

BYLAW XX/2026

HIGHWAY 2A INDUSTRIAL AREA STRUCTURE PLAN OFF-SITE LEVY BYLAW FOOTHILLS COUNTY, ALBERTA

THIS BEING a Bylaw of Foothills County, in the Province of Alberta, for the purpose of establishing off-site levies for land that is to be subdivided or developed within the Highway 2A Industrial Area Structure Plan;

WHEREAS section 648 of the Municipal Government Act, RSA 2000, c M-26, as amended (the MGA), provides that a Council of a municipality may enact a bylaw to provide for the imposition and payment of off-site levies in respect to lands that are to be developed or subdivided and to authorize agreements to be entered into in respect of the payment of those levies;

AND WHEREAS the Council of Foothills County deems it necessary to establish off-site levies to pay for the capital costs of new and expanded roads, for new or expanded water and wastewater facilities, and the land required in connection with those facilities, all of which will be required as a result of anticipated subdivision and development on lands within the Highway 2A Industrial Area Structure Plan;

AND WHEREAS, Foothills County has and continues to consult in good faith with affected landowners in order to address and define existing and future infrastructure and facility requirements within the Highway 2A Industrial Area Structure Plan and the benefit to new development from such infrastructure and facilities;

AND WHEREAS, the Council of Foothills County has received advice and reports respecting existing and future infrastructure and facility requirements within the Highway 2A Industrial Area Structure Plan and the benefit to new development from such infrastructure and facilities, which advice and reports set out a fair and equitable calculation of off-site levies in relation to benefit, in accordance with the purpose of the MGA and the principles of the Off-Site Levies Regulation, Alta Reg 187/2017 as amended;

AND WHEREAS, notice of intention to pass this bylaw has been given in accordance with the MGA;

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

1. BYLAW TITLE

- 1.1. This Bylaw may be cited as the “Highway 2A Industrial Area Structure Plan Off-Site Levy Bylaw”.

2. INTERPRETATION

- 2.1. For the purposes of this Bylaw, the following words will have the following meanings:

- a) “**Act**” or “**MGA**” means the Municipal Government Act, RSA 2000, c M-26, as amended.
- b) “**Benefitting Area**” means the land as identified in Schedule A of this Bylaw located within the Highway 2A Industrial Area Structure Plan boundary, that will benefit from the off-site infrastructure as defined in this Bylaw.
- c) “**CAO**” means the Chief Administrative Officer of Foothills County;
- d) “**County**” means Foothills County.
- e) “**Council**” means the Council of Foothills County.
- f) “**Site Development Area**” means any portion of the land that is the subject of a subdivision or development permit application, excluding land designated as environmental reserve, environmental reserve easement, school reserve, road right-of-way for arterial roadways, and any land owned by a school board that is to be developed for a special building project within the meaning of the Education Act, SA 2012, c E-0.3.
- g) “**Development Agreement**” means an agreement entered into as a

condition of subdivision approval or a development permit between the County and the applicant that provides for the construction of municipal improvements required to service the lands and to allow development to proceed.

- h) **“Development Permit”** means a permit issued in accordance with the Foothills County Land Use Bylaw by a Development Authority for the County or the Subdivision and Development Appeal Board.
- i) **“Off-Site Infrastructure”** means:
 - i. new or expanded facilities for the storage, transmission, treatment or supplying of water;
 - ii. new or expanded facilities for the treatment, movement, or disposal of wastewater;
 - iii. new or expanded roads and intersections required for or impacted by a subdivision or development; and
 - iv. land required for or in connection with any of the above-described facilities.
- j) **“Levy” or “Levies”** means either individually or collectively the levy imposed on lands located within the benefitting area payable to the County as a contribution towards the capital cost of the off-site infrastructure.
- k) **“The Regulation”** means the Off-Site Levies Regulation, Alta Reg 187/2017, as amended or repealed and replaced from time to time.
- l) **“Sanitary Levy”** means an off-site levy created and imposed under this Bylaw to pay for all or part of the capital costs of the construction or new or expanded facilities required for the supply, storage, transmission, treatment and distribution of wastewater.
- m) **“Transportation Levy”** means an off-site levy created and imposed under this Bylaw to pay for all or part of the capital costs of the construction of new or expanded roads required for or impacted by a subdivision or development.
- n) **“Water Levy”** means an off-site levy created and imposed under this Bylaw to pay for all or part of the capital costs of the construction or new or expanded facilities required for the supply, storage, transmission, treatment and distribution of potable water.

3. ENACTMENT

- 3.1. An off-site levy for the purposes as provided for in section 648(2)(a)-(c.1) and (d) of the Act is hereby imposed and shall be collected in respect of the site development area within the benefitting area as shown in Schedules A at the rate shown in Schedule B to this Bylaw.

4. IMPOSITION OF OFF-SITE LEVIES

- 4.1. Off-site levies are hereby imposed in respect of all land as shown on Schedule A of this Bylaw that is to be developed or subdivided for which off-site levies may be imposed in accordance with the Act.
- 4.2. The site developable area in respect of the levy is being imposed and collected shall be identified in the subdivision approval or development permit.
- 4.3. Applicants approved for subdivision or development in relation to lands within the benefitting area may be required to enter into a development agreement with the County as a condition of subdivision approval or the development permit requiring, among other things, payment of the levies.
- 4.4. Nothing in this Bylaw is intended to nor shall be interpreted as precluding Foothills County’s Development Authority or Subdivision Authority from requiring a developer to construct or pay for the entire (or a portion of) off-site infrastructure having oversize capacity as a condition of a development permit or subdivision approval in accordance with the Act.
- 4.5. Except as otherwise provided herein, a development agreement entered into by the County with respect to any subdivision approval or development permit may require the applicant to fund and construct the entire (or a portion of) off-site

infrastructure required to service the development. In such cases, the development agreement will contain provisions related to the endeavor to assist to allow for the reimbursement of costs incurred in excess of the applicants proportional benefit of the off-site infrastructure.

- 4.6. No levy shall be required to be paid where an off-site levy have been previously collected in respect of the lands for the same type of off-site infrastructure.
- 4.7. Where portions of a parcel are subject to a subdivision or a development permit approval, nothing shall prevent the imposition of a levy on the remaining land, or portion thereof, on subsequent subdivision and development approvals.
- 4.8. Council may defer the imposition of a levy on all or part of a parcel where there will be opportunity to collect the levies on future subdivision or development.
- 4.9. Notwithstanding any other provision in this Bylaw, the County may impose further or different levies, duly enacted by Bylaw, on any portion of lands which are the subject of development permit or subdivision approval and in respect of which the County has not collected off-site levies imposed under this Bylaw or any previous Off-site Levy Bylaw authorized by the Act or predecessor Act with respect to the same purpose as provided for in this Bylaw
- 4.10. Nothing contained in this Bylaw precludes the County from imposing such further or other charges, costs, fees, or levies as may be lawfully authorized

5. DETERMINATION OF THE OFF-SITE LEVIES

- 5.1. The construction costs of the off-site infrastructure and how the levies are calculated is contained in the Highway 2A Offsite Levy Analysis, dated October 5th 2026, prepared by K2 Engineering Ltd., attached as Schedule "B" to this bylaw.

