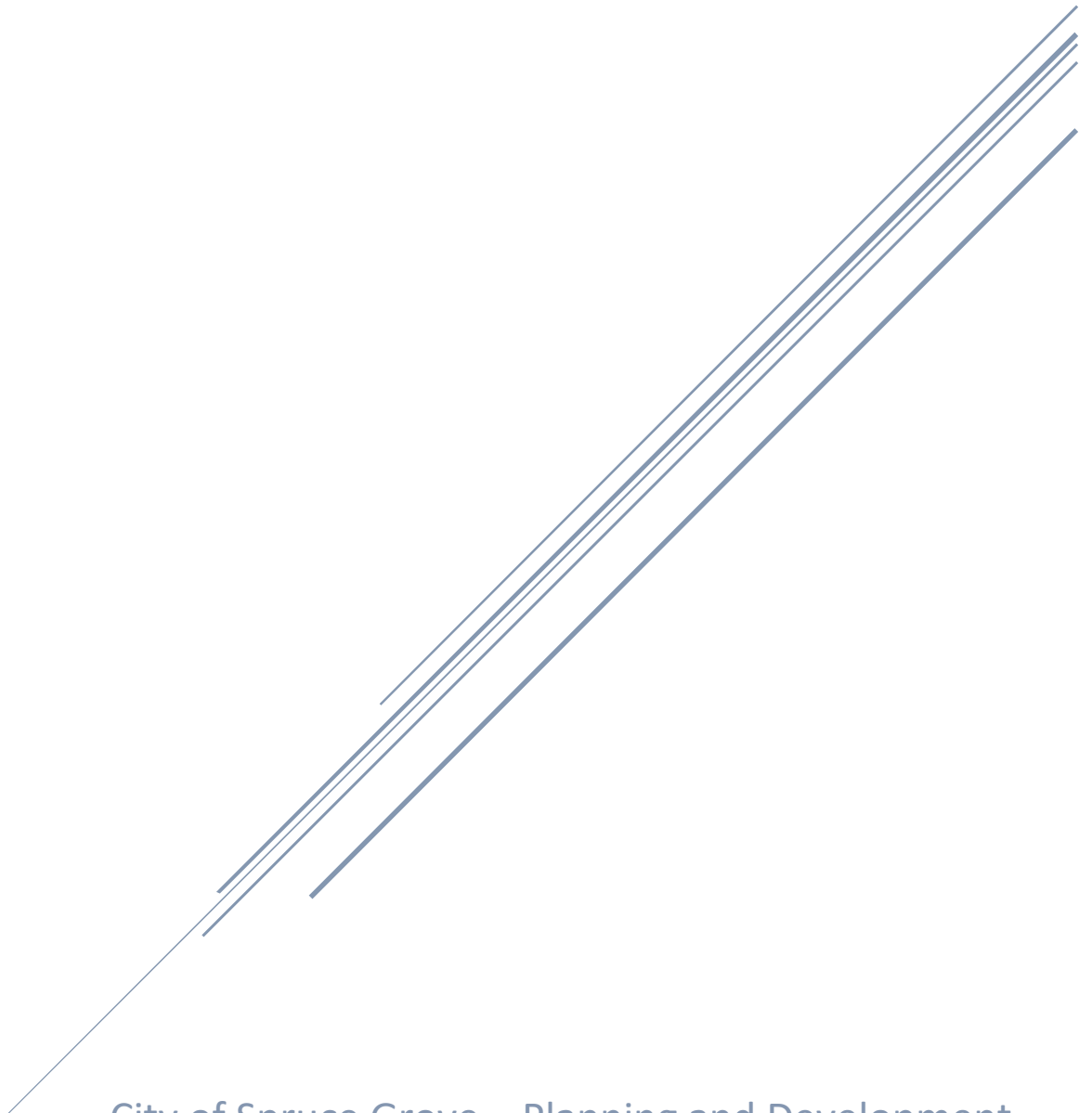


OPERATIONAL CONSIDERATIONS NARROW LOT HOUSING

Review of post development impacts and issues in developing neighbourhoods.



Executive Summary

This report is in response to a motion made by the Council on March 27, 2023, which deferred new redistricting applications for zero lot line home products in the Easton and Copperhaven neighborhoods until Administration could present a report on post-development issues and any other pertinent matters.

This report outlines operational issues encountered in both new and established neighborhoods, focusing on service delivery challenges and factors influencing the day-to-day quality of life for residents in these areas. Staff from Engineering, Public Works, Planning and Protective services were consulted to obtain information on neighbourhood complaints and logs.

The first section of the report delves into a spectrum of operational challenges affecting both emerging and established neighborhoods, highlighting significant impediments to effective service delivery and the overall well-being of community residents. The second half of the report examines the emerging fabric of new neighbourhoods that are densely populated with narrow lot housing forms. The last section examines issues that are common and unique to zero lot line developments.

Key observations pertaining to operational issues and post development impacts are as follows:

- **Solid Waste Collection:** A primary hurdle in the context of waste collection lies in the congestion caused by parked vehicles and improperly positioned garbage bins along roadways. These issues constrict the necessary operational space for service trucks and emergency vehicles, hampering smooth navigation.
- **Snow Clearance Removal and Storage:** Inadequate snow storage areas within alleys, combined with insufficient clearance efforts and minimal grade differentials between garages and alleys, culminate in the flooding of accessory structures like garages. Compounded by residential streets and alleys receiving last priority under the Snow Removal Policy exacerbates problems of accessibility in alleys during heavy snowfall, and drainage during the spring snow melt season affected accessory structures. Limited on-site snow storage also compels residents to relocate snow to public roadways.
- **On-Street Parking:** Increasing neighborhood density has amplified the competition for on-street parking due to the heightened concentration of residences within residential blocks. Contributing factors include residents repurposing garages for non-parking activities, tenant reliance on street parking, and diminished on-street parking capacity in subdivisions featuring front drive garages and post-development driveway expansions.
- **Lot Drainage:** As lot widths shrink, executing a drainage plan becomes intricate, posing challenges for builders to align with approved grading standards. Seasonal fluctuations, particularly the reduction of drainage space post-snowmelt, impact the drainage areas of the lots.
- **Densification Impact:** The densification of new neighborhoods accentuates concerns such as drainage complications, restricted on-street parking, and congestion, impacting residents from

diverse neighborhoods. Notably, this review does not link the operational issues exclusive to certain lot types or housing styles, instead highlighting the need to address these challenges across a spectrum of housing forms and neighbourhood design.

- **Narrow Lot Housing:** Emerging neighborhood maps underscore the ascendancy of narrow lot housing, encompassing single detached, semi-detached, zero side yard single detached and row housing, as the prevailing residential trend. Narrow lot housing emerges as the dominant housing style, adeptly accommodating varied housing preferences while adhering to density prerequisites mandated by the EMRB.
- **Zero Lot Line Homes:** Post-development impacts and concerns reported by residents of zero side yard homes include lack of on-street parking and congestion, drainage, landscaping and lot grading. This review finds that these issues are not strictly tied to zero side yard homes but can also be observed in other neighbourhoods which in the long term can be addressed through neighborhood design guidelines and development standards. Issues unique to zero side yard homes include shared easements and potential for disputes which can be addressed by improving home buyer education.

Recommendations:

To address the operational issues identified in this report, Administration is recommending a series of solutions which span across contract management, policy and regulatory changes, as well as long term view to introducing neighbourhood design guidelines to support the healthy growth of new neighbourhoods. The recommendations are categorized for short-, medium- and long-term implementation as shown in the table below.

Short Term	Medium Term	Long Term
<i>Solid Waste Collection</i>		
<p>Revising Service Contracts: Evaluating and revising service contracts to prioritize and increasing the use of lanes for waste collection in neighborhoods where lanes are available.</p>	<p>Utilizing Smaller Service Vehicles: Incorporating smaller service vehicles that are specifically designed to navigate the lanes in older subdivisions.</p>	<p>Increasing Lane Availability: In future neighborhood subdivisions, there can be a focus on including a higher percentage of lanes. This can facilitate easier waste collection, as service vehicles can navigate the lanes more effectively, reducing the need for collection from the street.</p>
<p>Revise Construction Standard for alleys: Recent revisions to the Engineering Standards have revised the construction</p>	<p>Upgrade alleys in older neighborhoods: As established neighborhoods undergo infrastructure rehabilitation, upgrade the construction of</p>	

