

**BY-LAW NO. 2757 OF THE
COUNTY OF GRANDE PRAIRIE NO. 1**

A by-law of the County of Grande Prairie No. 1 in the Province of Alberta, to adopt the attached CROSSROADS SOUTH PHASE II Area Structure Plan for SECTION 7-72-5-W6

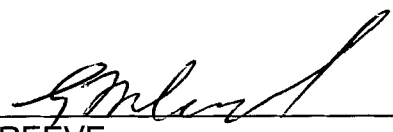
WHEREAS the Municipal Government Act, Statutes of Alberta, 2000, Chapter M-26. and amendments thereto, authorizes a Council to provide a framework for the subdivision and development of an area of land within the Municipality; and

WHEREAS the Council of the County of Grande Prairie No. 1 has properly notified the owners of land within the development area, pursuant to provisions of the Municipal Government Act, Statutes of Alberta, 2000, Chapter M-26, and amendments thereto.

NOW THEREFORE the Council of the County of Grande Prairie No. 1 duly assembled, hereby enacts as follows:

1. That this By-law shall be known as the "**CROSSROADS SOUTH PHASE II AREA STRUCTURE PLAN BY-LAW**".
2. That the CROSSROADS SOUTH PHASE II Area Structure Plan document is attached to this by-law as an appendix and forms part of this by-law.
3. That this by-law shall take effect on the date of its final passage by Council.

READ A FIRST AND SECOND TIME THIS 19TH DAY OF JULY A.D. 2005.


REEVE


COUNTY ADMINISTRATOR

READ A THIRD TIME AND FINALLY PASSED THIS 12TH DAY OF September
A.D. 2005.


REEVE


COUNTY ADMINISTRATOR

CROSSROADS SOUTH PHASE II AREA STRUCTURE PLAN

(Section 7-72-5-W6M)

Prepared by:

ISL

In association with



Beirsto Lehnert Ketchum Engineering Ltd.

**Bylaw No.: 2757
Adopted: September 12, 2005**

Office of Rob Penny
Assistant Deputy Minister
Transportation and Civil Engineering Division

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Edmonton AB T6B 2X3
Phone: (780) 422-2184
Fax: (780) 415-1268

August 26, 2005

Mr. Bill Rogan
County Administrator
County of Grande Prairie No. 1
10001 84 Ave
CLAIRMONT AB T0H 0W0

Dear Mr. Rogan:

RE: CROSSROADS SOUTH PHASE II AREA STRUCTURE PLAN

Alberta Transportation has reviewed the Crossroads South Phase II Area Structure Plan (ASP), regarding the future development in the County of Grande Prairie No. 1, located adjacent to Highway 43. The ASP addresses the department's concerns and is approved to meet the requirements of Section 14 of the Subdivision and Development Regulation.

Please forward a copy of the ASP once it has received third reading and the approval of council to our Operations Manager in Grande Prairie, Tom Williams, at the following address:

Alberta Infrastructure and Transportation
1st Floor, Provincial Building
10320 - 99 Street.
Grande Prairie AB T8V 6J4

The department supports continued co-operation on planning matters between the County of Grande Prairie No. 1 and Alberta Infrastructure and Transportation.

Sincerely,



Rob Penny, P.Eng.
Assistant Deputy Minister
Transportation and Civil Engineering

cc: Tom Williams

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1.0 INTRODUCTION

1.1 Purpose of Plan

The Crossroads South Phase 2 Area Structure Plan has been prepared to provide a framework for future development of four quarter sections of land north of the City of Grande Prairie in the County of Grande Prairie No. 1.

The primary objective of this Plan is to provide a framework for the development of the subject lands for industrial purposes in a manner that is consistent with the goals, objectives and policies of the County of Grande Prairie No. 1. In addition, as the site fronts onto a primary highway, the requirements of Alberta Infrastructure and Transportation also need to be accommodated. The Plan establishes the future land use and circulation pattern proposed for the site, and provides details respecting proposed servicing for the area.

This Area Structure Plan has been prepared in accordance with the Municipal Government Act, the Subdivision and Development Regulation, the County of Grande Prairie Municipal Development Plan, and the Grande Prairie Intermunicipal Development Plan.

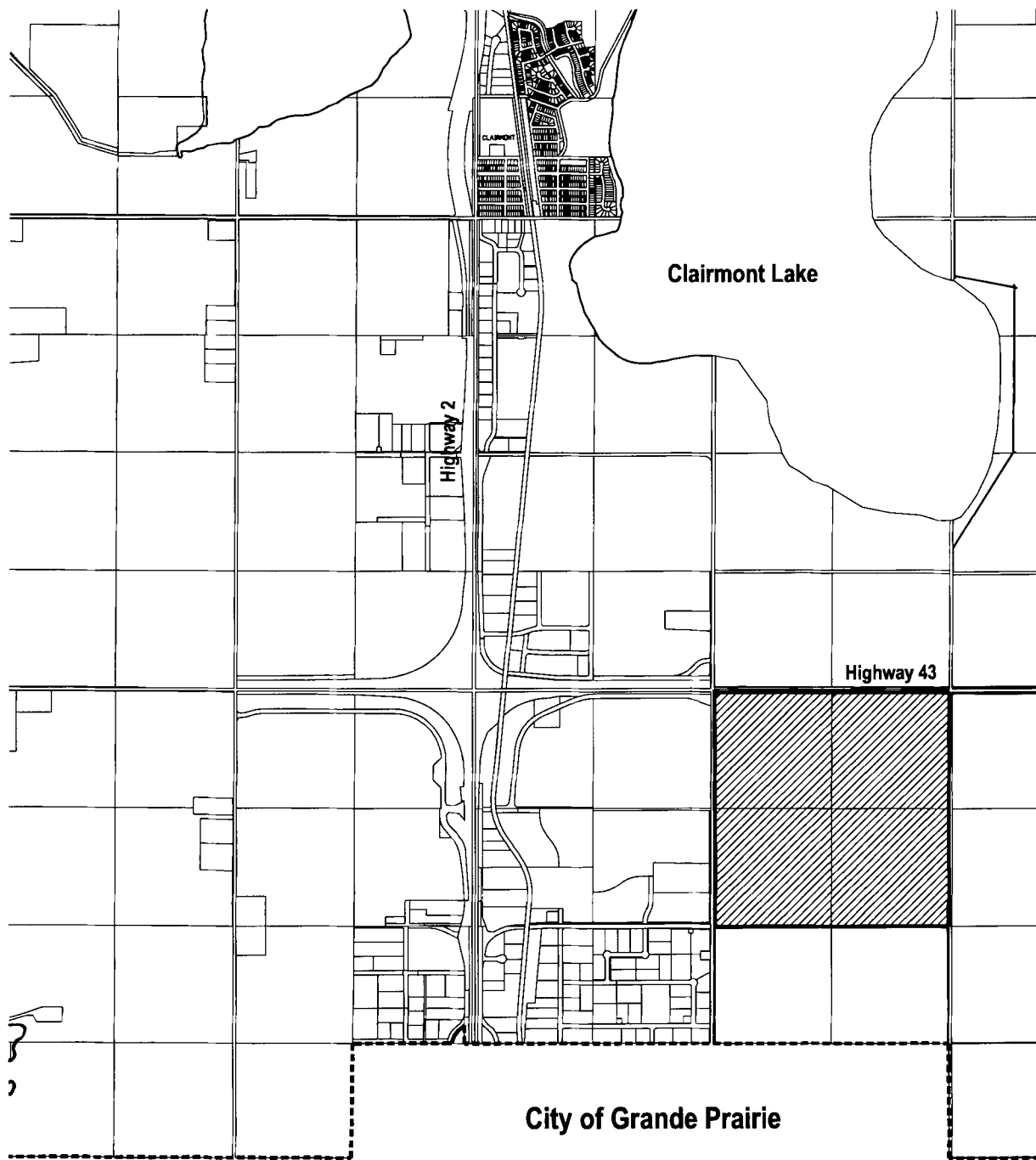
1.2 Plan Area

The land affected by this Area Structure Plan is located adjacent to the north boundary of the City of Grande Prairie, 1.6 km east of Four Mile Corner as illustrated in Map 1. The Plan area consists of four quarter sections of land totaling approximately 259 ha as outlined in Table 1 below. The policies of this plan will apply to this area.

Table 1 – Plan Area Composition

Legal	Owner	Area (ha)
NW 7-72-5-W6M	M. and S. Faul	63.6
NE 7-72-5-W6M	M. and S. Faul	63.6
SW 7-72-5-W6M	M. and S. Faul	64.7
SE 7-72-5-W6M	K. Faul and N. Lapointe	64.7
Road Plan 012-3449		2.2
Total		258.8

The site is bounded to the north by Highway 43, to the west by Range Road 60 (92nd Street), to the east by Range Road 55 (84th Street) and Township Road 721 (148th Avenue) to the south. The lands to the south and east are currently in agricultural use, while the McRae and County North Industrial Parks are located to the west.



Map 1- Location

**CROSSROADS SOUTH PHASE 2
AREA STRUCTURE PLAN
County of Grande Prairie No. 1**

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The Crossroads Industrial Park, currently under development, is located across Highway 43 to the northwest.

1.3 Existing Conditions

The Plan area is currently in agricultural production as shown in Map 2. The majority of the land in question has a Canada Land Inventory (CLI) rating of 100% 2c and 3t, which is considered as better agricultural land. The northeast corner of the Plan area is poorly drained and has a CLI rating of 100% 4w.

