

**TOWN OF CROSSFIELD
OFF-SITE LEVY BYLAW
BYLAW NO. 2023-03**

A BYLAW FOR THE TOWN OF CROSSFIELD, IN THE PROVINCE OF ALBERTA, FOR THE PURPOSE OF ESTABLISHING AN OFF-SITE LEVY FOR LAND THAT IS TO BE SUBDIVIDED OR DEVELOPED WITHIN THE TOWN OF CROSSFIELD.

WHEREAS the *Municipal Government Act*, RSA 2000, c. M-26, as amended or repealed and replaced from time to time, permits a Council to impose a levy known as an Off-Site Levy in respect of land to be developed or subdivided within a municipality's limits, and to authorize an Agreement to be entered into for payment of the levy;

AND WHEREAS the Municipality has engaged in consultation with representatives of the development industry to address and define existing and future infrastructure requirements of the Municipality with respect to circumstances of the Municipality and the benefits of development;

AND WHEREAS the Municipality received advice and a Report respecting existing and future costs for Off-Site Infrastructure which sets out a fair and equitable calculation of Off-Site Levies in accordance with the purpose of the *Municipal Government Act*;

AND WHEREAS Council has advertised its intention to consider the provision of this Bylaw pursuant to the requirements of the *Municipal Government Act*;

NOW THEREFORE the Council of the Town of Crossfield, in the Province of Alberta, duly assembled, hereby enacts as follows:

SECTION 1: TITLE

- 1.1 This Bylaw shall be cited as the Town of Crossfield "Off-Site Levy Bylaw".

SECTION 2: DEFINITIONS

- 2.1 In this Bylaw, words shall have the same meanings as in the *Municipal Government Act* except as otherwise defined below:
- 2.2 The following terms shall have the following meanings in this Bylaw:
- a. "**Bylaw**" means this off-site levy bylaw established by the Municipality;

- b. **"Chief Administrative Officer"** means the Chief Administrative Officer for the Town of Crossfield, regardless of the specific title that may be conferred on that Officer by Council from time to time;
- c. **"Council"** means the Council for the Town of Crossfield;
- d. **"Developable Land"** shall mean all land contained within the Development Region:
 - (i) upon which Development takes place after the date of passing of this Bylaw; or
 - (ii) for which Subdivision approval is obtained after the date of passing of this Bylaw;

excluding all Developed Land;

- e. **"Developed Land"** shall mean land that has been subject to Development or a Subdivision prior to the date of passing of this Bylaw, and in respect of which off-site levies for the same infrastructure have been paid;
- f. **"Development"** means "development" as defined in the *Municipal Government Act*;
- g. **"Development Agreement"** means "development agreement" as referred to in the *Municipal Government Act*, ss. 650 and 655, as amended or repealed and replaced from time to time;
- h. **"Development Region"** includes the area of land within the municipal boundaries of the Municipality identified in Schedule "B", attached;
- i. **"Growth"** shall mean:
 - (i) the creation of new lots through Subdivision; and
 - (ii) the occurrence of Development;
- j. **"Municipal Government Act"** means the Municipal Government Act, R.S.A. 2000, c. M-26, as amended;
- k. **"Municipality"** means the Town of Crossfield in the Province of Alberta;
- l. **"Off-Site Infrastructure"** shall mean those components and projects referred to in the Report, in relation to water supply facilities and infrastructure, wastewater

facilities and infrastructure, roads and connections of roads with provincial highways required for or impacted by a subdivision or development;

- m. "**Off-Site Levy**" means the off-site levy imposed pursuant to this Bylaw under the authority of the *Municipal Government Act*, ; and
- n. "**Report**" means the Town of Crossfield Off-Site Levies Background Document prepared by MPE Engineering Ltd., dated February 28, 2023 attached hereto as Schedule "C"; and
- o. "**Subdivision**" means "subdivision" as defined in the *Municipal Government Act*.

SECTION 3: PURPOSE

- 3.1 The purpose of this Bylaw is to: create off-site levies payable for all or part of the capital cost of new or expanded facilities or land required for or in connection with any new or expanded facilities for:
- (i) the storage, transmission, treatment or supplying of water;
 - (ii) the treatment, movement or disposal of sanitary sewage;
 - (iii) transportation infrastructure required to connect or to improve the connection of municipal roads to provincial highways resulting from a subdivision or development;
 - (iv) roads required for or impacted by a subdivision or development;
- a) authorize agreements to be entered into in respect of the payment of any off-site levies imposed pursuant to this Bylaw; and
 - b) identify how the amount owing for an Off-Site Levy shall be calculated.

SECTION 4: DELEGATION OF AUTHORITY

- 4.1 Council hereby delegates to the Chief Administrative Officer of the Municipality the duty and authority to enforce and administer this Bylaw, which includes, but is not limited to, the authority to enter into Development Agreements on behalf of the Municipality and to defer or waive collection of the Off-Site Levy imposed pursuant to this Bylaw.

SECTION 5: IMPOSITION OF LEVY

- 5.1 There is hereby imposed a levy which shall be known as an Off-Site Levy in respect of all Developable Land.
- 5.2 The amount of the Off-Site Levy imposed is as calculated in Schedule "A".
- 5.3 Unless otherwise agreed upon, the Off-Site Levy is due and payable prior to the endorsement of Subdivision approval for the Developable Land or upon the issuance of a Development permit in relation to the Developable Land.
- 5.4 Any payment of an Off-Site Levy pursuant to this Bylaw that is not paid when due and owing shall be a debt owing to the Municipality and shall be subject to interest as determined by the Municipality's policies. This provision does not affect any other remedy available to the Municipality for late or non-payment of an Off-Site Levy.
- 5.5 In addition, the Municipality may refuse to endorse a plan of Subdivision or issue a development permit in relation to Developable Lands within the Development Region until the Off-Site Levy has been paid in full.

SECTION 6: OBJECTS, PRINCIPLES AND CRITERIA

- 6.1 The objects, principles and criteria of the Off-Site Levy shall be in accordance with the following:
 - a. This Bylaw creates an Off-Site Levy to provide funds for the construction of Off-Site Infrastructure required for Growth.
 - b. Development in new growth areas through Off-Site Levies will provide the capital that will fund the infrastructure required for Growth. Those who benefit from the infrastructure, which is defined by all Developable Land in the Development Region, should share proportionally, on a per hectare basis, in related costs.
 - c. Provision of Off-Site Infrastructure by developers of Developable Land will not create an advantage or penalty due to the time or location of development.
 - d. Off-Site Infrastructure will be provided to maintain sustainable, cost effective and orderly Growth.
 - e. The calculation of the Off-Site Levy should be an open and transparent process.
 - f. All funds collected from the Off-Site Levy will be credited to a separate and distinct, identifiable Off-Site Levy reserve fund account, which may be invested

as per the Municipality's policies until used for the construction of the specified Off-Site Infrastructure.

- g. The Off-Site Levy will help allow the Municipality to recover the cost of infrastructure required for Growth:
 - (i) Using financing strategies that remain sustainable;
 - (ii) Facilitating development by reducing risk on early developers and ensuring future developers share the costs of the facilities from which they benefit; and
 - (iii) Promoting cost effective and orderly development.
- h. The Off-Site Levy will help promote orderly development by:
 - (i) Providing Off-Site Infrastructure, once the appropriate planning is in place, and when warranted in development; and
 - (ii) Providing infrastructure for contiguous development.
- i. The Off-Site Levy will help create a transparent process by:
 - (i) Providing opportunity for affected landowners and developers to provide input into the levy, its definition and administration, through good faith consultation and at the earliest opportunity;
 - (ii) Conforming with the *Municipal Government Act* and the *Off-Site Levies Regulation, Alta Reg 187/2017*, as amended or repealed from time to time; and
 - (iii) Providing annual reports on the Off-Site Levy.
- j. The Off-Site Levy will help create a clear process for calculation of the rate, levies and credits by:
 - (i) Creating consistent and predictable levies and credits;
 - (ii) Creating predictable and stable levies over time; and
 - (iii) Documenting a process for establishing the levy rate.

SECTION 7: DEVELOPMENT AGREEMENTS

- 7.1 The entering into a Development Agreement with respect to, amongst other things, the collection of an Off-Site Levy is hereby authorized.
- 7.2 Council may from time to time adopt policies or guidelines for the assistance and direction of the Chief Administrative Officer in determining which Development and Subdivision applications shall require a Development Agreement or where to defer or waive collection of the Off-Site Levy imposed pursuant to this Bylaw.

SECTION 8: ACCOUNTING

- 8.1 All funds collected pursuant to this Bylaw shall be accounted for in an Off-Site Levy reserve fund account and expended only as permitted under the provisions of the *Municipal Government Act*.
- 8.2 There shall be a separate Off-Site Levy reserve fund account for the Off-Site Levies for water infrastructure, sanitary sewer infrastructure, roads and infrastructure required for the interconnection of roads with provincial highways.

SECTION 9: REVIEW OF LEVY RATES

- 9.1 The Municipality shall review the calculation of the Off-Site Levy once every three years, with the first review commencing in 2026, and shall amend the Bylaw to update the Off-Site Levy rates accordingly.
- 9.2 Commencing in 2023, in each year that the Municipality does not conduct a review, the Municipality may adjust the amount of the Off-Site Levy rate on December 31 of the non-review year by the annual percentage change of the Consumer Price Index for the 12-month period from November of the year before the non-review year to November of the non-review year if the Consumer Price Index is positive. If the percentage change is zero or negative, the Off-Site Levy rate shall not change. The change will be effective commencing January 1st of the year following the non-review year.

SECTION 10: ANNUAL REPORT

- 10.1 The Chief Administrative Officer shall report annually to Council regarding the Off-Site Levy in a format acceptable to Council. The annual report shall include the following:

- a. the details of all Off-Site Levies received by each contributor for each type of Off-Site Infrastructure within each benefitting area,
- b. the uses for each type of Off-Site Infrastructure within each benefitting area for each capital project, and
- c. the amount of each category of Off-Site Levy collected.