<p>standard for new lanes which can accommodate a range of service vehicles. Newer lanes built in the last two years are being designed to the new standard. (underway)</p>	<p>older alley to the new construction standard which can accommodate a range of service vehicles.</p>	
<p>Resident Education: Implementing educational initiatives to raise awareness among residents about the proper placement of garbage bins. Clear guidelines and instructions can be provided on how to position bins in a way that does not obstruct the road or impede traffic flow (underway)</p>	<p>Enforcement: Enforcing regulations and penalties for residents who consistently place their garbage bins incorrectly or obstruct the road with parked cars.</p>	
<p><i>Snow Removal and Storage</i></p>		
<p>Review Snow Clearing Policy: Review the snow clearing priority list and increased the priority of alleys to the same standard as residential streets where services such as garbage collection are provided.</p>	<p>Review Development Standards: Review and consider widening the development standard for alleys to ensure sufficient snow storage space.</p>	
<p><i>On-Street Parking</i></p>		
<p>Enforcement: Enforce improper use of on-street parking.</p>	<p>Grouping of Driveways: Introduce land use bylaw regulation for front drive subdivisions to consistently ensure shared on street parking.</p>	<p>Enhanced Parking Management: Implementing more efficient parking management strategies, such as permit systems, time limits, or designated parking zones, can help regulate parking and ensure fair access for residents and visitors.</p>
<p>Community Education and Awareness: Educating residents about parking regulations. Increased awareness can lead to more considerate parking habits and better utilization of available spaces</p>	<p>On-site parking: Continue to ensure sufficient on-site parking provisions to meet the parking demand.</p>	<p>Encouraging Alternative Transportation: Promoting and supporting alternative modes of transportation, such as walking, cycling, or carpooling, can reduce the reliance on on-street parking. Creating infrastructure like bike lanes, pedestrian-friendly paths,</p>

		and carpooling programs can incentivize residents to choose these alternatives.
Lot Drainage		
Roof Leaders: Connecting roof leaders directly to storm sewer pipes to capture additional runoff during spring snow melt season.	Homeowner Education: Educate residents regarding the maintenance of drainage easements.	
Ensure Housing Mix and Diversity		
Zero Lot Line Homes: To ensure emerging housing forms such as zero side yard home don't become the dominant form of single detached housing, consider policies that limit the housing type to a percentage of the overall housing mix. This approach can allow the developers to introduce innovative housing form without impacting the overall balance of housing products.	Neighbourhood Concepts: Consider introducing a requirement for Neighborhood Concepts that promote the integration of various housing types, such as single-family homes, townhouses, apartments, and accessory dwelling units (Secondary Suites). This diversity can accommodate different family sizes, incomes, and lifestyles, fostering a more inclusive and vibrant community.	
Neighbourhood Design		
Development Standards: Review Development Standards to provide guidance on the use of residential local street cross sections with "Separate Sidewalk" to improve safety, snow storage, improved visibility, reduced clutter and active transportation options.		Neighbourhood Design Guidelines: In the long term consider introduction neighbourhood design guidelines or neighbourhood level planning requirements to shape the design development of neighbourhoods.

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1. Introduction

This report aims to document and analyze the operational issues arising after the development of new housing forms and neighborhoods in Spruce Grove, with a specific focus on drainage, garbage collection, parking congestion, and other relevant factors.

The report is in response to a motion made by the Council on March 27, 2023, which deferred new redistricting applications for zero lot line home products in the Easton and Copperhaven neighborhoods until Administration could present a report on post-development issues and any other pertinent matters.

While the Council's motion specifically pertained to zero lot line homes, Administration has expanded the scope of this investigation to encompass the neighborhood scale. This broader approach seeks to determine whether operational issues are exclusive to a single housing form, such as zero lot line homes, or if they affect various compact housing forms, which comprise the majority of new housing developments.

The report is organized as follows:

- **Post-development Operational Issues:** An overview and examination of the operational challenges encountered after the completion of new housing developments.
- **Commonalities between Zero Lot Line Homes and Narrow Lot Housing:** Identifying similarities and shared issues between zero lot line homes and narrow lot housing, providing insights into the broader range of compact housing forms present in new neighborhoods.
- **Narrow Lot Housing Spectrum:** A comprehensive analysis of various narrow lot housing options, considering their impact on operational issues and overall neighborhood dynamics.
- **Detailed Analysis of Operational Issues and Potential Solutions:** A thorough examination of specific operational issues, accompanied by potential solutions to mitigate or resolve them effectively.
- **Recommendations for Consideration:** Proposed recommendations for consideration by the Council and relevant stakeholders to address the identified operational issues and enhance the overall functionality of new housing forms and neighborhoods.

This report aims to provide valuable insights into post-development operational challenges and offer recommendations to facilitate informed decision-making regarding future housing developments in Spruce Grove.

2. Post-Development Operational Issues and Impacts

Any type of development in the city entails associated operational responsibilities. In this section, we will examine the operational services provided by the city and document emerging issues in new neighborhoods and subdivisions that feature narrow lot housing. The following areas will be discussed:

- Solid Waste Collection
- Snow Clearance, Removal, and Storage
- On-Street Parking and Congestion
- On-site Lot Drainage
- Emergency Access

By addressing these operational services and documenting emerging issues, we aim to enhance the functionality and livability of new neighborhoods and subdivisions.

Staff from engineering and public works were consulted to generate the following list of operational issues and their impacts on service delivery. During the investigation and documentation, most issues were tied to newer subdivisions that featured a range of compact housing forms on narrow lots.

2.1 Solid Waste Collection

The City of Spruce Grove has a comprehensive waste collection program that includes residential waste collection, an Eco Centre and several seasonal events, including Large Item Pick Up, Free-cycle, Shred-4-Free, and E-roundup.

For this review, we are focusing on residential waste collection which takes place every week and includes collection of Black Carts – Garbage, Green Carts – Organics (April to November) and Blue Bag – Recyclables.

Depending on the neighbourhood and contract arrangement with service provide, solid waste collection either takes place from the streets in front of the homes or from the lanes behind the homes.

Issue: The primary challenge impeding garbage collection is street congestion caused by parked cars and residents placing garbage bins incorrectly in the road carriageway. This reduces the available operational road width required for service trucks and emergency vehicles to navigate through smoothly.

Impact: Challenges in collecting solid waste results in longer timelines, increase cost, hazard to smooth traffic flow and resident dissatisfaction. The street congestion predominantly impacts those residential subdivisions where garbage is being collected from the street where it overlaps with on-street parking.

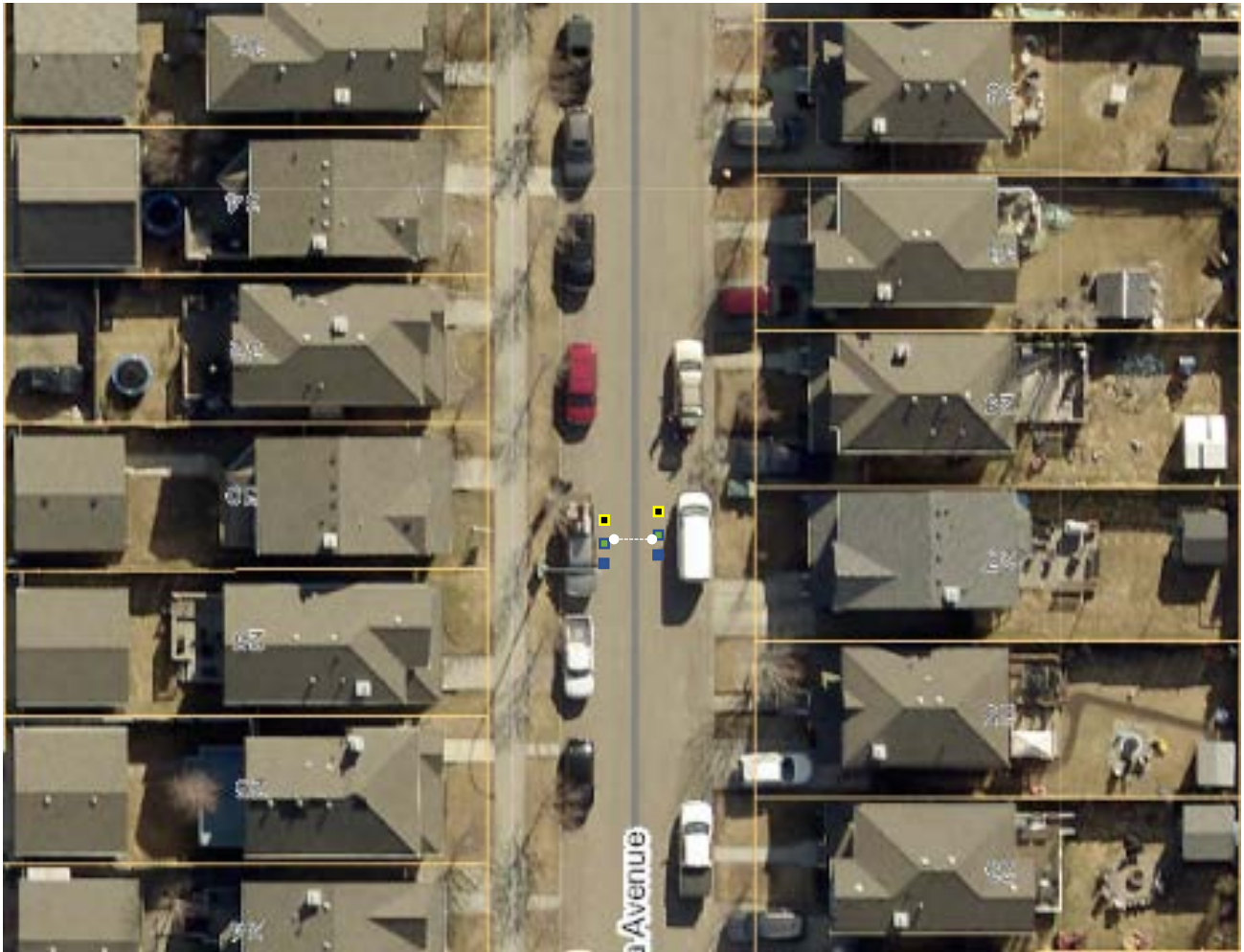


Figure 1: Illustration showing impact of street congestion on Solid Waste Collection

Potential Solutions: There are several contributing factors such as improper placement of bins, lack of space on streets to place bins properly, servicing contracts not optimized to use lanes for servicing where available, and older construction standard for lanes in older subdivisions which limits the ability to use heavy trucks for servicing lanes.

