

Augoustis Outline Plan

NW 14-39-7-5

Rocky Mountain House, Alberta

July, 2015



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1 INTRODUCTION

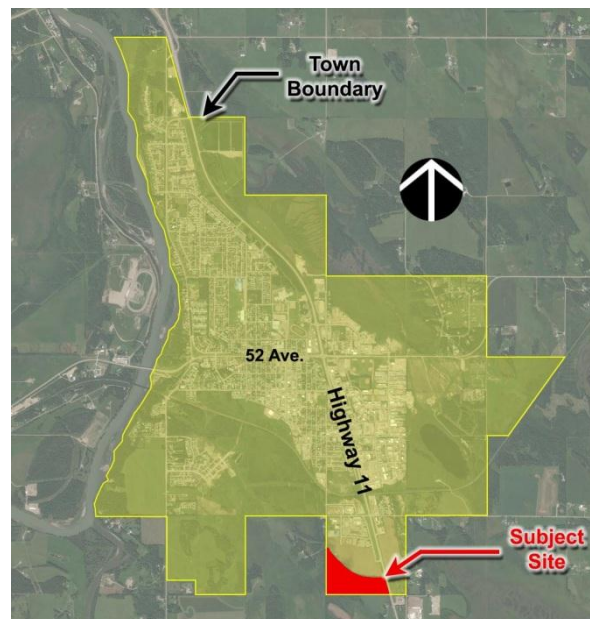
1.1 PURPOSE

The purpose of this Outline Plan is to establish the framework for the future subdivision and development of the subject site legally described as the southern portion of NW 14-39-7-5. This Outline Plan provides detailed information on future land uses, residential densities, road networks, servicing and the location of any environmental reserve, parks and open spaces. It also presents a rationale for a re-districting of the property to support the proposed development. This Outline Plan has been prepared in consultation with Town of Rocky Mountain House Staff and is subject to the review and approval of Council.

1.2 AREA LOCATION AND CONTEXT

The subject site (Figure 1) is located in the Town of Rocky Mountain House at the southern portion of its Urban Boundary, within the south half of NW 14-39-7-5. It is bounded by Highway 11 to the east, an abandoned Canadian National rail line to the north, and undeveloped farmlands to the west and south. The site is approximately 31.4 acres in area, and is designated for both residential and highway commercial development in the Municipal Development Plan (MDP). In the Town's Land Use Bylaw, the western 4/5ths of the property are currently designated Reserved for Future Development (RD), and the eastern 1/5th is currently designated Highway Commercial (HC). It is the intent of this development to re-designate the western portion to accommodate residential development, and extend the boundary of the portion currently designated HC. Additional information on these designations can be found in Section 2 - Planning Framework.

Figure 1: Site Location



2 PLANNING FRAMEWORK

2.1 ZONING RE-DESIGNATION

It is the intent of this development to request a zoning change, to accommodate the creation of the residential area, and extend the Highway Commercial area west. The following section will outline the planning framework relevant to this proposal.

2.2 INTERMUNICIPAL DEVELOPMENT PLAN (IDP)

An IDP is a high-level policy document designed to ensure development, typically near the boundaries of two adjacent municipalities, occurs in a manner that minimizes significant unnecessary impacts to each. In this case, the plan area falls within the Town of Rocky Mountain House - Clearwater County IDP. The Future Land Use Map identifies the area as Residential and Commercial, which is consistent with the concept of the proposed development. The IDP requires new major development to be based on the policies of the Municipal Development Plan and be preceded by an Area Structure Plan or Outline Plan. This Outline Plan has been prepared as per the policy requirements of the IDP. Specific IDP development policies that are addressed in this Outline Plan and fulfilled by the project include:

Section 5.2.3: Residential Uses

Within the Existing Town Boundary, the location, design and standards of residential subdivision and development shall be based on the policies of the Town's Municipal Development Plan and applicable area structure plan.

Policy 5.3.7: Commercial and Industrial Uses

Commercial and industrial development shall provide a high standard of building and overall site appearance on all parcels adjacent highway rights-of-way running through the Plan Area. This shall include orienting buildings to face the highway, creating attractive architectural appearances on building elevations visible from the highway and planting landscaping materials to break up and soften views of commercial and industrial properties.

Policy 5.5.4: Major Green Space, Parks, and Trails

A regional trail network connecting points of interest within the Town and County to major concentrations of residential development shall be addressed as new area structure plans are prepared. Connections to existing development shall be encouraged.

Policy 7.5: Utility Services

Provision shall be made for storm water management throughout all of the development areas contemplated by this Plan. Best management practices, including the integration of existing water bodies and natural areas into storm water management ponds, shall be pursued. The release of

storm water run-off from any development area to downstream areas shall be designed and managed in accordance with Alberta Environment requirements.

Policy 7.6: Utility Services

Natural and man-made drainage courses that are critical to the overall management of storm water and surface drainage within the Plan Area shall be protected by the municipality having jurisdiction. The Town and County shall work cooperatively to address drainage issues and may use tools such as public utility lots and/or drainage easements where needed to ensure proper drainage within the Plan Area.

2.3 MUNICIPAL DEVELOPMENT PLAN (MDP)

Similar to the IDP, a Municipal Development Plan (MDP) is a high level policy document prepared by municipalities pursuant to Section 632 of the Municipal Government Act. The MDP is intended to establish the policy direction which guides Council and Staff decisions related to land use, environment, transportation, parks, recreation and economic development. Policies under the MDP typically result in the implementation of controls and requirements under a Land Use Bylaw. According to the Future Land Use Concept map, the subject lands are intended to be developed as residential and commercial uses. In this way, the proposed development falls in line with the future growth plan of the Town.

Specific MDP development objectives and policies that will be fulfilled by this project include:

Policy 6.3: Promote Urban Design that Encourages Walkability

The Town should promote urban design that encourages walkability by providing functional and attractive pedestrian linkages between adjacent neighbourhoods and the existing trails system, designing for universal accessibility, encouraging the development of active residential and commercial streetscapes and ensuring pedestrian crossing are clearly marked.

9.0 Environmental and Ecological Management

Goal: To preserve significant natural areas and create and maintain attractive, clean and ecologically responsible natural and built environments.

Objective: (c) Conserve and sensitively incorporate natural features as an integral part of the open space system and utility system.

Policy 9.3: Green Infrastructure

The town shall incorporate existing natural features as part of the overall Infrastructure systems. This may include using existing wetlands as storm water management facilities wherever possible and planting shrubs and trees to improve air quality along major roads and within industrial areas. In addition, the Town shall also promote landscaping practices to enhance aesthetic beauty as well as promote water conservation such as retaining ponds and natural vegetation within residential neighbourhoods.

Policy 9.6: Environmental Reserve Dedication of Lands Unsuitable for Development

Through the subdivision process, the Town shall require that lands considered unsuitable for development are dedicated as environmental reserve in accordance with the provisions of the Municipal Government Act. The Town may accept the use of an environmental reserve easement in place of environmental reserve where there is no public access required or likely to be desired in the future. Upon the subdivision or development of land where reserve dedication or an environmental reserve easement cannot be secured, the Town may require an agreement on environmental conservation measures as a condition of approval.

Policy 9.7: Environmental Reserve Dedication of Lands Adjacent to Water Bodies and Water Courses

When lands adjacent to water bodies or water courses are subdivided, a strip of land shall be dedicated as environmental reserve to provide a buffer and provide public access. The width of the required dedication shall be established by the Subdivision Authority.

Policy 9.8: Use of Environmental Reserve

Lands dedicated as environmental reserve shall remain in their natural state and/or be used as part of the public trail systems where necessary to ensure a continuous, integrated trail system.

10.0 Housing and Neighbourhood Design

Policy 10.1: Location of Major Residential Areas

The Town shall direct future residential development to the areas conceptually shown for residential uses on the Land Use Concept Map. In general, the Town will guide residential development to areas where:

- existing land use patterns and road and trail systems can be extended in an orderly, economical and environmentally sensitive manner;
- spare servicing capacity exists;
- servicing costs are minimized; and
- major streets shall border rather than traverse neighbourhoods.

Policy 10.4: Residential Density for New Neighbourhoods

The residential density for new neighbourhoods shall be at least 12.5 dwelling units per gross developable hectare unless otherwise approved in an Area Structure Plan or Area Redevelopment Plan. Higher densities shall be encouraged where there is sufficient capacity in the major municipal utility infrastructure.