Development in the Plan area is limited to a farm site in the northwest corner of the area, and a communications tower on the east side. Adjacent land uses include established (and expanding) industrial parks to the northwest and west, and agricultural uses in all other directions. An existing farmstead is located adjacent to the east boundary of the Plan area.

As illustrated in Map 3, the Plan area generally drains from southwest to northeast. The area is relatively flat, as elevations range from approximately 683 m in the southwest corner to 672 m at the northeast corner (0.6% slope). The northeast corner of the Plan area is poorly drained and is frequently inundated with water from area runoff and may have significant development restrictions.

1.4 Policy Framework

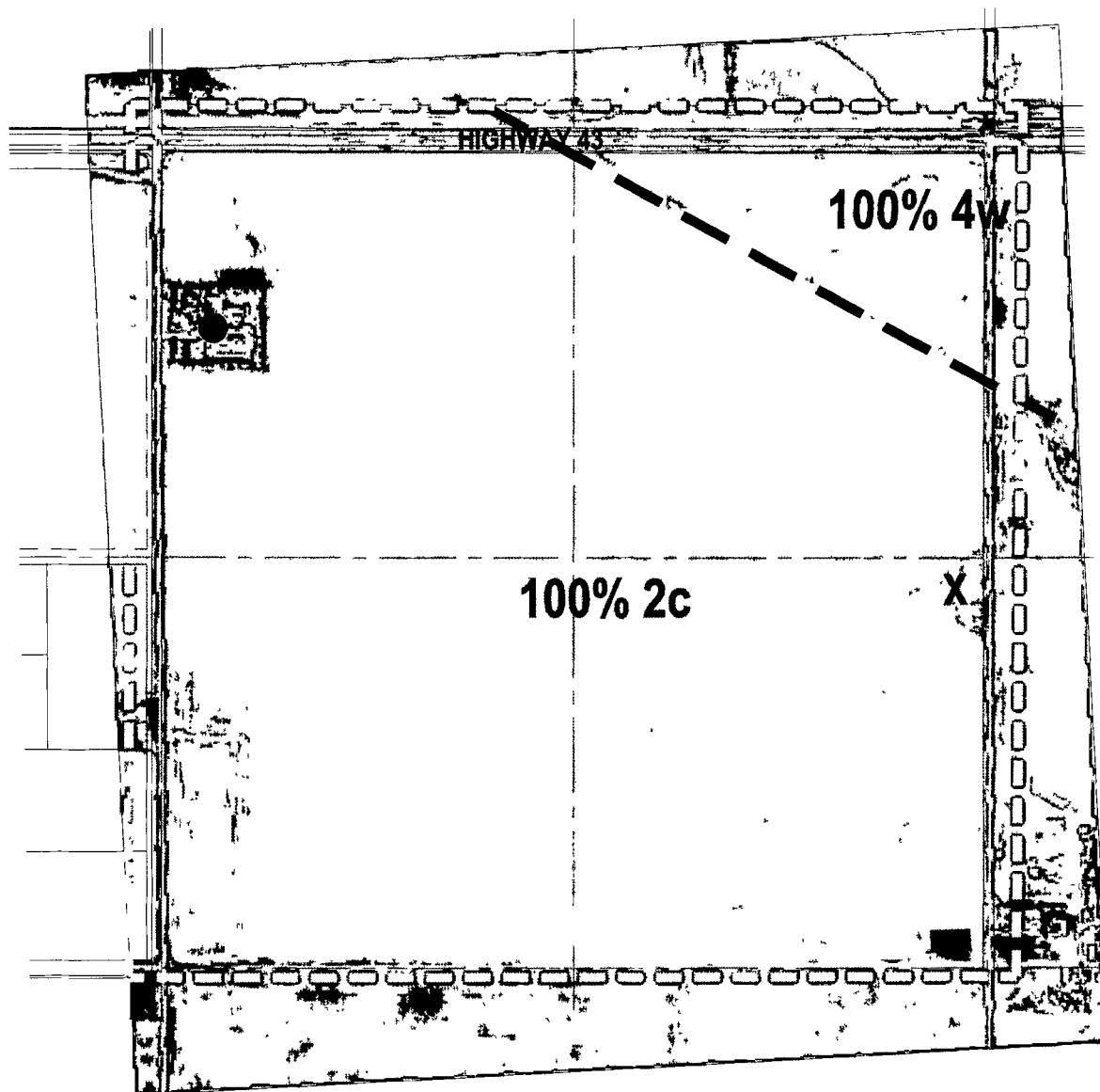
1.4.1 County of Grande Prairie Municipal Development Plan

The County MDP provides the general policy framework with which more detailed plans are required to be consistent. Section 13.5 of the Plan indicates that area structure plans are required as a prerequisite for the development of industrial parks, hamlets, highway commercial subdivisions, "or any other major development where such a plan would assist the County in making planning decisions".

The County of Grande Prairie Municipal Development Plan identifies the lands located adjacent to the highway corridor area for rural industrial use. The MDP should be amended to indicate the continued expansion of industrial development easterly between Highway 43 and Secondary Highway 670 including all areas in this Plan.

1.4.2 Grande Prairie Intermunicipal Development Plan

The south half of the Plan area is located in the IDP's "Referral Area", which requires that subdivision and major development applications proposed for the subject lands be circulated to the City for information.



CROSSROADS SOUTH PHASE 2 AREA STRUCTURE PLAN

COUNTY OF GRANDE PRAIRIE NO. 1

MAP 2 - EXISTING CONDITIONS



FARM SITE



COMMUNICATION TOWER



DUGOUT

100% 3t

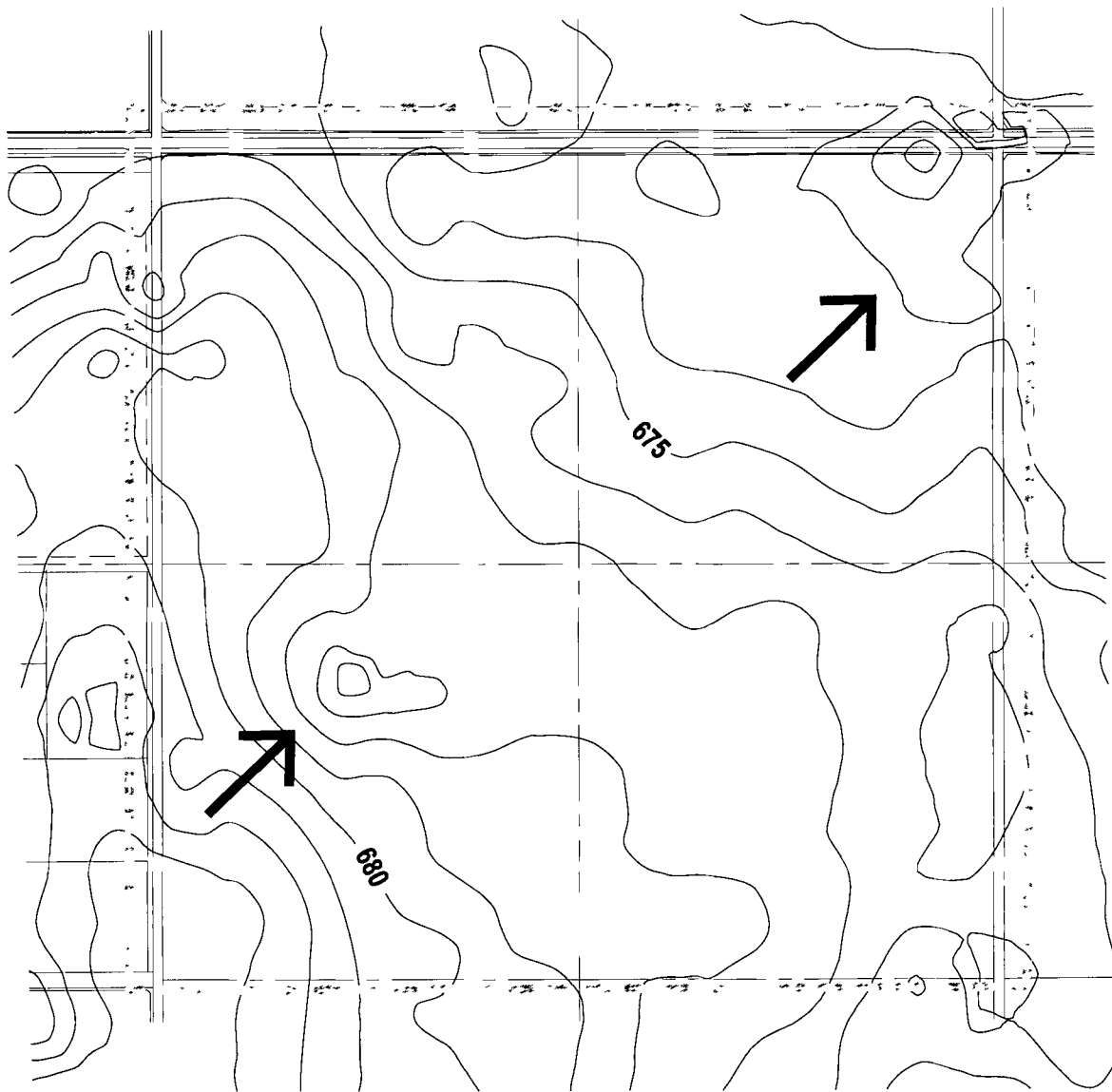
CLI RATING

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PLAN BOUNDARY



CROSSROADS SOUTH PHASE 2 AREA STRUCTURE PLAN

COUNTY OF GRANDE PRAIRIE NO. 1

MAP 3 - TOPOGRAPHY

670 ELEVATION

← DIRECTION OF FLOW

--- PLAN BOUNDARY

SCALE N T S

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1.4.3 County of Grande Prairie Land Use Bylaw

The land in the Plan area is currently designated as Agricultural (AG) in the County's Land Use Bylaw. In order to facilitate the development of these lands for industrial purposes, it is intended that the Plan area be rezoned to the appropriate land use districts as a prerequisite to subdivision.

