Schedule “E”

CORVUS Off-Site Levy Review

City of Medicine Hat: Offsite Levy Review

Version 6 (Final)
June 20th, 2013

Presented to:
Abdul Khan, Development and Infrastructure Commissioner
City of Medicine Hat
580 First Street SE
Medicine Hat, AB
T1A 8E6
(403) 529-8354
abdkha@medicinehat.ca

Prepared by:
Greg Weiss, Partner
CORVUS Business Advisors
9670 – 95 Avenue
Edmonton, AB T6C 2A4
(780) 428-4110
gweiss@corvusbusinessadvisors.com
www.corvusbusinessadvisors.com

Tom Cooper, Associate
CORVUS Business Advisors
9670 – 95 Avenue
Edmonton, AB T6C 2A4
(780) 428-4110
tcooper@corvusbusinessadvisors.com
www.corvusbusinessadvisors.com

1 DOCUMENT INFORMATION

1.1 Revision History

Version Number	Revision Date	Summary of Changes and Author
1.0	January 8th, 2013	DRAFT: created by CORVUS Business Advisors
2.0	January 23rd, 2013	DRAFT: Reviewed by City staff
3.0	January 31st, 2013	DRAFT: Reviewed by City staff
4.0	February 4th, 2013	DRAFT: Reviewed by City staff
5.0	March 26th, 2013	FINAL: Reviewed by City staff
5.1	April 2nd, 2013	FINAL: “Confidential” identifier removed
6.0	June 20th, 2013	FINAL: Revised Node Allocations, County Allocations, etc.

2 CONTENTS

2.1 Table of Contents

3 INTRODUCTION

3.1 Introduction

In September 2012, City of Medicine Hat retained CORVUS Business Advisors for the provision of services related to the development of offsite levy rates.

To date, City of Medicine Hat has established various levies, development charges and development agreements to help fund offsite infrastructure costs. The establishment of new harmonized offsite levy methodology provides the City with a repeatable process, rate continuity and insight into the cost of infrastructure required to support development, the grants and other contributions that may be anticipated in defraying infrastructure costs, and infrastructure cost assignment to benefiting parties.

The City wishes to facilitate growth of the community by providing offsite levy rates for roads, water, sanitary, and stormwater infrastructure that are fair and equitable and comply with legislative and regulatory requirements. This report outlines the methodology used in establishing roads, water, sanitary, and stormwater offsite levy rates for City of Medicine Hat.

3.2 Methodology

City of Medicine Hat has undertaken various Master Plan studies to support offsite levy bylaws in the past. However, CORVUS was not provided with, nor was it within its mandate to review these master plans, as part of the project.

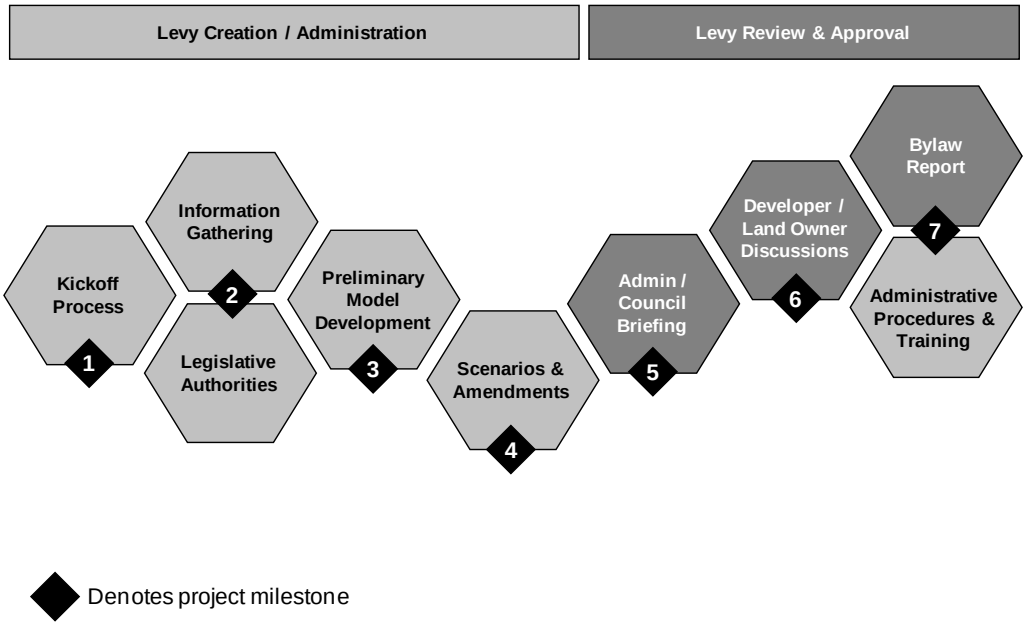
The City identified offsite projects for Roads, Water, Sanitary and Storm infrastructure including completed projects and future projects to support the 25 year growth plan. Each project was assessed for benefiting areas using the Offsite Development Areas identified in this report. The City's assessment included benefits to existing development, future development and intensification development. The City's worksheets were summarized in a project template for each project. This report uses the City's project templates as the basis for determining offsite levy rates.

Support provided by CORVUS Business Advisors has included:

- Establishing processes that would be used in the overall development, review, approval and administrative management of offsite levies for the City.
- Developing roads, water, sanitary, and stormwater offsite levy rates for the City's development areas.
- Developing processes to be used in collecting, administering and updating the City's offsite levies in the future.
- Presentation of offsite levy rates and background information to various stakeholders.

The following illustration outlines the macro level work plan undertaken for the study.

Offsite Levy Approach



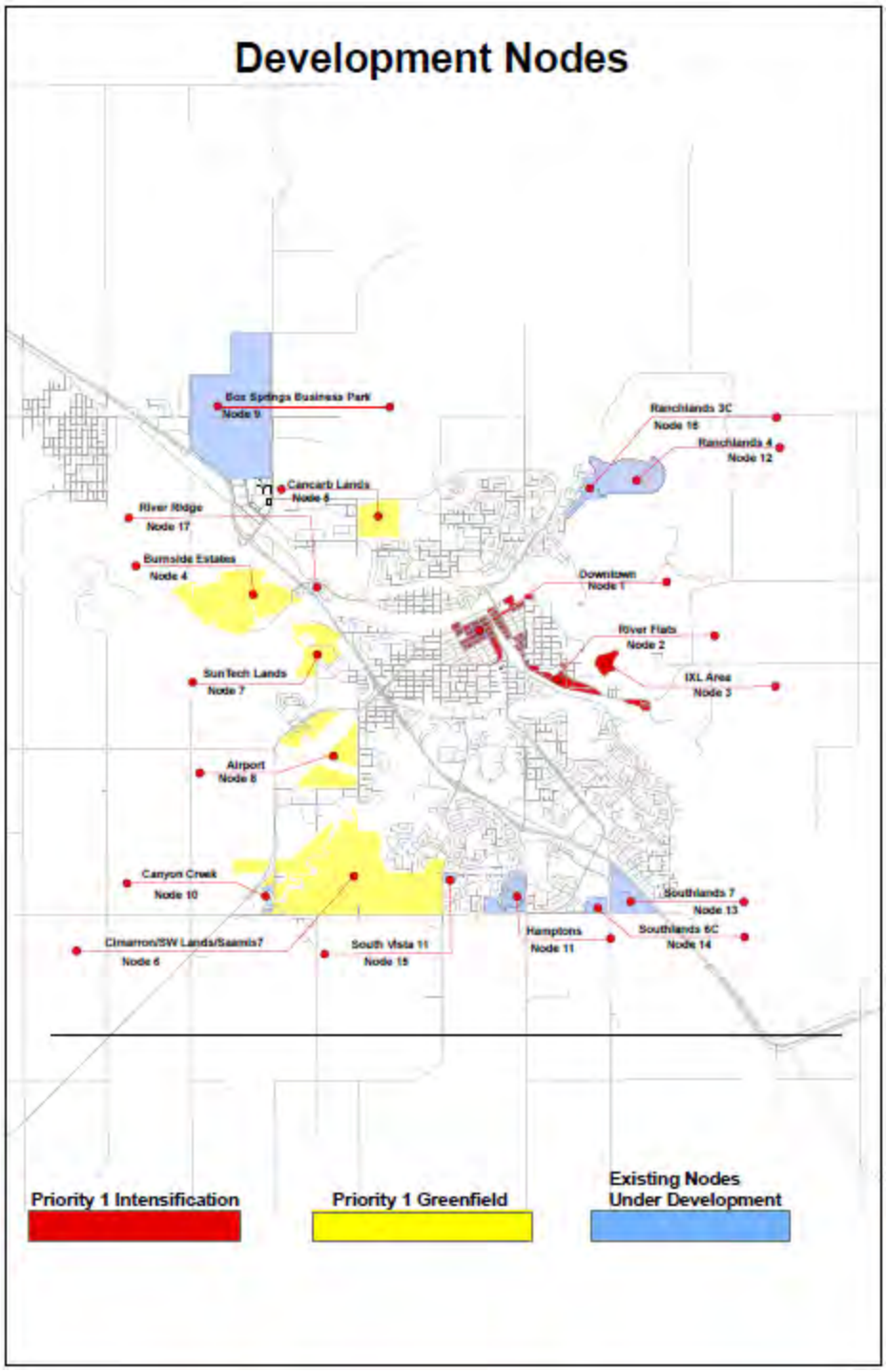
4 ANNUAL UPDATES

Offsite levy rates are not intended to stay static; they are based upon assumptions and the best available data of the day. Planning assumptions, cost estimates etc. may change each year. This is why the Municipal Government Act requires that offsite levy rates be updated with the most available information on a regular basis (usually annually). Should information change, it will be reflected in a future update, and rates adjusted accordingly.

5 OFFSITE LEVY DEVELOPMENT LANDS AND STAGING

The City's offsite levy development area under review is divided into 26 offsite levy areas/nodes, 17 of which anticipate development during the next 25 years, as shown in the map below. All offsite levy infrastructure costs have been allocated to one or more nodes.

Offsite Levy Development Nodes



Offsite levy areas 1 through 17 anticipate development during the next 25 years. Offsite levy areas 18 through 26 do not anticipate any development during the next 25 years as shown in the table below.

Offsite Levy Areas Not Anticipated to Develop During the 25-year Review Period

Area Ref. #	Development Area Location
18.0	Highway 3 / Industrial Lands
19.0	South Flats
20.0	NE Urban Reserve
21.0	Holsom Road
22.0	Upper Burnside
23.0	Dunmore Road
24.0	Uplands
25.0	13th Avenue
26.0	Industrial Commercial Area

Total net development area, the amount of land available for development in the offsite levy areas, is 4,633.79 ha. as outlined in the tables below. In calculating net development area only those lands remaining to be developed within the basin that have not previously paid offsite levies (as is required by legislation/regulation) have been considered. We have further made allowances in net development area calculations for environmental reserves, arterial road right of way and municipal reserves.

Offsite Levy Net Development Area

Area Ref. #	Development Area Location	Land Use	Gross Area (ha.)	Environmental Reserves (ha.)	Sub-total	Municipal Reserves	Road Right of Way	Net Development Area (ha.)	Net Development After 25 Yrs	Net Development Area w/ 25 Yrs
1.0	Downtown	Residential Intensification	46.30	-	46.30	-		46.30	22.84	23.46
2.0	River Flats	Residential Intensification	26.70	-	26.70	-		26.70	5.42	21.28
3.0	IXL Area	Residential Intensification	13.60	-	13.60	1.36		12.24	-	12.24
4.0	Burnside Estates	Residential	169.06	-	169.06	16.91	13.57	138.58	83.68	54.90
5.0	Cancarb Lands	Residential	53.08	-	53.08	5.31		47.77	0.00	47.77
6.0	Cimarron / SW Lands / Saamis 7	Residential	405.96	88.99	316.97	31.89	11.30	273.78	70.31	203.47
7.0	Suntech Lands	Residential	54.90	21.80	33.10	3.31	1.10	28.69	-	28.69
8.0	Airport	Non-residential	113.10	-	113.10	11.31		101.79	81.40	20.39
9.0	Box Springs	Non-residential	361.20	-	361.20	36.12		325.08	263.92	61.16
10.0	Canyon Creek	Residential	10.10	6.30	3.80	1.00		2.80	-	2.80
11.0	Hamptons	Residential	39.70	-	39.70	2.70	0.64	36.36	-	36.36
12.0	Ranchlands 4	Residential	165.00	81.90	83.10	11.30	-	71.80	-	71.80
13.0	Southlands 7	Residential	46.10	-	46.10	0.60	-	45.50	-	45.50
14.0	Southlands 6C	Residential	14.00	-	14.00	4.30	-	9.70	-	9.70
15.0	South Vista 11	Residential	4.30	-	4.30	0.43	-	3.87	-	3.87
16.0	Ranchlands 3C	Residential	30.60	10.90	19.70	2.40	-	17.30	-	17.30
17.0	River Ridge	Residential	1.65	-	1.65	-	-	1.65	-	1.65
18.0	Highway 3 / Industrial Lands	Residential Intensification	135.40	-	135.40	-	-	135.40	135.40	-
19.0	South Flats	Residential Intensification	26.70	-	26.70	-	-	26.70	26.70	-
20.0	NE Urban Reserve	Residential	402.10	-	402.10	40.21	-	361.89	361.89	-
21.0	Holsom Road	Residential	815.70	7.30	808.40	80.84	-	727.56	727.56	-
22.0	Upper Burnside	Residential	197.70	2.10	195.60	-	-	195.60	195.60	-
23.0	Dunmore Road	Residential Intensification	54.30	-	54.30	-	-	54.30	54.30	-
24.0	Uplands	Residential Intensification	16.60	-	16.60	-	-	16.60	16.60	-
25.0	13th Avenue	Residential Intensification	30.50	-	30.50	3.05	-	27.45	27.45	-
26.0	Industrial Commercial Area	Non-residential	2,109.30	-	2,109.30	210.93	-	1,898.37	1,898.37	-
		Total	**5,343.65**	**219.29**	**5,124.36**	**463.96**	**26.61**	**4,633.79**	**3,971.45**	**662.34**

Summary of Offsite Levy Net Development Area

Description	ha.
Gross Development Area	5,343.65
Less Environment Reserve	219.29
Less Municipal Reserve	463.96
Less ROW Allowance	26.61
Net Development Area	4,633.79

*Note: 1 Hectare (ha.) = ~2.47 Acres

Net development area definitions will be applied in determining offsite levy obligations of Developers on application for subdivision or development within City of Medicine Hat. Net development area is defined as follows:

- Gross Area – The area of lands to be developed in hectares that have not previously paid an offsite levy.
    - Less: Any environmental reserves contained within the development area Including environmental reserves and environmental easements.
    - Less: A 10% allowance for Municipal Reserves.
    - Less: The measurement of arterial road right of way that bisects the development lands.
- Equals: Net Developable Area, which is the area subject to offsite levies.

5.1 Development Staging

A rate planning period of 25 years was used for this review. This planning period is typical for municipalities as it provides a reasonable time frame to recoup the costs associated with offsite levy infrastructure construction, and it aligns with the timeframes of most municipal capital planning and construction cycles.

Of the 4,633.79 ha. of net development area available across all offsite levy development areas, planners estimate that approximately 14.3% of this land (662.34 ha.) will develop during the next 25 years (the rate planning period) as shown in the tables below.