Policy 10.8: Affordable and Special Needs Housing

The Town of Rocky Mountain House encourages the provision of affordable and special needs housing in the community. Specifically:

- the Town shall encourage the Government of Alberta and the Government of Canada to fulfill their mandates with respect to the provision of affordable housing;
- the Town may partner with private, public and non-profit organizations in the creation of affordable housing and special needs housing;
- for this purpose, affordable housing shall be defined as appropriately designed dwelling units that are accessible to households below the Province's Core Need Income Threshold for Rocky Mountain house.
- the Town shall ensure planning and design considers needs for seniors and people with disabilities.

11.0 Commercial Development

Objective: (c) Recognize emerging trends in retailing and commercial land use where appropriate.

Policy 11.1: Location of Commercial Development

The Town shall direct future commercial development to the areas conceptually shown for commercial uses on the Land Use Concept Map.

Policy 11.2: Highway 11 Commercial Corridor

The Highway 11 commercial corridor shall be the primary highway commercial area within the Town. Opportunities for intensification of land use, mixed use development and improvement to make the corridor more pedestrian friendly may be explored. When planning for development in the highway corridor, the Town shall take into consideration parking space for larger trucks.

In general, Highway Commercial development proposals along Highway 11 shall maintain a high standard of development. Design criteria for the approval of such uses shall include:

- paved roads and parking areas;
- landscaping adjacent to roads and residential areas;
- screened storage areas; and
- loading areas to be located to the side or rear of buildings.

Policy 11.4: Location of Local Commercial Sites

The Town shall support the development of local neighbourhood convenience commercial sites that serve local, convenience needs in select locations, identified within area structure plans, and outline plans for new residential areas on major arterial and collector streets and shall prohibit such uses from locating adjacent to school sites. The Town shall endeavour to locate local commercial sites within walking distance of the residents of the neighbourhood. Care shall be taken to choose sites which minimize land use conflicts with nearby residential properties but at the same time, provide convenient access to neighbourhood patrons.

Policy 11.7: Highway Commercial Development

Adequate buffering shall be required between highway commercial and adjoining residential areas to reduce possible conflicts of noise and traffic

Policy 11.8: Pedestrian Links

The Town will encourage pedestrian linkages between all building entrances, public sidewalks and pathways in highway commercial areas, including safe roadway crossings.

14.0 Parks, Recreation and Culture

Objectives:

(a) Provide open spaces and park areas that are functional, combine with and protect natural areas, and are effective in satisfying the needs of residents and visitors to Rocky Mountain House;

(b) Develop a continuous system of pathways with linkages to parks and natural areas as Rocky Mountain House grows.

Policy 14.1 Trails and Pathways

Trails and pathways shall be designed and constructed in accordance with the direction provided through the Parks and Open Space Plan (2009), as amended from time to time. As new areas are planned and developed, the Town shall ensure the design of the parks and open space system provides linkages between major open spaces, and connections between neighbourhoods and linear corridors.

14.6 Amount of Reserve Dedication

The Town shall require that at least 10 percent of the gross developable land being subdivided, less the land required to be dedicated as environmental reserve or environmental reserve easement, be dedicated as Reserve (municipal reserve, school reserve or municipal and school reserve) in accordance with the provisions of the Municipal Government Act.

2.4 SOUTH WEST AREA STRUCTURE PLAN (SWASP)

An area structure plan helps set out the general patterns of future land uses, major roads and utility services for a specific area of land. It aids in the creation of development that is compatible with adjacent uses and contributes to cohesion of built form and character.

Although the quarter section neighbouring to the west falls outside the Town urban boundary, it is part of the Southwest Area Structure Plan for the Town of Rocky Mountain House and Clearwater County. As such, the SWASP should be taken into account as an advisory document, ensuring compatibility and consistency with the Town's proposed long-term development intentions. According to the plan, the lands adjacent to the subject lands will serve as longer term residential expansion. It is the general mandate of the SWASP to:

- Facilitate compatibility between existing and future land uses, to ensure that no future subdivision and development decisions would prejudice the development of adjacent lands;
- Preserve sensitive natural features and utilize local amenity areas within the plan area;

- Facilitate the provision of a major trail system that can be integrated with the Town's existing system, by combining environmental preservation areas and undevelopable areas with municipal reserve requirements.
- Protect Trapper's Creek as an open space corridor within the Town.
- Promote the abandoned CPR right-of-way as a potential public open space corridor for recreational use.

2.5 LAND USE BYLAW

The majority of the site is presently zoned RD – Reserved for Future Development, with an eastern portion zoned HC – Highway Commercial. The existing abandoned CPR right-of-way abutting the northern edge of the site is also presently zoned RD. The proposed zoning re-designations are consistent with policies and guidelines in the Town's existing and future land development goals.

Upon Council approval of this Outline Plan, application will be made to have the plan area re-designated as R1 – Low Density Residential and HC – Highway Commercial, according to the attached concept plans. Re-designation is intended to occur for the entire property all at once; however, additional environmental work will be required to assess the western portion of the site. In light of this and at the discretion of the Town, the re-designation could also occur in stages. The initial re-designation would be completed for the highway commercial lands with the re-designation of the residential section occurring following an additional environmental assessment. It would be the intent to subdivide the highway commercial portion of the development concurrently with the re-designation.

3 EXISTING SITE CHARACTERISTICS

3.1 SITE DESCRIPTION

An existing residence and driveway are present at the southeast portion of the subject property on the west side of Highway 11. In the eastern portion, the site consists of a clearing of natural grasses north of the residence. Moving west across the clearing, the site transitions to dense forest cover, consisting of native aspen and spruce trees. Trapper's Creek runs diagonally across the southwest corner, with wet meadow and fen land cover in the central and western areas. Existing Site conditions are shown in Figure 2 with environmental features being shown in Schedule A.

Figure 2: Existing Site Conditions

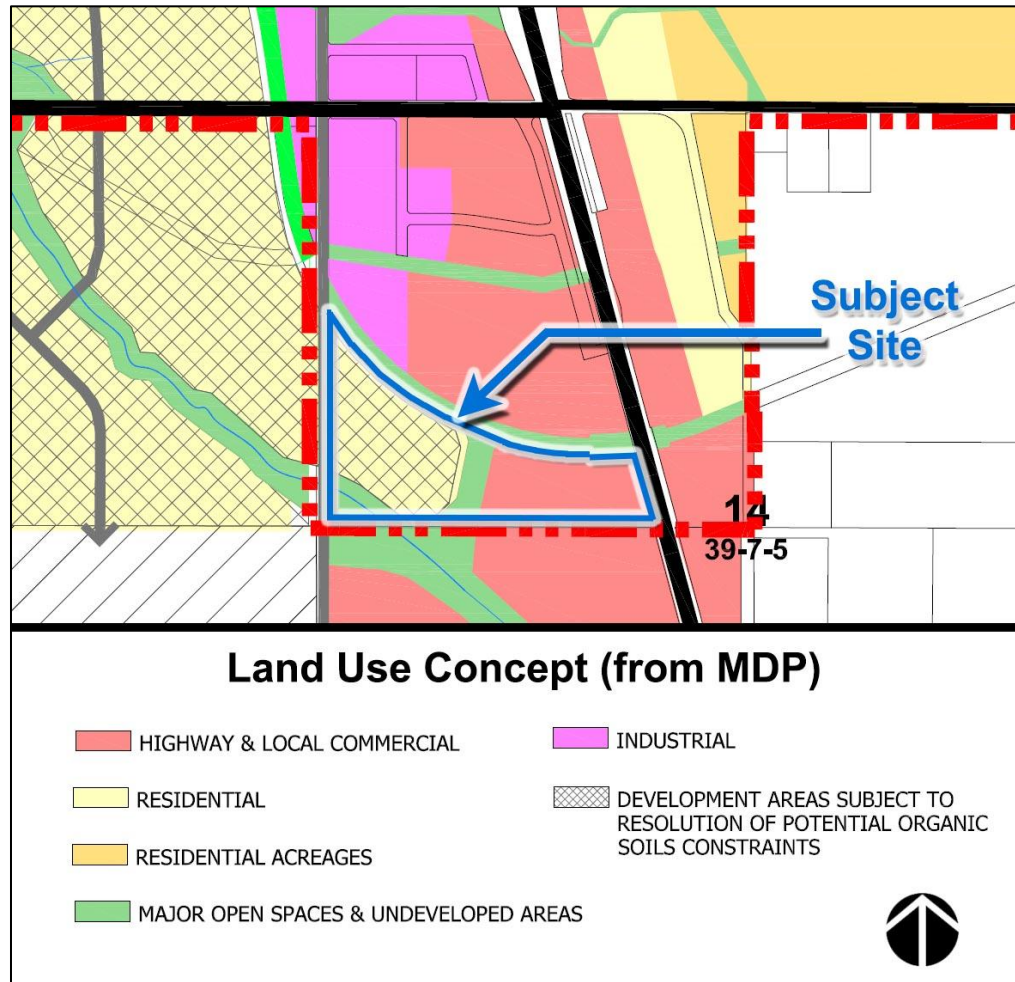


3.2 SURROUNDING LAND USES

To the east, the property is bounded by Highway 11 – the main thoroughfare between the Town and Red Deer. Immediately to the east of the highway is an existing acreage, designated for Highway Commercial development. The lands immediately to the south and west are currently undeveloped and lie outside the current Town boundary. Long-term plans for the Town include an expansion of its current boundaries to include these lands immediately south, as outlined by the Intermunicipal Development Plan between the Town and Clearwater County.

