirements for transit exchanges and Park & Ride facilities are described:
Site requirements:

- Sites with no significant safety concerns, which provide for direct and safe pedestrian access, and which minimize the interaction between buses and general traffic on adjacent roads;

- Sites that can be accessed safely and efficiently, avoiding traffic congestion and queuing;

- Sites that provide high visibility to pedestrians, motorists and others, minimizing personal safety concerns for transit passengers using the terminals in evenings and at other off-peak times; and

- The sites must be located to minimize additional transit routing and costs.

Physical requirements

- As a minimum, all platforms should be built to accommodate standard 12m buses.

- All corridors that operate high capacity buses (e.g. double-deckers, articulated buses) should enable prescribed overhead and horizontal clearances.

- Buses must be able to arrive and depart from platforms independently.

- Passenger facilities should include:
  - Passenger amenities, including weather protection, seating, illumination, and bicycle storage
  - Universal Accessibility to all areas of the facility
  - Wayfinding signage and information

- Transit terminals should also incorporate Transit Operator washrooms.

- In addition, Park & Ride sites should include parking for automobiles, bicycles and bus stops for transit access.
Transit Priority Measures

Fast, frequent, and reliable transit service grows ridership, but slow, infrequent, and inconsistent service discourages ridership. In mixed traffic, transit is limited by the prevailing traffic conditions and will be delayed by any factors that delay all other traffic. Within these operating conditions, transit priority measures are often required for transit to avoid delays and operate more reliably.

Transit has the highest capacity for moving people in a constrained space and when prioritized, has the potential to stem the growth of vehicle congestion and ultimately upgrade the performance of limited street space. This in turn reduces public infrastructure expenses while aiding in controlling transit operating costs.

Transit priority is a term used to refer to a variety of physical and operational improvements designed to give transit vehicles and their passengers varying degrees of priority over general vehicle traffic. Transit priority measures can be:

- Regulatory, such as “Yield to the Bus” regulations and signage;
- Operational, such as retiming traffic signals to respect observed transit travel times on the corridor and the large number of passengers on transit vehicles compared to private vehicles; and
- Physical, such as exclusive transit ways, intersection queue-jumpers, bus bulges, and transit signal priority measures.

Table 2 – Transit Priority Measures

<table>
<thead>
<tr>
<th>Signal Priority Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit signal priority can include active and passive measures to improve transit reliability and reduce travel times.</td>
</tr>
<tr>
<td>Transit signal priority (TSP) consists of various forms of active priority measures that modify traffic signal timing or phasing when transit vehicles are present. TSP can be structured conditionally or unconditionally. Conditional TSP grants priority when buses meet certain conditions including running late or carrying large passenger loads. Unconditional TSP grants priority to all buses regardless of operating conditions. TSP is most effectively applied to intersections where signals are a major source of delay, whether due to signal phase lengths or traffic volumes. For TSP to work, transit vehicles must be able to reach the signal by making use of a dedicated lane or an otherwise clear travel lane with managed traffic volumes.</td>
</tr>
<tr>
<td>A passive transit priority strategy includes transit signal progression. Transit signal progression is a pre-timed or passive transit signal approach which sets signal progressions to realistic travel speeds for transit operating on the corridor. It is applied on streets with high volumes of transit vehicles that operate in mixed traffic or dedicated transit lanes.</td>
</tr>
</tbody>
</table>
Lane Priority Measures

Transit lanes delineate space within the roadway as exclusive, either full-or part-time and are designated by signs and markings sometimes permitting limited use by other vehicles. They are applicable on corridors with moderate to high transit volumes where buses are delayed by congestion or curbside activities.

Transitways physically separate a portion of the street for exclusive use by transit at all times. Corridors with consistently low transit travel speeds and high transit volume are candidates for transitways facilitating creation of an open Bus Rapid Transit system.

Lane priority measures are combined with transit signal priority measures which together contribute significantly to reliable, attractive transit service.

Queue-Jumper Lanes at Key Areas of Congestion

Queue jump lanes combine short dedicated transit facilities with a dedicated transit signal or signal priority to allow buses to easily enter traffic flow in a priority position. They can be applied at intersections with near-side, far-side or without bus stops.

Queue jump lanes are applied on signalized streets with low or moderately frequent bus routes on corridors with high peak hour traffic volumes but relatively low right turn movements. On corridors with greater transit frequencies and high passenger volumes, lane priority measures in conjunction with signal priority should be considered.
Determining the most appropriate transit priority measures for a problem intersection requires careful consideration and analysis of all modes that utilize the right of way.

Since the Transit Future Plan, the Central Okanagan region implemented its first transit priority measures as part of the RapidBus project. The priority measures are in place in both Kelowna and West Kelowna and include signal priority along Highway 97 between Elliott Road and Edwards Road, and a 2+ High Occupancy Vehicle lane along Highway 97 initially between Hwy 33 and Pandosy and extending to Sexsmith Road in 2018. Given the anticipated increase in traffic volumes and congestion, additional transit priority measures will be needed to maintain or improve operating speeds, which will keep cost down and help to improve ridership. The type of priority measure implemented should match the particular needs of the intersection or corridor.

