CENTENNIAL PARK MASTER PLAN UPDATE 2015

PREPARED FOR:

City of Billings
Parks, Recreation, and
Public Lands Department
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ACKNOWLEDGEMENTS
CITY OF BILLINGS, MONTANA
2015 CENTENNIAL PARK MASTER PLAN UPDATE

ADOPTED _____/_____/2015

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Thomas W. Hanel

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Mike Whitaker – Director
Jon Thompson – Superintendent of Parks
Kory Thomson – Superintendent of Recreation
Mark Jarvis – Park Planner & Project Manager

Special Thanks to members of the community who generously contributed time, talent and information to help update the Centennial Park Master Plan.

Consultants

Stan Griswold, PLA – The Land Group, Inc. – Coeur d'Alene, Idaho (208) 667-3263
David Selvage – Planet Dynamics LLC – Boise, Idaho (208) 559-4422

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APPENDIX

CHAPTER 1 – PROCESS AND PUBLIC OUTREACH

Background

Parks are a resource to be managed for the best use and needs of a community. Various organizations have recently shown interest in developing new facilities at Centennial Park that do not fit within the current Master Plan of record (Appendix A). This master plan update provides a comprehensive framework to determine responsive development of the park through assessment of needs and demands. Before any determination can be made specific to Centennial Park, an assessment must be made to establish City-wide needs and the capacity of existing facilities to accommodate these needs and projected demands. This plan looks at and evaluates City-wide sports field facilities (Baseball, Softball, Football, Soccer, Lacrosse, rugby, etc…) in order to help guide future development of the entire City's provision of park and recreation services, as well as to help guide the Centennial Park Master Plan update process. Doing so best anticipates and provides for cost effective delivery of facilities and services needed by the neighborhood, surrounding populations within the park's intended service area, and the City as a whole.

Centennial Park is a valuable 30 acre parkland located near the City's western boundary. The surrounding 1.5 mile park service zone is experiencing growth in population and housing due to the availability of raw land for housing, new schools, parks, and businesses. Due to limited parklands and the anticipation of changing community values, the City's Parks, Recreation and Public Lands Department is evaluating the community's future needs to insure short and long term needs are addressed and anticipated. The Department is seeking to ensure existing and new field facilities and parks are not over or under built to serve current and future populations.

A key goal is to provide balanced, flexible, and equitable facilities and services that meet the needs of both youth and adults while sustaining and optimizing the value of the parks and recreation system for current and future residents in the areas of safety, quality of life, economic growth, and long-term financial sustainability.

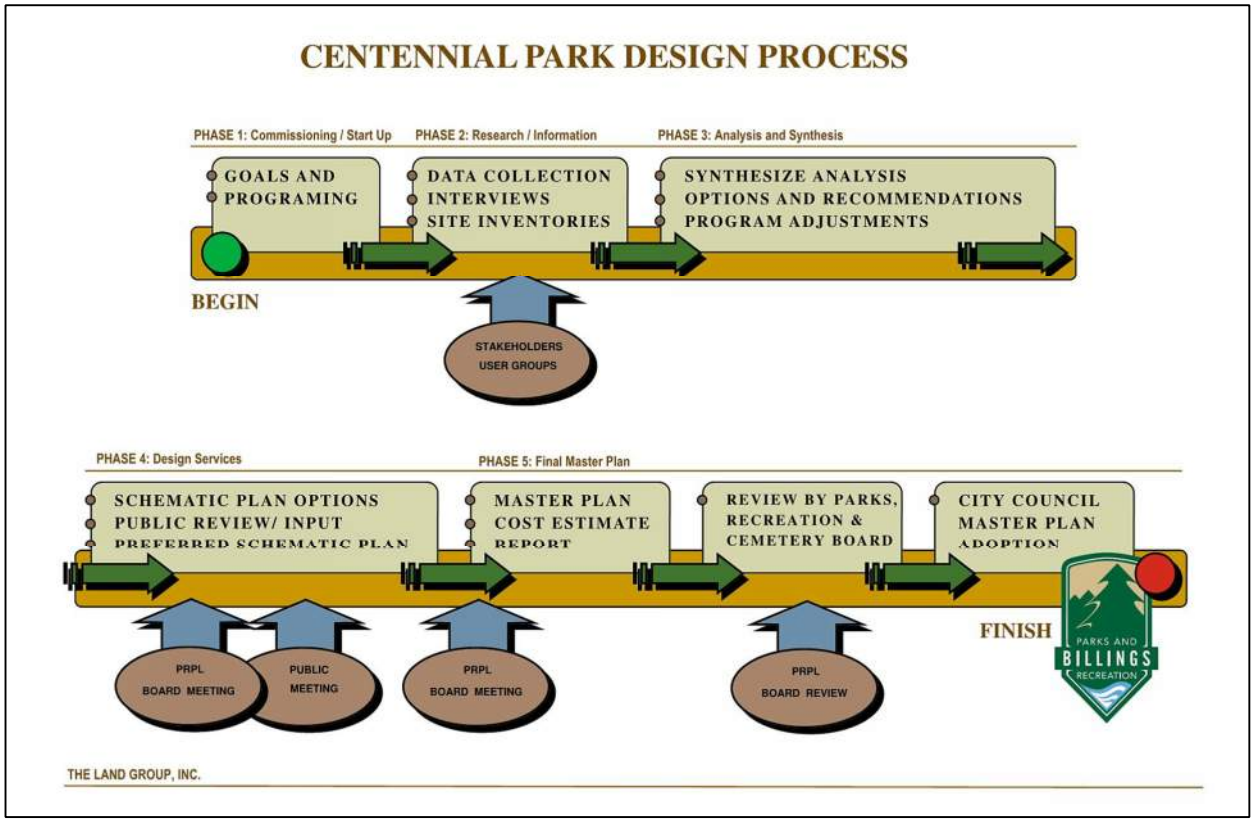
Public Involvement

Opportunities were provided for the Billings community to participate in the Centennial Park Master Plan Update. The design process for Centennial Park supported a framework for public input venues that provided fundamental guidance for the resulting design.

The Centennial Park Design Process flow chart, shown in Figure 1.1, indicates the key venues for public input used through the process.

Stakeholder/User Group Interviews and Questionnaire:
The research and information gathering phase of the project included sending out stakeholder and user group questionnaires the week of October 13, 2014 (Appendix B) with invitations to attend stakeholder and user group interviews on October 29-31, 2014. Interviews were scheduled for 30-minute periods over the course of the three days. Information gleaned from the questionnaires and interviews provided valuable insight into how the park is used, its importance to user groups, and an understanding of neighborhood and community values and attitudes toward the park and surrounding area.

Figure 1.1 Centennial Park Design Process:



Stakeholder and user groups/representatives who participated in the interviews and questionnaires were:

Luke Baker, Billings Rugby
Mark Wahl, School District #2
Karl Boltz, Central Giants Little League
Joe Robillard, Hockey
Sue Bresler/Macia Clausing, Dog Park Committee
Blake Wahrlich, Billings Scorpions Lacrosse
Harlod Olson, Billings Catholic Schools
Rob Morse, Burlington Little League
Donnel Small, Billings Curling Club
Leslie Albright, Yellowstone Valley Figure Skating Club
Jeremy DeVries, Yellowstone Youth Football
Steve Walton, Big Sky Little League
Shawn Hanser, Boulder/Arrowhead Little League
Joe Larimer, Riverside Little League
Alan Carlson, Billings Aquatics Club
Magic City Soccer Club
Rick DeVore and other members of PRPL Park Board

PRPL Parks Board Meeting #1:

Options and recommendations generated during the Analysis and Synthesis phase of the project were presented to the Billings Parks, Recreation, and Public Lands (PRPL) Parks Board in a board meeting

convened March 25, 2015 wherein the findings and recommendations of Chapters 2, 3, 4, and 5 were reviewed and discussed. Schematic Plans A, B, and C (Appendix C) were presented to the PRPL Board for review and comment.

Public Meeting:

Options and recommendations generated during the Analysis and Synthesis phase of the project were presented to the public in a meeting held on March 25, 2015 at Meadowlark Elementary School. Key findings and recommendations of Chapters 2, 3, 4, and 5 were presented with Schematic Plans A, B, and C (Appendix C).

This meeting gave the community opportunity to provide input to the design process. At this point site-specific and community data had been gathered, inventoried, and mapped. Analysis of this data was synthesized into observations, recommendations, and three schematic plan options.

Sign-in sheets indicate approximately 30 people attended this public meeting. Meeting attendees were given four comment sheets upon arrival. One sheet was for written comments and the other three provided Schematic Plans A, B, and C for written comments and sketching ideas. Comment Sheets were gathered following the meeting. A summary of the written public comments received at the March 25th meeting is located in Appendix D.

Public input from this meeting provided key community guidance in the final synthesis for the design giving opportunity for the community to come together in collaboration and provide constructive input. This input provided valuable insights for city staff and consultants to further synthesize the information into a Preferred Schematic (Appendix E). Members of the PRPL Park Board were also in attendance.

Staff and Consultants Present:

- Mike Whitaker - Director PRPL
- Mark Jarvis - Parks Planner
- Jon Thompson – Parks Superintendent
- Kory Thomson – Recreation Superintendent
- Stan Griswold - The Land Group, Inc.
- David Selvage - Planet Dynamics

PRPL Parks Board Meeting #2:

With input from the PRPL Parks Board Meeting #1 and the Public Meeting, city staff and the consultant worked through several iterations to develop a Preferred Schematic Plan (Appendix E). A special PRPL Parks Board meeting was held on July 22, 2015 to present the Preferred Schematic Plan to the board for comment. Board comments/questions on the Preferred Schematic Plan included the following.

- There was concern the splash pad and playground area as shown was too small. The board felt those areas need to be larger to accommodate more kids from both general park use and those kids attending with families who are participating in baseball events.

- There was question as to the need for a basketball court. Some felt the existing basketball courts at the church north of the site is meeting any need.

- There was a question if perimeter fencing is needed to prevent errant balls entering the busy streets.

- There was concern with people and their dogs accessing the dog park from the east parking lot to the northeast dog park entrance as it had them pass close to the playground. There was discussion whether the northeast dog park entrance should be moved to the southeast.

The city staff and consultant committed to address these issues brought up by the board and present a revised plan for board review on July 27, 2015. Revisions to the plan included the following.

- Changed basketball court to be multi-use court area that includes basketball and pickle ball to be more of a multi-use court area.

- Reworked access from east parking lot to northeast dog park entrance to avoid dogs passing near playground.

- Verified the splash pad and playground sizes and left them as they were because they were already large spaces as shown with the playground at 5,272 square feet (Pioneer Park = 5,000 sf) and the splash pad at 4,506 square feet (South Park = 2,500 sf). A shade structure was added between the two areas.

- Berms with hedges were added along the eastern edge of the multi-use sports fields buffering sports play from 32nd traffic.

- Sports netting was added at the north and south ends of both the multi-use playfields to catch errant balls at goal ends of fields.

A revised plan was delivered to the PRPL Parks Board on July 27, 2015 for review and comment. Response was given regarding the splash pad and playground areas and the desire was that they should be bigger areas. Revisions to the July 27 version of the plan were made to enlarge both the splash pad and playground areas.

PRPL Parks Board Meeting #3:

Following the PRPL Parks Board input and subsequent revisions to the Preferred Schematic Plan, a Final Draft Master Plan (Appendix F) was presented to the PRPL Parks Board in a special board meeting held July 30, 2015. After discussion, the board unanimously voted to approve the plan as presented.

CHAPTER 2 – DEMOGRAPHICS

City and Regional Demographics

Over the last eight years City and regional growth has been stimulated by an oil production boom associated with the oil sands found in the Bakken formation. The Bakken oil field formation is generally located between Billings, Mt and Fargo, ND, extending north into Canada. The Bakken is estimated to have oil reserves that will last 20 to 25 years based on current US consumption rates. Billings is a primary hub providing oil field support for materials, supplies, technical knowledge, banking, health care, retail services, plus social activities and a wide range of outdoor recreational activities.

The 2014 U.S. Census population estimate for Billings tops 109,000. The City's population growth has been driven upward by better than 19% over the fourteen year period between 2000 and 2014. The primary drivers of the City's population growth have been a national economic downturn; oil and new techniques for extracting it; the well-paying jobs that come with oil field development; and the City's quality of life factors such as strategic location to serve the oil industry, availability of housing, retail services, and provision of quality recreation facilities and opportunities including public parks, trails and programs. The City's population characteristics (Figures 2.1, 2.2, and Tables 2.1, 2.2) have changed in important ways that will likely continue to drive change in demands for park and recreation services for the next 10 to 20 years, a period of time that coincides with the Bakken's estimated oil resources based on U.S. consumption.

Three important facts about recent population growth:

1) Median age of City residents increased from 36.8 to 37.6 years young in 2014.
2) Over 32% of the City's total population growth has been in persons over the age of 18.
3) Nearly 23% of the population increase was in persons aged 4 and under.

Figure 2.1 Graph showing percent change in the age of City residents 2010 vs 2000 Census:

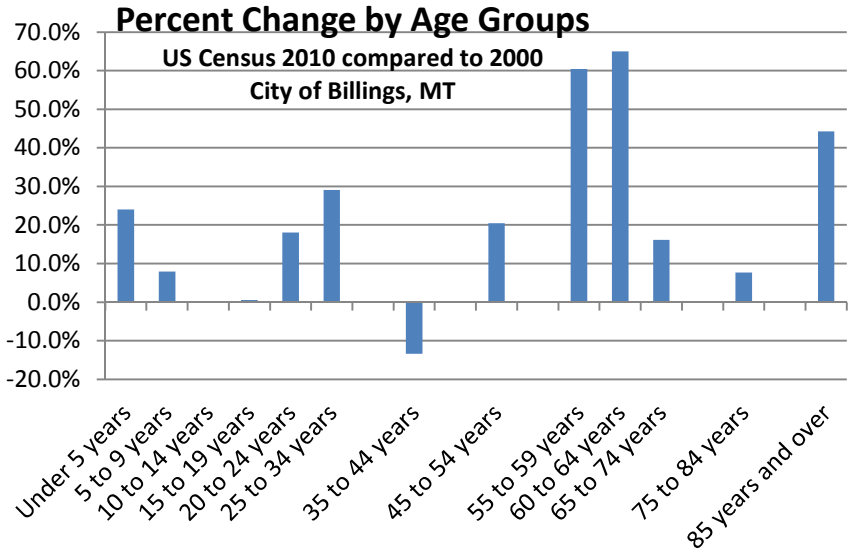
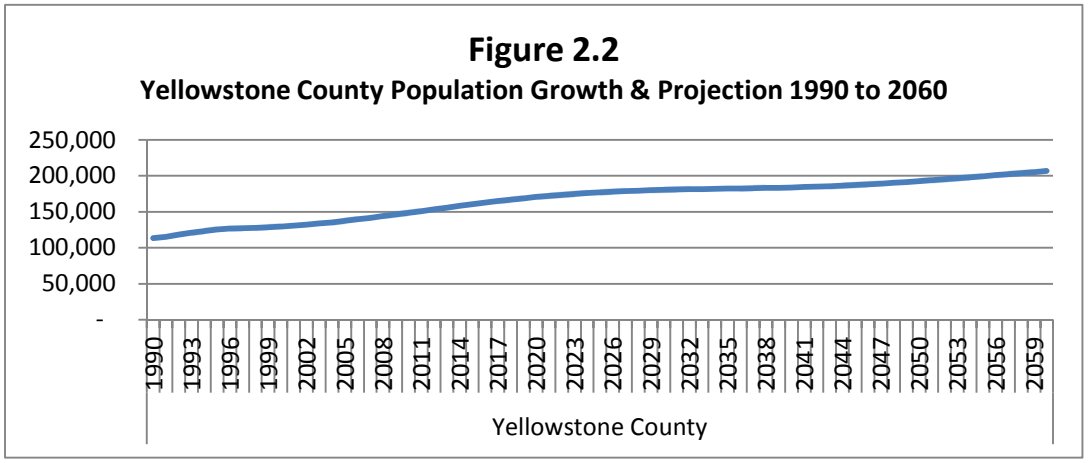


Table 2.1 Comparison of 2010 and 2000 U.S. Census data for City of Billings, Montana.