At present the land use is characterized by farmland. The lands to the east are intended to be designated Highway Commercial, according to the land use concept map of the MDP. The lands to the west, although outside the urban boundary, fall within the Southwest Area Structure Plan, and are anticipated to be developed for residential use in the long term. The lands to the north are buffered by a narrow strip of land previously used as a Canadian Pacific Rail route. This route is now abandoned. Immediately to the north of the rail right-of-way are undeveloped pasture farmlands designated for future Industrial and Highway Commercial uses, according to the land use concept map of the MDP.

Figure 3: Surrounding Land Uses



3.3 OIL & GAS FACILITIES

A Phase 1 Environmental Site Assessment (ESA) was carried out as part of this Outline Plan. While the ESA did not identify any existing or past wells or pipelines, it did identify potential

concerns related to the residential property and former railway line along the site's northern boundary. The following provides a summary of the potential contaminants identified in the ESA:

- Hydrocarbons in the area of the former oil tank used for heating the house prior to 1973
- PCBs associated with the electrical transformer
- Hydrocarbons and other chemicals associated with the former railway line
- Asbestos in the walls of Outbuilding #1 constructed of fibreboard
- Household and landscaping chemicals
- Surface staining
- Non-hazardous waste associated with old appliances and metal debris
- Hazardous waste associated with old batteries in the treed central portion of the Property
- Possible UFFI (urea formaldehyde foam) insulation in the greenhouse.

To reduce the level of uncertainty associated with the Phase I ESA methodology, a Phase II ESA would be required to quantify the contaminants of potential concern in the following areas:

- Former diesel AST
- Transformer
- Along the former railway line
- Outbuildings, sheds, shelters and greenhouse
- Dugout used for burning
- Debris areas
- Battery storage area

Based on discussions with Town Staff it was determined that the above mentioned Phase II ESA would be required prior to development occurring on the site but would not be required prior to approval of the Outline Plan.

3.4 NATURAL FEATURES

A Bio-Physical assessment identified existing natural features on the subject site. These include drainage channels, a wet meadow and fen in the central and western portions, a small creek in the southwestern corner and native Aspen and Spruce forest in the western portion. Tilled pasture occupies the eastern portion. Schedule A provides mapping outlining the existing site conditions and environmental features. The following outlines key findings of the Bio-Physical assessment:

- The drainage channels in the western portion of the site are considered ephemeral, fluctuating with different periods of precipitation and snowmelt;

- Saturated conditions and the existence of a high water table within the wet meadow and fen may be limiting to development;
- Any development within the wet meadow and fen will require further assessment. Development of this area will be dependent on the outcome of further environmental assessments and potentially the approval of the Provincial Department of Environment and Sustainable Resources; and
- The proximity of the intended development to water bodies requires that care is taken to control sediment flow off-site.

3.5 SOILS

A geotechnical analysis was conducted to evaluate the soil profile of the site. Upon study completion, the site can be generalized into two distinct soil profiles (east and west), divided north to south at the approximate boundary between clearing and forest land cover. The report findings are summarized below.

Eastern Portion (proposed commercial lots):

- Overall, this portion of the site is favourable for development. However, care should be taken to evaluate specific methods of pile and footing construction, due to the presence of sandy soil.
- When constructing roadways and parking areas, it will be necessary to visually inspect prepared subgrades for soft or very silty zones, in order to make recommendations for geotextile placement.

Western Portion (proposed residential lots):

- Large peat deposits and high groundwater levels pose the greatest concern to development. All peat, topsoil and organic soil must be removed from areas to be occupied by buildings and should be replaced with an engineered fill.
- Due to concern of methane gas build up from peat as it decays, all peat should be removed from below and at least 1.0 m beside all residential buildings.
- Due to the high water table found below the peat, this section of the site would require an extensive dewatering program and large volumes of engineered fill.
- For a portion of the area with thinner peat deposits, development may be more practical.
- Soft areas caused by shallow groundwater may be prone to re-occurrence after construction, leading to costly annual maintenance. Providing additional drains in these areas can significantly improve long-term stability.
- Site preparation procedures should be reviewed if excessively soft subgrade conditions are encountered.

3.6 TOPOGRAPHY AND SLOPE ASSESSMENT

The topography in the western portion of the site is flat, with a local relief of approximately 4m in the eastern pasture portion. Site drainage tends to flow to the west. Topographic features of the site are included in Schedule A.

4 DEVELOPMENT CONCEPT

4.1 VISION

The aim of this development is to contribute to the existing housing stock and commercial lands of the Town of Rocky Mountain House, by constructing a high-quality residential community adjacent to highway commercial uses available to local residents and the travelling public. Areas with natural aesthetic and environmental value will be preserved, with access for the use and enjoyment of residents throughout the area, while contributing to the connectivity of local trail networks. Commercial tenants providing productive highway-side services for both local and regional customers will be targeted. Schedule B provides the Development Concept.

4.2 OBJECTIVES

Key objectives for the residential and commercial developments are as follows:

1. Facilitate the efficient and orderly development of lots consistent with the Town's existing standards and requirements.
2. Support the preservation of environmental features and the establishment of amenity space for residents in the surrounding area through the preservation of natural areas.
3. Provide connectivity to neighbouring properties to allow for the integration of future development.
4. Contribute to a high quality of life through well-thought-out built form and urban design.
5. Facilitate the continued growth and economic development of the Town of Rocky Mountain House.

In pursuing these objectives, the plan complies with the Town's Intermunicipal Development Plan, Municipal Development Plan, Southwest Area Structure Plan and the Land Use Bylaw.

4.3 ZONING

It is the intent of this Outline Plan to encourage the consideration of re-zoning the current site from the RD (Reserved for Future Development) District to the R1 (Low-Density Residential) District in the western portion, and an expansion further west of the present HC (Highway Commercial) District in the eastern portion.

By converting these lands to accommodate the desired uses proposed by this concept plan, the following established planning guidelines for future growth will be satisfied:

- Conformance with the future land use concept outlined in the Town's MDP Map;
- Conformance with policies and objectives relating to the Commercial Development, Housing and Neighbourhood Design, and Parks, Recreation and Culture sections of the MDP;

- Objectives set out by the Intermunicipal Development Plan between the Town and Clearwater County.

4.4 LAND USE

Table 1 outlines the net developable area of the plan area while Table 2 provides a breakdown of the overall land use statistics.

Table 1: Developable Area

TABLE 1: Developable Area		
Land Use Category / Component	AREA (Hectares +/-)	% of Net Developable Area
Land Area (total)	12.7	100%
Environmental Reserve	0.3	2.4%
Net Developable Area	12.4	97.6%

Table 2: Land Use Statistics

TABLE 2: Land Use Statistics		
Land Use Category / Component	AREA (hectares +/-)	% of Net Developable Area
Net Developable Area (total)	12.4 ha	100%
Commercial Development	4.0	32.3%
Residential Development	5.0	40.3%
Roadways and Lanes (including right-of-way)	2.1	16.9%
Municipal Reserve	0.87	7.0%
Public Utility Lots	0.4	3.2%

4.4.1 Commercial Development

The eastern half of the site area will feature approximately four lots, varying in size between 0.77 ha (1.9 acres) and 1.3 ha (3.1 acres). These lots will feature commercial uses consistent with those permitted under the Highway Commercial District of the Land Use Bylaw. Lot areas and dimensions meet the minimum requirements of the HC District in the Town's Land Use Bylaw.

