


PUBLIC HEARINGS AND MEETINGS
PLANNING AND DEVELOPMENT REPORT TO COUNCIL
RESCIND AREA STRUCTURE PLAN (ASP)
LAND USE REDESIGNATIONS AND DENSITY EXEMPTION
June 4, 2025
To be heard at: 1:30 PM

RESCIND WOOD VALLEY ESTATES ASP		
LAND USE REDESIGNATIONS (TWO PARCELS) DENSITY EXEMPTION		
APPLICATION INFORMATION	FILE NOS. 25R 030, 25R 031, 25R 032	
	LEGAL DESCRIPTIONS: WOOD VALLEY ESTATES ASP 1. Multiple legal descriptions within NW 36-21-02-W5M 2. Multiple legal descriptions within SW 36-21-02-W5M	
	REDESIGNATION WITH DENSITY EXEMPTION (Patricia Holden): Plan 0211261, Block 3, Lot 3, PTN: NW 36-21-02-W5M	
	REDESIGNATION WITH DENSITY EXEMPTION (Morgan Holden): Plan 7810781, Block 4, PTN: NW 36-21-02-W5M	
	LANDOWNERS: Patricia Holden and Morgan Holden	
AGENT: Township Planning and Design Inc. / Kristi Beunder		
PROPOSAL: Request to rescind the Wood Valley Estates Area Structure Plan in order to allow the redesignation of Plan 0211261, Block 3, Lot 3 and Plan 7810781, Block 4 from Agricultural District to Country Residential District for the future subdivision of three 3.98 to 4.0 +/- acre Country Residential lots with a 17.90 +/- acre Country Residential District balance parcel, from Plan 0211261, Block 3, Lot 3 and the future subdivision of four 4.76 to 11.20 +/- acre Country Residential District lots with a 5.20 +/- acre balance parcel, from Plan 7810781, Block 4, both with the NW 36-21-02-W5M. The applications would require an exemption to the County's density policy.		
DIVISION NO: 5	COUNCILLOR: Alan Alger	FILE MANAGER: Theresa Chipchase

EXECUTIVE SUMMARY

Summary of Proposal

The applicants are requesting Council consider rescinding the Wood Valley Estates Area Structure Plan (Bylaw 1/2001) which provides the framework for subdivision and development of lands located within the NW/SW 36-21-02-W5M.

Rescinding Bylaw 1/2001 would allow the landowners to proceed with redesignation of Plan 0211261, Block 3, Lot 3, PTN: NW 36-21-02-W5M and redesignation of Plan 7810781, Block 4, PTN: NW 36-21-02-W5M, both parcels being located within the ASP, in order to allow the future subdivision of 7 new Country Residential District lots with two Country Residential District balance parcels, and an exemption to the County's density policy, all of which are not contemplated in the Wood Valley Estates Area Structure Plan.

Location

The subject lands are located approximately 7.5 kilometres west of Highway 552 and 6.3 kilometres south of Hwy 22X. They are also bisected by 1106 Drive West, directly east of 112th

Street West and directly south of 242nd Avenue West, approximately one-half kilometre west of White Post Lane.

Note: 242nd Avenue West on the west side of the application was part of the Provincial Highway system (Secondary Highway 773) which was eventually turned over to Foothills County.

Policy Evaluation

The application was reviewed within the terms of the Foothills County's Municipal Development Plan, Land Use Bylaw 60/2014, the Wood Valley Estates Area Structure Plan and the County's Growth Management Strategy.

Referral Considerations

The application was subject to a 30-day circulation period and was sent out to the required Provincial, Municipal, internal and external bodies, and any comments received have been provided within the Circulation Referral section of this staff report.

PROPERTY DESCRIPTION

MUNICIPAL ADDRESSES:

1. 242082 1106 Dr. W
2. 242084 112 St. W.

LOCATION: The application is located approximately 7.5 kilometres west of Highway 552 and 6.3 kilometres south of Hwy 22X. They are also bisected by 1106 Drive West and are directly east of 112th Street West and directly south of 242nd Avenue West, approximately one-half kilometre west of White Post Lane.

POLICY AREA: The lands have been evaluated within the perimeters of the County's Growth Management Strategy, Municipal Development Plan, Land Use Bylaw and the Wood Valley Estates Area Structure Plan.

CURRENT LAND USES:

WOOD VALLEY ESTATES ASP - Agricultural District, Country Residential District, Country Residential Sub-District A, Municipal Reserve and Environmental Reserve

1. REDESIGNATION (Patricia Holden) - Agricultural District
2. REDESIGNATION (Morgan Holden) - Agricultural District

PROPOSED LAND USES:

RESCIND WOOD VALLEY ESTATES ASP

1. REDESIGNATION WITH DENSITY EXEMPTION (Patricia Holden) - Country Residential District
2. REDESIGNATION WITH DENSITY EXEMPTION (Morgan Holden) - Country Residential District

AREA OF SUBJECT LANDS:

WOOD VALLEY ESTATES ASP - 191.69 acres

1. REDESIGNATION (Patricia Holden) - 29.88 acres
2. REDESIGNATION (Morgan Holden) - 31.22 acres

NUMBER AND SIZE OF PROPOSED NEW PARCELS:

1. REDESIGNATION (Patricia Holden) - Three new 3.98 +/- to 4.0 +/- acre Country Residential District lots with a 17.90 +/- acre Country Residential District balance parcel, with a request for an exemption to the County's density policy, in order to allow 34 lots within the NW 36-21-02-W5M.
2. REDESIGNATION (Morgan Holden) - Two new 4.76 +/- acre Country Residential District lots, one 5.20 +/- acre Country Residential District lot and one 11.20 +/- acre Country Residential District lot with a 5.20 +/- acre Country Residential District balance parcel, with a request for an exemption to the County's density policy, in order to allow 34 lots within the NW 36-21-02-W5M.

PURPOSE OF APPLICATION

1. **BYLAW XX/2025** – being a Bylaw of Foothills County to approve the Wood Valley Estates Area Structure Plan is hereby repealed upon this Bylaw coming into effect.

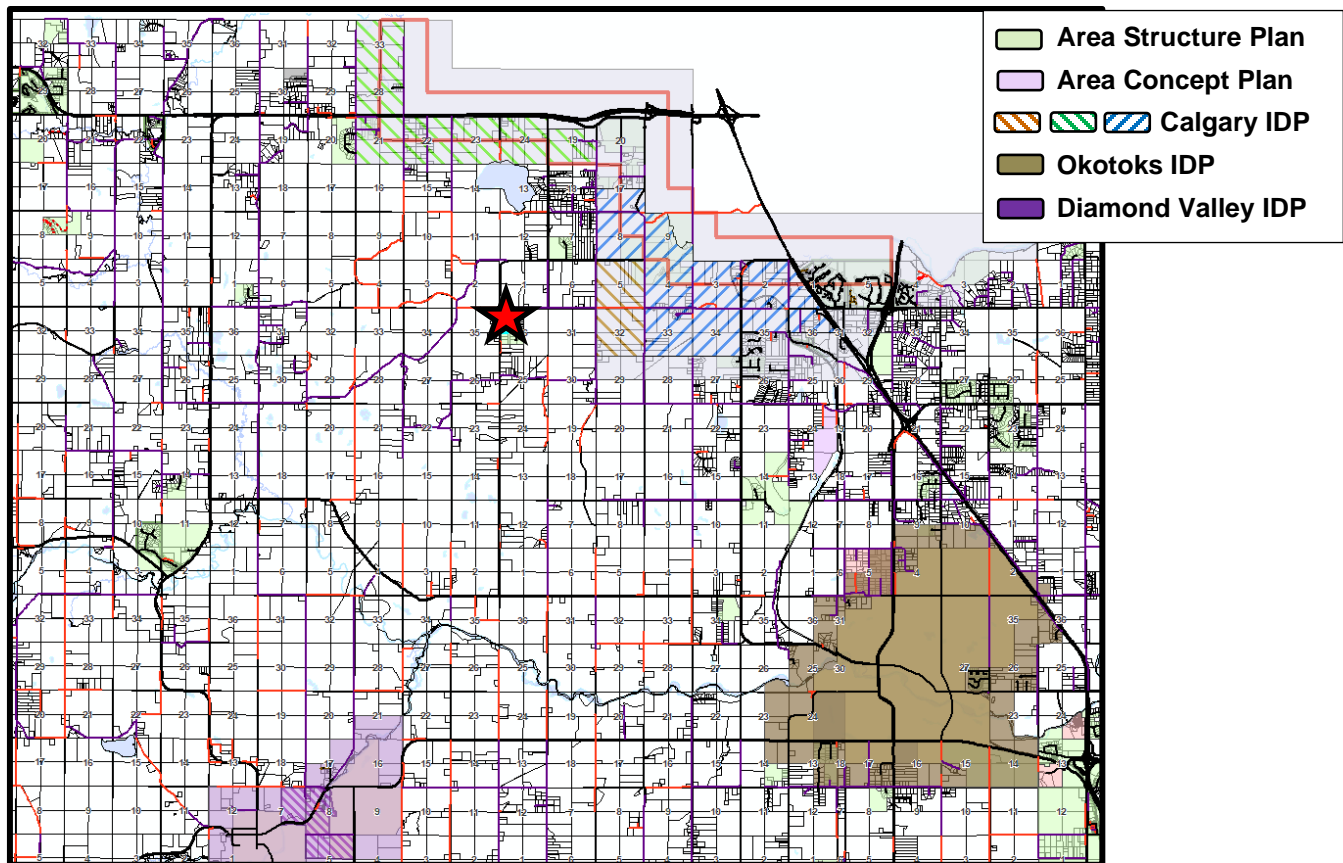
AND

2. **BYLAW XX/2025** – to further amend the Land Use Bylaw by authorizing the redesignation of a 29.88 +/- acre portion on Plan 0211261, Block 3, Lot 3; Ptn. NW 36-21-02 W5M from Agricultural District to Country Residential District, in order to allow for the future subdivision of three new 4.0 +/- acre Country Residential lots with an approximate 17.88 +/- acre Country Residential District balance parcel, and an exemption to the County's density policy.

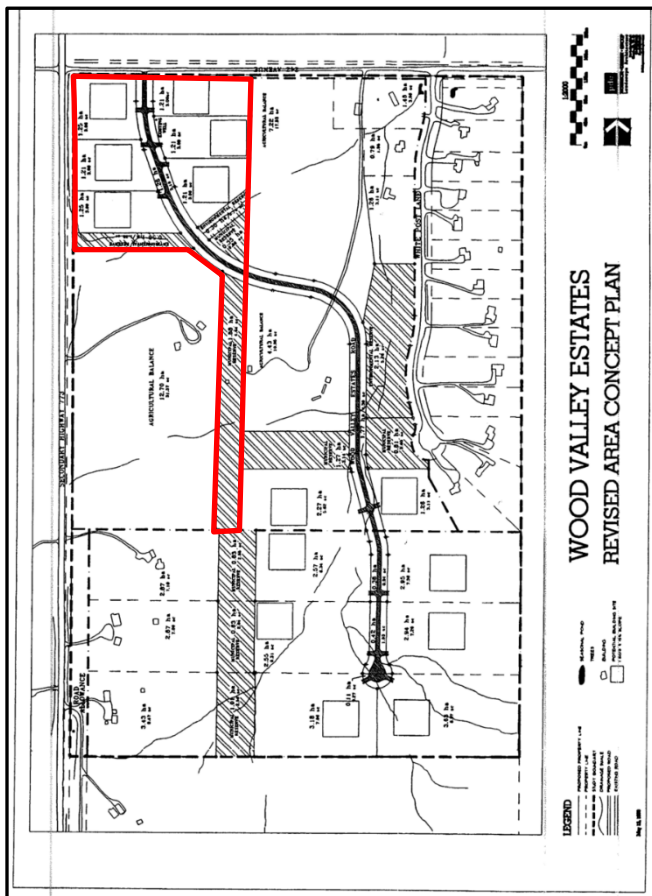
AND

3. **BYLAW XX/2025** - to further amend the Land Use Bylaw by authorizing the redesignation of a 31.12 +/- acre portion on Plan 7810781, Block 4; Ptn. NW 36-21-02 W5M from Agricultural District to Country Residential District, in order to allow for the future subdivision of two new 4.76 +/- acre Country Residential lots, one new 5.20 +/- acre Country Residential lot, and one new 11.20 +/- acre Country Residential lot, with an approximate 5.20 +/- acre Country Residential District balance parcel, and an exemption to the County's density policy.

AREA CONTEXT



The Wood Valley Estates ASP, as shown above, identified by the red star, is located 2.5 kilometres west of the Intermunicipal Development Plan area between the County and the City of Calgary and is approximately three kilometres southwest of the Sulky Ridge Area Structure Plan and approximately eight kilometres east of the Crestview Ranch Estates Area Structure Plan.



1997 – Area Concept Plan for the Holden lands was approved, with amendments made to the Plan in January of 1999.

2000 – Subdivision of six 3.01 to 3.06 acre CR lots, two environmental reserve parcels (totalling 2.10 acres) and two municipal reserve parcels (totalling 5.73 acres) under the ACP were registered.

The approval of the six lots also provided partial construction of 1106 Drive West running between the new lots and left a 31.12 acre balance parcel remaining. The lots were developed over lands within both the northwest and southwest quarters. (as outlined in red to the left and also shown on the map on the preceding page shaded in purple)

May 10th, 2001 – Third reading granted to Bylaw 01/2001 to the Wood Valley Estates Area Structure Plan, to be developed over 191.96 acres of the NW/SW of 36-21-02-W5M.

2002 – 12 Country Residential Sub-District “A” lots were registered under the Wood Valley Estates Area Structure Plan, along with three Municipal Reserve parcels (totalling 11.78 acres) and one Environmental Reserve parcel (5.62 acres) with a 29.88 acre balance in two parts and the construction of an extension to 1106 Drive. The Wood Valley Estates Area Structure Plan also acknowledged the six lots previously approved under the Area Concept Plan, along with a Girl Guide Camp operational on the balance of the property, that was eventually phased out of the Development area. (as shown on the map on the preceding page in shaded in orange). The land use and subdivision approvals required the lots to provide proof of water, underground servicing, \$6000.00 infrastructure levy, storm water management plan, and an engineered road design. The CRA zoning required slope stability testing, high water table testing, and PSTS for all lots as condition of a development permit.

SUMMARY OF PROPOSALS

Council is requested to consider the following components of this application:

1. RESCIND WOOD VALLEY AREA STRUCTURE PLAN

Request to rescind the Wood Valley Estates Area Structure Plan, in order to allow the landowners of a 31.12 acres parcel and a 29.88 acre parcel within the Plan area the ability to further subdivide their properties, which is not contemplated within this ASP.

The applicants have provided within their brief (attached as Appendix C) the following statement regarding the request to rescind the Wood Valley Estates ASP: *“amendments to this document would have to be fulsome in nature, and we do not feel this is an appropriate*

approach given that future subdivision would result in the quarter section reaching full build out. As such, we are applying to rescind Bylaw 1/2001 concurrent with the application for Land Use Redesignation”

2. REDESIGNATION PLAN 0211261, BLOCK 3, LOT 3, PTN: NW 36-21-02-W5M

Request to allow the redesignation of the above noted 29.88 acre Agricultural District parcel from Agricultural District to Country Residential District in order to allow the future subdivision of one 3.98 +/- acre, and two 4.0 +/- acre Country Residential District lots with a 17.90 +/- acre Country District balance.

3. REDESIGNATION PLAN 7810781, BLOCK 4, PTN: NW 36-21-02-W5M

Request to allow the redesignation of the above noted 31.12 acre Agricultural District parcel from Agricultural District to Country Residential District in order to allow the future subdivision of two 4.76 +/- acre Country Residential District lots, one 5.20 +/- acre Country Residential District lot and one 11.20 +/- acre Country Residential District lot with a 5.20 +/- acre Country Residential District balance.

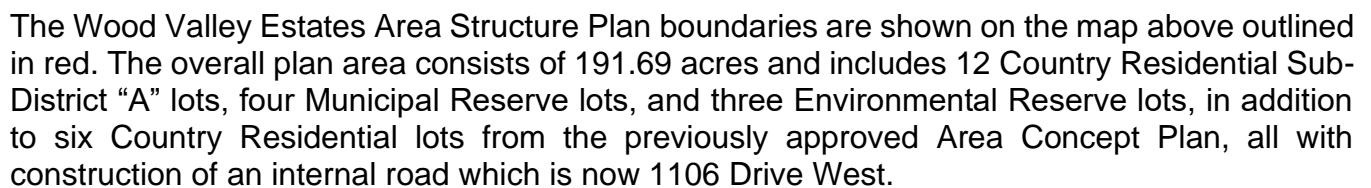
4. EXEMPTION TO COUNTY DENSITY POLICY

Request to allow an exemption to the Policy 13.1.6.2 (a)(i) of the Country Residential District within the County's Land Use Bylaw for Plan 7810781, Block 4, PTN: NW 36-21-02-W5M, which is to allow 34 lots from the quarter section whereby the maximum number of lots within the Policy is 32.

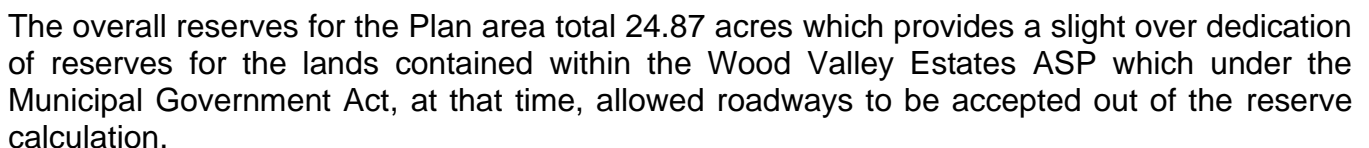
The remainder of the staff report on the remaining pages will provide Council with the following details:

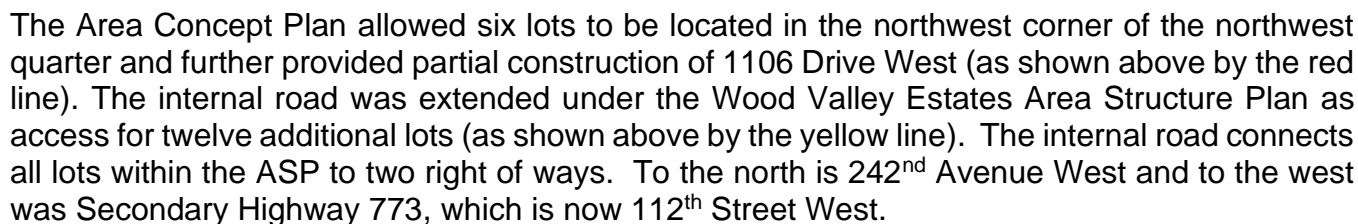
1. Overview of the existing approved Wood Valley Estates Area Structure Plan (proposed to be rescinded). (Full ASP attached as Appendix D)
2. Details of the redesignation of Plan 0211261, Block 3, Lot 3, PTN: NW 36-21-02-W5M
3. Details of the redesignation of Plan 7810781, Block 4, PTN: NW 36-21-01-W5M

ASP Boundaries



Municipal Reserves/ Environmental Reserves





As 112th Street was a Provincial right of way (Secondary Highway 773), the province required the developers of the ASP to provide partial construction of a service road for three lots within along the west boundary of the ASP, (as shown above shaded in green) at the time of subdivision. As direct access onto the Highway was not permitted, additional undeveloped

service road dedication was provided along the frontage of the southwest quarter adjacent to the Highway, south of the applicants.

Servicing Considerations

Water

Water for the overall Wood Valley Estates Area Structure Plan is provided by individually drilled water wells. Acknowledging that the existing White Post Lane development adjacent to the ASP obtains its water from a communal water system, utilizing three wells drilled for this development. The first well was drilled in 1976, the second in 1984, and the third in 1987, with deepening of the first well also completed at this time. The complete findings with regards to these wells can be found within the Wood Valley Estates Area Structure Plan attached to this staff report as Appendix D.

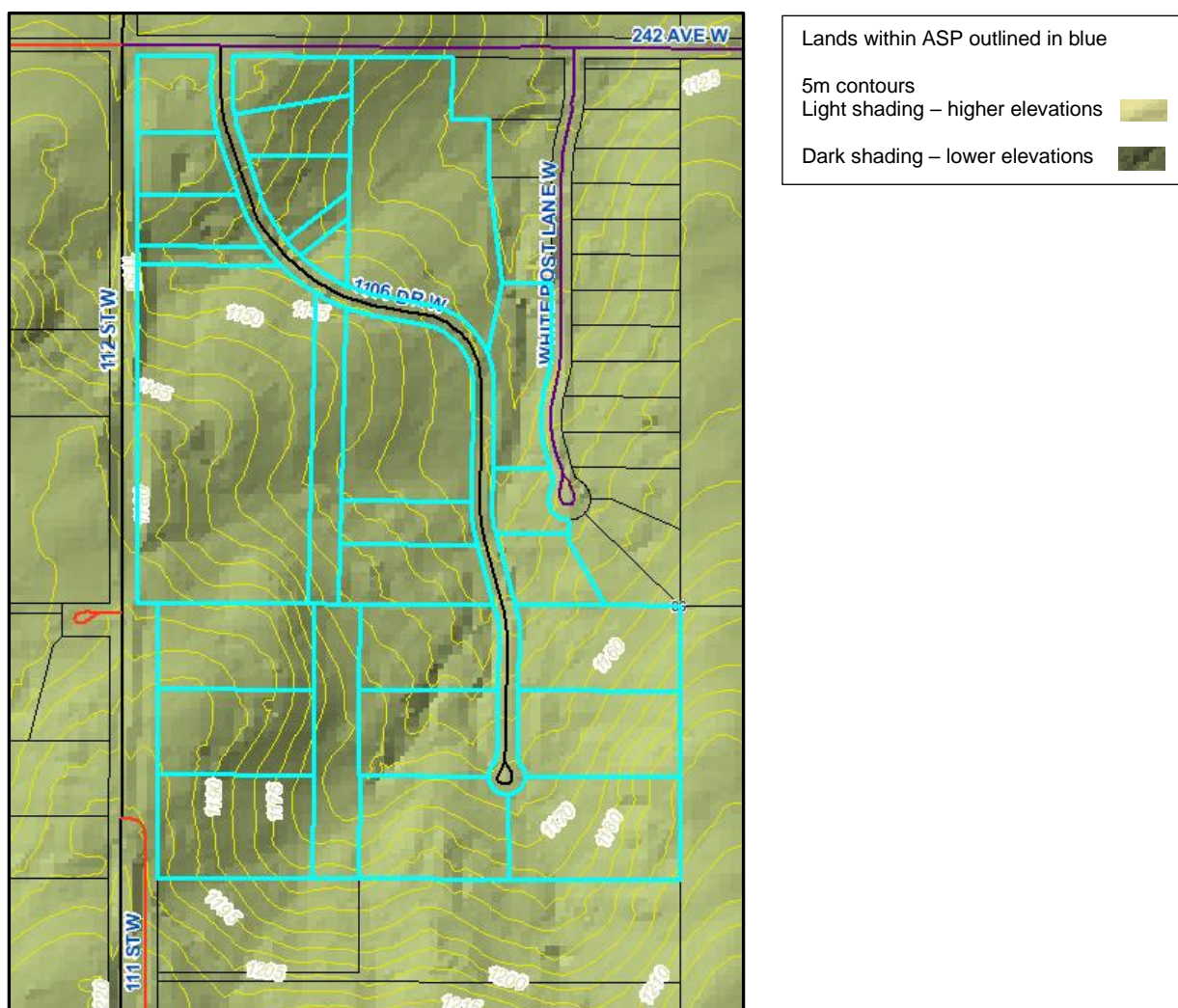
Wastewater

The Wood Valley Estates Area Structure Plan required individual sanitary sewage treatment for each of the lots within the development with geotechnical testing completed for those systems.

Storm Water Management

A stormwater management plan was provided for the development area along with the internal road design as a condition of the land use redesignation approval.

PHYSIOGRAPHY



The Wood Valley Estates ASP described the overall physiography of the Plan area as follows:

“Wood Valley Estates is located within a bowl shaped landform that generally slopes from south to north. The high point on the site is located in the southwest corner of the Plan Area. The low point is near the entrance to White Post Lane and the north end of the site. With this planning area there is a difference of some 95 degrees in elevation. Slopes vary from steep, +/- 20% to flat +/- 3%. The area drains to the north through a central ravine, that receives drainage flows from neighbouring lands to the east and from the balance of the site. The central ravine generally bisects the subject lands. The site is being used primarily for residential acreages and as marginal grazing land for a small number of cattle. The soils are Class 4 according to the Canada Land Inventory. Class 4 soils have severe limitations that restrict the range of crops or may require special conservation practices.

Existing buildings include four residences located off SH773, six lots currently under development on the northwest corner of the parcel, two single family residences located on the west side of White Post Lane, itself containing fifteen other residences of approximately 0.81 hectares (2 acre) parcels, and a former girl guide camp located near the center of the site. The development of the six lots on the northwest corner of the subject parcel has included the reconstruction of the western portion of 242 Ave. and an entrance road that will serve this proposed development.”

REDESIGNATION OF PLAN 0211261, BLOCK 3, LOT 3, PTN: NW 36-21-02-W5M

Summary of Proposal

Redesignation of Plan 0211261, Block 3, Lot 3, PTN: NW 36-21-02-W5M, in order to provide the future subdivision of one 3.98 +/- acre, and two 4.0 +/- acre Country Residential District lots with a 17.90 +/- acre Country District balance, and to allow an exemption to the County's density policy.

Location

The balance parcel would be located directly south of 242nd Avenue West and directly north of 1106 Drive West, with the three new lots also directly south and west of 1106 Drive West. The new lots are buffered from adjacent development by previously dedicated Municipal Reserve parcels to the west and to the south under the Wood Valley Estates Area Structure Plan.

Access

Access to all three new lots is proposed from 1106 Drive West with the access to the balance existing in two locations, one approach is from 1106 Drive West, which provides access to the existing yard site, with an additional approach from the north boundary off of 242nd Avenue West.

Water and Septic

There is a water well for the existing residence within the proposed balance parcel, with an additional water well drilled in 2024 on proposed Lot 2. The Q20 report provided for Lot 2 shows this well to be capable of providing the requirements under the Provincial Water Act including the requirement for the provision of 1250 cubic metres per year and indicates no interference with any other household users was to be expected. The well report for the residence on this parcel has been provided and is attached to this staff report as part of Appendix C.

Building Envelopes

The contour plan provided by the applicant's agent indicates good building envelopes with slopes generally under 15%.

Structures

The balance parcel would contain a residence with an attached garage and a small shop/barn. This parcel also contains two shipping containers.

NOTE: The proposed 17.91 +/- acre balance parcel would require approval on a development permit application in order to retain the two sea cans on the property.

Bed and Breakfast

The parcel has a one bedroom bed and breakfast development permit, approved by the County's Planning and Development department in 2023.

Density

The future subdivision of both Plan 0211261, Block 3, Lot 3, PTN: NW 36-21-02-W5M and Plan 7810781, Block 4, PTN: NW 36-21-02-W5M would bring the quarter section to 34 lots which would require an exemption to the County's density policy with respect to Residential Policy 15 of the County's MDP2010 and Section 13.1.6.2 (a)(i) of the Country Residential District within the County's Land Use Bylaw, whereby the maximum allowable density for a quarter section is 32 lots.