1.4.4 Subdivision and Development Regulation

Section 14 of the Regulation requires that an area structure plan be prepared in advance of development on all lands located within 800m of a highway. This Plan has been prepared in accordance with this requirement.

1.4.5 Clairmont Planning and Servicing Areas Study

The Clairmont Planning and Servicing Areas Study established a logical area structure plan and servicing areas for lands in the vicinity of Clairmont. This study was prepared in order to address broad planning and servicing opportunities for future development around Clairmont.

The northerly portion of this Area Structure Plan corresponds to planning area P10 as defined in the Study.

2.0 DEVELOPMENT CONCEPT

2.1 Goals of the Plan

The Crossroads South Phase 2 Area Structure Plan has been prepared in accordance with the following goals and objectives.

1. To provide a sound planning framework for the future development of the Plan area that is consistent with the goals of the County of Grande Prairie No. 1.
2. To contribute to the continued development of lands north of the City of Grande Prairie for industrial purposes.
3. To protect and maintain the operational safety and integrity of the Highway 43 corridor.
4. To establish an efficient and economical servicing and development concept for the Plan area.

2.2 Land Use Concept

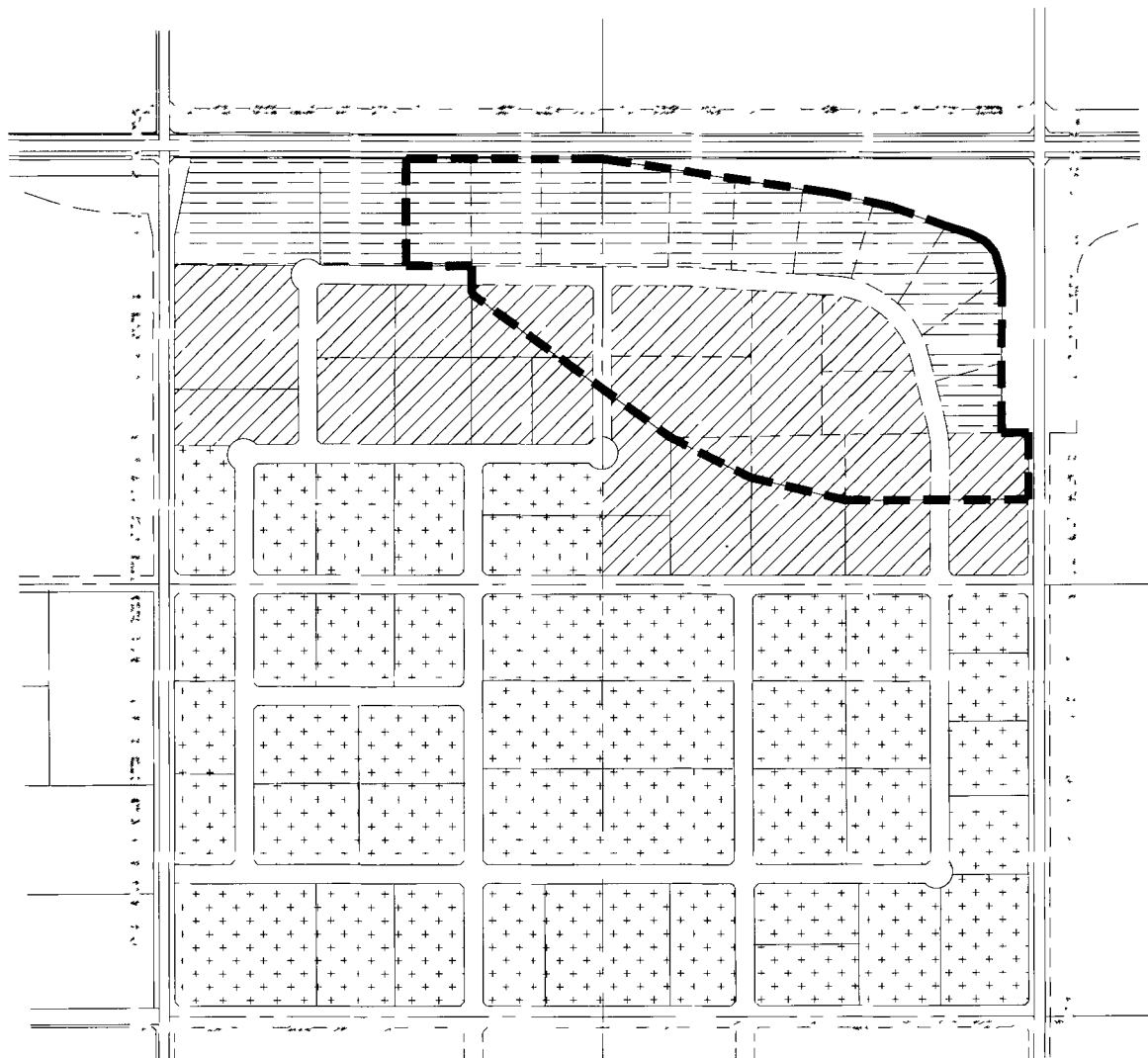
The proposed land use concept for the subject lands is illustrated in Map 4. The intent of this plan is to provide a generalized land use plan with a conceptual lot layout that will be subject to further refinement at the time of subdivision and survey.

- 2.2.1 As noted in Table 2, 85% of the Plan area is to be developed for industrial purposes. A mixture of highway-oriented, heavy and general industrial development is proposed. Given the proximity to Highway 43, it is proposed that approximately 31 ha of land located along the north boundary of the Plan area be designated as Highway Industrial (RM-4) in the Land Use Bylaw. The balance of the industrial land is to be zoned as Rural Heavy Industrial (RM-3) and Rural Medium Industrial (RM-2).

Table 2 - Land Use Area Estimates

Land Use Category	NW 7	NE7	SW 7	SE 7	Total	Percent
Gross Developable Area	63.60	63.60	64.70	64.70	256.60	
Less Road Widening	0.67	0.28	0.79	0.81	2.55	
Less Hwy 43 ROW	0	7.93	0	0	7.93	
Net Developable Area	62.93¹	55.39²	63.91	63.89	246.12	100.0
Industrial	53.49	49.53	52.26	54.17	209.45	85.1
Highway Industrial	15.57	15.18	0	0	30.75	12.5
General Industrial	37.92	34.35	0	0	72.27	29.4
Heavy Industrial	0	0	52.26	54.17	106.43	43.2
Roads	9.44	5.86	11.65	9.72	36.67	14.9

¹ This includes a poorly drained area of approximately 9.4 ha in the NW 7 and 35.4 ha in the NE 7 that would require the importation of a significant amount of fill in order to develop (see Section 3.4.2). This constitutes approximately 17% of the Plan area.



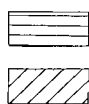
CROSSROADS SOUTH PHASE 2 AREA STRUCTURE PLAN

COUNTY OF GRANDE PRAIRIE NO. 1

MAP 4 - DEVELOPMENT CONCEPT



SCALE N T S



HIGHWAY INDUSTRIAL

GENERAL INDUSTRIAL



HEAVY INDUSTRIAL



REQUIRES FILL

PLAN BOUNDARY

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- 2.2.2 Heavy industrial use totaling 106 ha is proposed for the central portion of the Plan area. The intent is to create a dedicated area where uses such as asphalt plants and similar uses that may produce some off-site nuisance effects such as noise, odors or emissions but which by virtue of its location will not have a detrimental impact on settled areas. Lots in this area would be rezoned to the County's Rural Heavy Industrial (RM-3) District.
- 2.2.3 General industrial development (zoned RM-2 in the Land Use Bylaw) comprises approximately 72 ha (29%) of the Plan area. Uses encouraged in this area are those that are characteristic of other rural industrial parks in the vicinity and is intended to provide a transition from similar development that is proposed for abutting City lands to the south. This form of development is also proposed adjacent to the highway industrial area in order to provide buffering from the heavy industrial area.
- 2.2.4 Based on the layout shown on Map 4, approximately 21 lots may be developed for general industrial use, averaging 3.4 ha in size, and 13 lots for highway industrial use averaging 2.4 ha². 43 lots are proposed for heavy industrial use, averaging 2.5 ha in size.
- 2.2.5 Given that the Plan area abuts Highway 43, a landscaped buffer shall be provided on the north side of the lots located adjacent to the highway in accordance with the requirements of the County's Land Use Bylaw.
- 2.2.6 The amount of developable land in the northeast corner of the planning area has yet to be specifically defined. Given the low nature of the area and the importance to storm drainage, much of the area may remain undeveloped and form part of the storm water management retention system for the area.

2.3 Municipal Reserve

In accordance with the Municipal Government Act, a maximum of 10% of the Plan area (25.7 ha) may be provided as municipal reserve at the time of subdivision. Municipal Reserve will be provided in land form unless there is a definitive indication that the land for parks or schools is not needed in which case cash-in-lieu will be established as a condition of subdivision approval.

² This includes 11 highway industrial and 9 general industrial lots located in the north end of the Plan area requiring fill.

