AGENDA
Bentley Town Council
Tuesday September 24, 2024
6:30pm Regular Meeting of Council

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1. **Call To Order**

2. **Indigenous Acknowledgement**

   "We acknowledge that we are meeting on Treaty 6 Territory and Home of Metis Nation Region 3, on land that is part of a historic agreement involving mutuality and respect. We recognize all the many First Nations, Metis, Inuit, and non-First Nations whose footsteps have marked these lands."

3. **Amendments & Acceptance of Agenda**

4. **Adoption of Previous Minutes:**

   a) **Regular Meeting of Council September 10, 2024**

5. **Financial:**

   a) **Prepaid Cheque Listing – Cheques No. 20240695 to 20240743**

6. **New Business**

   a) **Public Hearing re: Bylaw 249-2024 – Sunset Heights Area Structure Plan**

      Applicant:
      - **Town of Bentley**
        - **Development Officer Presentation**

      Delegates:
      - **None Registered**

   b) **Bylaw 249-2024 – Sunset Heights Area Structure Plan – Consideration of 2nd and 3rd Reading**

   c) **Asset Management – Phase II**
      - **Presentation from Stantec Consulting**

   d) **Parkland Regional Library System 2025 Budget**

7. **Correspondence**

    a) **Lacombe County Council Highlights September 12, 2024**

    b) **Good Neighbor Day Poster – Sept 25 - 3:30pm to 7:30pm**

    c) **Hazardous Waste Roundup (LRWSC) – Bentley Transfer Site Oct 5, 2024, 1:00pm to 4:45pm**

    d) **Annual Yard Waste Clean-Up – Friday October 18, 2024**

8. **Other Business**

    a) **Notice of Public Meeting October 9, 2024 – Proposed Town of Bentley Land Use Bylaw Consolidation and Changes**

9. **Adjournment**

Minutes of the Regular of the Council of the Town of Bentley
September 10, 2024

Date and Place

Minutes of the Regular Meeting of the Council of the Town of Bentley held Tuesday, September 10, 2024, at 6:30 p.m., in the Bentley Municipal Office

In Attendance

Mayor Greg Rathjen
Deputy Mayor Eastman
Councillor Valiquette
Councillor Hansen
Councillor Grimsdale
CAO, Marc Fortais

Call to Order

Mayor Rathjen called the regular council meeting to order at 6:30pm

Indigenous Acknowledgement

"We acknowledge that we are meeting on Treaty 6 Territory and Home of Metis Nation Region 3, on land that is part of a historic agreement involving mutuality and respect. We recognize all the many First Nations, Metis, Inuit, and non-First Nations whose footsteps have marked these lands."

Read by Mayor Rathjen

Agenda

Motion 164/2024 Moved by Councillor Grimsdale, "THAT the agenda of the September 10, 2024, regular meeting be accepted."

Carried

Previous Minutes

Motion 165/2024 Moved by Councillor Hansen "THAT the minutes of the August 27, 2024, Regular Meeting of Council be accepted."

Carried

Financial

a) Prepaid Cheque Listing – Cheques No. 20240655 to 20240694

Motion 166/2024 Moved by Deputy Mayor Eastman "THAT Cheques No. 20240655 to 20240694 be received for information."

Carried

New Business

a) Town Mural Project

Motion 167/2024 Moved by Councillor Valiquette, "THAT Mayor and Council, authorize CAO Marc Fortais to enter into a contract for a maximum price of $13,650 plus GST with Little John's Custom Painting to commission a 546 sq foot mural that pays tribute to Oxford School and the historic Bentley Grain Elevators with a Prairie Scene; AND

THAT Mayor and Council approve the final design and rendering for the mural.

Carried

b) Bylaw #249/2024 Sunset Heights Area Structure Plan

Motion 168/2024 Moved by Councillor Hansen, "THAT Bylaw 249/2024 – The sunset Heights Area Structure Plan, be given first reading this 10th day of September 2024; AND

THAT a public hearing be scheduled for the September 24, 2024, Regular Meeting of Council.

Carried

c) Sentinel Storage AB Women's Curling Sponsorship

Motion 169/2024 Moved by Councillor Grimsdale, "THAT a donation of $250 be provided as community sponsorship to the 2025 Alberta Sentinel Storage Women's Curling Championships in Rimbey Alberta to take place January 21 to 26 2025.

Carried

Correspondence

a) Lacombe County Council Highlights August 22, 2024
b) Good Neighbor Day Poster – September 25 3:30pm to 7:30pm
c) Hazardous Waste Roundup (LRWSC) – Bentley Transfer Site Oct 5, 2024, 1:00pm to 4:45pm

Motion 170/2024 Moved by Deputy Mayor Eastman, "THAT correspondence item a to c be accepted as information."

Carried

An additional item of discussion took place in relation to the Lacombe County Council Highlights regarding the Gull Lake Regional Master Drainage Feasibility Study.

Mayor Rathjen brought up the fact that he was attending meetings regarding the water issues for Gull Lake. In addition, it was discussed that CAO Marc Fortais reach out to CAO of Gull Lake regarding the water issued and how Bentley can support.

Motion 171/2024 Moved by Councillor Hansen, "THAT Mayor Rathjen bring back information regarding his role as a liaison to the Gull Lake Watershed and what that specifically entails."

Carried

Other Business

a) Medicine Lodge Ski Hill Update

CAO Marc Fortais provided an update of the progress of the Ski Club to obtain funding for the Samson T-Bar. A grant application was submitted to the Active Communities Grant. The Town of Bentley supported the application by assisting to obtain letters of support from neighboring communities. Letters were obtained from Ponoka, Rimbey, Eckville, Sylvan Lake, Town of Bentley, MLA Nixon's Office, Lacombe County. If successful with the grant the funds will be used to re and re the Samson T-Bar and undertake a desktop hydrological study.

No motion was made for this item, it was provided as an update only

Council Reports

a) Mayor Rathjen
b) Deputy Mayor Eastman
c) Councillor Grimsdale
d) Councillor Hansen
e) Councillor Valiquette

Motion 172/2024 Moved by Councillor Valiquette, "THAT the August Council Reports be accepted as information."

Adjournment

Mayor Rathjen adjourned the September 10, 2024, Regular Council Meeting at 7:28pm

Mayor Greg Rathjen **CAO Marc Fortais**

TOWN OF BENTLEY

Cheque Listing For Council

2024-Sep-18
2:18:21PM

Cheque #	Cheque Date	Vendor Name	Invoice #	Invoice Description	Invoice Amount	Cheque Amount
20240695	2024-09-04	HIGH PRESSURE FLUSHING INC.		PAYMENT		8,872.50
			2532.	WASTEWATER-FLUSHING ALL S/	8,872.50	
20240696	2024-09-04	KTI LIMITED	REPL-20240587	Replacement Cheque	630.00	630.00
			REPL-20240587	Replacement Cheque		
20240697	2024-09-04	LACOMBE COUNTY	REPL-2024058{	Replacement Cheque	2,379.84	2,379.84
			REPL-2024058{	Replacement Cheque		
20240698	2024-09-04	SHAW CABLE	REPL-2024059(	Replacement Cheque	278.25	278.25
			REPL-2024059(	Replacement Cheque		
20240699	2024-09-04	TELUS MOBILITY INC.	REPL-20240591	Replacement Cheque	76.65	76.65
			REPL-20240591	Replacement Cheque		
20240700	2024-09-04	MOORE'S BACKHOE SERVICE LTD.	REPL-20240592	Replacement Cheque	2,100.00	2,100.00
			REPL-20240592	Replacement Cheque		
20240701	2024-09-04	OUTLAW ELECTRIC LTD.	REPL-2024059{	Replacement Cheque	2,364.97	2,364.97
			REPL-2024059{	Replacement Cheque		
20240702	2024-09-06	1704567 ALBERTA LTD.		PAYMENT		132.30
			1108	CURLING RINK & ARENA BAIT TF	132.30	
20240703	2024-09-06	BLACK PRESS GROUP LTD.		PAYMENT		100.48
			BPI192215	ADVERTISING IN THE RIMBEY RI	100.48	
20240704	2024-09-06	CALMONT EQUIPMENT LTD		PAYMENT		2,181.68
			P23269	BROOMS FOR HOPPER & TOOL(	2,181.68	
20240705	2024-09-06	CHAPMAN RIEBEEK LLP		PAYMENT		56.96
			2409006	GENERAL MATTERS	56.96	
20240706	2024-09-06	GREGG DISTRIBUTORS LP		PAYMENT		1,466.34
			059-671027	ARENA & OFFICE JANITORIAL SU	120.92	
			059-671028	GARBAGE, SHOP & WASTEWATE	338.58	
			059-672151	OFFICE MAINTENANCE SUPPLIE	26.00	
			059-672152	PARKS & REC SPRAYER	147.27	
			059-672938	ARENA JANITORIAL SUPPLIES	625.35	
			059-674193	ARENA JANITORIAL SUPPLIES	116.42	
			059-675026	ARENA JANITORIAL SUPPLIES	8.01	
			059-675027	PARKS & REC GENERAL SUPPLI	83.79	
20240707	2024-09-06	PRINCESS AUTO		PAYMENT		241.49
			3179010	HYDROLIC CYLINDER FOR JOHI	241.49	
20240708	2024-09-06	RATHJEN, GREG		PAYMENT		17.70
			31082024	MILEAGE REIMBURSEMENT MEI	17.70	
20240709	2024-09-06	TELUS COMMUNICATIONS INC.		PAYMENT		601.12
			04092024	ARENA WIFI	110.25	
			04SEPT2024	INTERAC LINE	37.54	
			SEPT0424	TELUS BILL FOR SEPTEMBER	453.33	
20240710	2024-09-15	RATHJEN, ARTHUR M				
20240711	2024-09-15	VALIQUETTE, BRENDA C				
20240712	2024-09-15	HANSEN, PAMELA				
20240713	2024-09-15	GRIMSDALE, DALE A				
20240714	2024-09-15	EASTMAN, LENORE M				
20240715	2024-09-15	CARSON, BARBARA J				
20240716	2024-09-15	JENSEN, DARREN J				
20240717	2024-09-15	MEREDITH, SANDRA L				
20240718	2024-09-15	GIBSON, COLE C				
20240719	2024-09-15	DENNEHY, NATHAN				

TOWN OF BENTLEY

Cheque Listing For Council

2024-Sep-18
2:18:21PM

Cheque #	Cheque Date	Vendor Name	Invoice #	Invoice Description	Invoice Amount	Cheque Amount
20240720	2024-09-15	GREAVES, LORYANNE				
20240721	2024-09-15	FORTAIS, MARC C				
20240722	2024-09-15	KIKSTRA, ROBERT B				
20240723	2024-09-15	LOOV, CHRISTOPHER D				
20240724	2024-09-13	327241 ALBERTA LTD.	1355	PAYMENT ANIMAL CONTROL SERVICES FC	1,207.50	1,207.50
20240725	2024-09-13	ACCESS GAS SERVICES	202408-AB1878	PAYMENT NATURAL GAS BILL FOR AUGUS'	402.01	402.01
20240726	2024-09-13	ADT SECURITY SERVICES CANADA INC.	34420274	PAYMENT PUMPHOUSE SECURITY	31.50	31.50
20240727	2024-09-13	G.L.D.C. GAS CO-OP LTD.	706965	PAYMENT BENTLEY FIREHALL NATURAL G.	41.98	41.98
20240728	2024-09-13	GO SERVICES INC.	15175198	PAYMENT PORTA POTTY SERVICING FOR /	866.25	866.25
20240729	2024-09-13	HHID	069510	PAYMENT DEM PAYMENT FOR SEPTEMBEI	787.50	787.50
20240730	2024-09-13	LACOMBE REGIONAL WASTE SERVICES COMM	38064	PAYMENT 2024 THIRD QUARTER REQUISIT	16,851.25	16,851.25
20240731	2024-09-13	MOORE'S BACKHOE SERVICE LTD.	1116	PAYMENT WATER - SERVICE BOX & PIN RE	2,688.00	2,688.00
20240732	2024-09-13	MY TECH ONSITE	AGR-MT 308	PAYMENT PW REPLACEMENT 2 MONITORS	354.87	354.87
20240733	2024-09-13	SERVUS CREDIT UNION	30082024	PAYMENT SERVUS MASTERCARD BILL FOI	4,706.34	4,706.34
20240734	2024-09-13	TELUS MOBILITY INC.	09092024	PAYMENT PW CELL PHONES & FIRE DEPT	122.10	122.10
20240735	2024-09-13	TOWN OF PENHOLD	42090	PAYMENT 2024-2025 MEMBERSHIP FEE CE	150.00	150.00
20240736	2024-09-13	WORKERS' COMPENSATION BOARD	27484755	PAYMENT INSTALLMENT PAYMENT	3,296.53	3,296.53
20240737	2024-09-17	LITTLE JOHN'S CUSTOM PAINTING	060	PAYMENT DEPOSIT FOR MURAL	5,016.38	5,016.38
20240738	2024-09-17	AMSC INSURANCE SERVICES LTD.	0869HS	PAYMENT HEALTH SPENDING ACCOUNT	86.24	86.24
20240739	2024-09-17	CANADA REVENUE AGENCY	20231231	PAYMENT REDUCED EI ACCT (PIER SUMM/	224.24	224.24
20240740	2024-09-17	CANOE PROCUREMENT GROUP OF CANADA, D	AB229534	PAYMENT WASTEWATER LAGOON DIGEST	6,947.33	6,947.33
20240741	2024-09-17	LACOMBE COUNTY	IVC00045516	PAYMENT AUGUST 2024 FIRE PAYROLL & T	2,299.56	2,299.56
20240742	2024-09-17	LOOV, CHRISTOPHER	15092024	PAYMENT REIMBURSEMENT PPE WORK B	146.99	146.99
20240743	2024-09-17	SYLVAN LAKE SUMMER HOCKEY CAMP LTD	30092024	PAYMENT ARENA CARETAKER PAYMENT F	6,825.00	6,825.00

Total 95,554.57

*** End of Report ***

Area Structure Plan – Sunset Heights

Bylaw 249/2024 - Public Hearing
September 24, 2024, 6:35 pm

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1. Call to Order

2. Introduction of members of the Hearing Board (Council)

3. Land Use By-law No. 249-2024 (Development Officer/CAO)

4. The hearing of oral or written submissions in favor of or not in favor of the By-law No. 249-2024 – Sunset Heights Area Structure Plan

- The Chairperson shall request those making a presentation to identify themselves and declare if they are in favor or not in favor of the proposed Bylaw 249-2024 – Sunset Heights Area Structure Plan. Those that have registered will be called up one at a time to speak. If a letter has been written, the Development Officer/CAO will read the letter.

- Verbal presentations are limited to five (5) minutes

5. Adjournment

Agenda Date: **September 24, 2024**

Agenda Item: **New Business:**
Bylaw # 249-2024 Sunset Heights Area Structure Plan

LEGISLATIVE REQUIREMENTS

WHEREAS the Council of the Town of Bentley recognizes the need to update and repeal the former Summersault Area Structure Plan and replace it with a new Area Structure Plan (Sunset Heights Area Structure Plan) to establish a framework and guide future development in better alignment to the market and to community priorities for the land legally described as S.W. 26-40-1-W5M, consisting of approximately 17.81 hectares (44acres) as shown and attached to Bylaw 249-2024 as Schedule B and forming part of the By-law;

AND WHEREAS, Section 633 of the Municipal Government Act, Chapter M-26 of the Revised Statutes of Alberta, provides for the development and adoption of an Area Structure Plan;

AND WHEREAS, notice has been given of Council's intention to pass this By-law on September 10, 2024, and September 17, 2024, issues of the Rimbey Review;

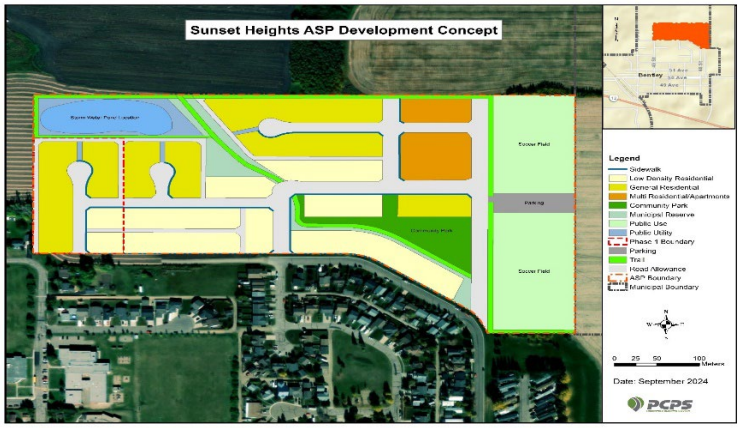
AND WHEREAS, first reading of Bylaw 249-2024 Sunset Heights Area Structure Plan took place at the September 10, 2024, Regular Meeting of Council;

AND WHEREAS, a Public was scheduled and took place at the September 24, 2024 Regular Meeting of Council, to allow the general public to further comment on the proposed Sunset Heights Area Structure Plan;

SUMMARY AND BACKGROUND

Sunset Heights Areas Structure Plan ***(Figure 1)*** is intended to create a framework for future subdivision and residential and recreational development of lands that are owned by the Town of Bentley in the North Side of the Community.

Figure 1 Sunset heights Area Structure Plan Concept



The area covered by the plan is approximately 17.81 ha (44 acres) ***(Figure 2)*** in total size and is legally described as SW 26-40-1-W5M. It is located within the Urban Reserve (UR) District. The area also includes phase 1 **(Attachment #1)** which has been developed and is formerly known as the New Beginnings Subdivision.

The Town owns the entire parcel and in phase 1 a total of 25 lots are currently fully serviced. Out of those 25 lots 4 lots were sold and a 4plex was constructed and occupied. 1 lot was developed as a single-family dwelling and is occupied. Currently 3 additional lots have been sold in 2024, and construction is beginning on two of them.

The subject site is located within the former Northeast Area Structure Plan ***(Figure 3),*** which was adopted in 1993 and envisioned as a low-density residential development. Although some development has occurred as a result of that initial ASP, the majority of the land remained undeveloped.

Figure 2 Site Area

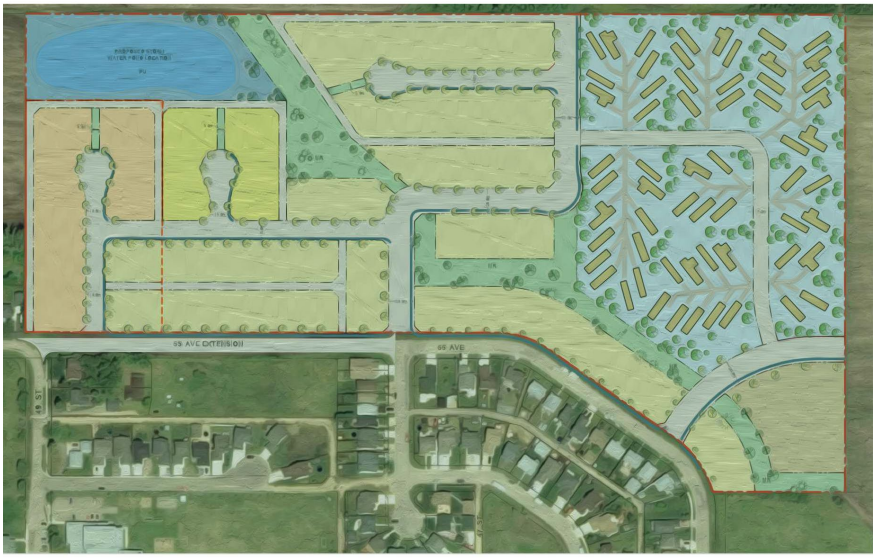
Figure 3 1993 Development Concept

In 2005 and 2006 the site was revisited, and a number of environmental and engineering studies were undertaken to further assess the development potential of the property. **Figure 4** shows the revised development concept, which envisioned a neighborhood featuring detached single-family homes, however again it did not lead to development of the subject property.

Figure 4 2005 Development Concept

Further in 2014, the Town of Bentley again revisited the plan with the help of WSP and created the Summersault Area Structure Plan (ASP) as shown in (**Figure 5)** below. The Plan was passed through Bylaw 178/2014 ***(Attachment #2)***, which also rescinded the former Northeast Area Structure Plan Bylaw 528/93.

Figure 5 2014 Summersault Area Structure Plan



The adjacent land to Phase 1 is under consideration to incorporate additional recreational space and to remove the previously designated areas for an expansion of the Manufactured Home Park. This is the intent and purpose of revising the Area Structure Plan formally know as the Summersault Area Structure Plan, which is now being considered with a new name Sunset Heights Area Structure Plan **(Attachment #3).**

To properly revise the Summersault Area Structure Plan (ASP) developed by WSP in 2014, it is crucial to understand the governing documents and existing land use policies. Additionally, reviewing past technical documents was essential for assessing the developments feasibility and identifying any design related issues that may need to be addressed. As a result, the new Sunset Heights ASP must

conform to the policies outlined in the Town's most recent Municipal Development Plan adopted in 2016 and the Town's new Community Strategic Plan adopted in 2024. In addition, once the Sunset Heights ASP is finalized , the town will recommend repealing the current Summersault ASP as part of the approvals process for the new Sunset Heights ASP.

The Town's consultant Parkland Community Planning Association (PCPS) has undertaken a thorough review of the MDP 2016. Community Strategic Plan 2024, Northeast Area Structure Plan (1993), Parks and Open Space Plan (2008), Land Supply and Future Growth Assessment Document, and the 2016 Land Use Bylaw and current proposed revisions to the Land Use Bylaw.

In addition to considering previous plans, policies, and strategies it was important to involve the Bentley community in the decision-making process so that any new plan reflects the desires, wants, and needs of the community. Therefore, two community surveys were undertaken in 2024, one for the new strategic plan, which ran in April and closed on April 26, 2024. The second, specifically regarding revisions to the Summersault Area Structure Plan ran in June and closed on June 24, 2024. Both Surveys made it clear that manufactured homes were not a priority for this area, and instead the community expressed a strong and enthusiastic desire for additional recreation space and a soccer field. This feedback has been taken into consideration and has been incorporated into the new ASP.

CURRENT STATUS

In developing the new ASP several key factors have been considered including:

1.) Residential Land Use Districts in the Concept Plan

- Variety of housing types for current and future residents with diverse family structures and income levels.
- Flexibility of the plan that follows the MDP maximum of 15 units per hectare.
- Incorporation of recreation space – soccer field, park areas and 26.7 acres of net residential land.
- Alignment to existing land uses to the south by introducing detached SFD along 55th avenue. Remainder of site features a blend of detached SFD, duplexes, row houses, and multi-unit development potential.
- Multi-unit proposed in proximity to recreation space and includes a buffer zone between the residential and recreation space to ensure peaceful living environment while having convenient access to amenities.
- Compatibility and adequate parking space provisions will be determined during the development permit stage. Neither of these sites isolate individual parcels nor restrict.
- Neighborhood park and open space corridor have been integrated throughout the entire development. The open space corridor through the plan also continues to function as a stormwater drainage channel culminating with a dry landscaped stormwater retention pond in the northwest corner of the development.

2.) Land Use Statistics

Table 5) Land Use Statistics		
Land Use	Area (acres)	Percentage
Plan Area (total)	44.05	100%
Residential Development	26.74	61.70%
Public Parks and Open Space – Municipal Reserve	6.51	14.78%
Circulation – Roads and Lanes	7.83	17.78%
Public Utility – Stormwater Pond	2.97	6.74%

3.) Transportation and Road Network

Integrated urban transport and road network with better flow than the previous ASP. This takes into consideration extensions of 47A and 46 St to create better flow than the previous plans. The incorporation of green space will also allow for snow storage in winter to assist Public Works operations. There is a more efficient grid pattern established than in the previous ASP to allow for better access, circulation, and overall improved maintenance ability.

4.) Incorporation of New Soccer Field and Recreation Space

The public spoke and we listened. Amenities for youth including soccer fields, sports fields and running track to support the school to promote physical activity and provide a space for social interaction. The area will include additional parking and phaseable amenities such as bleachers, washrooms etc.

The draft Sunset Heights Area Structure Plan ***(Attachment 4 – Power Point Sunset Heights Area Structure Plan)*** was presented to council for additional feedback and direction regarding next steps on August 27, 2024. The current version of the plan incorporates all feedback obtained through extensive public engagement and from any comments and considerations from Mayor and Council.

In addition, Mayor and Council gave first reading of Bylaw 249/2024 at the Regular Council Meeting on September 10, 2024, and provided notice of a public hearing to occur on September 24, 2024, at the same meeting as well as through media channels. The Public Hearing was advertised in the Rimbey Review on September 10 and September 15 and notice was also posted on the Town Website and through the Town's Facebook page.

Administration is recommending that Mayor and Council consider any feedback gathered through the public hearing regarding the Bylaw and to consider Bylaw 249/2024 – Sunset Heights Area Structure Plan for 2nd and 3rd reading, which will also include the repeal of Bylaw 178-2014 Summersault Area Structure Plan and all amendments thereto.

RATIONALE FOR RECOMMENDATION

Substantial engagement has taken place with the public regarding the changes to the original Summersault Area Structure Plan which will be replaced by the Sunset Heights Area Structure Plan.

The community has spoken and has shown significant support for the addition of recreational space and the removal of additional mobile home park space within the ASP.

BUDGET AND FINANCIAL

- **$19,000 for Planning work related to the ASP revisions. This included survey, research, draft, presentations, and finalization.**

- **Soccer Field cost finalization will be calculated once Lacombe County has a chance to review a finalized conceptual design and undertake materials and time calculations.**

ALTERNATIVES

1. Council approves the bylaw as It stands.
2. Council amends the bylaw based on feedback obtained from the public hearing and then either approves or defeats the amended bylaw.
3. Council provides direction to administration to change the proposed bylaw based on feedback obtained from the public hearing and sends the bylaw back to administration to edit and bring back for consideration of 2nd and 3rd reading.
4. Council defeats the bylaw as it stands.

RECOMMENDATION

THAT Bylaw 249/2024 Sunset Heights Area Structure Plan, be given 2nd reading this 24th day of September 2024; AND

THAT Bylaw 249/2024 Sunset Heights Area Structure Plan, be given 3rd and final reading this 24th day of September 2024; AND

THAT Bylaw 178/2014 Summersault Area Structure Plan and all amendments thereto be repealed and replaced by Bylaw 249/2024 Sunset Heights Area Structure Plan this 24th day of September 2024.

ATTACHMENTS

1) Map – Phase 1 Sunset Heights Subdivision
2) Bylaw 178/2014 - Summersault Area Structure Plan
3) Bylaw 249/2024 - Sunset Heights Area Structure Plan Draft
4) Power Point Sunset Heights Area Structure Plan

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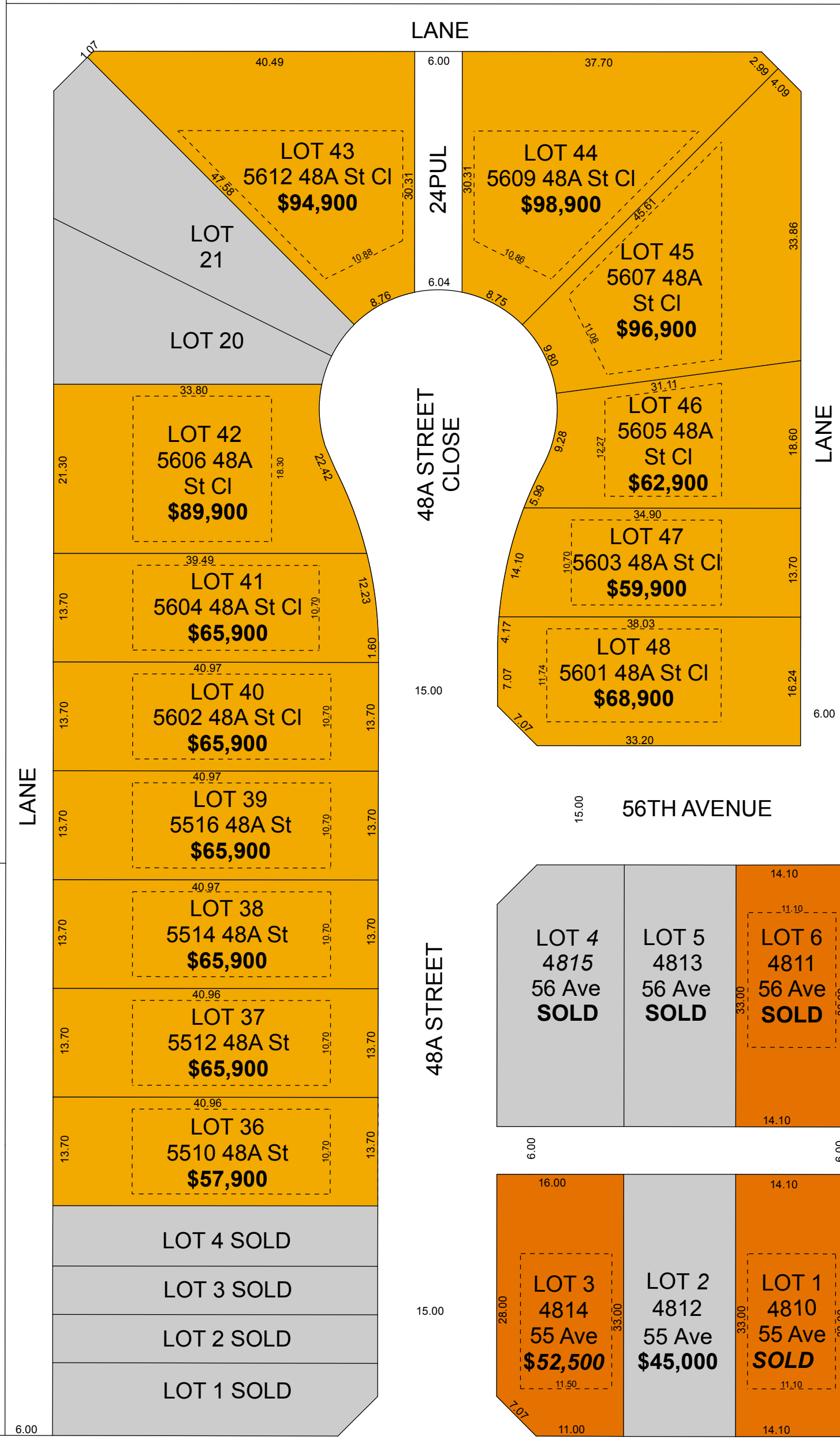
Marc Fortais, CAO



Lot Areas

Lot Number	Area (m^2)
1	465.3
3	515.0
6	465.3
36	561.4
37	561.4
38	561.4
39	561.4
40	561.4
41	555.8
42	763.7
43	833.4
44	828.1
45	828.0
46	529.7
47	505.1
48	607.3

SUNSET HEIGHTS SUBDIVISION

- Parcels Not Owned By Town
- Building Envelop
- Single Family Detached (R2B)
- Single Family Detached (R1A)

Land Use Bylaw Designations: Low Density Residential (R1A)
General Residential (R2B)

Yard Requirements:
Front Yard 6.0 m
Side Yard 1.5 m or 3.0 m on Corner Parcel
Rear Yard 10.0 m

NOTE: All dimensions are metric. N.T.S. April 2023

Town of Bentley

PCPS community planning services

NORTH

By-law No. 178 / 2014

A By-law of the Town of Bentley, in the Province of Alberta, to rescind the North East Area Structure Plan By-law No. 528/93 and adopt the Summersault Area Structure Plan

WHEREAS, the Council of the Town of Bentley has recognized the need to prepare a new Area Structure Plan to establish the framework and guide the future development for the land legally described as S.W. 26-40-1-W5M, consisting of approximately 17.81 hectares (44 acres), as attached hereto as Schedule A and forming part of this By-law;

AND WHEREAS, Section 633 of the Municipal Government Act, Chapter M-26 of the Revised Statutes of Alberta, provides for the development and adoption of an Area Structure Plan;

AND WHEREAS, notice was given of Council's intention to pass this By-law in the August 5th, 2014 and August 12th, 2014 issue of the Rimbey Review;

AND WHEREAS, a Public Hearing was held on August 19th, 2014 to allow the general public to comment on the proposed Summersault Area Structure Plan;

NOW THEREFORE, the Council of the Town of Bentley, duly assembled, rescinds the North East Area Structure Plan By-law No. 528/93 and adopts the Summersault Area Structure Plan, being land legally described as the S.W. 26-40-1-W5M, as described in Schedule A, attached hereto and forming part of this By-law.

By-law No. 178 / 2014 read a first time this 29th day of July, 2014.

By-law No. 178 / 2014 read a second time this 19th day of August, 2014.

Initial

Amendment: Moved by Deputy Mayor Butch Howard that By-law No. 178/2014 be amended as follows:

> That maps Schedule A – Land Use Plan and Schedule B – Landscaping Plan be amended to show that the row of future housing running east to west, abutting the currently developed 55th Avenue, will be designated Low Density Residential District (R-1) to provide for single family detached dwellings as set out in Clause 5.1 (1) b) and Figure 6: Area to be developed only for detached single family homes (shown in yellow).

By-law No. 178 / 2014 read a third time, *as amended*, and finally passed this 19th day of August, 2014.

Lynda Haarstad Petter
Mayor

Chief Administrative Officer

Summersault Area Structure Plan

Summersault Developments

SW 26-40-1-5

Bentley, Alberta

September 15, 2014

141-16071-00

TABLE OF CONTENTS

SCHEDULES

1. INTRODUCTION

1.1 Purpose

The purpose of the Summersault Residential Area Structure Plan is to establish the framework for the future subdivision and development of the subject site legally described as SW 26-40-1-W5M. The Area Structure Plan provides detailed information on future land uses, densities, the location of parks and open spaces, vehicle circulation and municipal infrastructure. The Area Structure Plan has been prepared in consultation with Town Staff and is subject to the review and approval of Council.

1.2 Site Location, Context and History

The subject site is located in the north eastern portion of the Town of Bentley, north of 55th Avenue and east of 49th Street. The site is approximately 17.81 ha (44.0 acres) in size and located within the Urban Reserve (UR) District. As outlined in the Land Use Bylaw, the purpose of this district is to "*reserve land for future subdivision and Development until an overall plan is prepared for and approved by Council*".

The lands surrounding the site to the north, east and west are primarily undeveloped farmland. Lands immediately south consist of predominantly detached single-family homes within either the R1 (Low Density Residential) District or R2 (General Residential) District.

Figure 1: Site Location (shown in red)

The subject site is located within the former North East Area Structure Plan (Figure 2). This plan was adopted in 1993 and envisioned as a primarily low density residential development. While it appears some development occurred as a result of the ASP, the majority of the land remained undeveloped. In 2005 and 2006 the site was revisited with a number of environmental and engineering studies undertaken to assess the development potential of the property. This development concept (Figure 3)

also envisioned a neighborhood featuring detached single-family homes; however, it did not lead to the development of the subject property.

Figure 2: Northeast Area Structure Plan Concept (1993)

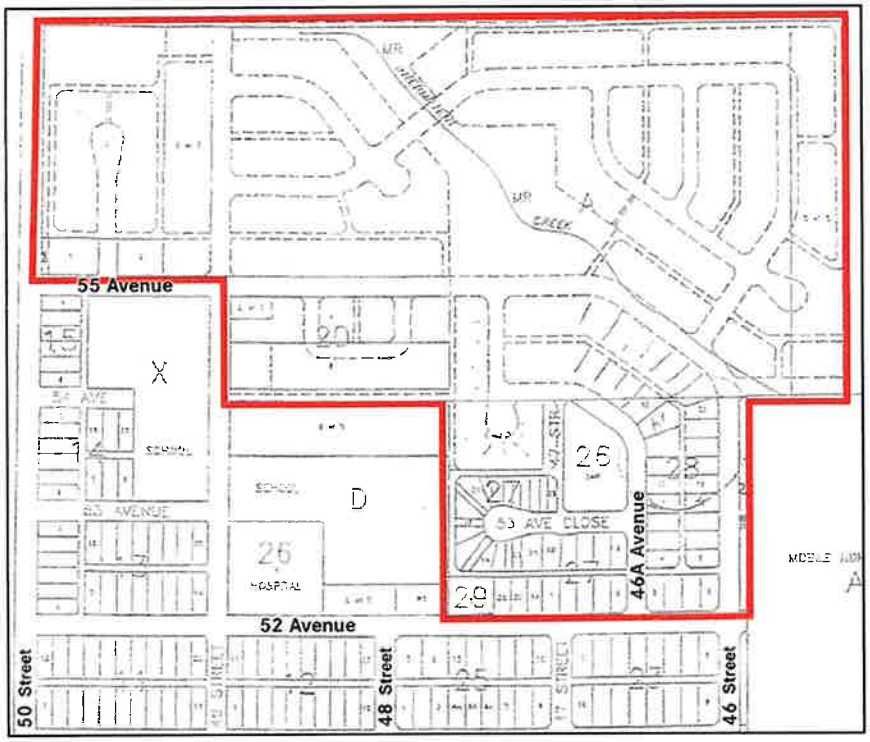


Figure 3: 2005 Development Concept

2. DEVELOPMENT CONCEPT

The proposed Land Use Plan is provided in Schedule A. The goal of the development is to provide numerous housing alternatives and styles not presently found in Bentley. While the exact breakdown and of the residential land uses is currently unknown, it is the developer's intent to provide a mixture of single-family, duplex, townhouse, manufactured dwellings and small apartment buildings. The limited housing alternatives are evidenced by the 2011 Census which indicates 86% of private dwelling units are detached single-family dwellings.

Roads and lots were designed around the natural drainage channel that runs northwest across the property to a proposed stormwater detention pond. While not a regulated water feature, the drainage channel provides a natural open space for the development. In addition to helping to manage stormwater, the drainage channel and stormwater pond are intended to be designed as public amenities and recreational space.

2.1 Land Use

The focus of the Land Use Plan (Schedule A) is to provide a variety of residential housing alternatives integrated with a high quality open space and trail network. Table 1 provides a breakdown of the land use statistics associated with the proposed development with the various land uses being described in more detail below.

Table 1: Land Use Statistics		
Developable Area	***Area (acres)***	***%***
Plan Area (total)	**43.98**	**100%**
Environmental Reserve (Drainage Channel)	0.99	2.3%
Developable Area	42.99	97.7%
Land Use	***Acres***	***% of Developable Area***
R1 (Low Density Residential) District	3.46	8.0%
R2 (General Residential) District	14.33	33.3%
R3 (Manufactured Home) District	12.11	28.2%
Circulation – Roads and Lanes	7.17	16.7%
Municipal Reserve (MR)	2.72	6.3%
Public Utility Lot (PUL)	3.21	7.5%

2.1.1 Residential

The land use plan integrates within the existing land use pattern immediately south by proposing detached single-family homes along 55 Avenue across from existing development. The remaining portions of the property is intended to feature a mixture of detached single-family dwellings, duplexes,

row houses, multi-unit housing developments (consistent with the R1 and R2 Districts) and a manufactured home park (consistent with the R3 District). The variety of housing types provides new alternatives for existing and future residents of varying family composition and income levels. While the location of some land uses is provided in Schedule A, it is important to note that the exact disbursement and location of various land uses could change based on market demand. Development in smaller communities requires flexibility in terms of housing types as the market is often somewhat unknown and subject to dramatic shifts.

The Municipal Development Plan (MDP) stipulates a maximum density of 30 units per hectare for new developments. Based on 12.17 hectares of net developable land (Table 1), the site could accommodate 365 dwelling units under the MDP. It is estimated that the development (based on the current land use plan) could have between 240 and 275 residential units. While the exact density is not known at this time, at no point should the number of residential units exceed the 365 units permitted.

The residential streets will consist of a mix of lane and laneless dwellings. Detached single-family homes will be located along 55 Avenue immediately across from existing single-family homes. This is intended to provide a transition between the existing development and the proposed, higher density development on the subject site.

Manufactured homes continue to be a desirable homeownership option for young families, first time home buyers and lower income individuals. In understanding this, a manufactured home park has been proposed at the eastern portion of the subject site. The park will provide options for both single and double-wide manufactured homes with or without garages.

2.1.2 Open Space and Stormwater Detention Pond

The northwest corner of the site is designated for a stormwater detention pond. This is consistent with previous development concepts, engineering assessments and is based upon the natural topography and seasonal drainage channel found on the site. The seasonal drainage channel is not a regulated watercourse however it has been designated as Environmental Reserve. In addition to its benefits from a stormwater management perspective, the seasonal drainage channel and stormwater pond present the opportunity for an open space/park corridor extending from the southeast corner of the site to the northwest corner.

A trail network will be incorporated along the open space and provide a natural amenity feature and improved pedestrian connectivity within the development. The stormwater detention pond is intended to be a landscaped dry pond, designed to serve as an amenity and recreation feature for residents in addition to its stormwater management functions. Details surrounding the proposed open space and landscaping are outlined in Schedule B. The trail network and landscaping will be the responsibility of the developer with specifics surrounding the design being finalized at the detailed design stage of future phases.

2.2 Road Network

Three accesses to the subject site from 55 Avenue have been proposed. The Developer will be responsible for constructing the remaining portion of 55 Avenue between 49 Street and 47A Street. Road reserves are provided to the lands immediately north and east. Sidewalks have proposed along one side of the street and connect with the proposed trail network. The width and design of roadways in the development are based on consultation with Town Staff who are utilizing the standards currently in place for the City of Red Deer. Details surrounding the proposed roadway design are outlined in Schedule C.

2.3 Site Servicing

WSP Group prepared a Preliminary Servicing Study for the proposed development to determine the serviceability of the proposed development relative to Town's existing infrastructure. The following subsections outline the findings of this study.

2.3.1 Existing Conditions

The site is primarily rolling agricultural land. A seasonal watercourse meanders west from the southeast corner to the northwest corner of the site. Sanitary and water mains currently exist along 55 Ave.

2.3.2 Water Distribution System

The proposed water distribution system involves three connections to the existing water main in 55 Avenue and will include two stubs to allow for the future servicing of properties to the north and east. The watermain sizes will be 200mm, other than fire hydrant leads and dead end lines. There is a 250mm line provided to the north as identified in the North Bentley Development Study prepared by GM Will Consulting Limited. Modelling of the system will be completed as part of an Area Structure Plan to confirm sizing provided. Further details surrounding the proposed water distribution system can be found in Schedule D.

2.3.3 Sanitary Sewer System

The proposed sanitary sewer system is outlined in Schedule E. To achieve proper cover on the pipe the existing sanitary main in 55 Avenue will be reconstructed to the west as shown. This new 250mm main will service the entire development with a stub to the north and east for future servicing, as per the North Bentley Development Study prepared by GM Will Consulting Limited. Some fill will be required in a couple of the cul-de-sacs to achieve the minimum cover. These lots will most likely become walk out lots.

2.3.4 Site Grading and Major (Overland) Drainage

Road grades and surface drainage are designed to follow the natural land topography where practical. The general overland water flow is from the southeast to the northwest. Section 2.3.5 of this document provides greater detail on the overall stormwater concept.

2.3.5 Stormwater System

The stormwater drainage system is based upon the Dual Drainage Concept with minor and major

systems. The overall stormwater concept is provided in Schedule F.

A previously prepared stormwater report by Stantec in April, 2006 is still relevant today. The major changes are that predevelopment rates have gone down over the years and the predevelopment rate Stantec used of 13.6 litres per second per hectare (l/s/ha) is on the high side. Current rates are around 4 to 6 l/s/ha in this area. Based on a rate of 5 l/s/ha, the pond size would change requiring approximately 8,700 m^3 in area versus the 5,500 m^3 that Stantec had indicated. We have reviewed the pond area provided in the previously approved Outline Plan and determined it will be adequate for the increased storage volume. Modelling of the system will be completed as part of the Area Structure Plan to confirm the pond size.

The stormwater management facility will be dry pond designed as a landscaped feature. All inlets to the facilities will have sedimentation forebays designed to Alberta Environment Guidelines to remove suspended sediment.

2.3.6 Erosion and Sediment Control

During construction, silt fencing will be installed around the site, where feasible, to mitigate off-site flow of soil. All stockpiled material will have silt fence installed at the toe of the pile.

The storm ponds will have North American Green 'SedimentStop' or equivalent filtration system installed around the perimeters until the landscaped vegetation inside the ponds has matured enough to effectively reduce sediment pollution.

3. DOCUMENT REVIEW

In order to properly evaluate the proposed development, it is important to understand governing documents and existing land use policies. Furthermore, a review of past technical documents allows for the assessment of the feasibility of the development and any issues that may need to be addressed through design. The following section highlights relevant findings from existing policy documents and past studies.

3.1 Planning Documents

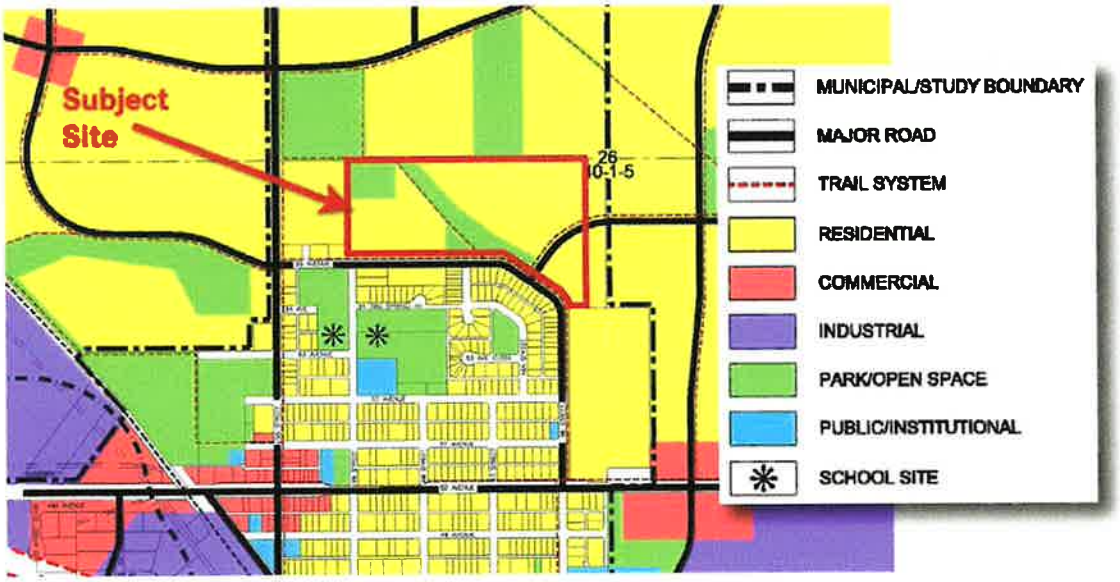
3.1.1 Town of Bentley: Municipal Development Plan (2007)

A Municipal Development Plan (MDP) establishes policies to manage growth across an entire municipality, while identifying the location of residential, commercial and industrial areas, environmentally sensitive areas, parks and major utility expansions.

The Town of Bentley MDP addresses a variety of municipal planning issues and objectives, particularly as they relate to future land uses and residential growth areas. To this point, a primary residential objective is to "ensure a variety of housing types to meet the community lifestyles and market requirements", which is consistent with the Land Use Plan.

The subject site is located within an area identified for 'Residential' development. Additionally, 'Park/Open Space' has been identified in the areas as generally depicted on the Land Use Plan (Schedule A). The MDP also indicates a road from 55 Avenue is planned to provide connectivity to the eastern portion of the town. This has also been accounted for in the Land Use Plan. Figure 4 highlights the subject site relative to the MDP.

Figure 4: Town of Bentley MDP Land Use Concept



The following table outlines MDP policies that apply to the proposed development along with comment as to how it has been addressed:

Table 2: Municipal Development Plan Policy Matrix	
Policy and Comment	**Text**
Policy 4.3.4	*The overall density of the Town should not exceed 15 dwellings units per gross developable hectare (6 dwellings units per gross developable acre).*
Comment	Based on the 2011 Census, the Town has 469 private dwelling units and land area of 230 hectares (ha). This provides a density of 2.04 units per gross hectare. At the maximum permitted density the proposed development would have 365 units which would bring the Town's overall density to 3.63 units per gross hectare. While these densities are not based on developable hectares, unless over 2/3 of the Town is undevelopable, the proposed development would be in conformance with this policy.
Policy 4.3.5	*The Town encourages the provision of a variety of housing forms…single family detached dwelling units should be a minimum of 70 percent of total potential dwelling units. Duplexes may contribute up to 10 percent…row house (townhouse), apartment developments should not exceed 20 percent…*
Comment	The Town's planning consultant has clarified that this policy is intended to apply to the entire town. The proposed development seeks to provide a mixture of housing types. While the exact ratio of each housing type is unknown, the first phase will feature detached single-family and townhouse units.
Policy 4.3.7	*Factors to be considered in the potential approval of any site for multiple family housing are:* a) *Direction provided in an approved Area Structure Plan;* b) *Direct access to a collector or arterial road;* c) *Convenient access to institutional, recreation and community facilities and open space;* d) *Existing housing area suitable for increased residential density;* e) *Compatibility (e.g. height, volume, appearance) with existing housing;* f) *Proximity to commercial services and facilities;* g) *Potential impact of additional traffic on adjacent development;* h) *Availability of space on site to meet parking requirements;* i) *The development does no isolate an individual lot that it could not be subsequently redeveloped; and* j) *The presence of other medium and high-density buildings on the block face.*

Comment	There is one site within the plan area that is identified for multiples family housing. It is planned for between two or three individual multi-unit buildings with approximately 8-12 units. Depending on market demand this could shift to two 18 unit buildings or one 36 unit building on each site. The site is located on the east side of the plan area south of the manufactured home park. This site is also adjacent to the natural drainage channel and open space. This multi-family site is located on a local road, however based on the MDP Land Use Map, it appears this will eventually be a collector or arterial road. Compatibility and adequate parking space provisions will be determined during the development permit stage. Neither of these sites isolate individual parcels nor restrict redevelopment.
Policy 4.3.12	*Adequate parks and open space shall be provided...*
Comment	As per the Land Use Plan, a park and open space corridor has been integrated throughout the entire development. This corridor also functions as a stormwater drainage channel, culminating with a dry landscaped stormwater detention pond in the northwest corner of the proposed development.
Policy 7.3.5	*The Town requires that the type and alignment for major roads be established in area structure plans.*
Comment	Roads will be designed based on the City of Red Deer standards. This standard dictates a 15 m right of way for local roads with a 10 m wide paved surface. Collector roads and roads connecting to existing 20 m right of way will be developed as a 20 m right of way.
Policy 9.3.1 & Policy 9.3.4	*Upon subdivision, the subdivision authority shall require the provision of up to 10 percent of the land as municipal reserve...* - & - *The Town may...dedicate public utility lots towards overall reserve dedications...*
Comment	The proposed development dedicates approximately 1.1 ha (6.3%) of land as municipal reserve (MR). These lands create a linear park system linking the entire development. In addition, the public utility lot (PUL), is intended for a dry landscaped stormwater detention pond, contributes an additional 1.3 ha (7.5%) of reserve land which could be designed as a duel stormwater management pond and park/open space. Depending on the determination of Council, any outstanding MR dedication would be paid cash-in-lieu.

In summary, the proposed Land Use Plan is in conformance with the policies and mapping established in the MDP. The proposed development represents a logical extension of residential land uses and municipal services, and, most notably, the proposed development satisfies the Town's residential growth objectives.

3.1.2 Town of Bentley / Lacombe County Intermunicipal Development Plan (2009)

The Town of Bentley and Lacombe County established an Intermunicipal Development Plan (IMDP) to provide direction related to land use in areas that reflect both the mutual and independent interests of both municipalities. As it relates to the Summersault Area Structure Plan, the IMDP provides broad

policy direction addressing growth management, environmental management and residential development. The following outlines relevant policies from the IMDP:

Table 3: Intermunicipal Development Plan Policy Matrix	
Policy and Comment	**Text**
Policy 2.3	*Both municipalities shall provide a variety of development opportunities within their jurisdiction maintaining the character of their respective communities.*
Comment	The proposed development is intended to provide new housing alternatives currently not available within Bentley which is in accordance this policy.
Policy 3.3	*Subdivision applicants shall be required to dedicate all lands that qualify as environmental reserve in accordance with the provisions of the Municipal Government Act.*
Comment	The drainage channel located on the property could be considered environmental reserve at the discretion of the Town. Given the seasonal nature of the channel it could also be developed or integrated into the subdivision, through approval by the Provincial Department of Environment and Sustainable Resource Development (ESRD). Neither the MGA nor IMDP provide clear direction as it relates to setbacks from drainage channels though ESRD does recommend a 6 metres buffer. Through consultation with Town Staff, this setback was deemed appropriate and applied to the development concept.
Policy 4.3.7	*A regional trail network shall be encouraged connecting points of interest within the Town and County to residential developments, natural features and other locations of cultural or recreational value.*
Comment	A trail network has been proposed along the drainage channel within the subdivision. This is in accordance with the Town's MDP and the above noted policy.

3.1.3 Village of Bentley: North East Area Structure Plan (1993)

An Area Structure Plan (ASP) provides specific direction on how a specific area within a municipality is to develop, identifying the specific mix and density of land uses as well as layout of streets and blocks. The subject site is located within the former North East Area Structure Plan (NEASP). The NEASP was prepared in order to establish a development concept, planning policies and implementation strategy for the subject site and immediate surrounding area. The intent of the Plan was to provide guidance on the following development considerations:

- ***Transportation***: the main objective of the NEASP was to extend 46th Street and 55th Avenue into the subject site. A series of local roads, including laneways designed for residential purposes, would

service the remaining lands.

- ***Service and Utilities***: Prior studies indicated that the NEASP could accommodate 580 persons. A lift station would likely be required to service sewage disposal, and a storm water retention pond was proposed to service stormwater by gravity flow.
- ***Future Land Uses***: The NEASP identified this area for major future residential growth consisting of a variety of housing types and densities. The envisioned plan was to foster the logical extension of existing residential areas into the NEASP. Specifically, it was projected that the subject site currently under consideration could accommodate 170 lots (500 persons).

The current Land Use Plan generally conforms to the 1993 NEASP, representing a logical residential expansion of the existing residential development south of 55 Avenue; an extension of major corridor roads and an internal local street network, inclusive of laneways, for individual units; and, services that include drainage channels and a storm water management pond (reference to the "Technical Documents" section below provides additional information regarding site servicing).

While the proposed development generally conforms to the above noted items, the development of alternative housing forms at a greater density on the site does not conform to the NEASP but do conform to the policies contained within the more recently adopted Municipal Development Plan. We understand it is the intent of the Town to repeal the NEASP as part of the approvals process for this proposed development.

3.1.4 Town of Bentley: Parks and Open Space Plan (2008)

According to the *Parks and Open Space Plan,* the most significant open space land base encompasses the northern sections of the Town. These lands are currently designated 'Urban Reserve' in the Land Use Bylaw and intended for future development. How these lands develop with respect to parks and open space should be considered in the development of this Area Structure Plan.

The proposed development's open space (as per MDP Policy 9.3.4 above and Objective 1.3 below) will contribute to the Town's 'Neighbourhood Park' and 'Open Space Areas' system. These are defined as *"open areas designed primarily for passive and active, non-organized recreational activities"*. The proposed park and open areas are intended to serve residents of the immediate neighbourhood, while simultaneously linking the development to adjacent lands.

The following *Parks and Open Space Plan* goals and objectives highlight select considerations as they apply to the proposed development's 'Neighbourhood Parks' and 'Open Space Areas':

NEIGHBOURHOOD PARKS

Objective 1.2: Park Service Areas

"Residential neighbourhoods should be served by a developed park located within approximately 400-metres."

- The proposed park corridor spans the entire length of the proposed development and is located well within the 400 metre radius. This corridor will provide for active linkages and leisure

opportunities for area residents.

Objective 1.3: Land Dedications

"Developers of residential neighbourhoods shall be required to contribute to park sites..."

- As outlined in Table 2 (Policy 9.3.4), the proposed development dedicates approximately 1.42 ha (8.0%) of land as municipal reserve (MR). These lands create a linear park system linking the entire development. In addition, the public utility lot (PUL), is intended for a dry landscaped stormwater detention pond, contributes an additional 1.20 ha (6.7%) of reserve land which could be designed as a duel stormwater management pond and park/open space. Depending on the determination of Council, any outstanding MR dedication would be paid cash-in-lieu.

Objective 3.1: Co-Location Opportunities

"Explore the feasibility to locate parks within storm water detention facilities provided sufficient park space can be provided."

- The proposed park corridor functions as a stormwater management and drainage system, culminating with a dry landscaped storm water detention pond in the northwest corner of the proposed development.

OPEN SPACE AREAS

Objective 1.1: Network Concept

"Combine natural areas into a connected system that preserves environmentally sensitive lands, provides wildlife habitat, and creates a sense of openness throughout the community."

- The proposed park corridor spans the entire length of the proposed development and will be fully landscaped with both natural and planned vegetation.

Objective 1.3: Recreation Opportunities

"Explore opportunities to incorporate compatible recreation and trail uses within open space areas."

- Given the dual function as a drainage channel, as well as size and configuration limitations, the proposed open areas do not provide sufficient space for supervised parks such as soccer fields or baseball diamonds. However, passive and active recreation activities are being proposed such a trail system, and open areas suitable for leisure outdoor activities.

A primary intention of this Area Structure Plan is to continue providing high-quality residential neighbourhoods in the Town of Bentley. Providing parks and open spaces is, therefore, an essential component of this development proposal and important to the overall marketability of the development. It is understood that upon submission of detailed plans for subdivision, a parks and open space plan will be provided respective of the objectives and guidelines established in the *Parks and Open Space Plan.*

3.1.5 Town of Bentley Land Use Bylaw No. 153 (2011)

A Land Use Bylaw splits the municipality up into various districts which outline specific regulations regarding what uses are permitted on a site and guides where and how development will occur on individual parcels. The proposed land use districts for the development are outlined in Section 5.3.

3.2 Technical Studies

3.2.1 Town of Bentley: Investment Attraction Profile (2012)

According to this document, the Town of Bentley has experienced population growth over the past decade. This trend is expected to continue as primary sector employment opportunities are also anticipated to grow. In order to accommodate anticipated growth, additional residential neighbourhoods are required.

The subject property is specifically identified in this document as an "Excellent Opportunity for Land Development". Adjacent to existing residential neighbourhoods, access to municipal services, and its general proximity to Town amenities, the subject site is identified as ideal for residential development investment.

3.2.2 Town of Bentley: Land Supply and Future Growth Potential (2013)

This document forecasts Bentley's future residential growth opportunities over the next 30 years, and correlates anticipated growth to municipal land supply. According to this document, an annual growth rate of 1.32 % is anticipated. At this rate, the following growth scenario is anticipated:

Table 3: Projected Population (Based on 1.32% Annual Increase)

Year	Total Population	Number of Persons Increase	Assumed Average Household Size	Number of Dwellings Increase
2012	1,147	15	2.4	6
2017	1,225	93	2.4	39
2022	1,308	176	2.35	75
2027	1,396	264	2.35	112
2032	1,491	359	2.35	153
2037	1,592	460	2.35	196
2042	1,700	568	2.35	242

Single detached and semi-detached dwellings are likely to satisfy residential development needs (100%) of new housing unit construction between 2006 and 2011. Residential land supply will, therefore, need to respond to anticipated population growth and demand for housing. Based on the Land Supply and Future Growth Study's findings, there is adequate residential land supply to accommodate development up to and well beyond 2042. The table below highlights these findings:

Table 4: Residential Land Absorption Projections

Year	*Total Population*	*Projected Demand (ha)*	*Overall Supply (ha)*
2042	1,700	19.7	51.0

In relation to the document's findings, the proposed development should satisfy anticipated growth potential and trends for the next 30 years.

3.2.3 *Geotechnical Investigation: Proposed Bentley Residential Subdivision (2005)*

This report was conducted to determine the nature and engineering properties of the site soils with regards to grading, the design of underground services, building foundations, and roadway subgrades. The investigation involved drilling eight 8 boreholes, each 6.7 metres deep, to examine soil profiles. The following soil types, in descending order, were identified:

- topsoil;
- lacustrine soils;
- till (0.3 to 1 metre below grade);
- weathered bedrock (1.8 to 4.8 metres below grade); and
- layers (approximately 1 metre thick) of dense coal were also identified in three of the eight boreholes.

According to the 2005 investigation, subsurface conditions are considered to be suitable for residential development. The most significant geotechnical issue is expected to be the presence of shallow bedrock which may impact underground service trench excavation. It is expected that buried services will be installed to depths of approximately 4 metres.

Notwithstanding this potential impact, site grading, building foundations and roadway design should follow generally accepted fill, soil and foundation engineering practices. In order to achieve the required grading on-site an approved fill, such as low to medium plastic clay, may be used. If coarse gravel is proposed, a maximum aggregate size of 100mm is recommended. Soil samples also determined that water soluble sulphates pose negligible threats to buried concrete and subgrade infrastructures.

The subject site has not been disturbed, outside of its ongoing agricultural use, since the time of this study so it is anticipated that the findings of this Geotechnical Investigation are still valid and applicable to the property.

3.2.4 *Bentley North Subdivision: Phase 1 Environmental Site Assessment (2006)*

A Phase 1 Environmental Site Assessment (ESA) was commissioned to identify potential environmental items that may require further site investigation or other action. The 2006 ESA concluded that the level of environmental risk associated with the subject site was low. Based on available information at the time, additional site investigation was not recommended. A secondary search of the Abacus Datagraphics (AbaData) online database on June 10, 2014 did not reveal the presence of any spills or oil and gas facilities on the subject property.

3.2.5 *Traffic Impact Assessment (2014)*

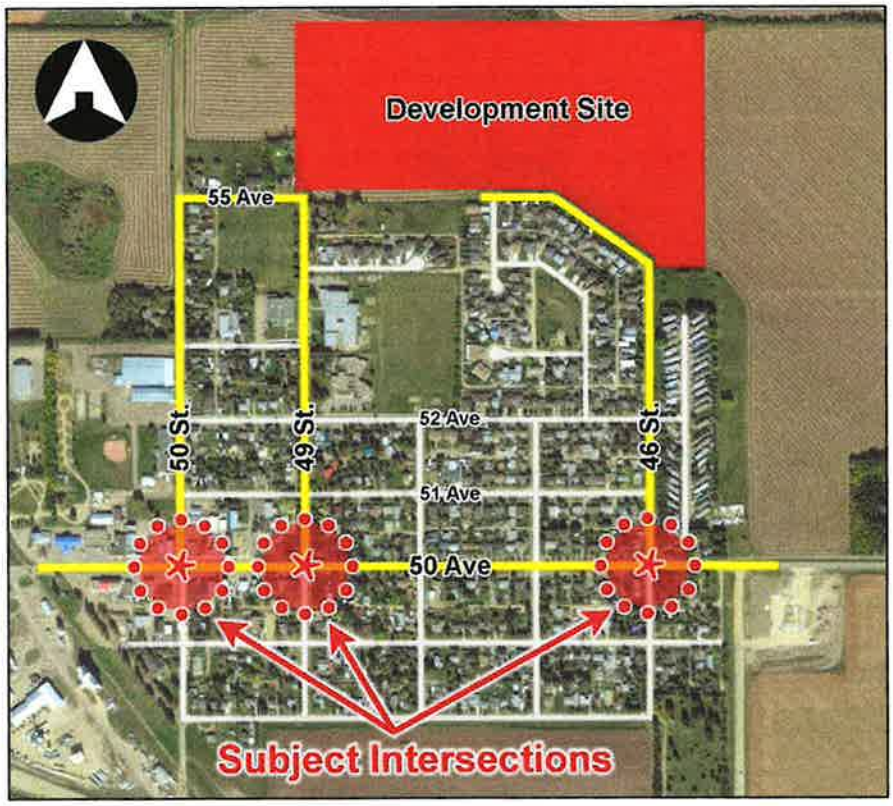
WSP Canada Inc. prepared a Traffic Impact Assessment (TIA) for the proposed development which has also been provided to the Town. A TIA is an unbiased assessment, prepared by a professional Engineer, that evaluates existing traffic conditions and infrastructure against the impact of a newly proposed development. Existing traffic conditions are determined through assessing existing traffic turning movements (obtained from Alberta Transportation or manual counts) and the geometric standards of existing transportation infrastructure and intersections. This determines the existing network's

functionality or level of service.