REDESIGNATION OF PLAN 7810781, BLOCK 4, PTN: NW 36-21-02-W5M

Summary of Proposal

Redesignation of Plan 7810781, Block 4, PTN: NW 36-21-02-W5M, in order to provide the future subdivision of four 4.76 to 11.20 +/- acre Country Residential District lots with a 5.20 +/- acre balance parcel, and to allow an exemption to the County's density policy.

Location

Lot 1 and the balance parcel would be located directly south of 1106 Drive West with Lots 2 through 4 located directly east of 112th Street West. Lots 2 through 4, as well as the balance, would be buffered from the adjacent development to the east through the previously dedicated Municipal Reserve parcels to the west, with Lot 1 buffered from adjacent development to the north by a previously dedicated Environmental Reserve, both provided under the Wood Valley Estates Area Structure Plan.

Access

Access to Lot 1 and the balance parcel are proposed from a common approach off of 1106 Drive West on the east side of the parcel. Access to proposed Lot 2 is to remain from an existing approach off of 112th Street West on the west side of the Lot. Access to Lots 3 and 4 are proposed from the surveyed out, undeveloped service road located directly south of the lots, via the construction of a 30 m x 30 m turnaround.

NOTE: The applicants have also illustrated that a continued 30 metre wide service road dedication along the west boundary of their parcel, matching the service road already surveyed out of the titles south of the applicant, may also be provided should it be required by Council.

Water and Septic

There is a water well for the existing residence to be located on the balance parcel. The Q20 report provided for the proposed balance parcel shows this well to be capable of providing the requirements under the Provincial Water Act including the requirement for the provision of 1250 cubic metres per year and no interference with any other household users. Well report for the residence on this parcel has been submitted and is attached to this staff report as part of Appendix C.

Building Envelopes

The contour plan provided by the applicant's agent indicates challenging building envelopes with slopes in excess of 15% for large portions of Lots 1, 3 and 4. Lot 2 would utilize the existing driveway and have good building sites, and the balance would contain the existing yard site.

Structures

The balance would contain all structures which includes the residence, gazebo, a 1530 square foot shop, a tack room and a storage barn. The site plan indicates all structures to meet the County's required setback distances and further provides that the tack room, storage barn and a small shelter within proposed Lot 1 are to be removed.

Density

The future subdivision of both Plan 0211261, Block 3, Lot 3, PTN: NW 36-21-02-W5M and Plan 7810781, Block 4, PTN: NW 36-21-02-W5M, would bring the quarter section to 34 lots which would require an exemption to the County's density policy with respect to Residential Policy 15 of the County's MDP2010 and Section 13.1.6.2 (a)(i) of the Country Residential District within the County's Land Use Bylaw, whereby the maximum allowable density for a quarter section is 32 lots.

POLICY EVALUATION

Municipal Development Plan (MDP 2010)

The Agricultural section of the MDP2010 discourages the subdivision of Agriculturally zoned lands outlining support for maintaining the integrity of the agricultural land base.

The Residential section of the MDP2010 provides that residential parcels should be compatible with the surrounding area and existing uses. Further recognizing that the design and infrastructure of residential development should consider the efficient use of land, the cumulative effects of development, the suitability of the lands for residential use, the environmental impact, the functional linkage of the proposal to adjoining lands and the conservation of water.

Policy 15 of the Residential section of the MDP2010 provides that subdivision shall comply with the density, parcel size, and servicing requirements as outlined in the appropriate section of the Land Use Bylaw. The development as proposed would not comply with the density requirements under the County Residential District of the Foothills County Land Use Bylaw.

Land Use Bylaw (LUB)

Should Council agree to rescind the Wood Valley Estates Area Structure Plan, approval of the subsequent redesignation applications would meet the lot size restrictions within the Country Residential District, however the proposed future subdivision of Plan 0211261, Block 3, Lot 3, PTN: NW 36-21-02-W5M and Plan 7810781, Block 4, PTN: NW 36-21-02-W5M would bring the quarter section to 34 lots which would require an exemption to the County's density requirements as set out in Section 13.1.6.2 of the Country Residential District within the County's Land Use Bylaw.

Growth Management Strategy (GMS)

The subject parcel is located within the North West District as noted within Foothills County's Growth Management Strategy. The vision for the North West District identifies that lands which fall within this District are expected to see intensified and significant development.

CIRCULATION REFERRALS

REFEREE	COMMENTS
INTERNAL	
Public Works	<p>Requires the following as conditions of the subdivision approval for all new lots for Plan 0211261, Block 3, Lot 3, PTN: NW 36-21-02-W5M (Patricia Holden):</p> <ul style="list-style-type: none"> • Geotechnical report for slope stability • Septic Disposal Evaluation (PSTS) (for all lots including the balance) • Building envelopes <p>Requires the following as conditions of the development permit approval for Plan 0211261, Block 3, Lot 3, PTN: NW 36-21-02-W5M (Patricia Holden):</p> <ul style="list-style-type: none"> • Lot grading /Overland Drainage Plan <p>Overall comments for Plan 0211261, Block 3, Lot 3, PTN: NW 36-21-02-W5M (Patricia Holden):</p> <ul style="list-style-type: none"> • The Developable area may include areas with slopes greater than 15% should an accompanying slope stability assessment or analysis report, that certifies slope stability, prior to, during and after, development is to meet the required Factor of Safety of 1.5. The slope stability analysis report must provide geotechnical covenants or setback distances to maintain slope stability for such areas. Actual drill test holes are required. • Proof of water will be required as per the Provincial Water Act. Public Works has concerns with water availability in this area. <p>Requires the following as conditions of the subdivision approval for all new lots for Plan 7810781, Block 4, PTN: NW 36-21-01-W5M (Morgan Holden):</p> <ul style="list-style-type: none"> • Geotechnical report for slope stability • Septic Disposal Evaluation (PSTS) (for all lots including the balance) • Building envelopes <p>Requires the following as conditions of the development permit approval for the subject lands for Plan 7810781, Block 4, PTN: NW 36-21-01-W5M (Morgan Holden):</p> <ul style="list-style-type: none"> • Lot grading /Overland Drainage Plan <p>Overall comments for Plan 7810781, Block 4, PTN: NW 36-21-01-W5M (Morgan Holden):</p> <ul style="list-style-type: none"> • Approaches are to be paved and built to County standards • The Developable area may include areas with slopes greater than 15%. should an accompanying slope stability assessment or analysis report indicate slope stability prior to, during and after, development is to meet the required Factor of Safety of 1.5. The slope stability analysis report must provide geotechnical covenants or setback distances to maintain slope stability for such areas. Actual drill test holes are required. • Proof of water will be required as per the Provincial Water Act. Public Works has concerns with water availability in this area.

CIRCULATION REFERRALS

	<ul style="list-style-type: none"> The 30 x 30 metre area that is to provide access to Lots 3 and 4 does ensure there is only one access point from 112th St. W instead of two approaches. Public Works will not maintain the 30 x 30 metre area. Alternatively, the 30 meter road area the applicant has provided by caveat may be surveyed out and a gravel surface road could be constructed in order to provide access to Lots 2, 3, and 4 which would reduce the direct access points from 112th St. W.
GIS/Mapping	<p>Morgan Holden (Plan 7810781, Block 4, PTN: NW 36-21-01-W5M)</p> <p>With regards to the subdivision application for Morgan Holden, please add a post approval condition to the subdivision that the applicant is to contact the GIS department once the approaches are built to obtain new civic addresses.</p> <p>Patricia Holden (Plan 0211261, Block 3, Lot 3, PTN: NW 36-21-02-W5M)</p> <p>No concerns with regards to the Patricia Holden application.</p>
Long Range Planning	No concerns with the proposed rescinding of the Wood Valley Estates ASP, or the proposed redesignation to allow the future subdivisions.
EXTERNAL	
FortisAlberta	FortisAlberta has no concerns.
PUBLIC	
Western Wheel	May 21 st and May 28 th , 2025, editions.
Landowners (Half Mile)	No letters received prior to submission of this staff report

SUMMARY

- 1. BYLAW XX/2025** – being a Bylaw of Foothills County to approve the Wood Valley Estates Area Structure Plan is hereby repealed upon this Bylaw coming into effect.

AND

- 2. BYLAW XX/2025** – application to further amend the Land Use Bylaw by authorizing the redesignation of a 29.88 +/- acre portion on Plan 0211261, Block 3, Lot 3; Ptn. NW 36-21-02 W5M from Agricultural District to Country Residential District, in order to allow for the future subdivision of three new 4.0 +/- acre Country Residential lots with an approximate 17.88 +/- acre Country Residential District balance parcel and to allow for an exemption to the County's current density policy.

AND

- 3. BYLAW XX/2025** - application to further amend the Land Use Bylaw by authorizing the redesignation of a 31.12 +/- acre portion on Plan 7810781, Block 4; Ptn. NW 36-21-02 W5M from Agricultural District to Country Residential District, in order to allow for the future subdivision of two new 4.76 +/- acre Country Residential lots, one new 5.20 +/- acre Country Residential lot, and one new 11.20 +/- acre Country Residential lot, with an approximate 5.20 +/- acre Country Residential District balance parcel and to allow for an exemption to the County's current density policy.

OPTIONS FOR COUNCIL CONSIDERATION

COUNCIL TO PROVIDE DECISIONS ON THE FOLLOWING THREE BYLAWS:

1. WOOD VALLEY ESTATES – REQUEST TO RESCIND BYLAW 01/2001

OPTION A – APPROVE (FIRST READING TO BYLAW)

Should Council be of the opinion that the proposed Bylaw to rescind the Wood Valley Estates ASP has merit, is consistent with the existing municipal policy framework and no significant planning considerations have been brought forward through the public hearing process that cannot be resolved through the planning process; Council may choose to grant first reading to Bylaw XX/2025 which would repeal Bylaw 01/2001, in order to rescind the Wood Valley Estates Area Structure Plan.

OPTION B - REFUSE

Should Council be of the opinion that the proposed Bylaw to rescind the Wood Valley Estates ASP does not have sufficient merit, is not consistent with the existing municipal policy framework or significant planning considerations have been brought forward which Council does not feel can be resolved through the planning process, Council may choose to refuse to repeal Bylaw 01/2001 for the Wood Valley Estates Area Structure Plan.

2. REDESIGNATION – PLAN 0211261, BLOCK 3, LOT 3, PTN: NW 36-21-02-W5M

OPTION A – APPROVAL

Council may choose to grant 1st reading to the application for redesignation of Plan 0211261, Block 3, Lot 3, PTN: NW 36-21-02-W5M from Agricultural District to Country Residential District, in order to allow the future subdivision of one (1) 3.98 +/- acre and two (2) 4.0 +/- acre Country Residential District lots, with a 17.90 +/- acre Country Residential District balance parcel and to allow for an exemption to Section 13.1.6.2 of the Country Residential District, for the following reasons:

Acknowledging Council's approval of first reading to a Bylaw rescinding the Wood Valley Estates Area Structure Plan, Council provides the following in support of the land use application and density exemption:

In their consideration of the criteria noted in Agriculture Policy 4 of the MDP2010, the Council is of the opinion that fragmentation of the subject lands would not be detrimental to the agricultural nature of the area.

Additionally, the application falls within the lot size restrictions set out within the Country Residential within the County's Land Use Bylaw.

Furthermore, in this instance, Council is in favor of allowing an exemption to the density provisions as outlined in Policy 15 of the MDP2010 and Section 13.1.6.2 (a)(i) of the Country Residential District within the County's Land Use Bylaw.

Staff suggests the three (3) new parcels to be subdivided out of Plan 0211261, Block 3, Lot 3, PTN: NW 36-21-02-W5M be designated as Country Residential Sub-District 'A' to ensure that the recommendations and restrictions as outlined in the septic disposal evaluation, building envelopes and slope stability report (conditions of subdivision) and lot grading/drainage plan (condition of development permit) are compiled with to the satisfaction of the Public Works Department. A completion certificate by a Professional Engineer verifying

that all aspects of the noted reports have been met, and a \$5,000 deposit as a pre-release condition to ensure compliance with all conditions of the development permit will be required.

Recommended Conditions for Option #1:

1. Landowners are to fully execute and comply with all requirements as outlined within the Municipal Development Agreement for the purposes of storm water management, grading and drainage and payment of the community sustainability fee and any other necessary municipal and on-site improvements as required by Council and the Public Works department;
2. Proof of adequate water supply provided as per the Provincial Water Act, to the satisfaction of the County;
3. Geotechnical Report completed in accordance with County standards, provided for slope stability testing, for all new lots, to the satisfaction of the Public Works department, **as a condition of subdivision**;
4. Septic Disposal Evaluations to be provided for all lots proposed, in accordance with Part 2 Section 6(4)(b) of the Matters Related to Subdivision and Development Regulation, to the satisfaction of the Public Works department, **as a condition of subdivision**;
5. Site plan to be provided which identifies building envelopes on each of the proposed lots which meets the requirements as outlined in Policy 9 under the Residential section of the MDP2010, to the satisfaction of the Public Works department, **as a condition of subdivision**;
6. Lot Grading/Drainage Plan to be provided for the subject lands, to the satisfaction of the Public Works department, **as a condition of development permit**;
7. Development permit application to be provided for the two shipping containers that are to be retained within the proposed 17.90 +/- acre balance parcel;
8. Second and third reading to be granted to Bylaw XX/2025 to rescind the Wood Valley Estates Area Structure Plan;
9. Final redesignation application fees to be submitted;
10. Submission of an executed subdivision application and the necessary fees.

OPTION B - REFUSAL

Council may choose to refuse the application for redesignation of Plan 0211261, Block 3, Lot 3, PTN: NW 36-21-02-W5M from Agricultural District to Country Residential District, in order to allow the future subdivision of one (1) 3.98 +/- acre and two (2) 4.0 +/- acre Country Residential District lots, with a 17.90 +/- acre Country Residential District balance parcel and to allow for an exemption to Section 13.1.6.2 of the Country Residential District for the following reasons:

In consideration of Policy 2 and 4 of the Agricultural section of the MDP2010, Council did not find sufficient merit in the proposal to consider removing the subject lands from the Agricultural District.

Additionally, in consideration of the criteria noted within Residential Policies 3 and 9 of the MDP2010, Council is of the opinion that the application does not adequately address the cumulative effects of the development, the suitability of the lands for residential construction and the efficient use of the land.

Furthermore, Council is of the opinion that the application is inconsistent with the approved Wood Valley Estates Area Structure Plan.

Finally, in accordance with Residential Policy 15 of the MDP2010 and Section 13.1.6.2.(a)(i) of the Country Residential District within the County's Land Use Bylaw, Council is of the opinion that the application does not comply with the County's density provisions.

3. REDESIGNATION – PLAN 7810781, BLOCK 4, PTN: NW 36-21-01-W5M

OPTION A – APPROVAL

Council may choose to grant 1st reading to the application for redesignation of Plan 7810781, Block 4, PTN: NW 36-21-02-W5M from Agricultural District to Country Residential District, in order to allow the future subdivision of two (2) 4.76 +/- acre Country Residential District lots, one (1) 11.20 +/- acre Country Residential District lot, with an 5.20 +/- acre Country Residential District balance parcel and to allow for an exemption to Section 13.1.6.2 of the Country Residential District for the following reasons:

Acknowledging Council's approval of first reading to a Bylaw rescinding the Wood Valley Estates Area Structure Plan, Council provides the following in support of the land use application and density exemption:

In their consideration of the criteria noted in Agriculture Policy 4 of the MDP2010, the Council is of the opinion that fragmentation of the subject lands would not be detrimental to the agricultural nature of the area.

Additionally, the application falls within the lot size restrictions set out within the Country Residential within the County's Land Use Bylaw.

Furthermore, in this instance, Council is in favor of allowing an exemption to the density provisions as outlined in Policy 15 of the MDP2010 and Section 13.1.6.2 (a)(i) of the Country Residential District within the County's Land Use Bylaw.

Staff suggests the four (4) new parcels to be subdivided out of Plan 7810781, Block 4, PTN: NW 36-21-01-W5M be designated as Country Residential Sub-District 'A' to ensure that the recommendations and restrictions as outlined in the septic disposal evaluation, building envelopes and slope stability report (conditions of subdivision) and lot grading/drainage plan (condition of development permit) are compiled with to the satisfaction of the Public Works Department. A completion certificate by a Professional Engineer verifying that all aspects of the noted reports have been met, and a \$5,000 deposit as a pre-release condition to ensure compliance with all conditions of the development permit will be required.

Recommended Conditions for Option #1:

1. Landowners are to fully execute and comply with all requirements as outlined within the Municipal Development Agreement for the purposes of storm water management, grading and drainage and payment of the community sustainability fee and any other necessary municipal and on-site improvements as required by Council and the Public Works department;
2. Proof of adequate water supply provided as per the Provincial Water Act, to the satisfaction of the County;
3. Geotechnical Report completed in accordance with County standards, provided for slope stability testing, for all new lots, to the satisfaction of the Public Works department, **as a condition of subdivision**;
4. Septic Disposal Evaluations to be provided for all lots proposed, in accordance with Part 2 Section 6(4)(b) of the Matters Related to Subdivision and Development Regulation, to

the satisfaction of the Public Works department, **as a condition of subdivision;**

5. Site plan to be provided which identifies building envelopes on each of the lots proposed which meets the requirements as outlined in Policy 9 under the Residential section of the MDP2010, to the satisfaction of the Public Works department, **as a condition of subdivision;**
6. Lot Grading/Drainage Plan to be provided for the subject lands, to the satisfaction of the Public Works department, **as a condition of development permit;**
7. Second and third reading to be granted to Bylaw XX/2025 to rescind the Wood Valley Estates Area Structure Plan;
8. Final redesignation application fees to be submitted;
9. Submission of an executed subdivision application and the necessary fees.

OPTION B - REFUSAL

Council may choose to refuse the application for redesignation of Plan 7810781, Block 4, PTN: NW 36-21-02-W5M from Agricultural District to Country Residential District, in order to allow the future subdivision of one (1) 3.98 +/- acre and two (2) 4.0 +/- acre Country Residential District lots, with a 17.90 +/- acre Country Residential District balance parcel and to allow for an exemption to Section 13.1.6.2 of the Country Residential District, for the following reasons:

In consideration of Policy 2 and 4 of the Agricultural section of the MDP2010, Council did not find sufficient merit in the proposal to consider removing the subject lands from the Agricultural District.

Additionally, in consideration of the criteria noted within Residential Policies 3 and 9 of the MDP2010, Council is of the opinion that the application does not adequately address the cumulative effects of the development, the suitability of the lands for residential construction and the efficient use of the land.

Furthermore, Council is of the opinion that the application is inconsistent with the approved Wood Valley Estates Area Structure Plan.

Finally, in accordance with Residential Policy 15 of the MDP2010 and Section 13.1.6.2.(a)(i) of the Country Residential District within the County's Land Use Bylaw, Council is of the opinion that the application does not comply with the County's density provisions.

APPENDICES

APPENDIX A: MAP SET:

LOCATION MAP

HALF MILE MAP – LAND USE

SITE PLANS

AERIAL IMAGERY

APPENDIX B:

PROPOSED BYLAWS

APPENDIX C:

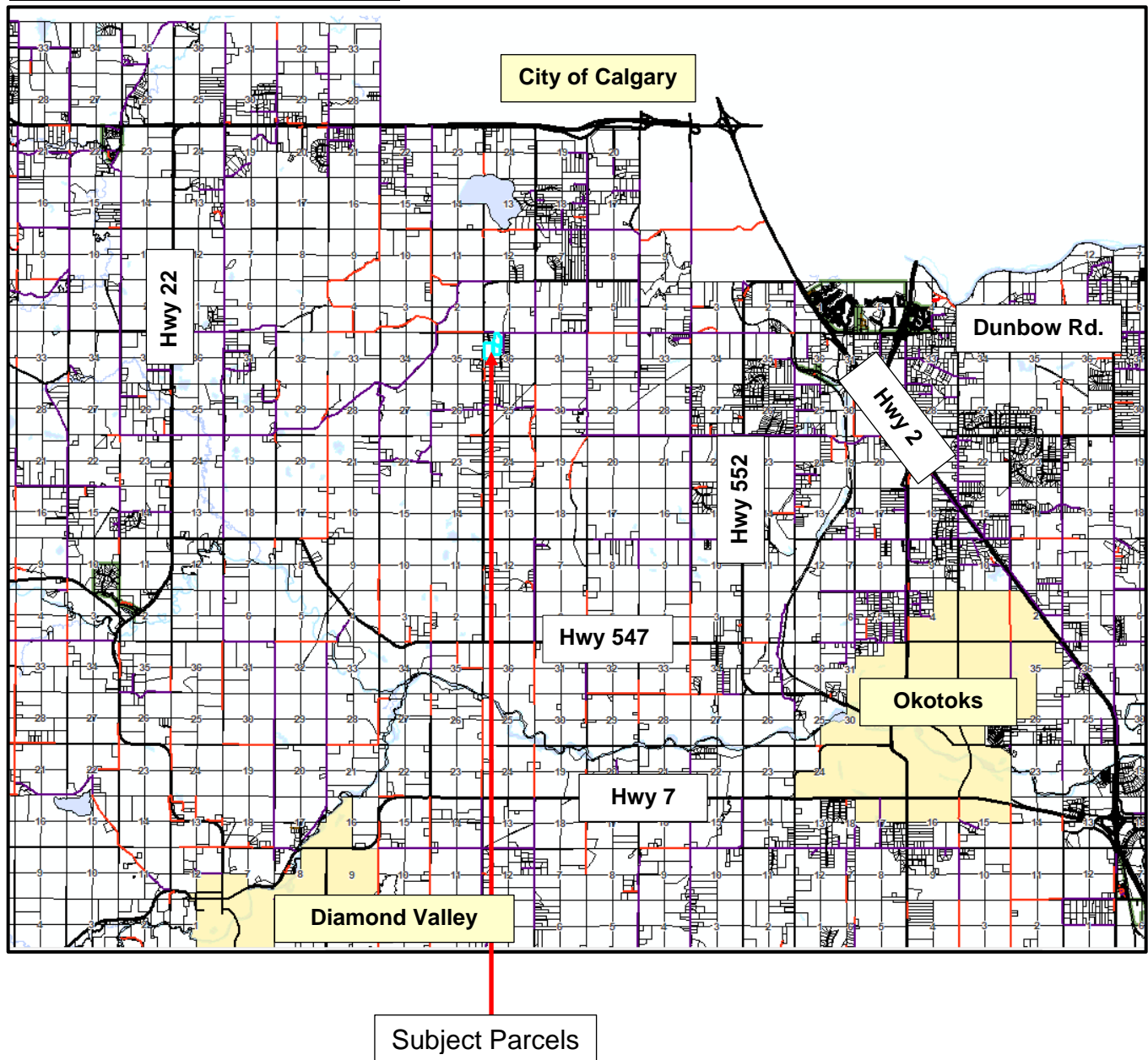
APPLICANTS AGENTS LETTER AND SUPPORTING DOCUMENTATION

APPENDIX D:

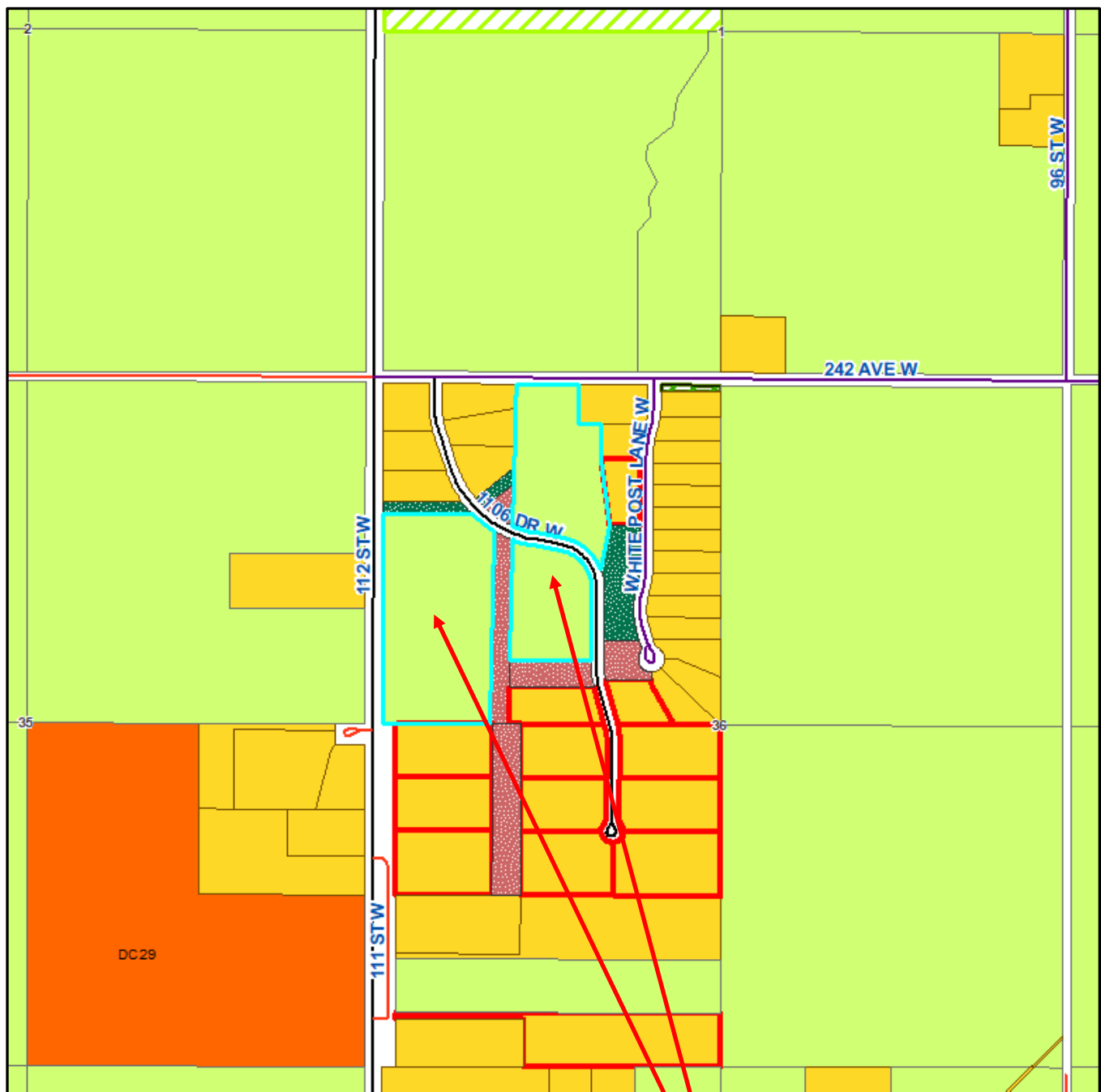
WOOD VALLEY ESTATES ASP

APPENDIX A: MAP SET

APPENDIX A: LOCATION MAP



APPENDIX A: HALF MILE MAP - LAND USE

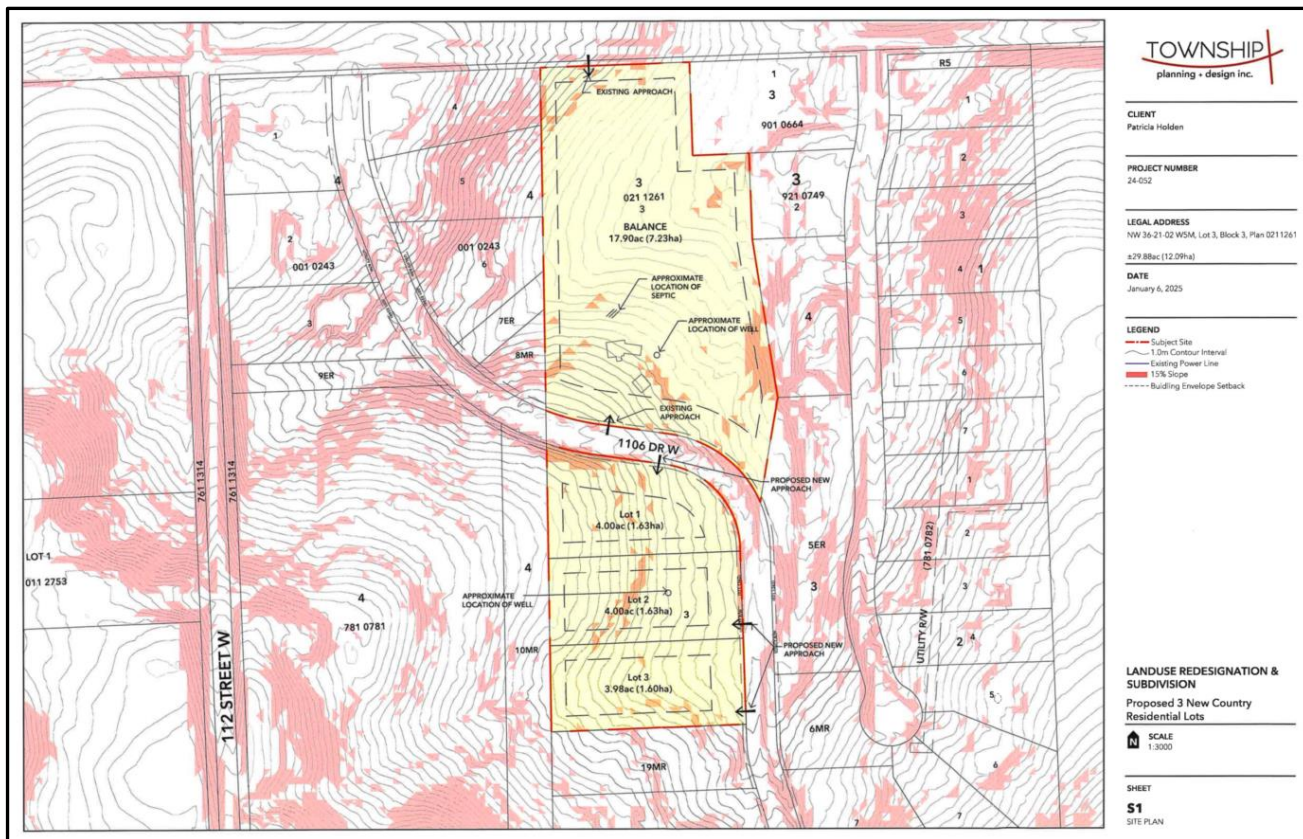


Legend

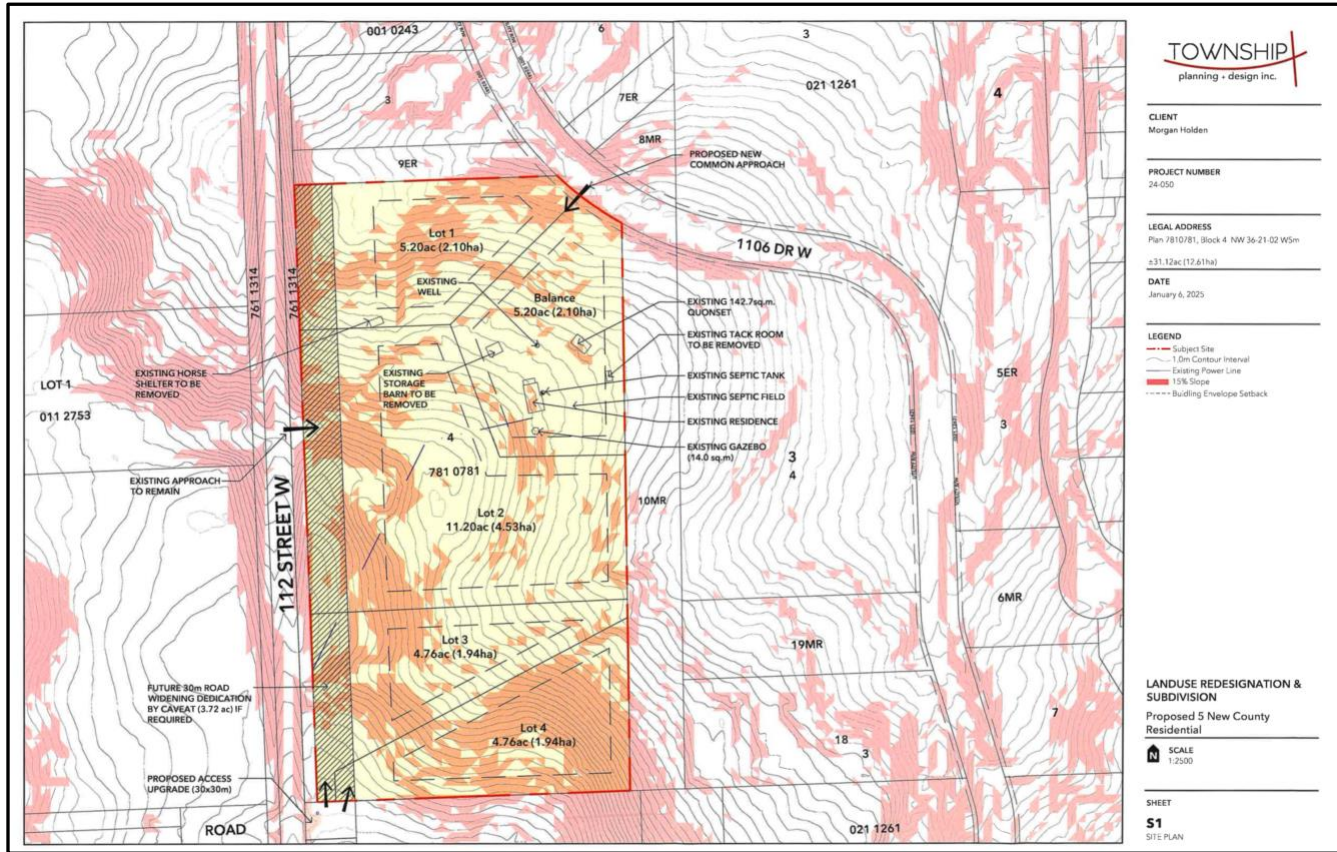
- | | |
|--------------------------------|----------------------------------|
| — County Roads | EP- Environmental Protection |
| — Highways | OS- Open Space |
| ▨ In Transition | INR- Natural Resource Extraction |
| A- Agricultural | MR- Municipal Reserve |
| AA- Agricultural Sub A | PUL- Public Utility |
| CR- Country Residential | SD- Service District |
| CRA- Country Residential Sub A | |
| DC - Direct Control | |
| ER- Environmental Reserve | |

Subject Lands outlined in blue

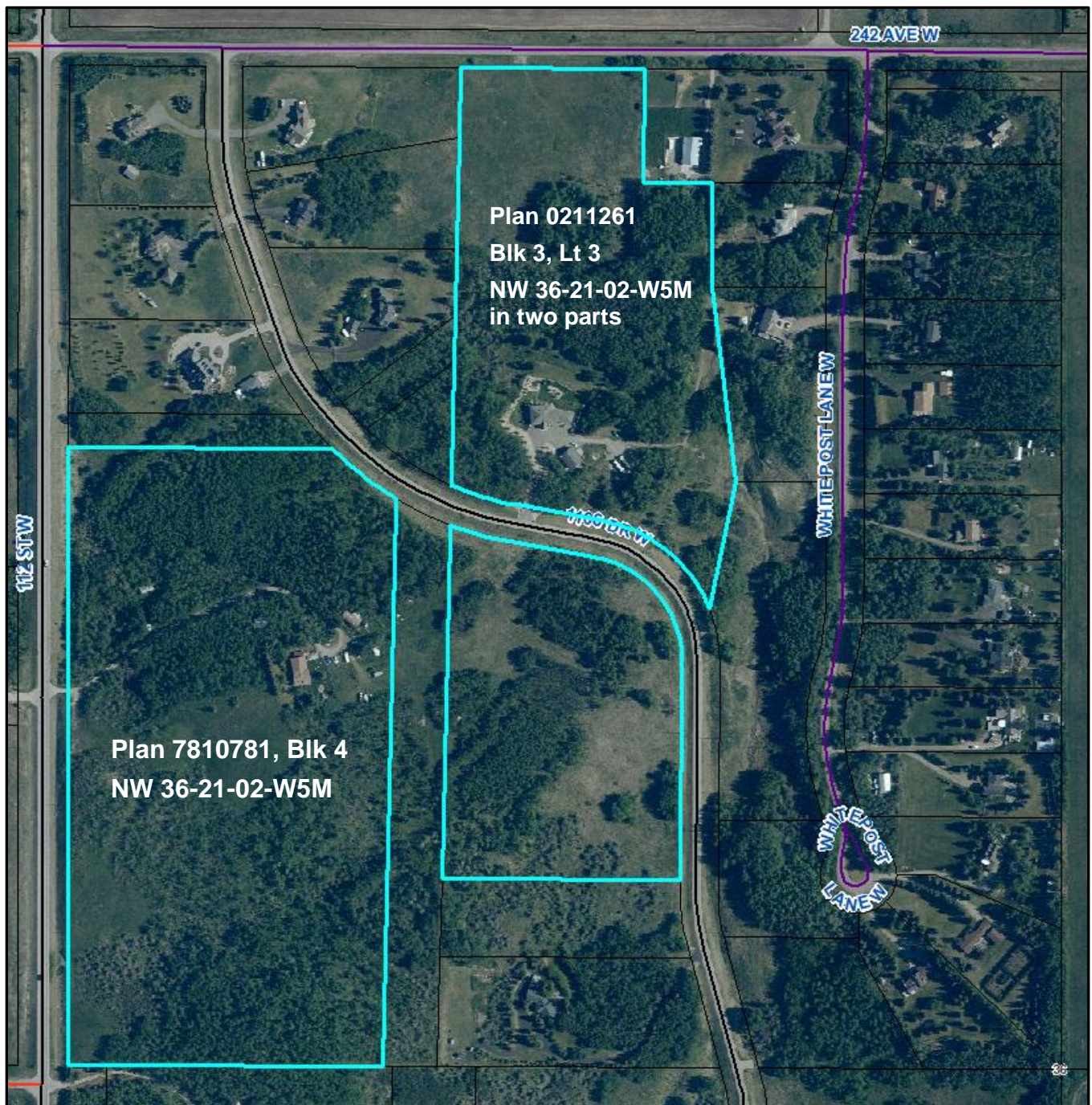
APPENDIX A: PLAN 0211261, BLOCK 3, LOT 3 (PATRICIA HOLDEN)



APPENDIX A: SITE PLAN – MORGAN HOLDEN



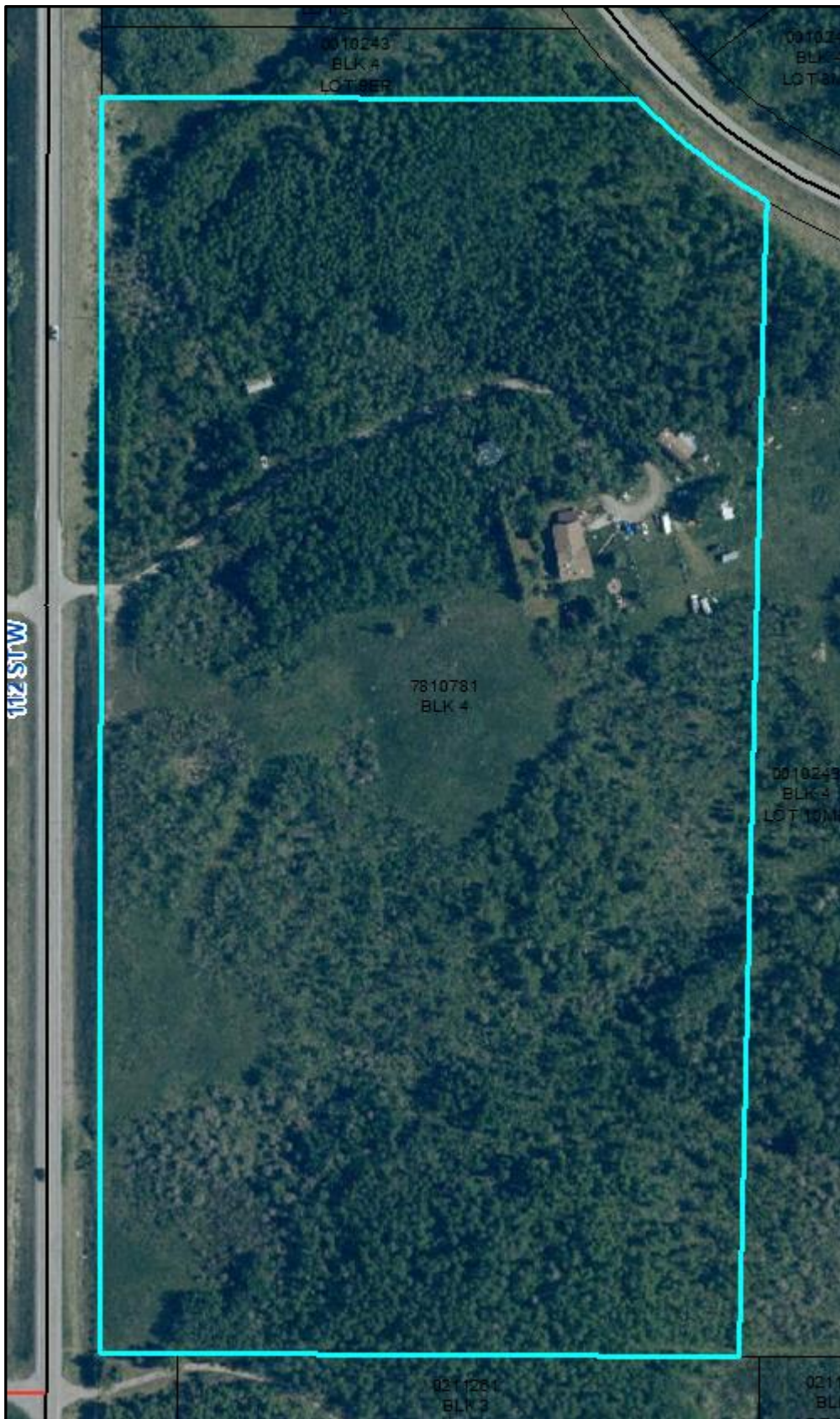
APPENDIX A: AERIAL IMAGERY (BOTH PARCELS)



APPENDIX A: AERIAL IMAGERY (PLAN 0211261, BLK 3, LT 3) (PATRICIA HOLDEN)



APPENDIX A: AERIAL IMAGERY (PLAN 7810781, BLK 4) (MORGAN HOLDEN)



BYLAW XX/2025

**BEING A BYLAW OF FOOTHILLS COUNTY TO REPEAL BYLAW 01/2001 BEING THE
WOOD VALLEY ESTATES AREA STRUCTURE PLAN**

WHEREAS Section 633(1) of the Municipal Government Act, Revised Statutes of Alberta, 2000, Chapter M-26, as amended, provides that Councils may, pass a bylaw, to amend an Area Structure Plan and;

WHEREAS A public hearing was scheduled and held on January 4, 2001 in accordance with Section 692 of the Municipal Government Act, whereby Council granted third and final reading; and

WHEREAS Section 191(1)(2) of the Municipal Government Act, Revised Statutes of Alberta, 2000, Chapter M-26, as amended, provides that Councils may repeal a bylaw;

NOW THEREFORE THE COUNCIL ENACTS AS FOLLOWS:

1. Bylaw 01/2001, being a Bylaw of Foothills County to approve the Wood Valley Estates Area Structure Plan is hereby repealed upon this bylaw coming in to effect.
2. This Bylaw shall have effect on the date of its third reading.

FIRST READING:

Reeve

Municipal Manager

SECOND READING:

Reeve

Municipal Manager

THIRD READING:

Reeve

Municipal Manager

PASSED IN OPEN COUNCIL assembled at the Town of High River in the Province of Alberta
this day of , 2025.

BYLAW XX/2025

**BEING A BYLAW OF FOOTHILLS COUNTY TO AUTHORIZE AN AMENDMENT TO THE
LAND USE BYLAW NO. 60/2014 AS AMENDED.**

WHEREAS pursuant to the provisions of the Municipal Government Act, Chapter M-26 Revised Statutes of Alberta 2000, and amendments thereto, the Council of Foothills County in the Province of Alberta, has adopted Land Use Bylaw No. 60/2014 and amendments thereto;

AND WHEREAS the Council has received an application to further amend the Land Use Bylaw by authorizing the redesignation of a 29.88 +/- acre portion on Plan 0211261, Block 3, Lot 3; Ptn. NW 36-21-02 W5M from Agricultural District to Country Residential District, in order to allow for the future subdivision of three new 4.0 +/- acre Country Residential lots with an approximate 17.88 +/- acre Country Residential District balance parcel and to allow for an exemption to the County's current density policy.

NOW THEREFORE THE COUNCIL ENACTS AS FOLLOWS:

1. Land Use Map No. 2102 is amended by redesignating a 29.88 +/- acre portion on Plan 0211261, Block 3, Lot 3; Ptn. NW 36-21-02 W5M from Agricultural District to Country Residential District, in order to allow for the future subdivision of three new 4.0 +/- acre Country Residential lots with an approximate 17.88 +/- acre Country Residential District balance parcel.
2. An exemption to the density provisions as outlined in Policy 15 of the Residential Section of the MDP2010 and Section 13.1.6.2 (a)(i) of the Country Residential District within the County's Land Use Bylaw.
3. This Bylaw shall have effect on the date of its third reading and upon being signed.

FIRST READING:

Reeve

CAO

SECOND READING:

Reeve

CAO

THIRD READING:

Reeve

CAO

PASSED IN OPEN COUNCIL assembled at the Town of High River in the Province of Alberta this
day of _____, 20__.

BYLAW XX/2025

**BEING A BYLAW OF FOOTHILLS COUNTY TO AUTHORIZE AN AMENDMENT TO THE
LAND USE BYLAW NO. 60/2014 AS AMENDED.**

WHEREAS pursuant to the provisions of the Municipal Government Act, Chapter M-26 Revised Statutes of Alberta 2000, and amendments thereto, the Council of Foothills County in the Province of Alberta, has adopted Land Use Bylaw No. 60/2014 and amendments thereto;

AND WHEREAS the Council has received an application to further amend the Land Use Bylaw by authorizing the redesignation of a 31.12 +/- acre portion on Plan 7810781, Block 4; Ptn. NW 36-21-02 W5M from Agricultural District to Country Residential District, in order to allow for the future subdivision of two new 4.76 +/- acre Country Residential lots, one new 5.20 +/- acre Country Residential lot, and one new 11.20 +/- acre Country Residential lot, with an approximate 5.20 +/- acre Country Residential District balance parcel and to allow for an exemption to the County's current density policy.

NOW THEREFORE THE COUNCIL ENACTS AS FOLLOWS:

1. Land Use Map No. 2102 is amended by redesignating a 31.12 +/- acre portion on Plan 7810781, Block 4; Ptn. NW 36-21-02 W5M from Agricultural District to Country Residential District, in order to allow for the future subdivision of two new 4.76 +/- acre Country Residential lots, one new 5.20 +/- acre Country Residential lot, and one new 11.20 +/- acre Country Residential lot, with an approximate 5.20 +/- acre Country Residential District balance parcel.
2. An exemption to the density provisions as outlined in Policy 15 of the Residential Section of the MDP2010 and Section 13.1.6.2 (a)(i) of the Country Residential District within the County's Land Use Bylaw.
3. This Bylaw shall have effect on the date of its third reading and upon being signed.

FIRST READING:

Reeve

CAO

SECOND READING:

Reeve

CAO

THIRD READING:

Reeve

CAO

PASSED IN OPEN COUNCIL assembled at the Town of High River in the Province of Alberta this
day of _____, 20__.

APPENDIX C: APPLICANT'S AGENTS LETTER AND SUPPORTING DOCUMENTATION

110-259 Midpark Way SE | Phone: 403.880.8921
Calgary, AB T2X 1M2 | TWPplanning.com



Foothills County
Box 5605
High River, AB
T1V 1M7

Updated on: 26/02/2025

ATTN: Samantha Payne, Manager of Planning Applications

RE: Application to Rescind Bylaw 1/2001 (Wood Valley Estates Area Structure Plan) and concurrently apply for Land Use Redesignation to redesignate the lands from Agricultural (A) District to Country Residential (CR) District to allow for the creation of a total of seven (7) new parcels from two (2) parent parcels legally described as Plan 781 0781, Block 4; NW 36-21-02 W5M (+/- 31.12 ac / +/- 12.61 ha) and Plan 021 1261, Block 3, Lot 3; NW 36-21-02 W5M (+/- 29.88 ac / +/- 12.09 ha), both within Foothills County.

Landowners: Patricia Helen Holden and Morgan Holden

Dear Mrs. Payne,

Please find enclosed the following in support of the above-mentioned application to rescind the Wood Valley Estates Area Structure Plan (ASP) and concurrently apply for the Land Use Redesignation of the two parent parcels:

- o The formal application for Amendment to the Land Use Bylaw to rescind the Wood Valley Estates Area Structure Plan (Bylaw 1/2001);
- o The formal application for Land Use Redesignation of the land legally described as Plan 781 0781, Block 4; NW 36-21-02 W5M +/- 31.12 ac (+/- 12.61 ha) within Foothills County from Agricultural (A) District to Country Residential (CR) District;
- o The formal application for Land Use Redesignation of the land legally described as Plan 021 1261, Block 3, Lot 3; NW 36-21-02 W5M +/- 29.88 ac (+/- 12.09 ha) within Foothills County from Agricultural (A) District to Country Residential (CR) District;
- o The Letter of Authorization allowing Township Planning + Design Inc. to Act as agent for the landowners;
- o A Credit Card Authorization for processing of the applicable fees:
 - o Land Use fee of \$6,100.00 (\$100 filing fee + \$1,500/new lot initial application fee) for the lands legally described as Plan 781 0781, Block 4; NW 36-21-02 W5M (+/- 31.12 ac / +/- 12.61 ha) within Foothills County;
 - o Land Use fee of \$4,600.00 (\$100 filing fee + \$1,500/new lot initial application fee) for the lands legally described as Plan 021 1261, Block 3, Lot 3; NW 36-21-02 W5M (+/- 29.88 ac / +/- 12.09 ha) within Foothills County; and
 - o Fee to Rescind Area Structure Plan of \$1,600.00 (\$100 filing fee + \$1,500 initial application fee).
- o A copy of The Abandoned Well Maps and Statements, showing no abandoned wells in the immediate vicinity;
- o A Groundwater Supply Evaluation which summarizes well completion details for the existing well contained within the boundaries of the balance lands (+/- 5.20 ac) of the lands legally described as Plan 781 0781, Block 4; NW 36-21-02 W5M (+/- 31.12 ac / +/- 12.61 ha) within Foothills County;
- o A Groundwater Supply Evaluation which summarizes well completion details for the existing

well contained within the boundaries of proposed Lot 2 (+/- 4.00 ac) of the lands legally described as Plan 021 1261, Block 3, Lot 3; NW 36-21-02 W5M (+/- 29.88 ac / +/- 12.09 ha) within Foothills County; and

- o Two (2) copies of each site plan, one (1) with, and one (1) without air photo.

To assist Planning and Development with the evaluation of this application we offer the following additional information:

Overview

The purpose of this application is to Rescind Bylaw 01/2001 (Wood Valley Estates Area Structure Plan) and concurrently request a Land Use Redesignation for two parcels of land within the ASP area: the lands are legally described as Plan 781 0781, Block 4; NW 36-21-02 W5M +/- 31.12 ac (+/- 12.61 ha) (Morgan Holden parcel) and Plan 021 1261, Block 3, Lot 3; NW 36-21-02 W5M +/- 29.88 ac (+/- 12.09 ha) (the Patricia Helen Holden parcel). The Land Use Redesignation application is to redesignate the lands from Agricultural (A) District to Country Residential (CR) District to allow for the future subdivision of four new parcels with a balance (Morgan Holden parcel) and three new parcels with a balance (Patricia Holden parcel); the proposed parcels range in size between +/- 3.98 ac and +/- 11.20 ac with CR balances of +/- 5.20 ac and +/- 17.90 ac.

The subject parcels are in an area of the County characterized by extensive fragmentation. The Foothills County Municipal Development Plan (MDP) directs new County Residential development to be located in areas of fragmentation. It is advantageous to propose new parcels in this area as they are within a well-connected quarter section with direct access to 242 Avenue W, 112 Street W, and 1106 Drive W. The subdivision of the additional seven lots would result in 34 Country Residential parcels in the quarter section, requiring an exemption to Section 13.1.6.2.a of the Foothills County Land Use Bylaw (LUB) to allow for the additional density on the quarter section.

Both subject parcels are located within the Wood Valley Estates Area Structure Plan (ASP). Adopted in 2001, the ASP is intended to act as a guide for future subdivision and development within the Plan area. While the undertaking of this ASP was a statutory requirement under the MCA, it was also a response to community member concerns with the ad-hoc pattern of development that was occurring. At the time the ASP was adopted, the Holden family collectively owned 60% of the land in the Plan Area and they were very involved in the design and public consultation processes. The subject parcels fall in a policy area that states, "A *"Restrictive Covenant As To the Use of Land"* shall be signed between the land owner and the Municipal District of Foothills limiting further subdivision of the Agricultural District land without the written approval of the Municipal District of Foothills No. 31". This agreement was not registered on either titles, therefore, there is currently no binding limitations or development restrictions for the subject parcels. During initial correspondence with Foothills County Administration, it was suggested that TWP amend the ASP to address outdated/restrictive language towards the two Agricultural Holden parcels. Following further discussion and analysis of the ASP, it was determined that amendments to this document would have to be fulsome in nature, and we do not feel this is an appropriate approach given that future subdivision would result in the quarter section reaching full build-out. As such, we are applying to rescind Bylaw 1/2001 concurrent with the application for Land Use Redesignation. We will undertake community engagement by sending a detailed notification letter to landowners within the radius identified by Foothills County Administration. The letter will include rationale for the Land Use Redesignation and rescinding the ASP and will provide direct contact to a dedicated Township team member so neighbours may provide feedback and raise any questions or concerns they may have.