Development During the Rate Planning Period (25 years)

Area Ref. #	Development Area Location	Area Developed in 25 years	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
1.0	Downtown	23.46	0.49	0.49	0.49	0.49	0.49	0.62	0.62	0.62	0.62	0.62	0.74	0.74	0.74	0.74	0.74	1.23	1.23	1.23	1.23	1.23	1.61	1.61	1.61	1.61	1.61
2.0	River Flats	21.28	0.28	0.28	0.28	0.28	0.28	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	1.42	1.42	1.42	1.42	1.42	1.70	1.70	1.70	1.70	1.70
3.0	IXL Area	12.24	-	-	-	-	-	0.78	0.78	0.78	0.78	0.78	1.66	1.66	1.66	1.66	1.66	-	-	-	-	-	-	-	-	-	-
4.0	Burnside Estates	54.90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.71	4.71	4.71	4.71	4.71	6.27	6.27	6.27	6.27	6.27
5.0	Cancarb Lands	47.77	2.09	2.09	2.09	2.09	2.09	4.70	4.70	4.70	4.70	4.70	2.76	2.76	2.76	2.76	2.76	-	-	-	-	-	-	-	-	-	-
6.0	Cimarron / SW Lands / Saar	203.47	2.35	2.35	2.35	2.35	2.35	3.15	3.15	3.15	3.15	3.15	8.40	8.40	8.40	8.40	8.40	13.66	13.66	13.66	13.66	13.66	13.13	13.13	13.13	13.13	13.13
7.0	Suntech Lands	28.69	-	-	-	-	-	-	-	-	-	-	3.40	3.40	3.40	3.40	3.40	2.34	2.34	2.34	2.34	2.34	-	-	-	-	-
8.0	Airport	20.39	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
9.0	Box Springs	61.16	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45
10.0	Canyon Creek	2.80	0.56	0.56	0.56	0.56	0.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.0	Hamptons	36.36	2.74	2.74	2.74	2.74	2.74	4.53	4.53	4.53	4.53	4.53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.0	Ranchlands 4	71.80	-	-	-	-	-	6.35	6.35	6.35	6.35	6.35	8.01	8.01	8.01	8.01	8.01	-	-	-	-	-	-	-	-	-	-
13.0	Southlands 7	45.50	-	-	-	-	-	4.55	4.55	4.55	4.55	4.55	4.55	4.55	4.55	4.55	4.55	-	-	-	-	-	-	-	-	-	-
14.0	Southlands 6C	9.70	1.94	1.94	1.94	1.94	1.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.0	South Vista 11	3.87	0.77	0.77	0.77	0.77	0.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.0	Ranchlands 3C	17.30	-	-	-	-	-	3.46	3.46	3.46	3.46	3.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.0	River Ridge	1.65	0.33	0.33	0.33	0.33	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.0	Highway 3 / Industrial Lands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.0	South Flats	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.0	NE Urban Reserve	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.0	Holsom Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.0	Upper Burnside	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.0	Dunmore Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.0	Uplands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.0	13th Avenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.0	Industrial Commercial Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		662.34	14.83	14.83	14.83	14.83	14.83	31.84	31.84	31.84	31.84	31.84	33.21	33.21	33.21	33.21	33.21	26.61	26.61	26.61	26.61	26.61	25.97	25.97	25.97	25.97	25.97

Summary of Development During the Rate Planning Period (25 years)

Developed In 25 Years	662.34	14.3%
Developed Beyond 25 Years	3,971.45	85.7%
Net Development Area	4,633.79	

Net development areas have been further classified according to anticipated land use. Land use classifications include: (1) Residential, (2) Non-residential, (3) Residential Intensification, and (4) Non-residential Intensification. The table below outlines the anticipated development by land use type during the rate planning period (25 years).

Development By Land Use Type During the Rate Planning Period (25 years)

Land Use Type	Net Development Area In Next 25 Years	%
Residential	523.81	79.1%
Non-residential	81.55	12.3%
Residential Intensification	56.98	8.6%
Non-residential Intensification	-	0.0%
Total	662.34	100.0%

6 ROADS

6.1 Road Offsite Infrastructure

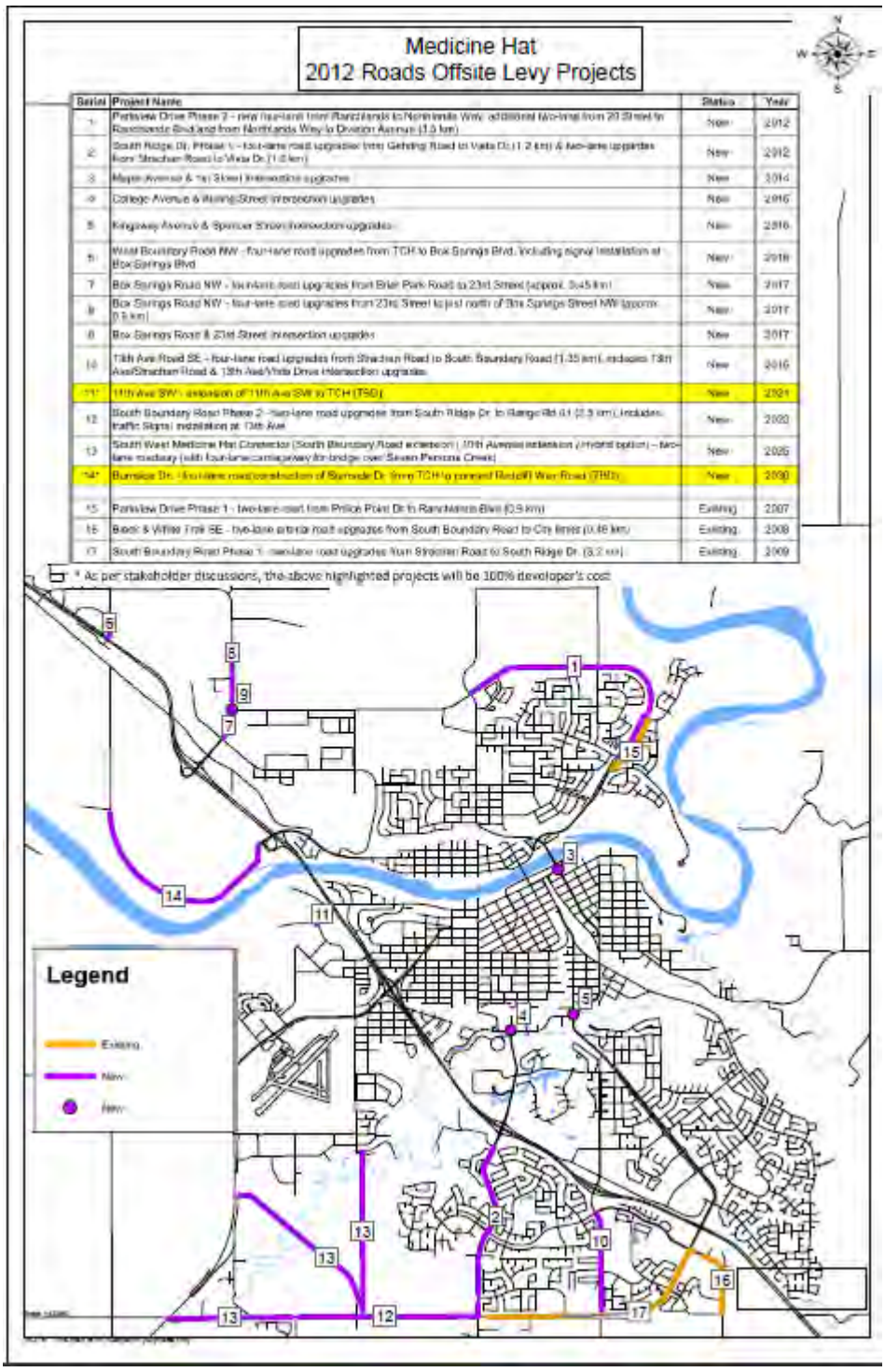
In order to support future community growth, road offsite infrastructure is required. The estimated cost of this infrastructure based upon: (a) actual construction costs to date, (b) debenture interest associated with financing, and (c) 2012 cost estimates. Total cost is approximately $114.93 million as outlined in the table below. Actual costs and debenture interest was provided by City finance staff. Costs estimates were provided by the City engineering staff. It is important to note that these costs represent “gross” costs, of which only a portion will go to support development during the 25-year review period. The remainder of this section outlines how the “net” costs for development are determined.

Summary of Road Offsite Infrastructure

Item	Project Description	Cost of Completed Work	Debenture Interest	Estimated Cost of Work Yet to be Completed	Total Project Estimated Cost
1	Parkview Drive Phase 2 (2012)	$ -		$ 12,000,000	$ 12,000,000
2	South Ridge Drive Phase 1 (2012)	$ -		$ 11,475,000	$ 11,475,000
3	Maple Avenue & 1st Street Intersection Upgrade (2014)	$ -		$ 1,000,000	$ 1,000,000
4	College Avenue & Kipling Street Intersection Upgrade (2015)	$ -		$ 2,000,000	$ 2,000,000
5	Kingsway Avenue & Spencer Street Intersection Upgrade (2016)	$ -		$ 3,500,000	$ 3,500,000
6	West Boundary Road (2016)	$ -		$ 2,500,000	$ 2,500,000
7	Box Spings Road Upgrade Phase 1 (2017)	$ -		$ 3,000,000	$ 3,000,000
8	Box Spings Road Upgrade Phase 2 (2017)	$ -		$ 5,800,000	$ 5,800,000
9	Box Springs Road & 23rd Street Intersection Upgrade (2017)	$ -		$ 2,000,000	$ 2,000,000
10	13th Avenue SE (2015)	$ -		$ 9,000,000	$ 9,000,000
11	11th Avenue SW Extension (2021)	$ -		$ -	$ -
12	South Boundary Road Phase 2 (2023)	$ -		$ 10,750,000	$ 10,750,000
13	South West Medicine Hat Connector (2025)	$ -		$ 27,000,000	$ 27,000,000
14	Burnside Drive (2030)	$ -		$ -	$ -
15	Parkview Drive Phase 1 (2007)	$ 5,800,000		$ -	$ 5,800,000
16	Black & White Trail SE (2008)	$ 4,650,000		$ -	$ 4,650,000
17	South Boundary Road Phase 1 (2009)	$ 14,450,000		$ -	$ 14,450,000
		$ 24,900,000	$ -	$ 90,025,000	**$ 114,925,000**

A map showing the location of this infrastructure is shown below:

Location of Road Offsite Infrastructure



6.2 Road Offsite Infrastructure Grants & Contributions to Date

The MGA enables the City to recoup costs for infrastructure, other than those costs that have been provided by way of special grant or contribution (i.e., contributed infrastructure). City of Medicine Hat does not anticipate the receipt of any special grants for road offsite levy infrastructure as shown in the table below (note, if the City receives other grants in the future, it will be reflected in one of the annual updates and rates adjusted accordingly). City of Medicine Hat has not collected any development agreement or other contributions for the construction of road infrastructure. The result is that the total reduced project estimated cost remains at $114.93 million.

Special Grants and Contributions for Road Offsite Infrastructure

Item	Project Description	Total Project Estimated Cost	Special Provincial Grants	Developer Agreement Contributions	Reduced Project Estimated Cost
1	Parkview Drive Phase 2 (2012)	$ 12,000,000			$ 12,000,000
2	South Ridge Drive Phase 1 (2012)	$ 11,475,000			$ 11,475,000
3	Maple Avenue & 1st Street Intersection Upgrade (2014)	$ 1,000,000			$ 1,000,000
4	College Avenue & Kipling Street Intersection Upgrade (2015)	$ 2,000,000			$ 2,000,000
5	Kingsway Avenue & Spencer Street Intersection Upgrade (2016)	$ 3,500,000			$ 3,500,000
6	West Boundary Road (2016)	$ 2,500,000			$ 2,500,000
7	Box Spings Road Upgrade Phase 1 (2017)	$ 3,000,000			$ 3,000,000
8	Box Spings Road Upgrade Phase 2 (2017)	$ 5,800,000			$ 5,800,000
9	Box Springs Road & 23rd Street Intersection Upgrade (2017)	$ 2,000,000			$ 2,000,000
10	13th Avenue SE (2015)	$ 9,000,000			$ 9,000,000
11	11th Avenue SW Extension (2021)	$ -			$ -
12	South Boundary Road Phase 2 (2023)	$ 10,750,000			$ 10,750,000
13	South West Medicine Hat Connector (2025)	$ 27,000,000			$ 27,000,000
14	Burnside Drive (2030)	$ -			$ -
15	Parkview Drive Phase 1 (2007)	$ 5,800,000			$ 5,800,000
16	Black & White Trail SE (2008)	$ 4,650,000			$ 4,650,000
17	South Boundary Road Phase 1 (2009)	$ 14,450,000			$ 14,450,000
		$ 114,925,000	**$ -**	**$ -**	**$ 114,925,000**

6.3 Road Offsite Infrastructure Benefiting Parties

The road offsite infrastructure previously outlined will benefit various parties to varying degrees. During this review three potential benefiting parties were identified including:

- City of Medicine Hat – a portion of the road infrastructure which is required to service existing residents.
- Other Stakeholders (or oversizing) – other parties (such as neighboring municipalities) or growth beyond the 25 year time frame of this review, that benefit from infrastructure oversizing and the like.
- City of Medicine Hat Developers – all growth related infrastructure (i.e., levyable road infrastructure costs) during the 25 year rate planning period.

The table below outlines the allocation of road offsite levy infrastructure costs to benefiting parties. Percentage allocations have been determined after reducing road offsite levy infrastructure costs for grants and contributions described earlier.

Allocation of Road Infrastructure to Benefiting Parties

Item	Project Description	Reduced Project Estimated Cost	City Share %	Other Stakeholder Share (Oversizing) %	OSL / Developer Share %
1	Parkview Drive Phase 2 (2012)	$ 12,000,000	52.700%		47.300%
2	South Ridge Drive Phase 1 (2012)	$ 11,475,000	43.529%		56.471%
3	Maple Avenue & 1st Street Intersection Upgrade (2014)	$ 1,000,000	50.000%	2.000%	48.000%
4	College Avenue & Kipling Street Intersection Upgrade (2015)	$ 2,000,000	50.000%	4.000%	46.000%
5	Kingsway Avenue & Spencer Street Intersection Upgrade (2016)	$ 3,500,000	50.000%	6.000%	44.000%
6	West Boundary Road (2016)	$ 2,500,000	45.440%	6.547%	48.013%
7	Box Spings Road Upgrade Phase 1 (2017)	$ 3,000,000	40.481%	9.523%	49.996%
8	Box Spings Road Upgrade Phase 2 (2017)	$ 5,800,000	13.138%	13.898%	72.964%
9	Box Springs Road & 23rd Street Intersection Upgrade (2017)	$ 2,000,000	50.000%	8.000%	42.000%
10	13th Avenue SE (2015)	$ 9,000,000	44.759%	4.419%	50.822%
12	South Boundary Road Phase 2 (2023)	$ 10,750,000	37.907%	17.386%	44.707%
13	South West Medicine Hat Connector (2025)	$ 27,000,000	15.000%	40.800%	44.200%
15	Parkview Drive Phase 1 (2007)	$ 5,800,000	52.000%		48.000%
16	Black & White Trail SE (2008)	$ 4,650,000	59.503%		40.497%
17	South Boundary Road Phase 1 (2009)	$ 14,450,000	37.910%		62.090%
		$ 114,925,000			

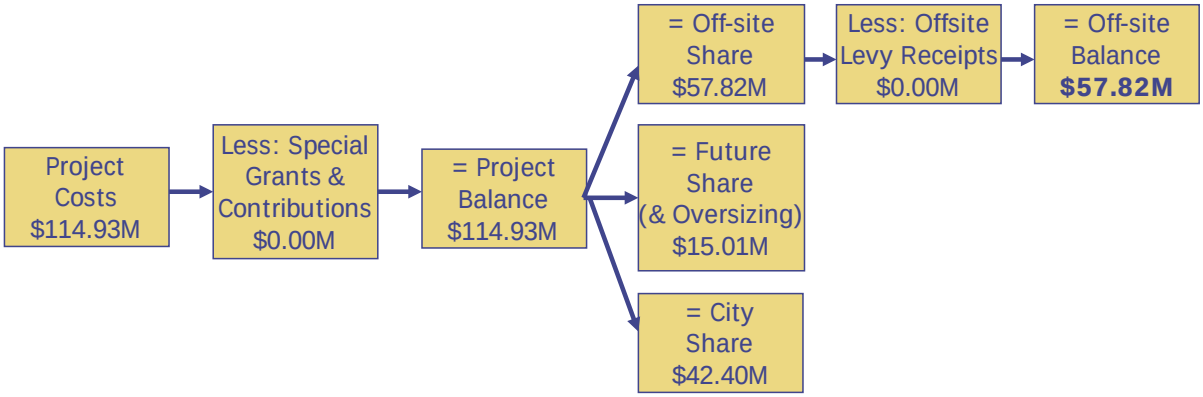
6.4 Existing Receipts

Prior to allocating costs to benefiting parties, existing offsite levy receipts collected from developers need to be considered in determining the residual/net costs to developers. In the case of City of Medicine Hat, City staff have advised CORVUS that they have amended (reduced) benefitting allocations to developers from previous bylaws for offsite levy receipts that have been collected to date. For example, in the 2006 offsite levy bylaw 100% of Project #1 (Parkview Drive) was allocated to development. With the adjustments made for receipts, the new allocation to development has been reduced to 47.3%. As benefiting areas have been amended, no receipts have been reflected in the rate calculation model.

6.5 Total Road Offsite Levy Costs

As shown in the figure below, the total cost for road infrastructure that forms the basis of the rate is approximately $57.82 million. The cost allocations to each benefitting party are based on the benefitting percentages shown in Section 6.3. The offsite levy balance (due from developers) is allocated to various benefitting areas (as described in the next section).

Total Road Offsite Levy Costs



6.6 Road Infrastructure Benefiting Areas

Net developer costs for each project have been allocated to multiple benefiting offsite levy area (see tables below). Allocations are denoted with a "1" below applicable area numbers. Benefiting areas were determined by City engineering staff. The lands anticipated to develop over the 25 years in each offsite levy benefitting area are used to determine rates.

