City of Kelowna
Regular Council Meeting
AGENDA

Monday, June 9, 2025

1:30 pm

Council Chamber

City Hall, 1435 Water Street

Pages

1. Call to Order

I would like to acknowledge that we are gathered today on the traditional, ancestral, unceded territory of the syilx/Okanagan people.

This Meeting is open to the public and all representations to Council form part of the public record. A live audio-video feed is being broadcast and recorded on kelowna.ca.

2. Confirmation of Minutes 5 - 12

PM Meeting - May 26, 2025

3. Public in Attendance

3.1 Community Safety Plan Year 3 Report 13 - 33

To receive the third annual progress report for Kelowna's Community Safety Plan.

4. Development Application Reports & Related Bylaws

4.1 Black Mountain Drive 675 - Z25-0004 (BL12796) - AP675 Developments Ltd., Inc. No. BC1335932 34 - 52

To rezone the subject property from the MF3 – Apartment Housing zone to the MF2 – Townhouse Housing zone to facilitate a townhouse development.

4.2 Harvey Ave 2271, Z24-0040 (BL12797) - Orchard Park Shopping Centre Holdings Inc, Inc No A0059814 53 - 82

To rezone a portion of the subject property from the C2 - Vehicle Oriented Commercial zone to the UC3 – Midtown Urban Centre zone and the UC3r – Midtown Urban Centre Rental Only zone to facilitate a mixed-use development.

8.2 **BL12778 - Amendment No. 4 to Revitalization Tax Exemption Program Bylaw No. 12561** 333 - 333

To adopt Bylaw No. 12778.

9. **Mayor and Councillor Items**

10. **Termination**

City of Kelowna
Regular Council Meeting
Minutes

Date:	Monday, May 26, 2025
Location:	Council Chamber City Hall, 1435 Water Street
Members Present	Mayor Tom Dyas, Councillors Ron Cannan, Maxine DeHart*, Charlie Hodge, Gord Lovegrove*, Mohini Singh, Luke Stack, Rick Webber and Loyal Wooldridge
Staff Present	Acting City Manager, Ryan Smith; City Clerk, Laura Bentley; Deputy City Clerk, Michael Jud; Policy Analyst, Janelle Taylor*; Partnership Manager, Valentina Trevino*; Development Planning Department Manager, Nola Kilmartin*; Development Planning Manager, Alex Kondor*; Planner Specialist, Tyler Caswell*; Long Range Planning Manager, Robert Miles*; Planner Specialist, Mark Tanner*; Housing Policy and Programs Manager, James Moore*; General Manager, Corporate Services, Joe Sass*; Deputy Chief Financial Officer, Marina Warrender*; Controller, Matt Friesen*; Budget Supervisor, Jay Jean*; Infrastructure Operations Department Manager, Geert Bos*; Alternative Revenue Manager, Christine Matte*
Staff Participating Remotely	Legislative Coordinator (Confidential), Arlene McClelland
Guest	Danielle Hubbard, CEO, Okanagan Regional Library*

(* Denotes partial attendance)

1. Call to Order

Mayor Dyas called the meeting to order at 1:31 p.m.

I would like to acknowledge that we are gathered today on the traditional, ancestral, unceded territory of the syilx/Okanagan people.

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2. Confirmation of Minutes

Moved By Councillor Hodge/Seconded By Councillor Lovegrove

THAT the Minutes of the Regular Meetings of May 12, 2025 be confirmed as circulated.

Carried

3. Public in Attendance

3.1 Okanagan Regional Library Delegation

Staff:
- Introduced Danielle Hubbard, Okanagan Regional Library CEO and delegation.

Danielle Hubbard, CEO, Okanagan Regional Library
- Displayed a PowerPoint Presentation outlining the Strategic Plan Initiatives, current activities and funding opportunities in Kelowna and responded to questions from Council.

4. Development Application Reports & Related Bylaws

4.1 John Hindle Dr 2335-2355 and 2340-2720, Packinghouse Rd 855 - OCP24-0014 (BL12790) Z24-0064 (BL12791) - City of Kelowna

Staff:
- Displayed a PowerPoint Presentation summarizing the application.

Moved By Councillor Stack/Seconded By Councillor Webber

THAT Official Community Plan Map Amendment Application No. OCP24-0014 to amend Map 3.1 in the Kelowna 2040 – Official Community Plan Bylaw No. 12300 by changing the Future Land Use designation of portions of:

- Lot A, Sections 9, 10 and 16, Township 23, ODYD, Plan 30819 Except Plan KAP81434, located at 2335-2355 John Hindle Drive, Kelowna, BC;
- Lot 1, Sections 9 and 10, Township 23, ODYD, Plan 1884 Except Plan 31642, located 855 Packinghouse Road, Kelowna, BC; and
- Lot 2, Sections 9, 10, 15 and 16, Township 23, ODYD, Plan EPP15596, located at 2340-2720 John Hindle Drive, Kelowna, BC;

From the R-AGR – Rural – Agricultural and Resource designation to the PSU – Public Services Utilities designation, as shown on Map "A" attached to the Report from the Development Planning Department dated May 26 2025, be considered by Council;

AND THAT the Official Community Plan Map Amending Bylaw be forwarded to a Public Hearing for further consideration;

AND THAT Council considers the Public Information Session public process to be appropriate consultation for the Purpose of Section 475 of the Local Government Act, as outlined in the Report from the Development Planning Department dated May 26 2025

AND THAT Rezoning Application No. Z24-0064 to amend the City of Kelowna Zoning Bylaw No. 12375 by changing the zoning classification of portions of:

- Lot A, Sections 9, 10 and 16, Township 23, ODYD, Plan 30819 Except Plan KAP81434, located at 2335-2355 John Hindle Drive, Kelowna, BC and;
- Lot 1, Sections 9 and 10, Township 23, ODYD, Plan 1884 Except Plan 31642, located 855 Packinghouse Road, Kelowna, BC ;

From the P3 – Parks and Open Space zone to the P1 – Major Institutional zone as shown on Map "B" attached to the Report from the Development Planning Department dated May 26 2025, be considered by Council;

AND THAT Rezoning Application No. Z24-0064 to amend the City of Kelowna Zoning Bylaw No. 12375 by changing the zoning classification of portions of:

- Lot 2, Sections 9, 10, 15 and 16, Township 23, ODYD, Plan EPP15596 located at 2340-2720 John Hindle Drive, Kelowna, BC;

From the A1 - Agriculture zone to the P1 – Major Institutional zone as shown on Map "B" attached to the Report from the Development Planning Department dated May 26 2025, be considered by Council;

AND FURTHER THAT the Rezoning Bylaw be forwarded to a Public Hearing for further consideration.

Carried

4.2 John Hindle Dr 2335-2355 and 2340-2720, Packinghouse Rd 855 - BL12790 (OCP24-0014) - City of Kelowna

Moved By Councillor Hodge/Seconded By Councillor Wooldridge

THAT Bylaw No. 12790 be read a first time;

AND THAT the bylaw has been considered in conjunction with the City's Financial Plan and Waste Management Plan.

Carried

4.3 John Hindle Dr 2335-2355 and 2340-2720, Packinghouse Rd 855 - BL12791 (Z24-0064) - City of Kelowna

Moved By Councillor Lovegrove/Seconded By Councillor Hodge

THAT Bylaw No. 12791 be read a first time.

Carried

4.4 Rezoning Bylaws Supplemental Report to Council

Councillor DeHart declared a conflict of interest on items 4.4 and 4.5 as their employer is in direct competition with the applicant and departed the meeting at 2:10 p.m.

Staff:
– Commented on notice of first reading and correspondence received.

4.5 Rezoning Applications

4.5.1 KLO Rd 860 - 1000 - BL12786 (TA25-0003) - Okanagan College

Moved By Councillor Lovegrove/Seconded By Councillor Wooldridge

THAT Bylaw No. 12786 be read a first, second and third time and be adopted.

Carried

Councillor DeHart returned to the meeting at 2:11 p.m.

4.6 Rezoning Applications

4.6.1 Bernard Ave 1181 - 1191 - BL12787 (Z25-0011) - SKJJ Bernard Land Holdings Ltd., Inc. No. BC1242190

Moved By Councillor Wooldridge/Seconded By Councillor Lovegrove

THAT Bylaw No. 12787 be read a first, second and third time.

Carried

4.7 Valley Rd 728 - DP24-0012 - 1138742 BC Ltd. Inc. No. BC1138742

Staff:
- Displayed a PowerPoint Presentation summarizing the application and responded to questions from Council.

Moved By Councillor Wooldridge/Seconded By Councillor Hodge

THAT Council hear from the Applicant.

Carried

Josh Klassen, Development Manager, Troika Developments
- Responded to questions from Council.

Moved By Councillor Wooldridge/Seconded By Councillor Hodge

THAT Council authorizes the issuance of Development Permit No. DP24-0012 for Lot 2 Section 29 Township 26 ODYD Plan EPP80501, located at 728 Valley Rd, Kelowna, BC subject to the following:

1. The dimensions and siting of the building to be constructed on the land be in accordance with Schedule "A";
2. The exterior design and finish of the building to be constructed on the land be in accordance with Schedule "B";
3. Landscaping to be provided on the land be in accordance with Schedule "C";
4. The applicant be required to post with the City a Landscape Performance Security deposit in the amount of 125% of the estimated value of the Landscape Plan, as determined by a Registered Landscape Architect;
5. The applicant be required to make a payment into the Public Amenity & Streetscape Capital Reserve Fund as established by Bylaw No. 12386 in accordance with Table 6.8.a. in Zoning Bylaw No. 12375;

AND THAT the applicant be required to complete the above noted conditions of Council's approval of the Development Permit Application in order for the permits to be issued;

AND FURTHER THAT this Development Permit is valid for two (2) years from the date of Council approval, with no opportunity to extend.

Carried

4.8 Osprey Ave 459 - DP25-0095 - 1347431 BC Ltd., Inc. No. BC1347431

Staff:
- Displayed a PowerPoint Presentation summarizing the application and responded to questions from Council.

Moved By Councillor Stack/Seconded By Councillor Wooldridge

THAT Council authorizes the issuance of Development Permit No. DP25-0095 for Lot A District Lot 14 ODYD Plan EPP120981, located at 459 Osprey Ave, Kelowna, BC subject to the following:

1. The dimensions and siting of the building to be constructed on the land be in accordance with Schedule "A";
2. The exterior design and finish of the building to be constructed on the land be in accordance with Schedule "B";
3. Landscaping to be provided on the land be in accordance with Schedule "C";
4. The applicant be required to post with the City a Landscape Performance Security deposit in the amount of 125% of the estimated value of the Landscape Plan, as determined by a Registered Landscape Architect;

AND THAT this Development Permit is valid for two (2) years from the date of Council approval, with no opportunity to extend.

Carried

5. Bylaws for Adoption (Development Related)

5.1 Bernard Ave 1531 - BL12656 (Z23-0085) - Orchard City Abbeyfield Society, Inc. No. S0030415

Moved By Councillor Wooldridge/Seconded By Councillor Webber

THAT Bylaw No. 12656 be adopted.

Carried

The meeting recessed at 2:33 p.m.

The meeting reconvened at 2:41 p.m.

6. Non-Development Reports & Related Bylaws

6.1 Heritage Conservation Area Development Guidelines and Bylaw Amendments

Councilor Lovegrove declared a conflict of interest for items 6.1, 6.2 and 6.3 as they own property in the Heritage Conservation Area and departed the meeting at 2:42 p.m.

Staff:
- Displayed a PowerPoint Presentation providing an overview of the new Heritage Conservation Area Guidelines and the process to develop them and responded to questions from Council.

Moved By Councillor Stack/Seconded By Councillor DeHart

THAT Council receive, for information, the report from Long Range Planning dated May 26, 2025, regarding proposed updates to the Heritage Conservation Area - Conservation and Development Guidelines;

AND THAT Official Community Plan Amendment Application No. OCP25-0006 to amend Kelowna 2040 – Official Community Plan Bylaw No. 12300 as outlined in Attachment A and B attached to the report from Long Range Planning dated May 26, 2025, be considered by Council;

AND THAT the Official Community Plan Amending Bylaw be forwarded to Public Hearing for further consideration;

AND FURTHER THAT Bylaw No.12764 being Amendment No. 7 to the Development Application and Heritage Procedures Bylaw No.12310 be advanced for reading consideration.

Carried

6.2 Heritage Conservation Area Development Guidelines BL12789 (OCP25-0006) and Bylaw Amendments

Moved By Councillor Cannan/Seconded By Councillor Stack

THAT Bylaw No. 12789 be read a first time;

AND THAT the bylaw has been considered in conjunction with the City's Financial Plan and Waste Management Plan.

Carried

6.3 BL12764 - Amendment No. 7 to Development Application and Heritage Procedures Bylaw No. 12310

Moved By Councillor Stack/Seconded By Councillor Cannan

THAT Bylaw No. 12764 be read a first, second and third time.

Carried

Councillor Lovegrove returned to the meeting at 3:00 p.m.

6.4 North Glenmore Sector Study Process Options

Councillor Lovegrove stated that their employer UBCO is no longer part of the developer group and therefore no longer has a perceived conflict of interest.

Staff:
- Displayed a PowerPoint Presentation outlining options to initiate a North Glenmore Sector Development Study and responded to questions from Council.

Moved By Councillor Singh/Seconded By Councillor Stack

THAT Council direct staff to initiate the North Glenmore Sector Study, as outlined in Option 1 in the report dated May 26, 2025.

Carried

6.5 Revitalization Tax Exemption - Program Updates

Staff:
- Displayed a PowerPoint Presentation summarizing the proposed amendments to the Revitalization Tax Exemption Program and responded to questions from Council.

Moved By Councillor Webber/Seconded By Councillor Wooldridge

THAT Council receives, for information, the report from the Housing Policy and Programs Department dated May 26, 2024, with respect to amendments to the Revitalization Tax Exemption Program Bylaw No. 12561;

AND THAT Bylaw No. 12758 being Amendment No. 3 to the Revitalization Tax Exemption Program Bylaw No. 12561 be advanced for reading consideration;

AND THAT Bylaw No. 12777 being Amendment No. 4 to the Revitalization Tax Exemption Program Bylaw No. 12561 be advanced for reading consideration.

Carried
Councillor Cannan - Opposed

6.6 BL12758 - Amendment No. 3 to Revitalization Tax Exemption Program Bylaw No. 12561

Moved By Councillor DeHart/Seconded By Councillor Stack

THAT Bylaw No. 12758 be read a first, second and third time.

Carried
Councillor Cannan - Opposed

6.7 BL12778 - Amendment No. 4 to Revitalization Tax Exemption Program Bylaw No. 12561

Moved By Councillor Stack/Seconded By Councillor DeHart

THAT Bylaw No. 12778 be read a first, second and third time.

Carried
Councillor Cannan - Opposed

6.8 First Quarter 2025 Financial Performance

Staff:
- Displayed a PowerPoint Presentation summarizing the 2025 first quarter financial performance indicators.

Moved By Councillor DeHart/Seconded By Councillor Singh

THAT Council receives, for information, the First Quarter 2025 Financial Performance Report from the Financial Services Controller as a continued approach of presenting timely and relevant financial information.

Carried

6.9 Q1 Amendment to the 2025 Financial Plan

Staff:
- Displayed a PowerPoint Presentation outlining the first quarter amendments to the 2025 Financial Plan and responded to questions from Council.

Moved By Councillor Wooldridge/Seconded By Councillor Singh

THAT Council receives, for information, the Report from Financial Services dated May 26, 2025 with respect to quarter one amendments to the 2025 Financial Plan;

AND THAT the 2025 Financial Plan be amended to include budget amendments detailed in this report.

Carried

6.10 New Civic Asset Naming Policy No. 394

Staff:
- Displayed a PowerPoint Presentation providing an overview of the new Civic Asset Naming Policy and responded to questions from Council.

Moved By Councillor Wooldridge/Seconded By Councillor Webber

THAT Council receives, for information, the report from the Communications Department dated May 26, 2025 with respect to the proposed New Civic Asset Council Policy;

AND THAT Council adopts Council Policy No. 394, being New Civic Asset Naming;

AND FURTHER THAT Council rescinds Council Policy No. 251, being Park Naming, and Council Policy No. 343, being Civic Community Facility Naming.

Carried

7. Resolutions

7.1 Regional District Board and Committee Appointments

Staff:
- Provided comments on the draft resolution and appointments to the Regional District Board along with appointments to Council committees and external agencies.

Mayor Dyas:
- Provided comments on the draft resolution and responded to questions from Council.

Moved By Councillor Wooldridge/Seconded By Councillor Stack

THAT the Regional District appointments for the City of Kelowna be as follows, effective September 1, 2025:

Appointees	Alternates
Mayor Tom Dyas – 5 votes	Councillor Charlie Hodge
Councillor Ron Cannan – 4 votes	Councillor Gord Lovegrove
Councillor Maxine DeHart – 5 votes	Councillor Mohini Singh
Councillor Luke Stack – 5 votes	
Councillor Rick Webber – 4 votes	
Councillor Loyal Wooldridge – 4 votes	

Carried
Councillors Hodge, Lovegrove and Singh - Opposed

8. Mayor and Councillor Items

Mayor Dyas:
- Provided comments regarding outdoor sheltering and provincial advocacy.

9. Termination

This meeting was declared terminated at 4:29 p.m.

Mayor Dyas

Michael Jud
D/City Clerk

/acm

Report to Council

Date:	June 9 2025
To:	Council
From:	City Manager
Subject:	Community Safety Plan – Annual Progress Update
Department:	Community Safety

Recommendation:

THAT Council receives, for information, the report from the Community Safety Services Branch dated June 9, 2025, with respect to the 2025 progress of Kelowna's Community Safety Plan.

Purpose:

To receive the third annual progress report for Kelowna's Community Safety Plan.

Council Priority Alignment:

Crime & Safety
Affordable Housing
Homelessness

Background:

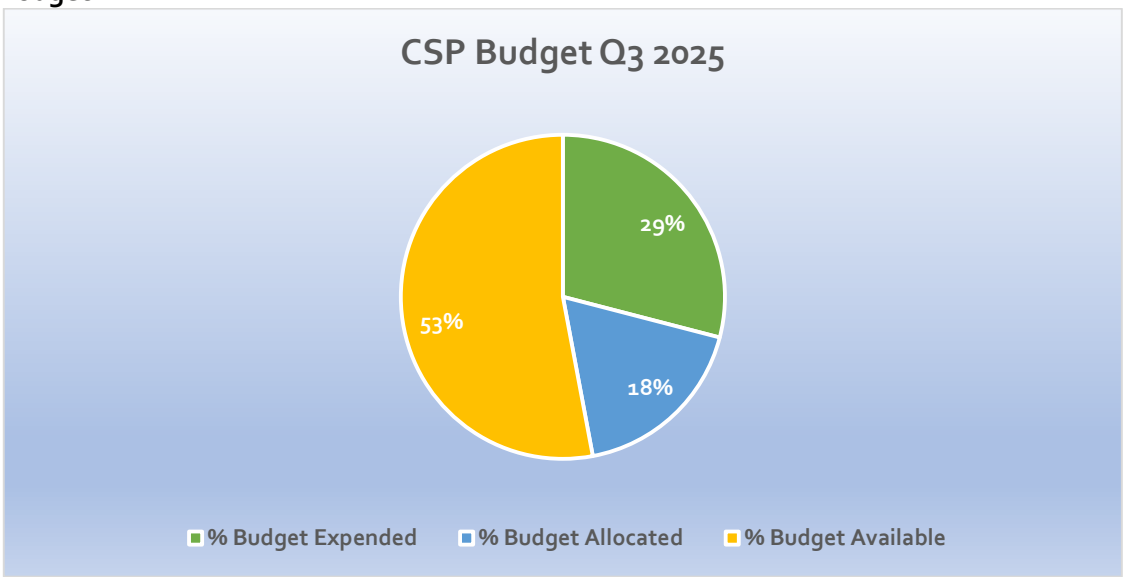
In 2021, the City convened and led the development of Kelowna's first-ever Community Safety Plan (CSP) through a comprehensive and collaborative process with social, health, education, and justice system leaders. The plan was informed by the diverse voices of nearly 900 people, including community members, representatives from more than 30 business and community organizations, City Council, and national subject matter experts. The five-year CSP was endorsed by City Council in spring 2022.

The CSP is a pragmatic five-year action plan which provides a strategic framework through which diverse agencies collaborate and coordinate their efforts to reduce risk, vulnerability, and harm, and create a community where all people are safe and feel safe. The CSP is guided by five priorities, 15 recommendations, and 30 action items. This report outlines the progress and results accomplished in the third year of implementation.

CSP Structure and Implementation:

The CSP is led by a Stewardship Team comprised of senior representatives from the City of Kelowna, RCMP, Interior Health, Ministry of Children & Family Development, Ministry of Social Development & Poverty Reduction, Okanagan College, School District 23, and KCR Community Resources (KCR). This Team, supported by the work of operational Action Teams, advances the five priorities and works collectively and collaboratively to advance the 30 Action Items.

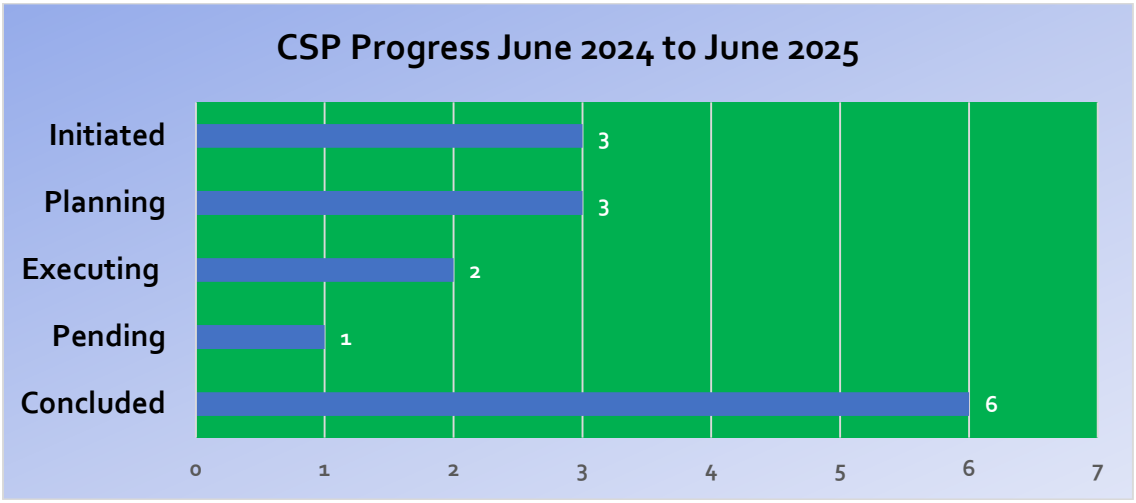
Budget:



In spring 2022, Council allocated $250,000 in funding for the implementation of the 30 Actions over five years. As of this report, 29 per cent ($72,600) of the budget has been spent with another 18 per cent ($45,000) earmarked for ongoing Actions and 53 per cent ($138,000) of funds remain to carry out Actions in the final two years of the plan. Individual Actions may also receive enhanced or ongoing funding from Council, such as Action 1.2 which received $250,000 in 2024, and another $500,000 in 2025.

This Year's Progress:

Recognizing that, three years in, the CSP has a strong foundation of inter-agency cooperation and collaboration, implementation of the 30 Action Items is being accelerated momentum is building towards the 2027 implementation timeline.



This past year:

- three Action Items moved to the Initiated stage
- three Action Items reached the Planning stage
- three Action Items reached the Executing stage
- one Action moved from Executing back to Pending
- six Action Items were Concluded

Action Items:
The CSP's Actions vary in scope and objective; each designed to be flexible to adapt to changes that have arisen since the CSP was first endorsed. The life cycle of an Action Item may not always be linear but is tracked through various stages to conclusion.

Action Item Stages

- Unactioned Items are those where the work has not reached a level that an Action Team has yet to be formed. Often there is work occurring 'behind the scenes' by the partners to address these Actions, but more work is needed before the idea can be brought to the Stewardship Team for consideration.

- Initiated Actions are those in which the Stewardship Team has approved the proposal of an Action Team, at least in principle, but funds have yet to be allocated as the detailed planning is not yet complete.

- Actions at the Planning stage are those in which an Action Team, who has submitted a proposal to the Stewardship Team, are refining the pitch. Typically, more details on budget or scope of work is required before the Action can move to the next stage.

- Actions in the Executing stage have been approved and funded by the Stewardship Team, and the Action Team is actively working to advance the objectives of the Action Plan.

- Actions in the Pending stage are those in which the Action Team has an approved plan but has encountered an obstacle or discovered a new area of work which requires the original plan to be amended. For example, under Action 4.2, the RCMP and KCR completed the Action as initially envisioned, but Social Development will lead Phase 2, including re-engaging the group, supporting the drafting of a new project charter inclusive of any funding requests. The Action Team will focus on identifying a specific project/initiative which can be developed and actioned within 6 months.

- Actions in the Concluded stage are those in which the Action Team has met the objectives of their plan. This does not mean that the work is over but rather the product of the Action becomes the foundation for further work by one or more of the partners.

Year Three Highlights:
The Action Teams have been very busy in the past year. As a demonstration of the type of complex, long-term issues the Action Teams are tackling, the following are samples from different stages of the typical Action Item:

Initiated

Priority 2	Domestic Violence and Intimate Partner Violence
Action 5.1	Expand and explore current and potential community learning programs to prevent dating violence (e.g., healthy relationships for couples, parenting skills & family relationships, victim-centered services, mentorship, etc.).
Action 6.1	Develop educational campaigns and resources for community members to identify risk factors and intervene in / report situations of DV/IPV (e.g., poster campaign in liquor establishments, virtual hand signal for DV/IPV, bystander intervention training).
Action 7.1	Advocate for increased funding for DV/IPV wraparound services, with a focus on transitioning out of shelters (e.g., support in managing finances, access to housing, etc.)

Led by the Ministry of Children & Family Development, the Action Team is taking the ambitious step of combining these three action items. The Action Team will engage with local experts to identify which programs can benefit from enhancement with funding and guidance from the CSP to collectively advance these Actions.

Planning

Priority 1	Crime Prevention, Intervention and Sense of Safety
Action 4.1	Create strategies / mechanisms for peer-to-peer (e.g., people with lived or living experience) involvement in community safety projects. (e.g., partnerships with business community)

The City's Social Development Team has launched an Action Team to explore collaboration between DKA and URBA with PEOPLE Lived Experience Society and the Lived Experience Circle on Homelessness (LECoH). The vision is a program in which the work of the BIA's On-Call Ambassadors and Clean Teams are assisted by the efforts of people experiencing homelessness; giving deserving people a chance at meaningful work that connects them with their community.

Executing

Priority 1	Crime Prevention, Intervention and Sense of Safety
Action 4.3	Expand the Strong Neighbourhoods program to further support neighbour connection, engagement, safety, and sense of belonging. More specifically this action will intentionally focus on expanding the Block Connector Program to have a presence in targeted neighbourhoods based on Community Safety data.

The City's Active Living & Culture Department has led the charge to advance this Action. Since inception, 84 Block Connectors neighbourhoods have been established, a Promotional Video created, an asset-based community development ("ABCD") workshop facilitated, and tailored events delivered like the 4th Neighbourhood pulse pop-up in Ben Lee Park, and the KSAN community engagement with CSSB and RCMP.

Concluded

Priority 5	Racism and Discrimination
Action 14.2	Expand and advance initiatives to increase partnerships, reduce hate crimes, and increase reporting. (e.g., post-secondary institutions, indigenous and diverse communities).

KCR Community Resources is the lead for this Action Team which has been productive with events such as:

- In collaboration with Kelowna Pride, Advocacy Canada, Dignity Network Canada, and This Space, a presentation titled '*From the Global to the local and back again*' was delivered. It was an open community dialogue on attacks on the 2SLGBTIQ+ community.
- Arranged for a public session, '*Hate Requires a Response*' featuring Dr. Danny Carroll on the growing threat of White Nationalism and White Supremacy.
- Completed delivery of two *anti-racism training in sports field* sessions for the UBC Okanagan Men's Soccer team and ran weekly inclusive soccer sessions in July and August 2024, and again from November 2024 to March 2025 with an average of 40 participants per session.
- Activated a United Against Discrimination (UAD) social media campaign, which is continuing, and responding to incident reports received through the UAD portal.
- Arranged a public speaking event held in February at the Metro Hub titled '*A Journey to Radical Compassion*' featuring Tony McAleer; over 140 participants attended

Sharing Progress - the CSP Dashboard:
A CSP dashboard has been launched on the Community Safety Plan landing page which provides up to date progress information. The purpose of this dashboard is to increase accountability to residents, and to acknowledge and recognize the many contributions of the 55+ project partners who have been collaborating to improve the safety and sense of safety in Kelowna since April 2022.

Conclusion:

The CSP continues to build effective interventions to address issues in our community. More importantly it has changed how we work in the Community Safety space. It has shown the importance of a collaborative, strategic approach among partners versus isolated efforts which sometimes duplicated the work and created competition for resources.

In the year ahead, the CSP Stewardship Team will be focussed on entrenching those relationships so they endure beyond the five-year timespan of the CSP and will be looking to build bridges with more community partners as we advance the remainder of our Actions.

Internal Circulation:
Active Living & Culture
Communications Department

Considerations not applicable to this report:
Legal/Statutory Authority:
Legal/Statutory Procedural Requirements:
Existing Policy:
Financial/Budgetary Considerations:
Consultation and Engagement:
Communications Comments:

Submitted by: K. Duggan, Community Safety Services Manager

Approved for inclusion: S. Leatherdale, General Manager, People & Protective Services

cc: cc: J. Gabriel, Divisional Director, Active Living & Culture
K. Mead, Acting Community Safety Director
C. Cornock, Social Development Manager

Kelowna's Community Safety Plan

Annual Progress Update

June 9, 2025

Community Safety Plan (CSP)

Purpose

- To provide Council with the third annual progress report for Kelowna's Community Safety Plan (CSP)

- To introduce the CSP Progress Dashboard

CSP Objectives

- ✓ Reduce risk, vulnerability and harm in our community
- ✓ Develop partnerships and governance structures among system leaders to advance community safety strategies
- ✓ Timelier, targeted and tailored supports available for vulnerable populations before costly, crisis intervention is required
- ✓ Improve *how* systems work together to achieve greater coordination and collaboration

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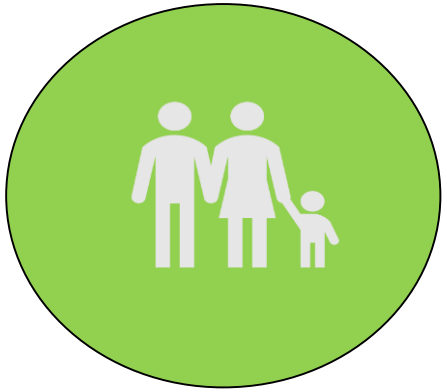
A community where all people feel safe and are safe

CSP Priorities

Crime Prevention, Intervention & Sense of Safety



Domestic & Intimate Partner Violence

Housing & Homelessness

Mental Health & Problematic Substance Use

Racism & Discrimination

Active Stewardship & Action Team Partners

This Year's Highlights

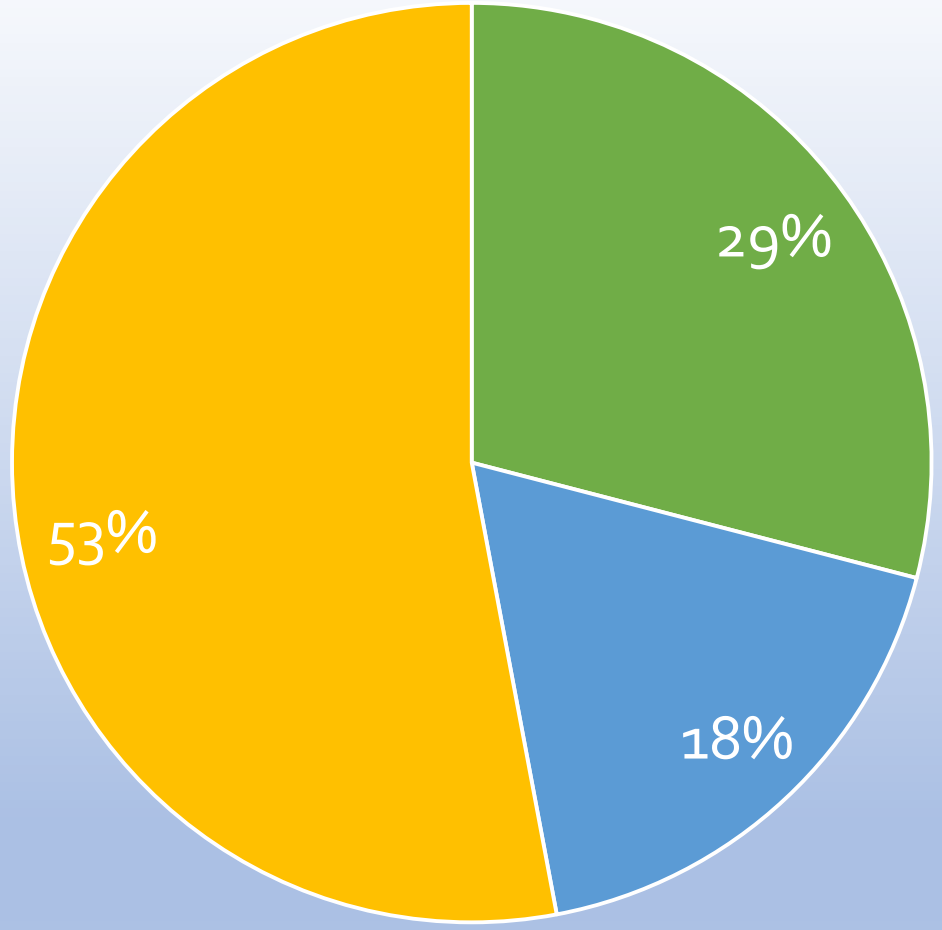
- Budget
- Progress
- Action Item examples
- The '*new*' CSP Dashboard

CSP Budget Status

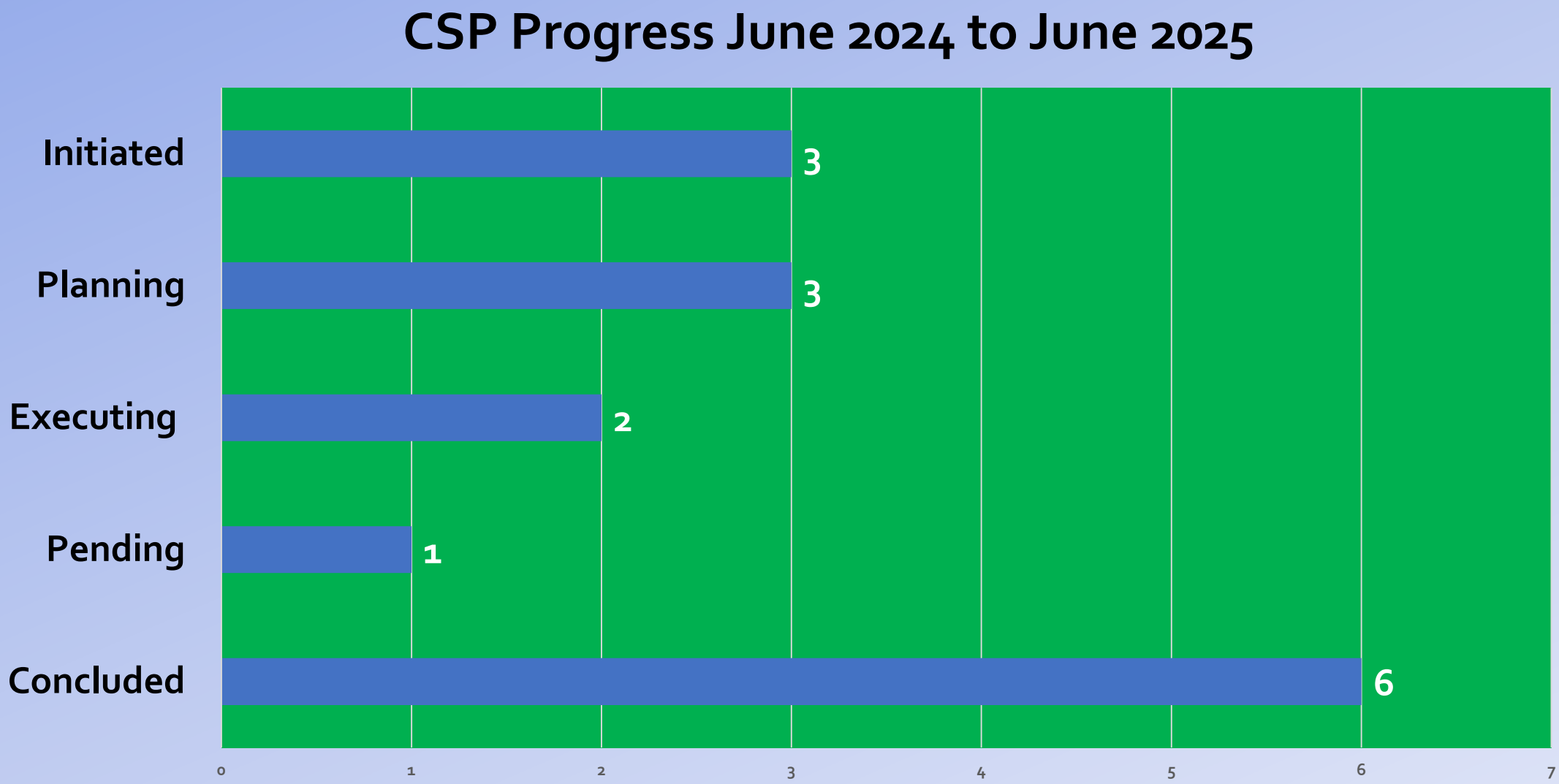
Original Budget
$250,000

Funds Expended
$72,600

Funds Allocated
$45,000



CSP Action Progress (2024/2025)



CSP Priority 2 – Domestic Violence and Intimate Partner Violence

Action 5.1 - Expand and explore current and potential community learning programs to prevent dating violence

Action 6.1 - Develop educational campaigns and resources for community members to identify risk factors and intervene in/report situations of DV/IPV

Action 7.1 - Advocate for increased funding for DV/IPV wraparound services, with a focus on transitioning out of shelters

Status - *Initiated*

- Led by Ministry of Children & Family Development
- Combining three actions
- Engaging local experts to identify programs in need

CSP Priority 1 – Crime Prevention, Intervention & Sense of Safety

Action 4.1

Create strategies / mechanisms for peer-to-peer (e.g., people with lived or living experience) involvement in community safety projects. (e.g., partnerships with business community)

Status - *Planning*

- Social Development Team leading
- Exploring collaboration between DKA, and URBA with PEOPLE Lived Experience Society and the Lived Experience Circle on Homelessness (LECoH)
- Helping our Business Improvement Areas and giving deserving people a chance at meaningful work that connects them with their community

CSP Priority 1 – Crime Prevention, Intervention & Sense of Safety

Action 4.3 - Expand the Strong Neighbourhoods program to further support neighbour connection, engagement, safety, and sense of belonging.

Status – *Executing*

- Led by Active Living & Culture Department
- 71 Block Connectors neighbourhoods established
- Promotional Video created
- Asset-Based Community Development ("ABCD") workshop
- 4th Neighbourhood pulse pop-up in Ben Lee Park
- KSAN community engagement with City and RCMP

CSP Priority 5 – Racism and Discrimination

Action 14.2: Expand and advance initiatives to increase partnerships, reduce hate crimes, and increase reporting. (e.g., post-secondary institutions, indigenous and diverse communities)

KCR COMMUNITY RESOURCES
Enhancing Lives - Connecting Communities

Status - *Concluded*

- Delivered presentation "From the Global to the local and back again", an open community dialogue on attacks on 2SLGBTIQ+ peoples
- Arranged public session '*Hate Requires a Response*' on the growing threat of White Nationalism and White Supremacy
- Completed two *anti-racism training in sports field* sessions for the UBC Okanagan Men's Soccer team
- Ran summer and fall weekly inclusive soccer sessions
- Activated a United Against Discrimination (UAD) social media campaign
- Responding to incident reports received through the UAD portal
- Arranged event '*A Journey to Radical Compassion*' featuring Tony McAleer

CSP Dashboard

[Community Safety Plan | City of Kelowna]

Questions?

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REPORT TO COUNCIL
REZONING

Date:	June 9, 2025
To:	Council
From:	City Manager
Address:	675 Black Mountain Dr
File No.:	Z 25-0004

	Existing	Proposed
OCP Future Land Use:	S-MU – Suburban Multiple Unit	S-MU – Suburban Multiple Unit
Zone:	MF3 – Apartment Housing	MF2 – Townhouse Housing

1.0 Recommendation

THAT Rezoning Application No. Z25-0004 to amend the City of Kelowna Zoning Bylaw No. 12375 by changing the zoning classification of Lot 3 Section 19 Township 27 Osoyoos Division Yale District Plan KAP87003, located at 675 Black Mountain Dr, Kelowna, BC from the MF3 – Apartment Housing zone to the MF2 – Townhouse Housing zone, be considered by Council.

2.0 Purpose

To rezone the subject property from the MF3 – Apartment Housing zone to the MF2 – Townhouse Housing zone to facilitate a townhouse development.

3.0 Development Planning

Staff support the proposed rezoning from MF3 – Apartment Housing to MF2 – Townhouse Housing to facilitate a townhouse development. The subject property is currently zoned as MF3- Apartment Housing which provides increased density and taller building heights. The applicant has decided to downzone the property to MF2 – Townhouse Housing as this zone meets the intent of their proposal to construct a townhouse development.

The proposed rezoning application would allow for the development of additional housing types in an area that is predominantly occupied by single detached housing. The decision to rezone to MF2 – Townhouse Housing allows for a development of townhouses that is less impactful than the heights and density provided by the MF3 – Apartment Housing zone. With close proximity to the Black Mountain Golf Course, a townhouse development would be more suitable for the form and character of the area in comparison to an apartment.

The subject property has an Official Community Plan (OCP) Future Land Use Designation of S-MU – Suburban Multiple Unit. The intent of the Suburban – Multiple Unit area is to provide lands that support a greater variety of multi-unit housing in suburban neighbourhoods that are located strategically to support the viability of local commercial areas, village centres, transit service, schools and other community amenities.

Lot Area	Proposed (m²)
Gross Site Area	10,502 m²
Road Dedication	N/A
Undevelopable Area	N/A
Net Site Area	10,502 m²

4.0 Site Context & Background

Orientation	Zoning	Land Use
North	VC1 – Village Centre	Participant Recreation, Outdoor/ Food Primary Establishment
East	P3 – Parks and Open Space	Participant Recreation, Outdoor
South	P3 – Parks and Open Space	Participant Recreation, Outdoor
West	MF3 – Apartment Housing	Participant Recreation, Outdoor/ Vacant

Subject Property Map: 675 Black Mountain

The subject property is located on Black Mountain Drive. The site is located between two parcels belonging to Black Mountain Golf Course and is situated south of the Black Mountain Golf Course club house. The site is located within 400m of Birchdale Park and several trail networks.

4.1 Background

The subject property has had several development applications in the past related to the development of the Black Mountain Golf Course. Previous applications include an approved subdivision to separate the lot from the existing Golf Course.

5.0 Current Development Policies

5.1 Kelowna Official Community Plan (OCP)

Objective 7.2 Designing Suburban Neighbourhoods to be low impact, context sensitive and adaptable	
Policy 7.2.1 Ground Oriented Housing	Consider a range of low-density ground-oriented housing development to improve housing diversity and affordability and to reduce the overall urban footprint of Suburban Neighbourhoods. Focus more intensive ground-oriented housing where it is near small scale commercial services, amenities like schools and parks, existing transit service and/or active transportation facilities.
	The proposal will provide up to 37 ground-oriented units and is close to parks, trails and golf courses.

Objective 7.3 Design Suburban Neighbourhoods to be inclusive, safe and to foster social interaction	
Policy 7.3.1 Private Open Space	Encourage the development of private open space amenities as part of new multi-unit residential development in Suburban Neighbourhoods
	The development is proposed to include a large private amenity space of approximately 227.6m2.

6.0 Application Chronology

Application Accepted: January 29, 2025
Neighbourhood Notification Summary Received: April 17, 2025

Report prepared by: Carson Mackonka, Planner II
Reviewed by: Carla Eaton, Development Planning Manager
Reviewed by: Nola Kilmartin, Development Planning Department Manager
Approved for Inclusion: Ryan Smith, Divisional Director, Planning, Climate Action & Development Services

Attachments:
Attachment A: Site Plan
Attachment B: Summary of Neighbourhood Consultation

For additional information, please visit our Current Developments online at www.kelowna.ca/currentdevelopments.

ATTACHMENT A
This forms part of application
Z25-0004
Planner Initials CM
City of Kelowna
DEVELOPMENT PLANNING

1 SITE PLAN
DP.100 1/20" - 1'-0"

SHEET NOTES

N.01	MAIN ENTRY
N.02	SMALL PARKING STALL
N.03	TRANSFORMER
N.04	CLASS 1 BIKE RACK - (SHORT-TERM)
N.05	STAIRS TO TRANSITION TO EXISTING UPPER SIDEWALK
N.06	EXISTING SURVEY
N.07	EXISTING ANCHOR
N.08	PROPOSED WASTE & RECYCLING AREA
N.09	PROPOSED ASPHALT SURFACE
N.10	PROPOSED CONCRETE WALKWAY
N.11	PROPOSED LANSCAPE
N.12	EXISITNG UTILITY POLES
N.13	EXISTING FIRE HYDRANT
N.14	EXISTING TREES
	PRINCIPAL ENTRANCE
	PROPOSED RETAINING WALL

GENERAL NOTES

A. REFER TO EX. SURVEY PLANS FOR GEODETIC ELEVATIONS ADJACENT TO DEVELOPMENT PERIMETER.

FAAS
FORMED ALLIANCE ARCHITECTURE STUDIO

SEAL

FOR REFERENCE ONLY - NOT FOR CONSTRUCTION

RELEASES

NO	DESCRIPTION	DATE

☐ CONSTRUCTION
☐ TENDER
☐ BUILDING PERMIT

MUNICIPAL ADDRESS
PROJECT ADDRESS

LEGAL ADDRESS
675 Black Mountain Dr. Kelowna

PROJECT NUMBER
24.045.ECC_BST

PROJECT NAME
BLUE SKY

DRAWN	CHECKED
Author	Checker

DATE	SCALE
2024.11.15	1/8" = 1'-0"

DRAWING TITLE
SITE PLAN

DRAWING NUMBER
DP.100

Neighborhood Consultation Summary Report

Rezoning Application – 675 Black Mountain Dr.

Consultation Overview:
As part of the rezoning application process, a neighborhood consultation was conducted to engage nearby property owners within a 50-meter buffer of the subject site. All applicable properties within this buffer are owned by a single entity.

Engagement Details:

- The property owner, who also serves as the developer of the surrounding neighborhood, was contacted directly.
- An information package outlining the proposed development and rezoning details was shared with the owner.
- The package included contact information to allow for questions, feedback, or further discussion.

Feedback and Outcome:

- The owner reviewed the materials and expressed no objections to the proposed rezoning.
- Ongoing collaboration has been established to ensure alignment with the broader neighborhood development.
- The consultation was completed successfully, with mutual cooperation.

Conclusion:

The neighborhood consultation resulted in positive and constructive engagement with the sole affected property owner, who is also the developer of the surrounding area. Their support for the rezoning proposal reflects alignment with the overall vision for the BlueSky neighborhood. By maintaining open lines of communication and sharing detailed information early in the process, we have fostered a strong working relationship based on transparency and mutual understanding. This collaboration not only supports the current rezoning application but also contributes to the cohesive and thoughtful development of the broader community.

ATTACHMENT B
This forms part of application
Z25-0004
Planner Initials CM

City of Kelowna
DEVELOPMENT PLANNING

Neighbour Consultation Form
(Council Policy No.367)

City of Kelowna

A summary of neighborhood consultation efforts, feedback and response must be provided to City staff, identifying how the efforts meet the objective of this form of consultation. This information must be provided to City staff a minimum of 20 days prior to Council initial consideration of the application(s) for inclusion in the report to Council or this information must be provided to the delegate authorized to issue minor Development Variance Permits prior the decision of the delegate.

I, Japleen Bhander *, the applicant for Application No.* 675 Black Mountain Dr

for Rezoning the site from MF3 to MF2
(brief description of proposal)

at 675 Black Mountain Dr (address) have conducted the required neighbour consultation in accordance with Council Policy No. 367.

- ☐ My parcel is located **outside** of the Permanent Growth Boundary and I have consulted all owners & occupants within a 300m radius
- ☑ My parcel is located **inside** of the Permanent Growth Boundary and I have consulted all owners & occupants within a 50m radius

I have consulted property owners and occupants by doing the following:

Distributed information letters to residents in the area. The letters included details on the proposed development along with renderings and viewpoints. Provided owners a chance to provide feedback via email/call.

Please initial the following to confirm it has been included as part of the neighbour consultation:

- ✓ Location of the proposal;
- ✓ Detailed description of the proposal, including the specific changes proposed;
- ✓ Visual rendering and/or site plan of the proposal;
- ✓ Contact information for the applicant or authorized agent;
- ✓ Contact information for the appropriate City department;
- ✓ Identification of available methods for feedback.

*Please return this form, along with any feedback, comments, or signatures to the File Manager **20 days prior to the anticipated initial consideration by Council date or 10 days prior to the delegates decision**. On the back of this form please list those addresses that were consulted.*

City of Kelowna
1435 Water Street
Kelowna, BC V1Y 1J4
TEL 250 469-8600
FAX 250 862-3330
kelowna.ca

Address	Spoke with Owner & Occupant	Left Package with Owner & Occupant	Date
550 Black Mountain Dr	✓	✓	
575 Black Mountain Dr	Same owner for all addresses		April 17, 2025
775 Black Mountain Dr			

ATTACHMENT B
This forms part of application
Z25-0004
City of Kelowna
DEVELOPMENT PLANNING
Planner Initials CM

CITY OF KELOWNA

BYLAW NO. 12796
Z25-0004
675 Black Mountain Drive

A bylaw to amend the "City of Kelowna Zoning Bylaw No. 12375".

The Municipal Council of the City of Kelowna, in open meeting assembled, enacts as follows:

1. THAT City of Kelowna Zoning Bylaw No. 12375 be amended by changing the zoning classification of Lot 3 Section 19 Township 27 Osoyoos Division Yale District Plan KAP87003 located on Black Mountain Drive, Kelowna, BC from the MF3 – Apartment Housing zone to the MF2 – Townhouse Housing zone.

2. This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first, second and third time by the Municipal Council this

Adopted by the Municipal Council of the City of Kelowna this

Mayor

City Clerk

Rezoning Application

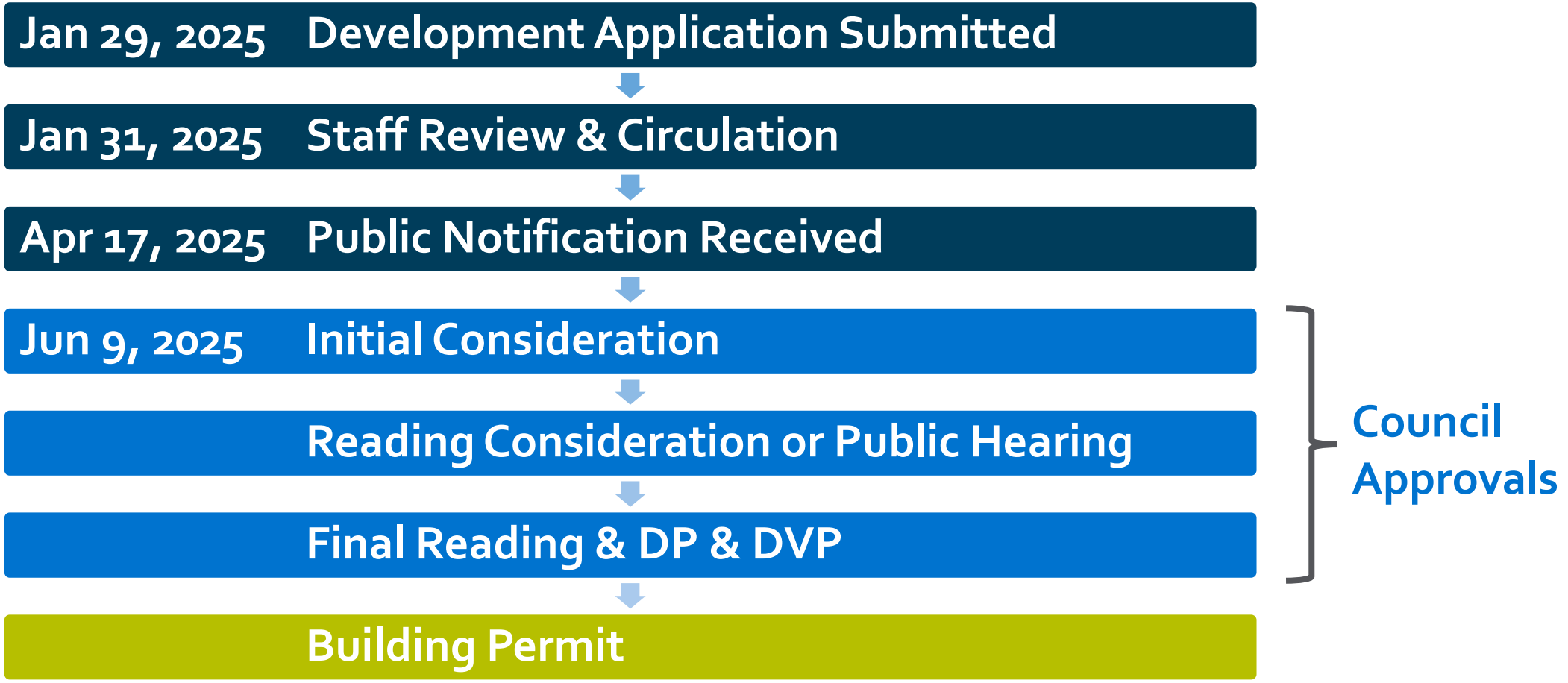
675 Black Mountain Drive

Z25-0004

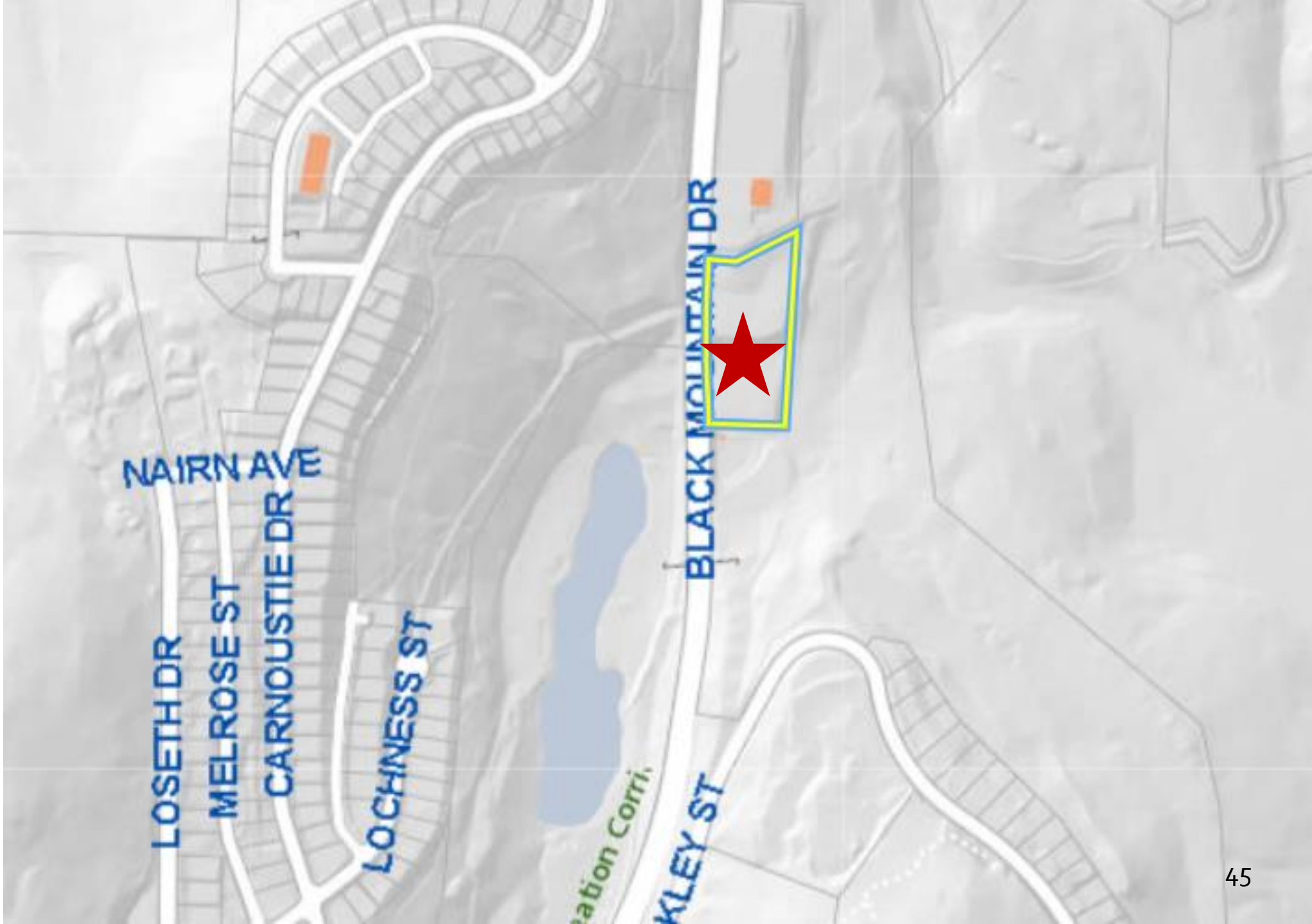
Purpose

To rezone the subject property from the MF3 – Apartment Housing zone to the MF2 – Townhouse Housing zone to facilitate a townhouse development.

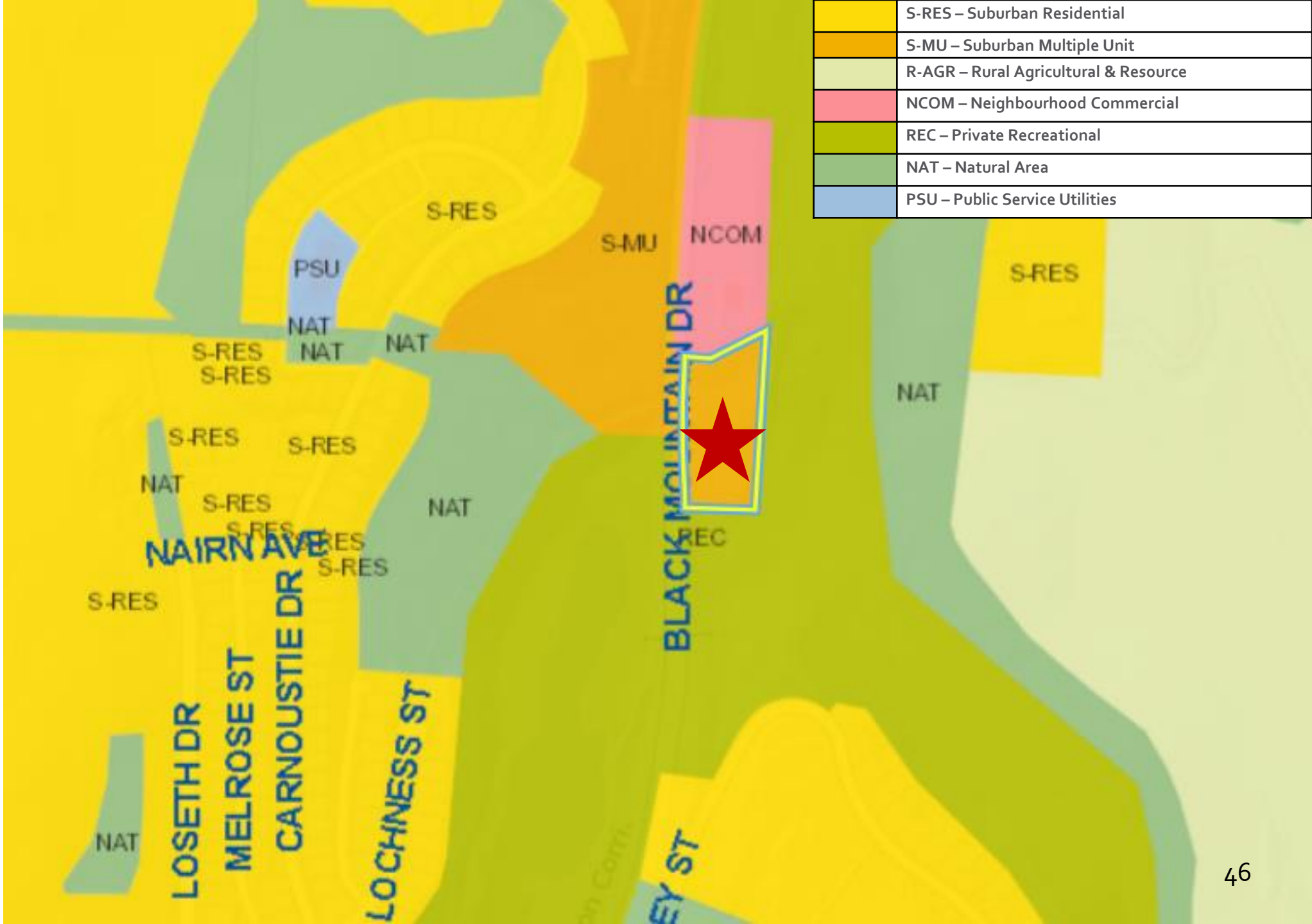
Development Process



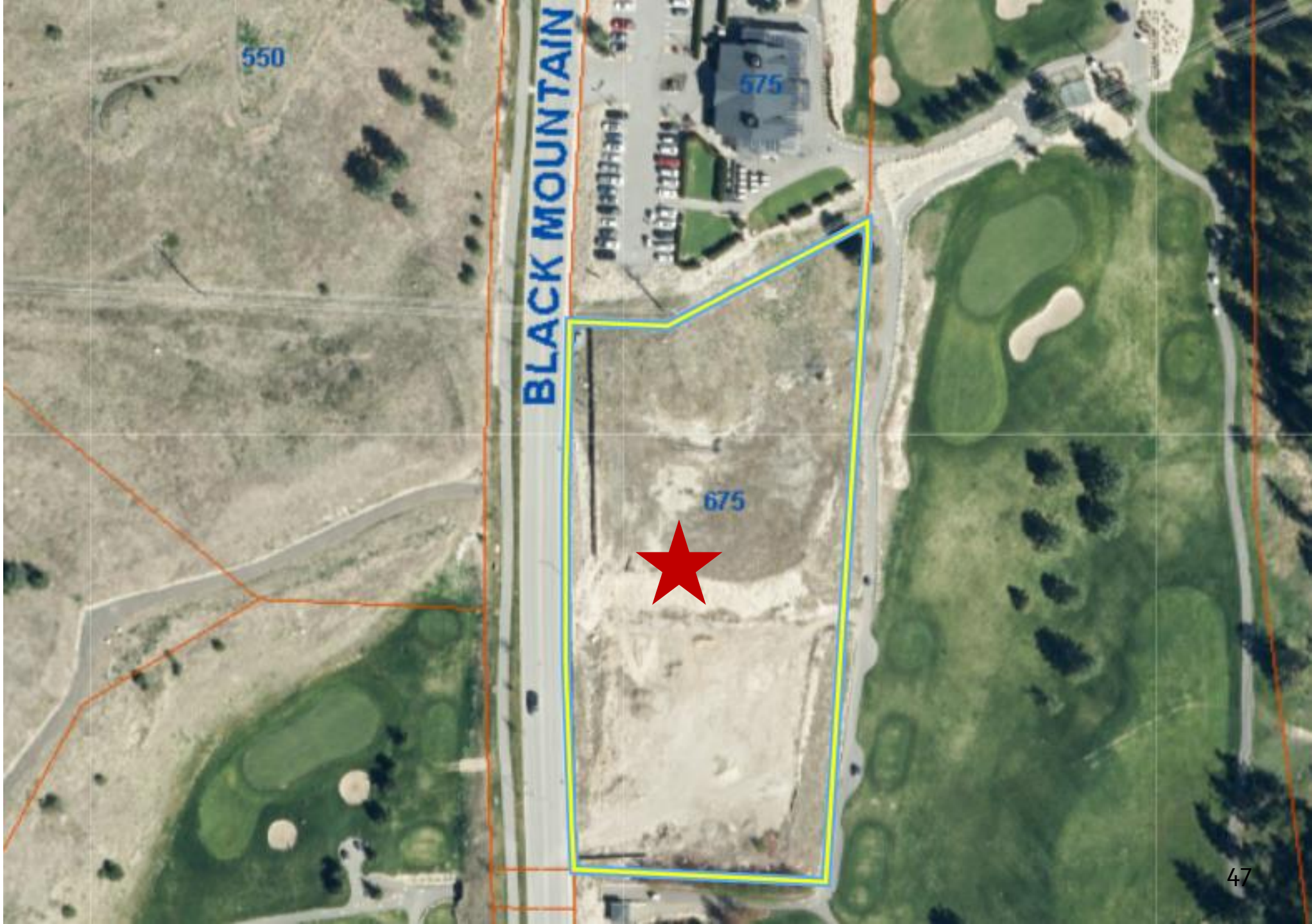
Context Map


N
NAIRN AVE
LOSETH DR
MELROSE ST
CARNOUSTIE DR
LOCHNESS ST
BLACK MOUNTAIN DR
KLEY ST

Context Map: OCP Future Land Use



Subject Property Map



"MF2" Townhouse Housing Zone

Purpose:

- To provide a zone for ground-oriented multiple housing (typically townhouses) up to 3 storeys on serviced urban lots.

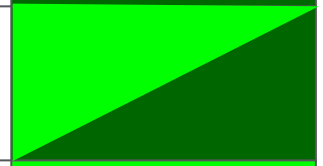
Summary of Uses:

- Townhouses
- Stacked Townhouses
- Duplex Housing
- Semi-Detached Housing
- Home Based Businesses

"MF2" Townhouse Housing Zone

Regulation	Permitted
Maximum Height	11.0 m & 3 storeys
Potential Number of Units	1.0 FAR + Bonus Density Options
Maximum Site Coverage of Buildings	55%

OCP Objectives: Climate Resilience

10 min walk to retail / restaurants	
5 min walk to park	
10 min bike to public school	
20 min bus to urban/village centre / employment hub	
Retaining trees and/or adding trees	
OCP Climate Resilience Consistency	

LEGEND

Dark Green
meets criteria

Light green
will meet criteria soon

Yellow
does not meet criteria

OCP Objectives & Policies

- S-MU – Suburban Multiple Unit
  - Policy 7.2.1 Ground Oriented Housing
    - Consider a range of low-density ground-oriented housing development to improve housing diversity and affordability and to reduce the overall urban footprint of Suburban Neighbourhoods. Focus more intensive ground-oriented housing where it is in close proximity to small scale commercial services, amenities like schools and parks, existing transit service and/or active transportation facilities.
  - Policy 7.3.1 Private Open Space
    - Encourage the development of private open space amenities as part of new multi unit residential development in Suburban Neighbourhoods.

Staff Recommendation

- Staff recommend **support** for the proposed rezoning as it is consistent with:
  - OCP Future Land Use S-MU
  - OCP Objectives in Chapter 7 Suburban Neighbourhoods
    - Ground Oriented Housing
    - Private Open Space
  - Development Permit to follow for Council consideration

REPORT TO COUNCIL
REZONING

Date:	June 9, 2025
To:	Council
From:	City Manager
Address:	2271 Harvey Ave
File No.:	Z24-0040

	Existing	Proposed
OCP Future Land Use:	UC – Urban Centre	UC – Urban Centre
Zone:	C2 - Vehicle Oriented Commercial	C2 - Vehicle Oriented Commercial UC3 – Midtown Urban Centre UC3r – Midtown Urban Centre Rental Only

1.0 Recommendation

THAT Rezoning Application No. Z24-0040 to amend the City of Kelowna Zoning Bylaw No. 12375 by changing the zoning classification of portions of Lot A District Lots 127 AND 4646 OSOYOOS DIVISION YALE DISTRICT PLAN EPP112989, located at 2271 Harvey Ave, Kelowna, BC from the C2 - Vehicle Oriented Commercial zone to the UC3 – Midtown Urban Centre zone and the UC3r – Midtown Urban Centre Rental Only zone as shown on Map "A" attached to the Report from the Development Planning Department dated June 9, 2025, be considered by Council;

AND THAT final adoption of the Rezoning Bylaw be considered subsequent to the outstanding conditions of approval as set out in Attachment "A" attached to the Report from the Development Planning Department dated June 9, 2025;

AND FURTHER THAT final adoption of the Rezoning Bylaw be considered subsequent to the approval of the Ministry of Transportation and Transit.

2.0 Purpose

To rezone a portion of the subject property from the C2 - Vehicle Oriented Commercial zone to the UC3 – Midtown Urban Centre zone and the UC3r – Midtown Urban Centre Rental Only zone to facilitate a mixed-use development.

3.0 Development Planning

Staff recommend support for the proposed rezoning of a portion of the property to the UC3 – Midtown Urban Centre and UC3r – Midtown Urban Centre Rental Only zones. The rezoning application is consistent with the Future Land Use Designation in the Official Community Plan (OCP) of Urban Centre. The rezoning proposal is only for a portion of the property, which contains Orchard Park Shopping Centre. The portion being rezoned with a split zone was previously used for the Kelowna Farmers and Crafters Market. The remainder of the property, where Orchard Park Shopping Centre is located, would remain zoned C2 - Vehicle Oriented Commercial and is not proposed to change by this application.

The request to add the rental subzone to a portion of the property would restrict any building or bareland stratification of future residential housing units to be rental only. The use of the rental subzone supports key direction within the OCP and Healthy Housing Strategy to promote and protect rental housing.

Lot Area	Proposed (m²)
Gross Site Area	7,996
Road Dedication	391
Undevelopable Area	n/a
Net Site Area	7,605

4.0 Site Context & Background

Orientation	Zoning	Land Use
North	UC3 – Midtown Urban Centre	Apartment Housing
East	C2 – Vehicle Oriented Commercial	Vacant Lot
South	A1 - Agriculture	Vacant Land (ALR)
West	C2 – Vehicle Oriented Commercial	Orchard Park Shopping Centre

Subject Property Map: 2271 Harvey Ave

The subject property is in the Midtown Urban Centre and within the Orchard Park Transit Oriented Area. It is near established commercial shopping areas and parks, including Mission Creek Regional Park.

4.1 Background

The subject property is currently one of three legal lots that contains the Orchard Park Shopping Centre. The portion of the property under consideration for this application is at the corner of Springfield Rd and Dilworth Dr, and is separated from the remainder of the lot by Dilworth Dr. This portion of property previously used to be the site of the Kelowna Farmers and Crafters Market. A Preliminary Layout Review has been issued to

subdivide off the portion of property not physically connected to the larger parcel containing Orchard Park Shopping Centre.

5.0 Current Development Policies

5.1 Kelowna Official Community Plan (OCP)

Objective 4.12. Increase the diversity of housing types and tenures to create inclusive, affordable and complete Urban Centres.	
Policy 4.12.1. Diverse Housing Forms.	Ensure a diverse mix of medium density and high-density housing forms that support a variety of households, income levels and life stages.
	The proposed rezoning will support medium or high-density development under the Urban Centre zone.
Policy 4.12.3. Diverse Housing Tenures.	Encourage a range of rental and ownership tenures that support a variety of households, income levels and life stages. Promote underrepresented forms of tenure, including but not limited to co-housing, fee-simple row housing, co-ops, and rent-to-own.
	The proposed split zoning creates a mix of market and rental housing within our Urban Centre which will continue to add to the diversity of housing tenures in this area.

6.0 Application Chronology

Application Accepted: August 2, 2024
Neighbourhood Notification Summary Received: April 8, 2025

Report prepared by: Kimberly Brunet, Planner Specialist
Report prepared by: Jason Issler, Planner II
Reviewed by: Carla Eaton, Development Planning Manager
Reviewed by: Nola Kilmartin, Development Planning Department Manager
Approved for Inclusion: Ryan Smith, Divisional Director, Planning, Climate Action & Development Services

Attachments:
Attachment A: Development Engineering Memo
Attachment B: DRAFT Site Plan
Attachment C: Summary of Neighbourhood Notification
Map A: Rezoning Amendment

For additional information, please visit our Current Developments online at www.kelowna.ca/currentdevelopments.

CITY OF KELOWNA

MEMORANDUM

Date:	August 28, 2024	
File No.:	Z24-0040	
To:	Urban Planning Manager (JI)	
From:	Development Engineering Manager (NC)	
Subject:	2271 Harvey Ave.	C3 to UC3 and UC3r

The Development Engineering Department has the following requirements associated with this application to rezone the subject from the C2 - Vehicle Oriented Commercial zone to UC3 - Midtown Urban Centre zone and the UC3r - Midtown Urban Centre (rental only) zone.

a. Road dedication along the entire frontage of Dilworth Dr and Springfield Rd is required to achieve a ROW width in accordance with the Dilworth-Springfield Intersection design to be provided by the City of Kelowna.

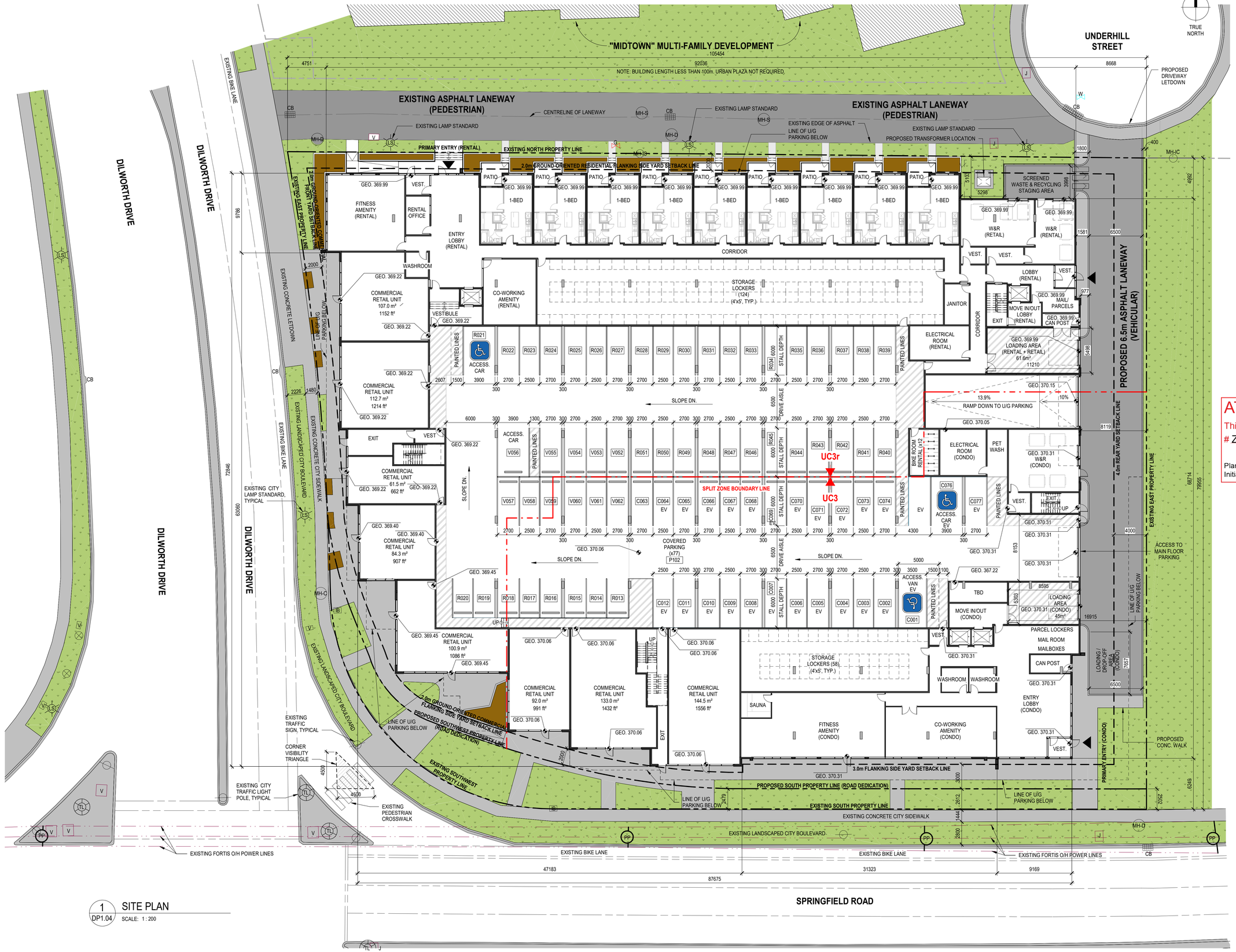
Works and Services requirements associated with the future development of this property are contained in the Development Engineering Memo under file S24-0066.

The Development Engineering Technologist for this file is Aaron Sangster (asangster@kelowna.ca).

