
March 2023

GREEN HAVEN ESTATES

AREA STRUCTURE PLAN
AMENDMENT

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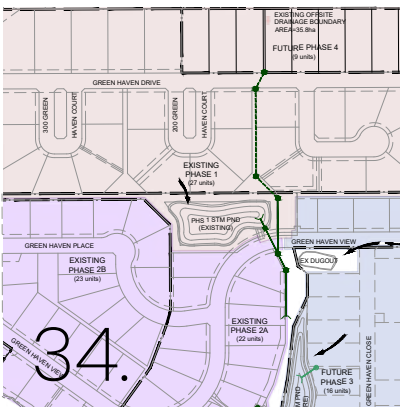
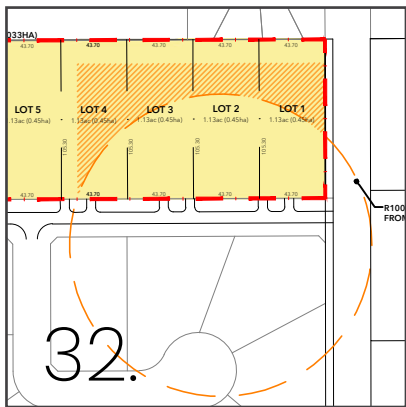
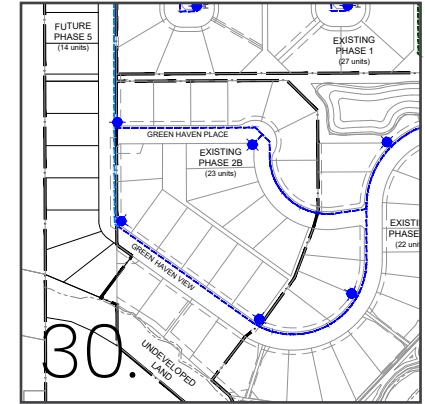
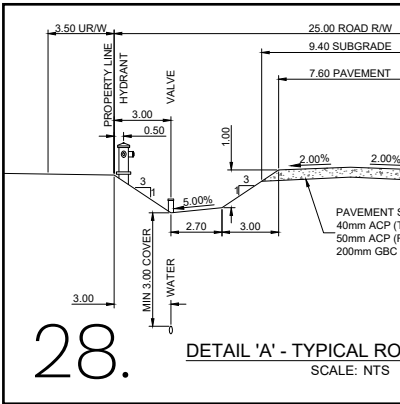
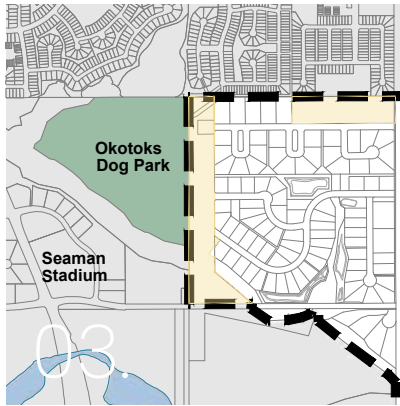


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01. Introduction





This document is an amendment to the Green Haven Estates Area Structure Plan (ASP) and is to be read in conjunction with the Green Haven Estates ASP. This ASP Amendment outlines two new phases of development that complete the Green Haven Estates community. The ASP Amendment follows the same policies and strategies as the original ASP. The policies in this document are intended to speak more directly to the Phase 4 and Phase 5 additions as well as provide assurances that these new phases will be developed and serviced in a similar manner as the existing community.

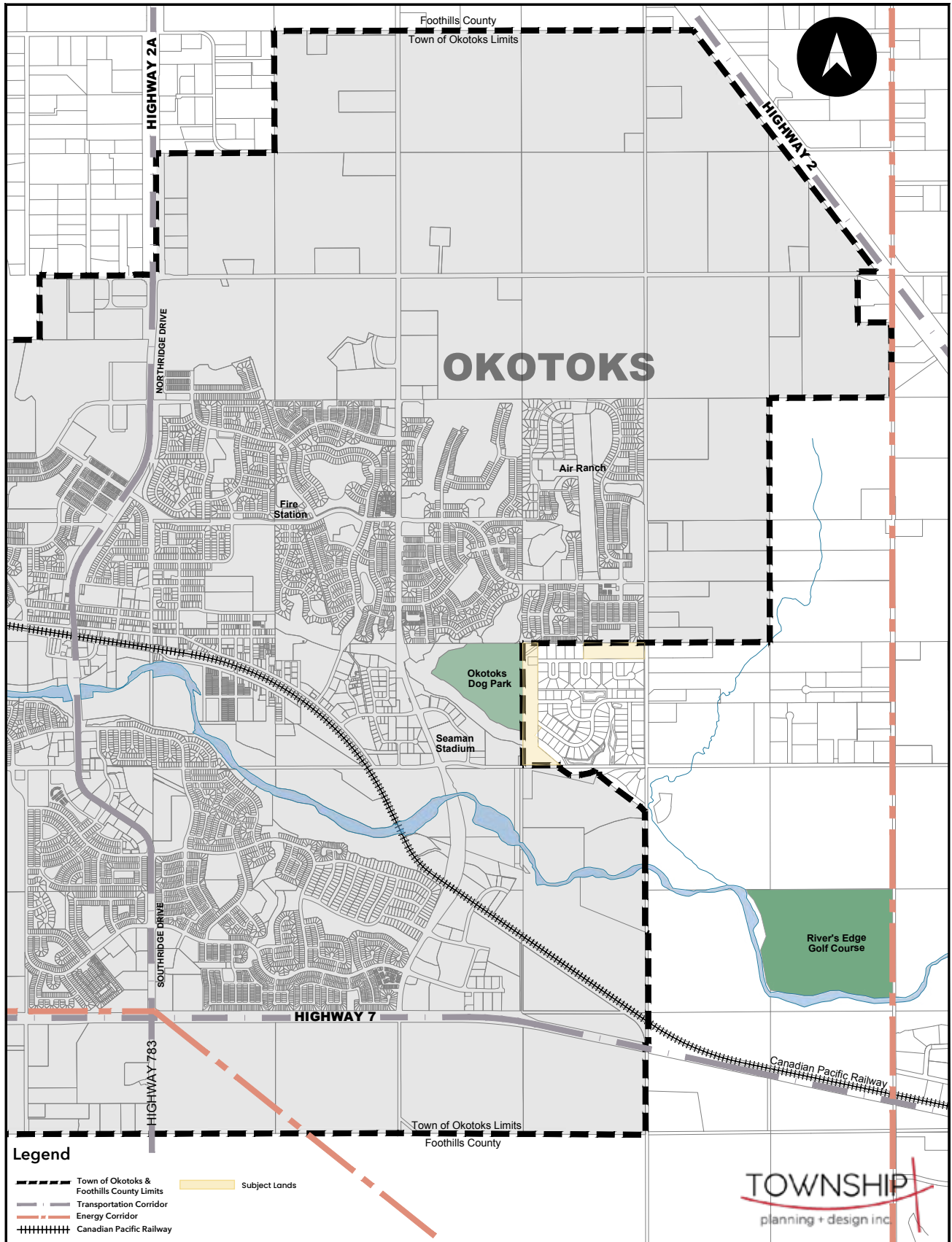


Figure 1 - Site Context

01.1 Purpose

This amendment to the Green Haven Estates ASP (2006) addresses the inclusion of Phase 4 and 5: two new phases which border the original ASP boundary (locations outlined in **Figure 1 & 2**). These phases occur on two parcels totalling 32.518 acres (13.160 ha) and are legally described in **Table 1** below. The development is located within Foothills County and is bound on three sides (North, West, and South) by the Town of Okotoks (See **Figure 1**). These two phases were not included in the original Green Haven Estates ASP as they were previously owned by private and corporate landowners at the time.

These lands are being added due to a demand for additional parcels and a need to more efficiently use the land as some of this site is subject to a groundwater production well setback. The introduction of new phases requires an amendment to the existing Green Haven Estates ASP in order to outline the goals, objectives, density, phasing, method of servicing, and housing types proposed. This amendment will form part of the Green Haven Estates Area Structure Plan. Any addition to the ASP by inclusion of this amendment will require a statutory public hearing at Foothills County. The existing policies of the Green Haven Estates ASP apply to these phases unless otherwise noted in, or updated by, this amendment document.

This site primarily features Country Estate Residential land uses. The goals and objectives for development of Phases 4 and 5 are detailed in this plan.