Billings, Montana - Overview	2010 Census		2000 Census		2000-2010 Change	
	Counts	Percentages	Counts	Percentages	Change	Percentages
Total Population	104,170	100.00%	91,006	100.00%	13,164	14.46%
Population by Race						
American Indian and Alaska native alone	4,619	4.43%	3,102	3.41%	1,517	48.90%
Asian alone	778	0.75%	545	0.60%	233	42.75%
Black or African American alone	828	0.79%	496	0.55%	332	66.94%
Native Hawaiian and Other Pacific native alone	93	0.09%	38	0.04%	55	144.74%
Some other race alone	1,467	1.41%	1,304	1.43%	163	12.50%
Two or more races	3,072	2.95%	1,875	2.06%	1,197	63.84%
White alone	93,313	89.58%	83,646	91.91%	9,667	11.56%
Population by Hispanic or Latino Origin (of any race)						
Persons Not of Hispanic or Latino Origin	98,714	94.76%	87,235	95.86%	11,479	13.16%
Persons of Hispanic or Latino Origin	5,456	5.24%	3,771	4.14%	1,685	44.68%
Population by Gender						
Female	53,904	51.75%	47,218	51.88%	6,686	14.16%
Male	50,266	48.25%	43,788	48.12%	6,478	14.79%
Population by Age						
Persons 0 to 4 years	7,293	7.00%	5,935	6.52%	1,358	22.88%
Persons 5 to 17 years	16,254	15.60%	16,035	17.62%	219	1.37%
Persons 18 to 64 years	65,017	62.41%	55,616	61.11%	9,401	16.90%
Persons 65 years and over	15,606	14.98%	13,420	14.75%	2,186	16.29%

Demographic projections from the State of Montana's Department of Commerce indicate Yellowstone County will experience continued strong growth well into the future (Figure 2.2).



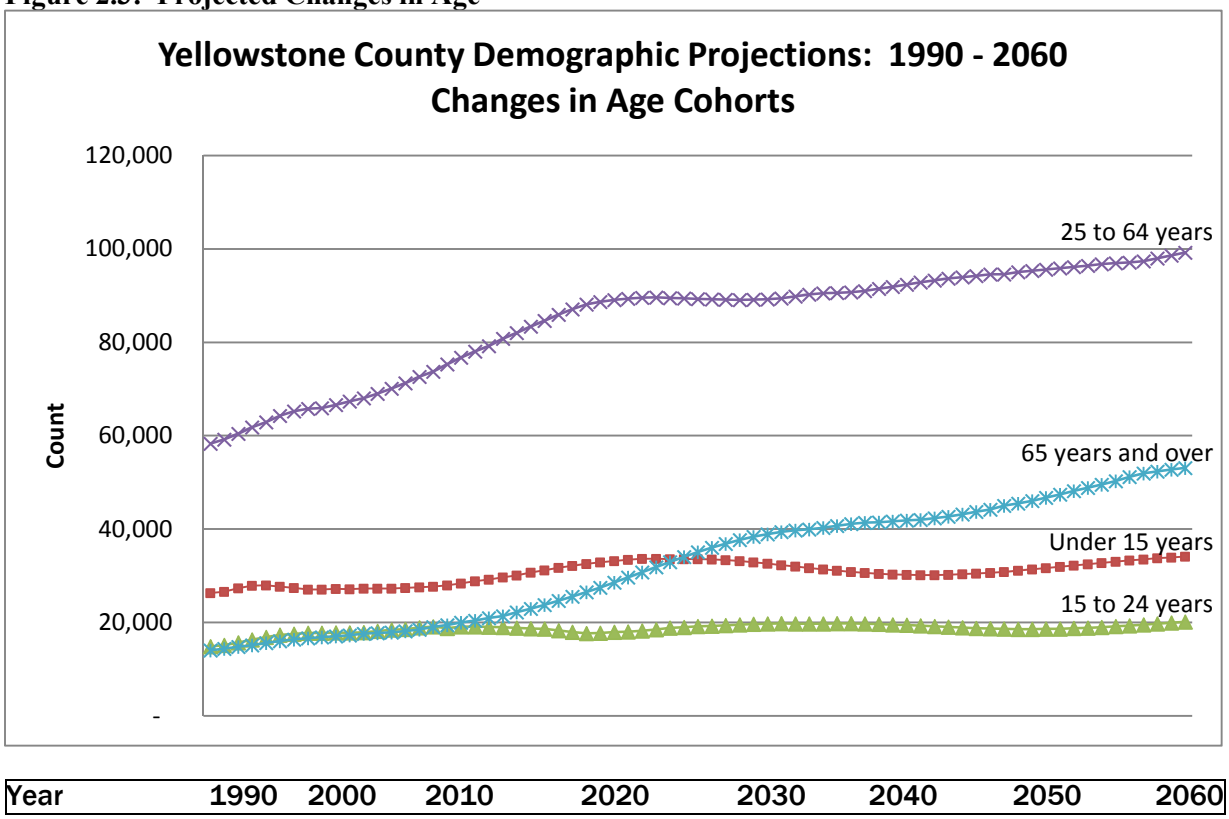
Source: eREMI - a product of Regional Economic Models, Inc. (www.remi.com) - Released April 2013
Compiled by the Census & Economic Information Center, MT Dept. of Commerce (www.ceic.mt.gov)

Table 2.2: Change in census tract populations.

Yellowstone County Change in Population By Census Tract 1970 - 2000								
Census Tract	1970	1980	Percent Change	1990	Percent Change	2000	Percent Change	Pop. Change since 1970
1	1503	1169	-22.2%	788	-32.6%			Tract eliminated
2	4472	3737	-16.4%	3334	-10.7%	3624	8.7%	-848
3	4697	3894	-17.1%	3300	-15.3%	3592	8.9%	-1105
4	7395	6189	-16.3%	5237	-15.4%	6214	18.7%	-1181
5	5244	4464	-14.9%	3971	-11.0%	4119	3.72%	-1125
6	4116	3696	-10.2%	3055	-17.34%	3136	2.7%	-980
7	5496	15276	177.9%		117.0%			Tract split
7.01	****	****		2741		3422	24.9%	681
7.02	****	****		4478		5097	13.8%	619
7.03	****	****		7305		7562	3.5%	257
7.04	****	****		3359		3632	8.1%	273
8	2165	4152	91.8%	4008	-3.5%	4346	8.4%	2181
9	6922	7898	14.1%		-5.2%			Tract split
9.01	****	****		3331		2682	-19.5%	-649
9.02	****	****		4156		5069	22.0%	913
10	5720	5002	-12.6%	4667	-6.7%	4772	2.2%	-948
11	6311	5483	-13.1%	5147	-6.1%	5116	-0.6%	-1195
12	2899	2533	-12.6%	2574	1.6%	2721	5.7%	-178
13	5567	6182	11.0%	6047	-2.2%	6181	2.2%	614
14	3179	6300	98.2%	6981	10.8%	9976	43.0%	6797
15	3561	5646	58.6%	6125	8.5%	7834	2.8%	4273
16	1320	4141	213.7%	4422	6.8%	5934	34.2%	4614
17	5996	7182	19.7%		51.3%			Tract split
17.01	****	****		6379		8552	34.1%	2173
17.02	****	****		4486		4345	-3.1%	-141
18	6345	9634	51.8%		10.9%			Tract split
18.01	****	****		2669		3215	20.5%	546
18.02	****	****		3097		4987	61.0%	1890
18.03	****	****		2175		2178	.1%	3
18.04	****	****		2736		2867	4.8%	131
19	4459	5455	22.3%	6851	25.6%	7799	13.8%	3340

It is important to note population projections for Yellowstone County anticipate change specific to age cohorts. Persons over the age of 65 are projected to rise and eventually exceed the population aged 15 years and younger. This is projected to occur around 2024 based on data compiled by the Montana Department of Commerce (Figure 2.3).

Figure 2.3: Projected Changes in Age



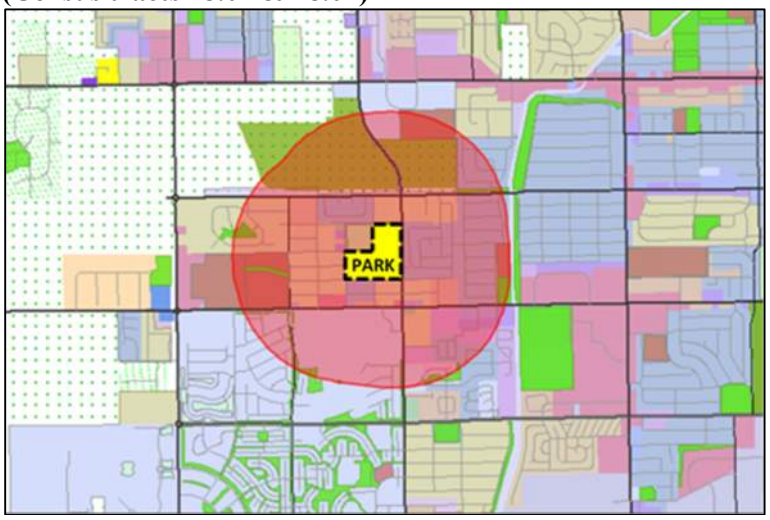
Economically, the 2012 median household income for Billing's residents has generally improved. The City saw median household income rise to $46,914 in 2010 compared to the state-wide average of $45,456. The City, however, saw an increase in persons with incomes at or below the poverty level. 2010 US census data indicates 13.1% of Billings' residents have incomes that place them at or below the poverty level.

The City's housing inventory has grown as well in response to population growth. 2010 Census housing units numbered 43,945 versus 37,525 units in 2000. That is a net increase of over 17% for all housing unit types. The Owner occupied housing rose 16% compared to renter-occupied housing which increased by over 18%. 2010 rental vacancy rates dropped from 5.3% in 2000 to 3.8% in 2010 – a 28% decrease. In comparison, homeowner vacancy rates also declined from 1.2% to 0.7%. Population and housing data suggests the Billings market will see continued growth in new residential building starts. New housing starts for both apartments and single family will place demands on the City to provide additional parks and recreation services.

Centennial Park Service Area

The Centennial Park master Plan update provides opportunity to evaluate current and potential future growth and demographics within its service areas. These factors should be strongly considered in conjunction with community demands and needs information along with citizen and user group input. The park currently serves nearly 10,000 persons and significant potential for new growth within the ½ mile neighborhood park service boundary (Figure 2.4).

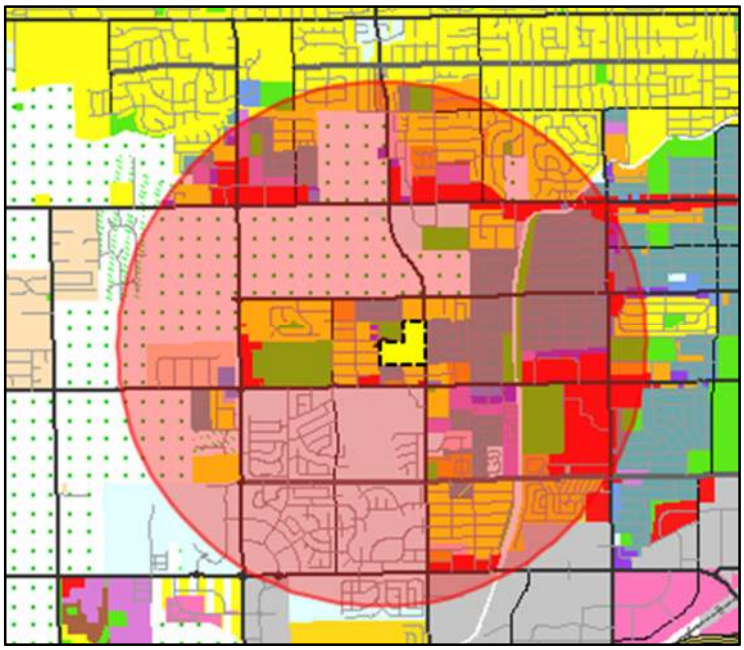
Figure 2.4: Centennial Park ½ mile neighborhood service area – 2010 Pop. 9,489 (Census tracts 18.01 & 18.02)



Centennial Park is classified as a Community Park by the City's adopted comprehensive parks plan. Community parks are intended to provide services to the surrounding neighborhood as well as provide for the more intensive park and recreation service needs of people living within 1.5 miles of the park (Figure 2.5). The areas within a ½ mile radius of Centennial Park have 187 acres of vacant land that may be developed for residential uses given current zoning and land use plans. In addition 110 platted vacant single family lots are available.

Park service demands from new growth in the park's service areas will likely encourage emphasis on adding neighborhood park features to accommodate drop in uses. Park features such as walking paths, playgrounds, open turf play areas, trees and features such as volleyball, bocce ball, horseshoes, picnic shelters, etc… will be needed at Centennial Park to serve existing and new resident demands as the surrounding area builds out.

Figure 2.5: Centennial Community Park 1.5 mile service area map overlaid on current zoning



Implications:

Implications for parks and recreation planning based on demographic and land use data, suggest the following:

1) Demand for youth and family recreation activities and programming will increase over the next 10 years. New families who have moved to Billings for work will be seeking activities to integrate themselves into the community and to enjoy a healthy lifestyle.

2) Park and Recreation facilities and programs should anticipate growth in demand for services by young adults over the next 30 years

3) Facilities, activities and programming for older, active adults; aged 55 and above, will be needed over the long-term to help support and foster a healthy, active community life style.

4) The City should ensure it secures and maintains an adequate supply of parkland to serve demands associated with projections for stable, strong population and housing growth.

5) Funding for acquisition and development of new park & recreation facilities will be needed to maintain existing quality of life factors valued by City residents.

6) Subsidies for providing parks and recreation services to individuals and families living at or below the poverty level will likely need to increase in order to counter potential increases in crime, drug and alcohol abuse, and school dropout rates. Providing funding for recreation programming that targets youth, youth-at-risk, and families living at or below the poverty level is proven to help reduce and manage a city's costs related to crime, law enforcement, and detention.

7) The City has opportunity to plan and provide new park and recreation facilities and programming in advance of growth and demographic change that will optimize and stabilize its strategic geographic, regional, and economic advantages for current and future City residents and businesses.

CHAPTER 3 – ADOPTED GOALS, OBJECTIVES, AND POLICIES

The following adopted goals, objectives and policies influence the Centennial Park Master Plan Update.