6. COLLECTION OF OFF-SITE LEVIES

- 6.1. The rates of the levies to be imposed pursuant to this Bylaw are the rates and amounts indicated in Schedule "B."
- 6.2. Each development agreement entered into by the County with respect to any subdivision approval or development permit for lands within the benefiting area shall make provision for payment of levies imposed by this Bylaw within the times specified by this Bylaw, as amended from time to time.
- 6.3. All off-site levies imposed by this Bylaw are due and payable prior to the endorsement of the plan of subdivision or prior to the issuance of a development permit or at the time specified in the Development Agreement if and when such an agreement is required.
- 6.4. Any levies collected under this Bylaw, and any interest earned from the investment of such levies, shall be accounted for separately for each type of Infrastructure and must be used only for the specific type of Infrastructure for which it was collected or for land required for or in connection with that purpose. In the event that any of the levies imposed by this Bylaw are not paid at the time specified in a development agreement, the CAO or designate is authorized to take whatever action deemed necessary to collect the unpaid levies.

7. REPORT TO COUNCIL

- 7.1. Not less than once per calendar year, the CAO or CAO designate shall provide a report to Council detailing all levies imposed under this Bylaw, including the collection amount and unpaid levy amounts from the previous calendar year, funds on hand to meet anticipated expenditures during the current calendar year and updated estimates for the costs expected to be incurred in order to complete construction of the facilities in respect of which the levies have been imposed under this Bylaw.

8. REVIEW OF BYLAW

- 8.1. The County shall review the off-site infrastructure and the levies every three years after the year this Bylaw is adopted or as otherwise determined by Council. After the review has been completed, Council may amend the Bylaw.

9. SEVERABILITY

- 9.1. If any portion of this Bylaw is declared invalid by a court of competent

jurisdiction, then the invalid portion must be severed, and the remainder of the Bylaw is deemed valid.

10. **EFFECTIVE DATE**

10.1. Bylaw ___/___ and any amendments are repealed upon this Bylaw coming into force and effect.

10.2. This Bylaw shall come into force and take effect upon being passed.

FIRST READING:

Reeve

CAO

SECOND READING:

Reeve

CAO

THIRD READING:

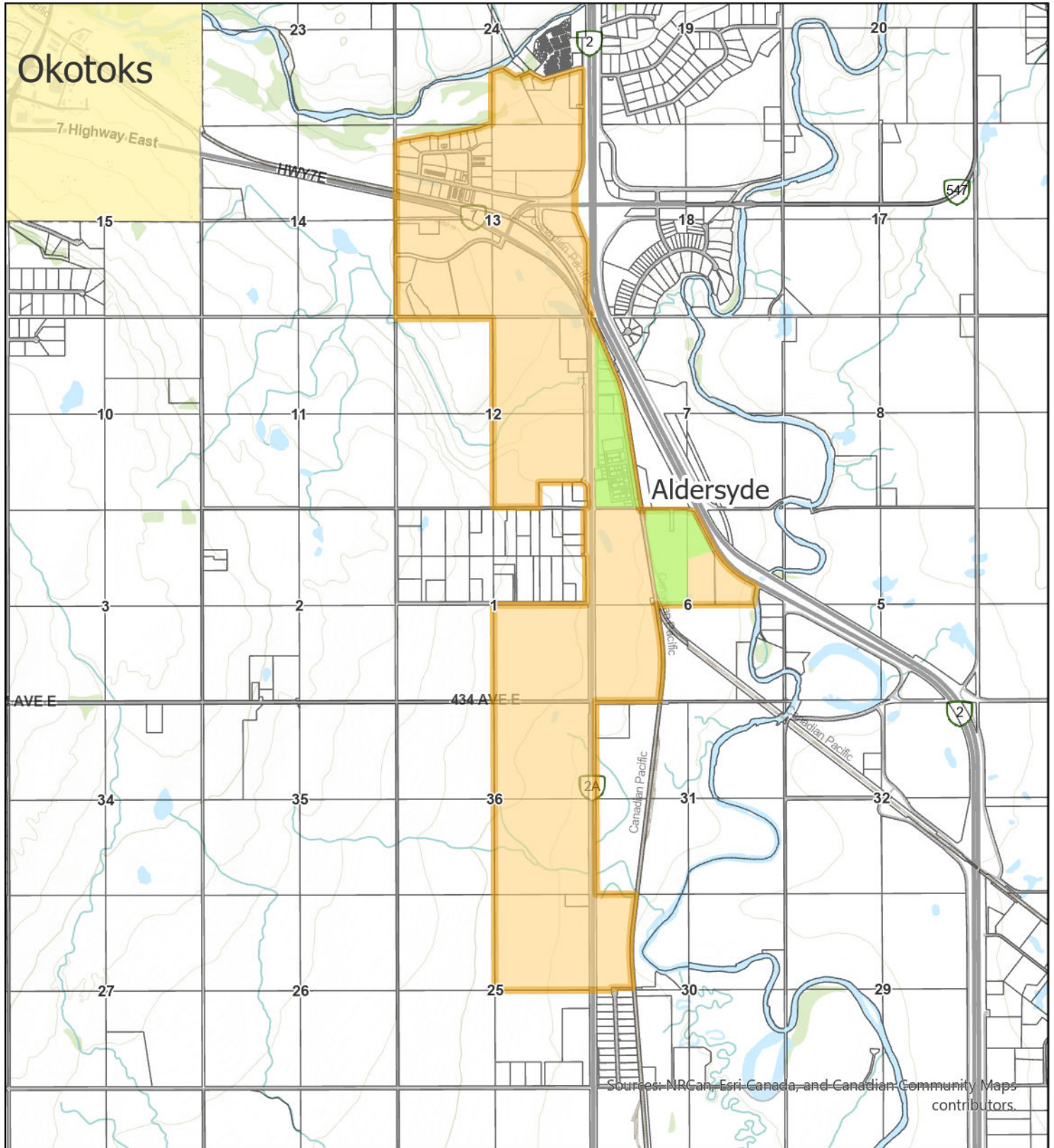
Reeve

CAO

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



Schedule A Highway 2A Off Site Levy Bylaw Benefiting Area



Legend

- Benefiting Area
- Aldersyde
- Parcels
- Okotoks

Not Survey Quality

Date Printed: 4/2/2026

Scale: 1:45,000

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Schedule B
Highway 2A Off Site Levy Bylaw Analysis

Foothills County

Highway 2A Offsite Levies

Water, Wastewater and Transportation

DRAFT Report

October 5, 2026

Prepared by:



Executive Summary

The Highway 2A ASP area allows for development of industrial and commercial uses with relatively low water demands. Based on the existing approved capacity of the infrastructure, an estimated 1000 Hectares of lands within this area can be developed.