Addressing the challenges is crucial for improving the efficiency of waste collection services, ensuring smoother traffic flow, and enhancing resident satisfaction. Potential solutions for improving solid waste collections include are:

1. **Revising Service Contracts:** Evaluating and revising service contracts to prioritize and increasing the use of lanes for waste collection in neighborhoods where lanes are available. This can help alleviate street congestion and allow for more efficient waste collection.

2. **Utilizing Smaller Service Vehicles:** Incorporating smaller service vehicles that are specifically designed to navigate the lanes in older subdivisions. These vehicles can access narrower spaces, ensuring efficient collection without causing damage to the infrastructure.
3. **Increasing Lane Availability and Construction Standard:** In future neighborhood subdivisions, there can be a focus on including a higher percentage of lanes. This can facilitate easier waste collection, as service vehicles can navigate the lanes more effectively, reducing the need for collection from the street.

Recent revisions to the Engineering Standards have revised the construction standard for new lanes which can accommodate a range of service vehicles. Newer lanes built in the last two years are being designed to the new standard.

4. **Resident Education:** Implementing educational initiatives to raise awareness among residents about the proper placement of garbage bins. Clear guidelines and instructions can be provided on how to position bins in a way that does not obstruct the road or impede traffic flow. This can help minimize congestion and ensure smoother waste collection operations.



5. **Enforcement:** Enforcing regulations and penalties for residents who consistently place their garbage bins incorrectly or obstruct the road with parked cars. Strict enforcement can serve as a deterrent and encourage compliance with waste management guidelines, leading to improved collection efficiency.

By implementing these solutions, it is possible to enhance solid waste collection services, reduce street congestion, and improve the overall effectiveness of waste management in the City of Spruce Grove.

2.2 Snow Clearance Removal and Storage

Residential street snow removal typically occurs when snow accumulates to a minimum of 22 centimeters and other higher priority roads have been cleared to an acceptable condition.

The City's snow and ice control program prioritizes streets as follows:

- Highway 16A
- Arterial roads (ex: Grove Drive, Century Road, Calahoo Road, Jennifer Heil Way)
- Emergency access ways - south end of King Street
- Snow routes and collector roads (McLeod Avenue and Diamond Avenue)
- City Centre area
- Commercial and industrial (ex: South Avenue)
- Residential streets
- Alleys

Under the priority list, alleys are often given last priority compared to other roads, resulting in instances where they may not be cleared due to the higher precedence given to high-priority roads.

Issue: A lack of sufficient snow storage space along alleys, when combined with a lack of snow clearance, and minimal grade differences between garages and alleys results in flooding of accessory structures such as garages. The lack of on-site snow storage space leads residents to place snow on public roadways.



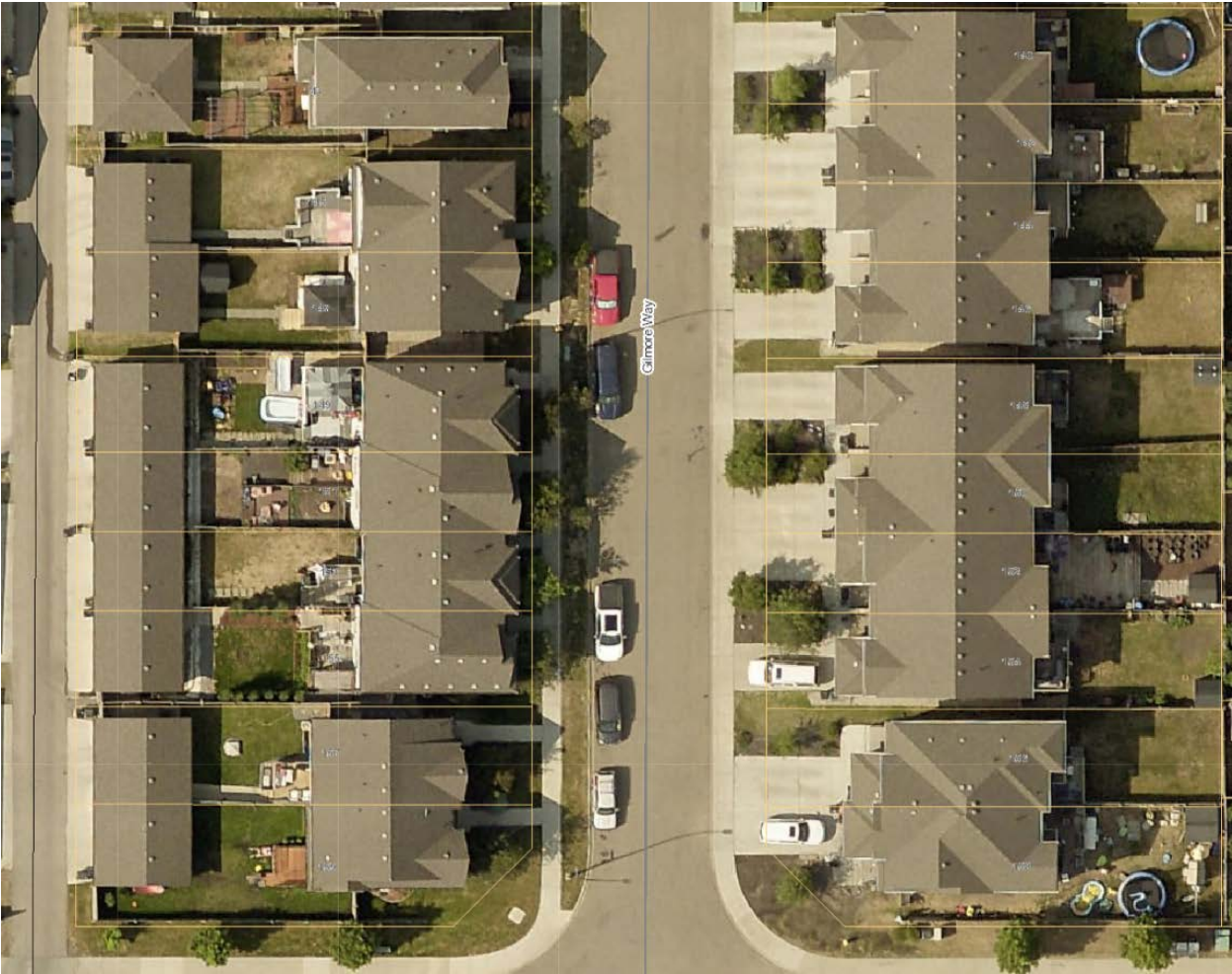
Impact: Lack of snow clearing from alleys can have unintended consequences such as rendering them inaccessible, causing flooded garages, and leading to drainage problems during snow melt. If alleys are not cleared regularly, this can also be an impediment to delivering services such as solid waste collection.

Potential Solution: Review the snow clearing priority list and increased the priority of alleys to the same standard as residential streets where services such as garbage collection are provided. Review and consider widening the development standard for alleys to ensure sufficient snow storage space.

2.3 On-Street Parking

Most residential streets in Spruce Grove are designed to accommodate on-street parking, ensuring space for visitors, service providers, and other parking requirements. This design approach aims to meet the diverse parking needs of residents and support various activities within the community.

Issue: As neighbourhoods become dense, there are more homes being located within residential blocks and there is increased competition for on-street parking. There are several contributing factors such as residents using garages for non-parking related activities, renters dependence on on-street parking and a reduction of on-street parking capacity where subdivisions feature lots with front drive garages and post development front driveway widening applications. In some cases, where there is only parking on one side of the street, there may be two or three households competing for one street parking stall.



Impact: Residents are experiencing increased competition for on-street parking stall resulting in resident dissatisfaction with on-street parking provisions.

Potential Solution: With the increased densities of new neighborhoods and the growing competition for on-street parking, it is likely that opportunities for residents and visitors seeking on-street parking will be reduced. To address this issue, potential solutions include:

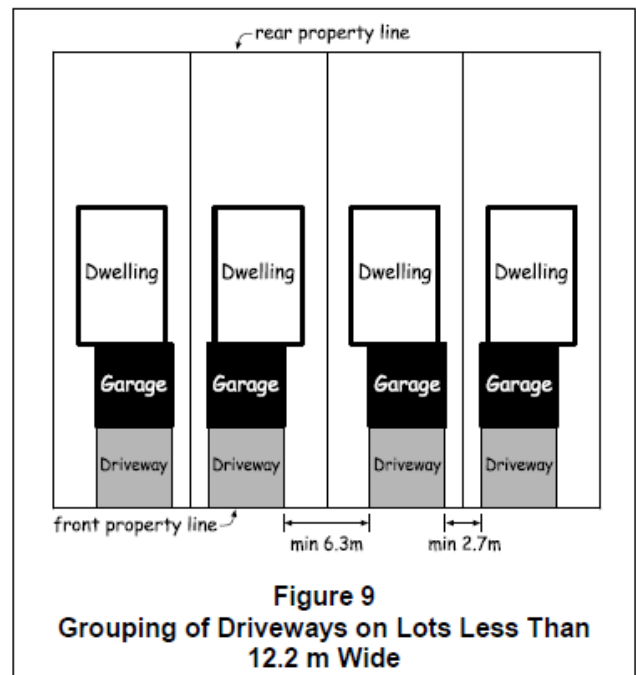
- **On-site Parking:** Ensuring sufficient on-site parking provisions to meet the parking demand.
- **Community Education and Awareness:** Educating residents about parking regulations, alternative transportation options, and the importance of shared parking resources can foster a more conscious parking culture. Increased awareness can lead to more considerate parking habits and better utilization of available spaces.
- **Enhanced Parking Management:** Implementing more efficient parking management strategies, such as permit systems, time limits, or designated parking zones, can help regulate parking and ensure fair access for residents and visitors.
- **Encouraging Alternative Transportation:** Promoting and supporting alternative modes of transportation, such as walking, cycling, or carpooling, can reduce the reliance on on-street parking. Creating infrastructure like bike lanes, pedestrian-friendly paths, and carpooling programs can incentivize residents to choose these alternatives.
- **Enforcement:** Enforce improper use of on-street parking.
- **Grouping of Driveways:** Introduce regulation for front drive subdivisions to consistently ensure shared on street parking. The following is an example of such regulation from St. Albert’s Land Use Bylaw that regulates driveway grouping and width to ensure on-street parking between stalls:

“8.21. Lots less than 12.2 m wide (BL2/2018)

For all dwelling types on lots less than 12.2 m wide, including single-detached houses, dwellings, duplex; dwellings, semi-detached; and street-oriented townhousing, the following regulations apply:

(a) Garages and driveways shall be grouped to maximize on-street parking with a minimum of one on-street parking space to every two lots (Figure 9).