10.2 The annual report shall be made publicly available

SECTION 11: TRANSITION

11.1 This Bylaw applies to:

- a. any Subdivision where the date of subdivision endorsement occurs on or after the date this Bylaw comes into force; and
- b. any Development where the date of issuance of the development permit occurs on or after the date this Bylaw comes into force.

SECTION 12: GENERAL

12.0 Nothing in this Bylaw precludes the Municipality from:

- a. imposing further or different levies, duly enacted by bylaw, on any portion of the Developable Lands in respect of which the Municipality has not collected Off-Site Levies;
- b. deferring collection of the Off-Site Levy for the stated objects of this Bylaw, on any portion of Developable Lands in respect of which the Municipality imposed Off-Site Levies, including requiring security for payment of such deferred Off-Site levies; or
- c. reducing or forgiving payment of the Off-Site Levies required pursuant to this Bylaw, or otherwise providing for credits for other Off-Site Infrastructure constructed by a developer in calculating and/or collecting the Off-Site Levies that become payable pursuant to this Bylaw.

12.1 The Schedules to this Bylaw may be amended from time to time by Council.

12.2 Subject to the transition provision of this Bylaw, this Bylaw shall repeal Bylaw #2010-03 and all amendments thereto upon the passing of this Bylaw.

12.3 In the event that any provision of this Bylaw be declared invalid or void by any Court having competent jurisdiction, then such invalid or void provision shall be severed from the Bylaw and the remaining provisions of the Bylaw shall be maintained and deemed valid.

12.4 This Bylaw shall take effect and come into force effective after final reading and signature thereof by the Chief Elected Official and Chief Administrative Officer, or their authorized delegates.


Given first reading this 7 day of March, 2023

Given second reading this 4 day of April, 2023

Given third and final reading this 4 day of April, 2023



Mayor Harris



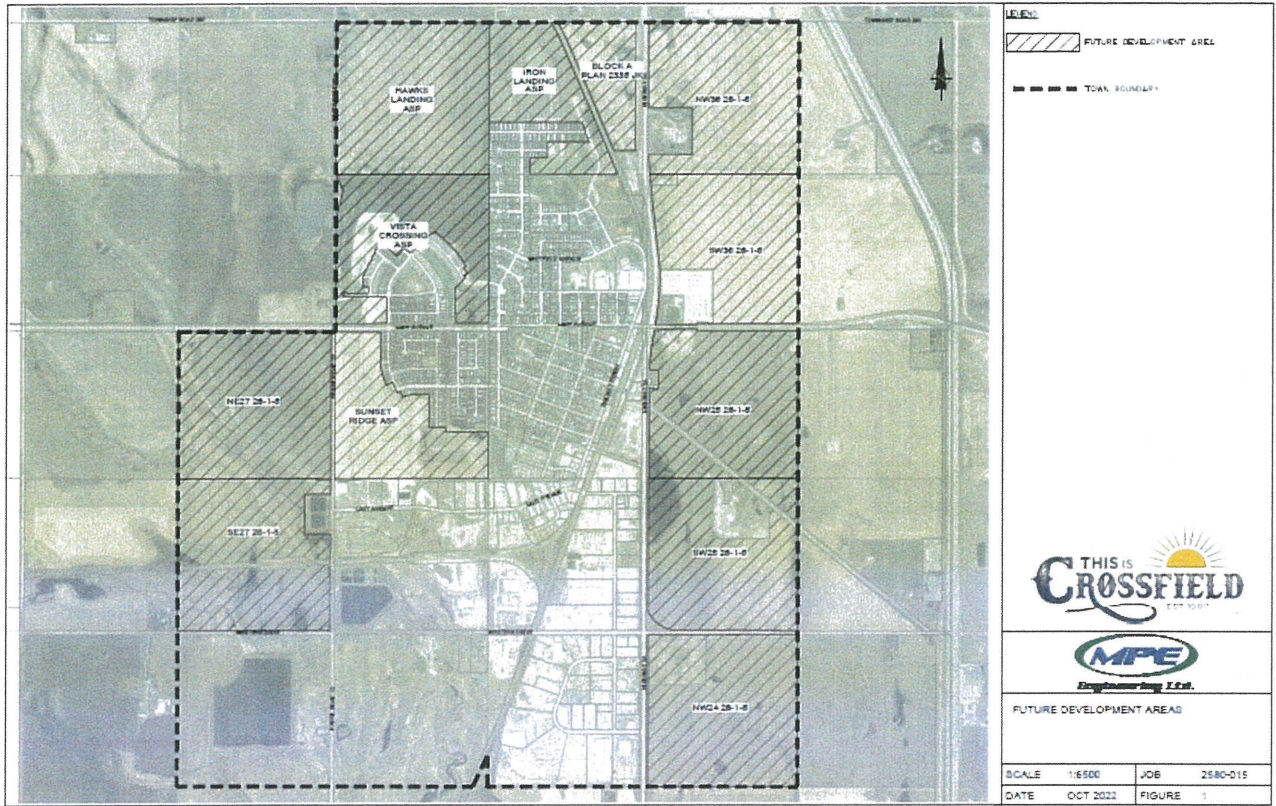
Chief Administrative Officer
Sue Keenan

Approved: April 4, 2023
Administrative Revision: March 1, 2026

SCHEDULE "A" – OFF-SITE LEVY SUMMARY

Development	Developable Acres	Developable Hectares	Common (\$/ha)	Site Specific (\$/ha)	Total (\$/ha)
NW24 28-1-5	157.69	63.82	\$40,363.32	\$22,681.29	\$63,044.61
SW25 28-1-5	133.79	54.14	\$40,363.32	\$40,996.63	\$81,359.95
NW25 28-1-5	146.90	59.45	\$40,363.32	\$40,996.63	\$81,359.95
SW36 28-1-5	126.75	51.29	\$40,363.32	\$11,517.52	\$51,880.85
NW36 28-1-5	143.67	58.14	\$40,363.32	\$11,517.52	\$51,880.85
Block A Plan 2335JK	43.25	17.50	\$40,363.32	\$11,517.52	\$51,880.85
Iron Landing ASP	74.87	30.30	\$40,363.32	\$44,404.90	\$84,768.22
Hawks Landing ASP	158.86	64.29	\$40,363.32	\$44,404.90	\$84,768.22
Vista Crossing ASP	109.01	44.11	\$40,363.32	\$11,517.52	\$51,880.85
Sunset Ridge ASP	95.18	38.52	\$40,363.32	\$11,517.52	\$51,880.85
NE27 28-1-5	155.16	62.79	\$40,363.32	\$11,517.52	\$51,880.85
SE27 28-1-5	144.99	58.67	\$40,363.32	\$11,517.52	\$51,880.85
Total	1,490.13	603.03			

SCHEDULE "B" – MAP OF DEVELOPMENT REGION



**SCHEDULE "C" – TOWN OF CROSSFIELD OFF-SITE LEVIES
BACKGROUND DOCUMENT (2023)**



a division of Englobe

Final Report for:

TOWN OF CROSSFIELD

OFF-SITE LEVIES BACKGROUND DOCUMENT

Date: December 15, 2023
Project Number: 2580-015-00

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www.mpe.ca

CORPORATE AUTHORIZATION

This report has been prepared by MPE a division of Englobe under authorization of the Town of Crossfield. The material in this report represents the best judgment of MPE a division of Englobe given the available information. Any use that a third party makes of this report, or reliance on or decisions made based upon it is the responsibility of the third party. MPE a division of Englobe accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions taken based upon this report.

Should any questions arise regarding content of this report, please contact the undersigned.

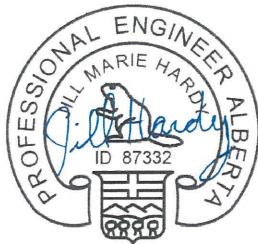
MPE a division of Englobe

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2023-12-15

Jill Hardy, P.Eng.



Professional Seal

Permit to Practice

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1.0 INTRODUCTION

1.1 Overview

The Town of Crossfield (Town) retained MPE a division of Englobe (MPE) to develop an off-site levy. An Off-Site Levy Bylaw will allow for new developments to be charged an appropriate rate for the cost of infrastructure that is not located directly on their development site or is oversized for future development and allows the Town to recover the costs associated with impacts of development for infrastructure.

The existing Town of Crossfield Off-site Levy Bylaw No. 2010-03 is currently in effect until a new off-site levy bylaw is passed by Council or is withdrawn completely. This report serves to provide the background documentation to establish a new bylaw to be passed by Council.

1.2 Legislation

Off-site Levies are governed through the Municipal Government Act (MGA), RSA 2000, Chapter M-26, Section 648 as follows:

- “(1.1) For the purposes referred to in subsections (2) and (2.1), a council may by bylaw*
- (a) Provide for the imposition and payment of a levy in respect of land that is to be developed or subdivided, and*
 - (b) Authorize an agreement to be entered into in respect of the payment of the levy.”*

“(2) An off-site levy may be used only to pay for all or part of the capital cost of any or all of the following:

 - (a) New or expanded facilities for the storage, transmission, treatment or supplying of water;*
 - (b) New or expanded facilities for the treatment, movement or disposal of sanitary sewage;*
 - (c) New or expanded storm sewer drainage facilities;*
 - (c.1) new or expanded roads required for or impacted by a subdivision or development;*
 - (c.2) subject to the regulations, new or expanded transportation infrastructure required to connect, or to improve the connection of, municipal roads to provincial highways resulting from a subdivision or development;*
 - (d) land required for or in connection with any facilities described in clauses (a) to (c.2)*

(2.1) In addition to the capital cost of facilities described in subsection (2), an off-site levy may be used to pay for all or part of the capital cost for any of the following purposes, including the cost of any related appurtenances and any land required for or in connection with the purpose:

 - (a) new or expanded community recreation facilities;*
 - (b) new or expanded fire hall facilities;*
 - (c) new or expanded police station facilities;*
 - (d) new or expanded libraries.”*

1.3 Guiding Principals

The governing legislation summarized within the Alberta *Municipal Government Act* and the *Off-Site Levies Regulation (187/2017)* provides a number of requirements, principals and criteria in the determination of levy rates. These are as follows:

- Description of the specific infrastructure to be funded by the levy.
- Description of the areas benefitting from the infrastructure and how those areas have been determined.
- Reference to, and publication of, the supporting studies, technical data and analysis.
- Estimated cost of the infrastructure and methodology used in its calculation.