4.4.2 Residential Development

The development will feature approximately 69 residential lots / units of approximately 515 m² or more in size, designed to accommodate detached dwellings only. This would provide an overall

density of 9.05 units per hectare. The density is based on everything west of the proposed municipal reserve in the central portion of the site. The lot sizes and dimensions are based on the requirements of the R1 District. These lots will tie in to municipal water and sewage disposal systems, and create a relaxed living environment in close proximity to commercial amenities and recreational trails.

Access to the lots will come from either internal roads or rear lanes proposed as part of the development. Lots with frontage along the 46 Street collector will be predominantly accessed by a rear lane.

A 0.25ha parcel in the southwest portion of the Plan area (lot 69) will be developed to accommodate affordable housing. It is the intent of the Town to develop this parcel to accommodate affordable housing, with access to a community park within the adjacent Municipal Reserve area. This area of land will be transferred to the Town by way of a fee-simple land Transfer Agreement between the Town and the Landowner. Subdivision of this parcel will occur at the time that the Highway Commercial parcels in Phase 1 are subdivided.

4.4.3 Municipal Reserve

Three portions of open green space will be set aside as municipal reserve (MR). One portion (approximately 0.29 ha in area) will be allotted in the southwest corner abutting the southern 10m riparian buffer of Trappers Creek. This area will accommodate a community park, adjacent to the intended affordable housing lands to the west. Two more portions of approximately 0.43 ha and 0.07 ha in area will run north-south, creating a natural buffer area between the commercial and residential sections. As well, a 0.08 ha MR area is located in the central-southern portion, to the east of lot 36.

Along the northern border of the property runs an abandoned rail right-of-way. It is our understanding that this may eventually be converted into a trail. This conversion of “rail-to-trail” would not only help contribute to an integrated municipal trail network, but also serve as a productive method of adaptive re-use in lands that are historically significant. Our proposed trail network will provide a direct linkage to this future trail. In addition, a 6 m wide green corridor is proposed, bisecting the residential section from northwest to southeast, and will include a 2.5 metre wide paved trail within. In total, an area of 0.87 ha has been set aside for MR which equals 7.0% of the developable land. In addition to this, the 0.25 ha parcel designated for affordable housing will be transferred to the Town, equalling an additional 2.0% of developable land, to be applied towards an equivalent of cash-in-lieu. The remaining 1.0% cash-in-lieu requirement will be negotiated between the developer and the Town at the time of subdivision.

Direct access to Trappers Creek will come from 46 Street. At this time, it is unclear whether there will be a trail network along Trappers Creek or if something else is planned in the longer term. The Developer will work with the Town as part of the rezoning and subdivision of the property to determine the exact location of any trail and additional linkages to Trappers Creek.

4.4.4 Pedestrian Connectivity

Pedestrian connectivity is provided through the local roadways delineated on the site plan which will feature sidewalks. The southwestern access to the property from 46 Street will provide the

opportunity for an intersection which would provide east-west connectivity between neighborhoods. Connection from the neighbourhood to the future trail planned in the former rail right-of-way will be provided by a 6 m wide green corridor that includes a 2.5 m wide paved trail, which will be accessible to all residents. The inclusion of bike lanes along the main east - west route would also provide further opportunity to enhance the overall connectivity of the development to adjacent neighbourhoods. In preparing engineered detailed design drawings, the Developer will review the Trails Master Plan and work with the Town in determining the exact location and design of all roadways, trails and pedestrian infrastructure.

4.4.5 Environmental Reserve

The 10 m riparian buffer along both sides of Trappers Creek will be dedicated as Environmental Reserve which totals 0.34 ha in area. The Biophysical Assessment completed for the property identified a potential fen and wet meadow taking up much of the area proposed for residential development. As part of the subdivision process, if portions of these lands are determined to be undevelopable they will be dedicated as Environmental Reserve. This will be determined through subsequent environmental studies.

4.4.6 Roadway Development

Roadways, rear lanes and their associated right-of-ways take up 2.1 ha (16.9%) of the property's developable area. This does not include the offsite extension of 46 Street. The development will be serviced by a main east-west street providing a through connection from Highway 11 to 46 Street. This will feature a 20 m wide right-of-way with a 12 m paved surface. The road designed to solely service the residential development and will feature a 15 m wide right-of-way with a 10 m paved surface. Laneways will provide access to the majority of lots fronting onto 46 Street as outlined in Section 4.4.2. All roads and laneways will be designed and built to the Town's standards. Additional details on the transportation network can be found in Section 5.1.

5 TRANSPORTATION AND SERVICING

5.1 TRANSPORTATION NETWORK

The primary access to the proposed development will occur along Highway 11 at the existing residential driveway in the southeast corner of the site, with an interior road running east-west through the lands. A southern extension to 46th street along the western edge of the site is proposed, providing two accesses to the residential section. The northern residential interior road will connect with the southern interior road in the western portion. The overall network will provide free-flowing connectivity between both regional and local roads systems, and will provide at least two points of access to any lot.

A Traffic Impact Assessment (TIA) examined the potential traffic implications associated with the proposed intersection at Highway 11. A TIA is an unbiased analysis of the function and capacity of intersections during peak hours based on current traffic, traffic generated as part of a proposed development, and forecasted traffic into the future. Changes or upgrades to intersections can be required when the level of service (efficiency) of an intersection falls below a certain level.

In general, there will need to be upgrades made to the intersection, in order to maximize traffic flow efficiency. The following summarizes the findings of the TIA:

- A northbound left turn lane (Type IV) and a southbound right turn lane will be warranted at full build out of the development. Therefore, a Type IVb intersection treatment is recommended for the study intersection. An additional 5 m storage length (total 75 m) is recommended for the standard Type IV left turn lane. It is noted that the 80 km/h speed zone begins approximately 140 m north of the study intersection. For safety reasons, WSP recommends that the 80 km/h posted speed sign be moved further south, so that the study intersection will be within the 80 km/h speed zone.
- Traffic signals (or roundabout) will be warranted at full build out (2024) at the study intersection. It should be noted that the specific types of development for the highway commercial lots are unknown at present and future developments may produce a large variation in the number of trips generated, depending on the specific end users. Therefore, the timing of signals required will be dependent on the development progress and ultimately the specific type of highway commercial development. WSP recommends upgrading the study intersection to Type IVb initially and monitoring the traffic to determine when signals will need to be installed.
- The capacity analysis results reveal that the north and southbound traffic on Highway 11 at the Site Access intersection will operate at LOS A during both the AM and PM peak periods up to the 20 year horizon. The eastbound traffic on the Site Access Road will operate at LOS D at full build out and LOS E and F at the 20 year horizon during the AM and PM peak hours. The stop control will not be capable of accommodating the forecasted post-development traffic at the 20 year horizon.

- All traffic movements at the study intersection will operate at an acceptable LOS C or better during both the AM and PM peak periods under the 20 year horizon traffic conditions when the intersection is under signal control.
- A roundabout would be a feasible option for the Highway 11 / Site Access intersection. Based on the forecasted traffic volumes, a double lane roundabout will be capable of accommodating the future traffic volumes. A proposed roundabout concept plan is attached in Schedule D.
- If a roundabout is constructed, all traffic movements at the study intersection will operate at an acceptable LOS B or better during both the AM and PM peak periods under the 20 year horizon traffic conditions.
- The intersection sight distances along Highway 11 at the Site Access intersection appear to be adequate.
- Delineation lighting is warranted at the study intersection under the full build out traffic conditions. When signals are installed or a roundabout is constructed at this intersection, additional illumination should be provided for all approaches.

An access to a residential acreage (on the west of Highway 11) and a Church property (on the east side of Highway 11) are located so the south of the proposed Plan area. Based on Alberta Transportation recommendations, these accesses should be relocated to allow for intersection upgrades at the proposed Plan area access. Should this be required, access to the Church Facility can be gained through its existing access to 42nd Street to the west. Relocation of the residential acreage access could be met through the provision of a service road access connecting from the south of the southernmost proposed east/west local road. Further collaboration between the property owner, the Town of Rocky Mountain House and Clearwater County should be carried out to finalize this option.

The additional 5 m storage length (total 75 m) will be adequate to accommodate the forecast full build out (2024) traffic volumes at the study intersection when the intersection is under stop sign control. It is anticipated that signals (or roundabout) will need to be installed at the study intersection to improve the traffic operational performance after the proposed subdivision is fully built out. The 75 m storage length will be adequate to accommodate the 20 year horizon traffic if the intersection is under signal control. The 95 m storage length was calculated based on the forecasted traffic volumes assuming that the intersection will be under stop sign control at the 20 year horizon which will not likely happen. Therefore, WSP recommends 75 m storage length left turn lane be constructed.