The existing level of service is then compared against the anticipated level of service once a proposed development is fully built-out and is based on anticipated future traffic growth and vehicle trips generated by a development during peak periods. This includes forecasting traffic volumes into the 20 year horizon. Depending on the outcomes of the modelling and assessment, upgrades to existing infrastructure and/or intersections can be required in order to maintain an acceptable level of service throughout the traffic network.

For the purposes of the proposed development, the TIA included assessments of three intersections: 50th Avenue / 50th Street, 50th Avenue / 49th Street and 50th Avenue / 46th Street 9 as shown in Figure 5.

Figure 5: Intersections Assessed in TIA



The following provides a summary of the findings from the TIA:

50th Avenue / 50th Street Intersection

- All traffic movements during AM and PM peak periods at this intersection will operate at an acceptable level of service at the development's full build-out and will be capable of accommodating the forecasted traffic up to the 20 year horizon.

- While not required as part of Phase 1, an exclusive eastbound left turn lane for vehicles turning left (north) from 50th Avenue onto 50th Street will be necessary at full build out of the development.
- Though not necessary based on current projections, best practices indicate the Town consider the addition of an exclusive westbound left turn lane for vehicles turning left (south) from 50th Avenue onto 50th Street.
- Traffic signals are not necessary at the intersection.
- It is recommended that the Town install and/or maintain appropriate pedestrian crosswalk pavement markings and signage at this location.
- The existing geometry of the intersection should allow for all of the above-noted changes and should be incorporated into the Town's streetscape improvement program.

50th Avenue / 49th Street Intersection

- All traffic movements during AM and PM peak periods at this intersection will operate at an acceptable level of service at the development's full build-out and will be capable of accommodating the forecasted traffic up to the 20 year horizon.
- While not required as part of Phase 1, an exclusive eastbound left turn lane for vehicles turning left (north) from 50th Avenue onto 49th Street will be necessary at full build out of the development. However, given the width of the existing eastbound lane at this intersection, adequate maneuvering space is available for vehicles to travel around vehicles waiting to make this left turn. Based on this, no geometric improvements to the intersection are required as a result of the proposed development, though the Town may consider adding lane markings for clarity.
- On-street parking in the vicinity of the 50th Avenue / 49th Street intersection is recommended to be limited during AM and PM peaks.
- Traffic signals are not necessary at the intersection.
- It is recommended that the Town install and/or maintain appropriate pedestrian crosswalk pavement markings and signage at this location.

50th Avenue / 46th Street Intersection

- All traffic movements during AM and PM peak periods at this intersection will operate at an acceptable level of service at the development's full build-out and will be capable of accommodating the forecasted traffic up to the 20 year horizon.
- A westbound right turn lane for vehicles turning right (north) from 50th Avenue onto 46th Street, though technically warranted, is not recommended. This is due to the low posted speed limit (50 km/h) and road right-of-way constraints.
- Traffic signals are not necessary at the intersection.

- It is recommended that the Town install and/or maintain appropriate pedestrian crosswalk pavement markings and signage at this location.

3.2.6 Preliminary Servicing Study (2014)

WSP Group was retained to prepare a Watermain Analysis and Stormwater Management Plan to confirm the serviceability of the existing development relative to the Town's existing infrastructure. Findings related to this analysis were previously outlined in Section 2.4 with the complete reports being provided to the Town.

4. RECOMMENDED POLICY CHANGES

4.1 Municipal Development Plan

The proposed development conforms with the Policies of the Town's Municipal Development Plan and no amendments are required to the Municipal Development Plan to permit the proposed development.

4.2 Northeast Area Structure Plan

With the approval of this Area Structure Plan the Town will repeal the Northeast Area Structure Plan.

4.3 Land Use Bylaw

The property is currently zoned Urban Reserve and will require a rezoning which is outlined further in Section 5.3. As part of future phases of the development, the Town and Developer may explore the creation a new district aimed at allowing narrower lots.

5. IMPLEMENTATION

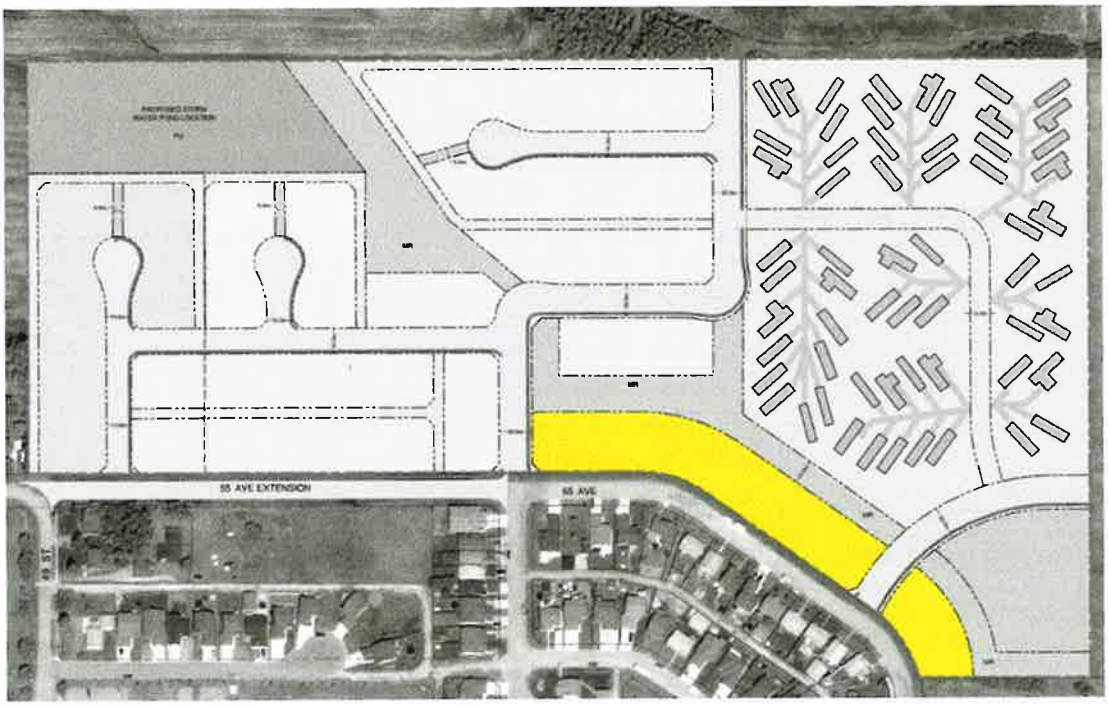
5.1 Development Policies

(1) Development across the majority of the subject property will be based on market demand and allow for a variety of low and medium density residential uses consistent with the R1, R2 and R3 Districts under the Town's Land Use Bylaw. The only exception are as follows:

a) Manufactured homes shall only be located in the area zoned and designated for a manufactured home park; and

b) Lots directly across from existing detached single-family homes on 55 Avenue as shown in Figure 6 shall only be used for detached single-family homes.

Figure 6: Area to be Developed with Only for Detached Single-Family Homes (Shown in Yellow)



(2) The developer and Town should work together in the final design of the proposed trail network and dry stormwater pond intended to serve as recreational and amenity features.

(3) The manufactured home park should be screened from adjacent land uses, properties and public roads through the use screening in the form of deciduous and coniferous trees along the entire length of the property's boundaries.

(4) Multi-unit dwellings and their associated parking shall be screened from adjacent land uses through a combination of deciduous and coniferous trees, an opaque wooden fence or some combination thereof to the satisfaction of the Development Authority.

(5) Notwithstanding sight triangle requirements, deciduous trees shall be planted along all public street frontages at the following rates:

a) 1 tree per detached single family dwelling and duplex lot;
b) 1 tree per every two lots planned for townhouse dwellings; and
c) 1 tree per 15 linear metres for multi-unit sites or the side yard of a corner lot that faces a street.

(6) Trees required under (5) shall be high leafing deciduous trees when planted within the Municipal right-of-way.

5.2 Development Staging

As indicated on the Land Use Concept, the development is anticipated to begin in the west, at the intersection of 49th Street and 55th Avenue in the area identified as Phase I. Development will progress in an easterly direction based on market demand and includes further extension of services and roadways. Approximate lot dimensions have been provided, though these could be subject to minor changes as building designs and footprints are finalized.

5.3 Redistricting and Subdivision

All of the land within plan area is currently districted as (UR) Urban Reserve District. Redistricting and subdivision of the land is intended to conform to the following:

- **R1 (Low Density Residential) District:** lands immediately northeast of 55 Avenue (across from existing detached single-family homes) and some lots associated with Phase 1 of the development.
- **R2 (General Residential) District:** any lands not indicated as manufactured homes, municipal reserve or public utility lots on the Land Use Plan (Schedule A).
- **R3 (Manufactured Home) District:** manufactured home park including both single-wide and double-wide lots.
- **P (Public Use) District:** stormwater detention pond, trail and open space.

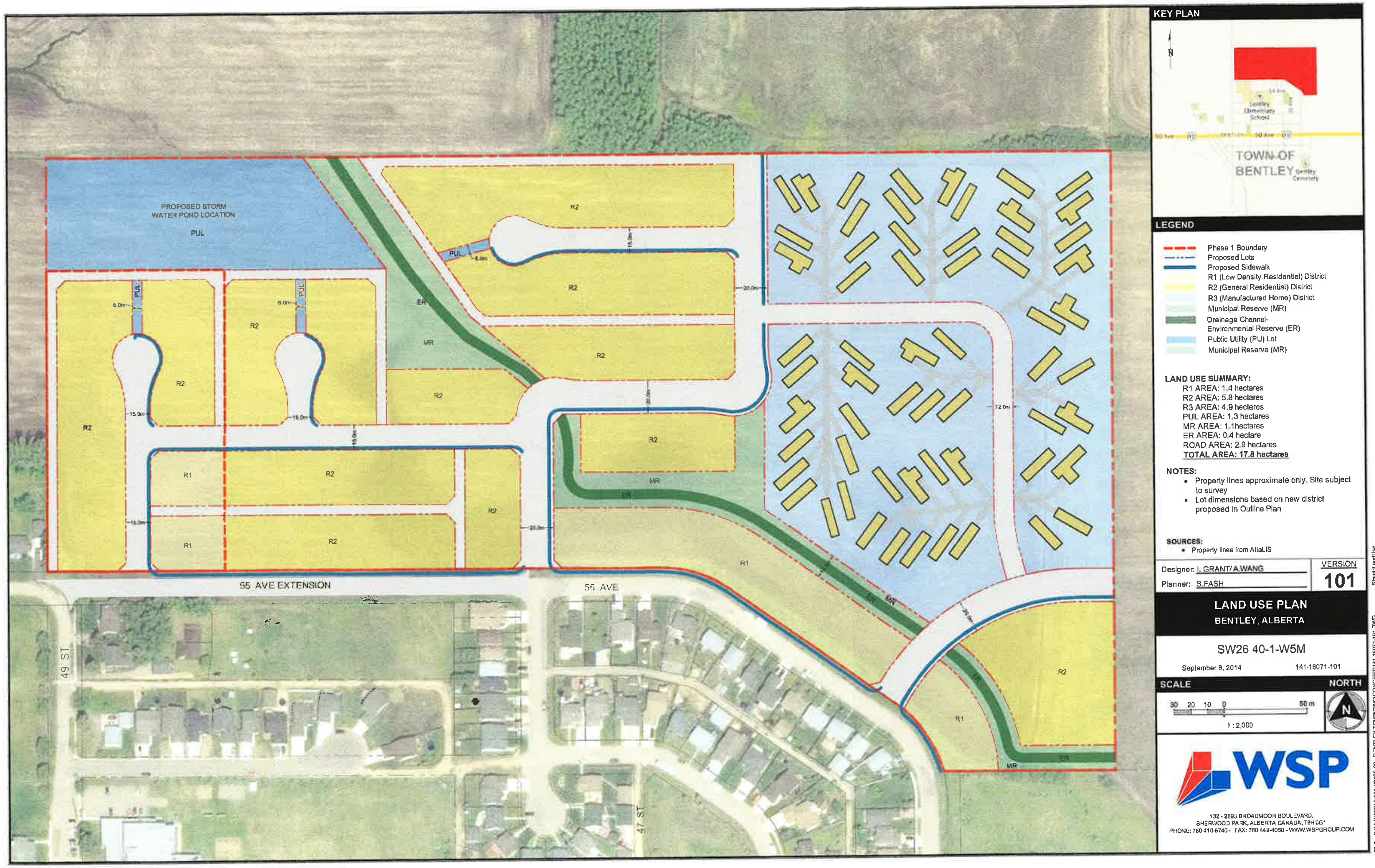
While the R2 (General Residential) District has been applied to the majority of lots, the developer and municipality may explore a new district for future phases as part of an amendment to the Land Use Bylaw.

5.4 Adopting and Amending the Area Structure Plan

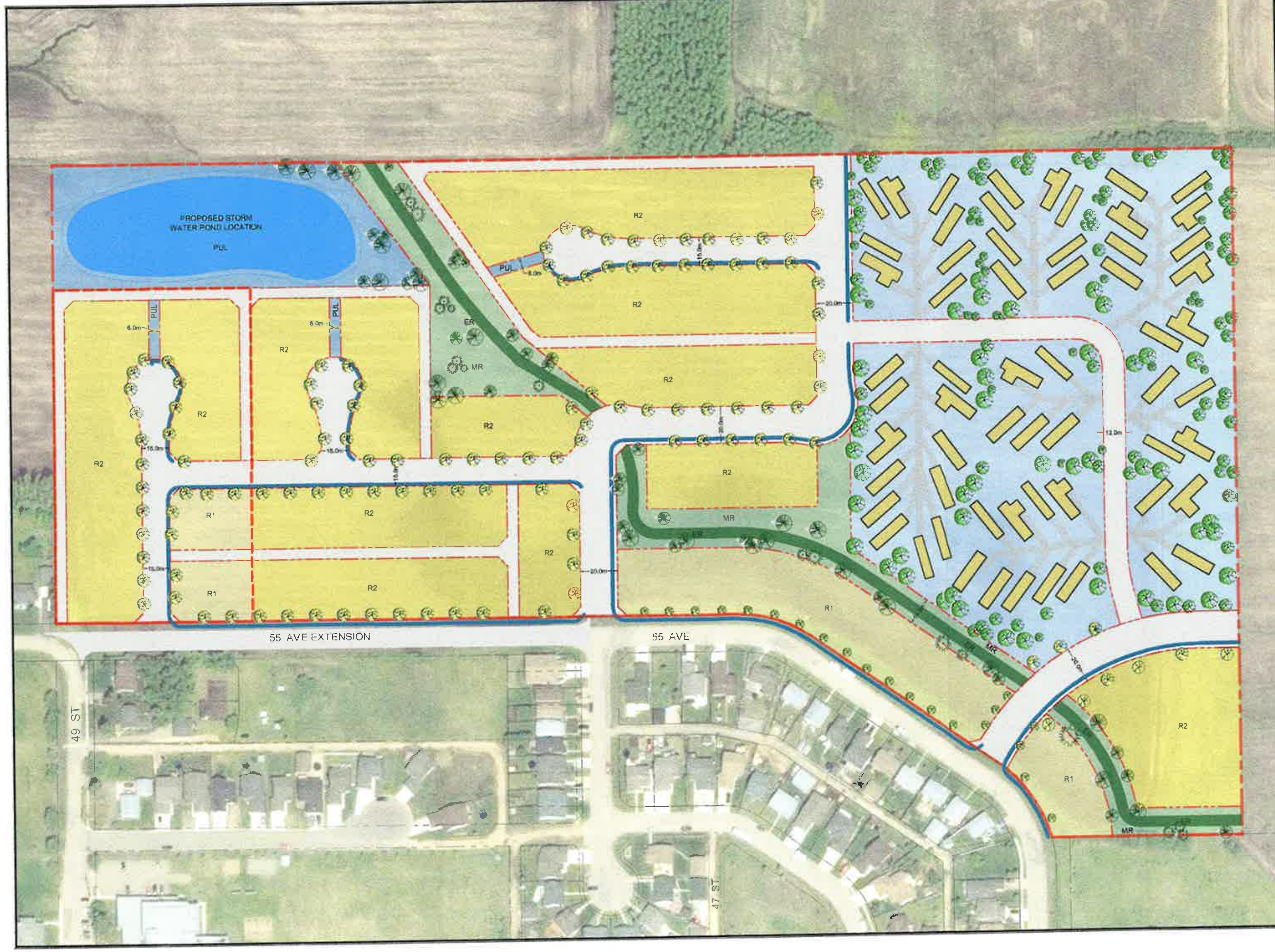
Adoption and any amendment of this Area Structure Plan would be the responsibility of Council. The Summersault Residential Area Structure Plan provides a conceptual development framework for the subject site.

SCHEDULE A:

Land Use Plan


KEY PLAN
TOWN OF BENTLEY
LEGEND
Phase 1 Boundary
Proposed Lots
Proposed Sidewalk
R1 (Low Density Residential) District
R2 (General Residential) District
R3 (Manufactured Home) District
Municipal Reserve (MR)
Drainage Channel-Environmental Reserve (ER)
Public Utility (PU) Lot
Municipal Reserve (MR)
LAND USE SUMMARY:
R1 AREA: 1.4 hectares
R2 AREA: 5.8 hectares
R3 AREA: 4.9 hectares
PUL AREA: 1.3 hectares
MR AREA: 1.1hectares
ER AREA: 0.4 hectare
ROAD AREA: 2.9 hectares
TOTAL AREA: 17.8 hectares
NOTES:
• Property lines approximate only. Site subject to survey
• Lot dimensions based on new district proposed in Outline Plan
SOURCES:
• Property lines from AltaLIS
Designer: I. GRANT/ A.WANG
Planner: S.FASH
VERSION
101
LAND USE PLAN
BENTLEY, ALBERTA
SW26 40-1-W5M
September 8, 2014
141-16071-101
SCALE
NORTH
30 20 10 0 50 m
1 : 2,000
N
WSP
132 - 2693 BROADMOOR BOULEVARD,
SHERWOOD PARK, ALBERTA CANADA, T8H 0G1
PHONE: 780 410-6740 - FAX: 780 449-4050 - WWW.WSPGROUP.COM
PROPOSED STORM WATER POND LOCATION
PUL
ER
MR
R1
R2
55 AVE EXTENSION
55 AVE
49 ST
47 ST
Sheet:LandUse
FILE: S:\MUNI\2013\131-20108-00 - BENTLEY TEMP\DWG\CONCEPT\141-16071-101.DWG

SCHEDULE B:
Landscaping Plan



KEY PLAN

LEGEND

- Phase 1 Boundary
- Proposed Sidewalk
- R1 (Low Density Residential) District
- R2 (General Residential) District
- R3 (Manufactured Home) District
- Municipal Reserve (MR)
- Drainage Channel-Environmental Reserve (ER)
- Public Utility (PU) Lot
- Municipal Reserve (MR)
- Deciduous Trees
- Coniferous Trees

Note - Selected trees shall be of a species capable of health growth in this region of Alberta

SITE SUMMARY:

- Land Area - 17.83 hectares
- Municipal Reserve - 1.1 ha (6.0%)
- Environmental Reserve - 0.4 ha (2%)
- Public Utility - 1.3 ha (7.3%)
- Public Roads & Lanes - 3.17 ha (16.3%)

NOTES:

- Property lines approximate only. Site subject to survey
- Lot dimensions based on new district proposed in Outline Plan

SOURCES:

- Property lines from AltaLIS

Designer: I. GRANT / A.WANG

Planner: S.FASH

VERSION 101

LANDSCAPE PLAN

BENTLEY, ALBERTA

SW26 40-1-W5M

SEPTEMBER 8, 2014 141-16071-101

SCALE 30 20 10 0 50 m 1 : 2,000

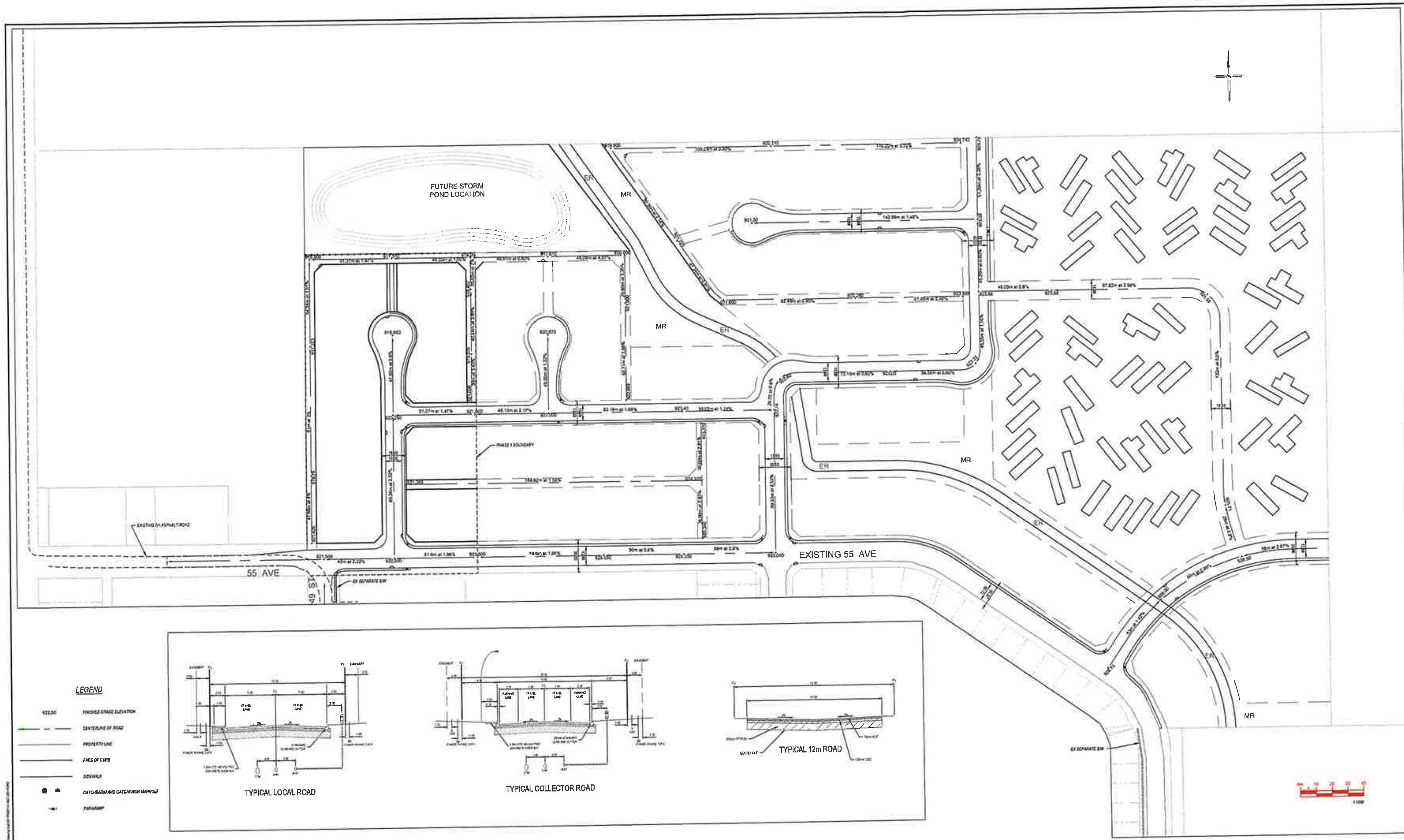
NORTH

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

Sheet:Landscape

FILE: S:\MUNI\2013\131-20108-00 - BENTLEY TEMP\DWG\CONCEPT\141-16071-101.DWG

SCHEDULE C:
Road Plan



REV	DATE	DESCRIPTION			
1	2014/09/15	ISSUE FOR ASP	AM	CR	CS
0	2014/07/11	ISSUE FOR REVIEW	AM	CS	CS

CLIENT: 174 0247 ALBERTA LTD.

WSP
7710 EDGAR INDUSTRIAL COURT
RED DEER, ALBERTA T4P 4E2
TEL: 1 403-342 7650 | FAX: 1 403-314-2239 | WWW.WSPGROUP.COM

PROJECT: SUMMERSAULT SERVICING STUDY

PROJECT NO: 141-16071

ORIGINAL SCALE: 1:1000

DATE: MAY 2014

DESIGNED BY: C SUCHY

DRAWN BY: A MCMURTRIE

DISCIPLINE: MUNICIPAL INFRASTRUCTURE

TITLE: ROAD PLAN

DRAWING NO: 141-16071-00-C001

SHEET NO: 1 OF 1

ISSUE: FOR ASP 2014/09/15

REV: 1

SCHEDULE D:
Water Distribution System

FUTURE STORM POND LOCATION

ER

MR

FUT WAT 200mm

FUT WAT 250mm

WAT 200mm PVC

FUT WAT 300mm PVC

PHASE I BOUNDARY

55 AVE

EXISTING 55 AVE

49 ST

47 A ST

EX 150mm WAT PVC

EX 150mm WAT

LEGEND

PROPOSED

- PROPERTY LINE
- WATERMAIN
- HYDRANT AND HYDRANT VALVE
- WATER VALVE
- WATER PLUG
- REDUCER
- AIR RELIEF VALVE

EXISTING

- WATERMAIN
- HYDRANT
- WATER VALVE

0m 10 20 30 40

1:1000

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CLIENT: 174 0247 ALBERTA LTD.

CLIENT REF NO:

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7710 EDGAR INDUSTRIAL COURT
RED DEER, ALBERTA T4P 4E2
TEL: 1 403-343-7150 | FAX: 1 403-314-2239 | WWW.WSPGROUP.COM

PROJECT: SUMMERSAULT SERVICING STUDY

PROJECT NO: 141-16071

ORIGINAL SCALE: 1:1000

DESIGNED: C. SUCHY

DRAWN: A. MCMURTRIE

DATE: MAY 2014

DISCIPLINE: MUNICIPAL INFRASTRUCTURE

TITLE: WATER DISTRIBUTION PLAN

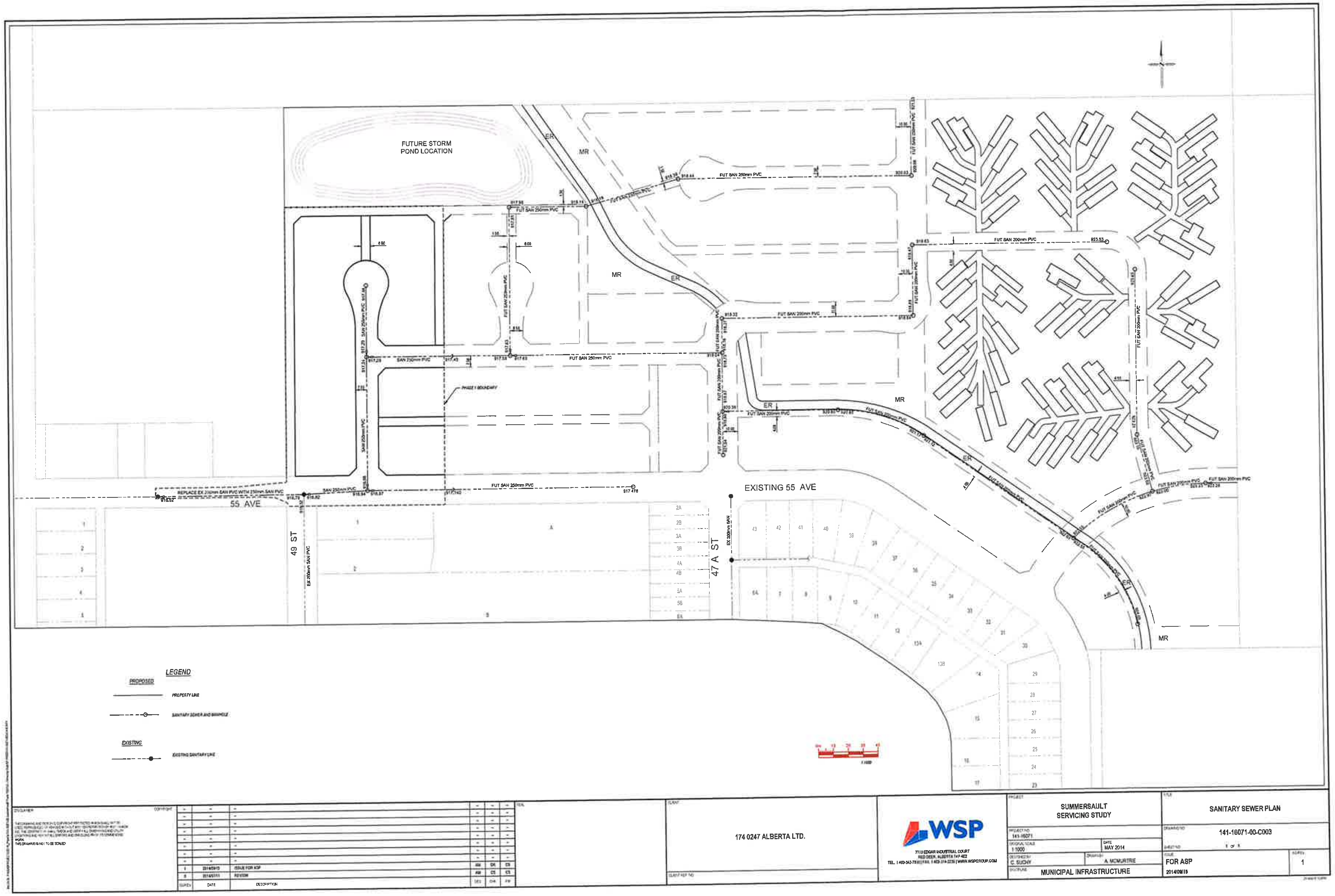
DRAWING NO: 141-16071-00-C002

SHEET NO: 1 OF 1

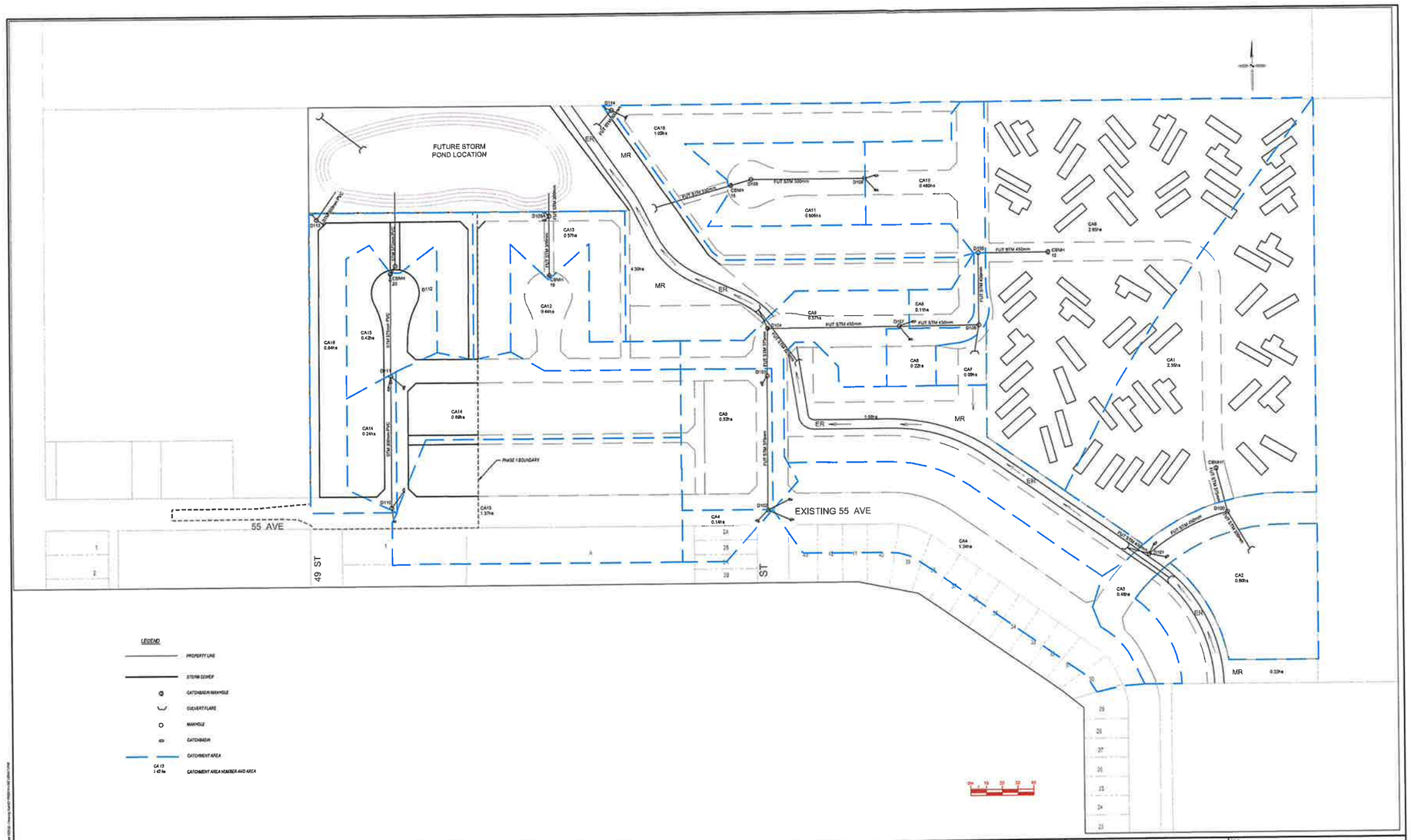
ISSUE: FOR ASP 2014/09/15

ISSUED: 1

SCHEDULE E:
Sanitary Sewer System


FUTURE STORM POND LOCATION
MR
ER
FUT SAN 250mm PVC
FUT SAN 200mm PVC
SAN 250mm PVC
PHASE 1 BOUNDARY
REPLACE EX 200mm SAN PVC WITH 250mm SAN PVC
EXISTING 55 AVE
55 AVE
49 ST
47 A ST
LEGEND
PROPOSED
PROPERTY LINE
SANITARY SEWER AND MANHOLE
EXISTING
EXISTING SANITARY LINE
174 0247 ALBERTA LTD.
WSP
7710 EDGAR INDUSTRIAL COURT
SUMMERSAULT SERVICING STUDY
141-16071
1:1000
MAY 2014
C. SUCHY
A. MCMURTRIE
MUNICIPAL INFRASTRUCTURE
SANITARY SEWER PLAN
141-16071-00-C003
FOR ASP
2014/09/15
1

SCHEDULE F:
Stormwater System



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-	-	-	-	-	-
1	2014/09/15	ISSUE FOR ASP	AM	DR	EB
0	2014/07/31	ISSUE FOR REVIEW	AM	EB	KB

SEAL

CLIENT: 174 0247 ALBERTA LTD.

CLIENT REF NO.

WSP
7110 EDGAR INDUSTRIAL COURT
RED DEER, ALBERTA T4P 4E2
TEL: 1 403-343-7650 | FAX: 1 403-314-2296 | WWW.WSPGROUP.COM

PROJECT	SUMMERSAULT SERVICING STUDY
PROJECT NO	141-16071
ORIGINAL SCALE	1:1000
DATE	MAY 2014
DESIGNED	C. SUCHY
DRAWN	A. MCMURTRIE
DISCIPLINE	MUNICIPAL INFRASTRUCTURE

TITLE	STORM MINOR PLAN
DRAWING NO	141-16071-00-C004
SHEET NO	1 OF 1
ISSUE	FOR ASP
ISSUE NO	1
	2014/09/15

By-law No. 249/2024

A by-law of the Town of Bentley, in the Province of Alberta, to rescind the Summersault Area Structure Plan By-law No. 178-2014 and to adopt the Sunset Heights Area Structure Plan.

WHEREAS, the Council of the Town of Bentley recognizes the need to update the former Summersault Area Structure Plan with a new Area Structure Plan (Sunset Heights Area Structure Plan) to establish a framework and guide future development in better alignment to the market now and into the future as well as to match community priorities for the land legally described as S.W. 26-40-1-W5M, consisting of approximately 17.81 hectares (44 acres) as shown and attached to this Bylaw 249/2024 as Schedule B and forming part of this By-law;

AND WHEREAS, Section 633 of the Municipal Government Act, Chapter M-26 of the Revised Statutes of Alberta, provides for the development and adoption of an Area Structure Plan;

AND WHEREAS, Notice has been given of Council's intention to pass this By-law 249-2024 on September 10, 2024, and September 17, 2024, issues of the Rimbey Review;

AND WHEREAS, a Public Hearing was scheduled for September 24, 2024, to allow the general public to further comment on thew proposed Sunset Heights Area Structure Plan;

NOW THEREFORE, the Council of the Town of Bentley, duly assembled, rescinds the Summerasult Area Structure Plan By-law No. 178-2014 and adopts the Sunset Heights Area Structure Plan, Bylaw 249/2024, being land legally described as the S.W, 26-40-1-W5M, as described in Schedule B, attached hereto and forming part of this By-law.

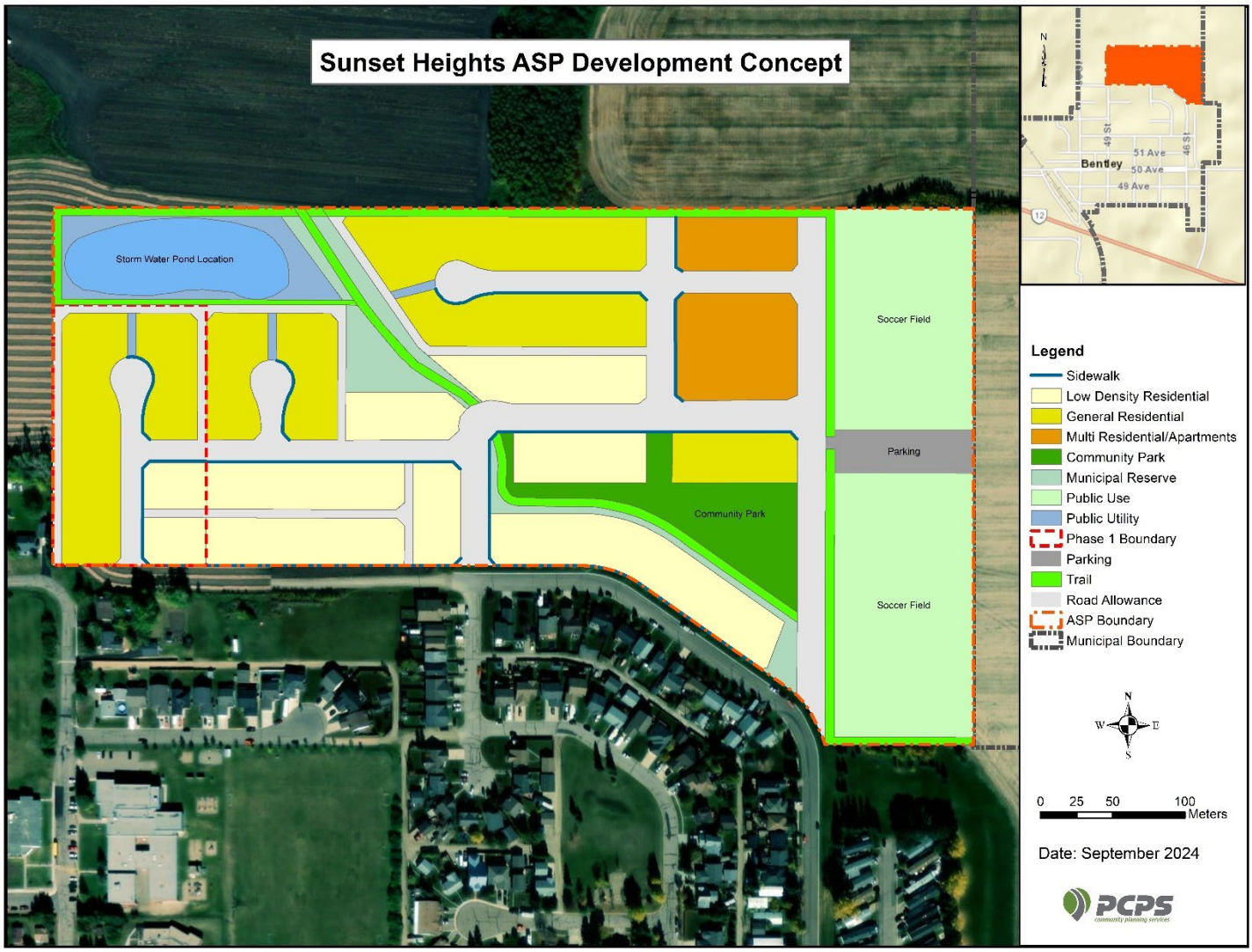
By-law No. 249/2024 read a first time this _____ day of _____, 2024.

By-law No. 249/2024 read a second time this _____ day of_____, 2024.

By-law No. 249/2024 read a third time and passed, this _____ day of_____, 2024

Town of Bentley

SUNSET HEIGHTS AREA STRUCTURE PLAN



2024

Table of Contents

1. INTRODUCTION

1.1 Purpose

An Area Structure Plan (ASP) is a long-term statutory planning document that outlines the overall development concept for a specific area within a municipality in Alberta. The ASP provides a comprehensive framework for land use, infrastructure, transportation, and environmental considerations, guiding future development and growth within the designated area. The ASP acts as a guide for land use decisions, development approvals, and infrastructure investments by the municipality and other stakeholders.

The Sunset Heights Area Structure Plan aims to create a framework for future subdivision, residential, and recreational development within the SW 26-40-1-W5M site. The ASP is designed to offer guidance to developers based on community preferences gathered through extensive engagement. However, the plan is flexible, and developers have the opportunity to revise or modify their proposed development configuration, with the requirement of additional community engagement and Council approval of the proposed amendments.

Structure of this Document

The document is divided into four main parts. Part I gives background information about the Area Structure Plan, providing context and history. Part II deals with Engineering and Infrastructure -related materials, focusing on engineering assessments and studies, examining technical aspects such as infrastructure and environmental impact. Part III introduces the new Concept Plan that consolidates all previous information to present a comprehensive vision for future development. Lastly, Part IV details the Implementation of the plan.

1.2 Site Location and History

The subject site is located in the northeastern portion of the Town of Bentley, north of 55th Avenue and east of 49th Street. The site is approximately 17.81 ha (44.0 acres) in size and located within the Urban Reserve (UR) District (Figure 1). As outlined in the Land Use Bylaw, the purpose of this district is to "*reserve land for future subdivision and Development until an overall plan is prepared for and approved by Council*".

The lands surrounding the site to the north, east and west are primarily undeveloped farmland. Lands immediately south consist of predominantly detached single-family homes within either the Low-Density Residential District, General Residential District and Multi-residential District.

Figure 1: Site Location (shown in red)

The subject site is located within the former Northeast Area Structure Plan. This plan was adopted in 1993 and envisioned as a primarily low-density residential development (Figure 2). While it appears, some development occurred as a result of the ASP, the majority of the land remained undeveloped. In 2005 and 2006 the site was revisited with a number of environmental and engineering studies undertaken to assess the development potential of the property. This development concept (Figure 3) also envisioned a neighborhood featuring detached single-family homes; however, it did not lead to the development of the subject property.

Figure 2: Northeast Area Structure Plan Concept (1993)

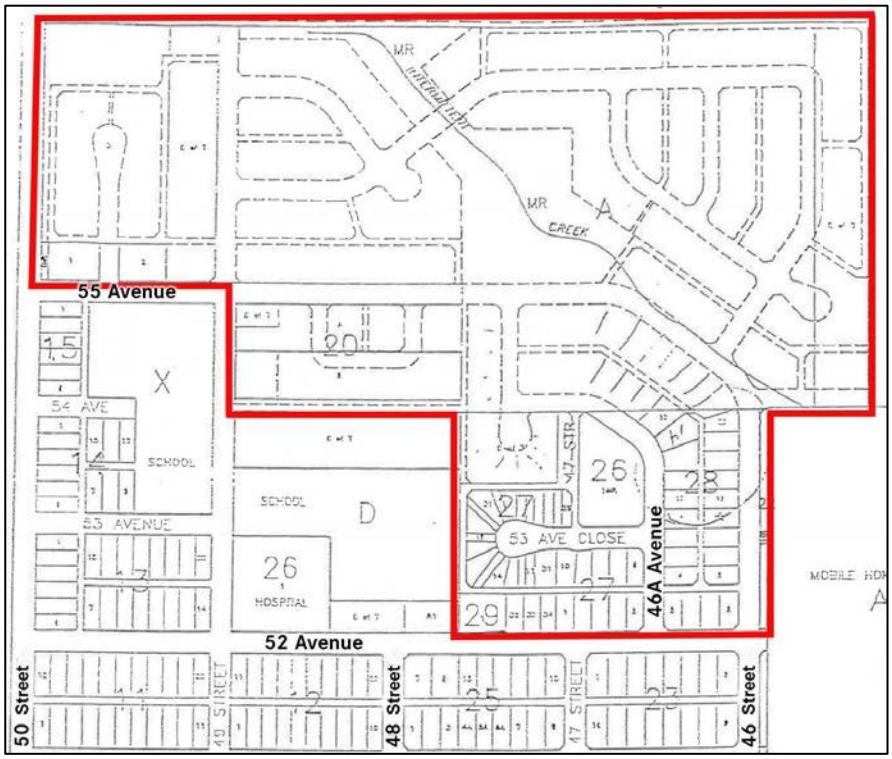
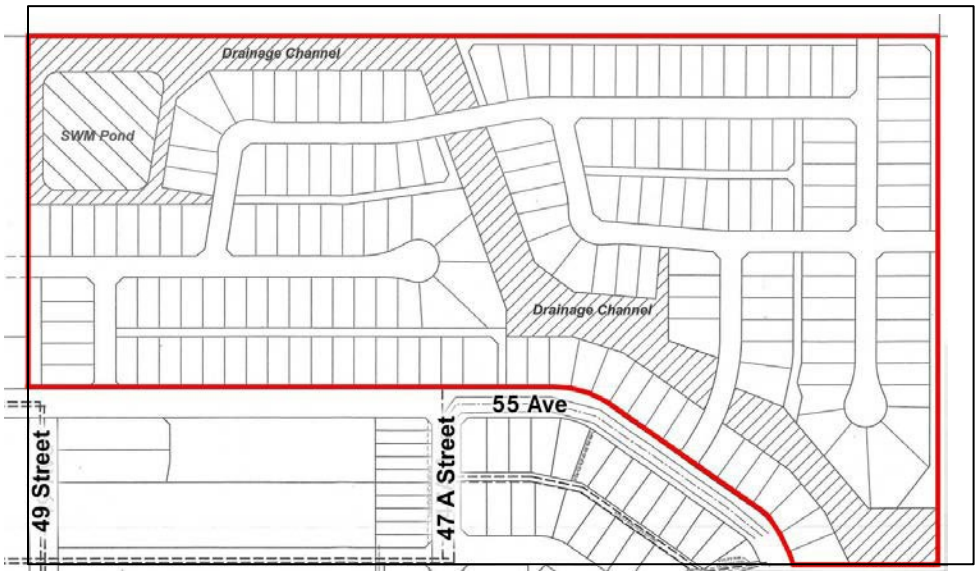


Figure 3: 2005 Development Concept



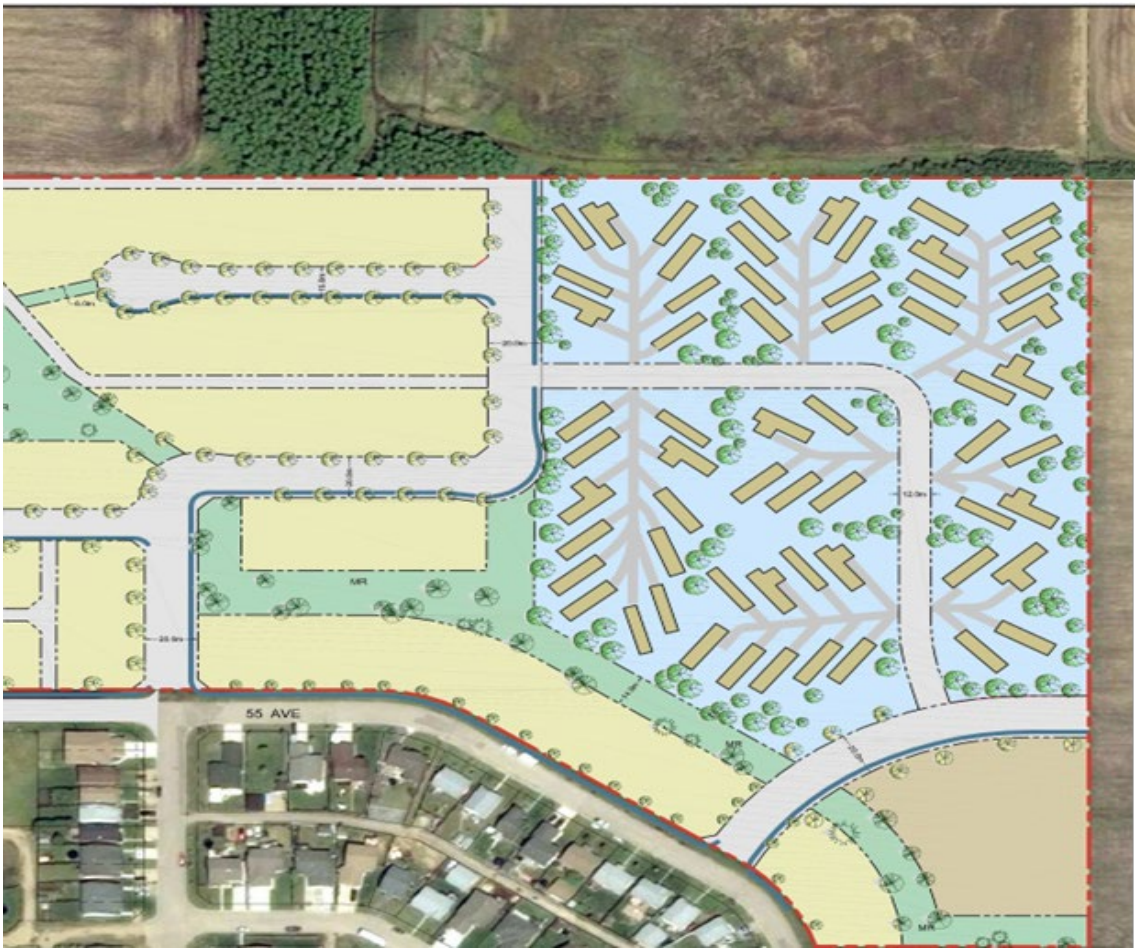
1.3 Concept Plan Developed By WSP In 2014

The Summersault ASP concept plan developed in 2014 by WSP included a combination of single-family, duplex, townhouse, manufactured dwellings and apartment buildings. The goal was to provide several housing alternatives in Bentley responding to the limited housing choices that had been evidenced by the 2011 Census.

The focus of the development concept was to provide a variety of residential housing alternatives integrated with a high-quality open space and trail network.

In the concept plan roads and lots were designed around the natural drainage channel that runs from the lower southeast corner of the plan area to the Northwest corner to a proposed stormwater detention pond. While not a regulated water feature, the proposed drainage channel provides a natural open space for the development. In addition to helping to manage stormwater, the drainage channel and stormwater pond were intended to be designed as public amenities and recreational space. (Figure 4).

Figure 4: 2014 Development Concept - WSP



Through collaboration with the Bentley Community and the Town's Administration, Parkland Community Planning Services (PCPS) undertook the task of revisiting and updating the plan. This plan has undergone a transformation and is rebranded as the Sunset Heights Area Structure Plan. Prior to being implemented, this revised version of the plan must undergo a comprehensive review and approval process by Council.

2. TRANSPORTATION AND INFRASTRUCTURE REVIEW

2.1 Road Network

Two accesses to the subject site from 55 Avenue and one access from 46 Street. have been proposed. With the Town's collaboration, the developer will be responsible for constructing the remaining portion of 55 Avenue between 49 Street and 47A Street. Road reserves are provided to the lands immediately north and east. Sidewalks have proposed along one side of the street and connect with the proposed trail network. The width and design of roadways in the development are based on consultation with Town Administration. Details surrounding the proposed roadway design are outlined in Schedule B.

2.2 Active Transportation Network

An active transportation network with a capacity of natural walking trails, and bike paths will be incorporated along the open spaces and the proposed soccer field. It will provide a natural amenity feature and improved pedestrian and bicycle connectivity within the development. The stormwater detention pond was intended to be a landscaped dry pond, designed to serve as an amenity and recreation feature for residents in addition to its stormwater management functions. Details surrounding the proposed open space and landscaping are outlined in Schedule C.

Currently, additional construction is taking place in the first phase of the subdivision. The plan is to hydroseed the pond area and include a trail around the perimeter as part of the development.

With the Town's collaboration, building the trail network and landscaping will be the responsibility of the developer with specifics surrounding the design being finalized at the detailed design stage of future phases.

2.3 Open Space and Stormwater Detention Pond

A stormwater detention pond has been built on the northwest corner of the site. This is consistent with previous development concepts, engineering assessments and is based upon the natural topography and seasonal drainage channel found on the site. The seasonal drainage channel is not a regulated watercourse; therefore, it does not require designation as Environmental Reserve. However, in addition to its benefits from a stormwater management perspective, the seasonal drainage channel and stormwater pond present the opportunity for an open space/park corridor extending from the southeast corner of the site to the northwest corner.

2.4 Site Servicing

WSP Group was retained to prepare a Watermain Analysis and Stormwater Management Plan to confirm the serviceability of the existing development relative to the Town's existing infrastructure.

WSP Group prepared a Preliminary Servicing Study in 2014 for the Summersault ASP to determine the serviceability of the proposed development relative to the Town's existing infrastructure. The following subsections outline the findings of this study.

2.4.1 Existing Conditions

The site is primarily rolling agricultural land. A seasonal watercourse meanders west from the southeast corner to the northwest corner of the site. Sanitary and water mains currently exist along 55 Ave.

2.4.2 Water Distribution System

The proposed water distribution system involves three connections to the existing water main in 55 Avenue and will include two stubs to allow for the future servicing of properties to the north and east. The watermain sizes will be 200mm, other than fire hydrant leads and dead-end lines. There is a 250mm line provided to the north as identified in the North Bentley Development Study prepared by GM Will Consulting Limited. Modelling of the system will be completed as part of an outline plan to confirm sizing provided. Further details surrounding the proposed water distribution system can be found in Schedule D.

2.4.3 Sanitary Sewer System

The proposed sanitary sewer system will be connected to the existing municipal sewer system to provide proper waste disposal for the development. As per the North Bentley Development Study prepared by GM Will Consulting Limited, the 250mm main pipe will ensure that all properties within the development have access to sewer services.

In the interim, a temporary on-site septic system may be utilized for the proposed soccer field until the sanitary network is extended to the east and northeast of the site. This temporary solution will ensure that waste can be properly managed until the permanent sewer system is in place.

Overall, the proposed sanitary sewer system will provide efficient and effective waste disposal for the development, ensuring the health and safety of residents and the surrounding environment. The proposed sanitary sewer system is outlined in Schedule E.

2.4.4 Site Grading and Stormwater System

Site grading and surface drainage are designed to follow the natural land topography where practical. The general overland water flow is from the southeast to the northwest.

The stormwater drainage system is based upon the Dual Drainage Concept with minor and major systems. The overall stormwater concept is provided in Schedule F.

A previously prepared stormwater report by Stantec in April 2006 is still relevant today. The major changes are that predevelopment rates have gone down over the years and the predevelopment rate Stantec used of 13.6 litres per second per hectare (l/s/ha) is on the high side. Based on a rate of 5 l/s/ha, the pond size would change requiring approximately 8,700 m^3 in area versus the 5,500 m^3 that Stantec had indicated. The pond area provided in the previously approved Outline Plan has been reviewed and determined it is adequate for the increased storage volume. Modelling of the system was completed by WSP as part of the Summersault Area Structure Plan to confirm the pond size.

The stormwater management facility is a dry pond designed as a landscaped feature. All inlets to the facilities will have sedimentation forebays designed to Alberta Environment Guidelines to remove suspended sediment.

2.4.5 Erosion and Sediment Control

During construction, silt fencing should be installed around the site, where feasible, to mitigate off-site flow of soil. Additionally, all stockpiled material should have silt fence installed at the toe of the pile.

The current storm pond installed around the perimeters, along with the matured landscaped vegetation inside the ponds, enhances the functionality to effectively reduce sediment pollution.

2.4.6 Traffic Impact Assessment (2014)

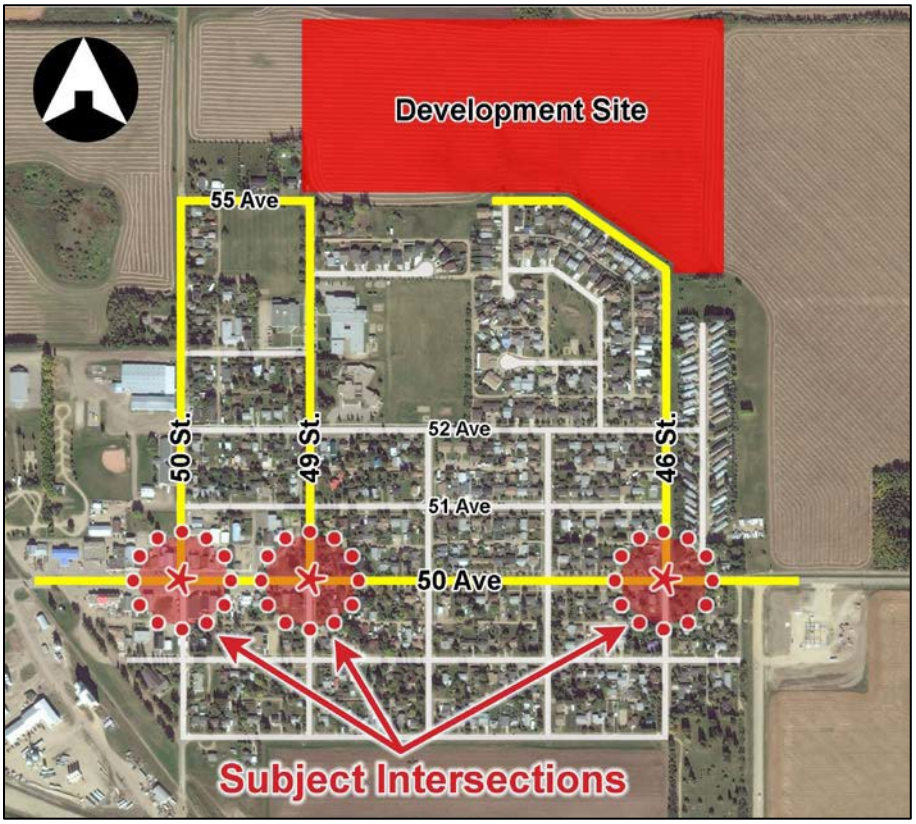
WSP Canada Inc. prepared a Traffic Impact Assessment (TIA) for the proposed development which has also been provided to the Town. A TIA is an unbiased assessment, prepared by a professional Engineer in 2014, that evaluated existing traffic conditions and infrastructure against the impact of the proposed development. Existing traffic conditions were determined through assessing existing traffic turning movements (obtained from Alberta Transportation or manual counts) and the geometric standards of existing transportation infrastructure and intersections. This study determined the existing network's functionality or level of service.

The existing level of service is then compared against the anticipated level of service once a proposed development is fully built-out and is based on anticipated future traffic growth and vehicle trips generated by a development during peak periods. This includes forecasting traffic volumes into the 20-year horizon. Depending on the outcomes of the modelling and assessment,

upgrades to existing infrastructure and/or intersections may be required in order to maintain an acceptable level of service throughout the traffic network.

For the purposes of the proposed development, the TIA included assessments of three intersections: 50th Avenue / 50th Street, 50th Avenue / 49th Street and 50th Avenue / 46th Street 9 as shown in Figure 5.

Figure 5: Intersections Assessed in TIA



The following provides a summary of the findings from the TIA:

50th Avenue / 50th Street Intersection

- All traffic movements during AM and PM peak periods at this intersection will operate at an acceptable level of service at the development's full build-out and will be capable of accommodating the forecasted traffic up to the 20-year horizon.
- While not required as part of Phase 1, an exclusive eastbound left turn lane for vehicles turning left (north) from 50th Avenue onto 50th Street will be necessary at full build out of the development.
- Though not necessarily based on current projections, best practices indicate the Town consider the addition of an exclusive westbound left turn lane for vehicles turning left (south) from 50th Avenue onto 50th Street.
- Traffic signals are not necessary at the intersection.

- It is recommended that the Town install and/or maintain appropriate pedestrian crosswalk pavement markings and signage at this location.
- The existing geometry of the intersection should allow for all of the above-noted changes and should be incorporated into the Town's streetscape improvement program.

50th Avenue / 49th Street Intersection

- All traffic movements during AM and PM peak periods at this intersection will operate at an acceptable level of service at the development's full build-out and will be capable of accommodating the forecasted traffic up to the 20-year horizon.
- While not required as part of Phase 1, an exclusive eastbound left turn lane for vehicles turning left (north) from 50th Avenue onto 49th Street will be necessary at full build out of the development. However, given the width of the existing eastbound lane at this intersection, adequate maneuvering space is available for vehicles to travel around vehicles waiting to make this left turn. Based on this, no geometric improvements to the intersection are required as a result of the proposed development, though the Town may consider adding lane markings for clarity.
- On-street parking in the vicinity of the 50th Avenue / 49th Street intersection is recommended to be limited during AM and PM peaks.
- Traffic signals are not necessary at the intersection.
- It is recommended that the Town install and/or maintain appropriate pedestrian crosswalk pavement markings and signage at this location.