Parcel	Legal	Title	ATS Reference	Size	Owner
Phase 4	Plan 9912114, Lot 1	221 066 181	4;29;20;27; SE	+/- 10.36 ac (+/- 4.194 ha)	2263582 AB Ltd.
Phase 5	Plan 2310060, Block 8, Lot 22	231 009 640	4;29;20;27;SE	+/- 22.16 ac (+/- 8.966 ha)	2263582 AB Ltd.

Table 1 - Legal Description

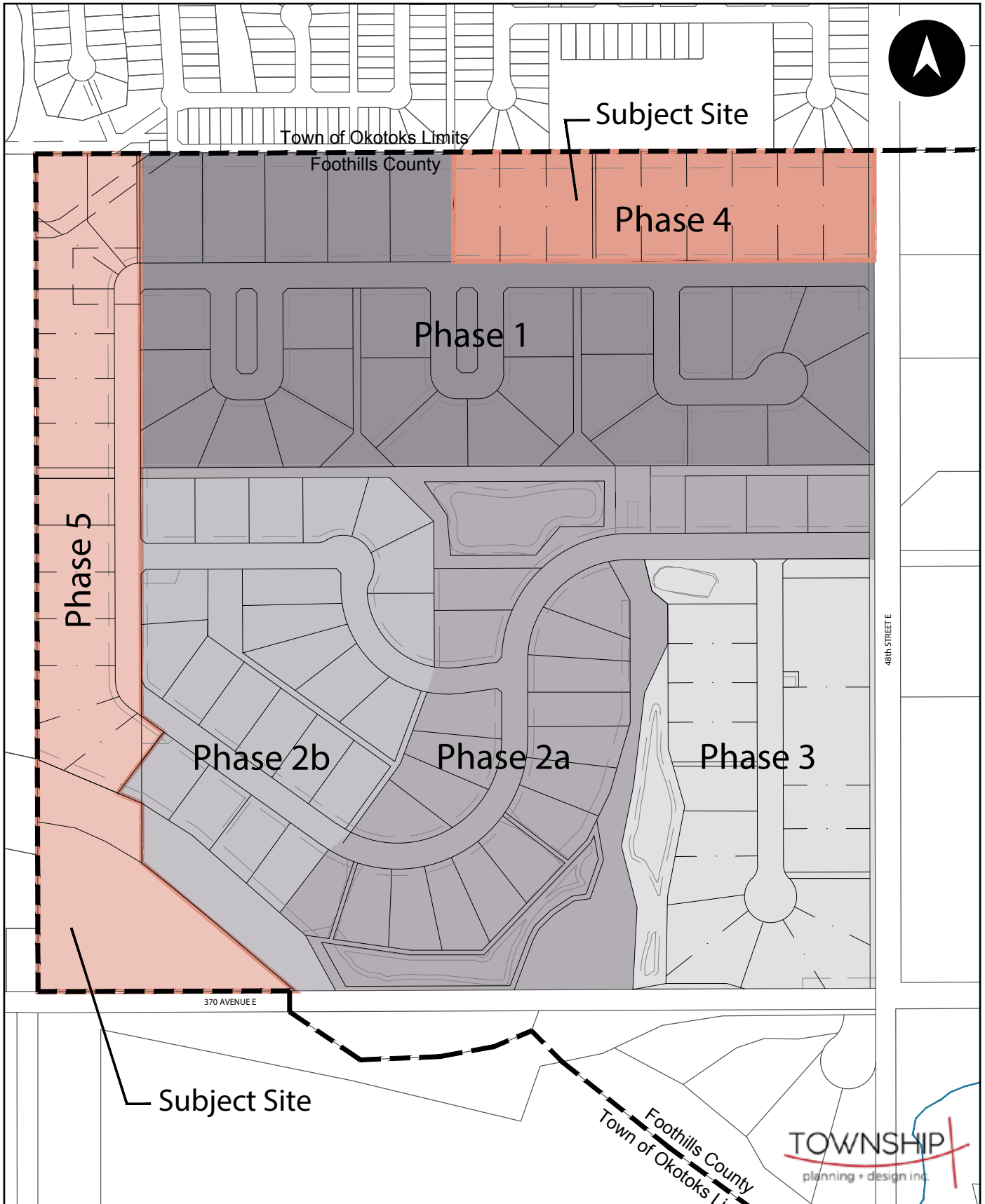


Figure 2 - Location of Phase 4 & 5

01.2 Site Context

This site is located east and adjacent to the Town of Okotoks within Foothills County. The parcel is accessed from 48th Street East and 370th Avenue East, which connects the Town of Okotoks to Highway 2 and is directly south of the site. The site is proximate to the Okotoks Air Ranch Community with existing and future development falling under the current runway approach path. The future of the Okotoks Air Ranch Community is unknown at this time, but there is potential that operations may cease.

The donation by Nexen of a dog park to the Town of Okotoks west of the site means the only existing development directly abutting Green Haven Estates is the Drake Landing residential neighbourhood to the north. There is exceptional connectivity to recreational areas and potential for comprehensive community planning through connection to existing pathways.

Emergency response to the area is provided by Foothills County. Police response is provided by the local RCMP detachment. (Please refer to **Figure 1** for the location of the nearest fire station)

The original Green Haven Estates ASP was adopted in January of 2007. Phases 1, 2A, and 2B have since been completed. Phase 3 subdivision has been approved by Foothills County and will proceed based on market demand. **Figure 2** outlines existing and proposed phases.

01.3 Historical Resource Act Approval

The southern portion of the site, including all of Phase 3 and the southern portion of Phase 5, are assigned a Historical Resources Value (HRV) of 5a. This designates them as archaeologically sensitive with the potential for historic resources to be present. This designation is provided by the Historic Resources Management Branch (HRMB) of The Alberta Ministry of Culture and the Status of Women. Two precontact archaeological sites have been recorded in Phase 3 and 5; therefore a Historical Resource Act (HRA) approval is required prior to any site disturbance. Lifeways of Canada Limited (Lifeways) has assessed the site, submitted the HRA application, HRA approval was granted in August 2022.

02. Policy Analysis

Due to its location within Foothills County, and its direct proximity to the Town of Okotoks, Green Haven Estates is subject to several policy plans. These plans have evolved since the original Green Haven Estates ASP was prepared and are summarized in this section.

02.1 South Saskatchewan Regional Plan (SSRP)

The South Saskatchewan Regional Plan (SSRP) came into effect in 2014 and was amended in 2017. It outlines the long-term vision for the region and provides guidance to the municipal areas under its influence. This is the highest level policy in the region and all plans in the region must conform to its directives. The SSRP promotes efficient use of land, and encourages municipalities to infill and develop properties that can be serviced communally and will not prematurely fragment agricultural land.



02.2 Calgary Metropolitan Region - Growth Plan (GP)/ Regional Evaluation Framework (REF)

The Growth Plan (GP) and the Regional Evaluation Framework (REF) provide guidance and policy for long-term planning in the Calgary Region. These documents produced by the Calgary Metropolitan Region Board (CMRB) address future land use, regional infrastructure planning, water quality assurance, and regionally significant corridors.

The Green Haven Estates ASP Amendment Aligns with policy 3.1.1.1 of the GP as it is being developed jointly with input from Foothills County and the Town of Okotoks. The Green Haven Estates Area Structure Plan is within a Joint Planning Area (JPA) as identified in Schedule 1: Regional Growth Structure of the GP.

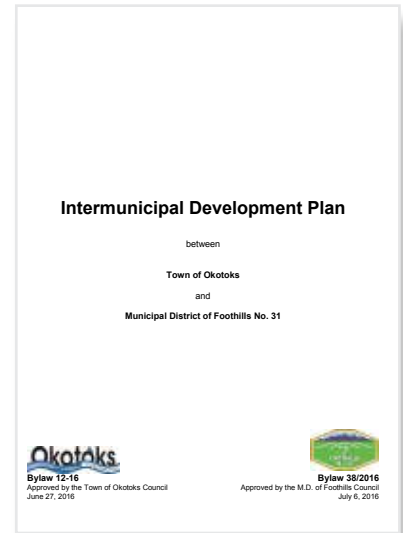
The Green Haven Estates ASP Amendment proposes to use the Residential Community Placetype which allows for a residential density of five (5) units per acre in the JPA (GP, p50, 3.1.4.4). Introducing this Placetype also aligns with policy 3.1.10.2 as it maintains the density of residential development and the ratio of Preferred Placetypes across the JPA.

Statutory plans and amendments to statutory plans must be referred to the CMRB when the plan/amendment proposes more than 200 new dwelling units within a Preferred Growth Area and when proposing more than 80 new dwelling units outside a preferred Growth Area. As the amendment to the Green Haven Estates ASP is within a Preferred Growth Area and consists of fewer than 200 new dwelling units, there is no referral required to the CMRB. However, alignment with the GP is encouraged.