Adopted Land Use Plan Provisions from the Yellowstone County and City of Billings 2008 Growth Policy Update

Chapter 3.0 Community Goals and Objectives

Open Space and Recreation Element

1. ISSUE: *Some neighborhood parks appear to receive more funding for improvements than other neighborhood parks.*

> ***GOAL:*** *Rational consideration of neighborhoods for park expenditures.*
>
> ***OBJECTIVES****:*
> *• Provide well-maintained and equipped neighborhood parks and improve undeveloped parks.*
> *• Create neighborhood parks designed to meet the needs of the neighborhood.*
> *• Empower neighborhoods to provide direction for budgetary decisions.*

2. ISSUE: *Billings and Yellowstone County need more major recreation facilities and need to improve those we already have.*

> ***GOAL:*** *Recreation facilities that serve the diverse recreational needs of Billings and Yellowstone County.*
>
> ***OBJECTIVES****:*
> *• Meet the recreation needs of City and County residents.*
> *• Improve the quality of life of residents.*
> *• Encourage the development of all athletes.*

3. ISSUE: *Private land development sometimes restricts access to public land.*

> ***GOAL:*** *Accessible public lands.*
>
> ***OBJECTIVES****:*
> *• Improve relations between users and landowners.*
> *• Ensure the public use of public land.*

4. ISSUE: *Billings and surrounding County town sites need more multiple use trails.*

> ***GOAL:*** *A multi-purpose trail network integrated into the community infrastructure that emphasizes safety, environmental preservation, resource conservation and cost effectiveness.*
>
> ***OBJECTIVES****:*
> *• Develop non-motorized connections between residential neighborhoods and work places.*
> *• Provide convenient access to bicycle and pedestrian facilities.*
> *• Improve quality of life for residents.*

5. ISSUE: *Public access to areas above and below the rimrocks is limited and decreasing each year.*

> ***GOAL:*** *Protect and increase the availability of public access to natural areas and trails near the rims.*
>
> ***OBJECTIVES:***
> *• Protect public use of a well-recognized and economically valuable natural resource.*
> *• Increase recreation options for residents.*
> *• Preserve a unique Billings' feature.*

6. ISSUE: *Public access to areas along the Yellowstone River is limited and decreasing each year.*

> ***GOAL:*** *Protect and increase the availability of public access to natural areas and trails along the River.*
>
> ***OBJECTIVES:***
> *• Protect public use of a well-recognized and economically valuable natural resource.*
> *• Increase recreation options for residents.*
> *• Preserve a unique Billings' feature.*

Chapter 4.1: Land Use

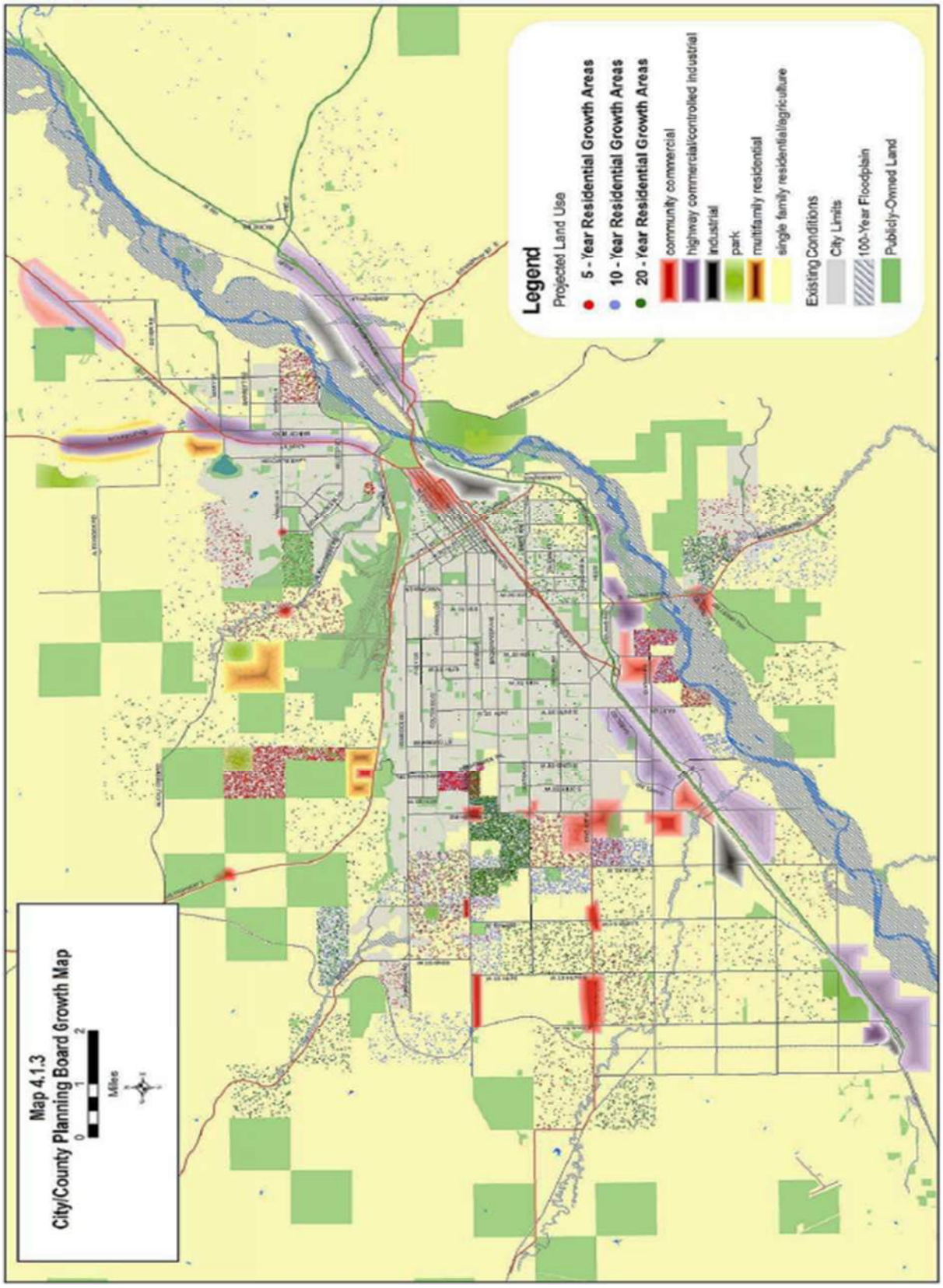
Billings Residential Land Use

The City Zoning jurisdiction includes the entire City of Billings (40.398 square miles). There are 25 zoning districts and 2 overlay districts in the City. Land zoned for residential uses comprises approximately 53 percent of the total zoning jurisdiction, which is up 3% since 2003. In order of density, the residential zoning districts allowed in the City are listed in Table 5. Also shown is the percentage of City land occupied by the district and the percentage of change in area that each district has experienced since 2003.

TABLE 5
RESIDENTIAL ZONING DISTRICTS WITHIN THE CITY OF BILLINGS

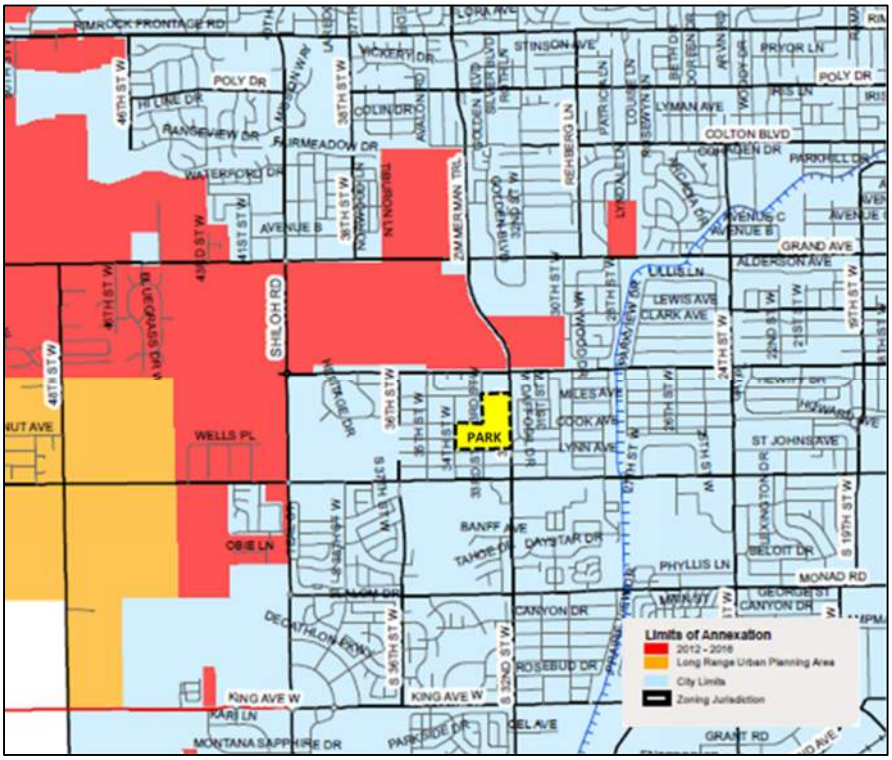
DISTRICT	% of City by Zoning District	% Change since 2003	DENSITY
Residential 9,600	27.9%	+2.69	1 d.u./9,600 s.f.
Residential 8,000	.13%	+.02	1 d.u /8,000 s.f., 2 d.u./10,000 s.f.
Residential 7,000	16.0%	+2.79	1 d.u./7,000 s.f., 2 d.u./9,600 s.f.
Residential 7,000-Restricted	Data not available	N/A	1 d.u./7,000 s.f.
Residential 6,000	4.8%	-1.4%	1 d.u./6,000 s.f., 2 d.u./8,000, 1,500 s.f. per additional unit up to 10 units.
Residential 6,000-Restricted	Data not available	N/A	1 d.u./6,000 s.f.
Residential 5,000	.50%	+.37%	1 d.u./5,000, 2 d.u./8,000 s.f.
Residential Multi-Family	.78%	-.82%	Square footage requirements increase for additional dwelling units. Minimum square footage is 6,000. 400 s.f. required for each additional unit over 8 units.
Residential Multi-Family Restricted	1.1%	+.25%	Square footage requirements increase for additional dwelling units. Minimum square footage is 6,000. 1,500 s.f. required for each additional unit over 8 units.
Residential Manufactured Home	1.7%	-.14%	Allows 1 manufactured home per 6,000 s.f.

Figure 3.1: Billings Long Range Land Use Plan Map



Annexation
Much of the area west of Centennial Park is planned to be annexed into City limits (Figure 3.2).

Figure 3.2: Billing's Annexation plan map for areas within and adjacent to Centennial Park service area.



Park classifications as noted in the Billings Comprehensive Plan - Chapter 4.8 open Space & Recreation

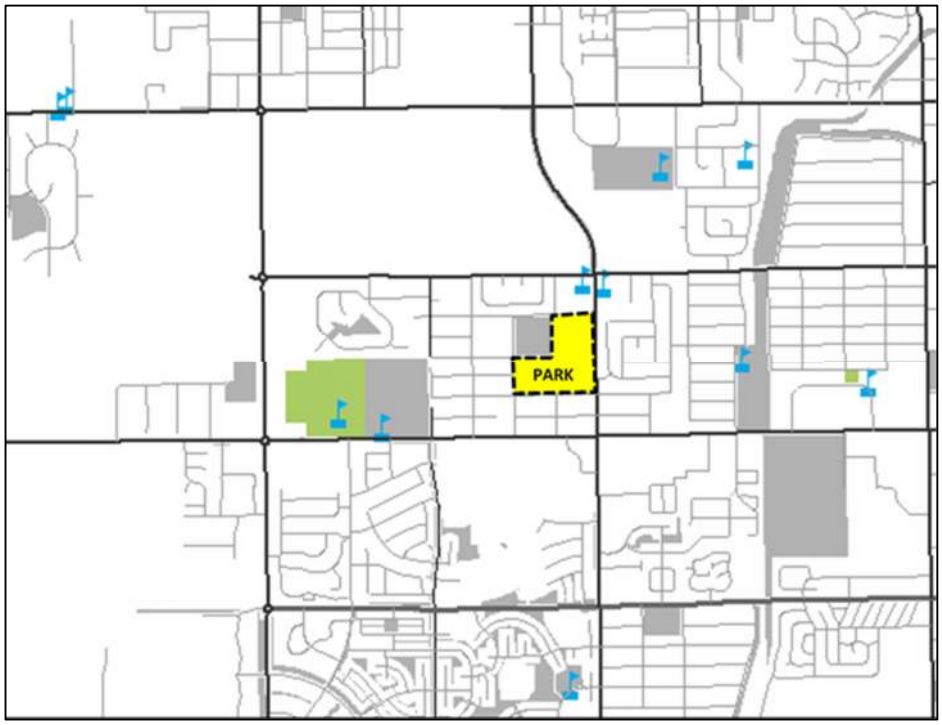
City of Billings Park classifications

• ***Community Park***
A Community Park serves broader community based recreation needs as well as preserving unique landscapes and open spaces. They allow for group activities and offer other recreational opportunities both active and passive on a city wide scale. The location of these parks are determined by quality and suitability of the site. These parks are appropriate sites for special use facilities such as aquatic facilities and activity centers. They have a service area of from ½ to 3 miles in distance. The size of a Community Park varies but should accommodate the desired uses and range from 30 to 50 acres.

• ***Sports Complex***
Are heavily programmed athletic fields and associated facilities strategically located and designed to serve the entire community. Accessibility from major transportation corridors is an important factor in location. Size is determined by projected demand and are a minimum of 25 acres with 40 to 80 acres considered optimal. Sighting of these facilities is crucial because of their intense and extended use so that activities do not interfere with adjacent property owners.

• ***Special Use Park***
This classification covers a broad range of parks and recreation facilities that are oriented to a single use. Location and size are variable depending on the use.

Figure 3.3 Centennial Park and relationship to nearby schools and public lands.



Parks 2020 – The Billings Parks, Recreation, and Open Space Master Plan, General Recommendations

Recreation Programs Recommendations **(pg. 20)**

1. *Increase the quality, diversity, and number of programs offered, balancing team sports and noncompetitive sports and activities.*

2. *Improve marketing and visibility of PRPL and their programs.*

3. *Establish the City as the leader in community recreation by developing new programs and serving as a clearinghouse for information on recreation opportunities in Billings. Use of public television, Internet website, brochures, and commercial announcements should be explored.*

4. *Improve PRPL image and visibility by establishing year-round programs and facilities. Ideally, the PRPL would be located in a City-operated, year-round recreation center. In the absence of a City recreation center, identify and utilize facilities available through schools, churches, and other community facilities for programming and developing diverse outreach programs designed to take advantage of community and regional resources.*

Recreation Facility Status **(pg. 22)**

There is expressed interest in higher quality, year-round, and specialized facilities. Existing facilities are not evenly distributed throughout the community. Newer neighborhoods suffer from an overall shortage of facilities. The lack of facility development in County parks creates a demand on the City to meet recreation needs of both City and County residents.

Funding for maintenance and replacement of facilities has not kept pace with capital improvements. The system suffers from aging infrastructure and inadequate reserves to replace, maintain, and upgrade facilities, particularly in older neighborhoods.