The total water infrastructure costs are estimated to be \$55.4 Million, of which \$25.1 Million has been allocated to the benefiting area.

The total wastewater infrastructure costs are estimated to be \$45.6 Million, of which \$45.6 Million has been allocated to the benefiting area.

The total transportation infrastructure costs are estimated to be \$21 Million, of which \$17.5 Million has been allocated to the benefiting area.

Financing costs are estimated at \$1785 per Hectare which have been added to the Water Infrastructure levy.

The proposed offsite levies are summarized below:

Infrastructure Component	Proposed Levy \$/Gross Hectare
Water	26875
Wastewater	45565
Transportation	17500
Total:	89940

As additional information becomes available the need to review and update these levies will be necessary.

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Figure 7: Intersections along Highways 2A and 7 requiring future upgrades

Introduction

The following report summarizes the offsite levy analysis for a portion of the Highway 2A Area structure plan area. The suggested levies are for water, sanitary wastewater and transportation infrastructure.

Background

The County requested that K2 Engineering Ltd. (K2) conduct an off-site levy review for the development of water, sanitary wastewater and transportation infrastructure necessary to service the Highway 2A Corridor.

Document Review

As part of the review, the following documents were reviewed:

- Alberta Municipal Government Act, September 2025
- Highway 2A Industrial Area Structure Plan, Bylaw 98/2010, Foothills County, October 2010
- Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems, Alberta Environment 2012, Revised 2021
- Water, Wastewater and Stormwater Servicing Strategy, Highway 2A Area Structure Plan, MPE Engineering Ltd., March 2010
- Aldersyde Regional Utility Servicing Project - Application under the EPEA for the Approval of New Municipal Waterworks System, Westhoff Engineering Resources, Sept. 2016
- Aldersyde Regional Utility Servicing Project - Application under the EPEA for the Approval of New Municipal Wastewater Treatment System, Westhoff Engineering Resources, Sept. 2016
- North Aldersyde Water and Wastewater Feasibility Study, Urban Systems, April 2020
- Aldersyde Water Treatment Plant – EPEA Capacity Increase, Associated Engineering, November 2024
- Regional Wastewater Services Delivery Study – TM03 – Feasibility Study and Preliminary Design DRAFT, MPE a division of Englobe, Nov. 2024.
- Design Basis Memorandum 01 – Preliminary Design – Pipeline, MPE a division of Englobe, October 2025
- Design Basis Memorandum 02 – Preliminary Design – Facilities, MPE a division of Englobe, January 2026
- 2025 Development Agreement Standard Terms and Conditions – Schedule “1”, City of Calgary
- Highway 2A Off-Site Levy – Transportation Planning Support – DRAFT Report, WATT Consulting Group, January 2025

Assumptions

Water:

- The Highway 2A area is proposed to be developed to industrial and commercial uses with relatively low water demands. Based on this goal and review of existing water use an average use of 1.0 m³/day/Gross Hectare was selected.
- Servicing provided via the Highwood Regional Water system currently under construction.
- Average Daily Demand (ADD) at Aldersyde WTP assumed to be 1000 m³/day
- Maximum Daily Demand (MDD) flows assumed to be 1.7 times ADD flows or 1700 m³/day.
- Total MDD plus Fire flows of 270 lps. Absolute minimum residual pressure of 150 kpa. Higher residuals preferred.
- Existing customers on the system. Looped distribution preferred.
- Developers are responsible for cost associated with connecting to the distribution system.
- System losses are assumed to be included with the projected water use.

Wastewater:

- It was assumed that 90% of the water use will be returned as sanitary wastewater. Based on this, an average generation of 0.9m³/day/Gross Hectare was selected.
- Servicing provided via the Highwood Regional Wastewater system consisting of a Wastewater Treatment Plant located in Aldersyde.
- Maximum Daily Demand (MDD) of the Aldersyde WWTP assumed to be 1530 m³/day.
- Peaking factor assumed to be 5.
- Infiltration assumed to be 0.1 lps/Ha.
- Forcemain sizing based on a target velocity of 1 m/s.
- No existing connections.
- Developers are responsible for costs associated with connecting to the collection system.

Transportation:

- The transportation levy scope is limited to the required intersection improvements at various intersections with Highways 2A and 7 within the benefitting area.
- Cost estimates assume that Highways 2A and 7 are twinned (i.e., 4 lanes in total).
- Each identified intersection is estimated to cost on average between \$3.5 - 4.0 Million.
- Developers are responsible for all other transportation improvements to access these intersections.

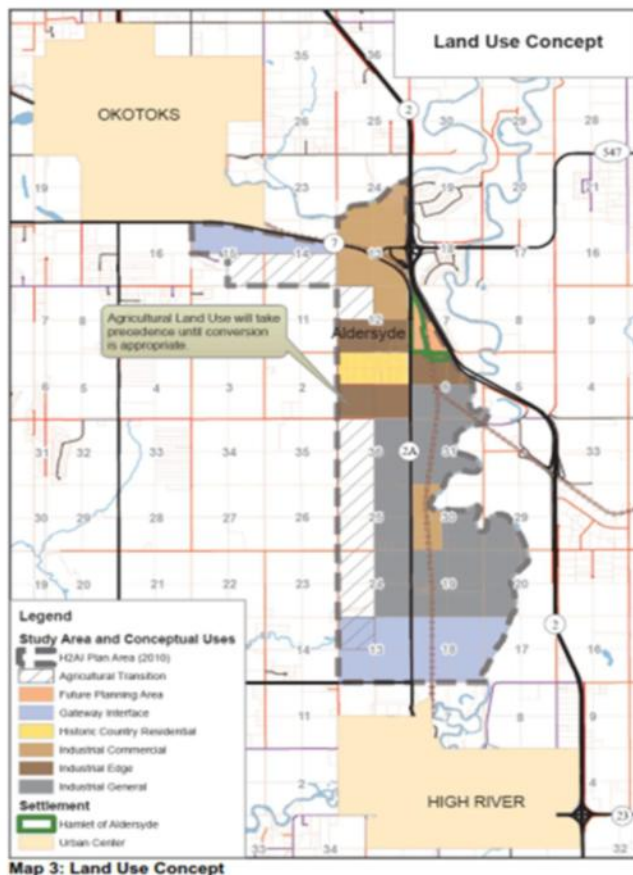
Financial:

- Cost estimates assume 10% engineering and 25% contingency. No allowances for land acquisition have been included.
- Urban Development Institute - Calgary 2025-unit rates
- Aldersyde WWTP cost assumed from Regional Wastewater Services Delivery Study – TM03
- Aldersyde Pump Station costs assumed from DM02 – Preliminary Design - Facilities
- Intersection upgrade costs assumed from Highway 2A Offsite Levy – Transportation Planning Support Study
- City of Calgary Class 4 cost estimate - Conceptual design
- Financing and/or borrowing costs not included
- Levy to be applied based on gross developable lands minus municipal and environmental reserve dedications.