02.3 Foothills County/Town of Okotoks Intermunicipal Development Plan (IDP)

The Phase 4 and Phase 5 plan area is within the Foothills County / Town of Okotoks IDP circulation referral area as it is located directly adjacent to the Town's municipal boundary. Therefore, the ASP Amendment is required to be referred to the Town of Okotoks. The IDP does not contain any specific policy guidance or direction regarding the Green Haven Estates ASP.

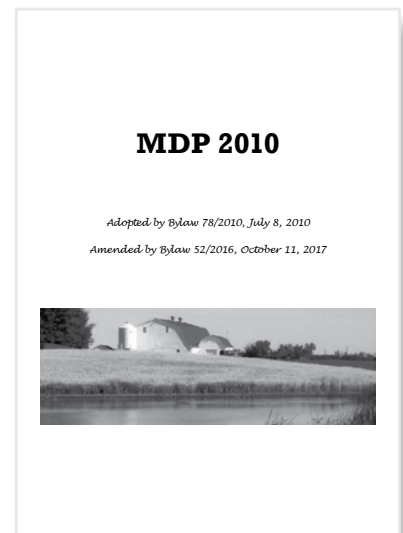


02.4 Foothills County Municipal Development Plan (MDP 2010)

The Foothills County Municipal Development Plan (MDP) outlines the vision for the municipality and aims to preserve the County's diversity by balancing the retention of agricultural lands with efficient residential and commercial development.

The Green Haven ASP Amendment aligns with the Community Development Principle of the MDP by "creat[ing] communities rather than individual lots" (p6, Foothills County Municipal Development Plan, 2010.) Green Haven aims to create a comprehensively planned community that integrates with the surrounding community and meets the policies and objectives of the MDP.

Foothills County uses a balanced approach to development which "directs residential growth to fragmented lands and identified growth areas in the form of clustered development, and hamlet style developments and away from un-fragmented agricultural lands" (p19, Foothills County Municipal Development Plan, 2010).



02.5 Foothills County Land Use Bylaw (60/2014)

The Foothills County Land Use Bylaw (LUB) divides municipal lands into a variety of land use districts (or zones). These districts determine what the rules and requirements are for development of the land. The LUB outlines the processes and requirements for redesignation, subdivision, and development permit applications within Foothills County.

Phases 4 and 5 utilize four Land Use Districts:

- Municipal Reserve;
- Environmental Reserve;
- Country Estate Residential District (sub-district “A”); and
- Public Utility Lot District.

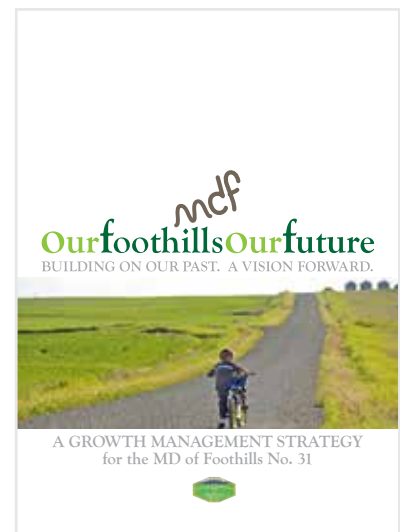
The sub-district “A” designation indicates the requirement to apply for a Development Permit prior to the construction of any building/structure and prior to issuance of a Building Permit. The sub-district “A” designation is there to ensure special consideration of the development and construction on the site including, but not limited to lot grading, site coverage, and building envelope.

The principles, goals, and vision of the Foothills County MDP 2010 and Land Use Bylaw support the intensification of development within existing hamlets and growth areas such as the Green Haven Estates area.

Redesignation of Phases 4 and 5 will take place comprehensively then the parcels will be subdivided in their respective stages.

02.6 Foothills County Growth Management Strategy (Our Foothills, Our Future: Building on the Past, A Vision Forward.)

The Foothills County Growth Management Strategy (GMS) builds on the direction provided in the MDP 2010 by identifying opportunities for growth and development and allocating it to logical areas. The GMS divides the county into five districts and identifies the Central District as the area that will accommodate most of the municipality’s future growth. Green Haven Estates is located in the Central District. This area is recognized as the growth engine for the County and is where most development is intended to occur within Foothills County.





03. Goals and Objectives



03.1 Objectives

The overall objectives of this amendment are outlined below:

- Establish a land use strategy that aligns with and is supported by existing municipal and regional policy and that benefits the Green Haven Estates residents.
- Present a comprehensive review of the existing site conditions and opportunities within the Plan Area.
- Incorporate the additional parcels into the existing land use concept, transportation network, and utilities within the Plan Area, and outline the strategy for continuous development.
- Meet the expectation of regional growth while balancing the context of the site and its appropriate density based on servicing.

03.2 Development Considerations

The primary development considerations for this community are as follows:

- Development is contiguous and compatible with existing surrounding areas.
- The land use strategy will complement the community character and meet the goals and growth objectives of the Growth Plan 2022 and County's MDP 2010.
- Linear pathways will create connectivity within the community and provide connections between adjacent neighbourhoods, commercial, and recreational areas.
- Architectural Controls registered by restrictive covenant will offer options in the design of single-family dwellings while maintaining a harmonious and unified theme to the built form of the community.

03.3 Guiding Principles

Principles and Goals remain unchanged from the Green Haven Area Structure Plan (2006)



Built Green



Residential Neighbourhood
& Community Character



Open Space &
Pathway Connectivity



Transportation Consideration



Infrastructure

04. Development Strategy



04.1 Site Characteristics

The Green Haven Estates community is situated on a plateau overlooking the Town of Okotoks to the west. Since adoption of the original Area Structure Plan (ASP), development has taken place leading to disruption of the native grass and vegetative cover. Soils are a mix of Canada Land Inventory 5 and 3T and are of limited agricultural production capacity. The mix of clay, sand, and gravel over the aquifers combined with the requirement for high-efficiency, tertiary treatment septic systems mitigates potential infiltration of septic and other materials into the groundwater source. In addition, there is a 100m setback required from the groundwater production wells which further mitigates the possibility of any septic infiltration to the groundwater production source. The site plan preserves the natural drainage and environmentally significant areas through Municipal and Environmental Reserve dedication. Municipal Reserve has been placed between Lot 7 & 8 (in Phase 5) to create a pedestrian connection to the neighbouring community of Drake Landing and the Okotoks Dog Park.

The topography slopes to the southwest with the south side of the property featuring a large escarpment that runs in an east/west direction (refer to **Figure 3**). The elevation ranges from 1070.0m in the north to 1060.0m at the top of the escarpment. The escarpment area has a +/-20m drop in elevation which has been fully dedicated as Environmental Reserve (ER) in accordance with the Municipal Government Act.

04.2 Current Land Use Strategy

The land use strategy is designed with sustainable development in mind. Green Haven Estates is planned to maximize the potential of site characteristics with minimal impact on adjacent land uses. The land use strategy provides a transition from the higher density residential development in the Town of Okotoks to the rural character of Foothills County. Municipal Reserve (MR) has been provided in order to integrate the community with the surrounding environment and provide pedestrian connections to neighbouring communities and amenities (refer to **Table 2** for details).

Phase 4				
Land Use	Lots	Area (Acres)	Area (Hectares)	% of Net Developable Area
GROSS Developable		10.363	4.194	
Environmental Reserve (ER)	n/a			
NET Developable		10.363	4.194	
Country Estate Residential District (CER-A)	9	10.284	4.161	99.23%
Public Utility Lot District (PUL)	1	0.080	0.033	0.77%

*MR deferred to Phase 5

Phase 5				
Land Use	Lots	Area (Acres)	Area (Hectares)	% of Net Developable Area
GROSS Developable		22.155	8.966	
Environmental Reserve (ER)	1	1.326	0.536	5.992%
NET Developable		20.829	8.430	
Country Estate Residential District (CER/CER-A)	14	14.602	5.910	69.84%
Municipal Reserve (MR)	2	5.931	2.400	29.73%

Table 2 - Land Use Statistics

04.3 Proposed Land Use

Due to limitations with septic servicing, multi-family residential housing typologies have been removed from the development and the number and configuration of lots have been revised to maximize preservation of natural features and provide adequate area for the Country Estate Residential (CER) District. A road connection from Green Haven Drive to Green Haven View has been established to provide vehicular access and improved emergency egress from the north portion of the site to the south. Municipal Reserve (MR) facilitates pedestrian connectivity between neighbouring communities and recreational space (refer to *Figure 4*).