Nelson Chapman, P.Eng.
Development Engineering Manager

AS

ATTACHMENT A
This forms part of application
Z24-0040
Planner Initials KB
City of Kelowna
DEVELOPMENT PLANNING



1 DP1.04 SITE PLAN
SCALE: 1 : 200

zeidler

Zeidler Architecture

300, 640 – 8 Avenue SW
Calgary, Alberta T2P 1G7
T 403 233 2525 | zeidler.com

OWNER:

EMPOWERED DEVELOPMENT

EMPOWERED DEVELOPMENT LTD.

NOTE

REGISTERED ARCHITECT JAMES D. BROWN BRITISH COLUMBIA

ATTACHMENT B
This forms part of application
Z24-0040
Planner Initials KB
City of Kelowna DEVELOPMENT PLANNING

NO.	ISSUE/ REVISION	DATE
2	REVISED SITE PLAN - REZONING	2025-01-24
1	ISSUED FOR REZONING+DP+DVP	2024-07-24

NOT FOR CONSTRUCTION

PROJECT

DILWORTH MULTI-FAMILY

PROJECT ADDRESS

2271 HARVEY AVENUE
(RE-ADDRESSING REQUIRED)
KELOWNA, BC

TITLE

SITE PLAN

PROJECT NO.	DRAWN	CHECKED
223-161	CJJ	TL

DRAWING NO. DP1.04

REVISION NO. 2

C:\Users\cjoslin\OneDrive - Zeidler\Documents\AR_223-161_DILWORTH_R24_cjoslin.rvt
2025-01-24 1:45:56 PM

EMPOWERED DEVELOPMENT

ATTACHMENT C
This forms part of application
Z24-0040
Planner Initials KB
City of Kelowna
DEVELOPMENT PLANNING

April 8, 2025
File #: Z24-0040

City of Kelowna
Attn: Kimberly Brunet, RPP, MCIP, Planner Specialist
1435 Water Street
Kelowna BC V1Y 1J4

Re: Proposed Apartment Development at 2271 Harvey Ave., Kelowna
Summary of Neighbour Notification

Dear Ms. Brunet,

At this time, we are writing to provide a summary of neighbour consultation completed in accordance with Council Policy no. 367. Mailouts (attachment #1) were delivered to 122 residences within 50 meters of the site on March 11, 2025, as noted in the attached consultation form. *Please see attachment 2 for all addresses.*

Summary of Feedback.
We received ***1 letter*** and ***2 emails*** with feedback and questions regarding the development.

Access/Traffic: All 3 respondents expressed concern about the lack of access to Springfield or Dilworth and were worried about Traffic impacts to their respective properties; however we note that City Staff only permitted access to Underhill drive when discussing our proposal with the Engineering Department. In addition, our proposal is far less dense than the OCP would ultimately allow: 15 storey towers are technically allowed by the OCP in this area.

View Impacts: One Neighbour from the project to the northeast was concerned about impacts to their south facing views; however, we are proposing something much shorter than the max 15 storeys allowed in the OCP, and the neighbours in question all still have south facing views over the lot to our east and the ALR lands south of Springfield. We are not directly south of the Mission Towers development.

Commercial Bike parking: One neighbour suggested adding outdoor commercial bike parking next to the commercial units, which we would be happy to review and incorporate.

Landscape Buffer/Setbacks: Our east neighbour wrote a letter with objections based on seeking clarity on the landscape buffer requirements along the shared property line. In our view such concerns are best addressed via the review of the DP and any DP Variances applied for at that time

Responses:
We have included our responses to this summary. To summarize, we would not propose to revise our plans based on the view or traffic feedback; however, we would consider adding commercial bike parking during the DP design phase.

Please feel free to contact me with any questions or matters requiring clarification at 778-829-6641 or email kyle@empowered-development.com.

Regards,
Empowered Development Ltd.

Kyle Stewart, Principal.

Attachments:

1. Neighbour Mail-out.
2. CoK - Neighbourhood Consultation Form.
3. Mailout list & Map
4. Neighbour responses (Letter, Emails)

EMPOWERED DEVELOPMENT

March 7, 2025

DEVELOPMENT NOTICE

A development application **with File #: Z24-0040** has been submitted to the CITY OF KELOWNA for property located at:

2271 Harvey Rd.

To rezone from Infill Housing (C2) to the Midtown Urban Centre (UC3) & Midtown Urban Centre (Rental Only) (UC3r) zones.

We are seeking neighbour input in accordance with Kelowna's Public Consultation Policies.

ATTACHMENT C
This forms part of application
Z24-0040
Planner Initials KB
City of Kelowna
DEVELOPMENT PLANNING

Location of the Subject Property:

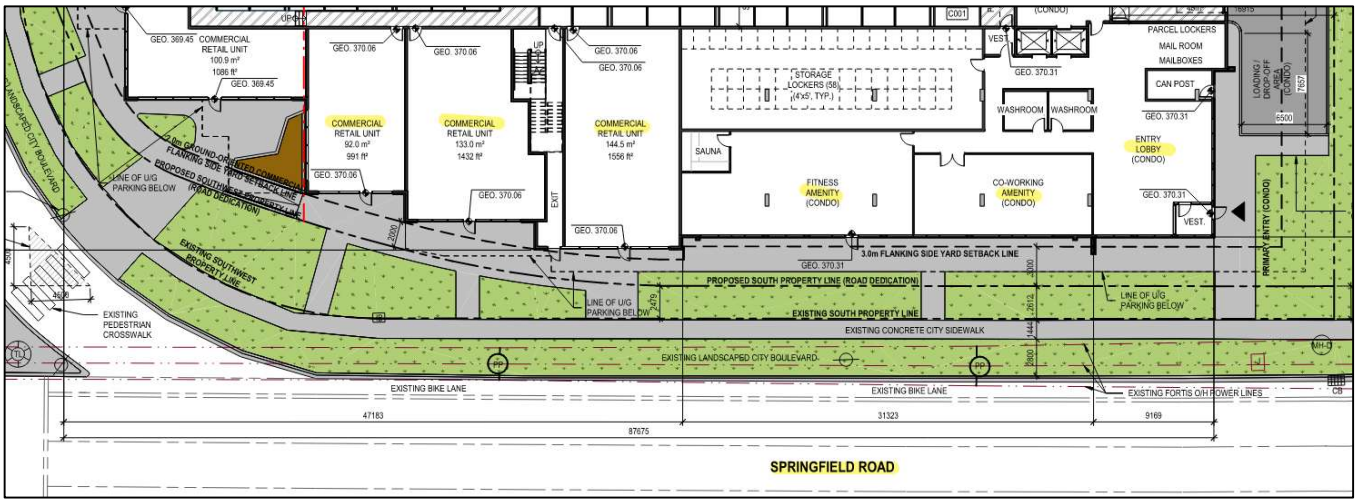
View from Springfield & Dilworth Intersection.

March 7, 2025

Proposed Development Background:

The proposed project consists of >290 apartment units spread across two buildings, all atop 1 single level underground parkade. The building is 6 storeys in height.

To facilitate this project, the applicant is proposing to amend the zoning from C2 to UC3/UC3r.
We are also seeking a Development Variance Permit to allow a reduction in the required amount of commercial street frontage along Springfield rd. proposed from 90% to 50%.



Level 1 – Springfield Dr. Commercial Frontage – Variance location

The rationale for this project is as follows:

1. Provide a thoughtful, sustainable, urban housing solution to a site located in the Midtown urban Centre, *well below the max allowable height* with a strong street presence and activated streetscape.
2. Provide 294 residences that provide private outdoor amenity spaces for each unit while including a variety of shared, robust amenity spaces including a dog run, gyms, and landscaped amenity space on the second level.
3. Provide a balance unit mix aligned with Housing Needs Assessment targets, include market condo units for one and two person households.
4. Encourages modeshift via the inclusion of **car-share stalls** and **robust cycling amenities**, in a highly walkable and transit friendly location, minimizing the need for vehicle trips.
5. The proposed development dramatically exceeds the Parking Bylaw requirements for vehicle stalls, and meets requirements for bike stalls.
6. The proposed development relocates the main drive aisle access from Dilworth Drive to Underhill Rd.'s existing cul-de-sac, ensuring traffic does not stop on an arterial roadway.

This proposed development recognizes the City of Kelowna's strategic approach to overall growth including better use of precious developable land in accordance with the City's OCP/Future Land Use, Healthy City Strategy & planning initiatives.

Neighbourhood Consultation purpose

We are seeking the input of the neighbourhood in accordance with Kelowna's Public Consultation Policies. Notices are being distributed to residents within ***50m*** of the subject property. If you have any questions or feedback you wish to provide in regard to this notice, or ***if you'd like a complete set of architectural drawings***, please contact **Kyle Stewart @ 778-829-6641 *or*** kyle@empowered-development.com

City Contact:
To discuss the proposal with the City of Kelowna, please reach out to Kimberly Brunet, Planner Specialist
Email: kbrunet@kelowna.ca
Phone: 250-469-8637.

ATTACHMENT C
This forms part of application
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City of Kelowna
DEVELOPMENT PLANNING

Neighbour Consultation Form
(Council Policy No.367)

A summary of neighborhood consultation efforts, feedback and response must be provided to City staff, identifying how the efforts meet the objectives of this Policy. This form must be filled out and submitted to the File Manager a minimum of 20 days prior to initial consideration by Council.

I, Kyle Stewart *, the applicant for Application No.* Z24-0040

for New Construction, 294 apartment units in two buildings. 6 storey woodframe atop 1 level parkade.
(brief description of proposal)

at 2271 Harvey Rd (Child Parcel) have conducted the required neighbour
(address)
consultation in accordance with Council Policy No. 367.

- ☐ My parcel is located **outside** of the Permanent Growth Boundary and I have consulted all owners & occupants within a 300m radius
- ☒ My parcel is located **inside** of the Permanent Growth Boundary and I have consulted all owners & occupants within a 50m radius

I have consulted property owners and occupants by doing the following:

Preparing an information package describing the development and mailing it to each homeowner.

Please initial the following to confirm it has been included as part of the neighbour consultation:

X Location of the proposal;
X Detailed description of the proposal, including the specific changes proposed;
X Visual rendering and/or site plan of the proposal;
X Contact information for the applicant or authorized agent;
X Contact information for the appropriate City department;
X Identification of available methods for feedback.

Please return this form, along with any feedback, comments, or signatures to the File Manager ***20 days prior to the anticipated initial consideration by Council date****. On the back of this form please list those addresses that were consulted.*

ATTACHMENT C
This forms part of application
Z24-0040
City of Kelowna DEVELOPMENT PLANNING
Planner Initials KB

City of Kelowna
1435 Water Street
Kelowna, BC V1Y 1J4
TEL 250 469-8600
FAX 250 862-3330
kelowna.ca

MAILOUT LIST

Title	NAME / Title	Company Name	Address Line 1: Adjacent LOT to Development	Mailing Address (if different from Site address)	City	State	ZIP Code
			2241 Springfield Rd		Kelowna	BC	V1Y 0M3
		E & A FARMS LTD., INC.NO. 632366	2255 Springfield Ave	SUITE 300 - 1060 MANHATTAN DRIVE	Kelowna	BC	V1Y 9X9
		4110 INVESTMENTS LTD., INC.NO. 539377	2261 Springfield Rd	218 - 1626 RICHTER STREET	Kelowna	BC	V1Y 2M3
		Callahan Property Group	2275 Springfield Rd	1626 Richter St #218,	Kelowna	BC	V1Y 9S3
		Primex Investments Ltd.	1960 Underhill St	Suite 200-1785 West 4th Ave	Kelowna	BC	V6J 1M2
	OCCUPANT		101-1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		102-1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		103-1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		104-1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		105-1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		106-1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		107-1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		201 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		202 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		203 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		204 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		205 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		206 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		207 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		301 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		302 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		303 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		304 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		305 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		306 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		307 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		401 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		402 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		403 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		404 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		405 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		406 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		407 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		601 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		602 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		603 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		604 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		605 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		606 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		607 - 1967 Underhill St		Kelowna	BC	V1X 8C9
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	OCCUPANT		702 - 1967 Underhill St		Kelowna	BC	V1X 8C9
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	OCCUPANT		704 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		705 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		706 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		707 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		801 - 1967 Underhill St		Kelowna	BC	V1X 8C9
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	OCCUPANT		804 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		805 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		901 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		902 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		903 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		904 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		905 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		101 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		102 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		103 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		104 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		105 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		106 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		107 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		201 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		203 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		204 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		205 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		206 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		201 - 1967 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		301 -1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		301 -1966 Durnin Rd		Kelowna	BC	V1X 7Z2

ATTACHMENT C
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Z24-0040
Planner Initials KB
City of Kelowna
DEVELOPMENT PLANNING

MAILOUT LIST

Title	NAME / Title	Company Name	Address Line 1: Adjacent LOT to Development	Mailing Address (if different from Site address)	City	State	ZIP Code
	OCCUPANT		301 -1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		301 -1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		301 -1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		301 -1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		301 -1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		401 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		402 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		403 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		404 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		405 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		406 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		407 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		501 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		501 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		502 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		503 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		504 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		505 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		506 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		601 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
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	OCCUPANT		603 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		604 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		605 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		606 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		607 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		701 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		701 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
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	OCCUPANT		901 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
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	OCCUPANT		904 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		905 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2
	OCCUPANT		501 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		501 - 1967 Underhill St		Kelowna	BC	V1X 8C9
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	OCCUPANT		501 - 1967 Underhill St		Kelowna	BC	V1X 8C9
	OCCUPANT		507 - 1966 Durnin Rd		Kelowna	BC	V1X 7Z2

ATTACHMENT C
This forms part of application
Z24-0040
Planner Initials KB
City of Kelowna
DEVELOPMENT PLANNING

Kyle Stewart

From: [redacted]
Sent: March 17, 2025 12:45 PM
To: Kyle Stewart
Subject: Proposed new development

Categories: 23-002 Dilworth

Hi Kyle:
Please review my e mail to the C Of Kelowna with your response. The growth since we move here from the coast 32 years ago reflect the life style why people here like us.
I am concerned especially with the traffic management issue with the additional inits being developed the corner of Springfield and Benevolin which are not occupied yet.
The access off Dilworth is show on the plot plan? also the commercial off loading area is not shown and I see there is no provision on Springfield. The owners of Mission Creek Towers will lose their respective site lines looking to the south which when they bought into these 2- towers have concerns off moving again. Your reply in this regard would be appreciated, thank you going forward
Best regards,
[redacted]

Kyle Stewart

From: [redacted]
Sent: March 19, 2025 11:48 AM
To: Kyle Stewart
Cc: kbrunet@kelowna.ca
Subject: Re: Request for Architectural Drawings 2271 Harvey Rd

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: 23-002 Dilworth

Thanks Kyle

I did notice what I believe to be an inaccuracy on one of your drawings. On the Page DP1.02 it shows to the east of Underhill cul-de-sac there is a road named Haynes Road. This is not correct. In that area is the driveway to our Strata Plan KAS2811.

I was also curious as to the decision on not having the asphalt laneway at the east of the property extend all the way to Springfield and make it only accessible to traffic exiting the new complex, heading south on the laneway to turn west onto Springfield. It would definitely alleviate traffic congestion at the intersection of Underhill and Baron, and potential backlog at peak hours for traffic heading westbound on baron to turn southbound onto Dilworth as that left turn lane already backs up to Underhill. I do understand that you are trying to avoid a driveway from Springfield into the laneway so as to not cause traffic disruptions on a main artery, but I believe having the laneway structured so as to not allow traffic entering from Springfield but only exiting westbound onto Springfield from the laneway will be of a great asset.

It is great to see a fair amount of bicycle parking, and it's great that you are designing the building with alternative modes of transportation in mind. What I don't see though is anywhere for people using the commercial units to lock up their bikes outside. The fewer barriers there are in our city to alternative modes of transportation the more likely people will be to cycle rather than drive.

Thanks for providing these drawings to give your neighbours a chance to provide their input.

[redacted]

> On Mar 17, 2025, at 10:58 AM, Kyle Stewart <kyle@empowered-development.com> wrote:
>
> Hi[redacted]
>
> Heres a link to the latest plans.
> https://www.dropbox.com/scl/fi/d7poaugept0udij1qfcw2/241015-DILWORTH_ISSUED-FOR-DP-Jan24-Update-Site-plan.pdf?rlkey=b2v5d8ue2uhhr2z1l0zethre0&st=zj3rwam2&dl=0
>
> Best,
>
> Kyle Stewart
> Principal
> Empowered Development Ltd.
>

>
>
>
>
> 7788296641
>
>
> kyle@empowered-development.com
>
>
> empowered-development.com
>
>
>
> Know someone who needs expert development management? Refer them to us by March 31st and receive a cash bonus! Ask me for details.
>
>
>
>
>
>
>
>
>
> -----Original Message-----
> From: [redacted]
> Sent: March 16, 2025 8:58 AM
> To: Kyle Stewart <kyle@empowered-development.com>
> Subject: Request for Architectural Drawings
>
> Hello
>
> I received the development notice about a development in Kelowna at Springfield and Dilworth drive. I would like to review your drawings if you can please send them to me I would appreciate it.
>
> Thanks
>
> [redacted]

[redacted]

March 27, 2025

City of Kelowna

Attention: Kimberly Brunet, Planner Specialist

Email: kbrunet@kelowna.ca

Dear Kimberly,

RE: REZONING OF 2271 HARVEY ROAD #Z24-0040

Thank you for your response March 21, 2025.

We would like to put it on record that we are not in support of this rezoning without the information required to make such a determination, specifically the setbacks and landscape buffer on the East property line which directly affects our property. It is also important to understand where the development will be accessed from while complying with the setbacks in order for staff/Council to determine if the property should be re-zoned.

We can put this in writing to Mayor and Council as well so that it forms part of the public record. Please advise if this is how we register our objection formally.

Kindest regards,

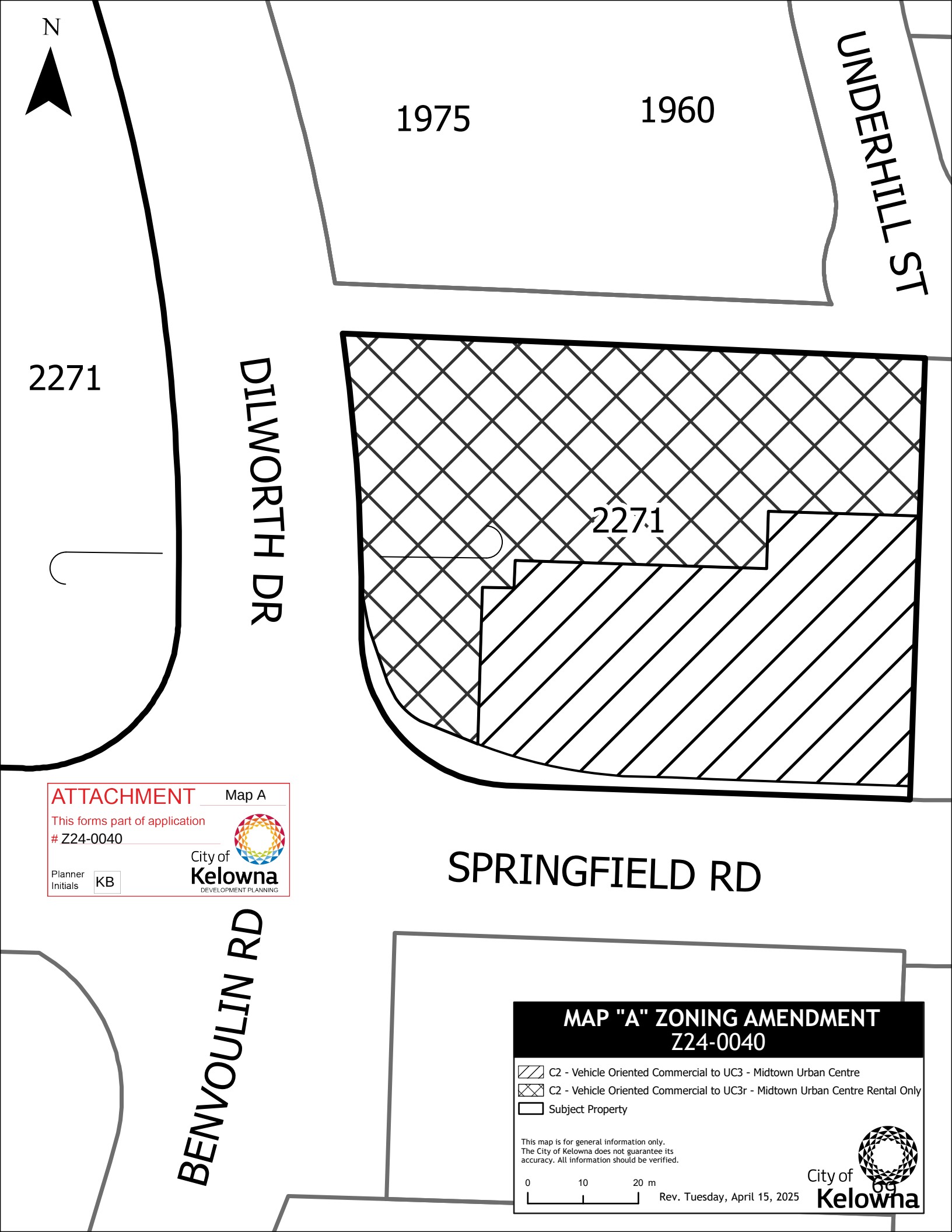
[redacted]

Director

cc: Kyle Stewart
Email: kyle@empowered-development.com

ATTACHMENT C
This forms part of application
Z24-0040
Planner Initials KB
City of Kelowna
DEVELOPMENT PLANNING

[redacted]



ATTACHMENT Map A
This forms part of application
Z24-0040
Planner Initials KB
City of Kelowna
DEVELOPMENT PLANNING

MAP "A" ZONING AMENDMENT
Z24-0040

- C2 - Vehicle Oriented Commercial to UC3 - Midtown Urban Centre
- C2 - Vehicle Oriented Commercial to UC3r - Midtown Urban Centre Rental Only
- Subject Property

This map is for general information only.
The City of Kelowna does not guarantee its accuracy. All information should be verified.

0 10 20 m

Rev. Tuesday, April 15, 2025

City of Kelowna

CITY OF KELOWNA

BYLAW NO. 12797
Z24-0040
2271 Harvey Avenue

A bylaw to amend the "City of Kelowna Zoning Bylaw No. 12375".

The Municipal Council of the City of Kelowna, in open meeting assembled, enacts as follows:

1. THAT City of Kelowna Zoning Bylaw No. 12375 be amended by changing the zoning classification of portions of Lot A District Lots 127 and 4646 OSOYOOS DIVISION YALE DISTRICT PLAN EPP112989, located on Harvey Ave, Kelowna, BC from the C2 - Vehicle Oriented Commercial zone to the UC3 – Midtown Urban Centre zone and the UC3r – Midtown Urban Centre Rental Only zone as shown on Map "A" attached to and forming part of this bylaw.

2. This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first, second and third time by the Municipal Council this

Approved pursuant to section 52(3)(a) of the Transportation Act this

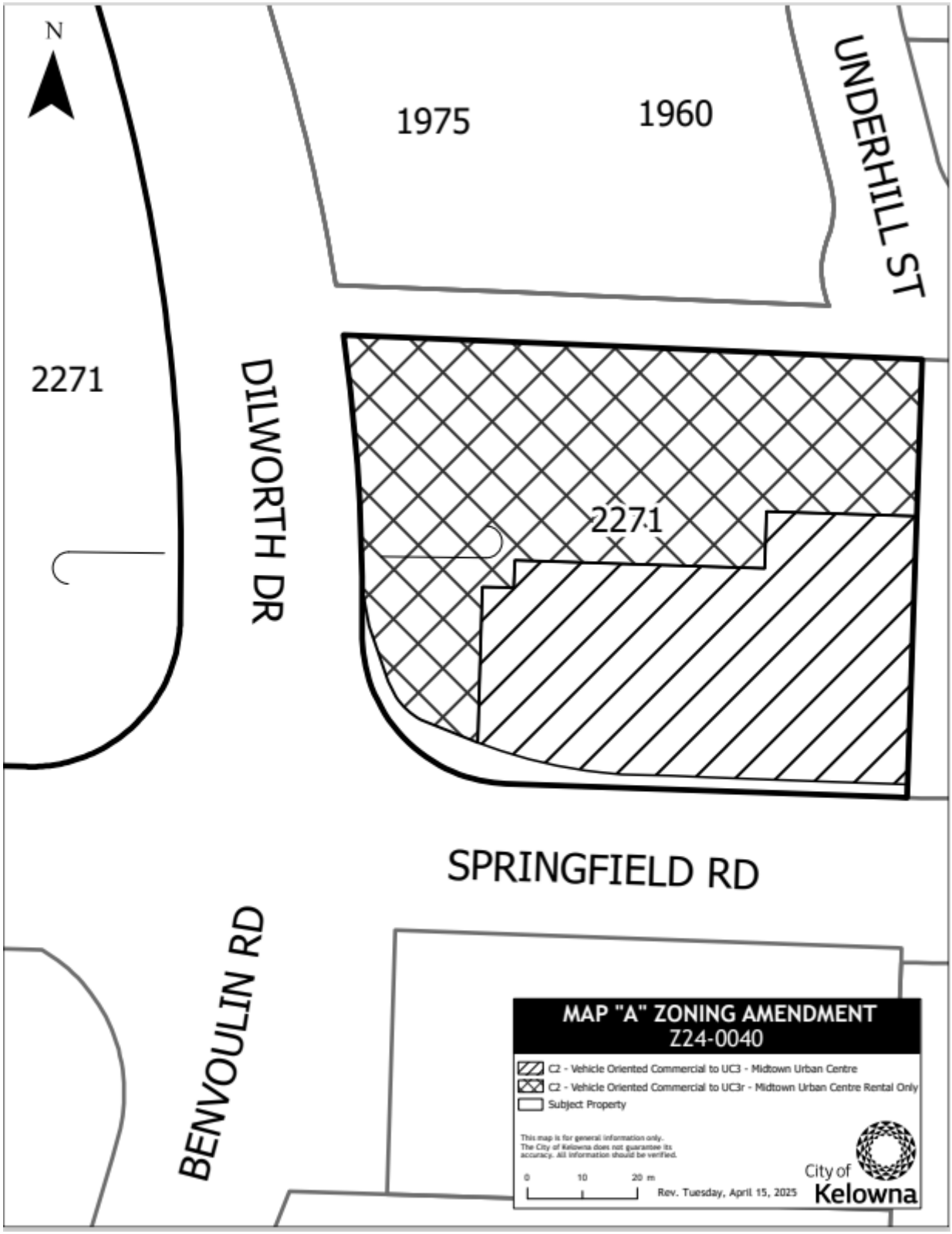
---

for Minister of Transportation & Transit

Adopted by the Municipal Council of the City of Kelowna this

Mayor

City Clerk


N
1975
1960
UNDERHILL ST
2271
DILWORTH DR
2271
SPRINGFIELD RD
BENVOULIN RD
MAP "A" ZONING AMENDMENT
Z24-0040
C2 - Vehicle Oriented Commercial to UC3 - Midtown Urban Centre
C2 - Vehicle Oriented Commercial to UC3r - Midtown Urban Centre Rental Only
Subject Property
This map is for general information only.
The City of Kelowna does not guarantee its accuracy. All information should be verified.
0
10
20 m
Rev. Tuesday, April 15, 2025
City of Kelowna

Rezoning Application

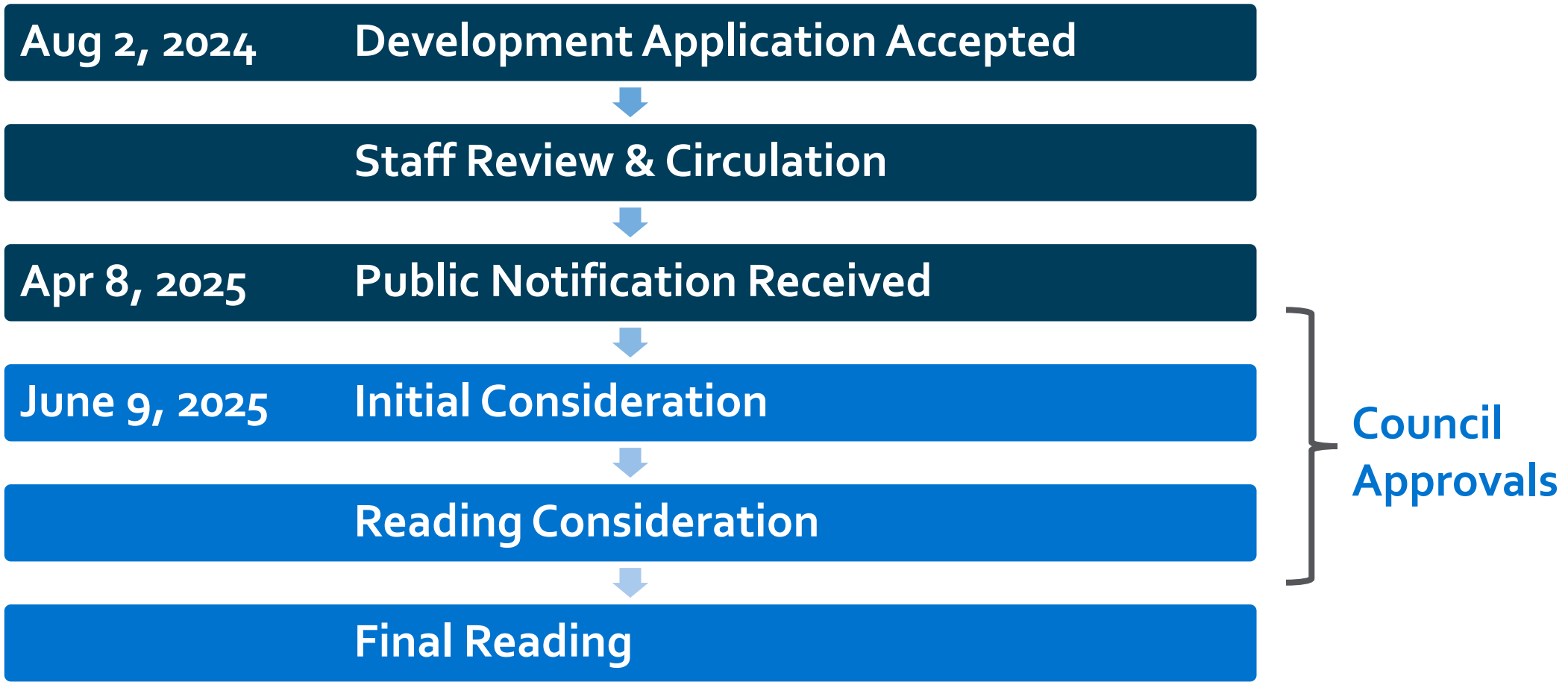
2271 Harvey Ave

Z24-0040

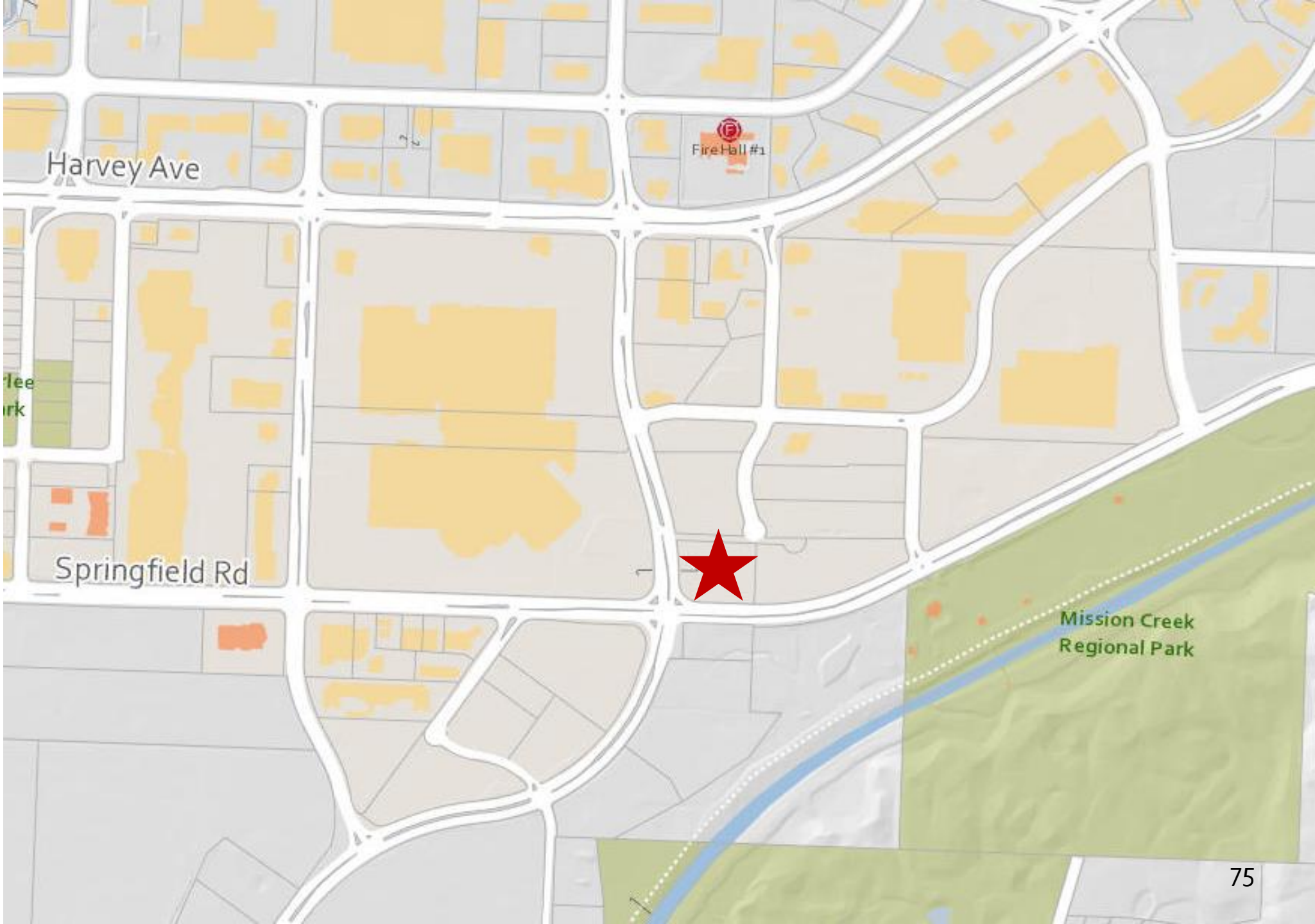
Purpose

To rezone a portion of the subject property from the C2 - Vehicle Oriented Commercial zone to the UC3 – Midtown Urban Centre zone and the UC3r – Midtown Urban Centre Rental Only zone to facilitate a mixed-use development.

Development Process

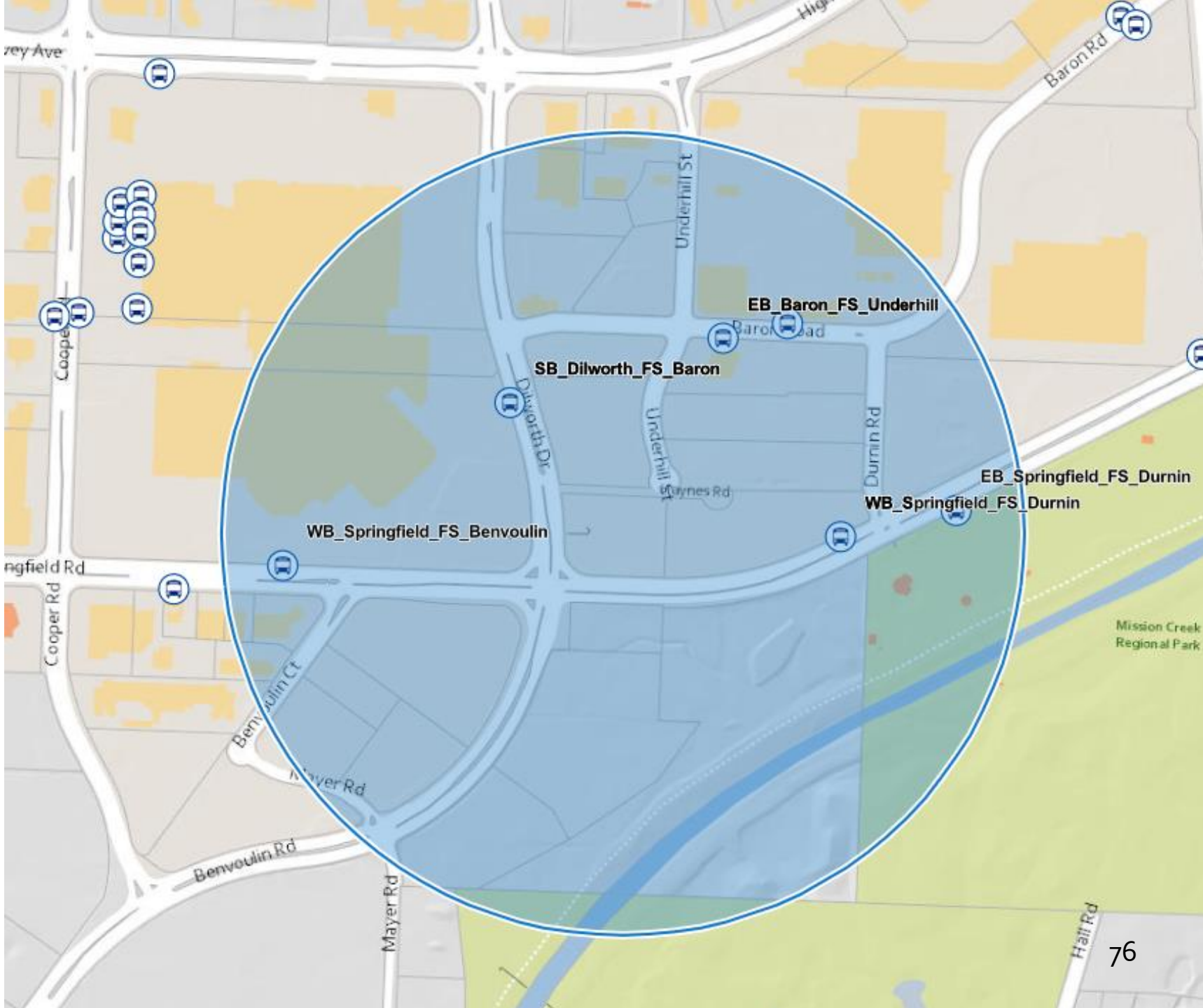


Context Map

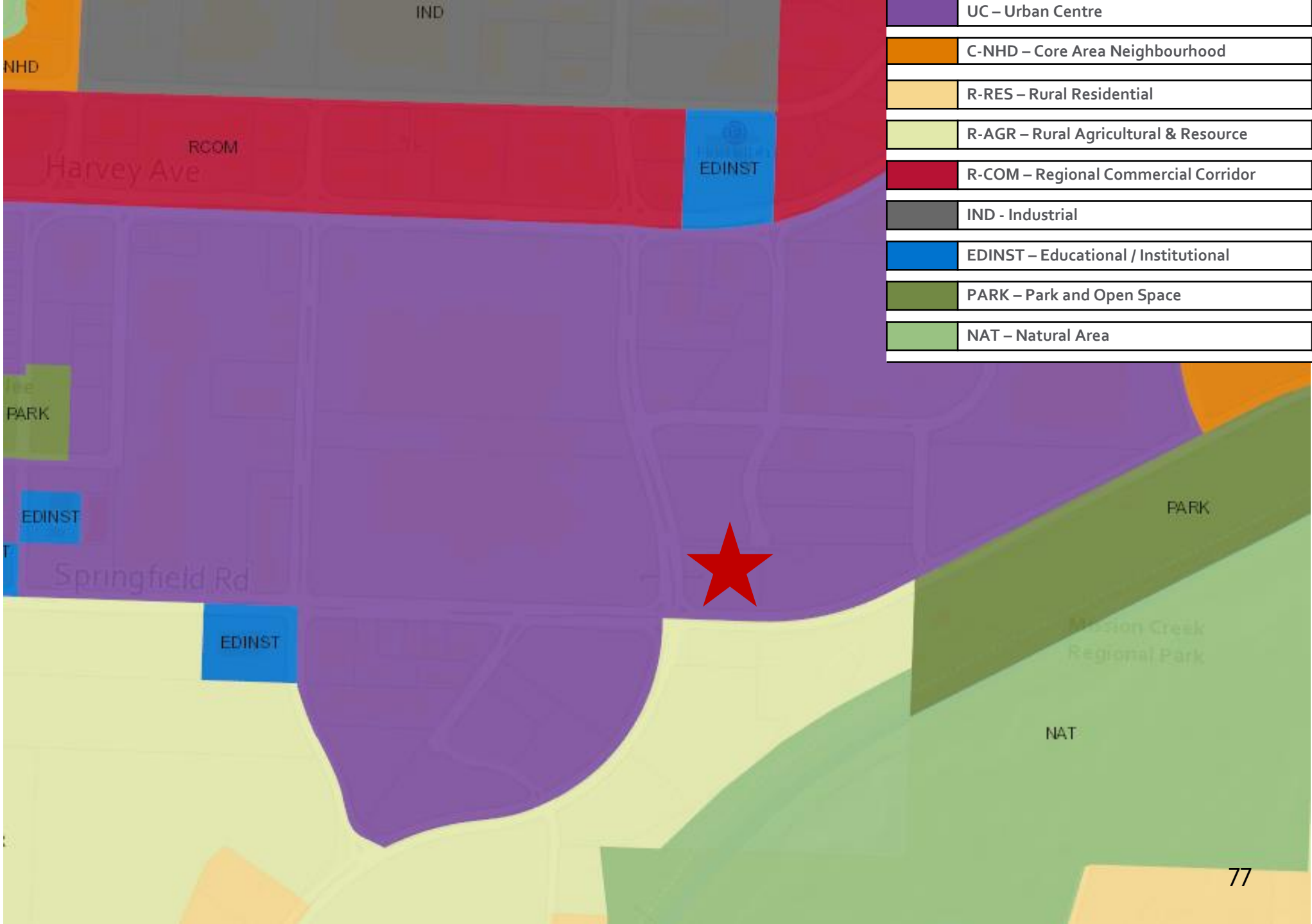

N
Harvey Ave
Fire Hall #1
Springfield Rd
Mission Creek
Regional Park

Model City

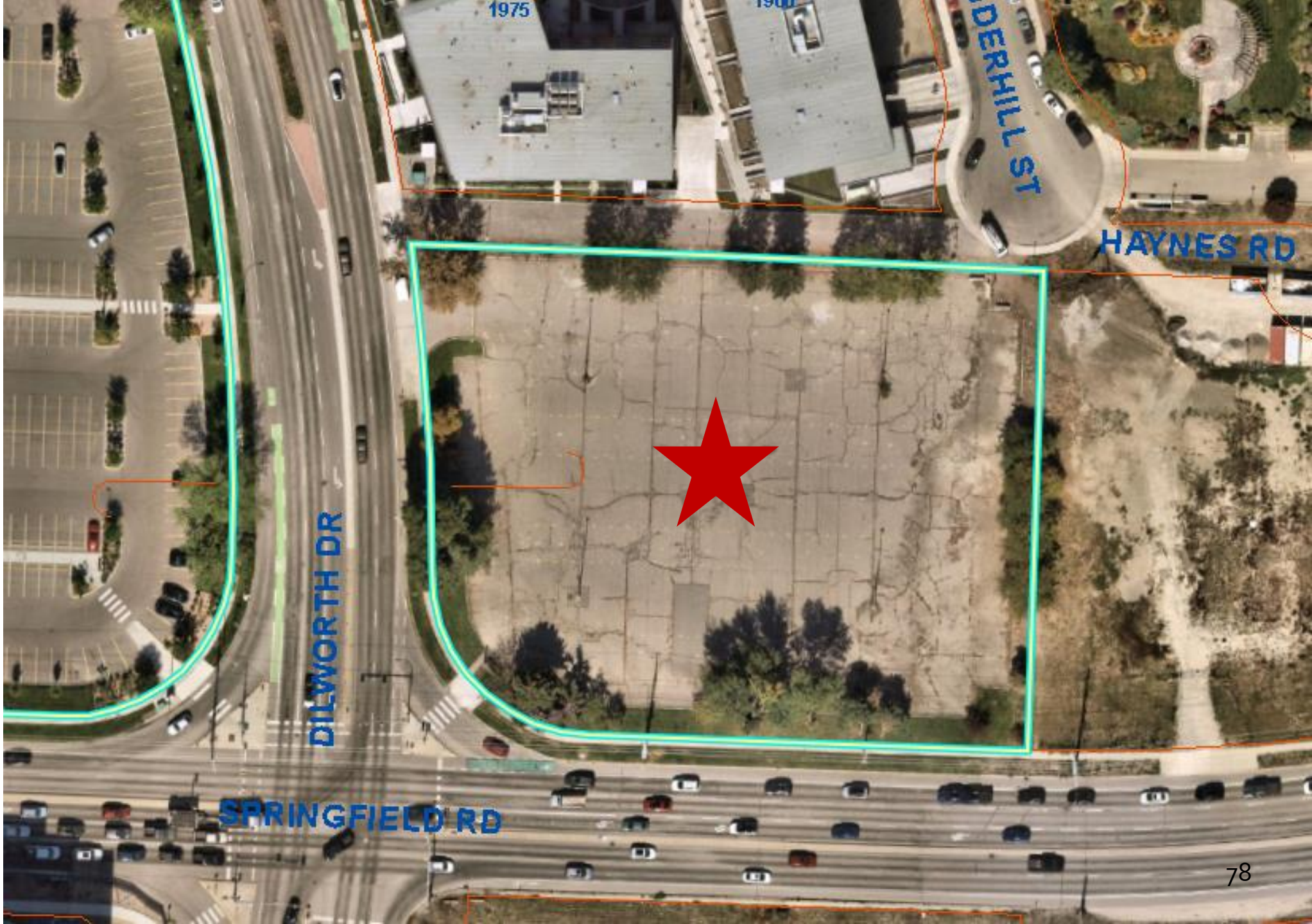
Residential Units:
1403
Commercial Units :
178
Estimated Population:
2007
Estimated Jobs:
5231



Context Map: OCP Future Land Use



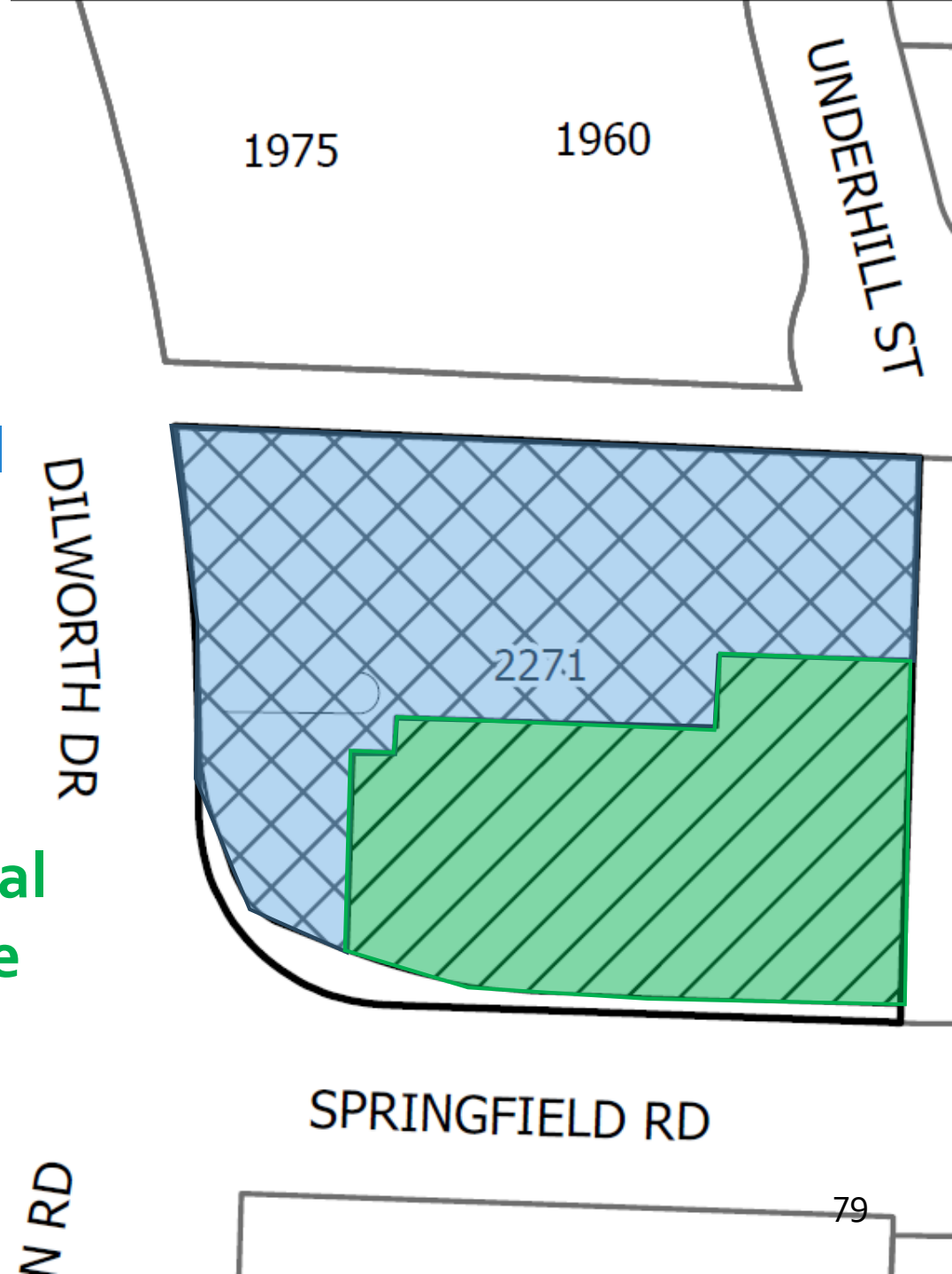
Subject Property Map



Proposed Zoning

C2 – Vehicle Oriented Commercial to UC3r – Midtown Urban Centre Rental Only

C2 – Vehicle Oriented Commercial to UC3 – Midtown Urban Centre



OCP Objectives: Climate Resilience

10 min walk to retail / restaurants	
5 min walk to park	
10 min bike to public school	
20 min bus to urban/village centre / employment hub	
Retaining trees and/or adding trees	
OCP Climate Resilience Consistency	

LEGEND

Dark Green
meets criteria

Light green
will meet criteria soon

Yellow
does not meet criteria

OCP Objectives & Policies

- Future Land Use - UC: Urban Centre
- Policy 4.12.1. Diverse Housing Forms
  - Ensure a diverse mix of density housing forms in Urban Centre's
- Policy 4.12.3. Diverse Housing Tenures
  - Encourage a range of rental and ownership tenures

Staff Recommendation

- Staff recommend support for the proposed rezoning as it is consistent with:
  - OCP Future Land Use (UC – Urban Centre)
  - OCP Objectives in Chapter 4 Urban Centres
    - Housing Diversity
    - Rental Housing

REPORT TO COUNCIL
REZONING

Date:	June 09, 2025
To:	Council
From:	City Manager
Address:	125 Park Rd
File No.:	Z25-0010

	Existing	Proposed
OCP Future Land Use:	UC - Urban Centre	UC – Urban Centre
Zone:	UC4 – Rutland Urban Centre	UC4r – Rutland Urban Centre Rental Only

1.0 Recommendation

That Rezoning Application No. Z25-0010 to amend the City of Kelowna Zoning Bylaw No. 12375 by changing the zoning classification of Lot 1 Block A Section 23 Township 26 ODYD Plan 4740, located at 125 Park Rd, Kelowna, BC from the UC4 – Rutland Urban Centre zone to UC4r – Rutland Urban Centre Rental Only zone, be considered by Council;

AND THAT final adoption of the Rezoning Bylaw be considered subsequent to the approval of the Ministry of Transportation and Transit.

2.0 Purpose

To rezone the subject property from the UC4 – Rutland Urban Centre zone to the UC4r – Rutland Urban Centre Rental Only zone to facilitate a mixed-use rental apartment building.

3.0 Development Planning

Staff support the proposed rezoning from the UC4 – Rutland Urban Centre zone to the UC4r – Rutland Urban Centre Rental Only zone. The proposed rezoning would facilitate a rental-only mixed-used apartment building, which is consistent with the Official Community Plan (OCP) policies that encourage diverse housing types and tenures. The applicant's concept plan reflects a four storey building with 13 dwellings and two commercial units. A development permit application will follow for Council consideration.

Lot Area	Proposed (m²)
Gross Site Area	567 sqm
Road Dedication	73.14 sqm
Undevelopable Area	N/A
Net Site Area	493.86 sqm

4.0 Site Context & Background

Orientation	Zoning	Land Use
North	UC4	Retail
East	UC4	Commercial
South	UC4	Health services
West	UC4	Retail

Subject Property Map: 125 Park Rd

The subject property is within the Rutland Urban Centre located on Park Rd. The surrounding area is primarily zoned UC4 – Rutland Urban Centre Zone with a mix of commercial use and apartment housing. The subject property is in close proximity to a transit hub and four different transit routes.

5.0 Current Development Policies

5.1 Kelowna Official Community Plan (OCP)

Objective 4.12. Increase the diversity of housing types and tenures to create inclusive, affordable and complete Urban Centres	
Policy 4.12.1. Diverse Housing Forms	Ensure a diverse mix of medium-density and high-density housing forms in Urban Centres to support a variety of household types and sizes, income levels and life stages
	The proposal would facilitate supporting a variety of household types and sizes, income levels and life stages.

Objective 12.1.2 Design the community to be more resilient to a changing climate	
Policy 12.1.2. Climate Resilient Land Use Planning	Focusing growth in connected, walkable, Urban Centres and Core Area
	The proposal would increase the diversity of land uses and adds to general growth in the Rutland Urban Center.

6.0 Application Chronology

Application Accepted: Apr 07,2025
Neighbourhood Notification Summary Received: May 12,2025

Report prepared by: Nadia Mahmoudi, Planner I
Reviewed by: Carla Eaton, Development Planning Manager
Reviewed by: Nola Kilmartin, Development Planning Department Manager
Approved for Inclusion: Ryan Smith, Divisional Director, Planning, Climate Sustainabillity, and Development Services

Attachments:
Attachment A: Development Engineering Memo
Attachment B: DRAFT Site Plan
Attachment C: Summary of Neighbourhood Notification

For additional information, please visit our Current Developments online at www.kelowna.ca/currentdevelopments.

CITY OF KELOWNA

MEMORANDUM

Date: April 11, 2025

File No.: Z25-0010

To: Development Planning Dept (NM)

From: Development Engineering Dept. (MH)

Subject: 125 Park Rd UC4 to UC4r

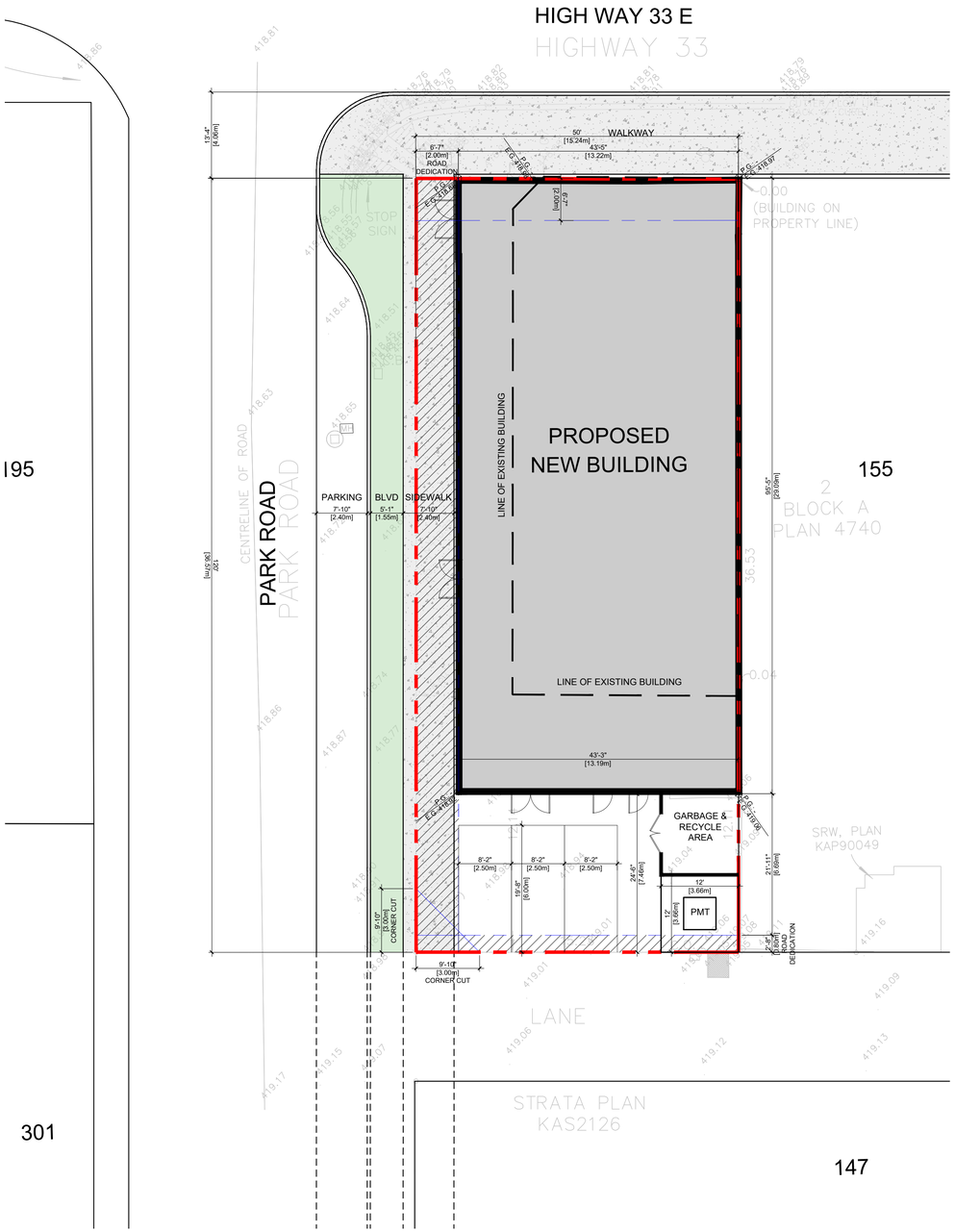
The Development Engineering Department has no requirements associated with this Rezoning Permit Application to rezone the subject property from UC4 to the UC4r – Rutland Urban Centre with Rental Subzone.

Works and Servicing requirements directly attributable at the time of Building Permit are provided in the Development Engineering Department memo for DP25-0053.

The Development Engineering Technologist for this file is Michael James-Davies (mjames-davies@kelowna.ca).

Nelson Chapman, P.Eng
Development Engineering Dept.

MJD



1 ENLARGED SITE PLAN
Scale: 3/32"= 1'-0"

PROJECT DESCRIPTION			
Civic Address	125 Park Road		
Legal Address	LOT 1, SECTION 23, BLOCK A, PLAN KAP4740, TOWNSHIP 26, OSOYOOS DIV OF YALE LAND DISTRICT		
Existing Zoning	UC4 (Rutland Urban Centre)		
Proposed Zoning	UC4 (Rutland Urban Centre)		
Proposed Use	Mixed-Use(Commercial&Residential)		
SITE INFORMATION			
	Square Meters		Square Feet
Site Area	557.42		6,000.1
DEVELOPMENT REGULATIONS			
CRITERIA	**UC4 Zone Requirement**		**Proposed**
Building Height	maximum 6 storeys/18m		3 storeys/11.43m
Front Yard (North)	2m (6.58ft)		0m (0ft) variance needed
Interior Side Yard (East)	0m (0ft)		0m (0ft)
Exterior Side Yard (West)	2m (6.58ft)		2m (6.58ft)
Rear Yard (South)	0m (0ft)		0m (0ft)
Lot Coverage	Maximum 100% Street Type: Retail Street, Mixed Street	6000.1 sq.ft	58% 3495.17 sq.ft
FAR	For Areas Identified as Transit Oriented Area (Map 8.3.d) have the base FAR for the 6-storey category increased from 1.8 FAR to 2.5 FAR	2.5	2.12 Gross Floor Are:15307.2 sqft(1,420 m2) Commericial: 3,690.2 sqft (340.8 m2) Residential:9,038 sqft (839.7 m2) Circulation:2,579 sqft (239.5 m2) Net Floor Area:12,728.2 sqft (1180.5 m2)
PARKING REGULATIONS			
	Required		**Provided**
Minimum Parking Requirements	Commerical	335.2m2/100m2x1.3=4.35 Min.1.3 spaces per 100m2 GFA, Max. 4.5 spaces per 100m2 GFA	3
	Residential	Location in exemption area (Map 8.3.d) Parking not required	
	Accessible Parking	0 required (0 per 1-4 parking spaces)	
	Total	4.35	
Parking Dimensions	Regular	90°: 2.5 x 6 m, min.70%	90°: 2.5 x 6 m,3 provided,75%
		Parallel: 2.5 x 6 m	0
	Small Car	2.3 x 4.8 m, max 30%	0
	Accessible Parking	3.7 x 6m	Not required
	Aisle Width	90°: 6.5m	Not required
	Total		N/A
Loading Requirement	1 Per 1,900 m2 GFA No less than 28 m2 for commercial, min.3m in width		1

Unit Type Breakdown

Unit Type	# of Unit	# of Bedoom	Floor Area (sq.ft)	Floor Area (m2)
Type A1	2	2	741	68.8
Type A2	2	2	706	65.6
Type B1	8	1	423	39.3
Type C1	1	3	2,760	256.4
Total	13		9,038	839.7

ATTACHMENT B
This forms part of application
Z25-0010
Planner Initials NM
City of Kelowna
DEVELOPMENT PLANNING

pacific west architecture

1200 West 73rd Ave (Airport Square)
Suite 940
Vancouver B.C. V6P 6G5

Office: 604 558 3064
Email: info@pwaarchitecture.com
www.pwaarchitecture.com

REVISIONS		
1		

ISSUES		DATE
8		
7		
6		
5		
4		
3	ISSUED FOR REVIEW	APR 29 2025
2	REISSUED FOR DP APPLICATION	MAR 05 2025
1	ISSUED FOR DP APPLICATION	OCT 11 2024

PROJECT NUMBER	A548
DRAWN BY	CW
CHECKED BY	PY
DATE CHECKED	
CONSULTANT	

PROJECT
MIXED-USE DEVELOPMENT
125 PARK ROAD
KELOWNA, BC

DRAWING TITLE
SITE PLAN

DRAWING No.
A 1.01

ATTACHMENT C
This forms part of application
Z25-0010
Planner Initials NM
City of Kelowna DEVELOPMENT PLANNING

Neighbour Notification Form (Council Policy No.367)

City of Kelowna

A summary of neighborhood notification efforts, feedback and response must be provided to City staff, identifying how the efforts meet the objective of this form of notification. This information must be provided to City staff a minimum of 20 days prior to Council initial consideration of the application(s) for inclusion in the report to Council or this information must be provided to the delegate authorized to issue minor Development Variance Permits 14 days prior the decision of the delegate.

I, Yichi Zhang, *the applicant for Application No.* DVP25-0054, DP25-0053

for 4 storey building with a thoughtful combination of residential rental and commcial spaces.
(brief description of proposal)

at 125 ~~R~~ Park Rd have conducted the required neighbour
(address)
notification in accordance with Council Policy No. 367.

☐ My parcel is located **outside** of the Permanent Growth Boundary and I have notified all owners & occupants within a 300m radius

☑ My parcel is located **inside** of the Permanent Growth Boundary and I have notified all owners & occupants within a 50m radius

I have notified property owners and occupants by doing the following: dropped off neighborhood notification package, explained owner and occupant the project, answer their questiones.

Please initial the following to confirm it has been included as part of the neighbour notification:

YZ Location of the development site
YZ Detailed description of the proposal including specific changes proposed
YZ Visual rendering or site plan of the proposal (if available)
YZ Website for the proposal (if available)
YZ Contact information for the applicant
YZ Contact information for Staff
YZ For Development Variance Permits - Delegated Minor, the neighbour notification must include details on how to provide feedback to Staff by a deadline that is at least 14 days after the notification is sent out

*Please return this form, along with any feedback, comments, or signatures to the File Manager **20 days prior to the anticipated initial consideration by Council date or 14 days prior to the delegates decision**. On the back of this form please list those addresses that were notified.*

City of Kelowna
1435 Water Street
Kelowna, BC V1Y 1J4
TEL 250 469-8600
FAX 250 862-3330
kelowna.ca

ATTACHMENT C

This forms part of application

Z25-0010

City of Kelowna
DEVELOPMENT PLANNING

Planner Initials NM

Address	Spoke with Owner & Occupant	Left Package with Owner & Occupant	Date
140 – 146 Gray Rd	✓	✓	2025.05.12
150 gray Rd	✓	✓	2025.05.12
150A gray Rd	✓	✓	2025.05.12
160 gray Rd	✓	✓	2025.05.12
110 – 150 Hwy 33 W	✓	✓	2025.05.12
125 Hwy 33 W	✓	✓	2025.05.12
137 – 139 Hwy 33 W	✓	✓	2025.05.12
145 - 147 Hwy 33 W	✓	✓	2025.05.12.
155 Hwy 33 W	✓	✓	2025.05.12.
160 Hwy 33 W	✓	✓	2025.05.12.
170 Hwy 33 W	✓	✓	~~105~~ 2025.05.12.
190 Hwy 33 W	✓	✓	2025.05.12.
195 Hwy 33 W	✓	✓	2025.05.12.
301 Hwy 33 W	✓	✓	2025.05.12.
125 Park Rd		✓	2025.05.12
147 ~~Rd~~ Park Rd		✓	2025.05.12.

CITY OF KELOWNA

BYLAW NO. 12798
Z25-0010
125 Park Road

A bylaw to amend the "City of Kelowna Zoning Bylaw No. 12375".

The Municipal Council of the City of Kelowna, in open meeting assembled, enacts as follows:

1. THAT City of Kelowna Zoning Bylaw No. 12375 be amended by changing the zoning classification of Lot 1 Block A Section 23 Township 26 ODYD Plan 4740, located on Park Rd, Kelowna, BC from the UC4 – Rutland Urban Centre zone to UC4r – Rutland Urban Centre Rental Only zone.

2. This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first, second and third time by the Municipal Council this

Approved pursuant to section 52(3)(a) of the Transportation Act this

---

for Minister of Transportation & Transit

Adopted by the Municipal Council of the City of Kelowna this

Mayor

City Clerk

Rezoning Application

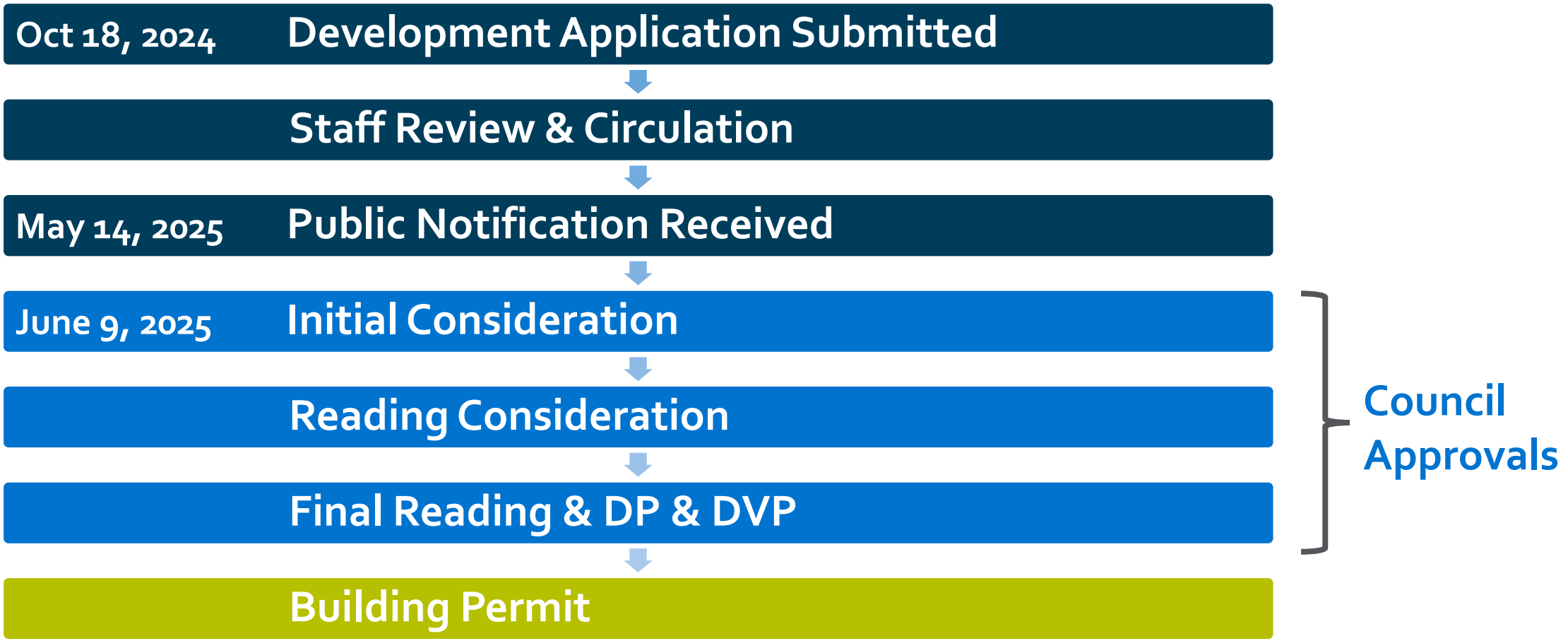
125 Park Rd

Z25-0010

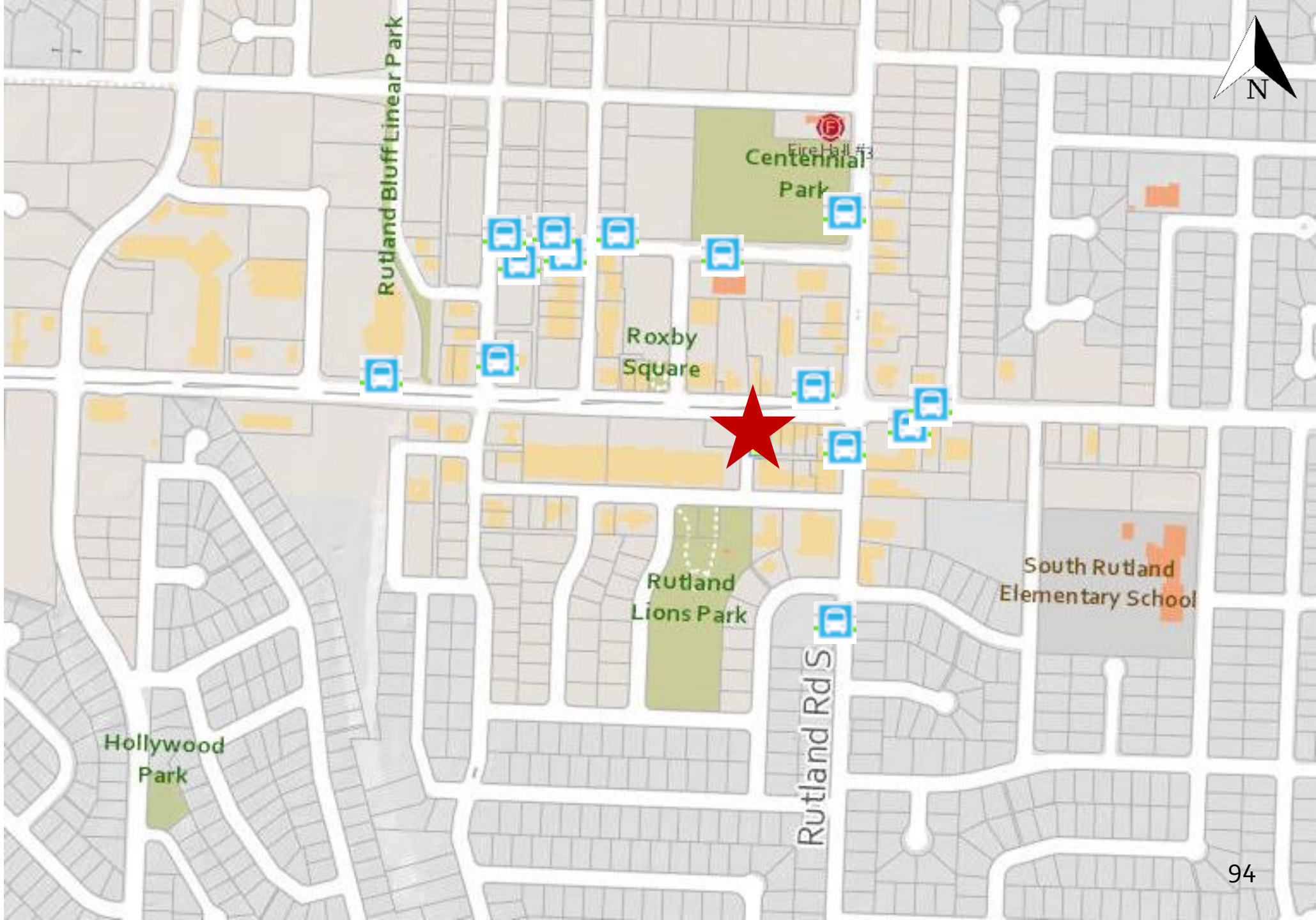
Purpose

To rezone the subject property from the UC4 – Rutland Urban Centre zone to the UC4r – Rutland Urban Centre Rental Only zone to facilitate a mixed-use rental apartment building.