3.0 TRANSPORTATION AND SERVICING

3.1 Road Network

As illustrated in Map 5, primary access to the Plan area is currently obtained from existing locations along Highway 43 at Range Roads 55 (84th Street) and 60 (92nd Street) which bound the east and west sides of the Plan area respectively. Both of these roads currently provide a direct connection between Highway 43 and the City of Grande Prairie. Traffic impact assessments for these intersections will be prepared for Alberta Infrastructure and Transportation and the County at the time of subdivision.

The development of roads in the plan area is consistent with an overall transportation strategy for the area. Map 5A identifies a broader, long term transportation plan for the entire area north of the City of Grande Prairie. The map indicates future highway locations, an arterial road network system linking the highways to future truck routes and land use areas. A major collector system to enable traffic to flow from the local roads to the arterial roads and ultimately to the highways is also indicated. Of particular importance to the County is the preservation and maintenance of the major collector road system that facilitates north-south traffic flow in the Clairmont corridor, and reduces reliance on the Highway 2/43 corridor. It is intended that this system be integrated into the area structure plan.

The development of 148th Avenue and 156th Avenue as major collectors to facilitate the movement of traffic in an east west pattern is also extremely important. As such, the rights of way for these important road systems will be defined and developed in accordance with County standards.

Range Roads 55 and 60 currently intersect with Highway 43. A Highway Access Management Plan recently completed by Alberta Infrastructure and Transportation indicates that a full intersection (future interchange) will be maintained to Highway 43 at Range Road 55. The Access Management Plan also indicates that a flyover may be appropriate at Range Road 60. It is the position of Alberta Infrastructure and Transportation that costs associated with a flyover would be the responsibility of the County or developers, and that it will be constructed to the satisfaction of, but at no cost to Alberta Infrastructure and Transportation. Lands have been set aside along the north boundary of the Plan area in order to accommodate these structures. In addition, traffic impact assessments will be prepared for Alberta Infrastructure and Transportation at the time of subdivision to determine if the intersections have sufficient capacity to accommodate the proposal.

- 3.1.1 All internal roads are to be paved and constructed in accordance with County specifications at the expense of the developer. The standard right of way for a local road shall be 30 metres. In those instances where a proposed road straddles a property line, the cost of road construction would be shared by the affected landowners.
- 3.1.2 All lots shall be accessed by the internal road system. No direct highway access will be permitted, and arterial access will be limited to the identified intersection locations.
- 3.1.3 Through the subdivision process, additional land shall be acquired by the County from the developer to provide for the future widening of Range Roads 55 and 60.

- 3.1.4 Prior to approval of any subdivision in future phases of the Plan area, a traffic impact assessment (TIA) shall be prepared for the County and Alberta Infrastructure and Transportation to determine if the existing highway intersections and other major roads are suitable for the area at "build-out". This TIA shall be provided prior to or with submission of the first subdivision application in the plan area.
- 3.1.5 Notwithstanding 3.1.4, traffic impact assessments may be requested by the County at the time of future subdivision phases to identify additional potential improvements to all external roadways.
- 3.1.6 All major collector roads shall have a 40 metre right of way. Developers will be required to construct the major collector road system to County standards. Where improvements to the major collector road network create a benefit to other landowners within the Plan area, the County will endeavour to require any new development in those areas to compensate the developers in this Plan area for a portion of the costs of the improvements.
- 3.1.7 Range Road 55 shall be recognized as an arterial roadway in this Plan, and all future planning approvals will recognize the status of this road that requires no less than a 45 metre wide right-of-way. This road is part of a planned urban arterial ring road concept proposed for the County connecting with the Clairmont area to the north and Range Road 63 (116th Street) to the west. As traffic volumes increase in the future, the design of the road will transition from a rural standard to an urban standard.
- 3.1.8 Range Road 60 currently intersects with Highway 43 at the northwest corner of the Plan area. Development will be permitted, subject to County approval, on the understanding that at some future point, the Province intends to close access to Highway 43 from Range Road 60 and provide a fronting service road to the nearest interchange location.
- 3.1.9 Through the subdivision process, additional land may be acquired by the County from the developer to provide for the future widening of Range Roads 55 and 60 and allow for the future development of an interchange and a flyover at these respective Highway 43 intersections. The land requirements for the flyover will be identified at the time of the first subdivision or development within the NW 7 and NE 7-72-6-W6M, ensuring that the height requirements of the high load corridor on Highway 43 have been addressed.
- 3.1.10 The County may impose a transportation levy to assist in paying for future upgrades to the road system in the area.
- 3.1.11 Improvements to Range Road 55 (84th Street) will create a benefiting area which includes the two quarter sections to the east of the Plan area. The County will require new development occurring in the benefiting area to pay levies to recover a portion of the costs for these improvements.
- 3.1.12 In order to facilitate pedestrian and bicycle movement in the Plan area and connections to neighbouring areas, a potential pedestrian linkage is proposed adjacent to Range Road 60 as illustrated in Map 5. This traffic may be accommodated through the construction of wider shoulders on the road, or the provision of a separate asphalt trail. This pedestrian linkage is not proposed as an at grade crossing at Highway 43 but would be integrated within the ultimate flyover design for Range Road 60 as per the requirements of Alberta Infrastructure and Transportation.

3.2 Sanitary Sewer

The Plan area consists of a single drainage basin as illustrated on Map 6 which drains to the existing sanitary sewer and lift station located in the Crossroads development across Highway 43 to the north, and to a future regional lift station to the northeast.

As noted in Map 6, the Plan area is composed of areas to be completely serviced and areas that may remain as dry lot. While it is possible for the entire planning area to be serviced, this decision requires considerable investment in infrastructure. Further, the creation of a regional lift station will provide significant opportunities to service other lands in the area. However, in order for the east half of the Plan area to be serviced it requires the development of a regional lift station in the SW 17-72-5-W6M. A lift station in this location would also enable the servicing of a much larger area. With the servicing concept shown on Map 6, the provision of a regional lift station at this location is a long term goal. The decision to extend servicing to the entire area will be made as the area continues to develop and as other servicing master plans are developed.

In areas where sanitary servicing requires downstream connections or lift stations that do not exist, it is proposed that dry sanitary services be installed within adjacent road rights-of-way in order to accommodate the future connection to the system. Once the downstream sanitary installations are complete, the necessary sanitary tie-ins to the dry system can be made.

With respect to the development of the northern drainage basin, in some instances the sanitary servicing requires downstream connections or lift stations that do not currently exist. It will involve the creation of easements or rights of way across other land in order to facilitate the ultimate design. Every effort will be made to secure this easements or rights of way as soon as possible. However a portion of the area can be serviced using a line that will run along Range Road 60. This line will allow the first phase of subdivision to be developed.

In order to facilitate the servicing of the Plan area, a new lift station will eventually be needed. The best location for this lift station would be on the north side of Highway 43 to avoid the need for additional augering for future force mains. A sanitary master plan will need to be done to determine the drainage extents of this lift station, the future location of the force mains, and the costs needed to support this infrastructure. A general alignment of the trunk main is shown in Map 6. A regional lift station was identified earlier as part of the Clairmont Planning and Servicing Areas Study. Construction of this lift station would trigger municipal services into the northern drainage basin. Sewage from this lift station would most likely be treated in lands west of Clairmont.

- 3.2.1 The long term sanitary sewer servicing patterns are identified on Map 6.
- 3.2.2 All development will be required to connect to municipal sanitary sewer systems. The timing of the connections may be subject to negotiation.
- 3.2.3 The development of sanitary sewer systems throughout the entire SW 7-72-5-W6M is contingent upon the provision of rights of way, easements or other mechanisms being provided in the NW 7-72-5-W6M. In the event that subdivision and development in the SW 7-72-5-W6M proceeds in advance of subdivision and development in the NW quarter, the developers, County and Aquatera will work towards finding temporary solutions to the servicing needs.