Benefitting Area

The Aldersyde Business Corridor also known as the Highway 2A ASP plan area (Figure 1) is located on both sides Highway 2A and is approximately 3000 Hectares in size. This corresponds to a water use of 3,000 m³/day ADD or 5100 m³/day MDD. Assuming approximately 90% of this may be returned as sanitary wastewater, this corresponds to 2700 m³/day ADD or 4590 m³/day MDD of sanitary flows.

Figure 1: Highway 2A Areas Structure Plan Area



Given that the wastewater treatment plant's current approval capacity is 900 m³/day ADD or 1530 m³/day MDD, and the assimilation capacity of the Highwood River is not yet understood, the existing approved wastewater capacity of 1530 m³/day MDD has been assumed to be the serviceable limit at this time. This corresponds to a water treatment capacity of 1000 m³/day ADD and 1700 m³/day MDD. Based on the assumed water use (1 m³/Ha/day), this allows for approximately **1000 Hectares** that can be serviced with these utility systems.

The below Figure shows the benefitting area subject to the off-site levy bylaw, which represents approximately 1/3 of the Aldersyde Business Corridor.

Figure 2: Proposed Benefitting Area



Water Infrastructure

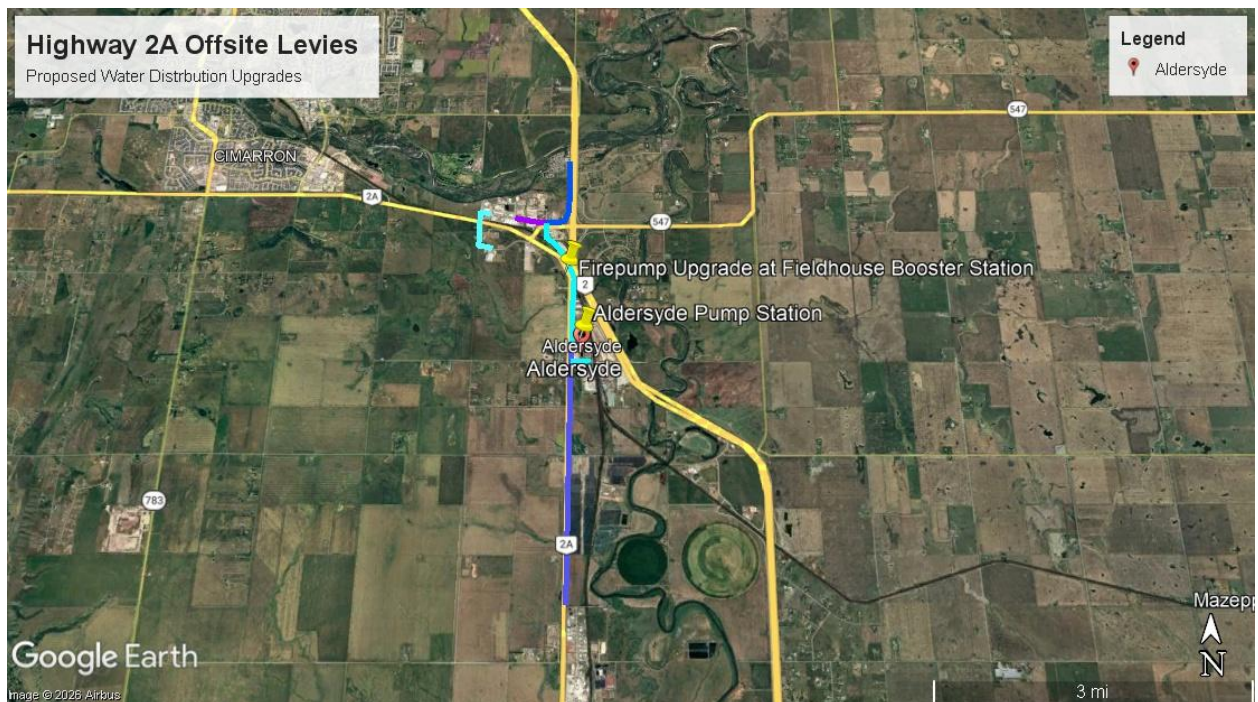
The Highwood Regional Water System is under construction. It consists of the following:

- Highwood River surface water intake
- Intake Pump Station
- Raw Water Pipeline
- Raw Water Reservoirs
- Raw Water Reservoir Pump Station
- Aldersyde Water Treatment Plant
- Aldersyde Reservoir and Pump Station
- Distribution System (Proposed)

Figure 3: Water Supply and Treatment System



Figure 4: Proposed Distribution System Upgrades

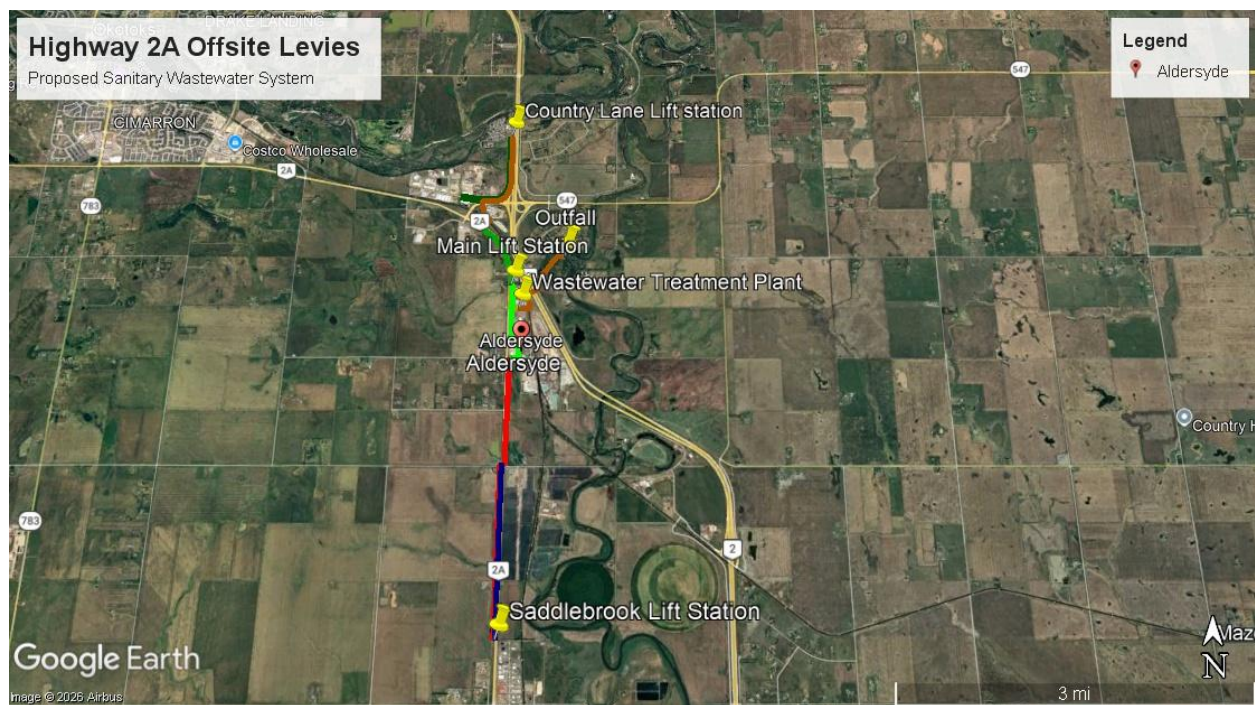


Wastewater Infrastructure

The Highwood Regional Wastewater System has not been built. There are no existing customers on the system. The system is proposed to consist of the following:

- Wastewater Treatment Plant
- Outfall Pipeline
- Highwood River Outfall
- Main Lift Station
- Saddlebrook Lift Station
- Country Lane Lift station
- Collection system (gravity and forcemains)

Figure 5: Proposed Sanitary Wastewater System



Transportation Infrastructure

There currently is a total of seven (7) existing intersections with Highways 2A and 7 within the benefitting area.

Figure 6: Existing intersections within the benefitting area



As part of the Off-site Levy – Transportation Planning report, the following intersections within the benefitting area have been identified to require future upgrades.

Figure 7: Intersections along Highways 2A and 7 requiring future upgrades



The following seven (7) intersections are identified within the benefitting area that will require future upgrades:

- Highway 7 and 64th Street East
- Highway 7 and Highway 2A
- Highway 7 and 79th Street E
- Highway 2A and 410 Avenue
- Highway 2A and 418 Avenue
- Highway 2A and 434 Avenue
- NEW Highway 2A and 450 Avenue

It is proposed that the Highway 2A and 426 Avenue intersection will be closed and consolidated with 418 Ave and/or 434 Ave. A future intersection at Highway 2A and 450th Avenue is assumed to accommodate development.

Water Infrastructure Costs

The following table outlines the costs for the various infrastructure components.

Table 1: Costs for various water infrastructure components

Infrastructure Component	Cost	Status
Highwood River Intake	\$465,127	Project Complete. Actual costs
Intake Pump Station	\$3,413,403	Project Complete. Actual costs
Raw Water Pipeline	\$3,757,884	Project Complete. Actual costs
Raw water reservoir	\$6,084,542	Tendered costs. Project Underway
Raw water reservoir -FC grading	\$168,351	Project Complete. Actual costs
Raw Water Reservoir Pump Station	\$1,900,283	Tendered costs. Project Underway
Water Treatment Plant	\$23,129,921	Tendered costs. Project Underway
Distribution upgrades	\$16,525,000	Future costs
Total:	\$55,444,511	

The construction of the water supply system with the exception of the distribution upgrades are expected to be complete in mid-2026 thereby allowing the system to begin the production of potable water.

The following table summarizes the assumed capacity of each infrastructure component.

Table 2: Levied costs of various water infrastructure components

Infrastructure Component	Cost (\$ Million)	Capacity varies	Levied Capacity varies	Costs (\$ Million)
Highwood River Intake	0.465	100	39	0.181
Intake Pump Station	3.413	95	39	1.401
Raw Water Pipeline	3.758	144	39	1.018
Raw water reservoir	6.085	419318	365000	5.296
Raw water reservoir -FC grading	0.168	419318	365000	0.147
Raw Water Reservoir Pump Station	1.900	3700	1700	0.873
Water Treatment Plant	23.130	Varies	1700	11.382
Distribution upgrades	16.525	69	20	4.790
	55.44			25.09

Notes:

Highwood River Intake capacity estimated to be 100 litres per second.

Intake Pump Station capacity estimated to be 95 litres per second.

Raw Water Pipeline capacity estimated to be 144 litres per second.

Levied costs assumed to be x2 WTP MDD for Intake, Intake Pump Station and Raw Water Pipeline due to restricted seasonal diversions due to water license instream objective restrictions.

Raw Water Reservoir capacity estimated to be 88% of required licensing. Grading of reservoirs completed by own forces, only engineering costs are applied. Levied capacity based on yearly ADD flows.

Raw Water Reservoir Pump Station capacity based on a flow of 3700 m3/day. Levied capacity based on MDD flows.

Water Treatment Plant capacity estimated at 1700 m3/day MDD. Plant oversize assumed to be \$10 Million. Oversize to be recovered via subsequent upgrades in capacity.

Distribution upgrades capacity estimated at MDD flow of 69 litres per second plus fireflows. Levied costs based on MDD flows only. Detained cost estimates are included in the Appendix.

The Aldersyde WTP capacity on opening day is 1700 m³/day MDD. However, during its design, allowances were made so that its ultimate capacity could be increased to 6000 m³/day MDD within the footprint of the existing building. That is, additional equipment could be added to increase the plants capacity without significant modifications to the reservoir and building structure. The additional cost of the building modifications has been estimated at approximately \$10 Million and are not applied to the levied costs.

A conceptual system was developed based on servicing the benefitting area only as shown in **Figure 4**. The distribution upgrades are intended to provide a basic network that future developments may access. The costs to reach this network is not part of the levy and would be a case-by-case additional cost to any developer depending upon their needs and distance from the nearest connection point. Preference was given to locate much of the infrastructure within existing roads such to provide opportunity for developments to easily gain access to it.

A grant application was made to the Alberta Water and Wastewater Assistance Partnership (AWWAP) and funding in the amount of \$428,220 was received in April 2023.

Benefitting Area Water Infrastructure Levies

The referenced benefitting area is 1000 Hectares, and the levied costs are \$25.09 Million resulting in a water levy of \$25,090/Hectare gross lands. This does not include financing costs.

Wastewater Infrastructure Costs

The Highwood Regional wastewater system currently has an EPEA approval for the construction of a 1530 m³/day MDD wastewater treatment plant and outfall to the Highwood River. Design and construction of this facility and any other infrastructure has not been initiated except for a future Highway 2 and CP crossing.

A conceptual system was developed based on servicing the benefitting area only as shown in **Figure 5**. The collection system is intended to provide a basic network that future developments may access. The costs to reach this network is not part of the levy and would be a case-by-case additional cost to any developer depending upon their needs and distance from the nearest connection point. Preference was given to locate much of the infrastructure within existing roads such to provide opportunity for developments to easily gain access to it.

The following table outlines the estimated costs for the various infrastructure components.

Table 3: Costs for various wastewater infrastructure components

Infrastructure Component	Cost
1N 200mm Gravity Main	\$890,000
Country Lane Lift Station	\$2,025,000
1N 200mm Forcemain	\$1,430,000
1S 300mm Gravity Main	\$930,000
All - Main Lift Station	\$3,375,000
All - 400mm Forcemain to WWTP	\$560,000
2 300mm Gravity Main	\$960,000
3 300mm Gravity Main	\$1,550,000
Saddlebrook Lift station	\$2,025,000
3 250mm Forcemain	\$2,880,000
Aldersyde WWTP	\$26,700,000
Outfall Line	\$1,700,000
Outfall	\$540,000
Total:	\$45,565,000

Notes:

Levied costs based on MDD flows only. Detained cost estimates are included in the Appendix.