50th Avenue / 46th Street Intersection

- All traffic movements during AM and PM peak periods at this intersection will operate at an acceptable level of service at the development's full build-out and will be capable of accommodating the forecasted traffic up to the 20-year horizon.
- A westbound right turn lane for vehicles turning right (north) from 50th Avenue onto 46th Street, though technically warranted, is not recommended. This is due to the low posted speed limit (50 km/h) and road right-of-way constraints.
- Traffic signals are not necessary at the intersection.
- It is recommended that the Town install and/or maintain appropriate pedestrian crosswalk pavement markings and signage at this location.

2.4.7 Geotechnical Investigation:

Proposed Bentley Residential Subdivision (2005)

A Geotechnical Investigation was conducted in 2005 to determine the nature and engineering properties of the site soils with regards to grading, the design of underground services, building foundations, and roadway subgrades. The investigation involved drilling eight 8 boreholes, each 6.7 metres deep, to examine soil profiles. The following soil types, in descending order, were

identified:

- topsoil;
- lacustrine soils;
- till (0.3 to 1 metre below grade);
- weathered bedrock (1.8 to 4.8 metres below grade); and
- layers (approximately 1 metre thick) of dense coal were also identified in three of the eight boreholes.

According to the 2005 investigation, subsurface conditions are considered to be suitable for residential development. The most significant geotechnical issue is expected to be the presence of shallow bedrock which may impact underground service trench excavation. It is expected that buried services will be installed to depths of approximately 4 metres.

Notwithstanding this potential impact, site grading, building foundations and roadway design should follow generally accepted fill, soil and foundation engineering practices. In order to achieve the required grading on-site an approved fill, such as low to medium plastic clay, may be used. If coarse gravel is proposed, a maximum aggregate size of 100mm is recommended. Soil samples also determined that water soluble sulphates pose negligible threats to buried concrete and subgrade infrastructures.

The subject site has not been disturbed, outside of its ongoing agricultural use, since the time of this study so it is anticipated that the findings of this Geotechnical Investigation are still valid and applicable to the property.

2.4.8 Bentley North Subdivision:

Phase 1 Environmental Site Assessment (2006)

A Phase 1 Environmental Site Assessment (ESA) was commissioned to identify potential environmental items that may require further site investigation or other action. The 2006 ESA concluded that the level of environmental risk associated with the subject site was low. Based on available information at the time, additional site investigation was not recommended. A secondary search of the Abacus Data graphics (AbaData) online database in June 2014 did not reveal the presence of any spills or oil and gas facilities on the subject property.

3. THE DEVELOPMENT CONCEPT PLAN

To properly revise the Summersault Area Structure Plan (ASP) developed by WSP in 2014, it is crucial to understand the governing documents and existing land use policies. Additionally, reviewing past technical documents is essential for assessing the development's feasibility and identifying any design-related issues that may need to be addressed.

Accordingly, the new Sunset Heights ASP must conform to the policies outlined in the Town's most recent Municipal Development Plan adopted in 2016 and the Town's Community Strategic Plan adopted in 2024 and previous strategic plans and policies. Evidently, the Town may repeal the current Summersault ASP as part of the approvals process for the proposed ASP.

The following sections highlights relevant findings from existing policy documents and past studies, providing a comprehensive foundation for revisiting the ASP.

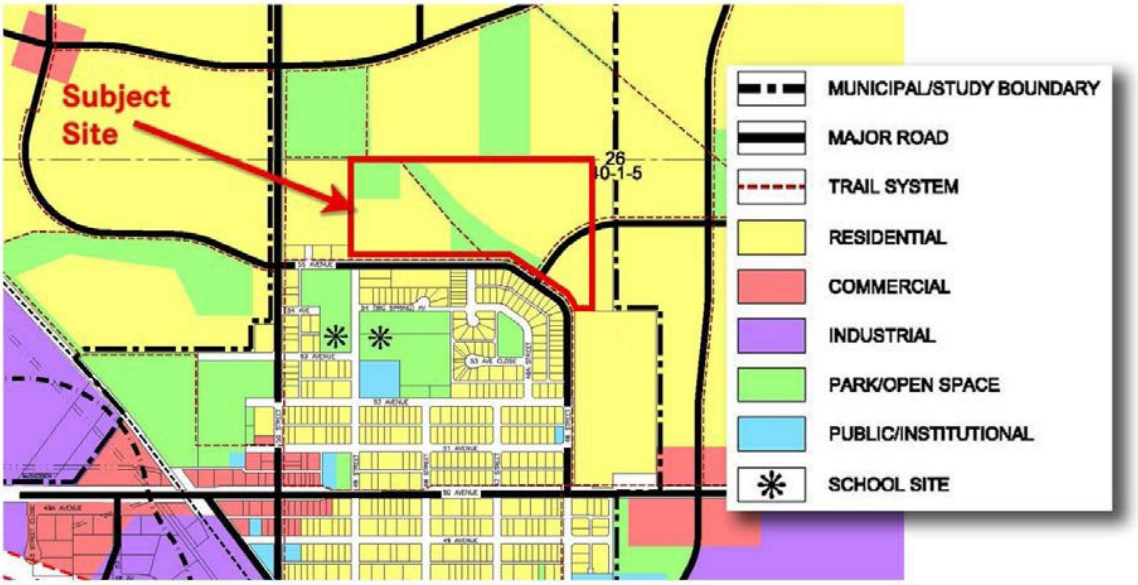
3.1 Planning and Land Use Policies

A Municipal Development Plan (MDP) establishes policies to manage growth across an entire municipality, while identifying the location of residential, commercial and industrial areas, environmentally sensitive areas, parks and major utility expansions.

The Town of Bentley's MDP addresses a variety of municipal planning issues and objectives, particularly as they relate to future land uses and residential growth areas. To this point, a primary residential objective is to "ensure a variety of housing types to meet the community lifestyles and market requirements", which is consistent with the development concept.

The subject site is located within an area identified for 'Residential' development. Additionally, 'Park/Open Space' has been identified in the areas as generally depicted on the development concept. The MDP also indicates building two roads from 55 Avenue and from 46 Street to provide connectivity to the east and north portions of the town. This has also been accounted for in the development concept. Figure 6 highlights the subject site relative to the MDP.

Figure 6: Town of Bentley MDP Land Use Concept



3.1.1 MDP 2016 Review

MDP 2016: Section 9 – RECREATION AND OPEN SPACE

9.2 Policies

1. *The Town shall provide developed and natural settings for recreation including facilities, parklands, open space areas and trails and recreational facilities to meet the needs of a growing community.*
    - The development of a new community park directly supports the Town's commitment to providing developed recreational facilities to meet the needs of a growing community.
2. *The Town shall establish long-term priorities for the recreational needs of the residents and shall solicit public input from Town residents with regards to parks and recreational area planning and development.*
    - Establishing a new community park, a trail network and a soccer field aligns with long-term recreational priorities and demonstrates responsiveness to community demands for diverse recreational options.
3. *The Town encourages a range of recreational uses. A balance of indoor and outdoor experiences shall be explored to ensure recreational facilities achieve optimum usage and are accessible by Town and district residents for year-round recreational pursuits.*
    - The soccer field adds to the range of outdoor recreational options, promoting balanced usage of both indoor and outdoor facilities.
4. *In new residential subdivisions the provision and development of buffer strips, walkways, pathways and utility rights-of-way will be encouraged to separate incompatible land uses*

and, if possible, to keep important natural and nature-like areas generally intact.

- The integration of buffer strips, walkways, and pathways in new subdivisions complements the development of the soccer field by enhancing accessibility and preserving natural areas.

KEY MESSAGE

The existing recreational policies in the Municipal Development Plan strongly support the creation of a new community park, a new trail network and a new soccer field in the community. These policies emphasize the provision of diverse recreational facilities to meet the needs of a growing population, the importance of long-term planning with public input, and the encouragement of both indoor and outdoor recreational activities to ensure year-round usage.

Additionally, the policies advocate for the central and safe siting of recreational facilities within residential neighborhoods, and the integration of buffer strips and pathways to enhance accessibility and preserve natural areas. Establishing a new soccer field aligns with these policies, providing a valuable outdoor recreational option that responds to the interests of residents, promotes active lifestyles, and enhances the overall recreational infrastructure of the community.

MDP 2016 - Section 12. RESIDENTIAL DEVELOPMENT

Bentley offers a mix of housing types and ownership although single family housing is the predominant form. There is an increase in the mix of housing types to support the needs, income levels and preferences of current and future residents in infill opportunities and as identified in the Area Structure Plan Area.

12.2 Policies

Policy 3: The Town will encourage a diversity of housing and subdivisions in new residential areas. This will facilitate infill development, by allowing for higher density residential developments. Modular homes are welcomed and treated as a type of Single-Family residential dwelling.

- While the policy welcomes modular homes to diversify housing, currently there is no demand for modular and mobile homes. Therefore, the focus of the ASP should shift towards incorporating recreational facilities, such as a soccer field, within the residential districts and new subdivisions. This approach would also contribute to the overall goal of creating diverse and vibrant residential areas by enhancing recreational opportunities.

Policy 4: New residential areas should be developed and integrated with existing development in a manner that facilitates linkages to community facilities, efficient servicing, and adherence to appropriate development standards. Residential areas shall be buffered from highways, railways, industrial and commercial areas.

- Integrating new residential districts with community facilities is crucial. The proposed residential development in the ASP area must be integrated with neighbouring housing development, and the proposed soccer field should be strategically placed within the new residential developments to ensure easy access and integration with existing

community facilities. This will enhance the recreational infrastructure and aligns with the policy of efficient servicing and appropriate development standards.

Policy 10: Non-residential development will not be allowed in residential areas except for developments that accommodate municipal services, and community uses which are compatible with the residential area. This includes parks, recreational and institutional uses, places of worship, childcare facilities, seniors housing and nursing homes.

- The new soccer field qualifies as a compatible community use within residential areas, similar to parks and recreational facilities mentioned in the policy. Prioritizing the soccer field development aligns with this policy, ensuring that non-residential developments enhance community living without disrupting the residential character of the area.

Policy 12: Parks, open spaces, and linkages shall be provided to integrate and connect new subdivisions with the Town's trail system through the use of municipal and environmental reserve and public utility lots.

- The new soccer field should be part of an integrated network of parks, open spaces, and trails, connecting new subdivisions with the Town's existing trail system. Utilizing municipal and environmental reserves for the soccer field will promote connectivity, active lifestyles, and a cohesive community structure, in line with this policy.

Residential Density

The Municipal Development Plan (2016) mandates specific density of future residential developments within the town:

Policy 13: The overall residential density of the Town should not exceed 15 dwelling units per gross developable hectare (6 dwelling units per gross developable acre).

Policy 14: For developing neighbourhoods, the proportion of single family detached dwelling units should be a minimum of 70 percent of total potential dwelling units. Duplexes may contribute up to 10 percent, while triplex, fourplex, townhouses, other multi-unit dwellings, apartments, and modular home units should not exceed 20 percent of total potential dwelling units.

Policy 15: Multiple housing sites (i.e. townhouse, apartment, multi-unit dwellings) may be accommodated within a neighbourhood in a number of suitable locations, which may contain one or more compatible developments provided each location does not exceed 1.75 hectares (4.32 acres). Exceptions include:

(a) when there are special site characteristics or design features that reasonably accommodate larger sites characteristic of the neighbourhood and surrounding land uses.

(b) except for apartments, densities on multiple unit dwelling sites should not exceed 30 units per net hectare (12 units per acre).

- The proposed development concept largely complies with the prescribed density requirements stated in the MDP. Nonetheless, the precise density will be determined during the development phase. If a future residential development proposal exceeds the

density required in the MDP, amendments to the MDP and/or ASP must be made before approval of the proposal.

In summary, the proposed ASP must be in conformance with the policies and mapping established in the MDP. The proposed development should represent a rational extension of residential land uses and municipal services, and the Town's residential growth objectives.

3.1.2 Community Strategic Plan 2024 - 2028

Bentley's new Community Strategic Plan was completed in Summer 2024. The establishment of a new soccer field in the Town of Bentley plays a central role in realizing the goals outlined in the Community Strategic Plan, particularly Goal 3: Develop Recreational Facilities for Youth.

Goal 3: Develop Recreational Facilities for Youth

This goal aims to provide a variety of recreational facilities and programs that meet the needs of young people, fostering a sense of belonging, promoting physical activity, and encouraging positive social interactions. It involves both physical infrastructure and collaborative programs with schools and other youth-oriented groups.

Objective 3.1: Expand Recreational Opportunities for Youth

To meet the recreational needs of youth, the Town of Bentley intends to create a Recreation Master Plan, which serves as a roadmap for identifying and developing facilities. Developing a new soccer field represents a tangible step toward this goal. Additionally, diversifying existing recreational facilities with new programs and features will ensure a wide range of activities for youth engagement.

Priority Action 3.1.2: Develop a New Soccer Field

- *A new soccer field will cater to youth and the broader community, providing a space for organized sports and recreational activities. It signifies a commitment to youth engagement and community wellness.*

This proposal not only addresses the critical need for increased recreational opportunities but also aligns with the Town's broader objective of expanding and diversifying youth engagement programs.

This proposed community park, centrally located within the site, plays a crucial role in enhancing the community's quality of life by prioritizing physical health, social interaction, and environmental sustainability. It, along with the planned trail network, offers ample opportunities for recreational activities, encouraging residents to adopt active lifestyles.

A dedicated soccer field will serve as a practical hub for organized sports, fostering physical activity, teamwork, and healthy lifestyles among young residents. It will also provide a communal space for various recreational activities, reinforcing our commitment to community wellness and cohesion.

By investing in this infrastructure, Bentley demonstrates a proactive approach to youth development, ensuring that the young population has access to high-quality facilities that encourage positive social interactions and a strong sense of belonging. Furthermore, the proposed soccer field will act as a catalyst for collaborative programs with schools and youth organizations, enhancing the overall recreational landscape of Bentley and creating a vibrant, inclusive environment for all community members.

3.1.3 Northeast Area Structure Plan (1993)

The Sunset Heights ASP site is located within the former Northeast Area Structure Plan (NEASP) area. The NEASP was prepared in order to establish a development concept, planning policies and implementation strategy for the subject site and immediate surrounding area. The intent of the Plan was to provide guidance on the following development considerations:

- Transportation: the main objective of the NEASP was to extend 46th Street and 55th Avenue into the subject site. A series of local roads, including laneways designed for residential purposes, would service the remaining lands.
- Service and Utilities: Prior studies indicated that the NEASP could accommodate 580 persons. A lift station would likely be required to service sewage disposal, and a storm water retention pond was proposed to service stormwater by gravity flow.
- Future Land Uses: The NEASP identified this area for major future residential growth consisting of a variety of housing types and densities. The envisioned plan was to foster the logical extension of existing residential areas into the NEASP. Specifically, it was projected that the subject site currently under consideration could accommodate 170 lots (500 persons).

The proposed development concept in the Sunset Heights ASP largely aligns with the above-mentioned criteria. However, the creation of a new soccer field on the site, in an area previously designated for mobile homes, represents a significant addition to the ASP, marking a departure from previous plans.

Further, the inclusion of alternative housing forms with diverse densities on the site deviates from the Summersault ASP 2014.

3.1.4 Parks and Open Space Plan (2008)

Another previous plan reviewed was Parks and Open Space Plan developed in 2008. According to the *Parks and Open Space Plan (2008),* the most significant open space land base encompasses the northern sections of the Town. These lands are currently designated 'Urban Reserve' in the Land Use Bylaw and intended for future development. How these lands are developed with respect to parks and open space should be considered in the development of this Area Structure Plan.

The proposed development's open space will contribute to the Town's 'Neighbourhood Park' and 'Open Space Areas' system. These are defined as *"open areas designed primarily for passive and active, non-organized recreational activities"*. The proposed park and open areas are intended to serve residents of the immediate neighbourhood, while simultaneously linking the development to adjacent lands.

The following *Parks and Open Space Plan* goals and objectives highlight select considerations as they apply to the proposed development's 'Neighbourhood Parks' and 'Open Space Areas':

Neighbourhood Parks

Objective 1.2: Park Service Areas

"Residential neighbourhoods should be served by a developed park located within approximately 400-metres."

- The proposed park corridor spans the entire length of the proposed development and is located well within the 400-metre radius. This corridor will provide for active linkages and leisure opportunities for area residents.

Objective 1.3: Land Dedications

"Developers of residential neighbourhoods shall be required to contribute to park sites..."

- As outlined in Table 2 (Policy 9.3.4), the proposed development dedicates approximately 1.42 ha (8.0%) of land as municipal reserve (MR). These lands create a linear park system linking the entire development. In addition, the public utility lot (PUL), is intended for a dry landscaped stormwater detention pond, contributes an additional 1.20 ha (6.7%) of reserve land which could be designed as a dual stormwater management pond and park/open space. Depending on the determination of Council, any outstanding MR dedication would be paid cash-in-lieu.

Objective 3.1: Co-Location Opportunities

"Explore the feasibility to locate parks within storm water detention facilities provided sufficient park space can be provided."

- The proposed park corridor functions as a stormwater management and drainage system, culminating with a dry landscaped storm water detention pond in the northwest corner of the proposed development.

Open Space Areas

Objective 1.1: Network Concept

"Combine natural areas into a connected system that preserves environmentally sensitive lands, provides wildlife habitat, and creates a sense of openness throughout the community."

- The proposed park corridor spans the entire length of the proposed development and will be fully landscaped with both natural and planned vegetation.

Objective 1.3: Recreation Opportunities

"Explore opportunities to incorporate compatible recreation and trail uses within open space areas."

- Given the dual function as a drainage channel, as well as size and configuration limitations, the proposed open areas do not provide sufficient space for supervised parks such as soccer fields or baseball diamonds. However, passive and active recreation activities are being proposed such as a trail system, and open areas suitable for leisure outdoor activities.

A primary intention of this ASP is to continue providing high-quality residential neighbourhoods in the Town. Providing parks and open spaces would, therefore, be an essential component of this development concept and important to the overall marketability of the development. It is understood that upon submission of a concept plan for the area, a new Parks and Open Space plan may be developed in accordance with the objectives and guidelines established in the *Parks and Open Space Plan* developed in 2008.

3.1.5 Land Supply and Future Growth Assessment

In an optimal situation, Bentley is projected to experience consistent residential expansion over the next 25 years, with a maximum annual growth rate of 1.0%. This growth trend will lead to an increase in population and create opportunities for future development in the town. As a result, it is crucial for the Town to carefully manage the municipal land supply to accommodate this anticipated growth and ensure sustainable development in Bentley. By effectively planning and allocating land resources, the town can capitalize on these growth opportunities and create a vibrant and prosperous community for its residents.

Table 3: Projected Population (Based on 1.0% Annual Increase)

Year	Total Population	Change Rate	Assumed Average Household Size	Number of New Dwellings Demand
2016	1,078		2.4	
2021	1,032	-4%	2.3	-
2022	1,037	0.48%	2.3	3
2030	1,122	1%	2.3	37
2040	1,240	1%	2.3	52
2050	1,370	1%	2.3	57

Residential land supply will, therefore, need to respond to anticipated population growth and demand for housing. Based on the land supply and future growth assessment results, there is adequate residential land supply to accommodate development up to and well beyond 2050. The table below highlights the results.

Table 4: Residential Land Projections

Year	*Total Population growth*	*Projected Demand (unit)*	*Overall Land Demand (acre)*	*Overall land Supply (acre)*
2050	333	145	24	27

Accordingly, the proposed development will satisfy anticipated growth potential and trends for the next 30 years.

3.2 Land Use

A land use bylaw designates various districts in a municipality which outline specific regulations regarding what uses are permitted on a site and guides where and how development will occur on individual parcels.

Through revisiting the current land use and in order to incorporate a new soccer field in the proposed concept plan it is necessary to assess the current and proposed land use designations in the plan area.

Incorporating various types of housing development, including single-family detached homes, semi-detached homes, row houses, and multi-unit apartments, in this plan area aligns with the desires of the community for diverse housing options. This mix of housing types responds to the varying needs and preferences of residents, accommodating different household sizes, lifestyles, and income levels that can contribute to a vibrant and sustainable community

The second major land use designation in the plan area is Public Park and Open Spaces.

Incorporating public parks and open spaces in the plan area serves as an essential component of this plan enhancing quality of life for residents. Public parks offer a range of benefits and amenities that respond to various recreational needs of the community.

The incorporation of a soccer field within a public park aligns with the popularity of this land use for sports and physical activities. The most popular land use for a soccer field is typically a public park or recreational area. These spaces are commonly designated for various outdoor activities and sports facilities, providing a central location that is easily accessible to the community. Public parks and recreational areas often include amenities such as playgrounds, walking paths, picnic areas, and other sports fields, making them ideal for accommodating a soccer field. This land use promotes community engagement, physical activity, and provides a multipurpose area for residents to enjoy.

3.3 The Development Concept

In addition to considering previous plans, policies and strategies, involving the Bentley community in the decision-making process was crucial for developing a plan that truly reflects the desires and needs of the Town. Through two community surveys conducted for both the 2024 Strategic Plan and the revision of the Summersault Area Structure Plan, residents made it clear that manufactured and mobile homes are not a priority for Bentley.

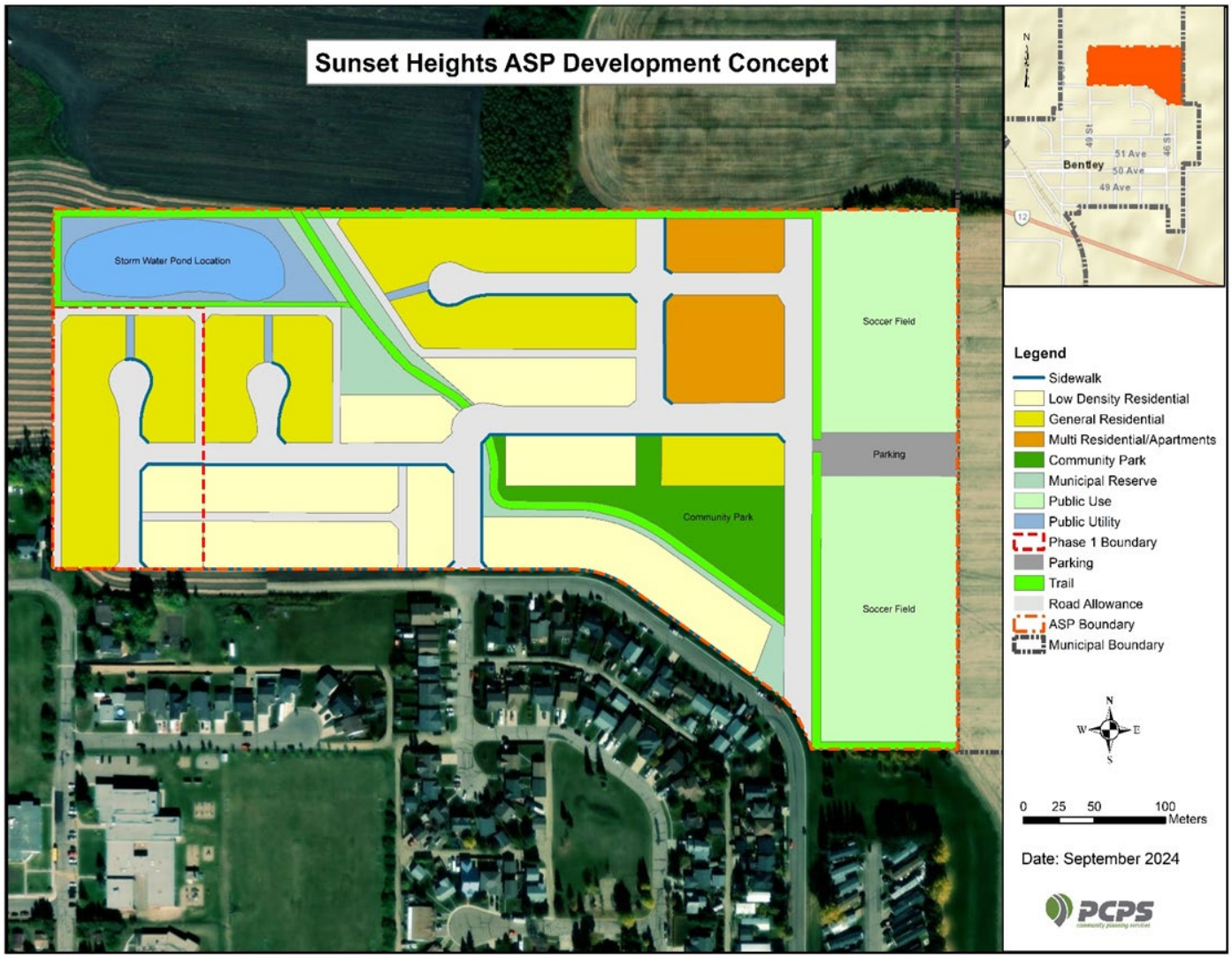
Instead, the community expressed a strong and enthusiastic desire for the addition of a new soccer field in town. This feedback has been taken into consideration, leading to the

incorporation of a new soccer field in the updated Sunset Heights ASP. The proposed soccer field development is located on the plan area, creating a hub for sports and recreation in Bentley.

As a result of this community-driven decision, the previous plans for manufactured homes in the residential development concept was removed to accommodate the new soccer field.

Considering all planning policies, engineering assessments and technical studies, a Development Concept is illustrated in Figure 7 below.

Figure 7: Development Concept Plan



3.3.1 Key Criteria for Developing the Concept Plan

In developing the Concept plan several key factors have been carefully considered including:

Residential Land Use Districts in the Concept Plan

The variety of housing types provides new alternatives for both current and future residents of with diverse family structures and income levels. While the development concept outlines the general location of various land uses, it is important to acknowledge that the specific distribution and placement of these land uses may evolve depending on market demand. Flexibility is key in the development of smaller communities given the inherent uncertainty and potential fluctuations in the housing market. The following points have been considered in designing the residential districts in the ASP development concept:

1. The Town of Bentley Municipal Development Plan (MDP - 216) requires a maximum overall density of 15 units per hectare (6 units per acre) for new developments. With a gross area of the approximately 41 acres, the total number of units should not exceed 246 units to achieve the desired overall density of 15 residential units per acre.
2. The proposed development concept plan designates a soccer field, park areas, and approximately 26.7 acres of net residential land (see Table 5). While the proposed development concept suggests a range of 240 to 275 residential units, the exact density will be flexible and may vary based on the number of units in the future development proposal. However, it is crucial to ensure that the total number of residential units does not exceed the permitted limit in the MDP. In case a feasible development proposal requires a higher density, the MDP and ASP shall be amended accordingly before approval.
3. The ASP development concept plan aligns with the existing land use layout to the immediate south by introducing detached single-family homes along 55 Avenue, opposite the already established developments. The remainder of the site will feature a blend of detached single-family dwellings, duplexes, row houses, multi-unit housing developments, and a soccer field.
4. The design of residential streets will incorporate a combination of laned and laneless zones. Detached single-family homes have been positioned along 55 Avenue, directly across from the existing single-family residences. This layout aims to create a smooth transition between the established community and the proposed higher-density development on the site.
5. Taking into account the lifestyle preferences and typical age demographics of the residents in the area, multi-residential units and apartments have been strategically situated in close proximity to the soccer field. A designated buffer zone has been established between the residential and soccer field areas to ensure that residents can enjoy a peaceful living environment while still having convenient access to recreational amenities.
6. There are two sites within the plan area identified for multiples family housing. It is planned

for between two or three individual multi-unit buildings with approximately 8-12 units. Depending on market demand this could shift to two 18-unit buildings or one 36 unit building on each site.

7. Compatibility and adequate parking space provisions will be determined during the development permit stage. Neither of these sites isolate individual parcels nor restrict
8. One residential site (R2), designed on a cul-de-sac, is located adjacent to the natural drainage channel and open space. The site is not located on an arterial or collector road, however based on the overall scale and intensity of development on the site, as well as the scale and intensity of development within the entire plan area, traffic volumes should not be a concern.
9. As per the development concept a neighbourhood park and open space corridor have been integrated throughout the entire development. The open space corridor also functions as a stormwater drainage channel, culminating with a dry landscaped stormwater detention pond in the northwest corner of the proposed development.

Overall, the residential land use districts designed in the concept plan aim to provide a diverse range of housing options to accommodate various family structures and income levels within the community. While the plan offers a general framework for the distribution of land uses, it is essential to remain adaptable to changing market dynamics and demands. By adhering to the guidelines set forth in the Town of Bentley Municipal Development Plan, the goal of the development concept is to create cohesive and inclusive neighborhoods that prioritizes both functionality and quality of life for the residents. Through thoughtful planning and flexibility, the development concept seeks to foster a harmonious blend of housing options while preserving the unique character of the surrounding area.

3.3.2 Land Uses Statistics

Table 5 below presents a detailed breakdown of the land use statistics associated with the proposed development concept, with each land use category described in more detail below. The proposed soccer field, a key feature of this development, is estimated to cover approximately 3.0 acres of the site.

Table 5) Land Use Statistics

Land Use	*Area (acres)*	*Percentage*
Plan Area (total)	**44.05**	**100%**
Residential Development	26.74	60.6%
Public Parks and Open Space – Municipal Reserve	6.51	14.8%
Circulation – Roads and Lanes	7.83	17.8%
Public Utility – Stormwater Pond	2.97	6.7%

3.3.3 Transportation and Road Network in the Development Concept

An integrated urban transportation and road network in a community should proficiently be designed to create effective and safe movements in the area while also promoting sustainable development and enhancing the overall quality of life in the community. With this primary principle in mind, the following key elements have been taken into consideration in the design of the road network in the Area Structure Plan (ASP) development concept:

1. **Connectivity:** The road network is designed to provide seamless connectivity throughout the plan area, linking residential areas and recreational facilities. A grid pattern with multiple access points has been considered to prevent traffic congestion and facilitate easy navigation.
2. **Access and circulation:** Adequate access points to major roads and potential future public transportation routes have been planned. Various transport modes, including sidewalks, pedestrian paths, natural trails, bike lanes, and public transport stops, have been incorporated to promote safe and efficient movement within the community.
3. **Land use integration:** By aligning road design with land use planning, the transportation network would support the overall development goals of the ASP. This strategic coordination ensures that the road network complements the surrounding land uses effectively.
4. **Roads:** May be designed based on the City of Red Deer standards. This standard dictates a 15 m right of way for local roads with a 10 m wide paved surface. Collector roads and roads connecting to existing 20 m right of way will be developed as a 20 m right of way.
5. **Sustainability:** The incorporation of active transportation practices, such as

encouraging walking, cycling, and the use of future public transportation, is a priority. Additionally, the implementation of green infrastructure, such as permeable pavements and roadside vegetation, aims to manage stormwater runoff and improve air quality.

3.3.4 Incorporating a new Soccer Field in the ASP area.

Incorporating a new soccer field in a community development plan can greatly enhance community engagement, promote physical activity, and provide a space for social interaction.

The key steps have been taken to design and integrate a new soccer field into the Sunset Heights Area Structure Plan include:

A. Assess Community Needs and Preferences

1. **Community Surveys and Meetings**: A community survey has been conducted to assess community interest in a soccer field. The results helped the project team to understand the community's preferences regarding location, size, and additional facilities.
2. **Stakeholder Engagement**: This practice has involved local sports clubs, and community groups in the planning process to ensure the proposed soccer field meets the needs of various users.

B. Site Selection

1. **Location Analysis**: In addition to the community and stakeholders' engagement through considering key elements of accessibility, the lands owned by the Town, safety, and proximity to other amenities, project team have identified potential sites for a soccer field development within the community.
2. **Environmental Impact**: A general environmental assessment was conducted to ensure the project would not adversely affect local ecosystems.
3. **Feasibility Study**: A technical and financial feasibility of the project will be assessed at the design stage considering land availability, soil quality, drainage requirements, and construction costs.

C. Planning and Design Criteria

1. **Connectivity:** The proposed soccer field should be planned in conjunction with new residential developments in the plan area, ensuring it is connected via pathways and buffered by green spaces to create an integrated recreational and natural environment.
2. **Public Amenities**: General criteria for incorporating essential amenities such as running track, seating, lighting, restrooms, changing rooms, and parking shall be considered in the design stage.
3. **Field Specifications**: The size and type of the soccer field (e.g., full-size, half-size, artificial turf, natural grass) will be analysed and determined at the design stage.
4. **Accessibility**: The accessibility of the field and facilities to people with disabilities shall be considered at the architectural design stage.

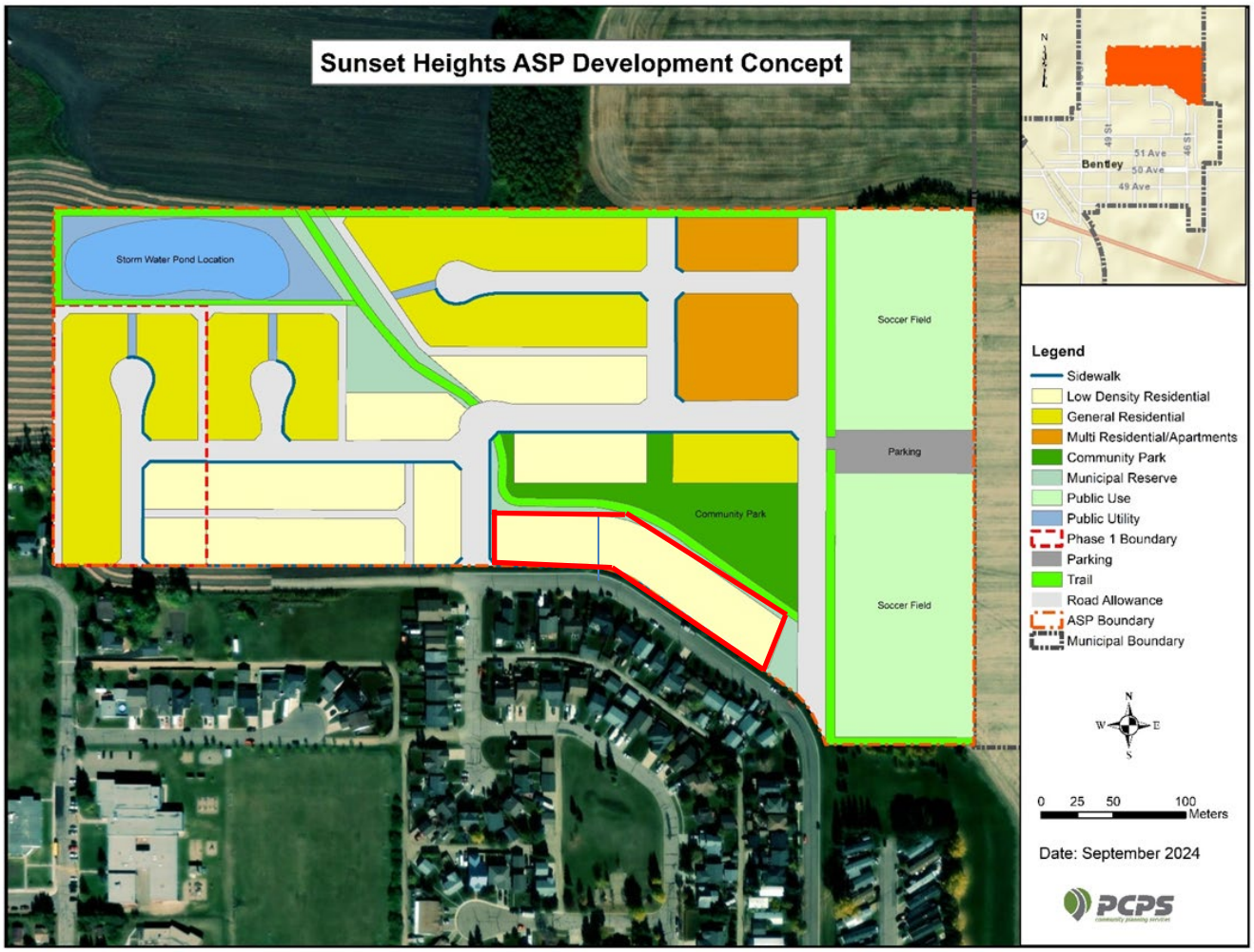
4. IMPLEMENTATION

4.1 Development Policies

(1) Areas designated for specific land uses on the development concept are intended to be flexible and not prohibit the development of other housing types permitted under this plan. The only exception are as follows:

a) Lots directly across from existing detached single-family homes on 55 Avenue as shown in Figure 6 shall only be used for detached single-family homes.

Figure 8) Area to be Developed with Only for Detached Single-Family Homes (Shown in red line)



(2) The developer and Town should work together in the final design of the proposed trail network and a neighbourhood park intended to serve as recreational and amenity features.

(3) Multi-unit dwellings and their associated parking shall be screened from adjacent land

uses through a combination of trees, a dense wooden fence or some combination thereof to the satisfaction of the Development Authority.

(4) Notwithstanding sight triangle requirements, deciduous trees should be planted along all public street frontages at the following rates:

a) 1 tree per detached single-family dwelling and duplex lot;

b) 1 tree per every two lots planned for townhouse dwellings; and

c) 1 tree per 15 linear metres for multi-unit sites or the side yard of a corner lot that faces a street.

(5) Trees required under (4) should be high leafing deciduous trees when planted within the Municipal right-of-way.

4.2 Development Phasing

Given the scale of the proposed development, the current demand in the housing market, and the resources available to the Town, it is evident that the development will be executed in multiple phases.

Phase I:

The initial phase of development has commenced in the western section, at the intersection of 49th Street and 55th Avenue, which is designated as Phase I. Progression will occur towards the east in alignment with housing market demand, encompassing the extension of services and road networks. Although approximate lot dimensions have been outlined, minor adjustments may be made as building designs and footprints are finalized.

Phase II:

In response to the community's expressed interest in establishing a soccer field, it would be prudent to incorporate the proposed soccer field and related amenities within Phase II. Additionally, it is recommended to introduce the proposed neighborhood park in this phase. This park not only caters to the community but also enhances the overall environment, thus attracting new residents, developers, and investors to the Town.

Subsequent phases will be determined based on factors such as housing demands, available Town's resources, and development proposals presented by developers, investors, and landowners.

4.3 Redistricting and Subdivision

Apart the land designated as Phase I, all other land within plan area is currently districted as (UR) Urban Reserve District. Redistricting and subdivision of the land is intended to conform to the following:

- **R1 District)** To provide and area for low density residential development in the form of Detached dwellings
- **R2 District:** To provide and area for low density residential development in the form

of detached and Semi-detached dwellings

- **R2B (General Residential) District:** To provide and area for low density residential development in the form of detached and Semi-detached dwellings and multiple units
- **PU (Public Use) District:** stormwater detention pond, trails, parks and open spaces.

As the plan area has been allocated specific districts, it is important to note that future phases of development may necessitate the exploration of new districts based on housing demand. In collaboration with the developer and municipality, amendments to the Land Use Bylaw could be pursued to introduce these new districts to accommodate the evolving needs of the community and the project.

4.5 Adopting and Amending the Plan

Adoption and any amendment of this Area Structure Plan would be the responsibility of Council. The Summersault Residential Outline Plan provides a conceptual development framework for the subject site.

4.5.1 Municipal Development Plan

The proposed development conforms with the residential and recreational policies of the current Town's Municipal Development Plan, no policy amendments are required to approve the proposed development.

4.5.2 Land Use Bylaw

In the current Town's Land Use Map, the developed part of the ASP plan area in the west has been designated as R1 and R2B. Following the adoption of the ASP, the land use bylaw must be amended to reflect the proposed land use designations. As part of an Area Structure Plan and future phases of the development, the Town and developers may explore the creation new zones aimed at allowing narrower lots.

4.5.3 Summersault Area Structure Plan

With the approval of this Area Structure Plan the Council will repeal the Summersault Area Structure Plan.

4.5.4 Financial Support and Investment Attraction

The subject property is specifically identified in this document as an "Excellent Opportunity for Land Development". Adjacent to existing residential neighbourhoods, access to municipal services, and its general proximity to Town amenities, the subject site is identified as ideal for residential development investment.

(I) With the support of Bently Residents, Lacombe County and other partners, it is recommended that the Town allocates the necessary resources to ensure the soccer field is not only well established but also well maintained. This will help elevate the soccer field to become a

regional recreational asset for residents to enjoy.

(2) Based on the feedback gathered from the community survey, it is evident that there is a strong interest in building a soccer field and its related facilities in the town. Therefore, it is crucial that the town takes into consideration the community expectations when designing and constructing the soccer field. (For detailed survey results, please refer to attachment G).

(3) Building of recreation amenities is a priority for the community, however this needs to be balanced with affordability and costs and the ability to maintain. As per the survey there was support for fundraising efforts to support such amenities as well. Amenities which are built not only support the Town, but families in the County as well. They should be built through joint efforts and funding or in-kind support.

(4) It is recommended that the Town of Bentley utilize the generous donation received and leverage this to access funding support from the county and possibly any other grants available. Soccer and other forms of recreation are important attractors to a community.

SCHEDULES

A. Development Concept

B. Road Network

C. Active Transportation Network

D. Water Distribution System

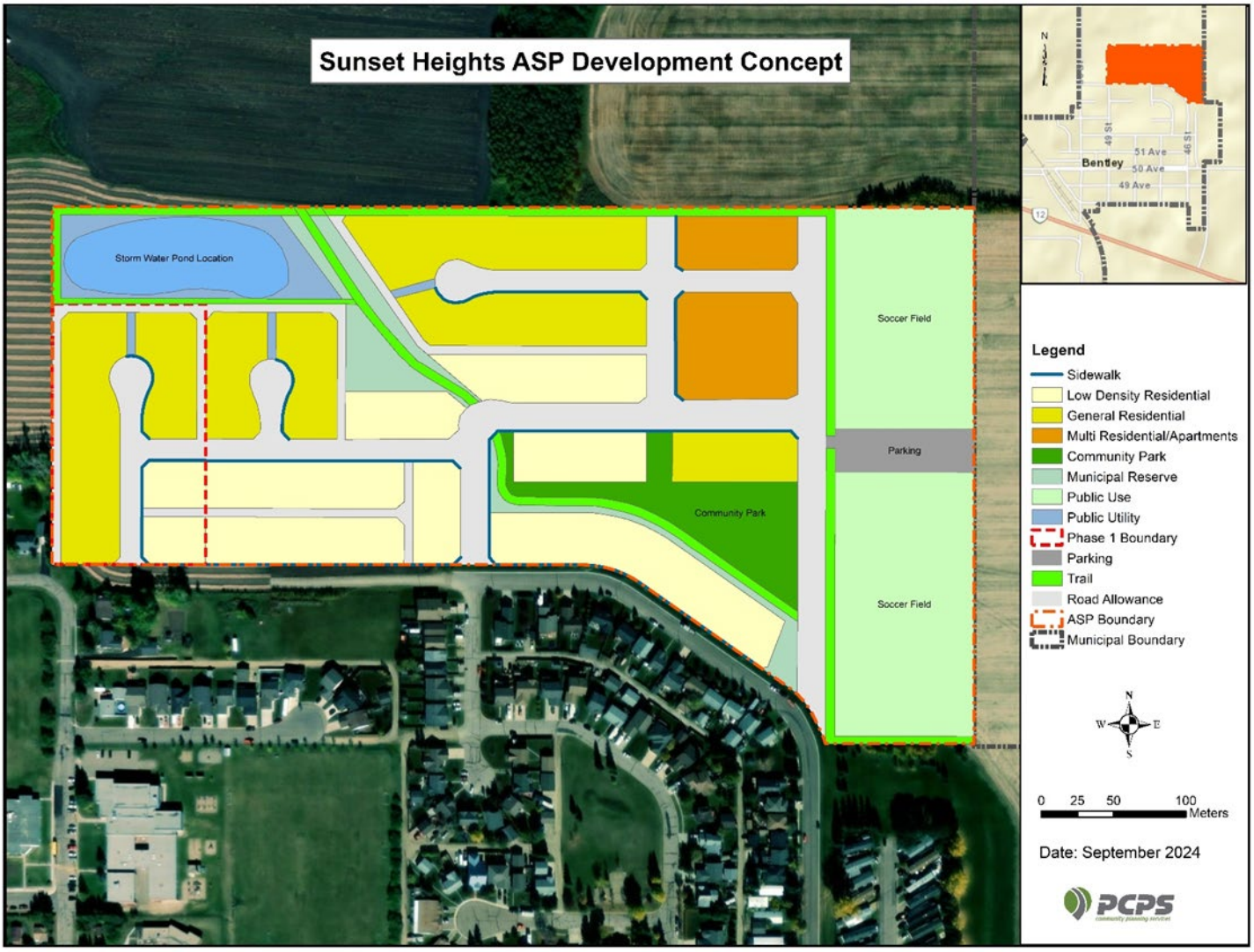
E. Sanitary sewer System

F. Stormwater Management System

G. **Community Survey Results**

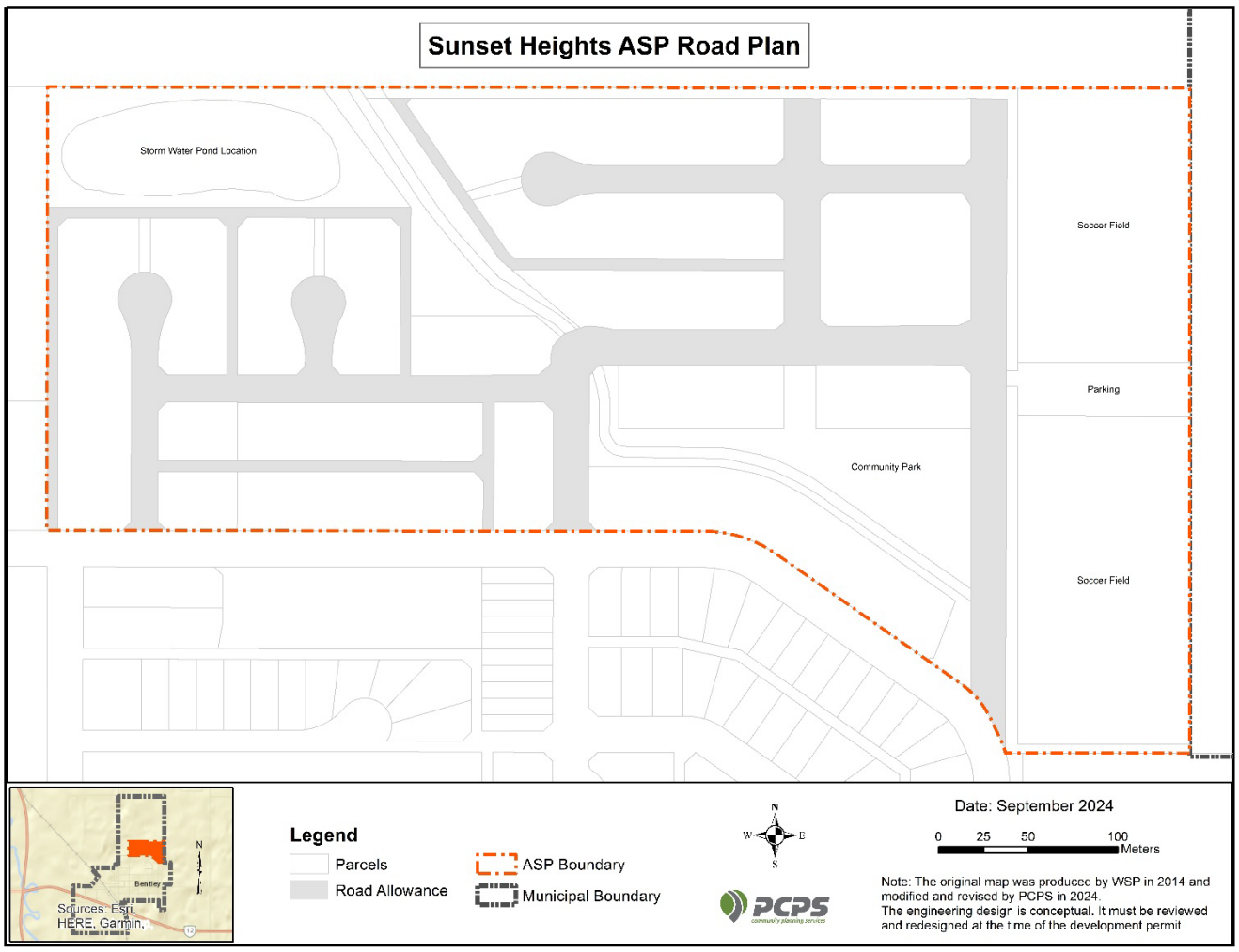
Schedule A:

Sunset Heights Area Structure Plan – Development Concept



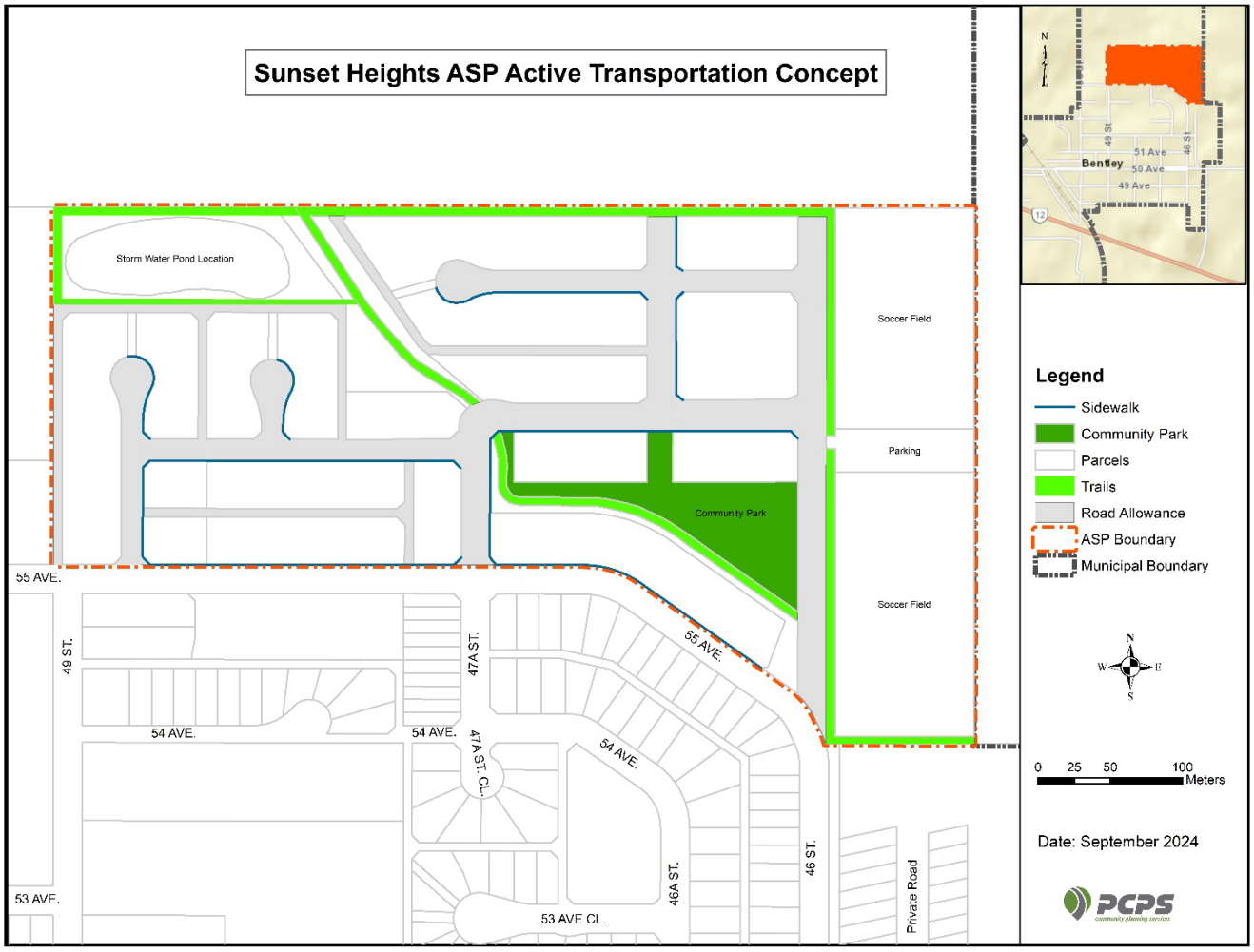
Schedule B:

Road Network



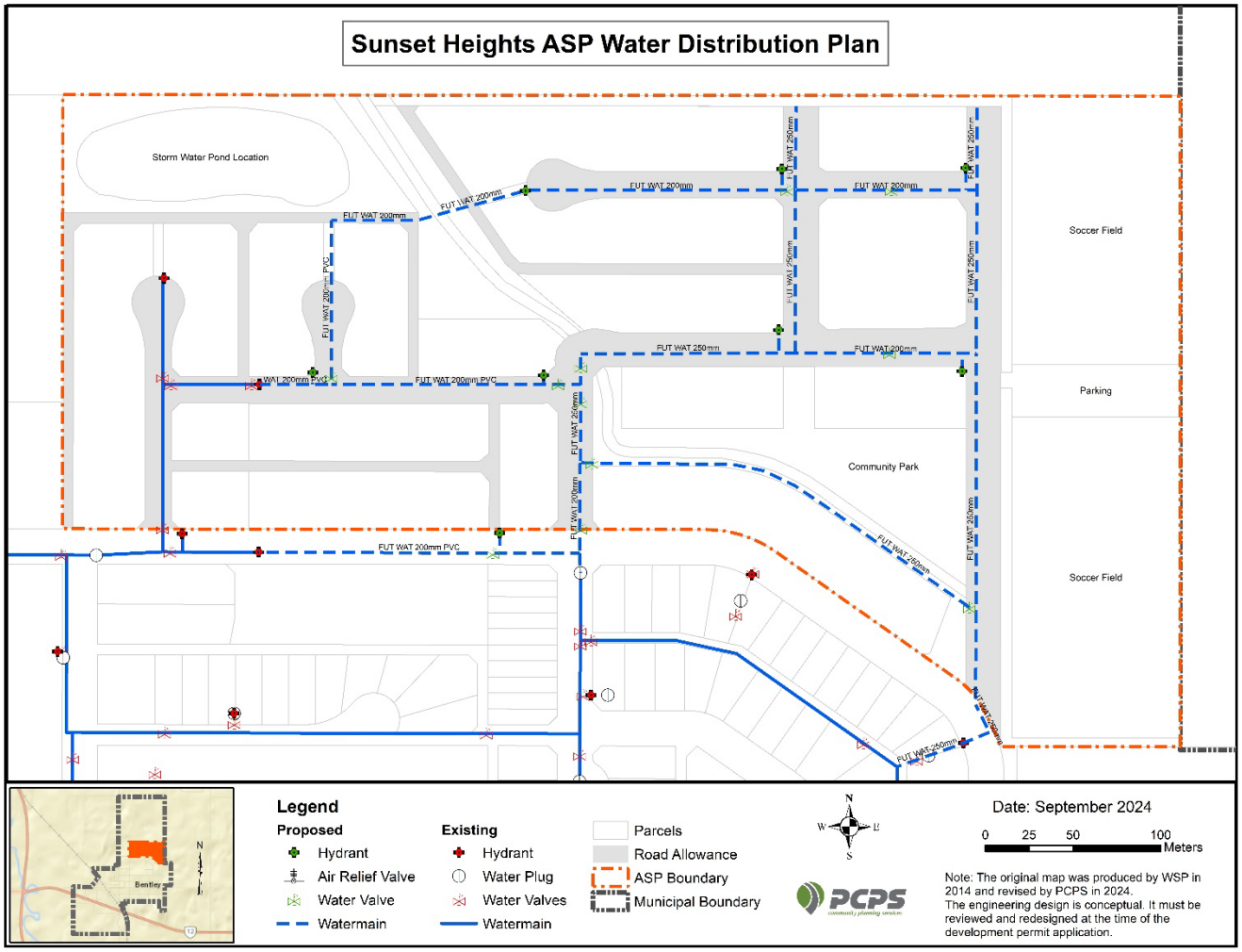
Schedule C:

Active Transportation Network



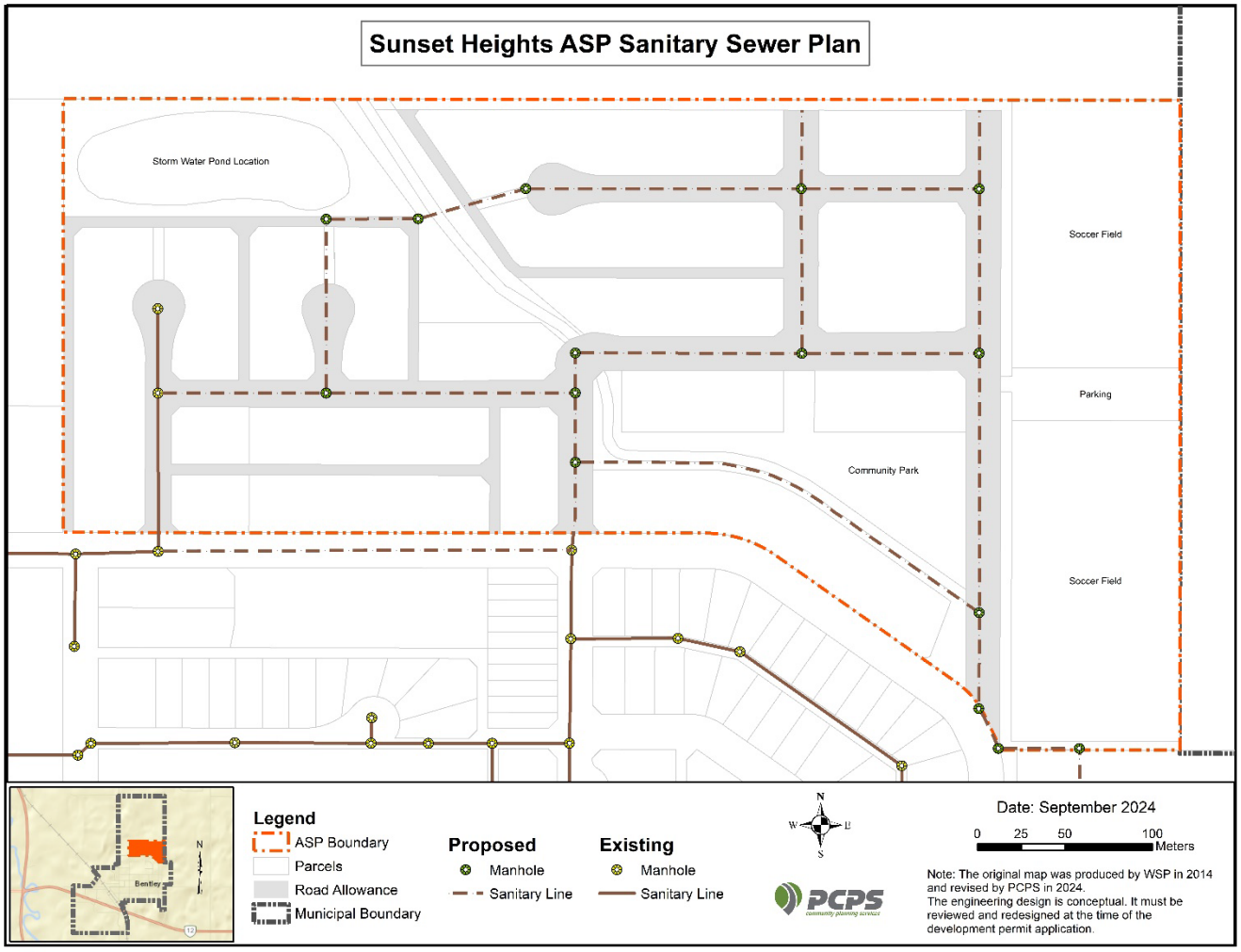
Schedule D:

Water Distribution System



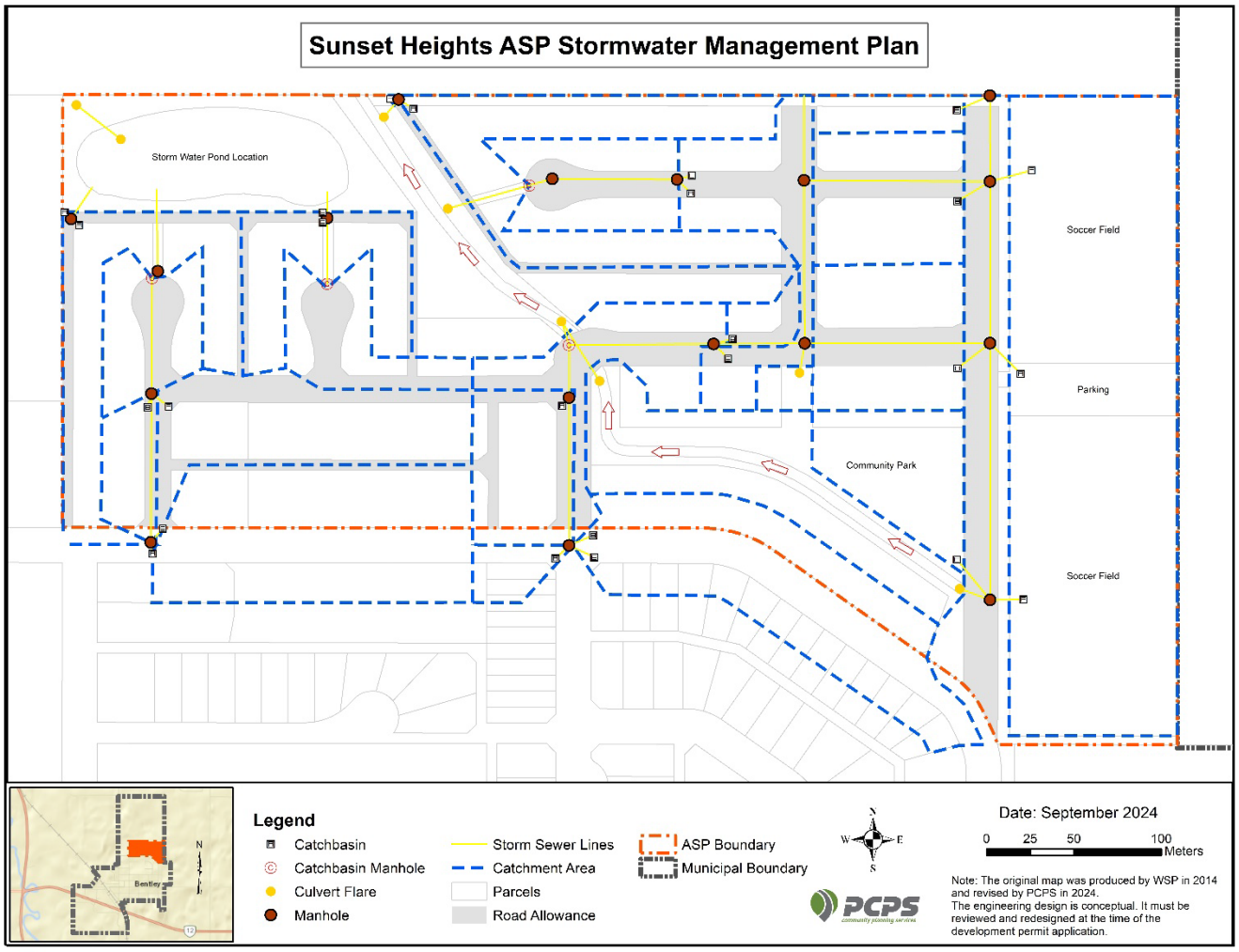
Schedule E:

Sanitary sewer System



Schedule F:

Stormwater Management System



Schedule G:

Community Survey Results

Survey Overview

- Total Respondents: 191
- Most respondents are middle-aged and long-term residents, which may influence their preferences for stability and community-oriented developments.
- Key Sections: Housing Development, Community Soccer Field Proposal

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Q1: What type of housing would you like to see developed in the Summersault area?