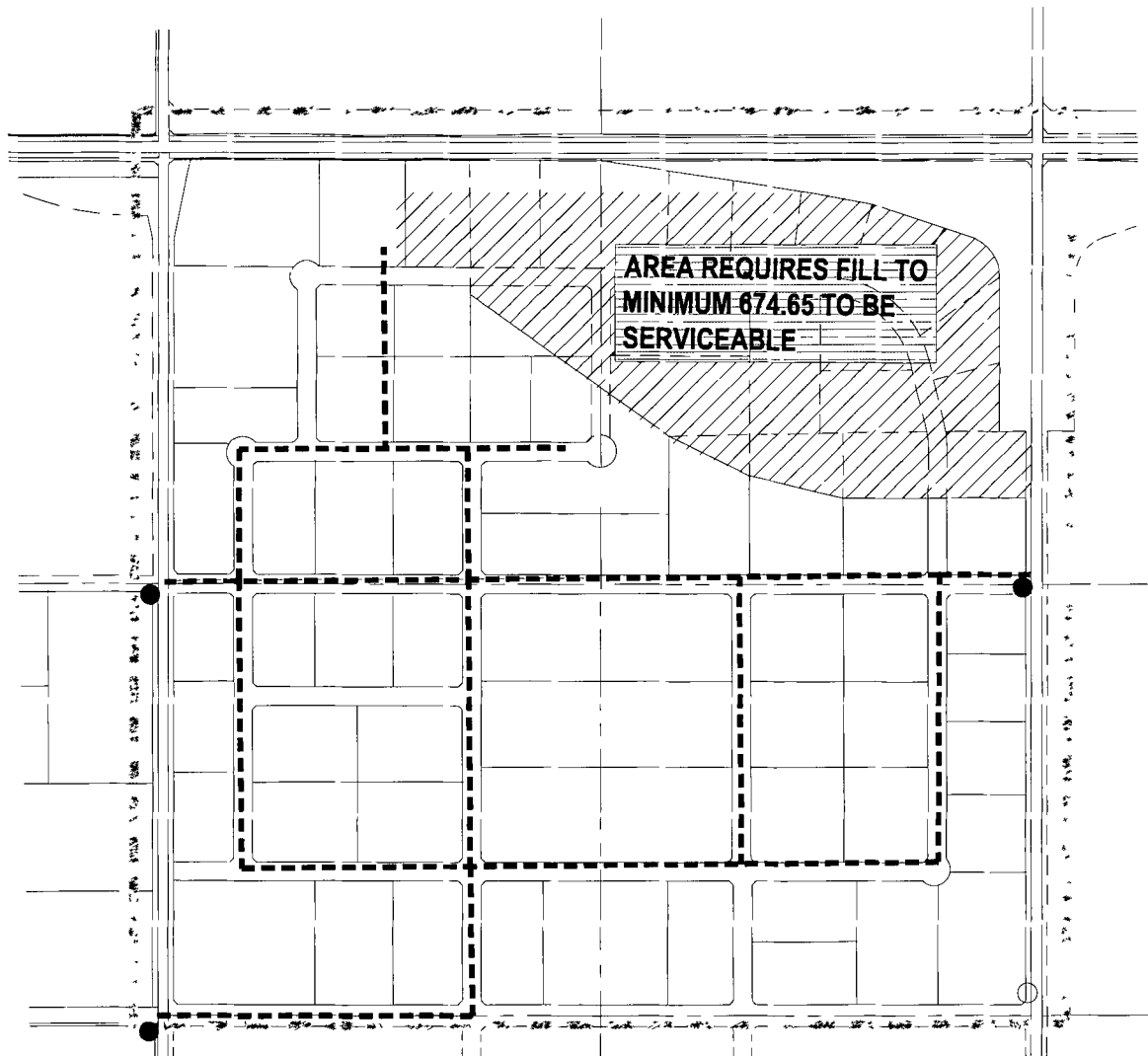
- 3.2.4 Any development or subdivision in the NW 7-72-5-W6M will trigger a requirement to provide the necessary easements, rights of way or other mechanisms to foster the installation of a sanitary sewer system in the planning area.
- 3.2.5 The developer shall be responsible for the installation of all sanitary sewer systems, including needed PULs, easements or rights-of-ways, to County standards.
- 3.2.6 Due to the large amount of fill required for development in the northeast portion of the Plan area, much of this area will be difficult to develop. As a result, the construction of the required lift station may be delayed, possibly necessitating the use of a low pressure system into the Crossroads lift station on an interim basis. This would apply to all lands in the Northern Drainage Basin that are shown as areas to be serviced. Any priority for excess capacity would, however be granted to lands located north of Highway 43.
- 3.2.7 The initial cost of the Crossroads lift station is to be recovered by lands north of Highway 43. Lands south of Highway 43 will be required to pay for the upgrading costs for the Crossroads system. These costs will include upsizing the lift station and paying for any additional force mains that may be required. A fee equivalent to the Northgate lift station of \$4,863/ha should be used until an overall master plan indicates a more appropriate value to address all needed improvements in the system.
- 3.2.8 In addition to the above, the County will collect offsite levies in the amount of \$13,248/ha to cover the costs of future improvements to the sanitary sewer system in Clairmont.
- 3.2.9 All development is subject to connection fees charged by Aquatera Utilities Inc.

3.3 Water Supply

- 3.3.1 As noted in Map 7, all areas in the Plan area will be serviced with a municipal water system.
- 3.3.2 Water from the Plan area is to be serviced out of Zone 3 from the City of Grande Prairie. Potential tie-in points are identified in Map 7. Pipe size accommodations should be made as part of Grande Prairie's long term infrastructure growth assessment. Fire flows are to be maintained at a minimum of 95 L/s.
- 3.3.3 The developer will be responsible for providing a municipal water system to the area.
- 3.3.4 Wherever possible, water extensions should provide for water looping opportunities.

3.4 Storm Water Management

Storm water management shall be required for quantity and quality control. Quantity control is required to reduce the potential impacts of urban storm water run-off on drainage ditches and watercourses (i.e. higher rates of erosion), and limit the potential for flooding on developed lands during major storm events. Quality control is required to mitigate any potential for environmental contamination of nearby bodies of water.



CROSSROADS SOUTH PHASE 2 AREA STRUCTURE PLAN

COUNTY OF GRANDE PRAIRIE NO. 1

MAP 7 - WATER SERVICING CONCEPT

- LONG TERM WATER CONNECTION POINTS

NOTE: ALL WATER PIPES
TO BE 250Ø UNLESS
OTHERWISE NOTED.



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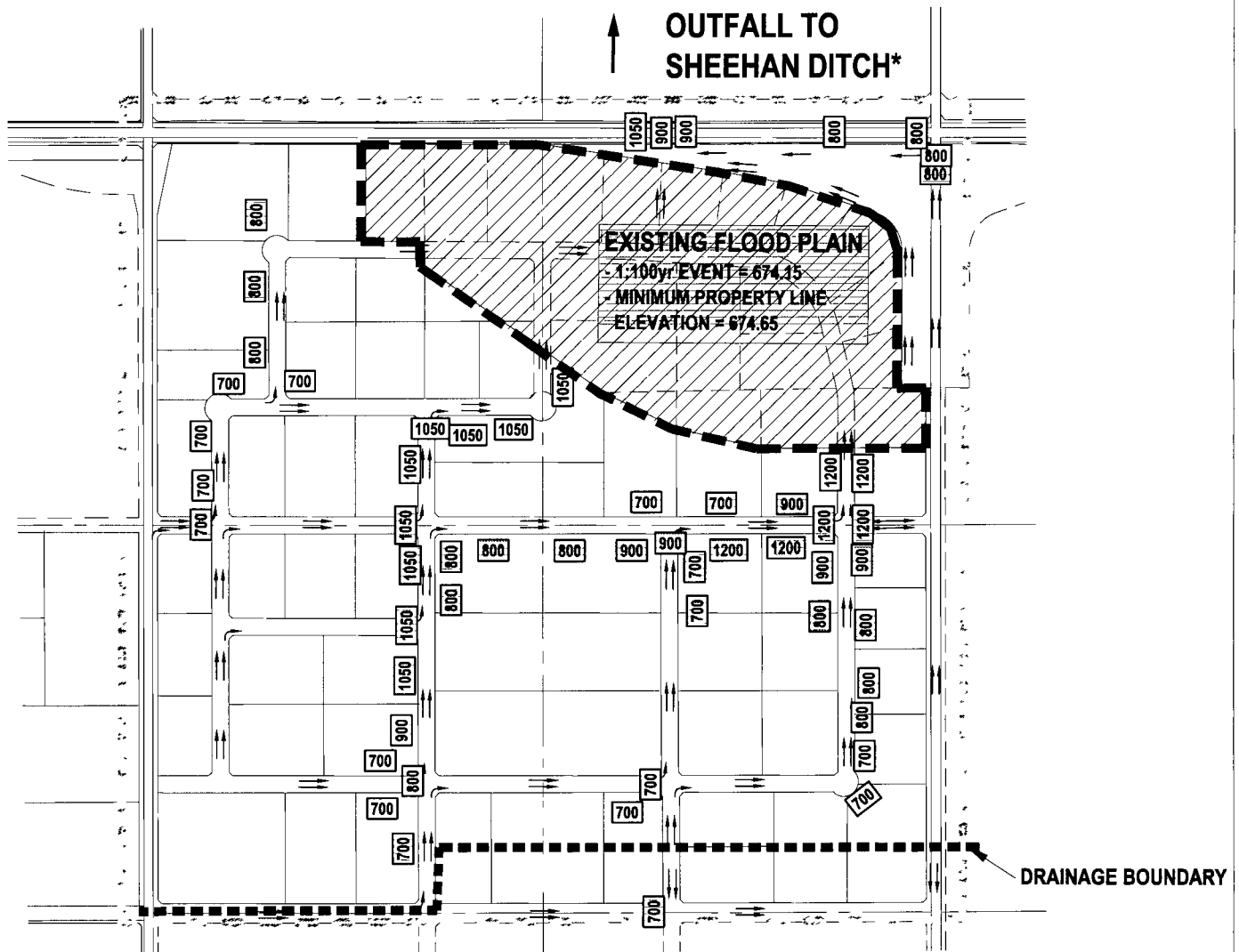


--- PLAN BOUNDARY

Storm water in the Plan area drains into Clairmont Lake to the north via the Sheehan ditch. The major drainage course (1:100 year events) as identified in Map 8, is to be sized to handle flows at 1:5 year flows with overflow requirements for the 1:100 year event. In this major course it is important to maintain flows within the road boundaries. To accomplish this it is important that overflows across approaches and roads be designed to handle excess water. In cases where this cannot occur, culverts must be designed to handle the 1:100 year event. This overflow will also assist in situations where culvert freeze up occurs. Ditches within the major course will need to have a minimum setback of 0.75m from the back slope to private property. Ditches in the major course that exceed 2% in grade will need to have erosion control measures such as silt traps, rip rapped corners, hydro-seeded ditch bottoms or other approved erosion prevention methods. Each developer will be responsible for upgrading their ditches in their respective developments. Additional information pertaining to storm water flows is available in the report entitled "Storm Drainage Analysis – Crossroads Development Phase 2" or any other subsequent site-specific reports.