Benefiting Areas for Road Offsite Infrastructure

Item	Project Description	Developer Cost	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
1	Parkview Drive Phase 2 (2012)	$ 5,676,000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	South Ridge Drive Phase 1 (2012)	$ 6,480,000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	Maple Avenue & 1st Street Intersection Upgrade (2014)	$ 480,000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	College Avenue & Kipling Street Intersection Upgrade (2015)	$ 920,000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	Kingsway Avenue & Spencer Street Intersection Upgrade (2016)	$ 1,540,000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	West Boundary Road (2016)	$ 1,200,320	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	Box Spings Road Upgrade Phase 1 (2017)	$ 1,499,879	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	Box Spings Road Upgrade Phase 2 (2017)	$ 4,231,917	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	Box Springs Road & 23rd Street Intersection Upgrade (2017)	$ 840,000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	13th Avenue SE (2015)	$ 4,573,947	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	11th Avenue SW Extension (2021)	$ -	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	South Boundary Road Phase 2 (2023)	$ 4,805,998	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	South West Medicine Hat Connector (2025)	$ 11,934,000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	Burnside Drive (2030)	$ -	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	Parkview Drive Phase 1 (2007)	$ 2,784,000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	Black & White Trail SE (2008)	$ 1,883,111	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17	South Boundary Road Phase 1 (2009)	$ 8,972,005	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		$ 57,821,176																	

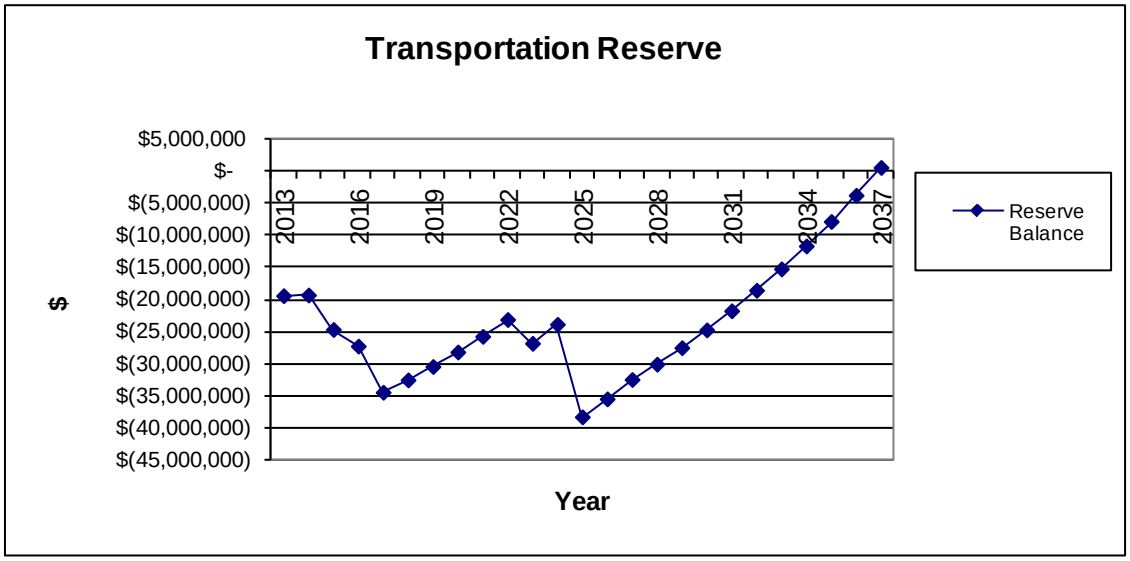
6.7 Development and Road Staging Impacts

Road offsite infrastructure will be constructed in staged fashion over the 25-year development period. We have reviewed the availability of offsite levy funds to meet these construction requirements and found that offsite levy reserve funds will not be sufficient to

pay for construction of road infrastructure from time to time—front ending of infrastructure will be required. A front-ender is the party (to date the City of Medicine Hat has been the sole front-ender) that constructs and pays up front for infrastructure that benefits other parties.

In order to compensate parties for capital they provide in front-ending offsite infrastructure construction, a 3.5% interest allowance has been created in offsite levy rate calculations. Further, a 2.0% interest credit has been provided to reduce offsite levy rates for interest earned on positive reserve balances. The graph and table below outline road levy reserve balances over the 25-year development period.

Anticipated Road Offsite Levy Reserve Balances



It should be noted that the opening balance of the roads offsite levy reserve is $5.77 million (end 2011). This was provided by City finance staff.

Anticipated Road Offsite Levy Reserve Balances

		Opening Balance	$ 5,774,524
Year	**Receipts**	**Expenditure**	**Interest**	**Balance**
2013 & Prior Years	$ 1,216,884	$ 25,795,116	$ (658,130)	$ (19,461,837)
2014	$ 1,253,391	$ 494,400	$ (654,600)	$ (19,357,446)
2015	$ 1,290,992	$ 5,828,528	$ (836,324)	$ (24,731,306)
2016	$ 1,329,722	$ 2,994,422	$ (923,860)	$ (27,319,866)
2017	$ 1,369,614	$ 7,396,614	$ (1,167,140)	$ (34,514,006)
2018	$ 3,028,576	$ -	$ (1,101,990)	$ (32,587,421)
2019	$ 3,119,433	$ -	$ (1,031,380)	$ (30,499,367)
2020	$ 3,213,016	$ -	$ (955,022)	$ (28,241,374)
2021	$ 3,309,406	$ -	$ (872,619)	$ (25,804,586)
2022	$ 3,408,689	$ -	$ (783,856)	$ (23,179,754)
2023	$ 3,662,824	$ 6,458,860	$ (909,153)	$ (26,884,942)
2024	$ 3,772,709	$ -	$ (808,928)	$ (23,921,162)
2025	$ 3,885,890	$ 17,015,030	$ (1,296,761)	$ (38,347,062)
2026	$ 4,002,467	$ -	$ (1,202,061)	$ (35,546,656)
2027	$ 4,122,541	$ -	$ (1,099,844)	$ (32,523,960)
2028	$ 3,402,629	$ -	$ (1,019,247)	$ (30,140,577)
2029	$ 3,504,708	$ -	$ (932,255)	$ (27,568,125)
2030	$ 3,609,849	$ -	$ (838,540)	$ (24,796,816)
2031	$ 3,718,144	$ -	$ (737,754)	$ (21,816,425)
2032	$ 3,829,689	$ -	$ (629,536)	$ (18,616,272)
2033	$ 3,849,638	$ -	$ (516,832)	$ (15,283,467)
2034	$ 3,965,127	$ -	$ (396,142)	$ (11,714,481)
2035	$ 4,084,081	$ -	$ (267,064)	$ (7,897,464)
2036	$ 4,206,603	$ -	$ (129,180)	$ (3,820,041)
2037	$ 4,332,802	$ -	$ 10,255	$ 523,016

6.8 Road Offsite Levy Rates

The table below outlines offsite levy rates associated with construction of road offsite infrastructure. Differences in rates reflect the differential benefits accruing to the basin. These are the rates that will be charged to developers as reflected in the offsite levy bylaw. For information, the weighted average rate across all basins is $82,060 per ha.

Summary of Road Offsite Levies by Area

Area Ref. #	Transportation Charges ($/ha.)
1.0	$ 82,060
2.0	$ 82,060
3.0	$ 82,060
4.0	$ 82,060
5.0	$ 82,060
6.0	$ 82,060
7.0	$ 82,060
8.0	$ 82,060
9.0	$ 82,060
10.0	$ 82,060
11.0	$ 82,060
12.0	$ 82,060
13.0	$ 82,060
14.0	$ 82,060
15.0	$ 82,060
16.0	$ 82,060
17.0	$ 82,060

7 WATER

7.1 Water Offsite Infrastructure

In order to support future community growth, water offsite infrastructure is required. The estimated cost of this infrastructure based upon: (a) actual construction costs to date, (b) debenture interest associated with financing, and (c) 2012 cost estimates. Total cost is approximately $131.28 million as outlined in the table below. Actual costs and debenture interest was provided by City finance staff. Costs estimates were provided by the City engineering staff. It is important to note that these costs represent “gross” costs, of which only a portion will go to support development during the 25-year review period. The remainder of this section outlines how the “net” costs for development are determined.

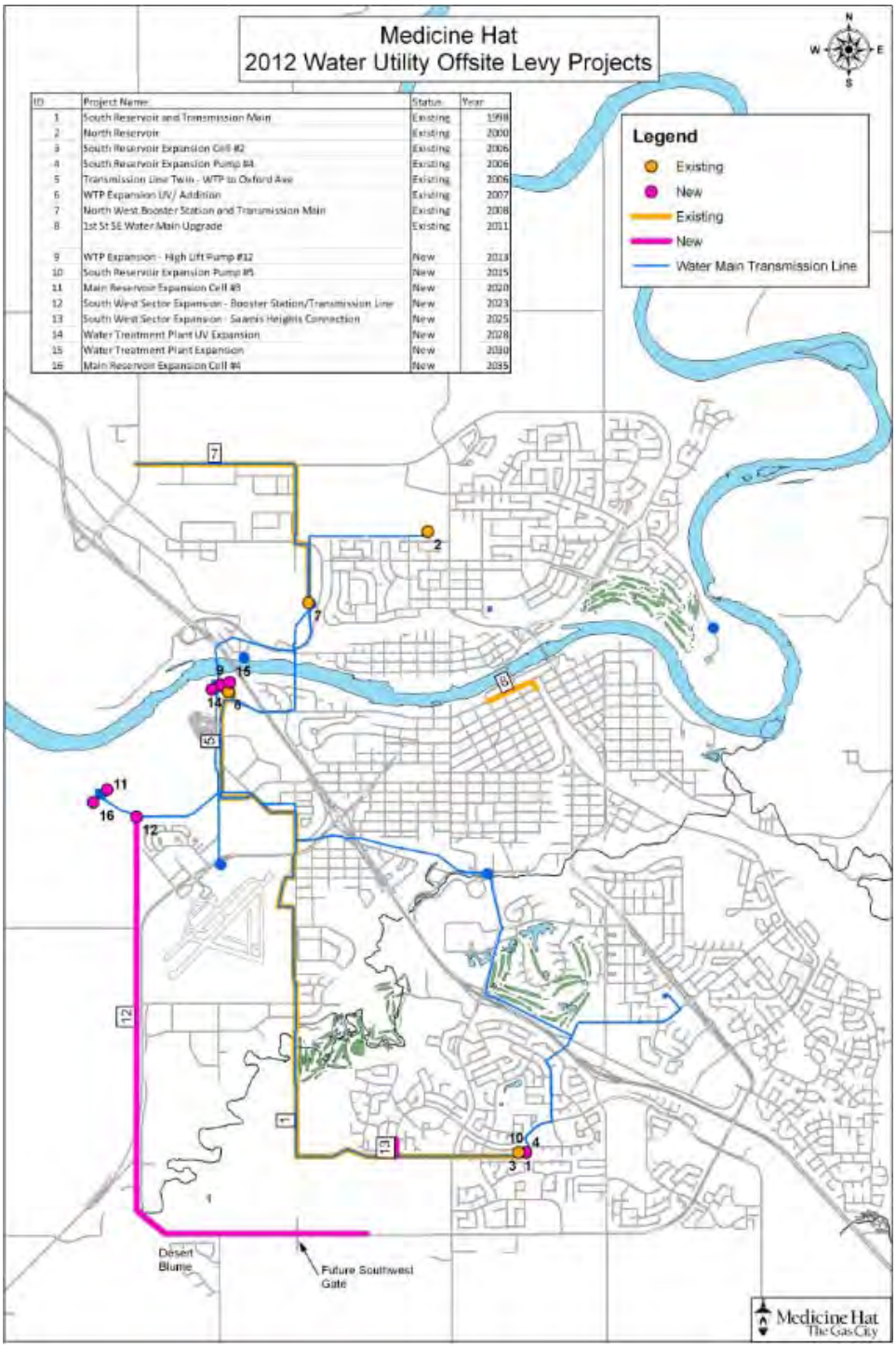
Summary of Water Offsite Infrastructure

Item	Project Description	Cost of Completed Work	Debenture Interest	Estimated Cost of Work Yet to be Completed	Total Project Estimated Cost
1	South Reservoir and Transmission Line (1998)	$ 6,278,000	$ 4,332,791	$ -	$ 10,610,791
2	North Reservoir (2000)	$ 4,836,000	$ 3,716,062	$ -	$ 8,552,062
3	South Reservoir Cell #2 (2006)	$ 3,400,000	$ 1,883,528	$ -	$ 5,283,528
4	South Reservoir Pump #4 (2006)	$ 250,000	$ 125,840	$ -	$ 375,840
5	Transmission Line Twinning from WTP to Oxford Avenue (2006)	$ 2,856,274	$ 1,510,079	$ -	$ 4,366,353
6	WTP Expansion (2007)	$ 19,700,000	$ 9,590,230	$ -	$ 29,290,230
7	NW Booster and Transmission Main (2008)	$ 9,864,767	$ 5,563,613	$ -	$ 15,428,380
8	First St. SE Water Main Upgrade (2011)	$ 2,362,223	$ 457,410	$ -	$ 2,819,633
9	WTP Expansion High Lift Pump #12 (2013)	$ -		$ 810,000	$ 810,000
10	South Reservoir Pump #5 (2015)	$ -		$ 250,000	$ 250,000
11	Main Reservoir Expansion Cell #3 (2020)	$ -		$ 6,300,000	$ 6,300,000
12	SW Sector Booster Station and Transmission Line (2023)	$ -	$ 319,145	$ 16,670,000	$ 16,989,145
13	SW Sector Saamis Emergency Connection (2025)	$ -		$ 900,000	$ 900,000
14	WTP UV Expansion (2028)	$ -		$ 2,000,000	$ 2,000,000
15	WTP Expansion (2030)	$ -		$ 21,000,000	$ 21,000,000
16	Main Reservoir Expansion Cell #4 (2035)	$ -		$ 6,300,000	$ 6,300,000
		$ 49,547,264	**$ 27,498,698**	**$ 54,230,000**	**$ 131,275,962**

With respect to the debenture interest associated with Item 12 SW Sector Booster Station and Transmission Line (2023), the City reports that this is a project that was initially identified in 2006 during a Municipal Development Amendment that brought the Cimarron/South West Lands into the approved growth strategy. In order to service this land, an expansion of the water supply is required. The Developer identified a rapid growth strategy which seemed reasonable under the conditions of the strong economy at the time. As a result, the Water Utility initiated a capital project in 2006 to commence the design for this project. However, the economic conditions changed in 2009 which reduced the urgency of this project. Under the current growth strategy, this project is now anticipated in 2023. The debenture interest of $319,145 shown for this project in the above table covers the 2010 debenture loan of $625,000 to cover design costs.

A map showing the location of this infrastructure is shown below:

Location of Water Offsite Infrastructure



7.2 Water Offsite Infrastructure Grants & Contributions to Date

The MGA enables the City to recoup costs for infrastructure, other than those costs that have been provided by way of special grant or contribution (i.e., contributed infrastructure). City of Medicine Hat does not anticipate the receipt of any special grants for water offsite levy infrastructure as shown in the table below (note, if the City receives other grants in the future, it will be reflected in one of the annual updates and rates adjusted accordingly). City of Medicine Hat has not collected any development agreement or other contributions for the construction of water infrastructure. The result is that the total reduced project estimated cost remains at $131.28 million.

Special Grants and Contributions for Water Offsite Infrastructure

Item	Project Description	Total Project Estimated Cost	Special Provincial Grants	Developer Agreement Contributions	Reduced Project Estimated Cost
1	South Reservoir and Transmission Line (1998)	$ 10,610,791			$ 10,610,791
2	North Reservoir (2000)	$ 8,552,062			$ 8,552,062
3	South Reservoir Cell #2 (2006)	$ 5,283,528			$ 5,283,528
4	South Reservoir Pump #4 (2006)	$ 375,840			$ 375,840
5	Transmission Line Twinning from WTP to Oxford Avenue (2006)	$ 4,366,353			$ 4,366,353
6	WTP Expansion (2007)	$ 29,290,230			$ 29,290,230
7	NW Booster and Transmission Main (2008)	$ 15,428,380			$ 15,428,380
8	First St. SE Water Main Upgrade (2011)	$ 2,819,633			$ 2,819,633
9	WTP Expansion High Lift Pump #12 (2013)	$ 810,000			$ 810,000
10	South Reservoir Pump #5 (2015)	$ 250,000			$ 250,000
11	Main Reservoir Expansion Cell #3 (2020)	$ 6,300,000			$ 6,300,000
12	SW Sector Booster Station and Transmission Line (2023)	$ 16,989,145			$ 16,989,145
13	SW Sector Saamis Emergency Connection (2025)	$ 900,000			$ 900,000
14	WTP UV Expansion (2028)	$ 2,000,000			$ 2,000,000
15	WTP Expansion (2030)	$ 21,000,000			$ 21,000,000
16	Main Reservoir Expansion Cell #4 (2035)	$ 6,300,000			$ 6,300,000
		$ 131,275,962	**$ -**	**$ -**	**$ 131,275,962**

7.3 Water Offsite Infrastructure Benefiting Parties

The water offsite infrastructure previously outlined will benefit various parties to varying degrees. During this review three potential benefiting parties were identified including:

- City of Medicine Hat – a portion of the water infrastructure which is required to service existing residents.
- Other Stakeholders (or oversizing) – other parties (such as neighboring municipalities) or growth beyond the 25 year time frame of this review, that benefit from infrastructure oversizing and the like.
- City of Medicine Hat Developers – all growth related infrastructure (i.e., levyable water infrastructure costs) during the 25 year rate planning period.