The proposed Type IV intersection treatment will be capable of accommodating the post-development traffic at full build out with the connection of 46 Street. Phase 1 includes the commercial development only without the residential development. The trips generated by Phase 1 commercial development will be less than that generated by the development at full built out. After a review of the trip generation table, it was found that Phase 1 generated vehicle trips assigned on the study intersection without 46th Street connection will be less than full build out vehicle trips assigned

on the study intersection with 46th Street connection. Therefore, the proposed Type IV intersection treatment will be capable of accommodating the Phase 1 traffic without 46 Street connection. Despite this, a low-grade gravel road will be constructed, connecting to 46th Street, to accommodate secondary emergency access to the Phase I build out.

5.2 STORMWATER AND DRAINAGE

The natural drainage of the site runs from east to west, with drainage channels and a small creek in the western portion. Prior to developing the western portion of the site, further examination of the wet meadow and fen will be required to determine if Alberta Environment and Sustainable Resources will permit it. As well, proper sediment control measures will need to be developed for implementation during the development process.

Existing municipal storm water lines terminating at the southern ends of 46th and 45A streets will need to be extended

The development will include both minor and major drainage systems. The minor drainage system includes gutters/roof leaders, catch basins, inlet structures, and underground piping to convey the 1:5 year storm. The major drainage system conveys the 1:100 year storm runoff in a controlled manner, typically along developed roadways to avoid property damage. Stormwater detention pond will be designed to match the post-development discharge to pre-development levels for the 1:100 year storm event.

The final pond volumes and grading will be determined at the detailed design stage based on the proposed land use and development plans. Pond physical characteristics and water treatment for wet ponds will be designed in accordance with:

- Stormwater Management Guidelines, March 2013, published by the Alberta Government
- Minimum Design Standards for Development, Town of Rocky Mountain House, 2007

Wet ponds are highly effective at removing pollutants from runoff through settlement and biological activity while preventing sediment re-suspension. Additional on-lot stormwater treatment facilities may be provided, such as rain gardens, mechanical oil/water separators, infiltration facilities, etc. Routine maintenance is required for the wet ponds to control weeds and algae, remove sediment, and manage mosquito populations. A conceptual stormwater and overall servicing plan has been provided in Schedule C.

5.3 WATER AND SANITARY SERVICES

Potable Water and Sanitary Sewer will be supplied to the proposed development by extending existing public utility lines south along the roadway on the western boundary of the property, as well as the eastern side along Highway 11 and into the project site.

The sanitary lines can be split to serve each side of the project, where the watermain would need to be looped to provide adequate water pressures and to maintain water service in case of disruption.

Both utilities will be within the road right-of-way and spaced according to the Town of Rocky Mountain House construction and design guidelines. The proposed sanitary sewer and water distribution system will extend throughout the proposed development, providing sanitary and water distribution to each occupant, as well as fire protection provided from fire hydrants spaced at regular intervals along the Site Access Roads. A conceptual servicing plan has been provided in Schedule C.

5.4 SHALLOW UTILITIES

Similar to sanitary sewer and water distribution, the site will also be serviced by shallow utilities such as gas, power, cable and telephone. Coordination with local utility companies will be required to determine availability and prepare the best layout and course of action to provide these services within the proposed development.

6 IMPLEMENTATION

6.1 DEVELOPMENT PHASING

The proposed development will take place over three phases as shown in Schedule C. The following provides a breakdown of each phase:

Phase 1

- This will involve the construction of the four highway commercial lots and would be completed as soon as possible.
- The proposed affordable housing development parcel (lot 69) will be subdivided at the same time as the highway commercial lots, and subsequently transferred to the Town prior to its rezoning to a suitable residential district.
- Servicing will be provided through connections to existing water and sanitary sewer lines located at the intersection of 45 Street and Highway 11.
- The stormwater detention pond will also be constructed as part of this initial phase and include the construction of a stormwater main from the pond to Highway 11.
- The roadway will be constructed from Highway 11 to just past the western edge of the Highway Commercial lots.
- Emergency access to the four Highway Commercial lots following phase I would be provided through a low-standard gravel road (with an 8.0 m ROW) south from 46th street, in accordance with the road layout of this Concept Plan.

Phase 2

- This will involve the construction of all roads and infrastructure associated with the 43 southern residential lots and those directly fronting onto 46 Street.
- This phase will involve the construction of 46 Street along the entirety of the lot's western boundary and the extension of water and sanitary sewer services to the existing infrastructure found at the intersection of 46 Street and 42B Avenue.
- Stormwater mains will be provided to tie into the overall system and utilize the stormwater detention pond.

Phase 3

- The final phase will involve the construction of all remaining infrastructure associated the final 29 residential lots.
- Services will tie into those previously installed as part of Phase 2.

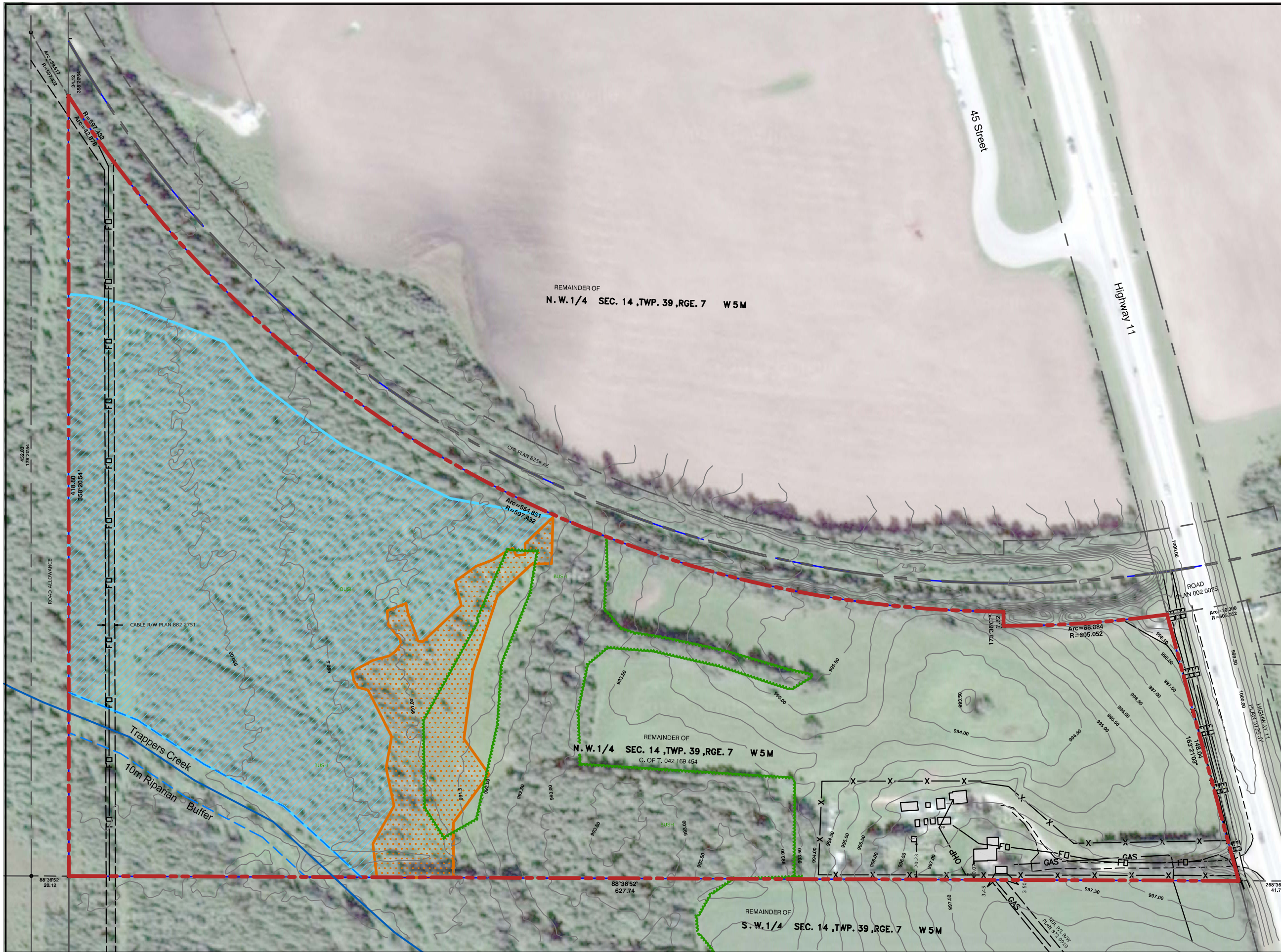
6.2 AMENDMENTS TO THIS PLAN

Any amendments to this Outline Plan will be subject to the approval of Council. Minor plan adjustments to the proposed land use boundaries, lots or roadway and servicing alignment may be incorporated where necessary without amendment to the Plan, provided the intent of the Plan is maintained.