Since the Transit Future Plan, the following additional transit priority measures have been established within the Kelowna Regional Transit System:

- Two queue jump lanes are in place at intersections along Lakeshore Road in Kelowna today aiding buses serving near-side stops at these locations to bypass queued vehicles when departing the stops.
- Throughout the City of Kelowna, transit signal priority equipment is in place at many signalized intersections, and this equipment is controlled through a Central Management System used by both emergency services and transit vehicles.
- Today, a significant portion of the vehicles in the conventional fleet are outfitted with TSP equipment.

Table 3 below outlines some standards for prioritizing future transit priority measures within the Kelowna Regional Transit System.

**Table 3 – Transit Service Type and Transit Priority Measure Standards**

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Priority</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rapid Transit</strong></td>
<td>Operational</td>
<td>Transit is given signal priority along the full corridor at intersections, particularly buses running late or carrying large passenger loads.</td>
</tr>
<tr>
<td></td>
<td>Physical</td>
<td>Transit lanes in areas of significant congestion or when there are a significant number of well-utilized buses operating along a corridor. Queue-jumper lanes at key areas of congestion.</td>
</tr>
<tr>
<td><strong>Frequent Transit</strong></td>
<td>Operational</td>
<td>Transit signals are optimized to benefit transit. Transit is given signal priority in areas of congestion or when there are a significant number of well-utilized buses along a corridor.</td>
</tr>
<tr>
<td></td>
<td>Physical</td>
<td>Queue-jumper lanes at key areas of congestion. Consideration for transit lanes in areas of significant congestion or where a significant number of well utilized buses operate along a corridor.</td>
</tr>
<tr>
<td><strong>Local Transit</strong></td>
<td>Operational</td>
<td>Transit signals are optimized to benefit transit. Transit is given signal priority at key delay points.</td>
</tr>
<tr>
<td></td>
<td>Physical</td>
<td>Not required.</td>
</tr>
</tbody>
</table>
SERVICE STANDARDS

Service standards define minimum levels of transit service desired to meet community needs. They are specific to a particular transit system and the communities it serves. Service standards can apply to existing services or to identify when service should be considered for new areas.

A key benefit of transit service guidelines is that they guide local governments and BC Transit staff in determining and managing community expectations regarding the level of transit service to be provided. They also inform decisions regarding system design such as whether to provide new service or increase or decrease existing service. They can also be helpful for existing customers and residents to better understand the decision-making process for the transit system.

Service standards should be considered within the context of performance guidelines to help prioritize improvements throughout the system.

Standards for Existing Service

Service standards for existing service can include a number of factors including service span, frequency, bus stop spacing, and walking distance to bus stops. The Central Okanagan Region’s transit service standards have been broken down according to the four layers of service defined within the Transit Future Plan.

<table>
<thead>
<tr>
<th>Primary Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid Transit Network (RTN)</td>
</tr>
<tr>
<td>RTN service is designed to move high volumes of passengers between major regional destinations along key transportation corridors. The level of investment in RTN infrastructure, technology, vehicles and service levels combine to significantly increase system performance. RTN services utilize an exclusive or semi-exclusive right-of-way with limited stop service.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequent Transit Network (FTN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The FTN provides key corridors with a convenient, reliable and frequent transit service. The FTN will carry a large share of the transit system’s total ridership and for this reason justifies capital investments in transit priority, a high level of transit stop amenities and corridor branding.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Transit Network (LTN)</td>
</tr>
<tr>
<td>The LTN is designed to connect neighborhoods to local destinations and to the RTN and FTN.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Targeted Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeted Services are a collection of transit services which include handyDART, regional, express, and rural transit services (including flex-route, dial-a-bus, and demand-responsive services).</td>
</tr>
</tbody>
</table>
Service Span

This section defines the existing, medium-term, and the long-term Transit Future Plan service span targets by service type (Table 4). Service span extensions, particularly those beyond these standards, should be considered when productivity of the first or last hour of service is greater than the average for that route.