Proposed Development – Morgan Holden Lands

The land use redesignation of the Morgan Holden lands will allow the future subdivision of four (4) new parcels (+/- 4.76 ac, +/- 4.76 ac, +/- 5.20 ac, and +/- 11.20 ac) with a CR balance (+/- 5.20 ac). There is an existing

Municipal Reserve (MR) parcel immediately to the east of the proposed parcels and an Environmental Reserve parcel immediately to the north that will provide a buffer between the proposed and existing parcels. Lot 4 will be the only parcel with a shared property line with a neighbour. The balance lands are proposed to retain the existing residence, quonset, and gazebo, while the horse shelter and tack room will be removed.

Access

The subject parcel is currently accessed via an approach from 112 Street W, which is proposed to be retained and utilized for Lot 2, and a new common approach is proposed from 1106 Drive W to service the balance lands and Lot 1. Lots 3 and 4 are proposed to be accessed via an upgraded 30x30m portion of the road allowance off 112 Street W at the southwest corner of the subject parcel boundary. Additionally, a +/- 3.72 ac future road widening dedication has been provided on the site plan should Council require continuation of the widening south of the subject parcel.

Servicing

The intent of this application is to accommodate a single detached dwelling on each newly created parcel with individual well and septic systems, and to isolate the existing homestead on the balance land. There is an existing water well on the balance parcel which was tested in December 2024. The results of the Groundwater Supply Evaluation, provided under separate cover, summarize that the subject ground water production well is capable of providing a maximum of 1,250 m³/ year in accordance with Section 23(3) of the Water Act. The proposed parcels have traditional rural building envelopes with existing vegetation for screening. We note proposed Lot 1 and Lot 4 may contain slopes greater than 15% in the building envelope. Should Council be supportive of this application, a Geotechnical Slope Stability Study can be undertaken at the direction of Council.

Proposed Development – Patricia Helen Holden Lands

The land use redesignation of the Patricia Helen Holden Lands will allow the future subdivision of three (3) parcels (+/- 4.00 ac, +/- 4.00 ac, and +/- 3.98 ac) with a CR balance (+/- 17.90 ac). The proposed parcels will integrate into the local context and have existing MR parcels to the immediate west and south resulting in no shared property lines with neighbours. The design of the proposed parcels reflects the existing parcel configurations of those along 1106 Drive W. The balance lands are proposed to remain in their current condition, retaining the existing single-family dwelling, detached garage, north and south accesses, and all vegetation.

Access & Servicing

The intent is to accommodate a single detached dwelling on each newly created parcel with individual well and septic systems. The proposed approach locations, as identified on the attached site plan, were purposefully located to address the curvature along 1106 Drive W and avoid areas of considerable slope. There is an existing water well within the proposed boundaries of Lot 2 which was tested in December 2024. The results of the Groundwater Supply Evaluation, provided under separate cover, summarize that the subject ground water production well is capable of providing a maximum of 1,250 m³/ year in accordance with Section 23(3) of the Water Act. The proposed parcels have viable building envelopes with existing vegetation for screening.

The Holden family are long-time landowners in the community and are committed to additional neighbor consultation to prepare a contextually appropriate application and to identify any potential issues that may require mitigation. Additional consultation may include direct neighbour conversations and plan/report sharing in addition to a letter to the community that details the proposal.

Should you have any questions or concerns please do not hesitate to contact us.

Sincerely,

Township Planning + Design Inc.

A handwritten signature in blue ink, appearing to read 'Kristi Beunder', with a long, sweeping horizontal stroke extending to the right.

Kristi Beunder, B.A., M.E.Des.
RPP MCIP
Senior Planner / Principal
Urban + Regional Planning

Cc: *Patricia Helen Holden and Morgan Holden - Landowners*

File: S-11-65

Groundwater Supply Evaluation
for a
Morgan Holden Water Well
for a Proposed New Balance Lot for a
Subdivision of Plan 7810781, Block 4
in a Portion of the NW 36 21-2 W5M

Submitted to:
Aqua Mule Water Systems and Services
Priddis, Alberta

Strom Engineering Inc.
P.O. Box 825,
Turner Valley, Alberta T0L 2A0
Phone 888-8088

December, 2024

Aqua Mule Water Systems and Services
Priddis, Alberta

**Re: Groundwater Supply Evaluation for a Morgan Holden Water Well
for a Proposed New Balance Lot for a Subdivision of Plan 7810781, Block 4
in a Portion of the NW 36 21-2 W5M**

Please find enclosed our letter report which summarizes well completion details, including a table of pump test data, a graph of the drawdown and recovery data from a field test conducted on the well. The report also makes recommendation with respect to the calculated Q_{20} or 20 year safe yield for a well as per the above referenced location.

All the pump test data was received from Aqua Mule Water Systems and Services which conducted all field work. Strom Engineering Inc. has been contracted to determine the Q_{20} or a 20 year safe yield groundwater evaluation report.

1.0 Background Information

The Owner what to subdivide a balance parcel that contains a water well with a residence and outbuildings as part of a larger subdivision to do that this Water Well or Groundwater Evaluation Report is being submitted.

2.0 Well Completion Details

Total Depth:	48.77 metres	
Non-pumping Water Level:	34.86 metres	
Surface Casing:	152 mm OD plastic casing with the bottom set at 6.40 metres.	
Liner:	114 mm OD plastic liner set from 3.35 metres to 48.46 metres.	
Drilling Contractor:	Peter Niemans Water Well Drilling	
Pump Test Contractor:	Aqua Mule Water Systems and Services	
Date Drilled:	Start October 26, 2001 / Finish October 27, 2002	
Lithology:	0m – 0.91m 0.91m – 4.88m 4.88m – 13.72m 13.72m – 20.73m 20.73m – 23.47m 23.47m – 26.82m 26.82m – 42.06m 42.06m – 43.28m 43.28m – 47.85m 47.85m – 48.16m 48.16m – 48.77m	Brown Clay and Rocks Light Brown Sandstone Brown Sandy Shale & Sandstone Ledges Brown Shale Gray Shale Brown Shale Gray Shale Gray Hard Shale Gray Shale Gray Sandstone Gray Shale

NOTE: 1) Cgpm = Canadian Gallons per Day = Igpm = Imperial Gallons per Day

3.0 Well Test Results

The well was flow tested by Aqua Mule Water Systems and Services on December 4, 2024. The well was pumped at a rate of 39.27 m³/day (6.00 Cgpm) for 720 minutes followed by a 720 minute recovery. Water level measurements were recorded by Aqua Mule Water Systems and Services and using an electronic water well measuring device.

The maximum drawdown was observed to be 5.98 metres during the 720 minute pump test at a pumping rate of 39.27 m³/day (6.00 Cgpm). **The recovery was 87% after 720 minutes of no pumping.**

The maximum available drawdown (head) measured from the non-pumping water level of 34.86 metres – 0.20 metres casing stickup = 34.66 metres to the top of the sandstone aquifer at 47.85 metres = 13.19 metres head.

Transmissive capacity has been determined graphically using the Cooper and Jacob semi log plot method, with transmissive capacity based usually on the final limb of the curve according to:

$$T = 2.3Q/(4\pi\Delta s)$$

Where:

T = transmissive capacity, in m² / day

Q = pump rate, in m³ / day

Δs = drawdown over 1 log cycle

Transmissive capacity, determined from the above method is summarized as follows:

Stage	Δs (metres)	Transmissivity
Drawdown	1.72	4.18

Based on the above methods of analysis, transmissive capacity is 4.18 m²/day. It should be noted that the calculated transmissive capacity value is time dependent, flow rate dependent particularly for fractured or stratified heterogeneous media and reflects the response of an aquifer for the particular time of the year during which the test was conducted. Transmissive capacity is not a constant everywhere in an aquifer and is generally characterized by a log-normal distribution.

The 20 year, long term safe yield index (Q₂₀), neglecting well loss, is determined from the equation:

$$Q_{20} = 0.683THs$$

where: Q₂₀ = 20 year, long term safe yield, in m³ / day

T = effective transmissive capacity, in m² / day

H = available drawdown in metres

s = safety factor of 0.7

The calculation of the 20 year safe yield index for an aquifer, assuming isotropic, homogeneous conditions is derived by extrapolating a drawdown trend so that the

available drawdown lasts for 20 years. This approach neglects the effects of recharge, and is, therefore, a conservative approach.

It is common practice to adjust the Q_{20} by a safety factor to account for the unknown boundary conditions due to test duration, well deterioration, well inefficiency, seasonal variability in non-pumping water levels and errors associated with assuming isotropic, homogeneous aquifer conditions. In accordance with Alberta Environment guidelines we have used a safety factor of 0.7.

The Q_{20} or the 20 year safe yield is **26.36 m³/day (4.03 Cgpm)**.

In accordance with the Water Act, every household user is entitled to divert up to a maximum of 1250 m³/year or 3.43 m³/day. Based on well test data and other evidence available, the production well is capable of providing the allotted 1250 m³/year.

Although this is a Production Report The Water Quality Test Results have been included for reference convenience. See Appendix, Figure 6.

4.0 Other Water Users

There are other water users within an 800 metre radius of the new well. Please see Section 5.0 for more information.

5.0 Well Interference

Well interference from domestic household wells, such as the well referred to in this Report, is not applicable for the following reasons:

1. Well interference can be caused by the continuous pumping of a well causing the formation of interfering cones of depression. Mark J. Hammer, Water and Wastewater Technology states that pumping of a well dewateres the surrounding ground and lowers the static water level forming a cone of depression. Under steady withdrawal, the water table is reduced until equilibrium drawdown is established.
2. No cone of depression develops in household well use. The water from a household well is pumped on a non-continuous basis with water being directed to a pressure tank or a cistern intermittently and on a demand basis only.

6.0 Summary of Findings

Based on the results of the flow test and drill log, the following conclusions have been drawn:

1. The ground water production well that is the subject of this report according to the evidence available is capable of providing a maximum of 1250 m³/year in accordance with Section 23(3) of the Water Act for the proposed parcel.

2. Pumping of the new well for household purposes on an intermittent basis will not interfere with any household users, licensees or traditional agricultural users who exist.

3. For most household situations, wells with a production rate of less than 5 Cgpm do not supply enough water for a one hour peak use period. Therefore, in this case it would be recommended to create additional water storage using a cistern ahead of the pressure tank.

If you have any questions or comments regarding the conclusions drawn in this groundwater supply evaluation, contact Rob Strom, P.Tech.(Eng.), P.L.(Eng.) at 888-8088 at your convenience.

Respectfully submitted,
Strom Engineering Inc.



Robert P. Strom, P.Tech.(Eng.), PL(Eng.)

PERMIT TO PRACTICE	
STROM ENGINEERING INC.	
Signature	<i>Robert P. Strom</i>
Date	<i>DEC. 11/2024</i>
PERMIT NUMBER: P 10566	
The Association of Professional Engineers, Geologists and Geophysicists of Alberta	

Appendix:

Figure 1 – Location Plan

Figure 2 – Site Plan

Figure 3 – Pump Test Data

Figure 4 – Q20 Plot

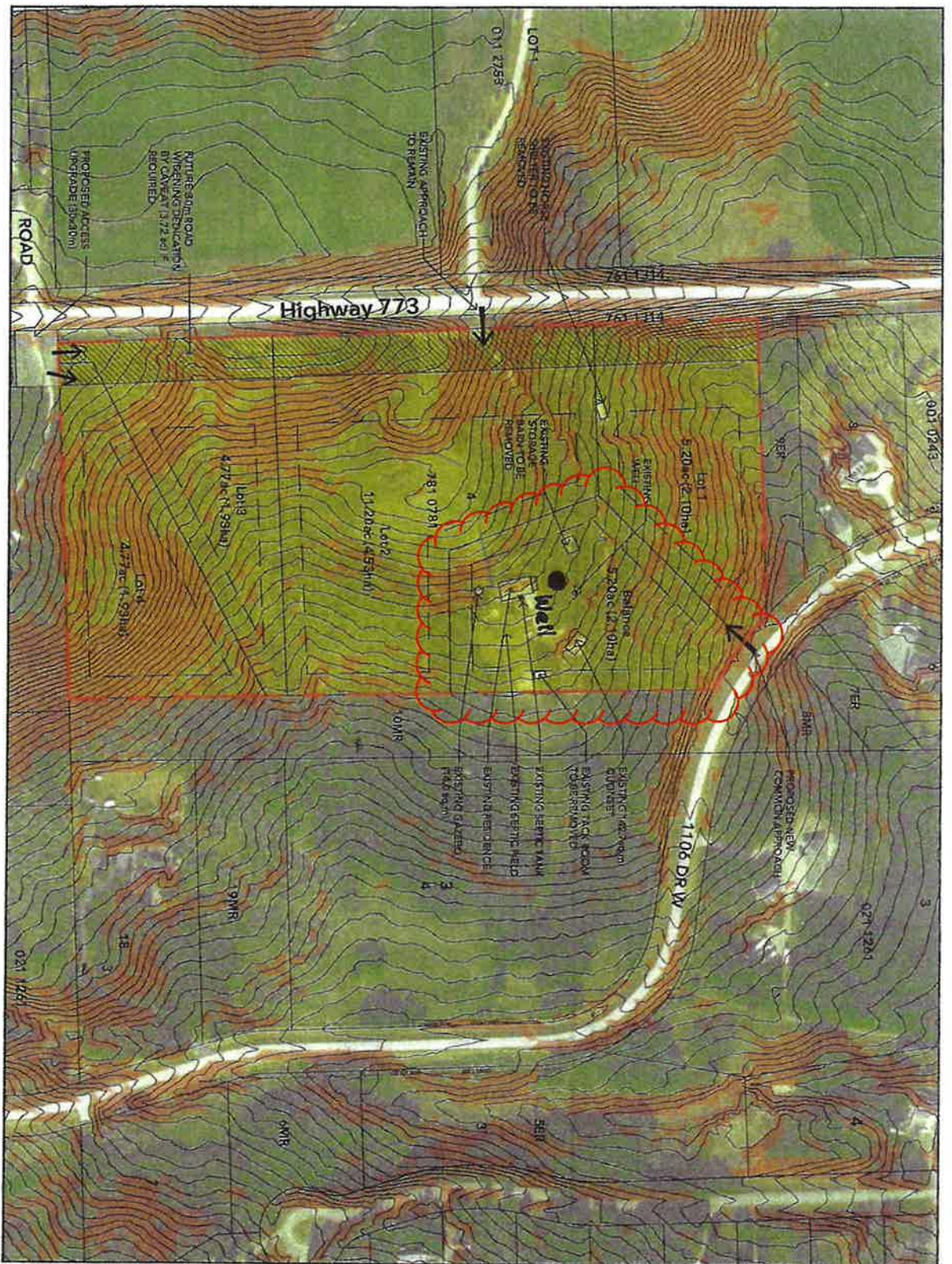
Figure 5 – Water Well Driller's Report

Figure 6 – Water Quality Report

Range 2

Figure 1 - Location Plan

[illegible]



TOWNSHIP
planning + design inc.

CLIENT
Morgan Hudson

PROJECT NUMBER
34020
PLAN 7810781, B4

LEGAL ADDRESS
The BIRCH, Block 4 NW 1/4, 102 W 2nd St
31.121924 NW 36 R1Z-11A
231.128123 R1Z-11A
DATE
November 24, 2024

LEGEND
--- Subject Site
--- 10m Contour Interval
--- Existing Power Line
--- 100' Slope
--- Building Envelope Subdiv

LANDUSE REDESIGNATION &
SUBDIVISION
Proposed 5 New County
Residential

SHEET
S1
SHEET NAME

Figure 2 - Site Plan



1893086 Alberta Ltd.
PO Box 87
Millarville, AB T0L 1K0
Office: 403-931-2991
admin@aquamule.com

WATER WELL PUMP TEST

Date: December 4, 2024

Customer: Morgan Holden

Land Description: NW-36-21-2-W5
GPS 50.830300 -114.158000

WELL SPECIFICATIONS:

Type of Well: Drilled (Well ID # 1610148)

Well Depth: 160 feet

Static (non-pumping water level): 114.95 feet

Casing Type: Plastic

Casing Size: 6"

Casing Height Above Ground: 8"

Liner Type: Plastic

Liner Size: 4.5" O.D.

Top of Liner (approx.): 11 feet

Sample Collected: Yes

Pump & Generator Required: No

2nd Man Required: No

Tested By: Billy Baker

Comments: Pump set at 139.55 feet. Water ran clear during testing with no odour.

PRODUCTION TEST DATA:

Pumping Rate (IGPM)	Water Level (drawdown)	Minutes	Water Level (Recovery)
6.0 IGPM	114.36 feet	0	
	115.99	1	120.25 feet
	116.21	2	117.29
	116.30	3	117.23
	116.39	4	117.23
	116.44	5	117.22
	116.49	6	117.22
	116.51	7	117.22
	116.55	8	117.22
	116.59	9	117.22
	116.60	10	117.21
	116.60	12	117.21
	116.61	15	117.19
	116.63	20	117.17
	116.65	25	117.16
	116.67	30	117.15
	116.68	40	117.13
	116.76	50	117.12
	116.80	60	117.11
	116.88	75	117.09
	116.94	90	117.07
	117.02	105	117.05
	117.11	120	117.03
	117.27	150	117.01
	117.41	180	116.94
	117.61	210	116.93
	117.81	240	116.92
	118.07	300	116.91
	118.74	360	116.90
	124.45	420	116.89
	126.40	480	116.89
	128.90	540	116.88
	130.07	600	116.87
	132.96	660	116.86
	133.99	720	116.85

NO PREDICTIONS OF THE WELL'S FUTURE PERFORMANCE ARE IMPLIED. HOWEVER, THE ABOVE INFORMATION INDICATED THAT THE WELL IS RECHARGING AT 6.0 IGPM AT THIS TIME. THE DRAWDOWN AND RECOVERY DATA HAS BEEN PROVIDED IN A FORMAT WHICH COULD BE REVIEWED BY A HYDRO GEOLOGIST, IF A SECOND OPINION OF THE WELL'S PERFORMANCE IS REQUIRED.

Figure 3 - Pump Test Data

Morgan Holden Drawdown and Recovery Data Expanded

Water Level Drawdown in Feet	Water Level Drawdown in Metres	Real Time in Minutes Drawdown (t)	Water Level Recovery in Feet	Water Level Recovery in Metres	Real Time in Minutes Recovery (t')	Recovery as minutes (t'/t)
114.36	34.857	0	133.99	40.84	720	
115.99	35.354	1	120.25	36.652	721	721
116.21	35.421	2	117.29	35.75	722	361
116.3	35.448	3	117.23	35.732	723	241
116.39	35.476	4	117.23	35.732	724	181
116.44	35.491	5	117.22	35.729	725	145
116.49	35.506	6	117.22	35.729	726	121
116.51	35.512	7	117.22	35.729	727	104
116.55	35.524	8	117.22	35.729	728	91
116.59	35.537	9	117.22	35.729	729	81
116.6	35.54	10	117.21	35.726	730	73
116.6	35.54	12	117.21	35.726	732	61
116.61	35.543	15	117.19	35.72	735	49
116.63	35.549	20	117.17	35.713	740	37
116.65	35.555	25	117.16	35.68	745	30
116.67	35.561	30	117.15	35.707	750	25
116.68	35.564	40	117.13	35.701	760	19
116.76	35.589	50	117.12	35.698	770	15
116.8	35.601	60	117.11	35.695	780	13
116.88	35.625	75	117.09	35.689	795	11
116.94	35.643	90	117.07	35.683	810	9
117.02	35.668	105	117.05	35.677	825	7.9
117.11	35.695	120	117.03	35.671	840	7
117.27	35.744	150	117.01	35.665	870	5.8
117.41	35.787	180	116.94	35.643	900	5
117.61	35.848	210	116.93	35.64	930	4.4
117.81	35.909	240	116.92	35.637	960	4
118.07	35.988	300	116.91	35.634	1020	3.4
118.74	36.192	360	116.9	35.631	1080	3
124.45	37.932	420	116.89	35.628	1140	2.7
126.4	38.527	480	116.89	35.628	1200	2.5
128.9	39.289	540	116.88	35.625	1260	2.3
130.07	39.645	600	116.87	35.622	1320	2.2
132.96	40.526	660	116.86	35.619	1380	2.1
133.99	40.84	720	116.85	35.616	1440	2

Figure 3 - Pump Test Data

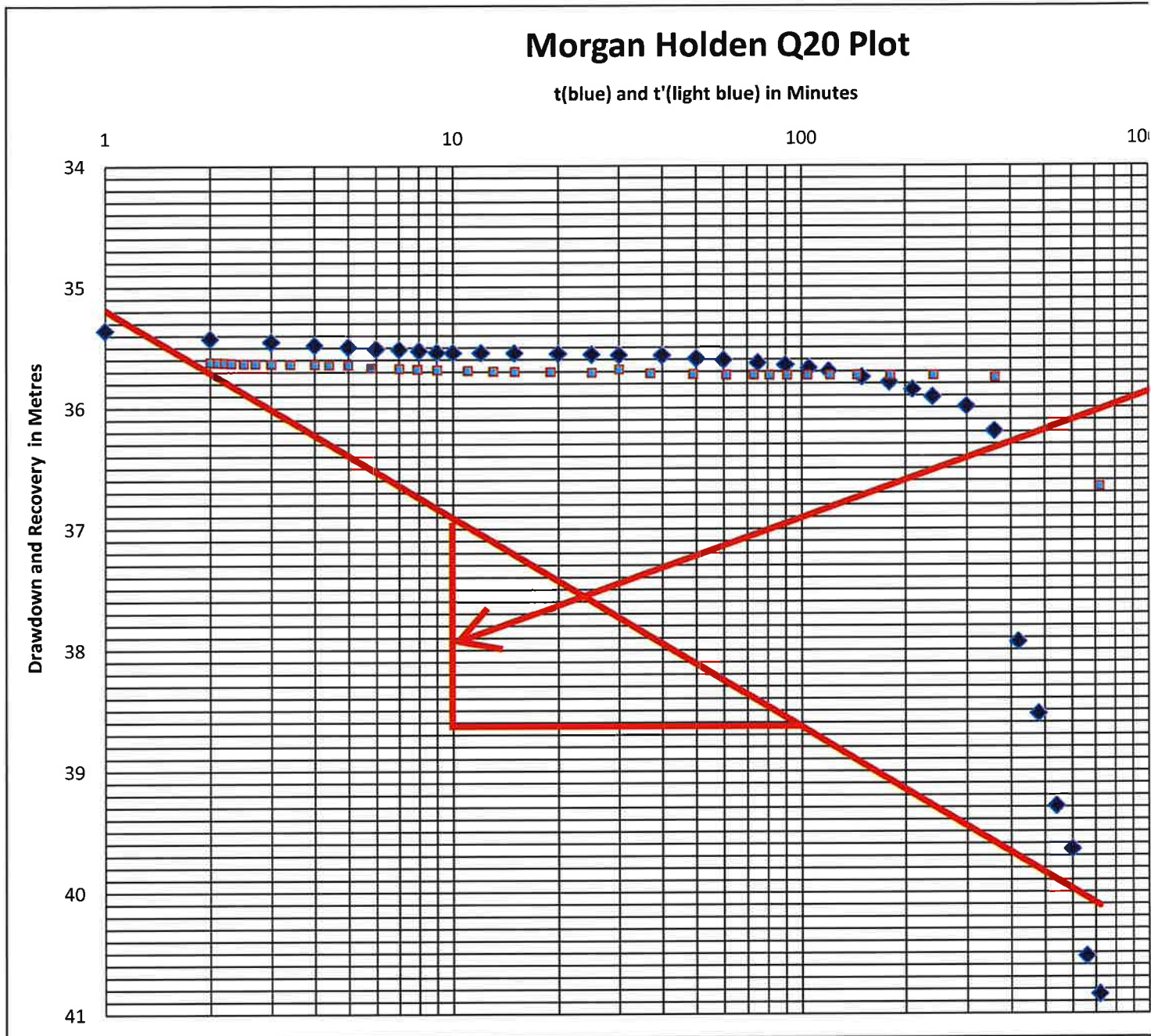


Figure 4 - Q20 Plot



Water Well Drilling Report

[View in Metric](#) [Export to Excel](#)

GIC Well ID 1610148
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

Well Identification and Location										Measurement in Imperial	
Owner Name HOLDEN, DES											
Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description		
	NW	36	21	2	5						
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)						
ft from					Latitude 50.830300 Longitude -114.158000					Elevation ft	
ft from					How Location Obtained					How Elevation Obtained	
					Not Verified					Not Obtained	

Drilling Information	
Method of Drilling Rotary	Type of Work New Well
Proposed Well Use Domestic	

Formation Log		Measurement in Imperial
Depth from ground level (ft)	Water Bearing	Lithology Description
3.00		Brown Clay & Rocks
16.00		Light Brown Sandstone
45.00		Brown Sandy Shale & Sandstone Ledges
68.00		Brown Shale
77.00		Gray Shale
88.00		Brown Shale
138.00		Gray Shale
142.00		Gray Hard Shale
157.00		Gray Shale
158.00		Gray Sandstone
160.00		Gray Shale

Yield Test Summary		Measurement in Imperial
Recommended Pump Rate 6.00 igpm		
Test Date	Water Removal Rate (igpm)	Static Water Level (ft)
2001/10/27	10.00	106.30

Well Completion		Measurement in Imperial
Total Depth Drilled	Finished Well Depth	Start Date
160.00 ft		2001/10/26
End Date		2001/10/27

Borehole		
Diameter (in)	From (ft)	To (ft)
7.88	0.00	160.00

Surface Casing (if applicable)		Well Casing/Liner
Plastic		Plastic
Size OD :	6.00 in	Size OD :
Wall Thickness :	0.370 in	Wall Thickness :
Bottom at :	21.00 ft	Top at :
		Bottom at :

Perforations				
From (ft)	To (ft)	Diameter or Slot Width(in)	Slot Length (in)	Hole or Slot Interval(in)
135.00	154.00	0.125		7.00

Perforated by Saw

Annular Seal Driven & Bentonite

Placed from 6.00 ft to 21.00 ft

Amount

Other Seals

Type At (ft)

Screen Type

Size OD : in

From (ft) To (ft) Slot Size (in)

Attachment

Top Fittings Bottom Fittings

Pack

Type Unknown Grain Size

Amount Unknown

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well PETER NIEMANS	Certification No 3631AD
Company Name PETER NIEMANS WATER WELL DRILLING	Copy of Well report provided to owner Date approval holder signed



Water Well Drilling Report

[View in Metric](#) [Export to Excel](#)

GIC Well ID 1610148
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

Well Identification and Location										Measurement in Imperial
Owner Name		Address		Town		Province		Country		Postal Code
HOLDEN, DES										
Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description	
	NW	36	21	2	5					
Measured from Boundary of				GPS Coordinates in Decimal Degrees (NAD 83)						
ft from				Latitude 50.830300 Longitude -114.158000				Elevation ft		
ft from				How Location Obtained				How Elevation Obtained		
				Not Verified				Not Obtained		

Additional Information		Measurement in Imperial
Distance From Top of Casing to Ground Level 17.72 in		
Is Artesian Flow		Is Flow Control Installed
Rate igpm		Describe
Recommended Pump Rate 6.00 igpm		Pump Installed
Recommended Pump Intake Depth (From TOC) 150.00 ft		Depth ft
		Type Make H.P.
		Model (Output Rating)
Did you Encounter Saline Water (>4000 ppm TDS)		Depth ft
Gas		Depth ft
Remedial Action Taken		Well Disinfected Upon Completion
		Geophysical Log Taken
		Submitted to ESRD
Additional Comments on Well		Sample Collected for Potability
BOREHOLE DIAMETER WAS ALSO 5.125 INCHES.		Submitted to ESRD
ADDITIONAL YIELD TESTSL: OCT 26/01 W/RIG AIR @ 11 GPM FOR 2 HRS.		