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SCHEDULE A

Environmental Features



- LEGEND**
- - - - Site Boundary
 - - - - 10.0m Riparian Buffer from the creek
 - ~~~~~ Existing Tree Line
 - Fen
 - Wet Meadow

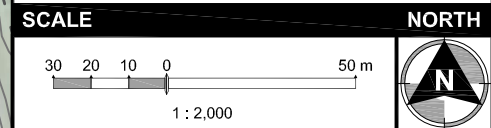
- NOTES:**
- Property lines approximate only. Site subject to survey
 - The exact location and any development restrictions related to the fen and wet meadow will be reviewed at the subdivision stage as part of a wetland assessment.
 - Total area of the site: 127089 sq. m, 31.4 ac, 12.7 ha.

- SOURCES:**
- Property lines and topographical information based on plan provided by Snell & Oslund survey Ltd. on March 24 2014.

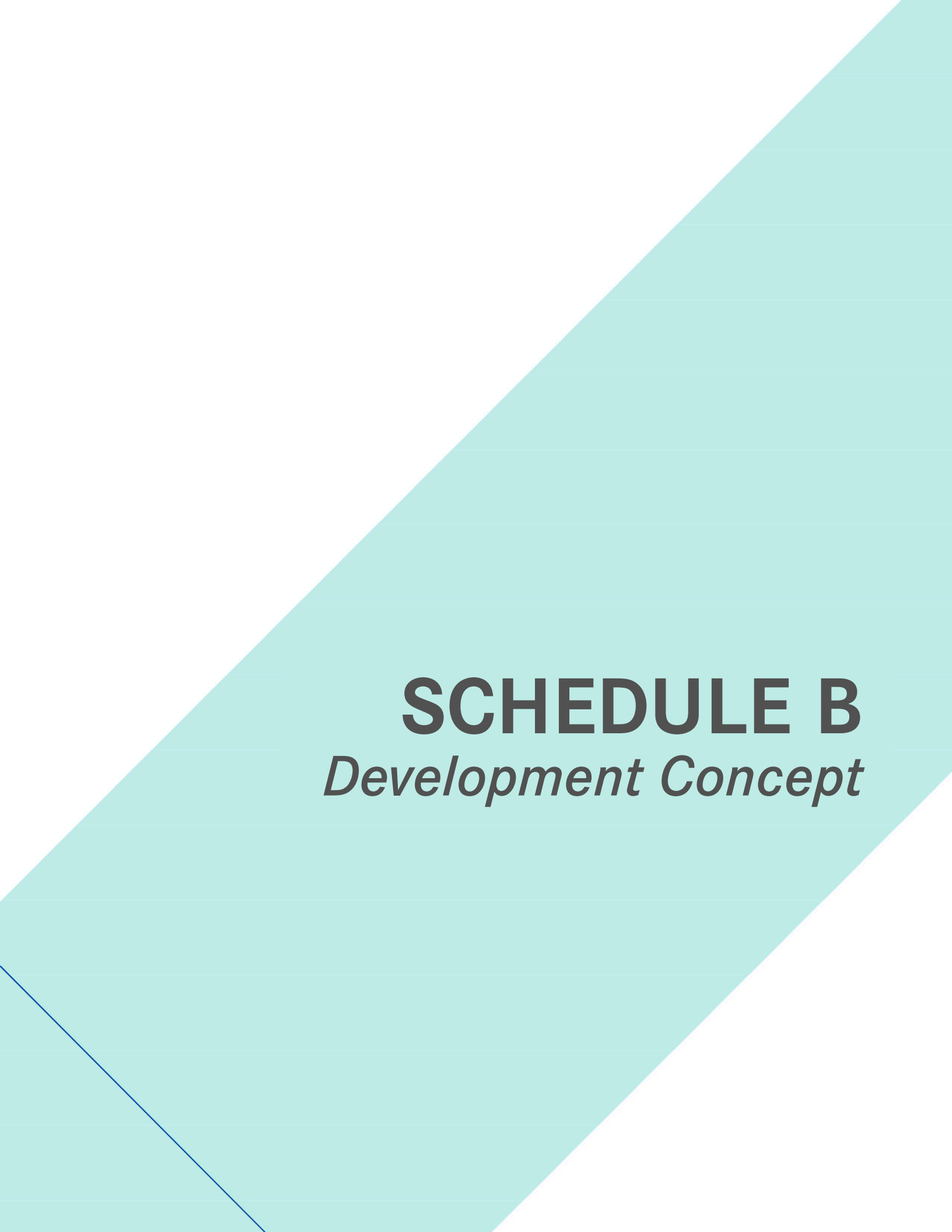
Designer: AWang / KWatters	VERSION
Planner: SFASH	7.0

**SCHEDULE A:
ENVIRONMENTAL FEATURES**

AUGUSTUS OUTLINE PLAN
JANUARY 20, 2015 141-15567-00-P701

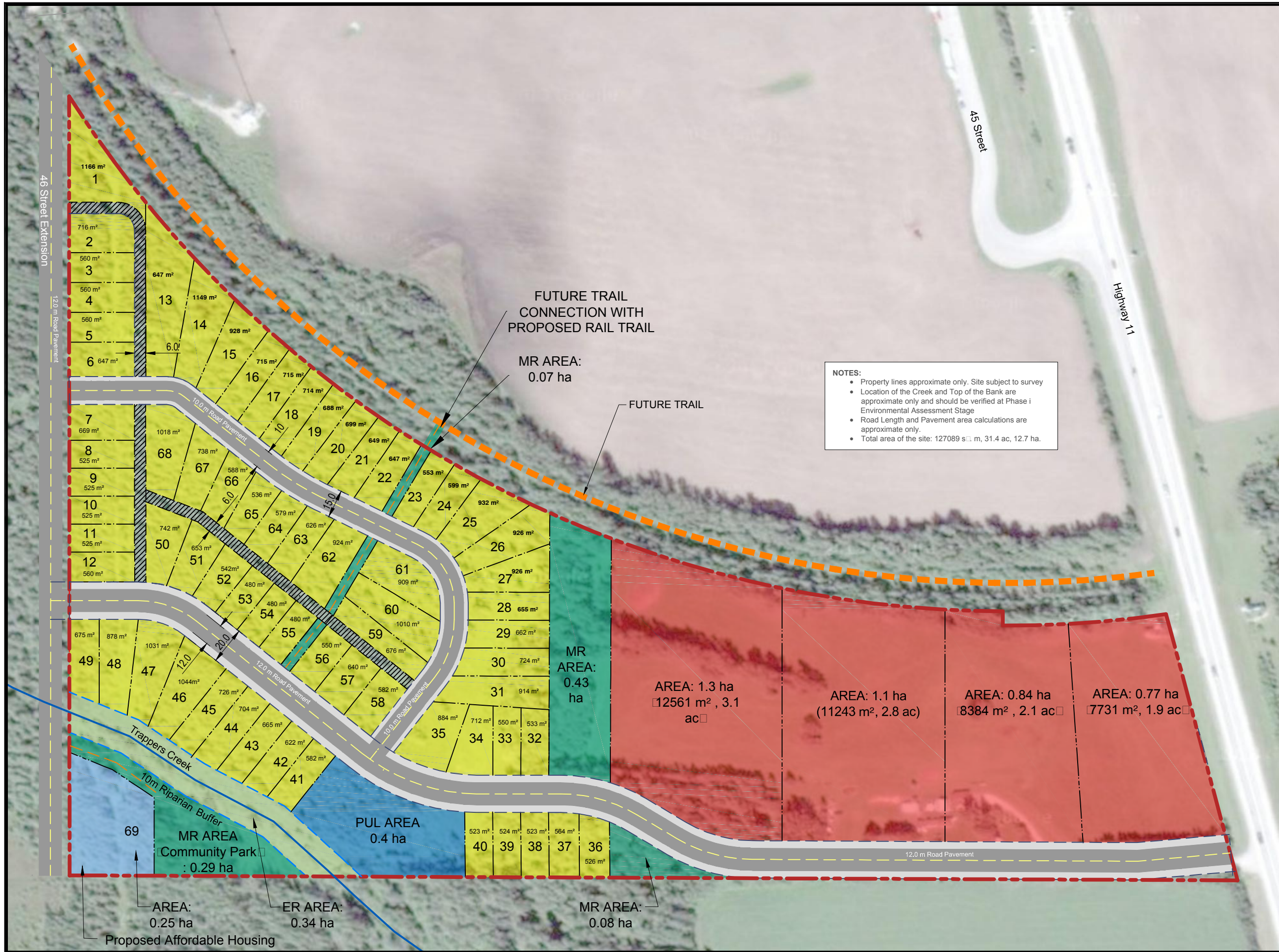


132 - 2693 BROADMOOR BOULEVARD,
SHERWOOD PARK, ALBERTA CANADA, T8H 0G1
PHONE: 780 410-6740 - FAX: 780 449-4050 - WWW.WSPGROUP.COM

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SCHEDULE B

Development Concept



NOTES:

- Property lines approximate only. Site subject to survey
- Location of the Creek and Top of the Bank are approximate only and should be verified at Phase I Environmental Assessment Stage
- Road Length and Pavement area calculations are approximate only.
- Total area of the site: 127089 s.m., 31.4 ac, 12.7 ha.



- LEGEND**
- Site Boundary
 - 10.0m Riparian Buffer from the creek
 - - - Proposed Lot Line
 - - - Proposed Road ROW
 - Proposed Municipal Reserve (MR)
 - Proposed 6.0m Trail
 - Proposed Lane
 - Existing Tree Line
 - Proposed Commercial
 - Proposed Residential
 - Proposed Affordable Housing Development
 - Proposed Road Pavement
 - Proposed Road ROW
 - Proposed PUL
 - Proposed ER

	NO. of Units	
Residential	69	
Commercial	4	
Total	73	