Housing Type	Score
Single-family Homes	4.55
Townhouses	3.67
Senior Living	3.02
Apartments	2.47
Mobile Homes	1.29

Analysis:

- Single-family Homes are the most preferred type of housing, with the highest score of 4.55 out of 5.
- Townhouses are the second most preferred, with a score of 3.67.
- Senior Living has moderate preference with a score of 3.02.
- Apartments and Mobile Homes are less preferred, scoring 2.47 and 1.29 respectively.

Q2: What are your biggest concerns regarding housing development in the Summersault area?

Concern	Score
Affordability	4.32
Traffic & Infrastructure	3.88
Density	3.74
Impacts on Community Character	3.22

Analysis:

- Affordability is the biggest concern, with a score of 4.32 out of 5.
- Traffic & Infrastructure is also a significant concern, scoring 3.88.
- Density has a notable level of concern with a score of 3.74.
- Impacts on Community Character is the least concerning, with a score of 3.22.

Q3: Additional comments or suggestions about housing development:

Key Themes:

- Adequate parking and green spaces
- Variety of recreational facilities
- Concerns about low-cost housing affecting property values
- Requests for rental houses and single-family homes
- Maintaining community aesthetics and avoiding low-quality developments

Q4: What do you think are the benefits of building a new soccer field in the Summersault area?

Benefit	Score
Better Opportunities for Youth Sports	4.72
Increased Community Engagement	4.50
Improved Health and Wellness	4.33
Potential Revenue from Events	3.98

Analysis:

- Better Opportunities for Youth Sports is seen as the greatest benefit, with a score of 4.72 out of 5.
- Increased Community Engagement is also highly valued, with a score of 4.50.
- Improved Health and Wellness has a strong positive perception, scoring 4.33.
- Potential Revenue from Events is viewed positively but to a slightly lesser extent, with a score of 3.98.

Q5: What concerns do you have about building a soccer field?

Concern	Score
Cost	4.22
Traffic	3.85
Environmental Impact	3.54
Noise	3.12

Analysis:

- Cost is the primary concern, with a score of 4.22 out of 5.
- Traffic is also a significant concern, scoring 3.85.
- Environmental Impact is a moderate concern, with a score of 3.54.
- Noise is the least concern, with a score of 3.12.

Q6: Where do you think the new soccer field should be located?

Location	Score
North of the Community (Town's land)	4.85

Analysis:

- The overwhelming preference is for the soccer field to be located North of the community (Town of Bentley land), with a score of 4.85 out of 5.

Q7: What size should the soccer field be?

Size	Score
Full-size (100-130 yards long)	4.61
Medium-size	4.08
Small size	3.47

Analysis:

- Full-size (100-130 yards long) is the most preferred, with a score of 4.61 out of 5.
- Medium-size is also favored, with a score of 4.08.
- Small size is the least preferred, with a score of 3.47.

Q 8) Expected Usage Frequency:

- Several Times a Week: Expected by 42.41%.
- Daily Usage: Anticipated by 35.60%.
- Weekly and Occasional Usage: Less expected.

The majority of respondents (42.41%) expect to use the soccer field several times a week, followed closely by those anticipating daily usage (35.60%). This indicates a high level of interest and expected usage of the soccer field by the community.

Q 9) Additional Facilities Desired:

Respondents highly desire essential facilities such as restrooms (89%), seating/bleachers (65%), and a running track (62%). Suggestions for other facilities such as lighting, picnic shelters, and equipment storage show a desire for a well-equipped and comfortable soccer field.

Q10) Accessibility for people with disability

Answer Choices	Responses
Very Important	49%
Somewhat important	44%
Not important	8%

Nearly half of respondents (49%) consider it very important and 44% of respondents believe that it is somewhat important that the soccer field and its facilities are accessible to people with disabilities, highlighting the community's commitment to inclusivity and accessibility.

Q11) Supporting hosting community events and soccer tournaments

Answer Choices	Responses
Yes	87.4%
No	3.2%
Maybe	9.5%

The majority of respondents (87.4%) are in favor of supporting community events and soccer tournaments, indicating a willingness to make the soccer field a central hub for community gatherings and activities.

Q12) Potential environmental impact of the development

Importance	Responses
Very concerned	25%
Somewhat concerned	50%
Not very concerned	20%
Not at all concerned	5%

A majority of respondents express some level of concern about environmental impacts, indicating the need for careful environmental planning and communication.

Q13) Supporting community fundraising efforts to help costs of the soccer field

Answer Choices	Responses
Yes	71.6%
No	7.9%
Maybe	21%
Other	5%

A majority of respondents (71.6%) are willing to support community fundraising efforts to help cover the costs of the soccer field, demonstrating a strong sense of community collaboration and investment in the project.

Q14) Your age group

1. **Under 18**: 1.58%
2. **19-29**: 2.63%
3. **30-44**: 52.11%
4. **45-60**: 32.63%
5. **61 or older**: 11.05%

The majority of respondents (85%) are in the 30-44 and 45-60 age groups, suggesting the survey

results are heavily influenced by middle-aged residents.

Q15) How long have you lived in Bentley?

1. **Less than a year**: 1.57%
2. **1-5 years**: 12.04%
3. **6-10 years**: 18.32%
4. **11-20 years**: 28.27%
5. **More than 20 years**: 24.61%
6. **Don't live in Bentley**: 19.37%

Most respondents (53%) have lived in Bentley for more than 10 years, indicating a well-established community with a long-term resident base.

Q 16) Additional comments or suggestions

1. Outline long-term costs clearly
2. Consider building a splash park for younger kids
3. Need for a pool, gym, and play space for kids
4. Attend busy soccer nights to understand community needs

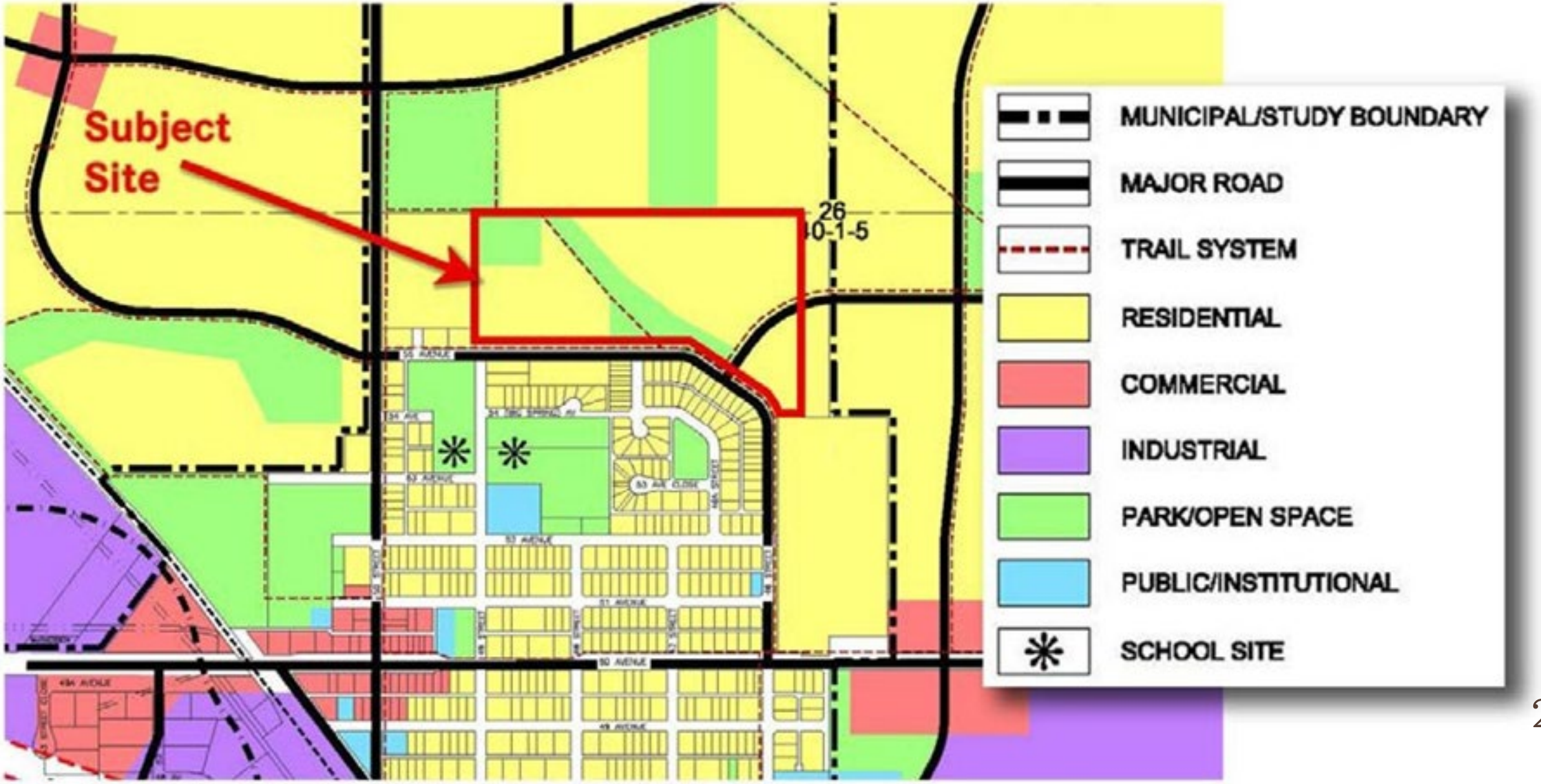
Further, respondents provided constructive feedback, emphasizing transparency in costs and suggesting additional recreational facilities.

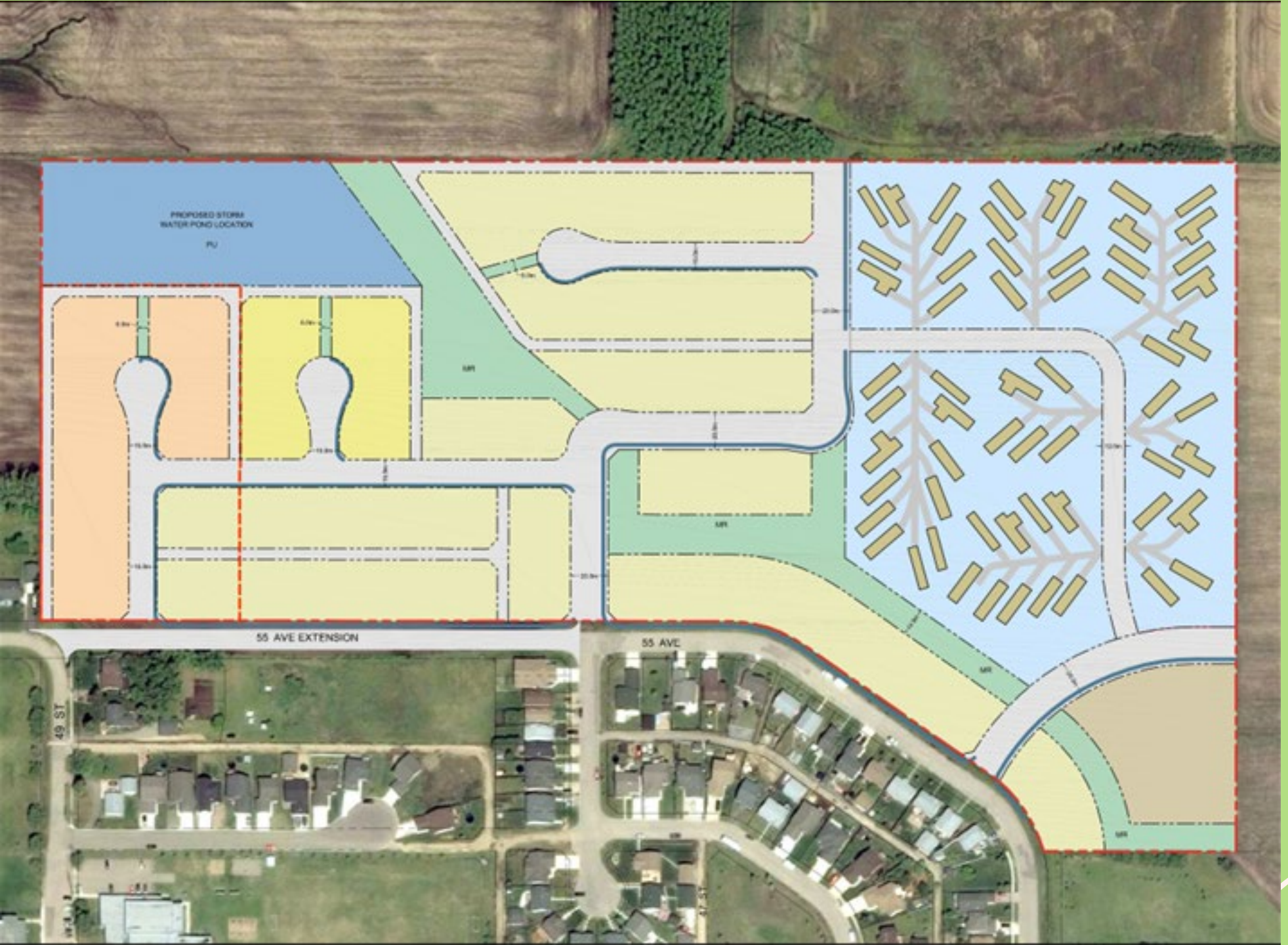
Conclusion

The community survey indicates overwhelming support for developing a new soccer field in the proposed area, emphasizing youth sports and community engagement. There is a strong preference for single-family homes and a cautious approach towards affordability and maintaining community character. Cost and traffic remain significant concerns, but there is a clear consensus on the proposed location and the need for additional amenities including seating stages, running tack and rest rooms to support the soccer field's usage.

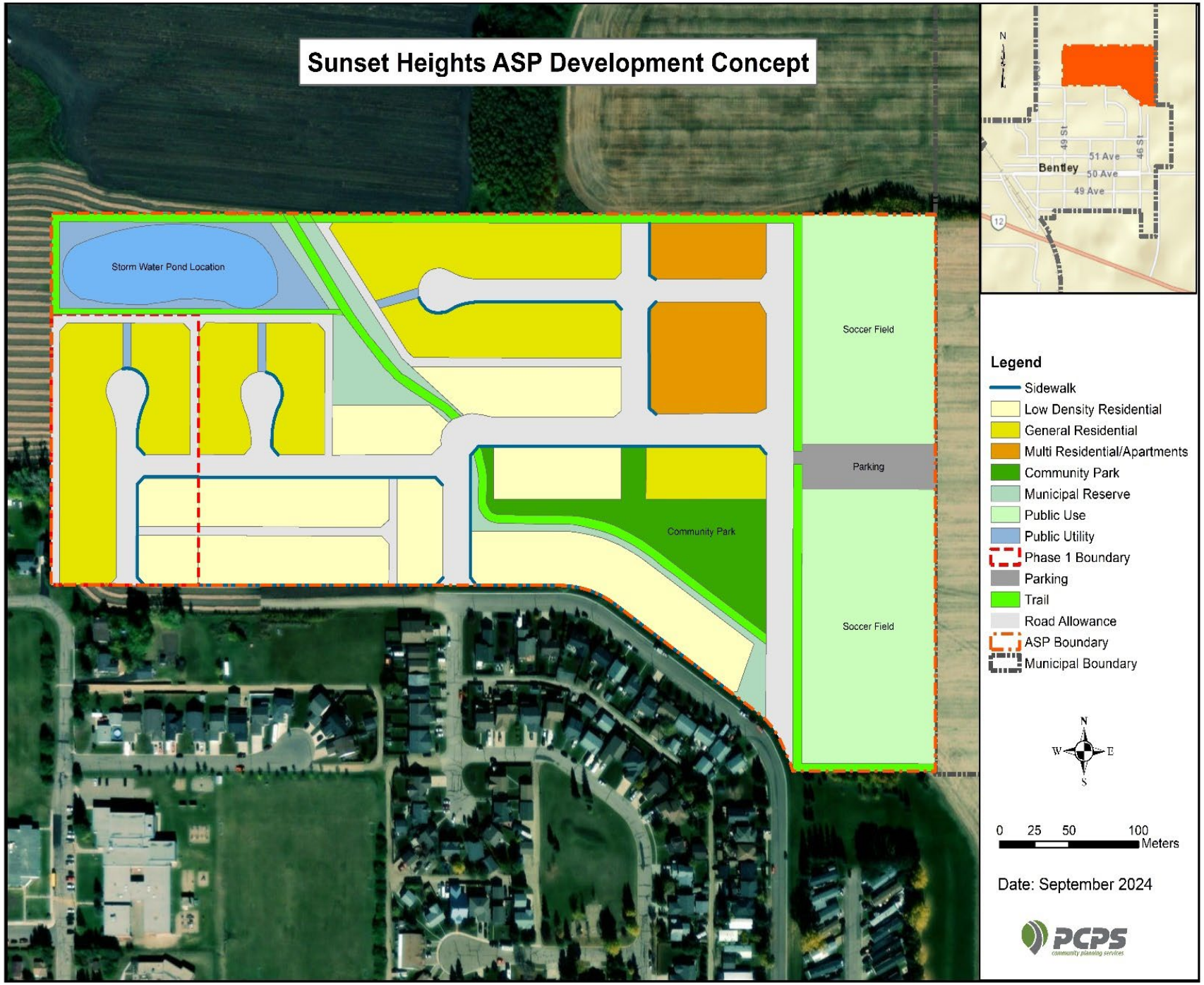
Sunset Heights (Summersault) Area Structure Plan

The ASP Site


Subject Site
MUNICIPAL/STUDY BOUNDARY
MAJOR ROAD
TRAIL SYSTEM
RESIDENTIAL
COMMERCIAL
INDUSTRIAL
PARK/OPEN SPACE
PUBLIC/INSTITUTIONAL
SCHOOL SITE



Summersault Area Structure Plan - WSP



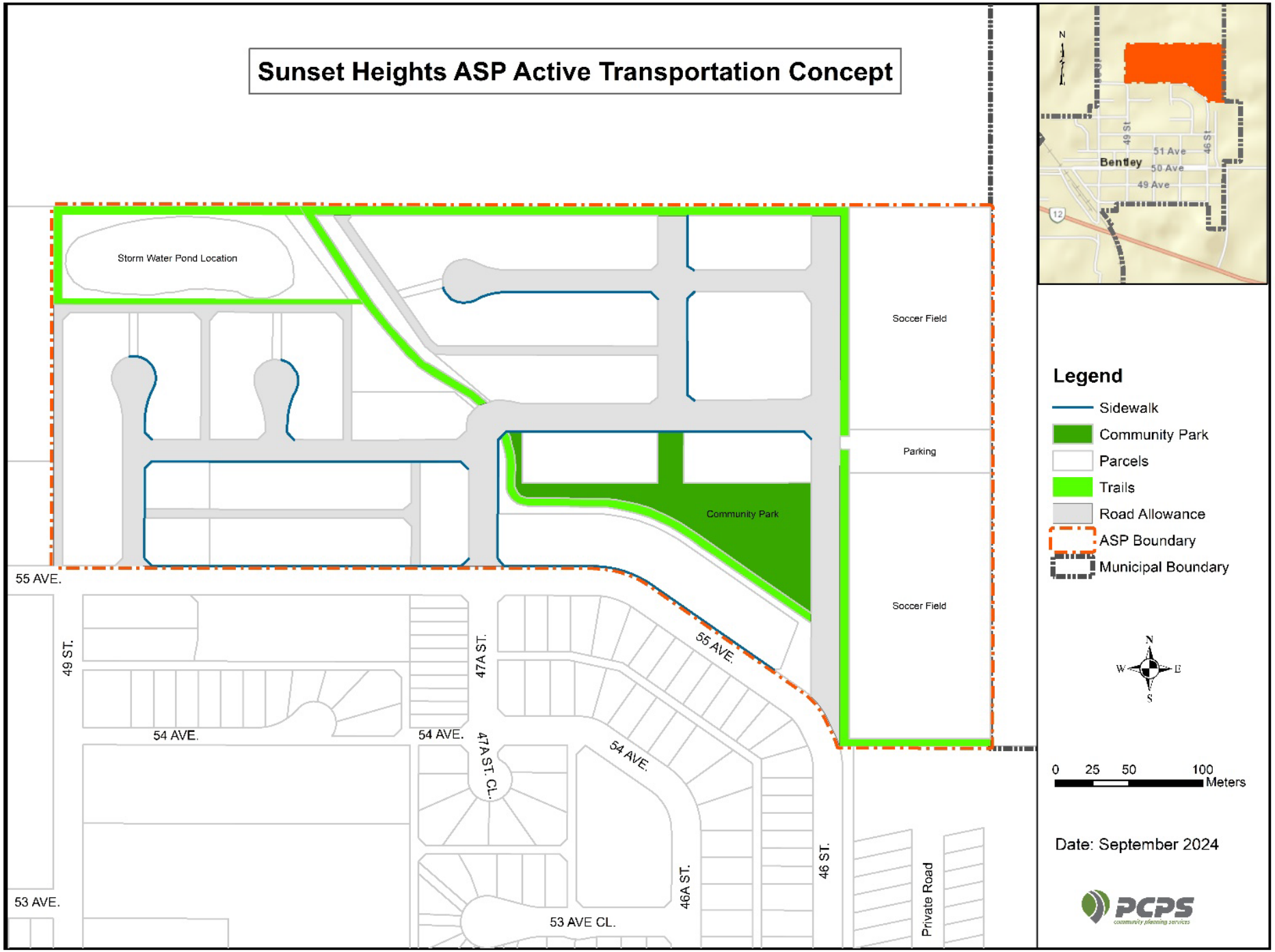
Sunset Heights Area Structure Plan -PCPS

Sunset Heights Area Structure Plan

REVISION:

1. Remove Mobile Home Park
2. New Soccer Field(s)
3. New Road Configuration/Alignment
4. Trail Network
5. Neighbourhood Park

Sunset Heights ASP Active Transportation Concept



Legend

- Sidewalk
- Community Park
- Parcels
- Trails
- Road Allowance
- ASP Boundary
- Municipal Boundary

N
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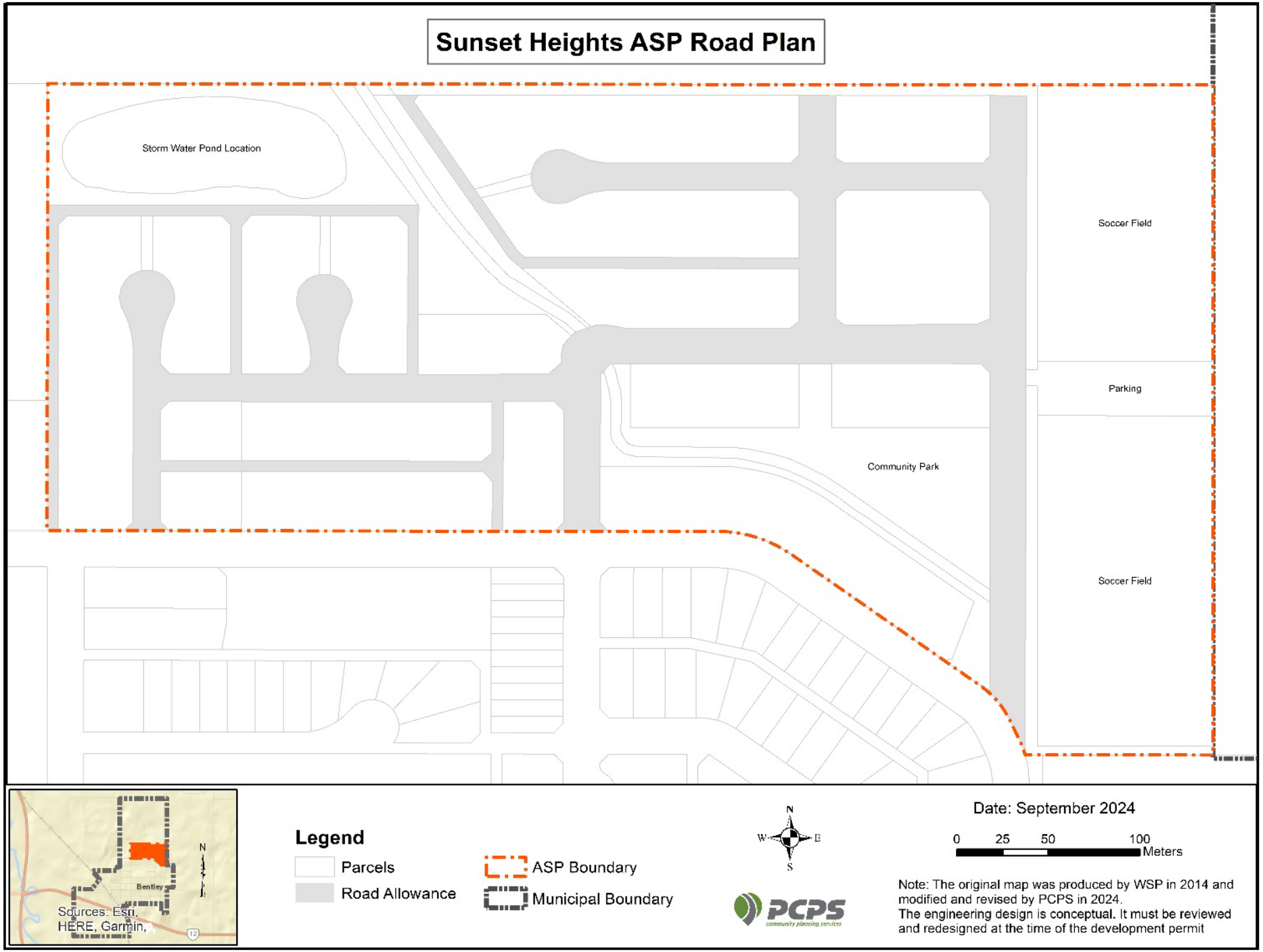
0 25 50 100
Meters

Date: September 2024

PCPS
community planning services

Sunset Heights ASP Road Plan



Legend

- Parcels
- Road Allowance
- ASP Boundary
- Municipal Boundary

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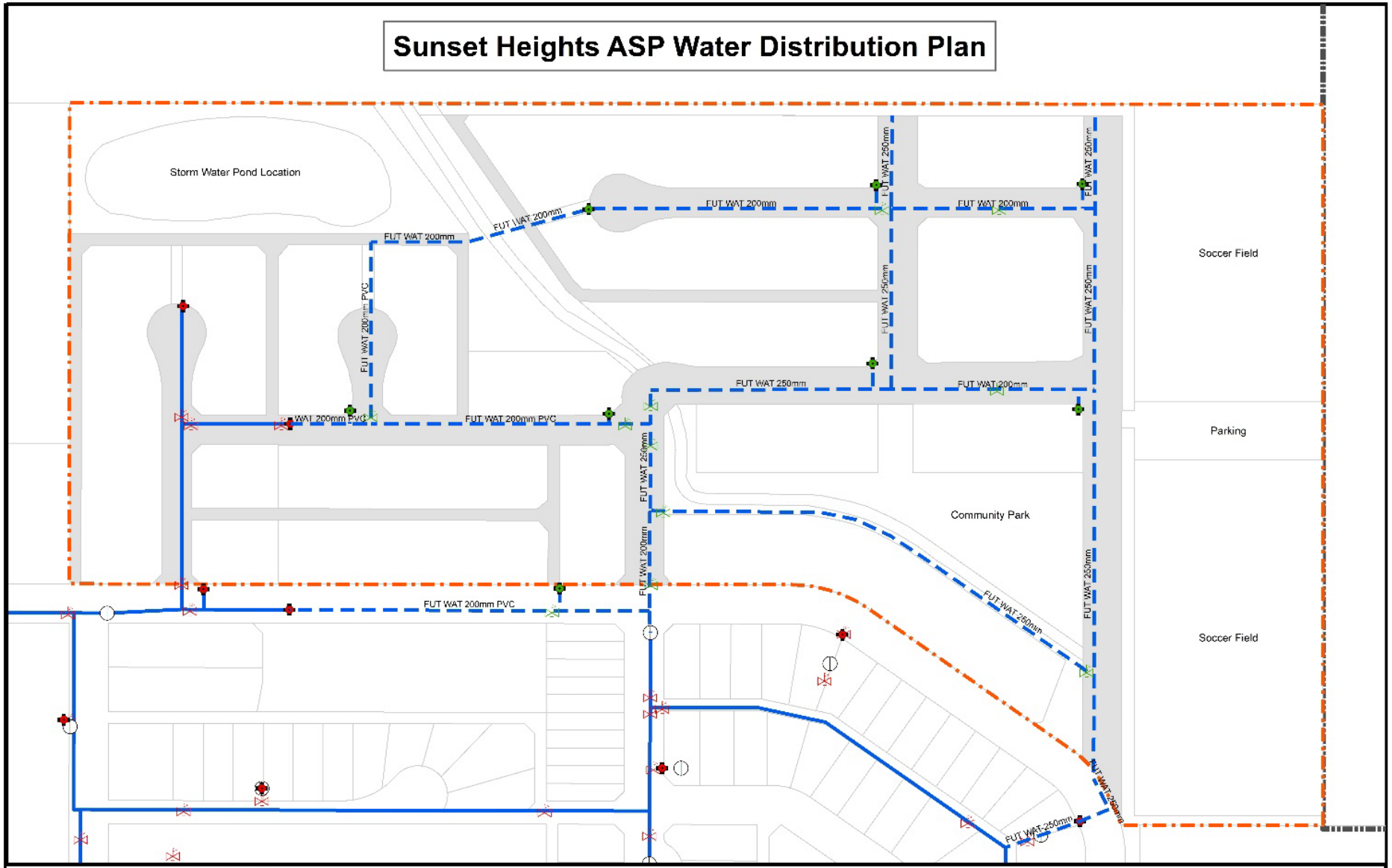
PCPS community planning services

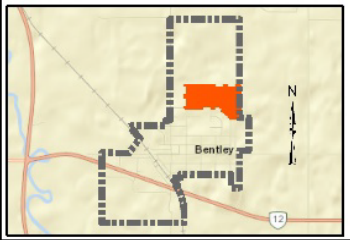
Date: September 2024

0 25 50 100 Meters

Note: The original map was produced by WSP in 2014 and modified and revised by PCPS in 2024.
The engineering design is conceptual. It must be reviewed and redesigned at the time of the development permit

Sunset Heights ASP Water Distribution Plan





Legend

Proposed
- Hydrant
- Air Relief Valve
- Water Valve
- Watermain

Existing
- Hydrant
- Water Plug
- Water Valves
- Watermain

- Parcels
- Road Allowance
- ASP Boundary
- Municipal Boundary

N W E S

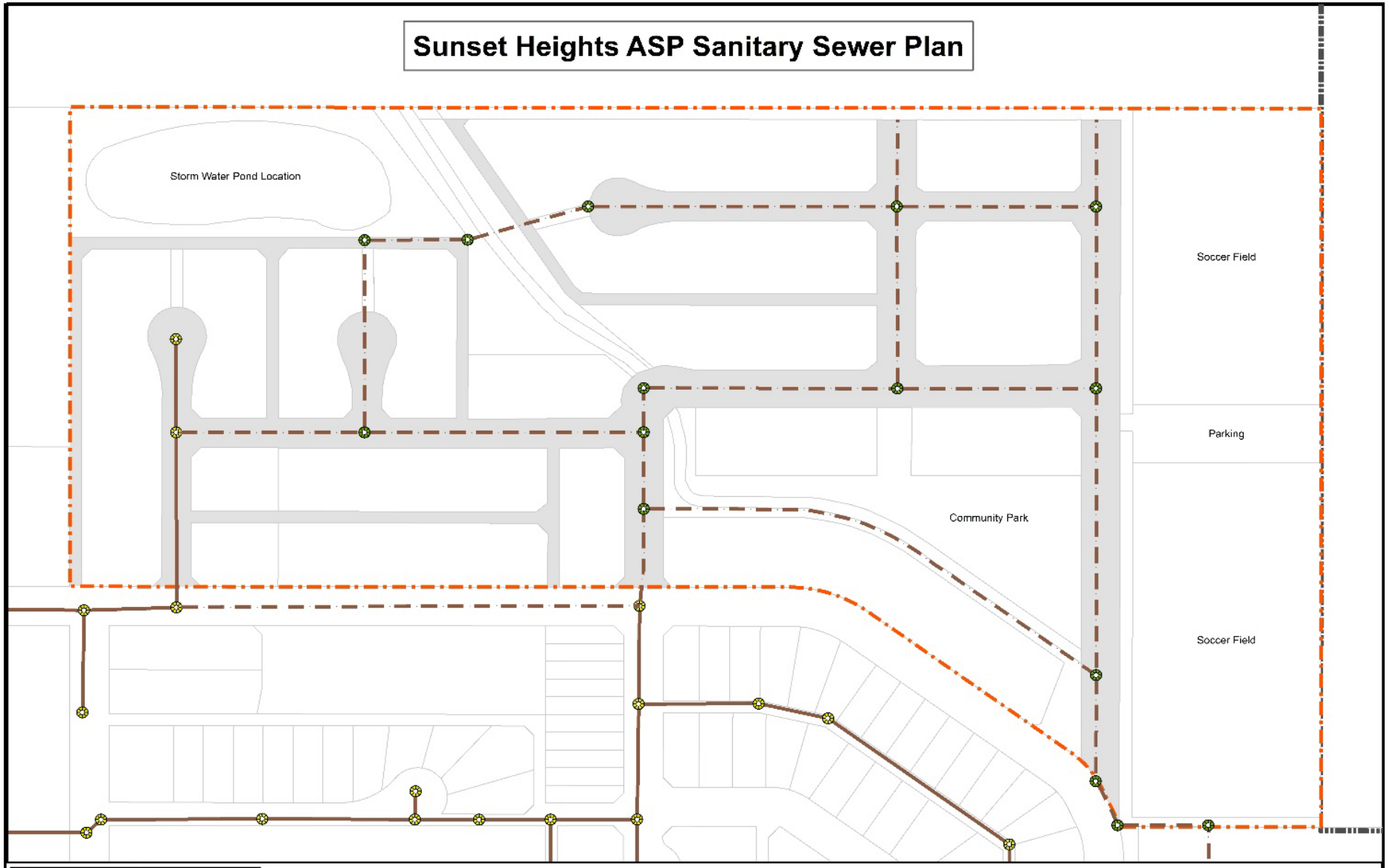
PCPS community planning services

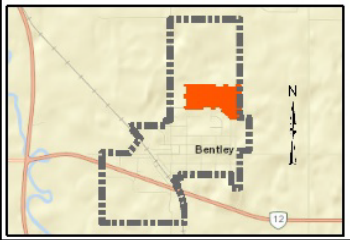
Date: September 2024

0 25 50 100 Meters

Note: The original map was produced by WSP in 2014 and revised by PCPS in 2024.
The engineering design is conceptual. It must be reviewed and redesigned at the time of the development permit application.

Sunset Heights ASP Sanitary Sewer Plan





Legend

- ASP Boundary
- Parcels
- Road Allowance
- Municipal Boundary

Proposed

- Manhole
- Sanitary Line

Existing

- Manhole
- Sanitary Line

N
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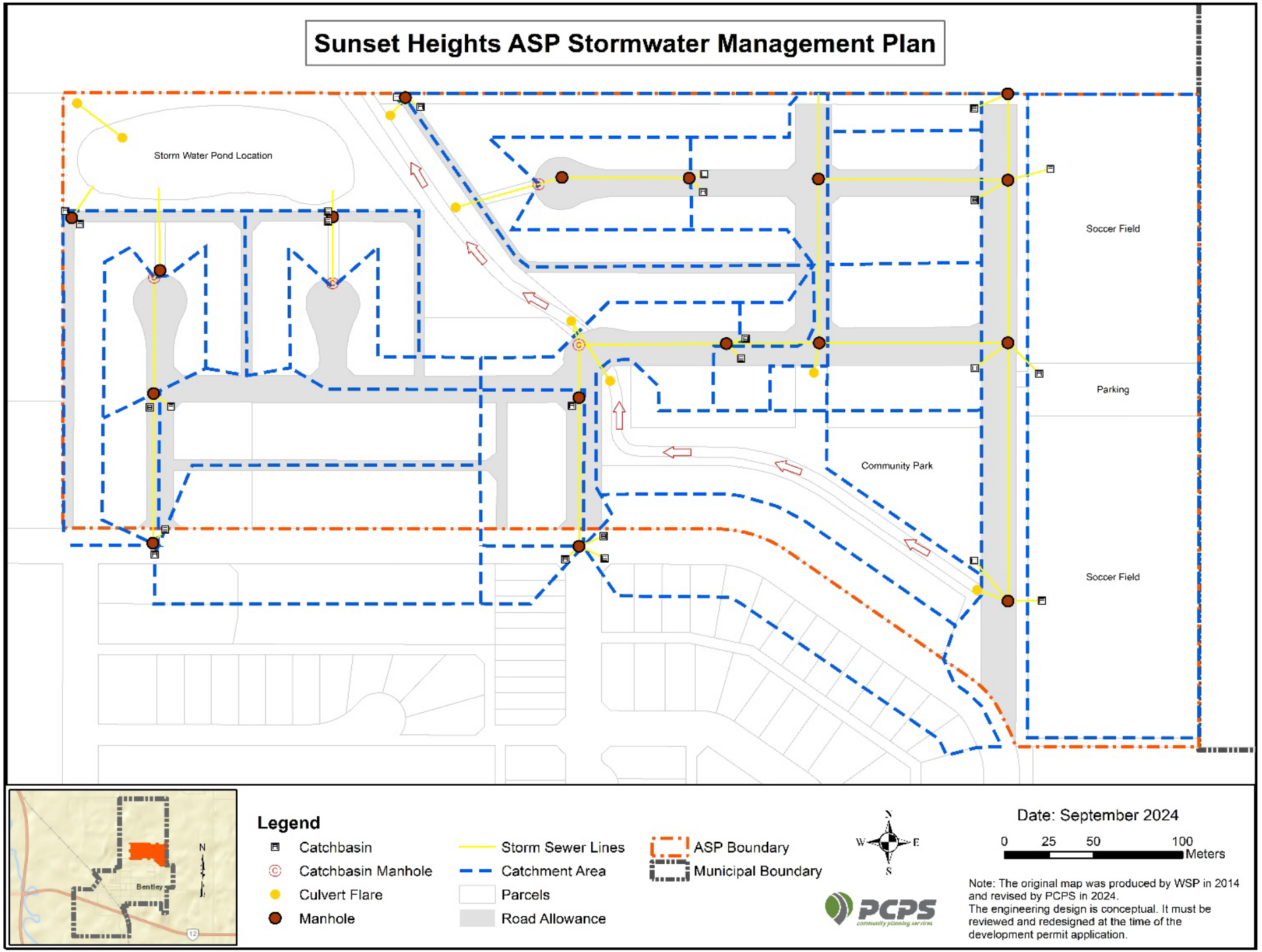
PCPS community planning services

Date: September 2024

0 25 50 100 Meters

Note: The original map was produced by WSP in 2014 and revised by PCPS in 2024.
The engineering design is conceptual. It must be reviewed and redesigned at the time of the development permit application.

Sunset Heights ASP Stormwater Management Plan



Legend

- Catchbasin
- Catchbasin Manhole
- Culvert Flare
- Manhole
- Storm Sewer Lines
- Catchment Area
- Parcels
- Road Allowance
- ASP Boundary
- Municipal Boundary

N
W E
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PCPS community planning services

Date: September 2024

0 25 50 100 Meters

Note: The original map was produced by WSP in 2014 and revised by PCPS in 2024.
The engineering design is conceptual. It must be reviewed and redesigned at the time of the development permit application.

Agenda Date: **September 24, 2024**

Agenda Item: **New Business:**
Asset Management Phase II Wastewater, Storm and Transportation Asset Management Plan

SUMMARY AND BACKGROUND

In July of 2020, Town of Bentley Administration, directed by Council, applied for funding with the Federation of Canadian Municipalities (FCM) to begin the advancement of the Town's Asset Management Program. The Town was successful in receiving a $50,000 grant and committed an additional $15,000 in funding to meet the 80% to 20% funding split for the grant.

The first phase of the Asset Management program looked at water infrastructure Assets and on June 14, 2022, Mayor and Council approved Policy 58/2022 – Asset Management Policy **(Attachment #1)** and the Asset Management Plan – Phase 1 – Water Distribution and Treatment System **(Attachment #2).**

The first phase indicted that the replacement value of the Water infrastructure (Wells, Treatment Plant, Water Reservoir, Water Mains, Hydrants) was estimated at around $15,614,000 and that the distribution system was constructed of primarily Asbestos Cement (AC) and Polyvinyl Chloride (PVC) pipe materials. Significant portions of the water system were installed in 1973 and as such they are well into their useful life at more than 50 years. It is also worth mentioning that PVC pipe typically has an estimated life of around 100 years, whereas Asbestos Cement pipe has a life of approximately 75 years. The life of these assets can be impacted by operating conditions, environmental conditions, level of service provided and ongoing maintenance. Typically, Bentley has done very well in the lifespan of its assets due to the excellent base conditions with clay and the ongoing monitoring by Public Works staff with regard to their condition. The town also tracks and records breaks and typically we have mainly experienced valve failures, with minimal pipe breaks other than those caused by tree roots.

Service Standards were defined in regard to the water system with the following priorities in mind:

- Ensure the system meets requirements and industry standards;
- Ensure that potable water is available for customers reliably (less 8 hours for any service interruption) and with appropriate pressure (45-60 psi) and volume; and
- Ensure that rates are affordable for residents (between 85% and 114% of comparable benchmarks).

The plan indicates that the Town should be setting aside $172,000 per annum or an average of 1.1% of the total infrastructure value per year to reserves. We have yet to begin doing this, as administration and Mayor and Council wanted to have the full Asset Management Plan completed, prior to determining the appropriate levels of reserve contributions, which also must take into account tax rates and utility rates in order to have sufficient funds to establish sufficient reserves.

CURRENT STATUS

During the 2024 budget process, Mayor and Council reiterated their long-term commitment to Asset Management and approved a goal to be implemented to complete Phase II Asset Management – Wastewater, Stormwater, and Transportation (Roads, Sidewalks, Curb and Gutter). Administration is on track to deliver this objective by the end of Q3.

This report has been prepared to highlight the findings from Phase II Asset Management and provide Mayor and Council with the opportunity to provide additional feedback, prior to finalization of the plan.

It should be noted that between Water, Wastewater, Stormwater and Transportation, these make up the most significant cost of assets to the Town of Bentley. It is important to ensure that we have a clear understanding of the age of these assets and the need for future replacement as we continue to work down the path of asset management.

Stantec Consulting has prepared the attached PowerPoint **(Attachment #3)** to highlight the findings and key points of Phase II. This presentation provides an overview of the current state of asset classes, the level of service provision as defined by public works and administration, understanding of risk with regards to these assets and the long-term implications to financial planning.

It is important that we understand that Asset Management helps a community to better prepare for significant costs associated to long-term capital replacement. By spreading the value of those assets over time, it lessens the burden on any one group of taxpayers, who will be faced with the inevitable cost of full asset replacement in the future. Administration for the Town of Bentley believes that costs associated with asset replacement for key infrastructure such as water, stormwater, wastewater, and transportation should be spread and born by current ratepayers as well as future ratepayers over a reasonable timeframe. In addition, there is no way to know if there will be grant programs in the future to help offset these costs or if we will be able to push the life of those assets further.

In collaboration with our engineer Stantec, we have used useful life estimates at the higher end of the spectrum, spreading that burden farther into the future. With this approach comes some risk that we may experience failure sooner than anticipated in relation to those estimates. However, Town administration feels that given the good soil conditions in the area (significant amounts of clay), that this risk is somewhat mitigated. There will also always be the risk of penetration from private property tree roots – especially in the case of VCT pipe, however through proper ongoing maintenance, taking imagery of lines, flushing on a regular basis etc. we believe that the life or our assets may be extended. As specific issues arise, we can address those issues on a case-by-case basis, especially if we have sufficient established reserves.

It is also important to note that transportation assets and the value associated to estimated replacement are significant. The amounts estimated to establish an annual contribution for reserves is significantly high due to the shorter lifespan of these assets. The Town of Bentley can explore further ways to reduce long term costs through asphalt recycling programs etc., that can be done at lower cost than a full re and re of a roadway. In addition, due to the small size of the community and less traffic, we believe that these assets can last for longer periods of time with property maintenance including a regular crack filing program.

Administration is seeking feedback from Mayor and Council regarding their appetite for risk in relation to Asset Management and the establishment of reserves. The fact is that we need to think long term

about ensuring that we have funds to support aging infrastructure. The good news is, we still have time to set aside reasonable funds to mitigate risk of major asset failure and required replacements. Town administration is also committed to monitoring grants and other programs to help offset these costs where possible. This may include earlier replacement, if necessary, when a grant is available.

BUDGET AND FINANCIAL

The below table represents a simple straight-line calculation of reinvestment, based on different estimated life spans for asset types within each class. It provides you with an overview of what reinvestment would look like if you were looking at full replacement within that specified time frame.

Asset Class	Current Replacement Value	Average Re-Investment Per Annum	Reinvestment % Per Annum
Water	$15,614,000	$171,000	1.1%
Wastewater	$13,893,000	$261,000	1.9%
Storm	$2,919,000	$38,000	1.3%
Transportation	$26,830,000	$1,063,000	4.0%
Buildings	TBD	TBD	TBD
Total	**$59,256,000**	**$1,533,000**	**2.6%**

The amount is higher than what a typical community like Bentley could afford on an annual basis, however it give you an idea of what full asset replacement looks like over the life of the assets. Town of Bentley needs to find a balance and establish a reasonable level or reserves that can meet the long-term needs of the community. As an example, 25% of the $1,533,000 works out to about $383,250 per annum and over 30 years achieves $11.5 million in reserves not including interest.

Municipal Governments can also invest surplus, reserves etc. Under section 250 of the MGA authorized investments include: bonds, debentures, trust certificates, GIC's.

250(2) A municipality may only invest its money in the following:

(a) Securities issued or guarantees by
  (i) The Crown in right of Canada or an agent of the Crown
  (ii) The Crown in right of a province or territory or an agent of a province or territory;

(b) Securities of a municipality, school division, hospital district, health region under the Regional Health Authorities Act or regional services commission in Alberta;
(c) Securities that are issued or guaranteed by a bank, treasury branch, credit union or trust corporation;
(d) Units in pooled funds of all or any of the investments described in clauses (a) to (c)
(e) Shares of a corporation incorporated or continued under the Canada Business Corporations Act (Canada) or incorporated, continued or registered under the Business Corporations Act if the investment is approved by the Minister.

The point of explaining this is to show that if the Town of Bentley develops an investment strategy and policy, we could achieve a reserve balance quicker, while investing in stable investments by a smaller amount each year.

Example (below shows you the potential for a 30-year investment at 3% or 2% for different investment levels per annum:

Benchmark Rates

Municipal Finance Authority Bond Rate 10 year = 3.68%
Government of Canada Bond Rate 10 year = 2.966%

$250,000 Investment Per Annum Asset Management

3% return, 30-year term

The future value will be:	$11,893,853.93
- Total Deposits	$ 7,500,000.00
- Total Interest	$ 4,393,853.93

2% return, 30-year term

The future value will be:	$10,142,019.80
- Total Deposits	$ 7,500,000.00
- Total Interest	$ 2,642,019.80

$200,000 Investment Per Annum Asset Management

3% return, 30-year term

The future value will be:	$ 9,515,083.14
- Total Deposits	$ 6,000,000.00
- Total Interest	$ 3,515,083.14

2% return, 30-year term

The future value will be:	$ 8,113,615.84
- Total Deposits	$ 6,000,000.00
- Total Interest	$ 2,113,615.84

$150,000 Investment Per Annum Asset Management

3% return, 30-year term

The future value will be:	$ 7,136,312.36
- Total Deposits	$ 4,500,000.00
- Total Interest	$ 2,636,312.36

2% return, 30-year term

The future value will be:	$ 6,058,211.88
- Total Deposits	$ 4,500,000.00
- Total Interest	$ 1,585,211.88

RECOMMENDATION

THAT Mayor and Council provide feedback and guidance regarding the presentation and report provided (risk tolerance for asset management and the establishment of sufficient reserves); AND

THAT Mayor and Council accept this report as information.

ATTACHMENTS

1) Policy 58/2022 – Asset Management Policy
2) Asset Management Phase I – Water Distribution and Treatment System
3) Power Point – Asset Management Phase II – Wastewater, Stormwater, Transportation

Marc Fortais, CAO

Policy 58/2022

POLICY TITLE: Asset Management Policy

DATE ADOPTED:
SCHEDULED REVIEW DATE:

REPLACES: NEW

AUTHORITY: The Municipal Government Act, Section 3, defines the purposes of a municipality to be: (a) to provide good government; (a.1) to foster the well-being of the environment; (b) to provide services, facilities or other things that, in the opinion of council, are necessary or desirable for all or a part of the municipality; (c) to develop and maintain safe and viable communities, and (d) to work collaboratively with neighboring municipalities to plan, deliver and fund intermunicipal services.

POLICY PURPOSE:
The Town of Bentley recognizes that to meet the Town's Vision for the future, infrastructure, and assets both existing and new assets must be effectively managed to ensure that they are sustainable for future generations to enjoy. This means that the Town embraces an Asset Management approach that is founded on delivering Levels of Service that the community and Mayor and Council supports and managing Risk and cost within reasonable levels. The Town will apply sound technical, social, and economic principles that consider the present and future needs of users when making investment decisions. It is the balance between Citizen Expectations-Level of Service-Risk and Cost that drive service decisions.

DEFINITIONS:
Asset: An item that has potential or actual value to the municipality. This can be an engineered structure or a natural asset delivering service. Value can be tangible or intangible, financial or non- financial, and includes consideration of risks and liabilities. Assets are defined as a class of assets with a total aggregated value of greater than $50,000.

Asset Management: Coordinated activity of the municipality to realize value from assets. The application of sound technical, social, and economic principles that considers present and future needs of users, and the service delivered from the asset

Externally Managed Assets: The Town has ownership of assets that are managed and operated by other parties (e.g., the Curling Club).

Level of Service: The parameters, or combination of parameters, which reflect social, political, environmental, and economic outcomes that the organization delivers. Service level parameters can include, but are not necessarily limited to, safety, customer satisfaction, quality, quantity, capacity, reliability, responsiveness, environmental acceptability, cost, and availability.

Life Cycle Costs: The total cost throughout its life including planning, design, acquisition and support costs and any other costs directly attributable to owning or using the asset

Risk: The relationship between the likelihood of an event happening and the consequences of that event

Sustainability: Meeting the needs of today without compromising the needs of future generations

Initial

Maintaining or improving the standard of living by protecting human health, conserving the environment, using resources efficiently and advancing long-term economic competitiveness.

POLICY STATEMENT:

Asset management is a broad strategic framework that encompasses many disciplines and involves the entire organization. To guide the organization, the following policy statements have been developed:

a) The Town of Bentley will maintain and manage infrastructure assets at defined levels to support the Town's Strategic Plan, public safety, and community well-being.

b) The Town of Bentley will set and monitor standards and service levels to ensure that they meet/support community and Council goals and objectives

c) Council will review the Town's Level of Service Register and Risk Register annually as part of the Budget Process.

d) The Town of Bentley will undertake periodic service level reviews to ensure that services, program and assets support community and Council expectations and other strategic objectives.

e) The Town of Bentley will establish infrastructure replacement strategies using full life cycle costing principles.

f) The Town of Bentley will plan financially for the appropriate level of maintenance of assets to deliver service levels and maximize and extend the useful life of assets.

g) The Town of Bentley will plan for and provide stable long-term funding to replace, renew and decommission infrastructure assets throughout its Life Cycle.

h) Where appropriate the Town of Bentley will consider and incorporate asset management in its other corporate plans as they continue to be updated into the future

i) The Town of Bentley will report to citizens annually on the status of community owned/operated infrastructure and the performance of work related to the implementation of this asset management policy. This report will provide a public facing forecast on the sustainability of the County's community infrastructure.

POLICY PRACTICES:

1. **Implementation Plan**
   a. The CAO shall develop and establish an Implementation Plan to guide the Administration's activities in developing an Asset Management System and Asset Management Plan(s).
   b. The CAO shall delegate appropriate authorities and accountabilities to staff to fully activate the Implementation Plan.
   c. The CAO shall communicate to Council the anticipated timelines, progress and level of resourcing required to fully implement the desired Asset Management System.

2. **Guidelines and Practices**

   The Town will incorporate best practices as part of implementing the Asset Management System, including:

   a) Maintaining a current register of Assets and Conditions.
   b) Making informed decisions, identifying all revenues and costs (including operation, maintenance, replacement and decommission) associated with infrastructure asset decisions, including additions and deletions. Tradeoffs will be articulated and evaluated, and the basis for the decision recorded.
   c) Integrating corporate, financial, business, technical and budgetary planning for infrastructure assets;
   d) Defining and articulate service, maintenance and replacement levels and outcomes;
   e) Using available resources effectively;
   f) Managing assets to be sustainable;
   g) Minimizing total life cycle costs of assets;
   h) Considering environmental goals;

Initial

i) Considering social and sustainability goals;
j) Minimizing risks to users and risks associated with failure.

3. Organizational Capacity

The Town considers Asset Management as a Core Service delivered by the Town and will:

a) grow and maintain the capacity to ensure the reliable and effective delivery of an Asset Management Program as a Core Service delivered by the Town;
b) ensure relevant employees receive the necessary training in asset and financial management to competently manage the Town's Infrastructure Assets;
c) ensure that all members of Council receive an appropriate orientation to the Town's Asset Management Program, and ongoing training as deemed necessary to appropriately oversee the program.

4. Asset Management Team

The CAO will establish a Cross Departmental Asset Management Team to coordinate and oversee the implementation of the Town's Asset Management System.

a) The CAO will designate a Lead for the Asset Management Team.
b) The Asset Management Team will have responsibility for implementing the Town's Asset Management System through the leadership of the corporate Departments.

5. Context and Integration

The CAO will ensure that the concepts and principles contained in the Asset Management Policy and Plan(s) are reflected in other Town documents such as:

- Official Community Plan
- Business plans
- Corporate strategic plan
- Corporate financial plan
- Capital Budget plan
- Operational plans and budgets (including vehicle and fleet plans and budgets)
- Neighborhood plans
- Annual reports
- Design criteria and specifications
- Infrastructure servicing, management, and replacement plans, e.g., transportation plans
- Community social plans
- Parks and recreation plans
- Facility plans

6. Understanding the state of the Town's **Externally Managed Assets** are important to ensure a transparent view of the communities' overall infrastructure obligations and liabilities. The CAO will work with the external groups to develop an approach and timeline for implementing Asset Management Plans for these Externally Managed Assets.

7. Annual Reporting

The CAO will annually report to Council the progress of the Town's Asset Management Program, the state of the Town's infrastructure, and the long-term forecast for the Town's infrastructure sustainability.

Chief Administrative Officer — Date: June 14, 2022

Mayor — Date: June 14, 2022

Asset Management Plan

Town of Bentley

June 9, 2022

Prepared for:
Town of Bentley

Contact: Marc Fortais
Email:

Prepared by:
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1100 – 4900 50 Street
Red Deer, AB T4N 1X7
Contact: Dallas Kuzek
Email: dallas.kuzek@stantec.com

Table of contents

The preparation of this project was carried out with assistance from the Government of Canada and the Federation of Canadian Municipalities. Notwithstanding this support, the views expressed are the personal views of the authors, and the Federation of Canadian Municipalities and the Government of Canada accept no responsibility for them.

1 Introduction

The Town of Bentley received funding through the Federation of Canadian Municipalities' Municipal Asset Management Program (FCM-MAMP) to support the development of the Town's first Asset Management Plan for the Water system. The main purpose of this effort for the Town will be to document and codify the existing Levels of Service, the Risk exposure related to the ownership of assets, to create a singular register of the community infrastructure, and to develop a Long-Term Financial Plan.

The primary deliverable from the MAMP Grant funding is to develop:

1. **Training for Staff & Council, Development of an Asset Management Policy & Strategy;**
2. **Document and Codify Asset and Program Levels of Service and Risk Profiles;**
3. **Asset Management Team Development and Draft Asset Management Plan.**

This Asset Management Plan (AMP) will serve as the foundation for the Town's continued growth and maturity in this discipline.

Across Canada, the knowledge that asset management requires proactivity and foresight is becoming more widely accepted and put into practice. Most assets follow a pattern of deterioration where maintenance can extend the useful life of the asset – and drastically reduce the overall cost - if timed appropriately. In contrast, maintenance performed on an asset that is already failing can be of questionable value. In the same manner, long term costs can be forecast by projecting forward the anticipated costs of ownership and renewal at the anticipated end of life.

A plan encompassing all relevant variables enables the community to prioritize asset maintenance, rehabilitation, and replacement measures. This way acceptable levels of service can be maintained while the costs incurred are minimized. Realistic overviews of what to expect in the future can be provided to strengthen the quality of long-term planning and decision making.

Currently, the Town's asset management system is in its infancy. The structure of the inventory and accompanying geographic information system (GIS) have been established. In further stages of development, the asset management plan will provide a basis for both short- and long-term planning and development, along with budgeting. The framework contained in this plan can be adapted and transposed to other infrastructure assets to allow the Town to have a broader perspective on the financial implications of maintaining the Town's assets. .

2 Asset Register

2.1 Water Treatment System

The Town of Bentley pumps raw water from 3 High Quality groundwater wells running simultaneously. The Wells draw from the Paskapoo formation, and the Town has a Diversion License to access 200,043 m3. The 2012 daily average draw from the raw water wells was 287 m3/day, or approximately 104,000 m3/year - just over 50% of the Town's total Diversion License.

From the wells, the raw water is pumped to the Treatment Plant where is it treated with Sodium Hypochlorite for disinfection and into the three inline reservoirs, with the capacity of 1778 m3, stored in the Treated Clear well for discharge to the Distribution System.

To pressurize the Distribution system, there are three Pumps, two in parallel and a third pump for Fire/Standby capacity. These are operated on a timed, alternating cycle.

2.2 Water Distribution System

The Town's water distribution system is constructed primarily of Asbestos Cement (AC) and Polyvinyl Chloride (PVC) pipe materials. AC pipe was used from 1973 to 1979 and can be found mainly in the core areas of the Town, this Asbestos Cement distribution system served as a replacement for individual wells serving residential properties. The town has not actively worked to remove or seal the original residential wells.

PVC has a significantly long life (expected to exceed 100 years) and has excellent resistance to breaks and failures. Figure 1 illustrates the installation of underground water distribution infrastructure over time. Table 1 itemizes the assets covered in this AMP, their quantity, life span and current replacement value.

Table 1: The Town of Bentley's Water System Replacement Value

Asset Type	Asset Quantity (*BULK*)	Typical Life	Current Replacement Value
Wells	3	50	$450,000.00
Treatment Plant	1	50	$310,000
Water Reservoir	4	80	$2,485,000
Water Mains	9176 m	75 – 100 years	$11,929,000.00
Hydrants	44	75 years	$440,000.00
Total Cost			**$15,614,000.00**

As a note on Current Replacement Value, this will be different than the Current Value noted in the Town's Tangible Capital Asset Register (TCA). The TCA will contain an opening balance, or acquisition cost of the assets, then depreciate them annually to calculate a current net book value. The Current Replacement value of the above assets is shown below in Figure 1. The Replacement Value of the Water Distribution system in the Town vastly exceeds the value of the remaining assets. 76% of the value of the Town's water utility assets are comprised of underground distribution mains as indicated in Figure 2.