It is the intent for the remainder of the lands in the Plan area to use Clairmont Lake for retention purposes. Ducks Unlimited operates a weir system at the outfall of the lake which is successfully being used to regulate flows and maintain lake levels. This has proven to be an acceptable method in adjacent areas for mitigating the impacts of increased flows on the downstream wetlands. The combination of a natural wetland that acts as an environmental cleansing agent as well as the incorporation of a grassed drainage ditch proves to be quite effective in providing water quality management as well as quantity management. Should Alberta Environment require further quality management, a wet pond at the last leg of the drainage course prior to the water entering the lake would be needed. This would only be needed if the downstream scenario is converted to an urban model with underground storm sewer and curbs. The cost of the wet pond would then need to be included in the upgrade cost.

- 3.4.1 Storm water management shall be required for quantity and quality control. Storm drainage will be provided as indicated on Map 8, and is part of a larger drainage system as illustrated on Map 8A. A detailed storm design will be required should any development occur in the N1/2 or SE quarter of Section 7-72-5-W6M.
- 3.4.2 If improvements to the Sheehan Ditch drainage system are initiated by public or private interests, the County may endeavour to cooperate with those interests to recover all or a portion of those costs from benefiting land owners.
- 3.4.3 The Plan area has extremely flat and low lying portions. This causes flooding during winter melts and in 1:100 year rainfall events. The 1:100 year event is estimated to create a maximum water level of 674.15m. The area that is within 0.5m of this level is identified as floodplain on Map 8. No development can occur in this area unless the land is filled to a level above 674.65m. No buildings with basements should have their basement footings below the 1:100 year rainfall event level. Pending the development of a detailed storm design for the area, no development or subdivision will be permitted in the NE 7-72-5-W6M. After the detail storm plan is prepared, a portion of the proposed development area may be set aside for storm water management purposes.



NOTE: CULVERT SIZES TO BE
A MINIMUM OF 600Ø UNLESS
OTHERWISE NOTED.

CROSSROADS SOUTH PHASE 2 AREA STRUCTURE PLAN

COUNTY OF GRANDE PRAIRIE NO. 1

MAP 8 - STORM DRAINAGE CONCEPT

→ DRAINAGE DIRECTION

□ CULVERTS

--- PLAN BOUNDARY

*NOTE: DETAILED DESIGN REPORT
REQUIRED IF DEVELOPMENT OCCURS IN
FLOOD PLAIN.

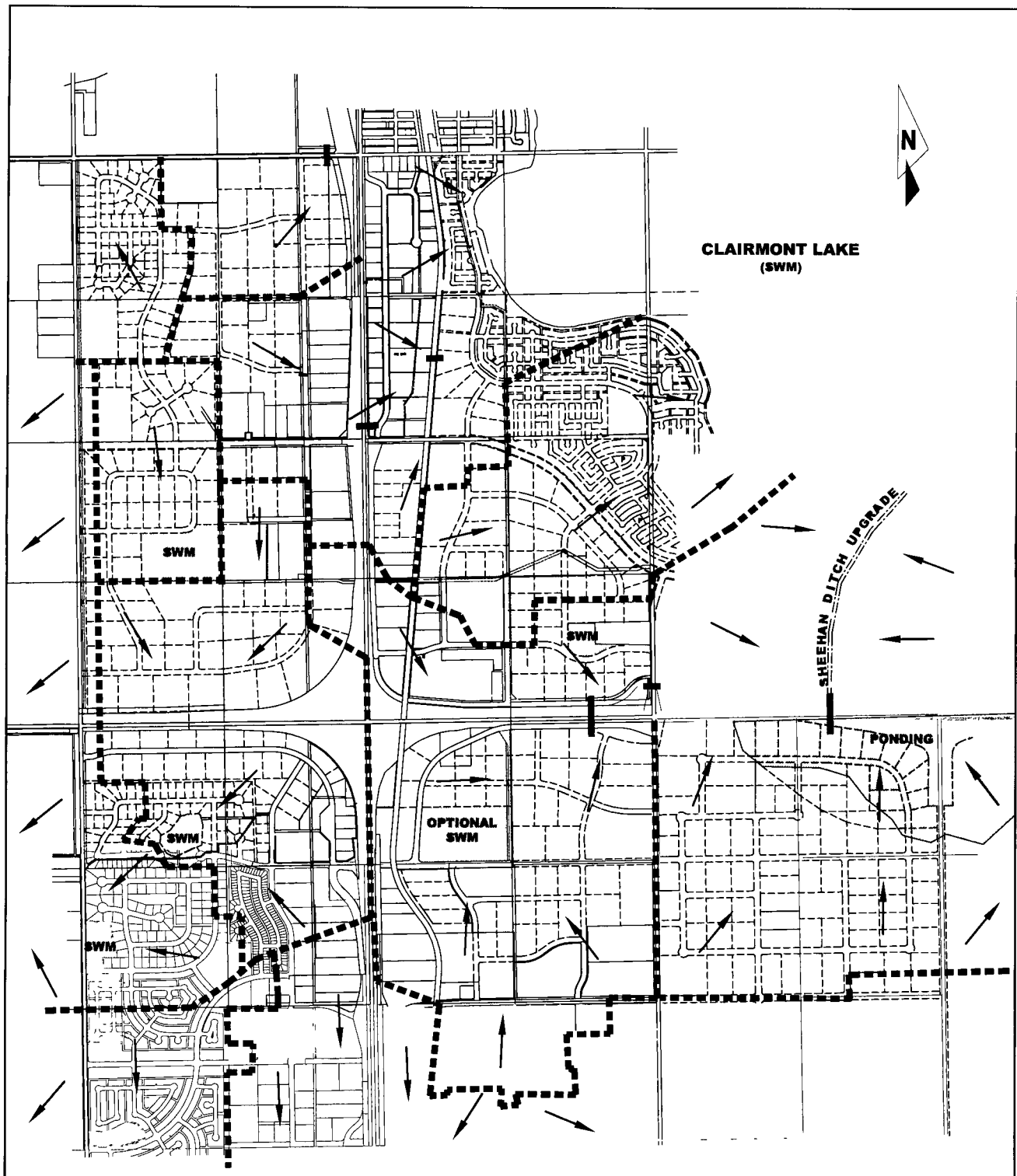


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COUNTY OF GRANDE PRAIRIE NO. 1

MAP 8A - OVERALL STORM WATER PLAN

--- DRAINAGE BOUNDARY
 → DRAINAGE DIRECTION

— REQUIRES UPGRADED
 CULVERT CROSSINGS

SWM

**STORM WATER
 MANAGEMENT
 POND**

- 3.4.4 An additional culvert crossing Highway 43 and one across Range Road 60 may be permitted once development begins to change from a rural to an urban landscape, and a plan for improvements to the Sheehan Ditch drainage system are complete and approved by the County. Until then, no increase to pre-development flows will be permitted across Highway #43. A preliminary estimate indicates that the cost of these culverts is approximately \$134,280. Assessed on a benefiting area of 308.4 ha, a tentative levy of approximately \$412/ha may be applied to developments located within the drainage area defined in Map 8 and includes drainage areas outside the Plan area. A policy or "endeavour to assist" would need to be created to administer this recovery.
- 3.4.5 The floodplain area identified in 3.4.3 acts as a retention area for flows across Highway 43. As a result, it is not necessary to increase highway culvert numbers or sizing. Should development occur in this floodplain area due to the insertion of borrow material, a detailed storm design would be needed to determine the impacts on the Sheehan ditch and the capacity of the highway ditches.
- 3.4.6 Clairmont Lake is to be used as the ultimate retention facility for storm water released from the northern drainage area. This lake suitably handles the increased water outfalls created by intensified development. Models show that urbanized development actually decreases lake levels due to shorter inlet and outlet times. Quality of flow is to be managed by natural filtration through a system of ditches and swales.
- 3.4.7 The County may implement a review process at the time of development permit to ensure businesses wishing to locate within the drainage basin do not impose any undue or unreasonable environmental risk to the area as part of their normal operations. Should there be a suspicion of risk the County will require a site specific, on-site storm water management plan, to minimize any spill related incidents. Based on the nature of the zoning only certain areas will be at elevated risk of this occurring.
- 3.4.8 Detailed engineering design drawings (submitted for subdivision approval) for all storm water conveyance and management systems shall ensure that the 1:100 year storm event does not impact private property, either within the subdivision or on upstream and downstream properties and shall conform to County Design Standards. These plans shall also identify minimum foundation elevations to ensure buildings are protected from flooding in 100 year storm events.
- 3.4.9 Detailed design drawings shall identify major overland flow routes as per County Design Standards and illustrate the 5- and 100-year storm events along those routes.

3.5 Shallow Utilities

- 3.5.1 All shallow utilities (natural gas, power, telephone) are to be extended into the Plan area by the individual franchise holders as required.
- 3.5.2 Shallow utilities may be located outside road rights-of-way in easements registered in the name of the County of Grande Prairie No. 1.

3.6 Lot Grading

- 3.6.1 A grading plan for each subdivision will be prepared by the Developer in accordance with County standards, prior to approval of each subdivision plan within the Area Structure Plan boundary, with the intent that all future building projects conform to the grading plan. The grading plan is intended to ensure that surface drainage from all lots is directed to the roadside ditches and storm retention ponds as provided in Section 3.4 and to ensure that all new construction proceeds in a manner consistent with that intent.
- 3.6.2 Lot grading plans shall be submitted to the County as part of the development permit application.
- 3.6.3 Any change to existing wetlands requires Alberta Environment approval.