The table below outlines the allocation of water offsite levy infrastructure costs to benefiting parties. Percentage allocations have been determined after reducing water offsite levy infrastructure costs for grants and contribution described earlier.

Allocation of Water Infrastructure to Benefiting Parties

Item	Project Description	Reduced Project Estimated Cost	City Share %	Other Stakeholder Share (Oversizing) %	OSL / Developer Share %
1	South Reservoir and Transmission Line (1998)	$ 10,610,791	81.860%		18.140%
2	North Reservoir (2000)	$ 8,552,062	88.170%		11.830%
3	South Reservoir Cell #2 (2006)	$ 5,283,528	81.860%		18.140%
4	South Reservoir Pump #4 (2006)	$ 375,840	81.860%		18.140%
5	Transmission Line Twinning from WTP to Oxford Avenue (2006)	$ 4,366,353	17.782%	7.963%	74.255%
6	WTP Expansion (2007)	$ 29,290,230	28.856%	7.789%	63.355%
7	NW Booster and Transmission Main (2008)	$ 15,428,380	46.038%		53.962%
8	First St. SE Water Main Upgrade (2011)	$ 2,819,633	25.000%		75.000%
9	WTP Expansion High Lift Pump #12 (2013)	$ 810,000		14.805%	85.195%
10	South Reservoir Pump #5 (2015)	$ 250,000		8.000%	92.000%
11	Main Reservoir Expansion Cell #3 (2020)	$ 6,300,000		35.062%	64.938%
12	SW Sector Booster Station and Transmission Line (2023)	$ 16,989,145	20.419%	49.267%	30.314%
13	SW Sector Saamis Emergency Connection (2025)	$ 900,000	46.895%	34.254%	18.851%
14	WTP UV Expansion (2028)	$ 2,000,000		61.559%	38.441%
15	WTP Expansion (2030)	$ 21,000,000		69.242%	30.758%
16	Main Reservoir Expansion Cell #4 (2035)	$ 6,300,000		88.000%	12.000%
		$ 131,275,962			

Oversizing has been calculated by prorated costs over a 25 year payback period. Those cost that fall within the current review period (2013 - 2037) are included in the offsite levy/developer share. Those costs that fall beyond the current review period (2038 and beyond) are included as oversizing. The table below highlights the oversizing calculations for water infrastructure.

Calculation of Oversizing

Year of Construction	Developer Cost (Leviable Costs) Before Removal of Oversizing	Cost Per Year	Number of Years Beyond 25 Year Payback Period	Amount Beyond 25 Year Payback Period (i.e., Oversizing)	Oversizing % of Reduced Project Estimated Cost (Column K)
1998	$ 1,924,798	$ 76,992	0	$ -	0.000%
2000	$ 1,011,709	$ 40,468	0	$ -	0.000%
2006	$ 958,432	$ 38,337	0	$ -	0.000%
2006	$ 68,177	$ 2,727	0	$ -	0.000%
2006	$ 3,242,256	$ 129,690	0	$ -	0.000%
2007	$ 18,556,827	$ 742,273	0	$ -	0.000%
2008	$ 8,325,462	$ 333,018	0	$ -	0.000%
2011	$ 2,114,724	$ 84,589	0	$ -	0.000%
2013	$ 690,082	$ 27,603	0	$ -	0.000%
2015	$ 250,000	$ 10,000	2	$ 20,000	8.000%
2020	$ 5,682,124	$ 227,285	7	$ 1,590,995	25.254%
2023	$ 8,583,382	$ 343,335	10	$ 3,433,353	20.209%
2025	$ 326,271	$ 13,051	12	$ 156,610	17.401%
2028	$ 1,922,048	$ 76,882	15	$ 1,153,229	57.661%
2030	$ 20,185,289	$ 807,412	17	$ 13,725,997	65.362%
2035	$ 6,300,000	$ 252,000	22	$ 5,544,000	88.000%
	$ 80,141,581			**$ 25,624,183**	

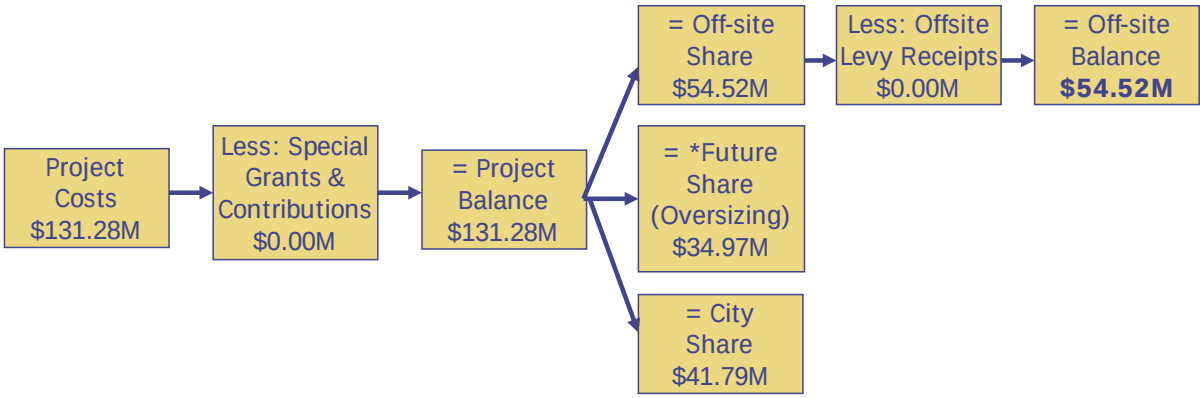
7.4 Existing Receipts

Prior to allocating costs to benefiting parties, existing offsite levy receipts collected from developers need to be considered in determining the residual/net costs to developers. In the case of City of Medicine Hat, City staff have advised CORVUS that they have amended (reduced) benefitting allocations to developers from previous bylaws for offsite levy receipts that have been collected to date. For example, in the 2006 offsite levy bylaw 100% of Project #6 (Water Treatment Plant Expansion) was allocated to development. With the adjustments made for receipts, the new allocation to development has been reduced to 59.5%. As benefiting areas have been amended, no receipts have been reflected in the rate calculation model.

7.5 Total Water Offsite Levy Costs

As shown in the figure below, the total cost for water infrastructure that forms the basis of the rate is approximately $54.52 million. The cost allocations to each benefitting party are based on the benefitting percentages shown in Section 7.3. The offsite levy balance (due from developers) is allocated to various benefitting areas (as described in the next section).

Total Water Offsite Levy Costs



7.6 Water Infrastructure Benefiting Areas

Net developer costs for each project have been allocated to multiple benefiting offsite levy area (see tables below). Allocations are denoted with a “1” below applicable area numbers. Benefiting areas were determined by City engineering staff. The lands anticipated to develop over the 25 years in each offsite levy benefitting area are used to determine rates.

Benefiting Areas for Water Offsite Infrastructure

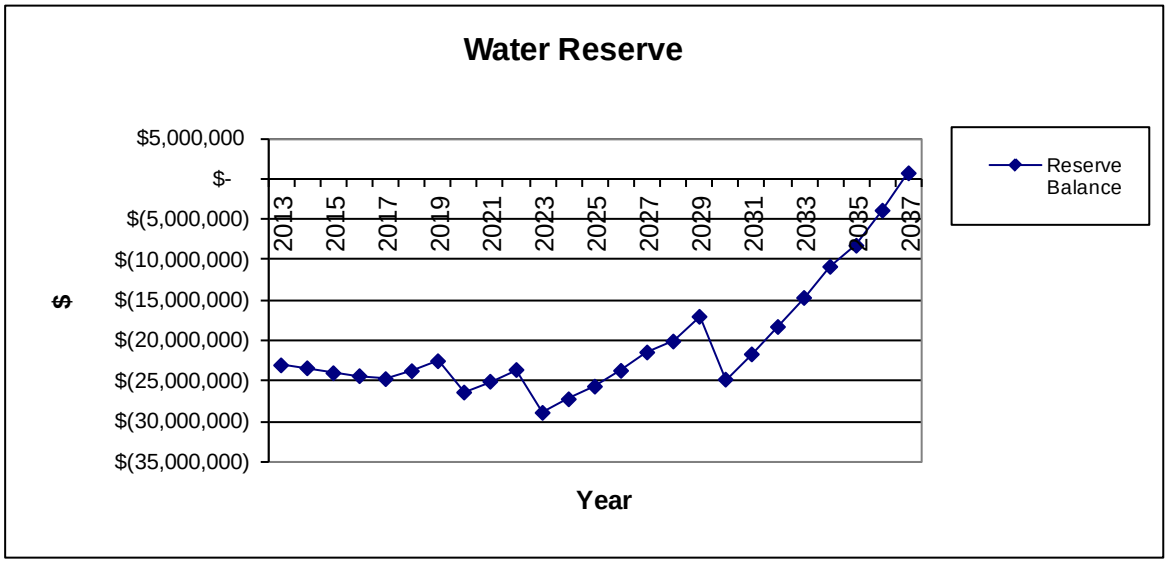
Item	Project Description	Developer Cost	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
1	South Reservoir and Transmission Line (1998)	$ 1,924,798						1					1		1	1	1		
2	North Reservoir (2000)	$ 1,011,709												1				1	
3	South Reservoir Cell #2 (2006)	$ 958,432						1					1		1	1	1		
4	South Reservoir Pump #4 (2006)	$ 68,177						1					1		1	1	1		
5	Transmission Line Twinning from WTP to Oxford Avenue (2006)	$ 3,242,256	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	WTP Expansion (2007)	$ 18,556,827	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	NW Booster and Transmission Main (2008)	$ 8,325,462					1				1								
8	First St. SE Water Main Upgrade (2011)	$ 2,114,724	1																
9	WTP Expansion High Lift Pump #12 (2013)	$ 690,082	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	South Reservoir Pump #5 (2015)	$ 230,000						1					1		1	1	1		
11	Main Reservoir Expansion Cell #3 (2020)	$ 4,091,122	1	1	1	1	1	1	1	1	1		1	1	1	1		1	
12	SW Sector Booster Station and Transmission Line (2023)	$ 5,150,045						1		1									
13	SW Sector Saamis Emergency Connection (2025)	$ 169,662						1		1		1	1		1	1	1		
14	WTP UV Expansion (2028)	$ 768,828	1	1	1	1	1	1	1	1	1	1					1		1
15	WTP Expansion (2030)	$ 6,459,269	1	1	1	1	1	1	1	1	1	1					1		1
16	Main Reservoir Expansion Cell #4 (2035)	$ 756,000	1	1	1	1	1	1	1	1	1	1					1		1
		$ 54,517,394																	

7.7 Development and Water Staging Impacts

Water offsite infrastructure will be constructed in staged fashion over the 25-year development period. We have reviewed the availability of offsite levy funds to meet these construction requirements and found that offsite levy reserve funds will not be sufficient to pay for construction of water infrastructure from time to time—front ending of infrastructure will be required. A front-ender is the party (to date the City of Medicine Hat has been the sole front-ender) that constructs and pays up front for infrastructure that benefits other parties.

In order to compensate parties for capital they provide in front-ending offsite infrastructure construction, a 3.5% interest allowance has been created in offsite levy rate calculations. Further, a 2.0% interest credit has been provided to reduce offsite levy rates for interest earned on positive reserve balances. The graph and table below outline water levy reserve balances over the 25-year development period.

Anticipated Water Offsite Levy Reserve Balances



It should be noted that the opening balance of the water offsite levy reserve is $1.07 million (end 2011). This was provided by City finance staff.

Anticipated Water Offsite Levy Reserve Balances

		Opening Balance		$ 1,066,961
Year	**Receipts**	**Expenditure**	**Interest**	**Balance**
2013 & Prior Years	$ 1,332,304	$ 25,538,743	$ (809,882)	$ (23,949,359)
2014	$ 1,372,273	$ 938,269	$ (823,037)	$ (24,338,392)
2015	$ 1,413,442	$ 1,210,424	$ (844,738)	$ (24,980,112)
2016	$ 1,455,845	$ 995,409	$ (858,189)	$ (25,377,865)
2017	$ 1,499,520	$ 1,025,271	$ (871,627)	$ (25,775,243)
2018	$ 2,881,100	$ 1,056,029	$ (838,256)	$ (24,788,428)
2019	$ 2,967,533	$ 931,425	$ (796,331)	$ (23,548,652)
2020	$ 3,056,559	$ 5,990,932	$ (926,906)	$ (27,409,931)
2021	$ 3,148,256	$ 918,943	$ (881,322)	$ (26,061,940)
2022	$ 3,242,703	$ 946,511	$ (831,801)	$ (24,597,549)
2023	$ 3,551,268	$ 7,896,136	$ (1,012,985)	$ (29,955,401)
2024	$ 3,657,806	$ 1,004,153	$ (955,561)	$ (28,257,310)
2025	$ 3,767,540	$ 1,276,175	$ (901,808)	$ (26,667,753)
2026	$ 3,880,567	$ 1,065,306	$ (834,837)	$ (24,687,330)
2027	$ 3,996,984	$ 935,943	$ (756,920)	$ (22,383,209)
2028	$ 3,647,814	$ 1,525,789	$ (709,141)	$ (20,970,326)
2029	$ 3,757,249	$ 30,542	$ (603,527)	$ (17,847,145)
2030	$ 3,869,966	$ 10,707,645	$ (863,969)	$ (25,548,793)
2031	$ 3,986,065	$ 32,402	$ (755,830)	$ (22,350,959)
2032	$ 4,105,647	$ -	$ (638,586)	$ (18,883,898)
2033	$ 4,190,249	$ -	$ (514,278)	$ (15,207,927)
2034	$ 4,315,956	$ -	$ (381,219)	$ (11,273,190)
2035	$ 4,445,435	$ 1,448,574	$ (289,672)	$ (8,566,000)
2036	$ 4,578,798	$ -	$ (139,552)	$ (4,126,754)
2037	$ 4,716,162	$ -	$ 11,788	$ 601,196

7.8 Water Offsite Levy Rates

The table below outlines offsite levy rates associated with construction of water offsite infrastructure. Differences in rates reflect the differential benefits accruing to the basin. These are the rates that will be charged to developers as reflected in the offsite levy bylaw. For information, the weighted average rate across all basins is $83,956 per ha.