04.4 Community Character

Foothills County values its rural character and has identified the following qualities as reflective of its communities: Wide Open Spaces, Scenic Vistas, Dark Skies and Air, Water, Soil, and Biodiversity. Green Haven aims to create a high quality, environmentally conscious built environment that reinforces the qualities of the rural community. The design of Green Haven Estates Phases 4 and 5 provides a seamless transition from urban to rural. Surrounded by recreational opportunities, the community is designed to connect residents with the natural and built amenities. The design integrates MR with the baseball diamonds and stadium in the neighbouring Industrial Business Park District (IBP) in Okotoks.

POLICIES

4.4.1 The Foothills County Dark Sky Bylaw and Community Standards Bylaw shall be implemented as required to the satisfaction of Foothills County.

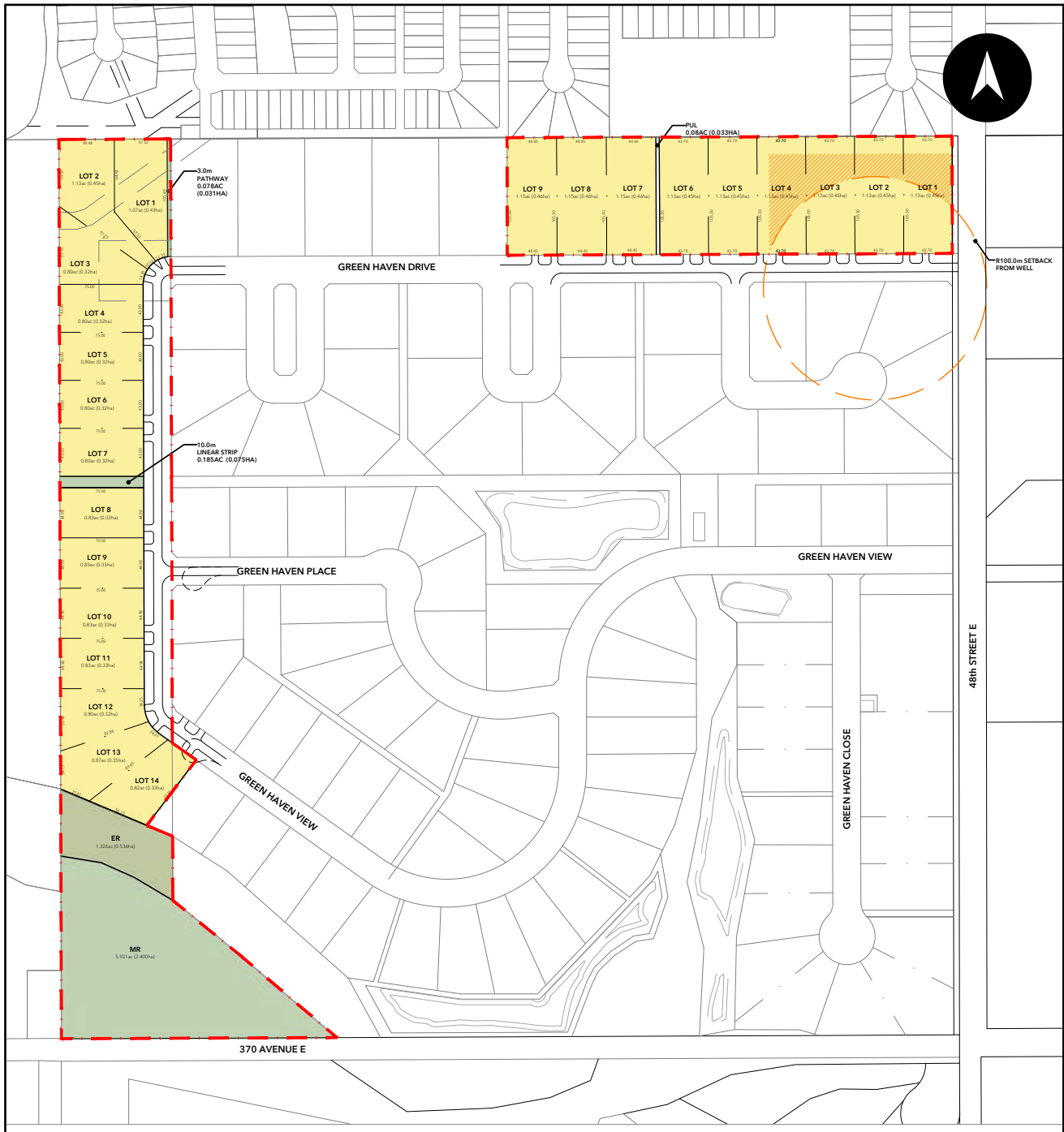


Figure 4 - Current Land Use Strategy

	Housing Units (Net)	Persons Per Dwelling	Estimated Population	Units Per Net Acre	Units Per Net Hectare
Phase 4	9	2.4 (2021 Census)	21.6	0.868	2.146
Phase 5	14		33.6	0.672	1.660

Table 3 - Residential Density

04.5 Residential Land Use

The residential land use in Phases 4 and 5 of Green Haven Estates is the Country Estate Residential sub-district “A” which is intended to support sustainable development. Lot sizes are designed to comply with the Country Estate Residential sub-district “A” land use district and meet servicing requirements. The housing typologies suitably integrate with the surrounding land uses and the existing community. To ensure a cohesive community that reflects the character of Foothills County, the Developer has implemented Architectural Controls registered on title. Architectural Controls are detailed in **Section 05**.

The population at full build-out of Phase 4 and 5 (based on 2021 average number of persons per dwelling of 2.4) is estimated to be 55.2 people. Please refer to **Table 3** for more details.

POLICIES

4.5.1 On Country Estate Residential lots, the housing form shall be single-family detached.

4.5.2 Relaxations to built form shall be as outlined in policy 4.5.3 and will require site specific amendments at the land use approval stage.

4.5.3 The construction of all buildings in the Plan Area shall comply with the Foothills County Land Use Bylaw and the Alberta Building Code. Standard relaxations for Green Haven Estates shall apply at the discretion of Foothills County. These include:

i) Front yard setbacks: 8m (26.25 ft.) from property line adjacent to 48th St. E; for those properties registered as Plan 991 2114, Lot 1 (Phase 4, Lot 1); and

ii) Front yard setbacks: 4m (13.12 ft.) from the property line adjacent to the internal road; for those properties registered in Phase 4 & Phase 5 of the Green Haven Estates Area Structure Plan Amendment.

4.5.4 The total number of lots for all 5 Phases of development shall not exceed 111. Phase 4 shall include 9 new lots and Phase 5 shall include 14 new lots.

4.5.5 Proposed lots in Phase 5 adjacent to the Environmental Reserve (ER) will be subject to additional geotechnical testing at the discretion of Foothills County and the expense of the Developer.

04.6 Open Space & Pathways

The land use strategy utilizes Municipal Reserve and Environmental Reserve to provide open space and linear greenways (refer to **Figure 5.**) These greenways provide access to adjacent communities and amenities. A formal path system is in place around the central and south stormwater ponds.

POLICIES

4.6.1 Proposed open spaces and trail and pathway networks should provide connections within the Plan Area and integrate with the surrounding area.

4.6.2 The design of linear greenways should incorporate Crime Prevention Through Environmental Design (CPTED) and include Dark Sky appropriate lighting to the satisfaction of Foothills County.

4.6.3 The design of pathways and trails shall be accessible to a variety users (ie.barrier free) to the satisfaction of Foothills County.

4.6.4 The operation and maintenance of open space, public utility lots, and public amenity spaces shall be determined through an agreement between the Homeowner's Association and Foothills County to the satisfaction of the County.

4.6

04.7 Municipal Reserve

The Municipal Reserve (MR) provided in Phase 5 is intended to complement the active recreation amenities in the adjacent Okotoks Industrial Business Park (IBP) District. The IBP is home to Seaman Stadium (Home of the Dawgs Baseball Club) and Tourmaline Field. The area around these amenities remains naturalized with a small trail system. The MR adjacent to the IBP area is intended for passive recreation and is designed as low maintenance grass/landscape integrating into the existing environment. MR is also utilized for the greenways, which are designed to be naturalized, low maintenance connections between the communities (refer to **Figure 5**).

04.8 Environmental Reserve

The Municipal Government Act requires land of environmental significance such as those subject to flooding, providing drainage, or with significant slope to be dedicated as Environmental Reserve (ER). These parcels will be left in their natural state.