In addition to the preceding, compliance with the Town of Crossfield strategic objectives and community goals, transparency in public consultation, and the balance of financial stability and competitive considerations to encourage long-term growth were incorporated as guiding principles.

1.4 Town Levies

For the purposes of the Town of Crossfield, a review of the Water, Wastewater and Transportation infrastructure was completed with regards to the new developments. Documentation to support recreation facilities is not readily available at this time to justify an off-site levy; however, may be reviewed and implemented in future off-site levy bylaws.

Infrastructure projects considered for inclusion in the levy calculations were identified in the following reports:

- The Town of Crossfield *Transportation Master Plan* (June 2020).
- The Town of Crossfield *Master Sanitary Servicing Study* (February 2021).
- The Town of Crossfield *Master Water Servicing Study* (July 2020).

The infrastructure projects throughout the Town have been reviewed to determine the application of:

- **“site-specific” levies:** referring to a component of infrastructure that is specific to a particular subdivision and only benefits a certain development(s).
- **“common” levies:** referring to a component of infrastructure that benefits the entire community, both existing and new development, resulting in a portion of the costs to be applied between the benefitting development and the Town as it benefits the existing community.

New developments would be subject to all common levies, whereas site-specific levies would only be applied to infrastructure that supports the new development.

2.0 TOWN DEVELOPMENT

2.1 Population Projections

The Town of Crossfield was initially incorporated as a Village in 1907 and subsequently incorporated as a Town in 1980. Population trends were reviewed in the Municipal Development Plan (2018) and in the supporting Master planning documents with a view towards a low (2%), mid (4%) and high rate of growth (6%). The 2021 federal census indicates a population of 3,599, while the provincial statistics indicate a 2021 population of 3,557 and an average year-over-year growth of 3.5%.

For the purposes of the Off-site Levy, projections were reviewed over a 30-year period up to 2052. Based on the realized year-over-year growth rate, the population projections are summarized in **Table 1**.

Table 1: 30-year Population Growth

Year	Population	Growth	Population Growth
2021	3,557		
2022	3,682	3.5%	125
2027	4,375	3.5%	693
2032	5,199	3.5%	824
2037	6,176	3.5%	977
2042	7,338	3.5%	1,162
2047	8,717	3.5%	1,379
2052	10,356	3.5%	1,639
Total			6,799

2.2 Developable Areas

In review of the land within the Town boundaries, 603.03 hectares of land is available for urban development. Though the majority of recent development has focused within northern areas of the Town, areas to the east of the Town have also been identified for potential development. These areas of potential development do not preclude a development elsewhere.

The individual development gross areas identified in **Table 2** are illustrated on **Figure 1** in **Appendix A**. The individual areas identified in **Table 2** are inclusive of any subdivision within the area noted.

Future development is calculated on a gross area basis. Environmental Reserves (ER) identified throughout the Town have not been included in the development areas noted in **Table 2**. For new developments, it is anticipated that future ERs will be designated; however, the exact areas are unknown at this time. Prior to development, an Environmental Impact Assessment Study is recommended to be completed to identify any ERs on the proposed development property. This study should be completed as part of the Land Use designation stage.

Table 2: Development Areas

Development	Acres	Hectares
NW24 28-1-5	157.69	63.82
SW25 28-1-5	133.79	54.14
NW25 28-1-5	146.90	59.45
SW36 28-1-5	126.75	51.29
NW36 28-1-5	143.67	58.14
Block A Plan 2335JK	43.25	17.50
Iron Landing ASP	74.87	30.30
Hawks Landing ASP	158.86	64.29
Vista Crossing ASP	109.01	44.11
Sunset Ridge ASP	95.18	38.52
NE27 28-1-5	155.16	62.79
SE27 28-1-5	144.99	58.67
Total	1,490.12	603.02

3.0 CALCULATION OF LEVIES

Levies are generally determined by dividing the capital cost of a particular project by a benefitting area. The capital costs may be associated with future projects that will be needed for advancing development within the Town.

In determining future projects, several documents have been used to identify those projects that benefit future development including various Area Structure Plans (ASPs) and Master Planning Documents. Project costs as of 2020 were identified within each of the Master Planning Documents and have been adjusted to account for a consistent 20% contingency and 15% engineering rate to account for fluctuations in costs.

No grant funding has been assumed for any future projects; however, an inflation rate of 3% was assumed calculated from the 2020 cost estimate to the year of project initiation. Project costs have been calculated excluding GST. Where grant funding is obtained, the Town will determine the allocation that may be applied to a benefitting project depending on the grant obtained. These rates should be reviewed regularly to account for actual project costs and interest rates.

Levies are calculated via the following methodology:

In the case of 'Common Levies', the population required to trigger the need for the project is assessed from the master planning documents and compared to the existing population. This calculation allows the determination of the relevant percentages of cost sharing.

$$100 - \left(\frac{\text{Current Population}}{\text{Trigger Population}} \right) * 100 = \% \text{ Cost Due to Development}$$

The resultant percentage is then applied to total project cost to determine that portion incurred by future development. In the case of 'Site-Specific' levies, this percentage is 100%.

Upon determination of the project cost, the year that the project is estimated to be required is estimated based on the population growth as stated in **Section 2.1**. The cost is then projected to the estimated date with the interest rate stated above.

$$(\% \text{ Cost Due to Development} * \text{Project Grand Total}) * (1 + \text{Int \%} * \text{Period}) = \text{Projected Cost}$$

Finally, the levy value calculated above is divided over the total affected area.

$$\left(\frac{\text{Projected Cost}}{\text{Area Affected}} \right) = \frac{\text{Levy value}}{\text{ha}}$$

4.0 TRANSPORTATION LEVIES

The Town of Crossfield *Transportation Master Plan (2020)* identified several needs based on population growth. Three population targets were identified triggering future growth:

- 7,000 – Accounting for 52% growth by 2041.
- 10,000 – Accounting for 63% growth by 2051.
- 15,800 – Beyond the time scope of this Levy Update.

The individual transportation capital projects are discussed in the following sections and are illustrated on **Figure 2** in *Appendix A*.

4.1 Project: Intersection of Limit Avenue and Highway 2A

Description and Cost

The intersection of Limit Avenue and Highway 2A was identified as a recommended capital project within the Town of Crossfield *Transportation Master Plan (2020)*. While this improvement is not necessary at the current population, it will be required at an estimated population of 7,000 which corresponds to a date of 2041 at the assumed growth rate. The improvement includes signalization with railway pre-emption and turn bays on all approaches. As this project includes elements of provincial highways, Alberta Transportation and Economic Corridors was included in the public consultation phase of the adoption of the *Transportation Master Plan (2020)* in order to satisfy legislative requirements.

2020 Grand Subtotal	2020 Grand Total	% Cost Due to Development	OSL Eligible	Projected Levy Cost @ 3% Interest
\$1,654,400.00	\$2,233,440.00	47%	\$1,058,650.56	\$1,856,350.17

Benefiting Areas

The identified improvement is largely driven by future development and benefits the entire Town. This is a levy common to all future developable areas and carries residual benefit for the existing Town.

4.2 Project: Limit Avenue Corridor (Phase 1)

Description and Cost

The Twinning of Limit Avenue between Railway Street and Highway 2A is identified as a recommended capital project within the Town of Crossfield *Transportation Master Plan (2020)* once the population is estimated at 10,000. This corresponds to the year 2051 at the assumed population growth rate.

2020 Grand Subtotal	2020 Grand Total	% Cost Due to Development	OSL Eligible	Projected Levy Cost @ 3% Interest
\$224,900.00	\$303,615.00	63%	\$191,823.96	\$438,879.34

Benefiting Areas

The identified improvement is largely driven by future development and benefits the entire Town. This is a levy common to all future developable areas and carries residual benefit for the existing Town.

4.3 Project: Ring Road (Western Drive)**Description and Cost**

The 2020 Town of Crossfield *Transportation Master Plan* recommends the construction of approximately 1.6 km Arterial Ring Road interfacing Highway 2A and upgrading Western Drive. The population horizon identified in the Master Plan is an estimated 10,000 persons which corresponds to the year 2051 at the assumed population growth rate. Portions of the ring road fall beyond the planning horizon of this study, however a unit rate was given within the *Transportation Master Plan* detailing the cost per km which was applied to this project length of 1.6 km.

2020 Grand Subtotal	2020 Grand Total	% Cost Due to Development	OSL Eligible	Projected Levy Cost @ 3% Interest
\$3,598,400.00	\$4,857,840.00	63%	\$3,060,439.20	\$7,022,069.44

Benefiting Areas

The identified improvement is largely driven by future development and benefits the entire Town. This is a levy common to all future developable areas and carries residual benefit for the existing Town.

4.4 Project: Ring Road (Range Road 12)**Description and Cost**

The 2020 Town of Crossfield *Transportation Master Plan* recommends the construction of approximately 2.4 km Arterial Ring Road, a portion of which would upgrade Range Road 12. The population horizon identified in the Master Plan is an estimated 10,000 persons which corresponds to the year 2051 at the assumed population growth rate. Portions of the ring road fall beyond the planning horizon of this study, however a unit rate was given within the *Transportation Master Plan* detailing the cost per km which was applied to this project length of 2.4 km.

2020 Grand Subtotal	2020 Grand Total	% Cost Due to Development	OSL Eligible	Projected Levy Cost @ 3% Interest
\$5,485,110.84	\$7,404,899.63	63%	\$4,665,086.77	\$10,703,876.50

Benefiting Areas

The identified improvement is largely driven by future development and benefits the entire Town. This is a levy common to all future developable areas and carries residual benefit for the existing Town.

4.5 Project: Township Road 290 at CP Railway

Description and Cost

There are a number of at-grade railway crossing upgrades identified in the Town of Crossfield *Transportation Master Plan (2020)*, with the Township Road 290 Crossing identified as highest priority. The population horizon identified in the Master Plan is an estimated 10,000 persons which corresponds to the year 2051 at the assumed population growth rate.