4.0 IMPLEMENTATION

4.1 Phasing

The proposed timing of development in the Plan area will be dependent on market conditions. It is intended, however, that development initially occur in the west-central portion of the Plan area as illustrated on Map 9. Subsequent development would then generally proceed northerly and easterly from this point.

4.2 Proposed Zoning

Proposed zoning for the Plan area is identified on Map 10. The industrial areas will be zoned under the Rural Medium Industrial (RM-2), Rural Heavy Industrial (RM-3) and Highway Industrial (RM-4) Districts of the County's Land Use Bylaw. All zoning changes will be made in advance of subdivision approval.

4.3 Subdivision and Development

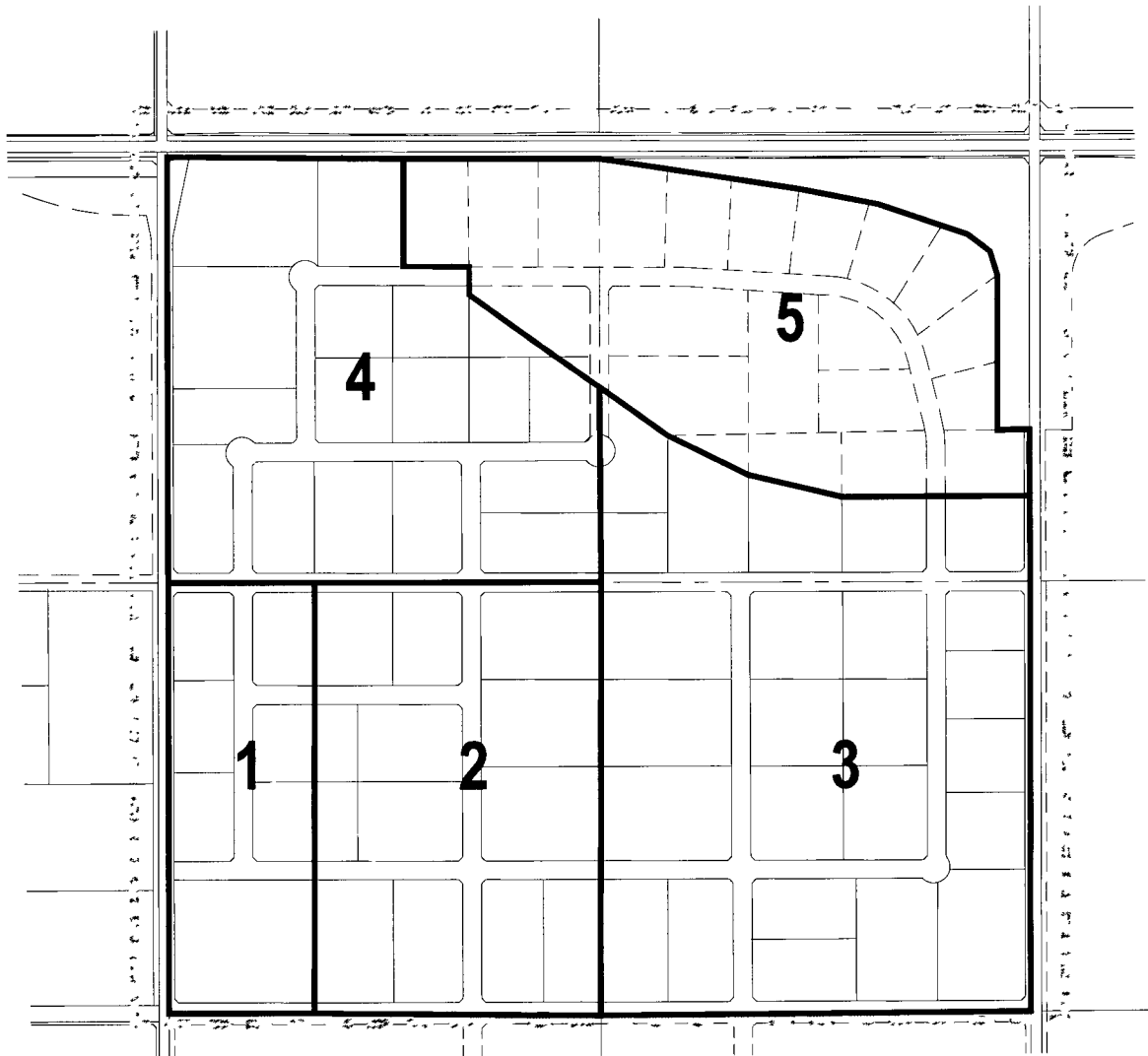
- 4.3.1 All developers shall be required to enter into a development agreement with the County and Aquatera Utilities Inc. as a condition of subdivision approval. The matters to be included in these agreements will include but not be limited to the provision of roads and municipal services, and the payment of off-site levies. The agreements will also deal with issues related to benefiting areas.
- 4.3.2 Detailed engineering drawings and specifications for roads, water, sanitary sewer, and storm drainage shall be prepared by the developer and approved by the County and Aquatera Utilities Inc. prior to subdivision approval on the subject lands³.
- 4.3.3 The lot sizes and yields identified in this Plan are conceptual. Minor variations to the road system and lot layout may be made at the time of subdivision without amendment to this Area Structure Plan.
- 4.3.4 The resubdivision of lots in the Plan area may be supported without amendment to the Plan provided that the resulting lot sizes meet the minimum requirements of the Land Use Bylaw and the capacity of servicing systems is not negatively affected. Where possible, buildings should be sited in a way that allows for the future resubdivision of lots.

4.4 High-Visibility Sites

- 4.4.1 Notwithstanding the requirements contained in the County's Land Use Bylaw⁴, the following design guidelines are to be applied to all developments in the Plan area located along arterial roadways and other high-visibility corridors:

³ Servicing strategies proposed for development on the N½ 6 are also to be submitted to the City of Grande Prairie for review.

⁴ As an alternative to these design guidelines, the County may instead develop a high visibility site overlay for inclusion in the Land Use Bylaw.



CROSSROADS SOUTH PHASE 2 AREA STRUCTURE PLAN

COUNTY OF GRANDE PRAIRIE NO. 1

MAP 9 - PHASING

1 DEVELOPMENT PHASE

--- PLAN BOUNDARY

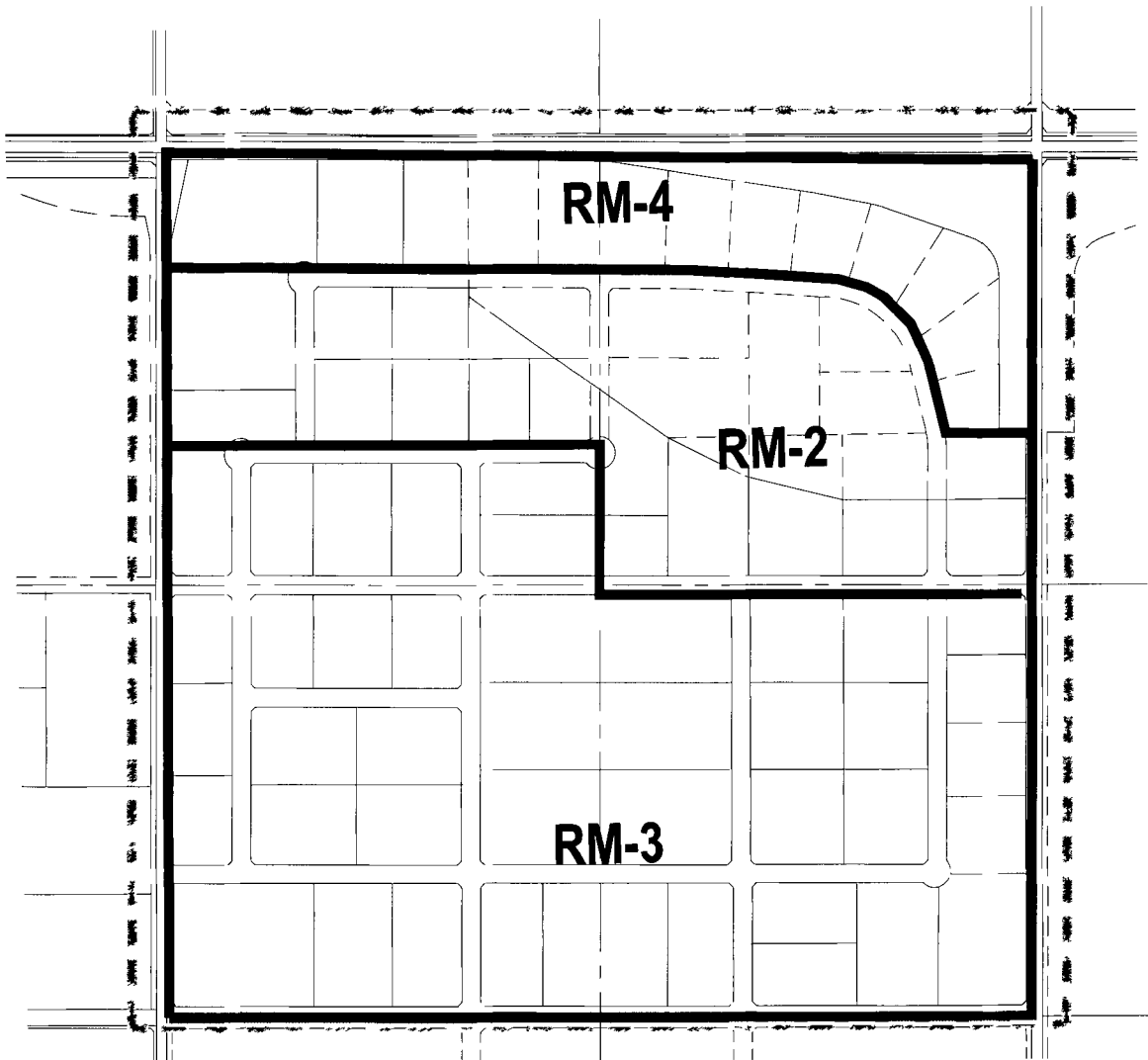


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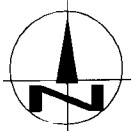
CROSSROADS SOUTH PHASE 2 AREA STRUCTURE PLAN