Benefitting Area Wastewater Infrastructure Levies

The referenced benefitting area is 1000 Hectares, and the levied costs are \$45.565 Million resulting in a wastewater levy of \$45,565/Hectare gross lands.

Transportation Infrastructure Costs

The following table summarizes the estimated costs, benefit and levied cost for each intersection.

Table 4: Levied costs for various transportation infrastructure components

Infrastructure Component	Total Cost (\$ Million)	Benefit factor	Benefitting Cost (\$ Million)
Highway 7/64th St	3.5	0.5	1.75
Highway 7/2A	3.5	0.5	1.75
Highway 7/79th St	0	0	0
Highway 2A/410 Ave	3.5	1	3.5
Highway 2A/418 Ave	3.5	1	3.5
Highway 2A/434 Ave	3.5	1	3.5
NEW Highway 2A/450 Ave	3.5	1	3.5
Total	21		17.50

Notes:

Highway 7 and 64th Street improvements will benefit lands within and outside of the benefitting area

Highway 7 and 2A demand for future upgrades assumed to be driven by development within the service area and background growth

Benefitting Area Transportation Infrastructure Levies

The referenced benefitting area is 1000 Hectares, and the levied costs are \$17.50 Million resulting in a transportation levy of \$17,500/Hectare gross lands.

Financing Costs (by others)

To date, much of the water infrastructure (i.e., Highwood River Intake, Intake Pump station, Raw water pipeline, Raw water reservoirs and Pump station, Water Treatment Plant) are either completed or reaching completion. The financing costs were estimated by others and were based on expenditures to date on the water system infrastructure only. A financing fee of 4% over a period of 3 years was assumed. The proposed financing fee was estimated to be \$1785/Hectare which is to be added to the Water Infrastructure Levy.

Summary

The following levies are assumed based on servicing a portion of the Highway 2A Area Structure Plan area which is identified as the Benefitting Area. The extent of Benefitting Area is currently limited by the approved capacity of the Aldersyde wastewater treatment plant.

The infrastructure is intended to provide a network that future development may connect to in a location that is easily accessible. All other infrastructure to reach and connect to this basic network are assumed to be at the developers cost. The proposed levies are outlined below:

Table 5: Proposed Offsite Levies – Water, Wastewater and Transportation

Infrastructure Component	Proposed Levy \$/Gross Hectare
Water	26875
Wastewater	45565
Transportation	17500
Total:	89940

Recommendations

The limiting factor to additional development beyond the assumed 1000 Hectares is allowable wastewater releases to the Highwood River. If the capacity of the river to accept wastewater is more than what is being assumed, then a larger benefitting area may be possible. As additional information becomes available the need to review and update these levies will be necessary.

Tom Gilliss, P.Eng.
M66333

K2 Engineering Ltd.

Closing

The information in this document was compiled and interpreted exclusively for the use as stated in the background section. K2 Engineering Ltd. has provided this information for these purposes only.

K2 Engineering Ltd. has exercised reasonable skill, care and diligence to assess the information acquired during the preparation of this letter but makes no guarantees or warranties as to the accuracy or completeness of this information. The information contained in this letter is based on, and limited by the circumstances and conditions acknowledged herein, and upon information available at the time of preparation.

K2 Engineering Ltd. does not accept any responsibility for the use of this letter for any purpose other than that stated and does not accept any responsibility to any third party for the use in whole or in part of this letter. Any alternative use, including that by a third party, or any reliance on, or decisions based on this letter, is the responsibility of the alternative user or third party.

Questions concerning the information, or its interpretation should be directed to Tom Gilliss.

Appendices

Proposed Water Distribution System Upgrades- Cost Estimate

Water Distribution Upgrades Cost Estimate

Items:	Total Cost
1.0 - Firepump upgrade at Aldersyde P/S	\$3,460,000
2.0 - Twin 450 line from Aldersyde south along HWY 2A	\$5,540,000
3.0 - Twin 300 line from Aldersyde to 79th street	\$3,300,000
4.0 - Twin 300 line from 79th street to Country Lane	\$1,290,000
5.0 - Firepump upgrade at Fieldhouse Booster Station	\$135,000
6.0 - Connect west end of Fieldhouse to Warner Business Park	\$1,980,000
7.0 - Warner ES Feed upgrade	\$500,000
8.0 - Aldersyde Loop upgrade	\$320,000
Total:	\$16,525,000

1.0 - Firepump Upgrade at Aldersyde Pump Station

Item	Quantity	Units	Unit Rate	Extension
Firepump upgrade at Aldersyde P/S	1	LS	3459000	3459000
Subtotal				3459000
Engineering (10%)				Included
Contingency (25%)				Included
1.0 Total				3460000

2.0 - Twin 450 line from Aldersyde south along HWY 2A to south end of Saddlebrook

Item	Quantity	Units	Unit Rate	Extension
Mobilization	1	LS	303749	303749
Connect to existing	2	each	5000	10000
Supply/Install 450mm PVC DR18	4332	lm	742	3214344
Supply/Install 450mm Gate valves	3	each	15000	45000
Supply and Install Fire Hydrants	12	each	12533	150396
Supply/Install road crossings 400mm HDPE DR11 by HDD	160	lm	1500	240000
Supply/Install access crossings 400mm HDPE DR11 by HDD	30	lm	1000	30000
Supply/Install watercourse/railway crossings 400mm HDPE DR11 by HDD	0	lm	2000	0
Tracer Wire c/w junction boxes	4522	lm	4	18088
Waterline Warning signs	8	each	300	2400
Site restoration	1	LS	86640	86640
Subtotal				4100617
Engineering (10%)				410062
Contingency (25%)				1025154
2.0 Total				5540000

3.0 - Twin 400 line from Aldersyde to 79th street

Item	Quantity	Units	Unit Rate	Extension
Mobilization	1	LS	180000	180000
Connect to existing	3	each	5000	15000
Supply/Install 400mm PVC DR18	2169	lm	742	1609398
Supply/Install 400mm Gate valves	3	each	15000	45000
Supply and Install Fire Hydrants	3	each	12533	37599
Supply/Install PRV vault	0	LS	150000	0
Supply/Install road crossings 400mm HDPE DR11 by HDD	250	lm	1500	375000
Supply/Install access crossings 400mm HDPE DR11 by HDD	0	lm	1000	0
Supply/Install railway crossings 400mm HDPE DR11 by HDD	50	lm	2000	100000
Tracer Wire c/w junction boxes	2469	lm	4	9876
Waterline Warning signs	6	each	300	1800
Site restoration	1	LS	43380	43380
Subtotal				2417053
Engineering (10%)				241705
Geotechnical (CPR Crossing)				35000
Contingency (25%)				604263
3.0 Total				3300000