2020 Grand Subtotal	2020 Grand Total	% Cost Due to Development	OSL Eligible	Projected Levy Cost @ 3% Interest
\$317,250.00	\$428,287.50	63%	\$269,821.13	\$619,095.02

Benefiting Areas

The identified improvement is largely driven by future development and benefits the entire Town. This is a levy common to all future developable areas and carries residual benefit for the existing Town.

Table 3: Transportation Levy Summary

Development	Developable Acres	Developable Hectares	Common (\$/ha)	Site-Specific (\$/ha)	Total (\$/ha)
NW24 28-1-5	157.69	63.82	\$34,227.40	--	\$34,227.40
SW25 28-1-5	133.79	54.14	\$34,227.40	--	\$34,227.40
NW25 28-1-5	146.90	59.45	\$34,227.40	--	\$34,227.40
SW36 28-1-5	126.75	51.29	\$34,227.40	--	\$34,227.40
NW36 28-1-5	143.67	58.14	\$34,227.40	--	\$34,227.40
Block A Plan 2335JK	43.25	17.50	\$34,227.40	--	\$34,227.40
Iron Landing ASP	74.87	30.30	\$34,227.40	--	\$34,227.40
Hawks Landing ASP	158.86	64.29	\$34,227.40	--	\$34,227.40
Vista Crossing ASP	109.01	44.11	\$34,227.40	--	\$34,227.40
Sunset Ridge ASP	95.18	38.52	\$34,227.40	--	\$34,227.40
NE27 28-1-5	155.16	62.79	\$34,227.40	--	\$34,227.40
SE27 28-1-5	144.99	58.67	\$34,227.40	--	\$34,227.40
Total	1,490.13	603.03			

5.0 WASTEWATER LEVIES

The Town of Crossfield collects effluent via a series of gravity pipe and forcemains to the Sanitary Lagoons on the west side of the Town. The Town of Crossfield *Master Sanitary Servicing Study* indicated several projects, as noted below, required to service future development. It should be noted, however, that the report does not address any ongoing issues downstream of the collection network. It is recommended that this levy bylaw be updated following a study of the Town's sanitary treatment network.

This study did not give population horizons that trigger specific improvements; however, it did provide timelines based on probable development of specific areas assuming 6% population growth. To reconcile this projection with the 3% growth assumed in this report, a population was determined for the year suggested within the report and compared to the year at which that population would be expected at 3.5% growth.

The individual wastewater capital projects are discussed in the following sections and are illustrated on **Figure 3** in **Appendix A**.

5.1 Project: Range Road 12 Sanitary Main

Description and Cost

The Town of Crossfield *Sanitary Servicing Study* (2020) identifies a requirement for a 675 mm diameter trunk line in Range Road 12 between Laut Avenue and a tie-in point in Vista Crossing. The trunk accounts for future expansion with tie-ins servicing development to the west and north, as well as future forcemain connections from the northeast. This project is assumed to be completed by 2023 at an estimated population of 3,811.

2020 Grand Subtotal	2020 Grand Total	% Cost Due to Development	OSL Eligible	Projected Levy Cost @ 3% Interest
\$1,997,088.00	\$2,696,068.80	100%	\$2,696,068.80	\$2,946,067.17

Benefiting Areas

The identified improvement is driven by future development within the Vista Crossing ASP, Hawks Landing ASP, Iron Landing ASP, Sunset Ridge ASP, Block A Plan 2335JK, NE ¼ Sec. 27-28-1-5, SE ¼ Sec. 27-28-1-5, SW ¼ Sec. 36-28-1-5, and NW ¼ Sec. 36-28-1-5. This is a levy specific to the noted properties and carries no residual benefit to the existing Town.

5.2 Project: Trunk C4

Description and Cost

The Town of Crossfield *Sanitary Servicing Study* (2020) identifies a requirement for 510 m of 250 mm diameter trunk line directing sewage north along Highway 2A to Western Drive. The study identified this

project as being required in the near term. The project is assumed to be completed by 2025 at an estimated population of 4,084.

2020 Grand Subtotal	2020 Grand Total	% Cost Due to Development	OSL Eligible	Projected Levy Cost @ 3% Interest
\$663,001.16	\$895,051.57	100%	\$895,051.57	\$1,037,610.08

Benefiting Areas

The identified improvement is driven by future development within the NW ¼ Sec. 24-28-1-5. This is a levy specific to the noted property and carries no residual benefit to the existing Town.

5.3 Project: Trunk C1

Description and Cost

The Town of Crossfield *Sanitary Servicing Study* (2020) identifies a requirement for a trunk adjacent to Township Road 290 that ultimately discharges to the existing Iron Landing Lift Station. The trunk consists of 442 m of 200 mm diameter and 1,110 m of 375 mm diameter pipe. The study suggested that this improvement would be required between 2030-2035 at a population growth rate of 6%. At the 3.5% growth rate assumed in this levy, the project is assumed to be necessary in 2045 at an estimated population of 8,137.

2020 Grand Subtotal	2020 Grand Total	% Cost Due to Development	OSL Eligible	Projected Levy Cost @ 3% Interest
\$885,645.90	\$1,195,621.97	100%	\$1,195,621.97	\$1,877,525.16

Benefiting Areas

The identified improvement is driven by future development within the Hawks Landing ASP, Iron Landing ASP and Block A Plan 2335JK. This is a levy specific to the noted properties and carries no residual benefit to the existing Town.

5.4 Project: Trunk C5

Description and Cost

The Town of Crossfield *Sanitary Servicing Study* (2020) identifies a requirement to bypass an existing section of sanitary trunk on Laut Avenue with a section of 525 mm diameter pipe from Railway to Laut Avenue. The study suggested that this improvement would be required between 2030-2035 at a population growth rate of 6%. At the 3.5% growth rate assumed in this levy, the project is assumed to be necessary in 2045 at an estimated population of 8,137.

2020 Grand Subtotal	2020 Grand Total	% Cost Due to Development	OSL Eligible	Projected Levy Cost @ 3% Interest
\$617,950.13	\$834,232.68	100%	\$834,232.68	\$1,746,697.96

Benefiting Areas

The identified improvement is driven by future development within the Hawks Landing ASP, Iron Landing ASP, Block A Plan 2335JK, NW ¼ Sec. 24-28-1-5, SW ¼ Sec. 25-28-1-5 and NW ¼ Sec. 25-28-1-5. This is a levy specific to the noted properties and carries no residual benefit to existing the Town.

5.5 Project: Trunk E1 (Phase 1)

Description and Cost

The Town of Crossfield *Sanitary Servicing Study (2020)* identifies a requirement for a trunk adjacent to Township Road 284A and discharging into Railway Street. This is the first of several phases which service the southeast area of future development within the Town. The improvement consists of 1,620 m of 525 mm and 260 m of 600 mm diameter pipe. The study suggested that this improvement would be required between 2030-2035 at a population growth rate of 6%. At the 3.5% growth rate assumed in this levy, the project is assumed to be necessary in 2045 at an estimated population of 8,137.

2020 Grand Subtotal	2020 Grand Total	% Cost Due to Development	OSL Eligible	Projected Levy Cost @ 3% Interest
\$1,389,453.18	\$1,875,761.79	100%	\$1,875,761.79	\$3,927,428.64

Benefiting Areas

The identified improvement is driven by future development within SW ¼ Sec. 25-28-1-5 and NW ¼ Sec. 25-28-1-5. This is a levy specific to the noted properties and carries no residual benefit to the existing Town.

Table 4: Wastewater Levy Summary

Development	Developable Acres	Developable Hectares	Common (\$/ha)	Site-Specific (\$/ha)	Total (\$/ha)
NW24 28-1-5	157.69	63.82	--	\$22,681.29	\$22,681.29
SW25 28-1-5	133.79	54.14	--	\$40,996.63	\$40,996.63
NW25 28-1-5	146.90	59.45	--	\$40,996.63	\$40,996.63
SW36 28-1-5	126.75	51.29	--	\$6,921.73	\$6,921.73
NW36 28-1-5	143.67	58.14	--	\$6,921.73	\$6,921.73
Block A Plan 2335JK	43.25	17.50	--	\$6,921.73	\$6,921.73
Iron Landing ASP	74.87	30.30	--	\$39,809.10	\$39,809.10
Hawks Landing ASP	158.86	64.29	--	\$39,809.10	\$39,809.10
Vista Crossing ASP	109.01	44.11	--	\$6,921.73	\$6,921.73
Sunset Ridge ASP	95.18	38.52	--	\$6,921.73	\$6,921.73
NE27 28-1-5	155.16	62.79	--	\$6,921.73	\$6,921.73
SE27 28-1-5	144.99	58.67	--	\$6,921.73	\$6,921.73
Total	1,490.13	603.03			

6.0 WATER LEVIES

The water distribution is fed from the treated reservoirs on the west side of the Town which is gravity fed throughout the Town. The Town of Crossfield *Master Water System Study (2009)* and *Master Water Servicing Study (2020)* identified several projects which address both current fire flow concerns within the Town as well as future development. Three population targets were identified triggering future growth:

- 5,189 – Accounting for 31% growth by 2032 at 3.5% growth rate.
- 6,912 – Accounting for 48% growth by 2040 at 3.5% growth rate.
- 11,609 – Accounting for 69% growth by 2055 at 3.5% growth rate.
- 17,666 – Beyond the time scope of this Levy Update.

The individual water capital projects are discussed in the following sections and are illustrated on **Figure 4** in **Appendix A**.

6.1 Project: Range Road 12 Water Main

Description and Cost

The Town of Crossfield *Master Water System Study (2009)* identifies a requirement for a 300 mm diameter trunk line in Range Road 12 between Laut Avenue and a tie-in point in Vista Crossing. The water main accounts for future expansion with tie-ins servicing developments to the west and north. This project is assumed to be completed by 2023 at an estimated population of 3811. An updated cost estimate is provided in **Appendix B**.

2020 Grand Subtotal	2020 Grand Total	% Cost Due to Development	OSL Eligible	Projected Levy Cost @ 3% Interest
\$1,326,000	\$1,790,100.00	100%	\$1,790,100.00	\$1,956,090.60

Benefiting Areas

The identified improvement is driven by future development within the Vista Crossing ASP, Hawks Landing ASP, Iron Landing ASP, Sunset Ridge ASP, Block A Plan 2335JK, NE ¼ Sec. 27-28-1-5, SE ¼ Sec. 27-28-1-5, SW ¼ Sec. 36-28-1-5, and NW ¼ Sec. 36-28-1-5. This is a levy specific to the noted properties and carries no residual benefit to the existing Town.