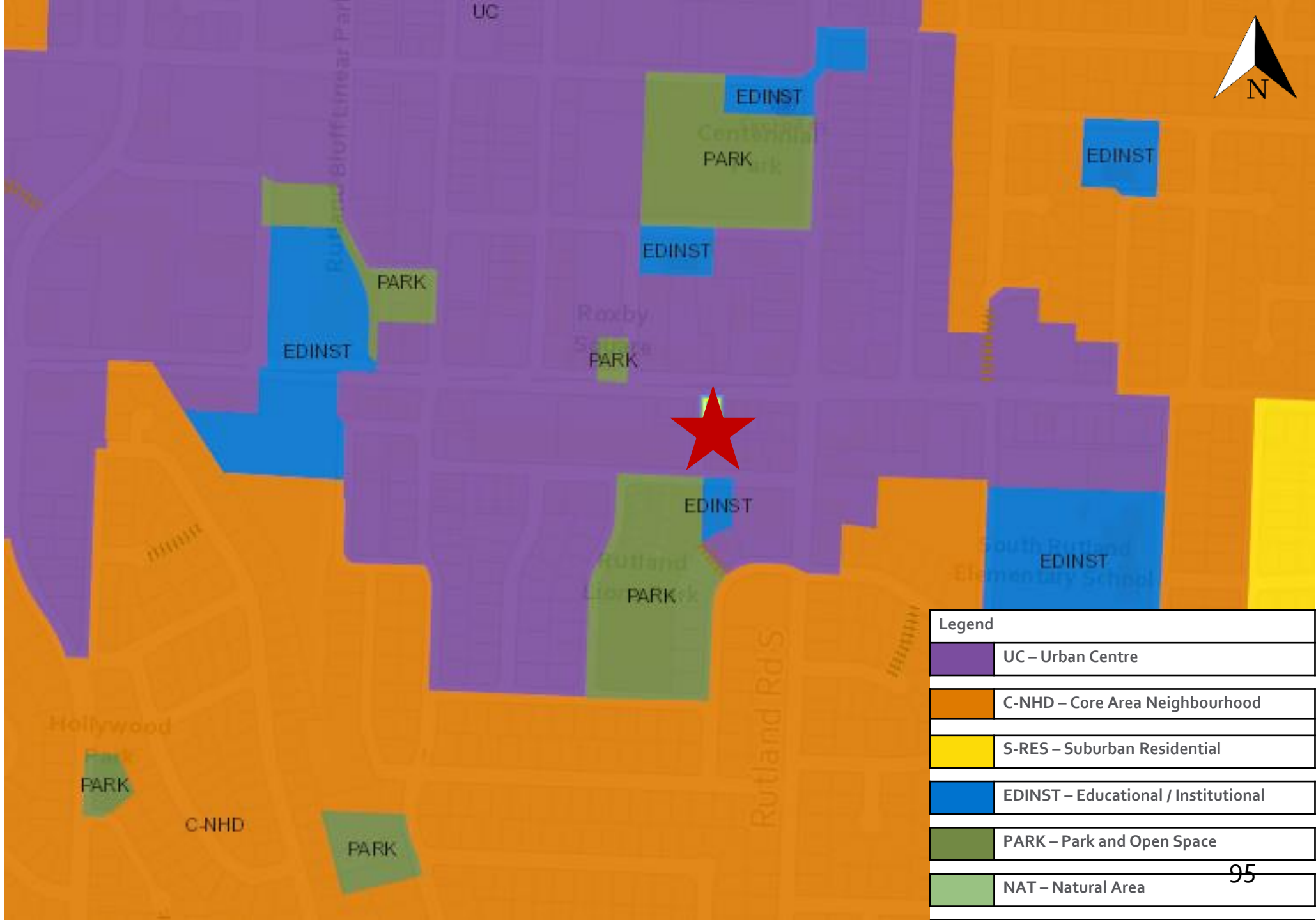
Development Process



Context Map


N
Rutland Bluff Linear Park
Centennial Park
Roxby Square
Rutland Lions Park
South Rutland Elementary School
Rutland Rd S
Hollywood Park
N

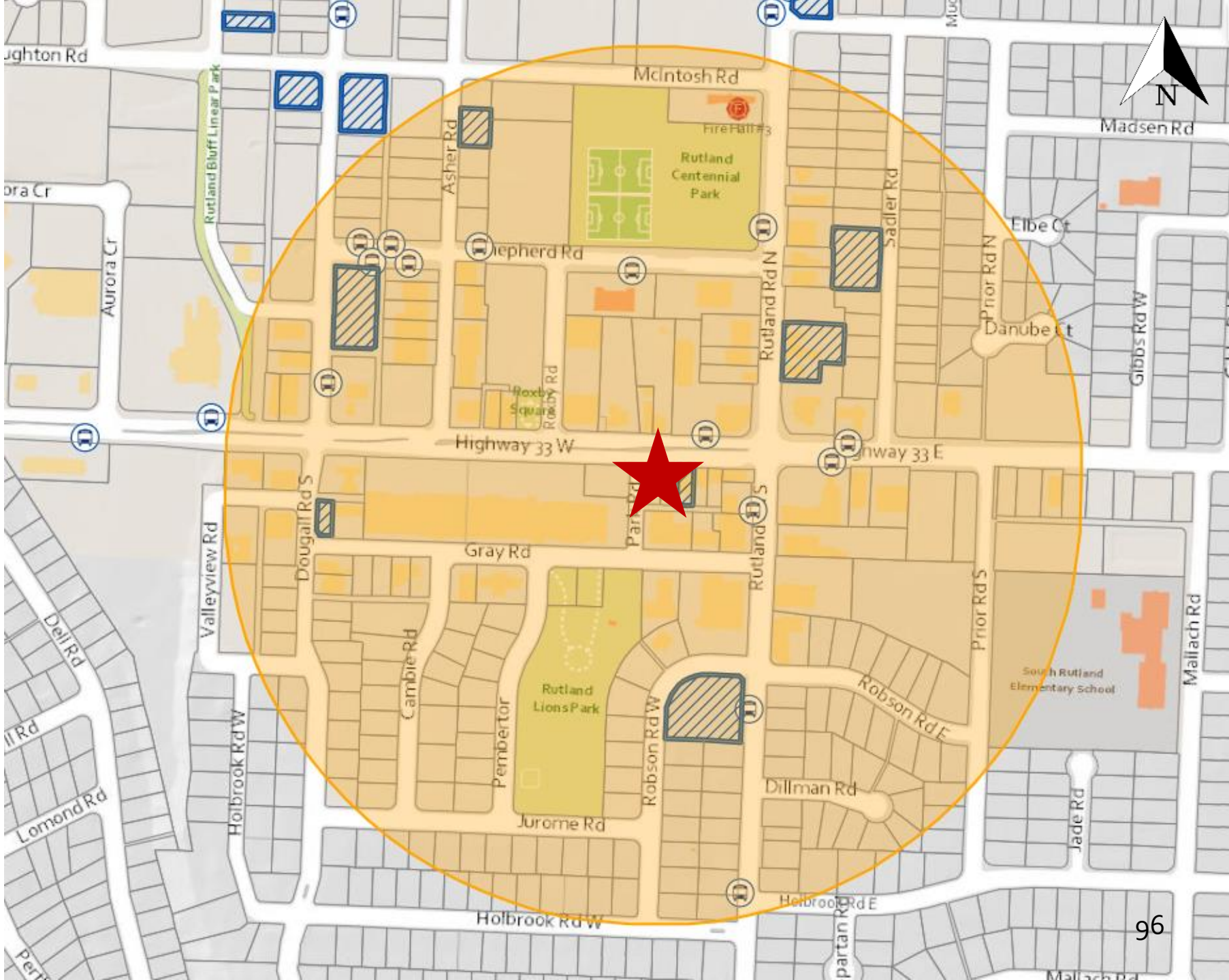
Context Map: OCP Future Land Use



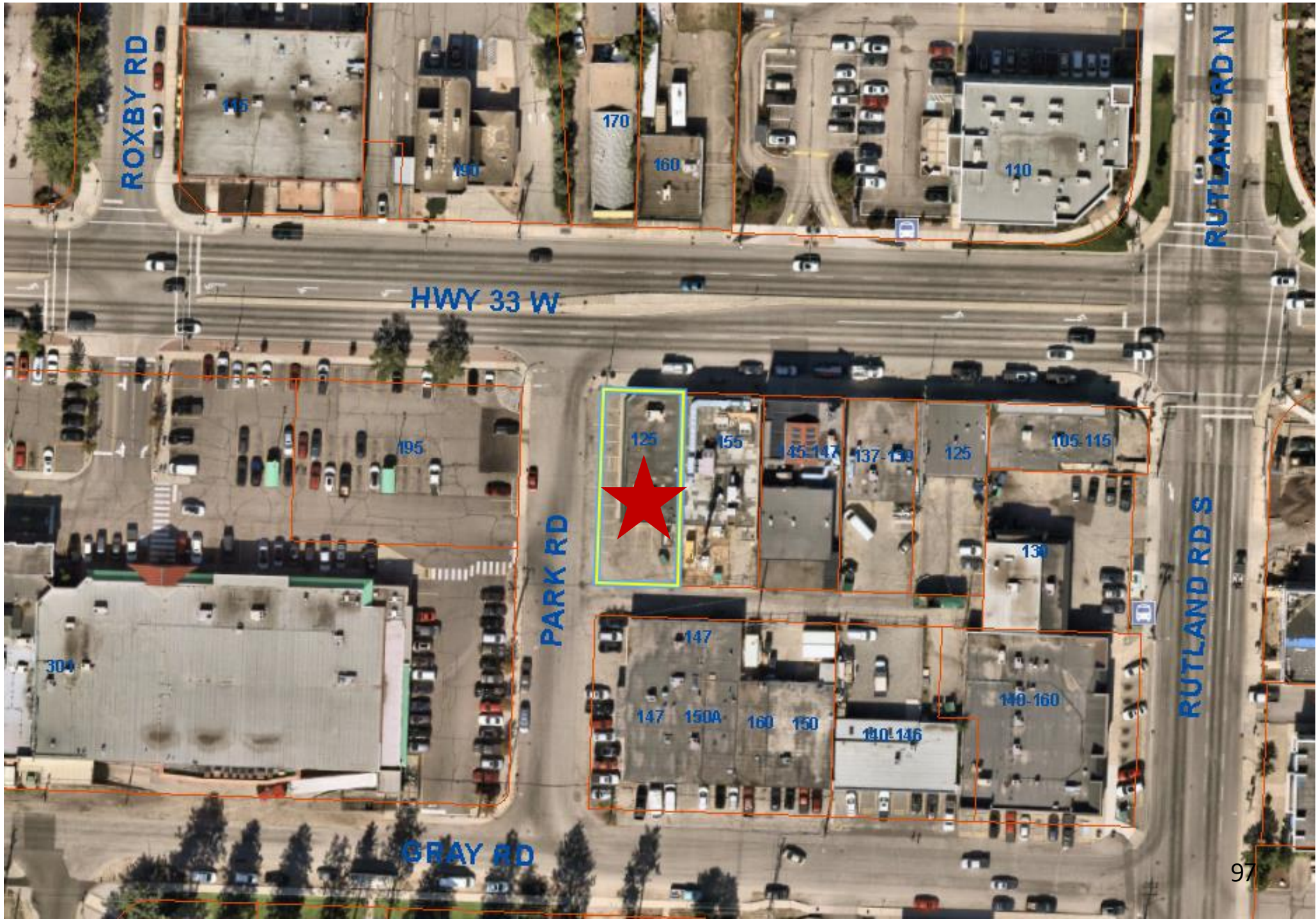
Model City:

Estimated Population: 1492

Estimated Jobs: 2049



Subject Property Map



“R” Rental Only Subzone

Purpose:

- To provide a sub-zone that restricts the dwelling units to a rental only tenure and to prohibit any building or bare land stratification.

Summary of Uses:

- Dwelling units must be long-term rental only
- Eligible to apply for Revitalization Tax Exemption

“R” Rental Only Subzone

Regulation	Permitted
Max Height	6 storeys (4 proposed)
Potential Units	13
Bonus Floor Area Ratio	Rental/Affordable: 0.3

OCP Objectives: Climate Resilience

10 min walk to retail / restaurants	
5 min walk to park	
10 min bike to public school	
20 min bus to urban/village center / employment hub	
Retaining trees and/or adding trees	N/A
OCP Climate Resilience Consistency	

LEGEND

Dark Green
meets criteria

Light green
will meet criteria soon

Yellow
does not meet criteria

OCP Objectives & Policies

- UC – Urban Centre
  - Policy 4.12.1. Diverse Housing Forms

    Ensure a diverse mix of medium-density and high-density housing forms in Urban Centres to support a variety of household types and sizes, income levels and life stages
- Climate Resiliency
  - Policy 12.1.2. Climate Resilient Land Use Planning

    Focusing growth in connected, walkable, Urban Centres and Core Area

Staff Recommendation

- Staff recommend **support** for the proposed rezoning as it is consistent with:
  - OCP Future Land Use UC
  - OCP Objectives in Chapter 4 Urban Centres
    - Rental Housing
  - OCP Objectives in Chapter 12 Climate Resiliency
    - Focusing growth in connected, walkable, Urban Centres and Core Area
  - Development Permit to follow for Council consideration

REPORT TO COUNCIL SUPPLEMENTAL

Date:	June 9, 2025
To:	Council
From:	City Manager
Address:	2809 Benvoulin Rd
File No.:	Z22-0059 OCP22-0010

	Existing	Proposed
OCP Future Land Use:	R – AGR – Rural – Agriculture and Resource	EDINST – Education / Institutional
Zone:	A2 – Agriculture / Rural Residential	P2 – Education and Minor Institutional

1.0 Recommendation

THAT Council waives the requirement for the outstanding conditions of approval as set out in Attachment "A" attached to the Report from the Development Planning Department dated June 9, 2025 to be considered in conjunction with final adoption of Rezoning Bylaw No. 12521;

AND THAT Council waives the requirement for the outstanding conditions the final adoption of the Rezoning Bylaw be considered in conjunction with Council's consideration of a Form and Character Development;

AND THAT final adoption of Official Community Plan Bylaw No. 12520 be considered by Council;

AND FURTHER THAT final adoption of Rezoning Bylaw No. 12521 be considered by Council.

2.0 Purpose

To waive a condition of adoption of Official Community Plan Bylaw No. 12520 and Rezoning Bylaw No. 12521, and to forward the bylaws for final adoption.

Discussion

Staff recommends waiving the requirements of final adoption of the Official Community Plan and Rezoning Bylaws. The conditions prior to final adoption that were previously set by Council included:

- Consideration of a Form & Character Development Permit; and
- Completion of Development Engineering requirements.

Form & Character Development Permit consideration is no longer typically required prior to final adoption of bylaws. A Form & Character Development Permit will be brought forward at a future Council meeting. Outstanding Development Engineering requirements must be completed prior to issuance of a Building Permit.

3.0 Background

Resolution	Date
THAT Official Community Plan Map Amendment Application No. OCP22-0010 to amend Map 3.1 in the Kelowna 2040 – Official Community Plan Bylaw No. 12300 by changing the Future Land Use designation of Lot 1 District Lot 130 ODYD Plan 8064 located at 2809 Benvoulin Road, Kelowna, BC from the R-AGR - Rural - Agriculture and Resource designation to the EDINST – Education / Institutional designation, be considered by Council; THAT Rezoning Application No. Z22-0059 to amend the City of Kelowna Zoning Bylaw No. 12375 by changing the zoning classification of Lot 1 District Lot 130 ODYD Plan 8064 located at 2809 Benvoulin Road, Kelowna, BC from the A2 – Agriculture / Rural Residential zone to the P2 – Education and Minor Institutional zone, be considered by Council; AND THAT the Official Community Plan Amendment and Rezoning Bylaw be forwarded to a Public Hearing for further consideration; AND THAT final adoption of the Rezoning Bylaw be considered subsequent to the outstanding conditions of approval as set out in Schedule "A" attached to the Report from the Development Planning Department dated October 11, 2022; and; AND FURTHER THAT final adoption of the Rezoning Bylaw be considered in conjunction with Council's consideration of a Form and Character Development Permit.	April 24, 2023

4.0 Application Chronology

Application Accepted: September 23, 2022
Reading Consideration: May 1, 2023

Report prepared by: Jason Issler, Planner II
Reviewed by: Adam Cseke, Development Planning Manager
Reviewed by: Nola Kilmartin, Development Planning Department Manager
Approved for Inclusion: Ryan Smith, Divisional Director, Planning & Development Services

Attachments:
Attachment A: Development Engineering Memo Z22-0059

For additional information, please visit our Current Developments online at www.kelowna.ca/currentdevelopments.

CITY OF KELOWNA

MEMORANDUM

Date: October 11, 2022

File No.: Z22-0059

To: Community Planning (WM)

From: Development Engineering Manager (NC)

Subject: 2809 Benvoulin Rd. A2 to P2

ATTACHMENT A
This forms part of application
Z22-0059
Planner Initials JI
City of Kelowna
DEVELOPMENT PLANNING

The Development Engineering Department has the following comments and requirements associated with this application to rezone amendment from A2 – Agriculture / Rural Residential to P2 – Educational and Minor Institutional to accommodate religious assembly. The Development Engineering Technician for this project is Aaron Sangster.

1. General

a) The following requirements are valid for one (1) year from the reference date of this memo, or until the PLR and/or application has been closed, whichever occurs first. The City of Kelowna reserves the rights to update/change some or all items in this memo once these time limits have been reached

2. Domestic Water and Fire Protection

a) The subject property(s) are currently serviced with multiple water services (19mm and 25mm). One metered water service will be required for the development. The disconnection of the existing smaller diameter water services and the tie-in of a larger service is the developer's responsibility. Only one service will be permitted for this development.

b) The Developer's Consulting Engineer will determine the domestic and fire protection requirements of this proposed development and establish hydrant requirements and service needs. The bylaw requirement for this development is 150 L/s. If it is determined that upgrades to any existing water distribution system must be made to achieve the required fire flows, additional bonding will be required.

3. Sanitary Sewer

a) These properties are currently serviced with a 150mm sanitary service. The developer's consulting mechanical engineer will determine the development requirements of this proposed development and establish the service needs. Only one service will be permitted for this development. The applicant, at their cost, will arrange for the removal and disconnection of the existing services and the installation of one new larger service, if necessary.

4. Storm Drainage

a) The property is located within the City of Kelowna drainage service area. For on-site disposal of drainage water, a geotechnical report will be required complete with a

design for the disposal method (i.e. trench drain / rock pit). The Lot Grading Plan must show the design and location of these systems.

b) Provide the following drawings:

i. A detailed Lot Grading Plan (indicate on the Lot Grading Plan any slopes that are steeper than 30% and areas that have greater than 1.0 m of fill);

ii. A detailed Stormwater Management Plan for this subdivision; and,

iii. An Erosion and Sediment Control Plan is to be prepared by a Professional Engineer proficient in the field of erosion and sediment control. The plan is to be prepared as per section 3.14 of Schedule 4 of Bylaw 7900. If a line item for ESC is not included in the Engineer's cost estimate for off-site work, then an additional 3% will be added to the performance security based on the total off-site construction estimate.

c) On-site detention systems are to be compliant with Bylaw 7900, Schedule 4, Section 3.11.1 Detention Storage.

d) As per Bylaw 7900, Schedule 4, Section 3.1.3 Climate Change, the capacity of storm works will include an additional 15 percent (15%) upward adjustment and applied to the rainfall intensity curve stage (IDF) in Section 3.7.2.

e) Show details of dedications, rights-of-way, setbacks and non-disturbance areas on the lot Grading Plan.

5. Electric Power and Telecommunication Services

a) All proposed distribution and service connections are to be installed underground. Existing distribution and service connections, on that portion of a road immediately adjacent to the site, are to be relocated and installed underground as the subject properties are within the "City Center Urban Center".

b) Make servicing applications to the respective Power and Telecommunication utility companies. The utility companies are required to obtain the City's approval before commencing construction.

c) Re-locate existing poles and utilities, where necessary. Remove aerial trespass (es).

6. Road Improvements

a) Boyd Rd. has been fully upgraded to a rural standard. No further upgrades are required at this time.

7. Road Dedication and Subdivision Requirements

a) Grant Statutory Rights of Way if required for utility services.

b) If any road dedication or closure affects lands encumbered by a Utility right-of-way (such as Hydro, Telus, Gas, etc.) please obtain the approval of the utility. Any works required by the utility as a consequence of the road dedication or closure must be incorporated in the construction drawings submitted to the City's Development Manager.

c) Access to Benvoulin Rd. will not be approved.

d) No parking signs must be installed along Boyd Rd.

e) Streetlight must be installed at the entrance off of Boyd Rd.

f) Road The ultimate width of Benvoulin Road is a Major Arterial (Multilane), complete with a 30.0m right of way (ROW). A road reserve of 2.0m of frontage must be registered on title to the City of Kelowna.

8. Erosion Servicing Control Plan

a) Provide a detailed ESC Plan for this development as per the Subdivision, Development and Servicing Bylaw #7900.

b) The developer must engage a consulting civil engineer to provide an ESC plan for this site which meets the requirements of the City Subdivision Development and Servicing Bylaw 7900.

c) Civil consultant is responsible for all inspection and maintenance.

d) A Security Deposit for ESC Works equal to 3.0% of the Consulting Engineer's opinion of probable costs of civil earthworks and infrastructure will be added to the Servicing Agreement.

9. Design and Construction

a) Design, construction supervision and inspection of all off-site civil works and site servicing must be performed by a Consulting Civil Engineer and all such work is subject to the approval of the City Engineer. Drawings must conform to City standards and requirements.

b) Engineering drawing submissions are to be in accordance with the City's "Engineering Drawing Submission Requirements" Policy. Please note the number of sets and drawings required for submissions.

c) Quality Control and Assurance Plans must be provided in accordance with the Subdivision, Development & Servicing Bylaw No. 7900 (refer to Part 5 and Schedule 3).

d) A "Consulting Engineering Confirmation Letter" (City document 'C') must be completed prior to submission of any designs.

e) Before any construction related to the requirements of this subdivision application commences, design drawings prepared by a professional engineer must be submitted to the City's Development Engineering Department. The design drawings must first be "Issued for Construction" by the City Engineer. On examination of design drawings, it may be determined that rights-of-way are required for current or future needs.

10. Servicing Agreements for Works and Services

a) A Servicing Agreement is required for all works and services on City lands in accordance with the Subdivision, Development & Servicing Bylaw No. 7900. The applicant's Engineer, prior to preparation of Servicing Agreements, must provide adequate drawings and estimates for the required works. The Servicing Agreement must be in the form as described in Schedule 2 of the bylaw.

b) Part 3, “Security for Works and Services”, of the Bylaw, describes the Bonding and Insurance requirements of the Owner. The liability limit is not to be less than $5,000,000 and the City is to be named on the insurance policy as an additional insured.

11. Geotechnical Report

Provide a geotechnical report prepared by a Professional Engineer competent in the field of hydro-geotechnical engineering to address the items below: NOTE: The City is relying on the Geotechnical Engineer’s report to prevent any damage to property and/or injury to persons from occurring as a result of problems with soil slippage or soil instability related to this proposed subdivision. The Geotechnical reports must be submitted to the Development Services Department (Subdivision Approving officer) for distribution to the Development Engineering Branch and Inspection Services Division prior to submission of Engineering drawings or application for subdivision approval.

(i) Area ground water characteristics, including any springs and overland surface drainage courses traversing the property. Identify any monitoring required.

(ii) Site suitability for development.

(iii) Site soil characteristics (i.e. fill areas, sulphate content, unsuitable soils such as organic material, etc.).

(iv) Any special requirements for construction of roads, utilities and building structures.

(v) Recommendations for items that should be included in a Restrictive Covenant.

(vi) Recommendations for roof drains, perimeter drains and septic tank effluent on the site.

(vii) Any items required in other sections of this document.

10. Charges and Fees

a) Development Cost Charges (DCC’s) are payable.

b) Fees per the “Development Application Fees Bylaw” include:

i) Survey Monument, Replacement Fee: $1,200.00 (GST exempt) – only if disturbed.
ii) Engineering and Inspection Fee: 3.5% of construction value (plus GST).
iii) Street/Traffic Sign Fees: at cost if required (to be determined after design).

Nelson Chapman, P.Eng.
Development Engineering Manager
AS

ATTACHMENT A
This forms part of application
Z22-0059
Planner Initials JI
City of Kelowna
DEVELOPMENT PLANNING

CITY OF KELOWNA

BYLAW NO. 12520

Official Community Plan Amendment No. OCP22-0010
2809 Benvoulin Road

A bylaw to amend the "*Kelowna 2040* – Official Community Plan Bylaw No. 12300".

The Municipal Council of the City of Kelowna, in open meeting assembled, enacts as follows:

1. THAT Map 3.1 – **Future Land Use** of "*Kelowna 2040* – Official Community Plan Bylaw No. 12300" be amended by changing the Future Land Use designation of Lot 1 District Lot 130 ODYD Plan 8064 located on Benvoulin Road, Kelowna, BC from the R-AGR - Rural - Agriculture and Resource designation to the EDINST – Educational / Institutional designation;

2. This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first time by the Municipal Council on this 1st day of May, 2023.

Considered at a Public Hearing on the 11th day of July, 2023.

Read a second and third time by the Municipal Council this 11th day of July, 2023.

Adopted by the Municipal Council of the City of Kelowna this

Mayor

City Clerk

CITY OF KELOWNA

BYLAW NO. 12521
Z22-0059
2809 Benvoulin Road

A bylaw to amend the "City of Kelowna Zoning Bylaw No. 12375".

The Municipal Council of the City of Kelowna, in open meeting assembled, enacts as follows:

1. THAT City of Kelowna Zoning Bylaw No. 12375 be amended by changing the zoning classification of Lot 1 District Lot 130 ODYD Plan 8064 located on Benvoulin Road, Kelowna, BC from the A2 – Agriculture / Rural Residential zone to the P2 – Education and Minor Institutional zone.

2. This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first time by the Municipal Council this 1st day of May, 2023.

Considered at a Public Hearing on the 11th day of July, 2023.

Read a second and third time by the Municipal Council this 11th day of July, 2023.

Adopted by the Municipal Council of the City of Kelowna this

_____
Mayor

_____
City Clerk

REPORT TO COUNCIL
DEVELOPMENT PERMIT

Date:	June 9, 2025
To:	Council
From:	City Manager
Address:	1531 Bernard Ave
File No.:	DP23-0232
Zone:	MF3r – Apartment Housing Rental Only zone

1.0 Recommendation

THAT Council authorizes the issuance of Development Permit No. DP23-0232 for Parcel Z Section 20 Township 26 ODYD Plan 3604 Except Plan EPP138640, located at 1531 Bernard Avenue, Kelowna, BC subject to the following:

1. The dimensions and siting of the building to be constructed on the land be in accordance with Schedule "A";
2. The exterior design and finish of the building to be constructed on the land be in accordance with Schedule "B";
3. Landscaping to be provided on the land be in accordance with Schedule "C";
4. The applicant be required to post with the City a Landscape Performance Security deposit in the amount of 125% of the estimated value of the Landscape Plan, as determined by a Registered Landscape Architect;

AND THAT the applicant be required to complete the above noted conditions of Council's approval of the Development Permit Application in order for the permits to be issued;

AND FURTHER THAT this Development Permit is valid for two (2) years from the date of Council approval, with no opportunity to extend.

2.0 Purpose

To issue a Development Permit for the form and character of an apartment building.

3.0 Development Planning

Staff support the proposed Development Permit for the form and character of an apartment building. The proposal conforms with several objectives within the Official Community Plan (OCP) Form and Character Design Guidelines for Low & Mid-Rise Residential Development. Key guidelines that are met include:

- Locate off-street parking and other 'back-of-house' uses (such as loading, garbage collection, utilities, and parking access) away from public view;
- Design attractive, engaging, and functional on-site open spaces with high quality, durable, and contemporary materials, colors, lighting, furniture, and signage; and
- Incorporate a range of architectural features and details into building facades to create visual interest, especially when approached by pedestrians.

Vehicle access is provided from the laneway which runs parallel to Bernard Avenue with two separate entrances leading to an at-grade and a second level parkade. Materials for the project are predominantly white brick and cementitious siding. Common amenity space has been provided in an indoor amenity room on the sixth level of the building, and a roof top amenity area which includes a dog run. Outdoor seating and five small trees are also provided.

4.0 Subject Property & Background

4.1 Subject Property Map

The subject property is located on Bernard Avenue, which is a Transit Supportive Corridor, and is approximately 125 m from a second Transit Supportive Corridor along Burtch Road. There are several bus stops along Bernard Avenue and the site is walkable to Duggan Park and Parkinson Recreation Centre.

5.0 Zoning Bylaw Regulations Summary

AREA & UNIT STATISTICS	
Gross Lot Area	1,874 m²
Total Number of Units	**51**
Studio 1-bed 2-bed 3-bed	5 18 24 4

DEVELOPMENT REGULATIONS		
CRITERIA	**MF3r ZONE**	**PROPOSAL**
Total Maximum Floor Area Ratio	**2.1**	**1.95**
Base FAR	1.8	
Bonus FAR (Rental)	0.3	
Max. Site Coverage (buildings)	65 %	59.4 %
Max. Site Coverage (buildings, parking, driveways)	85 %	76.2 %
Max. Height	**22 m / 6 Storeys**	**20.9 m / 6 Storeys**
Setbacks		
Min. Front Yard (North)	2.0 m	2.3 m
Min. Side Yard (West)	3.0 m	3.0 m
Min. Side Yard (East)	3.0 m	3.0 m
Min. Rear Yard (South)	3.0 m	3.0 m
Step backs		
Min. Fronting Street (North)	3.0 m	3.0 m
Amenity Space		
Total Required Amenity Space	**1,007 m²**	**1,035 m²**
Common Private	204 m²	573 m² 462 m²
Landscaping		
Min. Number of Trees	3 trees	19 trees
Min. Large Trees	2 trees	7 trees

PARKING REGULATIONS		
CRITERIA	**MF3r ZONE REQUIREMENTS**	**PROPOSAL**
Total Required Vehicle Parking	**56 stalls**	**59 stalls**
Residential Visitor "r" Subzone Reduction	55 7 -6	
Ratio of Regular to Small Stalls	Min. 50% Regular Max. 50% Small	59% Regular 41% Small
Bicycle Stalls Short-Term	6 stalls	6 stalls
Bicycle Stalls Long-Term	39 stalls	40 stalls
Bike Wash & Repair	y	y

6.0 Application Chronology

Application Accepted: December 11, 2023
Adoption of Zone Amending Bylaw: May 26, 2025

Report prepared by: Jason Issler, Planner II
Reviewed by: Adam Cseke, Development Planning Manager
Reviewed by: Nola Kilmartin, Development Planning Department Manager
Approved for Inclusion: Ryan Smith, Divisional Director, Planning, Climate Action & Development Services

Attachments:

Attachment A: Draft Development Permit DP23-0232
- Schedule A: Site Plan & Floor Plans
- Schedule B: Elevations & Sections
- Schedule C: Landscape Plan

Attachment B: OCP Form and Character Development Permit Guidelines
Attachment C: Applicant's Letter of Rationale
Attachment D: Renderings
Attachment E: Neighbourhood Context

For additional information, please visit our Current Developments online at www.kelowna.ca/currentdevelopments.

Development Permit

DP23-0232

This permit relates to land in the City of Kelowna municipally known as

1531 Bernard Ave

and legally known as

Parcel Z Section 20 Township 26 ODYD Plan 3604 Except Plan EPP138640

and permits the land to be used for the following development:

Apartment Housing

The present owner and any subsequent owner of the above described land must comply with any attached terms and conditions.

Date of Council Approval:	**June 9, 2025**
Development Permit Area:	Form and Character
Existing Zone:	MF3r – Apartment Housing zone rental only
Future Land Use Designation:	C-NHD – Core Area Neighbourhood

This Development Permit is valid for two (2) years from the date of approval, with no opportunity to extend.

This is NOT a Building Permit.

In addition to your Development Permit, a Building Permit may be required prior to any work commencing. For further information, contact the City of Kelowna, Development Services Branch.

NOTICE

This permit does not relieve the owner or the owner's authorized agent from full compliance with the requirements of any federal, provincial or other municipal legislation, or the terms and conditions of any easement, covenant, building scheme or agreement affecting the building or land.

Owner:	Orchard City Abbeyfield Society, Inc. No. S0030415
Applicant:	Novation Architecture

_____

Nola Kilmartin
Development Planning Department Manager
Planning & Development Services

_____

Date of Issuance

ATTACHMENT A
This forms part of application
DP23-0232
City of Kelowna
DEVELOPMENT PLANNING
Planner Initials JI

1. SCOPE OF APPROVAL

This Development Permit applies to and only to those lands within the Municipality as described above, and any and all buildings, structures and other development thereon.

This Development Permit is issued subject to compliance with all of the Bylaws of the Municipality applicable thereto, except as specifically varied or supplemented by this permit, noted in the Terms and Conditions below.

The issuance of a permit limits the permit holder to be in strict compliance with regulations of the Zoning Bylaw and all other Bylaws unless specific variances have been authorized by the Development Permit. No implied variances from bylaw provisions shall be granted by virtue of drawing notations that are inconsistent with bylaw provisions and that may not have been identified as required Variances by the applicant or Municipal staff.

2. CONDITIONS OF APPROVAL

THAT Council authorizes the issuance of Development Permit No. DP23-0232 for Parcel Z Section 20 Township 26 ODYD Plan 3604 Except Plan EPP138640 located at 1531 Bernard Ave, Kelowna, BC, subject to the following:

a) The dimensions and siting of the building to be constructed on the land be in accordance with Schedule "A";

b) The exterior design and finish of the building to be constructed on the land be in accordance with Schedule "B";

c) Landscaping to be provided on the land be in accordance with Schedule "C";

d) The applicant be required to post with the City a Landscape Performance Security deposit in the amount of 125% of the estimated value of the Landscape Plan, as determined by a Registered Landscape Architect.

AND FURTHER THAT this Development Permit is valid for two (2) years from the date of Council approval, with no opportunity to extend.

3. PERFORMANCE SECURITY

As a condition of the issuance of this Permit, Council is holding the security set out below to ensure that development is carried out in accordance with the terms and conditions of this Permit. Should any interest be earned upon the security, it shall accrue to the Developer and be paid to the Developer or his or her designate if the security is returned. The condition of the posting of the security is that should the Developer fail to carry out the development hereby authorized, according to the terms and conditions of this Permit within the time provided, the Municipality may use enter into an agreement with the property owner of the day to have the work carried out, and any surplus shall be paid over to the property owner of the day. Should the Developer carry out the development as per the conditions of this permit, the security shall be returned to the Developer or his or her designate following proof of Substantial Compliance as defined in Bylaw No. 12310. There is filed accordingly:

a) An Irrevocable Letter of Credit **OR** certified cheque **OR** a Surety Bond in the amount of **$87,750**

Before any bond or security required under this Permit is reduced or released, the Developer will provide the City with a statutory declaration certifying that all labour, material, workers' compensation and other taxes and costs have been paid.

4. INDEMNIFICATION

Upon commencement of the works authorized by this Permit the Developer covenants and agrees to save harmless and effectually indemnify the Municipality against:

a) All actions and proceedings, costs, damages, expenses, claims, and demands whatsoever and by whomsoever brought, by reason of the Municipality said Permit.

All costs, expenses, claims that may be incurred by the Municipality where the construction, engineering or other types of works as called for by the Permit results in damages to any property owned in whole or in part by the Municipality or which the Municipality by duty or custom is obliged, directly or indirectly in any way or to any degree, to construct, repair, or maintain.

ATTACHMENT A
This forms part of application
DP23-0232
Planner Initials JI
City of Kelowna
DEVELOPMENT PLANNING

The PERMIT HOLDER is the CURRENT LAND OWNER.
Security shall ONLY be returned to the signatory of the Landscape Agreement or their designates.

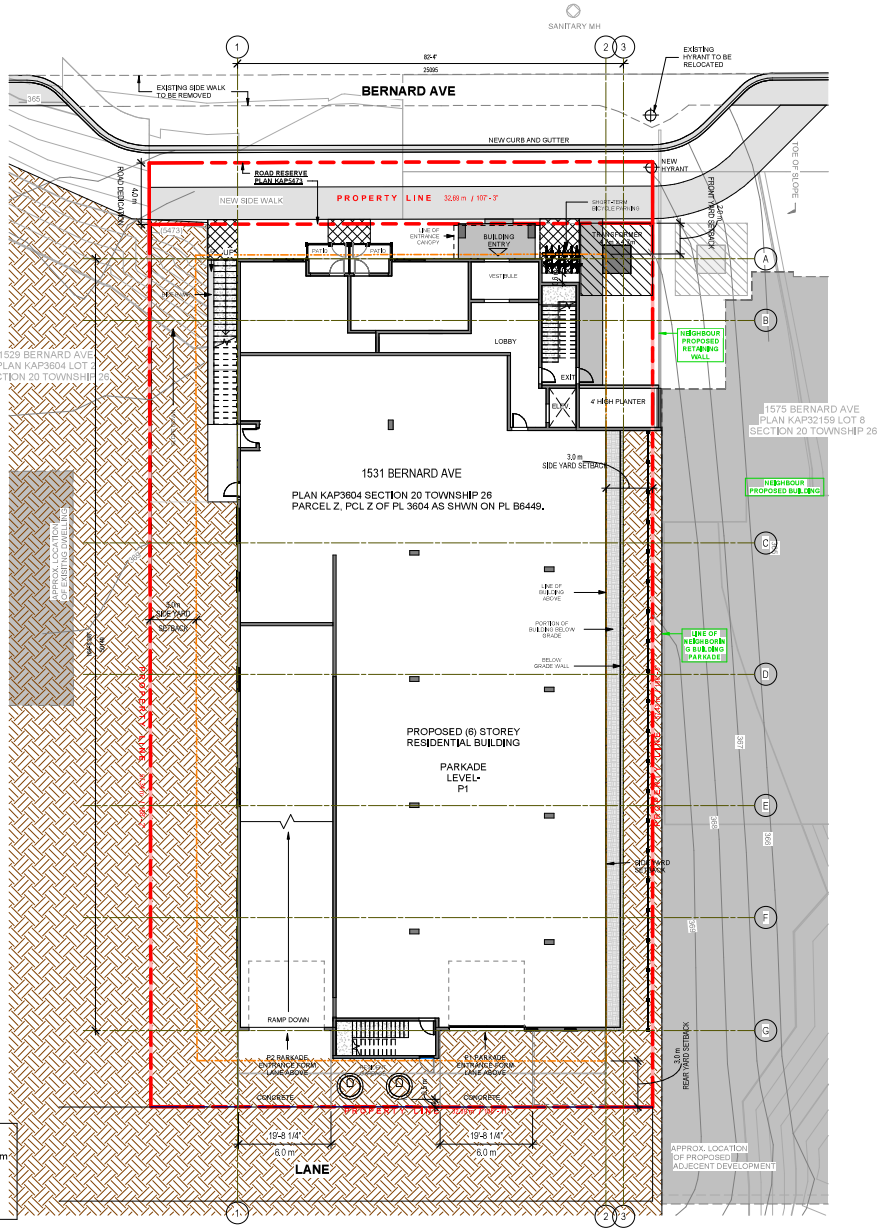
SCHEDULE A

This forms part of application

DP23-0232

City of Kelowna
DEVELOPMENT PLANNING

Planner Initials JI



1 OVERALL SITE PLAN
1 : 150

Notes:

All drawings shall be read in conjunction with specifications and consultant details.

All work shall be carried out in accordance with Canadian standards, specifications, BC Building Code (2018 edition) and local authority bylaws and requirements.

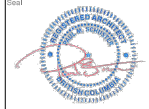
Tabulated scales refer to Arch D size drawings sheet.

This drawing must not be scaled.

Contractors shall verify all dimensions prior to commencement of work.

Any omissions or discrepancies shall be reported to the architect.

Seal



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C	2024-02-23	RE-ISSUED FOR DEVELOPMENT PERMIT
B	2023-10-07	RE-ISSUED FOR DEVELOPMENT PERMIT
A	2023-09-07	ISSUED FOR DEVELOPMENT PERMIT

Revisions

NOVATION ARCHITECTURE LTD
302 - 2237 LECKIE ROAD
KELOWNA BC V1X 6Y5

project title
BERNARD AVE
1531 Bernard Ave, Kelowna, BC
PLAN KAP3604 SECTION 20 TOWNSHIP 26
PARCEL Z, PCL Z OF PL 3604 AS SHWN ON PL B6449.

project no. 23015

drawing title
OVERALL SITE PLAN

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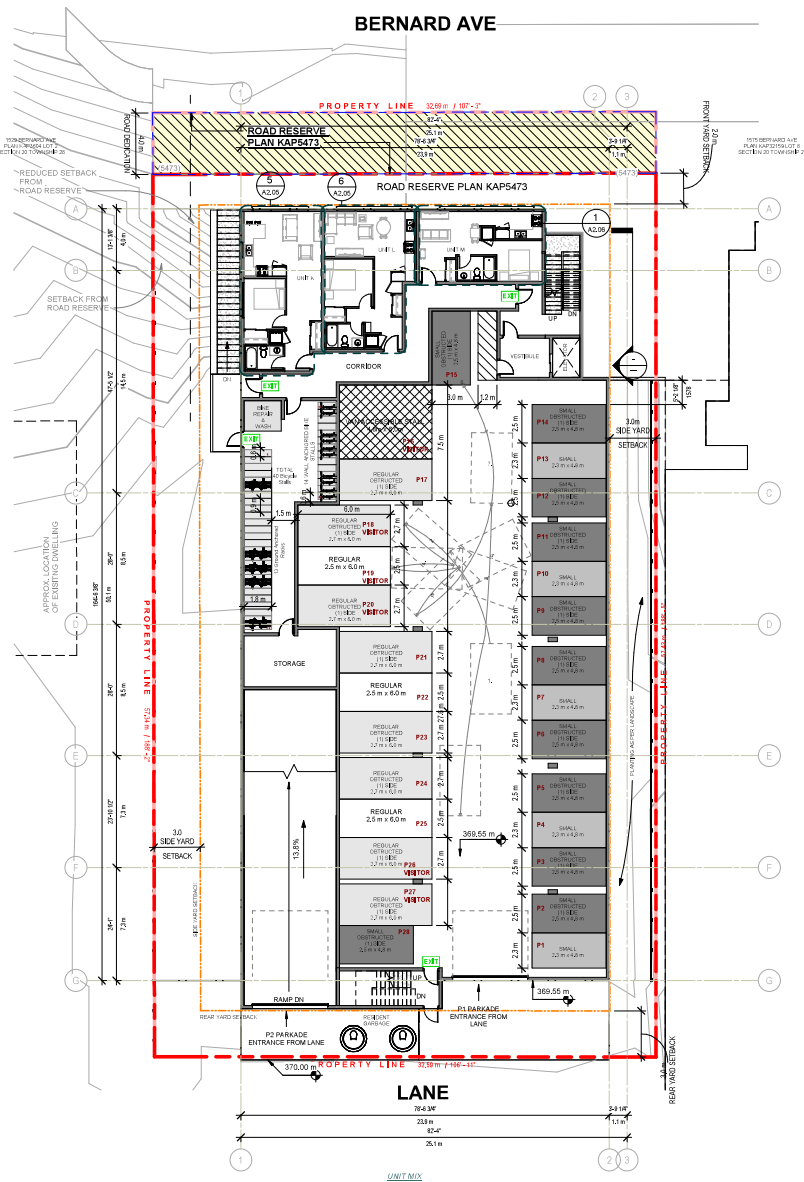
drawn	IP	
checked	PS	

drawing no.
A1.00

plotted 4/11/2025 11:20:25 AM

Project File Name and Location:

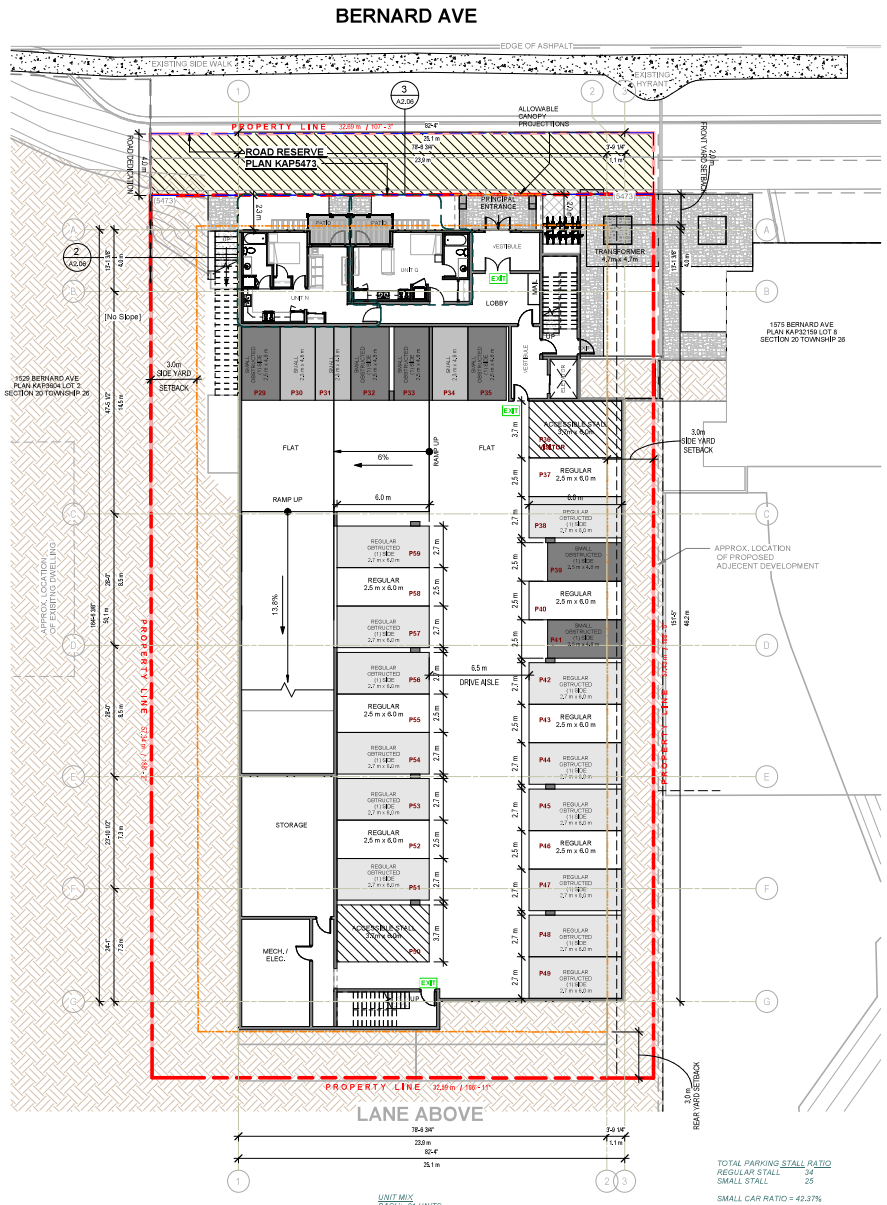


2 FLOOR PLAN - LEVEL 2 (P1)

1 : 150

UNIT MIX
BACH: 01 UNITS
1 BDR: 02 UNITS
2+BDR: 00 UNITS
TOTAL: 03 UNITS

TOTAL LEVEL 2 (P1) LIVING AREA (FOR FAR CALCULATION): 1525 SF
BUILDING FOOTPRINT AREA (FOR COVERAGE CALCULATION): 12817 SF
IMPERMEABLE SURFACE AREA (FOR COVERAGE CALCULATION): 3615 SF
BACHELOR: (UNIT M.) 387 SF
ONE BEDROOM: (UNIT L) 519 SF
ONE BEDROOM: (UNIT K) 544 SF



1 FLOOR PLAN - LEVEL 1 (P2)

1 : 150

UNIT MIX
BACH: 01 UNITS
1 BDR: 01 UNITS
2+BDR: 00 UNITS
TOTAL: 02 UNITS

TOTAL LEVEL 1 (P2) LIVING AREA (FOR FAR CALCULATION): 877 SF
PRIVATE OPEN SPACE AT LEVEL 1(P2)
BACHELOR: (UNIT O) 353 SF
ONE BEDROOM: (UNIT N) 451 SF
TWO + BEDROOM: 000 SF

TOTAL PARKING STALL RATIO
REGULAR STALL 34
SMALL STALL 25

SMALL CAR RATIO = 42.37%

VISUAL SCALE 1:150 @ Arch D

SCHEDULE A

This forms part of application

DP23-0232

Planner Initials JI

City of Kelowna
DEVELOPMENT PLANNING

Notes:

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Any omissions or discrepancies shall be reported to the architect.

Seal

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Revisions

NOVATION ARCHITECTURE LTD
302 - 2237 LECKIE ROAD
KELOWNA BC V1X 6Y5

project title
BERNARD AVE
1531 Bernard Ave, Kelowna, BC
PLAN KAP3604 SECTION 20 TOWNSHIP 26
PARCEL Z, PCL Z OF PL 3604 AS SHWN ON PL B6449.

project no. 23015

drawing title
PARKADE PLANS

designed PS scale 1 : 150
drawn IP
checked PS

drawing no. A2.01

plotted 4/11/2025 11:29:38 AM

Project File Name and Location:

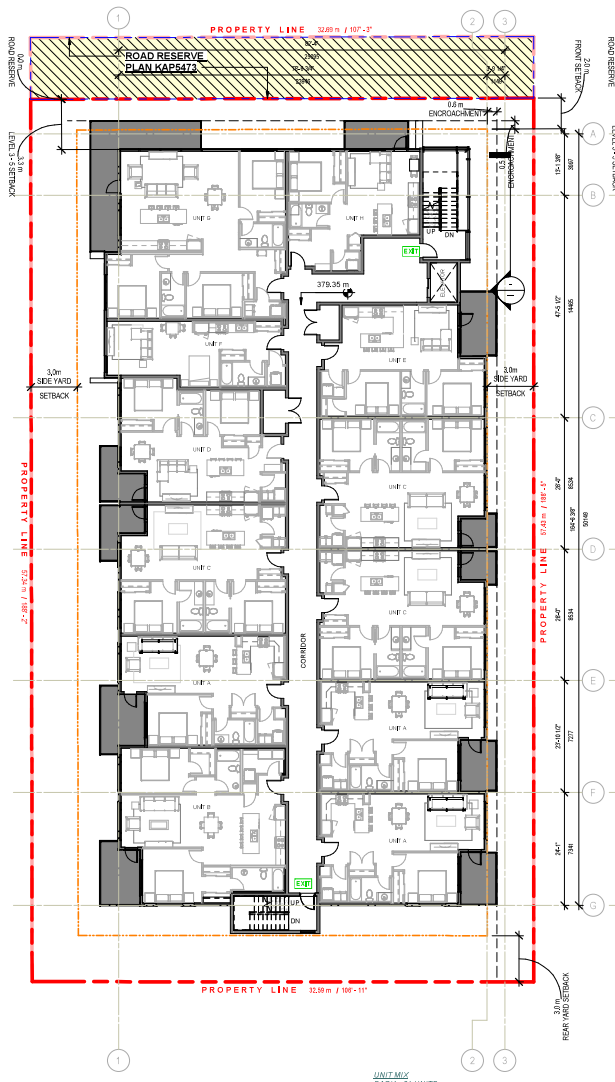
SCHEDULE A

This forms part of application

DP23-0232

Planner Initials JI

City of Kelowna
DEVELOPMENT PLANNING

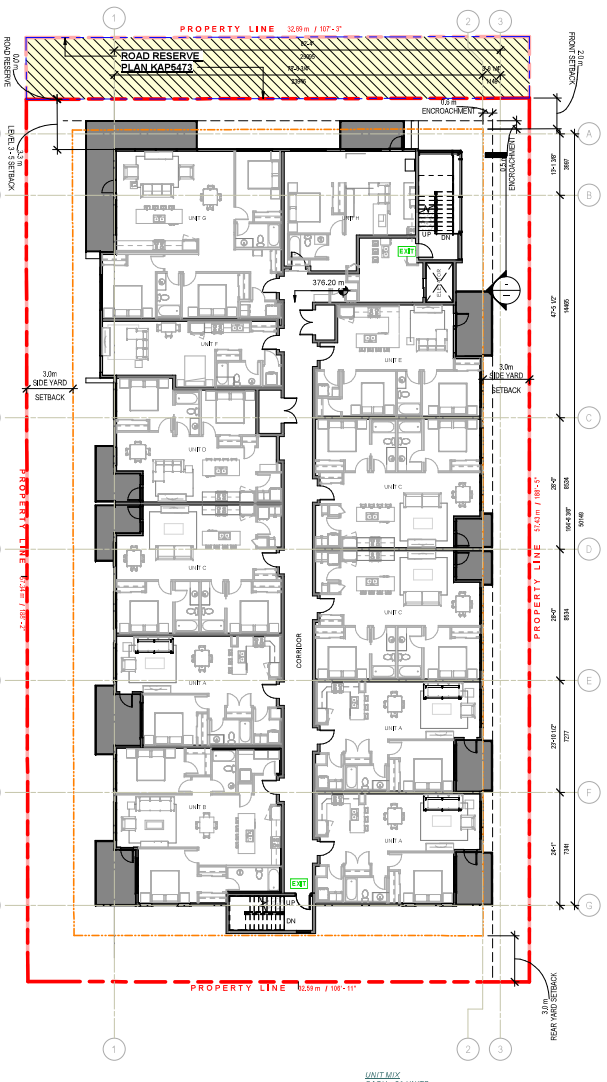


3 FLOOR PLAN - LEVEL 5

1 : 150

UNIT MIX
BACH: 01 UNITS
1 BDR: 04 UNITS
2+BDR: 07 UNITS
TOTAL: 12 UNITS

TOTAL LEVEL 5 LIVING AREA (FOR FAR CALCULATION): 10237 SF
PRIVATE OPEN SPACE AT LEVEL 4

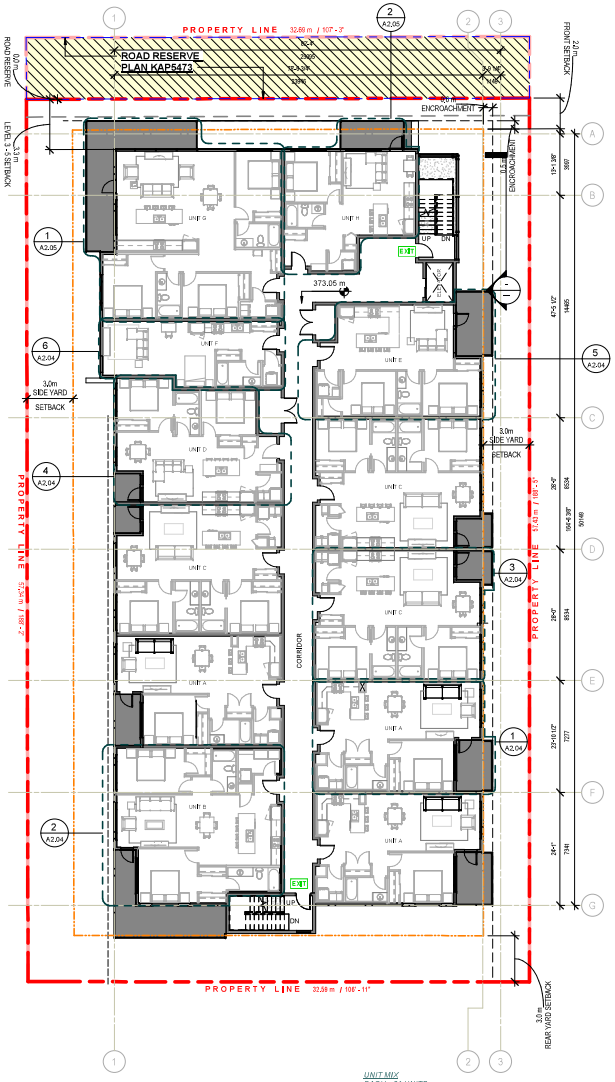


2 FLOOR PLAN - LEVEL 4

1 : 150

UNIT MIX
BACH: 01 UNITS
1 BDR: 04 UNITS
2+BDR: 07 UNITS
TOTAL: 12 UNITS

TOTAL LEVEL 4 LIVING AREA (FOR FAR CALCULATION): 10237 SF
PRIVATE OPEN SPACE AT LEVEL 4



1 FLOOR PLAN - LEVEL 3

1 : 150

UNIT MIX
BACH: 01 UNITS
1 BDR: 04 UNITS
2+BDR: 07 UNITS
TOTAL: 12 UNITS

TOTAL LEVEL 3 LIVING AREA (FOR FAR CALCULATION): 10237 SF
PRIVATE OPEN SPACE AT LEVEL 3

Notes:

All drawings shall be read in conjunction with specifications and consultant details.

All work shall be carried out in accordance with Canadian standards, specifications, BC Building Code (2018 edition) and local authority bylaws and requirements.

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This drawing must not be scaled.

Contractors shall verify all dimensions prior to commencement of work.

Any omissions or discrepancies shall be reported to the architect.

Seal

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Revisions

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KELOWNA BC V1X 6Y5

project title
BERNARD AVE

1531 Bernard Ave, Kelowna, BC
PLAN KAP3604 SECTION 20 TOWNSHIP 26
PARCEL Z, PCL Z OF PL 3604 AS SHWN ON PL B6449.

project no. 23015

drawing title
FLOOR PLANS - LEVEL 3-5

designed	PS	scale 1 : 150
drawn	IP	
checked	PS	

drawing no. A2.02

plotted 4/11/2025 11:38:04 AM

Project File Name and Location:

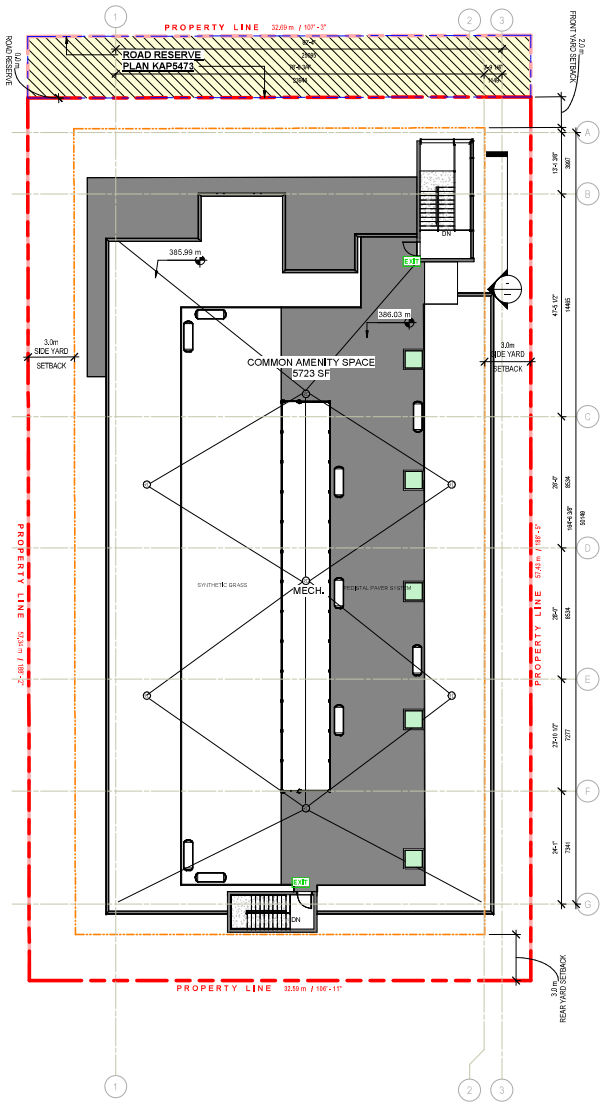
SCHEDULE A

This forms part of application

DP23-0232

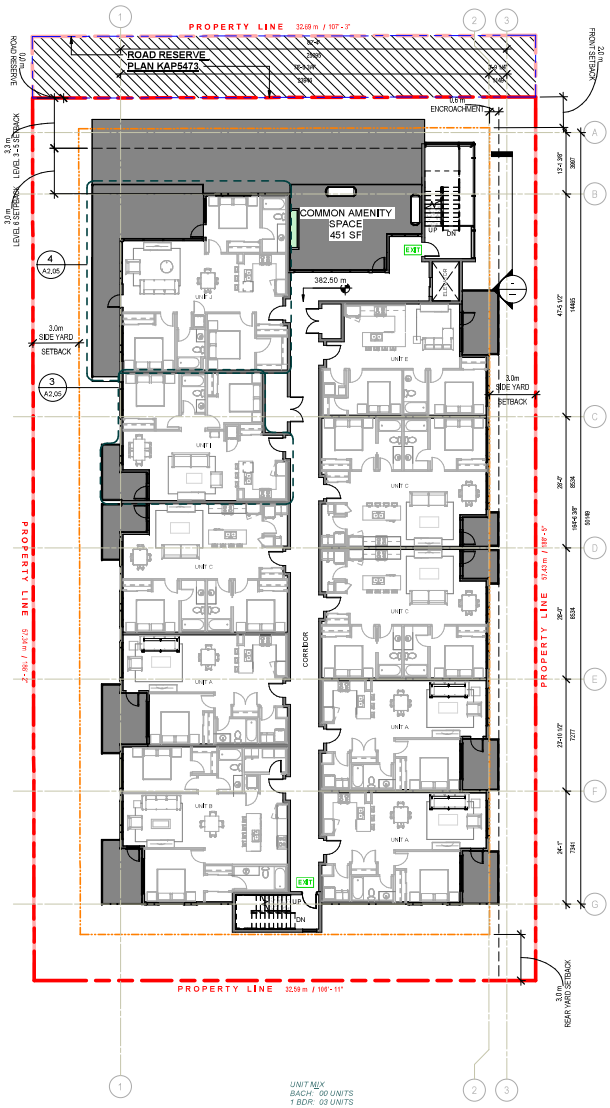
City of Kelowna
DEVELOPMENT PLANNING

Planner Initials JI



2 ROOF PLAN
1 : 150

COMMON AMENITY: 5723 SF



1 FLOOR PLAN - LEVEL 6
1 : 150

UNIT MIX
BACH: 00 UNITS
1 BDR: 03 UNITS
2+BDR: 07 UNITS
TOTAL: 10 UNITS

TOTAL LEVEL 6 LIVING AREA (FOR FAR CALCULATION): 9062 SF
PRIVATE OPEN SPACE AT LEVEL 4

COMMON AMENITY: 451 SF

Notes:

All drawings shall be read in conjunction with specifications and consultant details.

All work shall be carried out in accordance with Canadian standards, specifications, BC Building Code (2018 edition) and local authority bylaws and requirements.

Tabulated scales refer to Arch D size drawings sheet.

This drawing must not be scaled.

Contractors shall verify all dimensions prior to commencement of work.

Any omissions or discrepancies shall be reported to the architect.

Seal

2025-04-11

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B	2023-10-07	RE-ISSUED FOR DEVELOPMENT PERMIT
A	2023-09-07	ISSUED FOR DEVELOPMENT PERMIT

Revisions

NOVATION ARCHITECTURE LTD
302 - 2237 LECKIE ROAD
KELOWNA BC V1X 6Y5

project title
BERNARD AVE

1531 Bernard Ave, Kelowna, BC
PLAN KAP3604 SECTION 20 TOWNSHIP 26
PARCEL Z, PCL Z OF PL 3604 AS SHWN ON PL B6449.

project no. 23015

drawing title
FLOOR PLANS - LEVEL 6 & ROOF

designed	PS	scale	1 : 150
drawn	IP		
checked	PS		

drawing no.
A2.03

plotted 4/11/2025 11:30:14 AM

Project File Name and Location:

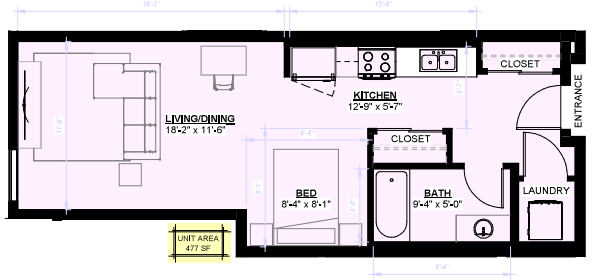
SCHEDULE A

This forms part of application

DP23-0232

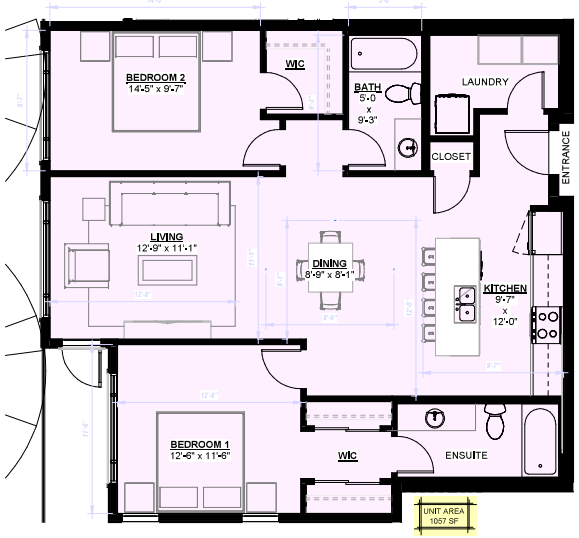
Planner Initials JI

City of Kelowna
DEVELOPMENT PLANNING

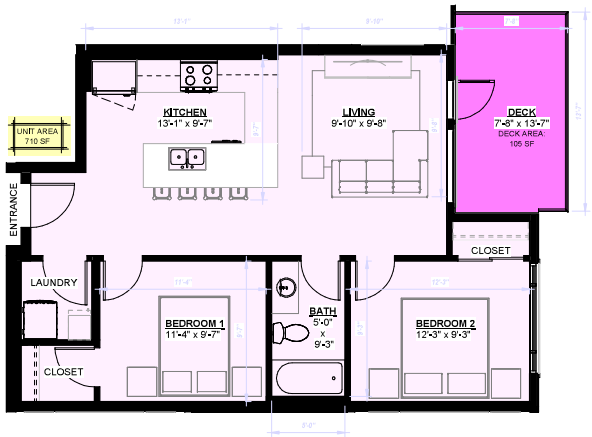


6 UNIT F
1/4" = 1'-0"

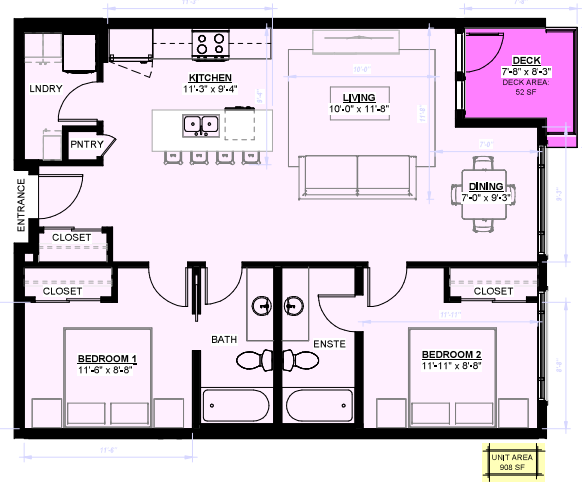
4 UNIT D
1/4" = 1'-0"



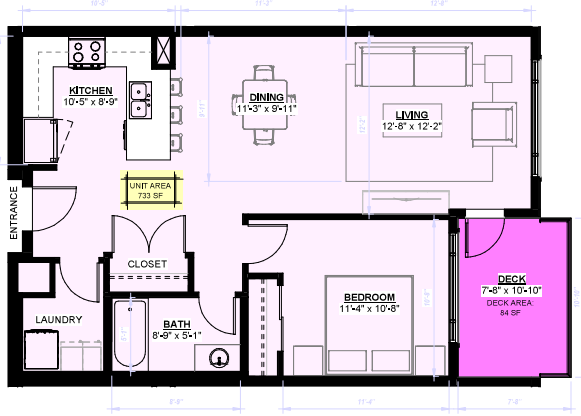
2 UNIT B
1/4" = 1'-0"



5 UNIT E
1/4" = 1'-0"



3 UNIT C
1/4" = 1'-0"



1 UNIT A
1/4" = 1'-0"

Project File Name and Location: C:\Users\Lenovo\Documents\Bernard_BLDG_Central_R24_R1_inderRTWZW.rvt

Notes:

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Titles/detail scales refer to Arch D size drawings sheet.

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Seal

2025-04-11

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B	2023-10-07	RE-ISSUED FOR DEVELOPMENT PERMIT
A	2023-09-07	ISSUED FOR DEVELOPMENT PERMIT

Revisions

NOVATION ARCHITECTURE LTD.
302 - 2237 LECKIE ROAD
KELOWNA B.C. V1X 6Y5

project title
BERNARD AVE
1531 Bernard Ave, Kelowna, BC
PLAN KAP3604 SECTION 20 TOWNSHIP 26 PARCEL Z, PCL Z OF PL 3604 AS SHWN ON PL B6449.

project no. 23015

drawing title
UNIT PLANS

designed	PS	scale 1/4" = 1'-0"
drawn	IP	
checked	PS	

drawing no.
A2.04

plotted 4/11/2025 11:30:19 AM

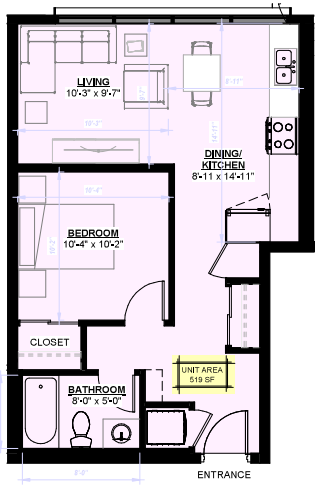
SCHEDULE A

This forms part of application

DP23-0232

Planner Initials JI

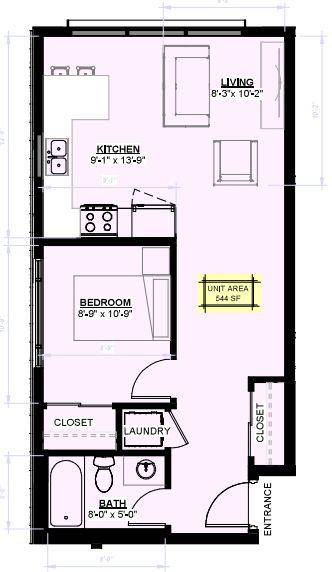
City of Kelowna
DEVELOPMENT PLANNING



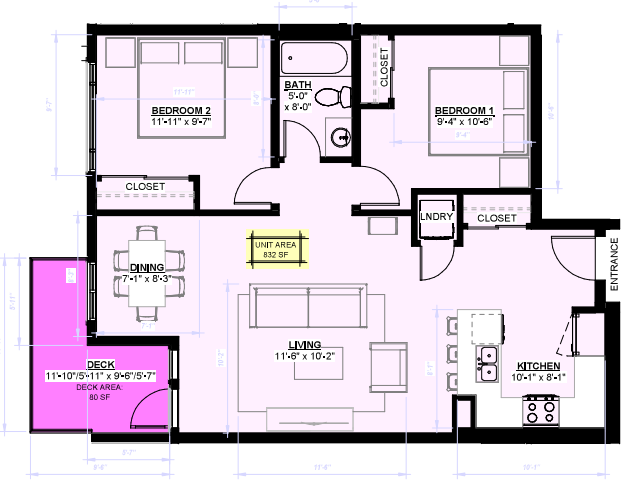
6 UNIT L
1/4" = 1'-0"

4 UNIT J
1/4" = 1'-0"

2 UNIT H
1/4" = 1'-0"



5 UNIT K
1/4" = 1'-0"



3 UNIT I
1/4" = 1'-0"

1 UNIT G
1/4" = 1'-0"

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A	2023-09-07	ISSUED FOR DEVELOPMENT PERMIT

Revisions

NOVATION ARCHITECTURE LTD.
302 - 2237 LECKIE ROAD
KELOWNA BC V1X 6Y5

project title
BERNARD AVE
1531 Bernard Ave, Kelowna, BC
PLAN KAP3604 SECTION 20 TOWNSHIP 26
PARCEL Z, PCL Z OF PL 3604 AS SHWN ON PL B6449.

project no. 23015

drawing title
UNIT PLANS

designed	PS	scale 1/4" = 1'-0"
drawn	IP	
checked	PS	

drawing no.
A2.05

plotted 4/11/2025 11:30:25 AM

Project File Name and Location: C:\Users\Lenovo\Documents\Bernard_BLDG_Central_R24_R1_inderRTWZW.rvt

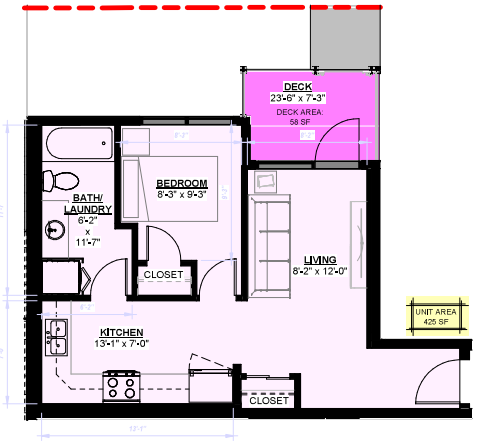
SCHEDULE A

This forms part of application

DP23-0232

Planner Initials JI

City of Kelowna
DEVELOPMENT PLANNING



2 UNIT N
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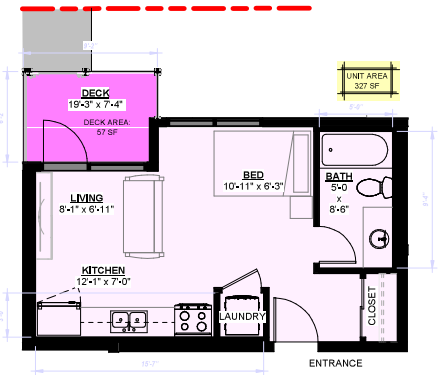
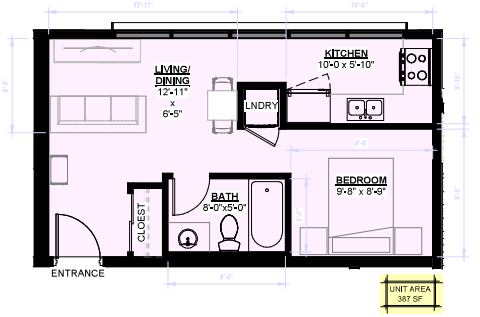


3 UNIT O
1/4" = 1'-0"



1 UNIT M
1/4" = 1'-0"

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A	2023-09-07	ISSUED FOR DEVELOPMENT PERMIT

Revisions

NOVATION ARCHITECTURE LTD.
302 - 2237 LECKIE ROAD
KELOWNA BC V1X 6Y5

project title
BERNARD AVE
1531 Bernard Ave, Kelowna, BC
PLAN KAP3604 SECTION 20 TOWNSHIP 26 PARCEL Z, PCL Z OF PL 3604 AS SHWN ON PL B6449.

project no. 23015

drawing title
UNIT PLANS

designed	PS	scale 1/4" = 1'-0"
drawn	IP	
checked	PS	

drawing no. A2.06

plotted 4/11/2025 11:30:29 AM

Project File Name and Location: C:\Users\Lenovo\Documents\Bernard_BLDG_Central_R24_R1_inderRTWZW.rvt

SCHEDULE B

This forms part of application

DP23-0232

Planner Initials JI

City of Kelowna
DEVELOPMENT PLANNING

2 NORTH ELEVATION - COLOUR
SCALE: 1/8" = 1'-0"

KEYNOTE LEGEND

KEY	DESCRIPTION
1	BLACK - METAL FASCIA, FLASHINGS, RAILINGS
2	BLACK - WINDOW FRAME
3	CLEAR - GLASS
4	WHITE - BRICK VENEER
5	WHITE - FIBER CEMENT PANEL C/W REVEALS
6	WHITE - VERTICAL LAP SIDING
7	KONA - LUX SIDING & SOFFIT
8	EXPOSED CONCRETE
9	BLACK - SLEEK FENCE SCREENING

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A	2023-09-07	ISSUED FOR DEVELOPMENT PERMIT

Revisions

NOVATION ARCHITECTURE LTD
302 - 2237 LECKIE ROAD
KELOWNA BC V1X 6Y5

project title
BERNARD AVE

1531 Bernard Ave, Kelowna, BC
PLAN KAP3604 SECTION 20 TOWNSHIP 26
PARCEL Z, PCL Z OF PL 3604 AS SHWN ON PL B6449.

project no.: 23015

drawing title
EXTERIOR ELEVATION - NORTH

designed	PS	scale 1/8" = 1'-0"
drawn	IP	
checked	PS	

drawing no.
A3.00

plotted 4/11/2025 11:31:47 AM

Project File Name and Location:

SCHEDULE B

This forms part of application

DP23-0232

City of Kelowna
DEVELOPMENT PLANNING

Planner Initials JI

1 EAST ELEVATION - COLOUR
SCALE: 1/8" = 1'-0"

KEYNOTE LEGEND

KEY	DESCRIPTION
1	BLACK - METAL FASCIA, FLASHINGS, RAILINGS
2	BLACK - WINDOW FRAME
3	CLEAR - GLASS
4	WHITE - BRICK VENEER
5	WHITE - FIBER CEMENT PANEL C/W REVEALS
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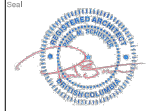
Seal



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Revisions

NOVATION ARCHITECTURE LTD
302 - 2237 LECKIE ROAD
KELOWNA BC V1X 6Y5

project title
BERNARD AVE

1531 Bernard Ave, Kelowna, BC
PLAN KAP3604 SECTION 20 TOWNSHIP 26
PARCEL Z, PCL Z OF PL 3604 AS SHWN ON PL B6449.

project no.: 23015

drawing title
EXTERIOR ELEVATION - EAST

designed	PS	scale 1/8" = 1'-0"
drawn	IP	
checked	PS	

drawing no.
A3.01

plotted 4/11/2025 11:33:53 AM

Project File Name and Location:

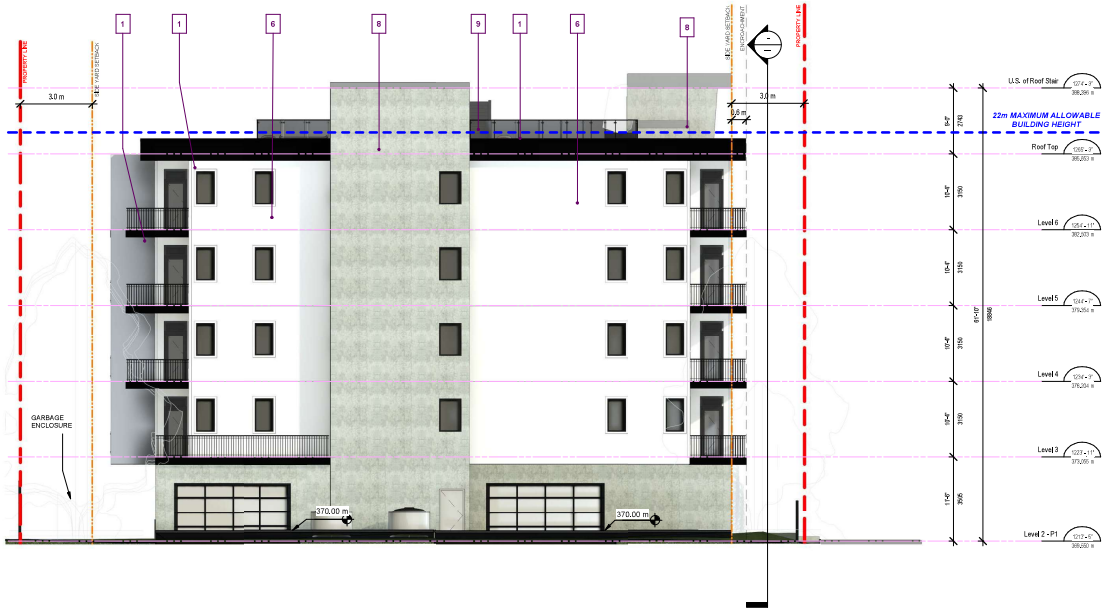
SCHEDULE B

This forms part of application

DP23-0232

Planner Initials JI

City of Kelowna
DEVELOPMENT PLANNING



2 SOUTH ELEVATION - COLOUR
SCALE: 1/8" = 1'-0"

KEYNOTE LEGEND

KEY	DESCRIPTION
1	BLACK - METAL FASCIA, FLASHINGS, RAILINGS
2	BLACK - WINDOW FRAME
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A	2023-09-07	ISSUED FOR DEVELOPMENT PERMIT