4.0 - Twin 300 line from 79th street to Country Lane

Item	Quantity	Units	Unit Rate	Extension
Mobilization	1	LS	70000	70000
Connect to existing	2	each	5000	10000
Supply/Install 300mm PVC DR18	1512	lm	517	781704
Supply/Install 300mm Gate valves	2	each	6248	12496
Supply and Install Fire Hydrants	0	each	12533	0
Supply/Install access crossing 300mm HDPE DR11 by HDD	45	lm	1000	45000
Tracer Wire c/w junction boxes	1557	lm	4	6228
Waterline Warning signs	5	each	300	1500
Site restoration	1	LS	30240	30240
Subtotal				957168
Engineering (10%)				95717
Contingency (25%)				239292
4.0 Total				1290000

5.0 - Firepump Upgrade at Fieldhouse Booster Pump Station

Item	Quantity	Units	Unit Rate	Extension
Firepump upgrade at Aldersyde P/S	1	LS	100000	100000
Subtotal				100000
Engineering (10%)				10000
Contingency (25%)				25000
5.0 Total				135000

6.0 - Connect west end of Fieldhouse to Warner Business Park

Item	Quantity	Units	Unit Rate	Extension
Mobilization	1	LS	110000	110000
Connect to existing	2	each	10000	20000
Supply/Install 300mm PVC DR18	838	lm	517	433246
Supply/Install 300mm Gate valves	2	each	6248	12496
Supply and Install Fire Hydrants	3	each	12533	37599
Supply/Install PRV vault	2	LS	150000	300000
Supply/Install road crossings 300mm HDPE DR11 by HDD	100	lm	2500	250000
Supply/Install access crossings 300mm HDPE DR11 by HDD	150	lm	1000	150000
Supply/Install railway crossings 300mm HDPE DR11 by HDD	50	lm	2000	100000
Tracer Wire c/w junction boxes	1138	lm	4	4552
Waterline Warning signs	14	each	300	4200
Site restoration	1	LS	16760	16760
Subtotal				1438853
Engineering (10%)				143885
Geotechnical (CPR Crossing)				35000
Contingency (25%)				359713
6.0 Total				1980000

7.0 Warner East Side Feed Upgrade

Item	Quantity	Units	Unit Rate	Extension
Mobilization	1	LS	30000	30000
Connect to existing	2	each	5000	10000
Supply/Install 300mm PVC DR18	544	lm	517	281248
Supply/Install 300mm Gate valves	2	each	6248	12496
Supply/Install PRV vault	0	LS	150000	0
Supply/Install road crossings 300mm HDPE DR11 by HDD	0	lm	2500	0
Supply/Install access crossings 300mm HDPE DR11 by HDD	20	lm	1000	20000
Supply/Install railway crossings 300mm HDPE DR11 by HDD	0	lm	2000	0
Tracer Wire c/w junction boxes	564	lm	4	2256
Waterline Warning signs	4	each	300	1200
Site restoration	1	LS	10880	10880
Subtotal				368080
Engineering (10%)				36808
Geotechnical (CPR Crossing)				0
Contingency (25%)				92020
7.0 Total				500000

8.0 Aldersyde Loop

Item	Quantity	Units	Unit Rate	Extension
Mobilization	1	LS	20000	20000
Connect to existing	2	each	5000	10000
Supply/Install 300mm PVC DR18	324	lm	517	167508
Supply/Install 300mm Gate valves	2	each	6248	12496
Supply and Install Fire Hydrants	0	each	12533	0
Supply/Install PRV vault	0	LS	150000	0
Supply/Install road crossings 300mm HDPE DR11 by HDD	0	lm	2500	0
Supply/Install access crossings 300mm HDPE DR11 by HDD	15	lm	1000	15000
Supply/Install railway crossings 300mm HDPE DR11 by HDD	0	lm	2000	0
Tracer Wire c/w junction boxes	338	lm	4	1352
Waterline Warning signs	3	each	300	900
Site restoration	1	LS	6480	6480
Subtotal				233736
Engineering (10%)				23374
Geotechnical (CPR Crossing)				0
Contingency (25%)				58434
8.0 Total				320000

Total 1.0 to 8.0 **16525000**

Proposed Sanitary Wastewater System – Cost Estimate

Infrastructure Component

Items:	Total Cost
1.0 - C1N 200mm Gravity Main	\$890,000
2.0 - C1N Country Lane Lift Station	\$2,025,000
3.0 - C1N 200mm Forcemain	\$1,430,000
4.0 - C1S 300mm Gravity Main	\$930,000
5.0 - All - Main Lift Station	\$3,375,000
6.0 - All - 400mm Forcemain to WWTP	\$560,000
7.0 - C2 300mm Gravity Main	\$960,000
8.0 - C3 300mm Gravity Main	\$1,550,000
9.0 - C3 Saddlebrook Lift station	\$2,025,000
10.0 - C3 250mm Forcemain	\$2,880,000
11.0 - Aldersyde WWTP	\$26,700,000
12.0 - Outfall Line	\$1,700,000
13.0 - Outfall	\$540,000
Total:	\$45,565,000

1.0 - C1N 200mm Gravity Main

Item	Quantity	Units	Unit Rate	Extension
Mobilization	1	LS	48684	48684
Connect to LS and collection	2	each	5000	10000
Supply/Install 200mm PVC SDR 35	1744	lm	251	437744
Supply/Install Manholes - Type 5A	10	each	6665	66650
Supply/Install road crossings 200mm HDPE DR11 by HDD	0	lm	1500	0
Supply/Install access crossings 200mm HDPE DR11 by HDD	50	lm	1000	50000
Supply/Install railway crossings 200mm Steel by Auguring	0	lm	2000	0
Tracer Wire c/w junction boxes	1794	lm	4	7176
Sanitary Warning signs	7	each	300	2100
Site restoration	1	LS	34880	34880
Subtotal				657234
Engineering (10%)				65723
Contingency (25%)				164309
1.0 Total				890000

2.0 - C1N Country Lane Lift Station

Item	Quantity	Units	Unit Rate	Extension
Country Lane Lift Station	1	LS	1500000	1500000
Subtotal				1500000
Engineering (10%)				150000
Contingency (25%)				375000
2.0 Total				2025000

3.0 - C1N 200mm Forcemain

Item	Quantity	Units	Unit Rate	Extension
Mobilization	1	LS	76736	76736
Connect to Lift Station and Gravity	2	each	5000	10000
Supply/Install 200mm HDPE DR11	1812	lm	315	570780
Supply/Install 200mm Gate valves	1	each	3573	3573
Supply/Install road crossings 200mm HDPE DR11 by HDD	135	lm	1500	202500
Supply/Install access crossings 200mm HDPE DR11 by HDD	40	lm	1000	40000
Supply/Install railway crossings 200mm Steel by Auguring	40	lm	2000	80000
Supply/Install Air Release Valves	1	each	5000	5000
Tracer Wire c/w junction boxes	2027	lm	4	8108
Forcemain Warning signs	10	each	300	3000
Site restoration	1	LS	36240	36240
Subtotal				1035937
Engineering (10%)				103594
Geotechnical (CPR Crossing)				35000
Contingency (25%)				258984
3.0 Total				1430000