Summary of Water Offsite Levies by Area

Area Ref. #	Water Charges ($/ha.)
1.0	$ 149,865
2.0	$ 57,921
3.0	$ 57,921
4.0	$ 57,921
5.0	$ 135,879
6.0	$ 92,780
7.0	$ 57,921
8.0	$ 81,924
9.0	$ 135,879
10.0	$ 52,078
11.0	$ 52,408
12.0	$ 52,595
13.0	$ 52,408
14.0	$ 52,408
15.0	$ 62,934
16.0	$ 52,595
17.0	$ 51,540

8 SANITARY

8.1 Sanitary Offsite Infrastructure

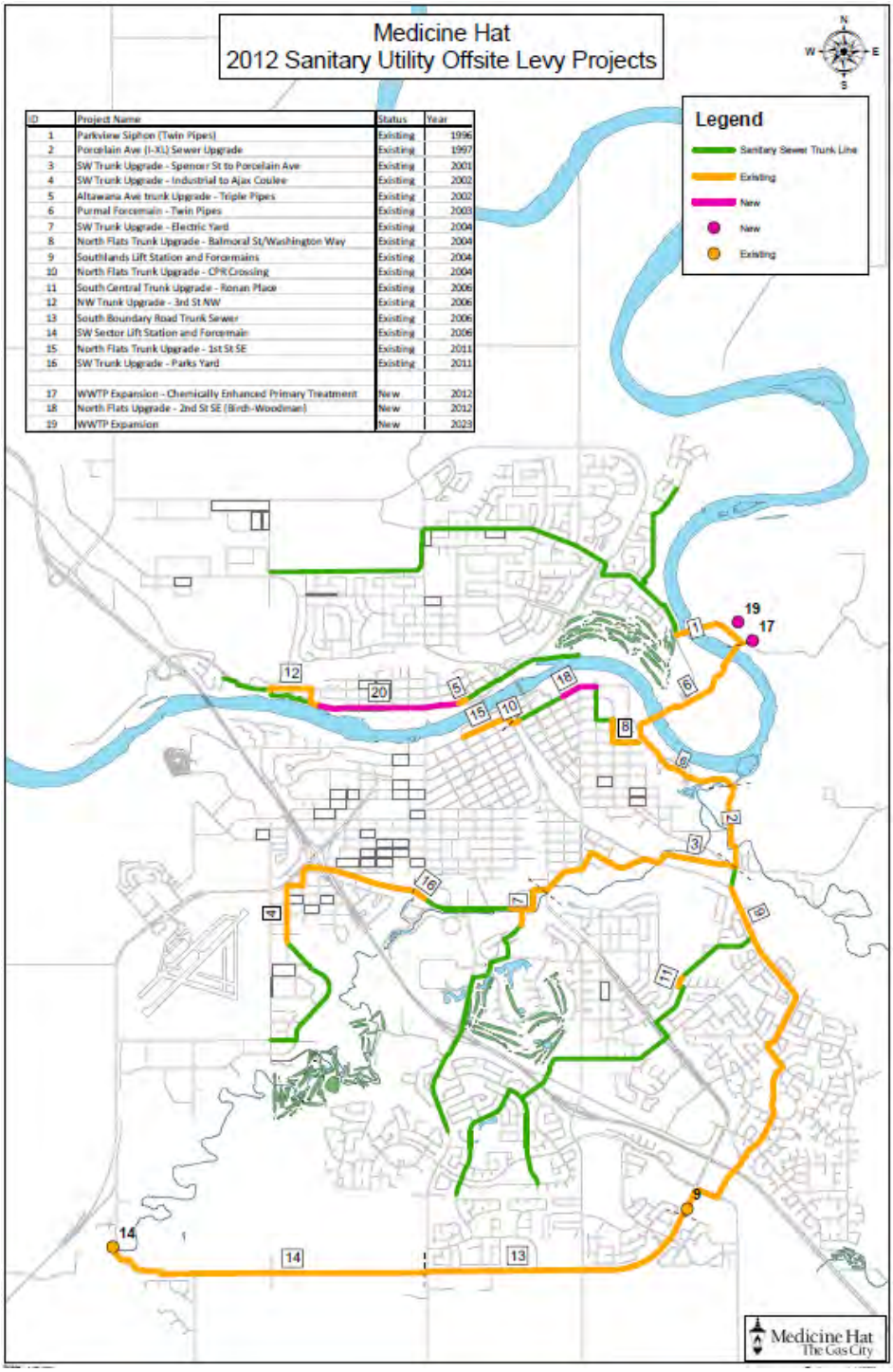
In order to support future community growth, sanitary offsite infrastructure is required. The estimated cost of this infrastructure based upon: (a) actual construction costs to date, (b) debenture interest associated with financing, and (c) 2012 cost estimates. Total cost is approximately $90.54 million as outlined in the table below. Actual costs and debenture interest was provided by City finance staff. Costs estimates were provided by the City engineering staff. It is important to note that these costs represent “gross” costs, of which only a portion will go to support development during the 25-year review period. The remainder of this section outlines how the “net” costs for development are determined.

Summary of Sanitary Offsite Infrastructure

Item	Project Description	Cost of Completed Work	Debenture Interest	Estimated Cost of Work Yet to be Completed	Total Project Estimated Cost
1	Parkview Siphon - Twin Lines (1996)	$ 820,000	$ 687,556	$ -	$ 1,507,556
2	Porcelaine Avenue (IXL Yard) (1997)	$ 625,000	$ 448,933	$ -	$ 1,073,933
3	SW Trunk Upgrade Spencer Street to Porcelaine Avenue (2001)	$ 1,655,536	$ 1,122,896	$ -	$ 2,778,432
4	SW Sanitary Trunk - SW Industrial and Ajax Coulee (2002)	$ 1,455,615	$ 1,144,441	$ -	$ 2,600,056
5	Altawana Drive Pipe Tripling (2002)	$ 213,373	$ 102,374	$ -	$ 315,747
6	Purmal Forcemain Twin Lines (2003)	$ 6,940,000	$ 4,383,430	$ -	$ 11,323,430
7	SW Sanitary Trunk - Electric Yard (2004)	$ 1,354,380	$ 855,421	$ -	$ 2,209,801
8	North Flats Trunk Line - Balmoral to Washington (2004)	$ 592,634	$ 364,924	$ -	$ 957,558
9	Southlands Lift Station and Forcemain (2004)	$ 6,726,548	$ 3,824,572	$ -	$ 10,551,120
10	North Flats Trunk Line - CPR Corssing Downtown (2004)	$ 310,915	$ 149,112	$ -	$ 460,027
11	South Central Trunk Upgrade - Ronan Place (2006)	$ 267,478	$ 146,955	$ -	$ 414,433
12	3rd Street NW Trunk Line (2006)	$ 2,320,297	$ 1,222,323	$ -	$ 3,542,620
13	South Boundary Road Sanitary Trunk Main (2006)	$ 5,151,082		$ -	$ 5,151,082
14	South West Sector (Desert Blume) Lift Station and Forcemain (2006)	$ 1,350,000	$ 720,358	$ -	$ 2,070,358
15	North Flats Trunk Upgrade First Street SE (2011)	$ 2,362,222	$ 832,838	$ -	$ 3,195,060
16	SW Trunk Sanitary Sewer Upgrade - Ajax Coulee / Parks Yard (2011)	$ 242,095		$ -	$ 242,095
17	Wastewater Treatment Plant Expansion: CEPT (2012)	$ -		$ 400,000	$ 400,000
18	North Flats Trunk Upgrade - 2nd Street SE (Birch-Woodman) (2012)	$ -		$ 750,000	$ 750,000
19	Wastewater Treatment Plant Expansion (2023)	$ -		$ 41,000,000	$ 41,000,000
		$ 32,387,175	**$ 16,006,134**	**$ 42,150,000**	**$ 90,543,309**

A map showing the location of this infrastructure is shown below:

Location of Sanitary Offsite Infrastructure



8.2 Sanitary Offsite Infrastructure Grants & Contributions to Date

The MGA enables the City to recoup costs for infrastructure, other than those costs that have been provided by way of special grant or contribution (i.e., contributed infrastructure). City of Medicine Hat does not anticipate the receipt of any special grants for sanitary offsite levy infrastructure as shown in the table below (note, if the City receives additional grants in the future, it will be reflected in one of the annual updates and rates adjusted accordingly). City of Medicine Hat has not collected any development agreement or other contributions for the construction of sanitary infrastructure. The result is that the total reduced project estimated cost remains at $90.54 million.

Special Grants and Contributions for Sanitary Offsite Infrastructure

Item	Project Description	Total Project Estimated Cost	Special Grants	Developer Agreement Contributions	Reduced Project Estimated Cost
1	Parkview Siphon - Twin Lines (1996)	$ 1,507,556			$ 1,507,556
2	Porcelaine Avenue (IXL Yard) (1997)	$ 1,073,933			$ 1,073,933
3	SW Trunk Upgrade Spencer Street to Porcelaine Avenue (2001)	$ 2,778,432			$ 2,778,432
4	SW Sanitary Trunk - SW Industrial and Ajax Coulee (2002)	$ 2,600,056			$ 2,600,056
5	Altawana Drive Pipe Tripling (2002)	$ 315,747			$ 315,747
6	Purmal Forcemain Twin Lines (2003)	$ 11,323,430			$ 11,323,430
7	SW Sanitary Trunk - Electric Yard (2004)	$ 2,209,801			$ 2,209,801
8	North Flats Trunk Line - Balmoral to Washington (2004)	$ 957,558			$ 957,558
9	Southlands Lift Station and Forcemain (2004)	$ 10,551,120			$ 10,551,120
10	North Flats Trunk Line - CPR Corssing Downtown (2004)	$ 460,027			$ 460,027
11	South Central Trunk Upgrade - Ronan Place (2006)	$ 414,433			$ 414,433
12	3rd Street NW Trunk Line (2006)	$ 3,542,620			$ 3,542,620
13	South Boundary Road Sanitary Trunk Main (2006)	$ 5,151,082			$ 5,151,082
14	South West Sector (Desert Blume) Lift Station and Forcemain (2006)	$ 2,070,358			$ 2,070,358
15	North Flats Trunk Upgrade First Street SE (2011)	$ 3,195,060			$ 3,195,060
16	SW Trunk Sanitary Sewer Upgrade - Ajax Coulee / Parks Yard (2011)	$ 242,095			$ 242,095
17	Wastewater Treatment Plant Expansion: CEPT (2012)	$ 400,000			$ 400,000
18	North Flats Trunk Upgrade - 2nd Street SE (Birch-Woodman) (2012)	$ 750,000			$ 750,000
19	Wastewater Treatment Plant Expansion (2023)	$ 41,000,000			$ 41,000,000
		$ 90,543,309	**$ -**	**$ -**	**$ 90,543,309**

8.3 Sanitary Offsite Infrastructure Benefiting Parties

The sanitary offsite infrastructure previously outlined will benefit various parties to varying degrees. During this review three potential benefiting parties were identified including:

- City of Medicine Hat – a portion of the sanitary infrastructure which is required to service existing residents.
- Other Stakeholders (or oversizing) – other parties (such as neighboring municipalities) or growth beyond the 25 year time frame of this review, that benefit from infrastructure oversizing and the like.
- City of Medicine Hat Developers – all growth related infrastructure (i.e., levyable sanitary infrastructure costs) during the 25 year rate planning period.

The table below outlines the allocation of sanitary offsite levy infrastructure costs to benefiting parties. Percentage allocations have been determined after reducing sanitary offsite levy infrastructure costs for grants described earlier.

Allocation of Sanitary Infrastructure to Benefiting Parties

Item	Project Description	Reduced Project Estimated Cost	City Share %	Other Stakeholder Share (Oversizing) %	OSL / Developer Share %
1	Parkview Siphon - Twin Lines (1996)	$ 1,507,556	64.066%		35.934%
2	Porcelaine Avenue (IXL Yard) (1997)	$ 1,073,933	71.451%		28.549%
3	SW Trunk Upgrade Spencer Street to Porcelaine Avenue (2001)	$ 2,778,432	80.292%		19.708%
4	SW Sanitary Trunk - SW Industrial and Ajax Coulee (2002)	$ 2,600,056	64.340%		35.660%
5	Altawana Drive Pipe Tripling (2002)	$ 315,747	8.574%		91.426%
6	Purmal Forcemain Twin Lines (2003)	$ 11,323,430	48.458%		51.542%
7	SW Sanitary Trunk - Electric Yard (2004)	$ 2,209,801	70.480%		29.520%
8	North Flats Trunk Line - Balmoral to Washington (2004)	$ 957,558	29.585%		70.415%
9	Southlands Lift Station and Forcemain (2004)	$ 10,551,120	46.553%	4.799%	48.648%
10	North Flats Trunk Line - CPR Corssing Downtown (2004)	$ 460,027	36.000%		64.000%
11	South Central Trunk Upgrade - Ronan Place (2006)	$ 414,433	96.523%		3.477%
12	3rd Street NW Trunk Line (2006)	$ 3,542,620	41.488%		58.512%
13	South Boundary Road Sanitary Trunk Main (2006)	$ 5,151,082	46.553%	7.528%	45.919%
14	South West Sector (Desert Blume) Lift Station and Forcemain (2006)	$ 2,070,358			100.000%
15	North Flats Trunk Upgrade First Street SE (2011)	$ 3,195,060	30.864%		69.136%
16	SW Trunk Sanitary Sewer Upgrade - Ajax Coulee / Parks Yard (2011)	$ 242,095	66.604%		33.396%
17	Wastewater Treatment Plant Expansion: CEPT (2012)	$ 400,000			100.000%
18	North Flats Trunk Upgrade - 2nd Street SE (Birch-Woodman) (2012)	$ 750,000	63.889%		36.111%
19	Wastewater Treatment Plant Expansion (2023)	$ 41,000,000	82.000%	7.200%	10.800%
		$ 90,543,309			

Oversizing has been calculated by prorated costs over a 25 year payback period. Those cost that fall within the current review period (2013 - 2037) are included in the offsite levy/developer share. Those costs that fall beyond the current review period (2038 and beyond) are included as oversizing. The table below highlights the oversizing calculations for sanitary infrastructure.

Calculation of Oversizing

Year of Construction	Developer Cost (Leviable Costs) Before Removal of Oversizing	Cost Per Year	Number of Years Beyond 25 Year Payback Period	Amount Beyond 25 Year Payback Period (i.e., Oversizing)	Oversizing % of Reduced Project Estimated Cost (Column J)
1996	$ 541,725	$ 21,669	0	$ -	0.00%
1997	$ 306,597	$ 12,264	0	$ -	0.00%
2001	$ 547,573	$ 21,903	0	$ -	0.00%
2002	$ 927,180	$ 37,087	0	$ -	0.00%
2002	$ 288,675	$ 11,547	0	$ -	0.00%
2003	$ 5,836,322	$ 233,453	0	$ -	0.00%
2004	$ 652,333	$ 26,093	0	$ -	0.00%
2004	$ 674,265	$ 26,971	0	$ -	0.00%
2006	$ 5,132,904	$ 205,316	0	$ -	0.00%
2006	$ 294,418	$ 11,777	0	$ -	0.00%
2006	$ 14,410	$ 576	0	$ -	0.00%
2006	$ 2,072,858	$ 82,914	0	$ -	0.00%
2006	$ 2,365,342	$ 94,614	0	$ -	0.00%
2006	$ 2,070,358	$ 82,814	0	$ -	0.00%
2011	$ 2,208,930	$ 88,357	0	$ -	0.00%
2011	$ 80,850	$ 3,234	0	$ -	0.00%
2012	$ 400,000	$ 16,000	0	$ -	0.00%
2012	$ 270,833	$ 10,833	0	$ -	0.00%
2023	$ 7,380,000	$ 295,200	10	$ 2,952,000	7.20%
	$ 32,065,574			**$ 2,952,000**	

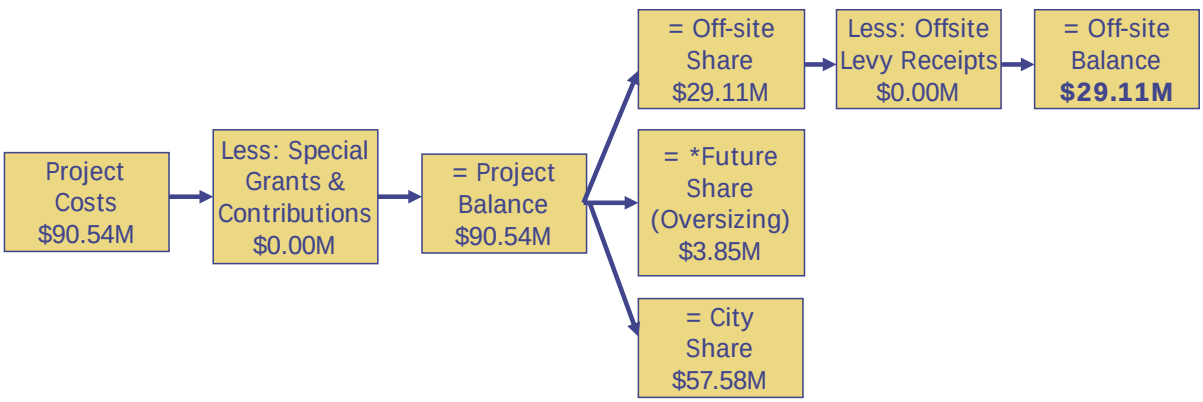
8.4 Existing Receipts

Prior to allocating costs to benefiting parties, existing offsite levy receipts collected from developers need to be considered in determining the residual/net costs to developers. In the case of City of Medicine Hat, City staff have advised CORVUS that they have amended (reduced) benefitting allocations to developers from previous bylaws for offsite levy receipts that have been collected to date. For example, in the 2006 offsite levy bylaw 100% of Project #6 (Purmal Forcemain) was allocated to development. With the adjustments made for receipts, the new allocation to development has been reduced to 51.5%. As benefiting areas have been amended, no receipts have been reflected in the rate calculation model.

8.5 Total Sanitary Offsite Levy Costs

As shown in the figure below, the total costs for sanitary infrastructure that forms the basis of the rate is approximately $29.11 million. The cost allocations to each benefitting party are based on the benefitting percentages shown in Section 8.3. The offsite levy balance (due from developers) is allocated to various benefitting areas (as described in the next section).

Total Sanitary Offsite Levy Costs



8.6 Sanitary Infrastructure Benefiting Areas

Net developer costs for each project have been allocated to multiple benefiting offsite levy area (see tables below). Allocations are denoted with a "1" below applicable area numbers. Benefiting areas were determined by City engineering staff. The lands anticipated to develop over the 25 years in each offsite levy benefitting area are used to determine rates.