Recreation Facility Recommendations (pg. 24)

1. *Focus limited fiscal resources on maintaining and improving the quality of the existing facilities.*

2. *Maximize the use of all existing facilities through efficient scheduling and management. Revise current use agreements on ball fields to transfer management and scheduling responsibilities from teams to Recreation Division of PRPL.*

3. *Operate existing facilities, including swimming pools, to be self-sustaining. Charge admission and user fees commensurate with costs. Public concern with price increases should be addressed through creative pricing schedules that provide discounts at underutilized facilities (e.g. South Park) and/or b offering a lower rate at different pools various days of the week.*

4. *Plan and develop major new facilities to include a maintenance and operation plan with the goal of operating to be self-sustaining. Encourage development of major new facilities with special assessments or bond issues versus general funds.*

5. *Provide incentives and establish policies to encourage nonprofit and private organizations to develop, operate, and maintain facilities for special uses. Many requested facilities, such as an equestrian course, will not have broad enough support to be funded by community-wide property tax assessments.*

6. *Formalize use agreements with schools, universities, nonprofits, and special events coordinators.*

Facility Standards per 1,000 Population:

Table 1. National Recreation and Park Association recreation facility standards. (Lancaster, 1983).

Facility	NRPA Standard	Existing City	Existing Others	Status
Pools	1per 20,000 or 4 for Billings	3 or 1/33,000	3 or 1/33,000	At least 1 more City facility is recommended.
Rec. Center	1 per 25,000 or 4 for Billings	0	3 or 1/33,000	No City facility exists. Need is only partially met by nonprofit groups.
Playgrounds	1 acre/1,000 or 100 Acres	37 each	33 each	Parks and schools provide 75% of playground needs.
Ball fields	1 per 5000 or 20 for Billings	78	17	Number of facilities is adequate, the quality and scheduling is poor.
Football/Soccer	1.5/10,000 Or 1 soccer field/10,000 and 1 football / 20,000	11	15 (schools)	Most are multiuse and not permanent Complex is desired.

Recreation Parks (pg. 26)
Multiple Use Parks
Larger multiple use recreation parks, frequently referred to as community parks, are 10 to 20-acre parks developed to meet community recreation needs and to preserve large areas of open space. In Billings, these high priority parks include already existing "jewels of the park system" (Pioneer, Rose, North, and South Parks). These parks are generally located three miles apart and are intensively developed to sere several neighborhoods. Improvements typically include open lawn areas, youth sports fields, picnic grounds with shelters, playgrounds, court sports, and large open areas for special uses or events. Due to size and proximity to residential neighborhoods and a broad base of users, these parks are appropriate sites for special use facilities. Development plans often incorporate aquatic facilities, activity centers, and complexes of sports fields or courts.

A series of smaller, less-intensively developed multiple use neighborhood parks reinforce the larger community parks. These 2 to 10-acre parcels provide a focus to neighborhood activity and bring basic recreational opportunities closer to home. Typical improvements include open lawn areas, playgrounds, backstops, picnicking, and landscaping. The current distribution of neighborhood park lands is quite variable with some neighborhoods having the luxury of several parks within a half-mile walk and others having no developed neighborhood parks. The greatest deficiency occurs in developing areas in West Billings and the Heights.

Subdivision Play Lots are small parks (less than 2 acres) developed to provide a playground for small children and open space within a quarter-mile radius of residences. Play lot needs are well met in developed areas by neighborhood, subdivision, and school parks. Deficiencies are evident in newer areas where parks are underdeveloped and the neighborhood schools are further apart.

Sports Complexes *are large community parks developed to consolidate heavily programmed athletic fields and associated facilities on a few larger sites throughout the community. The need for sports complexes has emerged since the development of the 1969 Park Master Plan. This earlier plan recommended field sports be played on multipurpose play fields located in community and neighborhood parks. Conflicts with residential land uses, the need for permanent fencing, and the desire to create complexes for tournaments and special events led to the evolution of sports complexes. Examples include Stewart, Poly Vista, Centennial, and Amend Parks. Historically, the private and nonprofit sector have taken the lead in development of sports complexes. Analysis and inspection of the existing complexes located on non-park land indicates City leadership is needed in development and management of permanent sports complexes. Many of the installations are unsafe, unattractive, poorly maintained, poorly constructed, and for these reasons cannot be programmed to maximum capacity. Developing sports complexes does not preclude the need to include sports fields in neighborhoods and community parks that can be easily accessed by youth.*

2015 – 2019 City Council Strategic Plan statements related to Parks & Recreation.

Strategy 7: Quality of Life

Goal 2: Continue to preserve and expand the City's recreational and library facilities for the benefit of residents.

- *Objective 2: Plan for adequate parks, open space and trails infrastructure city wide.*
    - *Action 1: Identify appropriate locations for future parks and trails through the update of The Comprehensive Billings Parks, Recreation and Open Space Master Plan. PRPL. FY15.*

- *Action 2: Develop park acquisition and development guidelines. PRPL & Planning. FY15.*
    a) Coordinate with City/County Planning to identify appropriate size and location of parkland to provide adequate parks, open spaces and recreational opportunities throughout the City.

Goal 3: Ensure the Parks and Recreation Department has the facilities, equipment, staff and training to provide high quality services.

- *Objective 1: Ensure that the Parks and Recreation Department meet all national standards of best practices*

  .
  - *Action 1: Complete agency accreditation process. PRPL. FY17.*

- *Objective 2: Enhance Parks and Recreation services and encourage community involvement through the recruitment, retention, and engagement of volunteers.*

  - *Action 1: Recruitment/Engagement: Setup online volunteer registration, project selection and records management that is accessible and user friendly for citizens. PRPL. FY15.*

- *Objective 5: Plan for and promote more and proper use of Natural Area parklands throughout the community.*

  - *Action 1: Develop and implement a Park Natural Area Management Plan. PRPL. FY16.*
  - *Action 2: Develop and implement a Noxious Weed Management Plan. PRPL. FY16.*
  - *Action 3: Inventory, develop and manage single track bike/hike trails in Natural Areas. PRPL. FY17.*

- *Objective 6: Promote, encourage and develop city wide landscaping and tree planting to make the community more attractive.*

  - *Action 2: Review, rewrite and implement city wide Landscaping Codes. PRPL, Planning & PW. FY17.*
  - *Action 3: Develop and implement and city wide Noxious Weed Management Plan. PRPL. FY17.*

Summary

1. Adopted policies suggest Centennial Park should be developed to provide a range of neighborhood park services.

2. Lands surrounding Centennial Park are prime for annexation, growth and development – Zoning and land use plans suggest the majority of new development will be residential housing in the form of single family and multifamily developments.

3. The potential to secure a large acreage parcel for a future regional park facility west of Centennial Park should influence the demand and needs for development of additional sports facilities at the park.

4. An inventory and analysis of sports facilities should follow the Committee for Accreditation for Park and Recreation Agencies guidelines (CAPRA).

5. Existing sports facilities need to be re-evaluated to ensure those that are intended to be scheduled and used for competitive use are maintained adequately for public safety and quality of play. Only fields designed and intended for scheduled competitive use should be reported/counted in inventory and analysis.

6. The City should establish and require adherence to development and maintenance standards for all new and existing sports field facilities used by partner leagues. This may be through the provision of leases, MOU's, scheduling preferences, park construction agreements, and/or user fee based programs and services.

7. The City should engage Little League to adjust service boundaries to better coincide with available quality baseball field facilities and anticipated changes in the equitable provision of quality services throughout the community.

8. Adopted policies suggest priority for use of city capital funds at Centennial park be focused on improvements needed to service growth and existing neighborhood park needs such as irrigated open turf areas, walking paths, playground, parking, trees, picnic shelter, etc….

CHAPTER 4 – SPORTS FIELD INVENTORY AND LEVEL OF SERVICE

A 2014 field inventory and condition assessment (Appendix G) conducted by PRPL staff resulted in a complete inventory and classification of its "sports fields". Fields could then be evaluated and classified based on condition, size, use, and service characteristics. Prior parks and recreation plans for the City of Billings did not define what a "field" is for purposes of providing and differentiating services.

The 2014 inventory provides statistics that lend a better understanding of services and opportunities to improve and enhance the quality of the parks and recreation system for benefit of the community. The inventory provides critical information that is necessary to address operational and service planning needs as well as help ensure the City is best positioned for growth and change in demands for service. Inventory data shows that the City has a substantial inventory of softball fields that are not suitable for competitive play (Table 4.1).

Table 4.1 City Owned Sports Field Inventory

	Athletic Field	Back-stop	Youth Baseball	Majors Bball	Softball	Tee ball	Ball field Total
Sports Field Count by Type	**22.0**	9	17	3	25	4	**58**
Sports Fields Suitable for Competition	**NA**	0	15	3	16	4	**38**

Ownership and Level of Service

The City is the primary provider of sports fields for area residents and visitors. Ownership and number of facilities within the community planning area is shown in Figure 4.1 below.

Figure 4.1 Sports Field Ownership by Type within the City of Billings 2014 Planning Area Boundary

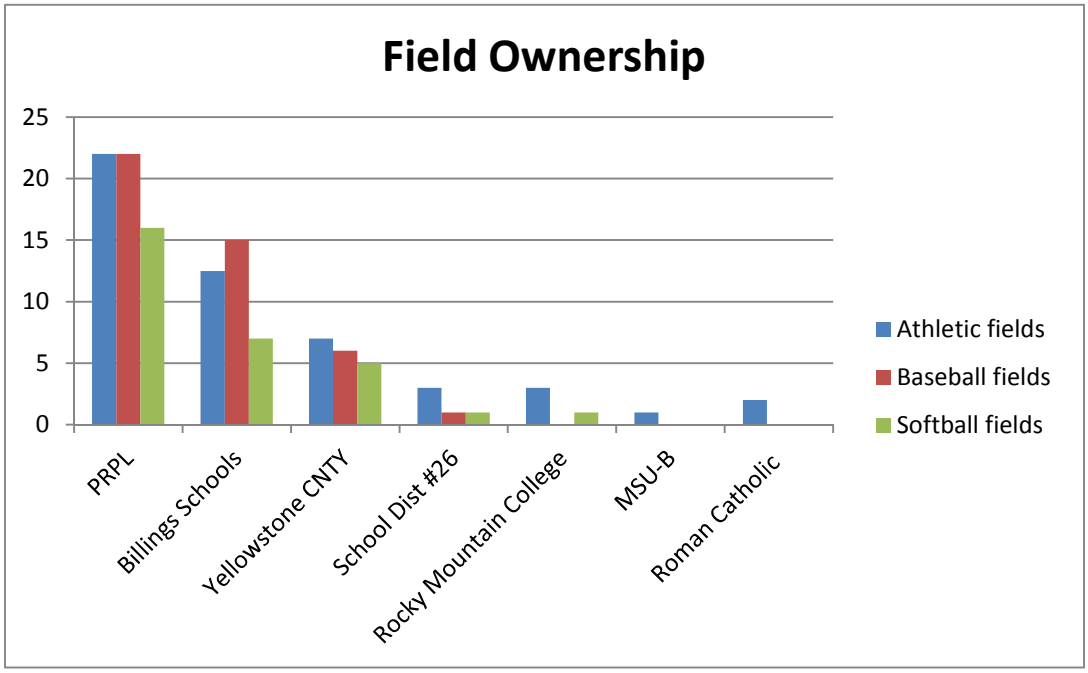
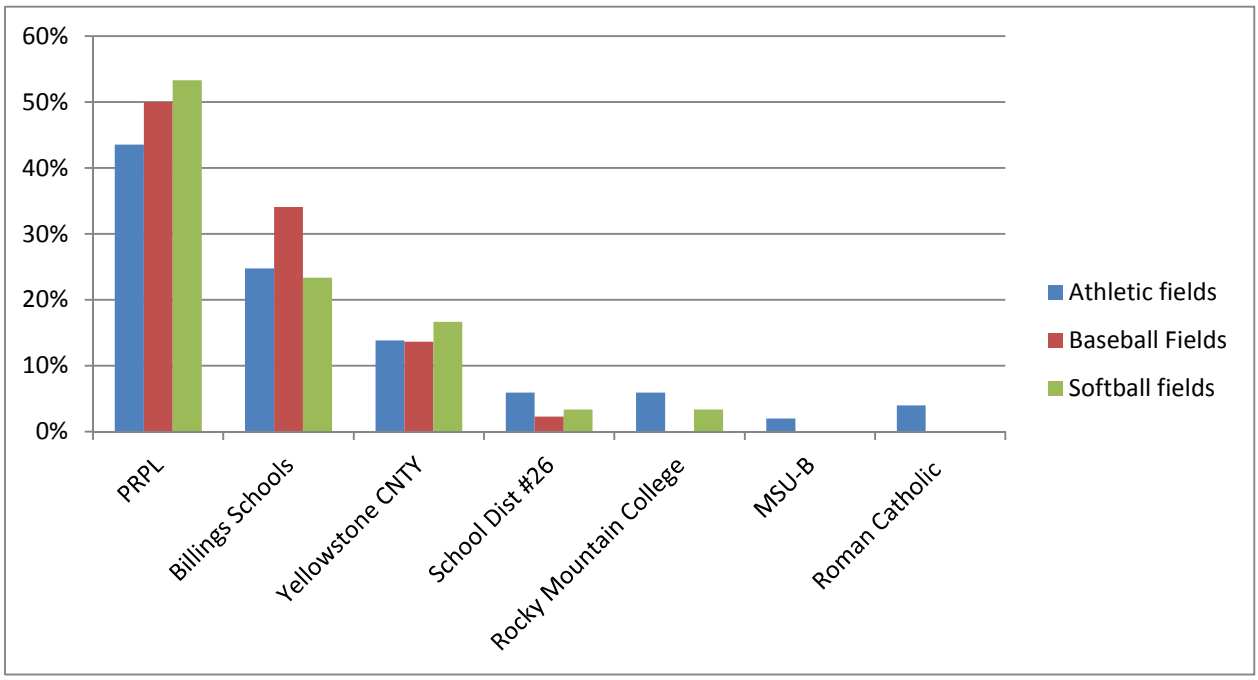


Table 4.2 City-wide Inventory of Competition Sports Fields by Owner.

Owner	Athletic fields	Baseball fields	Softball fields
PRPL	22	22	16
Billings Schools (#2)	12.5	15	7
Yellowstone CNTY	7	6	5
School Dist. #26	3	1	1
Rocky Mountain College	3	0	1
MSU-B	1	0	0
Roman Catholic	2	0	0
Totals	**50.5**	**44**	**30**

The City of Billings has historically been a key provider of public parklands for sports field development. Table 4.2 demonstrates the distribution of sports fields among all public providers within the City's planning area. The data clearly shows how the City stacks up as a provider of sports field facilities that serve current residents compared to other public entities.

Figure 4.2 Percentage of sports fields provided by ownership and type



The inventory of sports fields also provides important information about the City's current provision of sports fields per 1,000 population - known as Level of Service (LOS). NRPA standards provide that sports fields that are not suitable for competitive play should not be counted towards meeting the City's Level of Services standards.

Table 4.3 demonstrates the City's provision of sports fields per 1,000 population in 2010 versus 2014. The calculation is known as Level of Service (LOS) which is useful for establishing benchmarks for provision of parks and recreation services. LOS figures also provide a means for forecasting of future

needs for parks and recreation facilities as well as the parkland needed to house these facilities. Table 4.3 shows that the City's recent growth from 2010 to 2014 has reduced LOS for sports fields by 33%.

Table 4.3 2014 City of Billings Level of Service calculation

Level Of Service (LOS) per 1,000 population 2010 vs 2014					
Year	Population	Athletic fields	All Ballfields	LL	Softball
2010	104,190	0.21	0.36	0.21	0.15
2014	158,217	0.14	0.24	0.14	0.10

The City's 2010 LOS for athletic fields was 0.21 fields per 1,000 population and for ball fields it was 0.36 fields based on NRPA standards. These figures represent the City's share of facilities that serve the communities parks and recreation needs. If community needs for sports fields remains near current levels, the City should seek to ensure adequate parklands are acquired and reserved for development of new sports fields to meet demands due to growth.