Table 4 - Service Span Standards

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Period</th>
<th>Existing (Weekday)</th>
<th>Medium-term (Peak Service)</th>
<th>Long-term (Peak Service)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid Transit Network</td>
<td>Weekday</td>
<td>5:30am – 1:00am</td>
<td>5:00am – 1:00am</td>
<td>5:00am – 1:00am</td>
</tr>
<tr>
<td></td>
<td>Saturday</td>
<td>7:00am – 2:30am</td>
<td>6:00am – 2:30am</td>
<td>5:00am – 2:30am</td>
</tr>
<tr>
<td></td>
<td>Sunday</td>
<td>7:30am – 11:00pm</td>
<td>6:30am – 12:00am</td>
<td>5:00am – 1:00am</td>
</tr>
<tr>
<td>Frequent Transit Network</td>
<td>Weekday</td>
<td>6:00am – 11:00pm</td>
<td>5:00am – 1:00am</td>
<td>5:00am – 1:00am</td>
</tr>
<tr>
<td></td>
<td>Saturday</td>
<td>7:30am – 1:00am</td>
<td>6:00am – 1:00am</td>
<td>5:00am – 1:00am</td>
</tr>
<tr>
<td></td>
<td>Sunday</td>
<td>8:00am – 10:30pm</td>
<td>6:30am – 12:00am</td>
<td>5:00am – 1:00am</td>
</tr>
<tr>
<td>Local Transit Network (Ridership)</td>
<td>Weekday</td>
<td>Based on demand</td>
<td>7:00am – 9:00pm</td>
<td>6:00am – 12:00am</td>
</tr>
<tr>
<td></td>
<td>Saturday</td>
<td>Based on demand</td>
<td>7:00am – 9:00pm</td>
<td>7:00am – 12:00am</td>
</tr>
<tr>
<td></td>
<td>Sunday</td>
<td>Based on demand</td>
<td>8:00am – 8:00pm</td>
<td>8:00am – 8:00pm</td>
</tr>
<tr>
<td>Local Transit Network (Coverage)</td>
<td>Weekday</td>
<td>Based on demand</td>
<td>7:00am – 8:00pm</td>
<td>6:00am – 9:00pm</td>
</tr>
<tr>
<td></td>
<td>Saturday</td>
<td>Based on demand</td>
<td>Based on demand</td>
<td>Based on demand</td>
</tr>
<tr>
<td></td>
<td>Sunday</td>
<td>Based on demand</td>
<td>Based on demand</td>
<td>Based on demand</td>
</tr>
</tbody>
</table>

Service Frequency

This section defines the minimum suggested route frequency targets by service type, subject to meeting performance standards (Table 5). Investments to increase service frequencies beyond these minimum standards should be considered when required to alleviate identified passenger load issues, when route performance indicates the route is performing 25 per cent above the target for the routes class, or to strategically develop the network.

Table 5 - Service Frequency Standards

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Period</th>
<th>Existing (Peak Service)</th>
<th>Medium-term (Peak Service)</th>
<th>Long-term (Peak Service)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid Transit Route</td>
<td>Weekday</td>
<td>15 minute</td>
<td>10 minute</td>
<td>10 minute</td>
</tr>
<tr>
<td></td>
<td>Saturday</td>
<td>30 minute</td>
<td>15 minute</td>
<td>15 minute</td>
</tr>
<tr>
<td></td>
<td>Sunday</td>
<td>30 minute</td>
<td>30 minute</td>
<td>15 minute</td>
</tr>
<tr>
<td>Frequent Transit Route</td>
<td>Weekday</td>
<td>15 minute</td>
<td>15 minute</td>
<td>10 minute</td>
</tr>
<tr>
<td></td>
<td>Saturday</td>
<td>15 minute</td>
<td>15 minute</td>
<td>15 minute</td>
</tr>
<tr>
<td></td>
<td>Sunday</td>
<td>30 minute</td>
<td>30 minute</td>
<td>15 minute</td>
</tr>
<tr>
<td>Local Transit Route (Ridership)</td>
<td>Weekday</td>
<td>Varies</td>
<td>30 minute</td>
<td>30 minute</td>
</tr>
<tr>
<td></td>
<td>Saturday</td>
<td>Varies</td>
<td>Based on Demand</td>
<td>30 minute</td>
</tr>
<tr>
<td></td>
<td>Sunday</td>
<td>Varies</td>
<td>Based on Demand</td>
<td>30 minute</td>
</tr>
<tr>
<td>Local Transit Network (Coverage)</td>
<td>Weekday</td>
<td>Varies</td>
<td>60 minute</td>
<td>30-60 minute</td>
</tr>
<tr>
<td></td>
<td>Saturday</td>
<td>Varies</td>
<td>Based on Demand</td>
<td>60 minute</td>
</tr>
<tr>
<td></td>
<td>Sunday</td>
<td>Varies</td>
<td>Based on Demand</td>
<td>60 minute</td>
</tr>
</tbody>
</table>
Introducing Service to New Areas

Effective transit service depends largely on the land uses and density of the communities it serves. These service standards identify when it makes sense to provide a new transit service and what type of service is appropriate given the characteristics of the community it is serving.

When considering transit service expansion to newly developed areas, certain minimum density targets should be met to ensure that the proposed service has a reasonable likelihood of meeting the minimum performance guidelines for effective service (Table 6, Figure 2). Other factors can also influence potential ridership, so these minimum density targets should be considered within the context of other factors including local demographics, topography, road network characteristics, and the location of the proposed service area in relation to the broader network.

The minimum density targets in this table can also help inform when new types of service could be considered for an area that is already served by transit. For example, these average corridor density thresholds can help rationalize transitioning a local route to a frequent route or layering a limited-stop, rapid route over an existing frequent route.