6.2 Project: Additional Reservoir Cells (Phase 1)

Description and Cost

Fire flow storage is currently adequate according to the Town of Crossfield *Master Servicing Study (2020)*; however, consideration should be given to a reservoir extension allowing for an additional 2,100 m³ storage. A phased approach is suggested by building additional reservoir cells as needed. The study suggested that the first reservoir would be required between 2030-2035 at a population growth rate of 6%. At the 3.5% growth rate assumed in this levy, the project is assumed to be necessary in 2044 with an

estimated population of 7,844. This population accounts for 54% attributed to development at 3.5% growth.

2020 Grand Subtotal	2020 Grand Total	% Cost Due to Development	OSL Eligible	Projected Levy Cost @ 3% Interest
\$2,153,846.15	\$2,907,692.31	54%	\$1,570,153.85	\$3,700,170.39

Benefiting Areas

The identified improvement is largely driven by future development and benefits the entire Town. This is a levy common to all future developable area and carries residual benefit for the existing Town.

Table 5: Water Levy Summary

Development	Developable Acres	Developable Hectares	Common (\$/ha)	Site-Specific (\$/ha)	Total (\$/ha)
NW24 28-1-5	157.69	63.82	\$6,135.93	--	\$6,135.93
SW25 28-1-5	133.79	54.14	\$6,135.93	--	\$6,135.93
NW25 28-1-5	146.90	59.45	\$6,135.93	--	\$6,135.93
SW36 28-1-5	126.75	51.29	\$6,135.93	\$4,595.80	\$10,731.72
NW36 28-1-5	143.67	58.14	\$6,135.93	\$4,595.80	\$10,731.72
Block A Plan 2335JK	43.25	17.50	\$6,135.93	\$4,595.80	\$10,731.72
Iron Landing ASP	74.87	30.30	\$6,135.93	\$4,595.80	\$10,731.72
Hawks Landing ASP	158.86	64.29	\$6,135.93	\$4,595.80	\$10,731.72
Vista Crossing ASP	109.01	44.11	\$6,135.93	\$4,595.80	\$10,731.72
Sunset Ridge ASP	95.18	38.52	\$6,135.93	\$4,595.80	\$10,731.72
NE27 28-1-5	155.16	62.79	\$6,135.93	\$4,595.80	\$10,731.72
SE27 28-1-5	144.99	58.67	\$6,135.93	\$4,595.80	\$10,731.72
Total	1,490.13	603.03			

7.0 SUMMARY

Levies have been determined based on the information provided in this report and are listed in **Table 6**. Off-site levies should be reviewed and updated regularly as stipulated in the MGA and applied according to the bylaw.

Table 6: Levy Summary

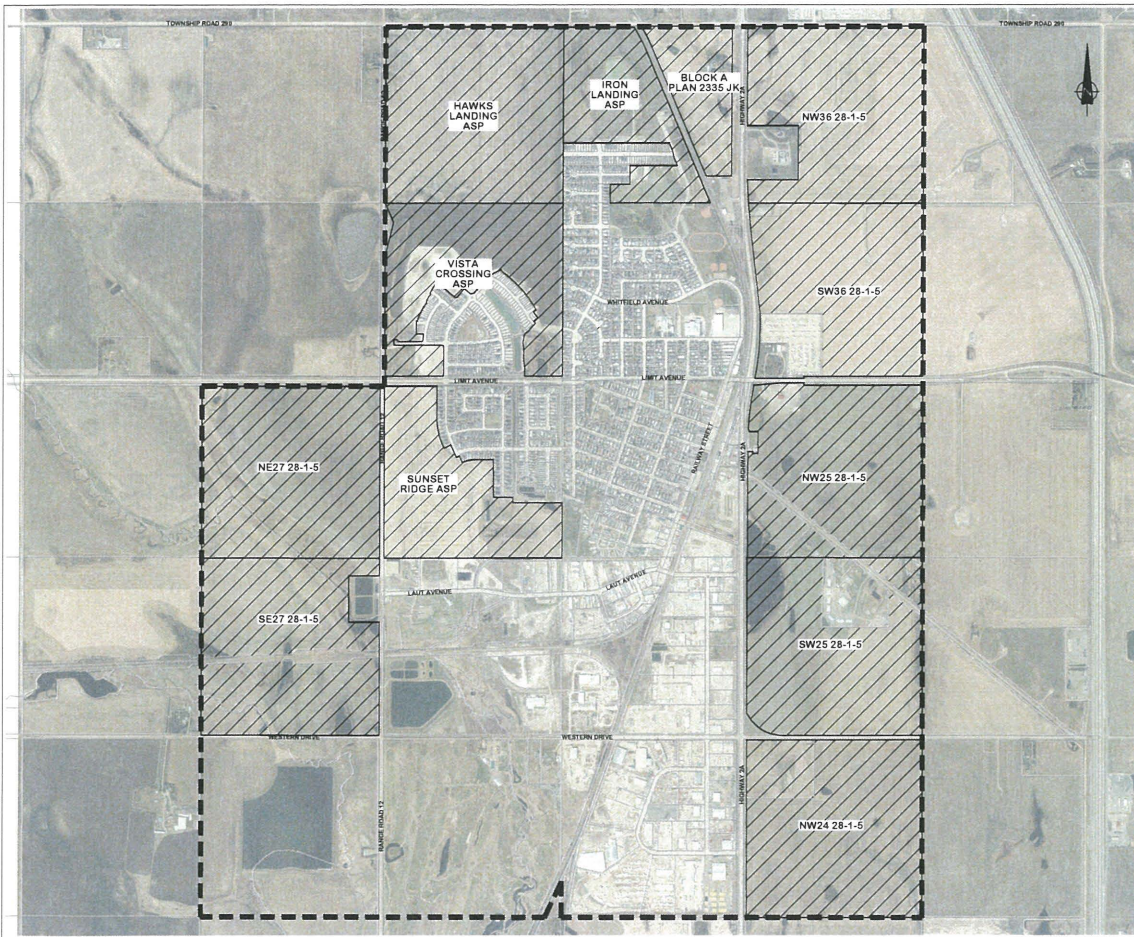
Development	Developable Acres	Developable Hectares	Common (\$/ha)	Site-Specific (\$/ha)	Total (\$/ha)
NW24 28-1-5	157.69	63.82	\$40,363.32	\$22,681.29	\$63,044.61
SW25 28-1-5	133.79	54.14	\$40,363.32	\$40,996.63	\$81,359.95
NW25 28-1-5	146.90	59.45	\$40,363.32	\$40,996.63	\$81,359.95
SW36 28-1-5	126.75	51.29	\$40,363.32	\$11,517.52	\$51,880.85
NW36 28-1-5	143.67	58.14	\$40,363.32	\$11,517.52	\$51,880.85
Block A Plan 2335JK	43.25	17.50	\$40,363.32	\$11,517.52	\$51,880.85
Iron Landing ASP	74.87	30.30	\$40,363.32	\$44,404.90	\$84,768.22
Hawks Landing ASP	158.86	64.29	\$40,363.32	\$44,404.90	\$84,768.22
Vista Crossing ASP	109.01	44.11	\$40,363.32	\$11,517.52	\$51,880.85
Sunset Ridge ASP	95.18	38.52	\$40,363.32	\$11,517.52	\$51,880.85
NE27 28-1-5	155.16	62.79	\$40,363.32	\$11,517.52	\$51,880.85
SE27 28-1-5	144.99	58.67	\$40,363.32	\$11,517.52	\$51,880.85
Total	1,490.13	603.03			

8.0 REFERENCES


1. Town of Crossfield Bylaw 2018-14; Land Use Bylaw, November 2018.
2. Town of Crossfield Bylaw 2016-12; Hawks Landing Area Structure Plan, prepared by Stantec Consulting for Creation Communities Inc., August 2017.
3. Town of Crossfield Bylaw 2011-11; Iron Landing Area Structure Plan, prepared by Longview Planning +Design for LaTerra Ventures Inc, June 2011.
4. Town of Crossfield Bylaw 2007-11; Sunset Ridge Area Structure Plan, prepared by BSEI Municipal Consulting Engineers for Sunset Ridge Developments Ltd, November 2007.
5. Town of Crossfield Bylaw 2015-07; Vista Crossing Area Structure Plan, prepared by b&a Planning Group for Dream Development, June 2015.
6. Town of Crossfield Bylaw 2010-03; Offsite Levy Bylaw, May 2010.
7. Town of Crossfield Bylaw 2019-07; Crossfield East Area Structure Plan, August 2019.
8. Town of Crossfield Bylaw 2013-08; Intermunicipal Development Plan, June 2013.
9. Town of Crossfield Bylaw 2010-10; Municipal Development Plan, September 2010.
10. Town of Crossfield Bylaw 2018-15; Municipal Development Plan, November 2018.
11. Town of Crossfield *Master Sanitary Servicing Study 2020 Update*; prepared by Allnorth Engineering, February 2021.
12. Town of Crossfield *Master Water Servicing Study 2020 Update*; prepared by Allnorth Engineering, June 2020.
13. Town of Crossfield *Master Transportation Plan*; prepared by ISL Engineering, June 2020.
14. Town of Crossfield *Master Water System Study*; prepared by D.A. Watt Consulting, Engineering Services Division, June 2009.