Green Haven Estates has an area of significant slope in the south portion of the site. The land use strategy dedicates this area as Environmental Reserve (ER) completing the dedication of the entire slope and protecting a significant regional feature.

POLICIES

4.7.1 Required Municipal Reserve shall be confirmed at the subdivision stage by Foothills County. The provision of reserves shall be in accordance with the requirements of the Municipal Government Act and to the satisfaction of Foothills County.

4.7.2 Should the provision of Municipal Reserve as proposed in this Plan be insufficient, the Developer shall provide the appropriate amount of cash-in-lieu to the satisfaction of Foothills County.

4.7.3 Municipal Reserve shall provide active linkages, open spaces, and recreational areas.

4.7.4 Landscaping and maintenance plans for Municipal Reserve parcels shall be reviewed and approved at the subdivision stage to the satisfaction of Foothill County.

4.7.5 Lots which back onto Municipal Reserve and Environmental Reserve or lands designated Recreation & Open Space District in the Okotoks LUB in Phase 4 and 5 shall have at minimum a 4-inch diameter chain link fence to delineate private land from public space to the satisfaction of Foothills County.

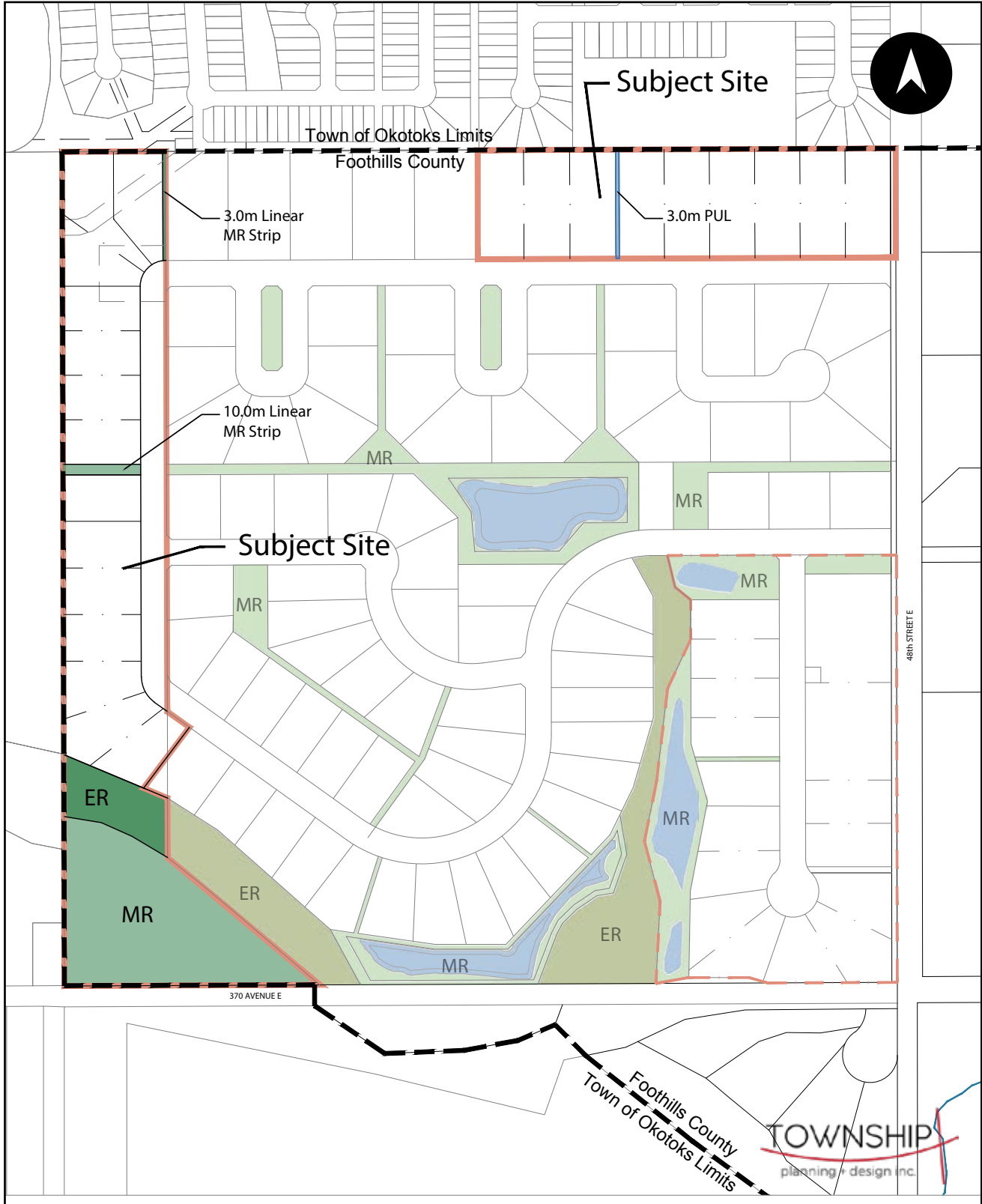


Figure 5 - Open Space Map

05. Architectural Controls

05.1 Purpose

The intention of the Green Haven Estates Architectural Controls is to create a cohesive and harmonious built form consistent with the high quality, environmentally conscious vision of the community. These controls are meant to guide homeowners and inspire variety and creativity while maintaining architectural unity.

05.2 Architectural Theme

An architectural theme has been established for the Plan Area that outlines architectural form and style and aligns with the existing architectural controls for Green Haven Estates. The theme details how to integrate Phases 4 and 5 with the existing Green Haven Estates and surrounding communities. Inspiration is drawn from traditional architectural styles such as Craftsman, Country Ranch, Folk Victorian, Prairie, French Country, Tudor, Georgian, and Colonial homes. These styles lend themselves to adaptation for modern features and conveniences.

POLICIES

5.1.1 Development in Phase 4 and 5 shall conform with the Architectural Controls put in place by the Developer and registered on title by restrictive covenant.

POLICIES

5.2.1 Similar themes, materials, massing and architectural style to those in completed phases of Green Haven Estates and surrounding areas shall be implemented within the Plan Area.

5.2.2 Architectural Controls shall outline a review and approval process that will detail the compliance required prior to approval from the Developer. This will ensure that Architectural Controls are satisfied by the builder prior to the submission of a Development Permit or formal Building Permit to Foothills County.



05.3 Architectural Examples

The photos included on this page provide examples of appropriate built form and urban design for the project area.







06.1 Transportation

External

The site is accessed via 48th Street E, a two-lane surfaced collector road maintained by Foothills County. Road acquisition agreements are in place to facilitate the eventual widening of 48th Street E. 48th Street E intersects with 338 Ave E and 370 Ave E, which provide at grade access to Highway 2 to the West and the Town of Okotoks to the East.

Internal

Internal roads will be constructed by the Developer and ownership transferred to Foothills County upon issuance of a Final Acceptance Certificate. A 25m road standard has been proposed with room for two vehicles to safely pass in all road conditions (refer to **Figure 6**). Internal roads are to be constructed to the satisfaction of Foothills County.

POLICIES

6.1.1 The Developer will execute and comply with the Foothills County Development Agreement for all transportation related construction and contributions to the satisfaction of Foothills County.

6.1.2 The County's Community Sustainability Fee shall be paid by the developer at the subdivision stage on a per lot, by Phase basis.

6.1.3 The designation and design of local roadways within the internal transportation network, including classification, street size, and intersection/access spacing, shall be designed to the satisfaction of Foothills County.

6.1.4 All internal roads shall be constructed by the Developer to the satisfaction of Foothills County. Upon issuance of the Final Acceptance Certificate the County will take over ownership and maintenance responsibilities from the Developer.

6.1.5 Endeavours to Assist should be considered in collaboration with Foothills County. These Endeavours to Assist can address planned excess capacity or support benefiting areas by constructing infrastructure improvements. This consideration ensures the Developer is appropriately compensated for the front-end costs associated with improvements for benefiting lands. These Endeavours to Assist should be determined at subdivision stage and shall be to the satisfaction of Foothills County.