Athletic fields

Inventoried athletic fields (Table 4.4) revealed new information about conditions and provision of services. Perhaps the most important is that few fields are adequately provisioned or maintained to support a very high level of competitive play. The City's main athletic field facility for competitive sports league uses (soccer, football, lacrosse, rugby, and ultimate Frisbee) is Amend Park which can be set up for 10 full size athletic fields. No other City park has comparable facilities to support scheduled competitive athletic field use. All other park sites offer far fewer multipurpose fields and few offer adequate parking and restrooms to support the volume of people that attend games. The current distribution of athletic fields is shown in Figure 4.3 below.

Figure 4.3 Distribution of Athletic Fields.

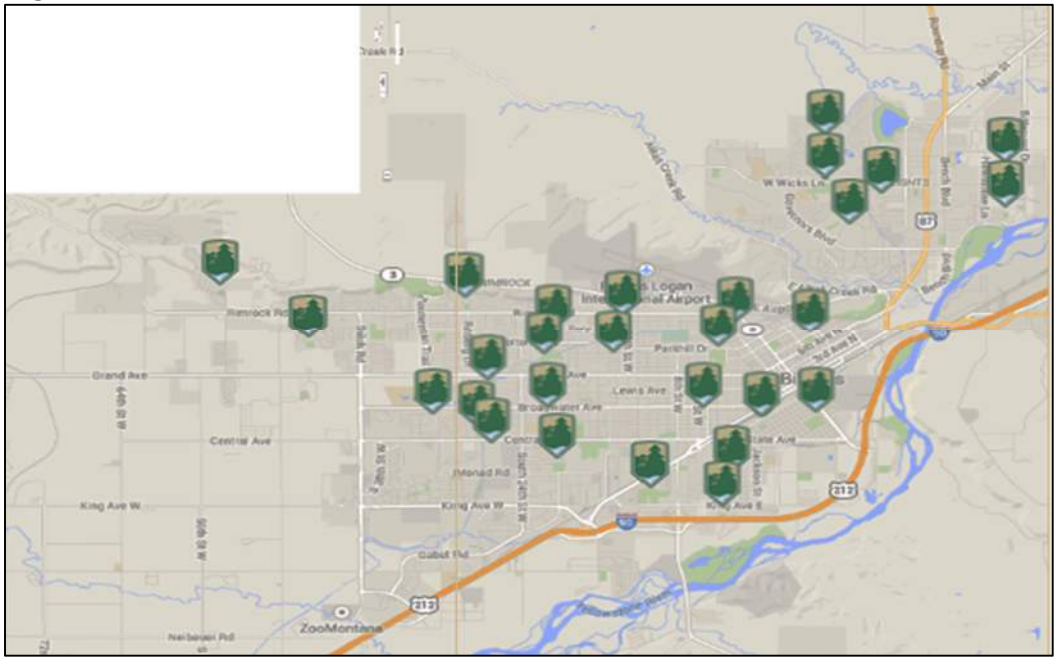


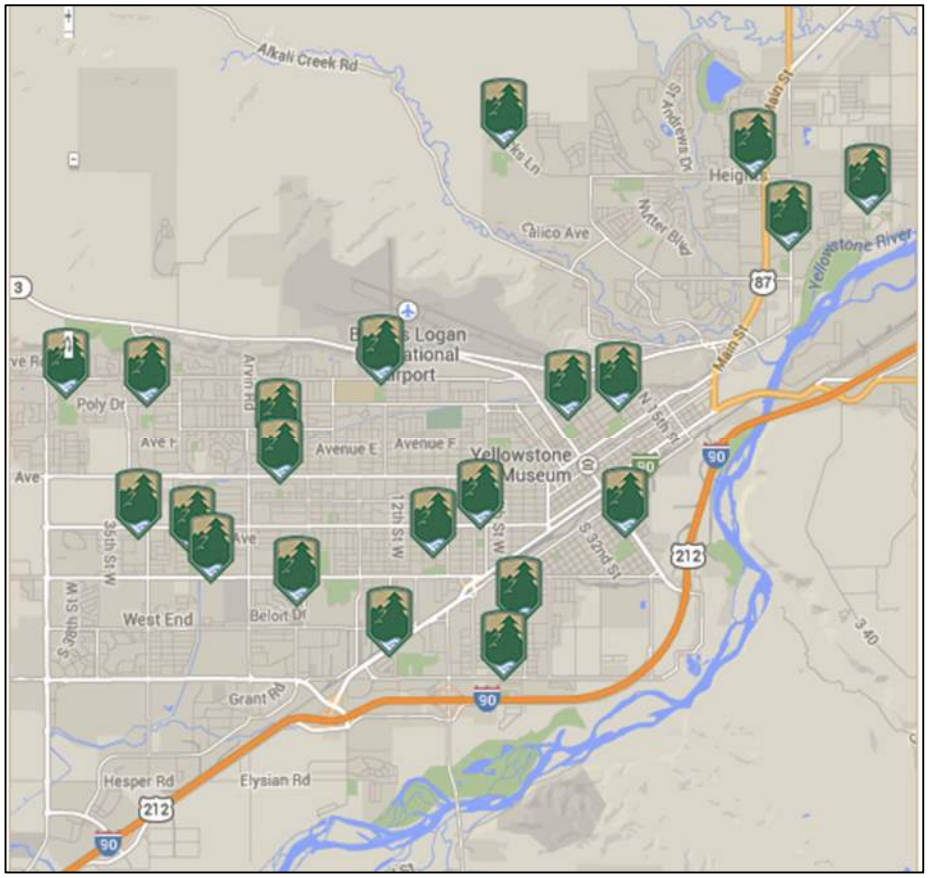
Table 4.4 City Parkland Inventory of Athletic Fields by site, size and use per site

Park Name	Field Count			Comment
	Full Size Equivalent 100 x 60 (yds)	Full Fields (Adult)	Half Fields (Youth)	
Amend	10.0	10		Development is not consistent w/ master plan
Burlington			2	Practice only
Castle Rock	4.0	4		Consistent with park master plan
Country Manor	1.0	1		
Eaton			1	Practice only
Edgerton			1	Practice only
Frances			2	Practice only
Gorham			2	Practice only
Grandview			1	Practice only
Hawthorne			1	Practice only
Highland			1	Practice only
High Sierra	2.0	2		
Millice			1	Consistent with master plan
North	0.5		1	If tree(s) removed in SW corner
Optimist			2	Practice only
Pioneer			1	Practice only
Ponderosa			2	Practice only
Primrose			1	Practice only
Rose	1.5		3	Adult field possible if play occurs over softball infields
Sacajawea	1.5		3	Adult field possible if trees removed
South	1.0	1		Rugby field
Terry			1	Practice only
Yellowstone Family			1	Practice only
Total	**22**	**16**	**26**	

Ball Fields

The City's park system provides a wide range of ball field facilities: little league baseball, majors, and softball. The inventory suggests the City's fields should be differentiated by their condition and services provided. It appears appropriate to distinguish types of fields by their primary purpose – those that are provisioned, maintained, and scheduled for competitive league play versus those suitable for practice or drop in recreational play. Distribution of fields across the City is shown in Figure 4.4:

Figure 4.4 Distribution of City Owned Ball Fields - Practice/ Youth Baseball/ Softball/Special Purpose



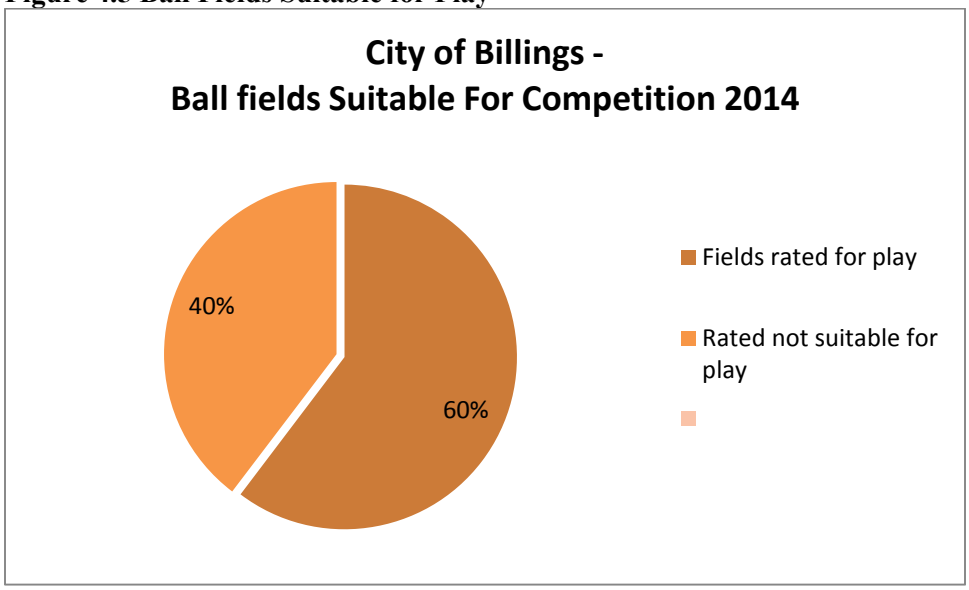
An important inventory finding is the inequity in development standards for ball fields across the city. The level of development and maintenance of Little League baseball fields, in particular, is not equal across the community. Many ball field facilities developed by area Little Leagues, in partnership with private and nonprofit entities; appear to have been built without City Parks & Recreation leadership, guidance, or substantive oversight. In addition, it appears the City has not provided a high level of maintenance service for these facilities.

The 2014 Baseball/Softball Field Inventory information identifies that 23 of the City's 58 ball fields are not suitable for play. Field conditions vary widely across the city from modern, high quality sites like Stewart Park, to aging and partially developed sites. Overall, 38 or 60% of all inventoried ball fields were rated as suitable for competitive use (Table 4.5, Figure 4.5). It is likely that these substandard fields provide only marginal value to the community in their present condition.

Table 4.5 Ball Fields Suitable for Play

Field Count by Type	Backstop	Baseball	Majors Bball	Softball	Tee ball	Total	
Ball fields not serviceable for games	9	17	3	25	4	58	60%
Serviceable for games	0	15	3	16	4	38	40%

Figure 4.5 Ball Fields Suitable for Play



Serviceable for Competitive (League Sanctioned) Games (Does not include fields owned by others).
A field designated as "serviceable" contains a fenced in playing surface (infield mix and grass), covered dugouts, necessary sports field equipment, and meets general safety requirements for league play with little or no maintenance.

1. Clevenger Park – 3 fields.
    a. 1 baseball field
    b. 2 softball fields
2. Arrowhead Park – 1 field (baseball)
3. North Park – 1 field (baseball)
4. South Park – 1 field (softball)
5. Optimist Park – 3 fields (baseball)
6. Central Park – 2 fields (baseball)
7. Veteran's Park – 1 field (baseball)
8. Burlington Park – 1 field (baseball)
9. Sacajawea Park – 1 field (baseball)
10. Rose Park – 2 fields
    a. 1 baseball field
    b. 1 softball field
11. Centennial Park – 4 fields
    a. 2 baseball
    b. 2 softball
12. Poly Vista Park – 4 fields (softball)
13. Stewart Park – 10 fields
    a. 3 baseball
    b. 7 softball
14. Boulder Park – 1 field (baseball)

Total = 35 fields
19 – baseball; 16 – softball

Non-Serviceable For Competitive (League Sanctioned) Games

A field designated as "non-serviceable" contains an unfenced in playing surface, a backstop, and possible amenities such as benches and field equipment boxes. These fields could be used for practice; however the field does not meet general safety requirements for league play, may need extensive landscaping and/or repair, and can possibly be used for multiple sports and recreation activities. The following sites contain ball fields that are not serviceable for competitive play:

1. Castlerock Park – 3 fields
2. Pioneer Park – 1 field
3. Grandview Park – 1 field
4. South Park – 1 field
5. Terry Park – 1 field
6. High Sierra Park – 1 field
7. Veteran's Park – 1 field
8. Burlington Park – 1 field
9. Gorham Park – 1 field
10. Sacajawea Park – 3 fields
11. Rose Park – 4 fields
12. Country Manor Park – 1 field
13. Poly Vista Park – 1 field
14. Millice Park – 1 field
15. Boulder Park – 2 fields

TOTAL = 23 fields

The number of non-serviceable ball fields within the park system is of particular note. Ball field sites with substantial improvements per the inventory but that are not suitable for play, may take up significant parkland and offer limited value in return given rate of use, condition, and potential liability. Perhaps because of population changes as well as changes regards use of time, technology, service delivery, and/or user expectations. If non-serviceable fields are included in the estimate for Level of Service those figures would likely overstate community demand.

In either case, the inventory of sports fields provides valuable information about the City's current facilities. The inventory also provides opportunities for the City to guide development and modification of it park system so it evolves to better meet citizen demands and user desires. Finally, the inventory provides a tool for the City to understand its costs, liabilities and ways to be better stewards of parklands to meet citizen needs.

Recommendations

1. Adopt LOS standards for provision of sports fields based on 2010 population:
    - Competition Athletic fields 0.21 fields per 1,000 population
    - Competition Ball fields 0.36 fields per 1,000 population

2. Adopt development standards for new sports field facilities. Standards should be applied to the City and its partner organizations and should address quality of materials, compliance with legal obligations such as ADA, building and fire codes; and public safety. Development standards should also provide for necessary support facilities such as parking, restrooms, lighting, concessions and storage facilities.

3. Adopt maintenance standards for competitive sports field facilities.

4. All new sports fields developed on City parklands should include a funding request for necessary routine and cyclical maintenance.

5. Where new fields are to be developed and maintained by a partnering organization, a formal user agreement should be developed that outlines the types of maintenance and repair activities that are required.

6. Where no use agreement is in place, the City should seek a long-term use agreement or utilize its annual Use Permit process to protect the city's liability while ensuring the partner organization's use of existing facilities, provided the facilities are maintained in a safe and useable condition throughout the year.

CHAPTER 5 – SPORTS FIELD NEEDS ANALYSIS

Background

This chapter evaluates the City of Billing's recreational use demands, inventory of sports fields, and user/population demands to determine if current needs are being met and what will likely be needed to serve the community's future populations. The analysis and data will be used to develop recommendations that can help current and future residents, elected officials, and staff plan for the future need and ensure the cost to maintain and manage such facilities is done as efficiently, economically, and sustainably as possible.

The sports field inventory provided key information that defines the community's supply of sports fields and related parks and recreation facilities. The needs analysis builds on the inventory and Level of Service information. The needs analysis utilizes community demographic data and statistics about the nation, state, region, and comparable or surrounding communities to project how many of the specific features in question will likely be needed in the future service area. It also applies various benchmarks to help the community establish the goals for meeting projected needs. Statistically valid community survey data, national standards, comparison to regional and peer cities, as well as the current supply and use of facilities are the key benchmarks that help define a strategy to maintain community quality of life factors related to its parks and recreation infrastructure and programs.