APPENDIX A


Figures




LEGEND

 FUTURE DEVELOPMENT AREA

 TOWN BOUNDARY

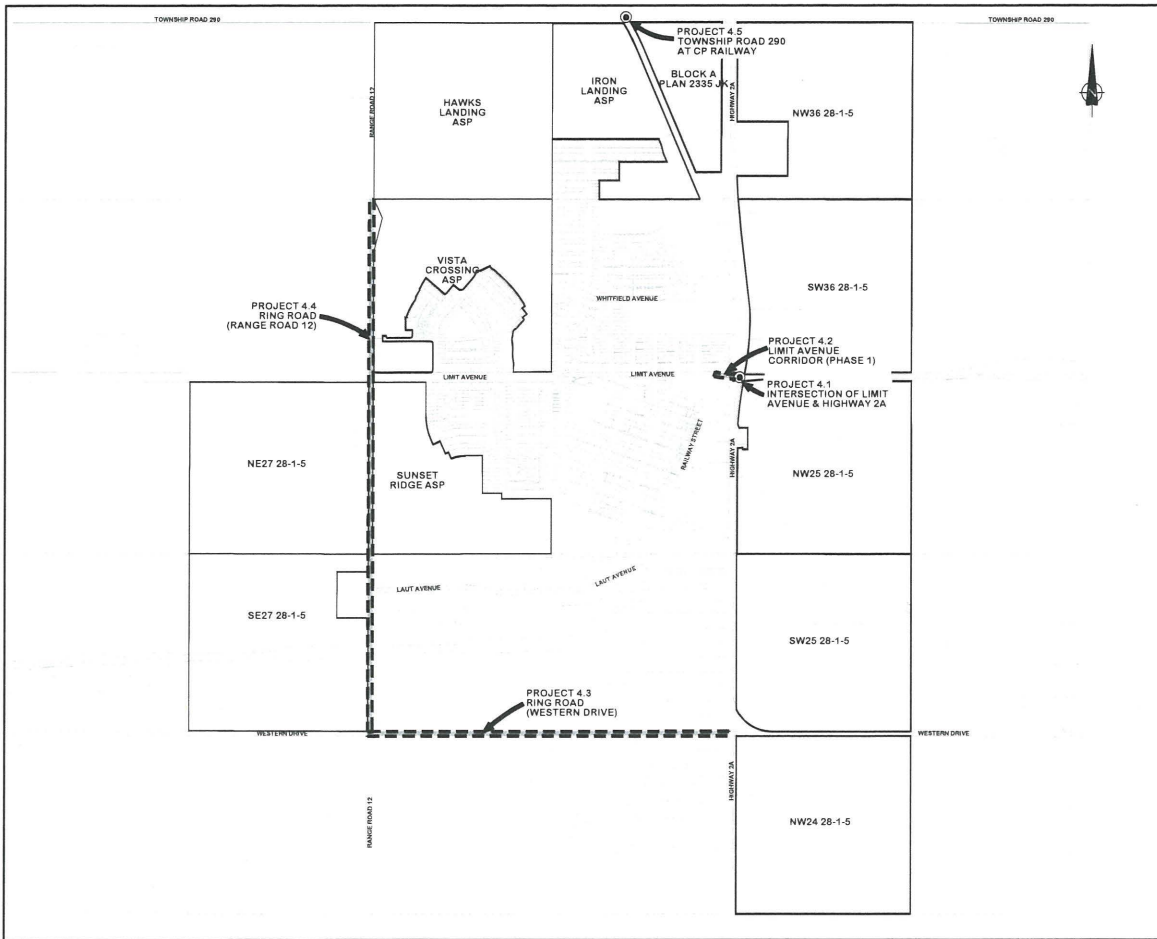





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Engineering Ltd.

FUTURE DEVELOPMENT AREAS

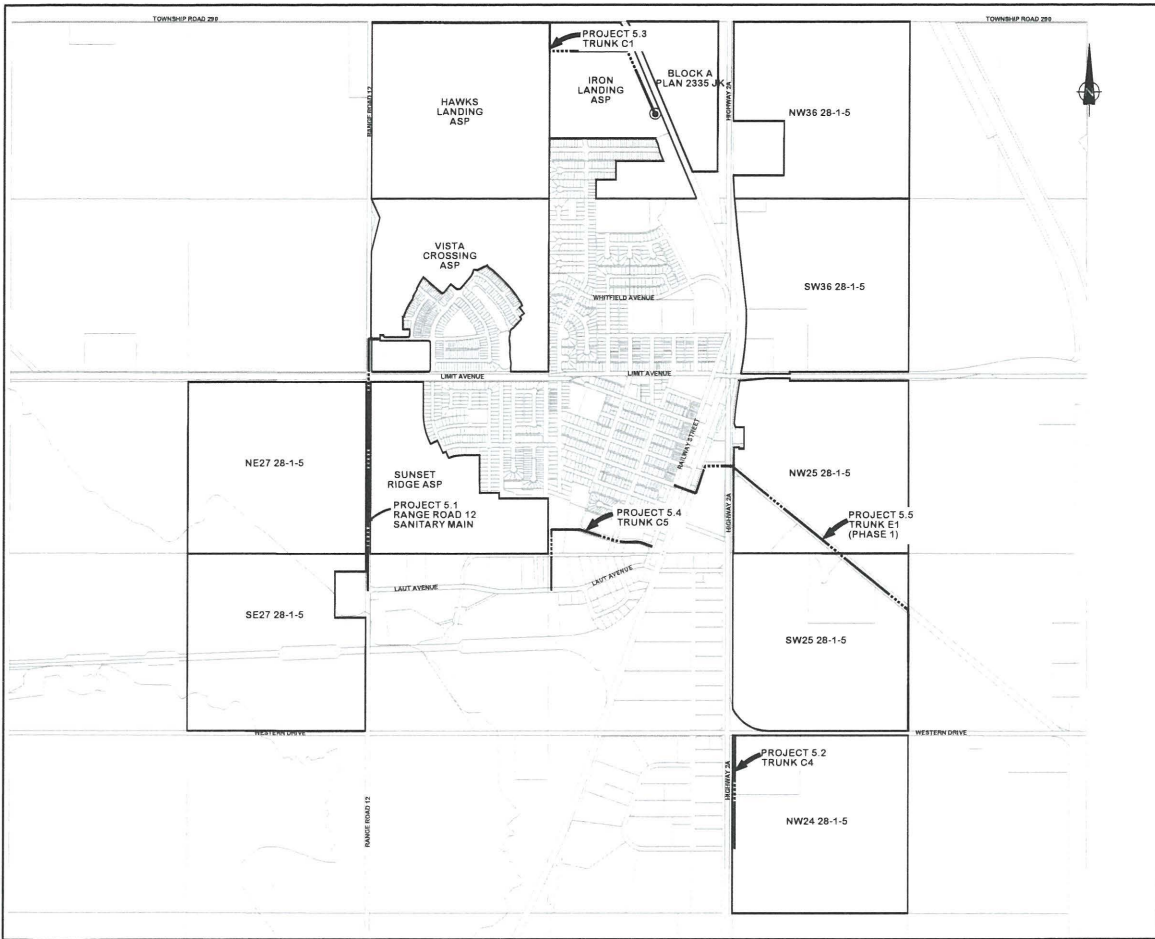
SCALE	1:6500	JOB	2580-015
DATE	OCT 2022	FIGURE	1