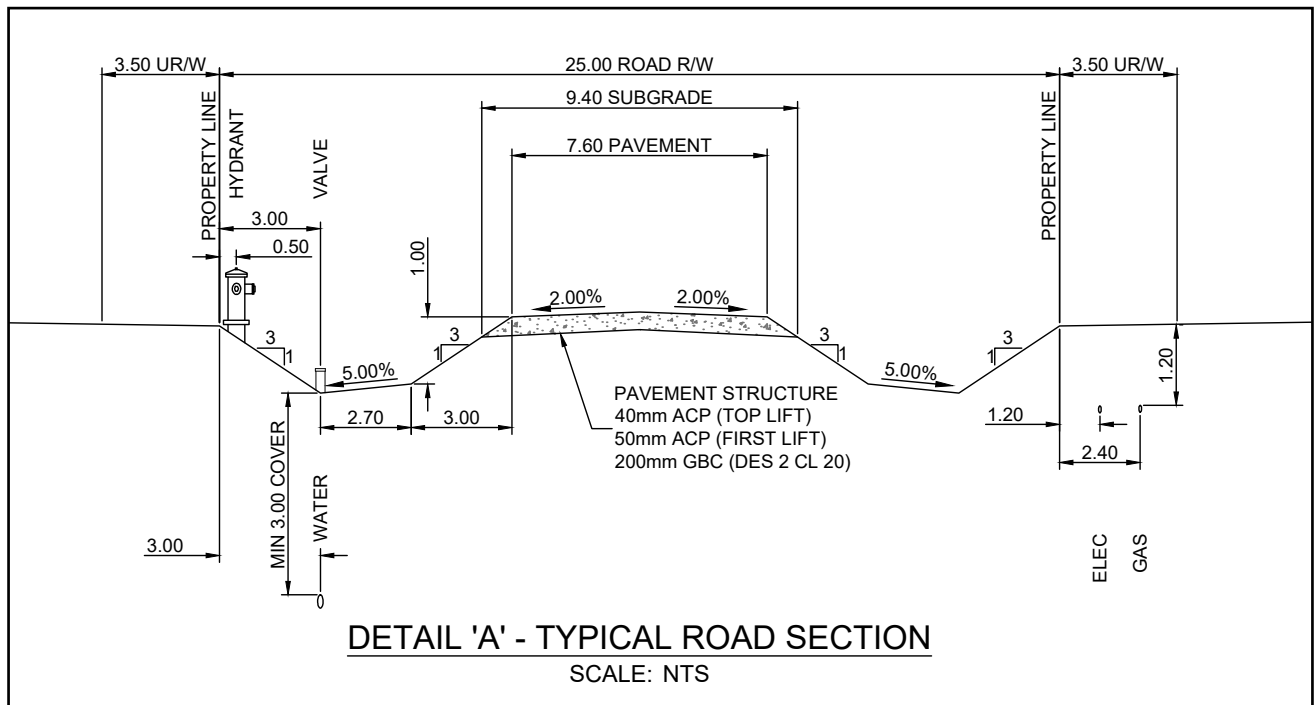


Figure 6 - Road Standard Section

06.2 Shallow Utilities

Shallow Utilities provide services such as power, gas, internet, and telephone to the development area. The Developer is required to ensure that the Plan Area has access to these utilities.

POLICIES

6.2.1 Shallow utility servicing (gas, electrical, telecommunication, and cable) can be provided through the extension of shallow utility infrastructure from existing development and regional facilities in proximity to the Plan Area. Shallow utility providers shall be engaged as part of subsequent planning and/or detail design stages to determine shallow utility requirements. Any necessary upgrades shall be completed by the Developer to the satisfaction of the utility companies and Foothills County.

6.2.2 The Developer shall execute and comply with the Foothills County Development Agreement for all utility related construction, including shallow utilities and any required contribution towards utility construction to the satisfaction of Foothills County.

06.3 Potable Water Servicing

The Green Haven Estates Water Treatment Plant and Water Distribution System were taken over by Foothills County in the Summer of 2021, and the County now owns and operates this potable water system. The water supply for Green Haven Estates is currently provided by one of two existing production wells that according to the 2007 EBA Report have the capacity to service more than 111 units at full build out (refer to **Table 4** for details). Home builders are required to follow water restrictions guidelines which are in place to reduce water consumption; these restrictions are registered on title by restrictive covenant.

Figure 7 outlines the potable water servicing for the site. All residential lots will include a 25mm service connection to a 200mm PVC water distribution system. Hydrants are located throughout the site to provide adequate fire protection coverage.

Phase 3 will include an extension of the existing 200mm PVC water main connecting to Green Haven View. The site was partially serviced during construction of Phase 2a to provide a connection from the production well on Phase 3 land to the Water Treatment Plant. This existing main will be extended to the south end of the cul-de-sac.

Phase 4 is located directly adjacent to the existing 200mm water main within Green Haven Drive. No additional main extensions are required to service the site. Individual 25mm lot services will connect directly to the existing main.

Phase 5 will include an extension of the existing 200mm PVC water main connecting to Green Haven Drive at the north end and Green Haven View at the south end. These connections will provide a complete looped system.

Phase	Number of Lots
Phase 1	27
Phase 2 A	22
Phase 2 B	23
Phase 3	16
Phase 4	9
Phase 5	14
Total	111

Table 4 - Residential Lots

POLICIES

6.3.1 Utility Rights-of-Way and associated easements shall be identified and provided to the satisfaction of Foothills County at the subdivision stage.

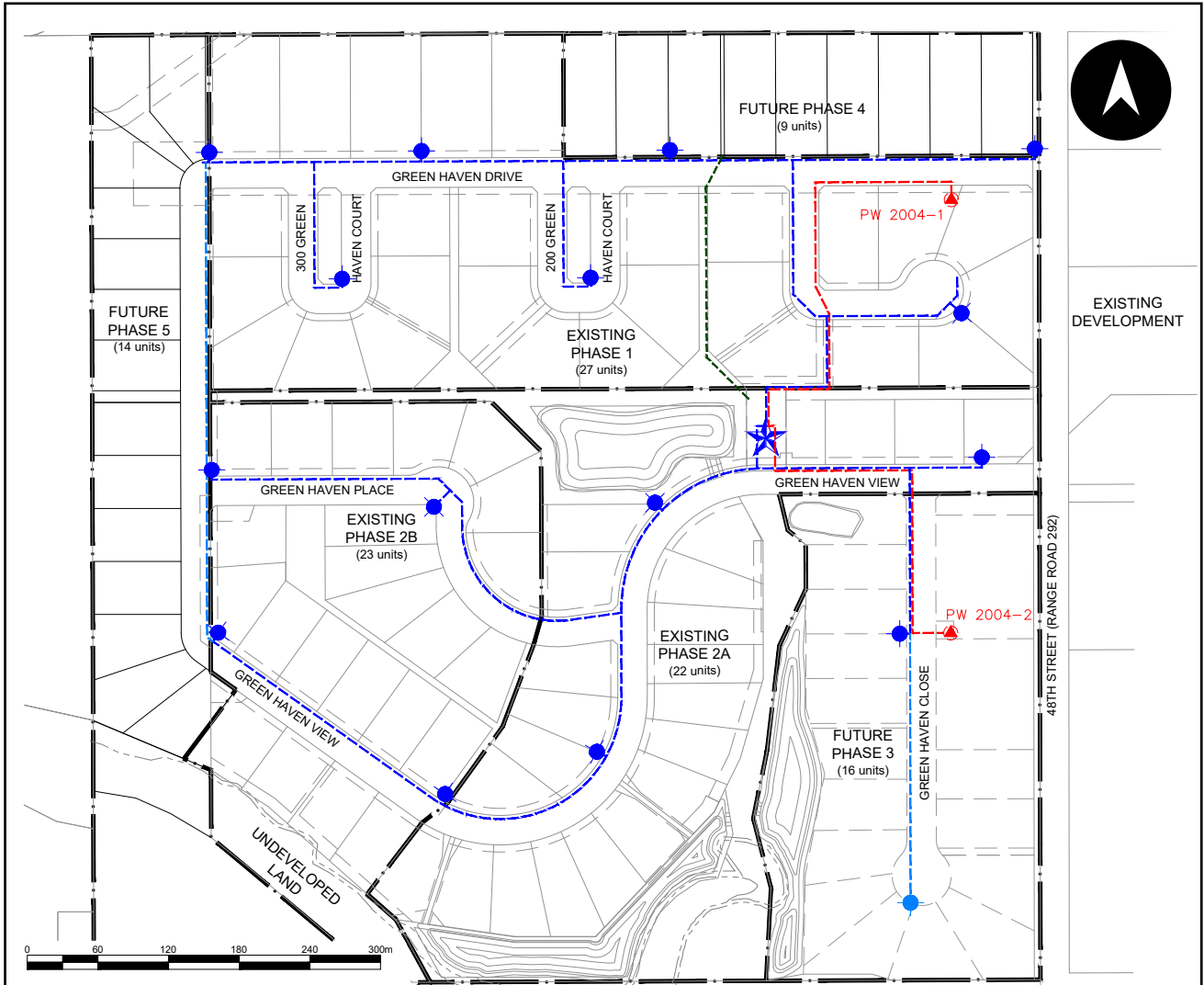
6.3.2 Water utilities shall be provided during the subdivision stage.