Benefiting Areas for Sanitary Offsite Infrastructure

Item	Project Description	Developer Cost	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
1	Parkview Siphon - Twin Lines (1996)	$ 541,725					1				1			1				1	
2	Porcelaine Avenue (IXL Yard) (1997)	$ 306,597		1	1			1		1		1	1		1	1	1		
3	SW Trunk Upgrade Spencer Street to Porcelaine Avenue (2001)	$ 547,573		1				1		1									
4	SW Sanitary Trunk - SW Industrial and Ajax Coulee (2002)	$ 927,180								1									
5	Altawana Drive Pipe Tripling (2002)	$ 288,675				1			1										1
6	Purmal Forcemain Twin Lines (2003)	$ 5,836,322	1	1	1	1		1	1	1		1	1		1	1	1		1
7	SW Sanitary Trunk - Electric Yard (2004)	$ 652,333						1		1									
8	North Flats Trunk Line - Balmoral to Washington (2004)	$ 674,265	1	1															
9	Southlands Lift Station and Forcemain (2004)	$ 5,132,904						1				1	1		1	1			
10	North Flats Trunk Line - CPR Corssing Downtown (2004)	$ 294,418	1																
11	South Central Trunk Upgrade - Ronan Place (2006)	$ 14,410															1		
12	3rd Street NW Trunk Line (2006)	$ 2,072,858				1			1										1
13	South Boundary Road Sanitary Trunk Main (2006)	$ 2,365,342						1				1	1		1	1			
14	South West Sector (Desert Blume) Lift Station and Forcemain (2006)	$ 2,070,358						1				1							
15	North Flats Trunk Upgrade First Street SE (2011)	$ 2,208,930	1																
16	SW Trunk Sanitary Sewer Upgrade - Ajax Coulee / Parks Yard (2011)	$ 80,850								1									
17	Wastewater Treatment Plant Expansion: CEPT (2012)	$ 400,000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	North Flats Trunk Upgrade - 2nd Street SE (Birch-Woodman) (2012)	$ 270,833	1	1															
19	Wastewater Treatment Plant Expansion (2023)	$ 4,428,000	1	1	1	1	1	1	1	1	1			1	1				
		$ 29,113,574																	

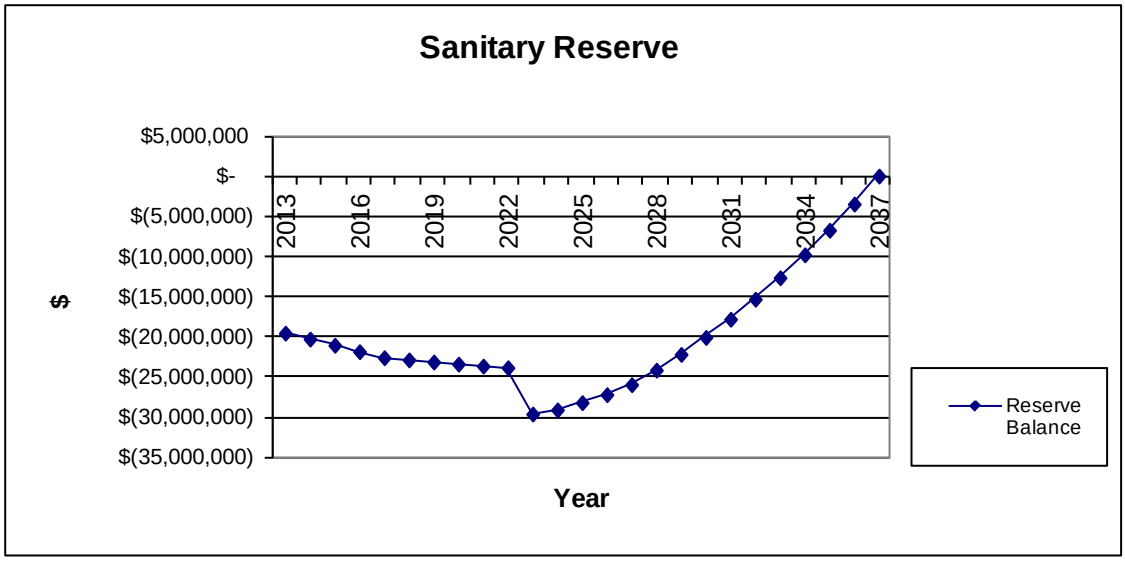
8.7 Development and Sanitary Staging Impacts

Sanitary offsite infrastructure will be constructed in staged fashion over the 25-year development period. We have reviewed the availability of offsite levy funds to meet these construction requirements and found that offsite levy reserve funds will not be sufficient to

pay for construction of sanitary infrastructure from time to time—front ending of infrastructure will be required. A front-ender is the party (to date the City of Medicine Hat has been the sole front-ender) that constructs and pays up front for infrastructure that benefits other parties.

In order to compensate parties for capital they provide in front-ending offsite infrastructure construction, a 3.50% interest allowance has been created in offsite levy rate calculations. Further, a 2.00% interest credit has been provided to reduce offsite levy rates for interest earned on positive reserve balances. The graph and table below outline sanitary levy reserve balances over the 25-year development period.

Anticipated Sanitary Offsite Levy Reserve Balances



It should be noted that the opening balance of the sanitary offsite levy reserve is -$1.22 million (end 2011). This was provided by City finance staff.

Anticipated Sanitary Offsite Levy Reserve Balances

		Opening Balance	$ (1,221,283)
Year	**Receipts**	**Expenditure**	**Interest**	**Balance**
2013 & Prior Years	$ 639,497	$ 17,551,004	$ (634,648)	$ (18,767,438)
2014	$ 658,682	$ 726,881	$ (659,247)	$ (19,494,884)
2015	$ 678,442	$ 748,687	$ (684,780)	$ (20,249,909)
2016	$ 698,796	$ 771,148	$ (711,279)	$ (21,033,540)
2017	$ 719,760	$ 724,775	$ (736,349)	$ (21,774,905)
2018	$ 1,189,735	$ 716,662	$ (745,564)	$ (22,047,396)
2019	$ 1,225,427	$ 738,162	$ (754,605)	$ (22,314,736)
2020	$ 1,262,189	$ 760,307	$ (763,450)	$ (22,576,303)
2021	$ 1,300,055	$ 783,116	$ (772,078)	$ (22,831,441)
2022	$ 1,339,057	$ 774,459	$ (779,340)	$ (23,046,182)
2023	$ 1,873,256	$ 6,681,313	$ (974,898)	$ (28,829,138)
2024	$ 1,929,454	$ 469,606	$ (957,925)	$ (28,327,215)
2025	$ 1,987,338	$ 192,286	$ (928,626)	$ (27,460,789)
2026	$ 2,046,958	$ 198,055	$ (896,416)	$ (26,508,302)
2027	$ 2,108,366	$ 46,777	$ (855,635)	$ (25,302,348)
2028	$ 2,607,618	$ 48,180	$ (796,002)	$ (23,538,912)
2029	$ 2,685,847	$ 49,626	$ (731,594)	$ (21,634,284)
2030	$ 2,766,422	$ 51,114	$ (662,164)	$ (19,581,141)
2031	$ 2,849,415	$ 52,648	$ (587,453)	$ (17,371,827)
2032	$ 2,934,897	$ -	$ (505,293)	$ (14,942,222)
2033	$ 3,018,994	$ -	$ (417,313)	$ (12,340,541)
2034	$ 3,109,564	$ -	$ (323,084)	$ (9,554,061)
2035	$ 3,202,851	$ -	$ (222,292)	$ (6,573,502)
2036	$ 3,298,937	$ -	$ (114,610)	$ (3,389,175)
2037	$ 3,397,905	$ -	$ 175	$ 8,904

8.8 Sanitary Offsite Levy Rates

The table below outlines offsite levy rates associated with construction of sanitary offsite infrastructure. Differences in rates reflect the differential benefits accruing to the basin. These are the rates that will be charged to developers as reflected in the offsite levy bylaw. For information, the weighted average rate across all basins is $48,351 per ha.

Summary of Sanitary Offsite Levies by Area

Area Ref. #	Sanitary Charges ($/ha.)
1.0	$ 163,352
2.0	$ 49,380
3.0	$ 23,686
4.0	$ 53,213
5.0	$ 11,920
6.0	$ 68,083
7.0	$ 53,213
8.0	$ 83,730
9.0	$ 11,920
10.0	$ 54,174
11.0	$ 43,133
12.0	$ 11,920
13.0	$ 51,380
14.0	$ 43,133
15.0	$ 19,535
16.0	$ 3,673
17.0	$ 44,966

9 STORMWATER

9.1 Stormwater Offsite Infrastructure

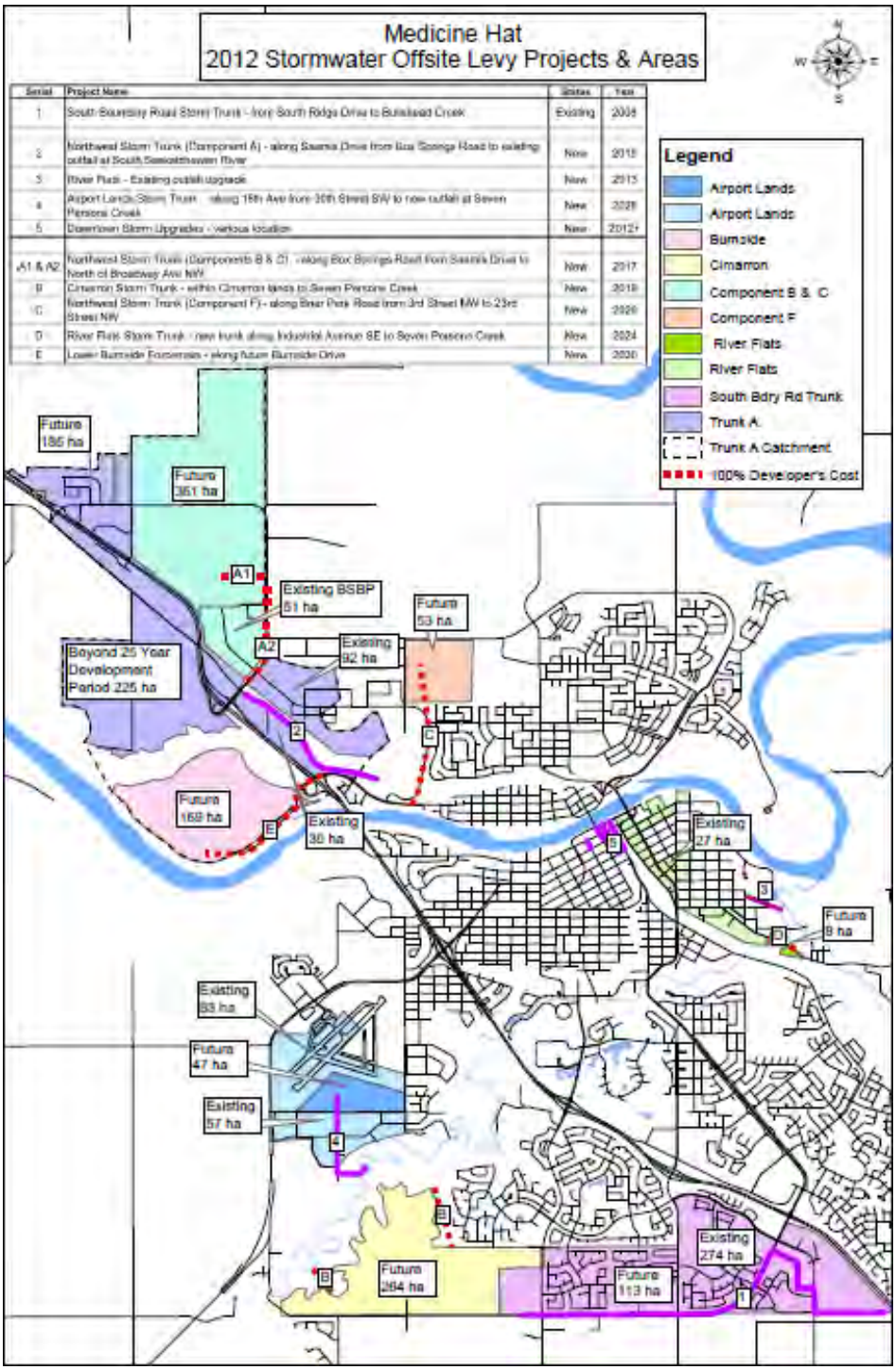
In order to support future community growth, stormwater offsite infrastructure is required. The estimated cost of this infrastructure based upon: (a) actual construction costs to date, (b) debenture interest associated with financing, and (c) 2012 cost estimates. Total cost is approximately $31.99 million as outlined in the table below. Actual costs and debenture interest was provided by City finance staff. Costs estimates were provided by the City engineering staff. It is important to note that these costs represent “gross” costs, of which only a portion will go to support development during the 25-year review period. The remainder of this section outlines how the “net” costs for development are determined.

Summary of Stormwater Offsite Infrastructure

Item	Project Description	Cost of Completed Work	Debenture Interest	Estimated Cost of Work Yet to be Completed	Total Project Estimated Cost
1	South Boundary Road Storm Trunk (2008)	$ 11,689,000		$ -	$ 11,689,000
2	Northwest Storm Trunk - Component A (2015)	$ -		$ 7,500,000	$ 7,500,000
3	River Flats Outfall Upgrade (2013)	$ -		$ 200,000	$ 200,000
4	Airport Lands Storm Trunk (2028)	$ -		$ 5,500,000	$ 5,500,000
5	Downtown Storm Upgrades Phase 1 (2012/2013)	$ -		$ 1,000,000	$ 1,000,000
6	Downtown Storm Upgrades Phase 2 (2016)	$ -		$ 2,500,000	$ 2,500,000
7	Downtown Storm Upgrades Phase 3 (2020)	$ -		$ 1,200,000	$ 1,200,000
8	Downtown Storm Upgrades Phase 4 (2022)	$ -		$ 400,000	$ 400,000
9	Downtown Storm Upgrades Phase 5 (2024)	$ -		$ 2,000,000	$ 2,000,000
		$ 11,689,000	**$ -**	**$ 20,300,000**	**$ 31,989,000**

A map showing the location of this infrastructure is shown below:

Location of Stormwater Offsite Infrastructure



9.2 Stormwater Offsite Infrastructure Grants & Contributions to Date

The MGA enables the City to recoup costs for infrastructure, other than those costs that have been provided by way of special grant or contribution (i.e., contributed infrastructure). City of Medicine Hat does not anticipate the receipt of any special grants for stormwater offsite levy infrastructure as shown in the table below (note, if the City receives a grant in the future, it will be reflected in one of the annual updates and rates adjusted accordingly). Similarly, City of Medicine Hat has not collected any development agreement or other contributions for the construction of stormwater infrastructure. The result is that the total reduced project estimated cost remains at $31.99 million.

Special Grants and Contributions for Stormwater Offsite Infrastructure

Item	Project Description	Total Project Estimated Cost	Special Provincial Grants	Developer Agreement Contributions	Reduced Project Estimated Cost
1	South Boundary Road Storm Trunk (2008)	$ 11,689,000			$ 11,689,000
2	Northwest Storm Trunk - Component A (2015)	$ 7,500,000			$ 7,500,000
3	River Flats Outfall Upgrade (2013)	$ 200,000			$ 200,000
4	Airport Lands Storm Trunk (2028)	$ 5,500,000			$ 5,500,000
5	Downtown Storm Upgrades Phase 1 (2012/2013)	$ 1,000,000			$ 1,000,000
6	Downtown Storm Upgrades Phase 2 (2016)	$ 2,500,000			$ 2,500,000
7	Downtown Storm Upgrades Phase 3 (2020)	$ 1,200,000			$ 1,200,000
8	Downtown Storm Upgrades Phase 4 (2022)	$ 400,000			$ 400,000
9	Downtown Storm Upgrades Phase 5 (2024)	$ 2,000,000			$ 2,000,000
		$ 31,989,000	**$ -**	**$ -**	**$ 31,989,000**

9.3 Stormwater Offsite Infrastructure Benefiting Parties

The stormwater offsite infrastructure previously outlined will benefit various parties to varying degrees. During this review three potential benefiting parties were identified including:

- City of Medicine Hat – a portion of the stormwater infrastructure which is required to service existing residents.
- Other Stakeholders (or oversizing) – other parties (such as neighboring municipalities) or growth beyond the 25 year time frame of this review, that benefit from infrastructure oversizing and the like.
- City of Medicine Hat Developers – all growth related infrastructure (i.e., levyable stormwater infrastructure costs) during the 25 year rate planning period.

The table below outlines the allocation of stormwater offsite levy infrastructure costs to benefiting parties. Percentage allocations have been determined after reducing stormwater offsite levy infrastructure costs for grants described earlier.