Figure 1: Current Replacement Value for the water distribution system

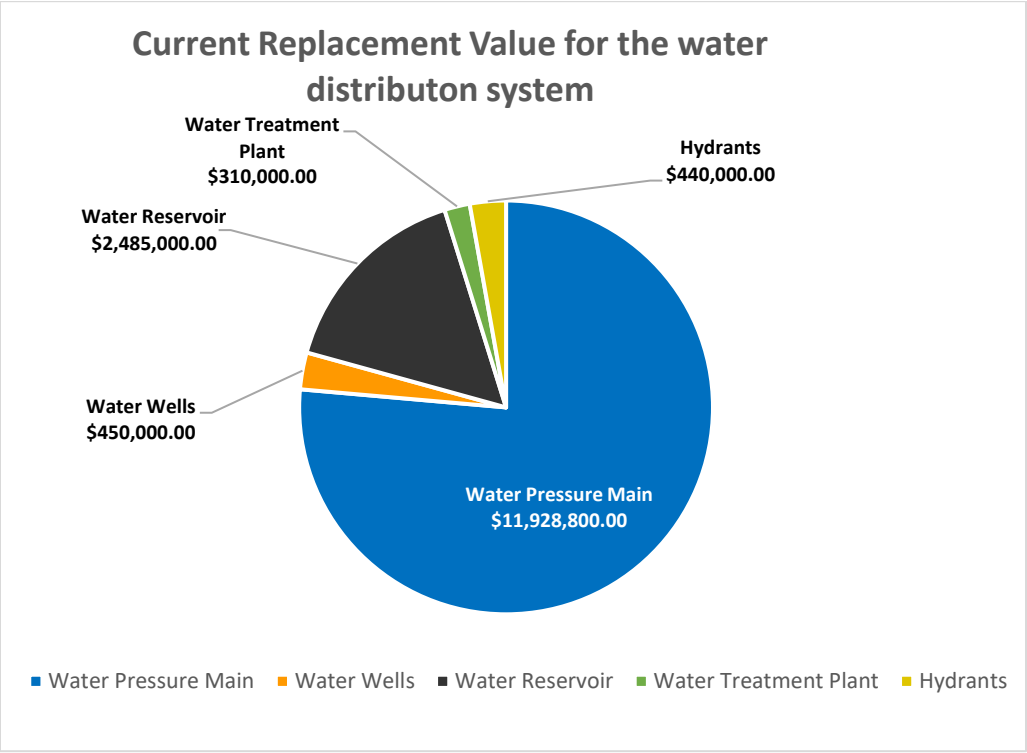
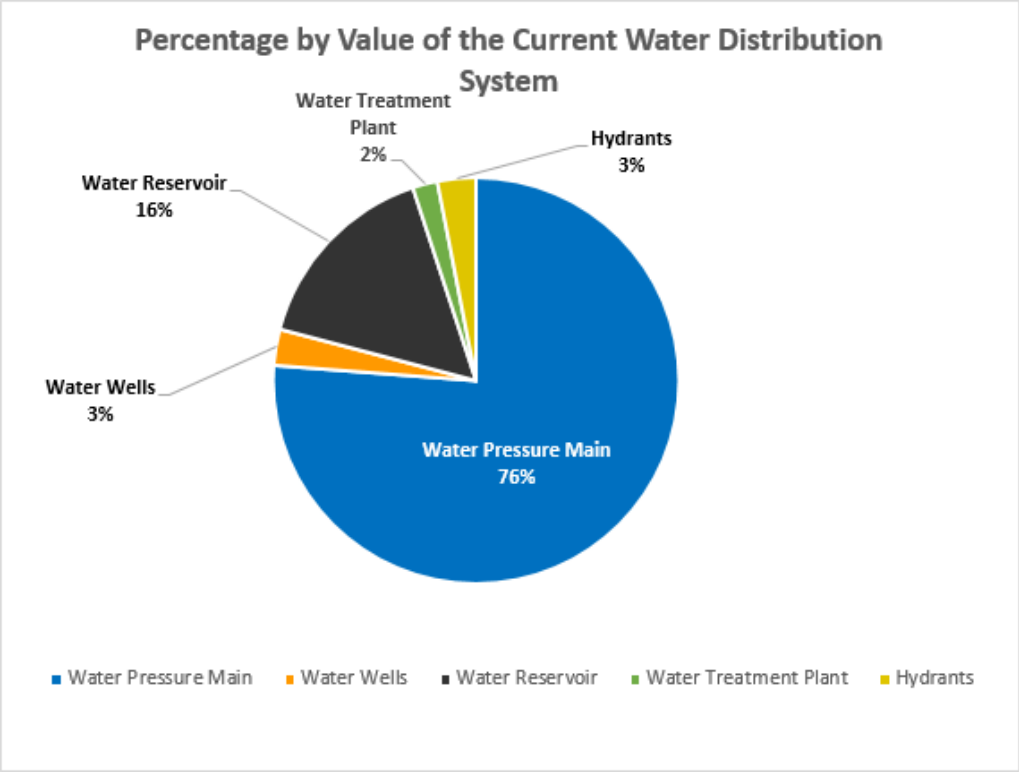
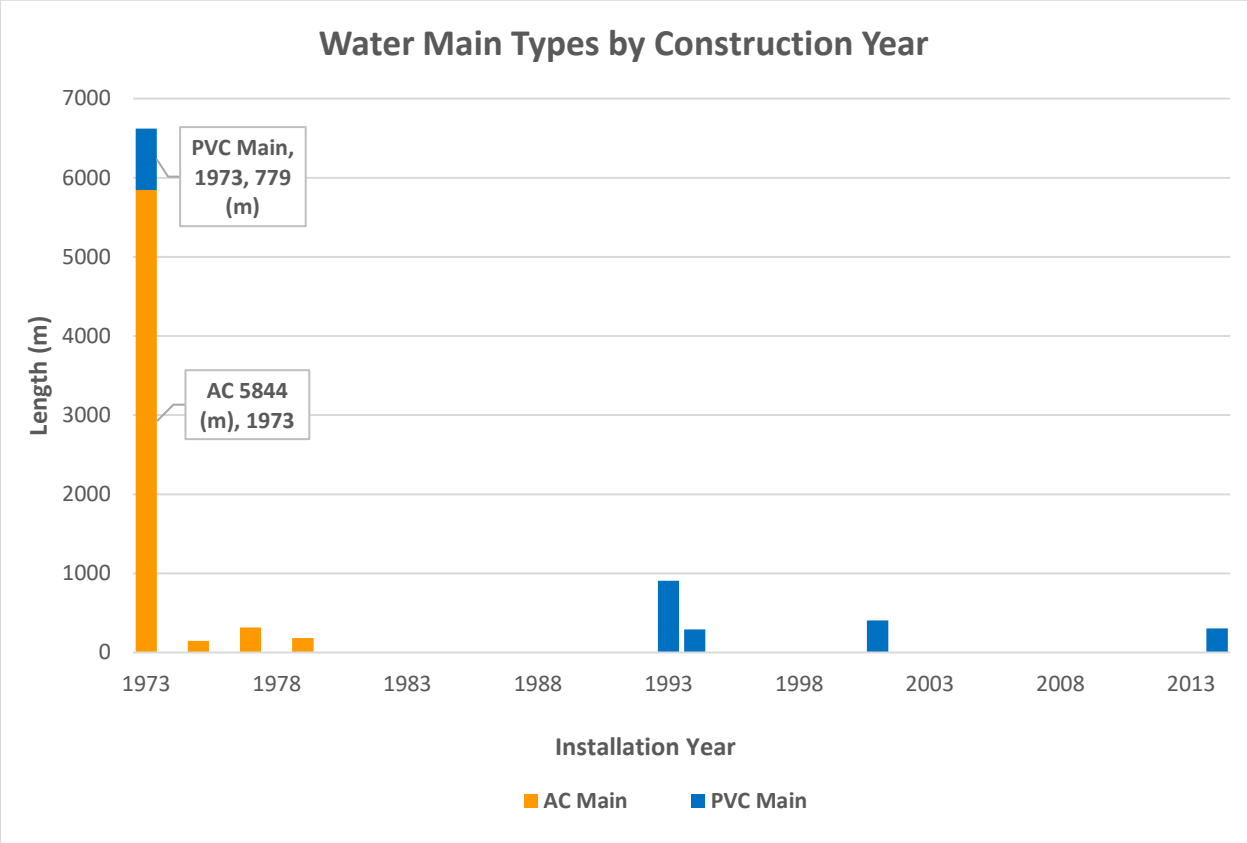


Figure 2: Percentage by Value of the Current Water Distribution System



In addition to the large relative value of underground distribution mains, a significant proportion of these mains were constructed in 1973 as part of the Town's conversion from individual wells servicing homes to a centrally treated municipal supply. Much of the Town's watermains are constructed of Asbestos Cement (AC) pipe with the remainder being of PVC. Figure 3 outlines the progression of underground distribution construction over time and by material.

Figure 3: Water Main Types by Construction Year



While underground infrastructure in many cases has a long useful life, it is finite and will ultimately require renewal and replacement. Table 2 outlines the typically observed life cycles for underground municipal assets in Alberta. Recent academic studies have estimated that the PVC pipe can be expected to provide reliable service in excess of 100 years.[1]

[1] Folkman, Steven, "PVC Pipe Longevity Report: Affordability and the 100+ Year Benchmark Standard" (2014). *Mechanical and Aerospace Engineering Faculty Publications*. Paper 170.
https://digitalcommons.usu.edu/mae_facpub/170

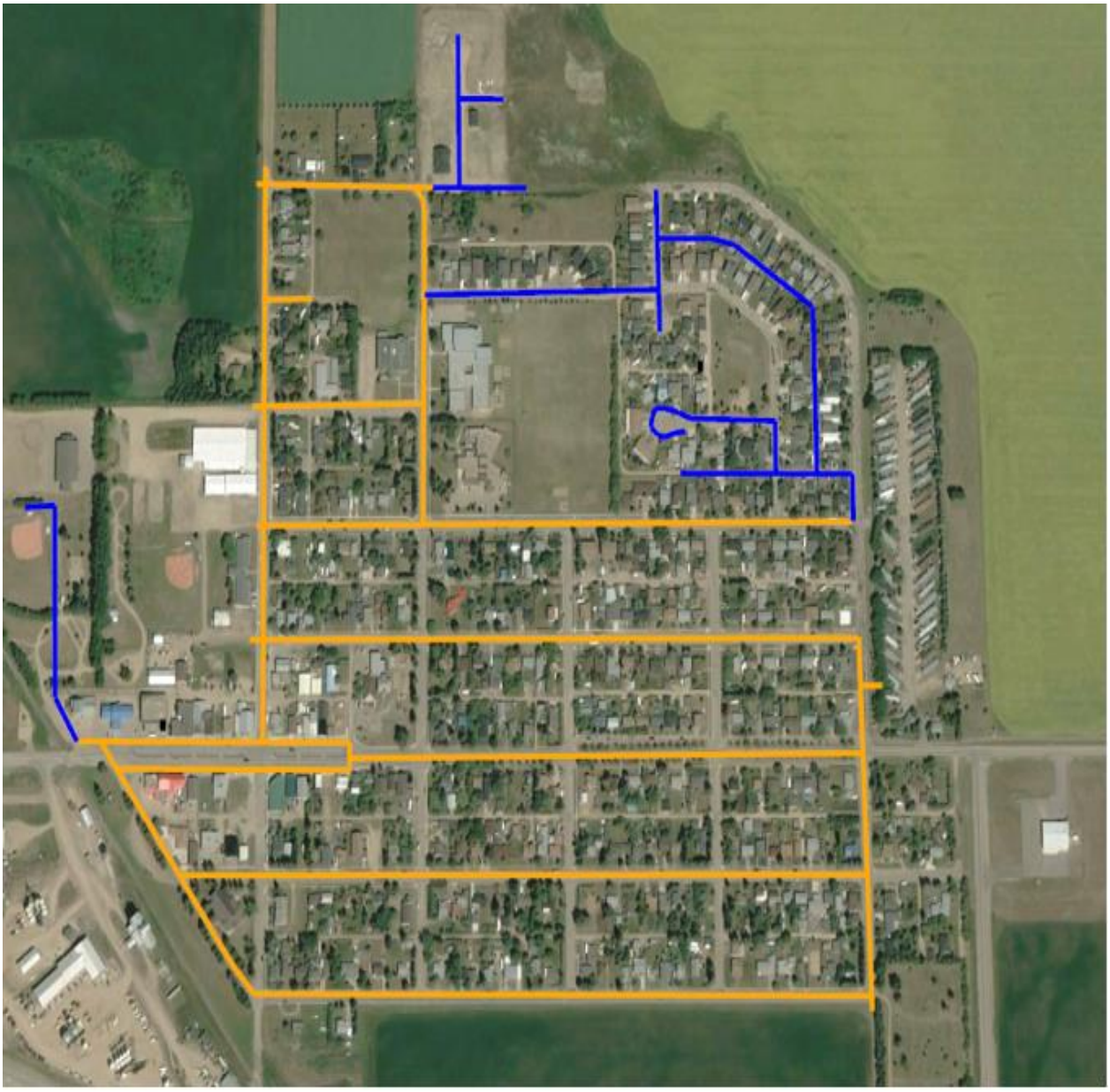
Table 2: The Town of Bentley's Water System Material Types and Estimated Life

Material Type	Estimated Life
Water Main (PVC)	100 years
Water Main (Asbestos Cement)	75 Years
Wells	50 Years
Water Reservoir	80 Years
Water Treatment Plant	50 Years
Hydrants	75 Years

Of note, there are additional system components that have not been included in this analysis. Assets like water meters, service connections (from the mainlines to the curb stop) are all constituent components that the Town may determine should be included in this AMP in future iterations.

Figure 4 illustrates the current and proposed water distribution network and the existing pipe materials.

Figure 4: Town of Bentley Water Main Network



3 Asset Performance

Assets not only have a typical useful life (based on a number of factors including operating conditions and environmental conditions), but their useful life is also influenced by the level of service that they are able to provide. For example, a component of the distribution system may be functioning adequately in terms of physical performance, but not meet the needs of the community service expectation (for example being undersized for adequate flow). In this example, decisions to invest in and replace/upgrade assets may be made for reasons other than physical condition. The following describes the current Asset performance as currently observed.

3.1 Asbestos Cement Watermain Performance

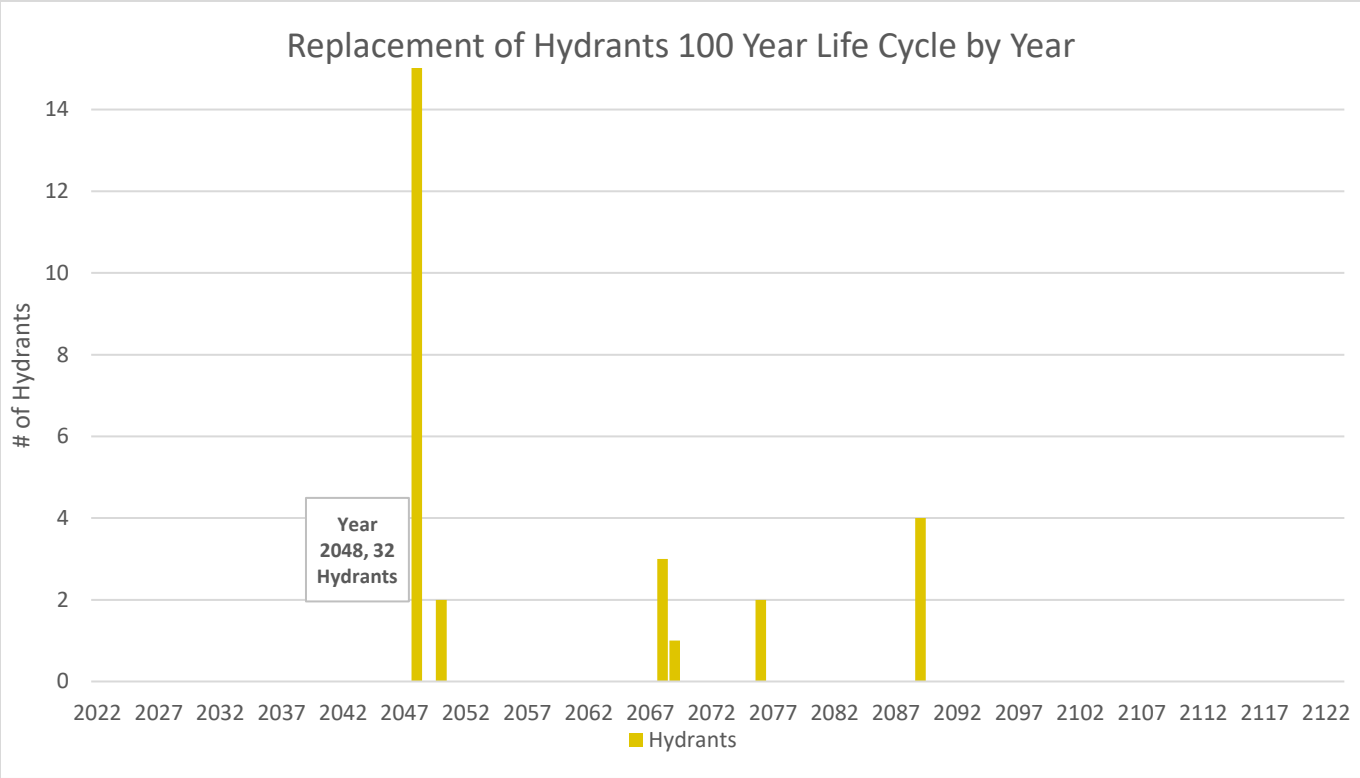
The water distribution infrastructure in the Town of Bentley is relatively new and is demonstrating very good performance. The Town tracks and records the instances of water main breaks, although has not recorded any water main breaks (caused by pipe material failure), and where there have been issues, they have been related to valve failures.

Asbestos Cement (AC) water mains are a well understood material in the water utility industry, and various studies have been conducted on their performance. The National Research Council Canada (NRC) has conducted research on AC water mains in other municipal environments to better understand the performance and failure modes. Factors contributing to the deterioration of AC water mains have been identified as pipe age, size, internal/external chemical attack, soil conditions and climate. Given the variety of factors at play leading to AC water main failure, the ongoing performance of the AC water mains should continue to be monitored, and as failure trends warrant, further examination and analysis should be conducted.

3.2 Hydrants

The Town owns and operates 44 hydrants largely of the same vintage as the watermains they are connected to. Hydrants have a similarly long life to that of AC pipes, however, are subject to occasional mechanical failures and may require early replacement. Figure 5 illustrates the forecast number of hydrants to be replaced annually based on estimated maximum life.

Figure 5: Replacement of Hydrants 100 Year Life Cycle by Year

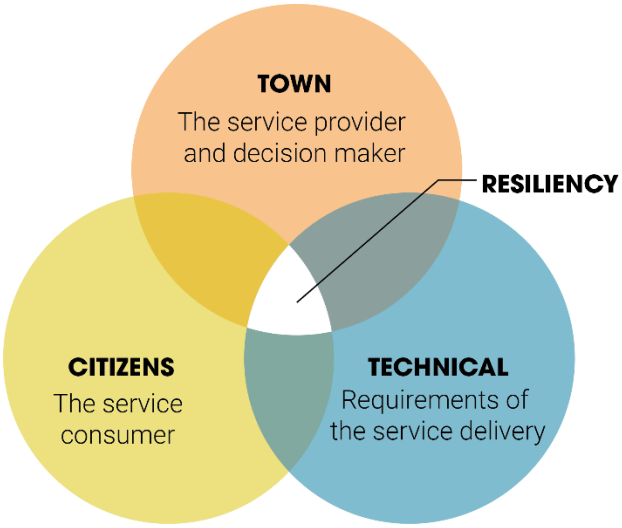


4 Levels of Service

The goal in managing the Towns' infrastructure assets is to meet a series of defined levels of service in the most cost-effective manner for the citizens and stakeholders.

A Level of Service (LOS) is driven by the expectations of the Town's citizens while at the same time meeting legislative and technical requirements. There is a direct relationship between the level of service and the cost of the service as financial constraints, and the availability of resources provides a degree of limitation. Determining the level of service requires finding a balance between three different factors.

The service provider factor is represented by an elected Council. Staff and elected officials within local government organizations have a variety of responsibilities and motivations when providing a service: the health and wellbeing of residents; regulatory requirements, policies, and laws; short and long-term budget constraints; and local interests and concerns. They must balance these considerations with the technical requirements and costs of service delivery.



1. *What are the Town's strategic goals and what are they willing and financially able to provide?*
2. *What are the Town's citizens expectations?*
3. *What are the technical and safety requirements of delivering these levels of service?*

In order to determine long term service goals and direction, the following are reviewed and assessed:

1. *What is currently provided?*
2. *Where are the gaps between current service levels and expected service levels?*
3. *How can we balance expected LOS against cost in a long-term financial plan with service and consequence risks?*

A Level of Service (LOS) analysis is a component of asset management planning that is significant and has a great deal of impact. One of the Town's core purposes is to provide safe drinking water to citizens and customers with a quality, quantity, and reliability they expect. Assets are used to provide those services and most of the resources devoted to asset management planning are spent on infrastructure. In this respect, physical assets are simply a

portion of what is required to deliver the various levels of service as determined by the Town. The Town needs to ensure the infrastructure performs to meet the level of service goals at an affordable and sustainable cost. An objective of a LOS analysis is to find a balance between the expected level of service and the cost of providing that level of service.

Additionally, as the Level of Service changes, there may be a corresponding change in the risk that is facing the organization. This will be explored later in the Plan.

A Level of Service analysis typically includes:

- Service identification with the identification of assets involved in providing the services and the stakeholders impacted.
- Determination of expectations with respect to services, and the attributes that matter to citizens.
- Determination of customer levels of service and their current and desired performance.
- Determination of technical levels of service for each strategic level of service
- Comparison of existing levels of service to expected strategic/technical levels of service
- An assessment of the lifecycle cost implications of moving from existing levels of service to expected (desired) levels of service over a forecast period.

Typically, an Asset Management Plan will be further defined in advancing levels of detail as more information becomes available and stakeholder expectations are further refined. The LOS analysis has been completed with the input of the Town staff. Workshops were held with staff to identify the range of services and activities performed by the Town.

Once services were identified, qualitative descriptions of the service levels were created on a 1-4 scale. On that scale, the Town's relative placement was identified, and confirmed with staff. This initial placement will allow the Town to objectively describe the services that it strives to provide and can begin to identify the costs to do so. Once that is well understood, a conversation about changes to levels of service, along with the corresponding change in cost, can be had.

As this is the first time the Town has documented its LOS in an Asset Management Plan, revisions are expected as more information becomes available and stakeholder expectations are further refined.

4.1 Customer / Citizen Levels of Service

Customer (or Citizen) Levels of Service (CLOS) are defined to align with the organization and stakeholder's vision and will help guide the infrastructure investment required to meet these goals. The CLOS is the highest level of service statement, and typically describes what the Customer sees or experiences.

Working with the Town staff, the following Strategic Levels of Service for the Water Utility has been defined based on the working knowledge of the Town's priorities:

The Town's water utility will operate in a way that:

- *Ensures the system meets requirements and industry standards;*
- *Ensures that potable water is available for customers reliably (less 8 hours for any service interruption) and with appropriate pressure (45-60 psi) and volume; and*
- *Ensures that rates are affordable for residents (between 85% and 114% of comparable benchmarks).*

While this describes the staff's interpretation of the Town's priorities, it is the highest-level statement from the Town about its service intentions. As such, Service Level Standards should be confirmed by the Town Council through annual budget process.

4.2 Technical Levels of Service

Technical Levels of Service (TLOS) are similar to the CLOS, except they typically describe the programs and activities that are required to ultimately create the CLOS that the customer experiences.

Each service can be delivered at varying degrees of acceptable performance – for example, where a municipality has a significant volume of unaccounted for water, proactively inspecting for mainline leaks can be an important part of leakage/integrity management. The frequency that the inspections are conducted defines the Technical Level of Service. In this example, not having a leakage detection program may be considered a 'Low' Level of Service, while the same inspection program conducted on an annual basis may be considered a 'High' Level of Service. Each example (Low vs. High) has its own cost to operate, as well as residual risks that may be present. Residual risks are discussed later in this report.

This Plan organizes the Town's Technical Services into the following categories:

- Affordability
- Capacity / Availability
- Condition
- Function

4.3 Current Level of Service Register

Levels of Service were described in terms of Customer and Technical along with current services, activities, and objectives and were defined on a 1 to 4 scale (1 being lowest service level and 4 being highest service level).

Using several sources of reference (including the Town staff experience, the Alberta Environment and Parks Regulatory Requirements, AWWA Standards and professional judgement based on the experience of Alberta water systems), Level 3 was identified as a best or recommended practice, with the Town's current activities placed in relation to those practices.

If the Town provided a level of service or conducted activities that exceeded the Level 3 practice, the level of service was identified as Level 4. If the Town provided a level of service below the Level 3 description, the level of service was identified as Level 1 or Level 2.

While there is no absolute answer for what is the 'right' level of service, each program decision carries with it a unique cost and risk residual. By understanding what the current level of service provided is, and what the related costs and risks are, the Town can make informed decisions about what resources are required. Following the methodology outlined above, an assessment was conducted with staff and identified **56** unique Levels of Service and evaluated them on a scale of "Low" to "High".

4.4 Observations on Level of Service

Following the Level of Service workshop, the following observations have been made. There are 20 Services that are currently identified at a below the identified best or recommended practices (i.e., Level of Service = 1 or 2). The Town should review these services and develop an approach to assess the gaps between current and recommended practices and take any sets determined necessary to close those gaps. The full Table of Town services and service levels is shown in Table 3 and are grouped into their corresponding Service Characteristic (Affordability, Capacity/Availability, Condition and Function).

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Table 3: Level of Service

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
1	Customer	Affordability	Water Rates are Affordable	Water Rates are comparable to other similar sized municipalities	Rates are more than 130% above comparable benchmarks	Rates are within 115-129% of comparable benchmarks	Rates are between 85-114% of comparable benchmarks	Rates are less than 84% of comparable benchmarks	
2	Technical	Affordability	Accuracy of billing	Meter Accuracy	Inspected Meters are recording <93% of measured water	Inspected Meters are recording 93-97% of measured water	Inspected Meters are recording 98% of measured water	Inspected Meters are recording >98% of measured water	
3	Technical	Affordability	The Water Utility is sustainable	The Water Utility has a plan to meet its' Customer Level of Service Statement/Targets and has adequate revenues and reserve balances to sustain itself into the future	MGA requires 3 year operating and 5-year capital budgets	MGA requires 3 year operating and 5-year capital budgets. Developed in-house, projected using simple methods	MGA requires 3 year operating and 5-year capital budgets. Budgets are supported by plans or long-term studies (ex IMP, growth, etc.)	The Utility has a 20-year spending plan that forecasts approved LOS Expenditures against forecast Revenues and shows an positive reserve balance	
4	Technical	Affordability	The Water Utility is sustainable	The ToB has a long-term capital investment plan that forecasts expenditures and revenues	MGA requires 3 year operating and 5-year capital budgets	MGA requires 3 year operating and 5-year capital budgets. Developed in-house, projected using simple methods	MGA requires 3 year operating and 5-year capital budgets. Budgets are supported by plans or long-term studies (ex IMP, growth, etc.)	The Utility has a 20-year spending plan that forecasts approved LOS Expenditures against forecast Revenues and shows a positive reserve balance	
5	Technical	Affordability	Minimize leakage	Water volume loss	>25%	15%-25%	5%-15% unaccounted water	<5%	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
6	Technical	Affordability	water meter servicing/bench testing	# of water meters	none	Water Meters tested at the time of installation	20-34	>34 (1%)	
7	Technical	Affordability	offsite levies are recalculated to ensure that the full costs of new development are reflected	Frequency that levy calculations are updated	Off Site levies are updated every 10 years	Off Site levies are updated every 7 years	Off Site levies are updated every 4 years	Off Site levies are updated every 2 years	
8	Technical	Affordability	Water Asset Management Program	An internal set of business processes is in place that allows the Toc to adequately manage the Water System in an optimal manner	No Asset Management Program in place	The Town has a basic inventory of assets and generally understands the condition of them. No forward-looking planning is competed regarding asset or service management	An Asset Management Program is in place, the Town understand the assets it owns, has a view of the long-term costs, and understands the LOS & Risks facing it.	An Asset Management Program is in place that the Town follows. Regularly reviewed and updated	
9	Technical	Affordability	Water main renewal program is in place	Degree that the main replacement program is financially optimized	No Main renewal Program in Place	Main Renewal Program is in place with modest funding and a forecast of replacing all the network mainlines within 150% of their anticipated life cycle	Main Renewal Program is in place with a target objective of replacing all the network mainlines within 120% of their anticipated life cycle.	Main Renewal Program in place with sufficient funding to reinvest in the water network at an optimized level to minimize overall cost	
10	Customer	Capacity/ Availability	Maximum length of Unplanned Outage	Time that any water customer is without water service due to an unplanned outage	> 12 Hours	8 - 12 Hours	< 8 Hours	< 6 Hours	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
11	Customer	Capacity/ Availability	Water Outages	The Number of times per annum that a customer experiences a planned or unplanned outage. Calculated on a system wide basis (e.g., x = # breaks/year/customers)	> one day every 5 years	One day every 5 years	One day every 10 years	< 1 day every 10 years	
12	Technical	Capacity/ Availability	The ToB has an adequate allocation of water to meet its future needs.	The Town regularly compares the forecast OCP/Growth Plan projections to current Town population and water consumption needs	The ToB has > 10% deficit of Water Allocation when compared to the projected growth over the next 20-year period	The ToB has a 10% deficit of Water Allocation when compared to the projected growth over the next 20-year period	The ToB has adequate Water Allocation to support projected growth over the next 20-year period	The ToB has a 30% excess of Water Allocation to support projected growth over the next 20-year period	
13	Technical	Capacity/ Availability	The Town has adequate Storage to meet Peak Demand and Fire Flow needs under normal operations	Number of hours of uninterrupted fire flow	Unable to maintain under normal operations	Peak demand, mid-August, 8 hours uninterrupted fire flow and service while maintaining pressure	Peak demand, mid-August, 12 hours uninterrupted fire flow and service while maintaining pressure	Peak demand, mid-August, 16 hours uninterrupted fire flow and service while maintaining pressure	
14	Technical	Capacity/ Availability	The Town has adequate Storage to meet Peak Demand and Fire Flow needs under loss of source	Number of hours of uninterrupted fire flow	Unable to maintain under normal operations	Peak demand, mid-August, 4 hours uninterrupted fire flow and service while maintaining pressure	Peak demand, mid-August, 8 hours uninterrupted fire flow and service while maintaining pressure	Peak demand, mid-August, 12 hours uninterrupted fire flow and service while maintaining pressure	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
15	Technical	Capacity/ Availability	Minimize breaks	The Break Rate Projection is an indicator of the overall system health. Calculated as the number of breaks per km per year. As tracking gets better, indicators can be quantitative	Break Rate is in significant incline	Break Rate is in incline	Break Rate is steady at 0%	Break Rate is in decline	
16	Technical	Capacity/ Availability	backup generator testing protocols	Frequency of generator testing	quarterly	monthly	weekly	daily	
17	Technical	Capacity/ Availability	utility locates for third party requests	time from request to locate	> 5 days	3-5 days	1-3 days	Same day	
19	Technical	Capacity/ Availability	a water demand management program is in place	robustness of the program	No Demand Management in place	A Demand Program is in place and is below typical industry and municipal standards.	ToB has a Demand Management Program in place, and it is comparable to similar municipalities	Demand Management Program is considered Class Leading, is auditable, and provides guidance to other municipalities	
20	Customer	Function	Aesthetically pleasing (taste, color, appearance) water	Number of water quality Complaints Annually	More than 20	10-20 complaints	Less than 10 complaints	Less than 5 complaints	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
21	Customer	Function	Water pressure is maintained at the recommended levels	Measure of Static Water Pressure in Mainlines	< 45 psi at times in certain areas of the network	No less than 45 - 60 psi at all times across the entire network	60-80psi at all times across the entire network	70-80 psi at all times across the entire network	Due to topography of the Town higher pressure cannot be obtained without causing issues at lower elevations of the system.
22	Technical	Function	SCADA (Supervisory Control and Data Acquisition Systems)	Measure of operator control over system	Do not have any. All manual control	System Functionality is limited.	Contemporary SCADA system that has remote access and control. responds to system events automatically. required limited direct supervisory control .	Starship Enterprise level control systems. State of the Art & Bleeding Edge. AI Augmented.	
24	Technical	Function	Fire Flows	Measure of the amount of water the Town that has sufficient water capacity under fire flow conditions	<75% compliance	>75% compliance	Sufficient capacity to meet ULC rating	Significantly Exceed ULC rating	
25	Technical	Function	Valve replacement program	4/yr. (360)	60% lifecycle program	80% lifecycle program	valve replacement program meets lifecycle	valve replacement cycle exceeds program requirements	
26	Technical	Function	hydrant replacement program	4/yr. (280)	60% lifecycle program	80% lifecycle program	hydrant replacement program meets lifecycle	hydrant replacement cycle exceeds program requirements	
27	Technical	Function	ToB operates a Valve exercise Program to ensure that Control Valves continue to operate effectively when required. The target is 100% of Valves operate when required	frequency of Valve exercises	<5 years	every 2-5 years	every 2 years	yearly	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
28	Technical	Function	hydrant maintenance program	pump down, visual inspection annually	<50% of hydrants are visually inspected and pumped down prior to winter	50% of hydrants are visually inspected and pumped down prior to winter	80% of hydrants are visually inspected and pumped down prior to winter	Every Hydrant is visually inspected and self draining prior to winter	
29	Technical	Function	Inspect and Maintain Distribution System Pumps in working order	Conduct a vibration test to monitor pump condition and predict potential failures	every 2-5 years	every 2 years	Annually	Every 6 months	
30	Technical	Function	Inspect and Maintain Distribution System Pumps in working order	Conduct Pump tests annually to monitor pump condition and ability to maintain pressure and flow	every 2-5 years	every 2 years	Annually	Every 6 months	
32	Technical	Function	flushing program-reg maintenance	annually	every 2-5 years	every 2 years	Annually	Every 6 months	
33	Technical	Function	flushing program-unidirectional	frequency	Never	Every 10 yrs.	Every 5yrs	Annually	Town to commit to unidirectional program every 5 years.
34	Technical	Function	storage reservoir cleaning program (incl structural inspection)	frequency	Never	10yr	5yr	3yr	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
35	Technical	Function	Infrastructure record drawings are accurate and held by the Town of Bentley	timeliness that records drawings are updated	Record Drawings are not updated	Record Drawings are updated > 12 months after construction	Updated Record Drawings within 6-12 months of construction/revisions	0-6 months	
36	Technical	Function	Water Network Modelling	The Town maintains and updates a Model of the Water Network	No Network Model in place	The Town updates the Water Network model between 5-10 years.	The Town updates the Water Network model every 5 years	The Town updates the water Network model every 2 years or less	
37	Technical	Function	The Town of Bentley supports development with the review of plans and applications	time to process applications from receipt to issue	20 days to review 40 days is the maximum to approve per MGA	15 days to review 30 days to approve	10 days to review 20 days to approve	5 days to review 10 days to approve	
38	Technical	Function	The Town of Bentley has design standards that specify infrastructure requirements	Time between reviews and updates of development standards. Reliance on Red Deer standards for some. We are currently developing the first version of standards for others	Design standards are updated every 10 years	Design standards are updated every 7 years	Design standards are updated every 4 years	Design standards are updated every 2 years	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
39	Technical	Function	The Town of Bentley has master plans for infrastructure to guide development and investments	frequency that master plans are updated. Specifically refers to IMP	Reviewed annually internally Major review and update every 8 years	Reviewed annually internally Major review and update every 6 years	Reviewed annually internally Major review and update every 4 years as per policy	Reviewed annually internally Major review and update every 2 years over and above policy	Town in the process of completing infrastructure masterplan.
40	Technical	Function	The Town of Bentley has a GIS system to aid in decision making	robustness of the Town's GIS platform	GIS system has the ability to display static infrastructure maps	GIS system displays maps that are updated quarterly by PCPS	GIS system displays maps that are updated internally on a monthly basis	GIS system contains real-time data and is used for complex decision making	
41	Technical	Function	new construction is inspected for compliance with bylaws and standards	percentage of post construction inspections for water connections	Water service connections are not inspected	0-33% of water service connections are inspected during construction and at the time of meter install	66-99% of water service connections are inspected during construction and at the time of meter install	100% of water service connections are inspected during construction and at the time of meter install	
42	Technical	Function	The Town enters into developer agreements to enable land and commercial development	timeliness of execution from development approval	Developer agreements prepared and executed within 8 weeks of subdivision or development approval	Developer agreements prepared and executed within 6 weeks of subdivision or development approval	Developer agreements prepared and executed within 4 weeks of subdivision or development approval	Developer agreements prepared and executed within 2 weeks of subdivision or development approval	
43	Technical	Function	The Town of Bentley has "full service" municipal engineering capability	volume of engineering design work contracted to the private sector (greater in-house capacity can lead to more flexibility and independence)	The Town outsources 100% of engineering design	The Town outsources > 50% of engineering design	The Town outsources > 20% of engineering design	The Town outsources 5% of engineering design	Due to amount of engineering design required, it is not feasible to have in -house engineering capacity.

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
44	Technical	Function	cross connection control	Robustness of the Cross Connection Program	No Cross Connection Program	A Cross Connection Program is in place and is below typical industry and municipal standards.	A Cross Connection Program is in place and is comparable to industry and other municipal standards	Cross Connection Program is considered Class Leading, is auditable, and provides guidance to other municipalities	
45	Customer	Regulatory	Clean, Safe Potable Water	Drinking water quality complies with statutory requirements	Not Compliant	Water Quality Testing is Completed, but records are not kept or up to date	All water quality testing, reports and records are kept up-to-date and pass AEP inspection	All water quality testing, reports and records are kept up-to-date and pass AEP inspection. Additional testing beyond scope from what AEP requires	
46	Technical	Regulatory	operator certification	certified operators that meet regulatory requirements	No certified operators	One operator	Level 1 WD and Level 1 WT & 2 Operators	More than two certified operators, with at least one operator with Level 2 WD certification	
47	Technical	Regulatory	Operator Training and Certification Maintenance	operator training programs to meet regulatory requirements	ToB does not have a Staff Training program in place.	ToB Staff to complete their own training for Certification maintenance.	ToB Manages its own Operator and Staff Training Program that meets the requirements of the Regulations	ToB manages its own Operator and Staff training Program that exceeds the requirements of the Regulations	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
48	Technical	Regulatory	testing	daily, as legislated	Not Compliant	Water Quality Testing is Completed, but records are not kept or up to date	All water quality testing, reports and records are kept up-to-date and pass AEP inspection	All water quality testing, reports and records are kept up-to-date and pass AEP inspection. Additional testing beyond scope from what AEP requires	
49	Technical	Regulatory	No Regulatory Compliance Breaches	Record of contraventions reported to AEP	Not reporting to AEP	Reporting some contraventions, but documentation is incomplete	Reporting all contraventions with documentation and no recommendations	No contraventions and passing AEP audit with no recommendations	
50	Technical	Condition	hydrant painting	every third year	Never	10yr	5yr	3yr	
51	Technical	Condition	Distribution pumps	replace 1/yr. deferred main until complete	>35	25-35 years	Replace 25 years	Replace 20-25 years	Distribution Pumps are very expensive. They are inspected yearly and will be replaced when necessary.
52	Technical	Condition	Shock and Airlift Wells	Process completed	never	6-10 years	3-6 years	2-3 years	
53	Technical	Function	A Connection Inspection Program	When private parties connect to a Town Distribution Main, steps are taken to minimize cross connection or contamination	No Action is taken to inspect private connections to the Town's main distribution system	Plans are approved in advance	Plans are approved in advance, and the private constructor is required to have a Town representative inspect/observe the site	Full onsite inspection is provided during construction and plans are approved in advance.	

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
54	Technical	Function	Regular Inspection of Treatment Facilities	Periodic Inspections to prevent ingress of contaminants	No regular inspections of Treatment Facilities	Access is lifted and ingress points are secured.	Access is limited and ingress points are secured along with occasional inspections.	Daily comprehensive inspection of treatment facilities to monitor for contaminant ingress	

In reviewing the Services described with a 'Low' level of Service (I.e., at Level 1 or Level 2), there are Services that may need to be reviewed to ensure that they continue to support the Town's overall objectives. Some of these are:

- A Meter Replacement Program to ensure that the Town's water meters are operating at optimum efficiency, and are recording accurate flows;
- A Long-Term Budgeting approach and a 20-year Utility Model would help support effective decision making given the multi-generation life of utility assets;
- Regular updating of the Town's Off Site Levy calculations would ensure that the existing utility customers are not unduly subsidizing new construction;
- The Town has a limited cross connection control program in place.

Other Services that have been identified at a Level 1 or Level 2 that may warrant consideration, but may not be impactful to the overall service delivery or customer experience are:

- The Town has no Demand Management or Water Conservation program in place.
- The Town has limited SCADA or remote Operator Control functionality in the water treatment systems.

5 Risk

With the continuing emphasis on meeting levels of service, it's important that any risk to achieving this is identified, measured, and mitigated. The typical risk management approach is described as identifying, analyzing, and mitigating potential risks, and illustrated in the figure below.

To evaluate the potential risks facing the Town's water utility, the Alberta Environment and Parks Drinking Water Safety Plan (DWSP) Risk Assessment was consulted as a basis from which to work. The DWSP is a proactive method of assessing risk to drinking water quality, which better protects public health. Plans are based on an assessment of risk factors that could potentially adversely affect drinking water quality. The Town has a DWSP completed and in place.

The DWSP risk rating uses a 5-point scale for Likelihood (Most Unlikely, Unlikely, Medium, Probable, Almost Certain), and identified a 5-point scale for Consequence ranging from Insignificant, Minor, Moderate, Severe and Catastrophic. Each step on the 5-point scale has an escalating value between 1 and 16.

In addition to the risks identified in the DWSP, the events were assessed against the following consequence categories to ensure that a full assessment of the potential impact of a risk materializing:

- People & Staff: Impacts on Town staff.
- Reputation: Reputational impacts on the Town resulting from a materialized risk.
- Business Processes & Systems: Internal processes and systems that enable the smooth functioning of the Town.
- Financial: A Risk of financial loss for the Town.

By identifying an event that could potentially occur, then assessing its risk using the multiplied product of the likelihood and consequence ratings, a total risk score can be determined. Events that have a risk score of greater than 32 are deemed to be high risk.

By identifying an event that could potentially occur, then assessing its risk using the multiplied product of the likelihood and consequence ratings, a total risk score can be determined. Events that have a risk score of greater than 32 are deemed to be high risk. Table 4 outlines the risk scores and the level of risk associated with them.

Table 4: Risk Consequence Table

		Consequences				
Risk Dimensions	People & Staff	Injuries or ailments not requiring medical treatment.	Minor injury or First Aid Treatment Case.	Serious injury causing hospitalisation or multiple medical treatment cases.	Life threatening injury or multiple serious injuries causing hospitalisation.	Death or multiple life threatening injuries.
	Reputation	Internal Review	Scrutiny required by internal committees or internal audit to prevent escalation.	Scrutiny required by clients or third parties etc.	Intense public, political and media scrutiny. E.g. front page headlines, TV, etc.	Legal action or Commission of inquiry or adverse national media.
	Business Processes & Systems	Minor errors in systems or processes requiring corrective action, or minor delay without impact on overall schedule.	Policy procedural rule occasionally not met or services do not fully meet needs.	One or more key accountability requirements not met. Inconvenient but not client welfare threatening.	Strategies not consistent with business objectives. Trends show service is degraded.	Critical system failure, bad policy advice or ongoing non-compliance. Business severely affected.
	Water Utility Function	Wholesale water interruption < 8 hrs	Short term or localised non-compliance, non health related e.g. aesthetic or interruption 8-12 hrs	Widespread aesthetic issues or long term non compliance, not health related or interruption 12-24 hrs	Potential Illness or interruption >24 - 48 hrs	Actual illness or potential long term health effects or interruption >48 hrs
	Financial	$5K	$50K	$100K	$250K	$500K

				Insignificant	Minor	Moderate	Severe	Catastrophic
				1	2	4	8	16
Likelihood	Conceivable but extremely small chance of happening in next 4-5 years	1	Most Unlikely	1	2	4	8	16
	Is possible and cannot be ruled out in next 4-5 years.	2	Unlikely	2	4	8	16	32
	As likely as not to happen in next 4-5 years.	4	Medium	4	8	16	32	64
	Would be expected to happen in next 4-5 years but there is a small chance it may not.	8	Probable	8	16	32	64	128
	Would be confident this will happen at least once in next 4-5 years	16	Almost Certain	16	32	64	128	256

Risk Management Approach

Low	Manage by routine procedures
Medium	Board delegates responsibility to Commission Manager with written contingencies required to document and manage the consequence should it materialize.
High	Detailed action plan approved by NRDRWSC Board to reduce the Risk to Medium or Low.

Risk Calculation Example

One of the events discussed in the Workshops was related to the failure of pumps at the water treatment plant as a result of a power surge. There was no surge protection in the water treatment plant, and this event would have an impact on the supply of potable water for Residents and was assessed to have a Likelihood score of '4' – Medium.

Assessing this event against the 5 Consequence categories the following consequence ratings were determined:

Operational Impacts: Moderate (4)

People & Staff: Insignificant (1)

Business Processes & Systems: Moderate (4)

Reputation: Moderate (4)

Financial: Moderate (4)

The Maximum value of the Consequences is '8', multiplied by the Likelihood score of '4' produces a total Risk Score of 32, which falls into the High category as defined by the DWSP.

After the initial workshop with Town staff installed surge protection and the risk has now been mitigated. The Likelihood score is now reduced to 1 with the total risk score being reduced to 4.

Following the identification and analysis of potential risks, the mitigation approach is a key step for the Town. An appropriate and documented approach to managing risk will support effective decision making and ensure that the risk management approach is well understood across the organization and approved by the Board. It is suggested here that risks assessed as High (Likelihood x Consequence >32) have a detailed action plan approved by the Town Council, and that those plans identify a path to reduce the risk to Medium or Low. Other risk ratings can be managed through routine procedures (Low Risk) and with written contingencies approved by the Town CAO or appropriate delegated authority (Medium Risk).

5.1 Current Risk Register

Working with the Town Staff, 87 risk items were reviewed (including those from the AEP DWSP). For each of these risk potentials, the likelihood of the event happening was assessed, as well as the consequence resulting from the occurrence. These consequences ranged from the functional operations of the Town water system (as outlined in the DWSP risk register) along with the additional consequence categories to ensure that a full picture of the risk profile was created.

Through the evaluation process, 12 risk items were assessed to be at a Medium level of Risk (with the product of Likelihood x Consequence >=8) and 3 risks were assessed as a High Risk (with the product of Likelihood x Consequence >=32). Table 5 below contains the risks identified in the Medium and High categories.

The complete Risk Register is contained in Appendix 3.

The Town has 3 Risks that were identified as High. One risk related to the Treatment Plants (contamination of potable water from ingress to a Reservoir) and two risks related to the customer responsibilities (connection pipe installation and sizing that may cause contamination issues for the user).

Table 5: Assessed Risks Rated HIGH

Risk Type	Risk Description	Cause of Potential Failure	Comment	Current Monitoring	How Risk is Currently Controlled	Risk Score
Network Risks	Contamination of water due to ingress of water as a result of inadequate structure or maintenance.	Due to lack of structural integrity of reservoir as a result of poor design or maintenance	Common weaknesses are lids, ducting holes for cables, poorly sealed roof joints, air vents.	Divers monitor deficiencies, visual inspections of hatches. Significant drop in cl2 residual would begin investigation.	Tritoflex sealant installed on #3 reservoir, no concerns with other reservoirs	32
Customer Risks	Contamination of water in supply due to reduction in disinfectant levels resulting from long residence time of water in pipe caused by incorrectly sized/long service pipe.	Disinfectant decay due to water remaining in pipe for extended period	Service may have been installed without any consideration of residence time in service pipe	None	None	32
Customer Risks	Contamination of water in supply as a result of unsatisfactory or damaged new connections caused by inadequate installation procedures.	As a result of unsatisfactory or damaged new connections due to bad installation and failure to follow a suitable code of practice	If the pipe ends are not protected during installation, then swarf or dirt may enter the pipe and cause contamination.	None	None	32

5.2 Management Approach

As part of a concerted approach to understand Levels of Service and Risk, and more importantly, to view them as interconnected, it is important to view the linkages between Risk and Level of Service. This is not an absolute exercise, but by viewing the two together, decision makers can often identify key areas for change.

In this exercise, the Levels of Service with a Low rating (1 or 2) with corresponding Risks have been identified. Low Levels of Service that are aligned with higher risks may warrant management attention to determine if the Risks are within acceptable tolerances. If the Risks are beyond acceptable tolerances, then additional actions or changes to the Levels of Service may be in order.

Table 6: *LOS & Risk Management Approach*

Service Description Indicator	LOS Description	Risk Description	Risk Description
Maximum time that any water customer is without water service due to an unplanned outage	8 - 12 Hours	Failure to meet demand due to inability to operate valves as required.	
SCADA systems in Place - Measure of operator control over system	Do not have any. All manual control	Loss of supply resulting from failure of telemetry.	
Frequency of Uni-Directional Flushing Program	Never	Failure to meet demand due to inability to operate valves as required.	
Robustness of the Cross Connection Program	A Cross Connection Program is in place and is below typical industry and municipal standards.	Contamination of water as a result of cross-connection	Contamination of water in supply as a result of inadequate hygiene practice at bulk water filling stations
SCADA (Supervisory Control and Data Acquisition Systems)	Do not have any. All manual control	Loss of supply resulting from failure of telemetry.	

Service Description Indicator	LOS Description	Risk Description	Risk Description
When private parties connect to a Town Distribution Main, steps are taken to minimize cross connection or contamination	Plans are approved in advance, and the private constructor is required to have a Town representative inspect/observe the site	Contamination of water in supply as a result of unsatisfactory or damaged new connections caused by inadequate installation procedures.	Contamination of water in supply as a result of connection to unwholesome water due to lack of knowledge/ supervision.
Periodic Inspections of Treatment Facilities to prevent ingress of contaminants	Access is limited, and ingress points are secured. Regular observations by staff	Contamination of water due to ingress of water as a result of inadequate structure or maintenance.	

6 Life Cycle Management Plan

The lifecycle management plan outlines how the community intends and plans to manage and operate its assets at the agreed levels of service while optimizing life cycle costs. To be successful, it needs to balance incoming revenues against operation costs while meeting maintenance, renewals, and upgrades priorities of the asset portfolio.

For the purposes of this report, a 100-year timeframe was adopted in order to give the Town a long-term view of the long-life infrastructure it manages.

A whole-of-life approach is used in Life Cycle Management. This approach is used to forecast the time of 'failure' of assets and project when they will require funding for renewal or replacement while considering day to day operations and maintenance. It is understood that each asset has a finite life and in the case of significant scale assets, they are made up of components that also have a finite life.

It should be noted that while this approach provides a transparent view of the long-term costs of owning and maintaining an asset, it is a long-term forecast and an estimate of future costs. As an asset is actively managed through its life, decisions need to be made based on the performance and functionality of the asset.

Functional requirements change over decades of operations (e.g., growth and water demand, environmental regulations), and what may have been suitable and desirable when constructed may not remain constant over the life of the asset.

These types of decisions are an important factor in planning for a significant renewal, replacement or upgrade of an asset as well as determining the ideal operations and maintenance budget to achieve optimum asset longevity.

By using information for each of the assets that includes:

- the total expected life,
- the current remaining life, and
- the estimated asset replacement value,

the total estimated and forecasted life and cost can be calculated.

This approach provides a visual and tangible method of assessing the recurring costs of an asset to anticipate the funding required to operate it over the long term. Note that significant components of an asset all require a regular and major reinvestment at the end of their useful lives to ensure the asset continues functioning at an appropriate level.

7 Long Term Financial Plan

The cost estimating method used in this report is based on an estimation of current Alberta construction unit costs multiplied by the volume of assets needing replacement. The anticipated life cycle for assets is shown in the Tables in previous sections.

As the life cycle of each infrastructure component comes to an end of life, the anticipated renewal cost is forecast into the future.

Given that each system component has its own anticipated useful life before requiring refurbishment, a regular and recurring cycle of reinvestment was modelled through the anticipated life of the asset. This recurring reinvestment represents the capital renewals of major systems required to maintain the maximum useful life of the assets. In the preliminary stages of an asset management plan, a number of assets identified as already having outlived their useful life may appear as requiring renewal in the first year. While these asset components should be reviewed for required replacement, it is not generally feasible or required to replace all assets in the next capital year and **prioritization** will be required. As the asset management plan progresses and is further refined, in time, this renewal spike will appear reduced.

The total asset replacement value provided is a high-level estimate for the purposes of asset management using generalized construction types. Since there was no on-site review or a comprehensive review of detailed information for each asset, certain items are assumed, and the costing may not account for specialty items or challenging site conditions etc. Across the portfolio the total asset replacement value is believed to be a legitimate tool for forecasting long term costs.

Based on our costing breakdown outlined above, the following Table 7 provides a summary of the current replacement value of the Town's assets, and the annualized replacement cost for the asset category (based on the forecast replacement schedule), and a calculation of the forecast Reinvestment rate per year as a percentage of total value.

Table 7: Annualized Reinvestment Rate ($/year Replacement)

Asset Name	Current Replacement Value	Annualized Cost $ / Year	Reinvestment % per year
Water Pressure Main	$11,928,800	$119,000	1.0
Water Wells	$450,000	$9000	2.0
Water Reservoir	$2,485,000	$31,000	1.3
Water Treatment Plant	$310,000	$6,200	2.0
Hydrants	$440,000	$6,400	1.3
Combined Total	**$15.6M**	**$172K**	**1.1%**

As indicated in Table 7, the Town's total annual cost of infrastructure renewal based on the forecast lifecycles is $172,000 per year, or 1.1% of the total infrastructure value. This low reinvestment rate is due to the significant value assets (Water Pressure Mains and Reservoirs) having reasonably long-life cycles. While their useful lives are long, their replacement values will represent a significant cost to the town. Planning for these asset replacements well in advance will ensure that the Town has the fiscal capacity to maintain and replace these assets when they reach the end of their useful or reliable life.

The following Figures outline the reinvestment forecast for all asset classes over the next 100 years.

Figure 6: Water System 100-year Life Cycle Cost by Year and Asset Class

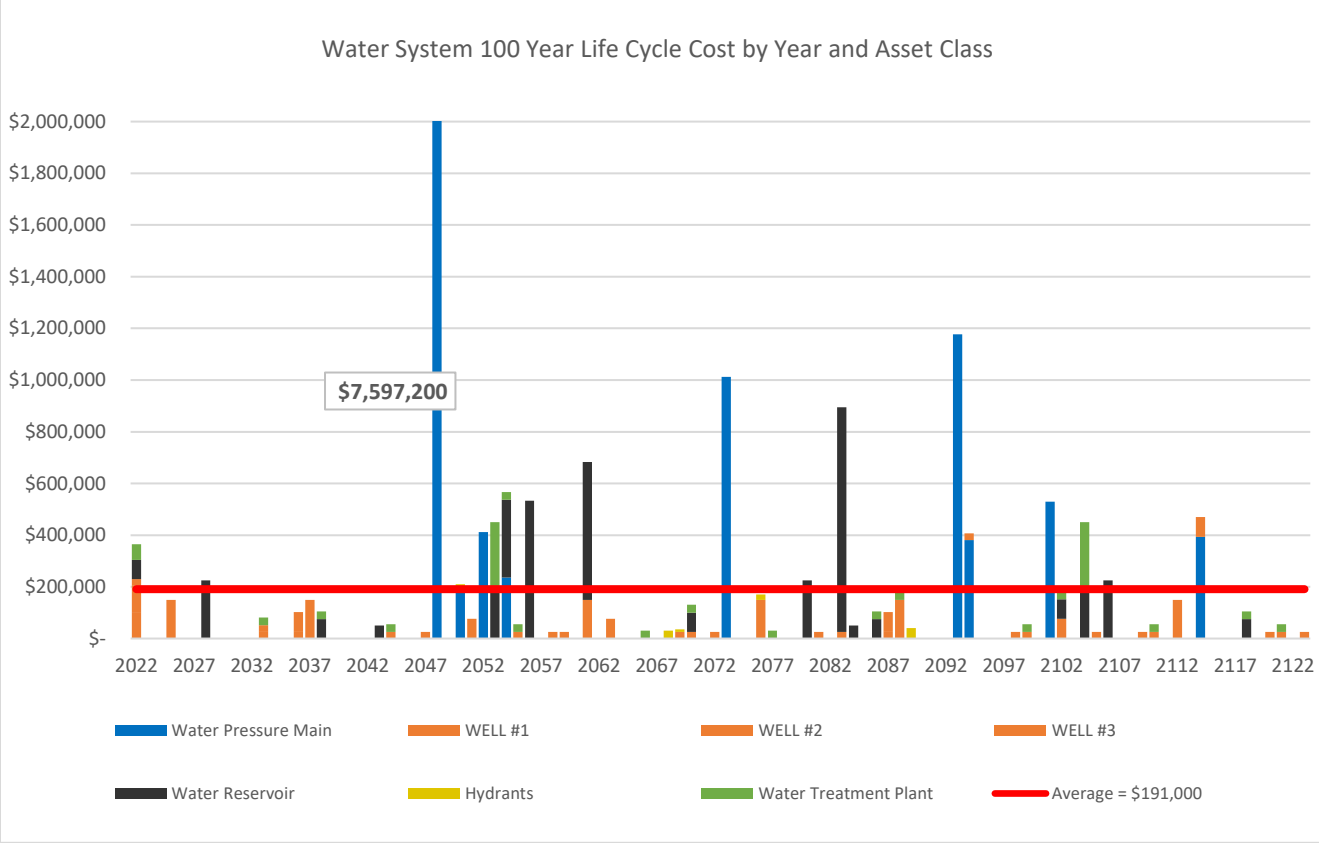


Figure 7: Water Pressure Main 100-year Life Cycle Cost by Year

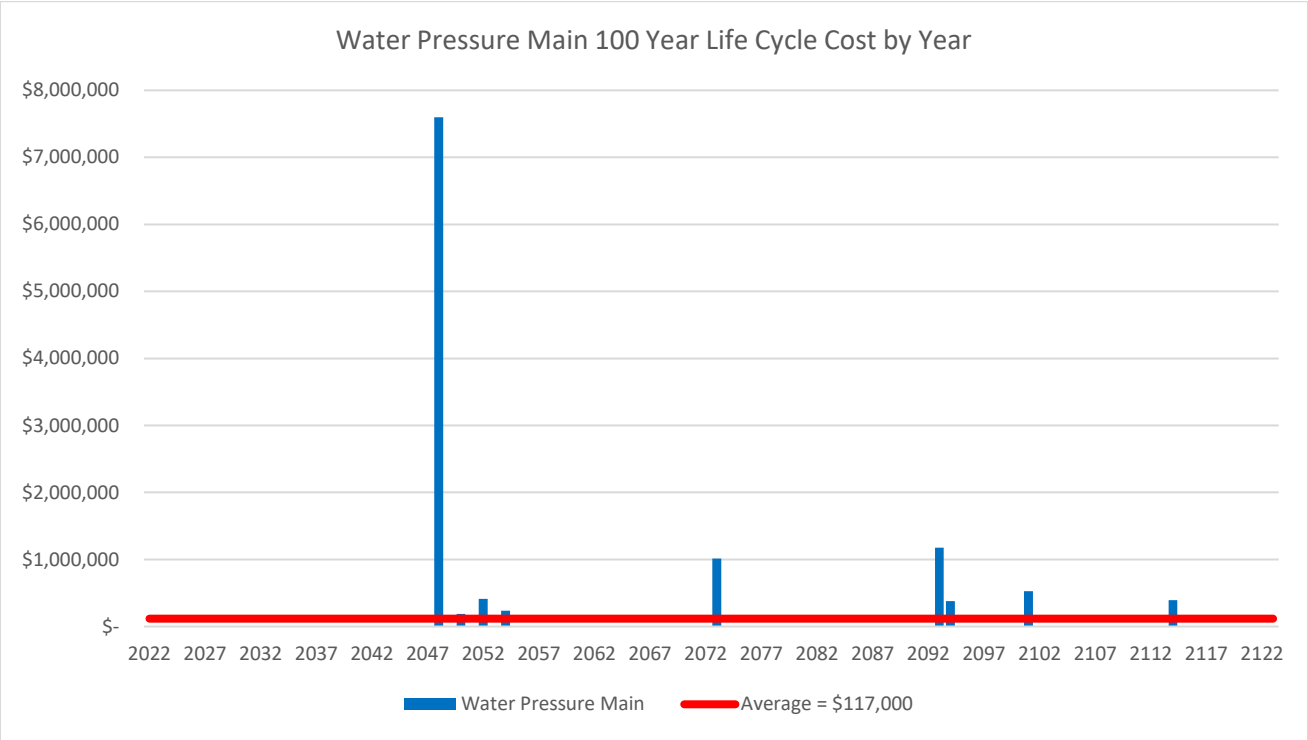


Figure 8: Water Treatment Facility and Wells 100-year Life Cycle Cost by Year

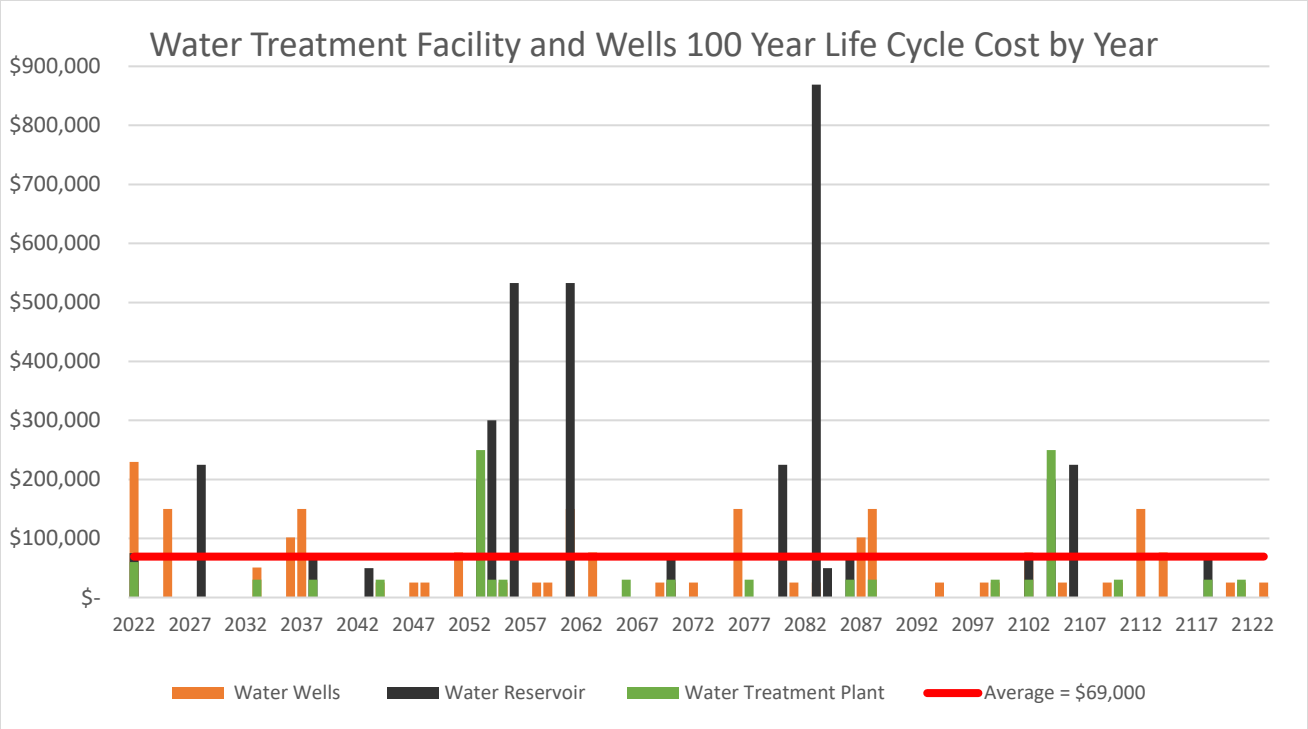
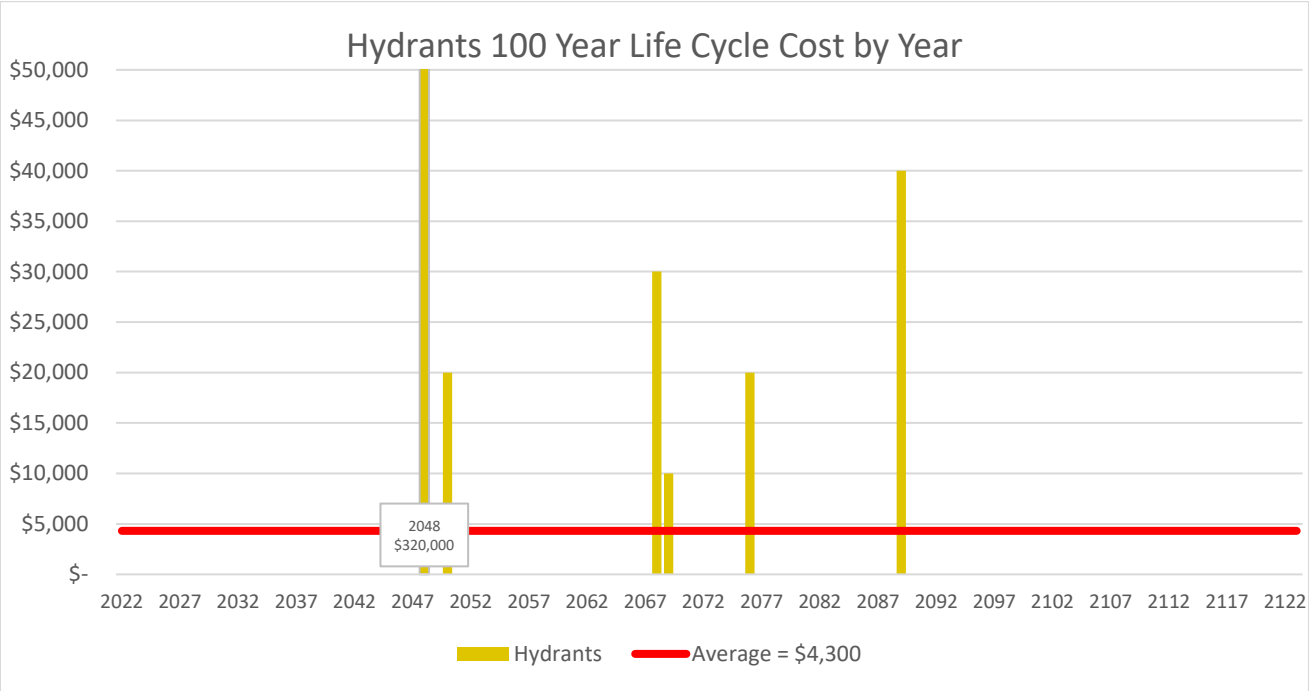


Figure 9: Hydrants 100-year Life Cycle Cost by Year



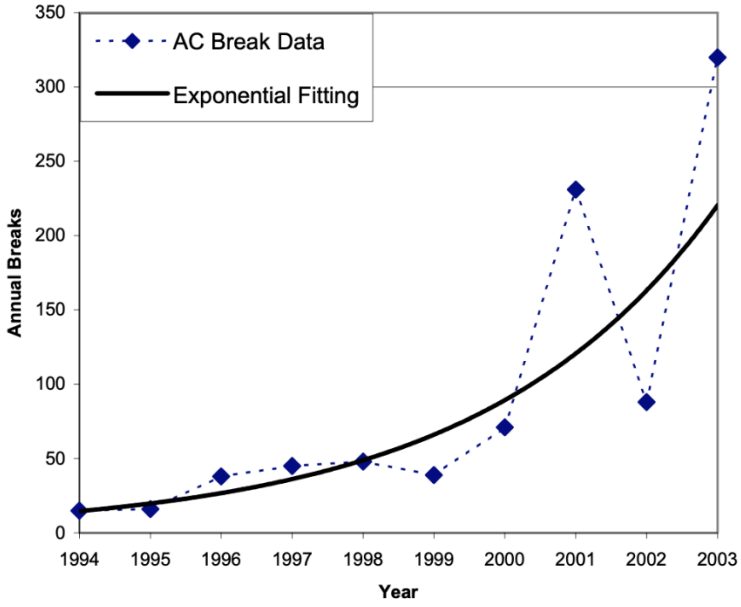
7.1 Observations

Generally, the mid-term forecast for the Water Utility expenses appears modest. Over the duration of the 100-year analysis, an average of $172,000/year has been identified as the annual average rehabilitation spend. The next significant investment exceeding that average will be related to the end-of-life failure of the AC water main network, which is forecast to approach a total of $7.5 M in investments (anticipated to be in 2048). As noted earlier, the expected life of AC water main is approximately 75 years, and subject to a variety of factors that may influence its functional life. The Town should be anticipating that as the AC water mains age, their performance will deteriorate and accelerate.