- LEGEND**
-  FUTURE DEVELOPMENT AREA
 -  FUTURE ROADWAY UPGRADE
 -  FUTURE INTERSECTION UPGRADE



TRANSPORTATION SERVICING CONCEPTS	
SCALE	1:6500
JOB	2580-015
DATE	OCT 2022
FIGURE	2

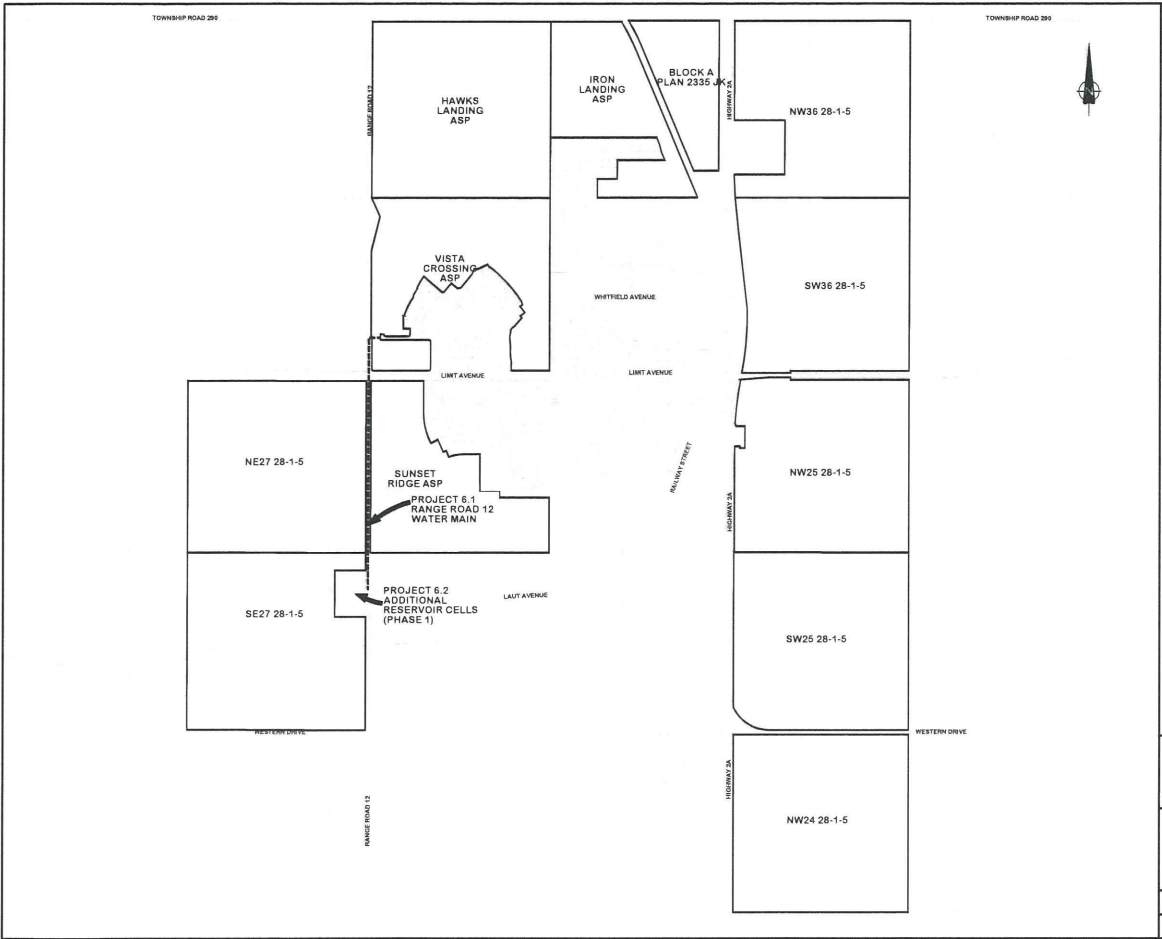


- LEGEND
-  FUTURE DEVELOPMENT AREA
 -  EXISTING SANITARY MAIN
 -  FUTURE SANITARY MAIN
 -  EXISTING LIFT STATION



SANITARY SERVICING CONCEPTS

SCALE	1:6500	JOB	2580-015
DATE	OCT 2022	FIGURE	3



- LEGEND
- FUTURE DEVELOPMENT AREA
 - EXISTING WATER MAIN
 - FUTURE WATER MAIN



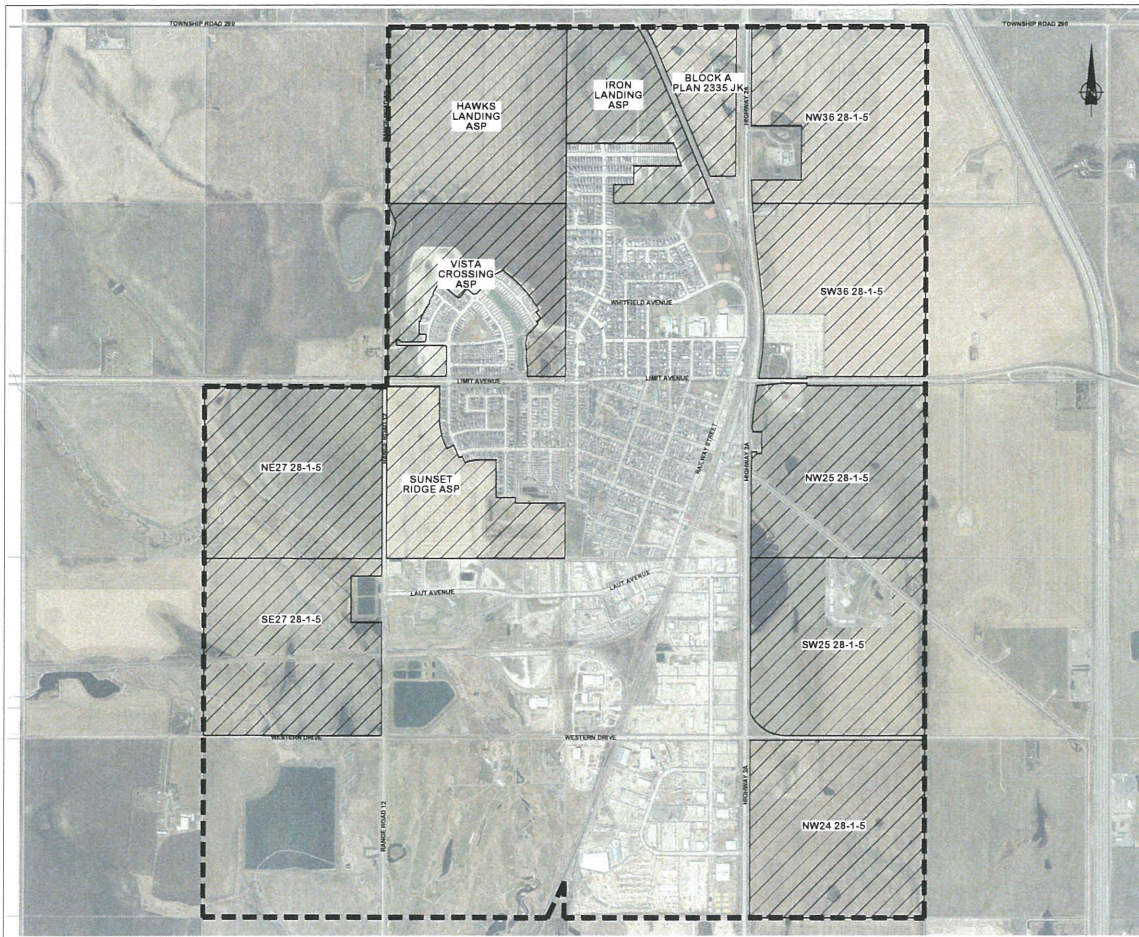
WATER SERVICING CONCEPTS	
SCALE 1:6500	JOB 2580-015
DATE OCT 2022	FIGURE 4

APPENDIX B


Cost Estimates


TOWN OF CROSSFIELD
2023 OFF SITE LEVY UPDATE
Project 6.1: Range Road 12 Water Main Cost Estimate


DESCRIPTION		QUANTITY	UNIT	UNIT PRICE	COST
SITE PREPARATION					
1	Erosion and Sediment Control	1	ls	\$ 5,000.00	\$ 5,000.00
2	Excavation - Common Excavation	8,500	m ³	\$ 6.95	\$ 59,110.00
SUBTOTAL					\$ 65,000.00
UNDERGROUND					
3	Water Mains - Including Fittings				
a)	Mains - 300mm PVC DR18 3.0-3.5m depth	1,400	m	\$ 375.00	\$ 525,000.00
b)	Valves - 300mm	3	each	\$ 3,640.00	\$ 10,920.00
c)	Carrier and Encasement Pipe - 300mm c/w 500mm Steel Casing	56	m	\$ 850.00	\$ 47,600.00
d)	Tie to Existing Stub - 300mm	2	each	\$ 445.00	\$ 890.00
e)	Miscellaneous - Additional to Auger	1	ls	\$ 60,000.00	\$ 60,000.00
f)	Allowance	1	each	\$ 10,000.00	\$ 10,000.00
4	Miscellaneous Underground				
a)	Excavation - Rock Excavation Type 'B'	560	m ³	\$ 27.00	\$ 15,120.00
5	Fencing				
a)	Construction Fence	400	m	\$ 6.50	\$ 2,600.00
b)	Silt Fence	100	m	\$ 12.00	\$ 1,200.00
6	Excavation of Unsuitable Trench Material	250	m ³	\$ 50.00	\$ 12,500.00
7	40mm Drainage Gravel for Pipe Zone	375	t	\$ 40.00	\$ 15,000.00
8	Third Party Agreement - TAQA	1	ls	\$ 10,000.00	\$ 10,000.00
SUBTOTAL					\$ 712,000.00
SURFACE					
9	Miscellaneous Surface				
a)	Subgrade Preparation	12,000	m ²	\$ 5.58	\$ 66,960.00
10	Geosynthetics				
a)	Geogrid	2,420	m ²	\$ 5.50	\$ 13,310.00
11	Gravel North				
a)	Supply, Place and Compact 80mm, 150mm depth	2,420	m ²	\$ 9.50	\$ 22,990.00
b)	25mm, 100mm depth	2,420	m ²	\$ 6.00	\$ 14,520.00
12	Gravel South				
a)	Supply, Place and Compact 80mm, 300mm depth	9,580	m ²	\$ 18.00	\$ 172,440.00
b)	25mm, 50mm depth	9,580	m ²	\$ 3.50	\$ 33,530.00
13	Miscellaneous Asphalt				
a)	Asphalt	240	m ²	\$ 90.00	\$ 21,600.00
14	Remove and Dispose				
a)	Existing Asphalt	240	m ²	\$ 40.00	\$ 9,600.00
15	Remove and Salvage				
a)	Existing Granular Structure	1	m ³	\$ 3.50	\$ 3.50
SUBTOTAL					\$ 355,000.00
LANDSCAPE					
16	Landscaping				
a)	Landscaping Seed Mix	20,000	m ²	\$ 5.00	\$ 100,000.00
SUBTOTAL					\$ 100,000.00
MAINTENANCE PERCENTAGE					
17	Maintenance - Underground Maintenance				
a)	Underground Water Mains	5	%	\$ 654,410.00	\$ 32,720.50
18	Surface Maintenance				
a)	Miscellaneous surface	10	%	\$ 354,953.50	\$ 35,495.35
19	Landscape Maintenance				
a)	Landscaping	25	%	\$ 100,000.00	\$ 25,000.00
SUBTOTAL					\$ 94,000.00
GRAND SUBTOTAL					\$ 1,326,000.00
<i>EXTRA WORK ALLOWANCE (20%)</i>					\$ 265,200.00
<i>ENGINEERING (15%)</i>					\$ 198,900.00
GRAND TOTAL					\$ 1,790,100.00