6.3.3 Potable water supply required to service the Plan Area shall be delivered through connection to the existing production wells and distribution system at the cost of the Developer.









6.3.4 Future development within the Plan Area shall utilize water conservation measures such as low flow fixtures and water meters, to the satisfaction of Foothills County.

6.3.5 The Developer shall execute and comply with the Foothills County Development Agreement for all utility related construction, including water, the \$5000 per lot contribution fee, and any required contribution towards utility construction to the satisfaction of Foothills County.

6.3.6 Endeavours to Assist should be considered in collaboration with Foothills County. These endeavours can address planned excess capacity or support benefiting areas by constructing infrastructure improvements. This consideration ensures the Developer is appropriately compensated for the front-end costs associated with improvements for benefiting lands. These endeavours should be determined at subdivision stage and shall be to the satisfaction of Foothills County.



LEGEND

-  PHASE BOUNDARY
-  EXISTING WATER DISTRIBUTION LINE
-  FUTURE WATER DISTRIBUTION LINE
-  EXISTING WATER SUPPLY LINE
-  EXISTING HYDRANT
-  FUTURE HYDRANT
-  EXISTING WATERTREATMENT FACILITY
-  EXISTING WELL

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Project					GREEN HAVEN ESTATES				
Client					2263582 ALBERTA LTD				
Title					WATER DISTRIBUTION SYSTEM				
Drawn	Check	Date	Scale	Drawing No.					
LS	NR	2022-04-12		81304-FIG-02					

Figure 7 - Potable Water Servicing Alignment

06.4 Wastewater Servicing

A Level IV Private Sewage Treatment System (PSTS) Assessment was completed by Groundwater Resources Information Technologies Ltd. (GRIT) in September 2022 using the Alberta Private Sewage Systems Standard of Practice (2015) and Model Process for Subdivision Approval (Alberta Association of Municipal District and Counties, 2011). The full report can be found under separate cover.

Given the composition of soil on the site and presence of a substantial amount of overlying clay, the production wells on site are considered to be at low risk for infiltration by surface water. The clay also provides a barrier against potential migration of septic field effluent.

Test pits dug on the site indicate that all soil types present will support septic effluent. A shallow water table is present under the lots in Phase 4 and it is recommended that a septic field mound system be utilized in order to reduce the risk of system failure.

Soil composition in Phase 5 can support traditional below grade septic fields for primary and secondary treated effluent.

Three (3) lots in Phase 3 do not meet the necessary setback requirements from the adjacent production well. While the rest of the lots in Phase 3 have been subdivided into their market dimensions these lots have been separated into two (2) parcels.

All lots within Phase 5 meet the required setbacks. Lots 1-4 (refer to **Figure 8** for detail) in Phase 4 are impacted by the adjacent production well; therefore the PSTS will need to be placed at the rear of the lots in order to comply with the setback requirements.

POLICIES

6.4.1 The Developer shall ensure lot dimensions/sizes meet provincial regulations for private sewage setbacks at the time of Subdivision to the satisfaction of Foothills County.

6.4.2 The design for Private Sewage Treatment Systems shall comply with the requirements of Foothills County Servicing Standards as well as any applicable provincial guidelines.

6.4.3 Wastewater service to the Plan Area shall be delivered by individual high-efficiency tertiary treatment systems at the cost of the Developer and to the satisfaction of Foothills County. This is a requirement by restrictive covenant on title.

6.4.4 Individual Private Sewage Treatment Systems shall meet the requirements laid out in the Architectural Controls.

6.4.5 A Level IV PSTS Assessment was completed by the Developer in 2022. The Developer will implement the recommendations of the Assessment as required and to the satisfaction of Foothills County.

6.4.6 Individual septic systems shall be located 100m from any production well (refer to **Figure 8**), as required by the Alberta Private Sewage Systems Standard of Practice 2021.

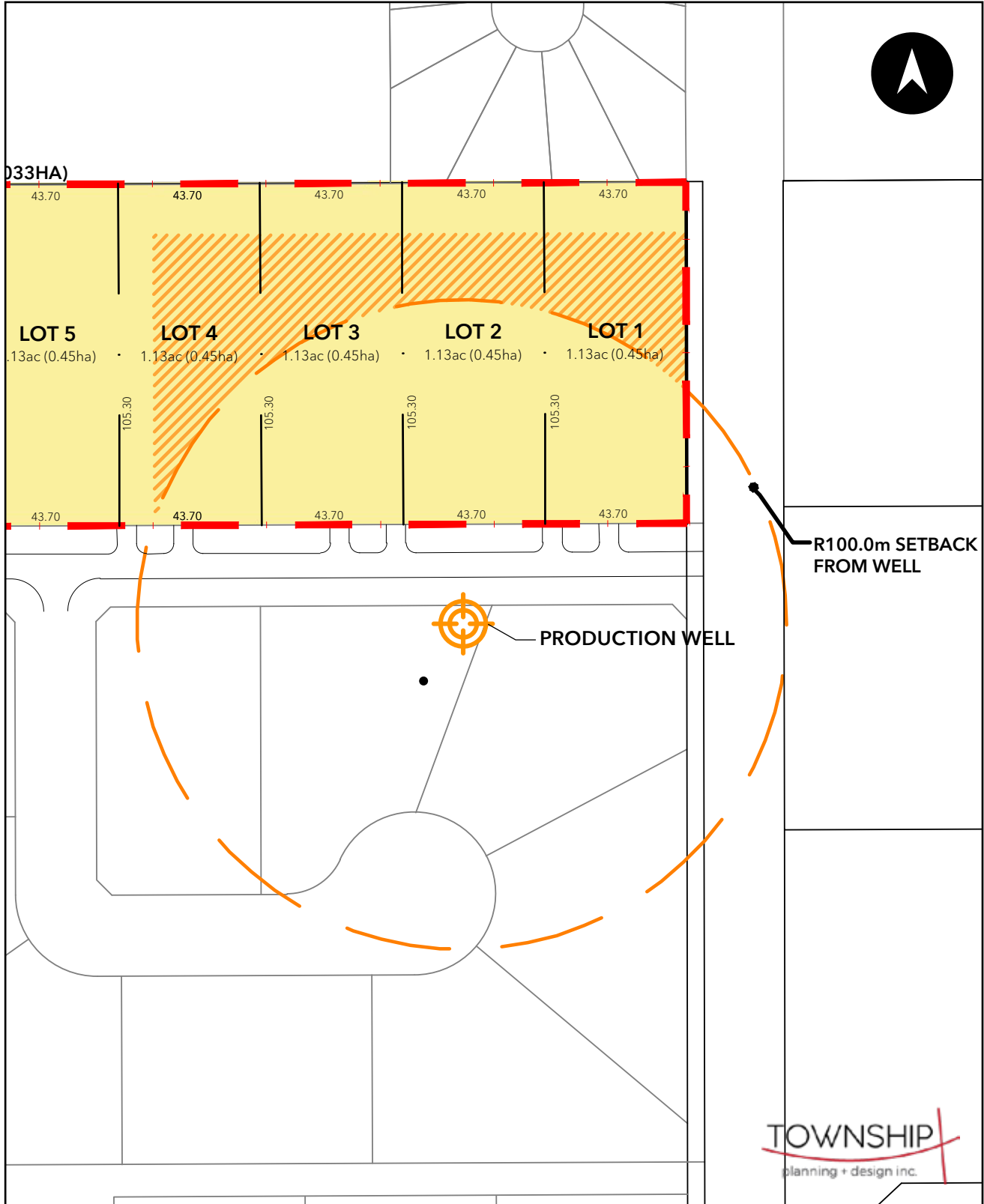


Figure 8 - Production Well Setback

06.5 Stormwater Servicing

The Green Haven Estates stormwater drainage system includes a combination of overland drainage ditches and grass swales, as well as an underground pipe system connecting to the three storm ponds with outfalls to the coulee flowing to the Sheep River.

The following stormwater drainage studies have been completed to date:

- Master Drainage Report, Westhoff Engineering Resources in October 2008.
- Phase 1 SWMR, Westhoff Engineering Resources in October 2008
- Phase 2 & 3 SWMR, Scheffer Andrew Ltd., October 13, 2013

Phase 3 will include construction of the proposed Phase 3 storm pond in accordance with the Green Haven Estates Phase 2 & 3 Stormwater Management Report prepared by Scheffer Andrew, October 13, 2013. Drainage will be collected in roadside ditches and grass swales and directed towards the new Phase 3 storm pond. The Phase 3 storm pond will include construction of a new outfall structure releasing stormwater to the coulee at a controlled rate.