National Standards

The National Recreation and Parks Association (NRPA) is recognized as an authority on parks and recreation planning such as providing for guidelines and standards for needs analysis. The NRPA's Commission for Accreditation of Park and Recreation Agencies (CAPRA) recognizes park and recreation agencies for excellence in operation and service. CAPRA establishes national standards for best practices and is a sound way for agencies to achieve goals for providing high quality, relevant and efficient services for their community. CAPRA standards for needs analysis states that the agency shall compile a complete and current inventory of parkland and recreation facilities, programs and services in the service area, including those provided by the agency and those offered by schools and other alternative public, private, and non-profit providers.

Using this approach, Billing's 2014 field inventory returns the following information on provision of ball field and athletic field sports in the community (Table 5.1):

Table 5.1 Provision of competition sports fields by type and ownership

Owner	Athletic fields	Youth Ball fields	Adult Ball fields
PRPL	22.0	22	16
Billings Schools	12.5	15	7
Yellowstone CNTY	7	6	5
School District #26	3	1	1
Rocky Mountain College	3	0	1
MSU-B	1	0	0
Central High School	2	0	0
Totals	**50.5**	**44**	**30**

NRPA's1990 Recreation, Park, and Open Space Standards and Guidelines (ref. Lancaster, R.A. (Ed.), Ashburn, VA: National Recreation and Park Association) identifies recreation facility standards for different types of competitive sports fields. This NRPA publication recommends one soccer field per 10,000 population serviced which is equal to 0.1 fields per 1,000 population. The same source recommends a standard for baseball and softball fields at one ball field per 5,000 population serviced which is equal to 0.20 ball fields per 1,000 population.

In comparison, Billings provides 0.30 baseball and softball fields per 1,000 population and 0.26 athletic fields per 1,000 population. Billings appears to be providing sufficient facilities in this regard; however, NRPA standards should only be used as a baseline for comparing an individual community's level of service standards. This is especially so, since many jurisdictions find national standards do not accurately reflect their community's needs.

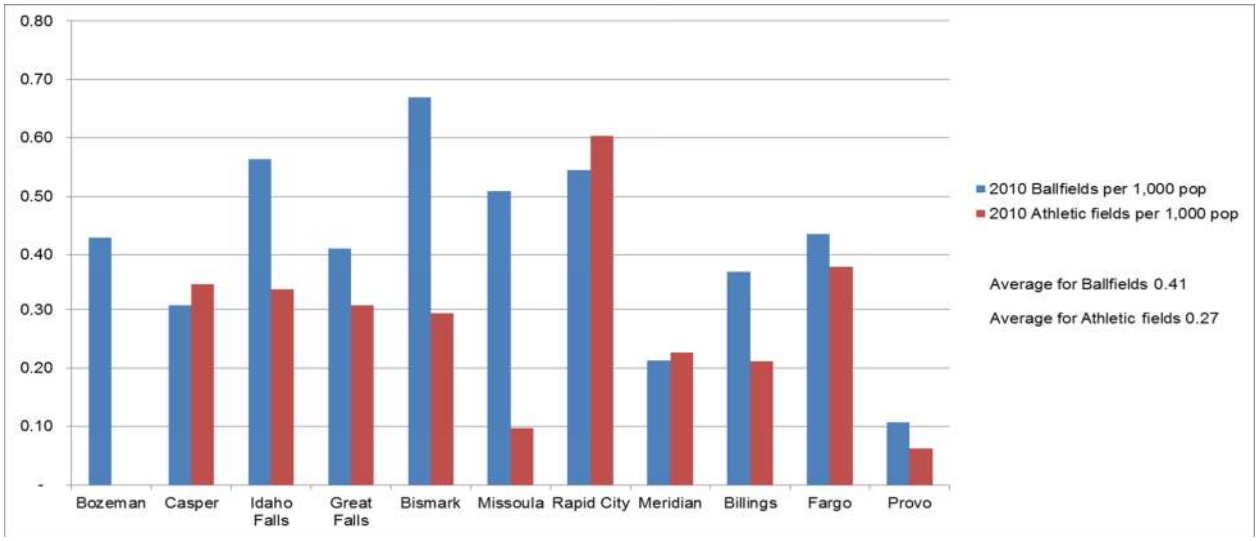
Comparison to Peer Communities

Municipal parks & recreation program's facility inventory and reporting needs and standards vary from community to community. This is particularly so in the intermountain west with regards to baseball, softball and athletic fields. The information that is available usually does not include factors such as field size, suitability of use, level of competition, or ownership. The approach used for this study seeks to come as close as possible to reflecting the number of publicly managed competitive use baseball, softball and athletic fields available to each and every community used for peer community comparison. This is the most appropriate approach for developing needs analysis data based on standards set through the National Recreation and Parks Association's Commission on Accredited Parks & Recreation Agencies.

Sports field inventory data for surrounding and regional peer communities was collected to help demonstrate where Billings ranks in terms of providing ball fields and athletic fields (Figure 5.1). Secondary data sources such as park listings, facility master plans, and consolidated annual financial report statistics were utilized for initial counts and then checked against available on-line satellite imagery. This was done to better ensure better potential of a full count of facilities within a jurisdiction's

service area was accurate, comparable, and in-line with NRPA recommended standards for parks and recreation needs analysis.

Figure 5.1 Comparison of sports fields provided per 1,000 population for select regional cities:



Sources: US Census, Respective city webpages, park & recreation comprehensive plan, and 2013 aerial counts

Peer Communities averaged 0.43 fields per 1,000 population for baseball/softball fields developed and maintained for competitive games. Peer City's provide an average of 0.27 athletic fields per 1,000 population. The previous chart shows Billings ranks last in provision of ball fields compared to other Montana communities and next to last in provision of athletic fields. In comparison to surrounding regional peer cities, Billing's provision of fields only exceeds that of three of the compared cities.

2014 Parks and Recreation Survey

In 2014, the City conducted a statistically valid Parks and Recreation Survey to gage community values and desires for future parks and recreation facilities. The survey provided important information about the city's roughly 44,000 households and 104,000 residents. Citizen's current interests and demands for recreation facilities and services is valuable for estimating parkland and recreation facility needs. Use of the data helps the City to anticipate and provide relevant and desired services for residents and the surrounding region. The 2014 survey revealed the following important information (Figure 5.2):

Figure 5.2 City of Billings resident's interest by activity type:

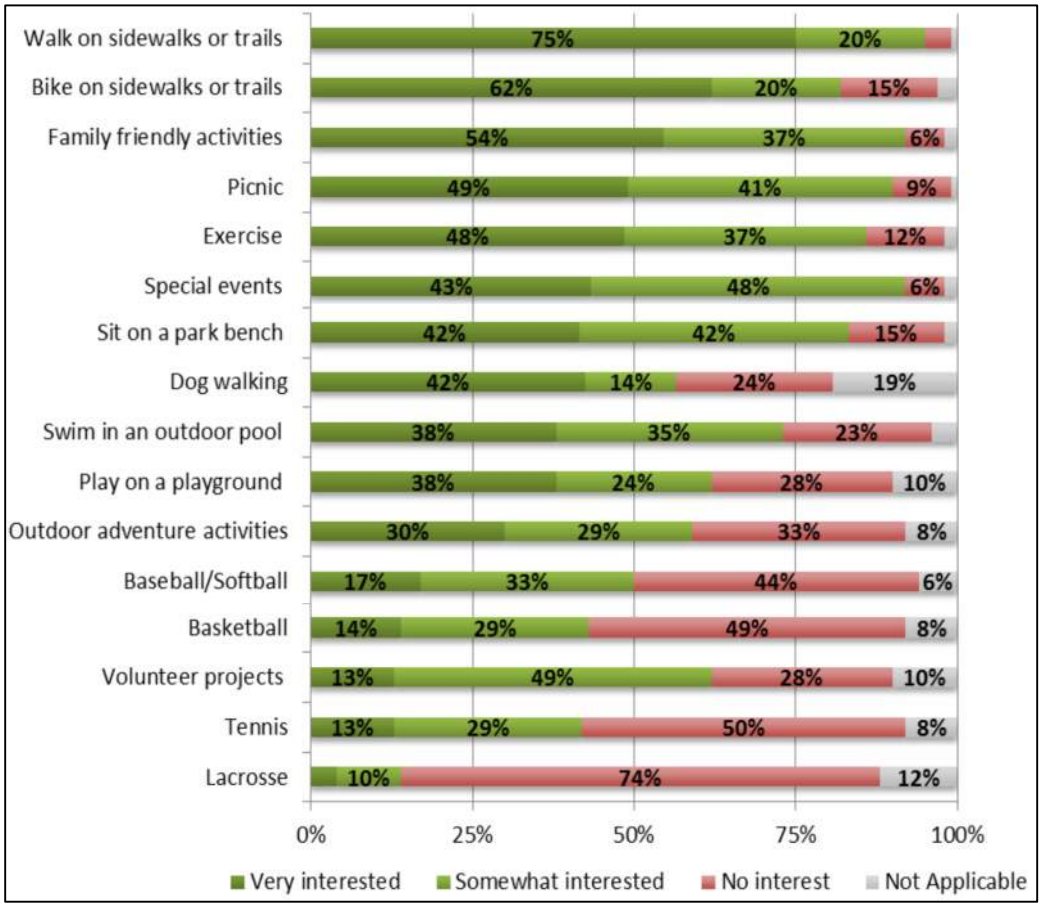


Figure 5.3 Billings citizen's desires for amenities in city parks:

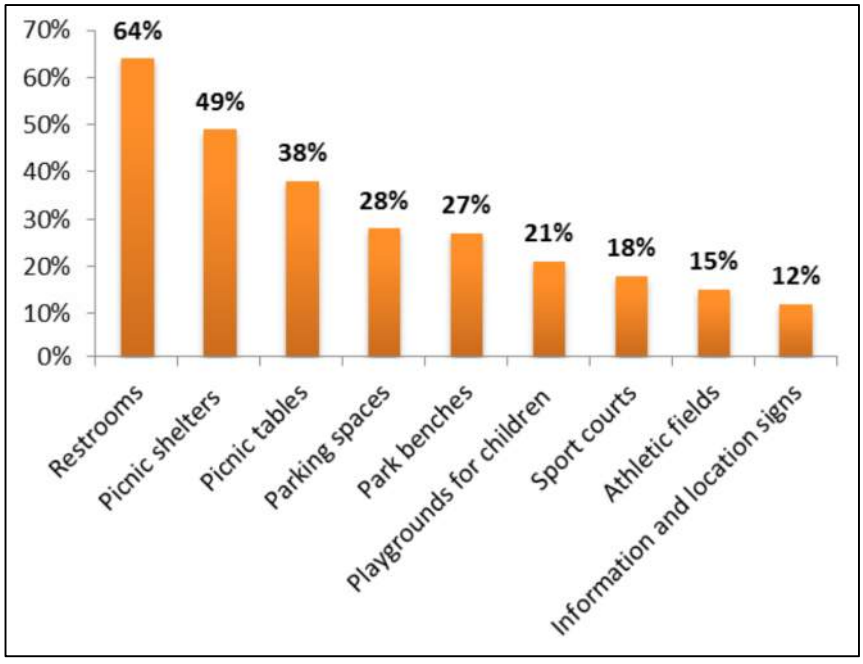


Table 5.2 Billings citizen's opinion about parks and recreation needs:

	2009 (Agree)	2013 (Agree)	*Percent Change*
More recreation opportunities for people with disabilities	46%	61%	33%
More youth recreation programs and activities*	55%	70%	27%
More organized sports*	36%	45%	25%
More recreation opportunities for adults age 55 and older*	52%	61%	17%
Additional regional parks such as Pioneer Park	71%	79%	11%
Family activities*	78%	75%	-4%

* Question wording slightly different between 2009 and 2013.

Table 5.3 Billings citizen's interests in parks and recreation facilities and activities:

1. **IF YOU OR YOUR FAMILY WERE TO VISIT A PARK, WHAT TYPE OF ACTIVITIES WOULD YOU LIKE TO DO THERE?**

	Base	Very interested	Somewhat interested	No interest	*Don't Know*
Play baseball or softball	*674*	17%	33%	44%	6%
Participate in family friendly activities	*685*	54%	37%	6%	2%
Exercise	*672*	48%	37%	12%	2%
Attend special events	*681*	43%	48%	6%	2%
Play basketball	*662*	14%	29%	49%	8%
Take my dog for a walk	*680*	42%	14%	24%	19%
Participate in volunteer projects	*674*	13%	49%	28%	10%
Do outdoor adventure activities such as rock climbing or mountain biking	*678*	30%	29%	33%	8%
Play lacrosse	*666*	4%	10%	74%	12%
Swim in an outdoor pool	*677*	38%	35%	23%	4%
Walk along sidewalks or trails	*686*	75%	20%	4%	1%
Ride a bike along sidewalks or trails	*691*	62%	20%	15%	3%
Play on playground equipment	*681*	38%	24%	28%	10%
Picnic	*692*	49%	41%	9%	1%
Play tennis	*671*	13%	29%	50%	8%
Sit on a park bench	*686*	42%	42%	15%	2%
Other	*121*	57%	8%	9%	25%

The 2014 Parks and Recreation Survey clearly demonstrates that citizen demand for Billings' parks and recreation services has changed over the last ten (10) years. Changes are most likely attributable to community aging, population growth from new comers, and factors such as technology, job growth, and housing market conditions (see Chapter 2).

Though there has been change in community needs regards, parks and recreation facilities, baseball and softball clearly continue to be in strong demand. Fifty percent (50%) of Billings' households are actively playing or interested in doing so. The Youth survey reveals that the number of youth "very interested" in playing baseball stands at 17% versus 33% who are "interested." This data suggests good potential for growth through new or alternative recreational programming such as club teams by providers other than Little League (Babe Ruth/Cal Ripken, softball, co-ed leagues, and club baseball); or through increased marketing and/or new offerings by Little League. The growth potential for new recreational baseball programming may warrant new field development and/or upgrading existing ball field facilities that are not suitable for competitive play. This may be feasible where the provision of park support facilities is or can be made adequate. Alternately, unmet demand must be meet by developing new sports fields. This will require adding new parklands and looking for opportunities to redesign or repurpose existing park space or recreational amenities to maximize use of parklands.

The 2014 community–wide survey shows demand for athletic field space stands at fifteen percent (15%) which is approximately15,000 citizens or 6,600 households. This demand rate is significant, but not unexpected given prior surveys of Billings residents' recreational interests. The 2014 survey shows household interest in Lacrosse is at 10% (roughly 4,400 households or 10,200 individuals). A 10% interest is significant, given there was no organized Lacrosse in Billings before 2009. Lacrosse is regularly gaining players and adding new teams across the West and is firmly established in many Montana cities. Continued stable youth soccer interest, an establishing and growing youth Lacrosse program, and an influx of young professionals will likely increase user demand for lacrosse field space. The survey also shows a 25% increase in community interest for more organized sports opportunities. Given the above factors, the current low number of athletic fields suitable for league play and available for programming by the Department is likely insufficient to meet the community's current recreational demand. This may put pressure on the City to free up and upgrade services within existing parkland spaces to provide new fields, or develop new athletic fields and facilities for scheduled use.

The City's 2014 youth survey reaffirm the findings of the statistically valid household survey. Table 5.4 shows 88% interest in team sports activities that require athletic field space. Table 5.5 shows that 78% of respondents felt athletic field space was important which is bolstered by the high importance placed (62%) on a regional youth sports complex.