LEGEND

 FUTURE DEVELOPMENT AREA

 TOWN BOUNDARY

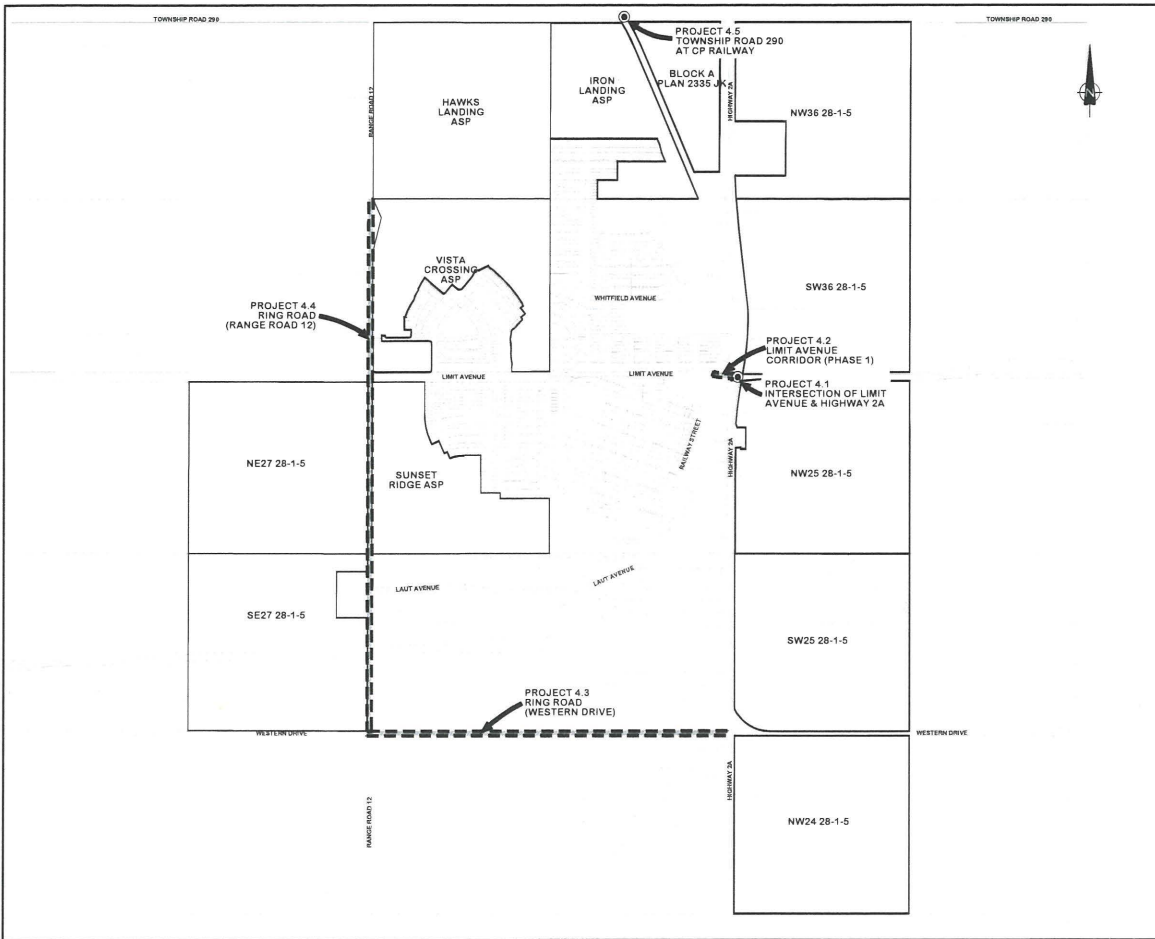


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FUTURE DEVELOPMENT AREAS

SCALE	1:6500	JOB	2580-015
DATE	OCT 2022	FIGURE	1

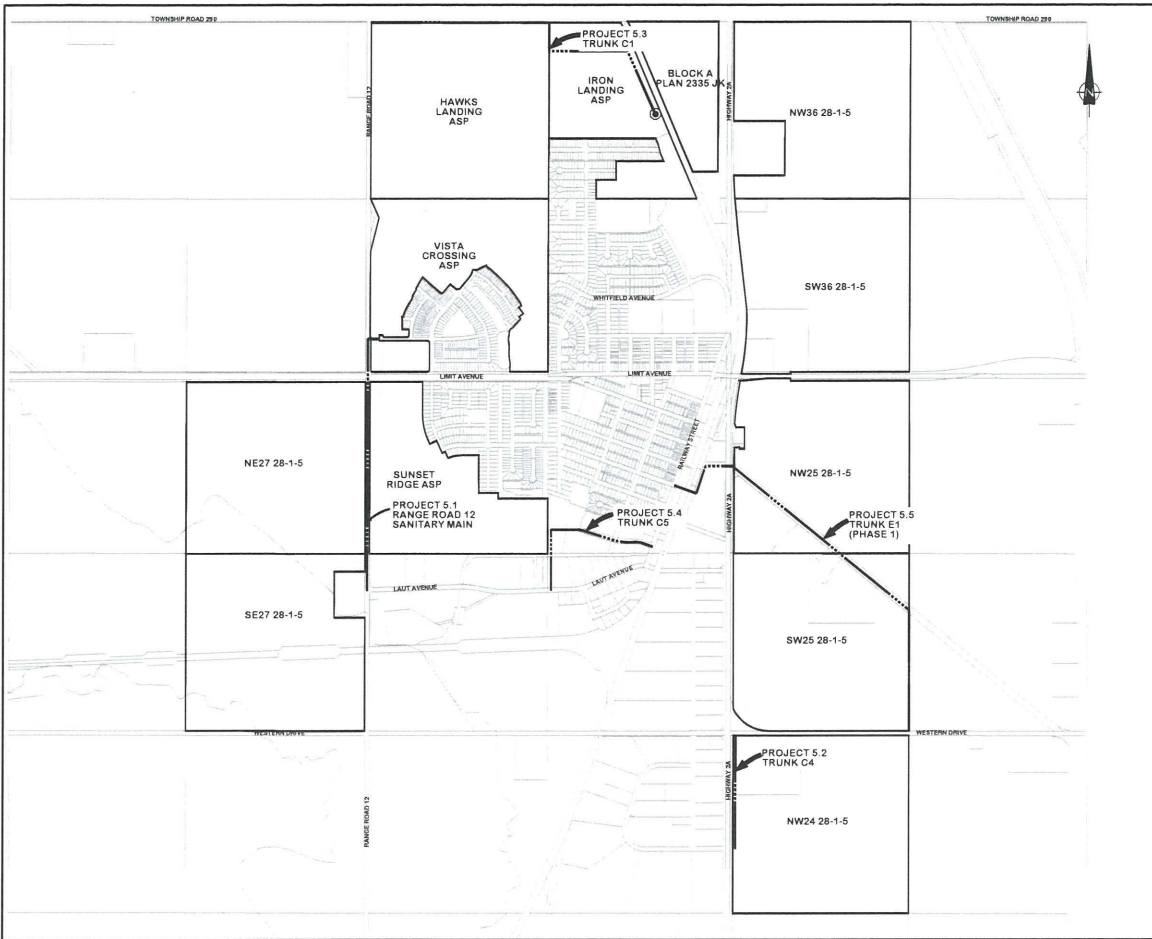


- LEGEND**
- FUTURE DEVELOPMENT AREA
 - FUTURE ROADWAY UPGRADE
 - FUTURE INTERSECTION UPGRADE



TRANSPORTATION SERVICING CONCEPTS

SCALE	1:6500	JOB	2580-015
DATE	OCT 2022	FIGURE	2



LEGEND

	FUTURE DEVELOPMENT AREA
	EXISTING SANITARY MAIN
	FUTURE SANITARY MAIN
	EXISTING LIFT STATION



SANITARY SERVICING CONCEPTS

SCALE	1:6500	JOB	2580-015
DATE	OCT 2022	FIGURE	3

TOWN OF CROSSFIELD
2023 OFF SITE LEVY UPDATE
Project 6.1: Range Road 12 Water Main Cost Estimate

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
SITE PREPARATION				
1 Erosion and Sediment Control	1	ls	\$ 5,000.00	\$ 5,000.00
2 Excavation - Common Excavation	8,500	m ³	\$ 6.95	\$ 59,110.00
			SUBTOTAL	\$ 65,000.00
UNDERGROUND				
3 Water Mains - Including Fittings				
a) Mains - 300mm PVC DR18 3.0-3.5m depth	1,400	m	\$ 375.00	\$ 525,000.00
b) Valves - 300mm	3	each	\$ 3,640.00	\$ 10,920.00
c) Carrier and Encasement Pipe - 300mm c/w 500mm Steel Casing	56	m	\$ 850.00	\$ 47,600.00
d) Tie to Existing Stub - 300mm	2	each	\$ 445.00	\$ 890.00
e) Miscellaneous - Additional to Auger	1	ls	\$ 60,000.00	\$ 60,000.00
f) Allowance	1	each	\$ 10,000.00	\$ 10,000.00
4 Miscellaneous Underground				
a) Excavation - Rock Excavation Type 'B'	560	m ³	\$ 27.00	\$ 15,120.00
5 Fencing				
a) Construction Fence	400	m	\$ 6.50	\$ 2,600.00
b) Silt Fence	100	m	\$ 12.00	\$ 1,200.00
6 Excavation of Unsuitable Trench Material	250	m ³	\$ 50.00	\$ 12,500.00
7 40mm Drainage Gravel for Pipe Zone	375	t	\$ 40.00	\$ 15,000.00
8 Third Party Agreement - TAQA	1	ls	\$ 10,000.00	\$ 10,000.00
			SUBTOTAL	\$ 712,000.00
SURFACE				
9 Miscellaneous Surface				
a) Subgrade Preparation	12,000	m ²	\$ 5.58	\$ 66,960.00
10 Geosynthetics				
a) Geogrid	2,420	m ²	\$ 5.50	\$ 13,310.00
11 Gravel North				
a) Supply, Place and Compact 80mm, 150mm depth	2,420	m ²	\$ 9.50	\$ 22,990.00
b) 25mm, 100mm depth	2,420	m ²	\$ 6.00	\$ 14,520.00
12 Gravel South				
a) Supply, Place and Compact 80mm, 300mm depth	9,580	m ²	\$ 18.00	\$ 172,440.00
b) 25mm, 50mm depth	9,580	m ²	\$ 3.50	\$ 33,530.00
13 Miscellaneous Asphalt				
a) Asphalt	240	m ²	\$ 90.00	\$ 21,600.00
14 Remove and Dispose				
a) Existing Asphalt	240	m ²	\$ 40.00	\$ 9,600.00
15 Remove and Salvage				
a) Existing Granular Structure	1	m ³	\$ 3.50	\$ 3.50
			SUBTOTAL	\$ 355,000.00
LANDSCAPE				
16 Landscaping				
a) Landscaping Seed Mix	20,000	m ⁴	\$ 5.00	\$ 100,000.00
			SUBTOTAL	\$ 100,000.00
MAINTENANCE PERCENTAGE				
17 Maintenance - Underground Maintenance				
a) Underground Water Mains	5	%	\$ 654,410.00	\$ 32,720.50
18 Surface Maintenance				
a) Miscellaneous surface	10	%	\$ 354,953.50	\$ 35,495.35
19 Landscape Maintenance				
a) Landscaping	25	%	\$ 100,000.00	\$ 25,000.00
			SUBTOTAL	\$ 94,000.00
			GRAND SUBTOTAL	\$ 1,326,000.00
			EXTRA WORK ALLOWANCE (20%)	\$ 265,200.00
			ENGINEERING (15%)	\$ 198,900.00
			GRAND TOTAL	\$ 1,790,100.00