Revisions

NOVATION ARCHITECTURE LTD
302 - 2237 LECKIE ROAD
KELOWNA BC V1X 6Y5

project title
BERNARD AVE

1531 Bernard Ave, Kelowna, BC
PLAN KAP3604 SECTION 20 TOWNSHIP 26
PARCEL Z, PCL Z OF PL 3604 AS SHWN ON PL B6449.

project no. 23015

drawing title
EXTERIOR ELEVATION - SOUTH

designed	PS	scale	1/8" = 1'-0"
drawn	IP		
checked	PS		

drawing no. A3.02

plotted 4/11/2025 11:35:15 AM

Project File Name and Location:

1 WEST ELEVATION - COLOUR
SCALE: 1/8" = 1'-0"

SCHEDULE B

This forms part of application
DP23-0232

Planner Initials JI

City of Kelowna
DEVELOPMENT PLANNING

KEYNOTE LEGEND

KEY	DESCRIPTION
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2	BLACK - WINDOW FRAME
3	CLEAR - GLASS
4	WHITE - BRICK VENEER
5	WHITE - FIBER CEMENT PANEL C/W REVEALS
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Revisions

NOVATION ARCHITECTURE LTD
302 - 2237 LECKIE ROAD
KELOWNA BC V1X 6Y5

project title
BERNARD AVE
1531 Bernard Ave, Kelowna, BC
PLAN KAP3604 SECTION 20 TOWNSHIP 26
PARCEL Z, PCL Z OF PL 3604 AS SHWN ON PL B6449.

project no. 23015

drawing title
EXTERIOR ELEVATION - WEST

designed	PS	scale 1/8" = 1'-0"
drawn	IP	
checked	PS	

drawing no. A3.03

plotted 4/11/2025 11:37:17 AM

Project File Name and Location:

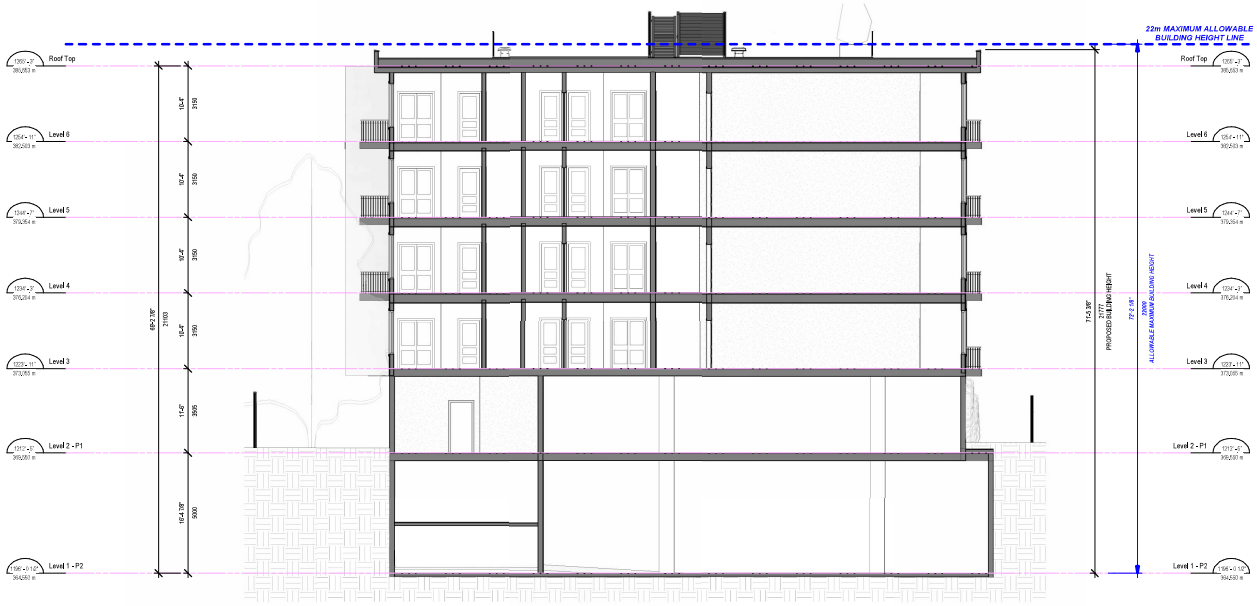
SCHEDULE B

This forms part of application

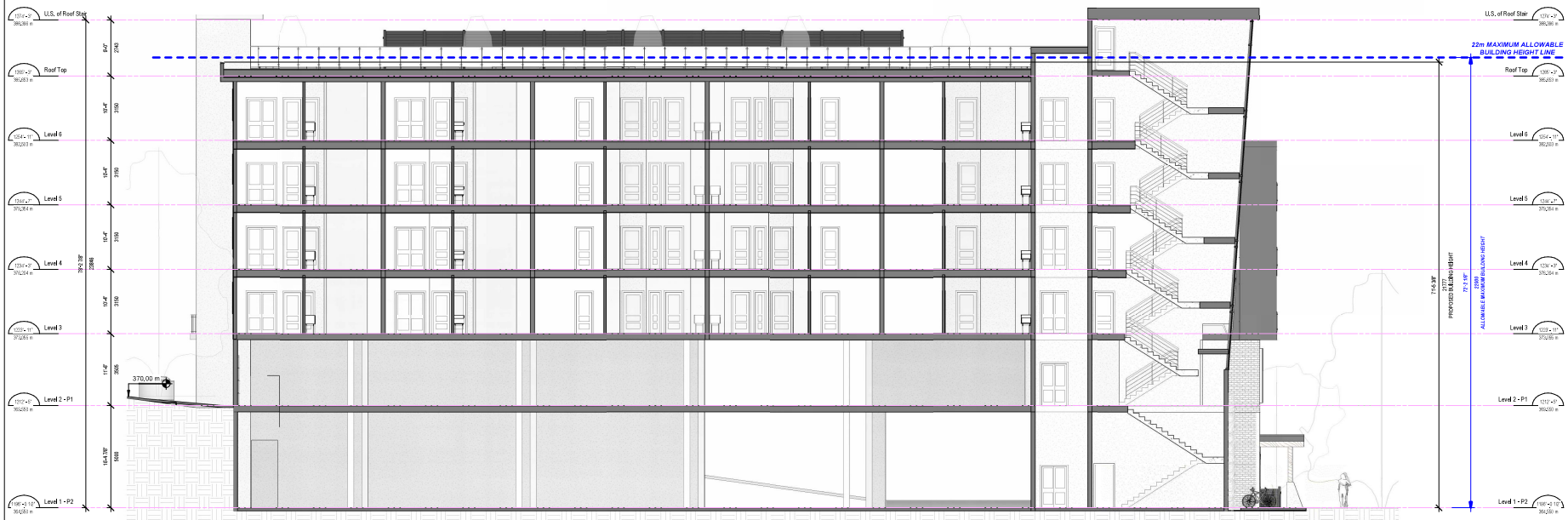
DP23-0232

City of Kelowna
DEVELOPMENT PLANNING

Planner Initials JI



2 SECTION B
1/8" = 1'-0"



1 SECTION A
1/8" = 1'-0"

Project File Name and Location:

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Revisions

NOVATION ARCHITECTURE LTD
302 - 2237 LECKIE ROAD
KELOWNA BC V1X 6Y5

project title
BERNARD AVE
1531 Bernard Ave, Kelowna, BC
PLAN KAP3604 SECTION 20 TOWNSHIP 26
PARCEL Z, PCL Z OF PL 3604 AS SHWN ON PL B6449.

project no. 23015

drawing title
BUILDING SECTIONS

designed	PS	scale 1/8" = 1'-0"
drawn	IP	
checked	PS	

drawing no.
A4.00

plotted 4/11/2025 11:38:28 AM

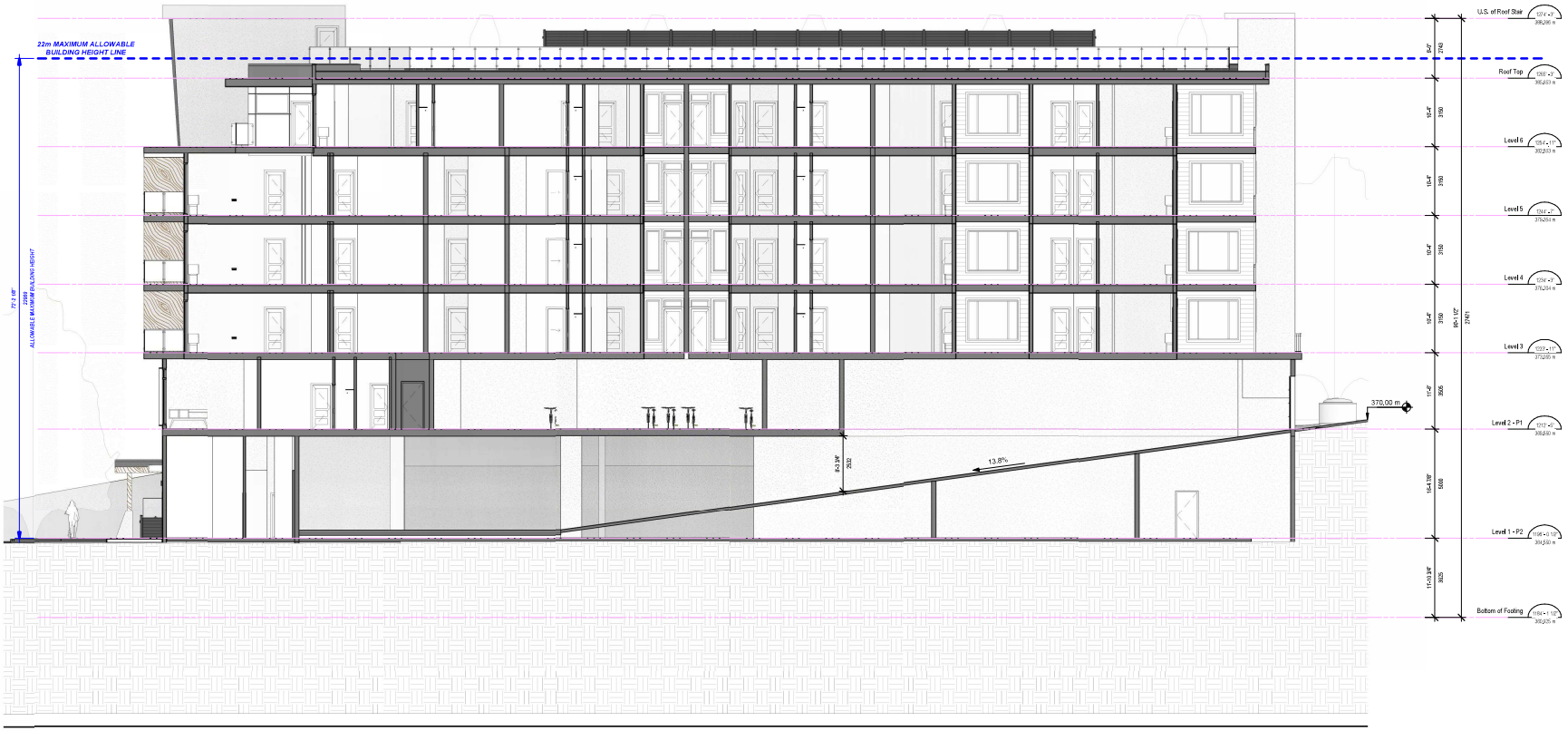
SCHEDULE B

This forms part of application

DP23-0232

Planner Initials JI

City of Kelowna
DEVELOPMENT PLANNING



1 SECTION C
1/8" = 1'-0"

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Revisions

NOVATION ARCHITECTURE LTD
302 - 2237 LECKIE ROAD
KELOWNA BC V1X 6Y5

project title
BERNARD AVE

1531 Bernard Ave, Kelowna, BC
PLAN KAP3604 SECTION 20 TOWNSHIP 26
PARCEL Z, PCL Z OF PL 3604 AS SHWN ON PL B6449.

project no. 23015

drawing title
BUILDING SECTIONS

designed	PS	scale 1/8" = 1'-0"
drawn	IP	
checked	PS	

drawing no. A4.01

plotted 4/11/2025 11:41:39 AM

Project File Name and Location:

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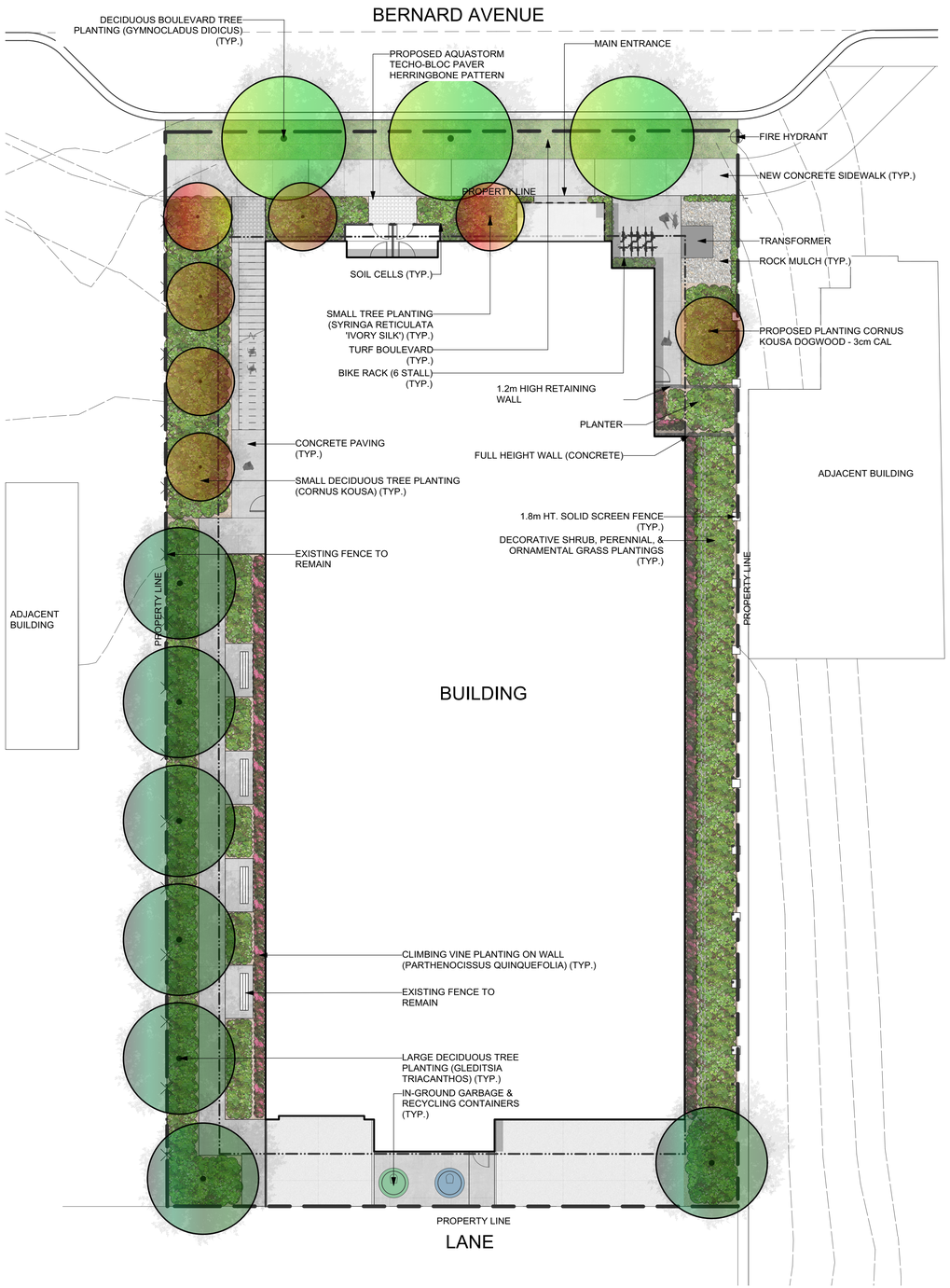
SCHEDULE C

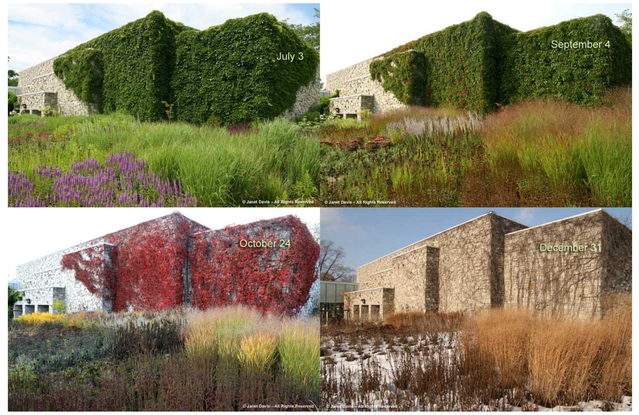
This forms part of application

DP23-0232

Planner Initials JI

City of Kelowna
DEVELOPMENT PLANNING





PRECEDENT IMAGE: CLIMBING VINE ON WALL

NOTES

1. PLANT MATERIAL AND CONSTRUCTION METHODS SHALL MEET OR EXCEED CANDAIAN LANDSCAPE STANDARDS. ALL OFFSITE LANDSCAPE WORKS TO MEET CITY OF KELOWNA BYLAW 12375 STANDARDS.

2. ALL SOFT LANDSCAPE AREAS SHALL BE WATERED BY A FULLY AUTOMATIC TIMED UNDERGROUND IRRIGATION SYSTEM.

3. TREE AND SHRUB BEDS TO BE DRESSED IN A MINIMUM 75mm NATURAL WOOD MULCH AS SHOWN IN PLANS. DO NOT PLACE WEED MAT UNDERNEATH TREE AND SHRUB BEDS.

4. SHRUB BEDS TO RECEIVE A MINIMUM 300mm DEPTH TOPSOIL PLACEMENT. TREE BEDS TO RECEIVE A MINIMUM 1000mm DEPTH TOPSOIL PLACEMENT.

5. TURF AREA FROM SOD SHALL BE NO.1 GRADE GROWN FROM CERTIFIED SEED OF IMPROVED CULTIVARS REGISTERED FOR SALE IN B.C. AND SHALL BE TOLERANT OF DROUGHT CONDITIONS. A MINIMUM OF 150mm DEPTH OF GROWING MEDIUM IS REQUIRED BENEATH TURF AREAS. TURF AREAS SHALL MEET EXISTING GRADES AND HARD SURFACES FLUSH.

6. SITE GRADING AND DRAINAGE WILL ENSURE THAT ALL STRUCTURES HAVE POSITIVE DRAINAGE AND THAT NO WATER OR LOOSE IMPEDIMENTS WILL BE DISCHARGED FROM THE LOT ONTO ADJACENT PUBLIC, COMMON, OR PRIVATE PROPERTIES.

7. FOR CONFORMANCE WITH DEVELOPMENT PERMIT LANDSCAPE REQUIREMENTS, THE PRIME CONTRACTOR AND/OR CONSULTANTS REPONSIBLE FOR SITE SERVICING AND UTILITIES SHALL ENSURE THAT ALL BUILDING PERMIT SUBMITTALS ARE COORDINATED WITH LANDSCAPE ARCHITECTURAL SUBMITTALS.

PLANT LIST

PLANT QUANTITIES ESTIMATED ONLY. NOT FOR PRICING

BOTANICAL NAME	COMMON NAME	QTY	SIZE/SPACING & REMARKS
TREES			
CORNUS KOUSA	KOUSA DOGWOOD	5	3cm CAL.
GLEDITSIA TRIACANTHOS	HONEY LOCUST	7	5cm CAL.
GYMNOCLADUS DIOICUS	KENTUCKY COFFEE TREE	3	5cm CAL.
SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK TREE LILAC	2	3cm CAL.
SHRUBS			
CORNUS ALBA 'BAILHALO'	IVORY HALO DOGWOOD	10	#02 CONT. /1.8M O.C. SPACING
PHILADELPHUS LEWISII 'BLIZZARD'	MOCK ORANGE 'BLIZZARD'	20	#02 CONT. /1.2M O.C. SPACING
PHYSOCARPUS OPULIFOLIUS 'SMPOTW'	TINY WINE NINEBARK	20	#02 CONT. /1.2M O.C. SPACING
SPIRAEA JAPONICA 'GOLDMOUND'	GOLDMOUND SPIREA	20	#02 CONT. /1.2M O.C. SPACING
SYMPHORICARPOS ALBUS	SNOWBERRY	10	#02 CONT. /1.8M O.C. SPACING
PERENNIALS & GRASSES			
ACHILLEA MILLEFOLIUM	COMMON YARROW	40	#01 CONT. /0.60M O.C. SPACING
COREOPSIS VERTICILLATA 'MOONBEAM'	MOONBEAM THREADLEAF COREOPSIS	40	#01 CONT. /0.6M O.C. SPACING
HELICTOTRICHON SEMPERVIRENS	BLUE OAT GRASS	40	#01 CONT. /0.6M O.C. SPACING
HEMEROCALLIS 'RUBY STELLA'	RUBY STELLA DAYLILY	20	#01 CONT. /0.9M O.C. SPACING
PANICUM VIRGATUM	SWITCH GRASS	20	#01 CONT. /0.9M O.C. SPACING
PEROVSKIA ATRIPLICIFOLIA 'LITTLE SPIRE'	DWARF RUSSIAN SAGE	40	#01 CONT. /0.6M O.C. SPACING
SALVIA NEMOROSA 'CARADONNA'	CARADONNA PERENNIAL SALVIA	40	#01 CONT. /0.6M O.C. SPACING
VINES			
PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	18	#01 CONT. /2.5M O.C. SPACING

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N

PROJECT TITLE

1531 BERNARD AVENUE
GROUND LEVEL

Kelowna, BC

DRAWING TITLE

CONCEPTUAL LANDSCAPE PLAN

ISSUED FOR / REVISION

1	24.02.14	Development Permit
2	24.04.24	Development Permit
3	24.04.30	Development Permit
4	24.08.20	Development Permit
5	24.08.26	Development Permit
6	25.04.16	Development Permit

PROJECT NO	23-0585
DESIGN BY	GS/AM
DRAWN BY	DM
CHECKED BY	TK
DATE	APR 16, 2025
SCALE	1:150
PAGE SIZE	24"x36"

SEAL

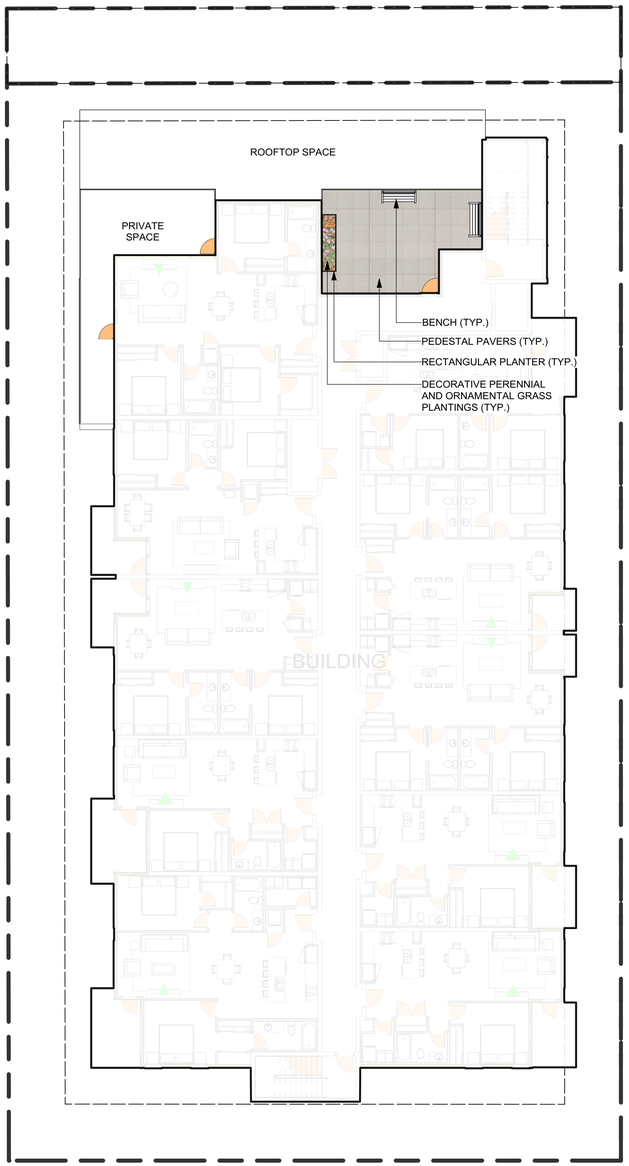
BRITISH COLUMBIA SOCIETY OF LANDSCAPE ARCHITECTS
REGISTERED MEMBER
GEORGE D. HARRIS
432

DRAWING NUMBER

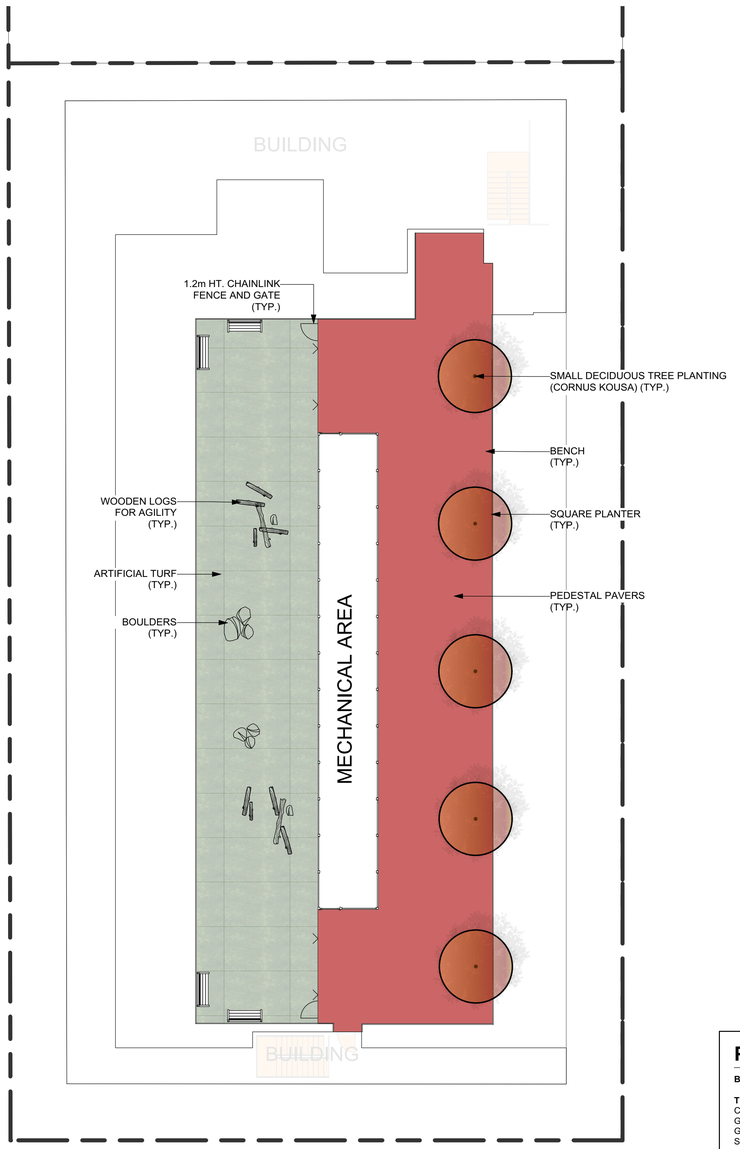
L1/4

NOT FOR CONSTRUCTION

0 5 10 15 20 25 M



LEVEL 6



ROOFTOP

SCHEDULE C

This forms part of application
DP23-0232

Planner Initials JI

City of Kelowna
DEVELOPMENT PLANNING

NOTES

1. PLANT MATERIAL AND CONSTRUCTION METHODS SHALL MEET OR EXCEED CANDAIAN LANDSCAPE STANDARDS. ALL OFFSITE LANDSCAPE WORKS TO MEET CITY OF KELOWNA BYLAW 12375 STANDARDS.

2. ALL SOFT LANDSCAPE AREAS SHALL BE WATERED BY A FULLY AUTOMATIC TIMED UNDERGROUND IRRIGATION SYSTEM.

3. TREE AND SHRUB BEDS TO BE DRESSED IN A MINIMUM 75mm NATURAL WOOD MULCH AS SHOWN IN PLANS. DO NOT PLACE WEED MAT UNDERNEATH TREE AND SHRUB BEDS.

4. SHRUB BEDS TO RECEIVE A MINIMUM 300mm DEPTH TOPSOIL PLACEMENT. TREE BEDS TO RECEIVE A MINIMUM 1000mm DEPTH TOPSOIL PLACEMENT.

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PROJECT TITLE

1531 BERNARD AVENUE
LEVEL 6 & ROOFTOP

Kelowna, BC

DRAWING TITLE

CONCEPTUAL LANDSCAPE PLAN

ISSUED FOR / REVISION

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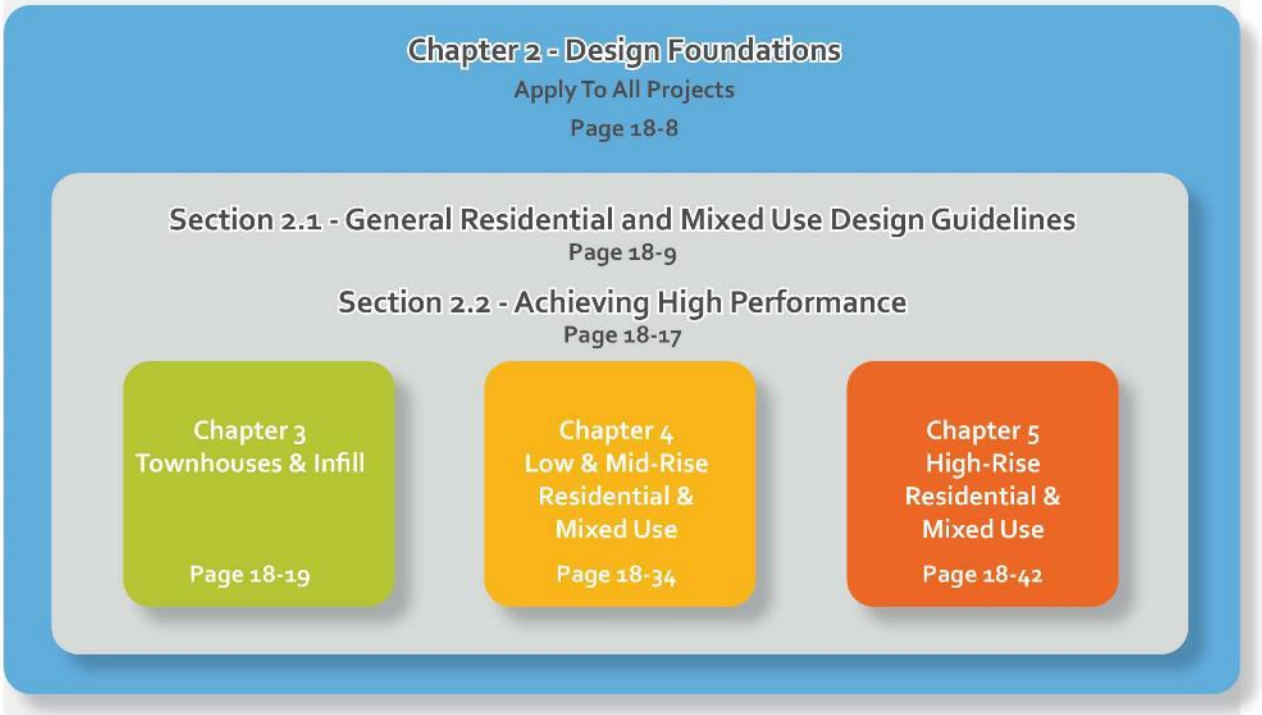
FORM & CHARACTER – DEVELOPMENT PERMIT GUIDELINES

Chapter 2 - The Design Foundations : apply to all projects and provide the overarching principles for supporting creativity, innovation and design excellence in Kelowna.

- Facilitate Active Mobility
- Use Placemaking to Strengthen Neighbourhood Identity
- Create Lively and Attractive Streets & Public Spaces
- Design Buildings to the Human Scale
- Strive for Design Excellence

The General Residential and Mixed Use Guidelines : provide the key guidelines that all residential and mixed use projects should strive to achieve to support the Design Foundations.

- The General Guidelines are supplement by typology-specific guidelines (e.g., Townhouses & Infill on page 18-19, High-Rise Residential and Mixed-Use on page 18-42), which provide additional guidance about form and character.



ATTACHMENT B
This forms part of application
DP23-0232
Planner Initials JI
City of Kelowna
DEVELOPMENT PLANNING

*Note: Refer to the Design Foundations and the Guidelines associated with the specific building typology.

Consideration has been given to the following guidelines as identified in Chapter 18 of the City of Kelowna 2040 Official Community Plan:

SECTION 2.0: GENERAL RESIDENTIAL AND MIXED USE						
RATE PROPOSALS COMPLIANCE TO PERTINENT GUIDELINE *(1 is least complying & 5 is highly complying)*	**N/A**	**1**	**2**	**3**	**4**	**5**
2.1 General residential & mixed use guidelines						
2.1.1 Relationship to the Street	**N/A**	**1**	**2**	**3**	**4**	**5**
a. Orient primary building facades and entries to the fronting street or open space to create street edge definition and activity.						x
b. On corner sites, orient building facades and entries to both fronting streets.	x					
c. Minimize the distance between the building and the sidewalk to create street definition and a sense of enclosure.						x
d. Locate and design windows, balconies, and street-level uses to create active frontages and 'eyes on the street', with additional glazing and articulation on primary building facades.					x	
e. Ensure main building entries are clearly visible with direct sight lines from the fronting street.						x
f. Avoid blank, windowless walls along streets or other public open spaces.						x
g. Avoid the use of roll down panels and/or window bars on retail and commercial frontages that face streets or other public open spaces.	x					
h. In general, establish a street wall along public street frontages to create a building height to street width ration of 1:2, with a minimum ration of 11:3 and a maximum ration of 1:1.75. • Wider streets (e.g. transit corridors) can support greater streetwall heights compared to narrower streets (e.g. local streets); • The street wall does not include upper storeys that are setback from the primary frontage; and • A 1:1 building height to street width ration is appropriate for a lane of mid-block connection condition provided the street wall height is no greater than 3 storeys.						x
2.1.2 Scale and Massing	**N/A**	**1**	**2**	**3**	**4**	**5**
a. Provide a transition in building height from taller to shorter buildings both within and adjacent to the site with consideration for future land use direction.					x	
b. Break up the perceived mass of large buildings by incorporating visual breaks in facades.					x	
c. Step back the upper storeys of buildings and arrange the massing and siting of buildings to: • Minimize the shadowing on adjacent buildings as well as public and open spaces such as sidewalks, plazas, and courtyards; and • Allow for sunlight onto outdoor spaces of the majority of ground floor units during the winter solstice.						x

2.1.3 Site Planning	N/A	1	2	3	4	5
a. Site and design buildings to respond to unique site conditions and opportunities, such as oddly shaped lots, location at prominent intersections, framing of important open spaces, corner lots, sites with buildings that terminate a street end view, and views of natural features.					x	
b. Use Crime Prevention through Environmental Design (CPTED) principles to better ensure public safety through the use of appropriate lighting, visible entrances, opportunities for natural surveillance, and clear sight lines for pedestrians.						x
c. Limit the maximum grades on development sites to 30% (3:1)						x
d. Design buildings for 'up-slope' and 'down-slope' conditions relative to the street by using strategies such as: • Stepping buildings along the slope, and locating building entrances at each step and away from parking access where possible; • Incorporating terracing to create usable open spaces around the building • Using the slope for under-building parking and to screen service and utility areas; • Design buildings to access key views; and • Minimizing large retaining walls (retaining walls higher than 1 m should be stepped and landscaped).						x
e. Design internal circulation patterns (street, sidewalks, pathways) to be integrated with and connected to the existing and planed future public street, bicycle, and/or pedestrian network.						x
f. Incorporate easy-to-maintain traffic calming features, such as on-street parking bays and curb extensions, textured materials, and crosswalks.	x					
g. Apply universal accessibility principles to primary building entries, sidewalks, plazas, mid-block connections, lanes, and courtyards through appropriate selection of materials, stairs, and ramps as necessary, and the provision of wayfinding and lighting elements.						x
2.1.4 Site Servicing, Access, and Parking	**N/A**	**1**	**2**	**3**	**4**	**5**
a. Locate off-street parking and other 'back-of-house' uses (such as loading, garbage collection, utilities, and parking access) away from public view.						x
b. Ensure utility areas are clearly identified at the development permit stage and are located to not unnecessarily impact public or common open spaces.						x
c. Avoid locating off-street parking between the front façade of a building and the fronting public street.						x
d. In general, accommodate off-street parking in one of the following ways, in order of preference: • Underground (where the high water table allows) • Parking in a half-storey (where it is able to be accommodated to not negatively impact the street frontage);						x

• Garages or at-grade parking integrated into the building (located at the rear of the building); and • Surface parking at the rear, with access from the lane or secondary street wherever possible.						
e. Design parking areas to maximize rainwater infiltration through the use of permeable materials such as paving blocks, permeable concrete, or driveway planting strips.	x					
f. In cases where publicly visible parking is unavoidable, screen using strategies such as: • Landscaping; • Trellises; • Grillwork with climbing vines; or • Other attractive screening with some visual permeability.	x					
g. Provide bicycle parking at accessible locations on site, including: • Covered short-term parking in highly visible locations, such as near primary building entrances; and • Secure long-term parking within the building or vehicular parking area.						x
h. Provide clear lines of site at access points to parking, site servicing, and utility areas to enable casual surveillance and safety.						x
i. Consolidate driveway and laneway access points to minimize curb cuts and impacts on the pedestrian realm or common open spaces.	x					
j. Minimize negative impacts of parking ramps and entrances through treatments such as enclosure, screening, high quality finishes, sensitive lighting and landscaping.	x					
2.1.5 Streetscapes, Landscapes, and Public Realm Design	**N/A**	**1**	**2**	**3**	**4**	**5**
a. Site buildings to protect mature trees, significant vegetation, and ecological features.	x					
b. Locate underground parkades, infrastructure, and other services to maximize soil volumes for in-ground plantings.						x
c. Site trees, shrubs, and other landscaping appropriately to maintain sight lines and circulation.						x
d. Design attractive, engaging, and functional on-site open spaces with high quality, durable, and contemporary materials, colors, lighting, furniture, and signage.						x
e. Ensure site planning and design achieves favourable microclimate outcomes through strategies such as: • Locating outdoor spaces where they will receive ample sunlight throughout the year; • Using materials and colors that minimize heat absorption; • Planting both evergreen and deciduous trees to provide a balance of shading in the summer and solar access in the winter; and • Using building mass, trees and planting to buffer wind.					x	
f. Use landscaping materials that soften development and enhance the public realm.					x	

g.	Plant native and/or drought tolerant trees and plants suitable for the local climate.						x
h.	Select trees for long-term durability, climate and soil suitability, and compatibility with the site's specific urban conditions.						x
i.	Design sites and landscapes to maintain the pre-development flows through capture, infiltration, and filtration strategies, such as the use of rain gardens and permeable surfacing.					x	
j.	Design sites to minimize water use for irrigation by using strategies such as: • Designing planting areas and tree pits to passively capture rainwater and stormwater run-off; and • Using recycled water irrigation systems.						x
k.	Create multi-functional landscape elements wherever possible, such as planting areas that also capture and filter stormwater or landscape features that users can interact with.						x
l.	Select materials and furnishings that reduce maintenance requirements and use materials and site furnishings that are sustainably sourced, re-purposed or 100% recycled.						x
m.	Use exterior lighting to complement the building and landscape design, while: • Minimizing light trespass onto adjacent properties; • Using full cut-off lighting fixtures to minimize light pollution; and • Maintaining lighting levels necessary for safety and visibility.						x
n.	Employ on-site wayfinding strategies that create attractive and appropriate signage for pedestrians, cyclists, and motorists using a 'family' of similar elements.					x	
2.1.6 Building Articulation, Features and Materials		**N/A**	**1**	**2**	**3**	**4**	**5**
a.	Express a unified architectural concept that incorporates variation in façade treatments. Strategies for achieving this include: • Articulating facades by stepping back or extending forward a portion of the façade to create a series of intervals or breaks; • Repeating window patterns on each step-back and extension interval; • Providing a porch, patio, or deck, covered entry, balcony and/or bay window for each interval; and • Changing the roof line by alternating dormers, stepped roofs, gables, or other roof elements to reinforce each interval.						x
b.	Incorporate a range of architectural features and details into building facades to create visual interest, especially when approached by pedestrians. Include architectural features such as: bay windows and balconies; corner feature accents, such as turrets or cupolas; variations in roof height, shape and detailing; building entries; and canopies and overhangs. Include architectural details such as: Masonry such as tiles, brick, and stone; siding including score lines and varied materials to distinguish between floors; articulation of columns and pilasters;						x

	ornamental features and art work; architectural lighting; grills and railings; substantial trim details and moldings / cornices; and trellises, pergolas, and arbors.						
c.	Design buildings to ensure that adjacent residential properties have sufficient visual privacy (e.g. by locating windows to minimize overlook and direct sight lines into adjacent units), as well as protection from light trespass and noise.					x	
d.	Design buildings such that their form and architectural character reflect the buildings internal function and use.						x
e.	Incorporate substantial, natural building materials such as masonry, stone, and wood into building facades.					x	
f.	Provide weather protection such as awnings and canopies at primary building entries.						x
g.	Place weather protection to reflect the building's architecture.						x
h.	Limit signage in number, location, and size to reduce visual clutter and make individual signs easier to see.						x
i.	Provide visible signage identifying building addresses at all entrances.						x

SECTION 4.0: LOW & MID-RISE RESIDENTIAL MIXED USE						
RATE PROPOSALS COMPLIANCE TO PERTINENT GUIDELINE *(1 is least complying & 5 is highly complying)*	**N/A**	**1**	**2**	**3**	**4**	**5**
4.1 Low & mid-rise residential & mixed use guidelines						
4.1.1 Relationship to the Street	**N/A**	**1**	**2**	**3**	**4**	**5**
i. Ensure lobbies and main building entries are clearly visible from the fronting street.						x
j. Avoid blank walls at grade wherever possible by: • Locating enclosed parking garages away from street frontages or public open spaces; • Using ground-oriented units or glazing to avoid creating dead frontages; and • When unavoidable, screen blank walls with landscaping or incorporate a patio café or special materials to make them more visually interesting.						x
Residential & Mixed Use Buildings						
k. Set back residential buildings on the ground floor between 3-5 m from the property line to create a semi-private entry or transition zone to individual units and to allow for an elevated front entryway or raised patio. • A maximum 1.2 m height (e.g. 5-6 steps) is desired for front entryways. • Exceptions can be made in cases where the water table requires this to be higher. In these cases, provide a larger patio and screen parking with ramps, stairs and landscaping.					x	

l. Incorporate individual entrances to ground floor units accessible from the fronting street or public open spaces.						x
m. Site and orient buildings so that windows and balconies overlook public streets, parks, walkways, and shared amenity spaces while minimizing views into private residences.						x
4.1.2 Scale and Massing	**N/A**	**1**	**2**	**3**	**4**	**5**
a. Residential building facades should have a maximum length of 60 m. A length of 40 m is preferred.					x	
b. Residential buildings should have a maximum width of 24 m.						x
c. Buildings over 40 m in length should incorporate a significant horizontal and vertical break in the façade.					x	
d. For commercial facades, incorporate a significant break at intervals of approximately 35 m.	x					
4.1.3 Site Planning	**N/A**	**1**	**2**	**3**	**4**	**5**
a. On sloping sites, floor levels should step to follow natural grade and avoid the creation of blank walls.						x
b. Site buildings to be parallel to the street and to have a distinct front-to-back orientation to public street and open spaces and to rear yards, parking, and/or interior court yards: • Building sides that interface with streets, mid-block connections and other open spaces and should positively frame and activate streets and open spaces and support pedestrian activity; and • Building sides that are located away from open spaces (building backs) should be designed for private/shared outdoor spaces and vehicle access.	x					
c. Break up large buildings with mid-block connections which should be publicly-accessible wherever possible.	x					
d. Ground floors adjacent to mid-block connections should have entrances and windows facing the mid-block connection.	x					
4.1.4 Site Servicing, Access and Parking	**N/A**	**1**	**2**	**3**	**4**	**5**
a. Vehicular access should be from the lane. Where there is no lane, and where the re-introduction of a lane is difficult or not possible, access may be provided from the street, provided: • Access is from a secondary street, where possible, or from the long face of the block; • Impacts on pedestrians and the streetscape is minimised; and • There is no more than one curb cut per property.						x
b. Above grade structure parking should only be provided in instances where the site or high water table does not allow for other parking forms and should be screened from public view with active retail uses, active residential uses, architectural or landscaped screening elements.					x	
c. Buildings with ground floor residential may integrate half-storey underground parking to a maximum of 1.2 m above grade, with the following considerations:						x

• Semi-private spaces should be located above to soften the edge and be at a comfortable distance from street activity; and • Where conditions such as the high water table do not allow for this condition, up to 2 m is permitted, provided that entryways, stairs, landscaped terraces, and patios are integrated and that blank walls and barriers to accessibility are minimized.						
4.1.5 Publicly-Accessible and Private Open Spaces	**N/A**	**1**	**2**	**3**	**4**	**5**
a. Integrate publicly accessible private spaces (e.g. private courtyards accessible and available to the public) with public open areas to create seamless, contiguous spaces.	x					
b. Locate semi-private open spaces to maximize sunlight penetration, minimize noise disruptions, and minimize 'overlook' from adjacent units.					x	
Outdoor amenity areas						
c. Design plazas and urban parks to: • Contain 'three edges' (e.g. building frontage on three sides) where possible and be sized to accommodate a variety of activites; • Be animated with active uses at the ground level; and • Be located in sunny, south facing areas.	x					
d. Design internal courtyards to: • Provide amenities such as play areas, barbecues, and outdoor seating where appropriate. • Provide a balance of hardscape and softscape areas to meet the specific needs of surrounding residents and/or users.	x					
e. Design mid-block connections to include active frontages, seating and landscaping.	x					
Rooftop Amenity Spaces						
f. Design shared rooftop amenity spaces (such as outdoor recreation space and rooftop gardens on the top of a parkade) to be accessible to residents and to ensure a balance of amenity and privacy by: • Limiting sight lines from overlooking residential units to outdoor amenity space areas through the use of pergolas or covered areas where privacy is desired; and • Controlling sight lines from the outdoor amenity space into adjacent or nearby residential units by using fencing, landscaping, or architectural screening.					x	
g. Reduce the heat island affect by including plants or designing a green roof, with the following considerations: • Secure trees and tall shrubs to the roof deck; and • Ensure soil depths and types are appropriate for proposed plants and ensure drainage is accommodated.						x
4.1.6 Building Articulation, Features, and Materials	**N/A**	**1**	**2**	**3**	**4**	**5**
a. Articulate building facades into intervals that are a maximum of 15 m wide for mixed-use buildings and 20 m wide for residential buildings. Strategies for articulating buildings should consider the potential impacts on energy performance and include:					x	

• Façade Modulation – stepping back or extending forward a portion of the façade to create a series of intervals in the façade; • Repeating window pattern intervals that correspond to extensions and step backs (articulation) in the building façade; • Providing a porch, patio, deck, or covered entry for each interval; • Providing a bay window or balcony for each interval, while balancing the significant potential for heat loss through thermal bridge connections which could impact energy performance; • Changing the roof line by alternating dormers, stepped roofs, gables, or other roof elements to reinforce the modulation or articulation interval; • Changing the materials with the change in building plane; and • Provide a lighting fixture, trellis, tree or other landscape feature within each interval.						
b. Break up the building mass by incorporating elements that define a building's base, middle and top.						**X**
c. Use an integrated, consistent range of materials and colors and provide variety, by for example, using accent colors.						**x**
d. Articulate the façade using design elements that are inherent to the buildings as opposed to being decorative. For example, create depth in building facades by recessing window frames or partially recessing balconies to allow shadows to add detail and variety as a byproduct of massing.					**x**	
e. Incorporate distinct architectural treatments for corner sites and highly visible buildings such as varying the roofline, articulating the façade, adding pedestrian space, increasing the number and size of windows, and adding awnings or canopies.	**x**					
f. Provide weather protection (e.g. awnings, canopies, overhangs, etc.) along all commercial streets and plazas with particular attention to the following locations: • Primary building entrances;, • Adjacent to bus zones and street corners where people wait for traffic lights; • Over store fronts and display windows; and • Any other areas where significant waiting or browsing by people occurs.						**x**
g. Architecturally-integrate awnings, canopies, and overhangs to the building and incorporate architectural design features of buildings from which they are supported.						**x**
h. Place and locate awnings and canopies to reflect the building's architecture and fenestration pattern.						**x**
i. Place awnings and canopies to balance weather protection with daylight penetration. Avoid continuous opaque canopies that run the full length of facades.						**x**
j. Provide attractive signage on commercial buildings that identifies uses and shops clearly but which is scaled to the pedestrian rather than the motorist. Some exceptions can be made for buildings						**x**

	located on highways and/or major arterials in alignment with the City's Sign Bylaw.						
k.	Avoid the following types of signage: • Internally lit plastic box signs; • Pylon (stand alone) signs; and • Rooftop signs.						x
l.	Uniquely branded or colored signs are encouraged to help establish a special character to different neighbourhoods.	x					

ATTACHMENT B
This forms part of application
DP23-0232
Planner Initials JI
City of Kelowna
DEVELOPMENT PLANNING

December 8th, 2023

Our File: 23015

City of Kelowna
1435 Water St,
Kelowna, BC V1Y 1J4

Attention: Trisa Atwood, Planner Specialist, City of Kelowna

Dear Ms. Atwood,

Re: Development Permit / Rezoning for property located at 1531 Bernard Avenue

This development proposal will adhere to the requirements of the MF3R zone as described in the City of Kelowna Zoning Bylaw No. 12375.

Project Description

The current zoning for the site is RU4b. With an OCP future land use designation of C-NHD, we are seeking a rezoning from RU4b to MF3R zone. The proposed project contains (1) 6-storey building with two levels of parking, one of which is below grade. The proposed project would include (51) multi-family residential units. The housing consists of underground and main level parking with 5 levels of residential above, providing (4) 3-bed, (24) 2-bed, (18) 1-bed and (5) studio units. The project consists of a prominent entrance at street level with ground-oriented units providing a strong connection to the neighborhood.

Design Rationale

We present an evolved design rationale for the 1531 Bernard Ave Residential Project, aligning its purpose with city objectives while acknowledging the transition from the current tenancy under the Abbey Field Society. The property's current operation, managed by Abbey Field Society, hosts 12 tenants, offering an independent retirement community experience. Residents benefit from a communal lifestyle akin to a modern commune, where bedrooms are rented, and shared facilities foster a family-like environment. The society provides self-served breakfast and two home-cooked meals daily, delivering a unique blend of communal living and culinary convenience.

The proposed development will transition to a rental-only model, focusing on market-rate units. It stands distinct from low-income or supportive housing, operating without supportive services and not aligning with a non-profit structure. Abbeyfield, citing challenges within the Landlord Tenant Act in BC, operational costs, and the age of its board, will cease to operate the facility, leading to the discontinuation of Orchard City Abbeyfield Society.

Paul M. Schuster – Architect AIBC, CAB, MRAIC, and NCARB Certified
• 302 – 2237 Leckie Rd. • Kelowna, BC • V1X 6Y5 | www.novationarchitecture.com | paul@novationarchitecture.com | (236) 420 – 4144 •

The project's suitability within the MF3R zone persists due to its residential context, accessibility, and potential to contribute positively to the city's future designation. Situated in a well-established neighborhood, its strategic location positions it as an ideal candidate for increased density, aligning with Kelowna's sustainability goals and long-term vision. In accordance with (OCP) objectives, we've included 10% 3-bedroom units in the unit mix to accommodate larger families and diverse household needs while maintaining the project's density and economic feasibility.

Our design philosophy extends beyond physical structures, aiming to fortify the neighborhood's identity. Through deliberate material integration, such as various brick and cementitious siding, the project seeks to create an aesthetically pleasing and pedestrian-friendly frontage along Bernard Ave, complemented by lush landscaping. Ground-oriented units at the entrance foster community cohesion, enhancing the area's visual harmony.

The project prioritizes accessibility through a dedicated lane, ensuring safe access for residents. Furthermore, the inclusion of comprehensive amenities—visitor parking, easily accessible bike storage and wash station, mailbox facilities, and waste recycling—reflects our commitment to convenience and sustainability, embodying our vision for a vibrant and accessible residential space.
Continued efforts toward a harmonious blend of community-centric design and sustainable functionality remain at the core of our approach for the 1531 Bernard Ave Residential Project.

In conclusion, the Bernard Ave Residential Project encapsulates our dedication to blending innovative design, community enhancement, and sustainable mobility.

We believe this proposal will not only meet the city's standards but also contribute positively to the fabric of Kelowna. We welcome the opportunity to engage in further discussions and provide additional information as needed.

We are seeking no variances as we feel that the development has been designed appropriately for the site and location.

I trust that you will find our application in good order. Please contact our office if you require any further information.

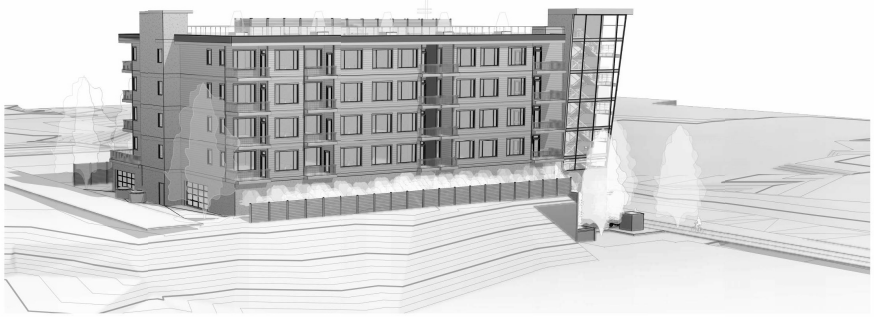
Kind Regards,

NOvation Architecture Ltd.

Paul M. Schuster, Architect
AIBC, CAB, MRAIC and NCARB Certified

(250) 718 - 1302
paul@novationarchitecture.com

ATTACHMENT C
This forms part of application
DP23-0232
City of Kelowna
DEVELOPMENT PLANNING
Planner Initials JI



ATTACHMENT D

This forms part of application

DP23-0232

Planner Initials JI

City of Kelowna

DEVELOPMENT PLANNING

Project File Name and Location

Notes:

All drawings shall be read in conjunction with specifications and consultant details.

All work shall be carried out in accordance with Canadian standards, specifications, BC Building Code (2018 edition) and local authority bylaws and requirements.

Tabulated scales refer to Arch D size drawings sheet.

This drawing must not be scaled.

Contractors shall verify all dimensions prior to commencement of work.

Any omissions or discrepancies shall be reported to the architect.

Seal

2025-04-11

this document is:

- [■] NOT controlled. Revisions may be made without notice.
- [ ] A CONTROLLED document. Revisions will be advised.
- [ ] The first issue of the document.
- [ ] A complete revision. Remove previous issues from use.
- [ ] A partial revision. Remove previous issues of corresponding sheets / pages from use.
- [■] Not for Construction.

NOT FOR CONSTRUCTION

No.	Date	Description
E	2025-04-11	RE-ISSUED FOR DEVELOPMENT PERMIT
D	2024-09-12	RE-ISSUED FOR DEVELOPMENT PERMIT
C	2024-02-23	RE-ISSUED FOR DEVELOPMENT PERMIT
B	2023-10-07	RE-ISSUED FOR DEVELOPMENT PERMIT
A	2023-09-07	ISSUED FOR DEVELOPMENT PERMIT

Revisions

NOVATION ARCHITECTURE LTD
302 - 2237 LECKIE ROAD
KELOWNA BC V1X 6Y5

project title

BERNARD AVE

1531 Bernard Ave, Kelowna, BC
PLAN KAP3604 SECTION 20
TOWNSHIP 26
PARCEL Z, PCL Z OF PL 3604 AS
SHWN ON PL B6449.

project no. 23015

drawing title

PROJECT MASSING

designed	PS	scale
drawn	IP	
checked	PS	

drawing no. A0.02

plotted 4/11/2025 11:27:06 AM

1575 BERNARD AVENUE
C.O.K. APPROVED DP
ADJACENT 6 STOREY BUILDING

1573 BERNARD AVENUE
PROPOSED NEW BUILDING

1 BERNARD AVENUE STREETSCAPE VIEW
3/32" = 1'-0"

ATTACHMENT E
This forms part of application
DP23-0232
Planner Initials JI
City of Kelowna
DEVELOPMENT PLANNING

Notes:

All drawings shall be read in conjunction with specifications and consultant details.

All work shall be carried out in accordance with Canadian standards, specifications, BC Building Code (2018 edition) and local authority bylaws and regulations.

Tabulated scales refer to Arch D size drawings sheet.

This drawing must not be scaled.

Contractors shall verify all dimensions prior to commencement of work.

Any omissions or discrepancies shall be reported to the architect.

Seal

2025-04-11

this document is:

- [■] NOT controlled. Revisions may be made without notice.
- [ ] A CONTROLLED document. Revisions will be advised.
- [ ] The first issue of the document.
- [ ] A complete revision. Remove previous issues from use.
- [ ] A partial revision. Remove previous issues of corresponding sheets / pages from use.
- [■] Not for Construction.

NOT FOR CONSTRUCTION

No.	Date	Description
E	2025-04-11	RE-ISSUED FOR DEVELOPMENT PERMIT
D	2024-09-12	RE-ISSUED FOR DEVELOPMENT PERMIT
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A	2023-09-07	ISSUED FOR DEVELOPMENT PERMIT

Revisions

NOVATION ARCHITECTURE LTD.
302 - 2237 LECKIE ROAD
KELOWNA BC V1X 6Y5

project title
BERNARD AVE
1531 Bernard Ave, Kelowna, BC
PLAN KAP3604 SECTION 20 TOWNSHIP 26 PARCEL Z, PCL Z OF PL 3604 AS SHWN ON PL B6449.

project no. 23015

drawing title
STREETSCAPE

designed Designer
drawn Author
checked Checker
scale 3/32" = 1'-0"

drawing no.
A3.10

printed 4/11/2025 11:37:43 AM

Project File Name and Location: C:\Users\Lenovo\Documents\Bernard_BLDG_Central_R24_R1_inderRTWZW.rvt

Development Permit

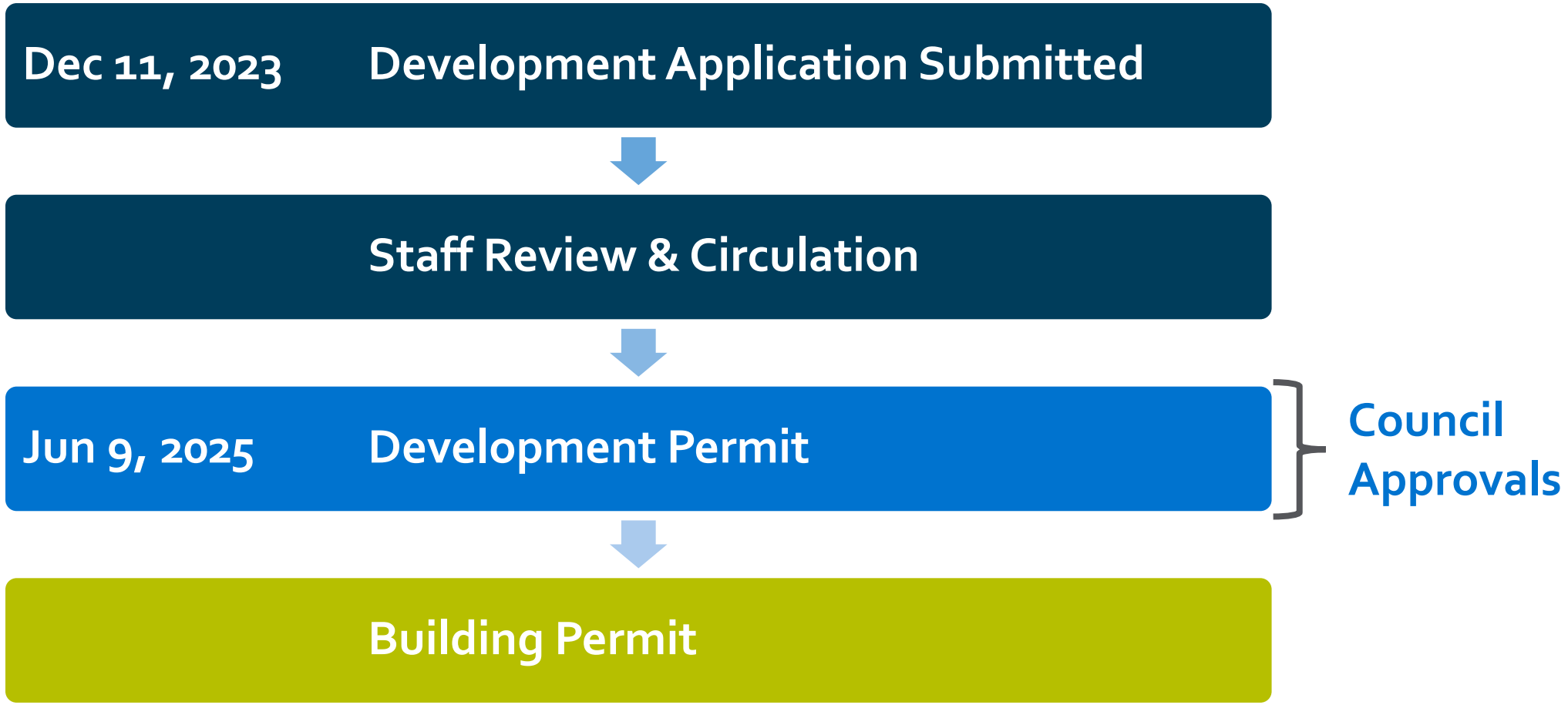
1531 Bernard Ave

DP23-0232

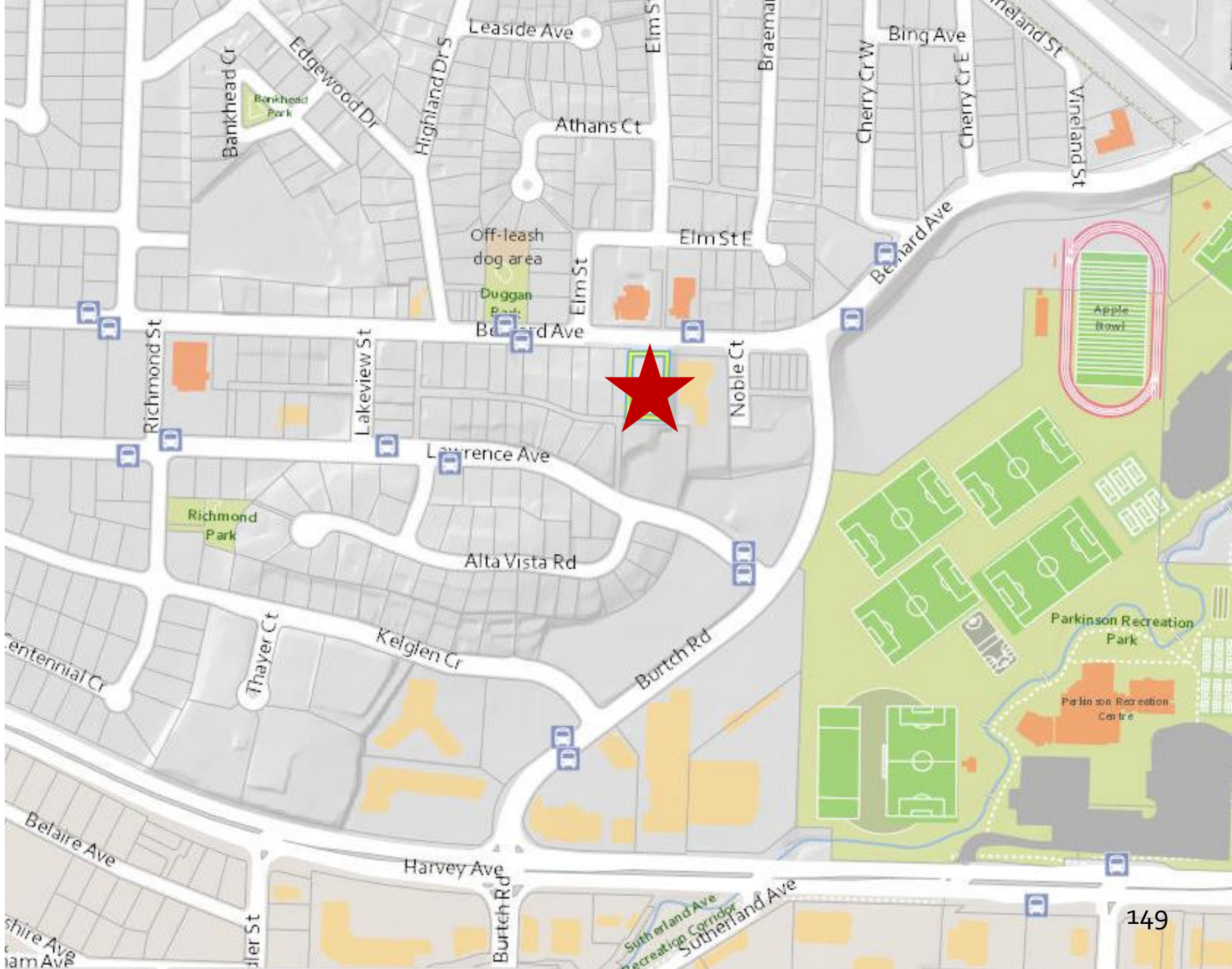
Purpose

- To issue a Development Permit for the form and character of an apartment building.

Development Process

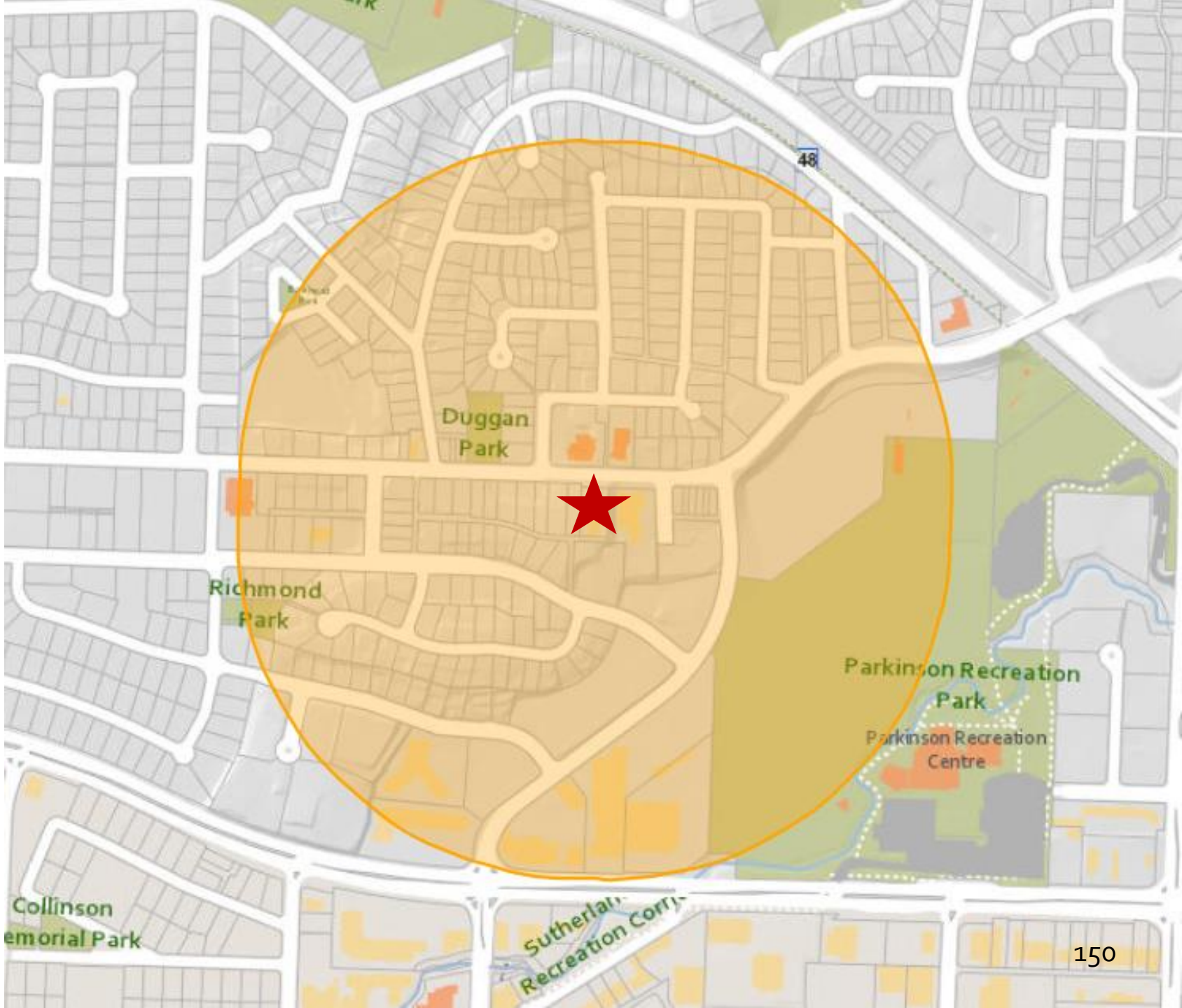


Context Map

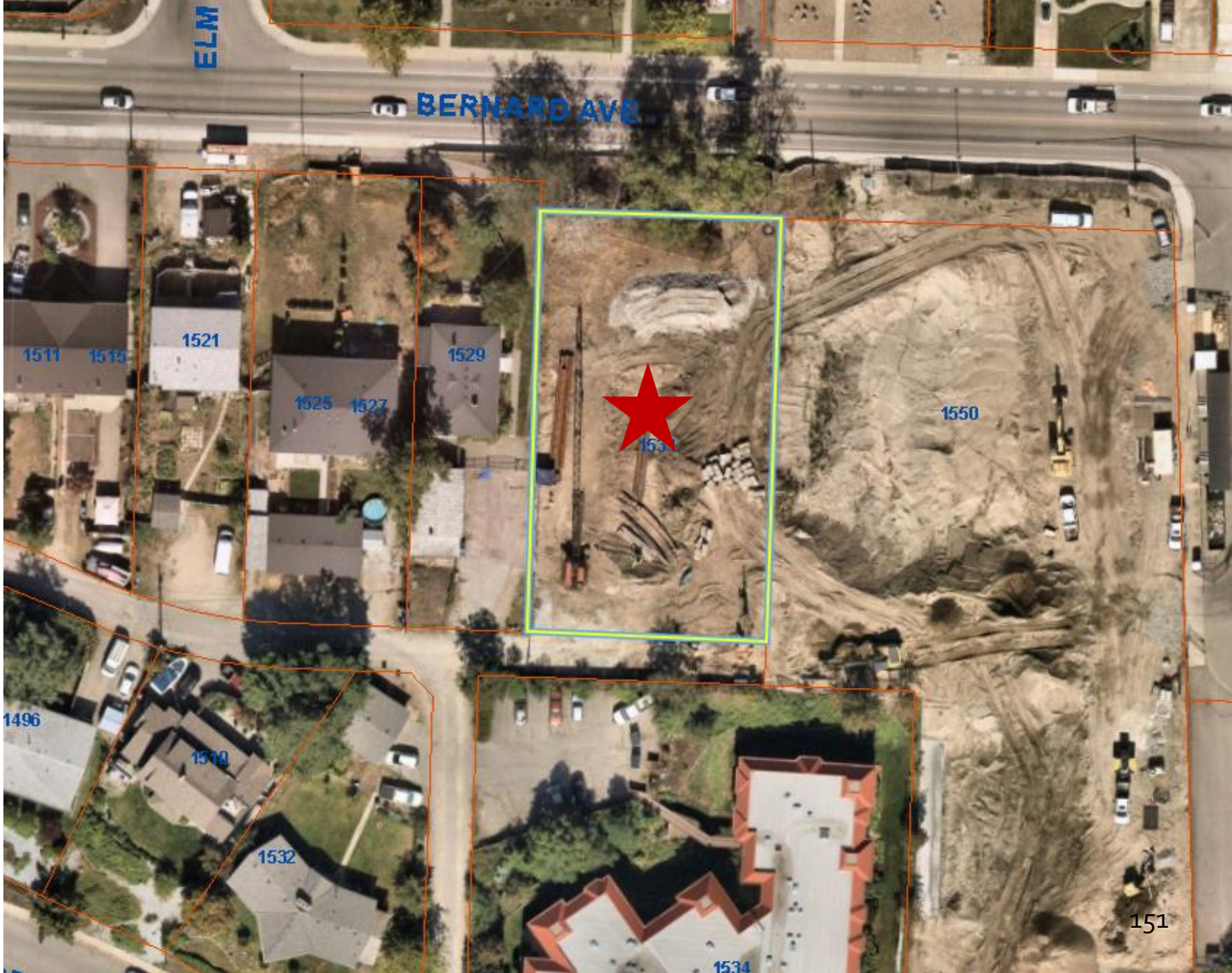

N
Leaside Ave
Bankhead Cr
Bankhead Park
Edgewood Dr
Highland Dr S
Athans Ct
Elm St
Braemar
Cherry Cr W
Bing Ave
Cherry Cr E
Vineland St
Off-leash dog area
Duggan Park
Elm St E
Bernard Ave
Richmond St
Lakeview St
Noble Ct
Lawrence Ave
Richmond Park
Alta Vista Rd
Thayer Ct
Kelglen Cr
Burtch Rd
Centennial Cr
Apple Bowl
Parkinson Recreation Park
Parkinson Recreation Centre
Belaire Ave
Harvey Ave
Sutherland Ave
Sutherland Ave Recreation Corridor

Model City

Estimated Population:
1,964
Estimated Jobs:
1328
Residential Units:
980
Commercial Units:
29



Subject Property Map

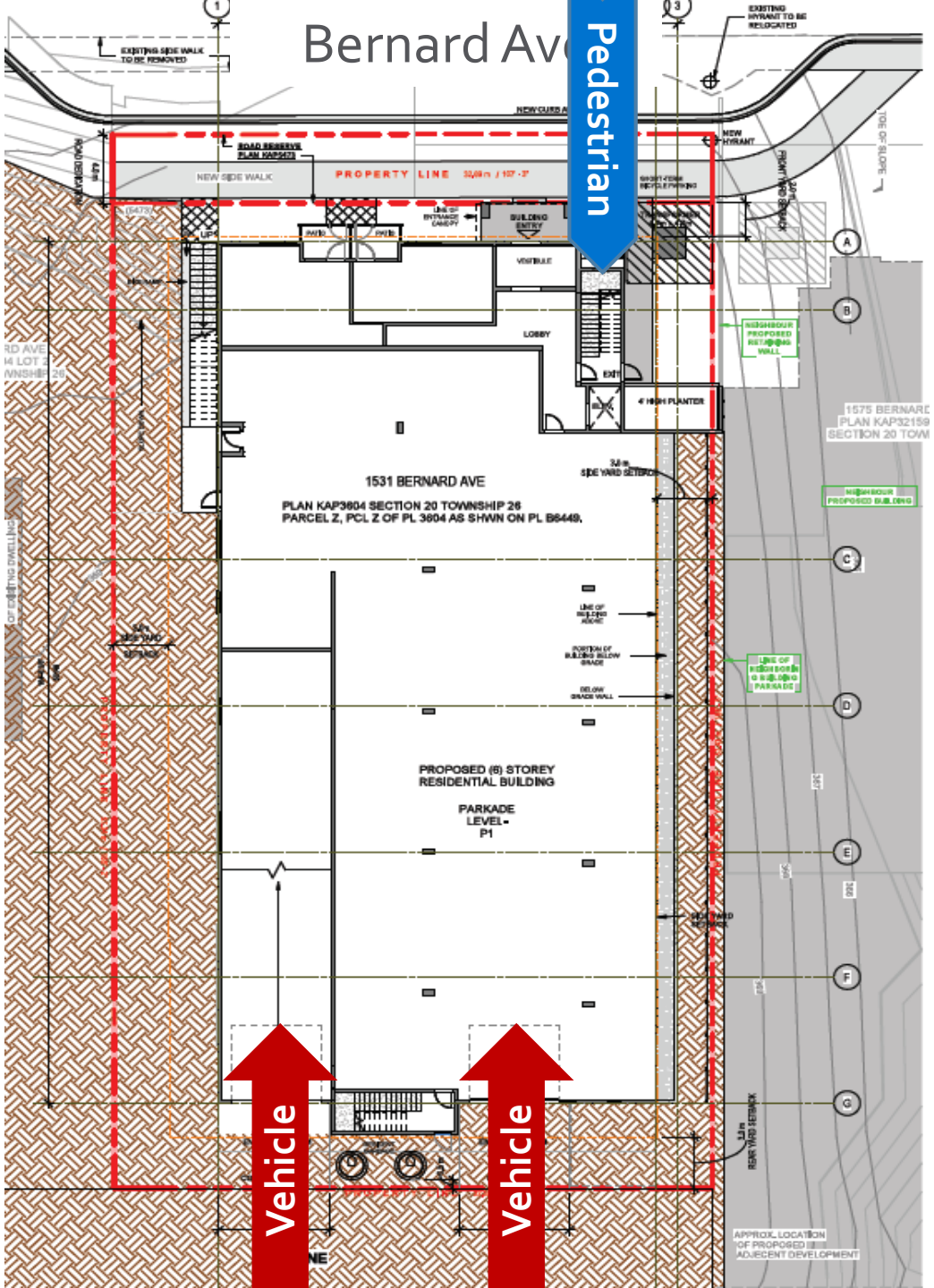


Technical Details

MF3r – Apartment Housing Rental Only

- 6 storeys with 51 units
  - 5 Studio
  - 18 One-Bedroom
  - 24 Two-Bedroom
  - 4 Three-Bedroom
- 59 Parking Stalls
- 46 Bicycle Parking Stalls
- 19 Trees
  - 7 Large Trees