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Average Corridor Density (Activity Units / km²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid Transit Route</td>
<td>5,000</td>
</tr>
<tr>
<td>Frequent Transit Route</td>
<td>4,000</td>
</tr>
<tr>
<td>Local Transit Route (Ridership)</td>
<td>2,000</td>
</tr>
<tr>
<td>Local Transit Route (Coverage)</td>
<td>1,000 - 1,500</td>
</tr>
</tbody>
</table>

Figure 2 – Examples of Average Corridor Density

Local Transit Route Corridor Density

Frequent or Rapid Transit Route Corridor Density

---

The density threshold for the Transit Core Area within Kelowna was set at 3,000 activity units per square kilometer, which is lower than the density threshold recommendation for new Frequent or Rapid Transit services. This discrepancy recognizes that there are generally transitional density zones at the fringe of a core area where either a frequent or local transit service could be supported.

Average corridor density is the average number of residents, jobs, and students per square kilometer calculated within a 400 meter buffer of a proposed route.

Although the minimum corridor density for local coverage service is set at 1,000 activity units per square kilometer, routes are more likely to meet minimum performance guideline targets at closer to 1,500 activity units per square kilometer and above.
Although the transit network may need to expand to serve new areas as the region grows, it is important to first ensure that the existing transit system is performing effectively. Figure 3 provides a visual outline of the recommended approach for prioritizing transit service expansion. Only when the bottom levels are operating at a satisfactory rate should the next level be considered as an area for resource investment.

**Figure 3 – Approach to Transit Service Improvement Priorities**
PERFORMANCE GUIDELINES

Performance guidelines define numerical thresholds and targets for a particular system and its routes and services. Working in tandem with service standards, performance guidelines are a tool that can be used to evaluate existing services, identify trends in performance and, based on this evidence, determine how service and supporting features should be changed to improve the effectiveness and efficiency of the system.

System Level Performance Guidelines

The purpose of monitoring system wide performance is to identify trends in system performance and compare the performance of the transit system with other peer transit systems. This can be particularly useful when identifying system wide impacts of major investments in the transit network, such as the ongoing development of the Frequent Transit Network. Table 7 identifies the system-level performance guidelines for the Kelowna Regional Transit System.

Table 7 - Kelowna Regional System Level Performance Guidelines

<table>
<thead>
<tr>
<th>Measure</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rides per service hour</td>
<td>35</td>
</tr>
<tr>
<td>Cost per passenger trip</td>
<td>$2.85</td>
</tr>
<tr>
<td>Cost recovery</td>
<td>35%</td>
</tr>
</tbody>
</table>

Customer Satisfaction Performance Guidelines

For transit, customer satisfaction is important for retaining and growing ridership, while also promoting a more positive image of transit within a community.

Since 2014, a customer satisfaction survey has been conducted every two years in the Kelowna Region. This survey asks customers to rate their level of satisfaction with various aspects of the Kelowna Regional Transit System, and one of the questions asks customers for their overall level of satisfaction with the transit service.

This overall customer satisfaction metric has fluctuated from 63 to 77 per cent in previous surveys. If customer satisfaction falls significantly below expectations, it increases the importance of reviewing the details of the customer satisfaction results to understand how resources can be targeted within the system moving forward.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Satisfaction</td>
<td>75%</td>
</tr>
</tbody>
</table>

7 This metric was set at $2.50 in the 2012 Transit Future Plan. The new metric accounts for a 2% annual inflation rate between 2012 and 2019.
Route Level Performance Guidelines

Route level performance guidelines give a detailed indication of how individual components of the transit system are performing. This analysis allows observations of the impact of service changes and investments made in the past and identifies future opportunities for strategic investment or reinvestment.

The route level performance guidelines have been broken down according to the four layers of service defined within the Transit Future Plan. These route-level performance guidelines include targets for the number of rides per service hour and the percentage of trips operating on time (Table 8). For the purposes of these guidelines, a trip is on time if it departs no more than three minutes late and no more than one minute early.

Table 8 - Performance Guidelines

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Boardings per Service Hour</th>
<th>On-time Departures^ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid Transit Network</td>
<td>45</td>
<td>70%</td>
</tr>
<tr>
<td>Frequent Transit Network</td>
<td>45</td>
<td>70%</td>
</tr>
<tr>
<td>Local Transit Network (Ridership)</td>
<td>25</td>
<td>70%</td>
</tr>
<tr>
<td>Local Transit Network (Coverage)</td>
<td>15</td>
<td>80%</td>
</tr>
<tr>
<td>Targeted Services</td>
<td>20</td>
<td>70%</td>
</tr>
</tbody>
</table>

Coverage local transit routes that meet the minimum average corridor density for new routes but fail to meet the minimum rides per service hour guidelines could be candidates for an alternative, custom transit service design including options for flex-routing, on-request service, or other demand-responsive service options (see Appendix A).

^ Proportion of trips that depart within 1 minute early and 3 minutes late of the scheduled departure time at each timing point.
PERFORMANCE MANAGEMENT CYCLE

How Will These Guidelines Be Monitored?