	Total	10.0 m	12.0 m	Outside site boundary
Road Length	1,454 m	348 m	673 m	433 m
Road Pavement Area	16,740 m ²	3461 m ²	8069 m ²	5,210 m ²

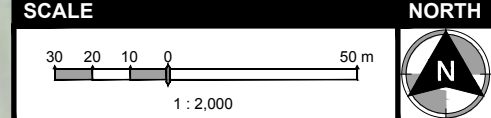
SOURCES:

- Property lines and topographical information based on plan provided by Snell & Oslund survey Ltd. on March 24 2014.

Designer: AWang / KWatters **VERSION**
Planner: ALader **8.1**


SCHEDULE B DEVELOPMENT CONCEPT
Rocky Mountain House, Alberta

AUGUSTIS OUTLINE PLAN
JULY 14, 2015 141-15567-00-P811

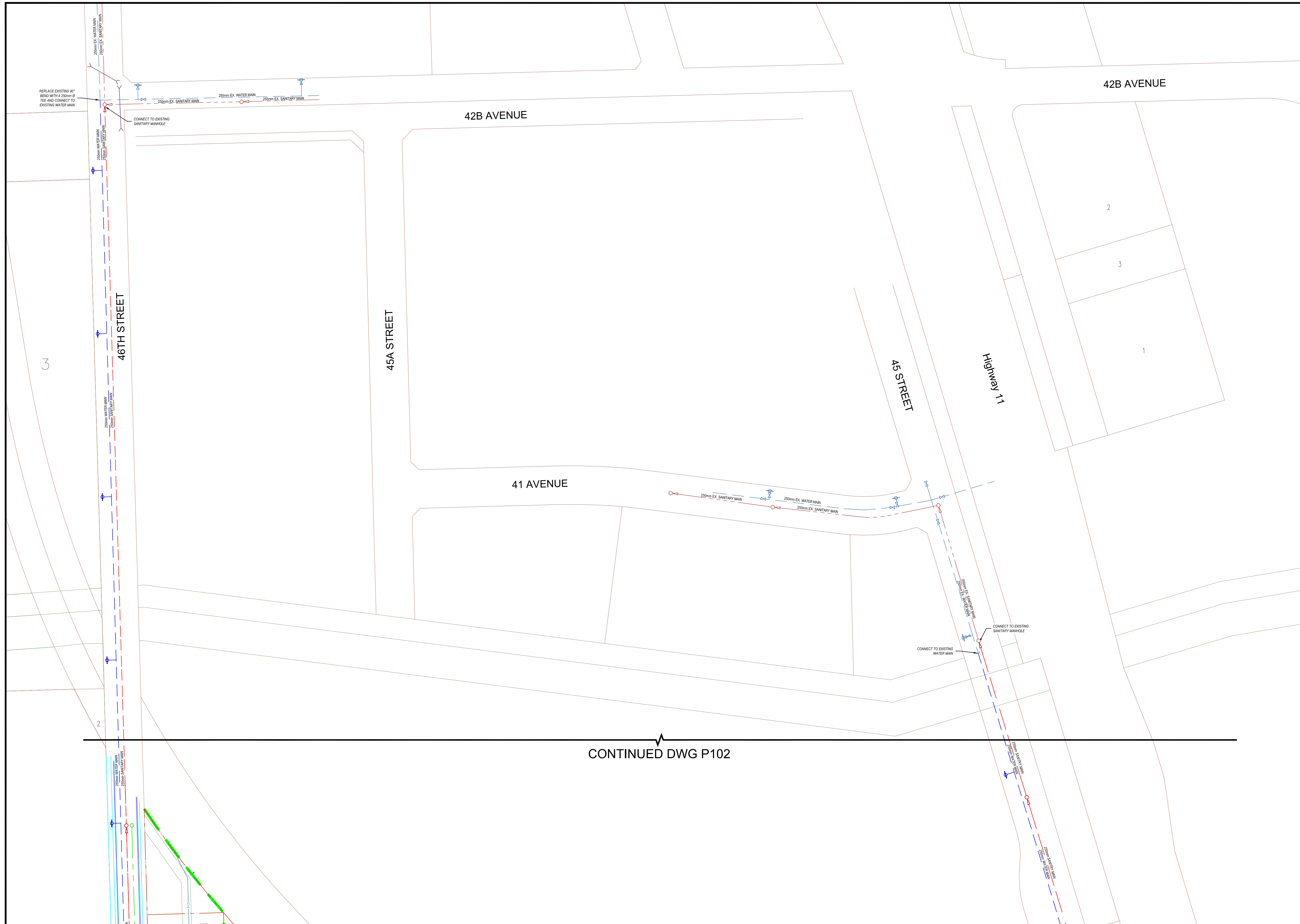


9925 - 109 STREET, SUITE 300
EDMONTON, ALBERTA CANADA, T5K 2J8
PHONE: 780 466-6555 - WWW.WSPGROUP.COM

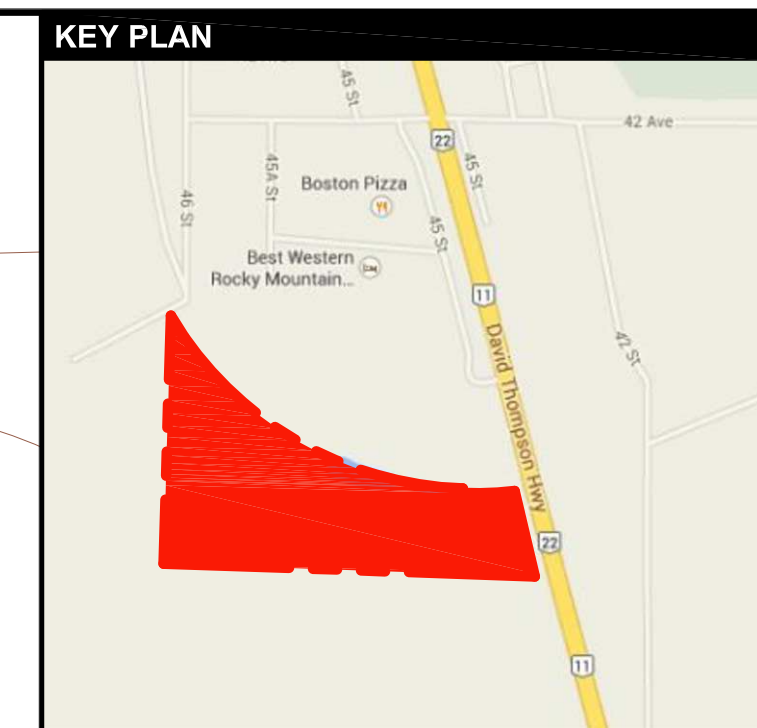
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SCHEDULE C
*Conceptual Servicing &
Phasing Plan*



CONTINUED DWG P102



LEGEND

LEGENDS		
	Existing Fiber Optic line	
	Existing Gas line	
	Existing Fence line	
	Existing Overhead Power	
	Existing Bush line	
	Existing Sanitary	
	Existing Water	
	Existing Property Line	
	Proposed Storm Main	
	Proposed Sanitary Main	
	Proposed Water Main	
	Proposed Asphalt Sidewalk	
	Proposed Curb and Walk	
	Proposed Property Lane	
	Proposed Hydrant	
	Proposed Water Valve	
	Proposed Flow Direction	
	Proposed Manhole	

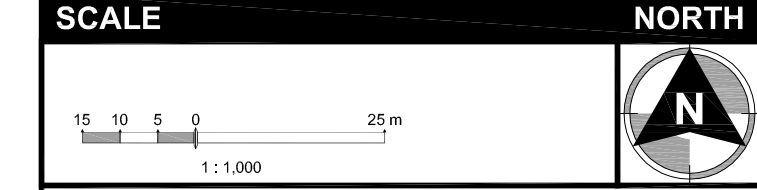
- NOTES:**
- Property lines approximate only. Site subject to survey
 - Add info to be highlighted.

- SOURCES:**
- Property lines from ALTALIS

Designer: MARC BIGGELAAR	VERSION
Planner: SCOTT FASH	P102A

Schedule C:
Conceptual Servicing Plan

Augustus Outline Plan
January 20, 2015 141-15567-00-P102



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SHERWOOD PARK, ALBERTA CANADA, T8H 0G1
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CONTINUED DWG P103A

N.W.1/4 SEC.14-39-7-5

N.W.1/4 SEC.14-39-7-5

PHASE 1

CABLE RW
PLAN 882 2751

KEY PLAN



LEGEND

- LEGENDS**
- FO — FO — Existing Fiber Optic line