Figure 10 below illustrates the observed failure rate over time based on empirical data gathered by the National Research Council of Canada using City of Regina data.

Other, lesser cost investments in the near term may also be related to the Raw Water Wells and Reservoirs all may require updating of the electrical and controls systems and other regular maintenance based on the age of the assets. There is no performance data to suggest that they are in need of renewal, however as all assets age, their reliabilty and performance degrade. The Town should consider a more detailed assessment of these systems and plan for any updates required.

Figure 10: Observed AC Main Pipe Failure Data – National Research Council of Canada



8 Future Demand

In order to establish the existing and future demands for the Town the following items should be considered:

- Population change
- Change in demographics
- Seasonal Factors
- Community Expectations
- Technological Changes
- Economic Factors
- Environmental Awareness and Resiliency requirements

The demand drivers above will influence future service delivery and requirements. These new services will be delivered by managing the Community's existing assets, upgrading, and providing new infrastructure to meet demand. This demand will be managed by additional non-asset solutions that include insuring against critical risks and managing network failures.

As part of an annual planning process, the Town Council and Staff should undertake an examination of the trends the Town is experiencing and how they will impact the future service and infrastructure requirements.

Stantec is in the process of preparing a servicing study for the Southeast Area Structure Plan, which also takes into account buildout of all future development area within the Town's existing limits. **The modeling and recommendations are still underway at the time of this report, but the preliminary findings are summarized below.**

Groundwater Wells

The Town's current (2021) average daily water demand is 290 m^3/day, which is supplied by three wells that have been pump tested and licensed/approved to pump up to their sustainable long-term yields. The wells have a combined capacity to supply 548 m^3/day, which is 189% of the average daily demand. The wells also have capacity to refill the reservoirs in the event that high demand for fire water or other temporary demand well in excess of the average daily demand is encountered. Without adding a fourth production well the Town has residual capacity to accommodate approximately 3% annual growth for more than 20 years.

Even with the conservative growth rate applied for planning and design, the Town's current wells are capable of service into the future with the likely need to add a fourth well to meet the projected demand for the full Town and southeast area buildout with a high level of confidence. Note that the individual wells also have higher allowable maximum diversion rates than the average daily maximums as presented above which can be leveraged to calculate limitations of the wells to meet potential short-term, high-demand situations/scenarios such as reservoir filling/fire water demand. However, if maximum daily withdrawals are made, the overall annual volumetric approvals still apply.

Reservoir Capacity

The Town's reservoirs have a total combined capacity of 1,778 m^3. Currently 1,269 m^3 of that capacity is utilized for the maximum daily demand, emergency storage, and fire flow storage (assuming 150 l/s fire flow for two hours). The future commercial/industrial areas are being planned for an average demand of 0.05 l/s/ha with a 2-hour fire flow of 150 l/s. Combined with the Town's future residential buildout within Town limits, it is estimated that the ultimate reservoir volume will need to be approximately 2,180m3. Depending on timing of future buildout and the life expectancy of the water treatment plant and reservoirs, this additional volume could be accommodated either by adding more capacity to the reservoirs at the water treatment plant, which would be challenging to expand with the current site constraints, or by replacing the water treatment plant with a new facility and additional storage.

Water Treatment and Pumping

The water treatment plant currently utilizes chlorination treatment without any filtration. If the existing wells and future wells continue to be classified as non-GUDI wells (Groundwater Under Direct Influence of surface water), and these

wells continue to produce high quality ground water as what is being produced, the chlorination process for disinfection will be adequate to claim 4-log reduction credit on virus inactivation.

The existing pump station is not known to have mechanical issues that need immediate attention, but the addition of surge protection is necessary and recommended to protect the electrical system and pump motors. To meet the long-term future demands, the pump station will need be upgraded to increase the pumping capacity and storage volume. Like the reservoir capacity, this can potentially be accommodated by upgrades at the existing water treatment plant but depending on timing for increases in demands and the estimated lifespan of the facility, the Town may want to consider replacing the water treatment plant and reservoirs in the relatively long-term future (approximately 20 years for an assumed 3% annual growth).

The Town is currently working on planning for the Town's growth over the next 20 years. With respect to Asset Management, it will be incumbent on the Town to add the new assets as they are brought online. This will allow the Town to further mange the replacement costs well into the future for their Water Assets. Planned upgrades will include assets like an additional Water Treatment plant, new water pipes, hydrants, water wells, etc.

9 Improvement Plan

An asset management plan is meant to be a living document that evolves every year to inform service decisions and long-term financial planning. In this initial stage of the plan, only a very high level of information was incorporated. Future iterations of the AM plan could evolve into more detail, which will lead to greater accuracy should the Town find benefit in more detailed information. It is recognized that it may take a number of planning cycles to evolve the plan to a sufficient level of detail for good asset management.

Based on the engagements with staff, the assessment of the data on hand, and the analysis of life cycle forecasts, the overall recommendation for the Town is to continue being a conscientious operator of the water system, and to be mindful of the forecast 2048 spike in AC Pipe failures. Knowing that this date represents the assumed 'end of life' for the AC mains, the Town can make plans to ensure that when the performance does deteriorate, that adequate financial resources are in place to effectively replace the network in an efficient manner.

The following are more detailed recommendations for improvements based on the structure of this Plan.

9.1 Asset Register

- Create a Record/Register of water asset performance and failures to ensure that the current performance is monitored in a systemic manner. Ensuring that the Town's infrastructure performance is accurately captured and recorded can serve as a valuable rearward looking dataset to forecast future performance.
- Ensure that the Town's physical assets are captured in not only the Asset Register but are accurately recorded in the Town's Tangible Capital Asset List as well as the Town's GIS Platform.

9.2 Level of Service

- Review the noted services that have been identified as Low (at a LOS 1 or 2) and review any changes required.

9.3 Risk

- Review the four noted Risks that have been identified as High (Risk Score >32) and determine if mitigating action is required. Review these risks (and the current services mitigating them) with Council and determine if they are within the Town's Risk Tolerance.
- Plan to conduct an inspection of the well casings to determine their integrity.
- Investigate the addition of electrical Surge Protection at the water treatment plant to ensure that the plant telemetry continues operating in the event of an electrical problem.

9.4 Lifecycle Management Plan

- Actively monitor the performance of the underground assets as they approach the end of their forecast lifecycle to ensure that the Town has the fiscal capacity to replace them when required.

9.5 Long Term Financial Plan

- Develop a 20-year Financial Model for the Town's water utility to forecast long-term revenues, expenses, reserve balances and rates.
- Table the Asset Management Plan (along with the Long-Term financial plan) with Council

01

Appendix 1

Asset Register

A	B	C	D		E	F	G	H	I	L	M	N	O
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**Diameter (mm)**	**Construction Year**	**General Life Expectancy**	**Estimated Remaining Life**	**Replacement Year**	**Length (m)**	**Unit Cost**	**Historical Cost**	**Asset Replacement Cost**	**Current Total Cost**
GIS #	**Water Pressure Main**												
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	150	1973	75	26	2048	**12.00**	$ 1,300	$ -	$ 15,600	$ 15,600
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	150	1973	75	26	2048	**106.00**	$ 1,300	$ -	$ 137,800	$ 137,800
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	150	1973	75	26	2048	**114.00**	$ 1,300	$ -	$ 148,200	$ 148,200
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	150	1973	75	26	2048	**131.00**	$ 1,300	$ -	$ 170,300	$ 170,300
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	200	1973	75	26	2048	**102.00**	$ 1,300	$ -	$ 132,600	$ 132,600
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	200	1973	75	26	2048	**101.00**	$ 1,300	$ -	$ 131,300	$ 131,300
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	200	2014	100	92	2114	**152.00**	$ 1,300	$ -	$ 197,600	$ 197,600
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	150	1973	75	26	2048	**124.00**	$ 1,300	$ -	$ 161,200	$ 161,200
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	150	1973	75	26	2048	**98.00**	$ 1,300	$ -	$ 127,400	$ 127,400
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	150	1973	75	26	2048	**124.00**	$ 1,300	$ -	$ 161,200	$ 161,200
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	150	2001	100	79	2101	**93.00**	$ 1,300	$ -	$ 120,900	$ 120,900
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	150	2001	100	79	2101	**27.00**	$ 1,300	$ -	$ 35,100	$ 35,100
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	150	1993	100	71	2093	**364.00**	$ 1,300	$ -	$ 473,200	$ 473,200
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	200	1973	100	51	2073	**159.00**	$ 1,300	$ -	$ 206,700	$ 206,700
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	200	1973	75	26	2048	**121.00**	$ 1,300	$ -	$ 157,300	$ 157,300
0201	**46 St (46 St - East Side)**	B1B	AC	150	1973	75	26	2048	**21.00**	$ 1,300	$ -	$ 27,300	$ 27,300
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	150	1973	75	26	2048	**102.00**	$ 1,300	$ -	$ 132,600	$ 132,600
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	150	1973	75	26	2048	**113.00**	$ 1,300	$ -	$ 146,900	$ 146,900
0189	**46 St (48 Ave - South End)**	B1B	AC	150	1973	75	26	2048	**16.00**	$ 1,300	$ -	$ 20,800	$ 20,800
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	150	1973	100	51	2073	**102.00**	$ 1,300	$ -	$ 132,600	$ 132,600
N/A	**56 Ave (48A St - East End)**	B1B	PVC	200	2014	100	92	2114	**58.00**	$ 1,300	$ -	$ 75,400	$ 75,400
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	150	1973	75	26	2048	**177.00**	$ 1,300	$ -	$ 230,100	$ 230,100
0145	**55 Ave (49 St - East End)**	B1B	AC	150	1973	75	26	2048	**18.00**	$ 1,300	$ -	$ 23,400	$ 23,400
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	200	2014	100	92	2114	**93.00**	$ 1,300	$ -	$ 120,900	$ 120,900
138, 139	**54 Ave (50 St - East End)**	B1B	AC	150	1973	75	26	2048	**52.00**	$ 1,300	$ -	$ 67,600	$ 67,600
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	150	2001	100	79	2101	**287.00**	$ 1,300	$ -	$ 373,100	$ 373,100
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	150	1973	75	26	2048	**194.00**	$ 1,300	$ -	$ 252,200	$ 252,200
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	150	1993	100	71	2093	**222.00**	$ 1,300	$ -	$ 288,600	$ 288,600
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	150	1993	100	71	2093	**60.00**	$ 1,300	$ -	$ 78,000	$ 78,000
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	150	1993	100	71	2093	**105.00**	$ 1,300	$ -	$ 136,500	$ 136,500
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	150	1993	100	71	2093	**56.00**	$ 1,300	$ -	$ 72,800	$ 72,800
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	150	1993	100	71	2093	**43.00**	$ 1,300	$ -	$ 55,900	$ 55,900
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	150	1993	100	71	2093	**33.00**	$ 1,300	$ -	$ 42,900	$ 42,900
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	200	1993	100	71	2093	**22.00**	$ 1,300	$ -	$ 28,600	$ 28,600
0172	**52 Ave (West End - 50 St)**	B1B	AC	150	1973	75	26	2048	**7.00**	$ 1,300	$ -	$ 9,100	$ 9,100
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	200	1973	75	26	2048	**182.00**	$ 1,300	$ -	$ 236,600	$ 236,600
0168	**52 Ave (49 St - 48 St)**	B1B	AC	200	1973	75	26	2048	**186.00**	$ 1,300	$ -	$ 241,800	$ 241,800
0167	**52 Ave (48 St - 47 St)**	B1B	AC	200	1979	75	32	2054	**182.00**	$ 1,300	$ -	$ 236,600	$ 236,600
0166	**52 Ave (47 St - 46 St)**	B1B	AC	200	1975	75	28	2050	**146.00**	$ 1,300	$ -	$ 189,800	$ 189,800
0193	**51 Ave (West End - 50 St)**	B1B	AC	150	1973	75	26	2048	**7.00**	$ 1,300	$ -	$ 9,100	$ 9,100
0122	**51 Ave (50 St - 49 St)**	B1B	AC	150	1973	75	26	2048	**201.00**	$ 1,300	$ -	$ 261,300	$ 261,300
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	150	1973	75	26	2048	**173.00**	$ 1,300	$ -	$ 224,900	$ 224,900
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	150	1977	75	30	2052	**153.00**	$ 1,300	$ -	$ 198,900	$ 198,900
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	150	1973	75	26	2048	**175.00**	$ 1,300	$ -	$ 227,500	$ 227,500
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	150	1994	100	72	2094	**293.00**	$ 1,300	$ -	$ 380,900	$ 380,900
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	200	1973	75	26	2048	**192.00**	$ 1,300	$ -	$ 249,600	$ 249,600
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	200	1973	75	26	2048	**112.00**	$ 1,300	$ -	$ 145,600	$ 145,600
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	200	1973	75	26	2048	**25.00**	$ 1,300	$ -	$ 32,500	$ 32,500
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	150	1973	75	26	2048	**121.00**	$ 1,300	$ -	$ 157,300	$ 157,300
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	150	1973	75	26	2048	**161.00**	$ 1,300	$ -	$ 209,300	$ 209,300
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	200	1973	75	26	2048	**98.00**	$ 1,300	$ -	$ 127,400	$ 127,400
0194	**50 Ave (49 St - 48 St)**	B1B	AC	200	1973	75	26	2048	**168.00**	$ 1,300	$ -	$ 218,400	$ 218,400
0195	**50 Ave (48 St - 47 St)**	B1B	AC	200	1973	75	26	2048	**173.00**	$ 1,300	$ -	$ 224,900	$ 224,900
0103	**50 Ave (47 St - 46 St)**	B1B	AC	200	1973	75	26	2048	**158.00**	$ 1,300	$ -	$ 205,400	$ 205,400
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	200	1973	100	51	2073	**108.00**	$ 1,300	$ -	$ 140,400	$ 140,400
0191	**50 Ave (45 St - East End)**	B1B	PVC	200	1973	100	51	2073	**295.00**	$ 1,300	$ -	$ 383,500	$ 383,500
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	150	1977	75	30	2052	**164.00**	$ 1,300	$ -	$ 213,200	$ 213,200
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	150	1973	75	26	2048	**156.00**	$ 1,300	$ -	$ 202,800	$ 202,800
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	150	1973	75	26	2048	**19.00**	$ 1,300	$ -	$ 24,700	$ 24,700
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	150	1973	75	26	2048	**99.00**	$ 1,300	$ -	$ 128,700	$ 128,700
0184	**49 Ave (50 St - 49 St)**	B1B	AC	150	1973	75	26	2048	**188.00**	$ 1,300	$ -	$ 244,400	$ 244,400
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	150	1973	75	26	2048	**172.00**	$ 1,300	$ -	$ 223,600	$ 223,600
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	150	1973	75	26	2048	**173.00**	$ 1,300	$ -	$ 224,900	$ 224,900
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	150	1973	75	26	2048	**153.00**	$ 1,300	$ -	$ 198,900	$ 198,900
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	150	1973	100	51	2073	**115.00**	$ 1,300	$ -	$ 149,500	$ 149,500
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	200	1973	75	26	2048	**154.00**	$ 1,300	$ -	$ 200,200	$ 200,200
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	200	1973	75	26	2048	**159.00**	$ 1,300	$ -	$ 206,700	$ 206,700
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	150	1973	75	26	2048	**193.00**	$ 1,300	$ -	$ 250,900	$ 250,900
0109	**48 Ave (49 St - 48 St)**	B1B	AC	150	1973	75	26	2048	**188.00**	$ 1,300	$ -	$ 244,400	$ 244,400
0108	**48 Ave (48 St - 47 St)**	B1B	AC	150	1973	75	26	2048	**172.00**	$ 1,300	$ -	$ 223,600	$ 223,600
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	150	1973	75	26	2048	**153.00**	$ 1,300	$ -	$ 198,900	$ 198,900
	45 St Lane (Lane - East Side)	**Proposed**	PVC	150	Proposed	100	N/A	N/A	**44.00**	$ 1,300	$ -	$ 57,200	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	200	Proposed	100	N/A	N/A	**511.00**	$ 1,300	$ -	$ 664,300	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	200	Proposed	100	N/A	N/A	**43.00**	$ 1,300	$ -	$ 55,900	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	200	Proposed	100	N/A	N/A	**371.00**	$ 1,300	$ -	$ 482,300	$ -
	Subtotal - Water Pressure Main								**9176**			$ 11,928,800	$ 11,928,800

A	B	C	D	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
GIS #	**Water Pressure Main**													
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

A	B	C	D	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
GIS #	**Water Pressure Main**														
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

A	B	C	D	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**
GIS #	**Water Pressure Main**														
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ 15,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ 137,800	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ 148,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ 170,300	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ 132,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ 131,300	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ 161,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ 127,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ 161,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ 157,300	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ 27,300	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ 132,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ 146,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ 20,800	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ 230,100	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ 23,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ 67,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ 252,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ 9,100	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ 236,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ 241,800	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 236,600	$ -	$ -
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ 189,800	$ -	$ -	$ -	$ -	$ -	$ -
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ 9,100	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ 261,300	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ 224,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 198,900	$ -	$ -	$ -	$ -
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ 227,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ 249,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ 145,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ 32,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ 157,300	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ 209,300	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ 127,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ 218,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ 224,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ 205,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 213,200	$ -	$ -	$ -	$ -
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ 202,800	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ 24,700	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ 128,700	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ 244,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ 223,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ 224,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ 198,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ 200,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ 206,700	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ 250,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ 244,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ 223,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ 198,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			**$ -**	**$ -**	**$ -**	**$ 7,597,200**	**$ -**	**$ 189,800**	**$ -**	**$ 412,100**	**$ -**	**$ 236,600**	**$ -**	**$ -**

A	B	C	D	BI											
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2057**	**2058**	**2059**	**2060**	**2061**	**2062**	**2063**	**2064**	**2065**	**2066**	**2067**	**2068**
GIS #	**Water Pressure Main**														
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

A	B	C	D										
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2069**	**2070**	**2071**	**2072**	**2073**	**2074**	**2075**	**2076**	**2077**	**2078**	**2079**	**2080**
GIS #	**Water Pressure Main**														
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	206,700	$ -	$ -	$ -	$ -	$ -	$ -
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	132,600	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	140,400	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	383,500	$ -	$ -	$ -	$ -	$ -	$ -
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	149,500	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**1,012,700**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

A	B	C	D											
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2081**	**2082**	**2083**	**2084**	**2085**	**2086**	**2087**	**2088**	**2089**	**2090**	**2091**	**2092**
GIS #	**Water Pressure Main**														
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

A	B	C	D											
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2093**	**2094**	**2095**	**2096**	**2097**	**2098**	**2099**	**2100**	**2101**	**2102**	**2103**	**2104**
GIS #	**Water Pressure Main**														
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 120,900	$ -	$ -	$ -
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 35,100	$ -	$ -	$ -
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ 473,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 373,100	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ 288,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ 78,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ 136,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ 72,800	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ 55,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ 42,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ 28,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ 380,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			**$ 1,176,500**	**$ 380,900**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 529,100**	**$ -**	**$ -**	**$ -**

A	B	C	D										
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2105**	**2106**	**2107**	**2108**	**2109**	**2110**	**2111**	**2112**	**2113**	**2114**	**2115**	**2116**
GIS #	**Water Pressure Main**														
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 197,600	$ -	$ -
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 75,400	$ -	$ -
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 120,900	$ -	$ -
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 393,900**	**$ -**	**$ -**

A	B	C	D						
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2117**	**2118**	**2119**	**2120**	**2121**	**2122**	**2123**
GIS #	**Water Pressure Main**									
0142	**50 St(North Wat Plug F3 - 55 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 140	**50 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
137, 133	**50 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
134, 135, 136	**50 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0112	**50 St (52 Ave - 51 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0113	**50 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0144	**49 St (55 Ave - 54 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
146, 147, 148	**49 St (54 Ave - 53 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
126, 125, 124	**49 St (53 Ave - 52 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
171, 155, 154	**47A St (55 Ave - 54 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
153, 152	**47A St (54 Ave - Cul-de-sac)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
156, 157, 158, 159	**54 Ave Lane (47A St - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
165, 204	**46 St Lane (52 Ave - 51 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0116	**46 St (51 Ave - 50 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0201	**46 St (46 St - East Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0100	**46 St (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0189	**46 St (48 Ave - South End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0203	**45 St (50 Ave - 49 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
141, 143, 144	**55 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0145	**55 Ave (49 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
138, 139	**54 Ave (50 St - East End)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
149, 150, 151	**54 Ave (49 St - 47A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
132, 131, 130, 129, 128, 127	**53 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0163	**53 Ave Close (Cul-de-sac - 49 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0162	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0161	**53 Ave Lane (East side - 46A St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0160	**53 Ave Lane (46A St - 46 St Lane)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**53 Ave Lane (46 St Lane - 46 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0170	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0169	**46 St (53 Ave Lane - 52 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0172	**52 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
110, 111, 123	**52 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0168	**52 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0167	**52 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0166	**52 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0193	**51 Ave (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0122	**51 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
121, 120	**51 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
119, 118	**51 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
115, 114	**51 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0202	**North-West (H 135 - 50 Ave)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0178	**50 Ave North Side (West End - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
177, 175,	**50 Ave North Side (50 St - 50 st Lane)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0174	**50 Ave (50 St Lane - South Side)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0176	**50 Ave South (50 St Lane - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
179, 180	**50 Ave South (50 St - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0173	**50 Ave (50 St Lane - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0194	**50 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0195	**50 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0103	**50 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0191	**50 Ave (45 St - East End)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0192	**50 Ave North (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0190	**50 Ave North (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
187, 186	**49 Ave (West End - Railway Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0185	**49 Ave (Railway Ave - 50 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0184	**49 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
198, 199	**49 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
102, 200	**49 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
101, 197	**49 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
188, 203	**49 Ave (46 St - 45 St)**	B1B	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
181, 196	**Railway Ave (50 Ave - 49 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0182	**Railway Ave (49 Ave - 48 Ave)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
183, 105, 104, 109	**48 Ave (50 St - 49 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0109	**48 Ave (49 St - 48 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0108	**48 Ave (48 St - 47 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
107, 106	**48 Ave (47 St - 46 St)**	B1B	AC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	45 St Lane (Lane - East Side)	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
205, 206, 207, 212, 213, 208, 214	**49 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0210	**49 Ave Lane (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
209, 211, 215	**50 Ave (45 St - East End)**	**Proposed**	PVC	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Pressure Main			**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

A	B	C	D	E	F	G	H	I	L	M	N	O
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**Diameter (mm)**	**Construction Year**	**General Life Expectancy**	**Estimated Remaining Life**	**Replacement Year**	**Length (m)**	**Unit Cost**	**Historical Cost**	**Asset Replacement Cost**	**Current Total Cost**
Asset ID	**WELL #1**	**Asset Code**	**Components**		**Construction Year**	**General Life Expectancy**	**Estimated Remaining Life**	**Replacement Year**	**% of TERV**	**Unit Cost**	**Maintenance Cost**	**Asset Replacement Cost**	**Current Total Cost**
N/A	**WELL #1**	B1F	Deactivate Well		1975	50	3	2025	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Casting and Surface Seal		1975	25	0	2022	20%	$ 30,000.00	$ -	$ 30,000	$ 30,000
N/A		B1F	Drill Well		1975	50	3	2025	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Electrical		1975	25	0	2022	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Pump		1975	25	0	2022	15%	$ 22,500.00	$ -	$ 22,500	$ 22,500
N/A		B1F	Yield Test & Quality Testing		1975	10	0	2022	17%	$ 25,500.00	$ -	$ 25,500	$ 25,500
	Subtotal - Well #1	**B1F**			**1975**	50	**3**	**2025**	**100%**	**$ 150,000**		**$ 150,000**	**$ 150,000**
Asset ID	**WELL #2**	**Asset Code**	**Components**		**Construction Year**	**General Life Expectancy**	**Estimated Remaining Life**	**Replacement Year**	**% of TERV**	**Unit Cost**	**Maintenance Cost**	**Asset Replacement Cost**	**Current Total Cost**
N/A	**WELL #2**	B1F	Deactivate Well		1987	50	15	2037	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Casting and Surface Seal		1987	25	0	2022	20%	$ 30,000.00	$ -	$ 30,000	$ 30,000
N/A		B1F	Drill Well		1987	50	15	2037	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Electrical		1987	25	0	2022	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Pump		1987	25	0	2022	15%	$ 22,500.00	$ -	$ 22,500	$ 22,500
N/A		B1F	Yield Test & Quality Testing		1987	10	0	2022	17%	$ 25,500.00	$ -	$ 25,500	$ 25,500
	Subtotal - Well #2	**B1F**			**1987**	50	**15**	**2037**	**100%**	**$ 150,000**		**$ 150,000**	**$ 150,000**
Asset ID	**WELL #3**	**Asset Code**	**Components**		**Construction Year**	**General Life Expectancy**	**Estimated Remaining Life**	**Replacement Year**	**% of TERV**	**Unit Cost**	**Maintenance Cost**	**Asset Replacement Cost**	**Current Total Cost**
N/A	**WELL #3**	B1F	Deactivate Well		2011	50	39	2061	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Casting and Surface Seal		2011	25	14	2036	20%	$ 30,000.00	$ -	$ 30,000	$ 30,000
N/A		B1F	Drill Well		2011	50	39	2061	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Electrical		2011	25	14	2036	16%	$ 24,000.00	$ -	$ 24,000	$ 24,000
N/A		B1F	Pump		2011	25	14	2036	15%	$ 22,500.00	$ -	$ 22,500	$ 22,500
N/A		B1F	Yield Test & Quality Testing		2011	10	0	2022	17%	$ 25,500.00	$ -	$ 25,500	$ 25,500
	Subtotal - Well #3	**B1F**			**2011**	50	**39**		**100%**	**$ 150,000**		**$ 150,000**	**$ 150,000**
	Water Wells											**$ 450,000**	**$ 450,000**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Volume (m3)**		**Construction Year**	**General Life Expectancy**	**Estimated Remaining Life**	**Replacement Year**	**% of TERV**	**Unit Cost**	**Maintenance Cost**	**Asset Replacement Cost**	**Current Total Cost**
N/A	**Concrete Reservoir #1**	B1E	712		2003	80	61	2083	29%	$ 1,000.00	$ -	$ 712,000	$ 712,000
N/A	**Concrete Reservoir #2**	B1E	533		1976	80	34	2056	21%	$ 1,000.00	$ -	$ 533,000	$ 533,000
N/A	**Concrete Reservoir #3**	B1E	533		1981	80	39	2061	21%	$ 1,000.00	$ -	$ 533,000	$ 533,000
N/A	**Concrete Clear Well**	B1E	107		2003	80	61	2083	4%	$ 1,000.00	$ -	$ 107,000	$ 107,000
N/A	**Electrical**	B1E	1		2003	25	6	2028	6%	$ 150,000.00	$ -	$ 150,000	$ 150,000
N/A	**Controls & Instrumentation**	B1E	1		2003	15	0	2022	3%	$ 75,000.00	$ -	$ 75,000	$ 75,000
N/A	**Pipe works**	B1E	1		2003	40	21	2043	2%	$ 50,000.00	$ -	$ 50,000	$ 50,000
N/A	**Decommissioning**	B1E	1		2003	80	61	2083	2%	$ 50,000.00	$ -	$ 50,000	$ 50,000
N/A	**Building**	B1E	1		2003	50	31	2053	8%	$ 200,000.00	$ -	$ 200,000	$ 200,000
N/A	**Pump 1, 2, 3**	B1E	3		2003	25	6	2028	3%	$ 25,000.00	$ -	$ 75,000	$ 75,000
	Subtotal - Water Reservoir	**B1E**				80			**100%**			**$ 2,485,000**	**$ 2,485,000**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Volume (m3)**		**Construction Year**	**General Life Expectancy**	**Estimated Remaining Life**	**Replacement Year**	**% of TERV**	**Unit Cost**	**Maintenance Cost**	**Asset Replacement Cost**	**Current Total Cost**
N/A	**Chlorination injection System**	B1D	1		2003	15	0	2022	10%	$ 30,000.00	$ -	$ 30,000	$ 30,000
N/A	**Controls & Instrumentation**	B1D	1		2003	10	0	2022	10%	$ 30,000.00	$ -	$ 30,000	$ 30,000
N/A	**Decommissioning**	B1D	1		2003	50	31	2053	16%	$ 50,000.00	$ -	$ 50,000	$ 50,000
N/A	**Building**	B1D	1		2003	50	31	2053	65%	$ 200,000.00	$ -	$ 200,000	$ 200,000
	Subtotal - Water Treatment Plant	**B1D**				50			**100%**	**$ 310,000**		**$ 310,000**	**$ 310,000**

A	B	C	D	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
Asset ID	**WELL #1**	**Asset Code**	**Comp**											
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ 30,000	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ 24,000	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ 22,500	$ -	$ -	$ 22,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Q	$ 25,500	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ 102,000**	**$ -**	**$ -**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**											
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ 22,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Q	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #2	**B1F**		**$ 102,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**											
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Q	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #3	**B1F**		**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Water Wells			**$ 229,500**	**$ -**	**$ -**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Vol**											
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ 150,000	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1E		$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pump 1, 2, 3**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ 75,000	$ -	$ -	$ -	$ -
	Subtotal - Water Reservoir	**B1E**		**$ 75,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 225,000**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Vol**											
N/A	**Chlorination injection System**	B1D		$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Treatment Plant	**B1D**		**$ 60,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

A	B	C	D	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
Asset ID	**WELL #1**	**Asset Code**	**Comp**												
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**												
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ 22,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ 25,500	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #2	**B1F**		**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**												
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ 22,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,500
	Subtotal - Well #3	**B1F**		**$ 25,500**	**$ -**	**$ -**	**$ 76,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**
	Water Wells			**$ 51,000**	**$ -**	**$ -**	**$ 102,000**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Volu**												
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1E		$ -	$ -	$ -	$ -	$ -	$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 50,000	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pump 1, 2, 3**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Reservoir	**B1E**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 75,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 50,000**	**$ -**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Volu**												
N/A	**Chlorination injection System**	B1D		$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Treatment Plant	**B1D**		**$ 30,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,000**

A	B	C	D	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**
Asset ID	**WELL #1**	**Asset Code**	**Comp**												
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ 22,500	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ 76,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**												
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #2	**B1F**		**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**												
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,500	$ -
	Subtotal - Well #3	**B1F**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**
	Water Wells			**$ -**	**$ -**	**$ 25,500**	**$ 25,500**	**$ -**	**$ -**	**$ 76,500**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Volu**												
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 533,000
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 150,000	$ -	$ -
N/A	**Controls & Instrumentation**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 75,000	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200,000	$ -	$ -	$ -
N/A	**Pump 1, 2, 3**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 75,000	$ -	$ -
	Subtotal - Water Reservoir	**B1E**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 200,000**	**$ 300,000**	**$ -**	**$ 533,000**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Volu**												
N/A	**Chlorination injection System**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 50,000	$ -	$ -	$ -
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200,000	$ -	$ -	$ -
	Subtotal - Water Treatment Plant	**B1D**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 250,000**	**$ 30,000**	**$ 30,000**	**$ -**

A	B	C	D	BI											
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2057**	**2058**	**2059**	**2060**	**2061**	**2062**	**2063**	**2064**	**2065**	**2066**	**2067**	**2068**
Asset ID	**WELL #1**	**Asset Code**	**Comp**												
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**												
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ 22,500	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #2	**B1F**		**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ 76,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**												
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ 22,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #3	**B1F**		**$ -**	**$ -**	**$ -**	**$ -**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Water Wells			**$ -**	**$ -**	**$ 25,500**	**$ 25,500**	**$ -**	**$ 150,000**	**$ -**	**$ 76,500**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Volu**												
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ 533,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pump 1, 2, 3**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Reservoir	**B1E**		**$ -**	**$ -**	**$ -**	**$ -**	**$ 533,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Volu**												
N/A	**Chlorination injection System**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Treatment Plant	**B1D**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,000**	**$ -**	**$ -**

A	B	C	D												
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2069**	**2070**	**2071**	**2072**	**2073**	**2074**	**2075**	**2076**	**2077**	**2078**	**2079**	**2080**
Asset ID	**WELL #1**	**Asset Code**	**Comp**												
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 22,500	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**												
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #2	**B1F**		**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**												
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #3	**B1F**		**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Water Wells			**$ 25,500**	**$ 25,500**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Volu**												
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 150,000
N/A	**Controls & Instrumentation**	B1E		$ -	$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pump 1, 2, 3**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 75,000
	Subtotal - Water Reservoir	**B1E**		**$ -**	**$ 75,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 225,000**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Volu**												
N/A	**Chlorination injection System**	B1D		$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Treatment Plant	**B1D**		**$ -**	**$ 30,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,000**	**$ -**	**$ -**	**$ -**

A	B	C	D												
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2081**	**2082**	**2083**	**2084**	**2085**	**2086**	**2087**	**2088**	**2089**	**2090**	**2091**	**2092**
Asset ID	**WELL #1**	**Asset Code**	**Comp**												
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ -	$ -	$ -	25,500	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**												
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	24,000	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	30,000	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	24,000	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	24,000	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	22,500	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	25,500	$ -	$ -	$ -	$ -	$ -	$ -	25,500	$ -	$ -	$ -	$ -
	Subtotal - Well #2	**B1F**		**25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**150,000**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**												
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	30,000	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	24,000	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	22,500	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #3	**B1F**		**$ -**	**$ -**	**25,500**	**$ -**	**$ -**	**$ -**	**76,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Water Wells			**$ 25,500**	**$ -**	**25,500**	**$ -**	**$ -**	**$ -**	**102,000**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Vol**												
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	712,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	107,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	75,000	$ -	$ -	$ -	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	50,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	50,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pump 1, 2, 3**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Reservoir	**B1E**		**$ -**	**$ -**	**869,000**	**$ 50,000**	**$ -**	**$ -**	**75,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Vol**												
N/A	**Chlorination injection System**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	30,000	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	30,000	$ -	$ -	$ -
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Treatment Plant	**B1D**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**30,000**	**$ -**	**30,000**	**$ -**	**$ -**	**$ -**

A	B	C	D											
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2093**	**2094**	**2095**	**2096**	**2097**	**2098**	**2099**	**2100**	**2101**	**2102**	**2103**	**2104**
Asset ID	**WELL #1**	**Asset Code**	**Comp**												
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,000	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 22,500	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ 76,500**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**												
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #2	**B1F**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**												
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #3	**B1F**		**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
	Water Wells			**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ 25,500**	**$ -**	**$ -**	**$ 76,500**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Volu**												
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 75,000	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200,000
N/A	**Pump 1, 2, 3**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Reservoir	**B1E**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 75,000**	**$ -**	**$ 200,000**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Volu**												
N/A	**Chlorination injection System**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 50,000
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200,000
	Subtotal - Water Treatment Plant	**B1D**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,000**	**$ -**	**$ 30,000**	**$ -**	**$ 250,000**

A	B	C	D											
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2105**	**2106**	**2107**	**2108**	**2109**	**2110**	**2111**	**2112**	**2113**	**2114**	**2115**	**2116**
Asset ID	**WELL #1**	**Asset Code**	**Comp**												
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Q	$ -	$ -	$ -	$ -	25,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**												
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	30,000	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	24,000	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	22,500	$ -	$ -
N/A		B1F	Yield Test & Q	$ -	$ -	$ -	$ -	$ -	25,500	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Well #2	**B1F**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ 76,500**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**												
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -	24,000	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -	30,000	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	24,000	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	24,000	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	22,500	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Q	$ 25,500	$ -	$ -	$ -	$ -	$ -	$ -	25,500	$ -	$ -	$ -	$ -
	Subtotal - Well #3	**B1F**		**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**
	Water Wells			**$ 25,500**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ 25,500**	**$ -**	**$ 150,000**	**$ -**	**$ 76,500**	**$ -**	**$ -**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Vol**												
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ 150,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pump 1, 2, 3**	B1E		$ -	$ 75,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Reservoir	**B1E**		**$ -**	**$ 225,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Vol**												
N/A	**Chlorination injection System**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Treatment Plant	**B1D**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 30,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

A	B	C	D								
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2117**	**2118**	**2119**	**2120**	**2121**	**2122**	**2123**
Asset ID	**WELL #1**	**Asset Code**	**Comp**							
N/A	**WELL #1**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ 25,500	$ -	$ -	$ -
	Subtotal - Well #1	**B1F**		**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**	**$ -**
Asset ID	**WELL #2**	**Asset Code**	**Comp**							
N/A	**WELL #2**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ -	$ 25,500	$ -	$ -
	Subtotal - Well #2	**B1F**		**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ -**	**$ -**
Asset ID	**WELL #3**	**Asset Code**	**Comp**							
N/A	**WELL #3**	B1F	Deactivate W	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Casting and S	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Drill Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Electrical	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A		B1F	Yield Test & Qu	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,500
	Subtotal - Well #3	**B1F**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 25,500**
	Water Wells			**$ -**	**$ -**	**$ -**	**$ 25,500**	**$ 25,500**	**$ -**	**$ 25,500**
Asset ID	**Water Reservoir**	**Asset Code**	**Total Vol**							
N/A	**Concrete Reservoir #1**	B1E	7	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #2**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Reservoir #3**	B1E	5	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Concrete Clear Well**	B1E	1	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Electrical**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1E		$ -	$ 75,000	$ -	$ -	$ -	$ -	$ -
N/A	**Pipe works**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Decommissioning**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Pump 1, 2, 3**	B1E		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Reservoir	**B1E**		**$ -**	**$ 75,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Asset ID	**Water Treatment Plant**	**Asset Code**	**Total Vol**							
N/A	**Chlorination injection System**	B1D		$ -	$ 30,000	$ -	$ -	$ -	$ -	$ -
N/A	**Controls & Instrumentation**	B1D		$ -	$ -	$ -	$ -	$ 30,000	$ -	$ -
N/A	**Decommissioning**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**Building**	B1D		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal - Water Treatment Plant	**B1D**		**$ -**	**$ 30,000**	**$ -**	**$ -**	**$ 30,000**	**$ -**	**$ -**

A	B	C	D		E	F	G	H	I	L	M	N	O
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**Diameter (mm)**	**Construction Year**	**General Life Expectancy**	**Estimated Remaining Life**	**Replacement Year**	**Length (m)**	**Unit Cost**	**Historical Cost**	**Asset Replacement Cost**	**Current Total Cost**
Hydrant#	**Hydrants**	**Asset Code**	**Model**	**Life Status**	**Construction Year**	**General Life Expectancy**	**Estimated Remaining Life**	**Replacement Year**	**Length (m)**	**Unit Cost**	**Historical Cost**	**Asset Replacement Cost**	**Current Total Cost**
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	N/A	N/A	2014	75	67	2089	N/A	$ -	$ -	$ 10,000	$ 10,000
N/A	**56 Ave (48A St - East End)**	B1B	N/A	N/A	2014	75	67	2089	N/A	$ -	$ -	$ 10,000	$ 10,000
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	N/A	N/A	2014	75	67	2089	N/A	$ -	$ -	$ 10,000	$ 10,000
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	N/A	N/A	2014	75	67	2089	N/A	$ -	$ -	$ 10,000	$ 10,000
H126	**55 Ave (50 St - 49 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H125	**54 Ave (49 St - 47A St)**	B1B	N/A	Active	2001	75	54	2076	N/A	$ -	$ -	$ 10,000	$ 10,000
H100	**52 Ave (49 St - 48 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H101	**49 Ave (46 St - 45 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H102	**49 Ave (47 St - 46 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H103	**49 Ave (48 St - 47 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H104	**49 Ave (49 St - 48 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H105	**49 Ave (50 St - 49 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H106	**50 Ave (49 St - 48 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H107	**50 Ave (48 St - 47 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H108	**50 Ave (47 St - 46 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H109	**50 Ave North (47 St - 46 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H110	**52 Ave (47 St - 46 St)**	B1B	N/A	Active	1975	75	28	2050	N/A	$ -	$ -	$ 10,000	$ 10,000
H111	**52 Ave (47 St - 46 St)**	B1B	N/A	Active	1975	75	28	2050	N/A	$ -	$ -	$ 10,000	$ 10,000
H112	**52 Ave (49 St - 48 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H113	**49 Ave (Railway Ave - 50 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H114	**48 Ave (47 St - 46 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H115	**48 Ave (47 St - 46 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H116	**48 Ave (48 St - 47 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H117	**48 Ave (50 St - 49 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H118	**48 Ave (49 St - 48 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H119	**52 Ave (50 St - 49 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H120	**51 Ave (48 St - 47 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H121	**51 Ave (47 St - 46 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H122	**51 Ave (49 St - 48 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H123	**51 Ave (50 St - 49 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H124	**51 Ave (West End - 50 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H127	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	N/A	Active	1993	75	46	2068	N/A	$ -	$ -	$ 10,000	$ 10,000
H128	**47A St (55 Ave - 54 Ave)**	B1B	N/A	Active	2001	75	54	2076	N/A	$ -	$ -	$ 10,000	$ 10,000
H130	**55 Ave (47A St - 46 St)**	B1B	N/A	Active	1993	75	46	2068	N/A	$ -	$ -	$ 10,000	$ 10,000
H131	**55 Ave (47A St - 46 St)**	B1B	N/A	Active	1993	75	46	2068	N/A	$ -	$ -	$ 10,000	$ 10,000
H132	**49 St (55 Ave - 54 Ave)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H133	**50 Ave North Side (50 St - 50 st Lane)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H135	**North-West (H 135 - 50 Ave)**	B1B	N/A	Active	1994	75	47	2069	N/A	$ -	$ -	$ 10,000	$ 10,000
H136	**53 Ave (50 St - 49 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H137	**53 Ave (50 St - 49 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H129	**50 Ave North Side (West End - 50 St)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
H134	**50 Ave South (50 St - Railway Ave)**	B1B	N/A	Active	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
N/A	**49 Ave (45 St - East End)**	B1B	N/A	N/A	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
N/A	**50 Ave (45 St - East End)**	B1B	N/A	N/A	1973	75	26	2048	N/A	$ -	$ -	$ 10,000	$ 10,000
0044	Subtotal - Hydrants											$ 440,000	$ 440,000
												Grand Total	

CURRENT ASSESSMENT YEAR	2022
Total capital replacement and major maintenance over next 100 Years	**$ 19,439,300**
Total Current Water Systems Replacement Value	**$ 15,613,800**

A	B	C	D	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
Hydrant#	**Hydrants**	**Asset Code**	**Model**											
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H126	**55 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	**54 Ave (49 St - 47A St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H100	**52 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	**49 Ave (46 St - 45 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	**49 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	**49 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	**49 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	**49 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	**50 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	**50 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	**50 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	**50 Ave North (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	**52 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H111	**52 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H112	**52 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	**49 Ave (Railway Ave - 50 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	**48 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	**48 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	**48 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	**48 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	**48 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	**52 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	**51 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	**51 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	**51 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	**51 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	**51 Ave (West End - 50 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H128	**47A St (55 Ave - 54 Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H130	**55 Ave (47A St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H131	**55 Ave (47A St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H132	**49 St (55 Ave - 54 Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	**50 Ave North Side (50 St - 50 st Lane)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	**North-West (H 135 - 50 Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	**53 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	**53 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	**50 Ave North Side (West End - 50 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	**50 Ave South (50 St - Railway Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**49 Ave (45 St - East End)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**50 Ave (45 St - East End)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	**Subtotal - Hydrants**			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
				$ 364,500	$ -	$ -	$ 150,000	$ -	$ -	$ 225,000	$ -	$ -	$ -	$ -

A	B	C	D	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
Hydrant#	**Hydrants**	**Asset Code**	**Model**												
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H126	**55 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	**54 Ave (49 St - 47A St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H100	**52 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	**49 Ave (46 St - 45 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	**49 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	**49 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	**49 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	**49 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	**50 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	**50 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	**50 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	**50 Ave North (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	**52 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H111	**52 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H112	**52 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	**49 Ave (Railway Ave - 50 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	**48 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	**48 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	**48 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	**48 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	**48 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	**52 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	**51 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	**51 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	**51 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	**51 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	**51 Ave (West End - 50 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H128	**47A St (55 Ave - 54 Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H130	**55 Ave (47A St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H131	**55 Ave (47A St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H132	**49 St (55 Ave - 54 Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	**50 Ave North Side (50 St - 50 st Lane)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	**North-West (H 135 - 50 Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	**53 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	**53 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	**50 Ave North Side (West End - 50 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	**50 Ave South (50 St - Railway Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**49 Ave (45 St - East End)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**50 Ave (45 St - East End)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	Subtotal - Hydrants			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
				$ 81,000	$ -	$ -	$ 102,000	$ 150,000	$ 105,000	$ -	$ -	$ -	$ -	$ 50,000	$ 55,500

A	B	C	D	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**
Hydrant#	**Hydrants**	**Asset Code**	**Model**												
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H126	**55 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	**54 Ave (49 St - 47A St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H100	**52 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	**49 Ave (46 St - 45 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	**49 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	**49 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	**49 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	**49 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	**50 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	**50 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	**50 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	**50 Ave North (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	**52 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -
H111	**52 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -
H112	**52 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	**49 Ave (Railway Ave - 50 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	**48 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	**48 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	**48 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	**48 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	**48 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	**52 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	**51 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	**51 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	**51 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	**51 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	**51 Ave (West End - 50 St)**	B1B	N/A	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H128	**47A St (55 Ave - 54 Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H130	**55 Ave (47A St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H131	**55 Ave (47A St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H132	**49 St (55 Ave - 54 Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	**50 Ave North Side (50 St - 50 st Lane)**	B1B	N/A	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	**North-West (H 135 - 50 Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	**53 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	**53 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	**50 Ave North Side (West End - 50 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	**50 Ave South (50 St - Railway Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**49 Ave (45 St - East End)**	B1B	N/A	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**50 Ave (45 St - East End)**	B1B	N/A	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	**Subtotal - Hydrants**			$ -	$ -	$ -	$ 320,000	$ -	$ 20,000	$ -	$ -	$ -	$ -	$ -	$ -
				$ -	$ -	$ 25,500	$ 7,942,700	$ -	$ 209,800	$ 76,500	$ 412,100	$ 450,000	$ 566,600	$ 55,500	$ 533,000

A	B	C	D	BI											
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2057**	**2058**	**2059**	**2060**	**2061**	**2062**	**2063**	**2064**	**2065**	**2066**	**2067**	**2068**
Hydrant#	**Hydrants**	**Asset Code**	**Model**												
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H126	**55 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	**54 Ave (49 St - 47A St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H100	**52 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	**49 Ave (46 St - 45 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	**49 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	**49 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	**49 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	**49 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	**50 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	**50 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	**50 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	**50 Ave North (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	**52 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H111	**52 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H112	**52 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	**49 Ave (Railway Ave - 50 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	**48 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	**48 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	**48 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	**48 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	**48 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	**52 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	**51 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	**51 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	**51 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	**51 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	**51 Ave (West End - 50 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000
H128	**47A St (55 Ave - 54 Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H130	**55 Ave (47A St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000
H131	**55 Ave (47A St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000
H132	**49 St (55 Ave - 54 Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	**50 Ave North Side (50 St - 50 st Lane)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	**North-West (H 135 - 50 Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	**53 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	**53 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	**50 Ave North Side (West End - 50 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	**50 Ave South (50 St - Railway Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**49 Ave (45 St - East End)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**50 Ave (45 St - East End)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	**Subtotal - Hydrants**			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000
				$ -	$ 25,500	$ 25,500	$ -	$ 683,000	$ -	$ 76,500	$ -	$ -	$ 30,000	$ -	$ 30,000

A	B	C	D											
Asset ID	Asset Name (Between)	Asset Code	Material	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080
Hydrant#	Hydrants	Asset Code	Model												
N/A	48A St (55 Ave - Cul-de-sac)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	56 Ave (48A St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H126	55 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	54 Ave (49 St - 47A St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -
H100	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	49 Ave (46 St - 45 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	49 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	49 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	49 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	49 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	50 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	50 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	50 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	50 Ave North (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H111	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H112	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	49 Ave (Railway Ave - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	48 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	48 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	48 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	52 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	51 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	51 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	51 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	51 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	51 Ave (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	46A St (53 Ave Close - 53 Ave Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H128	47A St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -
H130	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H131	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H132	49 St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	50 Ave North Side (50 St - 50 st Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	North-West (H 135 - 50 Ave)	B1B	N/A	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	50 Ave North Side (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	50 Ave South (50 St - Railway Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	49 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	50 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	Subtotal - Hydrants			$ 10,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,000	$ -	$ -	$ -	$ -
				$ 35,500	$ 130,500	$ -	$ 25,500	$ 1,012,700	$ -	$ -	$ 170,000	$ 30,000	$ -	$ -	$ 225,000

A	B	C	D											
Asset ID	Asset Name (Between)	Asset Code	Material	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092
Hydrant#	Hydrants	Asset Code	Model												
N/A	48A St (55 Ave - Cul-de-sac)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	10,000	$ -	$ -	$ -
N/A	56 Ave (48A St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	10,000	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	10,000	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	10,000	$ -	$ -	$ -
H126	55 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H125	54 Ave (49 St - 47A St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H100	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H101	49 Ave (46 St - 45 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H102	49 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H103	49 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H104	49 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H105	49 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H106	50 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H107	50 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H108	50 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H109	50 Ave North (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H110	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H111	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H112	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H113	49 Ave (Railway Ave - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H114	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H115	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H116	48 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H117	48 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H118	48 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H119	52 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H120	51 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H121	51 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H122	51 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H123	51 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H124	51 Ave (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H127	46A St (53 Ave Close - 53 Ave Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H128	47A St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H130	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H131	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H132	49 St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H133	50 Ave North Side (50 St - 50 st Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H135	North-West (H 135 - 50 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H136	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H137	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H129	50 Ave North Side (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
H134	50 Ave South (50 St - Railway Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
N/A	49 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
N/A	50 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-	$ -	$ -	$ -
0044	Subtotal - Hydrants			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	40,000	$ -	$ -	$ -
				$ 25,500	$ -	$ 894,500	$ 50,000	$ -	$ 105,000	$ 102,000	$ 180,000	$ 40,000	$ -	$ -	$ -

A	B	C	D											
Asset ID	Asset Name (Between)	Asset Code	Material	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104
Hydrant#	Hydrants	Asset Code	Model												
N/A	48A St (55 Ave - Cul-de-sac)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	56 Ave (48A St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H126	55 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	54 Ave (49 St - 47A St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H100	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	49 Ave (46 St - 45 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	49 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	49 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	49 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	49 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	50 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	50 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	50 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	50 Ave North (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H111	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H112	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	49 Ave (Railway Ave - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	48 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	48 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	48 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	52 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	51 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	51 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	51 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	51 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	51 Ave (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	46A St (53 Ave Close - 53 Ave Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H128	47A St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H130	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H131	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H132	49 St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	50 Ave North Side (50 St - 50 st Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	North-West (H 135 - 50 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	50 Ave North Side (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	50 Ave South (50 St - Railway Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	49 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	50 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	Subtotal - Hydrants			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
				$ 1,176,500	$ 406,400	$ -	$ -	$ -	$ 25,500	$ 55,500	$ -	$ 529,100	$ 181,500	$ -	$ 450,000

A	B	C	D										
Asset ID	**Asset Name (Between)**	**Asset Code**	**Material**	**2105**	**2106**	**2107**	**2108**	**2109**	**2110**	**2111**	**2112**	**2113**	**2114**	**2115**	**2116**
Hydrant#	**Hydrants**	**Asset Code**	**Model**												
N/A	**48A St (55 Ave - Cul-de-sac)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**56 Ave (48A St - East End)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**55 Ave (49 St Existing - East Limit)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H126	**55 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	**54 Ave (49 St - 47A St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H100	**52 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	**49 Ave (46 St - 45 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	**49 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	**49 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	**49 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	**49 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	**50 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	**50 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	**50 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	**50 Ave North (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	**52 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H111	**52 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H112	**52 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	**49 Ave (Railway Ave - 50 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	**48 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	**48 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	**48 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	**48 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	**48 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	**52 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	**51 Ave (48 St - 47 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	**51 Ave (47 St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	**51 Ave (49 St - 48 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	**51 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	**51 Ave (West End - 50 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	**46A St (53 Ave Close - 53 Ave Lane)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H128	**47A St (55 Ave - 54 Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H130	**55 Ave (47A St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H131	**55 Ave (47A St - 46 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H132	**49 St (55 Ave - 54 Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	**50 Ave North Side (50 St - 50 st Lane)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	**North-West (H 135 - 50 Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	**53 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	**53 Ave (50 St - 49 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	**50 Ave North Side (West End - 50 St)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	**50 Ave South (50 St - Railway Ave)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**49 Ave (45 St - East End)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	**50 Ave (45 St - East End)**	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	**Subtotal - Hydrants**			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
				$ 25,500	$ 225,000	$ -	$ -	$ 25,500	$ 55,500	$ -	$ 150,000	$ -	$ 470,400	$ -	$ -

A	B	C	D							
Asset ID	Asset Name (Between)	Asset Code	Material	2117	2118	2119	2120	2121	2122	2123
Hydrant#	Hydrants	Asset Code	Model							
N/A	48A St (55 Ave - Cul-de-sac)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	56 Ave (48A St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	55 Ave (49 St Existing - East Limit)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H126	55 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H125	54 Ave (49 St - 47A St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H100	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H101	49 Ave (46 St - 45 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H102	49 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H103	49 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H104	49 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H105	49 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H106	50 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H107	50 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H108	50 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H109	50 Ave North (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H110	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H111	52 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H112	52 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H113	49 Ave (Railway Ave - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H114	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H115	48 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H116	48 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H117	48 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H118	48 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H119	52 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H120	51 Ave (48 St - 47 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H121	51 Ave (47 St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H122	51 Ave (49 St - 48 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H123	51 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H124	51 Ave (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H127	46A St (53 Ave Close - 53 Ave Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H128	47A St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H130	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H131	55 Ave (47A St - 46 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H132	49 St (55 Ave - 54 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H133	50 Ave North Side (50 St - 50 st Lane)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H135	North-West (H 135 - 50 Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H136	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H137	53 Ave (50 St - 49 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H129	50 Ave North Side (West End - 50 St)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
H134	50 Ave South (50 St - Railway Ave)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	49 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
N/A	50 Ave (45 St - East End)	B1B	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -
0044	Subtotal - Hydrants			$ -	$ -	$ -	$ -	$ -	$ -	$ -
				$ -	$ 105,000	$ -	$ 25,500	$ 55,500	$ -	$ 25,500

02

Appendix 2

Risk Register

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Source Risks	4	General Risks	Contamination of raw water with sewage	Microbiological contamination	Resulting from sewage input to the source from private septic tanks or sewer outfalls.	No sanitary sewer line within 50'+ of a well.	1
Source Risks	5	General Risks	Chemical contamination of raw water as a result of proximity to transport corridor.	Chemical contamination Hydrocarbons	Due to chemical contamination in the source due to spillage from transport corridor (e.g., road or rail tanker) adjacent to source and no containment.	May result from accidental spillage or a crash.	1
Source Risks	10	General Risks	Contamination of water with nutrients, due to agricultural activity.	Algal bloom Reduced oxygen level in water.	Due to contamination in run-off from areas of agricultural activity.	There are a number of different sources: silage pits, sludge lagoons, concentrations of stock.	2
Source Risks	11	General Risks	Contamination of water with pathogens due to agricultural activity.	Microbiological contamination	Due to contamination in run-off from areas of agricultural activity.	Wells are all within Town limits.	4
Source Risks	12	General Risks	Contamination of raw water with pesticides	Pesticides	Resulting from pesticides spraying in the watershed due to poor practice.	Toxicity testing for Town water every 5 years.	8
Source Risks	13	General Risks	Deterioration of raw water as a result of flooding or heavy rain	Turbidity	Due to inability to close intake when raw water has deteriorated.	Lack of storage may also influence ability to close intake; high sediment loading resulting from high level of rainfall or spring melt.	1
Source Risks	22	General Risks	Insufficient raw water quantity	Loss of supply	Resulting from restriction in diversion license due to changing legislation or growth in demand.	Changes in environmental legislation may lead to tighter diversion limits.	1
Source Risks	24	General Risks	Insufficient water available for abstraction	Low pressure Loss of supply	As a result of drought.	The Town`s recent draw down recovery for the wells shows that in 20+ years the wells have shown no change in abstraction ability.	1

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Source Risks	25	Well Risks	Contamination of well during construction	Microbiological contamination Metals Drilling fluids	Cross-contamination by drilling equipment or residual substances used in drilling e.g., Barium released from drilling mud.	Drillers should operate according to the Water (Ministerial) Regulations	8
Source Risks	30	Well Risks	Deterioration of water quality	Iron manganese	Due to over-production from aquifer, mixing with other zones or biofouling	Well should not be pumped higher than recommended rate, downhole camera inspection, shock chlorination, rehabilitation	1
Source Risks	31	Well Risks	Deterioration of water quality	Fluoride Arsenic Uranium Other heavy metals	Due to naturally occurring minerals	Yearly water analysis done by contracted lab.	1
Source Risks	32	Well Risks	Contamination of aquifer	Hydrocarbons Pesticides Nutrients	Activities within recharge zone or vulnerable aquifer	More likely with shallow wells, unconfined aquifers or where rock is badly faulted or fractured.	1
Source Risks	36	Pumps & Mains Risks	Reduced resource availability due to break/leak on raw water mains	Loss of supply	Resulting from raw water main breaks/leaks as a result of poor mains condition.	Lack of maintenance may lead to more frequent interruptions to supply.	1
Source Risks	38	Pumps & Mains Risks	Failure of pumps at Pump Station	Loss of supply	Resulting from pumps failure due to insufficient/no standby generation if electricity supply fails.	Wells/pumps serviced every 5 years.	1
Source Risks	39	Pumps & Mains Risks	Loss of power to pumps as a result of electrical fault.	Loss of capacity	Loss of power to pumps due to control panel fault resulting from insufficient maintenance.	Essential components need to be maintained regularly.	1

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Treatment Risks	57	General Risks	Contamination caused by unauthorized human access	Unknown contamination	Unauthorized human access may lead to contamination.	WTWs should be kept secure at all times when not attended.	4
Treatment Risks	58	General Risks	Contamination of treated water as a result of dosing with incorrect or inferior quality chemicals	Chemical contamination	Contamination due to use of incorrect or inferior quality or contaminated chemicals due to lack of control check on deliveries.	Might be due to change in supplier or inadequate specification for chemicals used.	1
Treatment Risks	62	General Risks	Inability to meet demand caused by power failure	Loss of Supply	Resulting from power failure and to failure of stand by generator change over or no standby generator.	Many small WTW will have no standby power generation	4
Treatment Risks	66	General Risks	Inadequate treatment caused by incorrect dosing of chemicals	Chemical contamination	Due to incorrect dosing due to faulty equipment.	Manual dosing by hand can also be done.	4
Treatment Risks	67	General Risks	Loss of supply as a result of flooding	Loss of Supply	Due to plant shut down as a result of flooded areas of plant.	Flooding is not a great concern as in other Towns as we are on the side of the Blindman Valley, and our pumphouse is at the top of the hill.	1
Treatment Risks	68	General Risks	Contamination due to incorrectly plumbed drains	Chemical contamination Microbiological contamination	Due to inappropriate cross-connection of drainage into treated water areas.		1
Treatment Risks	69	General Risks	Contamination or loss of supply due to lack of knowledge of infrastructure location	Chemical contamination Microbiological contamination	Due to lack of adequate 'as-built' drawings	Bentley spent 3 years and contracted Stantec to map/GPS water system.	1