Annual Performance Review Process

These guidelines can be used by BC Transit, local partners, and the Operating Company to assist in adjusting and improving transit services on an on-going basis and as an aid in developing future transit plans.

BC Transit will provide analysis on an annual basis of how the transit system is performing at both a system- and route-level as part of its yearly, system-specific Annual Performance Summary (APS) reporting process. The APS process will be used to develop service improvement proposals for consideration by local partners that may be implemented during regular service change schedules which typically occur two to three times per year.

This monitoring can be supplemented as required through future Transit Future Action Plans, Local Area Transit Plans, and Service Change Plans, during which additional analysis may be performed to support these comprehensive planning processes.

For a service to be efficient and productive, a balance should be achieved between oversupply and overcrowding. A number of measures can help establish this equilibrium including the following:

- Implement transit priority
- Change frequency or service span
- Vehicle type allocation
- Change bus stop spacing
- Targeted marketing/corridor branding
- Bus route and network changes
- Reduce/increase coverage
APPENDIX – CUSTOM SERVICE OPTIONS

Table 9 – BC Transit Custom Transit Service Design Options

| Flex-route transit: Like Conventional transit, flex-route buses follow a fixed route and fixed schedule. The difference is that buses can deviate from the route to pick up or drop off passengers at nearby destinations. Usually, passengers requesting a deviation must call in advance for service. For the majority of users who do not require a deviation from the route, a flex-route service is no different than Conventional transit. They board and alight at designated bus stops along the route, at scheduled times. |
| On-Request: These services also follow fixed schedules or trip windows, but buses do not follow a fixed route. Instead, drivers determine their own route within a defined service boundary as required to pick up and drop off passengers who have requested service in advance. Buses may also stop at specific designated bus stops at scheduled times without the need for any advance requests for service. These bus stops are typically located at popular destinations such as shopping centres, community centres and downtown locations. Some on-request services provide “curb-to-curb” service, while others pick up and drop off passengers at “request stops.” Curb-to-curb service means passengers are picked up and dropped off at the curb in front of their home or destination. Request stops are designated bus stops located throughout an area; when a passenger requests a pick up, he or she walks to the nearest request stop to meet the bus. Returning passengers are dropped off at the request stop nearest their destination. |
**Demand-Responsive:** Unlike Conventional, Flex-route, and On-Request services which operate at fixed times, demand-responsive transit services such as handyDART operate only in response to requests for service. Service is provided only when and where it is requested. If no service is requested at a particular time or in a particular area, no service is provided.

- **handyDART:** A type of demand-responsive transit, handyDART is door-to-door service for customers with physical or cognitive impairments who cannot independently use the Conventional transit system some or all of the time.
- **Taxi Saver** – For times when the handyDART system is unavailable, the Taxi Saver Program provides registered handyDART passengers with subsidized taxi service, giving them the flexibility to coordinate their own trips.
- **Taxi Supplement Program** – The Taxi Supplement Program enables the handyDART operator to book trips in taxis when the regular vehicle(s) is unavailable, either because of capacity issues or because the trip cannot be accommodated in a timely manner.

Although these services are not available under the BC Transit model, additional mobility alternatives exist for neighbourhoods with density too low to support conventional transit (or with underperforming existing conventional transit services):

- Ridesharing through Transportation Network Services companies (app-based ride-hailing)
- Car-pool or van-pool programs
- Car, bike, or e-scooter sharing programs

These options can help address the first and last-mile challenge associated with conventional public transit.
What are Transit Service Guidelines?

- Design Guidelines
- Service Standards
- Performance Guidelines
Why are they needed?

- Ensure resources are used effectively & an acceptable level of service quality is provided.
- Provide a consistent and fair approach for guiding investments in existing and new transit services.
- Signal key land use and transportation network considerations for provision of effective transit.
Process

- Started with Transit Future Action Plan (TFAP).
- Included engagement on Transit Service Guidelines content with TFAP.
- Collaboration with staff from all Central Okanagan local government partners.
Design Guidelines

- Core and Coverage transit areas
- Network Design considerations
- Infrastructure Design Guidelines
Design Guidelines
Core and Coverage areas

Transit Coverage Density
(>1,000 residents/jobs per sq. km)

Transit Core Density
(>3,000 residents/jobs per sq. km)

Transit Core Boundary
Design Guidelines
Network design

Source: Central Okanagan Transit Service Guidelines
Service Standards

- Standards for both existing and new proposed transit services.