Yield Test			Taken From Ground Level	Measurement in Imperial	
			Depth to water level		
Test Date	Start Time	Static Water Level	Pumping (ft)	Elapsed Time	Recovery (ft)
2001/10/27	12:00 AM	106.30 ft		Minutes:Sec	
Method of Water Removal			106.30	0:00	128.22
Type Pump				1:00	120.34
Removal Rate 10.00 igpm			118.73	2:00	114.67
Depth Withdrawn From 150.92 ft			119.88	3:00	113.39
			120.80	4:00	113.06
			121.56	5:00	112.80
			122.11	6:00	112.60
			122.57	7:00	
			122.97	8:00	
			123.33	9:00	
			123.62	10:00	
			124.02	12:00	
			124.28	14:00	
			124.48	16:00	
			124.93	20:00	
			125.16	25:00	
			125.39	30:00	
			125.59	35:00	
			125.76	40:00	
			126.05	50:00	
			126.31	60:00	
			126.61	75:00	
			126.94	90:00	
			127.30	105:00	
			127.63	120:00	
			128.22	150:00	

Water Diverted for Drilling		
Water Source	Amount Taken	Diversion Date & Time
	ig	

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well	Certification No
PETER NIEMANS	3631AD
Company Name	Copy of Well report provided to owner
PETER NIEMANS WATER WELL DRILLING	Date approval holder signed



WSH Labs (1992) Ltd.

3851B – 21 Street NE • Calgary, Alberta, Canada • T2E 6T5

Phone: (403) 250-9164 • Fax: (403) 291-4597 • www.wshlabs.com

Aqua Mule

PO Box 87
Millarville, AB T0L 1K0

Phone: (403) 992-3931 Lab Number: 98447

Fax:

Email: allisonbaker@aquamule.com PO Number:

Sample Info: Morgan Holden
NW-36-21-2-W5

Sampled By: BB
Date Sampled: 12/5/2024
Date Received: 12/5/2024
Date Reported: 12/9/2024

TEST REPORT

Analyte	Units	Result	CDW Guideline Maximum	Detection Limit
Calcium	mg/L	65.6	No Guideline	0.02
Iron	mg/L	<0.03	AO: 0.3	0.03
Magnesium	mg/L	39.0	No Guideline	0.02
Manganese	mg/L	<0.01	AO: 0.02, MAC: 0.12	0.01
Potassium	mg/L	5.8	No Guideline	0.02
Sodium	mg/L	99	AO: 200	0.02
Bicarbonates	mg/L	497	No Guideline	-
Bromides	mg/L	<0.2	No Guideline	0.2
Carbonates	mg/L	0	No Guideline	-
Chlorides	mg/L	39.1	AO: 250	0.1
Fluorides	mg/L	0.19	MAC: 1.5	0.02
Nitrates as N	mg/L	2.73	MAC: 10	0.04
Nitrites as N	mg/L	<0.05	MAC: 1	0.05
NO ₃ + NO ₂ as N	mg/L	2.73	No Guideline	0.04
Sulfates	mg/L	35	AO: 500	0.9

Parameter	Units	Result	CDW Guideline Maximum	Detection Limit
Electrical Conductivity (at 25°C)	µS/cm	926	No Guideline	0.2
pH	pH	7.88	7.0 - 10.5	-
Hardness (as CaCO ₃)	mg/L	324	No Guideline	0.1
Total Alkalinity (as CaCO ₃)	mg/L	408	No Guideline	3
P-Alkalinity (as CaCO ₃)	mg/L	0	No Guideline	-
Hydroxide (as CaCO ₃)	mg/L	0	No Guideline	-
Total Dissolved Solids (calculated)	mg/L	531	AO: 500	4

Microbiology	Units	Result	CDW Guideline Maximum
Total Coliform	CFU/100 mL	0	MAC: Zero / Absent
Escherichia Coliform	CFU/100 mL	0	MAC: Zero / Absent

WSH Labs (1992) Ltd. as per: _____

Sum of Cations	10.93	TDS / EC Ratio	0.57
Sum of Anions	10.20	Sodium Adsorption Ratio	2.39
Ion Balance	1.07	Saturation Index	0.83



WSH Labs (1992) Ltd.

3851B – 21 Street NE • Calgary, Alberta, Canada • T2E 6T5

Phone: (403) 250-9164 • Fax: (403) 291-4597 • www.wshlabs.com

Legalities

Lab Number: 98447

- (1) The results above are related only to the items analyzed.
- (2) Results apply to the sample(s) as received. Date and time sampled are solely provided by the client.
- (3) Analytical determinations were performed in Calgary, AB. 3851B - 21 Street NE.
- (4) Condition of sample(s) upon receipt:
Acceptable
- (5) External provider(s) of laboratory results:

References

- (1) Accredited by CALA to ISO/IEC 17025 for specific tests.
- (2) Guidelines for Canadian Drinking Water Quality are provided courtesy of Health Canada, July 2024.
https://www.canada.ca/content/dam/hc-sc/migration/hc-sc/ewh-semt/alt_formats/pdf/pubs/water-eau/sum_guide-res_recom/summary-tables-eng-2024-07.pdf

Acronyms & Nomenclatures

< denotes less than detection limit
> denotes greater than
AO = Aesthetic Objective
CDW = Canadian Drinking Water

MAC = Maximum Acceptable Concentration
OG = Operational Guidance Value
TNTC = Too Numerous To Count (>80 colonies)

Standard Methods for the Examination of Water and Wastewater 23rd Edition (2017)

Alkalinity. 2320 B. Titration Method.
Ammonia Nitrogen. 4500-NH₃ C. Titrimetric Method.
Anions. 4110 B. Ion Chromatography with Chemical Suppression of Eluent Conductivity.
Biochemical Oxygen Demand. 5210 B. 5-Day BOD Test.
Color. 2120 B. Visual Comparison Method.
Conductivity. 2510 B. Laboratory Method.
Fluoride. 4500-F⁻ C. Ion-Selective Electrode Method.
Hardness. 2340 B. Hardness by Calculation.
Metals. 3125 B. Inductively Coupled Plasma / Mass Spectrometry (ICP-MS) Method.
Organic Carbon. 5310 B. High-Temperature Combustion Method.
pH. 4500-H⁺ B. Electrometric Method.
Total Kjeldahl Nitrogen / Nitrogen (Organic). 4500-Norg B. Macro-Kjeldahl Method.
Total Suspended Solids. 2540 D. Total Suspended Solids Dried at 103-105°C.
Turbidity. 2130 B. Nephelometric Method.

Hach Methods

Chemical Oxygen Demand. Hach Method 8000.
Chlorine, Total & Free. As per Hach CN66 Test Kit Instructions.
Coliforms, Total and E. coli. (Membrane Filtration). Hach Method 10029.
Ortho-Phosphate. Hach Method 8048.
Sulfides. Hach Method 8131.
Tannin & Lignin. Hach Method 8193.
Total Phosphate. Hach Method 8190.

File: S-11-66

Groundwater Supply Evaluation
for a
Pat Holden Water Well
in a Proposed New Lot 2, in the Southern Part of
Lot 3, Block 3, Plan 0211261
in a Portion of the NW 36 21-2 W5M

Submitted to:
Aqua Mule Water Systems and Services
Priddis, Alberta

Strom Engineering Inc.
P.O. Box 825,
Turner Valley, Alberta T0L 2A0
Phone 888-8088

December, 2024

Aqua Mule Water Systems and Services
Priddis, Alberta

**Re: Groundwater Supply Evaluation for a Pat Holden Water Well
in a Proposed New Lot 2, in the Southern Part of Lot 3, Block 3, Plan 0211261
in a Portion of the NW 36 21-2 W5M**

Please find enclosed our letter report which summarizes well completion details, including a table of pump test data, a graph of the drawdown and recovery data from a field test conducted on the well. The report also makes recommendation with respect to the calculated Q_{20} or 20 year safe yield for a well as per the above referenced location.

All the pump test data was received from Aqua Mule Water Systems and Services which conducted all field work. Strom Engineering Inc. has been contracted to determine the Q_{20} or a 20 year safe yield groundwater evaluation report.

1.0 Background Information

The Subdivision that is proposed to be subdivided is in the Southern Part of Lot 3, Block 3, Plan 0211261 in a Portion of the NW 36 21-2 W5M. For the proposed Lot 2 although there is a water well no water well for that property was found on the Alberta Reconnaissance Reports. There is possibly a water well on the Reconnaissance Report that has shown chemical testing of a water well that might meet the description but there is no other information to go with it.

Aqua Mule Water Systems and Services indicated that the Water Well appears to be in good shape. Aqua Mule noted that the water well casing is a single string. In water well development, the term single string refers to a well construction method where a single casing string is used from the surface to the bottom of the well. This method is often used in areas where the geological formations are stable and do not require multiple casing strings to prevent collapse or contamination.

2.0 Well Completion Details

Total Depth:	18.87 metres (61.92 feet)
Non-pumping Water Level:	9.32 metres (30.56 feet)
Casing:	114 mm OD steel casing with the bottom set at 18.87 metres. The casing is a single string (See Background Information.)
Drilling Contractor:	Not known
Pump Test Contractor:	Aqua Mule Water Systems and Services
Date Drilled:	Probably in the late 1970s.

NOTE: 1) Cgpm = Canadian Gallons per Day = Igpm = Imperial Gallons per Day

3.0 Well Test Methodology

The Well test pump was set at 15.85 metres (52 feet) during the test pumping. Where we do not have lithology because there is no record found we go by the pump depth as a marker for the aquifer. This especially appropriate in this case due to the strength of the water well.

4.0 Well Test Results

The well was flow tested by Aqua Mule Water Systems and Services on December 3, 2024. The well was pumped at a rate of 49.09 m³/day (7.50 Cgpm) for 720 minutes followed by a 720 minute pump off recovery. Water level measurements were recorded by Aqua Mule Water Systems and Services using an electronic water well measuring device.

The maximum drawdown was observed to be 0.52 metres (1 foot 8.5 inches) during the 720 minute pump test at a pumping rate of 49.09 m³/day (7.50 Cgpm). It should be noted that the drawdown under the pumping rate shows the water well has very good to excellent strength. **The recovery was 90.4% after 720 minutes of no pumping.**

The maximum available drawdown (head) measured from the non-pumping water level of 9.32 metres – 0.03 metres casing stickup = 9.29 metres to the pump at 15.85 metres = 6.56 metres head.

Transmissive capacity has been determined graphically using the Cooper and Jacob semi log plot method, with transmissive capacity based usually on the final limb of the curve according to:

$$T = 2.3Q / (4 \cdot \pi \cdot \Delta s)$$

Where:
T = transmissive capacity, in m² / day
Q = pump rate, in m³ / day
 Δs = drawdown over 1 log cycle

Transmissive capacity, determined from the above method is summarized as follows:

Stage	Δs (metres)	Transmissivity
Drawdown	0.29	30.93

Based on the above methods of analysis, transmissive capacity is 30.93 m²/day. It should be noted that the calculated transmissive capacity value is time dependent, flow rate dependent particularly for fractured or stratified heterogeneous media and reflects the response of an aquifer for the particular time of the year during which the test was conducted. Transmissive capacity is not a constant everywhere in an aquifer and is generally characterized by a log-normal distribution.

The 20 year, long term safe yield index (Q_{20}), neglecting well loss, is determined from the equation:

$$Q_{20} = 0.683THs$$

where: Q_{20} = 20 year, long term safe yield, in m^3 / day

T = effective transmissive capacity, in m^2 / day

H = available drawdown in metres

s = safety factor of 0.7

The calculation of the 20 year safe yield index for an aquifer, assuming isotropic, homogeneous conditions is derived by extrapolating a drawdown trend so that the available drawdown lasts for 20 years. This approach neglects the effects of recharge, and is, therefore, a conservative approach.

It is common practice to adjust the Q_{20} by a safety factor to account for the unknown boundary conditions due to test duration, well deterioration, well inefficiency, seasonal variability in non-pumping water levels and errors associated with assuming isotropic, homogeneous aquifer conditions and casing stick up errors. In accordance with Alberta Environment guidelines we have used a safety factor of 0.7.

The theoretical but not field tested Q_{20} or 20 safe yield is $97.01m^3$ / day or 14.82 Cgpm. Therefore, we use the pumping rate for our Q_{20} or the 20 year safe yield at **49.09 m^3 /day (7.50 Cgpm)**.

In accordance with the Water Act, every household user is entitled to divert up to a maximum of $1250 m^3$ /year or $3.43 m^3$ /day. Based on well test data and other evidence available, the production well is capable of providing the allotted $1250 m^3$ /year.

Although this is a Production Report The Water Quality Test Results (See Appendix, Figure 6). has been included for reference convenience. It should be noted that when Aqua Mule tested the well that there was no odour and the water ran clear. Also, this Water Quality Report shows no harmful bacteria. It should be noted that homeowners with water wells in use should submit regular water testing for quality assurance

5.0 Other Water Users

There are other water users within an 800 metre radius of the new well. Please see Section 6.0 for more information.

6.0 Well Interference

Well interference from domestic household wells, such as the well referred to in this Report, is not applicable for the following reasons:

1. Well interference can be caused by the continuous pumping of a well causing the formation of interfering cones of depression. Mark J. Hammer, Water and Wastewater Technology states that pumping of a well dewateres the surrounding ground and lowers the static water level forming a cone of depression. Under steady withdrawal, the water table is reduced until equilibrium drawdown is established.

2. No cone of depression develops in household well use. The water from a household well is pumped on a non-continuous basis with water being directed to a pressure tank or a cistern intermittently and on a demand basis only.

7.0 Summary of Findings

Based on the results of the flow test and drill log, the following conclusions have been drawn:

1. The ground water production well that is the subject of this report according to the evidence available is capable of providing a maximum of 1250 m³/year in accordance with Section 23(3) of the Water Act for the proposed parcel.

2. Pumping of the new well for household purposes on an intermittent basis will not interfere with any household users, licensees or traditional agricultural users who exist.

If you have any questions or comments regarding the conclusions drawn in this groundwater supply evaluation, contact Rob Strom, P.Tech.(Eng.), P.L.(Eng.) at 888-8088 at your convenience.

Respectfully submitted,
Strom Engineering Inc.



Robert P. Strom, P.Tech.(Eng.), PL(Eng.)

PERMIT TO PRACTICE	
STROM ENGINEERING INC.	
Signature	<i>Robert P. Strom</i>
Date	<i>DEC. 12/2024</i>
PERMIT NUMBER: P 10566	
The Association of Professional Engineers, Geologists and Geophysicists of Alberta	

Appendix:

Figure 1 – Location Plan

Figure 2 – Site Plan

Figure 3 – Pump Test Data

Figure 4 – Q20 Plot

Figure 5 – Water Quality Report

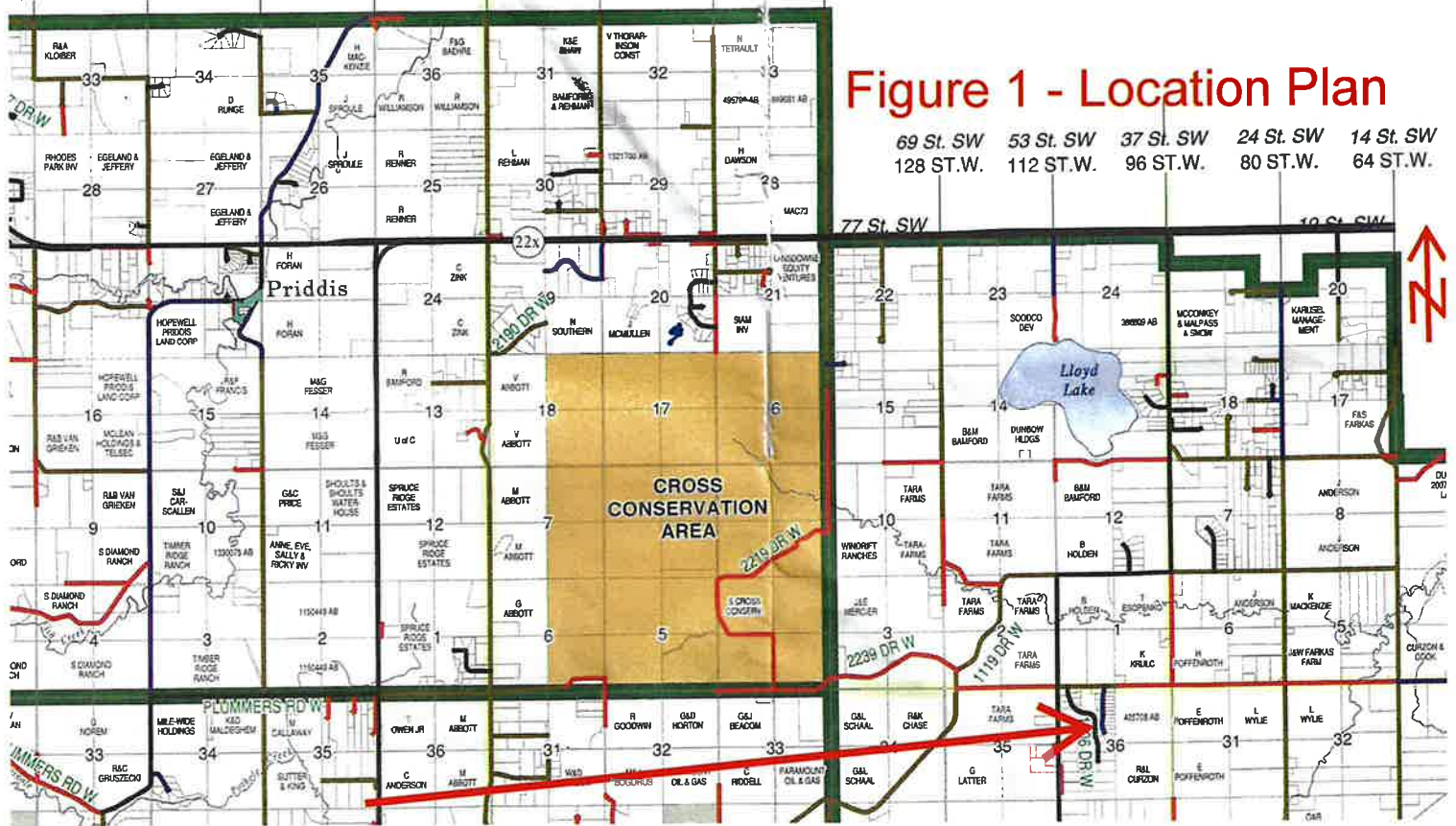
Range 3

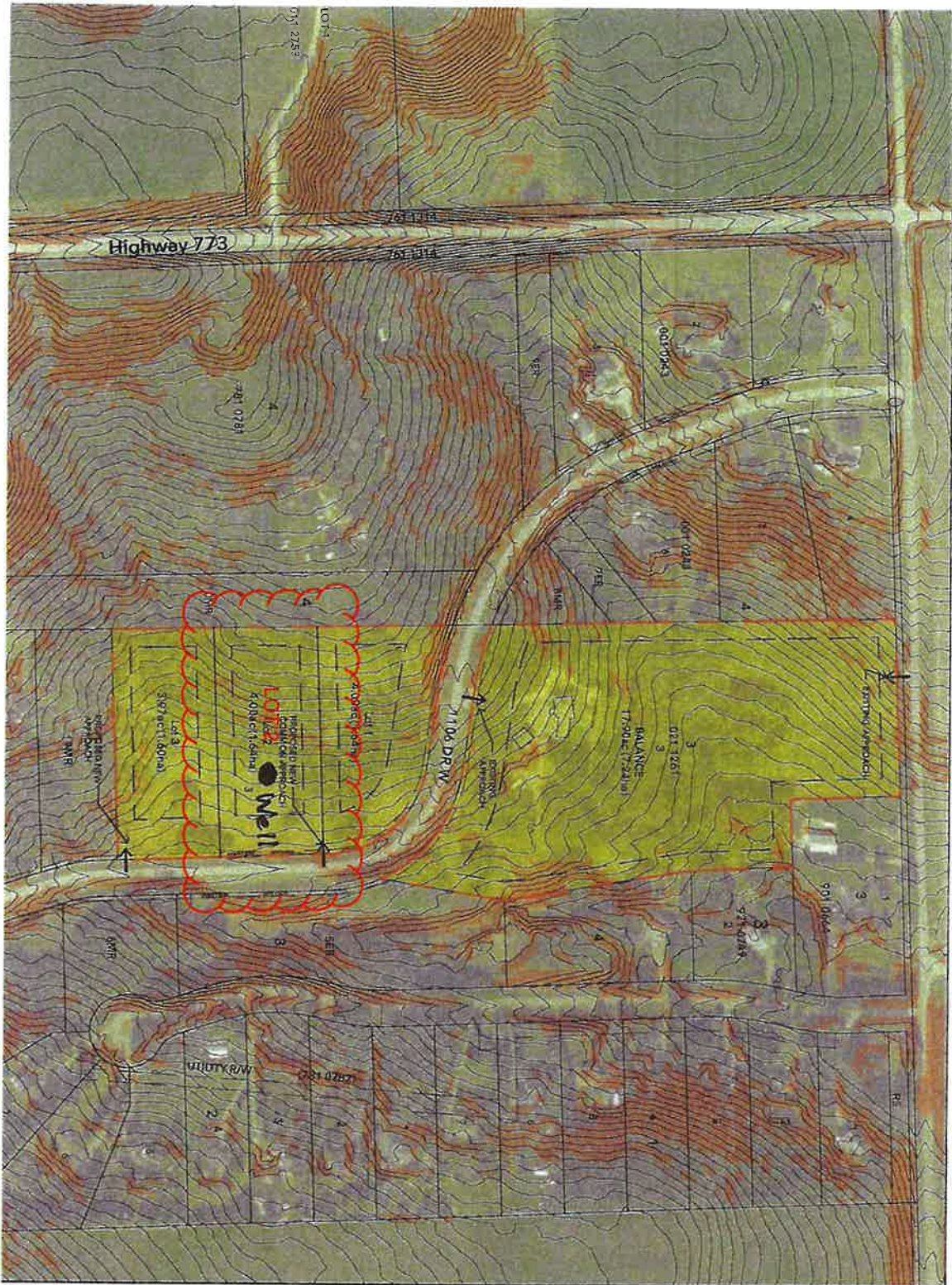
Range 2

56 ST.W. 240 ST.W. 224 ST.W. 208 ST.W. 192 ST.W. 176 ST.W. 160 ST.W. 144 ST.W.

Figure 1 - Location Plan

69 St. SW 53 St. SW 37 St. SW 24 St. SW 14 St. SW
128 ST.W. 112 ST.W. 96 ST.W. 80 ST.W. 64 ST.W.





TOWNSHIP
planting + design inc.

CLIENT

Holder

PROJECT NUMBER

052

P2A0211261,

LEGAL ADDRESS

NW 36-21-2 W5M, lot 3, Block 3, Plan 0211261
±29.88ac (120Yha)

DATE _____

Er 27, 2024

LEGEND

Subject Site

1.0m Centour Interval

1592 clon

...and the ...

.....

PROPOSED LOT 2
WELL

Figure 2 - Site Plan

LANDUSEREDesignation & Subdivision

Proposed 3 New County Residential Lots

SCALE
1:3000

SHEET

54



1893086 Alberta Ltd.
PO Box 87
Millarville, AB T0L 1K0
Office: 403-931-2991
admin@aquamule.com

WATER WELL PUMP TEST

Date: December 3, 2024

Customer: Pat Holden

Land Description: NW-36-21-02-W5
GPS 50.8290626 -114.1572330

WELL SPECIFICATIONS:

Type of Well: Drilled

Well Depth: 61.92 feet

Static (non-pumping water level): 30.56 feet

Casing Type: Steel

Casing Size: 4.5" O.D.

Casing Height Above Ground: 1"

Liner Type: None (single string)

Liner Size: N/A

Top of Liner (approx.): N/A

Sample Collected: Yes

Pump & Generator Required: Yes

2nd Man Required: No

Tested By: Billy Baker

Comments: Pump set at 52 feet during testing. Water ran clear during testing with no odour.

PRODUCTION TEST DATA:

Pumping Rate (IGPM)	Water Level (drawdown)	Minutes	Water Level (Recovery)
7.5 IGPM	30.56 feet	0	32.27 feet
	31.90	1	30.77
	31.99	2	30.77
	32.01	3	30.77
	32.02	4	30.77
	32.02	5	30.77
	32.03	6	30.77
	32.03	7	30.77
	32.03	8	30.77
	32.03	9	30.77
	32.04	10	30.77
	32.04	12	30.77
	32.04	15	30.77
	32.04	20	30.77
	32.04	25	30.77
	32.04	30	30.77
	32.05	40	30.77
	32.05	50	30.77
	32.06	60	30.77
	32.07	75	30.77
	32.07	90	30.77
	32.08	105	30.77
	32.08	120	30.76
	32.09	150	30.76
	32.10	180	30.76
	32.11	210	30.76
	32.13	240	30.76
	32.15	300	30.76
	32.17	360	30.76
	32.19	420	30.76
	32.21	480	30.74
	32.23	540	30.74
	32.25	600	30.74
	32.26	660	30.74
	32.27	720	30.73

NO PREDICTIONS OF THE WELL'S FUTURE PERFORMANCE ARE IMPLIED. HOWEVER, THE ABOVE INFORMATION INDICATED THAT THE WELL IS RECHARGING AT 7.5 IGPM AT THIS TIME. THE DRAWDOWN AND RECOVERY DATA HAS BEEN PROVIDED IN A FORMAT WHICH COULD BE REVIEWED BY A HYDRO GEOLOGIST, IF A SECOND OPINION OF THE WELL'S PERFORMANCE IS REQUIRED.