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Treatment Risks	70	Process Control Risks	Loss of supply resulting from failure of telemetry.	Loss of supply	Due to plant shut down not being notified due to failure of telemetry	The only system on a SCADA set-up is well number 3.	8
Treatment Risks	113	Disinfection Risks	Contamination of treated water as a result of accumulation of deposits in contact tank	Turbidity	As a result of carryover of sediment from contact tank.	n/a	1
Treatment Risks	114	Disinfection Risks	Contamination of treated water as a result high bromate content of sodium hypochlorite	Chemical contamination	As a result of sodium hypochlorite not meeting supply specification	n/a	0
Treatment Risks	115	Disinfection Risks	Contamination of treated water as a result of excessive formation of disinfection by-products	Chemical contamination	As a result of excessive disinfectant dose and high levels of trace organics	Due to formation of disinfection by-products	4
Treatment Risks	119	Disinfection Risks	Failure of disinfection as a result of failure of sodium hypochlorite delivery system.	Microbiological contamination	Due to failure of disinfection due to failure of delivery system.	Back-up chlorinator in stock.	2
Treatment Risks	122	Disinfection Risks	Inadequate treatment as a result of inability to meet disinfection requirements due to high chlorine demand	Microbiological contamination	Due to inability to add sufficient chlorine due to high flow or high chlorine demand	Colorimeter sample taken 7 days a week.	2
Treatment Risks	123	Disinfection Risks	Inadequate treatment as a result of insufficient contact time	Microbiological contamination	Due to insufficient contact time to kill bacteria as a result of poor contact tank design or operating beyond design flow	In 2002 the Town added a new pumphouse & reservoir to the existing. At that time, the two older reservoirs were retrofitted with diffusion piping on both the inlets and the outlets of reservoir 1 & 2.	1

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Treatment Risks	124	Disinfection Risks	Inadequate treatment as a result of incorrect chlorine dose	Microbiological contamination	Due to lack of residual controller and rapid change in chlorine demand, due to insufficient manual intervention.	The system is not a PLC setup, dosage does not control the CL2 injector. The injector is controlled by the start/stop process of the wells, dosage is manually adjusted.	2
Treatment Risks	130	Treated Storage Risks	Contamination of treated water as a result of vandalism	Microbiological contamination Chemical contamination	As a results of actions by intruders	As a minimum lids and air vents must be secure. Security fence is in place.	2
Treatment Risks	131	Treated Storage Risks	Contamination of treated water caused by rainwater ingress	Microbiological contamination Chemical contamination	As a result of lack of structural integrity of reservoir due to lack of inspection or maintenance	Reservoirs should be cleaned and inspected on a regular basis.	1
Treatment Risks	132	Treated Storage Risks	Deterioration in water quality due to disturbance of sediment in reservoir	Microbiological contamination Turbidity Aluminum Iron	Due to disturbance of sediment on floor of reservoir due to low level and lack of maintenance.	Reservoirs should be cleaned and inspected on a regular basis.	1
Treatment Risks	133	Treated Storage Risks	Loss of supply due to inadequate storage	Loss of supply	Due to insufficient storage to cope with fluctuations in demand.	Reservoirs may be undersized due to financial considerations.	4
Treatment Risks	134	Facility Specific Risks	VFD pressure switch waterline freezing		Emergency back-up pump running, ceiling exhaust fan removing excess heat and fumes from building causing a drop in temperature.	Only an issue during extended running of the back-up pump when the temperature outside the building is negative zero Celsius.	2
Network Risks	145	General Risks	Buildup of deposits in network as a result of inadequate flushing frequency and/or velocity	Discoloration Taste & Odor	Resulting from inadequate flushing of problem areas.	Areas where sediment is known to build up benefit from a regular flushing programmed.	1

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Network Risks	146	General Risks	Broken main as a result of PRV failure	Loss of supply Chemical contamination Microbiological contamination	As a result of a broken main due to high pressure due to failure of PRV.	PRVs should be serviced as required.	2
Network Risks	147	General Risks	Loss of supply and/or deterioration of water quality as a result of broken main	Loss of supply Chemical contamination Microbiological contamination	As a result of a broken main due to failure of pipe integrity.	May be as a result of many different circumstances	8
Network Risks	148	General Risks	Contamination of water as a result of cross-connection	Chemical contamination Microbiological contamination	As a result of connection with private supply due to customer having dual connection, no air gap	If customer has dual supply the pipework must be safely set up.	8
Network Risks	150	General Risks	Contamination of water in supply as a result of the use of non-approved or inappropriate materials in the network	Chemical contamination	As a result of contact with inappropriate materials.	Any materials used in the network should comply with the appropriate standard.	1
Network Risks	151	General Risks	Contamination of water due to failure to follow proper hygiene practice when carrying out repairs.	Chemical contamination Microbiological contamination	Due to ingress of material from excavation and/or poor disinfection procedures.	Operators should be fully trained in proper hygiene practice	1

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Network Risks	152	General Risks	Contamination of water in supply as a result of connection to mothballed or abandoned assets.	Chemical contamination microbiological contamination	As a result of connection to a main containing stagnant water.	All abandoned assets should be cut and capped rather than just valved off.	1
Network Risks	153	General Risks	Deterioration of water quality as a result of incorrect sequence of valve operations	Chemical contamination Microbiological contamination	As a result of flow reversal due to the need for rezoning due to the incorrect sequence of valve operations	Valves should be maintained, and good records kept of their location and mode of operation, i.e., RH or LH thread.	1
Network Risks	155	General Risks	Deterioration of water quality due to change in normal flow pattern.	Chemical contamination	Due to mains sediment being disturbed by increased flow.	Iron, manganese, aluminum sediment	1
Network Risks	156	General Risks	Failure to meet demand as a result of failure to mend break in a reasonable time	Loss of supply	As a result of poor access.	or as a result of contractor timing.	16
Network Risks	157	General Risks	Failure to meet demand due to inability to operate valves as required.	Loss of supply	Inability to operate valves when needed due to the lack of maintenance	If valves are not operated and checked, they may become difficult to operate.	8
Network Risks	158	General Risks	Failure to meet demand as a result of insufficient valves to isolate area affected by break	Loss of supply	Due to high loss of water due lack of isolation of mains	All valves exercised yearly with documentation; problem valves are replaced immediately.	8
Network Risks	159	General Risks	Failure to meet demand as a results of operating system above design pressure	Loss of supply	Due to broken mains as a result of operating mains above design pressure.	Pressure is maintained at 43 psi by VFD motors controlled by the main VFD computer.	2
Network Risks	161	General Risks	Failure to meet demand as a result of breaks caused by age-related deterioration.	Loss of supply	Resulting from break due to deterioration of pipe condition due to age.	Planned maintenance/renewal should prevent this problem occurring.	4
Network Risks	163	General Risks	Loss of pressure as a result of leakage	Loss of supply Loss of pressure	Due to leakage due to inadequate leakage control/poor maintenance.	If system leakage rates are high, a leakage control programme is recommended.	4

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Network Risks	164	General Risks	Loss of supply or pressure or contamination of water in supply as a result of fire service tackling a fire	Loss of supply Loss of pressure Microbiological contamination Chemical contamination	Due to high flow rate or changes in flow patterns, or loss of disinfectant contact time or disturbance of sediment		2
Network Risks	165	General Risks	Loss of supply or contamination of water in supply as a result of excessive demand in a short period of time	Loss of supply Chemical contamination	Lack of communication from external stakeholders, e.g., builders, fire service	Fire service should be aware that if they are testing hydrants, they should notify water operators.	2
Network Risks	166	General Risks	Loss of supply as a result of failure of critical main due to lack of alternative supply	Loss of supply	Due to break on a critical main such that no alternative means of supply is available		0
Network Risks	167	General Risks	Microbiological growth in distribution system as a result of oversized mains	Microbiological contamination	Buildup of biofilms in the network due to excessive dwell time as a result of incorrectly sized mains.	Biofilms are more likely to develop in areas of low flow where disinfectant residual may be very low.	1
Network Risks	168	General Risks	Microbiological growth in distribution system as a result of low disinfectant residual	Microbiological contamination	Buildup of biofilms in the network due to inadequate residual disinfectant.		1
Network Risks	169	General Risks	Migration of hydrocarbons and other contaminants through pipework as a result of inappropriate materials used in areas of contaminated land	Chemical contamination	Resulting from use of inappropriate materials in areas of contaminated land	All polyethylene pipes are susceptible to migration of hydrocarbons through the pipe wall.	1
Network Risks	170	General Risks	Health risk to vulnerable customer due to inability to operate dialysis machine or similar	Loss of supply	Due to loss of supply	Long term care facility.	2

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Network Risks	171	General Risks	Pressure problems caused by PRV failure	Loss of pressure High pressure	Pressure fluctuation due to the failure of PRV.	PRVs should be serviced as required.	2
Network Risks	172	Pumping Station Risks	Failure of pump control panel resulting in power loss	Loss of supply	As a results of inability to operate pumps due to lack of power	2 vfd's installed now	1
Network Risks	174	Pumping Station Risks	Oil contaminating water due to use of unacceptable pump lubricants.	Hydrocarbon contamination	Due to non-food grade leaking into wet well.	All pumps should use food grade lubricants.	1
Network Risks	175	Pumping Station Risks	Failure of pumps due to power surge at pump station.	Loss of supply	Due to pump failure due to electrical fault caused by power surge.	If electrical supply is subject to power fluctuations surge protection should be used.	4
Network Risks	176	Pumping Station Risks	Failure of pumps due to flooding	Loss of supply	Due to inadequate drainage or poor siting of pump house		1
Network Risks	178	Pumping Station Risks	Failure to meet demand due to insufficient pumping capacity	Loss of supply Low pressure	Due to pumps operating below rating or inadequately sized.	Pump capacity should be matched to expected demand.	
Network Risks	179	Reservoir Risks	Contamination of water as a result of sediment deposition in reservoir	Chemical contamination Microbiological contamination.	Due to buildup of sediment in bottom of reservoir as a result of inadequate maintenance.	Reservoirs should be emptied, inspected, and cleaned on a regular basis.	1
Network Risks	180	Reservoir Risks	Contamination of water due to ingress of water as a result of inadequate structure or maintenance.	Chemical contamination Microbiological contamination.	Due to lack of structural integrity of reservoir as a result of poor design or maintenance	Common weaknesses are lids, ducting holes for cables, poorly sealed roof joints, air vents.	32

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Network Risks	181	Reservoir Risks	Contamination of water due to ingress of organic debris as a result of inadequate structure or maintenance.	Chemical contamination Microbiological contamination.	Due to lack of structural integrity of reservoir as a result of poor design or maintenance	More of a problem on earth covered reservoirs where plant roots may penetrate structure.	1
Network Risks	182	Reservoir Risks	Contamination of water due to poor hygiene practice when doing planned inspection or maintenance.	Chemical contamination Microbiological contamination.	Due to poor hygiene practice or use of non-approved chemicals.	Operators should be fully trained in proper hygiene practice	1
Network Risks	183	Reservoir Risks	Contamination of water due to reservoir running empty due to faulty or no telemetry.	Chemical contamination	Due to disturbance of sediment on floor of reservoir due to low level as a result of lack of alarm.	Regular cleaning will help keep sediment build up to a minimum.	1
Network Risks	184	Reservoir Risks	Contamination of water as a result of vandalism	Chemical contamination Microbiological contamination.	Due to vandalism, due to lack of secure fencing and structure.	Degree of security required will depend on location.	1
Network Risks	185	Reservoir Risks	Contamination of water due to access to reservoir by stock or wildlife	Microbiological contamination	Due to lack of secure fencing round reservoir.	Degree of security required will depend on location.	1
Network Risks	186	Reservoir Risks	Contamination of water due vermin accessing reservoir	Microbiological contamination	Due to lack of mesh or flap valve on overflow from reservoir.		2
Network Risks	187	Reservoir Risks	Deterioration of water quality due to thermal stratification	Chemical contamination Microbiological contamination.	Due to hot weather and reservoir being above ground and inadequately insulated and poor circulation		1

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Customer Risks	202	General Risks	Lead in water in supply picked up from the service pipes and other fittings	Chemical contamination	Resulting from dissolved lead from internal pipework or lead solder.		4
Customer Risks	203	General Risks	Contamination of water in supply due to reduction in disinfectant levels resulting from long residence time of water in pipe caused by incorrectly sized/long service pipe.	Chemical contamination Microbiological contamination	Disinfectant decay due to water remaining in pipe for extended period	Service may have been installed without any consideration of residence time in service pipe	32
Customer Risks	205	General Risks	Contamination of water in supply or pressure problems as a result of leaking service pipe	Microbiological contamination Loss of pressure	Due to ingress due to leaking service pipe	If a leaking service pipe is sitting in water and there is a sudden drop in pressure, water may drawn in.	1
Customer Risks	206	General Risks	Contamination of water in supply as a result of unsatisfactory or damaged new connections caused by inadequate installation procedures.	Chemical contamination Microbiological contamination	As a result of unsatisfactory or damaged new connections due to bad installation and failure to follow a suitable code of practice	If the pipe ends are not protected during installation, then swarf or dirt may enter the pipe and cause contamination.	32
Customer Risks	207	General Risks	Hydrocarbon contamination as a result of laying service in contaminated land.	Chemical contamination.	As a result of fuel/oil leak in soil through which polyethylene pipe is laid.	Hydrocarbons can migrate through polyethylene pipe.	2
Customer Risks	208	General Risks	Contamination of water in supply as a result of connection to unwholesome water due to lack of knowledge/supervision.	Chemical contamination Microbiological contamination	Due to incorrect connection to unwholesome water due to lack of knowledge/supervision	Use of non-certified tradesmen may lead to unsatisfactory conditions	8
Customer Risks	209	General Risks	Contamination of water in supply as a result of use of inappropriate material in the presence of contaminated land	Chemical contamination.	Due to the use of inappropriate material due to the presence of contaminated land.	If laying pipes in contaminated land, contractors must install appropriate pipe materials.	2
Customer Risks	210	General Risks	Contamination of water in supply as a result of back siphonage caused by the lack of appropriate backflow protection	Chemical contamination Microbiological contamination	Resulting from back siphonage due to the lack of appropriate backflow protection, i.e. non-return valve.	Industrial/Commercial Premises are generally High Risk; Household Customers are generally Low Risk, although preparing pesticides for garden use potentially high.	8

Risk Type	Risk #	Risk Category	Risk Description	Hazard	Cause of Potential Failure	Comment	Risk Score
Customer Risks	211	General Risks	Pressure problems as a result of leakage caused by corrosion	Loss of pressure	Resulting from leakage due to corrosion of copper pipework due to lack of protection or maintenance	Pitting corrosion or electrolytic or galvanic corrosion may cause leakage or failure.	4
Customer Risks	212	General Risks	Increased water temperature as a result of inadequate design of storage facility or internal pipework	Chemical contamination Microbiological contamination	Warm water due to on site storage above required temp due to inappropriate storage facility/lack of insulation	Elevated temperature may encourage microbial growth.	1
Customer Risks	213	General Risks	Contamination of water in supply as a result of loss of chlorine residual caused by increased temperature	Microbiological contamination	Resulting from loss of chlorine residual due to increase in temperature.	May give rise to microbial growth.	2
Customer Risks	214	General Risks	Contamination of water in supply as a result of inappropriate plumbing	Chemical contamination Microbiological contamination	Resulting from use of inappropriate plumbing materials	Plumbers should only use materials approved for potable water.	2
Customer Risks	217	General Risks	Contamination of water in supply as a result of installation of inappropriate appliances	Microbiological contamination	Resulting from installation of inappropriate water filters and cartridges.	Any point of use device should be approved for potable water use.	2
Customer Risks	218	General Risks	Contamination of water in supply caused by bacterial growth in appliances as a result of inadequate maintenance	Microbiological contamination	Due to growth of bacteria in water filters or cartridges resulting from inadequate maintenance.	If cartridges or filters are not changed regularly internal bacterial growth may occur.	8
Customer Risks	221	General Risks	Contamination of water in supply as a result of inadequate hygiene practice at bulk water filling stations	Chemical contamination Microbiological contamination	As a result of ingress of contamination due to failure to operate proper hygiene practice.	If hoses are not properly managed and kept from coming into contact with the ground or other undesirable material contamination can easily occur.	16

Town of Bentley

Wastewater, Storm and Transportation Asset Management Plans

Council Presentation

Stantec

Town of Bentley Council Presentation

Agenda

- Introduction and Background
- Current State of Asset Classes
- Level of Service
- Risk
- Long Term Financial Plan
- Next Steps – Improvement Plan

Town of Bentley Council Presentation

Introduction and Background

Introduction

Dallas Kuzek B.Sc., A.L.S., P.Eng.
Asset Management Specialist

Moe Kamruzzaman B.Sc., E.I.T.
Asset Management Data Specialist

What is Asset Management

- Helps you confidently **evaluate and communicate** the linkage between service, cost, and managing risk.
- Provides you with a **defensible way of prioritizing** projects and resources.
- Aligns the organization to **focus on the things that matter most**.
- Helps you **decide** what infrastructure needs to be replaced or renewed, and how many years you can get out of it.
- Helps you figure out **how much you should be saving** for future infrastructure renewal.
- Helps you **demonstrate accountability** to residents and businesses in the community.

Benefits of Asset Management

Align the Organization with things that matter the most

- Service delivery from the perspective of the people receiving the service
- Alignment with other Community Plans

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Defensibly prioritize projects and allocate resources

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- Systematic approach to resources
- Evidence-based decisions

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Systematically manage risks to service delivery

- Understand risks to sustainable service delivery
- Identify funding needs and prioritization

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Demonstrate Accountability to your Community

- Be able to articulate why decisions are being made

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- Systematic approach to resources
- Evidence-based decisions

Systematically manage risks to service delivery

- Understand risks to sustainable service delivery
- Identify funding needs and prioritization

Demonstrate Accountability to your Community

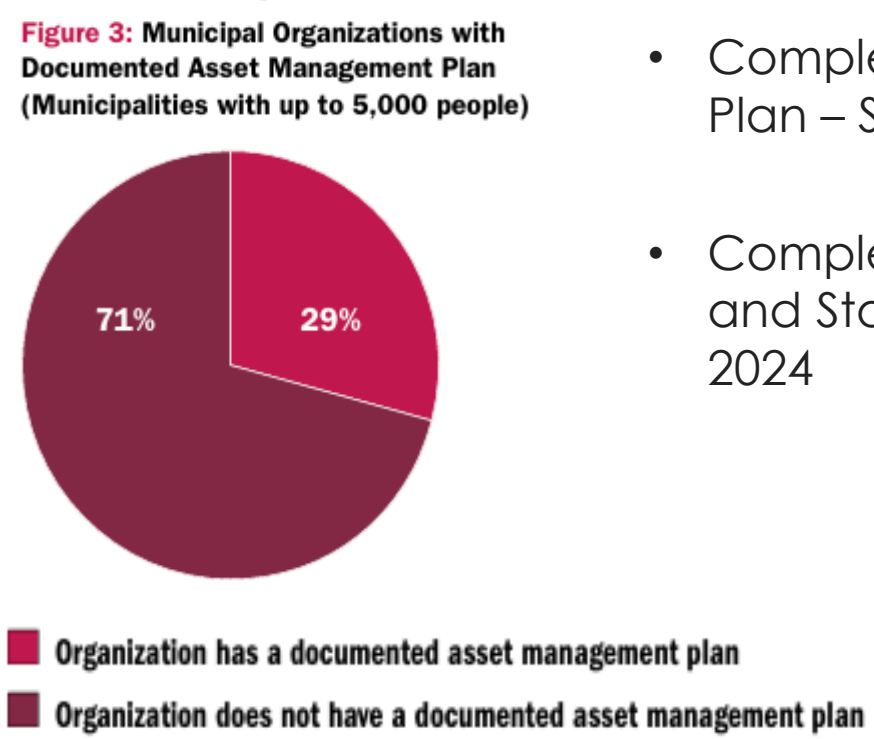
- Be able to articulate why decisions are being made

Position your Community to take advantage of Grants and meet funding requirements

- Asset management is increasingly being required to access grants

How Do We Compare?

The Town of Bentley is ahead of the curve!

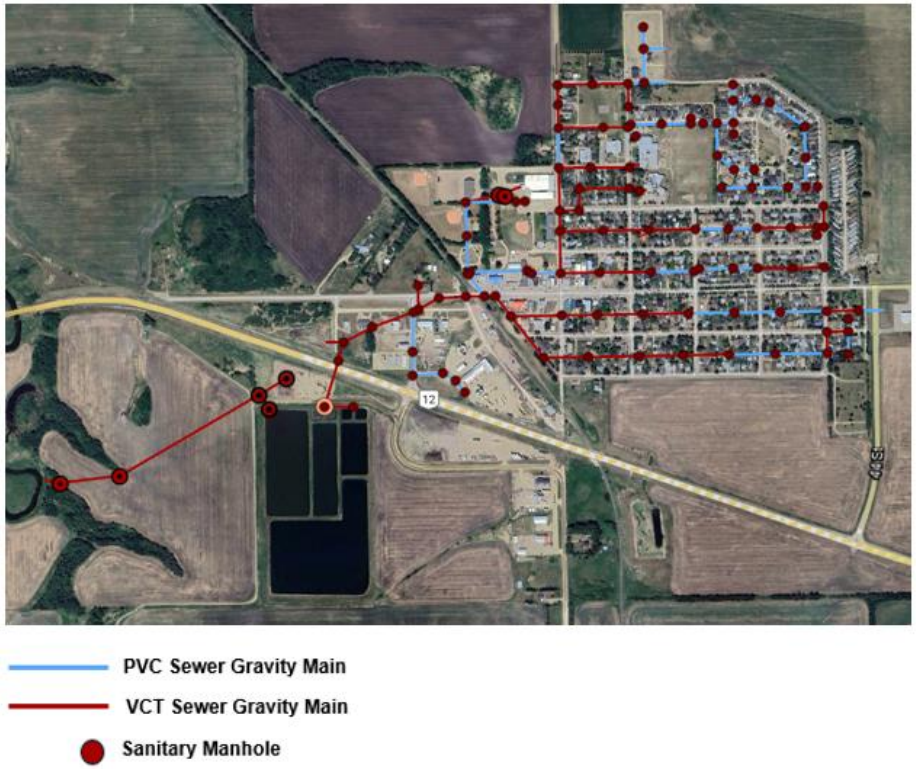


- Completed Water Asset Management Plan – Summer 2022
- Completing Transportation, Wastewater and Storm Asset Management Plans – 2024

Town of Bentley Council Presentation

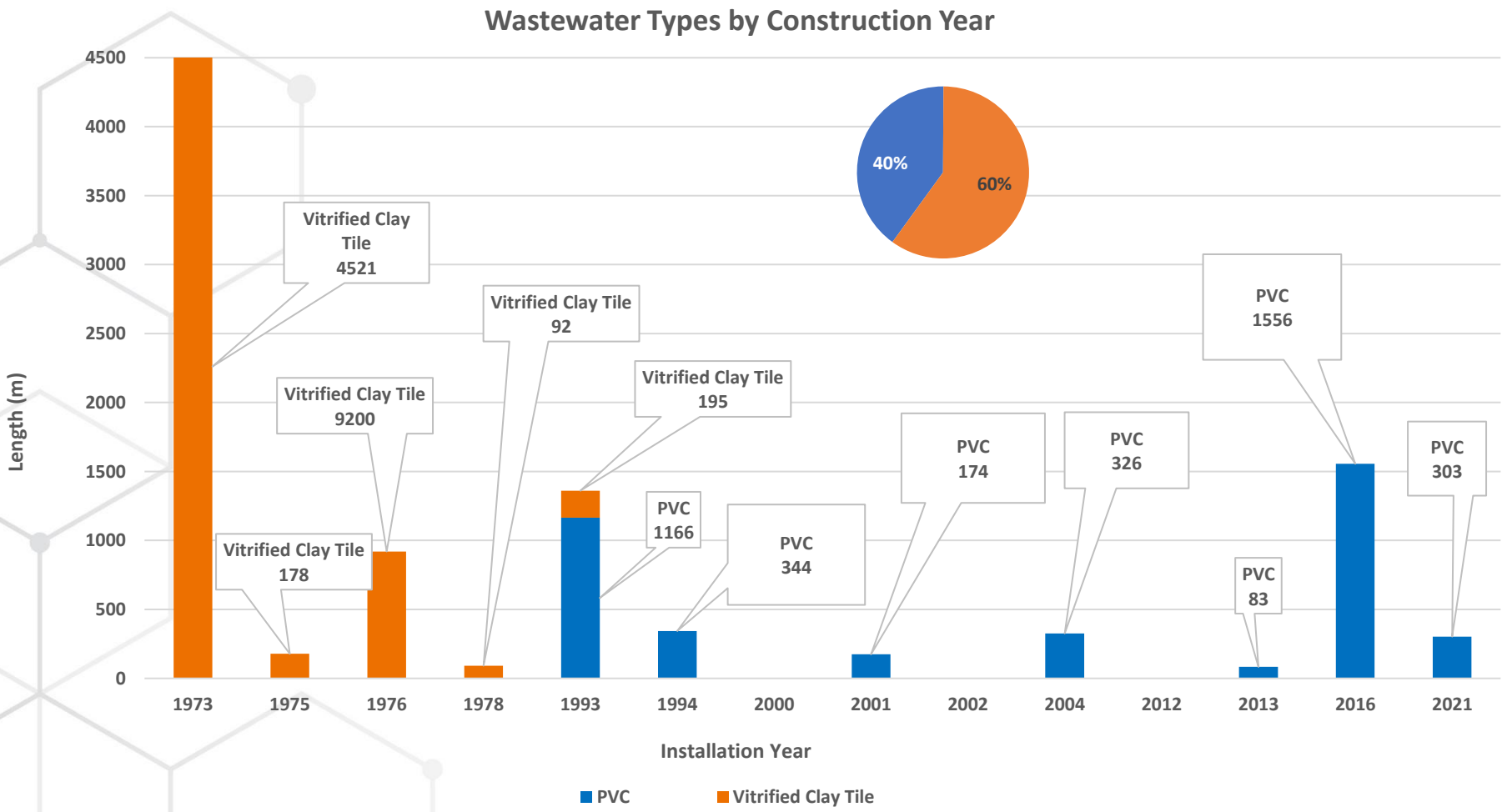
Current State of Asset Classes

Wastewater Asset Class



Asset Type	Asset Quantity	Typical Life	Current Replacement Value
Sanitary Gravity PVC Mains	3952 m	100 years	$2,232,000
Sanitary Gravity VCT Mains	5907 m	60 years	$3,346,000
Sanitary Manhole	115 each	50 Years	$2,440,000
Gate Valves	4 Each	15 Years	$100,000
Sanitary Lagoon	4 Anaerobic Cells 2 Facultative Cells 2 Storage Ponds	50 years	$5,775,000
Total Cost			**$13,893,000**

Wastewater Asset Class

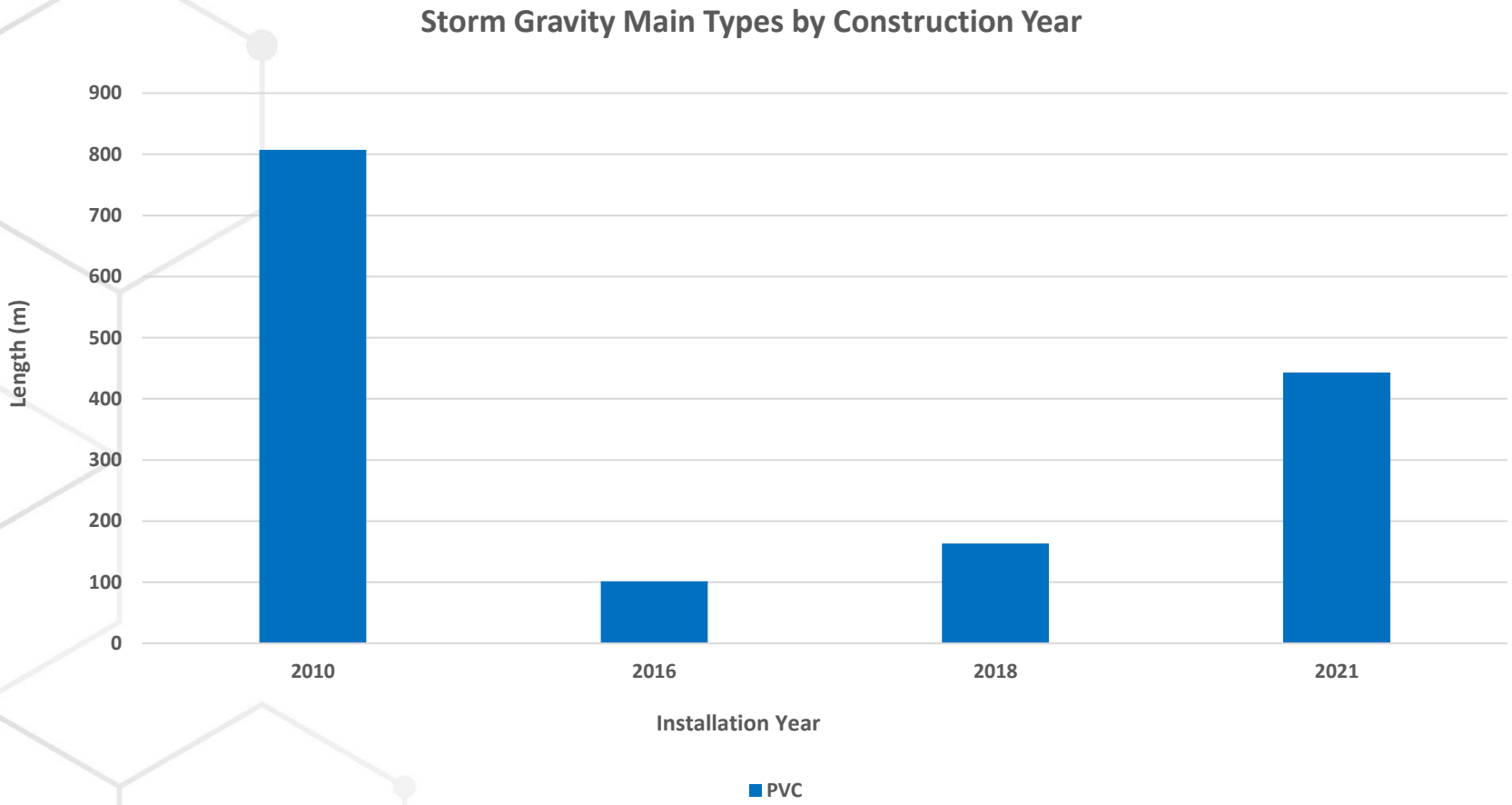


Storm Asset Class

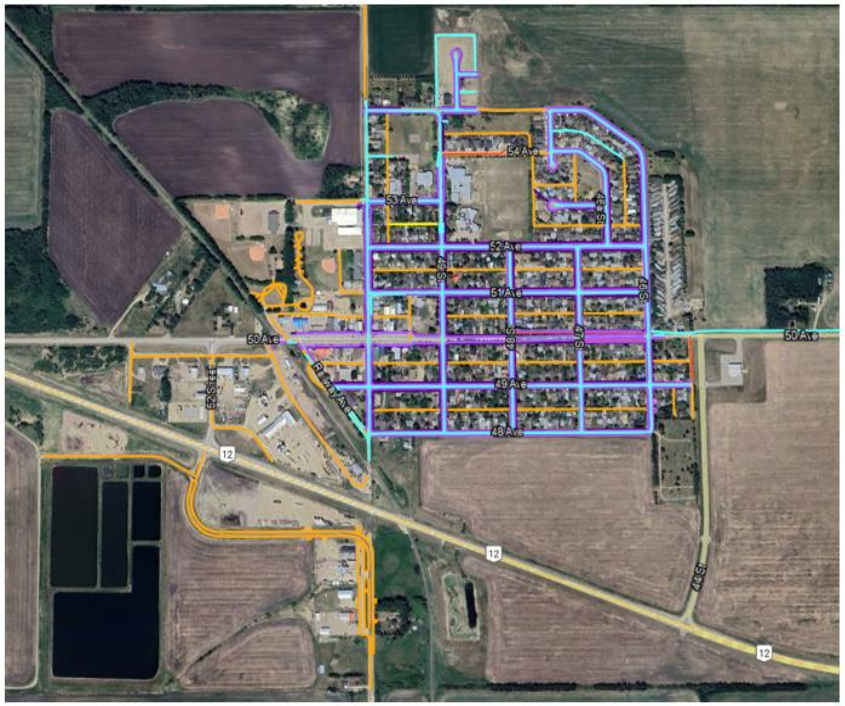
Storm Gravity Main (PVC)
Storm Services (PVC)
Storm Channel
Storm Catch Basin
Storm Manhole
Storm Outfall
Storm Culvert

Asset Type	Asset Quantity (*BULK*)	Typical Life	Current Replacement Value
Storm Gravity Main	1651 m	100 years	$955,000
Storm Channel	2543 m	80 Years	$292,000
Storm Service	407 m	80 Years	$243,000
Storm Catch Basin	53 ea.	50 Years	$562,000
Storm Outfall	9 ea.	80 years	$6,000
Storm Manhole	41 ea.	60 Years	$652,000
Storm Catch Basin Lead	115 m	80 Years	$55,000
Storm Culvert	260 m	30 Years	$152,000
Total Cost			**$2,919,000**

Storm Asset Class



Transportation Asset Class



Asset Type	Asset Quantity	Typical Life	Current Replacement Value
Asphalt Pavements	5697 Sq. m	20 Years	$1,333,000
Gravel Parking Area	11921 Sq. m	15 Years	$489,000
Sidewalks (Concrete)	14411 Sq. m	50 Years	$2,969,000
Curbs & Gutters	16173 m	30 Years	$3,445,000
Asphalt Roadways	68968 Sq. m	25 Years	$16,138,000
Gravel & Alley Roadways	59906 Sq. m	15 Years	$2,456,000
Total Cost			**$26,830,000**

Town of Bentley Council Presentation

Level of Service

Levels of Service and Risk

- What are public's expectations?
- What do regulators require?
- Do we need it?
- Are we receiving complaints?

- Where are we vulnerable?
- What are possible consequences?

- What condition is it in?
- What do we need to do and when?
- How much money do we need?
- Can we afford it?

- Tangible Capital Assets
- What do we own?
- Where is it?
- What is it worth?

Levels Of Service – Making Choices

Cadillac? vs. Volkswagen?

What is your objective?

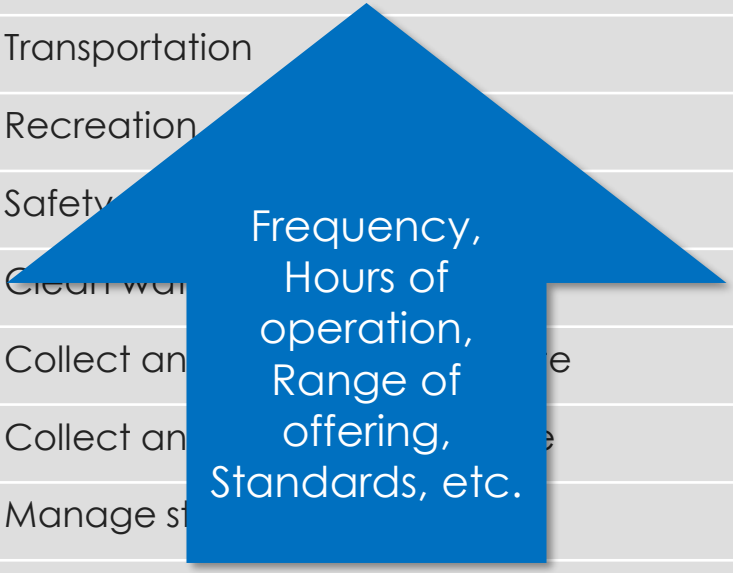
- Provide acceptable level of service?
- While minimizing costs?

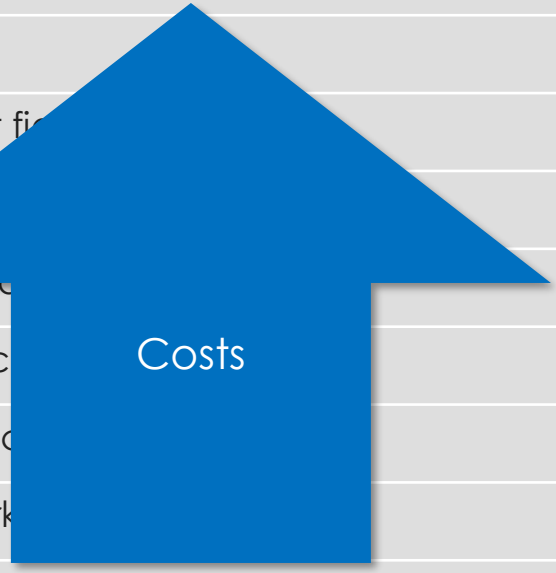
How do you measure Level of Service?

- Reliability?
- Comfort?
- Serviceability?
- Image/Status?

Levels of Service

Service delivered	Physical Asset
Shelter	Houses
Transportation	Roads and transit
Recreation	Skating rinks, sport fi
Safety	Firehalls, trucks
Clean wat	Treatment plant, c
Collect an e	Treatment plant, c
Collect an e	Landfill, recycling c
Manage st	Collection network
Manage air quality /GHG	Trees

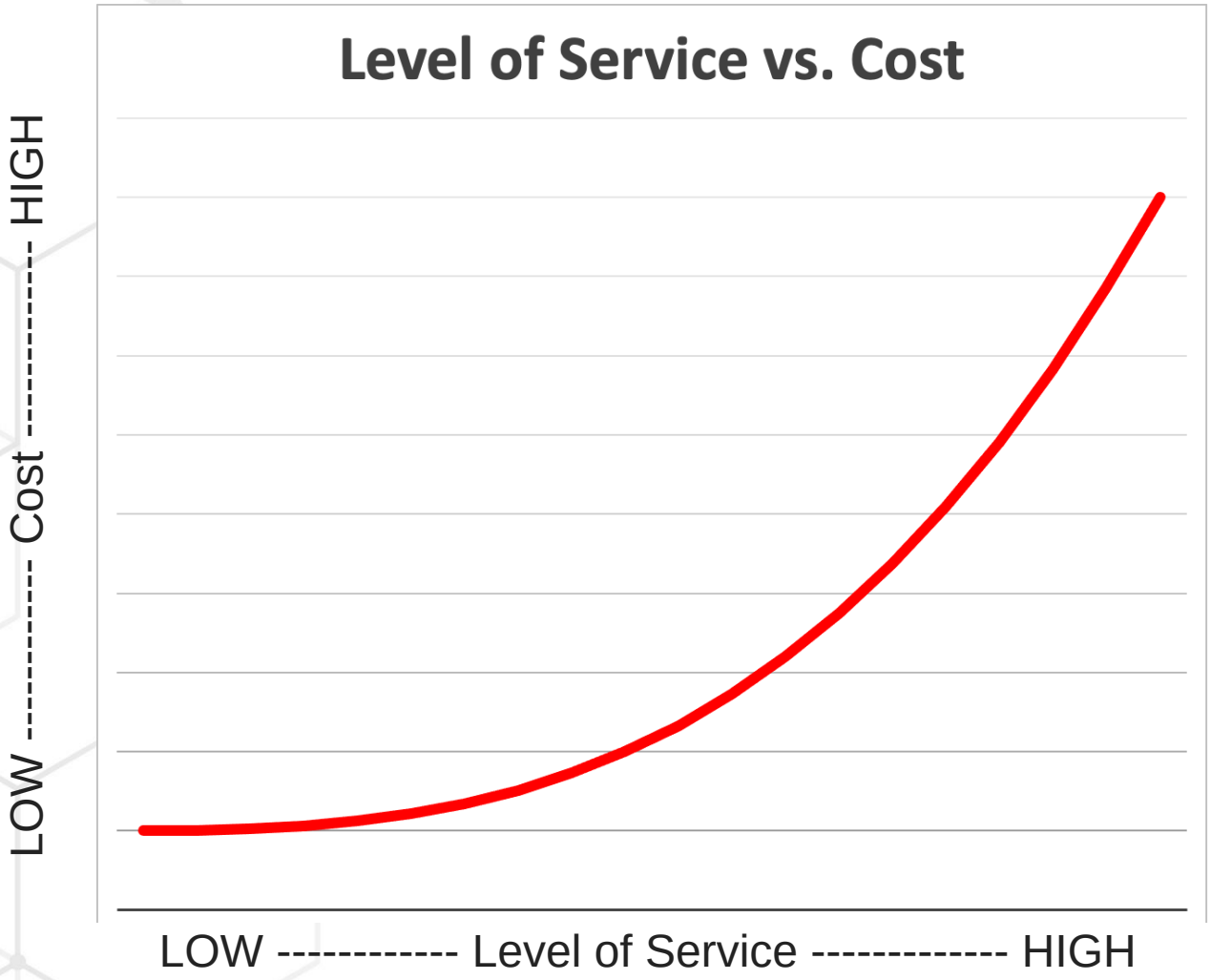




Higher Level of Service = Increased Cost

Cost

** The "Dan Smalls" Service-Cost Curve*



Wastewater Asset Class

LOS ID	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
1	Capacity/ Availability	Wastewater Accessible to Customer	% of properties connected to the municipal wastewater system	50% of properties connected to the municipal wastewater system	50% - 90%	> 90%	100% of properties connected to the municipal wastewater system	Level 3 >90% tied-in 8-12 properties are not connected business southwest. 2 residents are not connected
2	Capacity/ Availability	Wastewater Mains Maintained	% of Wastewater sewer flushed	No flushing program	Only known problem areas of Wastewater Main flushed annually	1/3 of Wastewater Main flushed annually	100% of Wastewater Main flushed annually	Entire system flush yearly and monitored the mains
3	Function	Continued service	# of sanitary backups per year per 10 km	> 0.5	0.5 - 0.3	0.3 - 0.2	< 0.2	1 backup per 2 years per 10 km
4	Regulatory	Wastewater system capacity	# of events per year where sewer flow in the municipal wastewater system exceeds system capacity	1 Event yearly	1 Event 2 - 5 years	1 Event every 5 - 10 years	No events occurred last 10 years	Regular flow is 1/3 of the capacity based on population
5	Regulatory	Effluent Regulation	# of effluent violations per year due to wastewater discharge	Discharge issues yearly	1 violation every 2 - 5 years	1 violation every 5 - 10 years	No violation occurred	Take sample pre and post 3 different sample every year before discharge to the river
6	Function	Asset Inventory up to date	percentage of known assets and associated data	No specific mapping or records kept	< 50% of assets with known construction date, materials and locations	50% - 95% of assets with known construction date, materials and location	> 95% of assets with known construction date, materials and locations	GIS map book updated 2024

Storm Asset Class

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
1	Technical	Function	Storm sewer Mains Maintained	% of Storm sewer flushed	No flushing program	Only known problem areas of Storm sewer Main flushed annually	1/3 of Storm sewer Main flushed annually	100% of Stormwater Main flushed yearly	3rd Party flushing service where mains are flushed based on recommendation from contractor
2	Technical	Function	Catch Basins Maintained	% of Catch Basins cleaned of debris	No cleaning program	Catch basin cleaned when backup occurred	Cleaned debris 1x yearly	Cleaned debris 2 x yearly	Catch basins cleaned yearly with additional cleaning where issues arise
3	Technical	Regulatory	Stormwater system capacity	Maximum Storm event Town's stormwater management system is designed to	No design standard	1:25 year storm event	1:100-year storm event	1:500-year storm event	Current system designed to handle 1:100-year storm event with expansion of the NW storm pond with development of the Southeast area
4	Technical	Condition	Stormwater systems condition	% of the stormwater system that is in good or very good condition	< 50%	50% - 75%	75% - 90%	over 90%	Majority of Storm system constructed in 2010 or later. System is in good condition
5	Technical	Condition	Stormwater systems condition	% of the stormwater system that is in poor or very poor condition	>40%	25% - 40%	10% - 25%	<10%	Majority of Storm system constructed in 2010 or later. System is in good condition

Storm Asset Class

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
6	Technical	Function	Asset Inventory up to date	percentage of known assets and associated data	No specific mapping or records kept	< 50% of assets with known construction date, materials and locations	50% - 95% of assets with known construction date, materials and location	> 95% of assets with known construction date, materials and locations	GIS map book updated 2024
7	Technical	Affordability	Stormwater system capital rate investment sustainable	Annual capital reinvestment rate	< 0.5%	0.5% - 1%	1% - 2%	> 2%	Due to age of the system capital reinvestment rate is low
8	Customer	Function	Surface water drainage from normal storm events	Number of customer complaints of surface flooding	> 10 per year	5 - 10 per year	1 - 5 per year	< 1 per year	Minor flooding on sidewalks along 50th Ave
9	Customer	Function	Management of Stormwater Assets	When was the last time that the Stormwater Network AMP was reviewed?	No Stormwater asset management plan	Stormwater asset management plan reviewed/created within last 5 years	Stormwater asset management plan reviewed/created within last 3 years	Stormwater asset management plan reviewed/created within last year	

Transportation Asset Class

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
1	Technical	Function	Average number of hours of pothole, crack fill repair per request	Time required for repair from time of the Request	No fixed schedule	Within a week	Within 48 hours	Within 24 hours	within 48hrs of notice and check every day plus annual crack filling program
2	Technical	Function	Winter Paved Road Management	Annual Frequency of Snow Removal Operations, Including Road Salting and Sanding	No snow removal	High priority roads cleared within 72 hours. All other roads are not prioritized	High priority roads cleared within 48 hours. All other roads cleared within a week	High priority roads cleared within 24 hours. All other roads cleared within 48 hours	Priority 1 - 50ave, 50th, 49th roads within 24hrs, Priority 2 remainder of the residential streets and avenues and parking lots within 24hrs , Priority 3 industrials within 48 hrs. and Priority 4 alleys as needed. Priority 1,2 and 4 full removal
3	Technical	Function	Street Sweeping Management	Annual Frequency of Street Sweeping	No Sweeping	1 x Springtime	2 x Per Year (Springtime & Fall Time)	> 2 x Per Year	Contracted out (This is also completed on an "as needed" basis with sweeper implement for skid steer)
4	Technical	Function	Line Painting Management	Number of Roads Line Painting every 2 years	No Line Painting	> 2 Years Cycle	2 Years Cycle	1 x year	Contracted out (Line painting is done annually, additionally Main Roads has painted lane dividing lines on 50 Ave annually as well)

Transportation Asset Class

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
5	Technical	Function	Parking Maintenance	% of time Adequate Parking available	No public parking	50 % Public Parking Capacity	Parking Capacity > 90%	Parking Capacity > 95%	adequate parking capacity >90%
6	Technical	Capacity/ Availability	Road Inspections	% of road network inspected per year	< 50% of the roads	50% of the Roads	80% of the roads	100% of all the roads	Visual road inspections completed daily
7	Technical	Condition	Road Condition	% of the Road Network that is in good condition	< 10%	10% – 25%	25% - 40%	>40%	
8	Technical	Capacity/ Availability	Sidewalks Inspections	% of sidewalks inspected per year	No Sidewalks Inspection	50% of the Sidewalks inspection	80% of the Sidewalks inspection	100% of all the Sidewalks inspection	Inspection and maintenance were completed over the last three years
9	Technical	Condition	Sidewalks Condition	% of sidewalks Good condition	< 50%	> 50%	> 70%	> 80%	70% - 75%
10	Technical	Capacity/ Availability	Culvert Inspection	Culvert inspection frequency	No inspection program	Less than 1 per year	100% of the culverts inspected yearly	culverts inspected > 1 per year	inspected 1 x per year

Transportation Asset Class

LOS ID	LOS TYPE	Service Characteristic	Service Description	Indicator	1	2	3	4	Comments
11	Technical	Capacity/ Availability	Ditch Inspections	% of Annual ditch inspections	No ditch Inspection program	Less than 1 per year	100% of the ditch inspected yearly	> 1 per year on average, all ditches inspected yearly	inspected 1 x per year, also mowed
12	Technical	Condition	Stormwater Culverts condition	% of the culverts that is in good or very good condition	< 30%	30% - 50%	> 50%	> 75%	above 50% good to very good
13	Technical	Function	Annual Unpaved Road Maintenance	# of times Grade Gravel Roads per year	No grading program	few times per year	Monthly	> Monthly	few times per year, re-gravel 2 x regraded (railway Ave and industrial)
14	Technical	Function	Annual Dust Control	# of times Gravel Roads dust control pre year	No dust control program	minimal dust control in high priority areas only	1 x per year	> Once per year	
15	Customer	Regulatory	When was the last time the Road Network AMP was reviewed?		No Road Network asset management plan	Road Network asset management plan reviewed/created within last 5 years	Road Network asset management plan reviewed/created within last 3 years	Road Network asset management plan reviewed/created within last year	Currently being completed

Town of Bentley Council Presentation

Risk

Levels of Service and Risk

- What are public's expectations?
- What do regulators require?
- Do we need it?
- Are we receiving complaints?

- Where are we vulnerable?
- What are possible consequences?

- What condition is it in?
- What do we need to do and when?
- How much money do we need?
- Can we afford it?

- Tangible Capital Assets
- What do we own?
- Where is it?
- What is it worth?

Risk Tolerance

- Not all Risks can be eliminated
- Some Risks can only be mitigated
- Risk Tolerance means the level of risk a municipality can reasonably handle

Question

- What is an example of a risk you might choose to tolerate?

- What is an example of a risk you would want to mitigate?

Wastewater Asset Class

			Consequences				
Risk Dimensions	People & Staff		Injuries or ailments not requiring medical treatment.	Minor injury or First Aid Treatment Case.	Serious injury causing hospitalisation or multiple medical treatment cases.	Life threatening injury or multiple serious injuries causing hospitalisation.	Death or multiple life threatening injuries.
	Reputation		Internal Review	Scrutiny required by internal committees or internal audit to prevent escalation.	Scrutiny required by clients or third parties etc.	Intense public, political and media scrutiny. E.g. front page headlines, TV, etc.	Legal action or Commission of inquiry or adverse national media.
	Business Processes & Systems		Minor errors in systems or processes requiring corrective action, or minor delay without impact on overall schedule.	Policy procedural rule occasionally not met or services do not fully meet needs.	One or more key accountability requirements not met. Inconvenient but not client welfare threatening.	Strategies not consistent with business objectives. Trends show service is degraded.	Critical system failure, bad policy advice or ongoing non-compliance. Business severely affected.
	Water Utility Function		Wholesale water interruption < 8 hrs	Short term or localised non-compliance, non health related e.g. aesthetic or interruption 8-12 hrs	Widespread aesthetic issues or long term non compliance, not health related or interruption 12-24 hrs	Potential illness or interruption >24 - 48 hrs	Actual illness or potential long term health effects or interruption >48 hrs
	Financial		$5K	$50K	$100K	$250K	$500K
			Insignificant	Minor	Moderate	Severe	Catastrophic
			1	2	4	8	16
Likelihood	Conceivable but extremely small chance of happening in next 4-5 years	1	Most Unlikely	1	2	4	8	16
	Is possible and cannot be ruled out in next 4-5 years.	2	Unlikely	2	4	8	16	32
	As likely as not to happen in next 4-5 years.	4	Medium	4	8	16	32	64
	Would be expected to happen in next 4-5 years but there is a small chance it may not.	8	Probable	8	16	32	64	128
	Would be confident this will happen at least once in next 4-5 years	16	Almost Certain	16	32	64	128	256

Wastewater Asset Class

Risk Type	Risk Description	Cause of Potential Failure	Comment	Current Monitoring	How Risk is Currently Controlled	Risk Score
Network Risks	Service Failure	Blockage in service line	Anecdotal accounts of blockages provided based on staff memory	N/A	Annual flushing and monitoring program	**32**

Wastewater Asset Class

Risk Type	Risk Description	Cause of Potential Failure	Comment	Current Monitoring	How Risk is Currently Controlled	Risk Score
Network Risks	Service Failure	Blockage in service line	Anecdotal accounts of blockages provided based on staff memory	N/A	Annual flushing and monitoring program	**32**

Management Approach

Service Description Indicator	LOS Description	Risk Description	Risk Description	Risk Description
# of sanitary backups per year per 10km	Continued Service	Service Failure-Blockage in service line	Decreased flow due to blockage in main line	Pipe Failure

Storm Asset Class

Risk Type	Risk Description	Cause of Potential Failure	Comment	Current Monitoring	How Risk is Currently Controlled	Risk Score
Network Risks	Localized flooding due to Poor overland drainage.	Poor Overland Drainage	Flooding in NW part of Town, possibly remediated through Dick Damron Drive Project	N/A	N/A	**32**

Storm Asset Class

Risk Type	Risk Description	Cause of Potential Failure	Comment	Current Monitoring	How Risk is Currently Controlled	Risk Score
Network Risks	Localized flooding due to Poor overland drainage.	Poor Overland Drainage	Flooding in NW part of Town, possibly remediated through Dick Damron Drive Project	N/A	N/A	**32**

Management Approach

Service Description Indicator	LOS Description	Risk Description	Risk Description
Maximum Storm event Town's stormwater management system is designed to	1:100-year storm event	Localized Flooding due to poor overland drainage	Systems Capacity for storm events

Transportation Asset Class

Risk Type	Risk Description	Cause of Potential Failure	Comment	Current Monitoring	How Risk is Currently Controlled	Risk Score
Network Risks	Minor Localized Flooding.	Poor drainage		Yearly Ditch inspection	Ditches are inspected and cleaned out as needed	**32**
Network Risks	Missing or damaged road signs	Vandalism or accidents	Possible critical road sign missing	Random visual inspection and customer complaints	Daily visual inspections of roads and signage are conducted	**32**

Transportation Asset Class

Risk Type	Risk Description	Cause of Potential Failure	Comment	Current Monitoring	How Risk is Currently Controlled	Risk Score
Network Risks	Minor Localized Flooding.	Poor drainage		Yearly Ditch inspection	Ditches are inspected and cleaned out as needed	**32**
Network Risks	Missing or damaged road signs	Vandalism or accidents	Possible critical road sign missing	Random visual inspection and customer complaints	Daily visual inspections of roads and signage are conducted	**32**

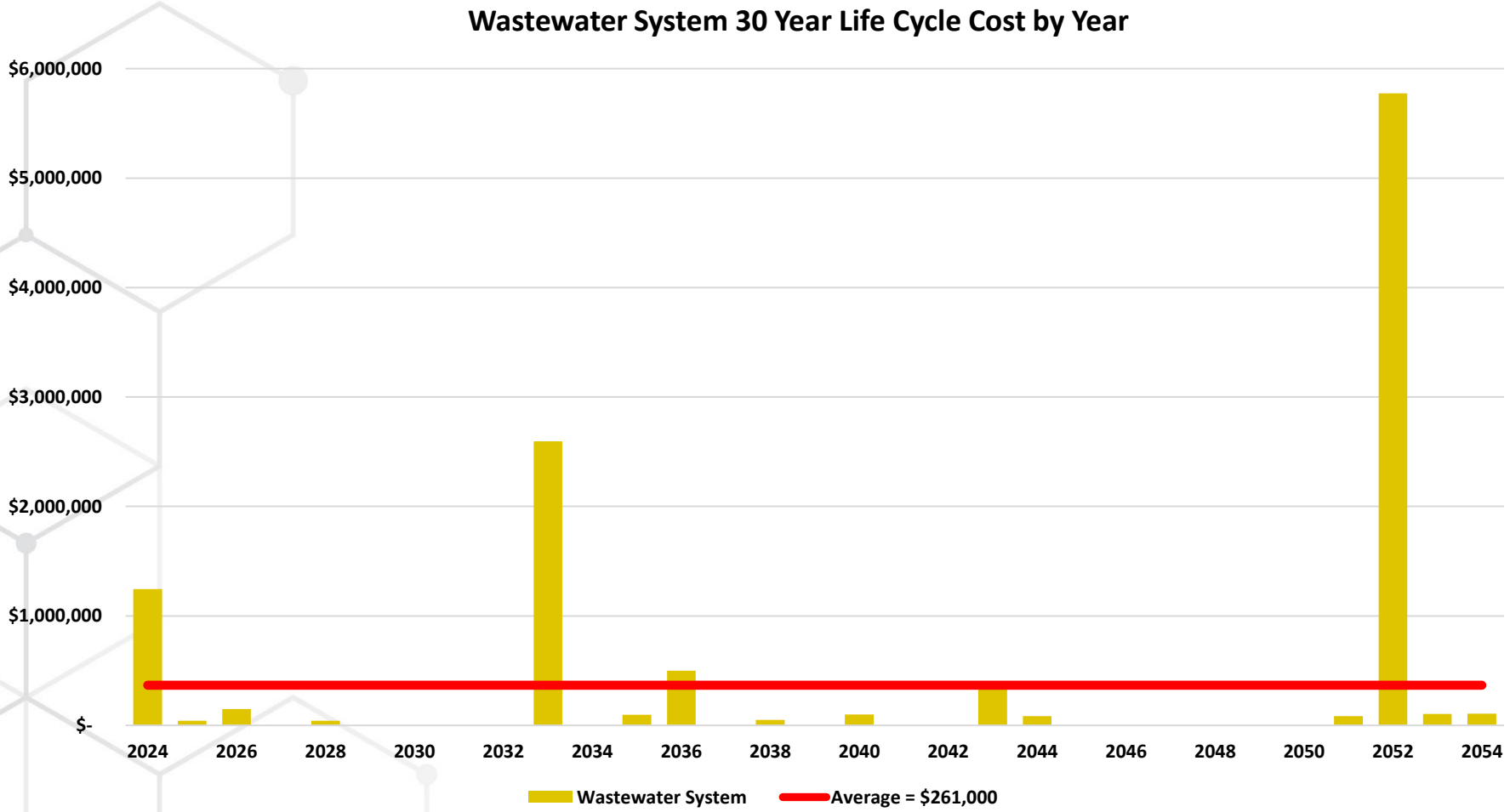
Management Approach

Service Description Indicator	LOS Description	Risk Description	Risk Description
% of Road Network Inspected per year	< 50% of the Roads	Deterioration of Road Condition	Reduction of Visitors to Town of Bentley

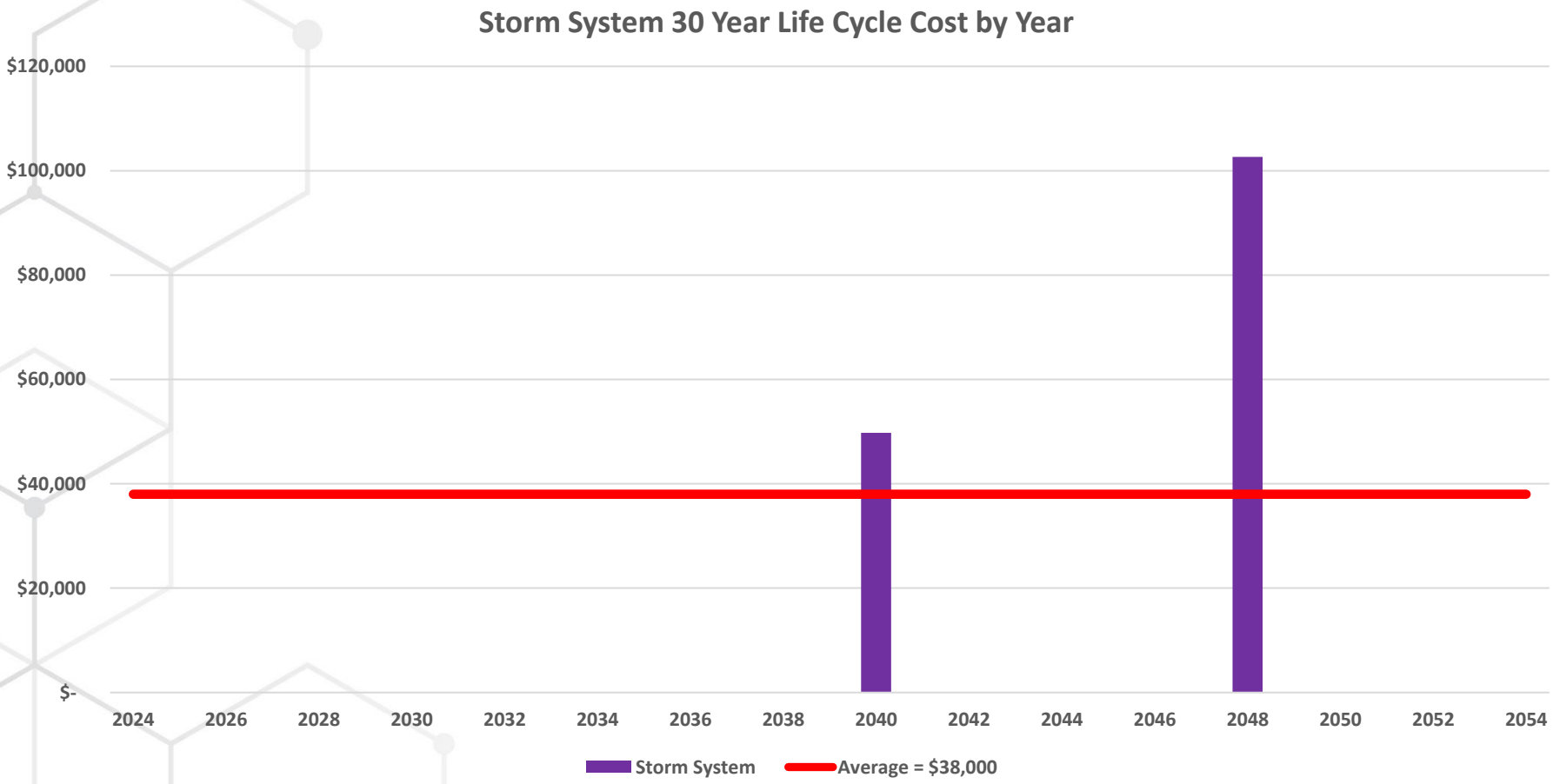
Town of Bentley Council Presentation

Long Term Financial Plan

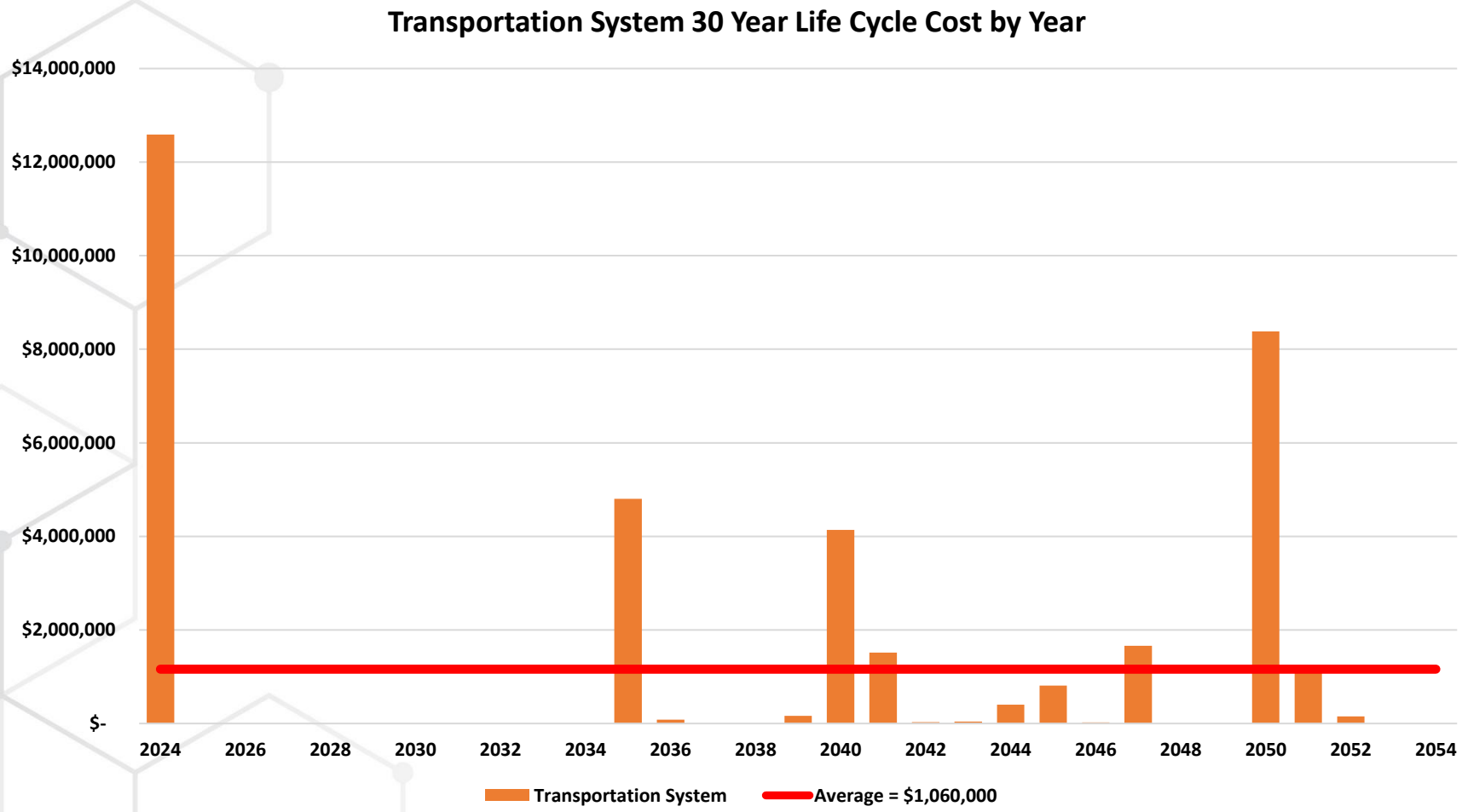
Wastewater Asset Class



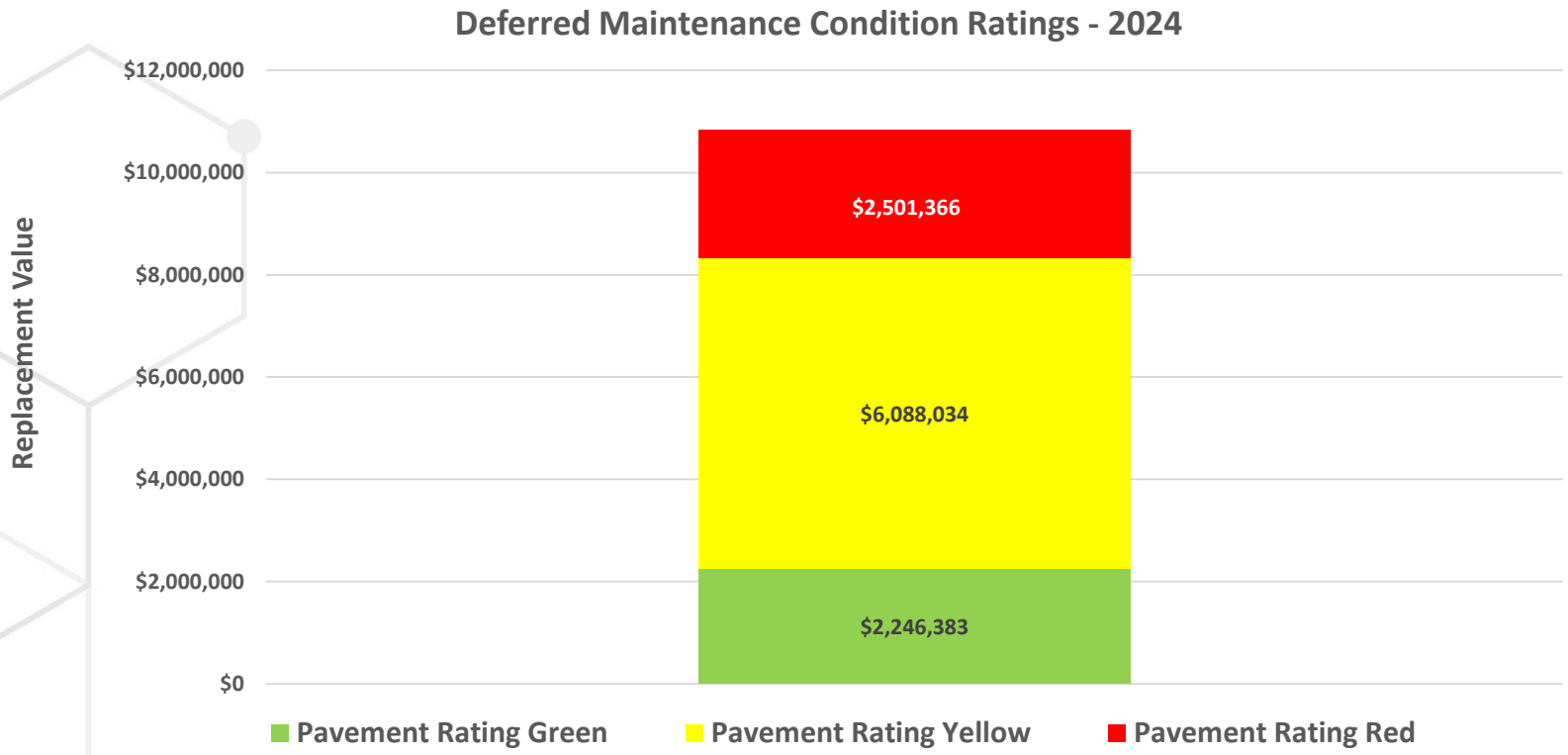
Storm Asset Class



Transportation Asset Class



Transportation Asset Class



Pavement Rating 2024	Replacement Value	Percentage
Pavement Rating Green	$2,246,383	21%
Pavement Rating Yellow	$6,088,034	56%
Pavement Rating Red	$2,501,366	23%
Total	**$10,835,784**	**100%**

Anticipated Re-Investment Per Annum

Asset Class	Current Replacement Value	Average Re-Investment Per Annum	Reinvestment % Per Annum
Water	$15,614,000	$171,000	1.1%
Wastewater	$13,893,000	$261,000	1.9%
Storm	$2,919,000	$38,000	1.3%
Transportation	$26,830,000	$1,063,000	4.0%
Buildings	TBD	TBD	TBD
Total	**$59,256,000**	**$1,533,000**	**2.6%**

Statement from Administration regarding annual re-investment

Town of Bentley Council Presentation

Next Steps – Improvement Plan

Next Steps

- Finalize Wastewater, Storm and Transportation AM Plans
- Understand your Asset Management Plans
  - Short and Long Term Planning
- Mature your Asset Management Plans
  - Annual review
  - Has our level of service changed?
  - Additional Risks?
  - Add/Remove Assets
  - Condition Ratings
  - Additional Asset Classes (Buildings, Parks and Recreation)


Questions?