Site Plan


Bernard Ave
Pedestrian
1531 BERNARD AVE
PLAN KAP3604 SECTION 20 TOWNSHIP 26
PARCEL Z, PCL Z OF PL 3604 AS SHWN ON PL B6449.
PROPOSED (6) STOREY
RESIDENTIAL BUILDING
PARKADE
LEVEL -
P1
Vehicle
Vehicle

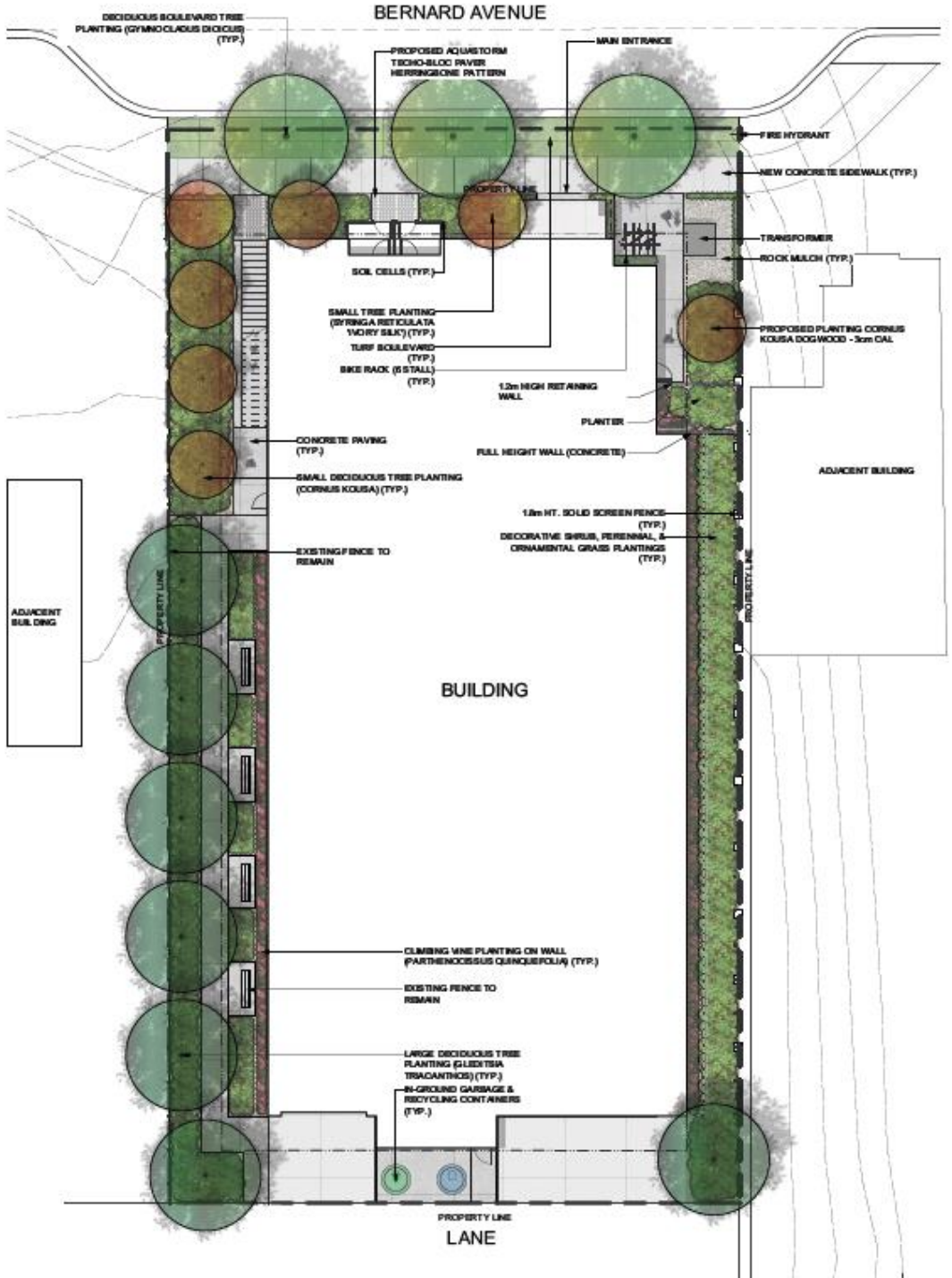
Elevation (North)

Elevation (East)

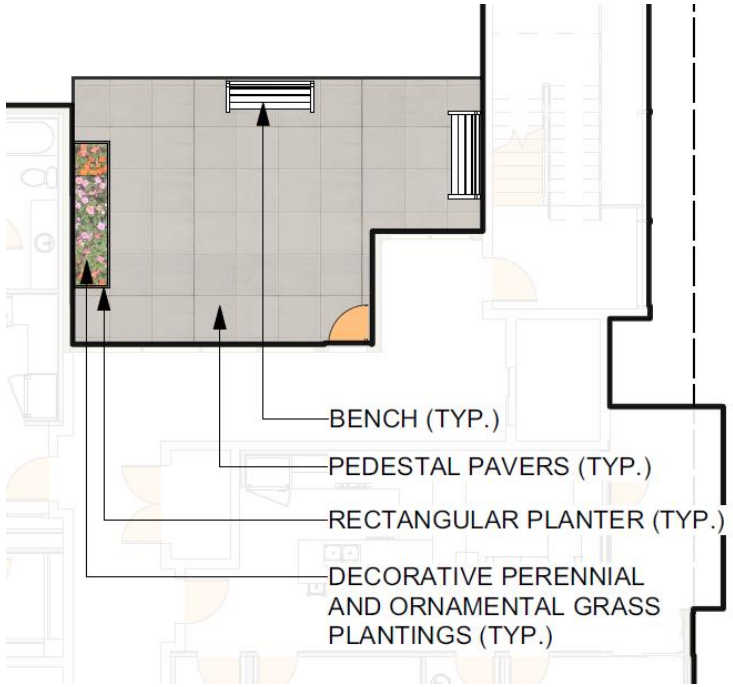
Elevation (South)

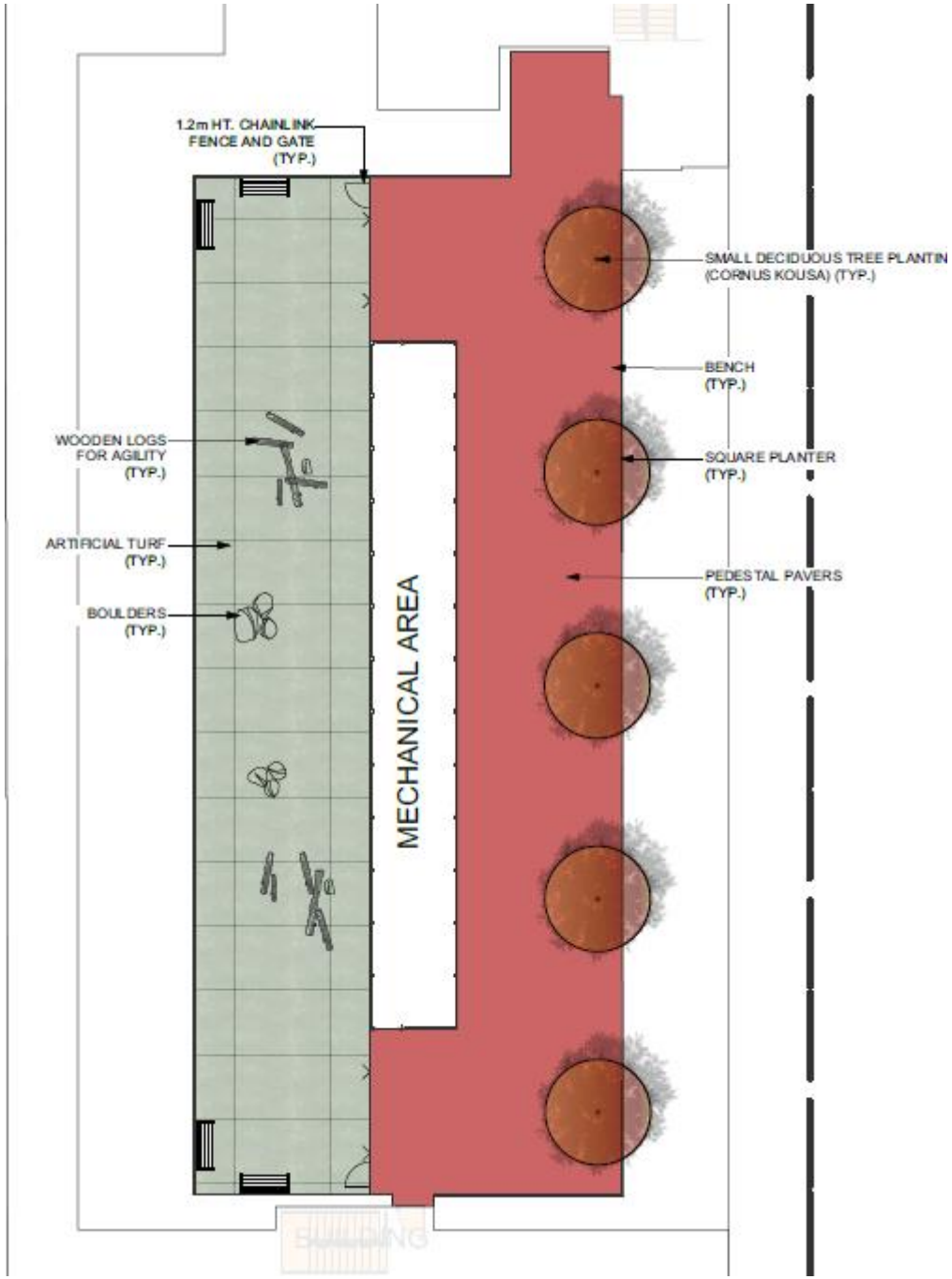
Elevation (West)

Landscape Plan



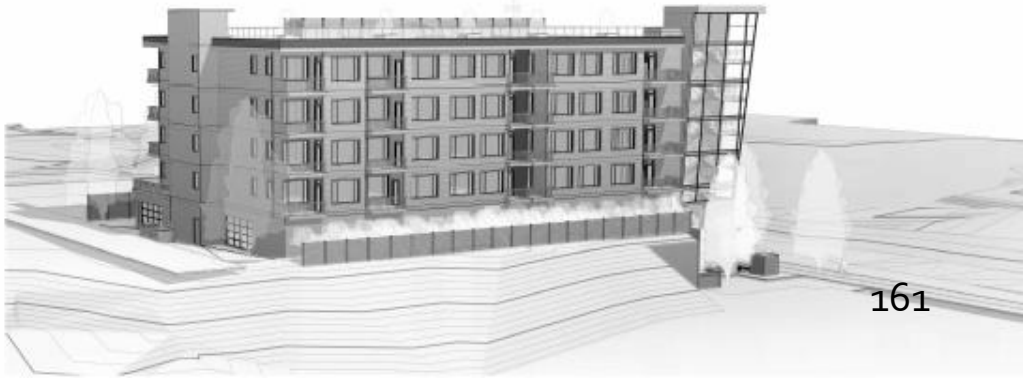
Rooftop / Outdoor Amenity





Rendering NW

Renderings



Street Context

1575 BERNARD AVENUE
C.O.K. APPROVED DP

1573 BERNARD AVENUE
PROPOSED NEW BUILDING

OCP Design Guidelines

- Locate off-street and other uses (loading, garbage, utilities, and parking) away from public view;
- Design attractive, engaging, and functional on-site open spaces;
- Incorporate a range of architectural features and details into the building façade.

Staff Recommendation

- Staff recommend support for the proposed development permit as it:
  - Meets majority of OCP Design Guidelines

REPORT TO COUNCIL EXTENSION

Date:	June 9, 2025
To:	Council
From:	City Manager
Address:	1444-1448 Gordon Dr and 1085 Martin Ave
File No.:	Z24-0003

	Existing	Proposed
OCP Future Land Use:	C-NHD – Core Area Neighbourhood	C-NHD – Core Area Neighbourhood
Zone:	MF1 – Infill Housing	MF3 – Apartment Housing

1.0 Recommendation

THAT in accordance with Development Application and Heritage Procedures Bylaw No. 12310, the deadline for the adoption of Rezoning Bylaw No. 12657 be extended from May 27, 2025 to May 27, 2026;

AND THAT Council direct Staff to not accept any further extension requests.

2.0 Purpose

To extend the deadline for adoption of Rezoning Bylaw No. 12604 to May 27, 2026.

3.0 Discussion

Final adoption of the Rezoning Bylaw is subject to the applicant meeting requirement of the Attachment "A": Development Engineering Memorandum. The applicant has been working with Staff and has requested additional time to complete the outstanding requirements. Staff are recommending that Council supports extending the deadline for the adoption of Rezoning Bylaw No. 12657 by one year to May 27, 2026, with no further extension requests to be granted.

4.0 Background

Resolution	Date
THAT Rezoning Application No. Z24-0003 to amend the City of Kelowna Zoning Bylaw No. 12375 by changing the zoning classification of Lot 4 District Lot 138 ODYD Plan 1472, located at 1085 Martin Avenue, Kelowna, BC, Lot 2 District Lot 138 ODYD Plan 1472, located at 1444 Gordon Drive, Kelowna, BC, and Lot 1 District Lot 138 ODYD Plan 1472, located at 1448 Gordon Drive, Kelowna, BC from the MF1 – Infill Housing zone to the MF3 – Apartment Housing zone, be considered by Council; AND THAT final adoption of the Rezoning Bylaw be considered subsequent to the outstanding conditions of approval as set out Attachment "A" attached to the Report from the Development Planning Department dated May 6, 2024; AND FURTHER THAT final adoption of the Rezoning bylaw be considered subsequent to the approval of the Ministry of Transportation and Infrastructure.	May 27, 2024

5.0 Application Chronology

Application Accepted:	May 22, 2025
Reading Consideration:	May 27, 2024

Report prepared by:	Tyler Caswell, Planner Specialist
Reviewed by:	Adam Cseke, Development Planning Manager
Reviewed by:	Nola Kilmartin, Development Planning Department Manager
Approved for Inclusion:	Ryan Smith, Divisional Director, Planning, Climate Action & Development Services

For additional information, please visit our Current Developments online at www.kelowna.ca/currentdevelopments.

CITY OF KELOWNA

BYLAW NO. 12726
Z24-0016
1870 Treetop Road

A bylaw to amend the "City of Kelowna Zoning Bylaw No. 12375".

The Municipal Council of the City of Kelowna, in open meeting assembled, enacts as follows:

1. THAT City of Kelowna Zoning Bylaw No. 12375 be amended by changing the zoning classification of Lot 1 Section 19 Township 27 ODYD Plan 33849, located on Treetop Road, Kelowna, BC from the RR1 – Large Lot Rural Residential zone to the RU2 – Medium Lot Housing zone.

2. This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first, second and third time by the Municipal Council this 2nd day of December, 2024.

Adopted by the Municipal Council of the City of Kelowna this

_____
Mayor

_____
City Clerk

CITY OF KELOWNA

BYLAW NO. 12747
Z24-0059
1210, 1220, and 1226 Glenmore Drive

A bylaw to amend the "City of Kelowna Zoning Bylaw No. 12375".

The Municipal Council of the City of Kelowna, in open meeting assembled, enacts as follows:

1. THAT City of Kelowna Zoning Bylaw No. 12375 be amended by changing the zoning classification of:

    a. Lot 2 Section 29 Township 26 ODYD Plan 25524, located on Glenmore Dr;

    b. Lot 1 Section 29 Township 26 ODYD Plan 25524, located on Glenmore Dr; and

    c. Lot A Section 29 Township 26 ODYD Plan 39467, located on Glenmore Dr

    from the MF1 – Infill Housing zone to the MF3r – Apartment Housing Rental Only zone.

2. This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first, second and third time by the Municipal Council this 10th day of March 2025.

Adopted by the Municipal Council of the City of Kelowna this

_____
Mayor

_____
City Clerk

CITY OF KELOWNA

BYLAW NO. 12765

Official Community Plan Amendment No. OCP24-0011
5570 and 5600 Lakeshore Road

A bylaw to amend the "*Kelowna 2040* – Official Community Plan Bylaw No. 12300".

The Municipal Council of the City of Kelowna, in open meeting assembled, enacts as follows:

1. THAT Map 3.1 – **Future Land Use** of "*Kelowna 2040* – Official Community Plan Bylaw No. 12300" be amended by changing the Future Land Use designation of portions of:

   a. Lot B Section 15 Township 28 Similkameen Division Yale District Plan KAP59239 Except Plan KAP88453, and
   b. That Part Fractional North West ¼ Section 15 Shown on Plan B1309 Township 28 Similkameen Division Yale District Except Plans KAP84401 and KAP88770

   located on Lakeshore Road, Kelowna, BC from the R-AGR – Rural – Agricultural & Resource designation to the S-RES – Suburban Residential designation as shown on Map "A" attached to and forming part of this bylaw.

2) This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first time by the Municipal Council this 7th day of April, 2025.

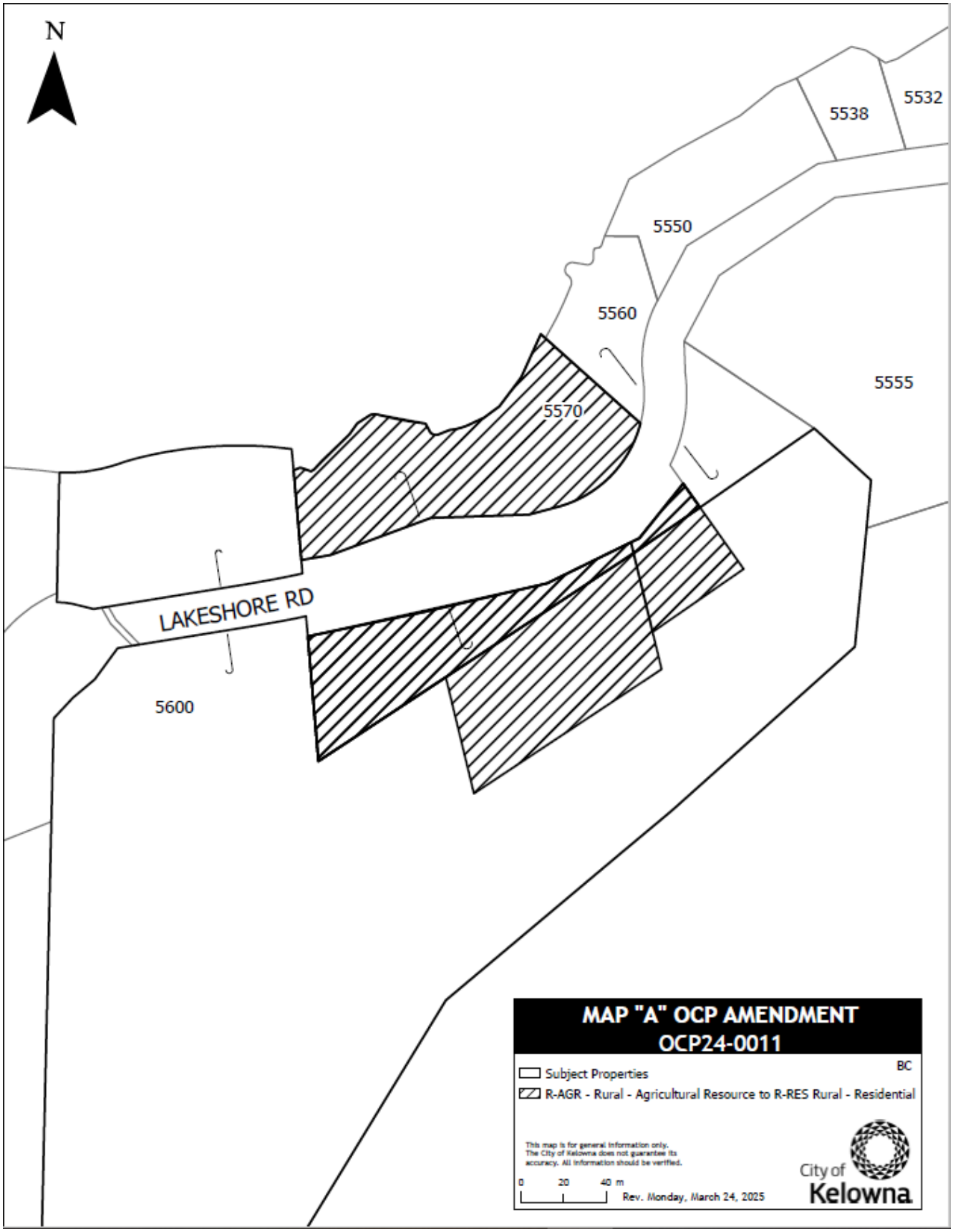
Considered at a Public Hearing on the 13th day of May, 2025.

Read a second and third time by the Municipal Council this 13th day of May, 2025.

Adopted by the Municipal Council of the City of Kelowna this

Mayor

City Clerk


N
5538
5532
5550
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5570
LAKESHORE RD
5600
MAP "A" OCP AMENDMENT
OCP24-0011
BC
Subject Properties
R-AGR - Rural - Agricultural Resource to R-RES Rural - Residential
This map is for general information only.
The City of Kelowna does not guarantee its
accuracy. All information should be verified.
0 20 40 m
Rev. Monday, March 24, 2025
City of
Kelowna

CITY OF KELOWNA

BYLAW NO. 12766
Z24-0036
5570 and 5600 Lakeshore Road

A bylaw to amend the "City of Kelowna Zoning Bylaw No. 12375".

The Municipal Council of the City of Kelowna, in open meeting assembled, enacts as follows:

1. THAT City of Kelowna Zoning Bylaw No. 12375 be amended by changing the zoning classification of portions of:

   a. Lot B Section 15 Township 28 Similkameen Division Yale District Plan KAP59239 Except Plan KAP88453, and
   b. That Part Fractional North West ¼ Section 15 Shown on Plan B1309 Township 28 Similkameen Division Yale District Except Plans KAP84401 and KAP88770

   located on Lakeshore Road, Kelowna, BC from the A2 – Agriculture / Rural Residential zone to the RR2 – Small Lot Rural Residential zone as shown on Map "B" attached to and forming part of this bylaw.

2. This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first time by the Municipal Council this 7th day of April, 2025.

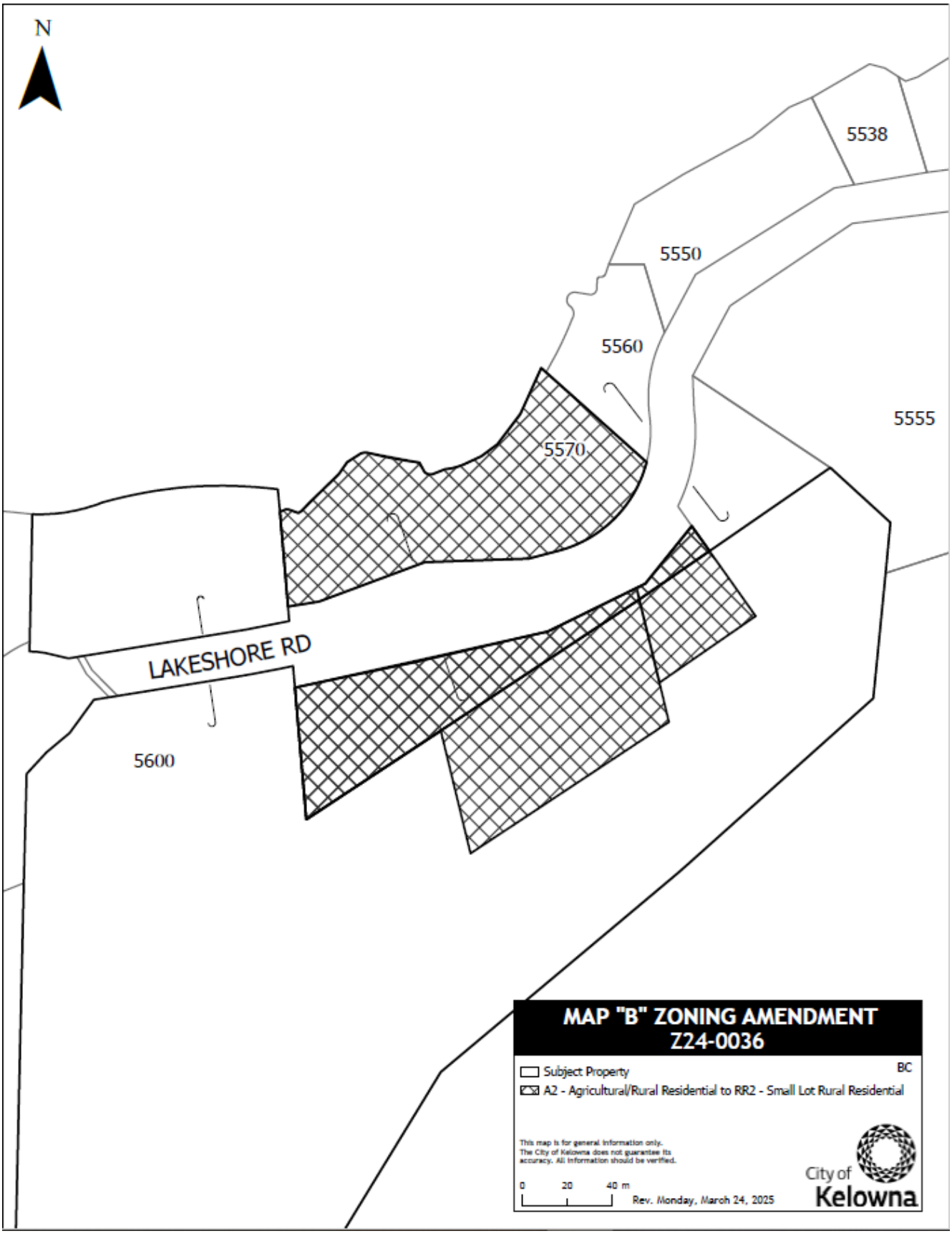
Considered at a Public Hearing on the 13th day of May, 2025.

Read a second and third time by the Municipal Council this 13th day of May, 2025.

Adopted by the Municipal Council of the City of Kelowna this

_____
Mayor

_____
City Clerk


N
5538
5550
5560
5555
5570
LAKESHORE RD
5600
MAP "B" ZONING AMENDMENT
Z24-0036
Subject Property
A2 - Agricultural/Rural Residential to RR2 - Small Lot Rural Residential
BC
This map is for general information only.
The City of Kelowna does not guarantee its accuracy. All information should be verified.
0 20 40 m
Rev. Monday, March 24, 2025
City of Kelowna

CITY OF KELOWNA

BYLAW NO. 12787
Z25-0011
1181-1191 Bernard Avenue

A bylaw to amend the "City of Kelowna Zoning Bylaw No. 12375".

The Municipal Council of the City of Kelowna, in open meeting assembled, enacts as follows:

1. THAT City of Kelowna Zoning Bylaw No. 12375 be amended by changing the zoning classification of Lot A District Lot 137 ODYD Plan EPP135950 located on Bernard Avenue, Kelowna, BC from the MF3 – Apartment Housing zone to the MF3r – Apartment Housing Rental Only zone.

2. This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first, second and third time by the Municipal Council this 26th day of May, 2025.

Approved pursuant to section 52(3)(a) of the Transportation Act this 27th day of May, 2025.

Audrie Henry

for Minister of Transportation & Transit

Adopted by the Municipal Council of the City of Kelowna this

Mayor

City Clerk

Report to Council

Date:	June 9th, 2025
To:	Council
From:	City Manager
Subject:	2024 Progress Report for the Official Community Plan and Transportation Master Plan
Department:	Long Range Planning; Integrated Transportation

Recommendation:
THAT Council receives, for information, the report from Long Range Planning and Integrated Transportation, dated June 9th, 2025, with respect to the 2024 Progress Report for the 2040 Official Community Plan and 2040 Transportation Master Plan.

Purpose:
To provide Council with the third annual Progress Report for the 2040 Official Community Plan and 2040 Transportation Master Plan.

Council Priority Alignment:
- Affordable Housing
- Transportation
- Agriculture
- Climate & Environment

Background:
The 2040 Official Community Plan (OCP) and 2040 Transportation Master Plan (TMP) were developed in tandem and adopted by Council in 2022. The creation of the two plans included significant public and stakeholder engagement that reflect community priorities and support the Imagine Kelowna vision. The plans are designed to work together to shape how Kelowna will grow and evolve in an era of rapid change.

Both plans outline a series of implementation actions to be undertaken following their completion as well as a monitoring program to measure progress. Monitoring the progress of these two plans together is important as the alignment between land use and transportation is critical to supporting our growing community and realizing Council's 2023-2026 Priorities. Annual reporting for the OCP and TMP also supports transparency, accountability, and is designed to complement our regular Council Priority reporting.

Discussion:
In 2022, staff introduced the reporting process and baseline data for both the OCP and TMP, with the first report delivered in 2023. This third report aims to continue the story of how quickly we are making progress toward the Official Community Plan's Pillars and Growth Strategy and the Transportation Master Plan's Vision and Goals. Regular performance monitoring allows the City to track key trends to ensure ongoing progress.

The monitoring process was developed to include two different types of reports: concise annual reports and more comprehensive reports when data becomes available. Notably, with the changes in provincial housing legislation (Bill 44), the City is required to update the 2040 OCP sooner than anticipated (by December 2025), which may impact the timing and focus of future reports.

This Council report summarizes the findings of the third annual 2040 OCP/TMP Progress Report. It is a snapshot in time and aims to highlight the following:

- **Key themes.** The most significant overall themes and trends observed are identified. This is only the third year of reporting, so it may take some time before clear trends emerge. In some cases, big shifts over previous years are highlighted. In other cases, the overall trends from the baseline year are highlighted.

- **Progress on implementation actions.** Realizing the vision of both plans also requires the delivery of a series of implementation actions identified in each plan. Highlights on implementation progress are outlined later in this report, and the status of all OCP and TMP implementation actions are summarized in Attachment 1.

Online Dashboard
The City has updated its OCP and TMP online dashboards as part of the 2024 OCP/TMP Progress Report. These dashboards provide an interactive opportunity for the public and Council to easily review the status of each indicator, why it is important, what actions are underway, and what's next.

2024 Key Themes
The results of the 2024 OCP/TMP Progress Report indicate strong positive trends in where our growth is focused and how people are moving around the City – a critical component for success of the community's vision. In future years, we will gain a better understanding of broader trends over longer time periods, and a clearer picture will emerge of how we are progressing.

Key themes from the 2024 OCP and TMP Progress Reports are summarized below:

- Building permits for new homes has slowed compared to recent years
- Most activity remains in the Urban Centres and Core Area, consistent with recent years and OCP directions. While some Urban Centres, like Downtown and Pandosy, have seen building permits slow significantly over recent years, Capri Landmark , Midtown and Rutland continue to steadily deliver more housing, with economic factors being more favourable for low rise apartments.
- High building permit numbers are shifting to high occupancies as larger apartment projects are completed. Occupancy permit unit numbers rose over 80 per cent compared to 2023, with most

units being apartments located in the Core Area and Urban Centres, particularly Downtown and Pandosy.

- The share of ground-oriented multi-unit housing, known as the missing middle, experienced a significant decline in occupancy in 2024 (dropping from about 22 per cent last year to about 10 per cent). Strong building permit approvals in 2024 will likely result in increased occupancies in 2026-2027. The future impacts of Bill 44 will be monitored in the coming years to determine the extent to which it affects this type of housing supply.
- Housing tenure also saw a shift in the last year, with rental housing increasing from nearly 26% in 2023 to almost 51% as many rental units got occupied in 2024.
- The office vacancy rate continues to rise, reaching 8.8 per cent, primarily due to the completion of the Bernard Block in Downtown, which added significant office space to our inventory. Meanwhile, industrial vacancy increased substantially to 5.6 per cent in part due to new inventory being onboarded alongside softening demand.
- Despite fast population growth, the policies in the OCP continued to support the preservation of agricultural lands. Rezonings and OCP amendments on agricultural lands were zero for the third time since the adoption of the OCP.
- Alongside rapid population growth, transit ridership reached new records in 2024, with 6.4 million boardings. This surpassed pre-pandemic levels and is up from 6.1 million in 2023. Nearly 4.8 per cent of all trips taken on a typical fall weekday were completed by transit (compared to 3.4 per cent in 2018), with ridership growth driven by youth and young adults (those 5 to 24 years old). The highest-performing routes served the Core Area and Urban Centres.
- Vehicle travel times increased modestly in 2024, particularly during the afternoon peak, but remained relatively stable overall given Kelowna's rapid population growth. During the same period, fuel sales per person declined and vehicle ownership remained steady overall with an uptake of electric and hybrid vehicles (3.1 and 4.5 per cent of all personally owned vehicles respectively).
- Trips by bike continue to trend upward. In 2024, Kelowna saw 6.4 million trips by bike, a 42 per cent increase since 2018. This growth reflects increased network connectivity and the rising popularity of e-bikes. Kelowna remains on track toward the TMP goal of quadrupling bike trips by 2040.
- Injury collisions decreased by 22 per cent in recent years (from 1,600 in 2018 to 1,284 in 2023). This includes fewer injuries for people walking and biking, indicating that recent investments in accessible, all-ages infrastructure and safety measures such as Smart Right turns are contributing to safer streets.
- Innovation and new technologies are helping reduce congestion and emissions. In 2024, shared e-scooters and e-bikes replaced an estimated 556,000 vehicle kilometres and prevented 109 tonnes of CO_2 emissions. As of the spring 2025, more than 1.6 million shared micromobility trips have been made in Kelowna since the program inception in 2021.

Implementation Actions

Putting the plans into action requires significant efforts beyond adoption and endorsement. In total, 68 actions were identified in the OCP and 130 actions were identified in the TMP to be implemented over

the 20 year span of these plans. These actions have been recommended to ensure the city achieves the vision outlined in these plans.

The following table summarizes the status of OCP and TMP implementation actions. Almost three quarters of the actions are either complete, in progress or ongoing, showing good progress on implementation. Remaining actions will be brought forward to Council when ready through the annual budget and 10-Year Capital Plan processes. A complete list and status update of the actions can be found in Attachment 1.

Implementation Action Update				
	Ongoing	**Complete**	**In Progress**	**Not Initiated**
2040 OCP	16	11	26	15
2040 TMP	22	18	51	39
TOTAL	**38**	**29**	**77**	**54**

Implementation Actions Highlights:

- The North End Plan (OCP Action 20) is complete, providing guidance to future growth in the neighbourhood, including the Mill Site Area Redevelopment Plan.
- Thriving Urban Centres, which addresses multiple neighbourhood planning initiatives identified in the OCP, has been initiated (OCP Actions 17, 18 and 19). The first deliverable, a Community Trends Report outlining initial findings of the work, was delivered earlier this year, and the Urban Centres Dashboard and Future Directions Report are being developed and expected for Summer 2025.
- The new Heritage Conservation Area Guidelines (OCP Action 48) have been developed and presented to Council, with a Public Hearing scheduled. The project has been adapted to align with Bills 44 and 47.
- The North Glenmore Sector Study has been initiated (Action 26).
- The Climate Resilient Kelowna Strategy and Sustainable Urban Forestry Strategy have been completed (OCP Actions 4 and 8).
- Delivered an interim Housing Needs Assessment to comply with Bill 44 (Action 41). This report was followed by a Housing Action Plan, delivered in January 2025.
- Delivered proposed direction on Tenant Protection Policies, with final policies and bylaws to be delivered later in 2025 (Action 42).
- The Transportation Accelerator Program (TAP) helped advance several high-priority TMP road projects through planning and design. These include:
    - Frost Road Extension (Killdeer Road to Chute Lake Road) – 500m road extension and roundabout (TMP Action 58)
    - Burtch Road Extension (Byrns Road to KLO Road – 1.2 km of arterial road extension including ATC and intersection improvements) (TMP Action 50, 93)
    - Hollywood Road Extension (John Hindle Drive to Sexsmith Road) – 2.2km of arterial road extension including intersection improvements (TMP Action 63, 64)

  - Glenmore Road (Union Road to Galiano Road) - road upgrades (TMP Action 59) and the addition of walking & cycling facilities (TMP Action 103)
  - Lakeshore 2,3,4,5 (Lanfranco Road to Dehart Road – 4km of urbanization, access upgrades and extension of existing ATC (TMP Actions 72,83, 115-117)

- Richter Street was selected as the preferred alignment for future rapid transit service through the Pandosy–Richter Corridor Study (TMP Action 24), initiated in 2024. The study, expected to conclude this year, is evaluating how to gradually introduce higher-order transit along the corridor and will identify the necessary right-of-way and policy steps needed to protect the corridor for future implementation.
- Transit service delivery reached a new high of 173,000 service hours. Route 98 Rutland/UBCO Express came in at introductory service levels to provide more direct and rapid service between UBC Okanagan, Rutland, and Downtown. Route 84 Academy Way was introduced based on demand connecting residential areas to UBCO. Additionally, mid-day and weekend service increased on the frequent transit network Routes (1, 5, 8, 10, and 11) (TMP Action 27). Service improvements came in on Rutland Local Area Transit Plan (TMP Action 47). The launch of the Umo electronic fare system also modernized transit payments, making it easier for people to access and use the system.
- Key connections in the all-ages and abilities (AAA) active transportation network were completed, including:

  - Sutherland Active Transportation Corridor (ATC) from Ethel Street to Parkinson Recreation Centre (TMP Actions 127-129)
  - Leckie ATC, linking the Okanagan Rail Trail to the Mission Creek Greenway (TMP Action 99)
  - Glenmore Road Multi-Use Pathway (MUP) between Dallas Road and Kane Road/Ballou Road (TMP Action 105)
  - In June 2025, the Bertram Multi-Use Overpass will open and which provides a safe, comfortable crossing over Highway 97 for pedestrians and cyclists (TMP Action 98)

Conclusion

This 2024 OCP/TMP Progress Report marks the third of a series of reports on how we are moving towards the direction set out in these key plans and advancing Council's 2023 - 2026 priorities.

For the 2040 OCP, it is critical to consider all the implementation actions and activities that will continue to put the plan into action. The dedicated commitment to those work activities alongside adequate resourcing will ensure that the 10 Pillars that guide the entire growth strategy are being advanced in harmony. For the TMP, equally as vital is the corresponding and timely delivery of the transportation investments needed to keep Kelowna moving as our population grows.

Internal Circulation:

Planning & Development Services
Partnerships & Investment
Real Estate
Development Planning

Corporate Strategic Services
Active Living and Culture
Parks and Buildings
City Clerk
Communications

Considerations applicable to this report:

Legal/Statutory Authority:
Local Government Act, Sections 471-478

Existing Policy:
Imagine Kelowna
2040 Official Community Plan
2040 Transportation Master Plan

Financial/Budgetary Considerations:
OCP and TMP actions guide the timing and resourcing of implementation. An OCP or TMP does not commit or authorize the City to proceed with any project that is specified in the plans. Projects will advance in recognition of available budget approved via annual Council budget deliberations and other work planning considerations.

Considerations not applicable to this report:
Legal/Statutory Procedural Requirements
Communications Comments

Submitted by:	Ahmed Mustafa, Planner Specialist, Long Range Planning Nathan Carswell, Manager, Strategic Transportation Planning
Approved for inclusion:	Mac Logan, General Manager, Infrastructure Brittany Hallam, Department Manager, Integrated Transportation Robert Miles, Department Manager, Long Range Planning

Attachment:

Attachment 1: 2024 Official Community Plan and Transportation Master Plan Implementation Actions.

2040 Official Community Plan Transportation Master Plan

Our Kelowna
as we move and grow

2024 Progress Report Attachment 1

City of Kelowna

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Appendix A - OCP Progress

OCP Pillars		Annual OCP Indicators	OCP Progress	
	Prioritize Sustainable Transportation & Shared Mobility	Number of trips by walking, biking, and transit		Moving toward the vision
	Strengthen Kelowna as the Region's Economic Hub	Industrial vacancy rate		Moving toward the vision
		Office vacancy rate		Minimal movement toward the vision
	Take Action on Climate	Total fuel sales		Minimal movement toward the vision*
	Protect and Restore our Environment	Proportion of tree canopy coverage	New Indicators are in the process of being developed.	
	Focus Investment in Urban Centres	New residential growth in Urban Centres against growth scenario targets		Moving toward the vision
	Incorporate Equity into City Building	Proportion of residents in core housing need		Minimal movement toward the vision
		Proportion of residents with low incomes living within five minutes of walking from the frequent transit network.		Moving toward the vision
		Proportion of residents with low incomes living within 500m walking distance to a neighbourhood park.		Minimal movement toward the vision
	Target Growth Along Transit Corridors	Residential units within 200m of Transit Supportive Corridors and in Urban Centres		Minimal movement toward the vision**
	Promote More Housing Diversity	New residential units by subtype and tenure		Moving toward the vision
		Residential rental vacancy rate		Moving toward the vision**
	Stop New Suburban Development	New suburban residential development against growth scenario targets in units		Moving toward the vision
		Average absorption price of new ground-oriented residential units in the Core Area and Suburbs		Minimal movement toward the vision***
	Protect Agriculture	Proportion of land that is actively farmed		Minimal movement toward the vision
		Total land area of ALR exclusions that are not planned in OCP 2040		Moving toward the vision
		Land area of properties rezoned from agricultural to a non-agricultural zone (outside of OCP FLU)		Moving toward the vision

* Fuel sales are influenced by many factors not within the City's control. While total fuel sales are increasing, on a per capita basis fuel sales are decreasing.
** Prezoning of select Transit Supportive Corridors is one of the federal Housing Accelerator Fund initiatives, and staff are actively working on this project.
*** Staff is monitoring the impacts of Bill 44 on the possible increase in supply of ground-oriented units.

Appendix B - TMP Progress

TMP Targets	TMP Target - Key Metric	TMP Progress
	Double Transit Ridership	Trending in the desired direction.
	Quadruple Bike Trips	Trending in the desired direction.
	Reduce Distance Driven Per Capita by 20%	Trending in the desired direction.
TMP Goals	**TMP Performance Measures**	**TMP Progress**
Improve Travel Choices	Number of trips by walking, biking, and transit	Trending in the desired direction.
Optimize Travel Times	Key corridor vehicle travel times	Not trending in the desired direction.
Enhance Travel Affordability	Vehicles per capita	No substantial change in direction.
Foster a Growing Economy	Goods movement travel time	Not trending in the desired direction.
Enhance Urban Centres	Investments connecting higher density areas	Trending in the desired direction.
Be Innovative and Flexible	Trips by emerging modes (shared mobility/ride-hailing)	Trending in the desired direction.
Improve Safety	Traffic related injuries and fatalities per capita	Trending in the desired direction.
Protect the Environment	Transportation emissions	Trending in the desired direction.
Ensure Value for Public Investment	Public benefits provided by transportation projects	Trending in the desired direction.
Improve Health	Share of students driven to school	Trending in the desired direction.
Promote Inclusive Transportation	Share of low-income residents close to frequent transit Share of low-income residents close to primary bike routes	Trending in the desired direction.

	Support Livable Communities	Sidewalk completeness in the core area	No substantial change in direction.

Appendix C – OCP Implementation Actions

#	Action	Associated Objective or Policy	Action Type	Status
Environment, Energy & Climate				
1	Develop an Anti-Idling Bylaw	14.1.1. Motor vehicle use and air quality	Bylaw Update	Complete
2	Implement and update the Air Quality Strategy	14.1.1. Motor vehicle use and air quality	Strategy / Program	In Progress
3	Implement the Community Climate Action Plan	12.1 Design the community to be more resilient to a changing climate	Implement existing plans	Complete*
4	Develop a Climate Action and Resiliency Strategy	12.1 Design the community to be more resilient to a changing climate	Strategy / Program	Complete
5	Partner with stakeholders to develop an Okanagan Lake Management Plan	14.3.1 Okanagan Lake ecosystem health	Plan development	In Progress
6	Develop and implement strategies to monitor changes in tree canopy coverage and to sensitive ecosystems.	16.4 Ensure the Official Community Plan responds to emerging trends, opportunities and risks.	Strategy / Program	In Progress
7	Identify and implement tools to protect ecosystem connectivity corridors.	14.4.2. Ecosystem connectivity corridors.	Strategy / Program	In Progress
8	Update and implement the Urban Forestry Strategy	14.2 Protect and expand a healthy and viable urban forest	Strategy / Program	Ongoing
9	Implement and update the Energy Step Code Strategy for new construction	12.4.1. Energy Step Code 12.4.2. Energy efficient design	Strategy / Program	Complete
10	Develop a Landscape Standards and Maintenance Bylaw	4.3, 5.5. Protect and increase greenery.	Bylaw Update	In Progress
11	Develop a Private Tree Protection Bylaw	14.2. Protect and expand a healthy urban forest.	Bylaw Update	Not initiated
12	Update the Heritage and Significant Tree Inventory	14.2. Protect and expand a healthy urban forest.	Inventory	Not Initiated
13	Develop a Community Energy Retrofit Strategy	12.4.2. Energy efficient design	Strategy / Program	Ongoing**

* This plan was replaced with the Climate Resilient Kelowna Strategy

** Developing a community energy retrofit strategy is an ongoing program

14	Implement the Corporate Energy and GHG Emissions Plan	12.5. Improve energy efficiency and reduce operational greenhouse gas emissions	Implement existing plans	Ongoing
15	Implement the Community Low Carbon Mobility Strategy: Electric Vehicles and E-Bikes	12.7.2. Electric mobility.	Implement existing plans	Ongoing
16	Explore options to encourage on-site green infrastructure in development	12.8 Invest in ecosystem services and green infrastructure to mitigate and adapt to a changing climate.	Strategy / Program	In Progress
Urban Centre & Local Area Planning				
17	Develop a Rutland Urban Centre Plan	4.7. Focus new development in Rutland strategically to create a new high-density hub to support improved services and amenities.	Plan development	In Progress
18	Develop a Pandosy Urban Centre Plan	4.6. Support infill and redevelopment to promote housing diversity and enhanced services and amenities in the Pandosy Urban Centre.	Plan development	In Progress
19	Develop a Midtown Urban Centre Plan	4.8. Support modest residential development to transition Midtown into a transit-supportive neighbourhood.	Plan development	In Progress
20	Develop a North End Neighbourhood Plan	5.8.3. North End Industrial Lands	Plan development	Complete
21	Develop a Residential Infill Strategy	5.3 Design residential infill to be sensitive to neighbourhood context.	Strategy / Program	In Progress
22	Implement the Capri Landmark Urban Centre Plan	4.5.1. Capri Landmark Urban Centre Plan	Implement existing plans	Ongoing
23	Develop an Okanagan Rail Trail Land Use Plan	13.8 Protect and enhance the Okanagan Rail Trail as a vital transportation corridor linking communities in the Okanagan Valley.	Plan development	Not Initiated
24	Complete the Pandosy/Richter Corridor Study	5.2. Focus residential density along Transit Supportive Corridors.	Strategy / Program	In Progress
25	Develop a Terms of Reference to guide developer-initiated Area Redevelopment Plans.	5.3.3. Strategic Density.	Process Change	Complete
26	Undertake a North Glenmore Sector Development Study to inform future OCP update processes.	16.4.2. Plan Review and Refinement	Strategy / Program	In Progress

27	Develop a Hall Road Neighbourhood Plan	8.4.4. Consideration of Serviced Areas.	Plan development	Not Initiated
Parks & Placemaking				
28	Develop a Parks Master Plan	10.3. Ensure parks reflect their unique natural and cultural context.	Plan development	In Progress
29	Develop a "Parks on Streets" Policy	10.2.2. Parks on Streets	Strategy / Program	Not Initiated
30	Develop an Alternative Parks Policies Framework	4.1.10, 5.4.4. Public Space for Future Development	Process Change	Not Initiated
31	Investigate tools to create an Okanagan Lake Waterfront Park Habitat Balance Strategy.	10.4.8 Waterfront park development	Strategy / Program	Complete
Land Development & Management				
32	Update the Development Application Review Process	16.1.1. OCP Consistency.	Process Change	Ongoing
33	Update the Subdivision, Development and Servicing Bylaw	16.1.1. OCP Consistency.	Bylaw Update	Complete
34	Update the Zoning Bylaw	16.1.1. OCP Consistency.	Bylaw Update	Complete
35	Update the Revitalization Tax Exemption Bylaw	4.4.7. Downtown Revitalization Tax Exemption 4.7.6. Rutland Revitalization Tax Exemption	Strategy / Program	In Progress
36	Implement the Wildfire Protection Plan	15.1. Reduce wildfire risk to health and safety of the public, property and infrastructure.	Implement existing plans	Ongoing
37	Update Council Policy No. 247 Hierarchy of Plans	16.1.1 OCP Consistency	Process Change	In Progress
38	Implement the Agriculture Plan	Objective 6.7 and 8.1. Protect and preserve agricultural land and its capability.	Implement existing plans	Ongoing
39	Monitor and report on OCP outcomes.	16.4.1. OCP Indicators Report	Strategy / Program	Ongoing
Housing and Community Well-being				
40	Develop an Equity Strategy	9.1.2 Equity Analysis and Strategy	Strategy / Program	Not Initiated
41	Develop Housing Needs Assessments to inform future OCP updates	16.4.3. Housing Needs Assessments	Strategy / Program	Ongoing

42	Develop a Tenant Assistance Policy	4.13.3, 5.12.3., 6.10.4. Tenant Assistance.	Strategy / Program	In Progress
43	Develop Rental Housing Retention or Replacement Regulations	4.14.1, 5.13.1. Protection of Existing Rental Stock.	Strategy / Program	Not Initiated
44	Complete the Social Planning Framework	9.1. Incorporate equity into planning decisions and resource allocation in our community.	Strategy / Program	Not Initiated
45	Complete and implement the Healthy City Strategy	9.3. Develop diverse partnerships to advance complex social planning issues and increase community wellbeing.	Strategy / Program	Ongoing
46	Establish location criteria for shelters and safety net supports for people experiencing homelessness.	4.2.2, 5.4.2. Safety Net Supports and Services.	Strategy / Program	Not Initiated
Arts, Culture and Heritage				
47	Update the Heritage Strategy	11.1.2. Heritage Strategy	Strategy / Program	Not Initiated
48	Update the Heritage Conservation Area Design Guidelines	11.1.2 Heritage Strategy	Strategy / Program	In Progress
49	Establish a Heritage Impact Assessment Terms of Reference	11.2. Identify, conserve and protect historic places.	Process Change	In Progress
50	Expand the Heritage Register to include archaeological sites, landscapes, structures and cemeteries.	11.2.3. Kelowna Heritage Register expansion.	Strategy / Program	Ongoing
51	Explore opportunities to encourage heritage building retrofits and energy efficiency upgrades	11.2.7. Heritage retrofits	Strategy / Program	Not Initiated
52	Implement the Cultural Plan	Various	Implement existing plans	Ongoing
53	Implement the Cultural Facilities Master Plan	Various	Implement existing plans	Ongoing
Transportation				
54	Implement the Transportation Master Plan	16.2.1. Supplementary plans.	Implement existing plans	Ongoing

55	Complete a Local / Neighbourhood Streets Pilot Program	5.16. Create neighbourhood streets that are safe and comfortable for people to walk, bike and play on.	Strategy / Program	In Progress
56	Develop a Transportation Safety Strategy	4.17. Create urban streets that are attractive to live, work and shop on. 5.16. 7.9. Create neighbourhood streets that are safe and comfortable for people to walk, bike and play on. 6.15. Maintain safe roads that support agricultural uses.	Plan development	In Progress
57	Update the Pedestrian and Bicycle Master Plan	16.2.1. Supplementary plans.	Plan development	Not Initiated
58	Develop an Accessibility Transition Plan	4.17. Create urban streets that are attractive to live, work and shop on. 5.16, 6.15, 7.9., Create neighbourhood streets that are safe and comfortable for people to walk, bike and play on.	Plan development	In Progress
59	Develop a Curbside Management Plan	4.18, 5.18. Manage curb space to reflect a range of community benefit.	Plan development	Not Initiated
60	Undertake a Goods Movement Study	6.11.7. Highway 97.	Plan development	Complete
61	Update the Cash In Lieu of Parking Bylaw	4.19.3, 5.19.3. Leverage Cash-in-Lieu.	Strategy / Program	In Progress
Infrastructure and Servicing				
62	Develop 2040 Infrastructure Plan	16.2.1. Supplementary plans.	Implement existing plans	Ongoing
63	Develop a Water Conservation Plan	13.4. Provide a secure supply of water. 13.5. Protect the supply of high-quality drinking water.	Plan development	In Progress
64	Develop an Agricultural Water Demand Management Plan	13.4.4. Water Availability for Agriculture.	Plan development	Not Initiated
65	Develop a Water Shortage Management Plan	13.4. Provide a secure supply of water. 13.5. Protect the supply of high-quality drinking water.	Plan development	In Progress
66	Establish an annual capital plan prioritization matrix to ensure capital investments align with OCP	13.1.1. Infrastructure Prioritization.	Process Change	Complete
67	Identify floodplain areas and develop policies to minimize flood risk	15.4. Reduce flood risk to health and safety, infrastructure, property and natural assets.	Plan development	In Progress

68	Identify new funding tools to support infrastructure and facilitate growth.	13.2.3. Infrastructure and facility funding tools.	Strategy / Program	In Progress

Appendix D – TMP Implementation Actions

#	Action	Estimated Timing	Action Type	Status
Maintenance and renewal				
1	Renewal	all years	Capital program	Ongoing
2	Bridges Renewal	all years	Capital program	Ongoing
3	KLO Rd Mission Creek Bridge Replacement	2021-2025	Capital project	In Progress
4	Maintenance	all years	Expanding existing program	Ongoing
Neighbourhood streets				
5	Crosswalk Safety, Signals and Flashers	All years	Capital program	Ongoing
6	Neighbourhood Traffic Calming Program	all years	Capital program	Ongoing
7	Sidewalk Network Expansion	all years	Capital program	Ongoing
8	Local Street Urbanization Program	all years	Capital program	Ongoing
Education and programs				
9	TDM Existing Funding	all years	Base budget	Ongoing
10	Accessibility Transition Plan	2021-2025	Plan development or design	In Progress
11	Adult Bicycle Skills Training	2023-2040	New program	Ongoing
12	Bike and Ped Individualized Marketing Strategy	2026-2040	Expanding existing program	Not Initiated
13	Bike Map Program	2022-2040	Expanding existing program	Ongoing
14	Wayfinding Program	2022-2040	Expanding existing program	Ongoing
15	Community Electric Vehicle & E-Bike Strategy -Implementation	2022-2030	Plan development or design	Ongoing
16	Curb Space Management Strategy	2026-2030	Plan development or design	In Progress

#	Action	Estimated Timing	Action Type	Status
17	Goods Movement Strategy	2021-2025	Plan development or design	Complete
18	Employer Commute Trip Reduction Program	all years	New program	In Progress
19	Open Streets	2023-2040	New program	Not Initiated
20	Safe Routes to School Expansion	all years	Expanding existing program	In Progress
21	Emerging Technologies and Shared Mobility Program	2022-2040	Expanding existing program	In Progress
22	Student Bike Skills Training Expansion	2023-2040	Expanding existing program	Not Initiated
23	Tactical Urbanism Pilot Project	2022-2040	New program	In Progress
24	Transit Pass Program Expansion	2023-2040	Expanding existing program	In Progress
25	Transit Travel Training Program	2022-2040	Expanding existing program	In Progress
26	Transportation Safety Strategy	2021-2025	Plan development or design	In Progress
Transit				
27	Transit Operating Costs	All years	Capital program	Ongoing
28	YLW Transit Hub	2021-2025	Capital project	In Progress
29	Exchange Driver Facilities	2026-2030	Capital project	In Progress
30	Frequent Transit Network (FTN) Glenmore - Infrastructure	2031-2035	Capital project	Not Initiated
31	FTN Gordon - Infrastructure	2036-2040	Capital project	Not Initiated
32	Highway 33 Transit - Infrastructure	2036-2040	Capital project	Not Initiated
33	Springfield Transit - Infrastructure	2036-2040	Capital project	Not Initiated
34	Highway 97 Dedicated Transit Lanes - Infrastructure	2036-2040	Capital project	In Progress
35	Hollywood Rd Transit - Infrastructure	2036-2040	Capital project	Not Initiated

#	Action	Estimated Timing	Action Type	Status
36	Orchard Park Exchange	2021-2025	Capital project	Not Initiated
37	Mission Recreation Transit Exchange & Mobility Hub	2021-2025	Capital project	In Progress
38	Mobility Hubs at Transit Exchanges	2031-2035	Capital project	In Progress
39	Transit - New Bus Stop and Amenities Program	all years	Capital program	Ongoing
40	Transit - Land Acquisition	all years	Capital program	Ongoing
41	Okanagan College Transit Exchange and Stations	2031-2035	Capital project	Not Initiated
42	Okanagan College Exchange Capacity Expansion	2021-2025	Capital project	In Progress
43	Pandosy / Richter Transit - Study + Infrastructure	2031-2035	Planning and design	In Progress
44	Route 1 FTN+ Infrastructure	2026-2030	Capital project	Not Initiated
45	Rutland Road FTN+ Infrastructure	2036-2040	Capital project	Not Initiated
46	Rutland Mobility Hub and Driver Facility	2021-2025	Capital project	Ongoing
47	Rutland Network Restructure - Infrastructure	2026-2030	Capital project	In Progress
48	Transit Maintenance & Operations Centre	2021-2025	Capital project	In Progress
Road Connections				
49	Benvoulin Capacity Optimization	2026-2030	Capital project	In Progress (Planning/Concept)
50	Burtch 2 (Springfield - KLO)	2026-2030	Capital project	In Progress (Preliminary Design)
51	Burtch 3 (Glenmore - Springfield)	2026-2030	Capital project	In Progress (Detailed Design)
52	Casorso Roundabouts	2026-2030	Capital project	In Progress
53	Clement 1 (Ellis - Graham)	2026-2030	Capital project	In Progress
54	Clement 2 Extension (Spall - Hwy 33)	2031-2035	Capital project	In Progress (Planning/Concept)

#	Action	Estimated Timing	Action Type	Status
55	Clement 3 Extension - Land from Highway 33 to McCurdy	2031-2035	Capital project	Not Initiated
56	Commonwealth Rd Upgrade	2021-2025	Capital project	In Progress (Planning/Concept)
57	Acland 2 Rd Extension (John Hindle - Airport)	2036-2040	Capital project	Not Initiated
58	Frost 1 (Killdeer - Chute Lake)	2031-2035	Capital project	In Progress (Detailed Design)
59	Glenmore 5 (Union - John Hindle)	2031-2035	Capital project	In Progress (Planning/Concept)
60	Glenmore Rd Safety Upgrades (John Hindle - Lake Country)	2031-2035	Capital project	Not Initiated
61	Gordon Dual Left Turns (Sutherland - Bernard)	2036-2040	Capital project	Not Initiated
62	Gordon Bridge over Bellevue Creek	2036-2040	Capital project	Not Initiated
63	Hollywood 7 DCC (Sexsmith - Appaloosa) Improvements	2021-2025	Capital project	In Progress (Preliminary Design)
64	Hollywood 7 Rd (Sexsmith - John Hindle)	2026-2030	Capital project	In Progress (Preliminary Design)
65	Hollywood 6 Rd (Rail Trail - Sexsmith)	2026-2030	Capital project	Not Initiated
66	Hollywood 5 Rd (Hwy 97 - Rail Trail)	2031-2035	Capital project	Not Initiated
67	Hollywood 4 Rd (Stremel - Hwy 97)	2036-2040	Capital project	Not Initiated
68	Hollywood 3 Rd (McCurdy - Stremel)	2036-2040	Capital project	Not Initiated
69	Lakeshore 1 DCC (DeHart - Vintage Terrace), Road	Completed 2021	Capital project	Complete
70	Lakeshore 1 DCC Bridge at Bellevue Creek	Completed 2021	Capital project	Complete
71	Lakeshore 3 Bridge over Wilson Creek	2036-2040	Capital project	Not Initiated
72	Lakeshore 3 Rd (Richter - Cook)	2031-2035	Capital project	In Progress (Preliminary Design)
73	Major Intersection Capacity Improvements	all years	Capital program	Ongoing
74	McCulloch Area DCC (KLO/Hall/Spiers)	2021-2025	Capital project	In Progress (Detailed Design)

#	Action	Estimated Timing	Action Type	Status
75	McCurdy Extension (Hwy 97 - Dilworth)	2036-2040	Capital project	In Progress (Planning/Concept)
76	Road Safety Improvements	all years	Capital program	Ongoing
77	Rutland 2 (Old Vernon Roundabout)	2036-2040	Capital project	Not Initiated
78	South Perimeter 1 DCC (Gordon - Stewart 1)	2021-2025	Capital project	Complete
79	Gordon 1 (Frost - South Perimeter)	2021-2025	Capital project	In Progress (Construction)
80	Stewart 3 DCC (Crawford - Dehart)	2026-2030	Capital project	In Progress (Detailed Design)
81	Sector B Deficiencies/Top Lift Paving	2026-2030	Capital project	In Progress
82	Traffic Signals & Roundabouts	all years	Capital program	Ongoing
83	Lakeshore 4 (Lanfranco - Richter)	2021-2025	Capital project	In Progress (Preliminary Design)
84	Richter 1 (Sutherland - KLO)	2036-2040	Capital project	Ongoing (Strategic Planning)
85	Rutland Multimodal Corridor (Robson - Leathead)	2036-2040	Capital project	Not Initiated
86	Sutherland Complete Street (Burtch - Spall)	2036-2040	Capital project	In Progress (Prelim/Detailed Design)
87	Sutherland Complete Street (Spall - Dilworth) – Design only	2026-2030	Capital project	Not Initiated
88	Urban Centre Improvements	2025-2040	Capital program	Not Initiated
Biking				
89	Abbott ATC (Rose - Cedar)	2021-2030	Capital project	Complete
90	Abbott Protected Bike Route (Rose - West), ATC	2021-2025	Capital project	Complete
91	AT Corridor/Bike Network Expansion	all years	Capital program	Ongoing
92	Okanagan Rail Trail Lighting and Improvements	2026-2030	Capital project	In Progress
93	Burtch 2 ATC (Springfield - Benvoulin)	2026-2030	Capital project	In Progress (Preliminary Design)

#	Action	Estimated Timing	Action Type	Status
94	Burtch 3 ATC (Glenmore - Springfield)	2026-2030	Capital project	In Progress (Detailed Design)
95	Bertram ATC (Sutherland - Cawston)	2021-2025	Capital project	In Progress (Planning/Concept)
96	Casorso 3 ATC (KLO - Barrera)	2021-2025	Capital project	Complete
97	Casorso 4 ATC (Raymer - KLO)	2021-2025	Capital project	Complete
98	Bertram/Central Green Overpass	2021-2025	Capital project	In Progress (Construction)
99	Rail Trail to Greenway ATC	2021-2025	Capital project	Complete
100	Ethel 3& 5 ATC (Springfield – Raymer)	Completed 2021	Capital project	Complete
101	Ethel 6 ATC (Cawston - ORT)	2021-2025	Capital project	In Progress (Preliminary Design)
102	UBCO MUP (Quail Ridge - Discovery Ave)	2031-2035	Capital project	Not Initiated
103	Glenmore 5 ATC (Union - John Hindle)	2031-2035	Capital project	In Progress (Planning/Concept)
104	Glenmore 3 ATC (Clement - High)	2026-2030	Capital project	In Progress (Preliminary Design)
105	Glenmore 4 ATC (Yates - Dallas)	2026-2030	Capital project	Complete
106	Hollywood 3 ATC (McCurdy - Stremel)	2036-2040	Capital project	Not Initiated
107	Hollywood 4 ATC (Stremel - Hwy 97)	2036-2040	Capital project	Not Initiated
108	Hollywood 5 ATC (Hwy 97 - Rail Trail)	2026-2030	Capital project	Not Initiated
109	Hollywood 6 ATC (Rail Trail - Sexsmith)	2026-2030	Capital project	Not Initiated
110	Hollywood 7 ATC (Sexsmith - John Hindle)	2026-2030	Capital project	In Progress (Preliminary Design)
111	Hollywood 9 ATC (Hollydell - Hwy 33)	2026-2030	Capital project	Not Initiated
112	Hollywood 10 ATC (Hwy 33 - McCurdy)	2031-2035	Capital project	Not Initiated
113	Hollywood 11 ATC (Springfield - Mission Creek Greenway)	2031-2035	Capital project	Not Initiated

#	Action	Estimated Timing	Action Type	Status
114	Houghton 2 ATC (Hollywood - Mugford)	2021-2025	Capital project	Complete
115	Lakeshore 4 ATC (Lanfranco - Richter)	2021-2025	Capital project	In Progress (Preliminary Design)
116	Lakeshore 3 ATC (Lexington - Old Meadows)	2026-2030	Capital project	In Progress (Preliminary Design)
117	Lakeshore 2 ATC (Old Meadows - Dehart)	2036-2040	Capital project	In Progress (Preliminary Design)
118	Lakeshore 1 ATC (DeHart - Vintage Terrace)	Completed 2021	Capital project	Complete
119	Leon Lawrence ATC (Waterfront - Ethel)	2031-2035	Capital project	Not Initiated
120	Neighbourhood Bikeway Capital Program	all years	Capital program	In Progress
121	Okanagan Rail Trail - Connection to Waterfront Park Pathway	2021-2025	Capital project	Complete
122	Pandosy Village ATC (Raymer - Abbott)	2026-2030	Capital project	Not Initiated
123	Richter 1 ATC (Sutherland - KLO)	2036-2040	Capital project	Not Initiated
124	Rose 1 Road and ATC (Pandosy - Ethel) – Design only	2021-2025	Plan development or design	Not Initiated
125	Rutland Rd ATC (Robson - Leathead)	2036-2040	Capital project	Not Initiated
126	Houghton 1 ATC (Houghton - Rail Trail)	2021-2025	Capital project	Complete
127	Sutherland 2 DCC ATC (Ethel - Gordon)	2021-2025	Capital project	Complete
128	Sutherland 1 ATC Improvements (Gordon - Burtch)	2021-2025	Capital project	Complete
129	Sutherland 1 ATC (Lequime - Burtch)	2021-2025	Capital project	Complete
130	Sutherland Complete Street ATC (Burtch - Spall)	2036-2040	Capital project	In Progress (Planning/Preliminary Design)

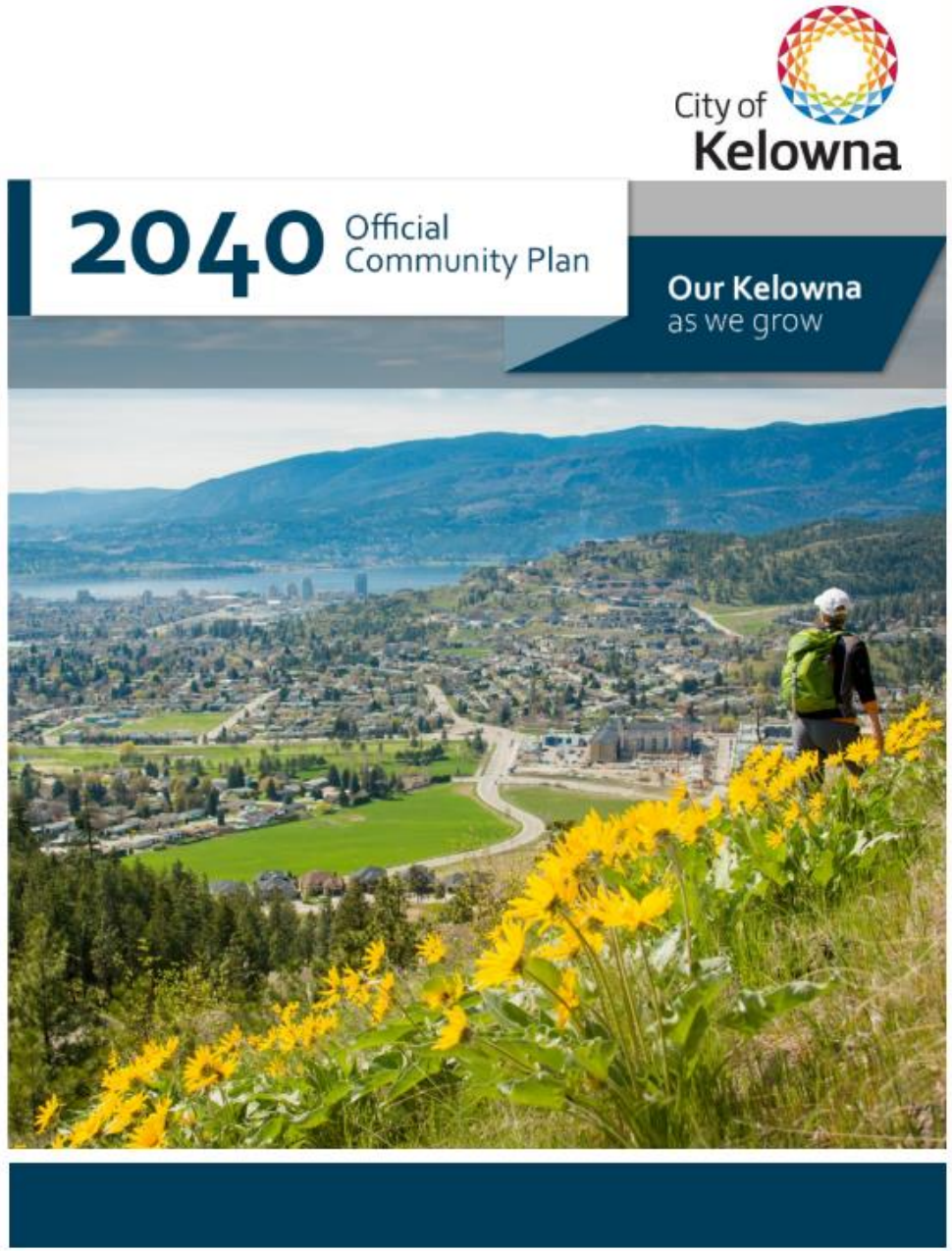
2040 Official Community Plan
2040 Transportation Master Plan
Annual Progress Report

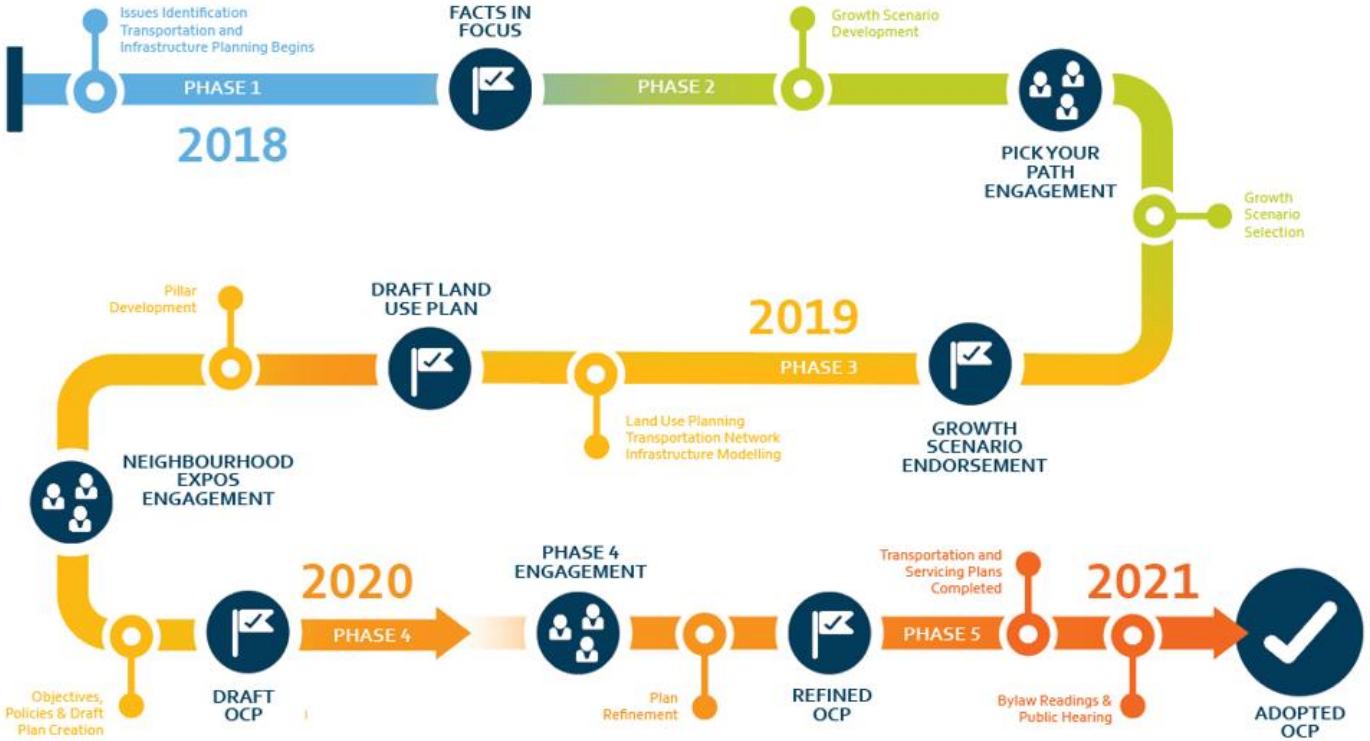
Long Range Planning & Integrated Transportation

June 9th, 2025

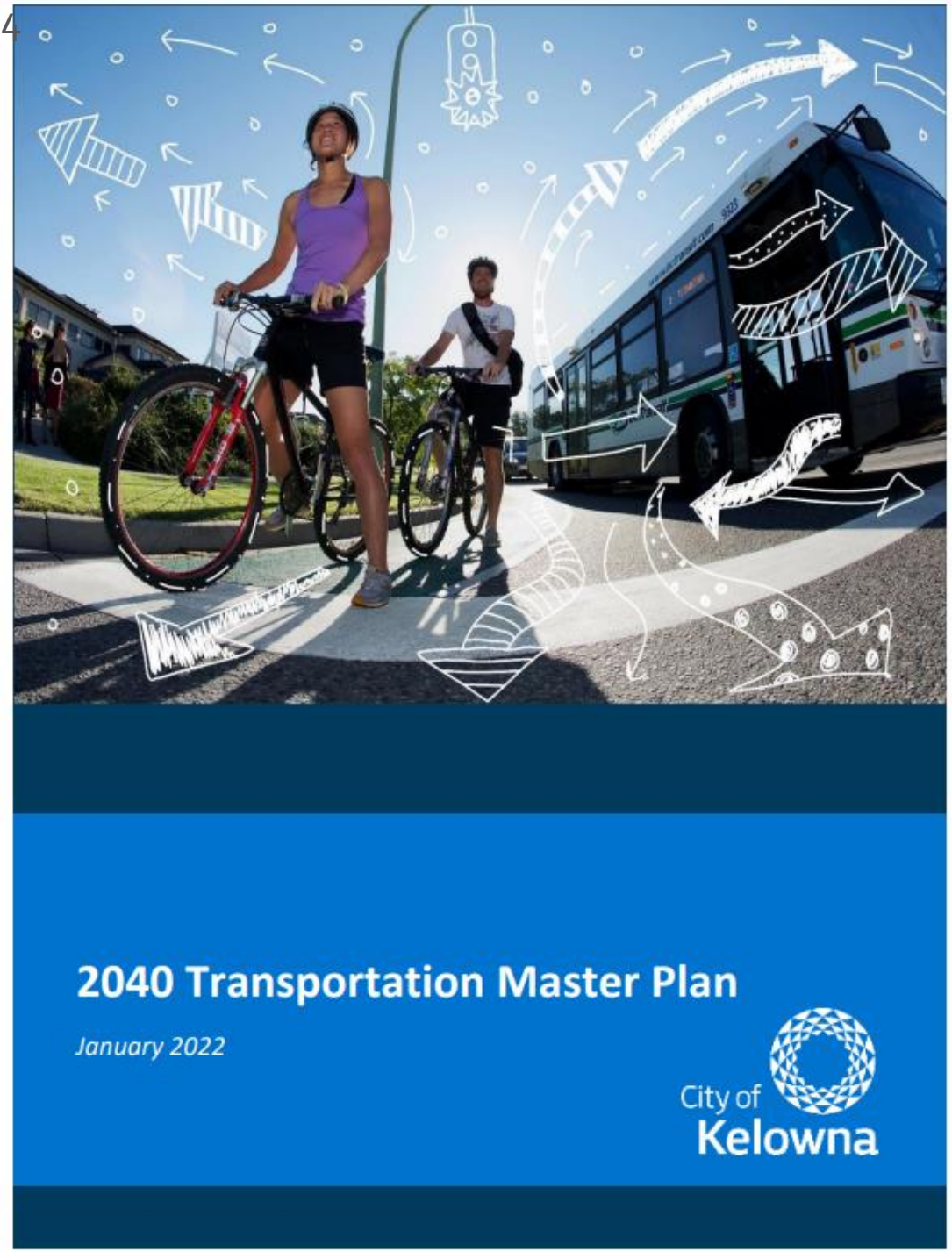
2024 Report

- OCP & TMP background
- Purpose of the Progress Report
- Implementation Actions update
- Report themes and monitoring
- Alignment with Council Priorities