Figure 3 - Pump Test Data

Pat Holden Drawdown and Recovery Data Expanded

Water Level Drawdown in Feet	Water Level Drawdown in Metres	Real Time in Minutes Drawdown (t)	Water Level Recovery in Feet	Water Level Recovery in Metres	Real Time in Minutes Recovery (t')	Recovery as minutes (t'/t)
30.56	9.315	0	32.27	9.836	720	
31.9	9.723	1	30.77	9.379	721	721
31.99	9.751	2	30.77	9.379	722	361
32.01	9.757	3	30.77	9.379	723	241
32.02	9.760	4	30.77	9.379	724	181
32.02	9.760	5	30.77	9.379	725	145
32.03	9.763	6	30.77	9.379	726	121
32.03	9.763	7	30.77	9.379	727	104
32.03	9.763	8	30.77	9.379	728	91
32.03	9.763	9	30.77	9.379	729	81
32.04	9.766	10	30.77	9.379	730	73
32.04	9.766	12	30.77	9.379	732	61
32.04	9.766	15	30.77	9.379	735	49
32.04	9.766	20	30.77	9.379	740	37
32.04	9.766	25	30.77	9.379	745	30
32.04	9.766	30	30.77	9.379	750	25
32.05	9.769	40	30.77	9.379	760	19
32.05	9.769	50	30.77	9.379	770	15
32.06	9.772	60	30.77	9.379	780	13
32.07	9.775	75	30.77	9.379	795	11
32.07	9.775	90	30.77	9.379	810	9
32.08	9.778	105	30.77	9.379	825	7.9
32.08	9.778	120	30.76	9.376	840	7
32.09	9.781	150	30.76	9.376	870	5.8
32.1	9.784	180	30.76	9.376	900	5
32.11	9.787	210	30.76	9.376	930	4.4
32.13	9.793	240	30.76	9.376	960	4
32.15	9.799	300	30.76	9.376	1020	3.4
32.17	9.805	360	30.76	9.376	1080	3
32.19	9.812	420	30.76	9.376	1140	2.7
32.21	9.818	480	30.74	9.37	1200	2.5
32.23	9.824	540	30.74	9.37	1260	2.3
32.25	9.830	600	30.74	9.37	1320	2.2
32.26	9.833	660	30.74	9.37	1380	2.1
32.27	9.836	720	30.73	9.367	1440	2

Figure 3 - Pump Test Data

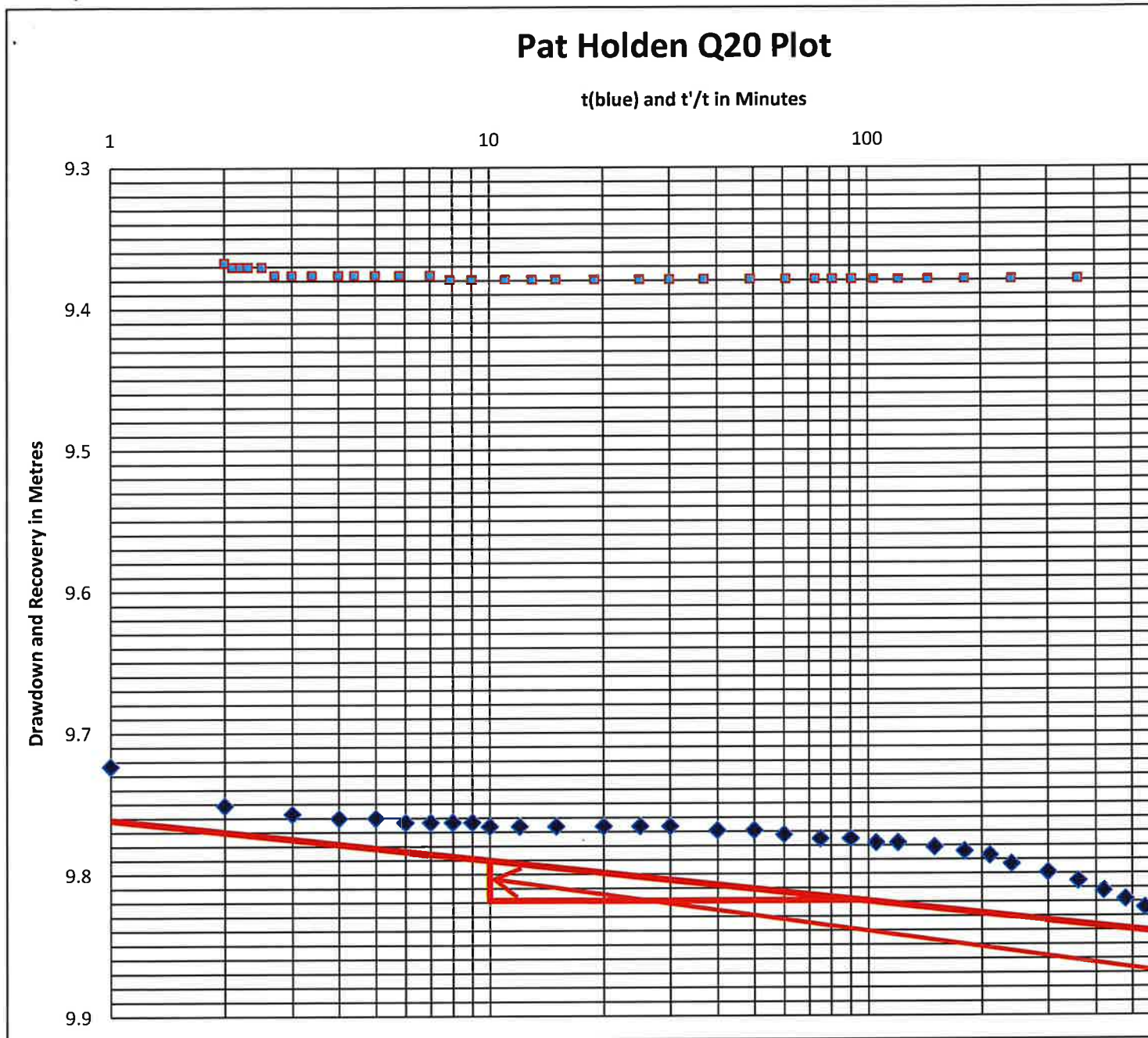


Figure 4 - Q20 Plot



WSH Labs (1992) Ltd.

3851B – 21 Street NE • Calgary, Alberta, Canada • T2E 6T5

Phone: (403) 250-9164 • Fax: (403) 291-4597 • www.wshlabs.com

Aqua Mule

PO Box 87
Millarville, AB T0L 1K0

Phone: (403) 992-3931 Lab Number: 98446

Fax:

Email: allisonbaker@aquamule.com PO Number:

Sample Info: Pat Holden
NW-36-21-02-W5

Sampled By: BB
Date Sampled: 12/4/2024
Date Received: 12/5/2024
Date Reported: 12/9/2024

TEST REPORT

Analyte	Units	Result	CDW Guideline Maximum	Detection Limit
Calcium	mg/L	72.0	No Guideline	0.02
Iron	mg/L	<0.03	AO: 0.3	0.03
Magnesium	mg/L	46.9	No Guideline	0.02
Manganese	mg/L	<0.01	AO: 0.02, MAC: 0.12	0.01
Potassium	mg/L	6.7	No Guideline	0.02
Sodium	mg/L	83	AO: 200	0.02
Bicarbonates	mg/L	507	No Guideline	-
Bromides	mg/L	<0.2	No Guideline	0.2
Carbonates	mg/L	0	No Guideline	-
Chlorides	mg/L	34.0	AO: 250	0.1
Fluorides	mg/L	0.19	MAC: 1.5	0.02
Nitrates as N	mg/L	3.95	MAC: 10	0.04
Nitrites as N	mg/L	<0.05	MAC: 1	0.05
NO ₃ + NO ₂ as N	mg/L	3.95	No Guideline	0.04
Sulfates	mg/L	40	AO: 500	0.9

Parameter	Units	Result	CDW Guideline Maximum	Detection Limit
Electrical Conductivity (at 25°C)	µS/cm	937	No Guideline	0.2
pH	pH	7.66	7.0 - 10.5	-
Hardness (as CaCO ₃)	mg/L	373	No Guideline	0.1
Total Alkalinity (as CaCO ₃)	mg/L	416	No Guideline	3
P-Alkalinity (as CaCO ₃)	mg/L	0	No Guideline	-
Hydroxide (as CaCO ₃)	mg/L	0	No Guideline	-
Total Dissolved Solids (calculated)	mg/L	536	AO: 500	4

Microbiology	Units	Result	CDW Guideline Maximum
Total Coliform	CFU/100 mL	0	MAC: Zero / Absent
Escherichia Coliform	CFU/100 mL	0	MAC: Zero / Absent

WSH Labs (1992) Ltd. as per: KBW

Figure 6 - Water Quality Report

Sum of Cations	11.21	TDS / EC Ratio	0.57
Sum of Anions	10.39	Sodium Adsorption Ratio	1.86
Ion Balance	1.08	Saturation Index	0.66



WSH Labs (1992) Ltd.

3851B – 21 Street NE • Calgary, Alberta, Canada • T2E 6T5

Phone: (403) 250-9164 • Fax: (403) 291-4597 • www.wshlabs.com

Legalities

Lab Number: 98446

- (1) The results above are related only to the items analyzed.
- (2) Results apply to the sample(s) as received. Date and time sampled are solely provided by the client.
- (3) Analytical determinations were performed in Calgary, AB. 3851B - 21 Street NE.
- (4) Condition of sample(s) upon receipt:
Acceptable
- (5) External provider(s) of laboratory results:

References

- (1) Accredited by CALA to ISO/IEC 17025 for specific tests.
- (2) Guidelines for Canadian Drinking Water Quality are provided courtesy of Health Canada, July 2024.
https://www.canada.ca/content/dam/hc-sc/migration/hc-sc/ewh-semt/alt_formats/pdf/pubs/water-eau/sum_guide-res_recom/summary-tables-eng-2024-07.pdf

Acronyms & Nomenclatures

< denotes less than detection limit
> denotes greater than
AO = Aesthetic Objective
CDW = Canadian Drinking Water

MAC = Maximum Acceptable Concentration
OG = Operational Guidance Value
TNTC = Too Numerous To Count (>80 colonies)

Standard Methods for the Examination of Water and Wastewater 23rd Edition (2017)

Alkalinity. 2320 B. Titration Method.
Ammonia Nitrogen. 4500-NH₃ C. Titrimetric Method.
Anions. 4110 B. Ion Chromatography with Chemical Suppression of Eluent Conductivity.
Biochemical Oxygen Demand. 5210 B. 5-Day BOD Test.
Color. 2120 B. Visual Comparison Method.
Conductivity. 2510 B. Laboratory Method.
Fluoride. 4500-F⁻ C. Ion-Selective Electrode Method.
Hardness. 2340 B. Hardness by Calculation.
Metals. 3125 B. Inductively Coupled Plasma / Mass Spectrometry (ICP-MS) Method.
Organic Carbon. 5310 B. High-Temperature Combustion Method.
pH. 4500-H⁺ B. Electrometric Method.
Total Kjeldahl Nitrogen / Nitrogen (Organic). 4500-Norg B. Macro-Kjeldahl Method.
Total Suspended Solids. 2540 D. Total Suspended Solids Dried at 103-105°C.
Turbidity. 2130 B. Nephelometric Method.

Hach Methods

Chemical Oxygen Demand. Hach Method 8000.
Chlorine, Total & Free. As per Hach CN66 Test Kit Instructions.
Coliforms, Total and E. coli. (Membrane Filtration). Hach Method 10029.
Ortho-Phosphate. Hach Method 8048.
Sulfides. Hach Method 8131.
Tannin & Lignin. Hach Method 8193.
Total Phosphate. Hach Method 8190.

Figure 6 - Water Quality Report

WOOD VALLEY ESTATES AREA STRUCTURE PLAN

April 24, 2001

BYLAW 1/2001

BEING A BYLAW OF THE MUNICIPAL DISTRICT OF FOOTHILLS NO. 31 TO ADOPT AN AREA STRUCTURE PLAN

WHEREAS the Council of the Municipal District of Foothills No. 31 (hereinafter called the "Council") is empowered by Section 633(1) of the Municipal Government Act, being Chapter M-26.1, to adopt an Area Structure Plan which provides a framework for subsequent subdivision and development of an area of land within the Municipality's boundaries; and

WHEREAS the Council did direct the preparation of an Area Structure Plan for the the following lands:

Plan 7810781 Block 3 in NW 36-21-2 W5 (55.43 acres); Plan 7810781 Block 4 in NW 36-21-2 W5 (60.25 acres); Block 1 in SW 36-21-2 W5 (23.72 acres); Block 2 in SW 36-21-2 W5 (23.72 acres) and Plan 7410925 Parcel 5 Block 3 in SW 36-21-2 W5 (28.57 acres)

WHEREAS the Area Structure Plan has been prepared under the direction of Council;

NOW THEREFORE the Council of the Municipal District of Foothills No. 31 in the Province of Alberta, hereby enacts as follows:

1. This Bylaw may be cited as the "*Wood Valley Estates Area Structure Plan*".
2. The *Wood Valley Estates Area Structure Plan* being Schedule "A" attached hereto and forming part of this Bylaw.
3. That the *Wood Valley Estates Area Structure Plan* may be amended by Bylaw from time to time in accordance with the Municipal Government Act, by the Municipal District of Foothills No. 31.
4. This Bylaw comes into full force and effect upon the third and final reading.

FIRST READING: January 4, 2001

Roy R. McLean

Reeve
[Signature]

Municipal Manager

SECOND READING: May 10, 2001

Roy R. McLean

Reeve
[Signature]

Municipal Manager

THIRD READING: May 10, 2001

Roy R. McLean

Reeve
[Signature]

Municipal Manager

PASSED IN OPEN COUNCIL assembled at the Town of High River in the Province of Alberta this 10th day of May, 2001.

**WOOD VALLEY ESTATES
AREA STRUCTURE PLAN**

Prepared pursuant to the provision of the
Municipal Government Act amended

July 27, 2000

**Revised February 8, 2001
Revised April 23, 2001**

**WOOD VALLEY ESTATES
AREA STRUCTURE PLAN**

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APPENDIX

- Appendix 1 Wood Valley Estates Revised Area Concept Plan as approved by Council, June 1999
- Appendix 2 Wood Valley Estates Newsletter and Questionnaire, January 2000
- Appendix 3 Wood Valley Estates Area Structure Plan - Notice of First Reading, Bylaw 001/2001, January 2001.
- Appendix 4 Groundwater Exploration and Research Ltd. Report on groundwater - June 30, 1998
- Appendix 5 Large scale plan of Revised Wood Valley Estates Area Structure Plan, April 2001.

LIST OF FIGURES

- Figure 1 Plan Location page 7
- Figure 2 The Planning Area page 8
- Figure 3 Wood Valley Estates Area Structure Plan page 12

1.0 Introduction

1. INTRODUCTION

1.1 Purpose of the Plan

The Wood Valley Estates Area Structure Plan has been prepared pursuant to Section 633 (1) of the Municipal Government Act and is in accordance with the requirements of the "Guidelines for the preparation of Area Structure Plans" as adopted by the Municipal District of Foothills by resolution of Council.

The Plan has a level of detail greater than the Foothills Municipal Development Plan and is intended to act as a guide to future subdivision and development within the Plan area. In accordance with Section 633 (1) of the Municipal Government Act, a Council of Municipality may, by By-Law, adopt the Plan as a Statutory Plan.

Direction for the Plan was provided by the Municipal Development Plan, Municipal District of Foothills No. 31, as adopted by Bylaw 139/98, third and final reading October 1, 1998. The Plan indicated that documents such as this should examine and address the following issues:

- 1.1 the proposed land use
- 1.2 the sequence of development
- 1.3 the location of proposed and existing roads and public utilities
- 1.4 the location of reserves
- 1.5 water supply and public sewage provisions
- 1.6 the developability of the land
- 1.7 impacts on surrounding land uses

In addition, this Area Structure Plan is to bring closure to an on-going debate regarding the development of the northern portion of the plan area and to facilitate the meaningful development of the south portion of the plan area in order to provide a "win-win" framework for current and future residents.

1.2 Background to the Area Structure Plan

Development proposals for the northern portion of the plan area began over twenty years ago with the development of White Post Lane in 1978. Since that time, various developments within the parcel have been approved on an ad-hoc basis. This has lead to an on-going mistrust between the residents of White Post Lane (hereafter WPL)and some of the owners of the land, who initially developed WPL. When a recent proposal for further development on the north west corner of the plan area was considered by Council, they requested that an Area Concept Plan be prepared to outline an overall development strategy for the area under consideration and the lands immediately to the east and south of the parcel.

The Area Concept Plan was prepared pursuant to a public hearing, April 16, 1997 and a motion of Council respecting By-Law 48/97, Holden Re-designation plan 7810781 Block 3 N.W. 36-21-02-W5. The plan was prepared in accordance with the requirements of the Foothills General Municipal Plan and Land Use By-Law and followed recommendations contained within the June 17, 1998 Draft Copy of the Municipal Development Plan. The Plan was prepared with a level of detail greater than that generally required by the Foothills Municipal Development Plan for Area Concept Plans.

The Area Concept Plan was reviewed by Council on January 21, 1999. At that time Council passed a resolution noting seven amendments. A revised plan incorporating the amendments was considered and approved by Council on June 28, 1999 when it accepted the plan of redesignation for PTN: N.W. 36-21-01-W5M - the Des Holden component of the concept plan. A copy of the approved Area Concept Plan is included in the Appendix. The Approved Area Concept Plan underpins this Area Structure Plan.

On January 4, 2001 Council gave First Reading to Bylaw 001/2001 authorizing the adoption of the Area Structure Plan subject to certain revisions. These revisions have been incorporated in this revised Area Structure Plan.

1.3 The Approval Process

The M.D. of Foothills No. 31 requires the preparation of an Area Structure Plan to provide a framework for subsequent subdivision and development within the plan area.

Consultants were retained by the landowners to prepare the Plan. The consultants have met with the landowners on a regular basis during the preparation of the Plan.

The Plan requires the approval of the M.D. of Foothills Council following public circulation, subsequent reviews and amendments.

1.4 Plan Implementation

The Wood Valley Estates Area Structure Plan, adopted by By-Law in accordance with Section 633 of the Municipal Government Act, shall become a statutory document of the Municipal District of Foothills No. 31.

Pursuant to Section 692(1), (f) of the Municipal Government Act, Council held a Public Hearing with respect to the proposed By-Law on December 14, 2000. The Wood Valley Estates Area Structure Plan does not supercede, repeal, replace, regulate, or otherwise diminish any Statutory Plan in effect in the Plan Area.

1.5 Plan Review and Amendment

While the Area Structure Plan is designed to provide an outline of how this specific plan area of the Municipality will be developed; changing considerations (environmental, social and economic) may require amendments to the Plan from time to time.

Council should review the Plan from time to time and amend if necessary, and shall hold a public hearing as required by Section 692(1) of the Municipal Government Act prior to giving second reading to any proposed amendment.

1.6 Interpretation

In this Plan:

- a) **“Concept Plan”** means the Area Concept Plan adopted by Council for this Plan area.
- b) **“Council”** means the Council of the Municipal District of Foothills No. 31.
- c) **“Plan”** means the Wood Valley Estates Area Structure Plan.
- d) **“Subdivision Approving Authority”** means the Council of the Municipal District of Foothills No. 31
- e) **“Plan of Subdivision”** means a detailed proposal for development of the land and forms the basis for an application for subdivision.
- f) **“Residual Lands”** means all lands within the Plan Area which are not identified for residential, roadway and utility uses by the Plan.
- g) **“Municipal Reserve” (MR)** as defined by Section 666(1) of the Municipal Government Act.
- h) **“Environmental Reserve” (ER)** as defined by Section 554(1) of the Municipal Government Act.

1.7 Legislative Framework

1.7.1 The Municipal Government Act

The Municipal Government Act as amended to this date sets out the requirements for an Area Structure Plan in Section 633(2) as follows:

“An Area Structure Plan

- (a) must describe:
 - i the sequence of development proposed for the area;
 - ii the land uses proposed for the area, either generally or with respect to specific parts of the area;
 - iii the density of population proposed for the area either generally or with respect to specific parts of the area; and

iv the general location of major transportation routes
and public utilities;
and

(b) may contain any other matter the Council considers necessary.”

1.7.2 The Municipal Development Plan

The Municipal Development Plan, adopted by Council Bylaw 139/98, is a statutory planning document affecting land use within the Municipal District of Foothills No.31.

Pursuant to the Municipal Development Plan, and based on the very low capability of this parcel for agriculture, the appropriate land uses for the Plan Area include the following:

- a) Country Residential Development
- b) Reserves - Municipal, School & Environmental
- c) Agriculture

Specific policies designed to achieve the objectives contained in the Municipal Development Plan are as outlined in the Municipal Development Plan as adopted by Bylaw 139/98 and this Area Structure Plan.

2.0 The Plan Area

2.0 THE PLAN AREA

2.1 Regional/Municipal Location

The Plan Area comprises the NW 36-21-02 W5 and the north ½ of SW 36-21-02 W5 generally located 3.2 kilometres south of Lloyd Lake and adjacent to the east side of SH 773 at 242 Avenue. The Plan Area lies entirely within the Municipal District of Foothills No. 31.

2.2 Definition of the Plan Area

2.2.1. Boundaries of the Plan Area

This Area Structure Plan encompasses land that five (5) landowners wish to sub-divide. The property is bounded on the north by 242 Avenue S.W., on the east by the fifteen residential lots of White Post Lane, on the south by residential acreages and on the west by SH773. The total plan area is 77.577 hectares (191.69 acres) more or less.

The plan location is illustrated on Figure 1 and the Planning Area is illustrated in Figure 2.

The landowners who wish to sub-divide include:

A. N.W. 36-21-02 W5

Art and Helen Holden	22.43 hectares (55.43 acres)
Plan 7810781 Blk 3 NW 36-21-2-W5	
Desmond and Adelaide Holden*	24.38 hectares (60.25 acres)
Plan 7810781 Blk 4 NW 36-21-2-W5	
<i>(*This includes the six - 3 acre lots currently approved and under development)</i>	

B. North ½ S.W. 36-21-02 W5

Clark and Hedy Seaborn	9.60 hectares (23.72 acres)
Block 1. S.W. 36-21-02-W5	
Frank Varga	9.60 hectares (23.72 acres)
Block 2. S.W. 36-21-02-W5	
Len and Lucill Maddison	11.56 hectares (28.57 acres)
Plan 7410925 Parcel 5. Blk 3, SW 36-21-2-W5	

Total area to be sub-divided 77.57 hectares (191.69 acres)

2.2.2 General Physical Description

Wood Valley Estates is located within a bowl-shaped land form that generally slopes from south to north. The high point on the site is located in the south west corner of the Plan Area. The low point is near the entrance to White Post Lane at the north end of the site. Within this planning area there is a difference of some 95 metres in elevation. Slopes vary from steep, +/- 20% to flat +/- 3%. The area drains to the north through a central ravine, that receives drainage flows from neighbouring lands to the east and from the balance of the site. The central ravine generally bisects the subject lands. The site is being used primarily for residential acreages and as marginal grazing land for a small number of cattle. The soils are Class 4 according to the Canada Land Inventory. Class 4 soils have severe limitations that restrict the range of crops or may require special conservation practises.

Existing buildings include four residences located off SH773, six lots currently under development on the north west corner of the parcel, two single family residences located on the west side of White Post Lane, itself containing fifteen other residences of approximately 0.81 hectare (2 acre) parcels, and a former girl guide camp located near the centre of the site. The development of the six lots on the north west corner of the subject parcel has included the re-construction of the western portion of 242 Ave. and an entrance road that will serve this proposed development

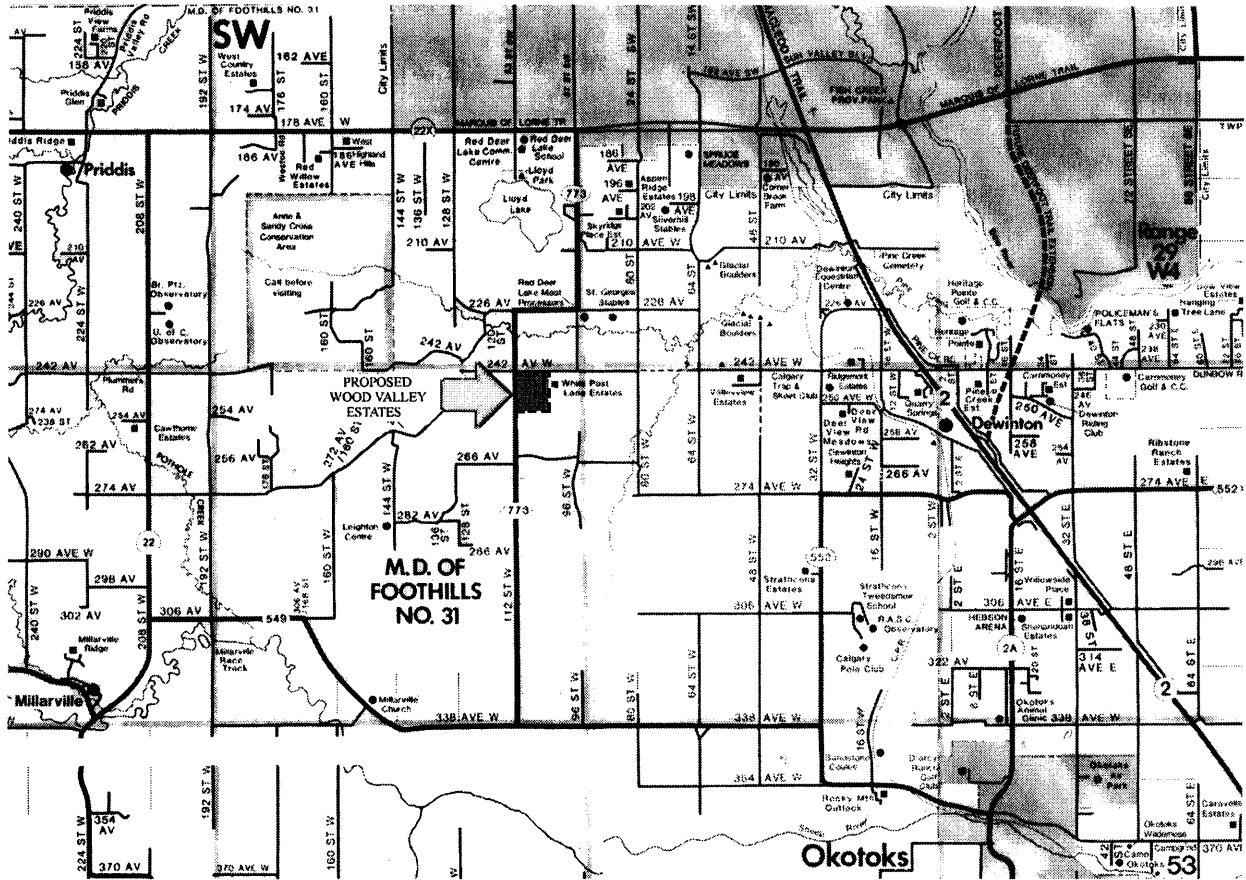


Figure 1 - Plan Location

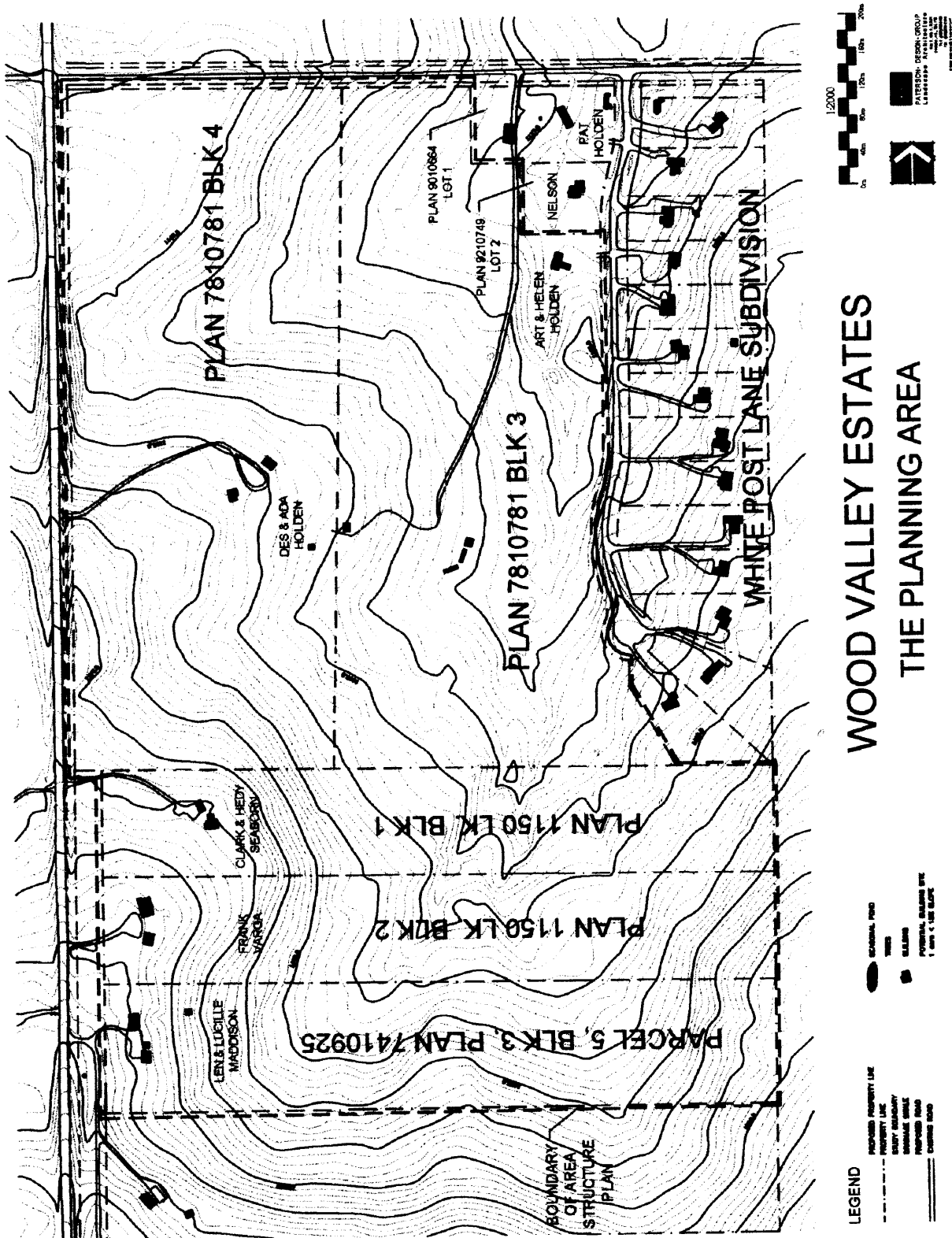


Figure 2 - The Plan Area

3.0 Plan Objectives

3.0 PLAN OBJECTIVES

3.1 Goals and Objectives of the Plan

- 3.1.1 To create a country residential development achieving the highest design, aesthetic and environmental standards in conformance with the existing provincial, regional and municipal policy documents.
- 3.1.2 To act as a guide under which the Municipal District can review and evaluate specific development proposals.
- 3.1.3 To provide a framework for subsequent sub-division and development proposals.
- 3.1.3 To establish polices which will direct proposed land use, open space, population density, location of transportation routes, location and methods of utility servicing, phasing of development, site specific issues such as escarpment and highway setbacks and other such matters as Council deems necessary.