Agenda Date: **September 24, 2024**

Agenda Item: **New Business: 2025 Proposed Budget Parkland Regional Library System**

ADMINISTRATIVE RECOMMENDATION

THAT Mayor and Council approve the municipal per capita requisition for the Parkland Regional Library System (PRLS) in the amount of $9.81; AND

THAT Mayor and Council support the 2025 Proposed Parkland Regional Library Budget as presented.

SUMMARY

Prior to November 1 of each year the PRLS is required to provide Parties to the agreement a budget and an estimate of money required to operate in the following fiscal year.

The proposed budget is based on conservative estimates whereby revenue is estimated at its minimum level and expenditure is estimated at the maximum level required. For 2025, there is a sixty-three-cent increase to the per capita requisition, which is changing from $9.18 to $9.81. It should be noted that the requisition was held for three consecutive years at $8.55 and then in 2023 it was increased to $8.75 and in 2024 it was $9.18.

In calculating the 2025 municipal levy the budget was built around the assumption that the government of Alberta operating grant will remain at the new 2023 rate of $4.75 per capita and based on 2019 population statistics. Likewise, staff assume the rural library services grant will remain at the new $5.60 per capita rate and be based on 2019 population statistics.

Driving factors for the proposed increase include:

- Overall expenditure increases of 1.9% in 2025
- Population Drop of approximately 9,277 due to switching back to Municipal Affairs Population Lists instead of Treasury Board Estimates.
- New board approved salary grid resulting in increased salary estimates of approximately 2.8%
- Internet connection fees increased slightly
- Econtent (ebooks, eAudiobooks etc) increased due to demand
- Audit fees have also increased
- Building Maintenance fees up mainly due to maintaining elevator in Parkland headquarters
- Travel costs have decreased through the provision of two staff vehicles offsetting reimbursements.

This proposed budget and cost estimate is being presented for Mayor and Council's consideration.

BACKGROUND

The PRLS, connects libraries across the province and provides many services including Alberta Wide borrowing (interlibrary loans), borrowing books by mail, alternate formats for print disabilities, grant information database, as well as a variety of tools and equipment including e readers, pedometers, radon screening kits, projectors, and screens and more. PRLS has a vision to be a leader in assisting its member libraries to achieve excellence in service and its mission to expand opportunities for discovery, growth and imagination for all Central Albertans.

The PRLS 2025 budget has been developed in accordance to Board policy and the requirements imposed by the Parkland Regional Library Agreement. In accordance with clause 8 of the agreement:

- The PRLS Board shall prior to November 1 of each year submit a budget to the parties to this agreement and an estimate of money required during the ensuing fiscal year to operate the library system. [Reg. s.25 (1)(f)]

- The budget and estimate of money required referred to in clause 8.1 above, shall be effective upon receipt by the PRLS Board of written notification of approval from two-thirds of the Parties to this agreement, which must represent at least two thirds of the member population; and thereupon, each part to this agreement shall pay to the PRLS Board an amount which is the product of the per capita requisition set out in Schedule “B” and the population of the Parties to the agreement.

- The population of a municipality that is a Party to this agreement shall be deemed to be the most recent population figure for the municipality as published by Alberta Municipal Affairs.

BUDGET AND FINANCIAL INFORMATION

- Amount contributed in 2020 = $9,216.90
- Amount contributed in 2021 = $9,216.90
- Amount contributed in 2022 = $9,216.90
- Amount contributed in 2023 = $9,432.50
- Amount contributed in 2024 = $9,519.66
- Amount to be contributed in 2025 = $10,222.02 (increase of $702.36)*
    - It should be noted that the Town of Bentley had budgeted $9,896.04 for 2024 budget and the information presented by PRLS now shows this amount to be less for 2024 (as the town of Bentley used a population of 1078 based on municipal affairs and PRLS used treasury board numbers in 2024)

RATIONAL FOR RECOMMENDATION

- The budget amount has been estimated in a conservative manner and supports fiscal responsibility and sound business practices.

- The amount for 2025 is higher than in previous years to take into consideration inflationary increases and adjustments to population numbers they are using in comparison to the prior year.

ATTACHMENTS:

1) 2025 Proposed Budget Parkland Regional Library System
2) PRLS – Board Talk

_____

Marc Fortais, CAO

Parkland Regional Library System

Proposed BUDGET 2025

PARKLAND REGIONAL LIBRARY SYSTEM

Proposed 2025 Budget

Salaries with staff added to new grid

		Present Budget 2024	Proposed Budget 2025
	Income		
1.1	Provincial Operating Grant	1,045,242	1,045,242
1.2	On Reserve, On Settlement Grant	156,647	156,647
1.3	Membership Fees	2,123,362	2,178,075
1.4	Alberta Rural Library Services Grant	452,928	452,928
1.5	Interest Income	50,000	67,500
	TOTAL Income	**3,828,179**	**3,900,392**
	Support Materials & Services Direct to Libraries		
2.1	Alberta Rural Library Services Grant	452,928	452,928
2.2	Allotment Funds Issued to Libraries	262,277	251,794
2.3	Computer Maint.Agree. Software licenses	231,308	236,627
2.4	Cooperative Collection Fund	30,000	30,000
2.5	eContent Platform fees, Subscriptions	66,050	66,850
2.6	On Reserve, On Settlement Grant expenses	84,756	84,756
2.7	Freight	1,200	1,200
2.8	Internet Connection Fees	8,820	11,025
2.9	Library Services Tools	6,530	6,700
2.10	Marketing/Advocacy	20,000	20,000
2.11	Member Library Computers Allotment	69,391	66,608
2.12	Outlets - Contribution to Operating	800	800
2.13	Periodicals	1,000	1,000
2.14	ILL Postage for libraries	2,300	2,300
2.15	Supplies purchased Cataloguing/Mylar	19,000	19,000
2.16	Vehicle expense	56,000	58,000
2.17	Workshop/Training expense	14,000	14,000
	PRL Circulating Collections		
2.18	Audio Book	5,000	5,000
2.19	eContent	67,500	75,000
2.20	Large Print	12,000	12,000
2.21	Programming Kits	5,000	5,000
2.22	Reference	2,600	2,600
	TOTAL Support Materials & Services Direct to Libraries	**1,418,460**	**1,423,188**
	Cost of Services		
3.1	Audit	21,000	25,000
3.2	Bank expenses	1,700	1,500
3.3	Bank Investment Fees	4,700	4,700
3.4	Building-Repairs/Maintenance	23,500	27,250
3.5	Dues/Fees/Memberships	13,000	13,000
3.6	Insurance	25,000	26,500
3.7	Janitorial/Snow removal/Outdoor maintenance expense	36,500	37,600
3.8	Photocopy	4,000	4,000
3.9	Salaries	1,777,903	1,828,510
3.10	Salaries - Employee Benefits	376,916	387,644
3.11	Staff Development	20,000	20,000
3.12	Supplies/Stationery/Building	29,000	29,000
3.13	Telephone	8,500	9,000
3.14	Travel	8,000	3,500
3.15	Trustee expense	26,000	26,000
3.16	Utilities	34,000	34,000
	TOTAL Cost of Services	**2,409,719**	**2,477,204**
TOTAL Expenses (library materials & cost of service)		**3,828,179**	**3,900,392**
	Surplus/Deficit	0	0
	AMOUNT PER CAPITA REQUISITION	**9.18**	**9.81**

Notes for the Parkland Regional Library System Budget 2025

Parkland's budget is developed according to Board policy and the constraints imposed by the Parkland Regional Library System Agreement. According to clause eight of the agreement – Library System Budget:

> *8.1 The PRLS Board shall prior to November 1 of each year submit a budget to the Parties to this Agreement and an estimate of the money required during the ensuing fiscal year to operate the library system. [Reg. s.25 (1)(f)]*
>
> *8.2 The budget and estimate of money required referred to in clause 8.1 above, shall be effective upon receipt by the PRLS Board of written notification of approval from two-thirds of the Parties to this Agreement which must represent at least two-thirds of the member population; and thereupon, each Party to this Agreement shall pay to the PRLS Board an amount which is the product of the per capita requisition set out in Schedule "B" and the population of the Parties to the agreement. Payments shall be made on or before the dates set out therein.*
>
> *8.3 The population of a municipality that is a Party to this Agreement shall be deemed to be the most recent population figure for the municipality as published by Alberta Municipal Affairs.*
>
> *8.4 Municipalities which join the library system after January 1, 1998 shall pay a signing fee as determined by the PRLS Board.*
>
> *8.5 The PRLS Board shall apply to the Government of Alberta for all library grants for which it is eligible, in accordance with the Department of Community Development Grants Regulation 57/98.*
>
> *8.6 Notwithstanding Clause 17.1.c., any increase in the requisition requires written notification of approval from two-thirds of the parties to this agreement which must represent at least two-thirds of the member population.*

Generally speaking, PRLS budgets are prepared with conservative estimates. Revenue is estimated at its minimum level and expenditures are estimated at their maximum level. For 2025, there is a sixty-three-cent increase to the municipal per capita requisition to $9.81. Despite the increase in the per capita requisition, the actual increase to municipalities above what they paid in 2024 will be negligible. Eighteen municipalities will actually see decreases. For calculating the municipal levy for 2025, Parkland will be using the newly revived Alberta Municipal Affairs most recent Official Population list. This means that while municipalities will be paying more per capita, many will see a drop in the population they are being invoiced on.

The budget was built around the assumption that the government of Alberta operating grant will remain at the new 2023 rate $4.75 per capita and based on 2019 population

statistics. Likewise, staff assume the rural library services grant will remain at the new $5.60 per capita rate and based on 2019 population statistics.

Points within the budget to note include:

- Overall, expenditures are anticipated to increase by 1.9% in 2025.
- For 2025, twenty-one expense lines are projected to remain unchanged from 2024, thirteen will see increases, and four will decrease.
- Now that they are being updated, switching back to Municipal Affairs Population Lists instead of the Treasury Board Estimates for invoicing municipalities resulted in a drop of 9,277 population which Parkland will no longer invoice on. Other systems are also facing a drop in the populations they are invoicing on for the same reason.
- Reduced population figures mean the *Allotment Funds Issued to Libraries* and *Member Library Computer Allotment* lines (lines 2.2 and 2.11 respectively) have also been reduced.
- To balance the budget, it will be necessary to increase the municipal requisition/levy by sixty-three cents. Had it been appropriate for Parkland to continue using the population figures supplied by the Treasury Board, the 2025 requisition would have been between forty and forty-one cents per capita lower.
- A new board approved salary grid will be implemented by putting staff on the grid at the nearest point to where they are currently located. No COLA was added, nor were step increases. The increase to the salary line equals approximately 2.8%.
- Internet connection fees have been increased slightly due to demands from member libraries (line 2.8)
- eContent (eBooks, eAudiobooks, etc.) has been increased slightly due to demand (line 2.19)
- Audit fees have increased because Parkland's current three-year agreement for audit services with MNP will expire and it will be necessary to review Parkland's audit service provider. For 2025, audit fees are estimated (line 3.1).
- Building Maintenance fees are up primarily due to the cost of maintaining the elevator in Parkland's headquarters (line 3.4).
- The travel line (line 3.14) has continued to drop over the years. Since Parkland started running two staff vehicles, mileage reimbursement has dropped considerably. Also, a number of food items which had been charged against the budget line are now being expended against the Workshop/Training expense line (line 2.17) when food is purchased for events for member libraries or member library staff.

Provincial grants amount to approximately 42.4% of PRLS' total income (line 1.1, 1.2, 1.4).

At the end of the budget documents, you will find the Budget Supplement. The largest planned purchase is for computer hardware from the Technology Reserve with expenditures estimated to be valued at $250,400. This includes a Fortigate hardware upgrade project for libraries which is necessary to maintain stable SuperNet connections.

By approving the budget, the board is approving these transfers to and from Parkland's reserve fund accounts.

Included is a "Return on Municipal Levy" document based on the projected budget comparing the amount of requisition/municipal levy to items of direct financial benefit to member libraries. Based on budget amounts, an equivalent of 92% of the 2025 levy is returned in tangible form. This return is before considering services provided by Parkland or taking into account the costs of running the Parkland system headquarters.

Also included is a document comparing the change in requestion paid by each municipality in 2024 and 2025.

Parkland Regional Library System

Return on Municipal Levy

Based on 2025 Budgeted Amounts **2025**

Materials Allotment for Libraries	(Books, DVD's, Audiobooks, etc.)	$251,794
Rural Library Services Grant		$452,928
Cooperative Collection Fund		$30,000
Technology	(Hardware– budget plus reserves)	$272,608
Postage	(Reimbursement for Interlibrary Loan)	$2,300
Software	(For computers, ILS, etc.)	$236,627
Rotating Collections	(Large Print, Audiobooks, Programming Kits, etc.)	$22,000
Internet	(Connectivity provided to member libraries)	$11,025
eContent	(Platforms & Purchases of eBooks, eAudiobooks, etc.)	$141,850
Vehicle Expense	(Ongoing budgeted expenses only—no new vans)	$58,000
Marketing/Advocacy		$20,000
Workshop/Training		$14,000
Cataloguing Supplies		$25,700
Contribution to Outlet Libraries*		$800
Materials Discount	(41% in 2023)	$115,536
SuperNet	(Fiber Optic connection provided by GOA to system members)	$370,022
Sub-Total		**$2,025,190**
Requisition		**$2,178,075**
		92%
Difference Between Levy & Direct Return		**$152,885**

*$200 each for Brownfield, Nordegg, Spruce View, and Water Valley Libraries

Parkland Regional Library System

Requisition Comparison for 2024 to 2025

	Municipality	2024 Treasury Board Population Estimates 2022 Billing population	2024 per Capita rate $9.18	2025 Municipal Affairs Population Lists 2023 Billing population	2025 per Capita rate $9.81	Requisition increase or decrease 2024 to 2025
1	Village of Alix	835	**7,665.30**	774	**7,592.94**	(72.36)
2	Village of Alliance	150	**1,377.00**	166	**1,628.46**	251.46
3	Village of Amisk	198	**1,817.64**	219	**2,148.39**	330.75
4	Town of Bashaw	778	**7,142.04**	848	**8,318.88**	1,176.84
5	Village of Bawlf	425	**3,901.50**	412	**4,041.72**	140.22
6	Town of Bentley	1,037	**9,519.66**	1,042	**10,222.02**	702.36
7	Village of Big Valley	341	**3,130.38**	331	**3,247.11**	116.73
8	SV of Birchcliff	145	**1,331.10**	211	**2,069.91**	738.81
9	Village of Bittern Lake	234	**2,148.12**	216	**2,118.96**	(29.16)
10	Town of Blackfalds	11,962	**109,811.16**	10,470	**102,710.70**	(7,100.46)
11	Town of Bowden	1,271	**11,667.78**	1,280	**12,556.80**	889.02
12	City of Camrose	19,847	**182,195.46**	18,772	**184,153.32**	1,957.86
13	Camrose County	9,208	**84,529.44**	8,504	**83,424.24**	(1,105.20)
14	Village of Caroline	464	**4,259.52**	470	**4,610.70**	351.18
15	Town of Carstairs	4,988	**45,789.84**	4,898	**48,049.38**	2,259.54
16	Town of Castor	881	**8,087.58**	803	**7,877.43**	(210.15)
17	Clearwater County	12,099	**111,068.82**	11,865	**116,395.65**	5,326.83
18	Village of Clive	823	**7,555.14**	775	**7,602.75**	47.61
19	Town of Coronation	905	**8,307.90**	868	**8,515.08**	207.18
20	Village of Cremona	452	**4,149.36**	437	**4,286.97**	137.61
21	Village of Czar	230	**2,111.40**	248	**2,432.88**	321.48
22	Town of Daysland	810	**7,435.80**	789	**7,740.09**	304.29
23	Village of Delburne	889	**8,161.02**	919	**9,015.39**	854.37
24	Town of Didsbury	5,092	**46,744.56**	5,070	**49,736.70**	2,992.14
25	Village of Donalda	207	**1,900.26**	226	**2,217.06**	316.80
26	Town of Eckville	1,158	**10,630.44**	1,014	**9,947.34**	(683.10)
27	Village of Edberg	152	**1,395.36**	126	**1,236.06**	(159.30)
28	Village of Elnora	291	**2,671.38**	288	**2,825.28**	153.90
29	Flagstaff County	3,614	**33,176.52**	3,694	**36,238.14**	3,061.62
30	Village of Forestburg	928	**8,519.04**	807	**7,916.67**	(602.37)
31	SV of Gull Lake	202	**1,854.36**	226	**2,217.06**	362.70
32	SV of Half Moon Bay	35	**321.30**	65	**637.65**	316.35
33	Town of Hardisty	465	**4,268.70**	548	**5,375.88**	1,107.18
34	Village of Hay Lakes	525	**4,819.50**	456	**4,473.36**	(346.14)
35	Village of Heisler	157	**1,441.26**	135	**1,324.35**	(116.91)
36	Village of Hughenden	230	**2,111.40**	213	**2,089.53**	(21.87)
37	Town of Innisfail	7,672	**70,428.96**	7,985	**78,332.85**	7,903.89
38	SV of Jarvis Bay	219	**2,010.42**	213	**2,089.53**	79.11
39	Town of Killam	844	**7,747.92**	918	**9,005.58**	1,257.66
40	City of Lacombe	14,229	**130,622.22**	14,258	**139,870.98**	9,248.76
41	Lacombe County	10,807	**99,208.26**	10,283	**100,876.23**	1,667.97
42	Village of Lougheed	281	**2,579.58**	225	**2,207.25**	(372.33)
43	Mountain View County	13,877	**127,390.86**	12,981	**127,343.61**	(47.25)
44	SV of Norglenwold	275	**2,524.50**	306	**3,001.86**	477.36
45	Town of Olds	9,567	**87,825.06**	9,209	**90,340.29**	2,515.23
46	Paintearth County	2,138	**19,626.84**	1,990	**19,521.90**	(104.94)
47	SV of Parkland Beach	154	**1,413.72**	168	**1,648.08**	234.36
48	Town of Penhold	3,928	**36,059.04**	3,484	**34,178.04**	(1,881.00)
49	Town of Ponoka	7,518	**69,015.24**	7,331	**71,917.11**	2,901.87
50	Ponoka County	10,372	**95,214.96**	9,998	**98,080.38**	2,865.42
51	Town of Provost	1,870	**17,166.60**	1,900	**18,639.00**	1,472.40
52	MD Provost	2,183	**20,039.94**	2,071	**20,316.51**	276.57
53	Red Deer County	21,930	**201,317.40**	19,933	**195,542.73**	(5,774.67)
54	Town of Rimbey	2,625	**24,097.50**	2,470	**24,230.70**	133.20
55	SV of Rochon Sands	79	**725.22**	97	**951.57**	226.35
56	Town of Rocky Mtn. House	6,603	**60,615.54**	6,765	**66,364.65**	5,749.11
57	Village of Rosalind	184	**1,689.12**	162	**1,589.22**	(99.90)
58	Village of Sedgewick	816	**7,490.88**	761	**7,465.41**	(25.47)
59	Town of Stetter	5,752	**52,803.36**	5,695	**55,867.95**	3,064.59
60	Stettler County	5,777	**53,032.86**	5,666	**55,583.46**	2,550.60
61	SV of Sunbreaker Cove	94	**862.92**	131	**1,285.11**	422.19
62	Town of Sundre	2,544	**23,353.92**	2,672	**26,212.32**	2,858.40
63	Town of Sylvan Lake	16,802	**154,242.36**	15,995	**156,910.95**	2,668.59
64	SV of White Sands	135	**1,239.30**	174	**1,706.94**	467.64
		231,303	**2,123,361.54**	222,026	**2,178,075.06**	54,713.52 TOTAL

Brief Notes – September 2025

INCOME

1.1 The Provincial Operating grant is an estimate, based on statements from the Public Library Services Branch (PLSB) calculated at $4.75 per capita.
1.2 The On Reserve, On Settlement grant for reserve residents is calculated at $10.35 per capita
1.3 Estimated requisition to municipalities to balance budget increase to $9.81
1.4 Based on statements from PLSB and calculated at $5.60 per capita
1.5 Increase reflects the changes in interest rates and estimated returns on investments

SUPPORT MATERIALS & SERVICES DIRECT TO LIBRARIES

2.1 Estimate, based on statement from PLSB - see 1.4 above
2.2 Reflects materials allotment rate of $1.13 per capita and reduced population
2.3 Line increased slightly due to increase costs for maintenance agreements with Sitecore (websites), Polaris (the Integrated Library system), and a few others that renewed at higher rates. This line also includes purchases of non-capital hardware and misc. IT items such as adapters, cables, and supplies. For software, subscriptions, maintenance agreements, ongoing website development, the Microsoft Office suite of software for PRLS and member library computers, and PRLS' management of wireless networks
2.4 Cooperative Collection Fund – funds to allow Parkland staff to purchase physical materials (e.g., books and DVDs) for placement in member libraries with the intent of reducing interlibrary loans and improving the system-wide collection
2.5 This line increased slightly due to license agreement renewals
2.6 This line is for the expenses of the On Reserve, On Settlement grant provided through a provincial government grant program calculated at $5.60 for library service to the indigenous residents of Parkland's six First Nations Reserves
2.7 Held at 2024 level - for vendor freight costs for library materials, in-house collections, IT equipment and shipment of computers for repairs and/or replacement parts
2.8 Increased to account for demands from member libraries
2.9 Increased slightly to $6,700 – Tools to assist with cataloguing library materials
2.10 Held at 2024 level - used to provide tools for marketing, advocacy and other initiatives for member libraries and PRLS
2.11 Reduced as this is based on current population at $0.30 per capita
2.12 Held at $800 - operating funding provided to PRLS' four outlet libraries
2.13 Held at $1,000 - based on actual expenditures
2.14 Held at 2024 level - includes both Inter Library Loan postage reimbursement to libraries and Inter Library Loans sent from HQ for libraries
2.15 Held at 2024 level - used for purchasing library material processing items such as laminated book covers, cataloguing records, and multimedia cases

2.16 Increased slightly - for the operations of three cargo vans and two staff vehicles - anticipated maintenance costs for five vehicles and fuel, using an estimate of actual costs and considering variances for fuel costs
2.17 Held at $14,000 - includes costs for all workshops, conferences, projects, and training activities for library managers, staff, and boards

PRLS Circulating Collections

2.18 Held at 2024 level $5,000
2.19 Increased due to demands by libraries and renewal of license agreements includes allotment for eBooks, eAudiobooks and other eContent agreements
2.20 Held at 2024 level $12,000
2.21 Held at 2024 level $5,000
2.22 Held at 2024 level $2,600

COST OF SERVICES

3.1 Increased - the 2025 audit fees are estimated because Parkland's current three-year agreement for audit services with MNP will expire and it will be necessary to review Parkland's audit service provider
3.2 Reduced slightly to $1,500 - covers the cost of enhanced electronic banking services and cheques
3.3 Held at 2024 level of $4,700 based on review of actual over a three-year period
3.4 Increased to $27,250 - actual costs reviewed plus an estimated increase in the maintenance agreement renewal for the elevator
3.5 Held at 2024 level $13,000 - to cover PRLS' cost to belong to membership organizations (e.g., The Alberta Library (TAL), Alberta Library Trustee Association (ALTA), etc.)
3.6 Increased slightly to $26,500 based on actual and anticipated increases - covers five vehicles, cyber insurance, and new building
3.7 Increased slightly to $37,600 - for janitorial building maintenance including carpet and window cleaning – also includes outside building maintenance and snow removal
3.8 Held at 2024 level – reflects fees for photocopiers and based on estimated usage
3.9 Reflects current staff levels – includes new salary grid and compensation policy implementation
3.10 Reflects predicted costs for staff benefits based on current staff levels
3.11 Held at the 2024 amount
3.12 Held at 2024 level $29,000 - based on a five-year review
3.13 Increase slightly to $9,000 - includes line charges, toll free number, mobile telephones, and long-distance costs
3.14 Reduced to $3,500 – since Parkland started running two staff vehicles, mileage reimbursement has dropped in addition to reallocation of food expenditures when doing offsite training or workshops - based on 5-year review of actual expenses

3.15 Held at 2024 level of $26,000 – includes Executive and Advocacy committee meetings, external meetings for trustees, and to support trustee activities using virtual and in person meetings as established

3.16 Held at 2024 of $34,000 - based on review of actual costs in the new building and then estimated

Complete Notes to the 2025 Budget

PARKLAND REGIONAL LIBRARY SYSTEM

Proposed 2025 Budget

		Present Budget 2024		Proposed Budget 2025
	Income			
1.1	Provincial Operating Grant	1,045,242		1,045,242
1.2	On Reserve, On Settlement Grant	156,647		156,647
1.3	Membership Fees	2,123,362		2,178,075
1.4	Alberta Rural Library Services Grant	452,928		452,928
1.5	Interest Income	50,000		67,500
	TOTAL Income	**3,828,179**		**3,900,392**

Income – line details

1.1 Provincial Operating Grant: for budgeting purposes, the provincial operating grant rate is based on information from the Public Library Services Branch (PLSB) - for regional systems it will be calculated using 2019 population statistics at $4.75 per capita - this rate is subject to change annually.

1.2 On Reserve, On Settlement Grant: The On Reserve, On Settlement grant from the PLSB is calculated at $10.35 per capita based on First Nations reserve populations found within Parkland's service area. The grant is to enable library services to FN reserve residents. This is composed of two grants; the $4.75 system operating grant and the $5.60 per capita operating grant. The $4.75 is used to fund operations of the regional system, the $5.60 per capita is to fund various First Nations service initiatives. See line 2.6.

1.3 Membership Fees: $9.81 per capita – requisition to municipalities to balance the budget, a sixty-three cent increase per capita.

1.4 Alberta Rural Library Services Grant: grant received from Alberta Municipal Affairs for service to rural residents. Based on the PRLS membership agreement for those municipalities and municipal districts who do not appoint a library board, the grant is dispersed entirely to libraries as directed by these municipalities and municipal districts. Based on information from the PLSB, the grant will be calculated using 2019 population statistics at $5.60 per capita – see line 2.1 under Support Materials & Services Direct to Libraries.

1.5 Interest Income: estimate based on the returns from the RBC Dominion investment program, any short-term investments, and current bank account – the budgeted amount is reflective of the anticipated return on investments with an increase.

	Support Materials & Services Direct to Libraries	2024		2025
2.1	Alberta Rural Library Services Grant	452,928		452,928
2.2	Allotment Funds Issued to Libraries	262,277		251,794
2.3	Computer Maint.Agree. Software licenses	231,308		236,627
2.4	Cooperative Collection Fund	30,000		30,000
2.5	eContent Platform fees, Subscriptions	66,050		66,850
2.6	On Reserve, On Settlement Grant expenses	84,756		84,756
2.7	Freight	1,200		1,200
2.8	Internet Connection Fees	8,820		11,025
2.9	Library Services Tools	6,530		6,700
2.10	Marketing/Advocacy	20,000		20,000
2.11	Member Library Computers Allotment	69,391		66,608
2.12	Outlets - Contribution to Operating	800		800
2.13	Periodicals	1,000		1,000
2.14	ILL Postage for libraries	2,300		2,300
2.15	Supplies purchased Cataloguing/Mylar	19,000		19,000
2.16	Vehicle expense	56,000		58,000
2.17	Workshop/Training expense	14,000		14,000
	PRL Circulating Collections			
2.18	Audio Book	5,000		5,000
2.19	eContent	67,500		75,000
2.20	Large Print	12,000		12,000
2.21	Programming Kits	5,000		5,000
2.22	Reference	2,600		2,600
	TOTAL Support Materials & Services Direct to Libraries	**1,418,460**		**1,423,188**

Support Materials & Services Direct to Libraries - line details

2.1 Alberta Rural Library Services Grant: provincial grant received by PRLS for municipalities and municipal districts that do not have library boards but are members of the system – per membership agreement, the grant is passed back to the libraries as mandated by the municipalities – see line 1.4 under income.

2.2 Allotment Funds Issued to Libraries: reflects materials allotment rate of $1.13 per capita – total amount reduced due to the switch back to the Municipal Affairs Population Lists with the subsequent loss of 9,277 population.

2.3 Computer Maint. Agree. Software Licences: line increased slightly due to increase costs for maintenance agreements with Sitecore (websites), Polaris (the Integrated Library system), and a few others that renewed at higher rates – this line covers, but is not limited to, the Microsoft suite of software for member library computers, website software, PRLS' management of wireless networks, licensed services for the Polaris integrated library system, and small non-capital IT items such as monitors and bar code scanners.

2.4 Cooperative Collection: designed to give Parkland staff a budget line for the purchase of physical materials (e.g., books, DVDs) for placement in member libraries with the intent of reducing interlibrary loans and augmenting the collections of member libraries. By using interlibrary loan and collection assessment data, Parkland can target spending so member library collections better reflect patron needs and improve the system-wide collection.

2.5 eContent Platform fees and Subscription fees: increased slightly – to pay for platform fees for CloudLibrary and Overdrive, and subscriptions for the TAL core of eResources (Ancestry Library Edition and Consumer Reports) along with CloudLinking, Niche Academy, Cypress Resume, Grant Connect, and eMagazines.

2.6 On Reserve, On Settlement Grant Exp: funding provided through a provincial government grant program calculated at $5.60 per capita for library service to the indigenous residents of Parkland's six First Nations reserves.

2.7 Freight: vendor freight costs for library materials, in-house collections, computers, IT equipment and shipment of computers for repairs and/or replacement parts – held at 2024 level.

2.8 Internet Connection Fees: estimated as five-year contract will need to be renewed and because of performance demands by libraries - for internet service provision to member libraries and HQ.

2.9 Library Services Tools: slight increase, based on actual costs then estimated– includes tools for Parkland's cataloguing staff (RDA tool kit, Web Dewey, BookWhere) as well as Audio Cine, Survey Monkey, Loomly, and LibraryData.

2.10 Marketing/Advocacy: amount held at the same level as 2024 – used to provide tools for marketing, advocacy and other initiatives for member libraries and PRLS.

2.11 Member Library Computers: reduced due to lower system population - income collected for transfer to the Technology Reserve for the purchase of computers and peripherals for member libraries in the year the funds are collected. Calculated at thirty cents per capita.

2.12 Outlet - Contribution to Operating: held at $800 - funds for Parkland's four outlet libraries, amounts set by board policy, up to $200 annually, if a local library outlet's sponsoring society provides matching funds.

2.13 Periodicals: held at 2024 level – based on actual, includes professional development publications and library journals.

2.14 ILL Postage Reimbursement for Libraries: held at 2024 level - based on actual and estimations – reimbursement for items interlibrary loaned (ILL) by member libraries and ILL's sent for libraries from Parkland.

2.15 Supplies purchased Cataloguing/Mylar: held at 2024 level – based on review of 3-year actual, line for purchasing library materials processing, laminated book covers, cataloguing records, and multimedia cases.

2.16 Vehicle Expense: increased slightly – estimates for fluctuation in fuel prices, also includes anticipated maintenance and repair costs for the operation of five vehicles (3 cargo and 2 staff vehicles) includes tire replacements.

2.17 Workshop/Training: includes costs for all workshops, conferences, projects, and training activities hosted or planned by PRLS staff for member libraries regardless of whether they are held at PRLS or other locations – also includes the reallocation of food expenditures from the line 3.14 - held at 2024 amount.

PRLS Circulating Collections

2.18. Audiobook Materials: held at 2024 level – used to support the physical audiobook collection.

2.19 eContent: increased due to demands by libraries and renewal of licence agreements - includes allotment eBooks and eAudiobooks through CloudLibrary and Overdrive, and potentially other eContent.

2.20 Large Print Books: held at 2024 level to help refresh the collection.

2.21 Programming Kits: held at 2024 level - to build new programming kits and replace consumables in current kits for programming in member libraries.

2.22 Reference Materials: held at 2024 – to purchase limited amounts of reference material for use by member libraries and PRLS staff; eResources for reference and professional development purposes can also be purchased using this budget line.

	Cost of Services	2024		2025
3.1	Audit	21,000		25,000
3.2	Bank expenses	1,700		1,500
3.3	Bank Investment Fees	4,700		4,700
3.4	Building-Repairs/Maintenance	23,500		27,250
3.5	Dues/Fees/Memberships	13,000		13,000
3.6	Insurance	25,000		26,500
3.7	Janitorial/Snow removal/Outdoor maintenance expense	36,500		37,600
3.8	Photocopy	4,000		4,000
3.9	Salaries	1,777,903		1,828,510
3.10	Salaries - Employee Benefits	376,916		387,644
3.11	Staff Development	20,000		20,000
3.12	Supplies/Stationery/Building	29,000		29,000
3.13	Telephone	8,500		9,000
3.14	Travel	8,000		3,500
3.15	Trustee expense	26,000		26,000
3.16	Utilities	34,000		34,000
	TOTAL Cost of Services	**2,409,719**		**2,477,204**

Cost of Services – line details

3.1 Audit: increased - the 2025 audit fees are estimated because Parkland's current three-year agreement for audit services with MNP will expire and it will be necessary to review Parkland's audit service provider - includes costs for an annual letter from PRLS' lawyers required for the audit process.

3.2 Bank Expenses: based on actual - to cover the cost of enhanced electronic banking services and cheques – reduced slightly from 2024 level.

3.3 Bank Investment Fees: fee for management of the RBC Dominion investment program – based on review of actual charges – held at 2024 level.

3.4 Building-Repair/ Maintenance: increased - actual costs reviewed plus an estimated increase in the maintenance agreement renewal for the elevator.

3.5 Dues/Fees/ Memberships: held at 2024 level - for Parkland's membership in professional organizations; may include, but not necessarily be limited to: The Alberta Library (TAL), Alberta Library Trustee Association (ALTA), Alberta Association of Library Technicians (AALT), Public Library Associations (PLA), Rural Municipalities of Alberta (RMA), and American Library Association (ALA)

3.6 Insurance: this line has a slight increase - includes the building, HQ's contents, PRLS' outlet libraries contents, five vehicles, general liability, cyber, bond and crime, employee drivers abstracts, and personal vehicles insurance reimbursement for personal vehicle use - based on a review of actual 3-year costs.

3.7 Janitorial/Outdoor Maint. Expense: increased slightly to $37,600 - for janitorial building maintenance including carpet and window cleaning, outside building maintenance, and snow removal.

3.8 Photocopy: reflects fees for photocopiers and estimated usage, based on 3-year average costs.

3.9 Salaries: to reflect the current staffing levels – includes new salary grid and compensation policy implementation.

3.10 Salaries-Employee Benefits: to reflect predicted costs for staff benefits based on current staff levels and being provided full benefits including, but not limited to, LAPP, Blue Cross.

3.11 Staff Development: funds PRLS staff to attend and travel to continuing education activities such as seminars, conferences, technology/training courses, first aid training, along with staff performance and support items, activities, and food– held at $20,000.

3.12 Supplies/Stationery/ Building: based on five-year review and held at 2024 level - includes, but not limited to, book processing-related supplies such as barcodes, barcode label protectors, new plastic patron membership cards supplied to public libraries, regional systems swag, and building and stationery supplies.

3.13 Telephone:	based on actual and increased slightly - includes line charges, toll free number, mobile telephones, and long-distance costs.
3.14 Travel:	reduced - since Parkland started running two staff vehicles, mileage reimbursement has dropped – also a reallocation of food expenditures when doing offsite training or workshops to line 2.17 - based on 5-year review of consulting travel to public libraries, administrative travel, annual IT visits, and staff travel to workshops and conferences (includes reimbursement at $0.550 per km to staff when they are unable to use the PRLS staff vehicles)
3.15 Trustee Expense:	accounts for a 10-member Executive Committee and a 10-member Advocacy Committee meeting 7 times a year, costs for other ad hoc or working group meetings, includes $100 half day/$200 full day honorarium and mileage for mixed committee meetings where members can meet digitally and/or in person (includes meetings the board members attend on PRLS' behalf) – held at 2024 level.
3.16 Utilities:	held at 2024 level - based on multi-year review of actual expenses in the new building.

PARKLAND REGIONAL LIBRARY SYSTEM

Proposed 2025 Budget

	Present Budget 2024	Proposed Budget 2025
TOTAL Income	**3,828,179**	**3,900,392**
TOTAL Support Materials & Services Direct to Libraries	**1,418,460**	**1,423,188**
TOTAL Cost of Services	**2,409,719**	**2,477,204**
TOTAL Expenses (library materials & cost of service)	**3,828,179**	**3,900,392**
Surplus/Deficit	0	0
AMOUNT PER CAPITA REQUISITION	**9.18**	**9.81**

Budget Supplement

Explanation points to the 2025 Budget dealing with Capital Assets, Amortization and Reserves.

Staff make all applicable computer and vehicle purchases directly from reserves.

For IT purchases, PRLS has a very detailed Technology Replacement Schedule as it relates to maintaining our current IT infrastructure and the purchase of computers for member libraries. Based on PRLS' Technology Replacement Schedule, items being identified as needing to be replaced or newly acquired will have their costs estimated with the funds required for purchase included in the notes section of the Budget Supplement document. This amount will be shown as coming from the Technology Reserve. The amortization expense for IT purchases will be allocated and the residual value set aside in the Amortization Reserve.

Parkland will be purchasing no vehicles in 2025. The amortization expense for vehicle purchases will be allocated and the residual value set aside in the Amortization Reserve when applicable.

In passing the budget, Board members are approving the movement of funds between reserves and operating as defined on the following pages and based on policy.

Parkland Regional Library System

Budget Supplement - Movement of Funds - 2025

Explanation points to the 2025 Budget dealing with Capital Assets, Amortization and Reserves.
In passing the budget you agree to the movement of funds between reserves and operating as defined below and based on policy.
Capital assets will be purchased from reserves.

1	MOVEMENT OF FUNDS FROM RESERVES TO OPERATING INCOME	2025	
	Amortization Reserve		
	Anticipated funds required to cover yearly portion of amortization expense from reserve w/o building	$64,913	**A**
	(actual amount will be affected by asset disposals during the year)		
	Vehicle Reserve		
	Anticipated funds required to purchase new vehicles	$0	**B**
	(actual amount will be based on exact purchase price in the year)		
	Technology Reserve		
	Anticipated funds required for Technology purchases	$250,400	
	(may include member library computers, wireless equipment, SuperNet CED units, PRLS assets)		
	*(Estimated capital PRLS assets - 2025, **$44,400 -B**)*		
		$315,313	

2	INCOME FROM THE SALE OF CAPITAL ASSETS		
	Vehicle selling price	$0	**C**
	(actual amounts will be based on exact selling price in the year)		
		$0	

3	MOVEMENT OF FUNDS FROM OPERATING EXPENSE TO RESERVES		
	Amortization Reserve		
	Residual Amortization anticipated - PRLS assets	$19,980	**B**
	Current Year Amortization estimated - PRLS Assets	$24,420	**B**
	(actual amounts will be based on exact purchase amounts in the year)		

Vehicle Reserve

Proceeds from the sale of vehicles	$0	**C**
(actual amounts will be based on exact selling price in the year)		

Technology Reserve

Budgeted for member library computers	$66,608	
	$111,008	

4 CAPITAL ASSET EXPENSE ALLOCATION

Amortization expense anticipated w/o building	$64,913	**A**
(actual amount will be affected by asset disposals during the year)		
Amortization expense anticipated for building	$78,939	
(actual amount will be affected by asset disposals during the year)		
	$143,852	

PRLS BOARD TALK

Highlights of the Parkland Regional Library Board Meeting

SEPTEMBER 12, 2024

2025 Budget

The board approved the draft 2025 budget. Some points included:

- Overall, expenditures are anticipated to increase by 1.9% in 2025 which is well below the rate of inflation.
- Now that they are being updated, switching back to Municipal Affairs Population Lists instead of the Treasury Board Estimates for invoicing municipalities resulted in a drop of 9,277 population which Parkland will no longer invoice on.
- Due to the switch in population figures, 18 municipalities will see a drop in their requisition.
- To balance the budget, it will be necessary to increase the municipal requisition/levy by sixty-three cents.
- Had it been appropriate for Parkland to continue using the population figures supplied by the Treasury Board, the 2025 requisition would have been approximately forty cents per capita lower.

The Parkland budget with full notes will be sent to municipalities for approval next week.

Vacant Seat on the Executive Committee

In June, Parkland received notice that Jamie Coston, the Executive Committee member representing the town of Rimbey, is no longer on the Parkland Board. As such, she has also resigned from the Executive Committee. Parkland informed Bentley, Eckville, Gull Lake, Parkland Beach, Ponoka, Ponoka County, and Rimbey (Area 5) that their seat on the Executive Committee was vacant. Marc Mousseau from the Summer Village of Parkland Beach volunteered and will sit on the Executive Committee until the new Executive Committee is chosen at the November organizational meeting.

PRLS Plan of Service (Strategic Plan)

Recently there have been some significant changes to the Alberta Libraries Act and Regulation. Until now, library systems had to file a plan of service (strategic plan) with the Public Library Services Branch at Municipal Affairs every three years. With the changes in the legislation, plans of service for library systems can now be up to five years in length. The board moved to change the dates of Parkland's Strategic Plan from 2023-2025 to 2023-2027

Board Meeting Management

Back in December 2023 the Executive Committee formed a working group to develop a policy governing board member conduct. Having met three times, their work is now complete. The working group presented a draft policy for how to deal with "Complaints Against Board Members".

They also shared a brief board self-assessment survey to be conducted following the September board meeting, the final board meeting before the November organizational meeting.

The working group also recommended that at the October meeting of the Executive Committee, the group have an informal discussion allowing the committee to consider how effective it was over the course of the year.

Lastly, the working group commissioned the creation of a board member recruitment document so that when municipalities appoint individuals to the system board, they would have some idea of the preferred qualifications of candidates and what their role will be. This document will be sent out when Parkland communicates annually with member municipalities regarding who they are appointing to the Parkland board.

Advocacy Committee Report

Municipal Presentations: Parkland's Advocacy Committee recommended that municipal councils be visited by Parkland staff. To make the visits as useful as possible to the councils, two presentations have been

developed. Councils can request a presentation on either 1) Parkland's structure and services, or, 2) the overarching structure and operation of public library service in Alberta. Several requests for an orientation have been made by member municipalities.

Presentations are designed to be about 15 minutes in length. The committee also agreed that a Parkland board member, especially the Chair, Vice-Chair, or Advocacy Committee Chair should always attend the presentations with Parkland staff.

MLA Visits: Early in the New Year, Parkland's Advocacy Committee established as one of its goals:

> *"To continue to advocate for a cost-of-living adjustment to provincial operating grants and/or another infusion for increased library funding."*

Parkland staff and Board Chair have visited two of our MLAs over specific issues.

Parkland board members and staff will proceed with MLA visits this fall with the intent of informing MLAs on how support for public libraries contributes to achieving the goals of the Government of Alberta's strategic plan, and continue to seek regular increases to the provincial operating grants. Seeking an increase in SuperNet bandwidth for member libraries will also be a priority.

2025 Board Meeting Dates

The board reviewed the tentative dates for Parkland's 2025 board meetings which will be confirmed by the Board at the organizational meeting in November. The tentative dates are: February 27, May 15, September 11, and November 27, 2025. The board voted to continue exclusively with Zoom meetings.

Committee News from Trustees

Stettler Public Library Stettler Public Library and Stettler County are collaborating with community partners on Culture Days events throughout September. The library is also collaborating with the Stettler Adult Learning Centre to offer "Come for a Byte" to help 50+citizens manage their devices and learn to avoid online scams. The Friends of the Library are launching their 7th annual wine survivor fundraiser. The Summer Reading Club is wrapped up for another year and the feedback has been great. The Stettler library also collaborated with the Stettler High School shop class to build a mini golf course, which was put on County Museum property. They've built a gazebo and for Culture Days, each golf hole was named after a country.

Provost Municipal Library is celebrating their 75th anniversary on October third at 7:00 p.m., and the following Saturday, on October 5th are holding an escape room fundraiser at the library. Everyone is welcome to attend.

Carstairs Public Library is holding their second Mountain View Comicon event on Saturday October 19th.

Camrose Public Library has procured a grant for a part-time staff person that concentrates on newcomer welcome programming.

Innisfail Public Library started a new Human Library program this spring in partnership with the Welcome and Inclusivity Committee, which has been very popular and quite impactful.

Penhold and District Public Library had a very successful Summer Reading Club with 31,400 minutes recorded on reading trackers.

Board Members Present

Barb Gilliat (Board Chair), Gord Lawlor, Ray Reckseidler, **(Zoom)** Jackie Almberg, Laureen Clark-Rennie, Deb Coombes, Teresa Cunningham, Cal David, Dana Depalme, Jeff Eckstrand, Sarah Fahey, Richard Forsberg, Elaine Fossen, Shaleah Fox, Barbara Gibson, Twyla Hale, Kathy Hall, Pam Hansen, Bryce Liddle, Julie Maplethorpe, Ricci Matthews, Marc Mousseau, Joy-Anne Murphy, Jackie Northey, Jacquie Palm-Fraser, Jas Payne, Leonard Phillips, Diane Roth, Sandy Shipton, Debra Smith, Les Stulberg, Carlene Wetthuhn, Shannon Wilcox, Janice Wing

Board Members Absent

Jul Bissell, Wayne Clark, Edna Coulter, Todd Dalke, Cody Hillmer, Cody Johnson, Stephen Levy, Jordon Northcott, Shawn Peach, Ron These, Harvey Walsh

Board Members Absent with Regrets

Alison Barker-Jevne, Dwayne Fulton, Dana Kreil, Naomi Tercier, Bill Windsor

Staff

Kara Hamilton, Paige Mueller, Ron Sheppard, Tim Spark

HIGHLIGHTS OF THE REGULAR COUNCIL MEETING
September 12, 2024

ANIMALS IN RESIDENTIAL DISTRICTS
The County's 2024-2026 long-range Planning Program includes community consultation regarding animals in residential districts on the 2024 project schedule. As such, Council endorsed the Terms of Reference for community consultation and authorized staff to continue the consultation process. A public meeting to seek feedback on animals in residential districts was scheduled for Thursday, November 14, 2024 at 7:00 p.m. in Council Chambers.

YUILL SUBDIVISION RENAMING REQUEST
Council approved an application to rename the Yuill subdivision to Pelican Bay. The County Manager was directed to proceed with the renaming of the subdivision.

MINISTER'S AWARD FOR MUNICIPAL EXCELLENCE VIDEO
Council viewed the video for which Lacombe County recently received the Minister's Award for Municipal Excellence.

AGRICULTURAL SERVICE BOARD RESOLUTION
The County Manager was directed to submit the Veterinary Student Support resolution, as presented, to the Central Regional Agriculture Service Board Resolution Review Committee.

2023 MUNICIPAL INDICATORS
Council was provided with an overview of the 2023 Municipal Indicators results. In the 2023 reporting year, Lacombe County met or exceeded all indicators, with the exception of Investment and Infrastructure and Infrastructure Age. The County is deemed "not at risk" according to the performance measures as set out by Alberta Municipal Affairs.

2025 PAVING PROGRAM
Council approved the Five-Year Paving Program. Council authorized the County Manager to tender and award the pavement overlay (blue) and chip-seal (green) for the following roads in 2025:

Tees (Access)
Birch Bay (internal roads)
Eckville North Road
Eckville West Road
Sunbreaker Cove Road
Sandy Point Access Road
Prentiss Road (Lakeside - Hwy 597)
Meridian Road (Hwy 12A - 4 way stop)
Brighton Beach (Meridian east to end)
McLaurin Subdivision
Last Hill Road
Nova North Access (east portion)
34th Street

Council further authorized the County Manager to tender and award the base work and paving of Range Road 2-4 from Township Road 39-0 to Eagles Quay Subdivision.

LACOMBE COUNTY

WHERE PEOPLE ARE THE KEY

2025 REMAINING OPERATIONS CAPITAL PURCHASES

The County Manager was authorized to tender and award for the capital equipment purchases as presented, at an estimated cost of $800,000 and to dispose of the existing units at an estimated trade-in or private sale value of $175,000. The difference between the purchase of the new units and the sale of the old units, estimated at $625,000, will be funded from the Fleet and Equipment Reserve.

POLICE FUNDING MODEL SURVEY

Rural Municipalities of Alberta (RMA) is seeking municipal input through member survey to gauge how members have been impacted by the Police Funding Model (PFM) Agreement that is set to expire in 2025. Council provided responses to the survey for submission to the RMA.

UNREGISTERED APPROVED ROAD CLOSURE PLAN

The matter of the unregistered and approved road closure Plan 4359 EO was deferred to a future Council meeting.

OPPORTUNITY FOR MEETING WITH MINISTER OF TRANSPORTATION AND ECONOMIC CORRIDORS

Council will request to meet with Minister Dreeshen during the 2024 Rural Municipalities of Alberta (RMA) Fall Convention November 4 – 7, 2024.

MUNICIPAL TRANSPORTATION PRIORITIES

At the request of the office of the MLA Jason Nixon, MLA for Rimbey-Rocky Mountain House-Sundre, Lacombe County provided a list of priority transportation projects, which was endorsed by Council.

ALBERTA COMMUNITY PARTNERSHIP PROGRAM GRANT – GULL LAKE REGIONAL MASTER DRAINAGE FEASIBILITY STUDY

Lacombe County will participate in the Alberta Community Partnership Grant application with the Summer Village of Gull Lake, the Summer Village of Parkland Beach, and Ponoka County for the development of a regional master drainage feasibility study for Gull Lake and furthermore, agree that Ponoka County be designated as the managing partner for this project, subject to Ponoka County agreeing to participate in this project as the managing partner.

FOOD CYCLER MUNICIPAL SOLUTIONS

The Food Cycler Municipal Solutions Presentation be received for information. The County Manager was directed to prepare a report and recommendation regarding Food Cycler Municipal Solutions for consideration at a future Council meeting.

LACOMBE DISCOVER AVIATION EVENT

The invitation for Council to attend the Discover Aviation event on Sunday, September 29, 2024 at the Lacombe Regional Airport was received for information.

Next Regular Council Meeting is
September 26, 2024 – 9:00 a.m.

Next Committee of the Whole Meeting is
October 1, 2024 – 9:00 a.m.

Lacombe County Administration Building
****For more details from Lacombe County Council meetings, please refer to the meeting minutes. All meeting minutes are posted on the website (www.lacombecounty.com) after approval.**

EVERYONE IS WELCOME TO JOIN US

GOOD NEIGHBOR DAY

FREE EVENT FREE EVENT

SEPTEMBER 25 FROM 3:30 TO 7:30 PM

COME & GO AT THE BENTLEY AG CENTRE

LAST YEARS' EVENT HAD OVER 400 PEOPLE! CAN WE BEAT THAT THIS YEAR?

HAMBURGERS/HOT DOGS & MORE
MUSIC KIDZ ZONE TOUCH A TRUCK
COMMUNITY GROUPS INFORMATION
VISIT WITH NEIGHBORS - MEET NEW ONES
LEARN ABOUT THE COMMUNITY

If you are non-profit and would like to have an information table and/or contribute in any way to this annual event, contact 403-748-2160 or community@townofbentley.ca

Businesses are welcome to contribute as well, LET'S CHAT!

The School will also be holding their open house, s families can pop by both opportunities!

ALECIA AICHELLE

Performing 2 sets - starting at 5:30

www.facebook.com/AleciaAichelleMusic

TOGETHER WE ARE BETTER!

Nutrien Ag Solutions · THE MARKET in Bentley · Town of Bentley · fcss Family and Community Support Services · The Bentley Agricultural Society Since 1957 · AZTEC ENGINEERING INC.

This Event is in recognition of September 28th, National Good Neighbor Day

JOIN THE RECYCLING ROUNDUP!

GET READY TO RECYCLE THESE ITEMS FOR FREE:
ELECTRONICS • PAINT • TIRES • USED OIL MATERIALS HOUSEHOLD HAZARDOUS WASTE

Bring your recyclables to:

Lacombe Regional Waste Services Commission
Bentley Transfer Station

October 5th, 2024 1:00-4:45pm

Alberta recycling MANAGEMENT AUTHORITY

Learn more about recycling these materials at **albertarecycling.ca**

Annual Yard Waste Clean-up

Friday October 18, 2024

Items Accepted:

- Grass Clippings
- Compost
- Leaves
- Twigs and Small Branches
- Flower Bed and Garden Remains

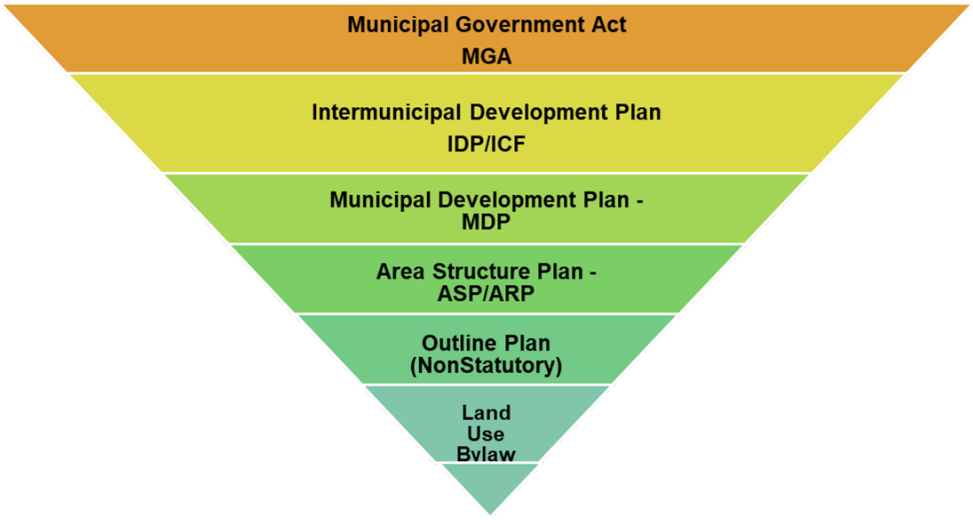
Items Refused:

- Large Tree Limbs
- Tree Stumps
- Construction Materials
- Building Demolition
- Household Garbage

Note: All yard waste must be either bagged or bundled neatly and placed in the alley for collection. Regular household garbage will be collected as normal on Thursday October 17, 2024

Public Information Session Notice
October 9, 2024 (6:00pm to 8:00pm)
Land Use Bylaw Proposed Changes

The Municipal Government Act (MGA) provides a hierarchy of documents for Land Use Planning in Alberta. Each level is required to be consistent with the level above it and below it, and that the policies or regulations within the planning document(s) at each level may be implemented by those below them in the decision-making process.



All municipalities are required to adopt a land use bylaw. The land use bylaw divides the municipality into districts, establishes development standards within each district and provides for a system for issuing development permits and managing development within the community.

In alignment with the Strategic Direction of Mayor and Council and in response to community vision aspiration and needs, the Town of Bentley is undertaking amendments to the Land Use Bylaw.

We cordially invite you to join us on October 9th to share your ideas and thoughts with us regarding the proposed amendments to the Land Use Bylaw. This public information session aims to provide an opportunity for members of the public to engage with the administration and our contracted planners through Parkland Community Planning Services (PCPS) to review and understand the proposed changes in the bylaw. This session will provides an opportunity for questions, feedback and gain a broader understanding of a key document for the municipality that will regulate future development within the community.

The session will be held at the Senior's Drop-In at 4918 50th Ave between 6:00pm and 8:00pm on Wednesday October 9, 2024.

Sincerely,

Marc Fortais
Chief Administrative Officer

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