(b) Driveways shall not exceed 5.5 m in width at the front property line when located on a lot less than 11.5 m in width.



2.4 Lot Drainage

When new development goes into construction, the City manages the drainage system through a detailed review at the subdivision and development agreement stage and then through a review of the lot grading at the development permit stage. In some instances, final inspection of grading occurs before the surface landscaping has taken place. With increased densities and lots becoming compact many residents are facing drainage related challenges.

Issue: With lot widths decreasing, there is limited space available for executing a drainage plan, making it difficult for builders to match the approved grades. The drainage area of the lots is affected seasonally, reducing in size once the snow melts.

Impact: The increasing number of complaints has led to more inspections being required to ensure that builders adhere to grading plans and proper downspout placement. As lots become narrower, the percentage of impermeable surfaces increases. Consequently, there is a greater amount of stormwater to manage since the area available for absorbing runoff and meltwater is limited or decreasing.

Potential Solution: With the lot sizes and dimension decreasing a limited amount of drainage and backup in the spring time is to be expected in a winter climate. Potential solutions that can address drainage issues are:

- Connecting roof leaders directly to storm sewer pipes to capture additional runoff, and
- Educate residents regarding the maintenance of drainage easements.

***Note:** In the Greenbury area, there have been numerous issues with sump pump discharge over the winter, specifically concerning the discharge over sidewalks. The original plan was to avoid directing the discharge over sidewalks and instead discharge it in the alley. However, builders chose to place the discharge where it was most convenient. The problem in Greenbury was caused by incorrect information in Geotech studies about water tables. The water tables are significantly higher during the winter. Proper placement of the sump pump could have resolved the issue.

2.5 Emergency Access

Issue: In the context of operational service delivery to neighbourhoods, the main issue for Emergency access stems from reduced operational road width on garbage collection days due to the improper placement of garbage bins on the road carriageway.

Potential Solutions: Potential solutions include revising solid waste collection contracts to optimize use of lanes where available, parking restriction on garbage collection days and enforcement of improper placement of bins can ensure more room for emergency vehicles.

2.6 Neighbourhood Complaints

City of Spruce Grove comments neighbourhood complaints reporting since 2020. In reviewing the complaint logs, we note the City is receiving numerous complaints regarding on-street parking, snow storage as well as garbage collection. However, due to the high level nature of reporting, there isn't sufficient detailed data to associate the complaints with operational issues at this point.

We also investigated whether the operational issues are tied to a particular neighborhood, subdivision or building type. In our observation, the operational issues cited in this section are being experienced across many, especially emerging neighbourhoods.

Certain subdivision designs, such as residential subdivisions that feature front driveways are likely to reduce the prevalence of on-street parking as well as offer no option for garbage collection from the alleys, as a result resident may experience higher impact and perception of congestion in those areas.

We did not find a conclusive link between operational issues and specific built forms. In our observation as neighbourhoods and subdivisions become dense, residents are likely to experience higher level of impact.

2.7 Summation

Based on the review, this section has identified several key operational issues and potential solutions.

Key observations are as follows:

- Emerging neighbourhoods are experiencing a higher level of post development impact on solid waste collection, snow storage and clearance, on-street parking, and lot drainage. A number of potential solutions have been identified for the each of the operational categories.
- It is worth noting that the review found operational issues are not tied to particular housing built forms, but rather associated with emerging subdivisions which are ever more compact and feature higher densities which are necessitated by affordability as well as density targets.
- These issues also suggest the need for long term consideration of implementing neighbourhood design guidelines and a review of development standards and policies which can support streamlining City's operational service delivery taking into context the emerging dense fabric and higher impact nature of new neighborhoods.

In the subsequent sections, we examine the composition of new neighborhoods, with a specific focus on narrow lot housing forms. The emerging compact housing forms are driven by need for diversity, affordability of homes and the implementation of higher density targets at the regional level by EMRB which began with the Capital Region Plan coming into effect in 2009.

3. Narrow Lot Housing and Neighbourhood Composition

3.1 Narrow Lot Housing

Spruce Grove began approving narrow lot housing subdivisions in the early 2000s, which included lots for single detached and semi-detached homes that were less than 10m wide. Spruce Village neighbourhood was one of the first neighbourhood to pilot narrow lot housing subdivision. There are other examples of zero lot line housing in the Westgrove neighbourhood built in the 80s, under direct control districts which have now been consolidated under the zoning for established neighbourhoods.

It is important to note that Edmonton metro region adopted its first Capital Region Growth Plan in 2009, administered by the then Capital Region Board. The Growth Plan established the concept of minimum density targets for its 24 member municipalities. In 2017, Edmonton Metropolitan Region Board (EMRB) adopted the new Edmonton Metropolitan Region Growth Plan (Growth Plan), which further increased the density targets for its member municipalities. Spruce Grove, which is member of the EMRB has a density target of 35 units per net hectare for new residential communities.

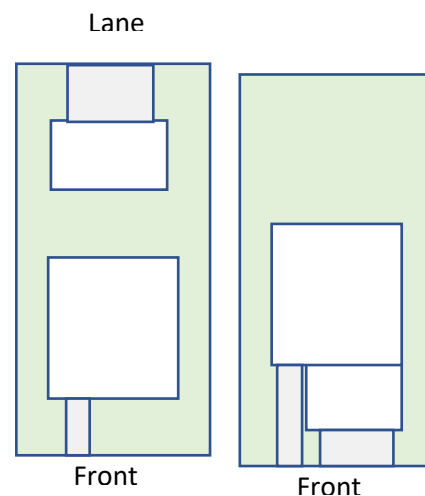
City's current Land Use Bylaw C-824-12 was adopted in 2012 and featured two key districts; R1 – Mixed Low to Medium Density Residential; and R1- Mixed Medium to High Density Residential District, which were conceived to offer flexibility for accommodating a variety of housing forms on a residential street while meeting the regional density targets. Both districts currently permit a variety of narrow lot housing forms including single detached, semi-detached, zero lot line single detached and row housing.

This section aims to examine the composition of new and emerging neighbourhoods to better understand to what extent new neighbourhoods are developing compact narrow lot housing, which is partly a result of density targets and partly a result of developers trying to bring housing products that are affordable for buyers that typically want to live in Spruce Grove.

The following section provides information on the minimum development standards for each housing form, currently permitted through the land use bylaw.

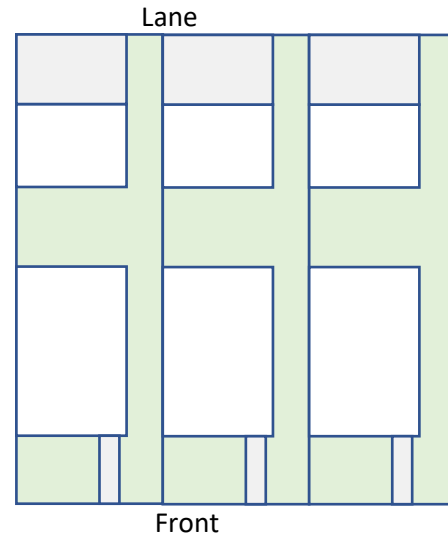
Housing Type: Narrow Lot Single Detached

Lot widths	9 – 10 m Min 8.5m R1 District
Typical Building Pocket	22 -24 feet
Features	Single-detached house Potential secondary suite, garage suite or garden suite Front drive or lane



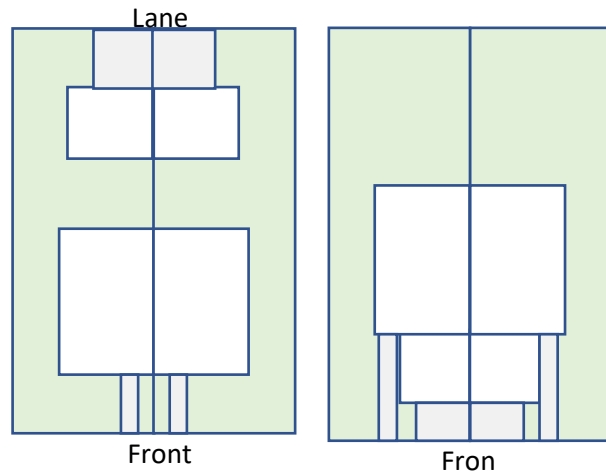
Housing Type: Single Detached – Zero Lot Line