Phase 4 land is within the existing Phase 1 storm pond catchment. Runoff from the site will adhere to the Green Haven Estates Phase 1 Stormwater Management Plan by Westhoff Engineering Resources, October 2008. No additional stormwater infrastructure is required to service Phase 4.

Phase 5 land is within the existing Phase 2a pond catchment. Runoff from the site will adhere to the Green Haven Estates Phase 2 & 3 Stormwater Management Report prepared by Scheffer Andrew, October 13, 2013. Post development flows will not exceed pre-development flows; the back of lots in Phase 5 will flow offsite to the west but will not exceed the pre-development release rate. The proposed roadside ditches and swales will be constructed to direct runoff from the remainder of the site to the Phase 2a storm pond. Details regarding catchment areas, existing and future storm lines, and manholes are depicted in **Figure 9**.

Water Act and Environmental Protection and Enhancement Act (EPEA) approvals are currently in place for full build out of the Green Haven Estates storm drainage system.

POLICIES

6.5.1 All proposed subdivision applications and final designs of stormwater systems shall be supported by a Stormwater Management Plan completed at the Developer's expense to the satisfaction of Foothills County, and all required approvals from Alberta Environment and Parks shall be obtained.

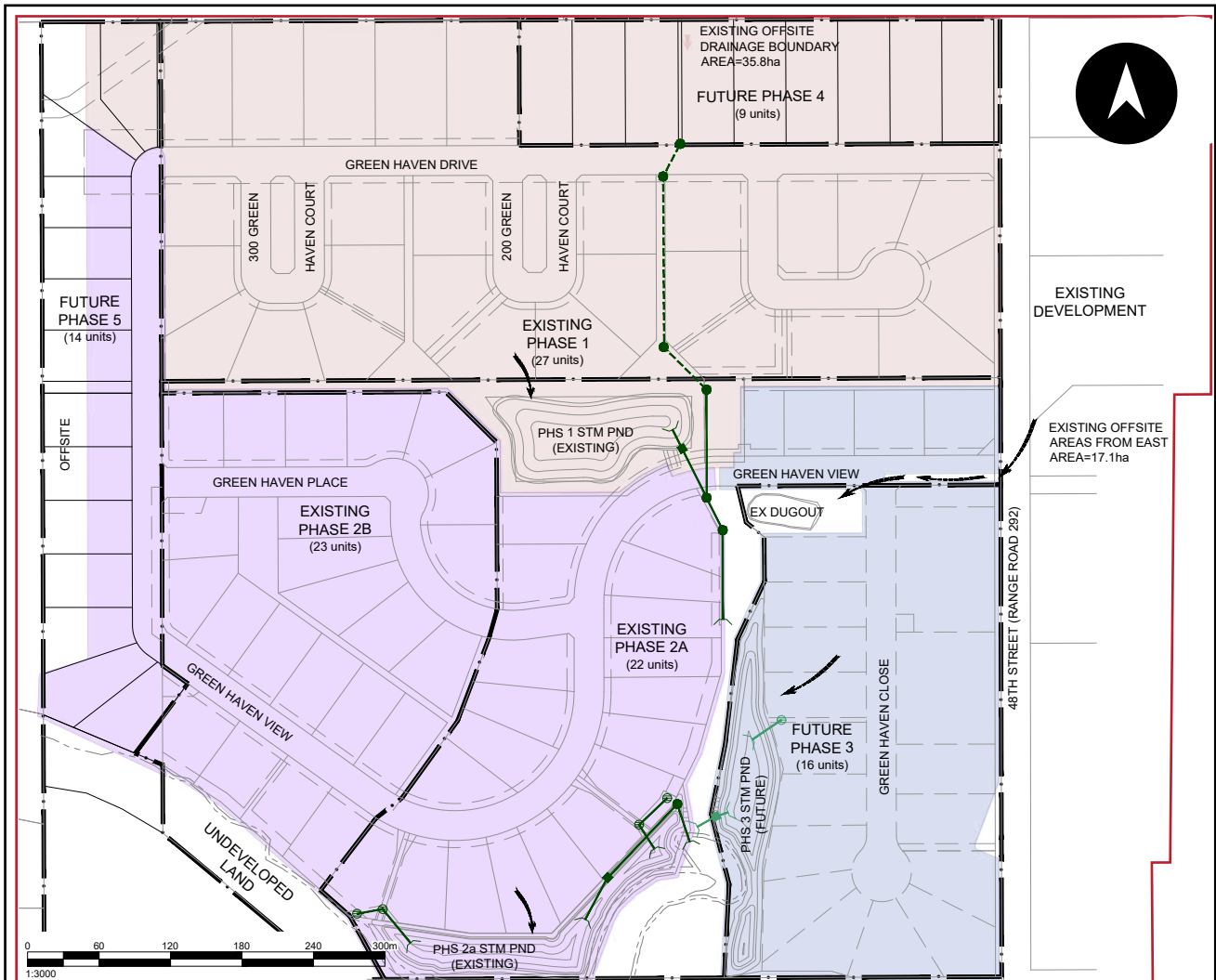
6.5.2 Stormwater management shall include conservation methods such as Best Management Practices (BMP) and should incorporate stormwater reuse principles in subdivision and development designs.

6.5.3 The Stormwater management systems should be designed to provide wetland treatment systems that improve stormwater quality.

6.5.4 Stormwater shall be conveyed in a manner that protects downstream properties.

6.5.5 The Developer will execute and comply with the Foothills County Development Agreement for all utility related construction, including stormwater and any required contribution towards utility construction to the satisfaction of Foothills County.

6.5.6 Endeavors to Assist should be considered in collaboration with Foothills County. These can address planned excess capacity or support benefitting areas as a result of constructing infrastructure improvements. This consideration ensures the Developer is appropriately compensated for the front-end costs associated with improvements for benefitting lands. These endeavours are usually determined at subdivision stage and shall be to the satisfaction of Foothills County.



LEGEND

- | | | | |
|--|--|--|--|
| | PHASE BOUNDARY | | EXISTING PHS 1 STM PND CATCHMENT (24.0ha) |
| | EXISTING STORM LINE | | EXISTING PHS 2a STM PND CATCHMENT (22.2ha) |
| | FUTURE STORM LINE | | FUTURE PHS 3 STM PND CATCHMENT (10.7ha) |
| | EXISTING DRAKE LANDING STORM BYPASS LINE | | |
| | EXISTING 5A MANHOLE | | |
| | FUTURE 5A MANHOLE | | |
| | EXISTING 1S MANHOLE | | |
| | FUTURE 1S MANHOLE | | |
| | EXISTING GRATED TOP MANHOLE | | |
| | FUTURE GRATED TOP MANHOLE | | |



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Project		GREEN HAVEN ESTATES	
Client		2263582 ALBERTA LTD	
Title		STORM WATER	
Drawn	Check	Date	Scale
LS	NR	2022-04-12	1 : 3000
		Date	Drawing No.
			81304-FIG-01

Figure 9 - Stormwater Management

07. Implementation Framework

07.1 Implementation

Adoption of this ASP Amendment will establish specific expectations around the implementation of development. The ASP Amendment provides a framework of policies that must be considered prior to land use amendment approval or subsequent subdivision within the plan area.

Adoption of the ASP Amendment will be considered by Foothills County Council following a statutory Public Hearing. The ASP Amendment must meet requirements of the Municipal Government Act.

Any land use amendment, subdivision, or development permit applications made following the ASP Amendment adoption must follow the policies of the Phase 4 and 5 Amendment document and any other Foothills County development requirements.

Land use redesignation of Phase 4 and 5 will occur concurrently with the ASP Amendment adoption. Subdivision will take place in stages to meet design and market considerations.

07.2 Public Engagement

Consultation with members of the current development and neighbouring communities occurred through letter mail out containing a map and development details, information on the Green Haven Estates website, discussions with affected property owners, and attendance at a Home Owners' Association meeting. Individual meetings or small group meetings with affected parties occurred when required, following Covid Protocols. A summary of feedback received during the engagement process has been provided to Foothills County under separate cover.

07.3 Phasing

Phase 4

Development will initially proceed on Phase 4 as the parcel has pre-existing access to both the transportation network and servicing.

Phase 5

Phase 5 will occur following the completion of Phase 4 and the internal road network connecting Green Haven View to Green Haven Drive. Servicing will be available at that time and development can proceed according to market demand.

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