Allocation of Stormwater Infrastructure to Benefiting Parties

Item	Project Description	Reduced Project Estimated Cost	City Share %	Other Stakeholder Share (Oversizing) %	OSL / Developer Share %
1	South Boundary Road Storm Trunk (2008)	$ 11,689,000	72.436%	0.000%	27.564%
2	Northwest Storm Trunk - Component A (2015)	$ 7,500,000	22.154%	17.601%	60.245%
3	River Flats Outfall Upgrade (2013)	$ 200,000	50.000%	0.000%	50.000%
4	Airport Lands Storm Trunk (2028)	$ 5,500,000	74.927%	15.044%	10.029%
5	Downtown Storm Upgrades Phase 1 (2012/2013)	$ 1,000,000	50.000%	0.000%	50.000%
6	Downtown Storm Upgrades Phase 2 (2016)	$ 2,500,000	50.000%	6.000%	44.000%
7	Downtown Storm Upgrades Phase 3 (2020)	$ 1,200,000	50.000%	14.000%	36.000%
8	Downtown Storm Upgrades Phase 4 (2022)	$ 400,000	50.000%	18.000%	32.000%
9	Downtown Storm Upgrades Phase 5 (2024)	$ 2,000,000	50.000%	22.000%	28.000%
		$ 31,989,000			

Oversizing has been calculated by prorated costs over a 25 year payback period. Those cost that fall within the current review period (2013 - 2037) are included in the offsite levy/developer share. Those costs that fall beyond the current review period (2038 and beyond) are included as oversizing. The table below highlights the oversizing calculations for stormwater infrastructure.

Calculation of Oversizing

Year of Construction	Developer Cost (Leviable Costs) Before Removal of Oversizing	Cost Per Year	Number of Years Beyond 25 Year Payback Period	Amount Beyond 25 Year Payback Period (i.e., Oversizing)	Oversizing % of Reduced Project Estimated Cost
2008	$ 3,476,880	$ 139,075	0	$ -	0.00%
2015	$ 4,911,375	$ 196,455	2	$ 392,910	5.24%
2013	$ 100,000	$ 4,000	0	$ -	0.00%
2028	$ 1,379,015	$ 55,161	15	$ 827,409	15.04%
2012	$ 3,550,000	$ 142,000	0	$ -	0.00%
2016	$ 1,250,000	$ 50,000	3	$ 150,000	6.00%
2020	$ 600,000	$ 24,000	7	$ 168,000	14.00%
2022	$ 200,000	$ 8,000	9	$ 72,000	18.00%
2024	$ 1,000,000	$ 40,000	11	$ 440,000	22.00%
	$ 16,467,270			**$ 2,050,319**	

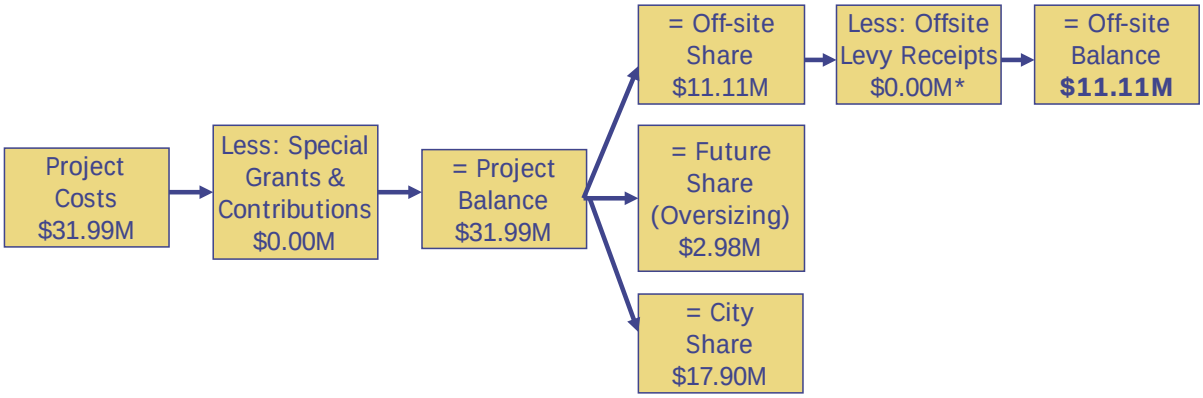
9.4 Existing Receipts

Prior to allocating costs to benefiting parties, existing offsite levy receipts collected from developers need to be considered in determining the residual/net costs to developers. In the case of City of Medicine Hat, City staff have advised CORVUS that they have amended (reduced) benefitting allocations to developers from previous bylaws for offsite levy receipts that have been collected to date. For example, in the 2006 offsite levy bylaw 100% of Project #2 (Northwest Storm Trunk) was allocated to development. With the adjustments made for receipts, the new allocation to development has been reduced to 65.5%. As benefiting areas have been amended, no receipts have been reflected in the rate calculation model.

9.5 Total Stormwater Offsite Levy Costs

As shown in the figure below, the total costs for stormwater infrastructure that forms the basis of the rate is approximately $11.11 million. The cost allocations to each benefitting party are based on the benefitting percentages shown in Section 9.3. The offsite levy balance (due from developers) is allocated to various benefitting areas (as described in the next section).

Total Stormwater Offsite Levy Costs



9.6 Stormwater Infrastructure Benefiting Areas

Net developer costs for each project have been allocated to multiple benefiting offsite levy area (see tables below). Allocations are denoted with a "1" below applicable area numbers. Benefiting areas were determined by City engineering staff. The lands anticipated to develop over the 25 years in each offsite levy benefitting area are used to determine rates.

Benefiting Areas for Stormwater Offsite Infrastructure

Item	Project Description	Developer Cost	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
1	South Boundary Road Storm Trunk (2008)	$ 3,221,956						1					1		1	1	1		
2	Northwest Storm Trunk - Component A (2015)	$ 4,518,380				1					1								
3	River Flats Outfall Upgrade (2013)	$ 100,000		1															
4	Airport Lands Storm Trunk (2028)	$ 551,606								1									
5	Downtown Storm Upgrades Phase 1 (2012/2013)	$ 500,000	1																
6	Downtown Storm Upgrades Phase 2 (2016)	$ 1,100,000	1																
7	Downtown Storm Upgrades Phase 3 (2020)	$ 432,000	1																
8	Downtown Storm Upgrades Phase 4 (2022)	$ 128,000	1																
9	Downtown Storm Upgrades Phase 5 (2024)	$ 560,000	1																
		$ 11,111,942																	

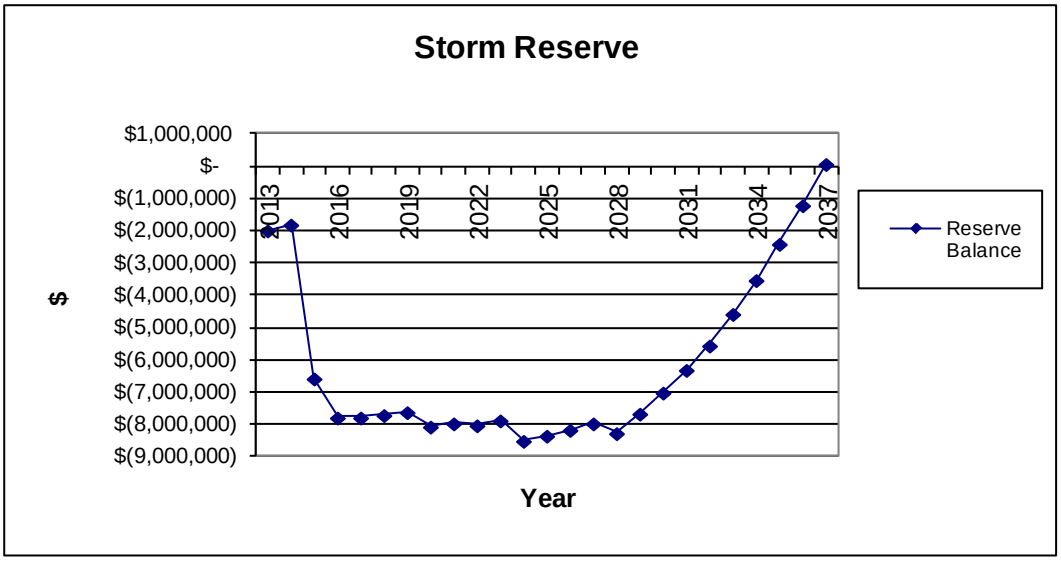
9.7 Development and Stormwater Staging Impacts

Stormwater offsite infrastructure will be constructed in staged fashion over the 25-year development period. We have reviewed the availability of offsite levy funds to meet these construction requirements and found that offsite levy reserve funds will not be sufficient to

pay for construction of stormwater infrastructure from time to time—front ending of infrastructure will be required. A front-ender is the party (to date the City of Medicine Hat has been the sole front-ender) that constructs and pays up front for infrastructure that benefits other parties.

In order to compensate parties for capital they provide in front-ending offsite infrastructure construction, a 3.50% interest allowance has been created in offsite levy rate calculations. Further, a 2.00% interest credit has been provided to reduce offsite levy rates for interest earned on positive reserve balances. The graph and table below outline stormwater levy reserve balances over the 25-year development period.

Anticipated Stormwater Offsite Levy Reserve Balances



It should be noted that the opening balance of the stormwater offsite levy reserve is $1.67 million (end 2011). This was provided by City finance staff.

Anticipated Stormwater Offsite Levy Reserve Balances

		Opening Balance	$ 1,673,074
Year	**Receipts**	**Expenditure**	**Interest**	**Balance**
2013 & Prior Years	$ 234,067	$ 3,821,956	$ (67,019)	$ (1,981,833)
2014	$ 241,089	$ -	$ (60,926)	$ (1,801,670)
2015	$ 248,322	$ 4,793,549	$ (222,141)	$ (6,569,039)
2016	$ 255,772	$ 1,202,000	$ (263,034)	$ (7,778,301)
2017	$ 263,445	$ -	$ (263,020)	$ (7,777,876)
2018	$ 336,766	$ -	$ (260,439)	$ (7,701,550)
2019	$ 346,869	$ -	$ (257,414)	$ (7,612,095)
2020	$ 357,275	$ 531,306	$ (272,514)	$ (8,058,640)
2021	$ 367,993	$ -	$ (269,173)	$ (7,959,819)
2022	$ 379,033	$ 167,011	$ (271,173)	$ (8,018,970)
2023	$ 417,017	$ -	$ (266,068)	$ (7,868,022)
2024	$ 429,528	$ 775,171	$ (287,478)	$ (8,501,143)
2025	$ 442,414	$ -	$ (282,056)	$ (8,340,785)
2026	$ 455,686	$ -	$ (275,978)	$ (8,161,077)
2027	$ 469,357	$ -	$ (269,210)	$ (7,960,931)
2028	$ 837,834	$ 859,384	$ (279,387)	$ (8,261,868)
2029	$ 862,969	$ -	$ (258,961)	$ (7,657,861)
2030	$ 888,858	$ -	$ (236,915)	$ (7,005,919)
2031	$ 915,523	$ -	$ (213,164)	$ (6,303,559)
2032	$ 942,989	$ -	$ (187,620)	$ (5,548,190)
2033	$ 1,133,318	$ -	$ (154,521)	$ (4,569,393)
2034	$ 1,167,318	$ -	$ (119,073)	$ (3,521,148)
2035	$ 1,202,337	$ -	$ (81,158)	$ (2,399,969)
2036	$ 1,238,407	$ -	$ (40,655)	$ (1,202,216)
2037	$ 1,275,559	$ -	$ 1,467	$ 74,810

9.8 Stormwater Offsite Levy Rates

The table below outlines offsite levy rates associated with construction of stormwater offsite infrastructure. Differences in rates reflect the differential benefits accruing to the basin. These are the rates that will be charged to developers as reflected in the offsite levy bylaw. For information, the weighted average rate across all basins is $15,099 per ha.

Summary of Stormwater Offsite Levies by Area

Area Ref. #	Storm Charges ($/ha.)
1.0	$ 104,348
2.0	$ 4,229
3.0	$ -
4.0	$ 35,038
5.0	$ -
6.0	$ 9,701
7.0	$ -
8.0	$ 24,347
9.0	$ 35,038
10.0	$ -
11.0	$ 9,701
12.0	$ -
13.0	$ 9,701
14.0	$ 9,701
15.0	$ 9,701
16.0	$ -
17.0	$ -

10 SUMMARY OF OFFSITE LEVY RATES

The table below show the combined offsite levy rates (per ha.) associated with construction of roads, water, sanitary, and stormwater offsite levy infrastructure for each offsite levy area. Differences in rates reflect the differential benefits accruing to the basin. These are the rates that will be charged to developers as reflected in the offsite levy bylaw. For information, the weighted average rate across all basins is $229,467 per ha.

Summary of Offsite Levies by Area

Area Ref. #	Transportation Charges ($/ha.)	Water Charges ($/ha.)	Sanitary Charges ($/ha.)	Storm Charges ($/ha.)	Total ($/ha.)
1.0	$ 82,060	$ 149,865	$ 163,352	$ 104,348	$ 499,625
2.0	$ 82,060	$ 57,921	$ 49,380	$ 4,229	$ 193,590
3.0	$ 82,060	$ 57,921	$ 23,686	$ -	$ 163,667
4.0	$ 82,060	$ 57,921	$ 53,213	$ 35,038	$ 228,232
5.0	$ 82,060	$ 135,879	$ 11,920	$ -	$ 229,859
6.0	$ 82,060	$ 92,780	$ 68,083	$ 9,701	$ 252,625
7.0	$ 82,060	$ 57,921	$ 53,213	$ -	$ 193,194
8.0	$ 82,060	$ 81,924	$ 83,730	$ 24,347	$ 272,061
9.0	$ 82,060	$ 135,879	$ 11,920	$ 35,038	$ 264,897
10.0	$ 82,060	$ 52,078	$ 54,174	$ -	$ 188,312
11.0	$ 82,060	$ 52,408	$ 43,133	$ 9,701	$ 187,303
12.0	$ 82,060	$ 52,595	$ 11,920	$ -	$ 146,576
13.0	$ 82,060	$ 52,408	$ 51,380	$ 9,701	$ 195,549
14.0	$ 82,060	$ 52,408	$ 43,133	$ 9,701	$ 187,303
15.0	$ 82,060	$ 62,934	$ 19,535	$ 9,701	$ 174,231
16.0	$ 82,060	$ 52,595	$ 3,673	$ -	$ 138,329
17.0	$ 82,060	$ 51,540	$ 44,966	$ -	$ 178,567