4.0 - C1S 300mm Gravity Main

Item	Quantity	Units	Unit Rate	Extension
Mobilization	1	LS	50807	50807
Connect to Main LS and collection	2	each	5000	10000
Supply/Install 300mm PVC SDR 35	1121	lm	325	364325
Supply/Install Manholes - Type 5A	7	each	6665	46655
Supply/Install road crossings 300mm HDPE DR11 by HDD	70	lm	1500	105000
Supply/Install access crossings 300mm HDPE DR11 by HDD	20	lm	1000	20000
Supply/Install Watercourse crossings 300mm Steel by Auguring	30	lm	2000	60000
Tracer Wire c/w junction boxes	1221	lm	4	4884
Sanitary Warning signs	6	each	300	1800
Site restoration	1	LS	22420	22420
Subtotal				685891
Engineering (10%)				68589
Contingency (25%)				171473
4.0 Total				930000

5.0 - All - Main Lift Station

Item	Quantity	Units	Unit Rate	Extension
Main Lift Station	1	LS	2500000	2500000
Subtotal				2500000
Engineering (10%)				250000
Contingency (25%)				625000
5.0 Total				3375000

6.0 - All - 400mm Forcemain to WWTP

Item	Quantity	Units	Unit Rate	Extension
Mobilization	1	LS	30712	30712
Connect to Lift Station and Gravity	2	each	5000	10000
Supply/Install 400mm HDPE DR11	480	lm	672	322560
Supply/Install 400mm Gate valves	1	each	13541	13541
Supply/Install road crossings 400mm HDPE DR11 by HDD	0	lm	1500	0
Supply/Install access crossings 400mm HDPE DR11 by HDD	20	lm	1000	20000
Supply/Install river crossings 400mm HDPE DR11 by HDD	0	lm	2000	0
Supply/Install Air Release Valves	1	each	5000	5000
Tracer Wire c/w junction boxes	500	lm	4	2000
Forcemain Warning signs	4	each	300	1200
Site restoration	1	LS	9600	9600
Subtotal				414613
Engineering (10%)				41461
Contingency (25%)				103653
6.0 Total				560000

7.0 - C2 300mm Gravity Main

Item	Quantity	Units	Unit Rate	Extension
Mobilization	1	LS	52944	52944
Connect to Main LS and collection	2	each	5000	10000
Supply/Install 300mm PVC SDR 35	1285	lm	325	417625
Supply/Install Manholes - Type 5A	8	each	6665	53320
Supply/Install road crossings 300mm HDPE DR11 by HDD	30	lm	1500	45000
Supply/Install access crossings 300mm HDPE DR11 by HDD	100	lm	1000	100000
Supply/Install Railway crossings 300mm Steel by Auguring	0	lm	2000	0
Tracer Wire c/w junction boxes	1415	lm	4	5660
Sanitary Warning signs	15	each	300	4500
Site restoration	1	LS	25700	25700
Subtotal				714749
Engineering (10%)				71475
Contingency (25%)				178687
7.0 Total				960000

8.0 - C3 300mm Gravity Main

Item	Quantity	Units	Unit Rate	Extension
Mobilization	1	LS	85301	85301
Connect to Main LS and collection	2	each	5000	10000
Supply/Install 300mm PVC SDR 35	2368	lm	325	769600
Supply/Install Manholes - Type 5A	14	each	6665	93310
Supply/Install road crossings 300mm HDPE DR11 by HDD	30	lm	1500	45000
Supply/Install access crossings 300mm HDPE DR11 by HDD	10	lm	1000	10000
Supply/Install Railway crossings 300mm Steel by Auguring	40	lm	2000	80000
Tracer Wire c/w junction boxes	2448	lm	4	9792
Sanitary Warning signs	4	each	300	1200
Site restoration	1	LS	47360	47360
Subtotal				1151563
Engineering (10%)				115156
Contingency (25%)				287891
8.0 Total				1550000

9.0 - C3 Saddlebrook Lift station

Item	Quantity	Units	Unit Rate	Extension
Saddlebrook Lift Station	1	LS	1500000	1500000
Subtotal				1500000
Engineering (10%)				150000
Contingency (25%)				375000
9.0 Total				2025000

10.0 - C3 250mm Forcemain

Item	Quantity	Units	Unit Rate	Extension
Mobilization	1	LS	158068	158068
Connect to Lift Station and Gravity	2	each	2500	5000
Supply/Install 250mm HDPE DR11	4003	lm	434	1737302
Supply/Install 250mm Gate valves	1	each	5318	5318
Supply/Install road crossings 250mm HDPE DR11 by HDD	70	lm	1500	105000
Supply/Install access crossings 250mm HDPE DR11 by HDD	20	lm	1000	20000
Supply/Install river crossings 250mm HDPE DR11 by HDD	0	lm	2000	0
Supply/Install Air Release Valves	1	each	5000	5000
Tracer Wire c/w junction boxes	4093	lm	4	16372
Forcemain Warning signs	6	each	300	1800
Site restoration	1	LS	80060	80060
Subtotal				2133920
Engineering (10%)				213392
Contingency (25%)				533480
10.0 Total				2880000

11.0 Aldersyde WWTP

Item	Quantity	Units	Unit Rate	Extension
Aldersyde WWTP	1	LS	26700000	26700000
Subtotal				0
Engineering (10%)				0
Contingency (25%)				0
11.0 Total				26700000

12.0 - Outfall Line

Item	Quantity	Units	Unit Rate	Extension
Mobilization	1	LS	91629	91629
Connect to Lift Station and Gravity	2	each	2500	5000
Supply/Install 400mm HDPE DR11	1172	lm	672	787584
Supply/Install 400mm Gate valves	2	each	13541	27082
Supply/Install road crossings 400mm HDPE DR11 by HDD	125	lm	0	113909
Supply/Install access crossings 400mm HDPE DR11 by HDD	20	lm	0	0
Supply/Install CP crossings 400mm HDPE DR11 by HDD	30	lm	0	176244
Supply/Install Air Release Valves	1	each	5000	5000
Tracer Wire c/w junction boxes	1327	lm	4	5308
Forcemain Warning signs	6	each	300	1800
Site restoration	1	LS	23440	23440
Subtotal				1236996
Engineering (10%)				123700
Geotechnical (CPR Crossing)				35000
Contingency (25%)				309249
12.0 Total				1700000

13.0 - Outfall

Item	Quantity	Units	Unit Rate	Extension
Outfall	1	LS	400000	400000
Subtotal				0
Engineering (10%)				40000
Contingency (25%)				100000
13.0 Total				540000
Total 1.0-13.0				45565000