COUNTY OF GRANDE PRAIRIE NO. 1

MAP 10 - ZONING

- RM-2 RURAL MEDIUM INDUSTRIAL**
- RM-3 RURAL HEAVY INDUSTRIAL**
- RM-4 HIGHWAY INDUSTRIAL**

--- PLAN BOUNDARY



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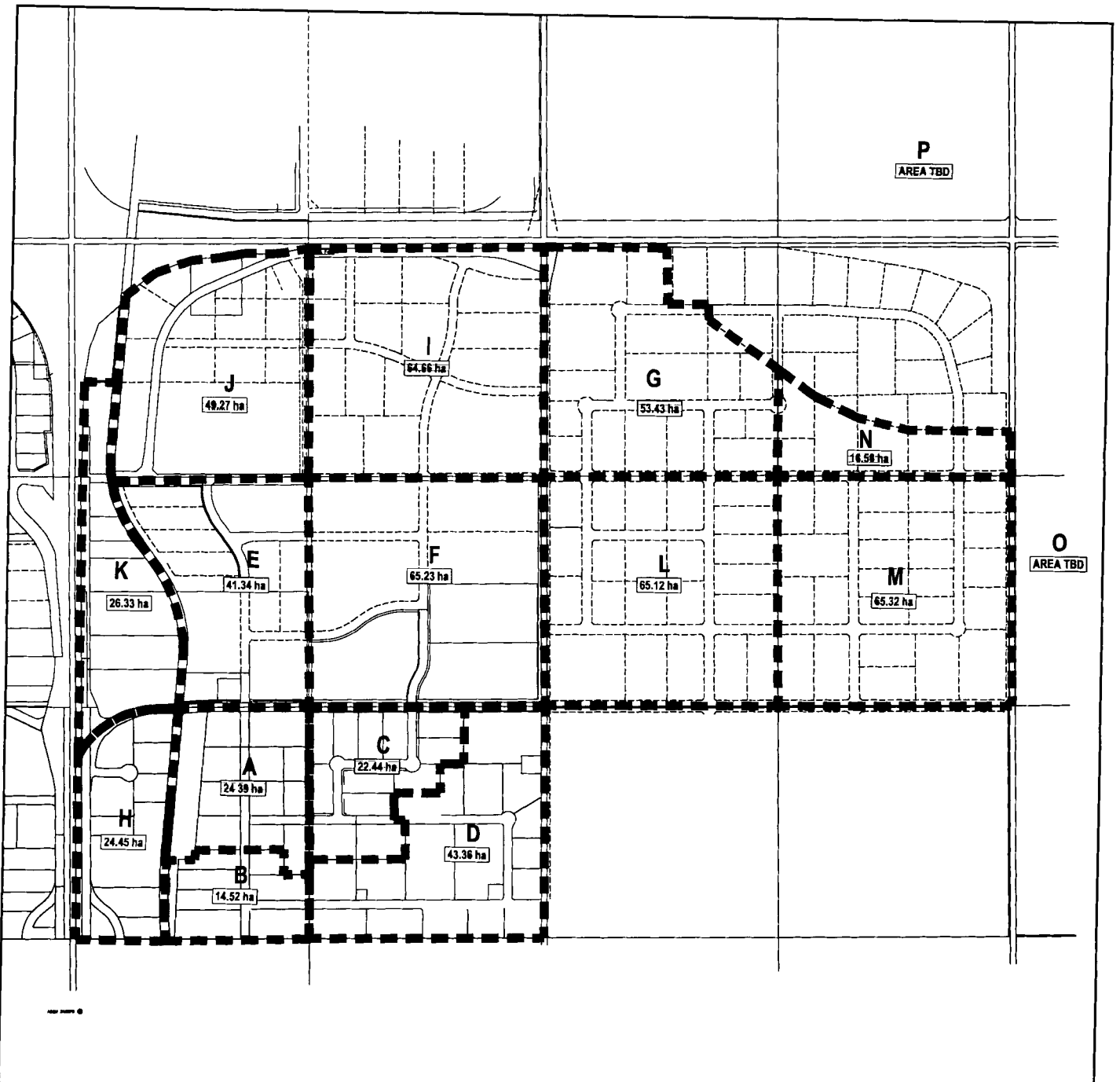
1. That portion of any lot abutting a major roadway identified as a high-visibility corridor is to be landscaped to the satisfaction of the County. The landscaped area is to consist of no less than 5% of the area of the subject lot.
2. All development permit applications submitted to the County shall include a landscaping plan in accordance with Section 3.16 of the Land Use Bylaw.
3. Any outdoor storage areas that abut a major roadway shall be fenced and/or screened from view to the satisfaction of the County. Screening may take the form of fencing, berming soft landscaping or a combination of these.
4. All development permit applications submitted to the County shall include building elevation drawings illustrating proposed finishing materials, colours and signage.
5. All principal buildings are to be developed on permanent foundations. In addition no soft-walled structures will be permitted as principal buildings in high-visibility areas, but may be considered for approval as secondary buildings in approved outdoor storage areas.

4.5 Benefiting Areas

- 4.5.1 Where municipal infrastructure is developed that provides a benefit to lands outside of the Plan area, the County will endeavour to assist in collecting a portion of the costs of the infrastructure from the said lands that benefit from the infrastructure at the time the lands that benefit initiate subdivision or development activities. A summary of applicable fees and levies is provided in Table 3, with benefiting areas illustrated in Map 11. Table 3 and Map 11 are included for information purposes only and are subject to change without amendment to this Area Structure Plan.
- 4.5.2 The efforts to collect costs from benefiting areas will expire within 20 years of the initial approval of this plan. Developers who develop in a particular quarter will be responsible for the entire contribution of their costs and costs incurred by other developers that benefit the subject quarter at the time of first subdivision. Costs incurred by the County are to be recovered on a per hectare basis, or other cost recovery mechanisms acceptable to the County.

4.6 Levies

- 4.6.1 All levies applicable in the plan shall be collected at the time of subdivision or development as the case may be in accordance with County policy.
- 4.6.2 In addition to any applicable levies, developers may be required to pay a connection fee to Aquatera Utilities Inc.



CROSSROADS SOUTH PHASE 2 AREA STRUCTURE PLAN COUNTY OF GRANDE PRAIRIE NO. 1

MAP 11 - LEVY OR ENDEAVOR TO ASSIST AREAS



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Table 3 – Levies and Endeavours to Assist

Infrastructure Development	Areas	Rate ⁵
Range Road 60 and Highway 43 culverts	A,C,E,F,I,J,K	\$412/ha
Crossroads lift station upgrade ⁶	A,C,E,F,G,I,J,K,L	\$4,863/ha
Highway 43 Sanitary Crossing	A,C,E,F,G,I,J,K,L	\$585/ha
Four Mile Corner Lift Station Upgrade	H,K	\$5,373/ha
Highway 2 (100 th Street) Sanitary Crossing	H,K	\$3,627/ha
156 th Avenue Road Construction ⁷	E,F,G,I,J,L,M,N	\$615/m
148 th Avenue Road Construction ⁸	A,C,D,E,F,L,M	\$615/m
156 th Avenue Water Main ⁸	E,F,G,I,J,L,M,N	\$125/m
148 th Avenue Water Main ⁸	A,C,D,E,F,L,M	\$125/m
Regional Lift Station – Highway 43 and RR 55	M,N,O,P	TBD
Levies or Secondary Contributions⁹		
Bylaw 2657 – Levy ⁹	All areas	See latest bylaw
Transportation Levy ¹⁰	All areas	See latest bylaw
Aquatera Water Fee ¹¹	All areas	Meter size
Aquatera Sanitary Fee ¹²	B,D	Meter size

⁵ Value in the infrastructure development could change based on actual costs of construction and design implications. Some costs may be up fronted by developers and recovered at a later date.

⁶ This is the equivalent of the Northgate Lift Station levy which is to be used for the Crossroads Lift Station upgrade and force main construction until the Sanitary Master Plan recommends a new rate.

⁷ Water mains and road construction shall be contributed based on a frontage basis and is recoverable once subdivision along that frontage occurs. Contributions from lands south of 148th Avenue would have to be negotiated as these are identified as "City Industrial Reserve" in the Intermunicipal Development Plan.

⁸ Secondary contributions are those costs above what is required to pay for the existing infrastructure but are needed to pay for future upgrades and expansion. These numbers could change after a sanitary master plan is completed.

⁹ Assumes levy will be expanded to include all those lands that will ultimately drain to Clairmont. An adjustment may be necessary to accommodate for the fact that water supply comes from Grande Prairie for lands south of Highway 43. This levy is paid for at the building permit stage.

¹⁰ This levy is charged to collect for regional roads. It shall not apply if regional roads are being constructed by the developer.

¹¹ This fee is a function of meter size and is charged at the building permit stage.