- Standards for service span, frequency and for the creation of new transit services.
Service Standards
Introducing service to New Areas

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Average Corridor Density (residents &amp; jobs/ km²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid Transit Route</td>
<td>5,000</td>
</tr>
<tr>
<td>Frequent Transit Route</td>
<td>4,000</td>
</tr>
<tr>
<td>Local Transit Route (Ridership)</td>
<td>2,000</td>
</tr>
<tr>
<td>Local Transit Route (Coverage)</td>
<td>1,000 to 1,500</td>
</tr>
</tbody>
</table>

Example Local Transit Route Corridor Density

Example Frequent or Rapid Route Corridor Density
Service Standards
Current density by route

Population and Employment Density per Square Kilometer by Route

- Rapid Transit
- Frequent Transit
- Local Transit (ridership)
- Local Transit (coverage)

| East | 9 | 1 | 8 | 5 | 10 | 2 | 11 | 18 | 4 | 6 | 19 | 3 | 13 | 14 | 12 | 17 | 24 | 16 | 97 | 21 | 28 | 25 | 20 | 15 | 29 | 23 | 32 | 22 |
|------|---|---|---|---|----|---|----|----|---|---|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| West | 9 | 1 | 8 | 5 | 10 | 2 | 11 | 18 | 4 | 6 | 19 | 3 | 13 | 14 | 12 | 17 | 24 | 16 | 97 | 21 | 28 | 25 | 20 | 15 | 29 | 23 | 32 | 22 |
Service Standards

Service Improvement Priorities

Priority order for consideration moves from bottom to top.

- Transit service is reliable, safe, accessible and operates sustainably
- Buses are well-utilized, but aren’t overcrowded, and transit is integrated with other modes of transportation
- Route- and system-level service standards and performance targets are met or exceeded
- Expand transit service to new areas
Performance Guidelines

- Guidelines at the system-level and route-level.
- Customer satisfaction target.
System-Level Performance Guidelines

<table>
<thead>
<tr>
<th>Measure</th>
<th>Target</th>
<th>2018/19 Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rides per service hour</td>
<td>35</td>
<td>28.3</td>
</tr>
<tr>
<td>Cost per passenger trip</td>
<td>$2.85</td>
<td>$3.47</td>
</tr>
<tr>
<td>Cost recovery</td>
<td>35%</td>
<td>36.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measure</th>
<th>Target</th>
<th>Historical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Satisfaction</td>
<td>75%</td>
<td>63-77%</td>
</tr>
</tbody>
</table>
### Route-Level Performance Guidelines

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Boardings per Service Hour</th>
<th>On-time Departures (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid Transit Network</td>
<td>45</td>
<td>70%</td>
</tr>
<tr>
<td>Frequent Transit Network</td>
<td>45</td>
<td>70%</td>
</tr>
<tr>
<td>Local Transit Network (Ridership)</td>
<td>25</td>
<td>70%</td>
</tr>
<tr>
<td>Local Transit Network (Coverage)</td>
<td>15</td>
<td>80%</td>
</tr>
<tr>
<td>Targeted Services</td>
<td>20</td>
<td>70%</td>
</tr>
</tbody>
</table>

*On-time = trips that depart within 1 minute early and 3 minutes late of the scheduled departure time at each timing point.*
Performance Guidelines
Current route-level performance

Boardings per Service Hour by Route (Fall 2019)
Applying the Guidelines

Transit Service Guidelines
Central Okanagan Region

CENTRAL OKANAGAN REGION | March 2018
Recommendation

THAT Council endorse the Central Okanagan Transit Service Guidelines.
Questions?
Recommendation:

THAT Council receive for information the report from the Integrated Transportation Department, dated January 27, 2020, with respect to Seasonal Transit Service Changes and Transit Operations Facility Capacity;

AND THAT Council receive the summary of the Spring/Summer 2020 transit service changes and status update regarding efforts to free-up capacity at the current transit operations facility;

Purpose:

To inform Council of the seasonal adjustments to transit service levels and to update Council on efforts to free up space at the current operations facility to allow for expansion of Conventional Transit services to proceed.

Background:

Transit ridership in the City of Kelowna continues to trend upward and in recent years has grown exponentially. Between 2017 and early 2019, 15% more trips were taken on transit with the bulk of ridership growth occurring in the Fall/Winter period on Core transit routes. Each Spring and Summer service levels on various routes are reduced in order to improve system productivity in these periods and ensure enough service hours are provided to meet demand in the busier Fall/Winter period. Given transit expansion limitations resulting from constraints at the current transit maintenance and operations facility, service optimization is crucial in ensuring resources are applied where and when they are needed most. Progress has been made on identifying an interim secondary operations site to house the Paratransit fleet and unlock capacity for future Conventional Transit expansion at the current transit facility.

Discussion:

The availability of reliable, regular performance data has enabled BC Transit and City staff to look beyond traditional seasonal service adjustments focused on changes in post-secondary travel demand
to identify further opportunities to improve productivity throughout the system. System and route-level performance targets outlined within the Transit Service Guidelines are considerations in the development of service change proposals. A key transit system performance metric is the number of passenger rides per revenue hour\(^1\). This metric is important because it standardizes ridership performance between routes or seasons according to the amount of service provided. Current data shows that the ridership productivity of the transit system per revenue hour for the Fall/Winter 2019 period was nearly 38% higher than the Summer 2019 period and nearly 30% higher than the Spring 2019 period. This represents an additional 9,500 daily boarding throughout the system in the Fall/Winter period as compared to Summer and an additional 7,600 boardings as compared to Spring.