Table 5.4 City of Billings youth interest and activities

	Interested	Participated
Sports and Athletics	88%	63%
Special Events	83%	29%
Outdoor Fitness	80%	50%
Extreme Sports	76%	33%
Indoor Fitness	63%	44%
Family Programs	59%	29%
Performing Arts	45%	29%
Arts & Crafts	42%	21%
Hobbies	42%	21%

Table 5.5 Areas of recreational importance to youth (Billings Youth Survey)

	Important
Firework display	90%
Athletic practice fields	78%
Football	74%
Connected walking biking trails	72%
Dog park	72%
Weight training	70%
Indoor fitness center	68%
Park playground equipment	66%
Picnic shelters	66%
Indoor multi-use recreational facility	65%
Nature trails	64%
Basketball	62%
Regional youth sports complex	62%
Special needs	60%
Family program activities	58%
Gymnasiums for public use	58%
Skate parks	58%
Volleyball	56%
Outdoor family aquatic facility	55%
Extreme sports	54%
Splash pads spray ground	53%
Indoor family aquatic center	50%
BMX trail	48%
Frisbee golf disc golf	48%
Soccer	48%
Rugby	42%
Softball	42%
Ice skating	40%
Baseball	38%
Tennis	36%

Table 5.6 Youth opinions on needs and concerns related to Parks and Recreation

	Agree	Disagree
I am aware of the recreation programs and activities that are offered	74%	14%
Billings needs additional regional parks such as Pioneer	74%	11%
There is a need for more organized sporting activities	67%	31%
There is a need for more youth recreational programs	66%	28%
There is a need for activities for the whole family	64%	27%
The condition of athletic fields is satisfactory	60%	23%

Youth survey returns affirm demand for athletic fields is relatively high with 88% of respondents interested in sports and athletics. Interestingly, Table 5.6 shows that only 60% of youth think available athletic fields are in satisfactory condition. This seems to support the City-wide field inventory findings which shows that Billing's has relatively few fields that are adequately sized, maintained and programmed for competitive team uses such as soccer, football, lacrosse, and ultimate Frisbee. This seems to be confirmed by comparing Billings to other communities in the region. The youth survey suggests more youth sports team programming is desired and needed.

Need for field space has grown and should continue to do so based on community survey data. The recent spike in population growth is putting pressure on the City's existing competitive sports field resources- particularly those that are serviceable for organized sports use. Table 5.7 projects current and future field needs for Billings out to 2030 based on population growth and its 2010 level of service.

Table 5.7 Current and projected sports field & land needs 2012 through 2030.

PRJECTED SPORTS FIELD NEEDS						
			Maintain 2010 Level of Service			
			Projected Demand for fields			
	Projected	Percent	based on 2010 level of service - competative fields			
Year	Population	Growth	Athletic fields	All Ballfields	LL	Softball
2010	104,190		-	-	-	-
2012	114,773	9%	2.2	3.9	2.2	1.6
2014	158,217	27%	11.4	19.7	11.4	8.3
2020	170,586	7%	14.0	24.2	14.0	10.2
2025	177,106	4%	15.4	26.6	15.4	11.2
2030	180,520	2%	16.1	27.8	16.1	11.7
Additional field needs for 2030			**14**	**24**	**14**	**10**
Estiimated Parkland Demand (acres):			65.94	129.5		

Table 5.7 above, demonstrates Billings' park system will see demands for up to 14 new competition level athletic field and 24 ball fields by the year 2030. The parkland needs to meet future sports field needs can be estimated based on Amend park (57 acres 12 fields possible = 4.75 acres/field) for athletic fields; and, Stewart park (54 acres 10 ball fields = 5.4 acres/field) for ball fields. Using this method, the City may need to dedicate and acquire just under 200 acres of active use parklands that are suitable to site and build new competitive sports fields to serve community population needs in 2030.

Sports field facility and parkland needs can be reduced and moderated in a number of ways:

a. Optimize existing field use through sports field maintenance practices
b. Maximize scheduled use
c. Redevelop/renovate existing unserviceable sports fields
d. Light sports fields for extended hours of use;
e. Develop artificial turf fields (playable in most weather conditions) and
f. Renovate existing parks to add sports fields

The City will need to invest in the park system if it is to maintain community quality of life and meet demand due to growth. Ramping up the level of athletic turf maintenance; to a higher standard than is currently funded or can be provided by PRPL, may be the cheapest and most flexible means verses any of the significant capital options. Increasing the level of athletic field maintenance would optimize the number of serviceable athletic fields for games to ensure they are playable in a range of normal weather conditions and do not become unsafe or unplayable through the course of the season. Increased maintenance for sports fields would also minimize potential liability from hazards that develop through use and over use of sports field facilities. Maximizing scheduled use is feasible only if field maintenance will support it and that a sufficient number of organizations agree to the scheduling and fee arrangements. Lighting and artificial turf should also be considered as a way to meet demand, especially for sports field facilities that serve teens and adults. Redeveloping existing parks to add sports fields can be more challenging and potentially costlier, however, it should be considered whenever there are existing underperforming features, such as appears to be the case in parks with unserviceable softball fields.

Acquiring land and developing new fields, however, will likely be necessary. New fields will ensure citizen's recreational service demands are met to advance to the community's health, social values, and recreational interest plus strengthen the economy. To help address field needs, the City should also evaluate existing unserviceable ball field spaces, particularly softball fields and backstops within the park system, and determine those that should be retained, rebuilt, upgraded, or converted to other uses (such as athletic field space).

Organized Sports Stakeholders

Organized sports program providers were identified as having a potential interest or insight on parks and recreation needs related to future development of Centennial Park. In October, 2014 City staff sent twenty-two (22) organizations a questionnaire about their facility needs and plans (Appendix B). City staff attempted follow up with each organization over a three week period to encourage individual organizations to complete and send back a questionnaire. Responsive organizations were asked to interview with staff and the consultant to more fully discuss the group's needs, challenges, trends, short and long term plans. The organizations that use existing City park lands were also asked about the conditions of existing facilities including provision of maintenance services, and programming.

Little League presents a challenge for planning ball field facilities and services since leagues are based on population within a geographic boundary. The formation of Little League service boundaries rarely considers or accounts for parkland availability, economic diversity, land use changes, or equity in field conditions and provision. As such, not all Little Leagues serve the same population groups nor do they have equal access to quality fields, or to resources for maintenance, equipment, and supplies. Figure 5.5 shows the 2014 Little League boundaries for Billings and surrounding areas.

The following organizations were identified and asked to complete a questionnaire:

Billings Athletic Facility Users

Organization	Primary Need/Interest	Participants
Magic City Soccer Assoc.	Athletic Fields	625
Yellowstone Soccer Assn.	Athletic Fields	Not Reported
Yellowstone Youth Football	Athletic Fields	900
Billings Rugby Club	Athletic Fields	45
Billings Scorpions Lacrosse	Athletic Fields	126
Boise & Girls Club		
Billings Catholic School	Tennis, X country,	33% of students
Billings School District #2	Tennis, X country, indoor space, softball	1/3 students

Continued on next page

Billings Athletic Facility Users

Organization	Primary Need/Interest	Participants
Montana 1 Little League District including:		
Huntley Project,	Softball & Baseball	Not reported
Central Giants,	Softball & Baseball	350
Riverside,	Softball & Baseball	200
Big Sky,	Softball & Baseball	400
Burlington,	Softball & Baseball	360
Heights,	Softball & Baseball	Not reported
Laurel, and	Softball & Baseball	Not reported
Boulder-Arrowhead	Softball & Baseball	400
Billings Softball Assoc.	Softball	Not reported
Friends of Billings Dog Parks	Dog Off Leash Areas	80% households
Billings Curling Club	Ice	40
Billings Amateur Hockey League	Ice	230
Yellowstone Valley Figure Skating Club	Ice	29
Billings Aquatics Club	Indoor Pool	900

Private organizations that completed surveys, reported serving over 4,600 individuals in 2014. That figure represents about five percent (5%) of the City's total population. Facility interest based on respondent's self-reported participation numbers is shown in Table 5.8:

Table 5.8 Questionnaire respondents by interest and participants served in 2014.

Facility Interest	2014 Participants	%
Athletic fields	1,696	37%
Softball/Baseball	1,710	37%
Ice Rink	299	6%
Pool	900	20%
Total	4,605	100%

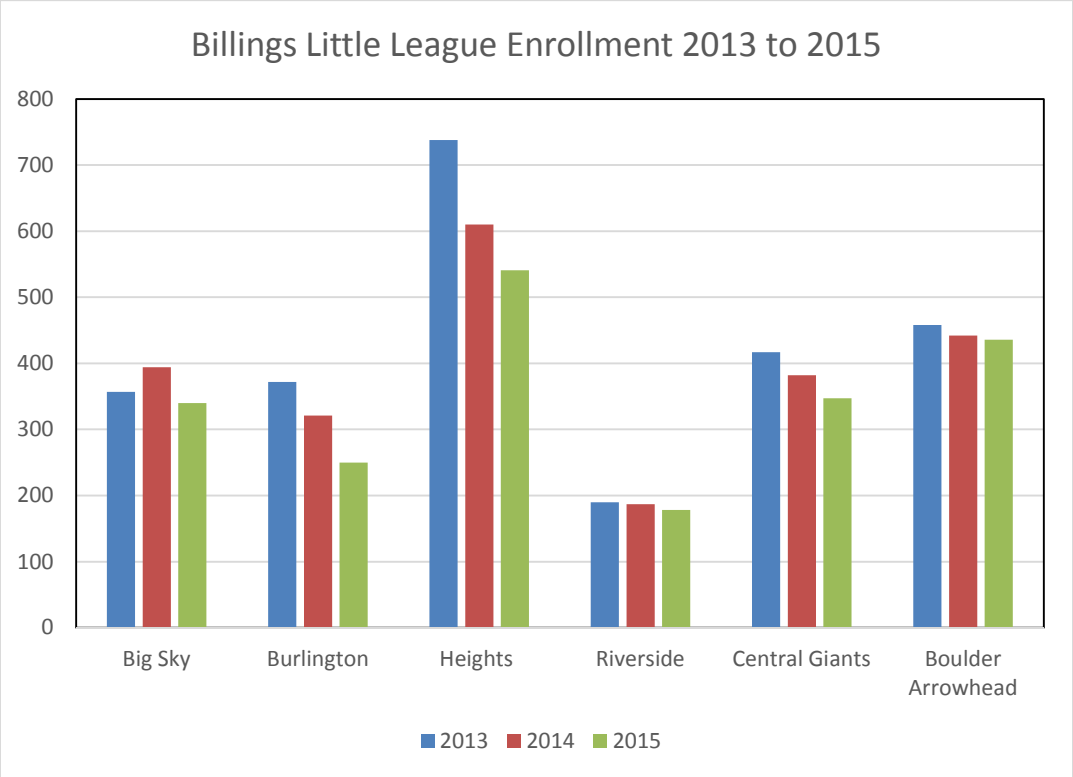
In July, 2015, City officials requested Montana Little League District 1 provide data for Billings Little League participation rates (Table 5.9). The data was requested to address concerns with some League Presidents not reporting as requested for this study.

Table 5.9 Billings Little League Enrollment

Billings Little League Enrollment 2013 to 2015			
As reported by League Presidents			
League	**2013**	**2014**	**2015**
Big Sky	357	394	340
Burlington	372	321	250
Heights	738	610	541
Riverside	190	187	178
Central Giants	417	382	347
Boulder Arrowhead	458	442	436
TOTAL	2532	2336	2092

The District's data indicates a 17% drop in the overall participation rate from 2013 to 2015. Change in League participation is graphically demonstrated by Figure 5.4:

Figure 5.4 Billings Little League Enrollment 2013 to 2015:



No individual Little League has sustained consistent grown over the three year reporting period. The data indicates a possible disconnect between what citizens report for interests in leisure activities versus what the primary service provider is actually providing. A number of variables could explain declines in Little League participation rates including, but not limited to: popularity, availability of time, interest, cost, or the format/delivery of services. The City's successful launch of club baseball services has attracted some players away from Little League; however, it is clear that such participation is only a small sector of the entire community's potential baseball and softball participants.

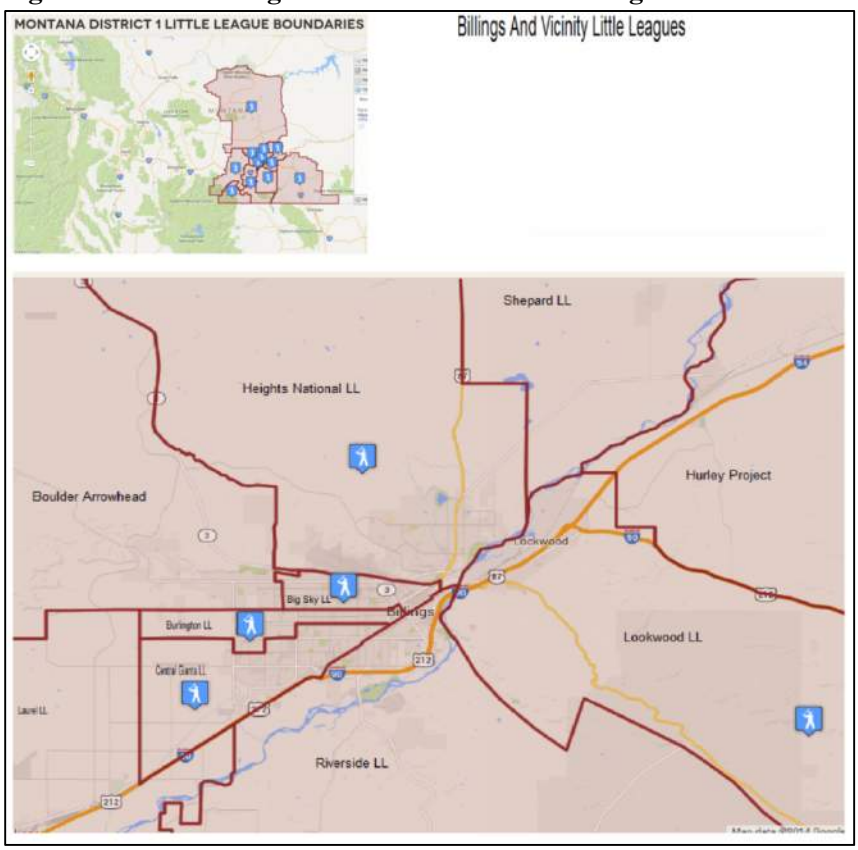
The City should continue to monitor citizen's recreation interests and participation rates to ensure it does not overbuild specialized sport facilities like baseball and softball fields and to help determine when new facilities should be built to meet community needs. The City should also continue to find opportunities to work with its user groups in order to meet public recreation demands as well as to be informed of changes in use rates and recreational interests. Where costs or the method of service delivery are negatively affecting participation, the City and its partner organizations should look to find ways to address such obstacles.

Little League has been primarily responsible for the development and upkeep of ball field facilities on City and County parkland. Past City practices allowed development of Little League facilities on its public parks, however, no permanent operating funds appear to have been allocated to the Parks and Recreation program to provide facility maintenance needs. As a result, some Little League facilities on City Parklands are maintained at a very high standard and others are barely serviceable due to age, lack of maintenance, and the socio-economic factors related to the individual leagues and their boundaries.

Competition for players poses some challenge to Little League, in part because of its organization. Alternatives to Little League youth baseball/softball programs such as Babe Ruth/Cal Ripkin, Municipal Parks & Rec Youth baseball, and Club Baseball programs could impact their participation numbers further. It is evident, however, that where alternative baseball and softball programs are found, the families that are attracted to them are looking for a different experience than what Little League provides. The bigger concern should be if community interests in baseball and softball are shifting long-term. Given the City's recent recreation interest survey data, it is not likely that this is occurring.