 - GAS — Existing Gas line
 - - - X - - - Existing Fence line
 - - - OHP - - - Existing Overhead Power
 - - - Existing Bush line
 - - - Existing Property Line
 - - - Proposed Storm Main
 - - - Proposed Sanitary Main
 - - - Proposed Water Main
 - - - Proposed Asphalt Sidewalk
 - - - Proposed Curb and Walk
 - - - Proposed Property Lane
 - - - Proposed Phase line
 - ⊕ Proposed Hydrant
 - ⊕ Proposed Water Valve
 - Proposed Flow Direction
 - Proposed Manhole
 - Proposed Culvert Crossing

- NOTES:**
- Property lines approximate only. Site subject to survey
 - Add info to be highlighted.

- SOURCES:**
- Property lines from ALTALIS

Designer: MBIGGELAAR / KWATTERS VERSION
Planner: ALADER **P103**

**SCHEDULE C:
CONCEPTUAL SERVICING PLAN**

AUGUSTIS OUTLINE PLAN
JULY 14, 2015 141-15567-00-P103

SCALE **NORTH**

1 : 1,000

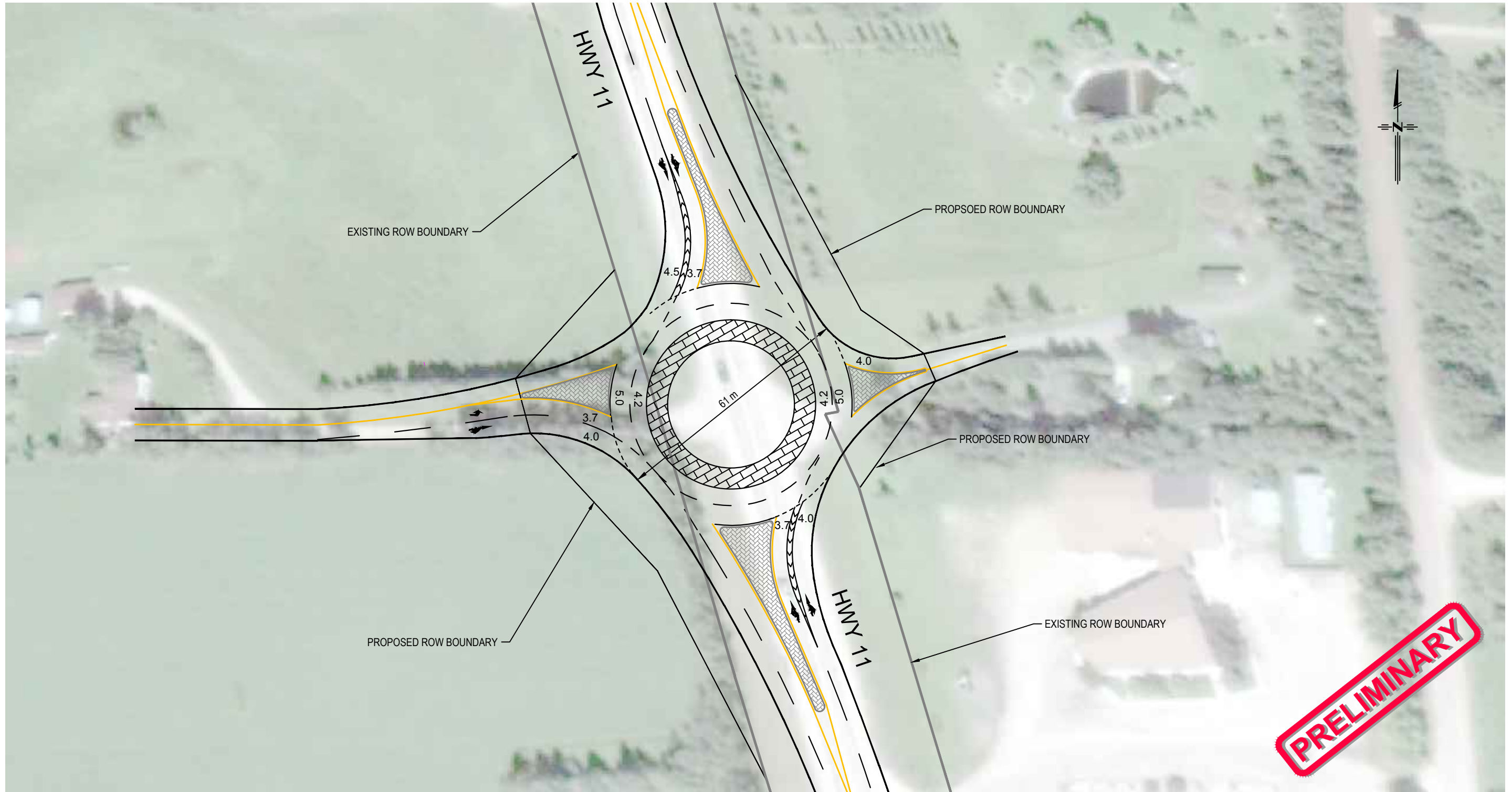
9925 - 109 STREET, SUITE 300
EDMONTON, ALBERTA CANADA, T5K 2J8
PHONE: 780-466-8555 - WWW.WSPGROUP.COM

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SCHEDULE D
*Roundabout Concept
Plan*

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300, 9925 109 STREET,
EDMONTON, ALBERTA CANADA, T5K 2J8
PHONE: 780 466-6555 - FAX: 780 463-0177 - WWW.WSPGROUP.COM

CLIENT:
MR. SOFOKLIS AUGOUSTIS

PROJECT:
AUGOUSTIS RESIDENTIAL AND COMMERCIAL DEVELOPMENT TIA

ISSUED FOR - REVISION:			
IS	RE	DATE	DESCRIPTION

DISCIPLINE:
CIVIL

TITLE:
HWY 11 / SITE ACCESS PROPOSED ROUNDABOUT CONCEPT PLAN

PROJECT NO:
141-15567-00

DESIGNED BY:
J.SUN

DRAWN BY:
J.SUN

CHECKED BY:
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SCALE:
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DATE:
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SHEET NUMBER:
141-15567-00-RO

SHEET #:
RO OF **--**

ISSUE:
REVIEW

DATE OF:
JUNE 10, 2015

IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.

25mm

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