In mid-Spring (April 26\(^{th}\)) and early Summer (June 28\(^{th}\)) of this year, changes will be made to select Core and Coverage bus routes where demand falls below minimum ridership targets. A portion of recovered resources will be applied to increase Sunday service frequency on route 10 in response to strong ridership.

**Service changes include:**

- Regular Spring seasonal discontinuation of select trips on routes serving Okanagan College and UBCO and seasonal discontinuation of routes #13 Quail Ridge and #4 Pandosy-UBCO.
- Route #6 Glenmore-UBCO summer schedule – 10 trips/day.
- Regular Summer-period seasonal discontinuation of select trips on various routes where demand is primarily driven by post-secondary student travel.
- Discontinuation of select underperforming individual trips on various Core and Coverage bus routes including #1 Lakeshore, #3 Dilworth, #4 Pandosy-UBCO Express, #12 McColloch, #15 Crawford, #97 Okanagan.
- General reduction of headways (service frequency) in select periods of the day or changes to service span on routes experiencing lower overall productivity in comparison to performance guidelines – #3 Dilworth, #5 Gordon, #6 Glenmore-UBCO, #11 Rutland, #12 McColloch, #15 Crawford.
- Introduction of 45-minute service frequency on Sundays on route #10 North Rutland in response to performance (62 rides/service hour) - currently hourly service.

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\(^1\) Revenue hours is a metric that describes the hours buses are in service and accessible to the public. It excludes operating hours accumulated by buses travelling out of service to and from facilities.
In addition to seasonal service reductions, BC Transit is exploring opportunities to slightly reduce peak-period bus demand through scheduling efficiencies on various major routes. This is anticipated to free up approximately 3 buses to support service expansion on route 8 during peak periods this coming Fall. These resources will be combined with the approved 950 hours of off-peak expansion for September.

Transit Maintenance and Operations Facility capacity:

With the current Hardy Street transit facility at capacity, staff have been working to identify interim solutions until the new operations and maintenance facility is available. To this end City staff have identified a City owned property located at 759 Crowley Avenue that has potential to be utilized as a maintenance facility for the Paratransit, or handyDART fleet. This former City Yard site has been leased for several years but will be available this October. Use of this facility for Paratransit operations would free up significant bus storage space and garage capacity, allowing for planned service expansions to occur over the next several years. Currently BC Transit has engaged their staff and a consultant to identify functional needs, suitability of the Crowley Avenue facility, and any improvements required. A follow up report with full cost impact is planned to be brought to Council this summer. Dependent upon available budget, and the level of improvement required, the facility could be brought into use early to mid-2021 allowing for fall 2021 service expansions to occur as previously planned.

Conclusion:

The Spring and Summer 2020 service adjustments will bring route and system level productivity in these periods into better alignment with targets. Recovered resources will bolster the approved 950-hour off-peak expansion and will be applied to routes experiencing significant demand pressures in the busier Fall and Winter period. While it is too soon to cite the total resources that are expected to be available for the Fall, this will become clearer as the Spring/Summer service delivery process unfolds and the detailed scheduling process begins for the Fall service change.
A potential interim secondary operations site is being assessed to determine its suitability as a Paratransit maintenance and bus storage facility. If deemed suitable, the site could be expected to be operational in early to mid-2021 allowing for a significant Conventional Transit service expansion in the Fall of 2021.

**Internal Circulation:**
Infrastructure
Community Communications
Financial Services

**Financial/Budgetary Considerations:**
Development and operational costs associated with the interim Paratransit operations site are yet unknown. These considerations are being explored through the site assessment process.

**Considerations not applicable to this report:**
Legal/Statutory Authority:
Legal/Statutory Procedural Requirements:
Existing Policy:
External Agency/Public Comments:
Communications Comments:

Submitted by:
M. Kittmer, Transit Service Coordinator

**Approved for inclusion:**
A. Newcombe, Divisional Director, Infrastructure

Attachment 1 - Seasonal Transit Service Changes and Transit Operations Facility Capacity Presentation

cc:  Alan Newcombe, Divisional Director, Infrastructure
     Rafael Villarreal, Integrated Transportation Department Manager
     Genelle Davidson, Divisional Director, Financial Services
     Carla Weaden, Divisional Director, Corporate Strategic Services
     Jerry Dombowsky, Transit and Programs Manager
     Kelly Isaak, Infrastructure Administration Manager
     Stephanie Trenholm, Communications Advisor
Seasonal Transit Service Changes & Operations Facility Capacity

January, 2020
Purpose

TO inform Council of the Spring/Summer adjustments to transit service levels.

AND TO update Council on efforts to relieve constraints at the current transit facility.
System-Level Ridership

- 15% ridership growth over past two years.
- 30% greater productivity in the Fall/Winter period vs. Spring.
- 38% greater in the Fall/Winter period vs. summer.
Seasonal Ridership Fluctuations

2019 Rides per Revenue Hour by Season
Kelowna Regional Transit System

System target
Spring/Summer Service Changes

- Seasonal discontinuation of #13 Quail Ridge, #4 Pandosy-UBCO and select trips on other routes serving Post-Secondary and Secondary Schools.