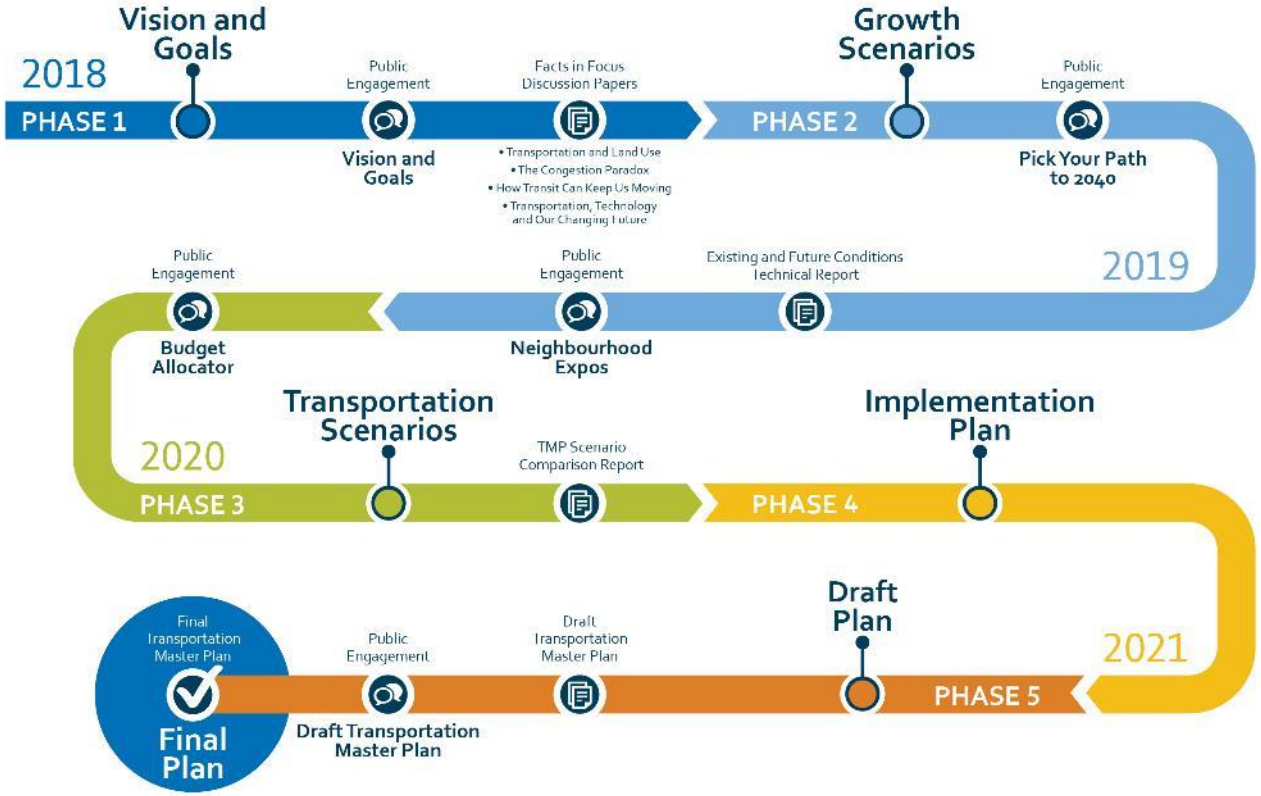




- Official Community Plan
  - Developed from Imagine Kelowna Vision and Goals
  - Significant public and stakeholder engagement
  - Multiple Council touch points



- Transportation Master Plan
  - 5 major public and stakeholder engagements
  - 12,000 + interactions with community members
  - 4,600 survey responses
  - 16 presentations to Council



Progress Reporting Purpose

- Guide decision making and plan reviews
- Measure progress towards our vision
- Watch trends and prepare for adaptation

Making the Plans Work

- OCP includes 68 recommended actions over 10 years
- TMP includes 130 recommended actions over 20 years

Implementation Action Update				
	Ongoing	Complete	In Progress	Not Initiated
2040 OCP	16	11	26	15
2040 TMP	22	18	51	39
2024 Total	38	29	77	54
2023 Total	33	18	85	62

Almost three quarter of the actions are either **complete**, **in progress** or **ongoing**

Implementation Action Highlights (Official Community Plan)

Complete

- North End Neighbourhood Plan
- Climate Resilient Kelowna Strategy
- Urban Forestry Strategy (ongoing)
- Housing Needs Report (Bill 44 updates)

In Progress

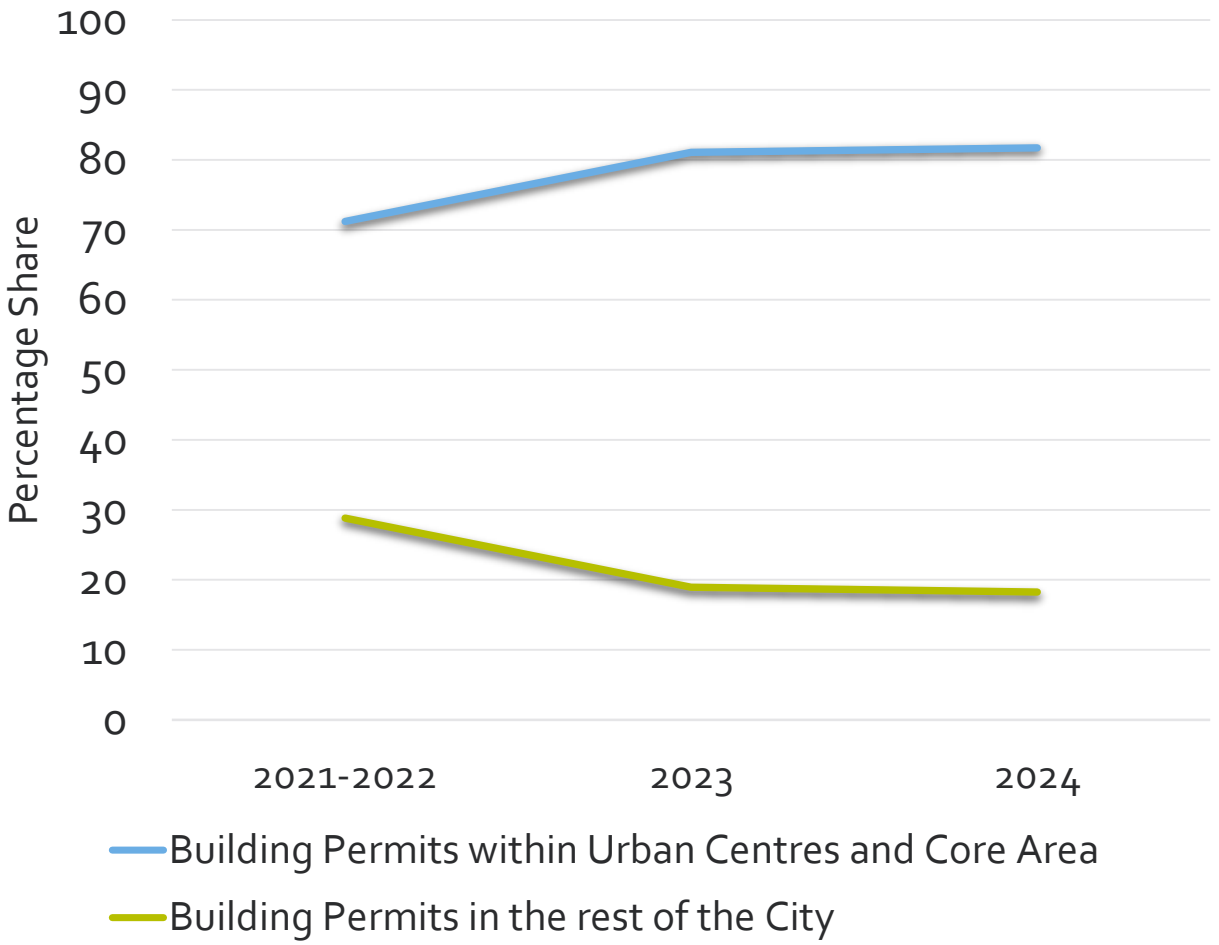
- Heritage Conservation Area Guidelines
- Residential Infill Strategy / Infill Options
- Thriving Urban Centres
- Parks Master Plan
- North Glenmore Sector Study

2024 Key Themes - OCP

- Building permits for new homes has slowed compared to recent years
- Occupancy permit unit numbers rose over 80%, with most units being apartments
- Ground-oriented multi-unit housing, known as the missing middle, experienced a decline in occupancy in 2024
- Office vacancy rate continues to rise with new office buildings being completed, reaching 8.8%
- Industrial vacancy increased substantially to 5.6%
- Policies in the OCP continued to support the preservation of agricultural lands

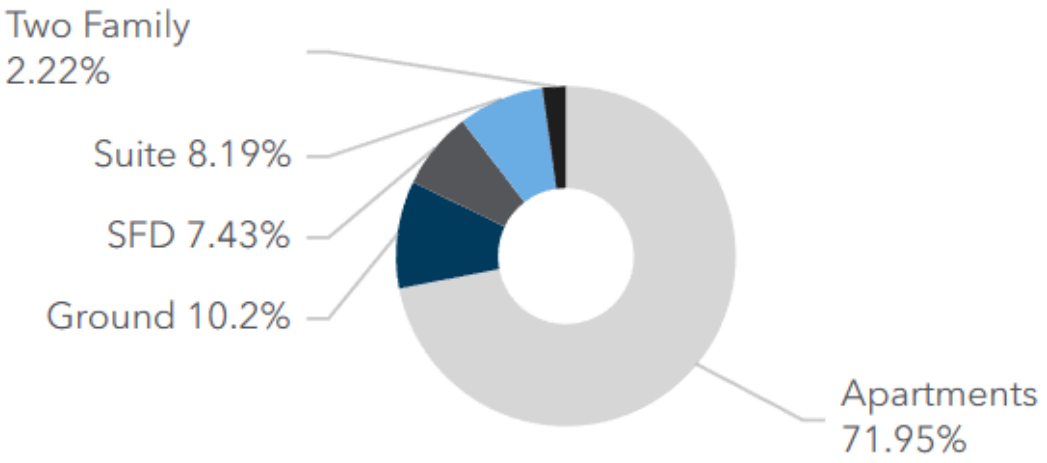
A More Urban City

- Building permits going down consistently outside Urban Centres and Core Area
- Consistent share of growth in the Urban Centre and Core Area
- Thriving Urban Centres Project will provide further refinement of targets



Steady Apartment Growth

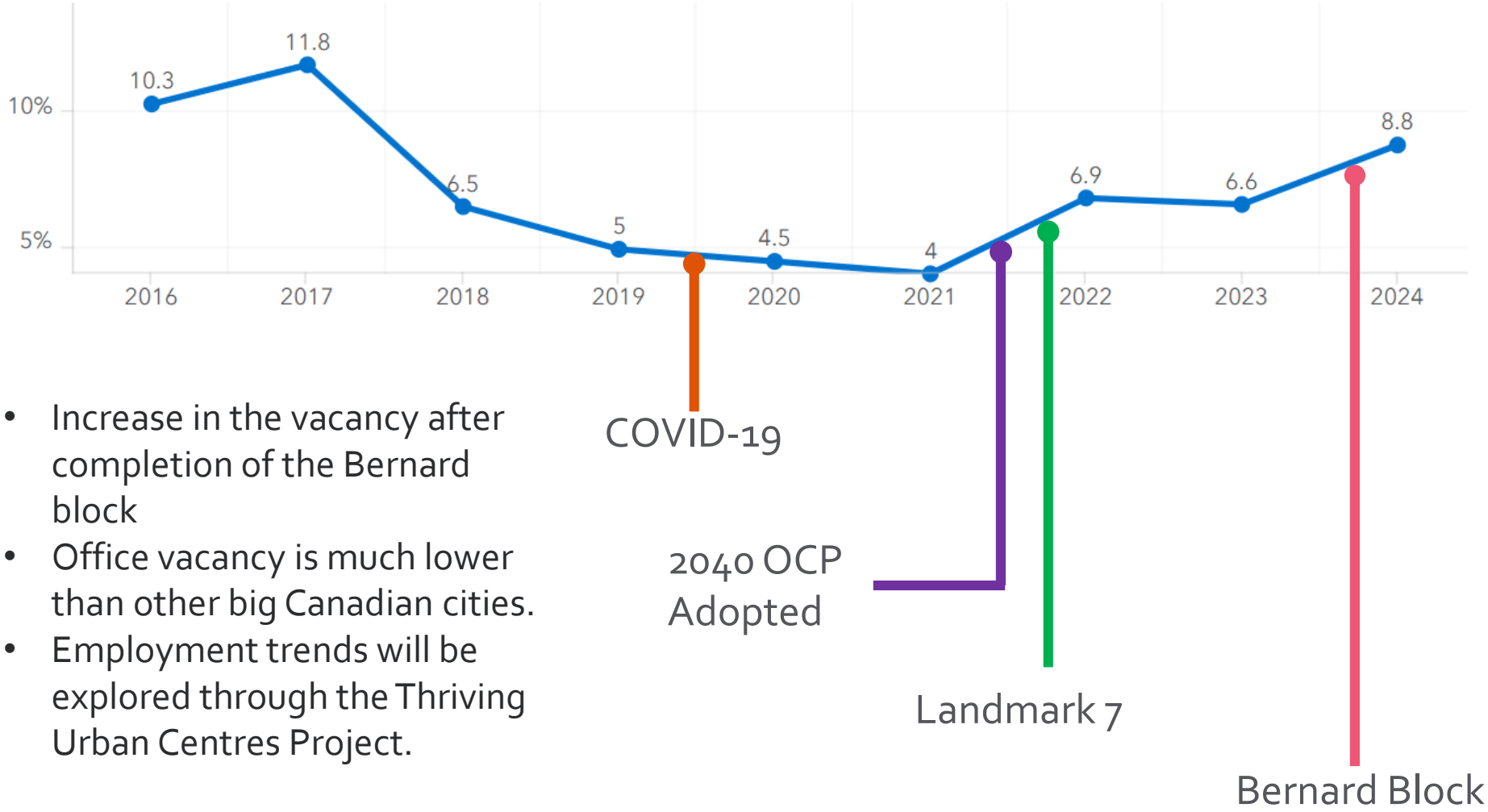
- Occupancy permit unit numbers rose over 80 per cent with most units being apartments
- Ground-oriented multi-unit housing, known as the missing middle, experienced a decline
- The future impacts of Bill 44 will be monitored in the to determine the extent to which it affects housing types.



Protection of Agriculture

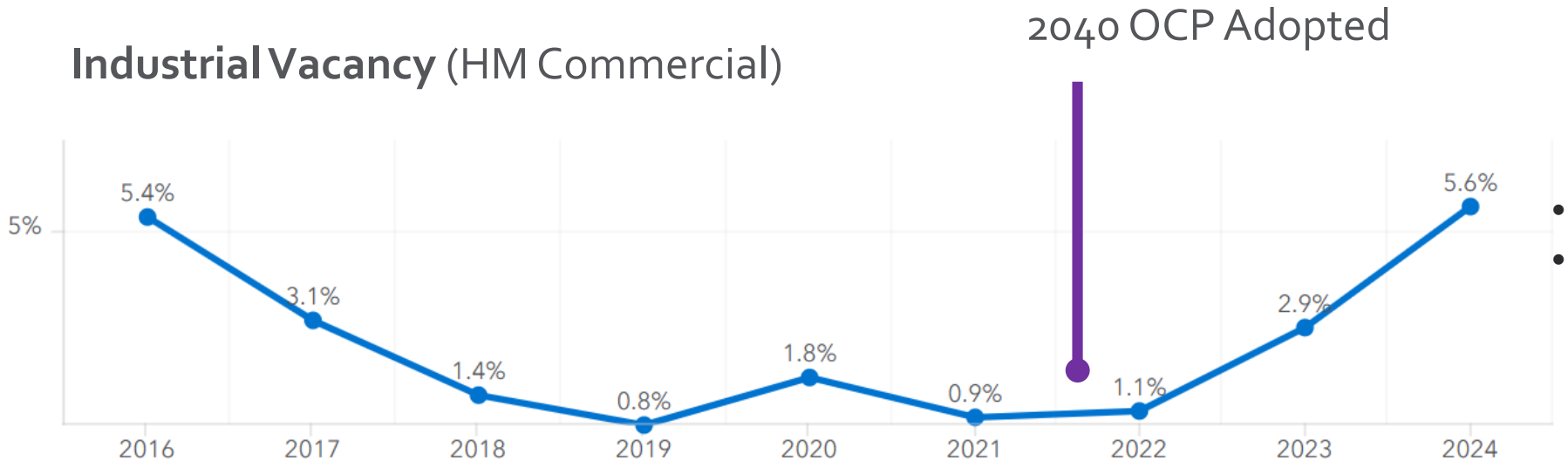
- No ALR exclusions
- No agricultural properties rezoned
- 28.7% of all land in the city was being actively farmed

Office Vacancy: Lower than most major cites



- Increase in the vacancy after completion of the Bernard block
- Office vacancy is much lower than other big Canadian cities.
- Employment trends will be explored through the Thriving Urban Centres Project.

A Changing Industrial Vacancy



- New inventory in Gateway
- Regional Employment Lands Inventory is complete

Implementation Action Highlights (Transportation Master Plan)

Complete

- Leckie ATC, linking the Okanagan Rail Trail to the Mission Creek Greenway
- Bertram Multi-Use Overpass
- Sutherland ATC from Ethel Street to Parkinson Recreation Centre

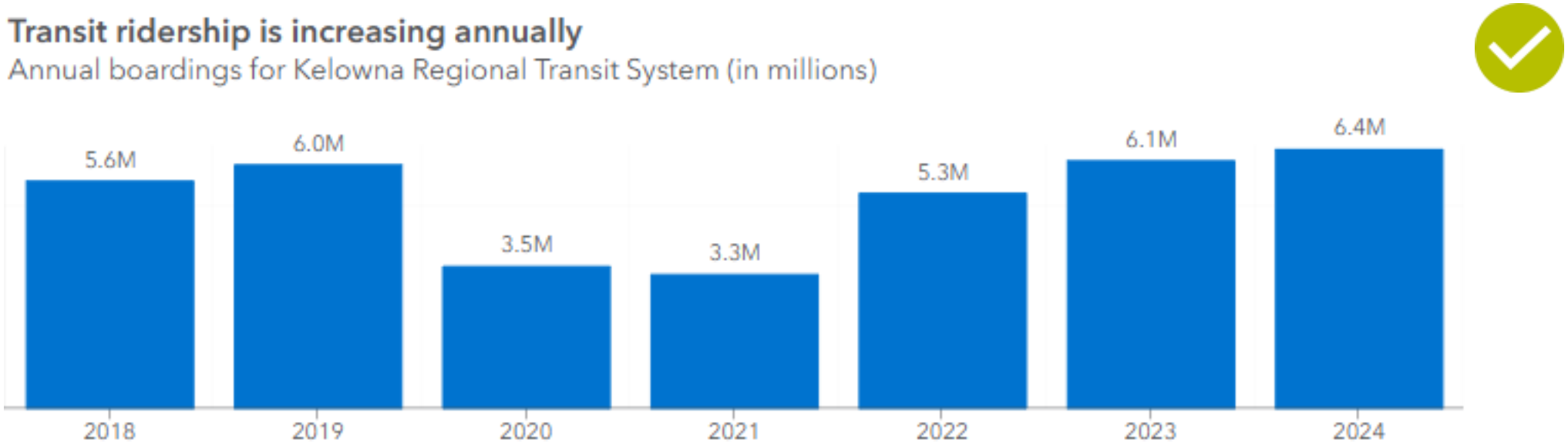
In Progress

- Clement Extension
- Lakeshore 2,3,4,5
- Hollywood Road Extension (John Hindle Drive to Sexsmith Road)

2024 Key Themes - TMP

- **Transit ridership hit a new record** with 6.4 million boardings, surpassing pre-pandemic levels
- **Bike trips up 42%** since 2018, keeping Kelowna on track to quadruple bike trips by 2040
- **Vehicle travel times** remained relatively stable, despite strong population growth
- **Injury collisions decreased** by 22% compared to 2018, including fewer injuries among people walking and biking
- **Shared micromobility** replaced over 556,000 km of vehicle travel in 2024, avoiding 109 tonnes of CO_2

Transit Use Reaches All-Time High



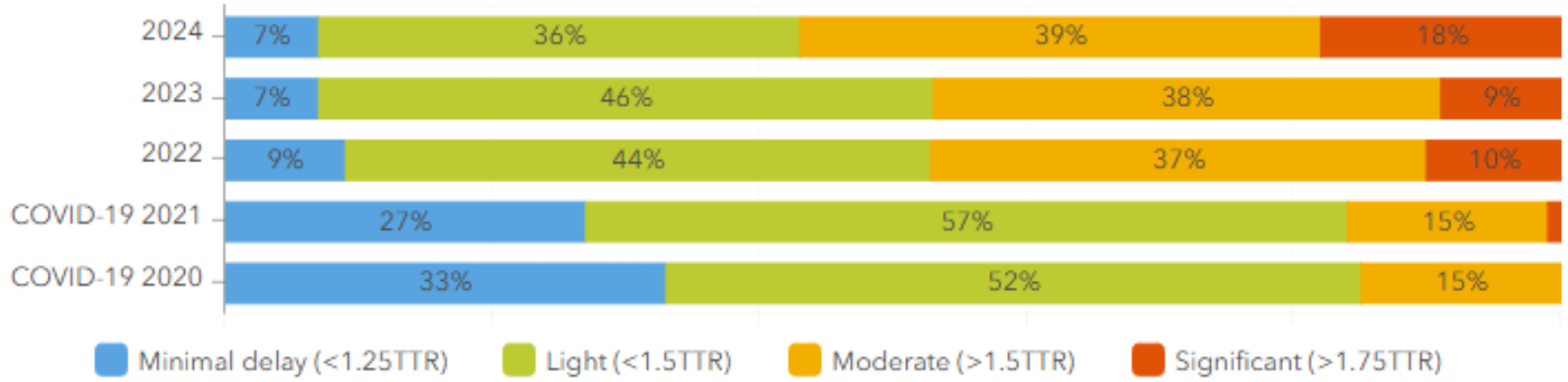
- Transit ridership is up 5% over 2023
- Weekday mode share: 4.8% (up from 3.4% in 2018)
- Strong growth among youth and young adults (5–24 years old)

Managing Congestion Amid Growth

- PM peak travel times have increased modestly, even with population growth

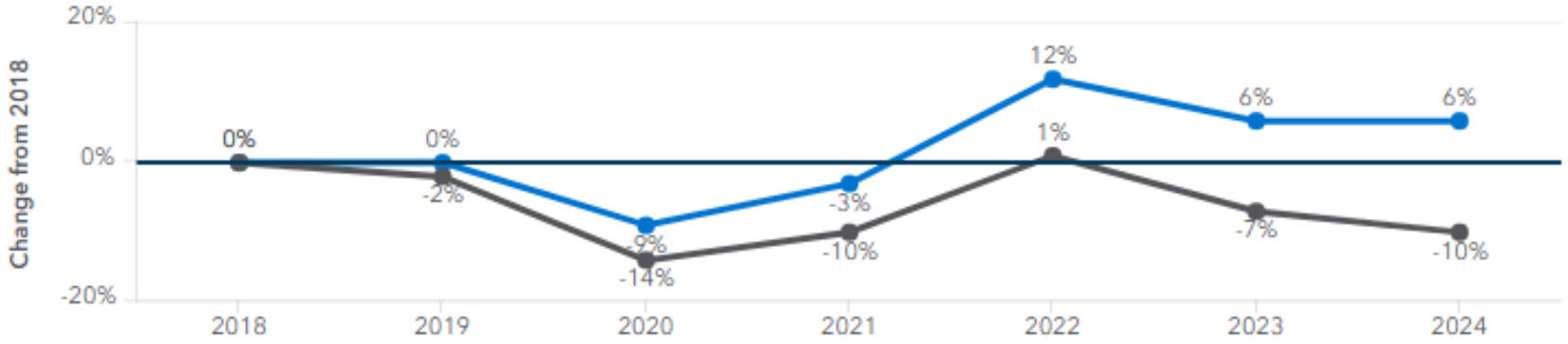
Afternoon peak travel times are increasing

Share of routes by level of delay (afternoon peak average, 3-6pm)



Fuel sales are decreasing after an increase during the pandemic

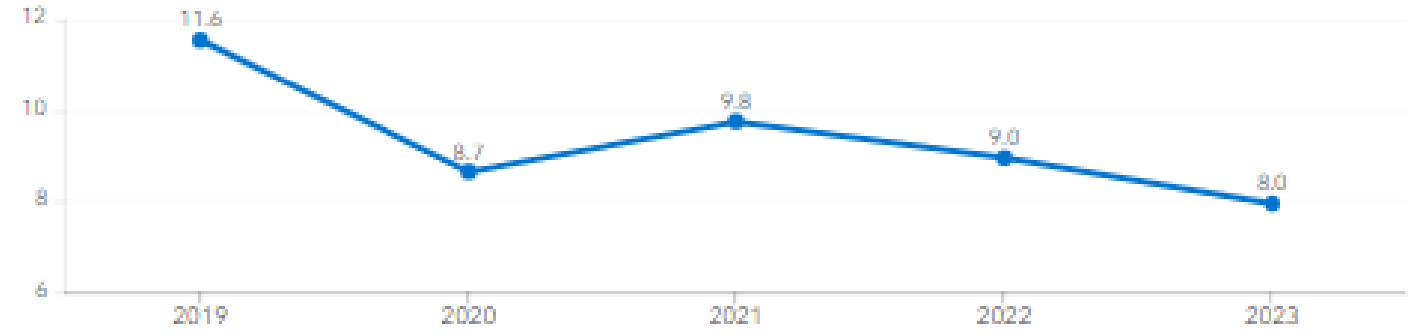
Percentage change in annual fuel sales, **total** and **per person**, compared to 2018 baseline



- Fuel sales per capita continue to decline
- Vehicle ownership stable; hybrid/electric uptake rising

Reducing Collisions Through Continued Safety Investment

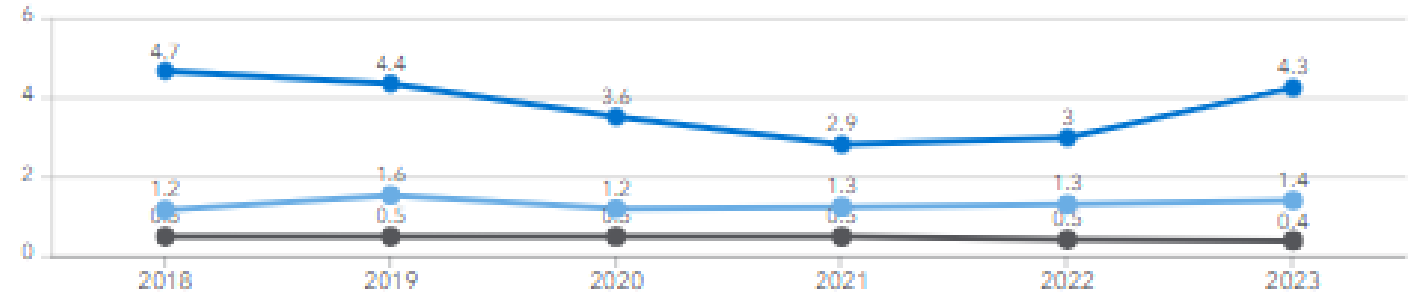
A decrease in traffic related injury collisions, shows traffic safety is improving over time
Collisions per 1,000 residents



Data: ICBC

- Injury collisions decreased by 22% since 2018

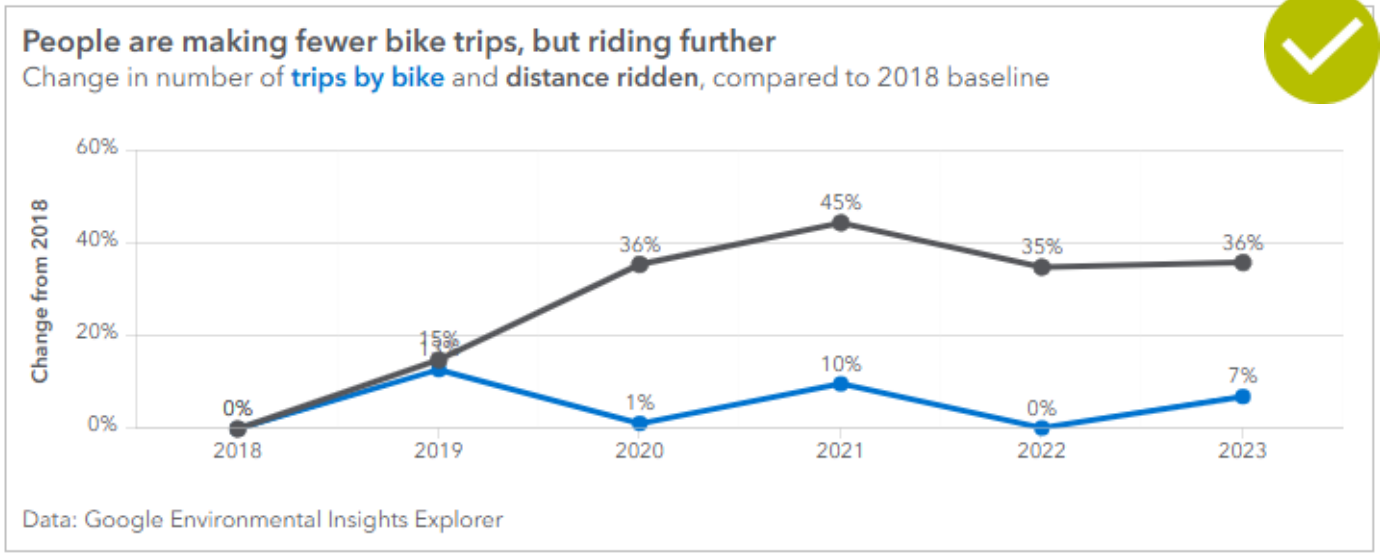
Injury collisions (injuries and fatalities) per distance travelled are dropping overall but increased for active modes
Rate of injuries and fatalities per million km travelled in Kelowna by **biking**, walking and **driving**.

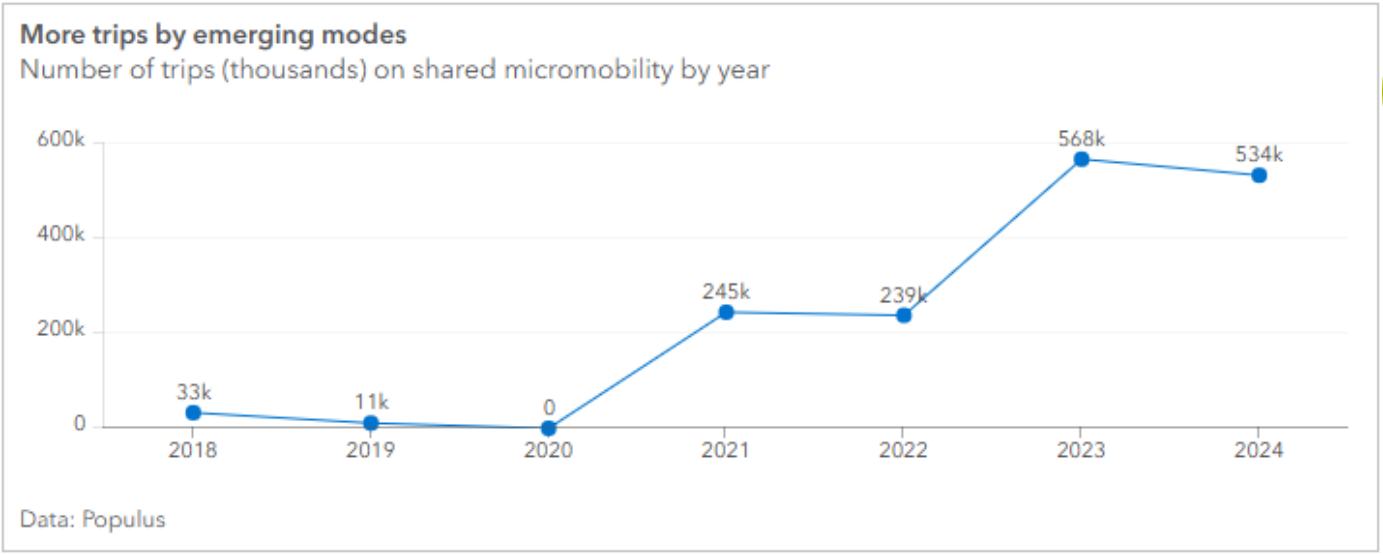


Data: ICBC

- Collision rates per distance travelled have improved for driving but vary for active modes

Growth in Bike Travel and Shared Micromobility





TMP Targets – At a Glance

TMP Targets	TMP Target - Key Metric	TMP Progress
	Double Transit Ridership	Trending in the desired direction.
	Quadruple Bike Trips	Trending in the desired direction.
	Reduce Distance Driven Per Capita by 20%	Trending in the desired direction.

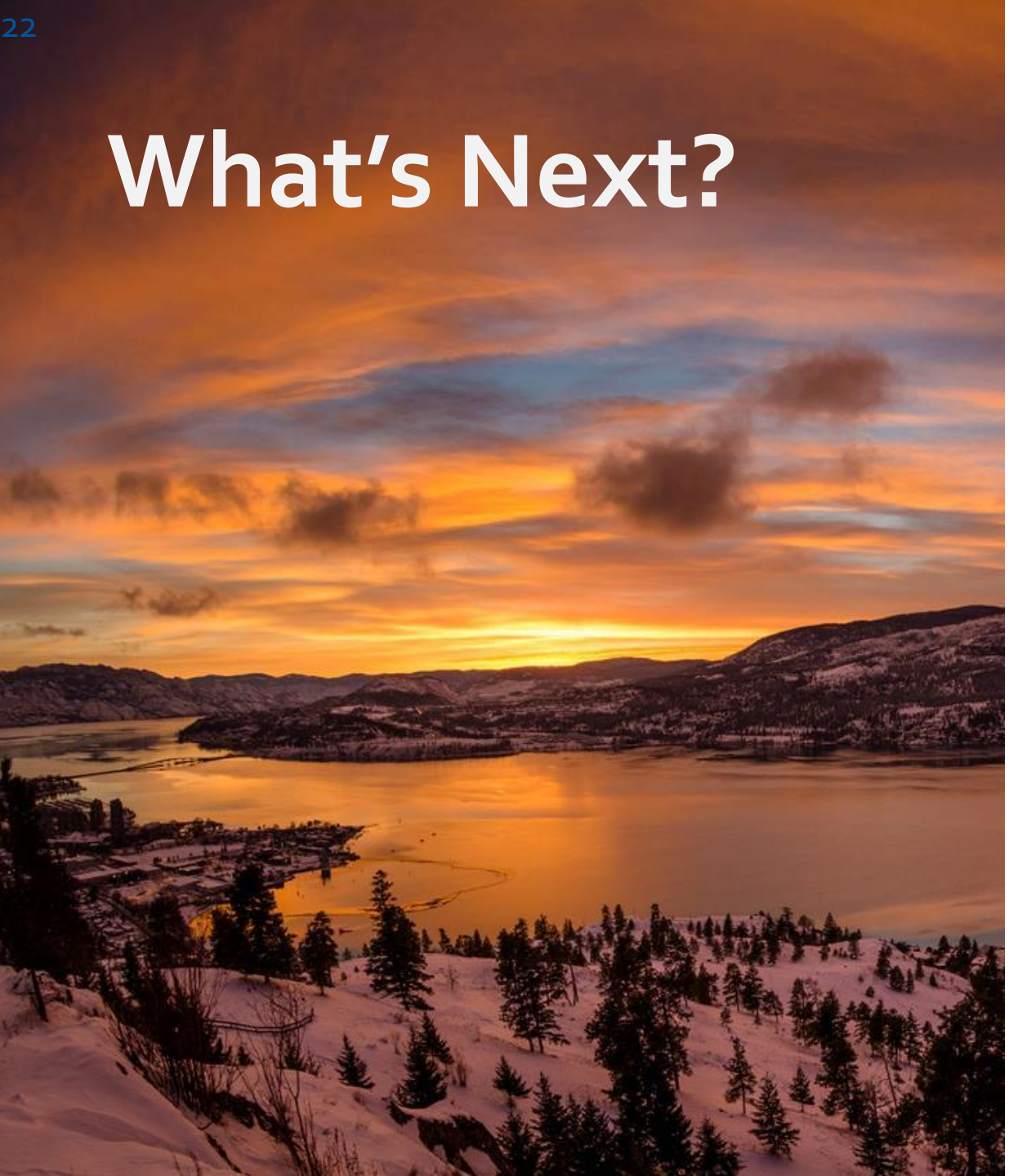
Click the hyperlink for the: TMP Dashboard

OCP & TMP Dashboards

- Click the hyperlink for the: [OCP Dashboard]

- Click the hyperlink for the: [TMP Dashboard]

City of Kelowna



What's Next?

- Focus on OCP/TMP implementation
- Alignment with Council Priorities
- Continual performance monitoring & annual reporting
- Update OCP to meet new provincial legislation

City of Kelowna

Questions?

For more information, visit kelowna.ca.

Report to Council

Date:	June 9, 2025
To:	Council
From:	City Manager
Subject:	Sustainable Fleet Strategy
Department:	Infrastructure Operations

Recommendation:

THAT Council receives, for information, the report from the Infrastructure Operations Department dated June 9, 2025, on the updated Sustainable Freet Strategy;

AND THAT Council directs staff to further explore and report back on, the key initiatives as noted in the Sustainable Fleet Strategy, based on decarbonization scenario 1, as described in the report from the Infrastructure Operations Department dated June 9, 2025.

Purpose:

To receive the Sustainable Fleet Strategy and to direct staff to further explore and report back on, key initiatives, as actions in the Sustainable Fleet Strategy based on decarbonization scenario 1.

Council Priority Alignment:

Climate & Environment

Background:

Building upon the City of Kelowna's commitment to climate and environment, the Sustainable Fleet Strategy (SFS) integrates a forward-looking approach that balances environmental stewardship with economic prudence. By prioritizing innovative solutions, such as the integration of hybridized operational frameworks and investments in cutting-edge vehicle technologies, the SFS ensures adaptability to emerging trends while addressing immediate climate goals.

It further advocates fostering partnerships with industry leaders to accelerate the adoption of groundbreaking practices and to establish Kelowna as a regional leader in sustainable fleet management.

This vision of transformation not only enhances mobility but also contributes to a healthier urban environment, laying the foundation for long-term resilience and community well-being whilst being fiscally prudent.

Discussion:

The Sustainable Fleet Strategy (SFS) for the City of Kelowna is a detailed plan aimed at addressing the critical environmental challenges posed by municipal vehicle and equipment operations. Currently, fleet operations contribute approximately 48% of the city's corporate greenhouse gas (GHG) emissions, therefore, the strategy underscores the need for effective decarbonization. Aligning with the Corporate Strategic Energy Management Plan, the primary objectives of the SFS include achieving a 40% reduction in GHG emissions by 2030 compared to 2007 levels and attaining net-zero corporate emissions by 2050. This document serves as a roadmap to transform the fleet into a model of efficiency, sustainability, and innovation while preserving operational capacity.

Key Initiatives and Strategic Directions:

Fleet Rightsizing:
Fleet rightsizing is a foundational pillar of the strategy, involving a comprehensive assessment of the number of vehicles and utilization. By identifying redundancies and inefficiencies, the city can expect to reduce the fleet by potentially up to 50 vehicles, ensuring only essential vehicles remain in service. This initiative not only mitigates emissions but also lowers costs related to vehicle acquisition, maintenance, fuel consumption, and eventual replacement, aligning with sustainability goals without compromising service quality.

Adoption of Low-Carbon Technologies:
The SFS emphasizes transitioning to low-carbon technologies. This shift is central to achieving significant and meaningful emissions reductions and operational efficiencies. Recommended technologies include:

- Electric Vehicles (EVs): Recognized as the optimal choice for light-duty applications, EVs offer mature technology, operational cost savings, and reduced environmental impact. Their reliability and affordability make them a cornerstone of the strategy for our light fleet.
- Hydrogen Solutions: For medium and heavy-duty vehicles, hydrogen-power technologies are identified as critical for long-term decarbonization. While challenges such as infrastructure development and market penetration remain, hydrogen internal combustion engines (H2-ICE) are anticipated by 2031, providing compelling zero emission solutions for heavy-duty applications.. Cost effective partial decarbonization can currently be achieved by applying direct hydrogen injection technologies on existing equipment. These retrofits are technologically mature, reasonably priced and deliver an immediate reduction in tailpipe emissions thus providing a cost effective and meaningful interim solution. In the longer term, hydrogen fuel cell solutions (HFCE) will be considered where applicable, viable and best value.
- Renewable Diesel: Hydrotreated vegetable oil (HVO), or 'renewable diesel', is made from vegetable oils and animal fats. It can be used in select diesel engines without modification as a 'drop-in' replacement for diesel, it performs equally well. HVO tailpipe emissions are marginally cleaner than diesel. Net CO_2 emissions for HVO are typically 70% lower than diesel, depending on the production and distribution methods, as the renewable feedstock used to make HVO

absorbs carbon during its growth. HVO remains more expensive than diesel, particularly where there are no government subsidies thus making it a temporary, transitional solution.
- New and Emergent Technologies: Continuous innovations will present options that were not contemplated as part of this strategy. Should those opportunities arise, we should remain open to evaluate and integrate new technologies into our strategy when deemed viable.

Strategic Charging Infrastructure Development:
Transitioning to EVs necessitates robust charging infrastructure which is crucial for operational continuity and cost optimization. Two strategic configurations are proposed:

1. Daisy Chain Configuration: Featuring 54 Level 1 chargers and 86 Level 2 chargers, this setup addresses approximately 99% of fleet charging needs. A daisy-chain configuration is where each charger's output is linked to the next charger's output. This allows multiple devices to share a common power source, streamlining wiring and reducing the number of power supplies needed.
2. Dedicated Chargers: Incorporating 126 Level 1 chargers and 88 Level 2 chargers, this configuration offers comprehensive coverage for all fleet requirements. Dedicated EV charges have their own circuit and provide faster, more reliable charging. However, it involves coordination challenges, longer implementation timelines and has higher associated costs.

Given the advantages in terms of lower expenditure and streamlined deployment and scalability, the Daisy Chain Configuration is preferred.

Financial Implications:
Comprehensive financial analysis forms the backbone of the strategy, ensuring cost-effectiveness while prioritizing sustainability:

- Electric Vehicles: Offering the highest Net Present Value (NPV) and lowest Marginal Abatement Cost (MAC), EV adoption presents significant financial and environmental benefits.
- Hydrogen Vehicles: Although characterized by higher capital and operational costs, hydrogen-powered solutions are indispensable for medium and heavy-duty decarbonization. Their inclusion is vital for achieving our long-term objectives for emissions and sustainability.

Maintenance and Operational Adaptations:
The transition to a sustainable fleet is hindered by limitations in the existing maintenance infrastructure:

- Space constraints and dated facilities restrict the integration of advanced EV and hydrogen technologies.
- Technician capacity is insufficient and specialized training programs for emerging technologies are lacking.
- Tools and protocols tailored to EVs and hydrogen vehicles are not yet in place, complicating effective fleet management.

Future Requirements:
To address these challenges, the SFS outlines the following measures:

- Expanding and upgrading maintenance facilities by 4 bays to 12 bays, equipped for traditional ICE vehicles, EVs, and hydrogen vehicles. (further expansion to 16 bays by 2050).
- Developing technician training programs focused on EV and hydrogen vehicle technologies to build a skilled workforce.

- Integrating advanced telematics systems for improved fleet management, alongside updated safety protocols for new technologies.

Fleet Decarbonization Scenarios:
The strategy explores two potential scenarios for fleet decarbonization:

- Scenario 1: Assuming timely adoption of recommended technologies, this scenario predicts a 37% reduction in emissions by 2030 and a 95% reduction by 2050. It represents the ideal pathway to achieving ambitious climate goals.
- Scenario 2: In the event of delayed adoption, emissions reductions are projected to be limited to a 26% reduction by 2030, catching up to Scenario 1 by 2050. This pathway highlights the critical nature of prompt and decisive action for short-term gains.

Both scenarios underscore the importance of grid decarbonization in achieving full net-zero emissions, with utilities and energy providers playing a key role in addressing this aspect.

Conclusion:

The Sustainable Fleet Strategy is a visionary plan that positions the City of Kelowna as a leader in municipal fleet sustainability. By leveraging advanced technologies, optimizing fleet size, and investing in infrastructure and training, the city demonstrates its commitment to addressing climate change while ensuring operational efficiency and fiscal responsibility.

It will also serve as a catalyst for our community partners that are looking for cost effective ways to decarbonize their fleet by sharing the approach and the success of the emerging technologies as well as the associated ecosystem challenges for alternative fuels such as hydrogen.

This strategy not only serves as a roadmap to a greener future but also establishes Kelowna as a role model for municipalities aiming to achieve ambitious climate goals.

Internal Circulation:
Fleet Services
Energy Management
Climate action and Environment
Considerations not applicable to this report:
Legal/Statutory Authority:
Legal/Statutory Procedural Requirements:
Existing Policy:
Financial/Budgetary Considerations:
Consultation and Engagement:

Submitted by: G. Bos, Infrastructure Operations Department Manager

Approved for inclusion: M. Logan, General Manager, Infrastructure

Attachments:
Attachment A: Sustainable Fleet Strategy Report

Sustainable Fleet Strategy Report

Prepared for the City of Kelowna

June 9, 2025

Classification: KPMG Public

Notice to Reader

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Executive Summary

The Sustainable Fleet Strategy (SFS) for the City of Kelowna is a comprehensive plan designed to reduce corporate emissions, aiming for a 40% reduction from 2007 levels by 2030 and achieving net-zero municipal emissions by 2050. Fleet decarbonization is crucial as Kelowna's municipal fleet is responsible for 48% of the city's corporate greenhouse gas (GHG) emissions, making it a focal point for realizing these ambitious targets. To address this critical area, the City commissioned the Sustainable Fleet Strategy to explore various decarbonization opportunities and establish a clear pathway for implementation.

The key components of the Sustainable Fleet Strategy include several essential initiatives. First being fleet rightsizing, which aims to optimize the number and types of vehicles utilized, identifying the potential for a reduction of 30 to 50 vehicles to enhance fleet efficiency. This initiative aims to streamline operations while promoting sustainability.

The strategy incorporates a low carbon technology review, evaluating various alternative fuel technologies with potential for fleet decarbonization. Currently, electric vehicles (EVs) are recognized as a viable solution for light-duty needs due to their established technology and the advantage of city-managed charging infrastructure. Hydrogen is identified as a promising candidate for medium and heavy-duty vehicles due to its high energy density and payload capacity. However, challenges remain regarding hydrogen infrastructure, with the anticipated availability of hydrogen internal combustion engine (ICE) technology not expected until 2029. Hybrid range extenders are emerging as another potential solution for mid-sized trucks, providing improved fuel economy without additional city-owned fueling infrastructure, although market availability is not expected until 2029.

The development of a robust charging infrastructure is central to the strategy, proposing the installation of approximately 140 chargers to accommodate the expected increase in electric vehicle usage while ensuring efficient charging capabilities. This infrastructure is critical in supporting the transition to EVs and encouraging broader adoption. Moreover, the strategy underscores the importance of maintenance adaptations, emphasizing the need for specialized maintenance areas and technician training programs. Existing facilities are currently not equipped to service EVs or hydrogen vehicles effectively, which necessitates the establishment of these specialized facilities to maintain a sustainable fleet.

In terms of implementing both short and long-term strategies, renewable diesel is considered an interim solution currently in use by the City, offering immediate emissions reductions compared to traditional diesel. However, limitations exist from a lifecycle perspective due to transport emissions, particularly since the renewable diesel is sourced from Southeast Asia.

The strategy reflects a multifaceted approach to municipal fleet decarbonization, recognizing the distinct advantages and challenges that each technology presents depending on vehicle class. Such diversity is essential for creating a robust and sustainable fleet as the City of Kelowna embarks on its journey towards reducing emissions and achieving its environmental goals.

The scenario analysis conducted considers two timelines: one where hydrogen ICE technology becomes available as currently estimated by manufacturers, and another with delayed releases. The analysis shows that a 40% reduction in fleet emissions would not be possible until 2031 under the non-delayed scenario. However, both scenarios project an ~95% reduction by 2050. The remaining ~5% emissions are attributed to the provincial

electricity grid's current emissions. Full fleet decarbonization depends on the province's ability to decarbonize its grid, which is beyond the City's scope and contingent on provincial and federal policies.

From a financial standpoint, transitions to electric vehicles consistently demonstrate the highest net present value (NPV) and lowest marginal abatement cost (MAC) due to emissions reductions as well as reduced maintenance and fuel expenses, and in some cases, even lower capital costs —saving the City approximately $100–$1,000 per tonne of emissions abated. For high-emission vehicles, particularly single axle and tandem axle trucks, the MAC of low-carbon alternatives is large, or the cost per tonne of carbon dioxide equivalent is high. However, the CAPEX and OPEX costs of low-carbon alternative technologies for these vehicle classes (such as hybrid range extenders, and co-combustion systems) are highly uncertain, given that these technologies are early-stage and largely untested in practice. This analysis used proxies and estimates for these costs and therefore results should be interpreted as highly preliminary.

The analysis to build the City of Kelowna's Sustainable Fleet Strategy structured a step-by-step approach in fleet right sizing and low carbon technology transition to the City's 447 vehicles. Conservative estimates see a potential reduction of 30-50 vehicles in the City's fleet through right sizing and fleet optimization strategies.

The charging analysis for the City's EV fleet evaluated two main charging configurations: a Daisy Chain Configuration, which optimizes charging organization, and a Prioritized Dedicated Charging approach, which requires more vehicle charging management. The analysis concludes that the Daisy Chain Configuration could potentially be more cost-effective while meeting the fleet's charging needs. A location-based approach, to further refine the results based on each department's needs, anticipated the City will require ~68 level 1 chargers, ~32 level 2 chargers and ~40 daisy chains[1] for a total of ~140 chargers. In summary, the strategic analysis of charging infrastructure is designed to ensure that the City can effectively support its growing fleet of electric vehicles while maximizing efficiency and minimizing costs.

The transition to hydrogen and EVs within municipal fleets necessitates significant adaptations in maintenance facilities and practices. Current maintenance infrastructure is primarily designed for ICE vehicles, which limits their capacity to service EVs and hydrogen-fueled vehicles. As the City of Kelowna moves towards a low carbon fleet, it is essential to expand facilities to accommodate the unique requirements of these vehicles. This includes creating dedicated maintenance bays equipped with specialized tools for high-voltage systems and hydrogen safety protocols. The need for comprehensive training programs for technicians is also critical, ensuring they are well-versed in the complexities of EV and hydrogen technologies, which differ significantly from traditional vehicle maintenance practices.

Moreover, the integration of advanced telematics systems and updated safety protocols will be vital in managing the evolving fleet. The City must prioritize the establishment of safety measures tailored to high-voltage and hydrogen systems, including fire suppression systems and emergency response plans. As the fleet transitions, it is crucial to implement a strategic approach that not only enhances operational capabilities but also aligns with provincial safety standards and environmental goals. This proactive planning will ensure that the City of Kelowna can effectively manage its fleet's maintenance needs while contributing to the reduction of GHG emissions.

[1] Each daisy chain charger can support between one to three electric vehicles based on conservative assumptions.

Contents

List of Acronyms

Acronym	Term	Acronym	Term
ASE	Automotive Service Excellence	MAC	Marginal Abatement Cost
ASTM	American Society for Testing Materials	NOx	Nitrogen Oxides
AWD	All-wheel drive	NPV	Net Present Value
B6.7	Model name of a 6-cylinder engine	OEM	Original Equipment Manufacturer
BAU	Business-as-usual	OPEX	Operating Expenditure
BCFC	British Columbia Fire Code	PHEV	Plug-in Hybrid Electric Vehicle
BEV	Battery Electric Vehicle	PM	Particulate Matter
CAPEX	Capital Expenditure	PPE	Personal Protective Equipment
CO	Carbon Monoxide	ROI	Return on Investment
CO2	Carbon dioxide	RTV	Rugged Terrain Vehicle
CRA	Canada Revenue Agency	SFS	Sustainable Fleet Strategy
DCFC	DC Fast Charger	SUV	Sport Utility Vehicle
EV	Electric Vehicle	tCO2e	Tonne of carbon dioxide equivalent
ESR	Electrical Safety Regulation	TRL	Technology Readiness Level
FCEV	Fuel Cell Electric Vehicle	UBC	University of British Columbia
GHG	Greenhouse gas	VOC	Volatile Organic Compounds
GSR	Gas Safety Regulation	X15	Model name of a 15-liter engine
H2 ICE	Hydrogen Internal Combustion Engine	YTD	Year-to-date
HRE	Hybrid Range Extenders	ZEV	Zero-emission vehicle
HTEC	Hydrogen Technology & Energy Corporation		
ICE	Internal Combustion Engine		
IT	Information Technology		
LDT	Light Duty Truck		

1 Introduction

1.1 Background and Context

The City of Kelowna ("City") recognizes that nearly half of its corporate emissions in 2023 stemmed from its fleet. In response, the City looks to develop a Sustainable Fleet Strategy (SFS) to align its vehicle and equipment procurement and management practices with its goal of achieving net-zero by 2050.

The SFS also presents other benefits to the City and its residents, including improved air quality and reduced fuel and maintenance costs. As such, the SFS presents an opportunity to galvanize the net-zero transition in Kelowna and position the City as a leader amongst Canadian municipalities.

1.2 Scope and Objectives

The Sustainable Fleet Strategy (SFS) was developed in three streams: Fleet Strategy, Charging, and Maintenance. Each of these streams includes holistic and stakeholder-informed strategy for fleet transition towards zero-emission vehicles (ZEV), including:

- Asset management optimizing and right-sizing fleet, charging, and maintenance assets/resources.
- Capital investment strategy and planning, including funding options and business cases.
- Emissions reduction planning in-line with decarbonization targets.
- Additional considerations include policy and regulatory environment and current/anticipated technologies, with focus on decarbonization technologies and methods beyond electric vehicles.

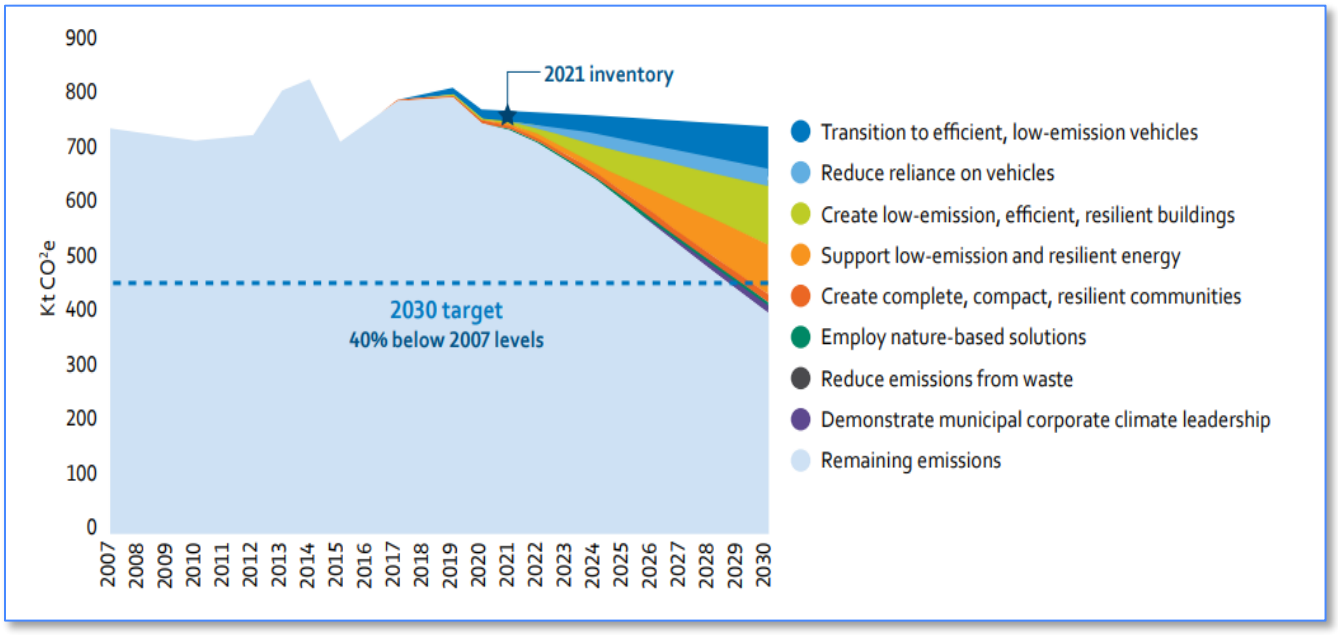
1.3 Kelowna's GHG Targets

As part of its commitment to sustainability, the City of Kelowna has established GHG reduction targets, aiming to significantly decrease emissions across the community, including corporate operations and municipal fleets. These targets include:

- Reduction in GHG emissions by 40% below 2007 levels by 2030
- Alignment with the Province of British Columbia's emissions reduction goals
- Net-zero emissions by 2050

Furthermore, Kelowna's fleet accounts for 48%* of corporate GHG emissions, making fleet management a crucial part of achieving the City's GHG reduction goals.

FIGURE 1 KELOWNA'S GHG TARGETS



Based on Figure 1, transitioning to lower-emissions vehicles plays a significant role in the City's overall emissions reduction strategy

Already, the City has explored innovative solutions to reduce GHG emissions, such as:

- Using R100, a 100% renewable diesel fuel
- Piloting a hydrogen-fueled car
- Purchasing electric vehicles
- Investigating hydrogen options for decarbonizing heavy-duty vehicles

1.4 Alternative Technologies

To move Kelowna towards a net-zero municipal fleet, the following technologies and practices were employed to reduce GHG emissions from fleet operations based on a review of available fleet technologies. More detail on the related review and selection of these technologies can be found in "Low Carbon Fleet Technology Review" (refer page 20), however, the below table provides a high-level overview.

TABLE 1 DEFINITIONS OF ALTERNATIVE TECHNOLOGIES

Technology Name	Definition
Hydrogen Internal Combustion Engine (H_2-ICE)	A modified internal combustion engine that burns hydrogen fuel to generate power
Hydrogen Co-Combustion	A process where hydrogen is burned alongside another fuel (typically a fossil fuel) in an internal combustion engine to reduce emissions and improve efficiency
Electric Vehicles	Powered solely by electric motors using electricity stored in batteries, with no internal combustion engine
Hybrid Range Extenders	Systems that primarily use an electric motor for propulsion, with a smaller combustion engine serving as a generator to extend driving range.
Renewable Diesel	A fuel chemically identical to petroleum diesel but derived from renewable biomass sources through hydrotreatment, compatible with existing diesel engines
Rightsizing	Optimizing the size and composition of the fleet to meet specific needs efficiently, balancing vehicle types and numbers to minimize costs and maximize effectiveness
Fleet Sharing	Allows municipal employees to share fleet vehicles for work-related purposes

1.5 Vehicle Type Definitions

For the purposes of this study, the following definitions were allotted to the City's vehicles based on vehicle type.

TABLE 2 VEHICLE TYPE DEFINITIONS

Vehicle Type (units)	Heavy Duty (85)		Medium Duty (43)			Light Duty Vehicles (290)				
	HD Equipment (68)	Tandem Axle Truck (17)	MD Equipment (12)2	Utility Vehicle (9)2	Single Axle Truck (22)	LD Equipment (69)	LD Truck (152)1	Van (31)	SUV (6)	Car (31)
Representative Vehicle	Freightliner M2, Volvo L110H	114SD, International 7500, 7600	Asphalt Recycler, Snow Rotor	Gators, RTVs	F-450, F-550, F600 Fuso Canter	Graco L Lazer, Olympia M	Ford F-150 to F-350	Ford Transit Connect	Ford Escape	Ford CMax
Main Functions	Snow, Mower, Landfill	Fire Truck, Sewer Jet, Gravel Hauling	Mowing, Snow removal, grading	Service, Fire, Hauling, Winter, Landfill	Fire, Heavy Towing, Dump, Tree, Snow Removal	Chipper, Paint, Snow Removal, Mowing	Hauling, Towing, Equipment mounting	Light hauling, Tool Transport	Inspection + People Transport	People Transport
Seating	2+	2+	2+	2+	2+	2+	4+	6+	5+	4+
On vs. Off-road			Off-road capable (AWD/4x4)	Off-road capable (AWD/4x4)	Roadside, Arena, Field		On & Off-road	On-road	AWD	On-road
Tow Rating	-	-	-	3500+ lbs	12,000+ lbs	-	~8,000 lbs	-	n/a	n/a
Payload Rating	-	-	-	-	-	-	~2,500 lbs	~2,500 lbs	n/a	n/a

Notes: [1]City's Light Duty Trucks: range from $^1/_2$ Ton (e.g. F-150) to 1+Ton Pickup (e.g. F350, F450) with work requirements that can be met by an F-150 with the exception of a few trucks in the Fire and Wastewater department that require heavy towing (up to 12,000lbs) and fire truck operations [2]Categories: Include light & medium duty equipment that are EV-eligible

1.6 Fleet Optimization Approach

Several factors contributed to the fleet optimization and decarbonization approach. This analysis was conducted on a step-by-step basis as outlined below:

FIGURE 2 FLEET OPTIMIZATION APPROACH

Retirement Rate (Attrition)

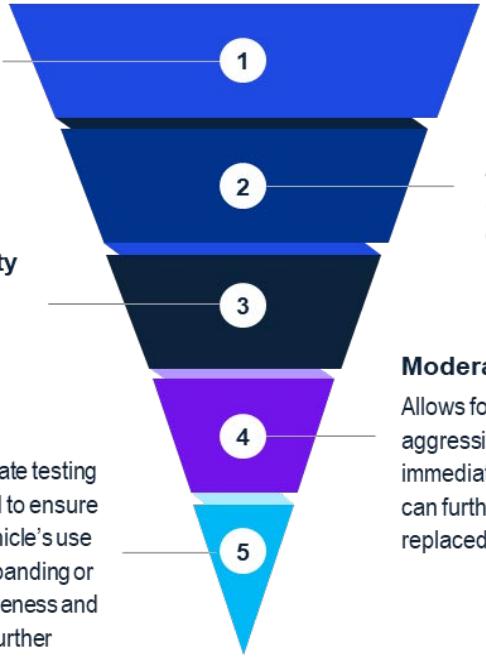
Identifies vehicle replacement in the short, medium, and long-term, achieved by analysing utilization data against fleet policy. Vehicles are replaced as needed based on attrition.

Technology and Model Applicability

Reduces the number of vehicles that can be transitioned. Only vehicles with viable model replacements can be considered.

Piloting New Technologies

Results in slower technology uptake to facilitate testing and adjustments for the new technology, and to ensure alignment of the new technology with the vehicle's use case. Pilot results will guide decisions on expanding or reconsidering technologies based on effectiveness and operational fit. Full fleet transition will await further practical assessments.[20]



Right-Sizing

Adjusts size and composition of fleet to align with current operational needs, ensuring optimal efficiency.[1]

Moderate versus Aggressive Scenarios

Allows for a more gradual transition, while an aggressive approach aims for a complete and immediate shift. Deciding between these scenarios can further lower how many vehicles will be replaced.

Notes: [1] Right-sizing opportunities are recommended; however, the City will make the final recommendation on fleet size and composition adjustments. Fleet composition is taken into account for the modelling; however, fleet size is assumed to stay the same as it is currently.[2] For the sake of modelling, it is assumed that pilots are successful and result in full fleet transitions.

2 Current State

2.1 Fleet

2.1.1 Condition Assessment

Fleet Inventory: Utilization Review

The following tables provides an overview of alignment between fleet utilization metrics and annualized utilization targets. Most fleet vehicles across all vehicle classes are under-utilized based on annual target utilization targets. Vehicles in the Single Axle Truck, Light Duty Equipment and Medium Duty equipment classes are all under-utilized.

TABLE 3 ANNUAL UTILIZATION VS. TARGET

Class	Avg. km[1]	Avg. km[3]	Avg. hr[1]	Avg. hr[3]	Annual Utilization Targets[2]		Meets Target[1,2]
					KM	Hours	
Utility Vehicle	7,436	7,605	304	149	10,000		35%
Light Duty Truck	8,742	8,903	340	98	10,000		32%
Car	8,621	9,793	311	N/A	10,000		30%
SUV	6,288	8,063	216	N/A	10,000		30%
Tandem Axle Truck	12,142	18,093	590	678	20,000		23%
Trailer	10,214	N/A	306	22	20,000		17%
Heavy Duty Equipment	3,207	298	486	562		1,000	15%
Van	6,088	6,701	236	N/A	10,000		12%
Single Axle Truck	8,069	6,244	362	581	20,000		0%
Light Duty Equipment	1,121	N/A	149	96		750	0%
Medium Duty Equipment	491	N/A	36	518		750	0%

Notes:
1. Analysis based on 406 vehicle devices from Geotab data between Sep 1st, 2022 – Aug 31st, 2024
2. Analysis based on 412 vehicles and equipment from the Fleet List. This includes 270 vehicles and 142 equipment.
3. Utilization targets are based on annual utilization targets (appendix C) of the City of Kelowna's Corporate Fleet Sustainability Policy

Fleet Operations: Routes and Locations for Cars, Vans, SUVs, and Utility Vehicles

Cars, vans, SUVs and utility vehicles consists of 104 vehicles (34,488 daily trips in 2 fiscal years), including cars (37), vans (34), SUVs (10), and utility vehicles (23), which collectively represent 25.6% of the total fleet. Analysis of trip data reveals that 80% of trips fall within 66.5 km, duration of 2.4 hour. The remaining 20% of trips, which exceed this distance, are performed by 97 vehicles from all 4 vehicles classes.

FIGURE 3 LIGHT DUTY VEHICLES- ROUTE

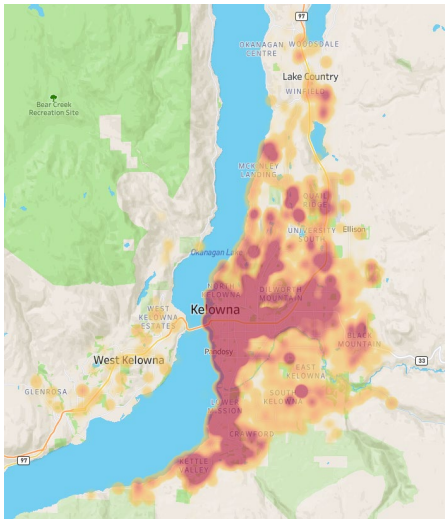


FIGURE 4 DAILY TRIP DISTANCE DISTRIBUTION (KM)- CAR, VAN, SUV, UTILITY VEHICLE

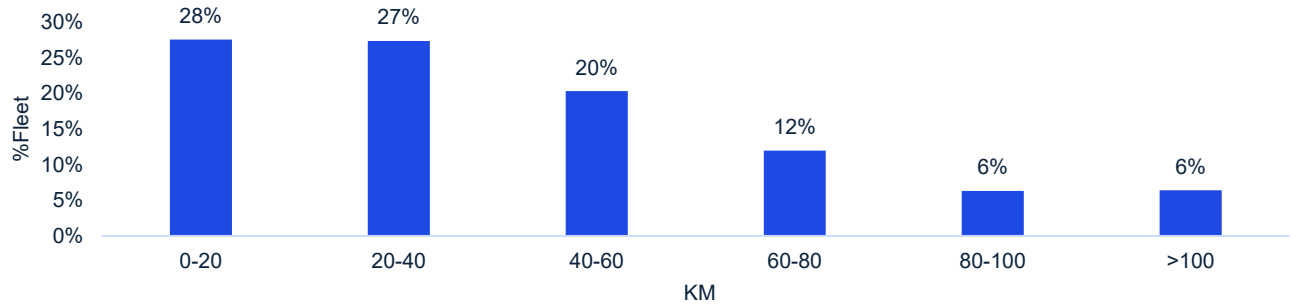
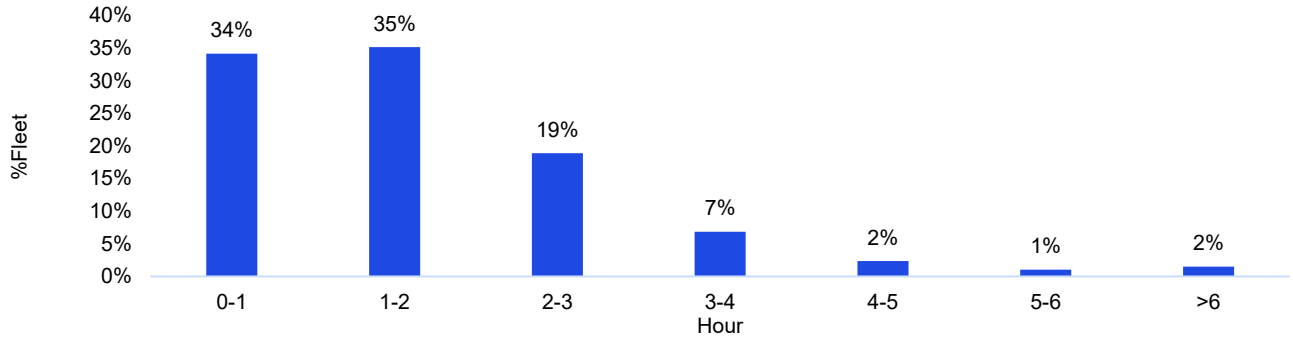


FIGURE 5 DAILY TRIP DURATION DISTRIBUTION (HOUR)- CAR, VAN, SUV, UTILITY VEHICLE



Based on the assessment above, the conclusion is that light duty vehicles rarely travel or operate more than 80km or more than 4hrs – making the case for electrification stronger.

Fleet Operations: Routes and Locations for Equipment

This sub-group consists of 69 vehicles (18,013 daily trips in 2 fiscal years), including Light Duty (9) Medium Duty (6) and Heavy-Duty Equipment (54), which collectively represent 17% of the total fleet. Analysis of trip data reveals that 80% of trips fall within 36.5 km, duration of 5.4 hour. The remaining 20% of trips, which exceed this distance, are performed mostly by 41 Heavy Duty Equipment.

FIGURE 6 EQUIPMENT- ROUTE

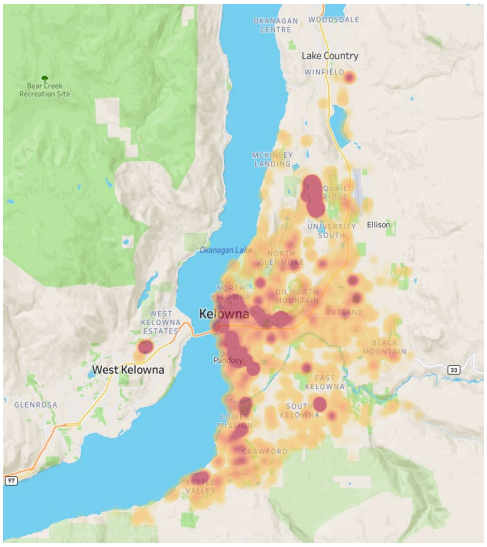


FIGURE 7 DAILY TRIP DISTANCE DISTRIBUTION (KM)- EQUIPMENT

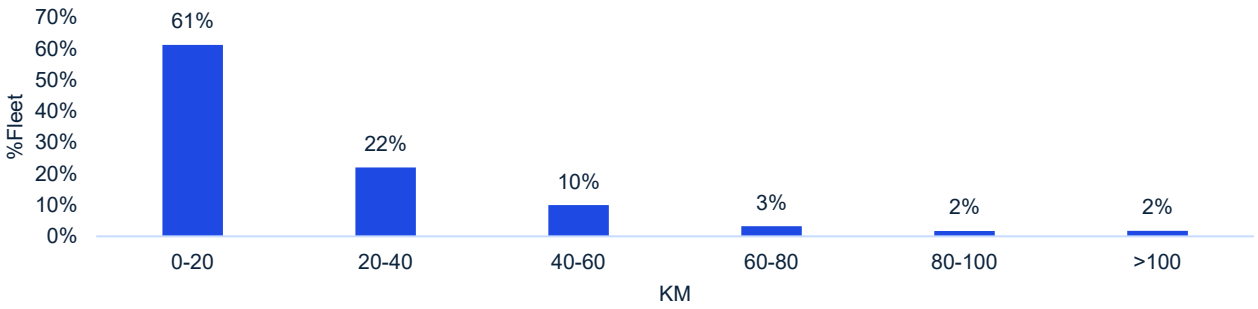
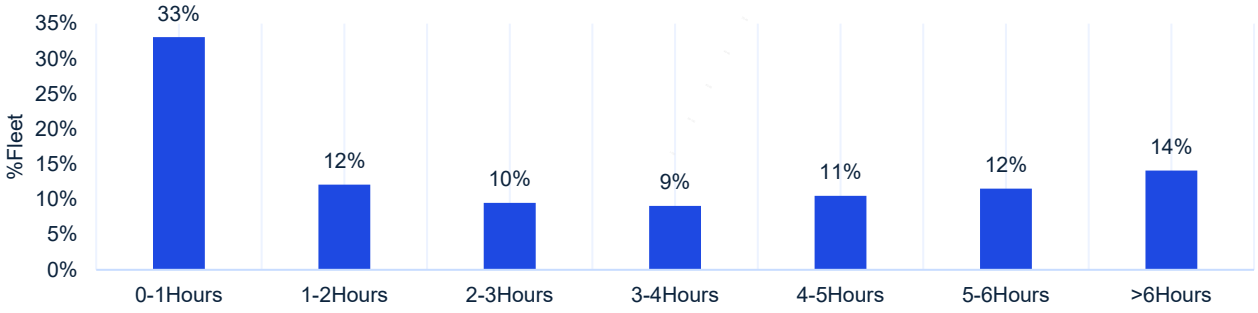


FIGURE 8 DAILY TRIP DURATION DISTRIBUTION (HOUR)- EQUIPMENT



Based on the assessment above, a significant fraction of the equipment operates for more than 5hrs – making the case for alternative technologies where electrification isn't feasible

Fleet Operations: Routes and Locations for Trucks[1]

This sub-group consists of 216 vehicles (77,675 daily trips in 2 fiscal years), including Light Duty Trucks (164), Single Axle Trucks (17) and Tandem Axle Truck (35), which collectively represent 53.2% of the total fleet. Analysis of trip data reveals that 80% of trips fall within 77.5 km, duration of 3.1 hour. The remaining 20% of trips, which exceed this distance, are performed mostly by 115 Light Duty Trucks.

FIGURE 9 TRUCKS- ROUTE

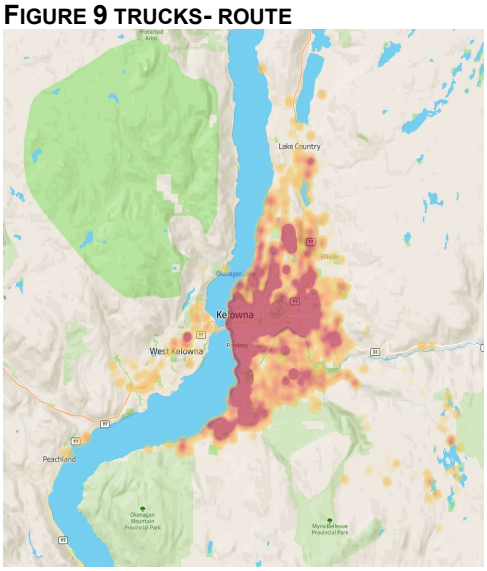


FIGURE 10 DAILY TRIP DISTANCE DISTRIBUTION (KM) - TRUCKS

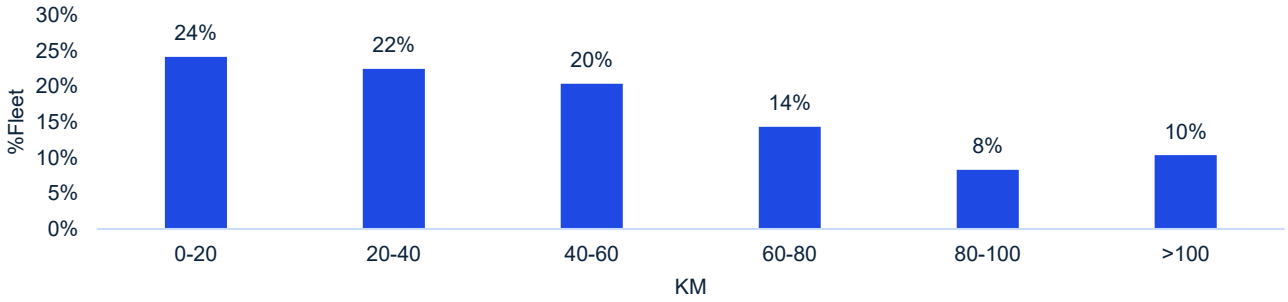
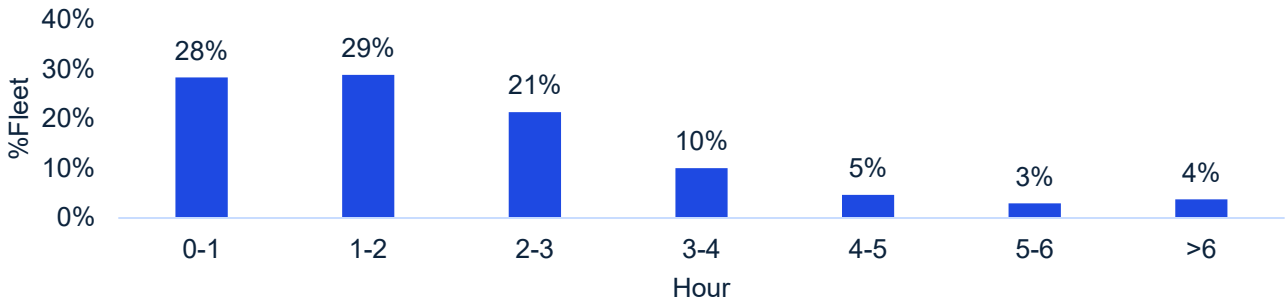


FIGURE 11 DAILY TRIP DURATION DISTRIBUTION (HOUR) - TRUCKS



Based on the assessment above, a signification proportion of trucks operate for more than 4hrs and > 80km – making the case for alternative technologies where electrification isn't feasible, especially in the winter.