3.2 Principles of Development

The major objectives of this development are as follows:

- 3.2.1 To ensure all development is in accordance with the current statutory policy and municipal standards.
- 3.2.2 To provide for residential land uses that respect the character of the landscape and which reflect the rural surroundings.
- 3.2.3 To provide high quality design and development standards for all proposed development.
- 3.2.4 To provide integrated municipal and environmental reserve parcels that serve the needs of the neighbourhood and that take advantage of the natural features of the area.
- 3.2.5 To ensure municipal and environmental reserves continue to allow public recreational activities that respect the quality of the landscape.
- 3.2.6 To develop safe and efficient transportation and utility systems that respect the natural qualities of the landscape.
- 3.2.7 To encourage safe and efficient movement of traffic within and adjacent to the proposed development by adhering to the long term goals of Alberta Transportation and Utilities.
- 3.2.8 To ensure that all development is controlled by fair and equitable policies that respect the character of the neighbouring developments.
- 3.2.9 To respect the areas natural resources and to actively mitigate against their destruction or overuse.
- 3.2.1 To improve upon and preserve the aesthetic qualities of the area.

4.0 Plan Policies

Wood Valley Estates Area Structure Plan

4.0 PLAN POLICIES**4.1 The Plan Concept**

This section discusses the implementation of the Area Structure Plan objectives and principles of development identified in Section 3.0 as they apply specifically to Wood Valley Estates and as currently reflected in the approved amended Area Concept Plan.

Goal:

To comprehensively plan a country residential subdivision that reflects the highest standards of design, aesthetic and environmental respect in conformance with the existing provincial, regional and municipal policy documents.

The Wood Valley Estates Area Structure Plan, Figure 3, provides the Municipal District of Foothills with a planned development consisting of country residential and integrated open space and environmental land uses that respect the character the surrounding landscape and neighbouring residential acreages.

The Area Concept Plan approved as a part of Council's June 10, 1999 resolution approving the Redesignation - PTN: N.W. 36-21-01-W5M, included a plan indicating a total of 15 new lots and three parcels of land in agricultural balance, one of which included the area known as the Girl Guide Camp. The Concept Plan approval allowed development of six lots on the northwest corner of the planning area to proceed and these are now under development. With the elimination of the Guide Camp, this Area Structure Plan continues to follow the design intent of the Area Concept Plan making only minor realignments of the boundaries of agricultural and MR parcels resulting in an increased municipal reserve buffer for residents of the adjacent White Post Lane. In its current configuration, this Area Structure Plan will permit a total of eight new lots to be developed in addition to the six already approved for a total of fourteen lots as agreed in the Area Concept Plan.

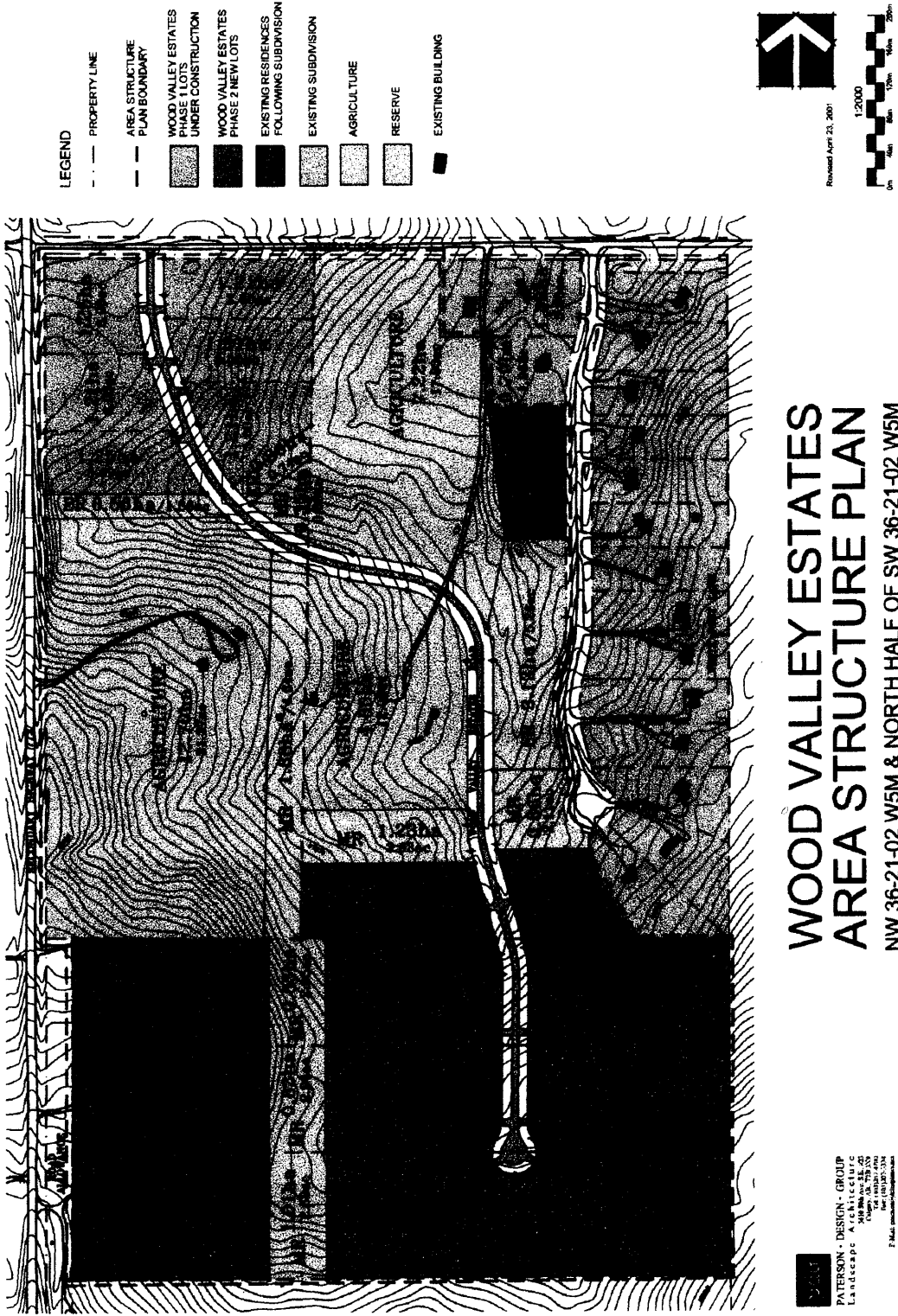


Figure 3 - Wood Valley Estates Area Structure Plan

4.2 Residential Land Use Component

4.2.1 Country Residential Development

Principle:

To provide for residential uses in a manner that is sensitive to the character of the landscape and the needs of the greater community.

Policies:

- 4.2.1.1 All Country Residential Development shall conform to provisions of the Municipal Development Plan and the Land Use By-Law including the general and specific setback requirements from highways, property lines and internal roads.
- 4.2.1.2 All subdivision and development shall be in conformity with the provisions of the Municipal Government Act, the Subdivision and Development regulations.
- 4.2.1.3 New Country Residential lots within the Area Structure Plan area shall range in size from 1.22 hectares (3.00 acres), to 3.63 hectares (8.97 acres), more or less.
- 4.2.1.4 Approval for Country Residential Development shall be contingent upon a signed Development Agreement between the Municipal District of Foothills No.31 and the Developer for the internal road following approval of the plan of subdivision.
- 4.2.1.5 All utilities and roads shall be developed in keeping with Municipal and Provincial standards as follows:
- a) Individual water wells shall be developed for each lot in accordance with Alberta Environment standards and licensing procedures.
 - b) Sewage treatment and disposal shall utilize conventional septic tanks and fields or be accomplished by mechanical treatment systems in accordance with the guidelines established by Alberta Labour in the Alberta Private Sewage Treatment and Disposal Regulations of Alberta Environmental Protection.

- c) Access roads and internal circulation roads shall be designed in accordance with Municipal standards and shall be approved by the Municipality of Foothills roads engineer.
- d) Installation of overhead and underground power, gas and telephone services shall be completed to all new lots at the Developer's expense and shall be in accordance with the franchised utility company design and installation standards.
- e) Timely garbage pickup and disposal from the development to an approved disposal site shall be the responsibility of each individual lot owner.
- f) Utility rights-of-way shall be provided in accordance with provincial and municipal regulations.

4.2.2 Girl Guide Camp

The "Tiny Holden Guide Camp" has been in continuous existence for many years. It has served thousands of young women who participated in an adventure camp providing a true rustic experience in the Foothills of the Rockies. Over the years, the camp became an important part of the annual program of the Girl Guides organization who developed a long standing tradition of use in the Plan Area. However, increasing pressures of development in the region and the requirements for continuous upkeep of the structures have led the land owners, in consultation with the girl guides, to conclude that the camp, in its present form, can no longer adequately serve the needs of the girl guides. Consequently, the owners have decided to seek other ways to commemorate Tiny Holden.

Principle:

To phase out the Girl Guide Camp following plan approval.

Policies:

- 4.2.2.1 To allow sufficient time for the Guides to seek alternate sites, the Girl Guide Camp shall be allowed to remain and be used until December 31, 2000.
- 4.2.2.2 All on-going maintenance and upkeep of the Guide Camp during this transition period shall be at the Developer's expense.
- 4.2.2.3 Following closure of the Guide Camp, all buildings and associated camp development shall be completely removed

and disposed of at the Developer's expense.

- 4.2.2.4 Following building removal the site shall become part of the Agricultural District parcel.

4.2.3 Plan 7810781 Blk 3 NW 36-21-2-W5

Principle:

To allow the continued use of the residual lands of Plan 7810781 Blk 3, for agricultural purposes.

Policies:

- 4.2.3.1 The residual lands of Plan 780781 Blk 3 consist of two parcels divided by an internal M.D. road. Parcel 1 encompasses the old Girl Guide camp. It is 4.857 hectares (12 acres) more or less in size. Parcel 2 to 7.22 hectares (17.83 acres) more or less. The combined parcels equal 12.077 hectares (29.83 acres).
- 4.2.3.2 Intensive Agricultural uses as defined by the Municipal Development Plan and Land Use Bylaw shall not be allowed without prior approval of the Municipal District of Foothills No 31.
- 4.2.3.3 A "Restrictive Covenant As To the Use of Land" shall be signed between the land owner and the Municipal District of Foothills limiting further subdivision of the Agricultural District land without the written approval of the Municipal District of Foothills No. 31.

4.3 Agricultural District - Plan 7810781 Blk 4 NW 36-21-2-W5

Principle:

To allow the continued use of the residual lands of Plan 7810781 Blk 4, for agricultural purposes.

Policies:

- 4.3.1 The subject lands shall continue with their current agricultural land

use until changes in the Municipal Development Plan regulations and By-Laws permit additional considerations.

- 4.3.2 Agricultural uses shall be limited to non-intensive farming of animals and agricultural crops.
- 4.3.3 A "Restrictive Covenant As To the Use of Land" shall be signed between the land owner and the Municipal District of Foothills limiting further subdivision of the Agricultural District land without the written approval of the Municipal District of Foothills No. 31.

4.4 Environmental Component

Principle:

To allow the utilization of such areas for public and private outdoor recreational activities such as walking, hiking and bicycling.

To ensure that development on or near environmentally sensitive areas is controlled in accordance with policies satisfactory to Alberta Environment and the Municipal District of Foothills.

Policies:

- 4.4.1 Environmental reserve areas within the Plan Area may be utilized for recreation purposes to the satisfaction of Alberta Environment and the Municipality of Foothills.
- 4.4.2 Any sub-division or development shall recognize the slope conditions in the Plan Area, and set-backs shall be in accordance with the requirements of the Municipal District Land Use By-Law and the recommendations of a qualified professional to the satisfaction of the Municipal District and Alberta Environment.
- 4.4.3 The dedication of Environmental Reserve (ER) in those areas not suitable for subdivision or development shall be considered at the plan subdivision stage.

4.5 Reserves - School/Municipal and Environmental

Principle:

To ensure that the school and recreational land needs of the community are met through the provision of a publically accessed, integrated open space system.

Capacity currently exists within the area schools to accommodate the projected student population from the Plan Area therefore no provision for school reserves is made within the Plan Area.

Policies:

- 4.5.1 Municipal Reserve (MR) has been dedicated as required by the Municipal Government Act, Subdivision regulations and the direction of Council on approval of the Area Concept Plan.
- 4.5.2 Lands dedicated for Municipal Reserve are similar in quality as the lands being utilized for development and will remain in a natural undeveloped state until utilized by the M.D.
- 4.5.3 Environmental Reserve (ER) as determined by Council has been dedicated adjacent to White Post Lane to provide a development buffer from the adjacent residential acreages and to respect the drainage course crossing under SH773. It will remain in a natural unaltered state.

4.6 Transportation

Principle:

To Develop an efficient and safe internal roadway in accordance with the standards of the Municipality of Foothills.

Policies:

- 4.6.1 Access to the Plan Area shall be limited from 242 Avenue and the proposed internal road. Direct access on to SH773 shall not be permitted with the exception of existing accesses serving the pre-concept plan lots abutting SH773.
- 4.6.2 Internal roads shall be developed in accordance with Municipal Standards.
- 4.6.3 All land uses proposed shall provide for their full parking requirements as outlined in the Land Use By-Law.

4.7 Phasing

Principle:

To phase development in a logical and efficient manner based upon market conditions

The first phase of development is currently underway with the re-construction of the intersection of 242 Ave and SH773, the development of the initial length of internal access road and the six lots approved by Council on the north west corner of the Plan Area.

The second phase of the development will address both market absorption and servicing considerations and will include the extension of the internal access road to service the new lots.

4.8 Utility Servicing

Principle:

To provide a high level of services which will not detrimentally affect adjacent communities.

The Plan Area shall have high quality development standards in all areas including water and sewage systems, roadways, landscaping and architectural guidelines/restrictive covenants aimed at creating a quality residential development.

The Developer shall prepare a set of community development guidelines as an integral part of the Development Agreement process, which will include control of the standards and development and operation of all communal utilities.

All utilities and roads will be developed in keeping with municipal and provincial standards as follows:

Policies:

4.8.1 Water Supply, Storage and Distribution

- 4.8.1.1 Individual water wells shall be provided for each lot in accordance with Alberta Environment standards and licensing procedures.
- 4.8.1.2 All capital costs associated with the provision of the facilities will be the sole responsibility of the Developer.

4.8.2 Sanitary System

- 4.8.2.1 Sanitary treatment shall be provided for each lot for sewage treatment and disposal in accordance with guidelines established by Alberta Labour and Alberta Environmental Protection as outlined in Section 4.2.1.5.(c) of this plan.

- 4.8.2.2 Geotechnical testing, if deemed necessary by Council, shall be undertaken to ensure adequate capability of the land to support septic tanks and fields.
- 4.8.2.3 All capital costs associated with the provision of facilities will be the sole responsibility of the Developer.

4.8.3 Storm Drainage System

- 4.8.3.1 A system of surface drainage integrated with the road system shall form the basis for run-off control within the development area. The open space overland flows will be directed to natural discharge water features within the site and ultimately to the natural drainage areas adjoining the property. The routes, discharge rates and flow will not be altered by new construction other than the access road which will direct water towards existing drainage channels. Cross flows will be contained within culverts as necessary to ensure positive drainage. Ditch checks will be used as required to impede water flow.
- 4.8.3.2 If deemed necessary by Council, A Storm Water Management Plan shall be completed by a certified professional to the satisfaction of the Municipal District of Foothills No. 31

4.8.4 Shallow Utilities

- 4.8.4.1 Extension of shallow utilities and their associated costs shall be the sole responsibility of the Developer. The right-of-way and servicing requirements shall be determined at the Plan-of-Subdivision stage.

4.9 Protective Services

4.9.1 Police Service

- 4.9.1.1 Police service to the Plan Area shall be provided by the RCMP detachment at Okotoks and Black Diamond/Turner Valley.

4.9.2 Fire Service

- 4.9.2.1 Fire Department assessments as part of the Municipal District's tax base of this existing residences in this area and will extend to all lots in the Plan Area.

5.0 Implementation

5.0 IMPLEMENTATION

5.1 Community Contact to Date

The preparation of this Area Structure Plan was preceded by the preparation and approval of an Area Concept Plan. Since this plan's approval by Council, the Developer has continued to liaise with adjacent land owners, has prepared and distributed a newsletter informing residents in the community about the status of the proposal and forwarded questionnaires to each landowner within a one mile radius of the Plan Area. A total of 53 questionnaires were distributed and approximately fifty percent (50%) responded. Those that did not respond were generally residents who lived at the outer edges of the one mile radius from the Plan Area.

Because of the very high response rate, this questionnaire, a copy of which is in the appendix, is considered to be representative of the majority view of the residents of this region. The respondents were sixty eight percent (68%) in favour of the development as proposed. They voiced their support for many reasons including:

- the Developers are local residents who will continue to live in the Plan Area,
- the plan exhibits landscape sensitivity in its recognition of land form and community open space needs, and
- the Developer's willingness to share water resources with their neighbours.

Further, those in favour of the development expressed concerns that a piecemeal approach to subdivision could result in the creation of unsightly pan-handle lots with their extensive driveways and potential accesses on to SH773.

Of the twenty percent (20%) of respondents who were opposed to the development, the majority provided no reasons for their objections. It was therefore not possible for the Developer to offer resolutions for these individuals. Twelve percent (12%) of the respondents voiced no opinion and are assumed to be non-objectors.

It is clear, based on the community contact to date, that the absolute majority of land owners within a one mile radius, are in favour of this Area Structure Plan.



Municipal District of Foothills No. 31

309 MACLEOD TRAIL, BOX 5605,
HIGH RIVER, ALBERTA T1V 1M7
TELEPHONE (403) 652-2341 or (403) 931-1905
FAX (403) 652-7880

June 28, 1999

Paterson Design Group
C/O Lawrence Paterson

Dear Sir/Madam:

Re: D. & A. Holden - Redesignation - PTN: N.W. 36-21-01-W5M

Please be advised that at its June 10, 1999 meeting, Council passed the following resolutions:

MOVED to accept the revised site plan in accordance with the Wood Valley Estates Area Concept Plan.

MOVED that the Public Works Department be requested to supply a report to the Planning Department outlining any concerns with site lines as well as the requirement for upgrading from Secondary Highway 773 to the new internal subdivision road.


Prior to further consideration of the Bylaw, you will now be required to submit the following:

- final lot fees of \$400.00 per new lot;
- Developer's Agreement as per recommendations from the Public Works Department;
- Proof of adequate water supply as per the Provincial Water Act;
- Subdivision application (enclosed) as well as subdivision fees of \$365.00 per new lot + \$35.00 filing fee and \$250.00 Subdivision Appeal Fee (paid up front).

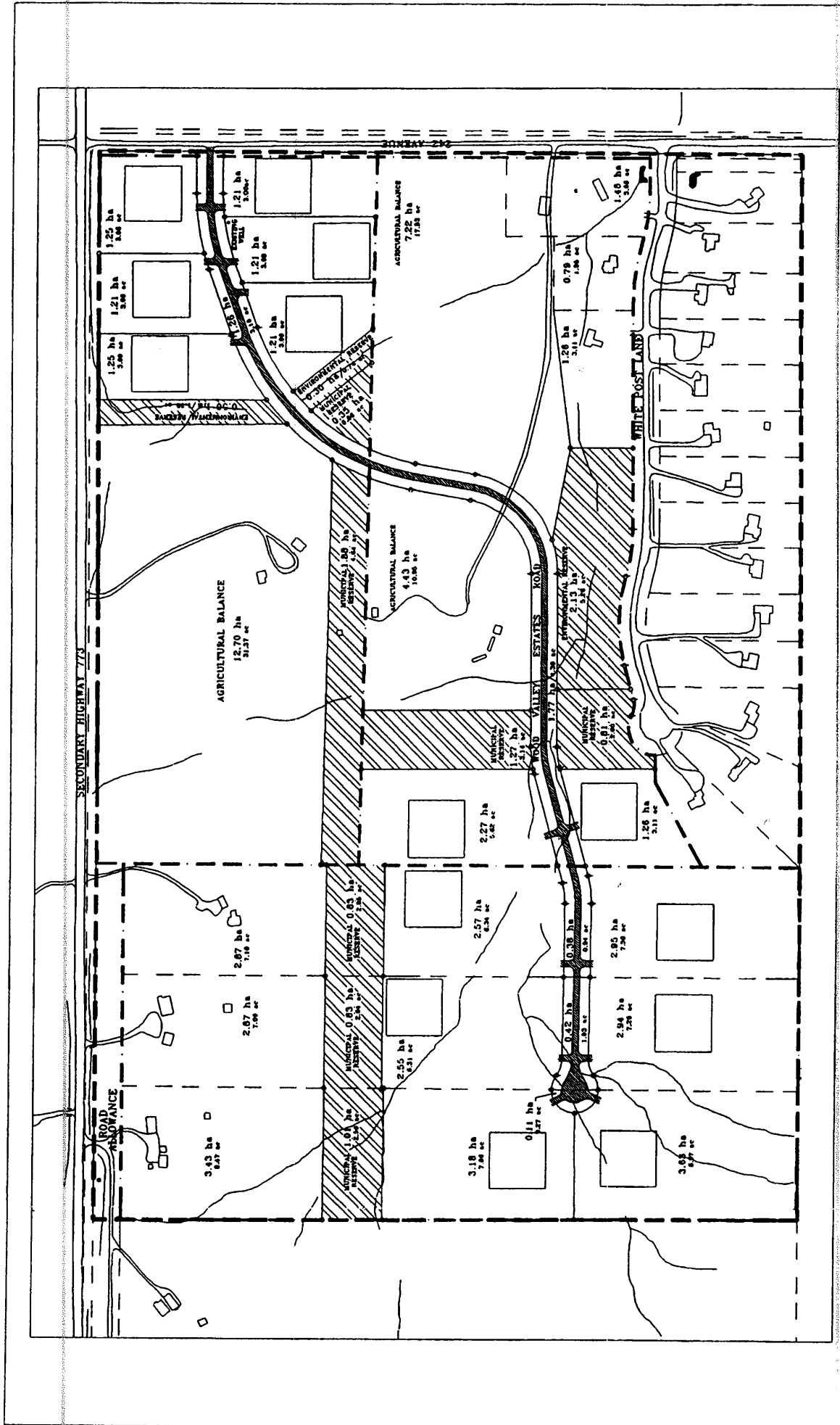
By copy of this letter, the landowners who submitted letters of concern and/or who attended the public hearing will be notified of this decision.

Should you require further assistance, please contact Kelley Fiske-Nielsen in our Planning Department.

Sincerely,
MUNICIPAL DISTRICT OF FOOTHILLS NO.31


Judy Gordon
Coordinator/Planning Department

JG/cg

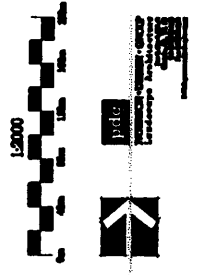


LEGEND

- PROPOSED PROPERTY LINE
- PROPERTY LINE
- STUDY BOUNDARY
- DRAINAGE SHALE
- PROPOSED ROAD
- EXISTING ROAD
- SEASONAL POOL
- TREES
- BUILDING
- POTENTIAL BUILDING SITE
- 1:200 & 1:500 SCALE

WOOD VALLEY ESTATES

REVISED AREA CONCEPT PLAN



WOOD VALLEY ESTATES NEWSLETTER AND QUESTIONNAIRE

January 2000

Dear neighbour:

This letter is being sent to each local residence and landowner within a one mile radius who may be interested in, or affected by, the residential development underway on, and proposed for, the Holden, Seaborn, Varga and Maddison lands. At its June 10, 1999 meeting MD Council accepted the site plan for the Des and Ada Holden property, and this is proceeding as phase 1. As you may also be aware the new municipal government act requires preparation and MD acceptance of an Area Structure Plan (ASP) and this statutory requirement affects the subsequent developments as proposed, requiring this questionnaire and public information gathering.