- Discontinuation of underperforming trips and reductions to service frequency on select routes.

- Increased Sunday service frequency – route 10 North Rutland.
September 2020

- Approved 950 hour service off-peak service expansion.

- Bus blocking changes to improve efficiencies and reduce peak-bus demand.

- Focus resources on meeting demand and improving schedule reliability on routes 8 and 97.
Interim Paratransit Facility
Questions?
December 12, 2019

To: All SILGA Members

**Call for Resolutions for 2020 Convention**

The SILGA Annual General Meeting and Convention is scheduled to be held in Vernon from April 28th to May 1st, 2020. The SILGA Constitution requires that resolutions to be considered at the Annual Meeting are to be received by the Secretary-Treasurer no later than 60 days prior to this meeting. Friday, February 28th, 2020 will be the deadline for receipt of resolutions.

If your local government wishes to submit a resolution for consideration at the 2020 SILGA Convention, please forward by email your resolution to yoursilga@gmail.com. Any background information on the resolution would be helpful. Each resolution should be endorsed by the sponsoring Member’s Municipal Council or Regional Board. The resolution should be relative to regional issues and should not pertain to a finite local interest.

**If you do not receive a confirmation email regarding your resolution, please contact the SILGA office at 250 851 6653.**

For information on how to properly write a resolution please refer to the UBCM website below.


or go to the resolutions page on the SILGA website at


Resolutions not received by February 28th, 2020 will be considered late resolutions and must go through the following procedures to be considered at the AGM.

**Late Resolutions**

1. Resolutions submitted following the expiry of the regular deadline noted in section 10.4 shall be considered "Late Resolutions" and shall comply with all other submission requirements, except that a copy of the resolution shall be provided to SILGA by noon on the Friday preceding the date of the Annual General Meeting. The resolutions committee will meet on the Tuesday preceding the Annual General Meeting to provide recommendations as to whether the late resolution(s) should be brought to the Members for inclusion in the resolution debate. All late resolutions must be adopted by a Special
Resolution of the Member Representatives in attendance at the Annual General Meeting to be included in the discussion.

(2) Late resolutions will be reviewed by the Resolutions Committee prior to the Meeting and only those of a subject matter which could not have been submitted by the normal deadline date outlined in section 10.4 will be considered.

(3) Late Resolutions shall be available for discussion after resolutions printed in the resolutions book have been considered.

(4) Late Resolutions admitted for plenary discussion shall be dealt with in the order presented in the Late Resolutions report.

(5) In the event that a late resolution is recommended to be admitted for discussion, the sponsoring member of the late resolution shall produce sufficient copies for distribution to the Members at the Annual General Meeting.

(6) The Late Resolution will, after reading, be properly before the meeting, and the regular procedures for handling resolutions will apply.

Alison Slater
SILGA
December 12, 2019

To: All SILGA Members

Re: SILGA Convention – Call for Nominations 2020

As per the Constitution of the Southern Interior Local Government Association (amended 2017), the “Call for Nominations” is now going out to all member Mayors, Councillors, Regional Chairs and Directors who wish to seek a position on the SILGA Executive for the 2020/2021 term. Elections are to be held at the SILGA Convention in Vernon on April 30th, 2020.

Offices to be filled are President, 1st Vice President, 2nd Vice President and seven Directors. One member of the SILGA board must be an Electoral Area Director of a member Regional District. All positions are for one year. Those presently serving may run for another term if they so wish.

Excerpt from the SILGA constitution regarding new voting procedures:

7.10 The election of Officers to the Executive shall be held at the Annual General Meeting on a first ballot and that of the Directors at Large subsequently on a second ballot. Any candidate that is unsuccessful in obtaining an Officer position on the first ballot may become a candidate for a Director at Large position on the second ballot.

7.11 If, in the election of the Officers to the Executive on the first ballot, an Electoral Area Director of a regional district is elected, the Director at Large positions will then be filled by the candidates with the most votes.

7.12 If, in the election of the Officers to the Executive on the first ballot, an Electoral Area Director of a regional district is not elected, then in the election of the Directors at Large, the candidate - of those candidates that are Electoral Area Directors of a regional district - with the most votes will be elected as a Director at Large and the balance of the Director at Large positions will be filled by the remaining candidates with the most votes. If only one Electoral
Area Director of a regional district candidate runs for a Director at Large position, that candidate will be acclaimed.

Deadline for nominations is Friday, February 28, 2020. You will be asked to complete a biography and submit a photo for the printing of the official Nominating Committee Report to be contained in the Convention Package.

The SILGA nomination committee is chaired by Past President Shelley Sim, District of Clearwater.

All those interested in serving are asked to contact Councillor Sim by email at shelleysim@telus.net or the SILGA office at 250-851-6653. All information should be forwarded to both Councillor Sim and the SILGA office (yoursilga@gmail.com).

Alison Slater
SILGA