Lot widths	7.5 m (min) GPL District
Typical Building Pocket	20 feet
Features	Single-detached house Potential secondary suite and/or garage suite? Front drive or lane
Year introduced in Spruce Grove	2017



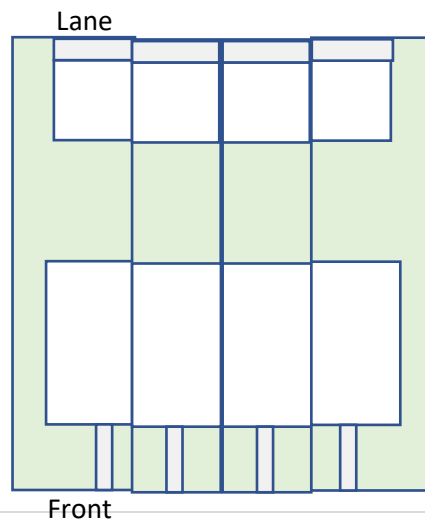
Housing Type: Narrow Lot Semi-Detached

Lot widths	7.5m wide R1 / R2 District
Typical Building Pocket	20 -22 feet
Features	Semi-detached house Front drive or lane



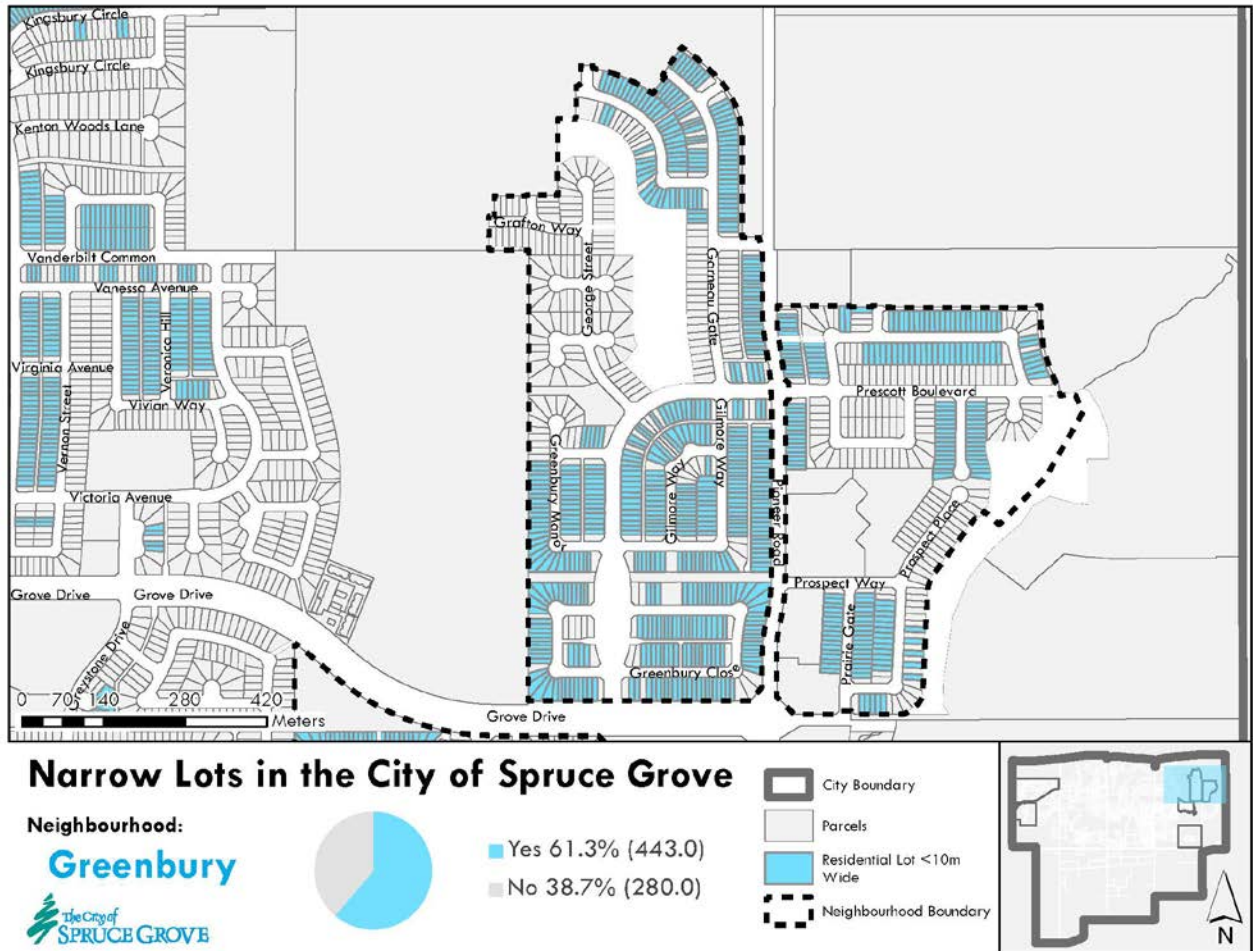
Housing Type: Row Housing (Townhomes)

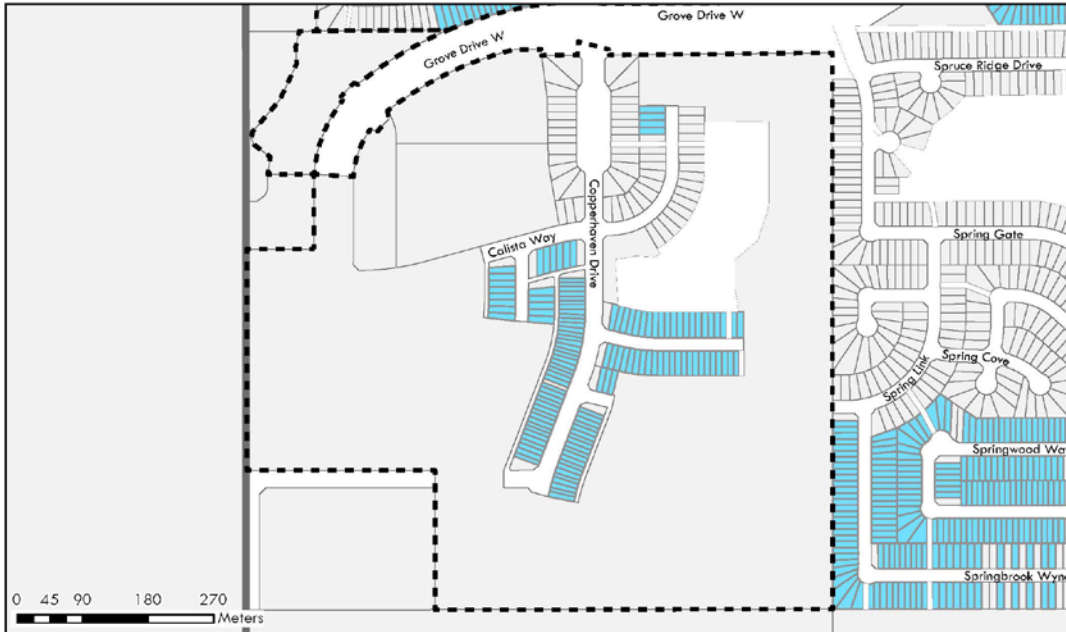
Lot widths	4.2 – 5.5 m
Typical Building Pocket	14 - 18 feet R1 / R2 District
Features	Row House Front drive or lane
Year introduced in Spruce Grove	
Number of lots in Spruce Grove	



To better understand the fabric of new neighbourhoods, we developed a series of maps identifying the location of narrow lots within some of the more active and developing neighbourhoods of Greenbury, Copperhaven, Easton, Harvest Ridge, Tonewood and Prescott. We mapped the location of all lots that were less than 10m in width, as the narrow lot housing category. Narrow lot homes include Single Detached, Semi-Detached and Row housing.

Residential lots, that are less than 10 m in width, and feature front driveways are also likely to impact on-street parking and present design challenges that limit the capacity of on-street parking to less than one stall per home.





Narrow Lots in the City of Spruce Grove

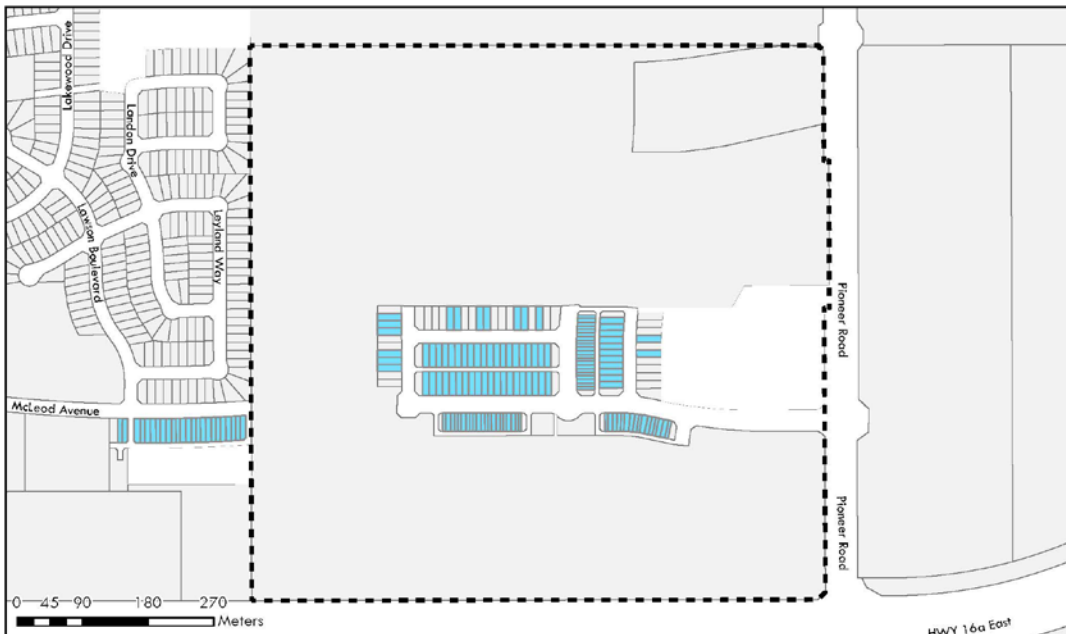
Neighbourhood:

Copperhaven



■ Yes 60.1% (128.0)
■ No 39.9% (85.0)

- ▭ City Boundary
- ▭ Parcels
- ▭ Residential Lot <10m Wide
- - - Neighbourhood Boundary



Narrow Lots in the City of Spruce Grove

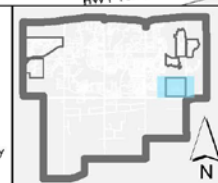
Neighbourhood:

Easton



■ Yes 80.4% (131.0)
■ No 19.6% (32.0)

- ▭ City Boundary
- ▭ Parcels
- ▭ Residential Lot <10m Wide
- - - Neighbourhood Boundary





Narrow Lots in the City of Spruce Grove

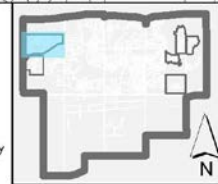
Neighbourhood:

Harvest Ridge



No 66.9% (883.0)
 Yes 33.1% (436.0)

- City Boundary
- Parcels
- Residential Lot <10m Wide
- Neighbourhood Boundary



Narrow Lots in the City of Spruce Grove

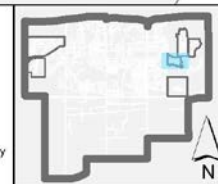
Neighbourhood:

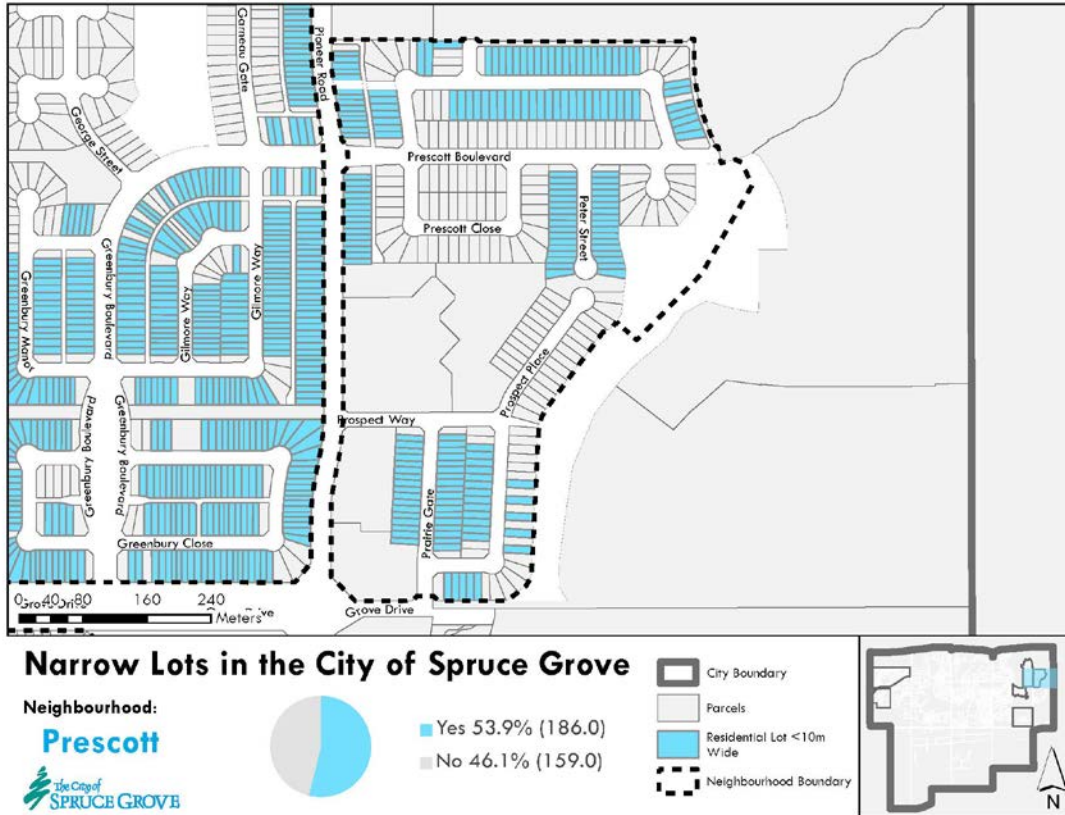
Tonewood



Yes 65.5% (203.0)
 No 34.5% (107.0)

- City Boundary
- Parcels
- Residential Lot <10m Wide
- Neighbourhood Boundary





As evidenced by the maps, the main observation is that on average narrow lots comprise 60 to 70 percent of residential lots in new neighbourhoods and this number continues to evolve based on market conditions.

This suggests that most new neighbourhoods are built with higher density attributed to affordability and regional density targets and this densification is likely the driving force behind residents experiencing a higher level of congestion and post development impact. The trend of dense neighbourhoods can be observed across the Edmonton metro region and the emerging issues are also being experienced by other regional municipalities to varying degrees.

3.2 Summation

Based on the analysis of the neighborhood maps, and taking into consideration the impacts of density targets implemented by the regional growth plans since 2009, we conclude with the following key observations:

- On average 60 to 70 percent of all residential lots being developed in new neighbourhoods are narrow lot homes, which feature lots that are less than 10 m in width.
- Higher composition of narrow lot housing can create a perception of congestion and higher impact for its residents, who may not have experienced life in dense neighbourhoods in the past.
- Certain configurations of narrow residential lots, especially those featuring front driveways may contribute to the reduction of on-street parking and may result in increased competition between neighbours for on-street parking amenities.
- Narrow lot housing is a result of density targets being implemented under the regional Growth Plan and the need for compact housing forms that are affordable.
- Neighbourhoods are also experiencing diversity of housing forms which is advantageous to the home buyers by increasing housing choice in all neighbourhoods.
- Rise of complaints associated with operational issues and service delivery is a likely result of increased densities in new neighbourhoods. This trend is not isolated to Spruce Grove and similar issues are being experienced in other communities in the metro region.
- Narrow lot housing has become the predominant housing type in new neighborhoods, it effectively caters to the diverse housing preferences while meeting the density requirements mandated by the EMRB.

4. Zero Lot Line Homes

The Greenbury Planned Lot (GPL) District was adopted in June 2017 as initiated by Beaverbrook Communities for the purpose of developing zero side yard housing in the Greenbury Neighbourhood.

As zero side yard housing was a new offering in Spruce Grove, the GPL District was implemented as a Pilot Project to gauge if there was a suitable market for the product, and to allow the City and developer an opportunity to evaluate the impacts or unintended consequences after full build out of the district.

The GPL District was applied to an area of approximately 13 hectares, and since adoption the boundaries were amended twice.

4.1 What is a Zero Lot Line Home

A zero side yard, or zero lot line, development allows the reduction of one side yard setback to 0.0 m, so that the building can be constructed along one property line, while the other setback is increased to 1.5 m to ensure safe separation distance. An easement is registered along the zero side yard side that allows for 0.30 m foundation and eave encroachments, and provides access for maintenance.

Zero side yard homes are being developed across the Edmonton metro region, with varying development standards. Spruce Grove was an early adopter of ZLL homes, which were developed through the GPL District pilot.

A scan of land use bylaws from comparable regional municipalities provides a picture of development standards being allowed for zero side yard homes, as shown in the table below:

(Min) Development Standards for Zero Side Yard Developments by Municipality					
District	Municipality	Lot Width	Lot Depth	Lot Area	Coverage
RLD	Edmonton	-	27.0	-	53 - 56%
IN	Beaumont	4.9	-	-	55%
CN	Beaumont	6.0	-	-	55%
R5 / R6	Stony Plain	6.3 / 7.2	-	235 / 180	50%
RCD	Leduc	7.1	27.0	191.7	53%
RNL	Leduc	7.6	32.0	243.2	45%
R2C	Strathcona County	7.6	32.9	250.0	50%
GPL	Spruce Grove	7.6	33.5	254.6	50%
RPL / RMD	Edmonton	7.6	30.0	247.0	53%
RXL	St.Albert	7.7	30.0	231.0	45 - 47%
DCA -13	Fort Saskatchewan	7.6	34.0	258.4	53%
DCA-15	Fort Saskatchewan	8.3	38	315.4	53%

The purpose of comparing the development standards was to demonstrate that Spruce Grove is not overly restrictive in regulating development standards, the zero side yards homes being built in Spruce Grove are in line in similar homes being built in other municipalities with minor differences

4.2 Reporting from Pilot Project

In September 2020, Administration brought forward a Council update that focused on the review of the development process for zero side yard developments. That update had identified some key issues pertaining to Real Property Reports, drainage and landscaping and on-street parking congestion concerns. In June 2021, the City and the developer engaged the residents of the pilot project through a homeowner satisfaction survey, which highlighted the following broad areas in which homeowners expressed dissatisfaction.