Condition: Replacement Cycle

The following section identifies the condition of the current fleet relative to the replacement guide and compares the age of vehicles and equipment identified in the fleet list. Single Axle trucks and Light Duty Equipment have >60% of their fleet above guideline.

TABLE 4 CONDITION OF THE CURRENT FLEET RELATIVE TO THE REPLACEMENT GUIDE (WITH RESPECT TO AGE)

Vehicle Type	Replacement Guideline	Vehicles / Equipment Over Guideline	Percentage Over Guideline
Light Duty Truck	10 years	55 / 151	36%
Tandem Axle Truck	10 years	14 / 35	40%
Single Axle Truck	10 years	11 / 18	61%
Car	10 years	8 / 36	22%
Van	10 years	10 / 34	29%
SUV	10 years	2 / 10	20%
Utility Vehicle	10 – 15 years*	10 / 26	38%
Heavy Duty Equipment	10 – 15 Years*	23 / 75	31%
Light Duty Equipment	7 – 15 Years*	33 / 53	62%
Medium Duty Equipment	10 – 15 Years*	0 / 8	0%
Total		166 / 446	37%

Based on the above analysis, 166 out of 446 vehicles, or 37%, of the fleet are due for replacement based on age.

Condition: Replacement Cycle (Mileage-Hours)

The following section identifies the condition of the current fleet relative to the replacement guide and compares the mileage and hours used for vehicles and equipment identified in the fleet list. Tandem Axle trucks and Heavy-Duty Equipment (73%) have > 60% of their fleet above guideline.

TABLE 5 CONDITION OF THE CURRENT FLEET RELATIVE TO THE REPLACEMENT GUIDE (MILEAGE-HOURS)

Vehicle Type	Replacement Guideline	Vehicles / Equipment Over Guideline	Percentage Over Guideline
Light Duty Truck	150K KM	11 / 151	7%
Tandem Axle Truck	200K KM / 7500 Hours	22 / 35	63%
Single Axle Truck	200K KM / 7500 Hours	8 / 18	44%
Car	150K KM	5 / 36	14%
Van	150K KM	1 / 34	3%
SUV	150K KM	0 / 10	0%
Utility Vehicle	200K KM / 7,500 Hours	3 / 26	12%
Heavy Duty Equipment	10,000 – 15,000 Hours	55 / 75	73%

Vehicle Type	Replacement Guideline	Vehicles / Equipment Over Guideline	Percentage Over Guideline
Light Duty Equipment	500 – 2,500 Hours	24 / 53	45%
Medium Duty Equipment	7,500 Hours	1 / 8	13%
Total		130 / 446	29%

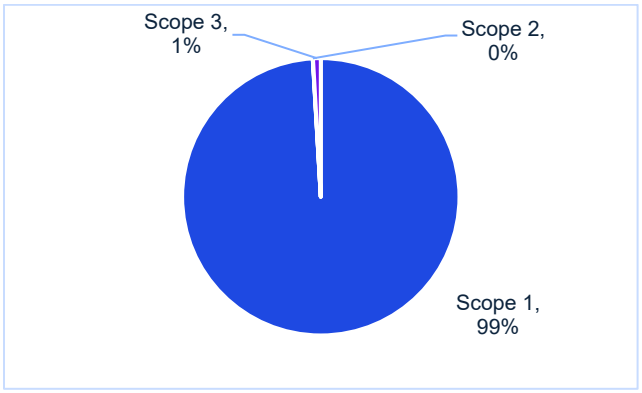
Based on the analysis above, 130 out of 446 vehicles, or 29%, of the fleet are due for replacement based on age.

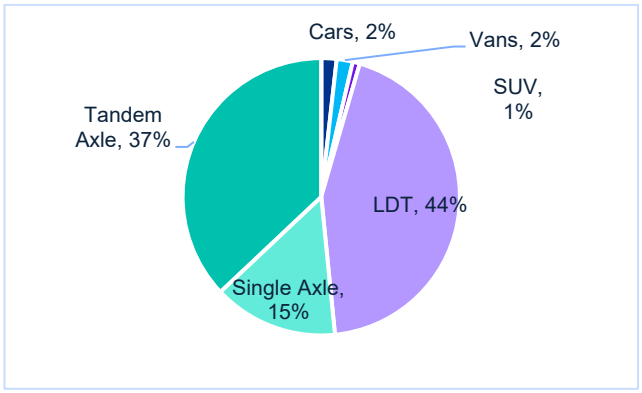
2.1.2 Emissions

Fleet Analysis: GHG Emissions (Percentage Terms)

Virtually all the City's fleet emissions are produced by City-owned vehicles (Scope 1 emissions). These Scope 1 emissions are concentrated in three vehicle classes: heavy duty equipment, light duty trucks, and tandem axle trucks, which make up 95% of total emissions or 1,450 tCO_2e.

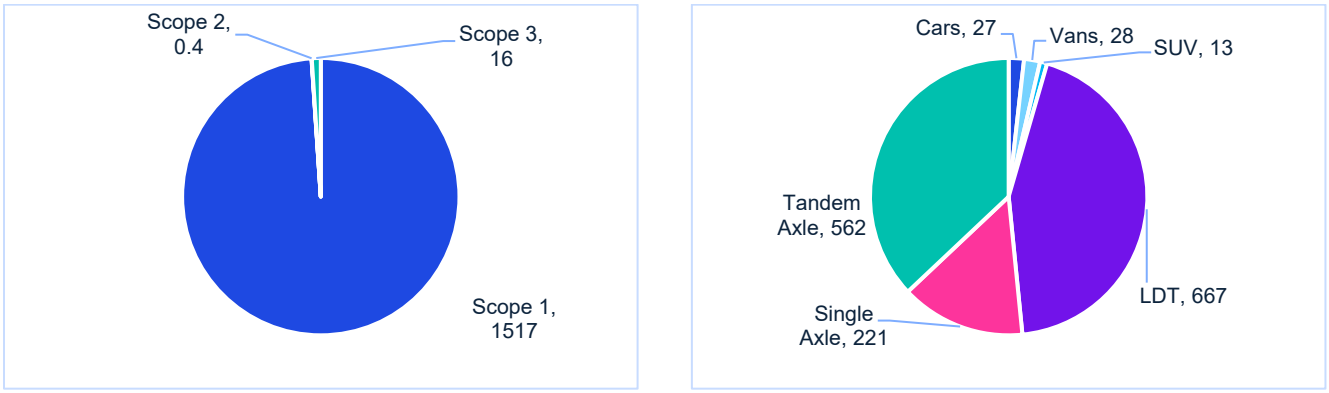
FIGURE 12 EMISSIONS BY SCOPE AND SCOPE 1 EMISSIONS BY VEHICLE CLASS (2024, tCO_2E)





Note: Analysis excludes scope 2 emissions from Flow 1 chargers. Scope 3 includes emissions from employee-owned vehicles and MODO fleet sharing vehicles.

FIGURE 13 EMISSIONS BY SCOPE AND SCOPE 1 EMISSIONS BY VEHICLE CLASS (2024, tCO_2E)

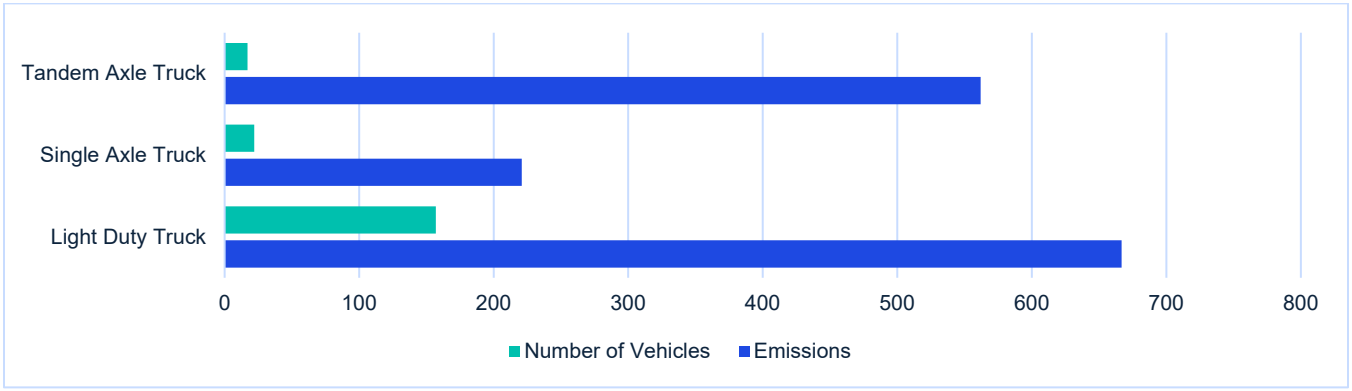


Note: *Analysis excludes scope 2 emissions from Flow 1 chargers. Scope 3 includes emissions from employee-owned vehicles and MODO fleet sharing vehicles.

Fleet Analysis: Vehicle Numbers

While 95% of the emissions are from the light duty truck, single axle truck, and tandem axle truck vehicle classes, there are significantly more vehicles in the light duty truck vehicle class – on a per vehicle basis, replacing vehicles in the single and tandem axle classes with lower-emissions alternatives offers the most significant emissions reduction potential.

FIGURE 14 FLEET ANALYSIS: VEHICLE NUMBERS



With an understanding of the fleet's emissions profile, a decarbonization analysis with two scenarios was conducted. The scenarios are elaborated in the section 3.2.1 Scenario Analysis.

2.2 Charging

2.2.1 Charging Infrastructure: Overview

The table below provides an overview of the level two charging infrastructure that has been installed to date or what is currently in progress and will be installed before the end of the year. The City currently has no Level 3 chargers installed and has no plans to install them.

TABLE 6 OVERVIEW OF LEVEL TWO CHARGING INFRASTRUCTURE

Location	Address	Current Chargers		Planned Chargers		Additional Notes
		Count	Type	Count	Type	
Public Works	1495 Hardy St, Kelowna, BC V1Y 7W9	12	Level Two	9	Level Two	Three (3) of the chargers are being relocated to the Parks Yard. The chargers are installed such that 3 chargers share a 40A circuit.
Parks Yard	1359 KLO Rd, Kelowna, BC V1W 3N8	0	Level Two	8	Level Two	Fortis BC approved a 7.2kW additional load per building, allowing four chargers to load share on a 40A circuit in each. This setup is due to capacity limitations from the existing 75kVA transformer
WWTP	951 Raymer Ave, Kelowna, BC V1Y 4Z7	12	Level Two	6	Level Two	Five (5) of the chargers are being relocated to the Parks Yard and one (1) of the chargers is being relocated to the Construction Yard (3235 Gulley Road). The chargers are installed such that 3 chargers share a 40A circuit.
Landfill	2710-2720 John Hindle Drive, Kelowna, BC V1V 2C5	2	Level Two & EV Kiosk	6	Level Two	A dedicated EV kiosk is installed at the landfill to support fleet EV chargers and an electric Volvo Loader. One Core+ charger is currently operational, but infrastructure is designed to accommodate up to five EV chargers along with the Loader.
Library Parkade	1360 Ellis St, Kelowna, BC V1Y 2A2	0	N/A	16	Level Two	These chargers will be configured with load sharing with 2 groups of 2 chargers sharing a 40A circuit and 4 groups of 3 chargers sharing a 40A circuit.
Field Office	3235 Gulley Rd, Kelowna, BC V1W 4E5	0	N/A	2	Level Two	One level two charger will be relocated from the City Works Yard and installed before the end of November. The electrical infrastructure was installed two support a second EV charger in the same area.

2.2.2 Summary of Current State: Billing Infrastructure

The City uses two main methods to access its charging data, explained below. Both options provide limited access to needed information, which could prove problematic as internal demand for this information grows.

FIGURE 15 OPTIONS TO ACCESS CHARGING DATA

1. Charging Department:	*2. Geotab Data:*
• At the end of the year, the City's charging department receives a bill for all of the kilowatts used. • There is no submetering in place, Flow provides total usage data. • Flow is the software system responsible for monitoring the Level 2 chargers owned by the City. • This bill is not itemized and is unable to be broken up by department or vehicle.	• To access Geotab data, the City must contact a third-party representative who must write a code to access the Geotab data, every time. • This process is time-consuming and inconvenient, which results in a lack of use and hinders timely decision-making. • The lack of direct access to Geotab data may prevent the City from leveraging this information for strategic planning and operational improvements.

2.3 Maintenance

2.3.1 Key Take-Aways: Challenges & Opportunities

Maintenance Infrastructure

- **Current State:** Asset management is primarily focused on facilities rather than vehicles, which are not clearly identified as assets. The city has a lifecycle replacement plan for vehicles outlined in the 'Corporate Fleet Sustainability Policy-2012,' which also includes utilization targets. While this policy provides a solid foundation, there are opportunities for improvement and updates to ensure it remains effective and relevant.
- **Challenges:** The maintenance shop faces significant constraints due to limited space across all facilities, including ceiling heights that are too low for cranes on larger equipment and a facility that cannot accommodate today's larger vehicles. Outdated infrastructure, such as fuel stations from the 1990s and an unheated equipment barn, leads to inefficiencies. Additionally, minimal storage and only one wash bay, along with repurposed and insufficient office spaces, impact overall operations.
- **Opportunities:** Leverage the 2025 Yards Master Plan to establish benchmarks for the required yard and facility space, accounting for current capacity constraints and future needs, which should be informed by the City's strategic direction and comparative analysis of infrastructure benchmarks of other municipalities.

IT Systems

- **Current Challenges:** The CityWorks system is highly customized which has limited the ability to update the system the result is the fleet team not being able to access system for their needs. The team has limited direct access to conduct their own analysis using the system.
- **Opportunities:** Explore dedicated fleet management software that integrates with CityWorks to meet Fleet's needs while providing necessary data for Asset Management. Evaluate the long-term cost-benefit of transitioning to a modern system versus continuing with CityWorks customizations.

Technician Capacity

- **Current State:** The facility operates with a dozen (12) number of technicians year-round, utilizing shift work during the winter months to manage workloads effectively.
- **Challenges:** Cramped maintenance bays with low ceiling heights lead to difficulties accommodating larger vehicles. A lack of dedicated training and office spaces also impede efficient maintenance operations.
- **Opportunities:** Modernize office and training spaces in future facility planning to support workforce efficiency.

Facility Benchmarking

The objective of Facility Benchmarking is to assess the current dimensions of the facility, and the equipment present at the city, as well as to evaluate whether these resources are adequate relative to industry benchmarks.

- **Current State:** There are 10 bays in total. This includes eight standard bays, one bay for weld & fabrication, one bay for the fire department. The bays have a standard size of **49'L x 13'W X 15'-19'H** and door width of **12'W x 14'H.**
- Key Equipment Include:

- Overhead gantry crane (x1)
- Service Pit (x1)
- Drive-on Hoist (27,000 lb) (x1)
- Jib Crane (x1)

The city currently faces challenges due to insufficient space for managing essential equipment and vehicles, which negatively impacts operational efficiency as noted through engagement sessions.

The existing spatial limitations result in difficulties maneuvering equipment, heightening the risk of vehicle damage, and creating potential operational delays stemming from overcrowded working conditions.

This situation is concerning, especially because industry standards as notes in the next slide highlight the necessity of adequate space not just for storage, but also for safe and efficient access and movement of resources. Hence, it is imperative for the city to reassess its space allocation and explore possibilities for expansion or reorganization to fulfill both present and anticipated operational demands.

Industry Benchmarks – Space

Based on the City's maintenance facility, the following industry benchmarks are applicable:

Bays

- **Space:** 49'L x 13'W X 15'-19'H is inadequate in compared to standards for mixed fleets with extended sizes of: Length: 60-75 feet, Width: 20-25 feet and Height: 20-25 feet. (APWA, NAFA)

Service Pits

- **Space:** Typically, 40'L x 4'-4" D x 3'-6" W (12.2, L x 1.22 D x 1.07 W). The current maintenance bay at the city meets requirements

- **Length:** Should allow technicians to exit from both sides, even with a vehicle positioned over the pit
- **Safety:** Pits should be protected when not in use to prevent falls, and proper lighting and ventilation are essential
- **Clearance:** Allow clearance needed for technicians to move comfortably under vehicles

Crane and Hoist

- **Space:** Depending on the size, cranes require 2.5 to 4.5 meters (8 to 15 feet) of headroom to accommodate their larger size and complex mechanisms. While the current city infrastructure meets many industry benchmarks, there are specific areas that require attention, such as the ceiling height, which is too low for the use of cranes on larger equipment. Addressing these constraints will help ensure the facility can fully accommodate the operational needs of heavy-duty vehicles and equipment.
- **Clearance:** Maintain a minimum clearance of 3 inches overhead and 2 inches laterally from any obstructions like pipes, beams, or walls

Vehicles / Trucks / Trailers

- **Space:** The industry standard for a municipal mixed fleet maintenance facility typically requires larger bay sizes to accommodate heavy-duty vehicles. A minimum width of **20-25 feet** and a length of **60-75 feet** are recommended to ensure sufficient space for maintenance operations. Additionally, ceiling heights should be at least **20-25 feet** to allow for the use of cranes and other equipment. While the current space falls short of meeting some industry benchmarks, the number & capacity of bays available are not sufficient for the size and diversity of the fleet.

Industry Benchmarks – Resourcing

The below table details the current state maintenance staffing with a total of 12 staff. This data is used to benchmark industry best practices using Vehicle Equivalent Units (VEUs) in the next section.

TABLE 7: RESOURCE BENCHMARKING

Shift	Summer July 1 - September 15			Winter - September 15 to July 1		
	Schedule	# Technicians on Duty	Description	Schedule	# Technicians on Duty	Description
Shift 1 (morning) (2-week rotation with shift 2)	6AM - 2:30PM	3 plus Serviceperson and Apprentice	2 - Heavy Duty Mechanics 1 - Automotive Mechanic 1 - Serviceperson 1 - Apprentice (Heavy Duty)	6AM - 2:30PM	3 plus Serviceperson and Apprentice	2 - Heavy Duty Mechanics 1 - Automotive Mechanic 1 - Serviceperson 1 - Apprentice (Heavy Duty)
Shift 2 (afternoon) (2-week rotation with shift 1)	7AM - 3:30PM	3 plus Serviceperson and Apprentice	2 - Heavy Duty Mechanic 1 - Automotive Mechanics 1 - Serviceperson 1 - Apprentice (Heavy Duty)	7AM - 3:30PM	3 plus Serviceperson and Apprentice	2 - Heavy Duty Mechanic 1 - Automotive Mechanics 1 - Serviceperson 1 - Apprentice (Heavy Duty)
Shift 3 (Field Mechanics)	Monday - Thursday 6AM - 4:30PM	1	Heavy Duty Mechanic	Same shift all year round		

Shift	Summer July 1 - September 15			Winter - September 15 to July 1		
	Schedule	# Technicians on Duty	Description	Schedule	# Technicians on Duty	Description
Shift 4 (Field Mechanics)	Tuesday - Friday 6AM - 4:30PM	1	Heavy Duty Mechanic	Same shift all year round		

Resourcing Industry Standard – Vehicle Equivalent Unit-VEU Analysis

Technician/Staff Requirement

Industry standards suggest that each technician can handle approximately **100-120** VEUs.

Using the upper limit for a conservative estimate:

- Required Technicians = Total VEUs / VEUs per Technician
- Required Technicians = 1818 / 120 ≈ **15 technicians**

Using the lower limit for a more demanding estimate:

- Required Technicians = Total VEUs / VEUs per Technician
- Required Technicians = 1818 / 100 ≈ **18 technicians**

TABLE 8: VEU ANALYSIS

Vehicle Type	Quantity	VEU per Vehicle	Total VEUs
Car	**32**	**1**	32
Heavy Duty Equipment	68	7	476
Light Duty Equipment	65	3	195
Light Duty Truck	159	2.5	397.5
Medium Duty Equipment	12	3.5	42
Single Axle Truck	34	2.5	85
SUV	12	1.5	18
Tandem Axle Truck	20	5	100
Trailer	2	0.5	1
Utility Vehicle	11	2	22
Van	33	1.5	49.5
Additional Vehicles	100	4	400
Aggregate (VEUs)			**1,818**

Based on the above VEU calculation, a maintenance staff of 12 technicians is insufficient to handle the City's fleet of vehicles (including additional vehicles currently out of scope for this study).

3 Enhanced Future State

3.1 Fleet

3.1.1 Right sizing

A summary of a general right-sizing approach is provided in the table below.

TABLE 9 SUMMARY OF RIGHT-SIZING APPROACH

Definition	Optimizing the number and types of vehicles to meet operational needs efficiently (based on annual utilization benchmarks). Optimizing the number of vehicles refers to removing vehicles from the fleet, while optimizing the types of vehicles refers to changing the vehicle make/model to better suit the requirements of that unit.
Emissions (not including lifecycle emissions)	Generally, leads to lower total GHG emissions by better matching operational needs to vehicle type
Fleet Composition	Optimizes mix for current and future needs by matching the fleet composition to actual usage patterns and demand
Utilization Rates	Maximizes utilization by aligning fleet composition with operational needs and eliminating underutilized assets
Lifecycle Cost Analysis	Typically achieves a lifecycle cost reduction of 10-20%
Maintenance and Repair Costs	By eliminating underutilized vehicles, fleets can lower overall maintenance costs, as fewer vehicles mean less routine maintenance and fewer repairs over time
Public Perception and Community Needs	Seen as favourable by achieving environmental objectives and cost efficiencies
Cost-Benefit Analysis	Benefits generally far exceed the costs and a positive return on investment (ROI) is usually achieved
Impact of Technology on Service Delivery	Optimized technology to enhance operational efficiency
Future Growth Projections	Accounts for future growth projections

Rightsizing Methodology

To deploy right-sizing practices on the City of Kelowna's municipal fleet, a four-step process was employed: baselining of existing fleet; apply forecasted growth to determine an increase in number of vehicles overtime; adjust for rightsizing; and assign low carbon technologies. Unique situations where vehicles are critically

important to specific departments, regardless of utilization rates, were considered. Information from the city ensured essential vehicles were accounted for, rand not candidates for reduction.

FIGURE 16 RIGHTSIZING METHODOLOGY

Scenario	Baseline scenarios for comparison		Impact of Optimization/Right Sizing	
	01 **Current State / Status Quo**	**02** **Status Quo + Forecast Growth**	**03** **Optimize/Right Size + Forecast Growth**	**04** **Decarbonize + Forecast + Optimize**
Assumptions	Reviewed existing fleet size and related data and how utilization performs against fleet policy guidelines for vehicle replacement/ retirement	Applied a 2% increase in operations (hr & km), absorbed by existing fleet to represent an estimate of growth in municipal operations	Assessed each vehicle within a departmental context for fleet rightsizing optimization The result should be higher average utilization, a fleet optimized for the required service with an improved cost per km	Assessed electric and hydrogen fuelled vehicles (co-combustion and H2-ICE) replacements based on vehicle class availability of technology

Rightsizing Survey Methodology

The rightsizing exercise is preceded by a survey of the City's fleet needs where departments completed a survey describing their operations, payload, towing, passenger and driving requirements. The output of that survey guided the analysis to right-size some of the City's fleet in tandem with best practice utilization benchmarks for each of vehicle class. The methodology for the rightsizing analysis is summarized below.

- **Survey Distribution:** The survey was distributed to all City departments, ensuring comprehensive coverage of the entire municipal fleet.
- **Operational Assessment:** Departments were asked to describe their specific operational requirements, including details on the types of tasks performed and the frequency of vehicle use.
- **Vehicle Specifications:** They survey collected information on payload requirements, towing capability, and passenger capacity for each department's vehicles based on their needs, allowing for a thorough understanding of the necessary vehicle specifications.
- **Driving Requirements:** Departments provided information on their unique driving requirements, such as off-road capabilities, specialized equipment needs, or specific terrain challenges they encounter.
- **Rightsizing Analysis:** The data collected from the survey informed the rightsizing analysis, which was used to inform fleet optimization aligned with best practice utilization benchmarks and validated by City of Kelowna representatives.

Rightsizing Results Summary

This summarized rightsizing analysis is presented on a per department basis. Departments with highly utilized vehicles were not considered when making suggestions for removal or repurposing.

TABLE 10 RIGHTSIZING RESULTS SUMMARY

Scenario		Current State / Status Quo	Status Quo + Forecast Growth	Optimized / Right sized / Electrified
Cars	Units Utilization (km)	32 9,393	32 9,581	30* (18 EV replacements) 10,220
Vans	Units Utilization (km)	31 5,700	31 5,814	18* (18 EV replacements) 10,014
SUV	Units Utilization (km)	13 6,197	13 6,321	8* (8 EV replacements) 10,271
Light Duty Truck	Units Utilization (km)	157 8,581	157 8,753	141* (100 EV replacements) 10,000
Single Axle Truck	Units Utilization (km) Utilization (hr)	22 11,517 442	22 11,747 450	13* (13 Green replacements) 19,970 750
Tandem Axle Truck	Units Utilization (km) Utilization (hr)	17 20,270 996	17 20,676 1016	17* (17 Green replacements) 20,676 1016

Note: *Refers to the total number of vehicles in the fleet required to meet the policy. The value in parathesis indicates how many new EV's or green replacements would be required in the optimized / electrify / rightsized scenario.

Based on the results of the analysis, the suggested path forward for the City could be to reduce or repurpose the number of Cars by two, Vans by 13, Light Duty Trucks by 20, SUV by five, Single Axle trucks by nine and maintain the status quo for Tandem Axle Trucks. These reductions / repurposing in units may contribute to the City reaching fleet target utilization benchmarks as noted in the City's fleet policy. It's important to note that this analysis is conducted at a strategic level and does not consider operational constraints. The key purpose is to identify the optimal number of vehicles to meet the target utilization benchmarks set by the City.

Having completed the right-sizing analysis, we can now review the available low-carbon alternative technologies for each vehicle class to identify decarbonization pathways for the fleet.

3.1.2 Low Carbon Fleet Technology Review

The low carbon fleet technology review provides the basis for the City of Kelowna's Sustainable Fleet Strategy.

- **Hydrogen-based technologies –** For medium and heavy-duty vehicles, hydrogen-powered technologies were identified to be the most promising due the fuel's high energy density and superior payload capacity, which are needed to meet these vehicles' high energy requirements. Given that hydrogen is still early-stage, the associated storage, transportation, and fueling infrastructure is not yet built out, making uptake a challenge for the City. This infrastructure development will largely depend on market forces and external support, highlighting the need for collaboration with industry partners and other stakeholders.

While hydrogen ICE vehicles that are fueled entirely by hydrogen have yet to hit the market, co-combustion retrofits that leverage both hydrogen and diesel for power are an available technology that can provide emission reductions, support hydrogen infrastructure development, and provide the City with experience using hydrogen as a transportation fuel.

- **Electric vehicles (EVs) –** These vehicles have achieved a high Technology Readiness Level (TRL) making them commercially viable options for meeting the City's light-duty fleet requirements. EVs offer a strong solution for decarbonizing municipal transportation, as they align seamlessly with employee mobility patterns and leverage mature energy-efficient powertrain technology. One key advantage of EVs is that the charging infrastructure they require can be implemented and controlled by the City itself. However, there may be some initial range anxiety among employees, which can be addressed through targeted education programs and the strategic expansion of charging infrastructure throughout the city. While EVs are ideal for light-duty applications, such as pickup trucks and smaller vehicles, heavier-duty options remain limited due to their significant power requirements, which can be incompatible with battery power. Companies like Volvo and Daimler AG are making strides in developing heavy-duty electric trucks and buses, but widespread adoption is limited. Hence, the City may need to consider other alternatives for its heavy-duty fleet until more options become available.
- **Hybrid range extenders (HRE) -** These vehicles are emerging as a promising solution for mid-sized trucks, with ongoing development and potential for future market availability. This application should not require additional infrastructure and can be used as a stop-gap measure to achieve fuel economy and lower emission benefits, while maintaining flexibility to operate on longer routes without range limitations.
- **Renewable diesel –** This fuel is being considered as a viable option for emissions reduction that does not require any additional infrastructure or technology, though it comes at a higher cost than conventional diesel. However, the lifecycle emissions for renewable diesel from the City's current supplier represent only an estimated 20% reduction in emissions due to large transportation distances. Securing a new supplier closer to the City can represent a better opportunity for emissions reduction but should be considered holistically with the new supplier's cost.

Alternative Technologies: Comparison

A review of fleet replacement technologies revealed the following potentially viable options summarized in the below table:

TABLE 11 ALTERNATIVE TECHNOLOGIES: COMPARISON

Technology	Hybrid Range Extender	EVs	FCEV	H_2-ICE	Co-Combustion
Definition	Combines an electric powertrain with a gasoline engine acting as a generator.	Powered by electric motors using electricity stored in batteries.	Use hydrogen to power an electric motor through a chemical reaction in a fuel cell, emitting only water vapour and warm air.	A modified version of the traditional gasoline-powered internal combustion engine that uses hydrogen as fuel.	Retrofits can be added to allow vehicles to use traditional fuel and hydrogen fuel simultaneously or individually.
Emissions	Emissions are dependent on the type of fuel consumed during actual use, which varies. Emissions are mostly driven by the ICE engine backup, which usually	Zero tailpipe. Lifecycle emissions are driven by the source of electricity used to charge the vehicle, which may	Zero tailpipe. Lifecycle emissions are driven by the source of electricity used to charge the vehicle, which may	Zero tailpipe. Lifecycle emissions are driven by the source of electricity used to charge the vehicle, which may	Emissions are dependent on the type of fuel consumed during actual use, which varies. Emissions are also driven by the

Technology	Hybrid Range Extender	EVs	FCEV	H_2-ICE	Co-Combustion
	uses unleaded gasoline. Emissions can be higher if the electricity source is not zero-emissions.	not be zero-emissions.	not be zero-emissions.	not be zero-emissions.	power source used to generate hydrogen, which may not be zero-emissions.
Technology	Extended Range EV	Lithium-ion battery	Fuel cell + electric motor	Modified ICE	Retrofit ICE
Fuel flexibility	Electricity + Gas (Unleaded)	Electricity only	Hydrogen only	Hydrogen only	Hydrogen + Diesel
Maintenance	Similar to traditional ICE	Lower than ICE (fewer moving parts)	Lower than ICE (fewer moving parts)	Higher than traditional ICE (expected)	Higher than traditional ICE (expected)
Capital Expenditure	Moderate to High	Moderate to High	High	Moderate	Low to moderate
Operating Expenditure	Low to Moderate	Low to moderate	Low to moderate	Moderate	Moderate
Cold weather performance	Reduced Range	Reduced Range	May face challenges	Good	Good
Refueling time	Similar to conventional	80% in 30 minutes (Level 3)	5-15 minutes	5-15 minutes	Similar to conventional
Vehicle range	Comparable to conventional	Less than conventional	Less than conventional	Comparable to conventional	Comparable to conventional
Infrastructure needs	Electric charging needs	Electric charging stations	Hydrogen stations	Hydrogen stations	Hydrogen stations

Fuel Options: Comparison

A review of fleet fuel options identified the following potentially viable options, summarized in the table below. Each of these fuels plays a significant role in the current energy ecosystem, influencing not only the environmental footprint of fleet operations but also the economic viability of vehicle technology choices.

TABLE 12 FUEL OPTIONS: COMPARISON

Fuel Option	Unleaded Gasoline	Conventional Diesel	Renewable Diesel	Hydrogen	Electricity
Definition	Petroleum-derived fuel used in internal combustion engines	Conventional diesel is a type of fuel derived from crude oil, used primarily in diesel engines	Alternative to conventional diesel fuel derived from fats and oils like canola or soybean instead of crude oil, compatible with existing diesel engines	An energy carrier that can power vehicles through direct combustion or through an electric motor	Electricity as a fuel used in electric motor vehicle whose propulsion is powered fully or mostly by electricity

Emissions	Unleaded gasoline engines produce carbon dioxide (CO2), carbon monoxide (CO), nitrogen oxides (NOx), and volatile organic compounds (VOCs).	Diesel engines emit CO2, NOx, particulate matter (PM), and hydrocarbons. While diesel engines are more fuel-efficient, they can produce higher levels of NOx and PM.	See slide 'Renewable Diesel - Leading Practice Review'	See slides 'Hydrogen Municipal Fleet Considerations (1-4)'	Zero tailpipe. However, emissions are driven by the source of electricity used to charge the vehicle, which may not be zero-emissions.
Maintenance	Regular oil changes, fuel filter replacements, and spark plug inspections	Oil changes, fuel filter replacements, and monitoring of the fuel injection system	Similar to diesel	Less moving parts but overall higher maintenance cost than ICE	~30% lower than ICE (fewer moving parts)
Cost ($/100km)	$10-15	$10-15	$13-19	$100-120	$1-4
Cold weather performance	Risk of poor performance (starting)	Risk of poor performance (fuel gelling)	Risk of poor performance (fuel gelling)	Hydrogen embrittlement, combustion abnormalities, and high-pressure pump requirements	Reduced Range

3.1.3 Leading Practice Review

Having identified the fuel alternatives at a high level, we now conduct an in-depth leading practice review to highlight the risks and opportunities associated with each fuel type identified in Table 13.

TABLE 13 LEADING PRACTICE REVIEW OF RENEWABLE DIESEL

Dimension	Risks	Opportunities
Emissions	**Tailpipe GHG emissions** from the combustion of renewable diesel are only slightly lower than conventional diesel, limiting local GHG emissions reductions in Kelowna. **Supplier location and feedstock** create significant variability around potential lifecycle emissions reductions. The City's current supplier, Suncor, ships renewable diesel to the City from southeast Asia. Based on transport emissions and the soy feedstock Suncor uses, it is estimated that lifecycle emissions reductions are approximately 20% relative to conventional diesel. At 8.9g CO2e/MJ, soy as a feedstock has a relatively low- to mid-range emissions intensity/MJ relative to other feedstocks like canola (19.3 gCO2e/MJ), carinata (15.2 gCO2e/MJ) and corn oil (1.7 gCO2e/MJ).	On a lifecycle basis, renewable diesel presents opportunities for real emissions reductions of up to 85%, enabling decarbonization. **Local air emissions:** Renewable diesel significantly reduces non-GHG tailpipe pollutants compared to fossil fuel diesel: • Particulate matter (PM): Reduced by 34-40% • Nitrogen oxides (NOx): Reduced by 10% • Hydrocarbons and carbon monoxide: Reduced by over 20%

Resource Availability	**Resource availability:** The use of agricultural products such as canola for fuel production raises questions about the diversion of resources from food to fuel – particularly in Kelowna, which is known for its fertile land and agricultural output.	**Feedstock alternatives**: Non-food sources such as used cooking oil or animal fats can also be used as feedstock, however, the overall supply of these sources is limited.
Performance	**Cold-weather performance:** It is understood that the City has faced challenges with the cold-weather performance of the renewable diesel sourced from its current supplier, Suncor, though this may not be an issue with other suppliers.	**Engine and infrastructure compatibility:** Renewable diesel meets the conventional petroleum ASTM D975 specification allowing it to be used in existing diesel engines and diesel fueling, transport, and storage infrastructure. Renewable diesel is fully interchangeable with diesel (i.e., 'drop-in' fuel) or be blended in any ratio without performance degradation.
Costs	**Higher than conventional diesel:** Renewable diesel is more expensive than conventional diesel and is currently being sourced by Kelowna at a premium of $0.25.	**Future cost-competitiveness:** It's expected that renewable diesel is likely to become cost competitive with conventional diesel over time under future carbon pricing scenarios.

Leading Practice Review: Hydrogen

A summary of hydrogen risks and opportunities are provided in **Table 14**.

TABLE 14 LEADING PRACTICE REVIEW OF HYDROGEN

Dimension	Risks	Opportunities
Emissions	**Nitrogen oxide emissions:** Hydrogen ICE engines are typically associated with increased production and emission of nitrogen oxides (NOx) due to the high temperatures required for hydrogen combustion. A preliminary study by UBC in partnership with Hydra Energy of co-combustion engines found that the truck's emission control systems can handle the increased NOx emissions with no net increase in NOx output to the environment. However, the technology is still early-stage and NOx emissions from hydrogen ICE vehicles in practice need to be monitored and better understood over time.	**Emissions reductions from co-combustion:** A study conducted by UBC in partnership with Hydra Energy found that co-combustion engines found that hydrogen replaced 25% of the truck's diesel consumption and resulted in approximately the same amount (~25% decrease) in CO2 emissions. **Emission reductions from hydrogen ICE:** Hydrogen ICE vehicles can offer significant GHG reductions compared to conventional diesel engines. The extent of this reduction largely depends on the hydrogen production method. Using B.C. clean electricity allows production to be relatively low-emissions, though the grid is not net-zero.
Resource Availability	**Hydrogen supply:** Securing a reliable supply of hydrogen and hydrogen vehicles may be challenging due to increasing demand and limited supply. These resources may be prioritized for other sectors, potentially delaying the City's access to these critical components.	**Early-stage adoption:** As an early-stage adopter, Kelowna may be able to secure a reliable hydrogen supply at a lower cost.
Costs	**Higher cost:** Hydrogen is much more expensive than any other fuel on a per-km basis, making marginal abatement costs very high.	**Funding Opportunities:** Hydrogen fueled vehicles could be supported by public funding opportunities to support further integration of these vehicles into Kelowna's fleet.

External	**Public Perception:** The potential for hydrogen as a viable fuel source in Kelowna depends significantly on public perception and acceptance. The severe climate change and safety consequences of hydrogen leakage may deter public support for hydrogen-fueled fleets and limit future market adoption.	Several hydrogen projects are ongoing in BC, pointing towards market development: Green Hydrogen Production Projects: Quantum Technology is developing a green hydrogen production plant on Vancouver Island, and the Steward Hydrogen Project in Stewart, B.C., focuses on producing green hydrogen for the transportation sector. CP Rail's Hydrogen Pilot Project: CP Rail is retrofitting locomotives with hydrogen fuel cell technology and producing hydrogen using small electrolysers. H2 Gateway Project: This project will establish 20 refueling stations and three hydrogen production facilities, enabling the decarbonization of heavy-duty transportation.
Feasibility	• **Infrastructure limitations:** Hydrogen production, storage, distribution, and fueling infrastructure is limited in Kelowna and requires development. Due to the low density and high flammability of hydrogen, it requires specialized transportation and storage, making such infrastructure development complex and expensive. Other challenges related to developing hydrogen infrastructure include permitting complexities and significant electrical upgrades needed for operational stations. Notably, these infrastructure deficiencies are widening as hydrogen demand increases rapidly. • **Specific Storage Requirements:** Hydrogen gas is typically stored at either 350 bar or 700 bar, with vehicle's on-board storage usually at 350 bars. The City currently only has one, limited 700 bar sources at its HTEC facility, which is incompatible with on-board storage requirements. There is also no local production at the facility, it only includes storage. The City will require reliable access to 350 bar hydrogen production and storage in the long-term as hydrogen uptake increases. • **Technological Maturity:** While H2-ICE is promising, it is still in the development phase and is not yet commercially available. There may be technical challenges that need to be addressed before it can be widely adopted, which can reasonably be expected to result in delays in market release. Due to its early stage, there is also significant uncertainty around the timing of the technology availability, cost, and viability for adoption.	

Leading Practice Review: Electric Vehicles

A summary of electric vehicle risks and opportunities are provided in Table 15

TABLE 15 LEADING PRACTICE REVIEW – ELECTRIC VEHICLES

Topic	Risks	Opportunities
Emissions	N/A	**BC's Clean Grid:** The environmental benefits of EVs are dependent on the sources of electricity used to charge them. With 98% of BC's electricity coming from clean or renewable sources, EVs charged in BC produce minimal GHG emissions during operation. As BC continues to invest in clean energy technologies and diversify its renewable energy mix, the grid is likely to become even lower emissions. This trend supports the increasing adoption of EVs by ensuring that their environmental benefits are realized.
Resource Availability	**Battery Disposal and Recycling:** The environmental impact of battery production and disposal is a concern. As EV adoption increases, the need for effective recycling and disposal methods for used batteries will become more pressing.	**Existing Battery Recycling Options in Kelowna:** Kelowna currently has several battery recycling facilities such as The Battery Doctors, ABC Recycling Kelowna, Interstate All Batter Center, and Canadian Energy Kelowna, amongst others.

Costs	**Higher upfront investment:** EVs remain more expensive at initial purchase prices than their conventional counterparts.	**Total Cost of Ownership:** Despite higher initial purchase prices, electric light-duty vehicles often have a lower total cost of ownership compared to their gasoline counterparts due to reduced fuel and maintenance expenses.
Feasibility	**Infrastructure Updates:** The City and FortisBC may need to invest in upgrading electrical systems in municipal facilities to support an increased number of EVs in its fleet. **Charging Time:** While charging times are decreasing, they can still be longer than refueling a gasoline vehicle.	**Technological Advancements:** Continuous improvements in battery technology are leading to longer ranges and shorter charging times for EVs.

Whether and how the City should employ renewable diesel, hydrogen, or electric vehicles must be considered alongside utilization, vehicle requirements, technology availability, etc. These considerations are built into the NPV, MAC, and other metrics that enable direct comparisons of alternative technology initiatives and should therefore drive decision-making at the City. Please see results of the Scenario Analysis for these metrics.

Selecting H2-Fueled Alternatives: FCEVs vs. Hydrogen ICE

A review of the two technologies fueled entirely by hydrogen, FCEVs and hydrogen ICE, was conducted to identify the most appropriate option for the City's applicability and cost requirements.

Applicability

- FCEVs are efficient at lower loads but struggle with high-power, heavy-duty applications such as dump trucks or snowplows. These are critical components of Kelowna's fleet.
- H_2ICE vehicles, on the other hand, excel in heavy-duty and transient operations due to their robust engine design and ability to handle high loads without additional hybrid systems. Medium-duty vehicles could benefit from H_2ICE technology where BEV range or payload capacity is insufficient.

* Note that for lighter vehicles like cars and SUVs, BEVs are deemed a better fit due to their higher efficiency and well-developed charging infrastructure.

Costs

- **Vehicle Costs:** FCEVs generally have higher upfront costs due to expensive fuel cell stacks and hydrogen storage systems. H_2ICE vehicles leverage existing ICE technology with modifications for hydrogen combustion, resulting in lower capital costs.
- **Maintenance Costs:** H_2ICE vehicles have maintenance requirements similar to traditional ICE vehicles, which Kelowna's fleet maintenance teams are already equipped to handle. FCEVs require specialized maintenance for fuel cells and related systems, potentially increasing operational costs.
- **Infrastructure Costs:** Both FCEVs and H_2ICE vehicles require hydrogen refuelling infrastructure. However, H_2ICE refuelling can integrate more easily into existing depot-based fuelling setups without extensive changes.

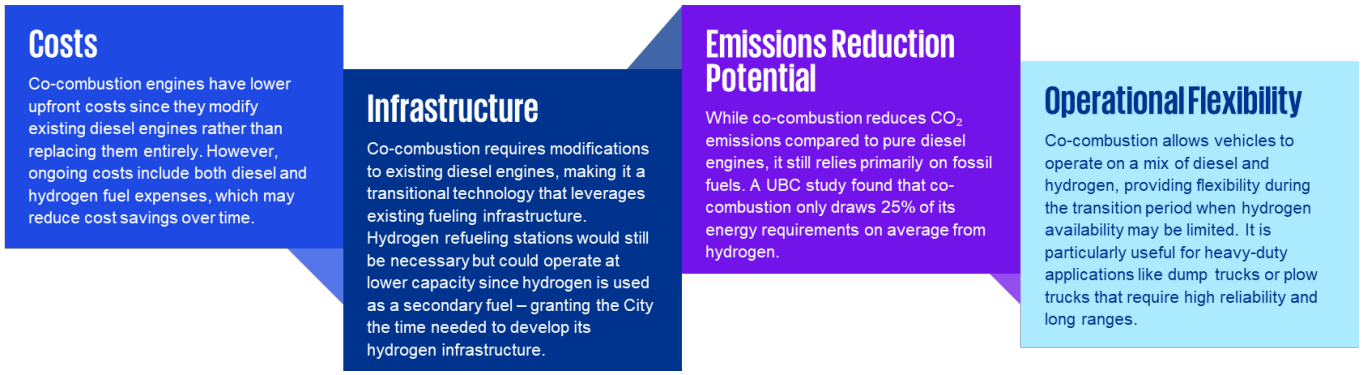
Overall, hydrogen ICE vehicles align better with the City's vehicle requirements at a lower cost and are thus chosen as the preferred alternative low-carbon technology for heavy and medium-duty applications in the long-term.

Having identified that Hydrogen ICE vehicles are more aligned to the City's requirements, it is important to consider short-term solutions, as these Hydrogen ICE vehicles are not yet available on the market.

H2-Fueled Alternatives: Co-Combustion as a Short-Term Solution

The figure below illustrates the benefits of hydrogen co-combustion

FIGURE 17 HYDROGEN CO-COMBUSTION BENEFITS



Hydrogen co-combustion offers a gradual transition towards hydrogen due to its lower upfront costs and compatibility with existing diesel engines. It provides immediate GHG reductions while leveraging current infrastructure. Kelowna could adopt a phased approach—starting with co-combustion in the short term while gradually transitioning to hydrogen ICE vehicles as hydrogen fuel availability and infrastructure improve.

3.2 Low-Carbon Model Alternatives Summary

Lower-carbon models were identified for each vehicle class with consideration for vehicle requirements and market availability. The following table outlines the rationale for the selection of the models used as replacements for each vehicle class.

TABLE 16 RATIONALE FOR THE SELECTION OF THE MODELS

Vehicle Class	Identified Models for Replacement	Rationale
Cars	• Kona EV • Nissan Leaf SV EV • Toyota Prius Plug-in Hybrid Electric Vehicle (PHEV)	• Kona EVs and Leaf SV EVs are the makes/models already in use by the City. The fleet also currently includes the Ford Focus EV, however it has been discontinued and therefore is not proposed as an option for model replacement. • In certain cases, City staff respondents noted specific requirements for long-distance, out-of-town travel where charging opportunities may be limited; here, the Toyota Prius PHEV is suggested for model replacement.

Vehicle Class	Identified Models for Replacement	Rationale
Vans	• Ford E-Transit • Ford F150 EV (with a canopy)	• The Ford E-Transit is one of the most commercially available EV vans that meets the larger load and space requirements of full-size van. • While some mid-size vans could have been downsized to a smaller EV such as the Chrysler Pacifica Hybrid or Volkswagen ID Buzz, the City noted a preference for Ford vehicles where possible due to existing contracts and/or trained maintenance labour. • Where City staff noted requirements for larger size and/or a canopy, the Ford F150 EV with a canopy was recommended as the replacement option for some, but not all midsize vans.
SUVs	• Subaru Soltera	• The Subaru Solterra is recommended as the electric SUV to align with the City's operational needs and preferences. By focusing on a brand like Subaru, the City can ensure consistency in service management and parts availability, similar to the strategy the City employs with Ford. • The Ford F-150 EV is the recommended replacement for 0.5-to-1-ton trucks, due to its commercial availability and alignment with City staff requirements. The F-150 EV is also the recommended replacement option for F250 and F350 models that could be downsized based on their requirements. However, the direct replacement option for F250 and F350 models are hybrid range extenders.
Light Duty Trucks Replacement A[2]	• Ford F-150 EV • Hybrid Range Extender	• The Ford F-150 EV is the recommended replacement for 0.5-to-1-ton trucks, due to its commercial availability and alignment with City staff requirements. The F-150 EV is also the recommended replacement option for F250 and F350 models that could be downsized based on their requirements. However, the direct replacement option for F250 and F350 models are hybrid range extenders.
Light Duty Trucks Replacement B[2]	• B 6.7 hydrogen internal combustion engine (H2 ICE)	• Once available, the B6.7 H2 ICE is recommended based on vehicle size and requirement compatibility for F250s-F350s.
Single Axle Trucks Replacement A[2]	• Hybrid Range Extender • Co-Combustion • Conventional internal combustion engine (ICE)	• Hybrid range extenders are replacements for F-series trucks due to the engine compatibility and power requirement alignment. • Co-combustion is piloted for one single-axle truck as it was deemed the only vehicle viable for this technology based on its size and fuel consumption. • In some instances, vehicles are due for replacement and a lower-emissions alternative is not available, so the baseline option (conventional ICE) is used as a replacement.
Single Axle Trucks Replacement B2	• B6.7 hydrogen internal combustion engine (H2 ICE) • X15 hydrogen internal combustion engine (H2 ICE) • Conventional ICE	• Once available, X15 H2 ICE and B6.7 H2 ICE are recommended based on vehicle size and requirement compatibility. • Due to their lower cost point and alignment with the City's higher-duty applications, H2 ICE vehicles were identified as the most viable technological solution that meets the requirements of this vehicle class.

Vehicle Class	Identified Models for Replacement	Rationale
Tandem Axle Trucks Replacement A2	• Conventional ICE	• Co-combustion is piloted for three tandem trucks to assess the viability of the technology for the City. In this case, vehicles with high fuel use are prioritized. It is assumed that the technology is proven successful during the pilot and is then rolled out based on attrition for a total of 12 co-combustion vehicles (one in single axle trucks, the remainder tandem axle), with continued prioritization of vehicles with high fuel use. High fuel use is defined as 2400 L/year. • In some instances, vehicles are due for replacement and a lower-emissions alternative is not available, so the baseline option (conventional ICE) is used as a replacement.
Tandem Axle Trucks Replacement B2	• X15 H2 ICE	• Once online in 2029, X15 H2 ICE vehicles recommended. These are the expected market-leading low-carbon alternatives that meet the requirements and specifications of the vehicle class. • Due to their lower cost point and alignment with the City's higher-duty applications, H2 ICE vehicles were identified as the most viable technological solution that meets the requirements of this vehicle class.
Utility Vehicles	• N/A	• As yet, there are no viable low-carbon alternatives on the market that meet the specific requirements for these vehicles.
Medium Duty Equipment	• N/A	• As yet, there are no viable low-carbon alternatives on the market that meet the specific requirements for these vehicles.
Heavy Duty Equipment	• N/A	• As yet, there are no viable low-carbon alternatives on the market that meet the specific requirements for these vehicles.

Note: [1] Vehicle models that are being replaced with the same model at attrition are not included above, as they are considered a BAU case.

[2] Two sets of replacements are recommended for single axle and tandem axle trucks due to H_2 ICE models becoming available on the market in 2029 and 2033 for X15 and B6.7 vehicles, respectively. Hybrid range extenders are expected to come online in 2029.

3.2.1 Scenario Analysis

Scenario Analysis Overview

The City of Kelowna is looking to lower the emissions from its fleet by replacing its current fleet with newer, low-emissions technologies. The technologies considered for each vehicle class are noted in the section above. The scenario analysis is the cumulative result of all previous analyses, including attrition, right-sizing for model and type of vehicle, technology and model applicability, and pilots. The aggressive and moderate scenarios are presented as scenarios 1 and 2 below.

Analysis suggests that replacement options are limited – generally only one alternative technology is available at a given point in time, and many technologies in the analysis are not yet on the market. This led to the development of two scenarios that differ only on **a temporal basis (i.e., *when* the purchase is made, but not *what*** is being purchased**).** Therefore, the two scenarios have similar cost and emissions reductions in the aggregate but different implications for these factors over time.

FIGURE 18 TWO SCENARIOS

SCENARIO 1	*SCENARIO 2*
Based on a strategy of adopting new technologies as soon as they become available without retiring existing assets before the end of their useful life. • 2029 X15 H_2 ICE availability • 2033 B6.7 H_2 ICE availability	Based on an assumed delay in the release of new technologies to market, resulting in extending the duration of temporary alternatives like co-combustion and hybrid range extenders. • 2033 X15 H_2 ICE availability • 2037 B6.7 H_2 ICE availability

The following table outlines the timing of replacement technology for different vehicles classes for the assessment of two strategic scenarios looking out to 2050. While Scenario 1 optimizes replacement with alternative technologies as soon as the vehicle is ready for replacement and the technology is expected to be available, Scenario 2 considers that the release of H_2 ICE engines will be delayed. The scenario analyses assume that the co-combustion pilot is successful and is thus rolled out to the wider fleet.

TABLE 17 TIMING OF REPLACEMENT TECHNOLOGY

Vehicle Class	Scenario 1				Scenario 2			
	2025-2027	2027-2029	2029-2033	2033-2050	2025-2027	2027-2029	2029-2032	2033-2050
Cars	Replace with EVs based on attrition				Replace with EVs based on attrition			
SUVs	Replace with EVs based on attrition				Replace with EVs based on attrition			
Vans	Replace with EVs based on attrition				Replace with EVs based on attrition			
Light Duty Trucks (LDTs) (F150-F350)	**F150:** Replace with EVs		**F150:** Replace with EVs F250-350: Range extenders or downsize to F150 EV	**F150:** Replace with EVs **F250-350:** X6.7 H_2 ICE as needed	**F150:** Replace with EVs		**F150:** Replace with EVs F250-350: Range extenders or downsize to F150 EV	**F150:** Replace with EVs **F250-350:** X6.7 H_2 ICE as needed
Single Axle Trucks	Pilot Co-combustion for one vehicle. Other vehicles requiring replacement to be replaced with conventional ICE.	Retrofit with co-combustion to a maximum of 12 vehicles between classes Other vehicles requiring replacement to be replaced with conventional ICE.	Range extenders	X6.7 H_2 ICE	Pilot Co-combustion – 1 vehicle for 1 year Other vehicles requiring replacement to be replaced with conventional ICE.	Retrofit with co-combustion to a maximum of 12 vehicles between classes Other vehicles requiring replacement to be replaced with conventional ICE.	Range extenders	X6.7 H_2 ICE

Vehicle Class	Scenario 1				Scenario 2			
	2025-2027	2027-2029	2029-2033	2033-2050	2025-2027	2027-2029	2029-2032	2033-2050
Tandem Axle Truck	Pilot Co-combustion 3 vehicles. Other vehicles requiring replacement to be replaced with conventional ICE.	Retrofit with co-combustion to a maximum of 12 vehicles Other vehicles requiring replacement to be replaced with conventional ICE.	X15 H_2 ICE		Pilot Co-combustion – 3 vehicles for 1 year Other vehicles requiring replacement to be replaced with conventional ICE.	Retrofit with co-combustion to a maximum of 12 vehicles Other vehicles requiring replacement to be replaced with conventional ICE.	X15 H_2 ICE	

Scenario 1: Overall Emissions Reductions and CAPEX

With the technologies modelled, the City is able to achieve 69% emission reductions for its fleet in 10 years. It falls short of the City's targeted 40% reduction by 2030, achieving only a 38% reduction by 2030. While the City is able to achieve a 95% reduction of GHG emissions by 2050, it is not able to achieve their stated goal of net-zero by 2050 from a fleet perspective due to emissions from electricity consumption from the provincial grid, which is not net-zero.

Over BAU, emissions can be reduced by:

- 69% in 2035 (1,040 tCO_2e),
- 87% in 2040 (1,317 tCO_2e), and
- 95% in 2050 (1,463 tCO_2e)

Total additional CAPEX needed (undiscounted):

- Incremental CAPEX until 2035: $11,598,524
- Incremental CAPEX for project life: $77,308,140

FIGURE 19 CITY OF KELOWNA'S BAU VS SCENARIO 1 EMISSIONS REDUCTIONS (2025-2050)

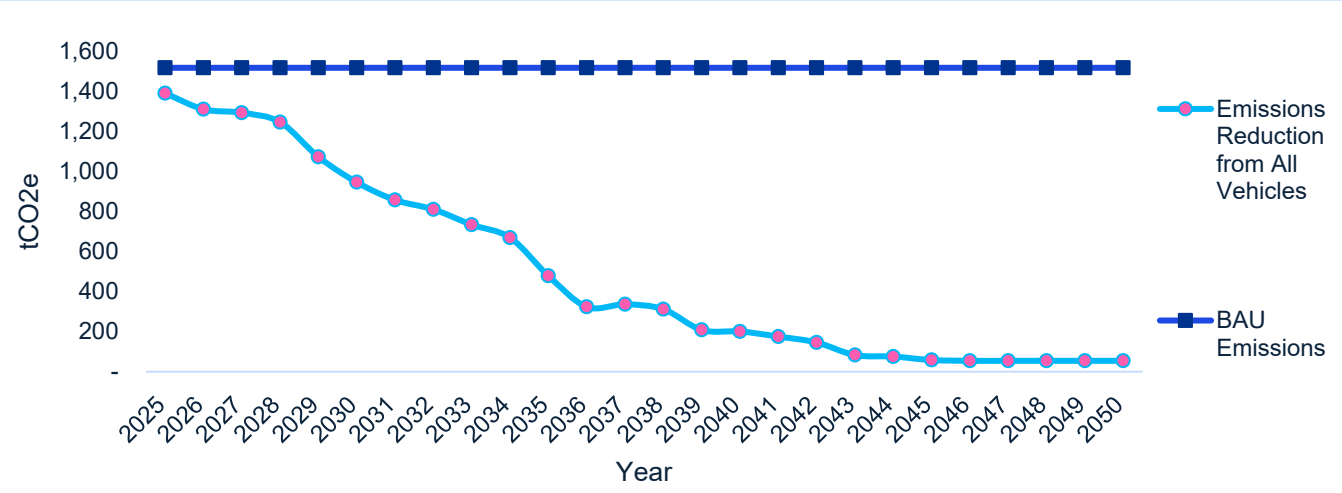


TABLE 18 SCENARIO 1 FINANCIAL AND EMISSIONS METRICS

Initiatives	Net Present Value (NPV)	Cumulative emission reductions (tCO2e)	Incremental CAPEX Spend (Negative is savings)	Incremental OPEX Spend (Negative is savings)	Total undiscounted CAPEX	MAC **(per tCO2e)**	ROI
Cars							
Hybrid EV Replacement	$2,228	511	$604,543	($328,488)	($4)	54%	Hybrid EV Replacement
Unleaded EV Replacement	$113,496	136	$62,648	($96,945)	($837)	155%	Unleaded EV Replacement
Unleaded Hybrid Replacement	($28,223)	10	$35,557	$ -	$2,706	0%	Unleaded Hybrid Replacement
LDT							
Unleaded to HRE	$2,032,455	844	($2,162,195)	$396,194	($2,408)	18%	Unleaded to HRE
Unleaded to EV	$805,870	6995	$3,982,137	($2,924,455)	($115)	73%	Unleaded to EV
Diesel to HRE	$108,991	41	($124,177)	$21,661	($2,627)	17%	Diesel to HRE
Diesel to EV	($47,667)	87	$83,466	($26,337)	$550	32%	Diesel to EV
Unleaded to B6.7 H2 ICE	($14,274,312)	3994	$11,458,389	$463,902	$3,574	-4%	Unleaded to B6.7 H2 ICE
Diesel to B6.7 H2 ICE	($842,849)	170	$682,462	$23,217	$4,965	-3%	Diesel to B6.7 H2 ICE
Single Axle							

Initiatives	Net Present Value (NPV)	Cumulative emission reductions (tCO2e)	Incremental CAPEX Spend (Negative is savings)	Incremental OPEX Spend (Negative is savings)	Total undiscounted CAPEX	MAC **(per tCO2e)**	ROI
Diesel to B6.7 H2 ICE	($63,774)	269	$149,169	$36,619	$237	-25%	Diesel to B6.7 H2 ICE
Unleaded to HRE	$1,751,722	724	($1,505,813)	$153,110	($2,420)	10%	Unleaded to HRE
Diesel to HRE	$346,445	48	($371,012)	$38,532	($7,283)	10%	Diesel to HRE
Diesel to Co-Combustion	($139,688)	46	$129,318	$32,965	$3,039	-25%	Diesel to Co-Combustion
Diesel to B6.7 H2 ICE	($3,406,978)	819	$3,574,610	$197,867	$4,159	-6%	Diesel to B6.7 H2 ICE
Diesel to X15 H2 ICE	($717,086)	251	$782,863	$46,657	$2,860	-6%	Diesel to X15 H2 ICE
Unleaded to B6.7 H2 ICE	($1,275,993)	1055	$1,783,342	$131,873	$1,209	-7%	Unleaded to B6.7 H2 ICE
SUV							
Hybrid EV Replacement	$29,285	24	$6,879	($23,514)	($1,231)	342%	Hybrid EV Replacement
Unleaded EV Replacement	$56,912	249	$222,396	($137,665)	($228)	62%	Unleaded EV Replacement
Tandem Axle							Tandem Axle
Diesel to Co Combustion	($126,156)	906	($1,204,233)	$596,096	$139	50%	Diesel to Co Combustion
Diesel to X15 H2 ICE	($17,216,969)	7545	$9,771,164	$1,309,674	$2,282	-13%	Diesel to X15 H2 ICE
Vans							
Unleaded EV Replacement	($790,583)	647	$1,759,001	($599,333)	$1,222	34%	Unleaded EV Replacement

- MAC is calculated by taking NPV and dividing it by the cumulative reduction in emissions
- A negative MAC indicates that the City is experiencing net cost savings for every tonne of GHG emissions reduced, even after accounting for capital expenditure (CAPEX). These savings come from reduced operational costs, primarily in maintenance and fuel
- A negative OPEX indicates that the City is experiencing net cost savings
- ROI is calculated by taking the total incremental OPEX and dividing it by the total incremental CAPEX.

An in-depth analysis of these results by vehicle class is noted on the following pages.

Scenario 1 Financial and Emissions Metrics: Cars

- On a per-kilometer basis, the City's unleaded cars emit approximately 2.5 times more emissions than their hybrid counterparts. Therefore, the greatest reduction in emissions for cars can be achieved by transitioning unleaded vehicles to EVs on a per-vehicle basis. However, above, the cumulative emissions reductions are higher for hybrids because there are many more hybrids in the fleet than there are unleaded cars.
- The most cost-effective approach for emissions abatement is unleaded cars moving to EVs, largely due to the reduced fuel and maintenance (OPEX) costs.
- In general, moving to EVs represents a negative MAC, or very low positive MAC for the City, indicating savings or low costs for each tonne of emissions abated. Furthermore, the acquisition of these vehicles proves to be a strong investment, delivering a return on investment (ROI) ranging from ~50% to 150%.

Scenario 1 Financial and Emissions Metrics: SUVs and Vans

- There is only one alternative technology option for vans and SUVs – EVs. These represent a strong investment due to the expected reduction in fuel and maintenance costs.
- MAC for SUV EV transitions is negative, indicating savings, while the MAC for vans is positive, indicating cost. This is due to the significantly higher CAPEX differential between unleaded vans and their EV replacement, versus the CAPEX differential between hybrid or unleaded SUVs and their EV replacement. However, the initiative still has positive ROI, which indicates that the OPEX savings outweigh the CAPEX investment over time.

Scenario 1 Financial and Emissions: Unleaded to EV Comparison

The transition from Unleaded to EVs represents different MACs across the vehicle classes. EVs always represent maintenance (OPEX) savings, however, for vans, the NPV is negative as EV vans' CAPEX is much higher than their conventional counterparts. Conversely, differential between the conventional option and the EV option for the other vehicle classes is not much higher.

Scenario 1 Financial and Emissions Metrics: Light Duty Trucks

- Moving from Unleaded to EV versus Diesel to EV represents higher energy savings due to the higher cost of renewable diesel. This is also reflected in the MAC.
- Due to the assumption of higher OPEX and CAPEX for H2 ICE vehicles (i.e., CAPEX for H2 ICE is $130,000 more than the conventional alternative), the ROI for H2 ICE engines are negative and represent high costs per tonne abated.
- Transitioning to hybrid range extenders has a positive NPV and a negative MAC (in other words, results in savings) due to the relatively low CAPEX investment required for the hybrid range extenders (estimated at $21,000)
- Emissions abatement for diesel single axle trucks is tempered by the existing use of renewable diesel. However, the costs associated with renewable diesel are fully incorporated into these calculations and are reflected in the higher ROI of unleaded to hydrogen.
- The CAPEX and OPEX projections for range extender and hydrogen vehicles are subject to significant uncertainty. This is due to the anticipated market release of these technologies being four years away, even under optimistic timelines. Consequently, any financial analysis pertaining to these emerging vehicle types should be interpreted with caution.

Scenario 1 Financial and Emissions Metrics: Single Axle Trucks

- Due to the assumption of higher OPEX and CAPEX for H2 ICE vehicles, the ROI for H2 ICE engines are negative and represent high costs per tonne abated.
- The future cost of these vehicles, regardless of if they are low carbon, is projected to be significantly higher than current models. This increase in base vehicle cost negatively impacts the MAC, even though it's not directly related to emission reduction efforts. Consequently, the MAC calculations for hydrogen vehicles suggest that emission reduction efforts are less cost-effective than they truly are, as they include cost increases unrelated to emission reduction technologies.
- Transitioning to hybrid range extenders has a positive NPV and a negative MAC (in other words, results in savings) due to the relatively low CAPEX investment required for the hybrid range extenders (estimated at $21,000)
- Emissions abatement for diesel single axle trucks is tempered by the existing use of renewable diesel. However, the costs associated with renewable diesel are fully incorporated into these calculations.
- The CAPEX projections for single-axle hydrogen and range extender vehicles are subject to significant uncertainty. This is due to the anticipated market release of these technologies being four to eight years away, even under optimistic timelines. Consequently, any financial analysis pertaining to these emerging vehicle types should be interpreted with caution.

Scenario 1 Financial and Emissions Metrics: Tandem Axle Trucks

- Due to the assumption of higher OPEX and CAPEX for H2 ICE vehicles (i.e., CAPEX H2 ICE is $130,000 more than the conventional alternative), the ROI for H2 ICE engines are negative and represent high costs per tonne abated.
- The future cost of these vehicles, regardless of if they are low carbon, is projected to be significantly higher than current models. This increase in base vehicle cost negatively impacts the MAC, even though it's not directly related to emission reduction efforts. Consequently, the MAC calculations for hydrogen vehicles suggest that emission reduction efforts are less cost-effective than they truly are, as they include cost increases unrelated to emission reduction technologies.
- Emissions abatement for diesel tandem axle trucks is dampened due to the existing use of renewable diesel. However, the costs of using renewable diesel are incorporated into these calculations.
- The CAPEX and OPEX costs for tandem-axle hydrogen and co-combustion vehicles are highly uncertain – particularly for hydrogen ICE vehicles, which are not to be released for another four to eight years under a best-case scenario.

3.3 Scenario Comparison

Scenarios 1 and 2 compare the emissions reduction pathways and associated financial metrics between an “on-time” and “delayed” release of hydrogen internal combustion engine technologies. Given that these technologies are only considered alternatives for vehicles in the light-duty, single axle, and tandem axle trucks, the emissions pathways for only those vehicle classes are highlighted – those for cars, SUVs, and vans have not changed from scenario 1.

The key difference between the two scenarios is driven by the impact of a discount factor and cost increases; the model assumes a discount factor of 4.7% year on year (inflation is 5%), resulting in less favourable NPVs and

MACs for scenario 2 as there is a timeline delay in some technology purchase. However, the metrics does not consider other potential benefits of either scenario:

- **Scenario 1:** Cost savings achieved by being an early adopter of new technologies, such as grants access and securing favourable contracts with suppliers (or securing contracts altogether – supply may not be available in the future as demand increases).
- **Scenario 2:** Cost savings from waiting to implement these technologies, such as reduced costs and risks.

Ultimately, cumulative emissions reductions and non-discounted aggregate capital spending will be the same between scenarios; the advantages of pursuing either scenario should be carefully considered within the context of the City's emissions reduction strategy and approach.

Scenario 2: Overall Emissions Reductions and CAPEX

With the technologies modelled, the City can achieve 57% emission reductions for its fleet in 10 years. It falls short of the City's targeted 40% reduction by 2030, achieving only a 26% reduction by 2030. While the City can achieve a 95% reduction of GHG emissions by 2050, it is not able to achieve their stated goal of net-zero by 2050 from a fleet perspective due to emissions from electricity consumption from the provincial grid, which is not net-zero. Emission reductions are achieved slower than in Scenario 1 due to delayed timing of vehicle purchases.

Over BAU, emissions can be reduced by:

- 57% in 2035 (870 tCO2e),
- 95% in 2045 (1,447 tCO2e), and
- 95% in 2050 (1,447 tCO2e)

Total additional CAPEX needed (undiscounted):

- Incremental CAPEX until 2035: $7,491,556
- Incremental CAPEX for project life: $74,385,969

FIGURE 20 CITY OF KELOWNA BAU VS. SCENARIO 2 (DELAYED)

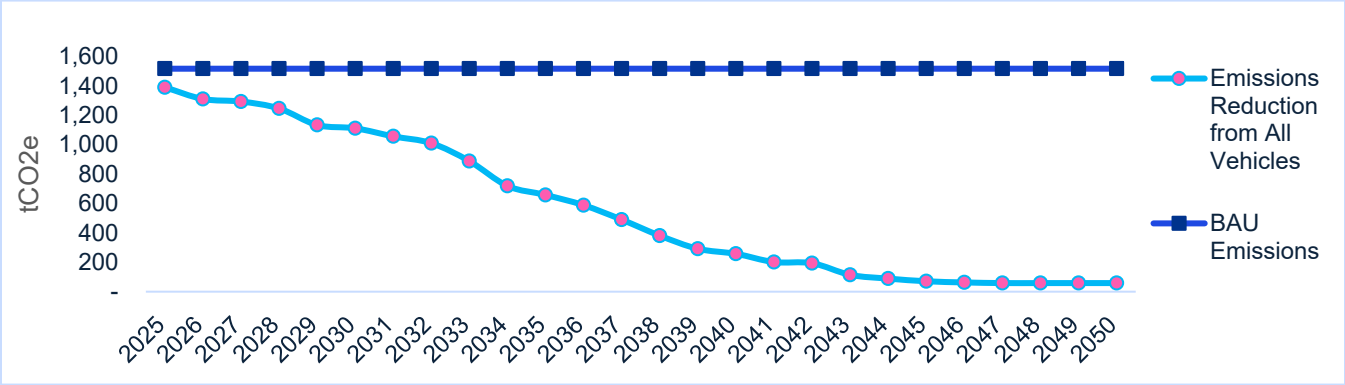


TABLE 19 SCENARIO 2 FINANCIAL AND EMISSIONS METRICS

Initiatives	Net Present Value (NPV)	Cumulative emission reductions (tCO2e)	Incremental CAPEX Spend (Negative is savings)	Incremental OPEX Spend (Negative is savings)	Total undiscounted CAPEX	MAC (per tCO2e)	ROI
LDT							
Unleaded to HRE	$ 2,032,455	839	$(2,162,195)	$ 396,194	$4,842,655	$(2,422)	18%
Unleaded to EV	$ 805,870	6,955	$ 3,982,137	$(2,924,455)	$27,939,460	$ (116)	73%
Diesel to HRE	$ 108,991	41	$ (124,177)	$ 21,661	$ 296,418	$(2,627)	17%
Diesel to EV	$ (47,667)	87	$ 83,466	$ (26,337)	$ 393,080	$ 550	32%
Unleaded to B6.7 H2 ICE	$(12,351,438)	3,331	$ 9,988,880	$ 394,059	$34,196,691	$ 3,708	-4%
Diesel to B6.7 H2 ICE	$ (533,061)	133	$ 411,032	$ 14,896	$ 1,399,003	$ 4,021	-4%
Single Axle							
Unleaded to HRE	$1,751,722	724	$(1,505,813)	$153,110	$2,563,492	$(2,420)	10%
Diesel to HRE	$346,445	48	$(371,012)	$38,532	$687,322	$(7,283)	10%
Diesel to Co-Combustion	$(139,688)	46	$129,318	$32,965	$552,385	$3,039	-25%
Diesel to B6.7 H2 ICE	$(3,448,393)	722	$3,593,542	$174,517	$14,627,379	$4,774	-5%
Diesel to X15 H2 ICE	$(717,086)	251	$782,863	$46,657	$2,618,579	$2,860	-6%
Unleaded to B6.7 H2 ICE	$(1,275,993)	1,055	$1,783,342	$131,873	$10,099,842	$1,209	-7%
Tandem Axle							
Diesel to Co Combustion	$(126,156)	906	$(1,204,233)	$596,096	$8,190,359	$139	50%
Diesel to X15 H2 ICE	$(6,172,843)	2,720	$3,485,928	$472,022	$17,156,145	$2,269	-14%

- MAC is calculated by taking NPV and dividing it by the cumulative reduction in emissions.
- A negative MAC indicates that the City is experiencing net cost savings for every tonne of GHG emissions reduced, even after accounting for capital expenditure (CAPEX). These savings come from reduced operational costs, primarily in maintenance and fuel.
- A negative OPEX indicates that the City is experiencing net cost savings.
- ROI is calculated by taking the total incremental OPEX and dividing it by the total incremental CAPEX.

3.4 Charging

3.4.1 Charging Analysis Introduction

This section provides guidance to the City of Kelowna regarding the future charging needs as the City transitions to electric vehicles. This analysis is intended to serve as a framework for the City's planning and decision-making processes. This guidance will help the City to strategically allocate resources, invest in necessary infrastructure, and prepare for the anticipated growth in EV adoption.

Charger Types

The "Charging Infrastructure Demand Analysis" establishes overall charging needs at the strategic level for the City of Kelowna based on future electric vehicles as determined by the "Sustainable Fleet Scenario Analysis". This analysis is further refined on a location by basis in following section seven "Charging Infrastructure Analysis by Location." This analysis is based on data provided by the City and assumptions agreed to by the City.

There are three main levels of electric vehicle chargers as outlined in the table below. Charging level is determined by power output and charging speed of the different types of charging equipment.

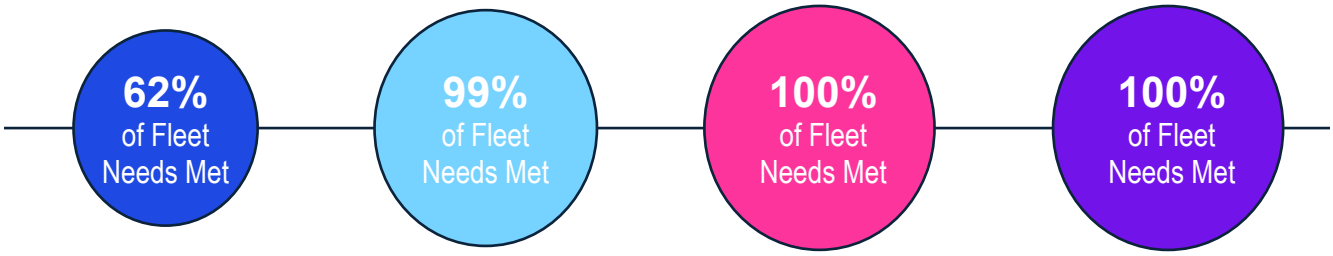
TABLE 20 LEVELS OF ELECTRIC VEHICLE CHARGERS

Charging Level	Power	Time to Charge	Typical Uses	Comments
Level 1: Wall outlet charging	1.4kW output Requires standard 120V/15A wall socket	Charges 4 - 11km/hour BEV: 12-20 hours	Home Emergency charging	Typical household outlet Typically used as a backup option when Level 2 or Level 3 charging is unavailable, or for vehicles with small batteries and low daily mileage requirements.
Level 2: AC charging	6.6 – 7.2kW output Requires 208V or 240V power input	Charges 30-40 km/ hour BEV: 2-8 hours	Home Businesses Common areas	Requires a 30A or 40A circuit Requires installation by a qualified electrician
Level 3: DC fast charging	25 to 350kW+ output Requires 3-phase high-power input	Charges 200-250 km/hour at 50kW Charges 8km/hour BEV: 1-4 hours	Business Opportunity charging Common areas	Requires installation of DC fast charger (DCFC) Note: The City currently has no Level 3 chargers installed and has no plans to install them.

3.4.2 Charging Analysis Summary

This section summarizes the results of the charging analysis.