Background on the Phase 1

The concept plan earlier approved added 15 new lots to the 22 lots already approved within the plan boundaries comprising the NW 36-21-2-W5 and the north 80 acres of the SW 36-21-2-W5. This approval allowed us to proceed with the first phase of development, the 6 new lots on the Des and Ada Holden property. A portion of 242 Avenue has been reconstructed to improve sight distances and safety, and to provide an entry into the project. The access road on the property will be paved.

Wells have been drilled for the 6 lots, and we are happy to report a very ample supply of water. Our proven water supplies are up to 6 times greater than those required by the Alberta Government. Water supply testing information is on file at the MD office. As you would recall, there has been a significant amount of debate about water supply. More about this later.

The Phase 1 properties are now for sale, and the sale agreement contains a covenant regarding the use and development of the properties, a covenant very similar to that which governs the White Post Lane development. Together with the ample 3 acre lot sizes it will ensure land development compatible with adjacent properties. Some lots have already been sold to people who desire to live in the country, and we look forward to these people becoming our neighbours.

Background on the proposed Phase 2 developments

With the proven success of Phase 1, we will proceed as soon as possible with Phase 2. This is being revised as a result of new information, as follows items A to D.

A Escalating costs of subdivision and road development

The escalating costs of the subdivision development in making one mile of paved road make it difficult to develop and market an affordable lot. Because of this, we are asking that the ASP include 4 more lots to the 37 previously approved or in place.

B Improvement In lot shapes

As suggested by some members of council, the lots proposed on the Seaborn and Varga properties will be amalgamated by boundary adjustment to provide wider and more private properties. The resulting lots are a large 5 acres in size, will be mostly located in the trees, and will not intrude on the privacy of those living nearby.

C Changes to the water system

As reported earlier, the wells which have been drilled on phase 1 have proven very ample water. This together with the historical abundance of water found in the wells in the valley bottom and the fact that White Post Lane wells have proven very adequate, all lead to the conclusion that water availability will not prove to be a limiting factor on this development. Despite this, we recognize that some neighbours on high hillsides surrounding this development have found it difficult to obtain water from domestic wells. Respecting this, we are proposing a caveat in this ASP as follows:

- i the developer will create a municipal water system co-op for the 9 lots closely grouped at the southern extremity of the development in accordance with Alberta Environment standards
- ii The developer will covenant that the water co-op system may be "tapped into" by adjacent acreage landowners to serve their own domestic needs
- iii Adjacent property owners so using the co-op water supply will do so at their own cost for hookup and will pay for their pro-rata and proper share of operating costs as do other water co-op members
- iv the developer will covenant all properties on the water co-op system to provide free utility right of way to any adjoining neighbour so desiring to join the water co-op.

D Principle- to be Included In the Area Structure Plan

Every ASP must have a time frame limitation and a scope of application. We are, in this ASP including a principle that: No further subdivisions will be made of the lands included within this ASP unless (a) the MD allows a new high density land designation permitting more than 32 residences per quarter section and (b) a permanent water system, not relying on well water becomes available and can become connected to any new residences proposed.

We have some concerns

We live in the area and will continue to do so. Therefore whatever we do impacts us as much as it does you. That is why we are concerned. We do not want to propose

anything that will adversely impact our neighbourhood, we only wish to improve it. During the many meetings, back fence discussions and telephone tally that have taken place over the past couple of years much has been said that needs clarification. The following comments are some examples seen in recent editions of the paper:

"High density of this nature is inappropriate in this agricultural community"

The ASP, as now envisaged, contains only 41 of the 48 permitted by the MD's current regulations. Furthermore, the land we propose to develop is not used for agriculture. It is terrain which has never been farmed. Those who object to high density, we note, are not involved in agriculture, but rather live in nearby acreages, most smaller acreages than that which we are proposing. This ASP continues in the development of high quality, quiet, country acreage properties already prevalent.

"Highway 773 is not upgraded to a level that can handle additional daily traffic"

Upgrading of Highway 773 will occur when traffic conditions warrant. These demands are not attributable to this proposal. The upgrade, when it happens, will be paid for by taxes and may indeed be cost shared by the province.

"The developers plan was lacking in that council had to make revisions"

We appreciate the inputs of Council and MD staff, who were frequently consulted in the preparation of the plan. Council has frequently and historically asked for revisions to many plans, and ours is no exception. It is normal for plans like ours to go through many refinements, an indication of our willingness to make the best for all concerned.

"This area is a recognized water shortage area"

We note that White Post Lane has had a reliable water source since its inception, the only water shortages being due to mechanical failure. The new Q20 tests performed on Phase 1 have proven water to be up to 6 times that required by the Alberta Water Resources Act. This has confirmed the opinion of our water consultant, and we believe will also prove true for the balance of the development. Incidentally, the MD also utilizes the services of our water consultant.

Critical questions to be asked

We have spent a lot of time and money. We have talked, and will continue to talk to you, our neighbours about this plan and feel that we have an excellent plan which if anything will enhance the existing residential property values. We ask you to look carefully at the plan, and consider these questions as they affect you personally as you reply to the attached questionnaire which will be submitted to the MD as a requirement of the ASP application:

- 1 Does this plan put any more vehicular traffic past my driveway?
- 2 Does this plan put any new houses intruding on my lifestyle closer to my house than my existing neighbours?
- 3 Does this plan, incorporating the MD bylaws and governed by a development covenant similar to that of White Post Lane, seem likely to create a nuisance, a slum or any sort of bad neighbourhood likely to devalue my property?
- 4 Does this plan put any new residential septic fields nearer to my water supply than is my own septic field?
- 5 Does this plan, having a community water co-op for the southern 9 properties, put any water wells closer to the WPL community wells than these WPL wells are to each other?

We raise these questions because we feel in the past there have been a number of residents objecting on the basis of limited information. Hopefully this information news letter will help you to consider the questions asked on the attached questionnaire.

We are asking if you would fill in answers to the questions, and mail, fax or deliver this questionnaire by February 18, 2000 to one of the following locations where it will be tabulated and prepared to assist council in the public meeting to come. We will, following our tabulation, provide you with an update. Thank you for your time, we appreciate your response.

Clark and Hedy Seaborn



Paterson Design Group Inc.
Landscape Architects



Office phone 938-2459 office fax 938-2476

Sincerely

Clark Seaborn

Larry Paterson

Representing the owner developers of Wood Valley
Estates, F. Varga, A. and H. Holden, D. and A. Holden, L.
and L. Maddison, C. and H. Seaborn

WOOD VALLEY ESTATES AREA STRUCTURE PLAN QUESTIONNAIRE
Sent to all property owners within 1 mile of Wood Valley Estates

Name _____ Date _____
Address _____ H Phone _____
_____ B Phone _____

Legal description of your nearby property _____
Approx area of your property-if residential _____

**Have you been consulted or informed about this proposed development
in the earlier concept plan applications?**

By public meetings _____ By meeting with the consultant _____
by discussions with neighbours _____ by attendance at MD meeting _____

Are you? In favour _____ Neutral _____ Undecided _____ Opposed _____
Other _____

**What sort of development would you be willing to
accept?** _____

**Do You have preferences where the buildings/lots are
located** _____

What are your greatest concerns about this proposed development?

Number of lots _____
Secondary Highway #773 _____
Ground water quantity _____
Septic beds impact on groundwater _____
Impact on views _____
Use of agricultural land _____
Other _____

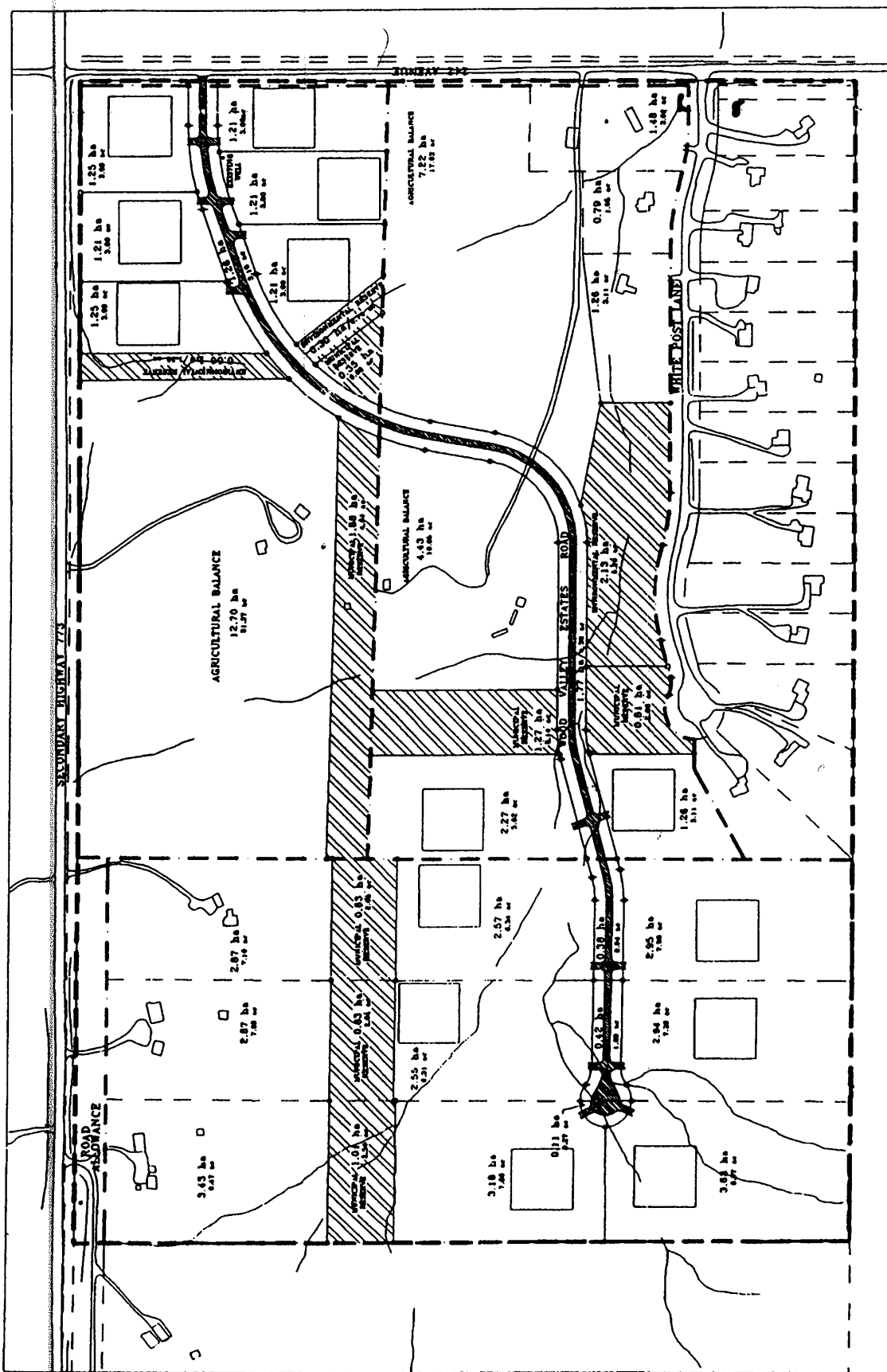
**Are there steps or procedures that would make you more comfortable
with this proposal?** _____

What do you feel are the benefits of this proposed development?

Any other comments? _____
use reverse if necessary _____



1



INDEX

**WOOD VALLEY ESTATES
APPROVED AREA CONCEPT PLAN**



圖書分類



Municipal District of Foothills No. 31

309 Macleod Trail, Box 5605
High River, Alberta T1V 1M7
Telephone: (403) 652-2341 or (403) 931-1905
Fax: (403) 652-7880
web: <http://mdfoothills.com>

January 18, 2001

Paterson Design Group Inc.
c/o Lawrence Paterson



Dear Mr. Paterson:

Re: Wood Valley Estates Area Structure Plan - PTN: N.W. & S.W. 36-21-02-W5M

Please be advised that at its January 4, 2001 meeting, Council gave first reading to Bylaw 001/2001 authorizing the the adoption of the Wood Valley Area Structure Plan in NW & 36-21-2 W5.

Prior to any further consideration on this application, the developers are to submit revisions and amendments to the Area Structure Plan to conform with the Area Concept Plan previously approved by Council on January 21, 1999.

We would like to make you aware that third and final reading must be given within two years from the date of first reading. You therefore have until January 4, 2003 to finalize this application or your Bylaw will automatically be rescinded.

The fees for the enclosed Subdivision Application will be \$425.00 per new lot + \$50.00 filing fee and a \$300.00 Subdivision Appeal Fee which is to be paid up front.

Should you require any further assistance please contact Coreena Carr of our Planning Department.

Sincerely,
MUNICIPAL DISTRICT OF FOOTHILLS NO.31

Judy Gordon
Planning Coordinator

JG/sj

cc: A. & H. Holden
D. & A. Holden
C. & H. Seaborn
F. Varga
L. & L. Maddison
Area Landowners

Encl.



MUNICIPAL DISTRICT OF FOOTHILLS NO. 31

Box 5605, 309 Macleod Trail • High River, Alberta T1V 1M7

APPLICATION FOR SUBDIVISION APPROVAL

FOR OFFICIAL USE ONLY

Date of receipt _____

File No.: _____

Fees submitted: _____

Receipt No. _____

- ____ By plan of subdivision
____ By other instrument
(Tick whichever applies)

THIS FORM IS TO BE COMPLETED IN FULL WHEREVER APPLICABLE BY THE REGISTERED OWNER OF THE LAND, THE SUBJECT OF THE APPLICATION OR BY AN AUTHORIZED PERSON ACTING ON HIS BEHALF.

1. Name of registered owner of land to be subdivided _____

Address _____ Postal Code _____

Home Phone _____ Business Phone _____

2. Authorized person acting on behalf of registered owner _____

Address _____ Postal Code _____

Home Phone _____ Business Phone _____

3. LEGAL DESCRIPTION AND AREA OF LAND TO BE SUBDIVIDED:

All/part of the: _____ 1/4 sec. _____ twp. _____ range _____ west of _____ meridian.

Being all parts of lot _____ block _____ Reg. Plan No. _____ C.O.T. No. _____

Area of the above parcel of land to be subdivided _____ acres.

4. LOCATION OF LAND TO BE SUBDIVIDED:

a. The land is situated in the Municipal District of Foothills No. 31

b. Is the land situated immediately adjacent to the municipal boundary? Yes _____ No _____

If "yes", the adjoining municipality is _____

c. Is the land situated within 0.5 miles of the right-of-way of a Highway? Yes _____ No _____

If "yes", the Highway is No. _____, the secondary road is No. _____

d. Is the land situated within 0.5 miles of a river, stream, watercourse, lake or other permanent body of water, or a canal or drainage ditch? Yes _____ No _____

If "yes", state its name _____

5. EXISTING AND PROPOSED USE OF LAND TO BE SUBDIVIDED:

Describe:

a. Existing use of the land _____

b. Proposed use of the land _____

c. The designated use of the land as classified under a land use bylaw or a zoning bylaw or a land use classification guide where applicable _____

d. Number of new parcels being created _____ . Size of parcels being created _____

6. PHYSICAL CHARACTERISTICS OF LAND TO BE SUBDIVIDED:

a. Describe the nature of the topography of the land (flat, rolling, steep, mixed)

d. Describe the nature of the vegetation and water on the land (brush, shrubs, tree stands, woodlots, etc. - sloughs, creeks, etc.) _____

c. Describe the kind of soil on the land (sandy, loam, clay, etc.) _____

EXISTING BUILDINGS ON THE LAND TO BE SUBDIVIDED:

Describe any buildings, historical or otherwise, and any structures on the land and whether they are to be demolished or
oved:

REGISTERED OWNER OR PERSON ACTING ON HIS BEHALF:

I _____ hereby certify that I am the registered owner
(Full name in block capitals) I am authorized to act on behalf of the
registered owner

and that the information given on this form is full and complete and is, to the best of my knowledge, a true statement of the
facts relating to this application for subdivision approval.

Address _____ (Signed) _____

Phone No. _____ Date _____

RIGHT OF ENTRY

I hereby authorize the Municipal District of Foothills No. 31 to enter my land for the purpose of conducting a site inspection in
connection with my application for subdivision approval.

This right is granted pursuant to Sec. 43 (1) (a) and 5 (d) of the Planning Act.

Owner's Signature

This personal information is being collected under the authority of the Municipal Government Act and will be used for planning
and zoning purposes. It is protected by the privacy provisions of the *Freedom of Information and Protection of Privacy Act*.

THIS SECTION FOR OFFICIAL USE

Decision _____

The reasons for refusal or conditions of approval are attached.

Date _____ Signed _____
(Authorized Officer of Approving Authority)

Groundwater Exploration & Research Ltd.
Box 15
Balzac, AB., CANADA T0M 0E0
Phone (403) 228-0330; Fax (403) 228-6593; Email nowakb@cadvision.com

June 30, 1998
File No 9847

Seaborn Consultants Ltd
Bay 5, 4041 74 Avenue SE
Calgary, AB.
T2C 2H9

Attention: Mr. Clark Seaborn

**RE: Proposed Acreage Subdivision
NW-36 and part of SW-36-21-02-W5M**

Dear Sir:

Further to your letter and documents of May 11, 1998 we enclose a review of groundwater well data with respect to the potential for individual wells for any proposed further subdivision. Our comments and observations are as follows:

- [1] The White Post Lane subdivision consists of 14 two acre lots on a communal water system obtained from three wells. Under Interim Licence #08787 three priority numbers have been issued for a total of 6 ac-ft/year [20.3 m³/day or 3.1 igpm]. The original well was drilled in 1976 to a depth of 105 feet but completed to a depth of 100 feet. The aquifer was described as a sandstone, highly fractured and cemented. A second well was drilled in August of 1984 to a depth of 110 feet then subsequently deepened to 135 feet in November 1987. This well was tested at a flow rate of 12 igpm for 86 hours with a calculated Q20 of 11 igpm. Based on comments from the driller's log it was suggested that the maximum pump rate be less than 5 igpm because of the presence of expanding shale. During the flow testing of the second well no impact was observed on the first well. A third well was drilled in June 1987 to a depth of 171 feet and pump tested for 60 hours. In April 1987 the original well was deepened from 100 to 121 feet.

[2] Groundwater consumption records [in gallons] for White Post Lane are tabulated as follows:

Year	Well #1	Well #2	Well #3	Total Consumption per lot
1988	389900	703590	506930	1,600,420
1990	538800	322060	364350	1,225,210
1991	462930	385310	252660	1,100,900
1992	419850	362590	241210	1,023,650
1993	401790	278677	329010	1,009,477
1994	409950	285420	505250	1,200,620
1995	380770	177710	468100	1,026,580

The highest groundwater consumption was observed in 1988. With the exception of 1988 all other years indicate an average consumption of less than 240 gpd/lot which is the Alberta Environmental Protection guideline [June 27, 1994]. Based on historical records none of the wells are averaging greater than 1 igpm on a continuous flow basis [equivalent to 525,600 gal/year] except Well #2 in 1988 and Well #1 in 1990.

[3] Pumping water levels [in feet] for the period 1990 to 1995 are tabulated as follows:

Year	Well #1 SWL 45	Well #2 SWL 65	Well #3 SWL 53
1990: May	68	60	67
1991: Apr	69	62	67
: Jun	67	62	65
: Oct	69	61	66
1992: Jun	68	62	69
: Nov	68	63	70
1993: Apr	68	63	48
: Oct	64	62	45
1994: Apr	64	60	40
1995: Dec	58	57	44

The static water levels [SWL] are indicated for each well at the time of well completion and/or well deepening. The water level depths reported to Alberta Environment are supposed to reflect pumping water levels although it appears that the levels in Well #3 from 1993 to 1995 reflect static or non-pumping water levels. The following observations are made from a review of the data:

- [a] In Well #1 the original swl was 42 feet on August 6, 1976. When the well was deepened in April 1988 the swl was 45 feet. The water level therefore indicates little or no drop over the 1976 to 1988 time frame.
- [b] In Well #2 the original swl was 59 feet on August 3, 1984. When the well was deepened on November 10, 1987 the swl was 65 feet. There is little or no drop in water level over the 1984 to 1987 time frame.

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- [c] In Well #3, the original swl was 52.6 feet on June 16, 1987. Water level data collected between 1993 and 1995 indicates that the water levels have risen since the well was installed.
- [d] Based on historical records there is no evidence that pumping water levels are decreasing over the operating period 1990 to 1995.
- [4] The White Post Lane Subdivision is located along the east flank of a drainage gully which flows northward toward Pine Creek. According to the local hydrogeological map, springs occur along tributaries to, as well as the major Pine Creek drainage basin. The relief over the subdivision varies from 1155 meters at the south end to 1113 meters at the north end for an elevation difference of some 42 meters. Three acreages currently exist on the west flank of the drainage gully essentially opposite the White Post Lane subdivision.
- [5] The water well data for NW-36 and SW-36 has been tabulated on the enclosed Table 1. The following observations are made from a review of the data:
 - [a] Well depths vary significantly from 31.4 to 103.7 meters in depth
 - [b] Preliminary, short term flow rates vary from a low of 4 gpm to 50 gpm
 - [c] The White Post Lane and Holden/Nelson wells are clustered around similar depths and non-pumping water levels
 - [d] The Seaborn, Varga and Maddison wells in the northern portion of SW-36 cluster about common depths and non-pumping water levels
 - [e] Well logs indicate relatively thin water bearing zones suggesting stratified, heterogeneous, non-radial flow
- [6] A hydrostratigraphic cross-section oriented southwest to northeast along bedrock dip was constructed and enclosed with this letter report. An interpretation of the hydrostratigraphic cross-section relationships suggest the following:
 - [a] The Seaborn, Maddison and Varga wells located on the upland area southwest of White Post Lane are completed at a deeper depth than the Holden/White Post Lane wells and do not appear to be hydraulically connected

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- [b] The Holden and White Post Lane wells are clustered about similar well depths and non-pumping water levels and are located stratigraphically lower, along the valley bottom sideslopes, than the Seaborn et al wells
- [c] There was reportedly no hydraulic connection between the White Post Lane Well #2 and Well #1 during an 86 hour pump test in 1985, suggesting that even through a potential exists for hydraulic connection that none was present.
- [d] The most recent Holden well [Nov 97] has a water elevation nearly identical to that of the White Post Lane well #3 [1987] and well #2 [1987] even after 10 years of operation of the White Post Lane production wells

In summary, the following conclusions have been reached from the data review:

- [1] Under existing groundwater withdrawal licences White Post Lane is allowed to divert 6 ac-ft or 1,628,220 gallons per year or approximately 4461 gallons per day. Based on original pump test data, any of the three wells should have the capability of supplying the entire subdivision requirement of 3360 gallons per day [14 lots X 240 gpd/lot].
- [2] There is no evidence based on pumping water levels that the aquifer is being depleted. Historical data for well #3 indicates a water level rise since its installation.

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- [3] Based on historical consumption records, the White Post Lane subdivision uses less than the 240 gallons per day per lot deemed adequate by Alberta Environmental Protection's June 27, 1995 guidelines for rural water supply. The water demand is currently buffered by an 8000 gallon storage reservoir. It is our understanding that a water conservation program is in effect at White Post lane. This may account for the reduced water consumption observed since the peak demand in 1988.
- [4] The Holden/Nelson White Post lane wells are potentially hydraulically connected based on stratigraphic relationships. However, pump testing on the White Post Lane wells #2 and #1, indicated a lack of hydraulic response confirming that the aquifers are fracture controlled.
- [5] The Seaborn/Varga/Maddison wells are located at deeper depths than the White Post Lane wells and based on stratigraphic relationships are not hydraulically connected.
- [6] The variation in depth and flow rate lends support to the assumption that the aquifers are fracture controlled. This implies that high and low yield wells can be found in close proximity to one another depending on fracture spacing and fracture connectivity. Shallow fracture flow systems can be subject to depletion because of a decrease in duration and intensity of precipitation events. This phenomenon can be minimized somewhat by ensuring a deeper completion zone and restricting flow rates to avoid excessive drawdown.
- [7] Based on available well record information, and knowing that the site is characterized by fracture flow, there is no reason why additional subdivision, using individual wells, can not be undertaken provided that the current test of "existing + proposed lots divided by 6" is adhered to.
- [8] Assuming a maximum density of 32 lots in NW-36, a Q20 of 5.3 igpm would be required to support additional subdivision. It is cautioned that wells drilled on the upland area in the vicinity of the Seaborn/Varga/Maddison wells may experience a depletion in water level subject to prolonged seasonal moisture deficits. Deeper wells in this area may be required.

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- [9] If preliminary drilling in the area suggests that wells capable of passing a Q20 redesignation are difficult to obtain, then consideration may have to be given to the development of one or two "good" wells and the establishment of a communal water supply system.

If you have any question or comments regarding our conclusions, please contact the undersigned at your convenience. Thanking you for the opportunity to have been of service to Seaborn Consultants, we remain,

Respectfully yours,
Groundwater Exploration & Research Ltd

Bob Nowak; Ph.D., P.Geol.
Groundwater Geologist

Table 1 Summary of Groundwater Well Data

Landowner	Date Drilled	Td/Npwl(m)	Completion Interval (m)	Preliminary Flow Data
NW-36				
Holden	Jun 58	17.7/9.1	12.8-15.9	15 gpm/1 hr-u
Holden "C"	Apr 90	31.4/10.7	13.1-31.4	50 gpm/2 hrs-a
Holden WPL Well #1	Aug 76	32.0/12.8	18.3-30.5	24 gpm/12 hrs-p
Nelson "B"	Mar 92	31.7/12.2	16.5-31.7	40 gpm/4 hrs-a
White Post Lane #2	Nov 87	41.2/19.8	24.4-41.2	16 gpm/3 hrs-b
White Post Lane #3	Jun 87	52.1/16.2	39.6-43.6	5 gpm/60 hrs-p
White Post Lane #1	Apr 88	36.9/13.7	18.3-36.9	20 gpm/3 hrs-b
Holden "J"	Nov 97	54.9/31.6	43.0-51.8	10.5 gpm/ 2 hrs-p
SW-36				
Seaborn	May 90	85.4/57.9	57.9-83.8	10 gpm/2 hrs-b
Varga	Jun 72	55.5/48.8	51.8-54.9	20 gpm/0.75 hrs-b
Varga	Jun 85	70.1/56.1	64.0-70.1	9 gpm/2 hrs-b
Maddison	Feb 77	68.6/56.4	54.9-68.8	8 gpm/3.25 hrs-b & a
Maddison	Sep 90	90.2/57.9	61.0-67.1 & 73.2-79.3 & 84.1-90.2	8 gpm/2 hrs-b
Foster	Dec 74	54.9/31.4	45.7-54.9	4 gpm/3.5 hrs-b
Hammer	Aug 83	103.7/75.9	85.4-91.5	9 gpm/3 hrs-b
Siverston	Jan 94	51.8/38.1	33.5-51.8	6 gpm/12 hrs-p
Lawuman	Nov 72	51.8/38.1	48.8-51.8	5 gpm/4 hrs-u
Curzon	Mar 92	42.7/22.3	18.3-35.1	4 gpm/4.5 hrs-p
	u = unknown;	p = pump;	a = air;	b = bailer