Site Drainage and landscaping

Compact lot configuration compounded with the issue of builders not grading the site in accordance with design specifications resulted in a number of sites facing challenges with grading and proper site drainage. 55% of homeowners had drainage issues on their property, with drainage issues affecting front landscaping, and most severe issues affecting rear yard landscaping. Issues cited include pooling of water resulting from grading challenges.

Congestion and On-street parking

Homeowners expressed dissatisfaction with the street parking provisions, and issues cited include lack of street parking availability for visitors, congestion, challenged with snow storage and removal, and construction crews occupying available street parking.

Homeowner Education

Only a small percentage of homeowners (9%) indicated clarity on the role of the shared easement. Survey highlighted the lack of information sharing between the home builders and the homeowners during the sale process. There appears to be a challenge with the provision of education and information material to the homeowner explaining the unique features and limitations of the zero side yard development. The sharing of information and education material can play a positive role in informing residents about their options and limitations pertaining to landscaping in the easement area.

Awareness of price savings

In terms of price benefits, majority (over 77%) of homeowners claimed they were not aware that they were saving between \$5,000 and \$12,000 by purchasing a zero side yard property (in comparison to a traditional property).

4.3 Issues unique to Zero Side Yard Homes

While concerns related to site drainage, landscaping, congestion, and street parking may also be evident in other developing neighborhoods, particularly those with narrow lot homes, there are several distinctive operational challenges associated with zero side yard homes. These challenges are outlined below:

Easement Encroachment

One of the most common form of encroachment in Zero Side Yard homes stems from the placement of air-conditioners into the easement area, which is not permitted under the land use bylaw. The other operational issues affecting existing homeowners stems from foundation excavation which occurs too close to the foundation of the adjacent building.



Figure 2: Foundation Excavation in Zero Side Yard developments

The issue with foundation excavation being conducted too close to existing foundations in infill or zero lot line housing lies in the increased risk of potential structural damage and compromised stability for both the new and existing structures. When excavation is performed too closely to an existing foundation, several problems such as vibration impact, soil erosion and settling, water infiltration and potential damage to existing structures can arise.

Potential for disputes over shared easement

Shared easements are legal rights that allow one party to use another party's property for specific purposes. In the context of zero side yard homes, shared easements often arise due to the necessity of accessing neighboring properties for various reasons such as access and maintenance. In zero side yard homes, where properties are built close to property lines without side yards, the potential for disputes over shared easements can be significant.

To minimize the potential for disputes over shared easements in zero side yard homes, it's important for property owners to have clear and well-defined legal agreements in place. These agreements should outline the purpose of the easement, usage rights, maintenance responsibilities, and any other relevant terms.

Ensuring Diversity and Housing Mix

In February 2023, the City initiated a regional assessment of zero side yard developments. This involved engaging with several regional municipalities to gain insights into the prevalence of such developments within their respective communities. Among these municipalities, Beaumont and Leduc emerged as noteworthy cases, where zero side yard developments have swiftly assumed prominence as the prevailing mode of Single Detached Home development. Fort Saskatchewan also reported observations that zero side yard homes may be encroaching on the market share of other more affordable housing forms such as semi-detached homes.

This emerging trend may spark considerations regarding the potential replication of this pattern in Spruce Grove if unrestricted implementation of zero side yard homes were to take place citywide. To proactively address this concern, the City Council can explore the prospect of instituting policy measures or regulations aimed at effectively curbing or managing the proportion of homes built under specific type, such as zero side yard homes to ensure the neighbourhood has a healthy mix of housing types.

In parallel, numerous municipalities have adopted strategies to regulate the spatial distribution of such developments. These strategies include direct control districts, statutory plan amendments, and map overlays. By adopting these tactics, municipalities can govern the strategic placement and permissible zones for these developments.



Figure 3: Missing Middle Housing Typologies, Source -Opticos Design

Comparison of Development Standards

In neighborhoods where land use is guided by area structure plans and land use bylaws, the physical configuration of streets is guided by engineering standards. These standards delineate the various elements that constitute a residential street's design or street's development standard.

During a recent bus tour organized by the Urban Development Institute to showcase zero side yard homes, the tour featured several examples of such homes built in St. Albert. A closer look at the street design, reveals the use of an enhanced street design that features street separated sidewalks on both sides of the street, and tree boulevards which improve the safety and aesthetics of the street and make the overall development feel less congested.



Figure 4: Zero Side Yard Homes in St. Albert

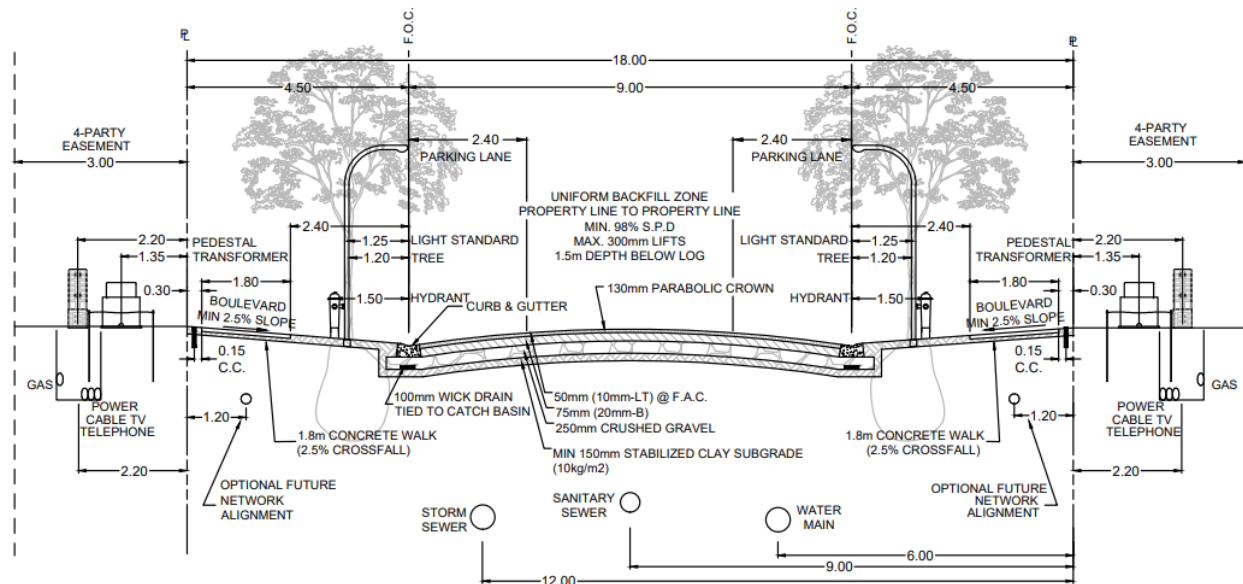


Figure 5: Local Roads Cross Section, St. Albert Engineering Standards

City of Spruce Grove also allows a similar “Separate – Walk” street cross section under the Engineering Standards, there is little guidance on when the “Mono-walk” vs “Separate – Walk” cross section is utilized. As a result, most subdivision designs default to using the mono-walk cross section due to its reduced cost.