FIGURE 21 CHARGING ANALYSIS SUMMARY

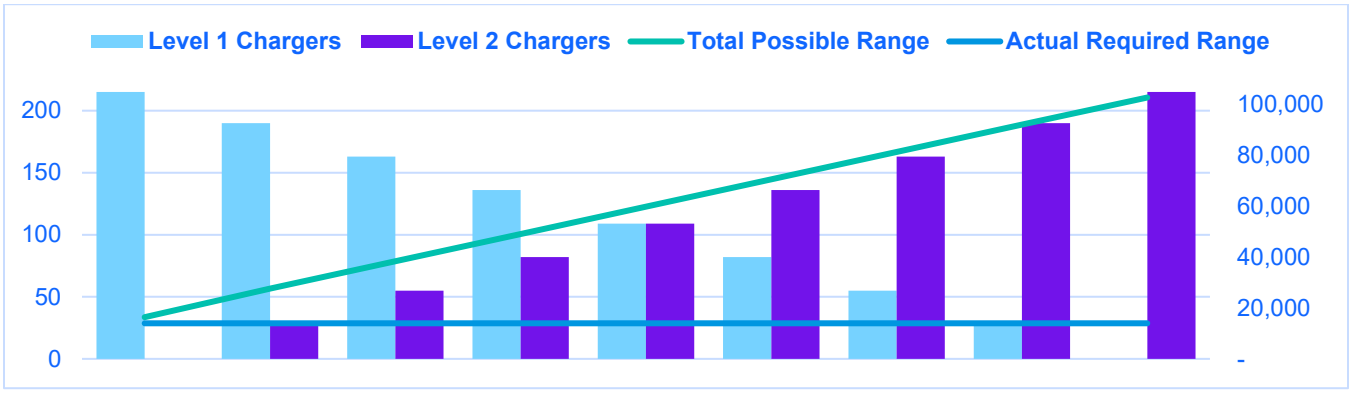


In this scenario, the fleet would require 234 dedicated Level one chargers. This would yield a Total Daily range of ~18,000km (>the daily adjusted range of the fleet) 146 out of 234 vehicles of the fleets total daily range requirements would be met.	In this scenario, the fleet would require 54 Level one chargers and 86 Level two chargers. This would yield in a total daily range provided by the chargers of ~26,000km. Out of the 234 identified EV's, this configuration would serve 231 vehicles while providing a surplus of 72% over daily fleet range needs.	In this scenario, the fleet would require 126 Level one chargers and 88 Level two chargers. This would yield in a total daily range provided by the chargers of ~52,000km. This configuration would serve all 234 vehicle needs While providing a surplus of 245% over daily fleet needs.	In this scenario, the fleet would require 234 Level two chargers. This serves the daily range requirement of all 234 vehicles and provides a daily range of ~110,000km, oversupplying the fleet by 642%. This is a significant oversupply of charging infrastructure and not needed for the City.

Prioritized Charging Infrastructure

This section outlines the range of dedicated Level 1 and Level 2 chargers that can be configured without a daisy chain with dedicated chargers for each vehicle. This scenario does not assume optimized charging cycles and assumes one charger per vehicle.

FIGURE 22 RANGE OF DEDICATED CHARGERS



Prioritize Level 1

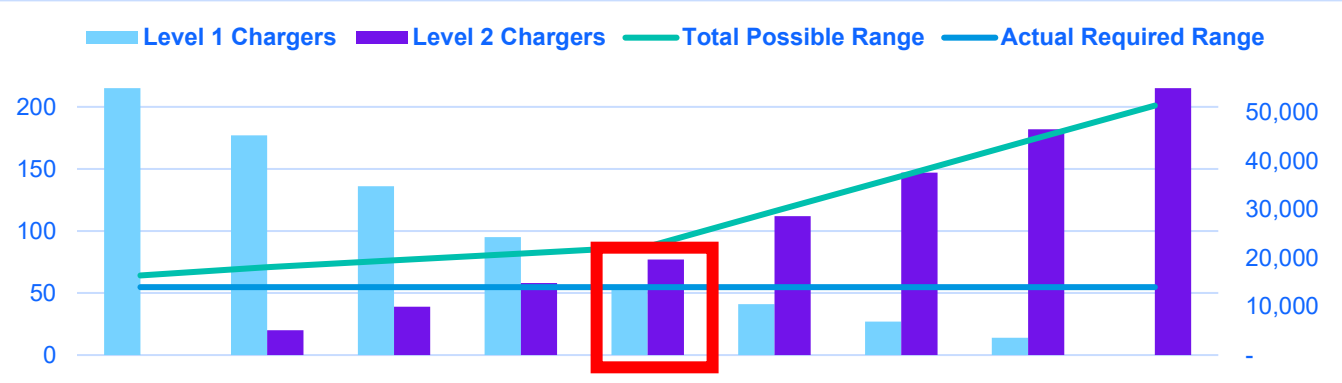
Implementing a 1:1 Level 1 to Vehicle ratio may serve the needs of a fleet as whole (overall daily fleet range), but it is important to note that when doing a vehicle specific analysis, only 62% of the fleets' needs are met. Refer to

section seven “Charging Infrastructure Analysis by Location” for detailed information on charging requirements per department on the other hand, implementing a 1:1 ratio of Level 2 chargers, oversupplies the fleets needs by a significant margin and is therefore not recommended.

Daisy Chain Infrastructure

This section identifies the optimal number of Level 1 and Daisy chain Level 2 chargers to be configured. In this scenario, Level 1 vehicles get Level 1 charging through the chain; Level 2 vehicles get proportionate Level 2 charging based on number of vehicles in the chain. The analysis assumes approximately 1-3 vehicles per daisy chain charger.

FIGURE 23 OPTIMAL NUMBER OF CHARGERS TO BE CONFIGURED - BY LEVEL



Prioritize Level 1

In this scenario, 86 level 2 daisy chains complement 54 dedicated level 1 chargers. The daisy chain efficiently meets the needs of vehicles without dedicated chargers, offering flexibility and less charging planning while ensuring all fleet vehicles are charged efficiently. This scenario satisfies 99% of the individual vehicle needs, the remaining 1% of unmet charging needs could be met by installing one additional level 2 charger.

Prioritized Charging Configuration

This section discusses the findings for “Prioritized Charging Configuration” where a vehicle is allocated a dedicated Level 1 or 2 charger.

- The optimal mix of Level 1 and Level 2 chargers assuming conservative charging cycles and location specific factors such as number of vehicles is 126 Level 1 Chargers and 88 Level 2 Chargers (without daisy chains).
- In this scenario, the identified chargers provide a surplus of 245% fleet in terms of daily range but serve each vehicle appropriately based on their daily adjusted utilization.
- Under this scenario without the Daisy Chain technology, the city workers will need to organize charging effectively to optimize the use of chargers to ensure that “low priority” vehicles are charging the nights where high priority vehicles do not need to be charging.
- Additional charging can be achieved by allowing multiple vehicles to charge for shorter periods throughout the day, ensuring that each charger is utilized more efficiently.
- Organizing charging schedules can help tailor access to meet all the charging needs under this scenario. By implementing scheduled charging times or reservations, the City can prevent overcrowding and

ensure equitable access, prioritizing those who need longer charges while accommodating others who require quick top-ups. This approach maximizes the efficiency of existing charging infrastructure and additional chargers that may be added and could avoid the potential cost expenditure related to infrastructure of the Daisy Chain technology.

3.4.3 Charging Infrastructure – Summary

In conclusion, the City has two viable options for implementing its EV charging infrastructure strategy, both based on conservative assumptions:

Preferred Option: Daisy Chain Configuration - This involves installing **86 level 2** daisy chain chargers (with two to three charging ports) and 54 Level 1 chargers. This configuration reduces the need for workers to effectively organize charging, making it more efficient and less labor-intensive. Additionally, the Daisy Chain Configuration is potentially more cost-effective due to the lower number of chargers required and simpler installation.

Less Preferred Option: Prioritized Dedicated Charging - This involves installing **88 level 2** chargers and **126 level 1** chargers, which requires more intensive charging organization that must be undertaken by city workers. While this option offers ample coverage for the City's proposed EV fleet, it demands more labor and coordination, potentially increasing operational complexity and costs.

TABLE 21 VIABLE OPTIONS FOR IMPLEMENTING EV CHARGING INFRASTRUCTURE STRATEGY

Scenario:	Daisy Chain Configuration	Prioritized Dedicated Charging
Total level 1: Total level 2:	54 dedicated level 1s 88 level 2 daisy chains	126 dedicated level 1s 88 dedicated level 2s
Total Hours of Charging	3,510	3,510
Total Range Provided (km)	26,000	52,000
Charging Effectiveness KPI (km/hr)	7	15
% of Fleet Needs Met	99% (231 / 234 Vehicles)	100% (234 / 234 Vehicles)
% Surplus over Fleet Need	72% (~15,000 daily adjusted utilization)	245% (~15,000 daily adjusted utilization)

Both strategies ensure that vehicles can be reliably charged overnight without factoring in daytime charging. However, Daisy Chain Configuration is recommended due to its efficiency, reduced labor requirements, and potential cost savings.

3.4.4 Charging Analysis – Conclusion

Below is a summary of the results of the charging analysis per location.

TABLE 22 SUMMARY - CHARGING ANALYSIS PER LOCATION

Location	Units	Daily Adjusted Utilization (km)	Strategic Assessment	Justification	Max Daily Range offered (km)	BEV Recommendation (Max Chargers per Location)
Chapman Parkade	3	198	1-level 1, 1- level 2	Low-cost strategy	~500	N/A
City Hall	2	120	1-level 1 & 1-level 2	Maximize availability and redundancy	~600	6
Compost Facility	3	58	2-level 1 and 1-level 2	Prioritize redundancy and range	~700	1
Ellis St. Parking Lot	4	191	3-level 1 & 1 level 2	Charging port redundancy and capacity for additional vehicles	~700	N/A
Landfill	12	591	3-chain daisy configuration with load balancing, 8-level 1	Uninterrupted availability with above-required range	~2000	5
Library Parkade	10	1,183	5-level 1, 5-level 2	Meets all vehicles requirements and uninterrupted availability with above-required range	~3500	15
Memorial Parkade	17	1,495	3-dedicated level 2, 10-level 1	Redundancy, availability and range maximization	~3000	N/A
Parkinson Rec	4	87	4-level 1	Low cost strategy	~500	N/A
Police Services	3	260	1-dedicated level 2, 2-level 1	Range maximization	~700	N/A
Utilities Construction Yard	12	550	4-chain daisy configuration with load balancing with 4 dedicated level 1	Redundancy, availability and range maximization	~2500	6
Westside Gravel Pit	1	74	1-dedicated level 2 charger	Range maximization	~500	N/A
Windsor Road	17	559	5-chain daisy configuration with load balancing with 5 dedicated level 1	Redundancy, availability and range maximization	~3000	19
Parks Yard	55	5153	5-dedicated level 2, 10-daisy chain configuration, 7 dedicated level 1	Redundancy and fleet optimization	~7000	34
Public Works Yard	45	3311	5-dedicated level 2, 10-chain daisy configuration, 5 dedicated level 1	Redundancy and low cost strategy	~7000	28
Wastewater Treatment Facility	28	2010	5-dedicated level 2, 3- chain daisy configuration with load balancing, 8- dedicated level 1	Redundancy and fleet optimization	~4000	12
Firehall	17	1090	5 – chain daisy configuration with load balancing, 2 dedicated level 2, 3 dedicated level 1	Fleet optimization and redundancy	~4000	5

TABLE 23 – REQUIRED CHARGER INVENTORY

Total Level 1	Total Level 2	Total Level 2 (Daisy)	Total Chargers Required
~68	~32	~40	~140

Based on the results of the analysis – Parks Yard, Public Works Yard and Wastewater Treatment Facility require the greatest increase in level 2 chargers while other locations may suffice with level 1 chargers or a level 2 Charger with a daisy configuration. It is advised to install Level 2 chargers where possible due to increased efficiency of charging and greater optimization of the fleet.

3.4.5 Billing Best Practices

Given the current challenges with accessing and itemizing bills from charging data based on our Supply Analysis, some tailored billing best practices for the City to consider are outlined below.

TABLE 24 INTEGRATED BILLING PRACTICES

Practice	Description	Benefits
Implement Submetering	• Install submeters on chargers to track energy usage per department or vehicle.	• Enhanced Accountability: Departments/entities can be billed based on actual usage, promoting responsible energy consumption. • Detailed Reporting: Provides granular data for better budget planning and trend analysis. • Implementation: Work with Flo to integrate submetering capabilities into the existing infrastructure.
Automated Itemized Billing	• Utilize billing software that can automatically generate itemized invoices. • Providers: Evnity, Wevo Energy	• Transparency: Departments receive detailed bills, improving financial accountability. • Efficiency: Reduces manual processing and errors. • Implementation: Integrate billing software with Flo's monitoring system to automate the generation of itemized bills.
Direct Access to Geotab Data	• Establish a direct API connection to Geotab for real-time data access.	• Timely Decision-Making: Immediate access to data allows for quicker adjustments and strategic planning. • Operational Efficiency: Reduces dependency on third-party representatives and streamlines data retrieval. • Implementation: Collaborate with Geotab to set up an API that provides direct access to the necessary data.
Centralized Data Management Platform	• Implement a centralized platform that consolidates data from Flo and Geotab. • Providers: GreenFlux, Evnity.	• Unified View: Provides a comprehensive overview of all charging activities and energy consumption. • Strategic Insights: Facilitates better analysis and reporting, aiding in strategic planning and operational improvements. • Implementation: Choose a platform that can integrate with both Flo and Geotab, ensuring seamless data consolidation.

Practice	Description	Benefits
Regular Audits and Reviews	• Conduct regular audits of energy consumption and billing processes.	• Accuracy: Ensures billing accuracy and identifies any discrepancies. • Continuous Improvement: Provides insights for ongoing improvements in energy management and billing practices. • Implementation: Schedule periodic audits and reviews, involving relevant stakeholders to ensure thorough evaluations.

Level 1&2 charging in EVs can be effectively tracked using smart meters integrated into the charging stations. These smart meters measure the energy consumption of each charging session, providing precise data on electricity usage. This data can be processed by billing systems, which generate detailed reports and invoices based on the amount of energy consumed. By using smart meters, City of Kelowna can ensure accurate billing for EV charging, whether for personal or departmental use, and maintain transparency in energy usage.

By implementing these best practices, the City can improve its billing processes, enhance accountability, and make more informed decisions regarding its EV charging infrastructure.

City Staff Charging Personal Vehicles:

- **Usage Guidelines:** Implement clear guidelines outlining when and how staff can use city-installed chargers for personal vehicles, whether for work or non-work-related purposes.
- **Billing System:** Use a billing system that tracks usage and charges staff for personal vehicle charging to ensure fair use and cost recovery.
- **Education Programs:** Provide education programs to inform staff about the policies and encourage responsible usage.

B2B Charging Between Departments:

- **Interdepartmental Agreements:** Establish agreements between departments to define usage, billing, and payment processes for shared chargers.
- **Centralized Billing:** Use centralized billing software to capture and allocate costs accurately across departments.
- **Usage Tracking:** Implement tracking systems to monitor usage and ensure transparency in billing.

3.5 Maintenance

3.5.1 Introduction

This section contrasts the current state of Kelowna's fleet maintenance facilities and the necessary adaptations to accommodate the growing presence of alternative fuel vehicles.

As the automotive industry evolves, the transition from ICE vehicles to EVs and hydrogen fueled vehicles presents both challenges and opportunities for fleet maintenance. Current maintenance facilities are primarily designed for ICE vehicles, lacking the capacity for EV-specific repairs and charging infrastructure.

To effectively manage the shift towards a low carbon fleet, it is essential to implement best practices that align with future needs including:

- Building and delivering comprehensive training programs for maintenance staff allowing for continuous upskilling of technicians to handle the complexities of EV and hydrogen technologies,
- Integrating advanced telematics systems,
- Establishing of safety protocols tailored to high-voltage and hydrogen systems,
- Expanding existing facility to meet basic facility requirements,
- Developing dedicated maintenance bays for EVs and hydrogen vehicles, equipped with the necessary tools and safety measures.

This strategic approach will not only enhance the operational capabilities of the fleet ensuring a smooth transition and operational efficiency, but also contribute to the reduction of GHG missions, aligning with provincial safety standards and environmental goals.

3.5.2 Maintenance: Current State and Future Needs

This section provides a summary contrasting the current state and future needs for fleet maintenance at the City.

TABLE 25 MAINTENANCE - CURRENT STATE AND FUTURE STATE

Dimension	Current State	Future Needs
Age	• The current maintenance building is over 50 years old with limited expansions or improvement. • Current facility does not meet space requirement of modern larger-sized vehicles.	• A fit-for-purpose maintenance facility allows for the incorporation of latest green automotive technologies and infrastructure to support EVs and other low carbon alternatives ensuring that the City is equipped to handle the evolving demands of fleet maintenance.
Space	• There is limited space across all facilities leading to outdoor storage of tools and equipment (resulting in exposure to weather and vandalism), outdated infrastructure, and insufficient office and support spaces. • Existing maintenance facilities are designed for ICE vehicles and lack the capacity for EV-specific repairs or charging infrastructure.	• Expanded facilities to accommodate EV charging stations, battery storage areas, and high-voltage repair zones. • Dedicated bays for EVs and hydrogen fuel cell vehicles, with safety measures to handle high-voltage systems and hydrogen storage.
Safety	• Safety protocols focus on ICE vehicles, with limited provisions for high voltage systems, battery fires and hydrogen hazards.	• Training for technicians on handling high-voltage systems and hydrogen safety. • Implementation of fire suppression systems specific to battery fires. • Enhanced safety zones for charging equipment and hydrogen refuelling.

Requirements: Electric Vehicles

Electric vehicles have specific maintenance requirements considering training safety protocols, facility design, and related tools.

TABLE 26 REQUIREMENTS - ELECTRIC VEHICLES

Maintenance focus areas for EVs	• More frequent tire pressure monitoring and rotation for EVs due to their heavier weight • Cooling system maintenance to abate battery fire hazard • Software updates for vehicle control systems • Electrical connector inspection • Battery health monitoring and maintenance • Routine brake system inspection and lubrication
Technician training	• Thorough training on EV systems, including battery management, EV cooling systems, thermal management systems, motor control, high voltage safety & diagnostics and repair, and charging infrastructure • Understanding of manufacturer-specific maintenance protocols for different EV models
Safety protocols	• Handling high voltage systems, including de-energization and isolation techniques • Fire suppression systems for lithium-ion battery fires • Designated storage areas for damaged batteries • Emergency response plan for electrical incidents • Personal Protective Equipment (PPE) requirements
Facility design considerations	• EV maintenance workspace with proper ventilation • Clear signage for high voltage areas • Adequate lighting for working on electrical components • Designated charging stations with appropriate power capacity • Specialized storage areas for storing and handling EV batteries
Specialized tools and equipment	• Diagnostic for battery health and performance. • High voltage safety equipment for electrical shock. • Dedicated lifting systems suitable for EV chassis design • Battery removal and handling tools • Insulated hand tools • Thermal imaging cameras

Requirements: Hydrogen Vehicles

Hydrogen vehicles have specific maintenance requirements considering training safety protocols, facility design, and related tools.

TABLE 27 REQUIREMENTS - HYDROGEN VEHICLES

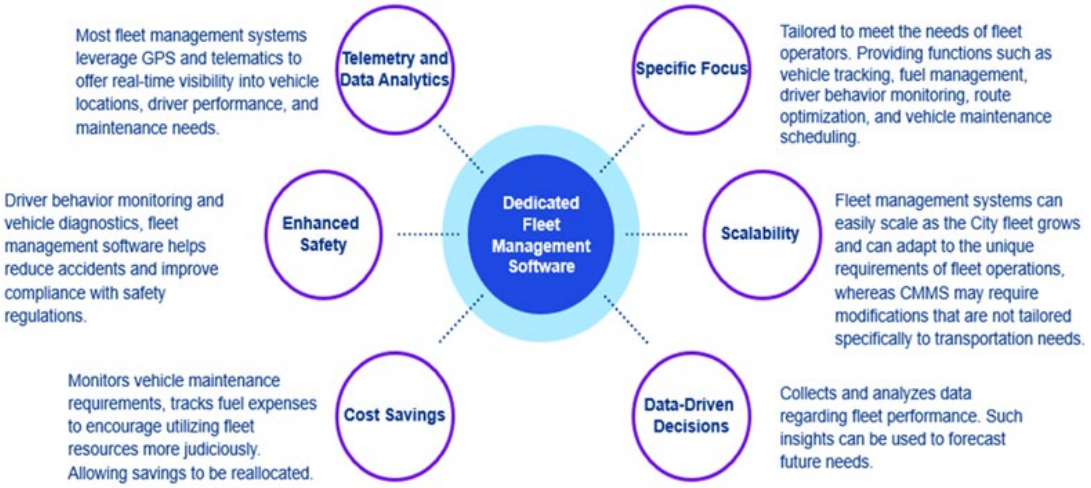
Pressure Equipment Safety Regulation	This regulation outlines the requirements for the construction and maintenance of pressure systems. Including: • Certification of pressure equipment • Regular inspections and maintenance protocols • Proper training for personnel involved in operation and maintenance
Electrical Safety Regulation (ESR)	This regulation mandates standards that ensure electrical installations do not pose risks of faults or hazards. Including: • Professional qualifications for those performing electrical work • Adherence to the Canadian Electrical Code • Routine inspections to verify compliance with electrical safety standards

British Columbia Fire Code (BCFC)	This regulation mandates fire prevention and suppression measures in facilities utilizing pressure fuel systems. Including: • Installation of appropriate fire suppression systems such as sprinklers or chemical agents • Fire safety plans that detail emergency preparedness and response measures • Accessibility and clarity of fire exits in a facility
Gas Safety Regulation (GSR)	This regulation specifically addresses safety for the installation and upkeep of gas appliances and systems. Including: • Systems are installed by qualified professionals • Adequate maintenance schedules are established and adhered to • Emergency shut-off systems are in place
Environmental Protection Measures	Environmental regulations also encompass the management of spills and potential contaminations, particularly for systems handling fuels such as hydrogen. Including: • Protocols for immediate response to spills or leaks • Regular assessments of environmental impact • Containment measures to prevent pollution

Requirements: Information Technology

The City needs a dedicated Fleet Management System-FMS that meets the diverse needs of Internal Combustion Engines, Electric Vehicles, Hydrogen Retrofits, Hydrogen Internal Combustion Engines, Hydrogen Fuel Cell Electric Vehicles, Hybrid Vehicles, and Hybrid Range Extenders. General Computerized Maintenance Management Systems do not provide all the key inputs to streamline effective decision making. Below is an illustration of the range of values that City stands to derive from the deployment of a dedicated FMS.

FIGURE 24 REQUIREMENTS- INFORMATION TECHNOLOGY



Requirements - Personnel, Technicians, Skills

TABLE 28 REQUIREMENTS - PERSONNEL, TECHNICIANS, SKILLS

Technology	H_2-ICE	Co-Combustion	EVs	Renewable Diesel
Best Practices	Regularly inspect high-pressure hydrogen	Technicians should be skilled in calibrating fuel systems to	Routine Battery Maintenance	Conduct regular inspections of engines

Technology	H_2-ICE	Co-Combustion	EVs	Renewable Diesel
	storage tanks and fuel systems for leaks or wear Use of materials resistant to hydrogen embrittlement in engine components	achieve optimal H2-diesel blend Ability to Monitor injector performance to ensure proper fuel mixing and analyze effects of different hydrogen-diesel ratios on engine performance	Monitoring of Thermal Management Systems Leverage Advanced Diagnostic Equipment Data-Driven Optimization	running on renewable diesel to ensure compatibility with fuel properties and OEM engine specification Knowledge of emissions systems and regulations, peculiar to renewable diesel
Key Skills and Roles for Fleet Personnel	Engine technicians Safety specialists	Engine technicians Fuel specialist	High-voltage technicians Fleet managers with knowledge of EVs	Engine technicians with expertise in advanced diagnostics, fuel injectors etc.
Training Requirements	Certification in hydrogen handling Training on thermal pressure relief devices Certification in pressure fuel repair and inspection Regular upskilling programs on H2-ICE vehicle technologies	Training on dual-fuel system calibration and emissions control Courses on High Voltage Safety, High Pressure systems and general maintenance & repair of dual-fuel vehicles Certification in pressure fuel repair and inspection	EV-specific certifications (e.g. EVSC, Automotive Service Excellence EV (ASE)) Regular upskilling programs for ICE technicians transitioning to EV maintenance roles	Minimal retraining required as renewable diesel is mostly compatible with ICE engines Training on emissions systems and regulations, with focus on renewable diesel
Safety Training	Leak detection protocols using IoT-enabled sensors Emergency response for invisible hydrogen flames	Emergency protocols for managing both diesel and hydrogen leaks	High-voltage safety protocols for battery handling Fire suppression techniques specific to lithium-ion battery fires	Emergency protocols for diesel management

Future Proofing for Vehicle Maintenance Facility

A. Number of Technicians with Specializations

For future state, where the City's fleet will be transitioning to the following categories:

TABLE 29 REQUIREMENTS – PERSONNEL FUTURE PROOFING

Category	Count	Comment	Category	Count	Comment
EV Car	32	Electric	Tandem Axle Trucks	17	X15 H2 ICE
EV Van	31	Electric	Utility Vehicle	9	EV replacement
EV SUV	12	Electric	Heavy Duty Equipment	68	Electric replacement
EV LDT	106	Electric	Medium Duty Equipment	12	Electric replacement
Hybrid Range Extender	51	LDT	Light Duty Equipment	69	Electric replacement
Single Axle Trucks	21	B6.7 H2 ICE	Other City Vehicles	50-100	Out of scope but used by the City

Based on the foregoing, the city would need approximately 18-22 technicians. Specializations should include:

TABLE 3031 REQUIREMENTS – SPECIALIZATION

Technology	Estimated Need	Comment
EV Technicians	5-6	Requires special training and certification
ICE Technicians	6-8	Including Apprentice and heavy duty mechanics
Hydrogen Vehicle Technicians	3-4	Requires special training and certification
General Technicians	4-5	Including Servicepersons (2)
Aggregate	18-21	Result in 1800 – 2520 VEUs – more than double the City's current VEU needs. Will address staff shortage and improve KPIs

B. Number of Bays

Given the variety and number of vehicles in the future state, the City should aim for 20-25 bays to ensure efficient maintenance and minimize downtime.

C. Type of Equipment and Counts

Each bay should be equipped with the necessary tools and equipment specific to the vehicle types they will service. For example:

- EV Bays: Charging stations, diagnostic tools for electric systems, insulated tools.
- ICE Bays: Standard diagnostic tools, lifts, oil change equipment.
- Hydrogen Vehicle Bays: Hydrogen fueling stations, specialized diagnostic tools for hydrogen systems.

D. Standard Bay vs Technician: The standard ratio is typically 2 bays per tech.

TABLE 32 REQUIREMENTS – STANDARD BAY VS. TECHNICIAN

Ratios	Estimate	Comment
Technician/Bay	2 bays per tech	• 2 bays to 1 technician for effective throughput and prevent overcrowding
Equipment/Bay	5-6 pieces of essential equipment	• In addition to Crane, Vehicle Lift, Diagnostic Tools, Air Compressor; Tool Storage. • Fluid Management Systems: Safety Equipment (e.g. Fire extinguishers, first aid kits, and personal protective equipment (PPE)
Equipment/ Technician	Technician should have access to 3-4 specialized tools	• Standard tools include, torque wrench, insulated tools, brake service tools, and specialized tools like, hydrogen leak detector

Breakdown: Below is a sample breakdown of what the recommended bays look like while considering different technologies, required equipment and sizes.

- **ICE Bays:** 8 Recommended
- **EV Bays:** 7 Recommended
- **H2 Vehicle Bays:** 6 Bays (Some of these can be used for alternative fuel vehicles like renewable diesel)

- **Others:** 4 Bays (these include 2 bays for welding & fabrication as well as bays for the Fire Department)

Requirements for maintenance pits is factored into bay sizes in line with fire safety standards.

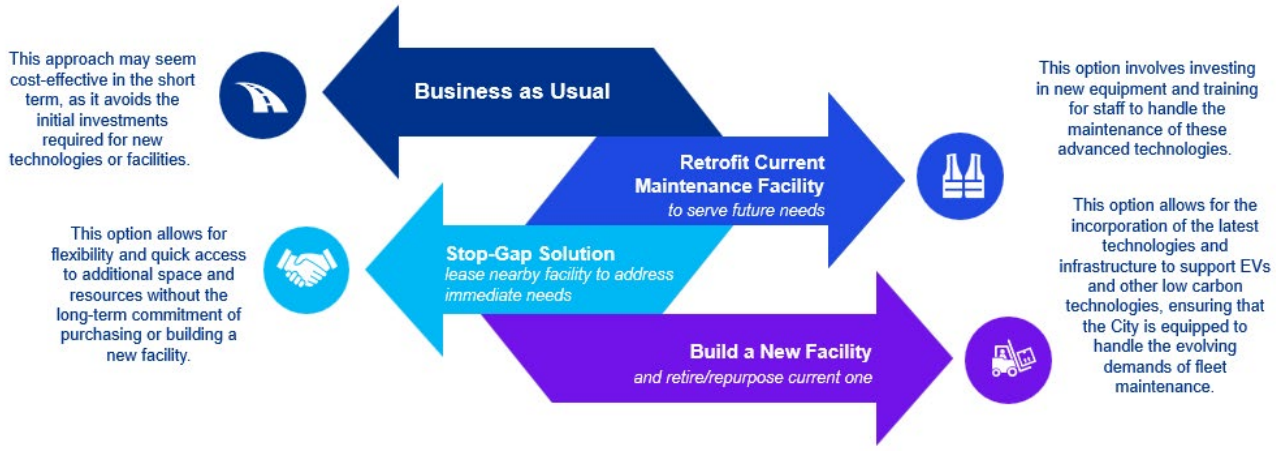
TABLE 33 REQUIREMENTS – BAY REQUIREMENTS

Bay No.	Size (feet)	Dedicated Vehicle Type	Floor Heights (feet)	Standard Equipment Requirement
1-8	Standard2 (45'L x 12'W X 14'H)	ICE	Minimum 14'	Overhead Crane, Standard diagnostic tools, lifts, oil change equipment
9-15	Standard-Extended (45'L x 12'W X 15'H)	EV	Minimum 15'	Overhead Crane, Charging stations, diagnostic tools for electric systems, insulated tools
16-21	Adaption of current size (50'L x 13'W X 19'H)	H2-Vehicle	Minimum 19'	Overhead Crane, Hydrogen fueling stations, specialized diagnostic tools for hydrogen systems
22-23 (Welding & Fabrication)	(50'L x 13'W X 19'H)		Minimum 19'	MIG Welder, TIG Welder, Plasma Cutter, Welding Table, Grinding and Cutting Tools (e.g. angle grinders, bench grinders, and cutting wheels for preparing and finishing welds), Safety Equipment etc.
24-25 (Miscellaneous e.g. Fire Department)	(50'L x 13'W X 19'H)		Minimum 19'	Fire & Standard Equipment

3.5.3 Options Analysis & Recommendation

Based on the foregoing, the following maintenance facility options have been identified:

FIGURE 25 MAINTENANCE FACILITY OPTIONS



Our analysis indicates that the current maintenance facility has exceeded its useful life, posing significant operational and safety risks. Retrofitting the facility with modern equipment to meet future demands is both operationally and financially impractical. Therefore, we recommend implementing a temporary solution while planning for a transition to a purpose-built maintenance facility.

Sustainable Fleet Strategy

Karen Gorecki, KPMG

June 9, 2025

Introduction to the updated Green Fleet Strategy

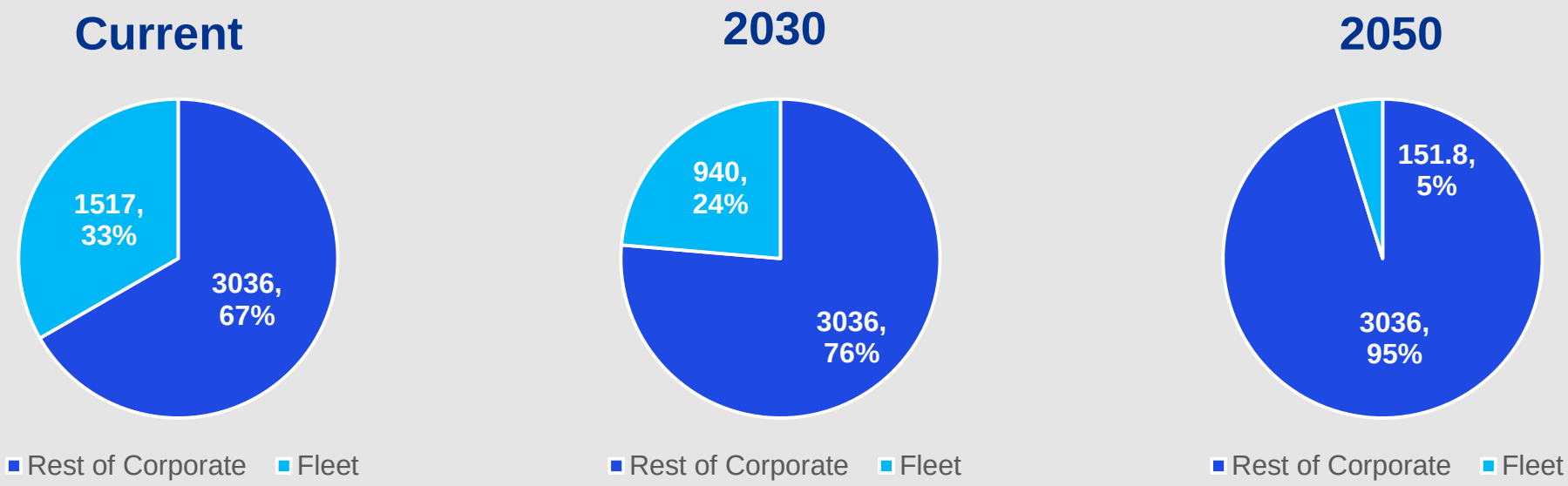
- Overview of the city's commitment to sustainability.
- Importance of reducing corporate emissions through fleet management.
- Alignment with long-term climate goals and community health.
- Overview of innovative technologies and strategies in the plan.
- Decarbonization scenarios

City of Kelowna Sustainable Fleet Strategy

Document Classification: KPMG Public

June 9th 2025

Context and Objectives



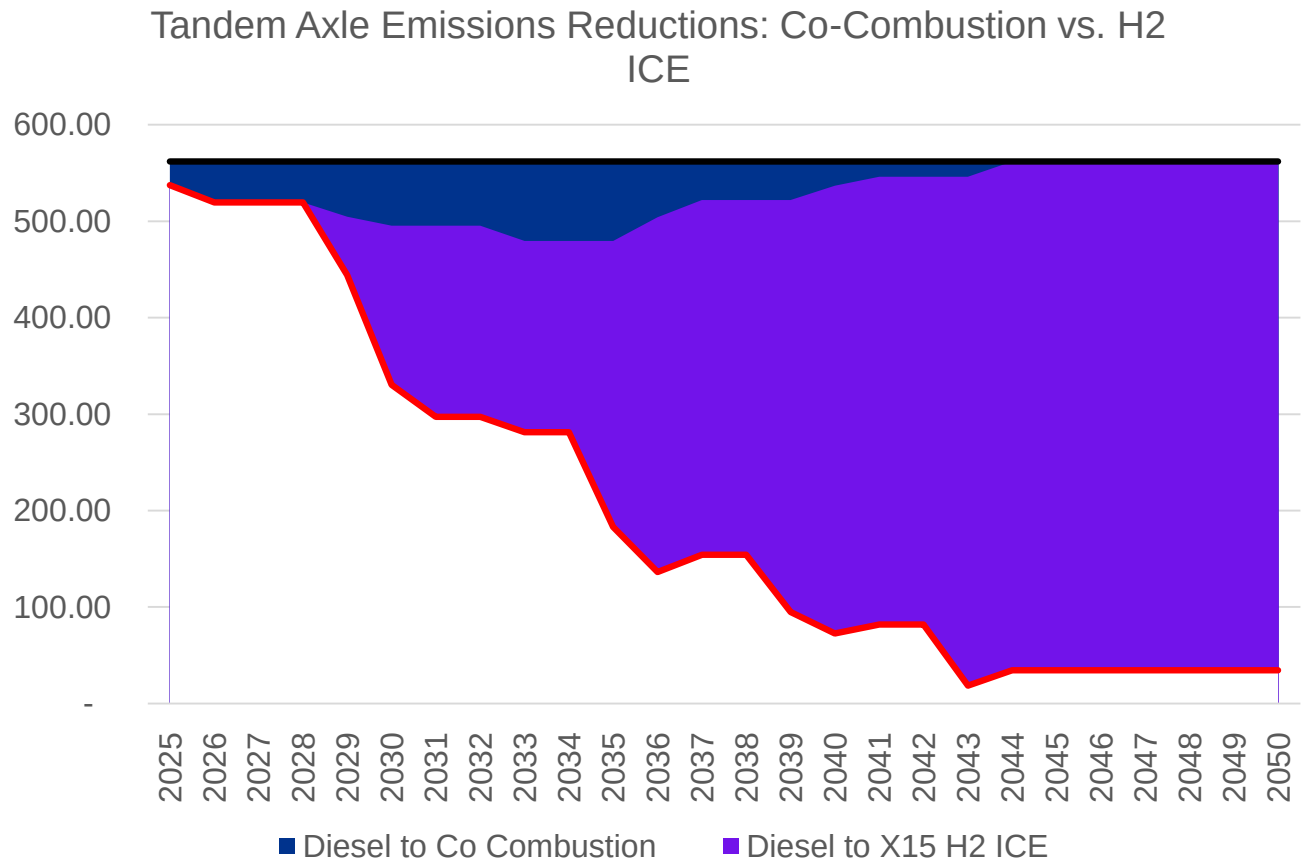
The timely adoption of recommended fleet technologies can play a substantial role in reducing the City's corporate emissions.

Fleet Rightsizing

	Number of Vehicles	
Vehicle Class	**Current**	**Range of Reduction**
Cars	32	1 - 2
Vans	31	9 - 13
SUV	13	3 - 5
Light Duty Truck	157	11 - 16
Single Axle Truck	22	6 - 9
Tandem Axle Truck	17	-
	TOTAL	30 - 45

Adoption of Low-Carbon Technologies

Vehicle Class*	Short-Term (2025-203X)	Long-Term (203X-2050)
Light Duty	EV	EV
Other Heavy Duty	Hybrid Range Extenders	H2 ICE
Tandem Axle	Co-combustion retrofits	H2 ICE/FC EV (shown right)



The City's Hydrogen Journey

70%

Despite challenges with hydrogen production, supply, infrastructure, and market penetration, it remains critical to reducing the City's fleet emissions, because **~70%** of fleet emissions are from heavier duty vehicles that cannot be electrified at this point in time.

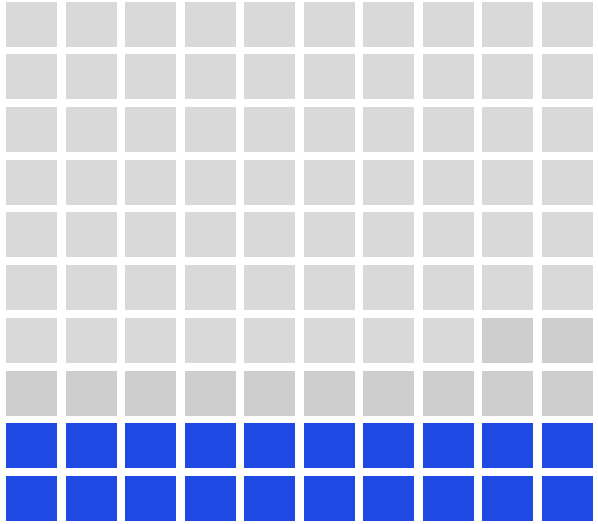
Co-combustion offers a **gradual, measured transition** towards hydrogen, providing immediate GHG reductions while leveraging current infrastructure based on actual data.

Kelowna can **pilot hydrogen with co-combustion** in the short term while gradually transitioning to H2 ICE or FCEV as hydrogen infrastructure develops and new technologies become available

By securing supply and testing hydrogen on a smaller scale early-on, the City can better take advantage of the H2 ICE opportunity when vehicles hit the market.

Renewable Diesel

20%
reduction



- Renewable diesel can present opportunities for emissions reductions of up to 85% on a lifecycle basis,
- Origin and feedstock reduce **lifecycle emissions reduction opportunities of only 20%.**
- Tailpipe emissions for renewable diesel are only slightly lower than conventional diesel.
- **renewable diesel significantly reduces non-GHG tailpipe pollutants.**
- Use of agricultural products as an input to fuel production (**diverting resources from food to fuel)**

Strategic Charging Infrastructure Development

Scenario:	DC	PDC
Total level 1:	54	126
Total level 2:	88	88
Total Hours of Charging	3,510	3,510
Total Range (km)	26,000	52,000
Charging Speed (km/hr)	7	15
% Fleet Needs Met	99%	100%
% Surplus over Fleet Need	72% (~15,000 daily adjusted utilization)	245% (~15,000 daily adjusted utilization)

While both DC (Daisy Chain) and PDC (prioritized dedicated Charging) ensure that vehicles can reliably be charged overnight, DC is recommended due to its efficiency, lower labour needs, and potential cost savings.

Financial Implications

Vehicle Class*	Short-Term Tech	MAC	Emissions Reductions	Long-Term Tech	MAC	Emissions Reductions
Light Duty	EV	High Net Savings	403			
Other Heavy Duty	Hybrid Range Extenders	High Net Savings	150	H2 ICE /HFCE	High Net Cost	530
Tandem Axle	Co-combustion retrofits	Low Net Cost	86	H2 ICE /HFCE	High Net Cost	530

Maintenance and Operational Adaptations

	Current State	Future Requirements
Space	Space restrictions and outdated facilities restrict integration of advanced EV and hydrogen technologies.	Expand maintenance facilities to include 12-16 bays for EVs, hydrogen, and traditional ICE.
Technicians	Insufficient technician capacity and there is a lack of upskilling and specialized training programs in new technologies.	Develop training programs focused on EV and hydrogen technologies to build a skilled workforce.
Tools and Software	Tools, protocols, and software tailored to EVs and hydrogen are not in place.	Integrate advanced telematics systems for improved fleet management. Establish robust safety protocols for high-voltage and hydrogen systems.

Fleet Scenario Analysis Overview

The scenario analysis is the cumulative result of all previous analyses, including attrition, right-sizing for model and type of vehicle, technology and model applicability, and pilots.

SCENARIO 1

Based on a strategy of adopting new technologies as soon as they become available without retiring existing assets before the end of their useful life.

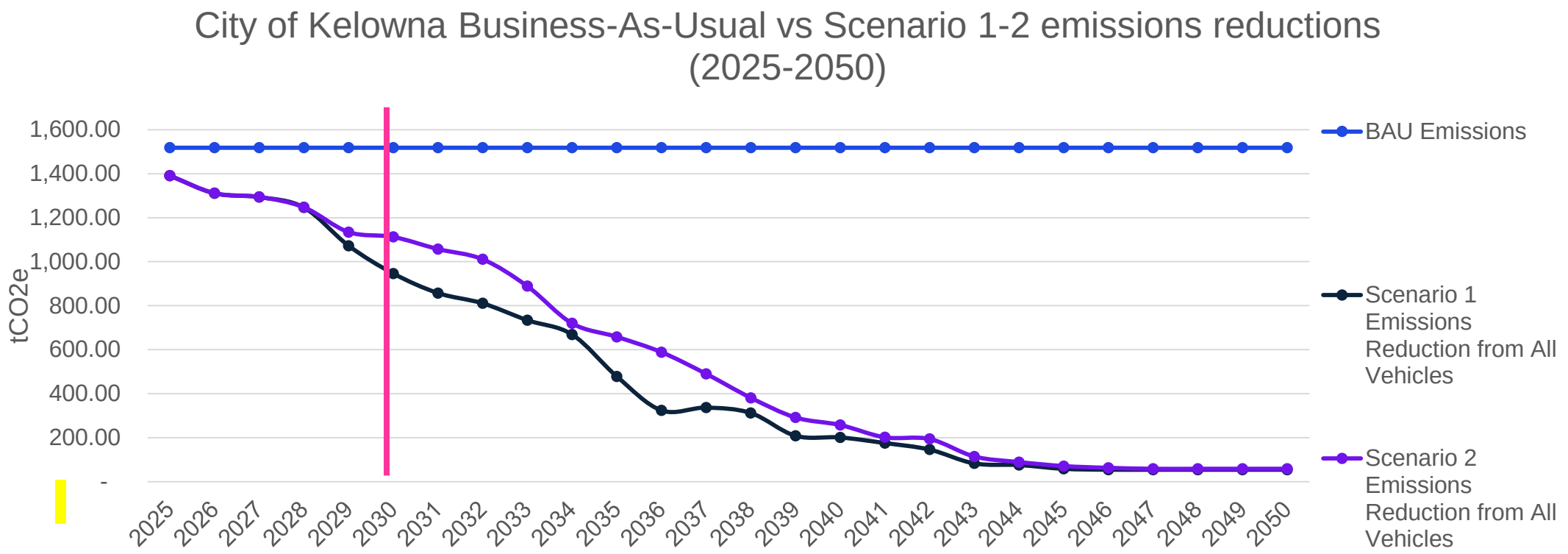
- 2029 X15 H_2 ICE availability
- 2033 B6.7 H_2 ICE availability

SCENARIO 2

Based on an assumed delay in the release of new technologies to market, resulting in extending the duration of temporary alternatives like co-combustion and hybrid range extenders.

- 2033 X15 H_2 ICE availability
- 2037 B6.7 H_2 ICE availability

Fleet Decarbonization Scenarios



Technology Adoption Strategy

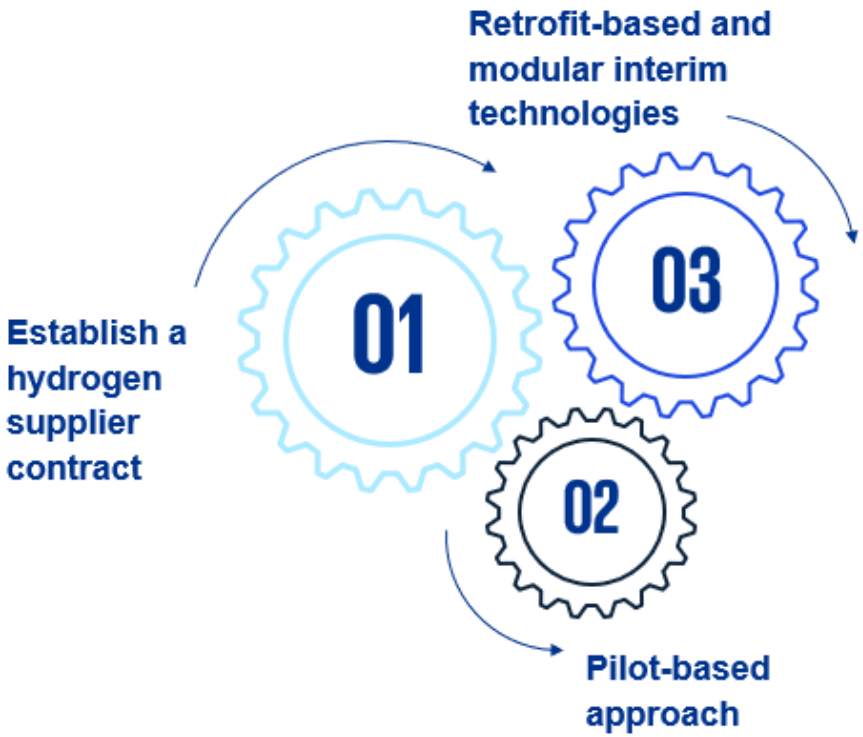
SCENARIO 1

Cost savings achieved by being an early adopter of new technologies, such as access to grants and improved likelihood of securing favorable supplier contracts with suppliers (or securing contracts altogether – supply may not be available in the future as demand increases).

SCENARIO 2

Cost savings from waiting to implement these technologies, such as reduced costs and risks.

Building a Strategy around Adaptability



Due to the uncertainty around the future costs and availability of low-carbon fleet technologies, **this fleet strategy is built around adaptability.**

Establishing a scalable hydrogen supplier partnership early-on allows for **fuel availability and demand flexibility**.

Demonstrate the benefits to the community at large early on and share our progress and challenges along the way while inviting others in the valley to join in

These are ultimately new technologies – **we have to pilot them and iterate**. A 1-year piloting period is built into the strategy for all new technologies. The interim solutions are also modular and based on retrofit, allowing them to be easily transferred between vehicles.

Conclusion

The Sustainable Fleet Strategy not only serves as a roadmap to a greener future but also establishes Kelowna as a role model for municipalities aiming to achieve ambitious climate goals.

01 **Optimization**

Fleet rightsizing exercise enables emissions reductions and allows City to demonstrate commitment to operational efficiency, climate change, and fiscal responsibility.

02 **First-Mover**

Kelowna is set up as a leader in emerging clean technologies, including co-combustion retrofits and H2 ICE, and can share its experiences with its neighbours and community partners.

03 **Aligned with Objectives**

The Sustainable Fleet Strategy is a roadmap to alignment with a 95% reduction in fleet emissions by 2050.

This report has been prepared by KPMG LLP (“KPMG”) for the internal use of the City of Kelowna (“Client”) pursuant to the terms of our engagement agreement with Client dated 2024-09-18 (the “Engagement Agreement”). This report is being provided to Client on a confidential basis and may not be disclosed to any other person or entity without the express written consent of KPMG and Client. KPMG neither warrants nor represents that the information contained in this report is accurate, complete, sufficient or appropriate for use by any person or entity other than Client or for any purpose other than set out in the Engagement Agreement. This report may not be relied upon by any person or entity other than Client, and KPMG hereby expressly disclaims any and all responsibility or liability to any person or entity other than Client in connection with their use of this report.

KPMG relied on information provided to us by the City. We have not audited or otherwise validated the data provided. The information provided to us by Client was determined to be sound to support the analysis. Notwithstanding that determination, it is possible that the findings contained could change based on new or more complete information. KPMG reserves the right (but will be under no obligation) to review all calculations or analysis included or referred to and, if we consider necessary, to review our conclusions in light of any information existing at the document date which becomes known to us after that date.

KPMG have indicated within this deliverable the sources of the information provided. We have not sought to independently verify those sources unless otherwise noted within the deliverable.

KPMG is under no obligation in any circumstance to update this deliverable, in either oral or written form, for events occurring after the deliverable has been issued in final form.

home.kpmg/ca

Recommendation

- As part of our ongoing commitment to sustainability and reducing corporate emissions, it is recommended that we pursue fleet decarbonization according to Scenario 1 as outlined in the Sustainable Fleet Strategy.

- This approach involves adopting new technologies as soon as they become available, without retiring existing assets before the end of their useful life and to pilot new technologies and gather data for informed decision making.

- By adopting Scenario 1, we position ourselves as leaders in emerging clean technologies and demonstrate our commitment to operational efficiency, climate change mitigation, and fiscal responsibility.

City of Kelowna

Questions/Discussion

Report to Council

Date:	June 9, 2025
To:	Council
From:	City Manager
Subject:	Food Waste Diversion
Department:	Utility Services

Recommendation:

THAT Council receive, for information, the report from the Utility Services Department, dated June 9, 2025, regarding adding food waste to the materials collected in the City of Kelowna's curbside organics collection program;

AND THAT Council not support the City of Kelowna's participation in the Regional District of Central Okanagan's proposed Curbside Food Waste Program;

AND THAT Council direct staff to ensure that food waste diversion from landfill is included in the 2030 update to the Regional Solid Waste Management Plan;

AND FURTHER THAT future food waste diversion include consideration of multi-family residential as well as commercial properties.

Purpose:

To consider adding food waste to the curbside organics collection program.

Council Priority Alignment:

Climate & Environment

Background:

The City provides curbside collection of garbage, recycling and yard waste to 43,000 single family and ground oriented multi-family properties within the city. This is a mandatory program for single family homes and duplexes, and an optional program for ground oriented multi-family properties if the contracted service vehicles can safely service the property. Recent bylaw amendments have been made to better accommodate new higher density, ground-oriented development (1-6 units per lot) into the curbside collection program. Approximately 500 units/year are added to the curbside collection program.

To maximize economies of scale and improve customer service across the region, Kelowna partners with the District of Lake Country, the City of West Kelowna, the District of Peachland and the Regional District of Central Okanagan (RDCO) in delivering a consistent program. RDCO staff administer the program and collection contracts on behalf of the partners. RDCO staff have led the evaluation and public engagement relating to the cost and feasibility of adding food waste to the curbside organics collection program. A summary Regional District timeline relating to curbside food waste collection is provided as Attachment 1.

Recent (2021 & 2024) Waste Characterization Studies found 40% of residential waste from the curbside collection program is compostable (food waste, soiled papers, and other organic materials). RDCO staff performed public engagement in 2023 and 2024. The results of the engagement showed 73% of respondents support a curbside food waste program with the top concerns identified as cost, wildlife and reduced frequency of garbage collection. When asked about costs, 49% of residents in the region (and 55% in Kelowna specifically) said they are willing to pay up to $66/year for a curbside food waste program.

A Food Waste Feasibility Study commissioned by the RDCO (2021) identified the best option to manage food waste for our curbside customers is to include it with current curbside yard waste carts for composting. The study estimated that 7,000 tonnes of curbside collected food waste per year could be diverted from the 32,000 tonnes of curbside collected garbage disposed of annually. Not all "compostable" waste would be appropriate for the curbside composting program and not all users would fully participate all year. The total waste stream landfilled is 150,000 tonnes per year.

The City diverts approximately 45,000 tonnes of organic materials that arrive at the landfill each year. This includes approximately 15,000 tonnes of curbside collected yard waste and 13,000 tonnes of commercial or self-hauled yard waste. Due to space constraints and costs for expected volumes and odour management facilities, co-mingled food and yard waste cannot be practically managed at the Glenmore Landfill compost site therefore this material would need to be hauled and processed elsewhere leaving 13,000 tonnes per year of yard waste continuing to be processed to create Glengrow compost.

Previous Council Resolution

Resolution	Date
THAT Council receives for information, the report from Utility Services dated September 9,2024, with respect to updates on the second phase of public consultation on the Regional District of Central Okanagan Food Waste Diversion initiative.	September 9, 2024

Discussion:

The changes being proposed to curbside collection programs across the region are summarized as follows:

1. Allow food waste to be added to the curbside yard waste collection cart;
2. Increase yard waste collection to a weekly, year-round service from the current every other week from March 01 to December 31;

3. Decrease garbage (black bin) collection from a weekly service to every other week. As food waste is removed from the garbage stream the quantity of garbage, along with much of the putrescible waste is reduced, allowing for a reduction in collection frequency.

In Kelowna, the curbside collection program is fully funded by user fees, not property taxes. Users see the fee as separate levy on their annual tax notice. In 2025 this user fee is $198.34 per dwelling unit.

To provide curbside food waste collection, a consultant estimated cost increase of approximately $63 per household would be required (based on 2025 costs). A new transfer station would be required for this change, with costs required for land, construction, hauling costs and composting co-mingled food and yard waste from the curbside bins covered by the increased user fee.

If the proposed service change maintains weekly garbage collection with the increased weekly co-mingled yard waste/food waste collection, there would be an additional cost of approximately $22 per year (in addition to the estimated $63 per household per year).

The cost estimate provided by the consultant for a new, simple, transfer station is estimated at $12 million (including $6 million for 3 acres of land). However, City staff believe a transfer station within Kelowna would cost more than this, since a facility located within our urban setting would need higher investment to enable indoor operations and sufficient odour-control.

Staff also note that 65% of residential growth in Kelowna is projected to be apartment style dwelling units that are not serviced by the curbside collection program, thereby reducing the future benefit relative to growth. If the City is going to support food waste diversion from the rapidly growing apartment population, then the transfer facilities will need to be either sized or expandable (with appropriate land base) to meet the needs of all residents. This will require a higher level of investment. Further expandability will be necessary if there is a desire to address food waste diversion from commercial waste generators such as schools, hotels, grocers, and restaurants.

Given the uncertainty of transfer station location, design and technical features, as well as the need for space to accommodate significant growth, Council should consider a cost range of $60 to $70 per household as a potential fee if costs are to be fully recovered from users.

In summary:

Providing food waste pickup would include the following benefits to the City:

1. Increases landfill lifespan.
2. Reduced overall Greenhouse Gas emissions.
3. Allows for growth in existing or new waste recovery and future leachate and water management operations in the space constrained landfill footprint.
4. Increased return of nutrients back into the natural environment.

However, this change in service would have the following challenges:

1. Decreased Glengrow availability to the local market as co-mingled yard and food waste would most cost effectively be composted elsewhere and used for mine reclamation.
2. Additional odours and wildlife attraction to curbside bins.
3. Services would only be available to residents of the curbside collection system.

4. Increased cost of $60-$70 (30-35%) per year to Kelowna curbside collection households.

Conclusion:

Staff recommend not proceeding with the expansion of the food waste diversion program at this time due to the estimated cost impacts, uncertainty in the implementation, and a preference to consider impacts to the program from commercial food waste and the growing percentage of multi-family units in the city from the infill housing programs.

Internal Circulation:
Finance
Communications

Considerations applicable to this report:

Financial/Budgetary Considerations:
No additional financial considerations

Communications Comments:
No additional comments.

Considerations not applicable to this report:
Legal/Statutory Authority:
Legal/Statutory Procedural Requirements:
Existing Policy:
Consultation and Engagement:

Submitted by: S. Hoekstra, Manager – Landfill and Composting Operations

Reviewed by: K. Van Vliet, Utility Services Department Manager

Approved for inclusion: M. Logan, General Manager, Infrastructure

Attachments:
Attachment 1 – Report to Kelowna – Curbside Food Waste May 2025
Attachment 2 – Food Waste Diversion Presentation 20250526

cc:
D. Nobel-Brandt, RDCO

Attachment 1 - Regional District Timeline Curbside Food Waste Program

Date	Milestone
April 8, 2021	2021 Waste Characterization study data presented to RDCO Governance and Services Committee identifying about half of curbside waste was identified as compostable organics.
February 2, 2023	The findings of the Food Waste Feasibility study were presented to the Regional Board on February 2, 2023. At that meeting, the Board resolved: **AND THAT** Staff initiate next steps to implement a regional curbside co-mingled food and yard waste collection program as outlined in the report from the Director of Engineering Services; **AND FURTHER THAT** the Board be presented with the consultation and engagement strategy for approval prior to engagement with residents and municipal Councils.
April 8, 2023	Consultation and Engagement framework presented to the Board, and at that meeting the Board resolved: **AND THAT** the Board supports the Food Waste Collection Consultation and Engagement Framework dated April 20, 2023.
August 2023	Regional Board updated 2023-2026 strategic priorities include implementation of a curbside organics collection program (Food Waste Program).
February 22, 2024	Phase 1 of public engagement - region wide survey results were presented to the Regional Board. In a statistically valid survey: • 73% of residents support a curbside food waste program • 83% would participate if such a program was implemented
Summer 2024	Phase 2 of public engagement took place, including Council presentations. • 4200 residents filled out the survey on Yoursay.rdco.com • 76% are in favour of a food waste collection program • 49% are willing to pay at least $66/year to support a curbside food waste program • The top concerns identified include scheduling (every other week garbage collection), wildlife and costs for the program
November 28, 2024	Results of engagement provided to Board, along with service recommendations to resolve concerns. Staff highlighted concerns that only half of the community appeared to support the expected program costs. At that meeting, the Regional Board resolved the following: **AND THAT** the Board directs staff to formally request participation in the Curbside Food Waste Program from all municipal councils, seeking confirmation by July 31, 2025 of their support and participation.
April 2025	Consultant provides updated costing for the proposed Food Waste program to aid in Council consideration of formal participation. Cost estimated to be $63 per household.
May & June 2025	RDCO staff present to all municipal councils.
Before July 31, 2025	Report back to the RDCO Board on the outcome of formal participation requests.

Food Waste Diversion

Utility Services | June 9, 2025

Agenda

- Overview
- RDCO Curbside Food Waste Collection Consultation - Phase 2
- City of Kelowna Context

RDCO Curbside Food Waste Collection

- Cynthia Coates,
  - Supervisor, Solid Waste Services
- Kit Caufield,
  - Manager of Environmental Services
- Travis Kendel,
  - Associate Director of Development and Engineering

Curbside Food Waste Collection

2025

1450 K.L.O. Road
Kelowna, BC, V1W 3Z4
rdco.com

Regional District of Central Okanagan

Agenda

- Purpose
- Background
- Proposed Service
- Public Engagement
- Updated Costing
- Next Steps

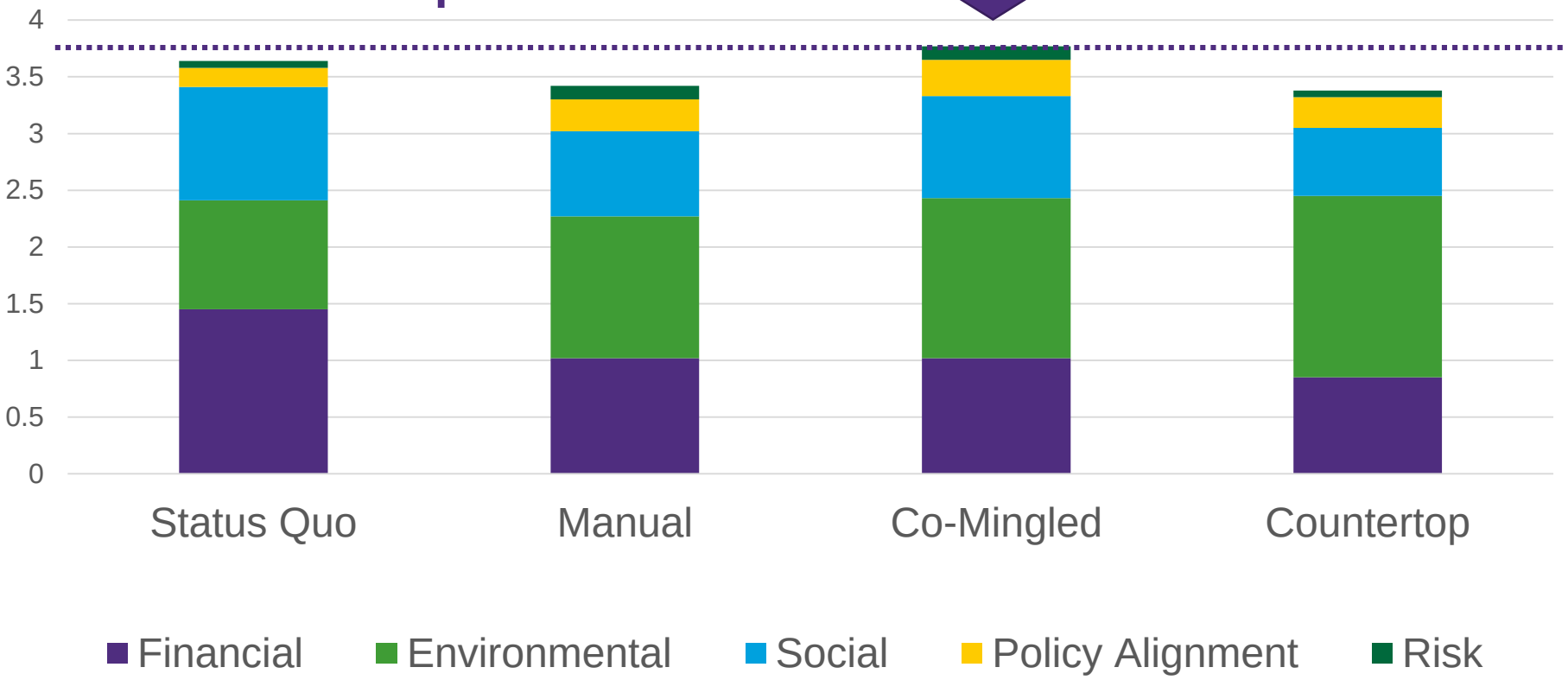
Purpose

- To provide Council with an update on costing for a curbside food waste program
- To request formal participation in the curbside food waste program

Background – Current Status

- 64,500 households receive curbside collection (garbage, yard waste, recyclables)
- Yard Waste is sent to Glenmore Landfill for composting (Glengrow)
- Over 40% of residential curbside waste is compostable (food waste, soiled paper)
- Strong public support for a curbside food waste program (73%)
- Best option for managing food waste is to include in existing yard waste carts

Feasibility Study – Collection Options



Service Model

- Add food waste to existing curbside yard waste carts
- Collect comingled organics weekly – year round
- Collect garbage bi-weekly
- Single transfer station

Public Engagement

Overall support

There is overall support of a food waste collection program (73%).

Cost concerns

About half of users (49%) are willing to pay up to $66/HH/Year

Nuisance of wildlife, rodents and odour

Residents have expressed a need to minimize conflict with not only wildlife and rodents. Odours are also a concern.

Scheduling concerns

Bi-weekly garbage collection is a concern, that could be managed through available programs (tag a bag // cart upsizing).

Costing Update

Nov 2024 Report:

$66 - $90 / household / year

Q1 2025 – 3rd Party Expert Consultant engaged to complete cost analysis update.

Findings: $63/household/year

Costing Update - Continued

- Full Regional Participation:
  - Service Cost: ~$63 / HH
  - ~50% of population willing to participate
- Without City of Kelowna
  - Economies of scale
  - Service Cost: >$150 / HH
  - Less than 13% of population willing to participate

Costing Update – Support @ $150/HH

		Total	Region						Age		
			Kelowna	West Kelowna	Lake Country	Peachland	Elect Area East (Joe Rich or Ellison)	Elect Area West (Trepanier, Brent Rd)	19-39	40-59	60+
Please indicate your level of support to add a weekly curbside food/ waste collection program for additional cost of $150/year.	Strongly opposed	16%	15%	19%	17%	14%	11%		14%	20%	14%
	Opposed	22%	24%	21%	20%	19%	19%	24%	19%	24%	22%
	Support	10%	13%	11%	8%	9%	7%		11%	14%	7%
	Strongly support	3%	3%	6%	1%				7%	3%	1%
	Not willing to pay more	37%	32%	31%	43%	50%	57%	76%	33%	33%	43%
	Strongly opposed to $50\year	2%	2%	2%	1%	1%			4%	1%	1%
	Strongly opposed to $100\year	10%	10%	11%	9%	7%	6%		12%	6%	12%
Total	Base:	**516**	**162**	**146**	**130**	**59**	**14**	**4**	**125**	**175**	**215**

Next Steps

May - June

Seeking formal participation from Councils

July 17, 2025

Present outcome to Regional Board

*Possible Next Steps**

Secure partner funding contributions

Procurement of land, contractors and capital

Service Launch

**dependent on municipal participation*

Thank you

City of Kelowna Context

- Current organics diversion in Kelowna is significant
  - Approx 45,000 tonnes of organics managed
    - Approx 15,000 tonnes from curbside collection
  - Approx 21,000 Biosolids composted
- *GlenGrow*™ and other non-putrescible organics are managed with minimal nuisance complaints
- Processing of mixed yard and food waste would not occur at the *Glengrow*™ compost operation

City of Kelowna Context

- Expansion of the residential organics diversion would not consider the Commercial and multi-family (apartment) segments
- Uncertainty around transfer station location and design
  - Location
  - Nuisance mitigation in urban areas
  - Total costs
  - Future expansion and scalability
- Expect fee increase to range from $60 to $70
  - Current User Fee is $198.34 (30 to 35% increase)

City of Kelowna Context

Food Waste Diversion

Benefits	Challenges / Gaps
Small increase in landfill lifetime	Lose approximately half of GlenGrow™ feedstocks resulting in less compost available for local market
Overall lower green house gas emissions	Potential for increased nuisances at curbside
Allows for growth in current recycling and water operations (existing and future)	This program would not address rapidly growing multi-family or commercial food waste
Increased return of nutrients to the natural environment	Increase in User fee estimated at $63 from current $198 (32%)
May defer some capital and equipment replacement projects	Lower landfill gas revenue with same capital and operating costs

City of Kelowna Context

- *Glengrow* Composting Impacts

Benefits	Challenges / Gaps
May defer some capital and equipment replacement projects	Lose approximately half of GlenGrow™ feedstocks resulting in less compost available for local market
Allow small increase in space for other small scale waste diversion opportunities	Smaller scale of operations - expect unit cost of Glengrow operation will increase

City of Kelowna Recommendation

- Staff recommend that
  - City of Kelowna not proceed at this time with the expansion of the organics program by including food waste
  - food waste diversion from landfill be included in the 2030 update to the Regional Solid Waste Management Plan
  - future versions of this work include consideration of commercial and multi-family (apartment) residential diversion

City of Kelowna

Questions?

For more information, visit **kelowna.ca**.

DRAFT RESOLUTION

Re: Community Task Force on Economic Prosperity

THAT Council endorses the establishment of a Community Task Force on Economic Prosperity with Terms of Reference as attached to the draft resolution dated June 9, 2025.

BACKGROUND:

The Community Task Force on Economic Prosperity will support the Council priority of the economy. Under the attached Terms of Reference, the Task Force will be charged with identifying community-driven opportunities to strengthen Kelowna's business, employment and tourism sectors, and providing corresponding recommendations to Council. The Task Force membership will be selected by the Mayor and will include a broad range of community representation as set out in the Terms of Reference. The Task Force will be in place for an initial 10-month term with the possibility of extension.

Date: June 9, 2025

Terms of Reference

COMMUNITY TASK FORCE ON ECONOMIC PROSPERITY

1. Introduction

The Community Task Force on Economic Prosperity is to provide recommendations to Council on community-driven opportunities to strengthen Kelowna's business, employment and tourism sectors, with the specific aims of growing the health and resiliency of current industries and exploring new business investment/partnership opportunities to enhance the economic viability of the region.

The Community Task Force on Economic Prosperity functions as a **Task Force** of Council.

2. Objectives

Task Force recommendations to Council will focus on the following objectives:

- Consider partnership opportunities to enhance tourism and tourism related business via the **creation** of hotels, conference and/or convention facilities;
- Engage the business community to improve understanding of industry **growth** opportunities;
- Conduct a gap analysis, with community input, on industry sector **gaps** that Kelowna may be able to fulfill;
- Identify civic **investment opportunities** that would support the health and wellbeing of local businesses.

3. Scope of Work

To achieve its purpose and objectives, the Community Task will:

- Review all relevant policy, programs and services within the City of Kelowna and those held by relevant partners and institutions (i.e. Chamber of Commerce, Economic Development Commission);
- Identify and consult key stakeholders;
- Report back to Council with a summary of what was learned through the community and stakeholder review process; and
- Develop actionable recommendations related to:
    - Specific steps forward based on learnings from the policy, program and services review in addition to the community and stakeholder consultation process;
    - Review the viability of a convention/conference center;
    - The support required to grow private business in Kelowna and stimulate employment;
    - Specific public investments that will stimulate economic growth;
    - Identify new business opportunities
        - private
        - multi-party partnership
        - hybrid
    - determine government policy challenges, related preventing economic growth

4. Guiding Principles

The Task Force should consider the following guiding principles when developing recommendations:

- Consider legislative context, authorities and limitations;
- Categorizing recommendations into short, medium and long-term in order to set expectations;
- Be aware of the City's overall financial plans and relative priority of any recommended investments;
- Leverage partnerships that may involve; community groups, resident or business association, non-profit sectors, businesses, post-secondary institutions and other potential partners in the community while acknowledging capacity, respective mandates, expertise, and level of involvement;
- Base recommendations on best practices, data and evidence-based models;
- Consider cost, sustainability, and ongoing operations.

Note: *limitations to the assistance of a business, noted in the Community Charter are acknowledged and will be respected.*

5. Membership, Appointment and Term

Members will be appointed by the Mayor and will include:

- 1 member with legal expertise
- 1 – 2 Subject Matter Experts
    - Convention facilities
    - Economic development
    - Real Estate
- 1 member at large
- 1 member from the technology sector
- 1 member from the financial sector
- 1 member from the retail/restaurant sector
- 1 member with partnership development expertise
- 1 Councillor
- Mayor

The Mayor will serve as the Task Force Chair.

The Community Task Force on Economic Prosperity will be in place for a 10-month timeframe with the ability to extend.

6. Reporting to Council

The Task Force will provide updates to Council on at the end of month 5 and month 10.

10. Support

Support will be provided as follows:

- Administrative support will be provided by the City of Kelowna;
- Meeting rooms will be provided at City Hall as needed;
- Miscellaneous expenses will be covered by the City of Kelowna; and
- Financial recommendations are subject to the regular City of Kelowna budgeting processes.

Endorsed by Council: June 9, 2025

CITY OF KELOWNA

Bylaw No. 12758

Amendment No. 3 to Revitalization Tax Exemption Program Bylaw No. 12561

The Municipal Council of the City of Kelowna, in open meeting assembled, enacts that the City of Kelowna Revitalization Tax Exemption Program Bylaw No. 12561 be amended as follows:

1. In the **Preamble**, by **deleting** "within Kelowna's Core Area and identified Village Centres;" after "To incentivize construction of new Purpose-Built Rental Housing" and **replacing** with ", Non-Profit Rental Housing and Co-Operative Housing within Kelowna's Permanent Growth Boundary;".

2. In **Section 4.1**, **Agreement,** by **deleting** ", substantially in the format of and with the content of Schedule "B"".

3. In **Section 4.1**, **Purpose-Built Rental Housing**, by **deleting** "meets an identified need for housing in the City and does not include buildings that are stratified, except those stratified buildings that are subject to operating agreements with the Provincial Rental Housing Corporation." and **replacing** with "does not include buildings that are stratified."

4. In **Section 4.1**, by **adding** the following new definitions in the appropriate locations:
   a) ""Co-operative Housing" means a project with five or more Dwelling Units that is owned by a legal association incorporated under the Cooperative Association Act."
   b) ""Non-Profit Rental Housing" means a project with five or more Dwelling Units that is owned and operated by a non-profit housing provider, local government, or the Provincial Rental Housing Corporation (BC Housing)."
   c) ""Land" has the same meaning as set out in the *Assessment Act*."
   d) ""Land Amount" means the municipal portion of property tax calculated in relation to the assessed value of the land on the property."

5. In **Section 5.1.5 ,** by **deleting** "in a Revitalization Area shown on Schedule "A"." and **replacing** with "within the Permanent Growth Boundary as shown on Map 3.1 of Kelowna 2040 - Official Community Plan Bylaw No. 12300, as amended from time to time."

6. In **Section 6.1.4,** by **deleting** "within the Core Area, Glenmore Valley Village Centre and University South Village Centre as shown in Schedule "A"" and **replacing** with "and Co-Operative Housing Projects".

7. In **Section 6.1,** by **adding** the following new section in its appropriate location:
   "6.1.5 For Non-Profit Rental Housing projects, 100% of the Revitalization Amount on the parcel which can be attributed to residential land uses and 100% of the Land Amount."

8. In **Section 7.3.5,** by **deleting** "(Schedule B)" after "Signed Agreement".

9. In **Section 8.1,** by **deleting** the section in its entirety and **replacing** with the following new section:

   "8.1 A Purpose-Built Rental Housing project which falls under Section 6.1.4 or Non-Profit Rental Housing which falls under Section 6.1.5, is required to have zoning for rental-only tenure for the property."

10. In **Section 8.3,** by **deleting** the section in its entirety.

11. In **Schedule B** attached to and forming part of Revitalization Tax Exemption Program Bylaw No. 12561, by **deleting** the Schedule in its entirety.

12. This bylaw may be cited as "Bylaw No. 12758, being Amendment No. 3 to Revitalization Tax Exemption Program Bylaw No. 12561."

13. This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first, second and third time by the Municipal Council this 26th day of May, 2025.

Adopted by the Municipal Council of the City of Kelowna this

_____

Mayor

_____

City Clerk

CITY OF KELOWNA

Bylaw No. 12778

Amendment No. 4 to Revitalization Tax Exemption Program Bylaw No. 12561

The Municipal Council of the City of Kelowna, in open meeting assembled, enacts that the City of Kelowna Revitalization Tax Exemption Program Bylaw No. 12561 be amended as follows:

1. In **Section 5 – Eligibility**, by **adding** the following new section 5.3:

   "5.3 Notwithstanding Section 5.2.4 above, a Project for which an Occupancy Permit has been issued in accordance with City of Kelowna Building Bylaw No. 7245 is eligible for a Tax Exemption provided that the Occupancy Permit was issued between February 1 and August 31, 2023. This transitional provision applies only to Projects for which a complete Tax Exemption application is received by the City prior to October 1, 2025."

2. In **Section 8 – Other Provisions**, by **adding** the following new section 8.5:

   "8.5 Notwithstanding Section 8.1 of this bylaw, a Project to which Sections 5.3 and 6.1.4 apply and for which an Occupancy Permit has been issued in accordance with City of Kelowna Building Bylaw No. 7245 between February 1 and August 31, 2023 is not required to have zoning for rental-only tenure, but is instead required to enter into a housing agreement with the City."

3. This bylaw may be cited as "Bylaw No. 12778, being Amendment No. 4 to Revitalization Tax Exemption Program Bylaw No. 12561."

4. This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first, second and third time by the Municipal Council this 26th day of May, 2025.

Adopted by the Municipal Council of the City of Kelowna this

_____
Mayor

_____
City Clerk