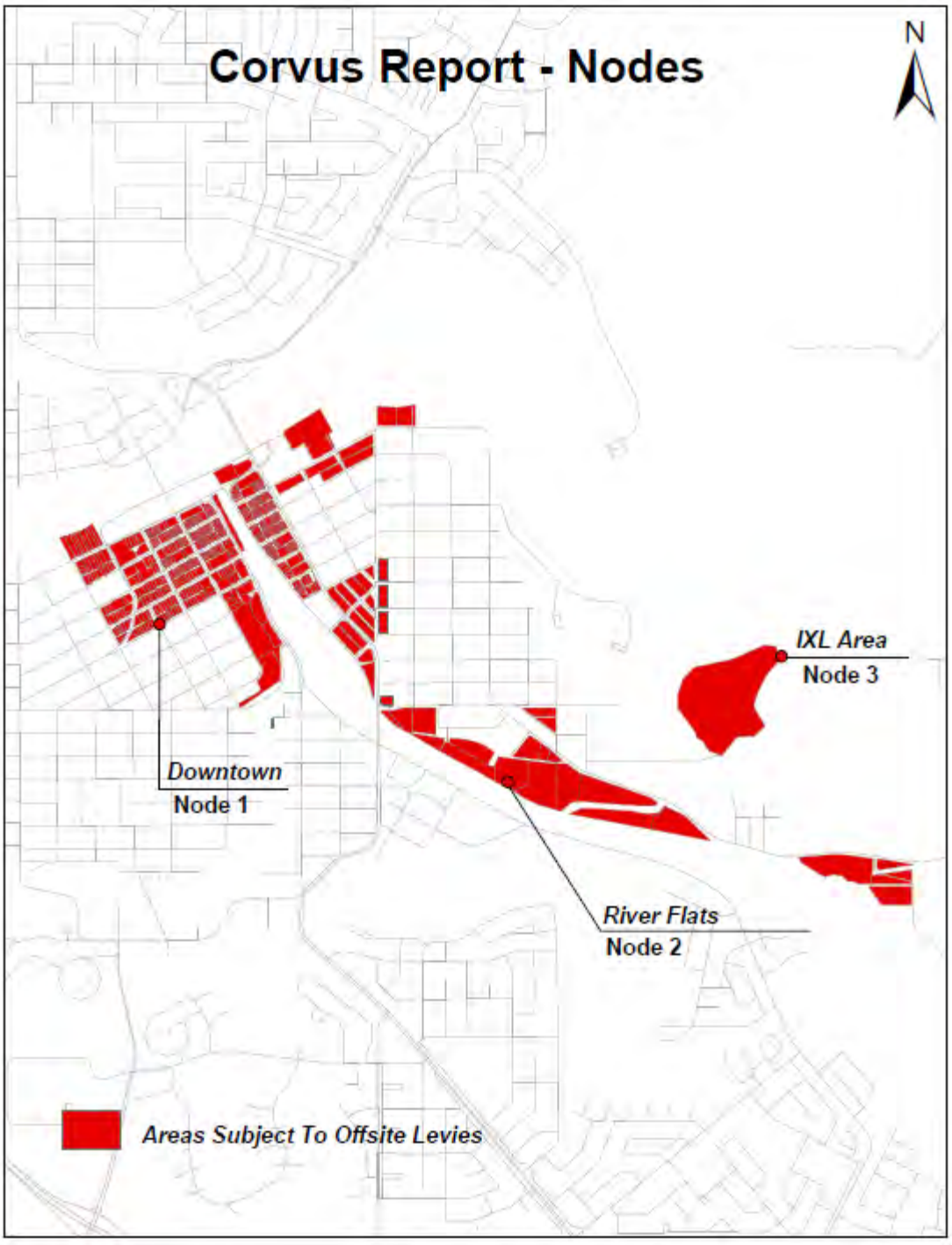
11 ACKNOWLEDGEMENTS

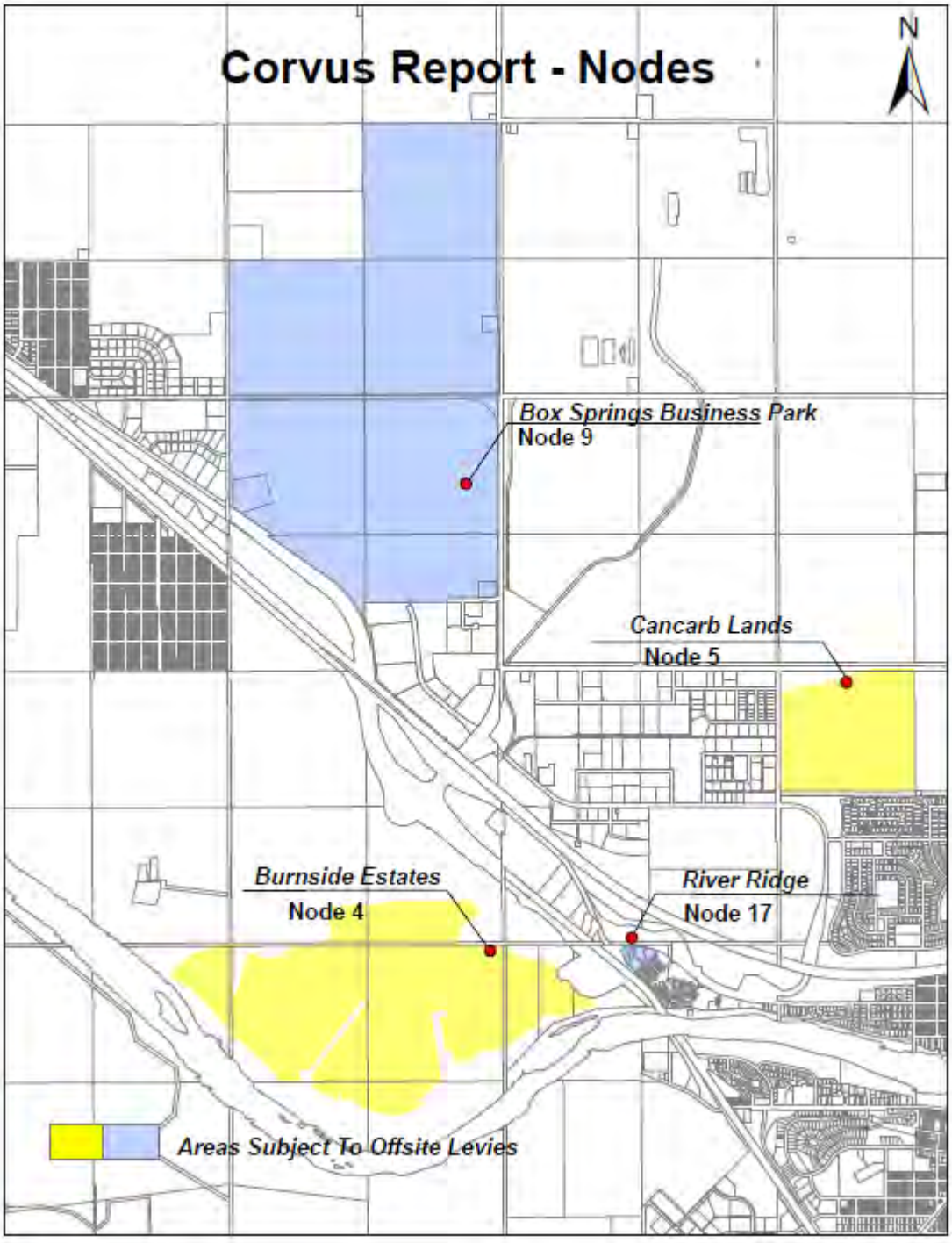
CORVUS Business Advisors would like to thank all the City of Medicine Hat staff from Engineering, Planning, and Finance who supported the work of this review.

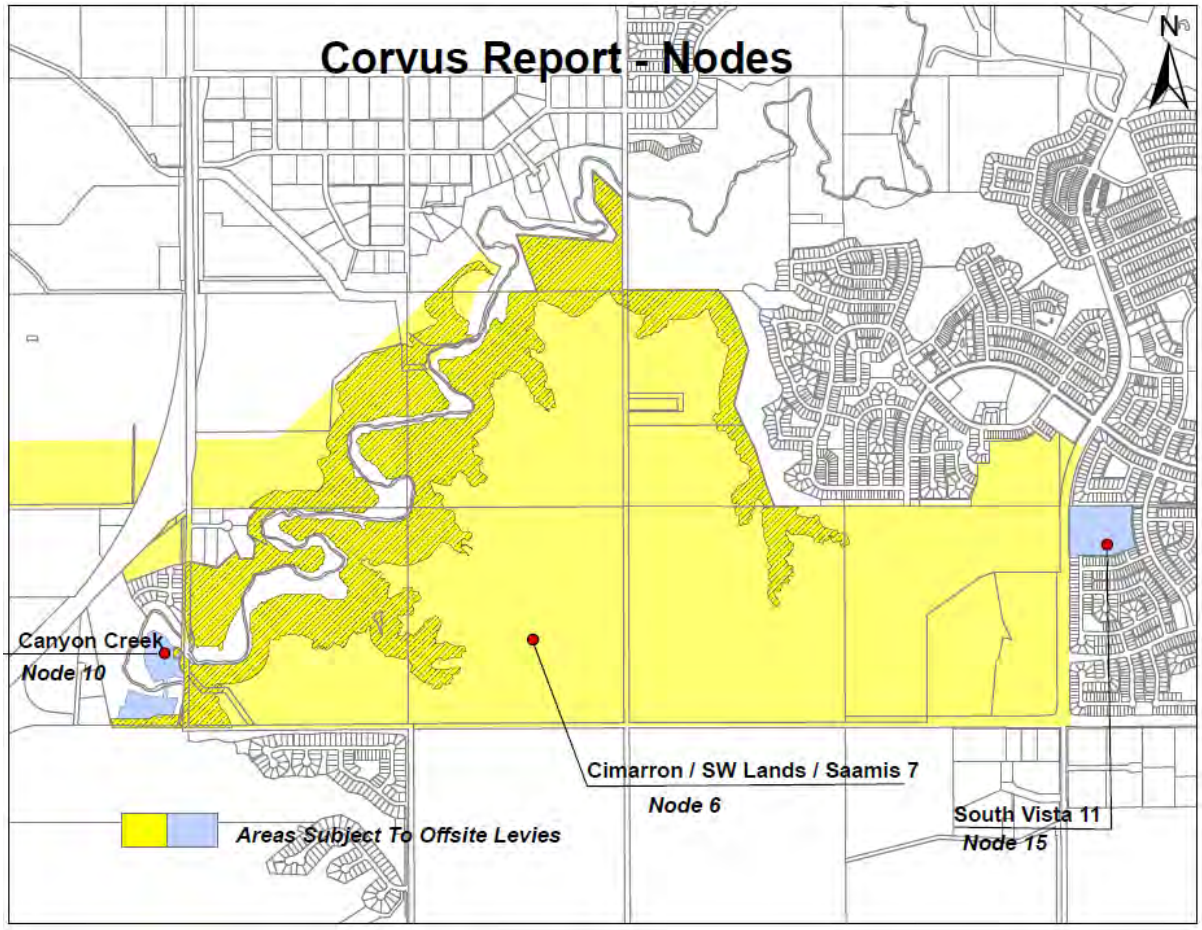
12 DISCLAIMER

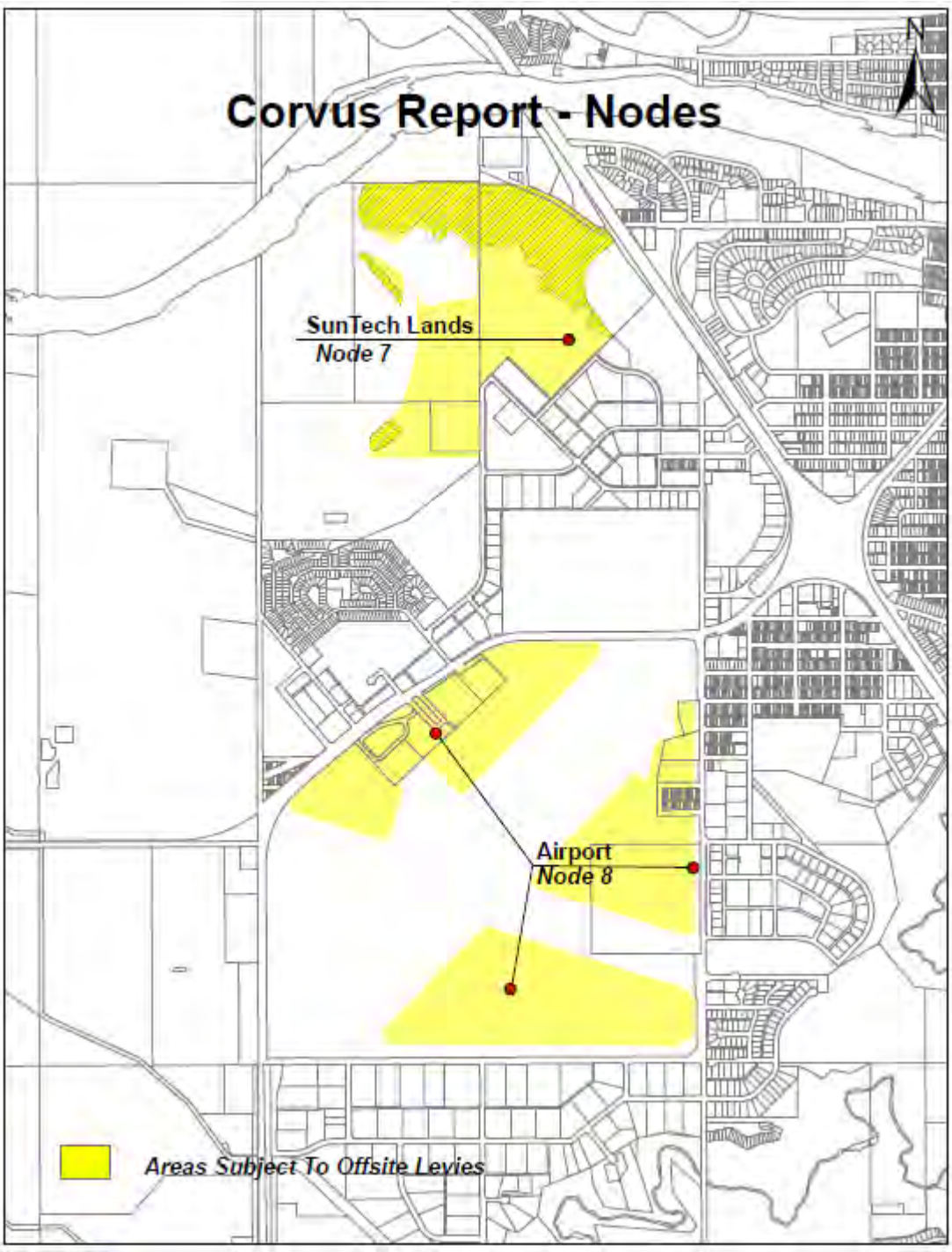
CORVUS Business Advisor has relied upon City of Medicine Hat to provide all of the data and information used to construct the offsite levy model and create the rates, such as planning data and assumptions, development forecasts and assumptions, infrastructure costs and costs estimates, allocations to benefitting parties, allocation to benefitting areas, and other assumptions etc. As such, CORVUS Business Advisors makes no guarantee as to the accuracy of the input data and information provided by these groups or the results that stem from this data and information.

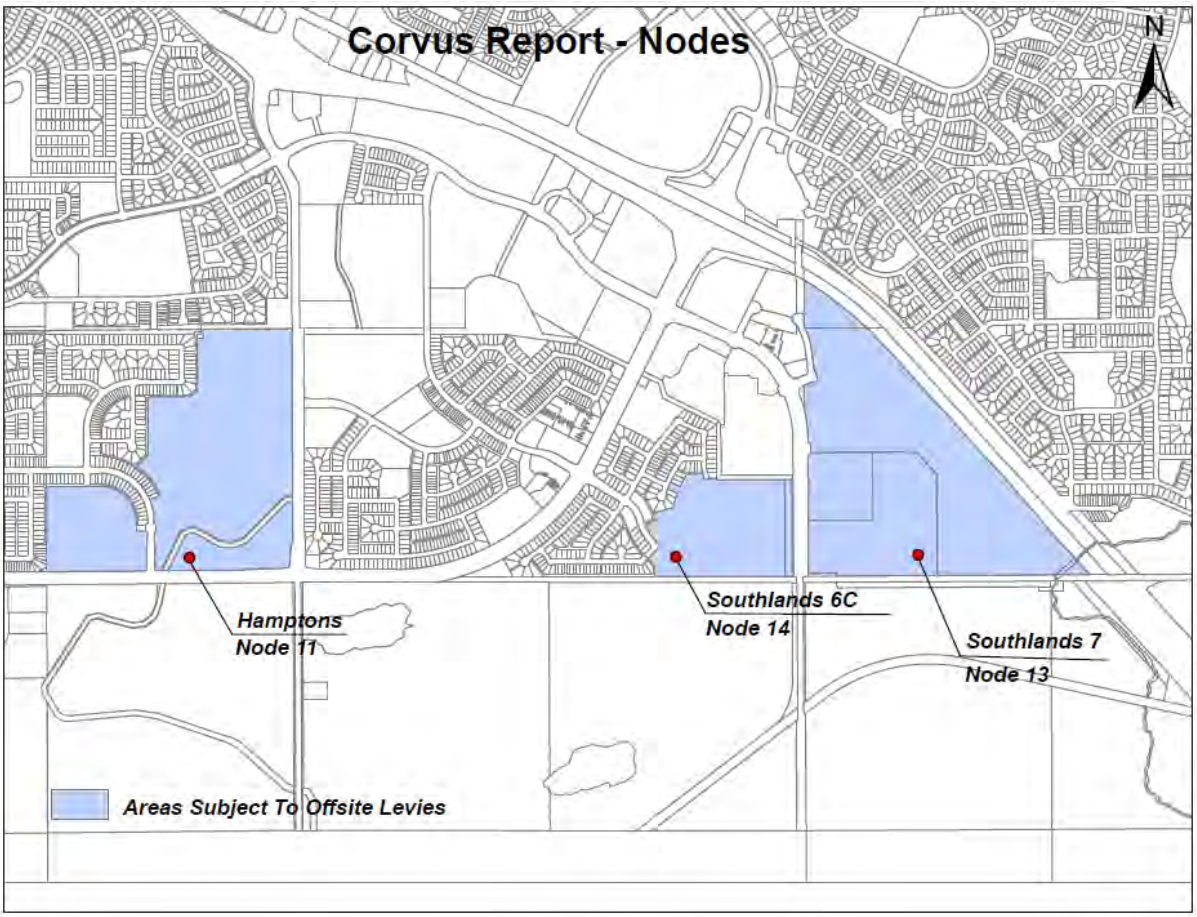
ANNEX A: MAP OF DEVELOPMENT NODES




Corvus Report - Nodes
N
Box Springs Business Park
Node 9
Cancarb Lands
Node 5
Burnside Estates
Node 4
River Ridge
Node 17
Areas Subject To Offsite Levies


Corvus Report - Nodes
N
Canyon Creek
Node 10
Cimarron / SW Lands / Saamis 7
Node 6
South Vista 11
Node 15
Areas Subject To Offsite Levies


Corvus Report - Nodes
N
SunTech Lands
Node 7
Airport
Node 8
Areas Subject To Offsite Levies


Corvus Report - Nodes
N
Hamptons
Node 11
Southlands 6C
Node 14
Southlands 7
Node 13
Areas Subject To Offsite Levies


Corvus Report - Nodes
N
Ranchlands 3C
Node 16
Ranchlands 4
Node 12
Areas Subject to Offsite Levies