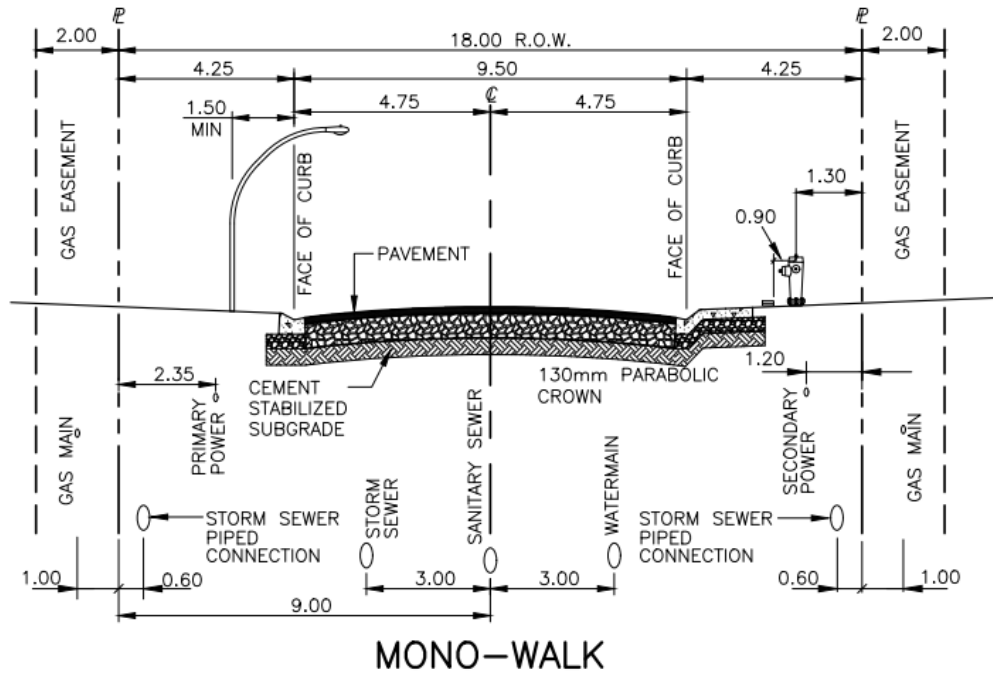


Figure 6: Mono-walk local road cross section, Spruce Grove Engineering Standards

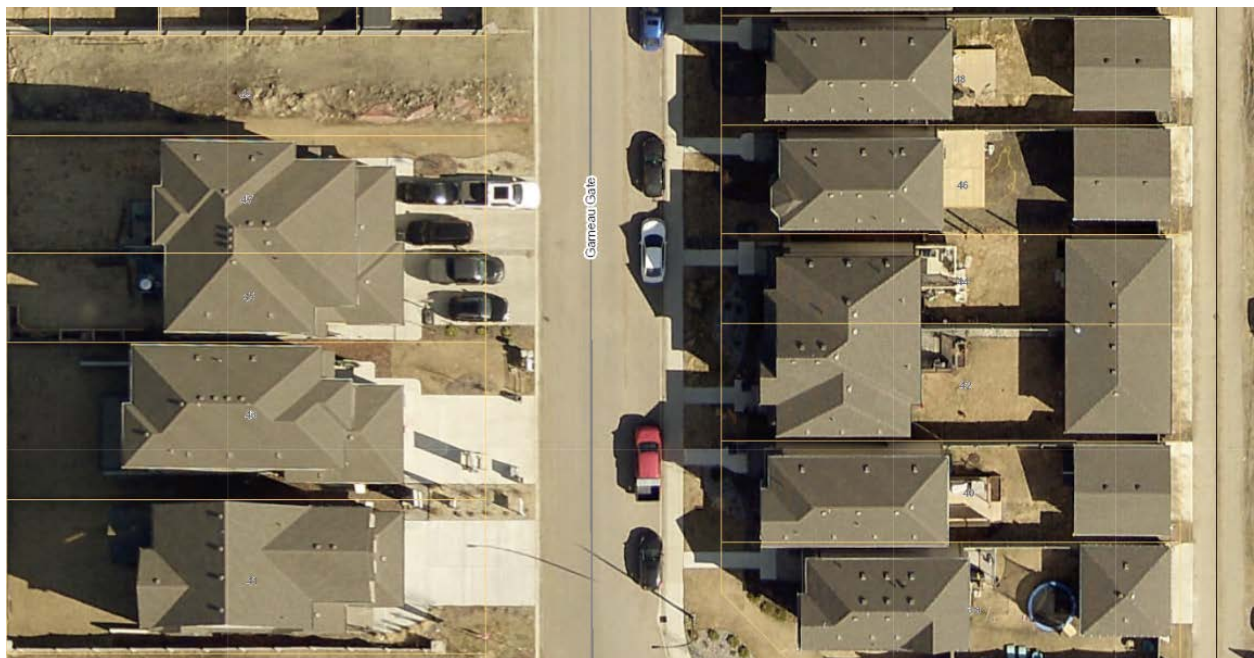


Figure 7: Zero Side Yard Developments, GPL District

As Spruce Grove continues to experience growth and densification of our neighbourhoods, there is a need to examine the infrastructure development standards to ensure it meets the emerging needs of the neighbourhood and climatic conditions as winter city. In this context, the use of the “Separate-Walk” street cross section can offer a range of advantages that prioritize safety, convenience, accessibility, aesthetics, and urban vitality:

Safety

Street-separated sidewalks provide a physical barrier between pedestrians and vehicular traffic, reducing the risk of accidents and collisions. This separation enhances pedestrian safety, especially in high-traffic areas. Pedestrians benefit from clearer visibility at crossings because the separation ensures that there is no snow buildup at the crosswalks. This enhances safety and reduces the risk of accidents.

Comfort

Pedestrians can enjoy a more comfortable and relaxing walking experience without worrying about proximity to moving vehicles or noise from traffic. The physical separation creates a buffer zone that enhances pedestrians' comfort.

Snow Storage

The separation between the street and the sidewalk provides space for snow storage. Snow plows can push accumulated snow into these areas without obstructing pedestrian pathways or creating hazards.

Enhanced Visibility

The separation itself provides a visual distinction between the street and the sidewalk, making it easier for both pedestrians and snow removal crews to identify the boundaries and clear the respective areas.

Reduced Clutter

Separating pedestrians from the roadway reduces the clutter of signage, street furniture, and other elements that would otherwise be needed to ensure pedestrian safety in a mono walk scenario.

Active Transportation

By creating a safe and inviting environment for pedestrians, street-separated sidewalks encourage people to choose walking as a mode of transportation. This supports active lifestyles and reduces the reliance on motor vehicles.

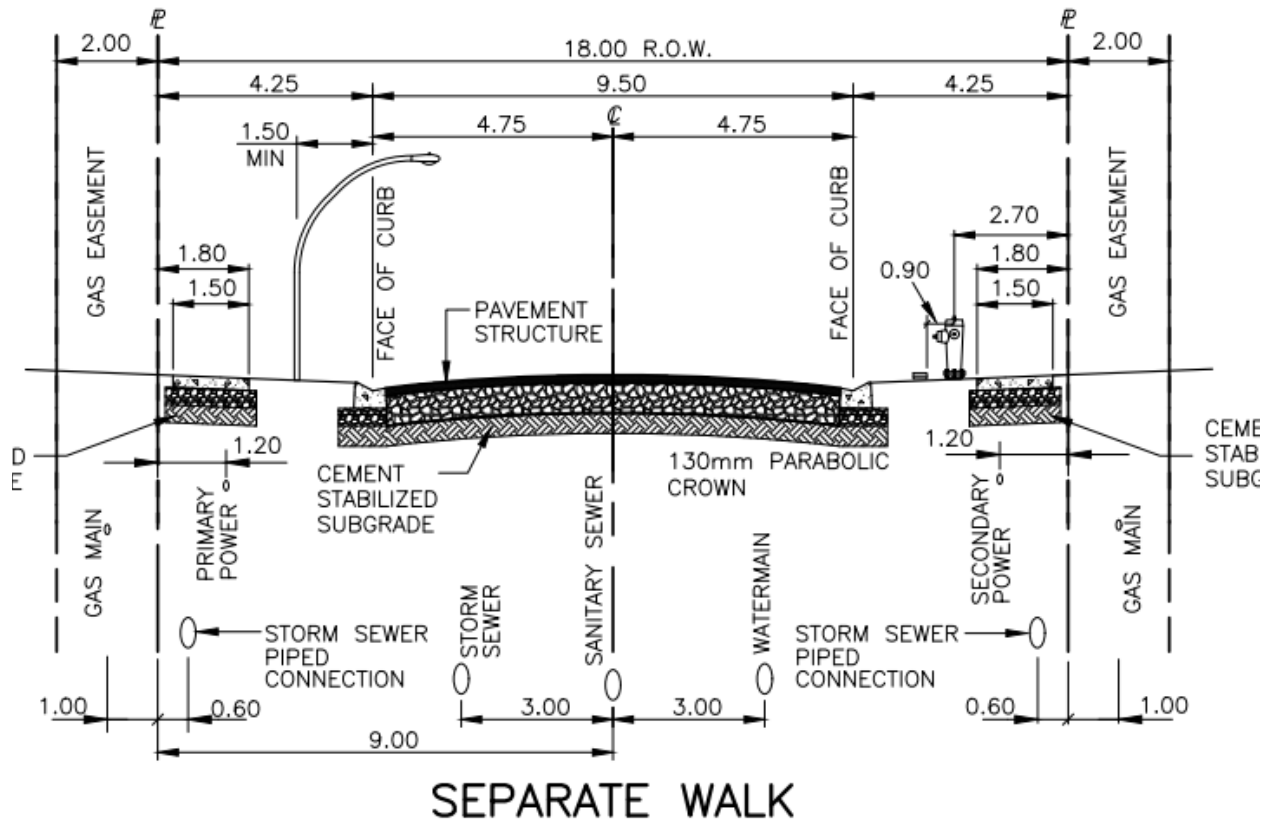


Figure 8: Separate-walk local road cross section, Spruce Grove Engineering Standards

4.4 Summation

Based on the analysis in this section, our key observations and potential solutions are as follows:

- Spruce Grove adopted the GPL District in June 2017, which allowed zero side yard housing in the Greenbury Neighbourhood. The GPL District was implemented as a Pilot Project to gauge if there was a suitable market for the product, and to allow the City and developer an opportunity to evaluate the impacts or unintended consequences after full build out of the district.
- The GPL District was applied to an area of approximately 13 hectares, and since adoption the boundaries were amended twice. The pilot is currently approximately 75% developed and future stages are under construction.
- The development standards for zero side yard homes in Spruce Grove are not overly restrictive and the homes are in line with those being built in other municipalities with minor differences in engineering standards, road cross sections and front setbacks.
- Interim reporting on the pilot project has occurred through administrative updates as well as residents survey which provided mixed feedback from the residents. Based on the feedback developers have stopped developing certain problematic typologies, such as the semi-detached house with zero side yards.

- In terms of post-development impacts being experienced by the residents, there are issues pertaining to on-street parking and congestions, drainage, landscaping and lot grading. These issues are not strictly tied to zero side yard homes but can also be observed in other neighbourhoods as discussed throughout this report.
- There are issues that are specific to zero side yard homes, which include insufficient education to customer on the unique limitations on shared easement that are central to this housing form.
- Other main concerning development trend based on observations in other communities is that zero side yard homes may become the predominant form of single detached housing.
- To address the above concern and to ensure diversity of housing mix, administration is recommending Council consider limiting zero side yard homes as a fixed percentages of the neighbourhood composition or give consideration to other tools available such as direct control districts, overlays, neighbourhood concepts.