The bigger challenge is the supply of ball fields – especially in communities where supply is tight and/or the main parks and recreation provider does not directly manage scheduling of ball fields on its lands. In these cases, new programs are difficult to establish due to lack of access to field space. Fields that are under-utilized may provide services for new and growing programs; however, it may be difficult to find funds to upgrade available facilities to provide safe and quality programs, or the Little League may claim priority over fields within its boundaries (Figure 5.5) and object to another user groups intended use.

Figure 5.5 Little League Boundaries for the Billings area:



Similarly, organized athletic field users also face challenges with growing, new or competing programs that could take field space from their use. In addition, only Amend Park has adequate facilities to accommodate competitive games and tournaments. Athletic field users cite the lack of available sports turf fields as a challenge to accommodating all residents who may wish to participate. Similarly, they also note the lack of park facilities that provide opportunities to play on safe, quality turf fields for games that also have adequate parking, restrooms, lighting, warm up areas, spectator seating and activities for children, spouses, and others.

During the interviews, it was noted several times that Amend Park is a leased City facility that benefits primarily Soccer but is not generally available or affordable to other smaller organizations. The School District and Billings Catholic Schools also commented on the difficulty of scheduling time at Amend Park and the rates charged to use fields. The perceived quality of the maintenance of turf fields and support facilities was also discussed several times.

It is apparent that long-term use agreements are valuable to secure and protect partnerships, and in case of municipal corporations it is most often legally required. Many such agreements need updating to reflect provisions that maintain, sustain and reinvest or allow the owner of the property (City) to address the Community's changing health, safety, and economic needs and responsibilities by reinvesting in the parks and recreation system to meet current and future recreational needs. Under such situation, one clear option is to enhance investment in park maintenance to optimize benefit and use to meet maintenance obligations and responsibilities, and to protect the City's liability exposure. In the absence of a written agreement, many Parks & Recreation Departments, like Billings PRPL, rely on the issuance of Use Permits or a facility reservation system to ensure team sports facilities are made available for organized sports use and that the facilities are safe as well as maintained to a reasonable level and improved to an

agreed upon standard. Use Permits do require regular inspection to ensure facilities are kept in safe condition; that any required user maintenance is consistent with government practices, and that the user organization meets minimum standards for liability for use of public lands and improvements.

A clear message was also heard in regards to specialized facilities – particularly ice and indoor gym space. There isn't enough in Billings and what is available is heavily programmed and used. Loss of the ice rink at Metra means that all ice based sports and activities are hosted at a small, aging facility currently operated by the Billings Amateur Hockey Club. Lack of other indoor recreational spaces was also noted. The City should seek to address indoor space needs in partnership with special interest user groups, Yellowstone County, and other organizations that support community health and wellbeing.

Another clear demand specific to Centennial Park is for a dog off-leash area. The Humane Society noted in 2007 that approximately 60% of the U.S. had one dog, 25% had two or more dogs, and 15% had three or more dogs. It is figured that 80% of Billings Households have dogs (2009 Needs Assessment). A conservative estimate is there are 68,000 dogs in Billings. Attendance counts for the High Sierra Dog Park, the only dog park in Billings, shows the period during fall 2012 through spring 2013 had approximately 359 visits per day, giving a projected annual attendance of 180,000. Centennial Park presents the best combination of having suitable space that could accommodate the desired space wanted for such a facility and a sizeable residential population that is not currently being served. Park master planning should proceed to identify an appropriate space and support facilities for a new dog off-leash area.

Billing's recreation facility needs are changing to reflect the characteristics of its growing population. Park and recreation needs to serve the community's short and long-term needs suggest the current Centennial Community Park master plan should be amended to 1) better anticipate current and future growth demands in the park's service area; 2) reflect changing demand for organized sports; and new partnership opportunities for advancing development of Centennial Park.

Ensure Centennial Park offers multiple use opportunities for both programmed activities and drop-in needs of the surrounding neighborhood. This ensures a balance that helps maintain user satisfaction and better accommodates growth and changing demographics. Amending the master plan also allows partnership opportunities to address trends in community activity trends and future growth impacts.

Recognizing the need for a flexible and adaptive approach, some cities have embraced use of multipurpose athletic fields. These large fields (80 m x 180 m) can accommodate various age groups and multiple program uses. Because of the flexibility they afford, multi -purpose fields may be incorporated into all developed park types, including neighborhood parks provided adequate facilities such as parking, restrooms, accessible paths and seating are provided along with consistent maintenance services and practices with use standards in place.

Recommendations

1. The City should continue to acquire new parklands for active use parks and specialized sports facility needs.

2. The City should plan and develop park facilities that are flexible in design, incorporate multiple use opportunities that are capable of accommodating changing demographics as well as trending recreational sports demands.

3. The City should continue to engage, support, and sustain partnerships with various sports groups for development of new sports field facilities. Where existing partnerships are poorly defined, new

agreements should be sought to address public safety, legal obligations, facility use and scheduling, new development, re-investment in existing facilities, maintenance and repairs.

4. The City should work to address indoor space needs in partnership with special interest user groups, Yellowstone County, and other organizations that support community health and wellbeing.

5. The City should continue to regularly monitor citizen's recreation interests and participation rates. The data will help ensure the City does not overbuild specialized sport facilities like baseball and softball fields and will help determine the timing of when new facilities are needed.

6. The City should continue to find opportunities to work with its user groups in order to meet public recreation demands as well as to keep informed of changes in use rates and recreational interests.

7. Where costs or the method of service delivery are negatively affecting participation, the City and its partner organizations should look to find ways to address such obstacles to maximize opportunities for citizens to lead healthy, active lifestyles.

8. The City should continue to provide multi-purpose athletic fields and baseball facilities to meet projected community demand. Facilities should be developed and maintained in accordance with established dimensional standards, site development guidelines, and best maintenance practices:

   Athletic Field Development Standards

   Critical dimensions

   - 120 yards x 80 yards. A north-south orientation is preferred

   Qualitative Guidelines

   - Independent automatic field irrigation system – the field can be irrigated independent of surrounding park areas. Irrigation heads in the field of play are rubber topped and maintained flush to grade for safety.

   - Parking is adequate for the anticipated number of players, coaches, officials and spectators per field.

   - Restrooms – portable and/or permanent facilities provided to serve scheduled games and programs.

   - Trash – is regularly collected from dispersed locations and stored securely in a large central dumpster

   - Spectator seating – space is available to accommodate spectator seating in the form of open grass areas, bleachers, or stadium seating.

   - Maintenance guidelines for athletic field turf or artificial turf

   - Sports field turf is substantially weed free (less than 5% weeds); free draining, fertilized a minimum of 2 times per year, aerated annually, and may be cut to a

height 2.5" Fields may be lighted but must meet each particular sport's minimum lighting levels.

- Artificial turf fields shall provide for fall protection in the form of padding and/or addition of infill rubber, are free draining, may have permanent lines.

Ball field Development Standards.

Baseball

Critical dimensions

- Minimum 325 feet to foul poles
- Minimum 400 feet to center fields
- 90 foot base paths
- Raised mound 60 feet 6 inches from home plate

Qualitative Guidelines

- Outfield fencing
- Shale base paths and warning track or other acceptable materials.
- Fine turf infield and outfield
- Independent automatic irrigation system
- Secure site
- Preferred SW orientation from home plate to second base
- Positive drainage of fields – preferred 1% cross fall, integrated with overall open space site drainage pattern.

Slow pitch softball

Critical dimensions:

- Vary based on the age group and the requirements of users

  Note: Where a diamond has been "dedicated: for women's play or for use of a younger age group, critical dimensions will be reduced to accommodate that group's requirements (e.g., outfield fence). This will not affect the area of the skinned infield, nor will varying the distances from home plate to the pitching rubber or length of base paths. Critical dimensions noted above would accommodate all groups up to and including senior men's slow pitch.

Qualitative Guidelines:

- Outfield fencing
- Torpedo sand, red shale, topsoil mix for entire skinned infield
- Fine turf outfield
- Independent automatic irrigation system
- Preferred SW orientation from home plate to second base

- Positive drainage of fields – preferred 1% cross fall, integrated with overall open space site drainage pattern.

Amenities & Services:

Team benches/dugouts
Minimum 100 person spectator seating
On site or acceptable offsite parking for teams, coaches, officials and spectators – typically one stall for each 6 seats

Minimum sports field facility maintenance standards should be developed and implemented by the City for all facilities located on City owned parkland. These standards should focus on ensuring safe competitive play conditions and address legal responsibilities of the City.

Areas of focus should include:

- Annual site safety inspection
- Parking lots and ADA access
- Sanitation
    - Trash pick-up and removal
    - Provision of restroom facilities and cleaning
- Turf quality
    - Mowing schedule and height
    - Watering schedule and costs
    - Fertilization schedule
    - Treatment for weeds and record keeping (must comply with Montana Pesticide licensing requirements)
- Spectator seating
- Parking and traffic control

9. The City and partner organizations should explore potential and opportunity to establish and fund a sports field maintenance unit. This new unit would generally provide for both regular, annual and cyclical maintenance of city-owned sports fields such as:

    - Spring preparation: inspection and repairs, irrigation system start up, field layout, fertilization, aeration, treatment of weeds)
    - Re-occurring services: dragging, relining, watering in of infields, checking bases and sports field lights, adjusting irrigation clocks (where provided)
    - Fall shut down: leaf removal, move/store bleachers, inspection and repairs, secure site, winterize field irrigation systems and plumbed facilities, etc….
    - Repair and replacement of worn and aging sports field infrastructure such as irrigation heads, fence fabric, backstops, and score boards.
    - Options for funding may include a long-term use agreement, a fee schedule tied to each field's use permit(s), a user choice menu approach, City subsidized services, partner/private funding, or a combination of these.

10. Centennial Park's master plan should accommodate a total of four Little League minors field given existing vacant lands and projected residential growth. The minors fields will be needed to accommodate population increases and continued strong community demand for ball fields within the Burlington Little League boundaries. The Centennial park master plan should also provide for a

multi-purpose athletic field. The park master plan should also add park amenities that ensure the park provides the range of services expected of a community park. These could include:

- ADA compliant perimeter walking path
- 50 to 100 person picnic shelter
- Playground
- Dog off-leash area
- Parking lot
- Trees
- Park identification sign
- Add recreational amenities typical of a neighborhood park such as sand volleyball, bocce, horseshoes, pickleball, basketball, tennis court.

11. The Centennial park master plan should remove the proposed indoor sports facility (ice arena) as the park is not sufficiently large enough to accommodate all recreational needs of the surrounding neighborhood. In addition, an ice arena is probably too commercial in nature to be sited within the neighborhood such that it is viewed as a good neighbor.

12. The city should seek formal agreements with each Little League to provide for fuller development of park improvements to support field development and use. Elements such as ADA compliant parking, restrooms, as well as trash enclosures, field irrigation upgrades, perimeter paths and storage facilities are needed at nearly all parks that host Little League fields. The City will need to provide leadership, standards, funding and maintenance.

CHAPTER 6 – SPORTS FIELD MAINTENANCE PROGRAM IMPLEMENTATION

How are sports fields different from other parklands?

The first goal in sports field maintenance is to ensure a smooth and consistent bounce off the playing surface. Soccer coaches don't need to be told that their game demands better turf quality than just about any other outdoor team sport. On a smooth, dry, well-maintained pitch, soccer has a graceful quality - even in the middle of a hard-fought game. But when the field goes bad, the whole game goes bad. Bad ball response disrupts players' efforts to execute passes, the game slows to a crawl as miss-kicked balls constantly fly over the touch lines, and the score may depend on who can stay upright most successfully. Baseball and softball coaches also value quality turf and well maintained facilities. They know that a hard hit grounder over the infield or turf could result in a poor bounce that leads to an error or a cheap hit; or, it could be the cause of a broken finger or a ball to the throat because the ball popped up off a grass edge, bounce on a sprinkler head, changed direction in a turf divot, or was affected by a rock, or irrigation line depression due to inadequate field maintenance.

The second goal in sports field maintenance is to ensure players to have firm footing. No slipping while running, kicking, throwing, defending, pitching, or stealing. Poor footing can lead to a host of player injuries. A pitcher can stretch a leg muscle because they slipped on landing or a base runner or fielder may slip, collide with another player or an object, leading to injury, or a player can twist and ankle in a broken irrigation head or gopher hole. A thick, healthy sports grass is safer to play on than a weak and worn field containing weeds, rocks, insects, trash, or broken irrigation heads. Players can't make the play when they can't get good footing.

The third priority in sports field care and baseball field maintenance is to provide for identification of the areas of play. Field layout, lining, care and upkeep of backstops, bases, goals, bleachers, netting, etc… are important to the respective game's competitive fairness, pace of play, officiating, as well as player and spectator safety.

Accordingly, the maintenance priority for all types of athletic fields, including baseball and softball fields, should be focused on ensuring player safety. Good turf doesn't and safe sports field facilities just happen in a public park system. It takes careful planning, attention to detail, understanding and applying the science of agronomy, and hard work.

After the above priorities are addressed, the remaining maintenance activities are just to make the field look pretty (Source: Jim Reiner, Baseball Field Maintenance Handbook).

What does it take to maintain sports fields?

An effective field management program starts with the regular and systematic inspection of the fields. Maintenance personnel have to monitor and know what's going on with the turf grass in order to help make knowledgeable decisions about how to take care of it.

Sports field Maintenance and Programming Activities and Responsibilities

Activity	Frequency	Responsible Unit
Soil Testing	Annually	Park Maintenance
Inspection & Monitoring	Bi Monthly	Park Maintenance
User Education	Annually w/ Post & Notice	Rec & Park Maintenance
Practice Fields	Post/schedule	Rec & Park Maintenance
Watering	2x – 5x weekly	Park Maintenance
Aeration	1 -2x/Year	Park Maintenance
Mowing	Every 5 to 14 days	Park Maintenance
Fertilization	Min. 1 ea. Spring & Fall	Park Maintenance
Weed Control	As needed	Park Maintenance
Top Dressing & Over-seeding	As needed	Park Maintenance
Scheduling	Daily	Recreation
Design & Funding	Once	Administration
Construction	If Phased	Administration
Cyclical Maintenance	As needed	Admin – Park Maintenance
Seasonal Maintenance	9 – 10 Months	Park Maintenance

User group interviews suggested the city has a mixed history in the quality and consistency of its sports field maintenance activities. Several Little League Baseball representatives felt the City should not be responsible for field maintenance outside of water, mowing and trash collection. Some league representatives indicated their organization was able to provide any additional services they required. Most user groups in the latter category felt exclusive use of their facility was needed to protect the investment. Most user groups, however, appreciated the level of service they received and wanted more. All cited the cost of maintenance as a limiting factor to completing facility improvements.

Funding and staffing levels for the entire park, recreation, open spaces and trails are not sufficient to dedicate to providing a complete program for all City owned sports fields. The City's Park Maintenance unit is, however, finding opportunities to utilize time, specialized horticultural equipment, and limited material funds to improve maintenance for sports fields. The on-going re-investment in replacing aging park and recreation infrastructure is likely one reason staff is seeing some time savings that can be put towards other priority maintenance needs. The Department should continue to look for organizational improvements, through staff training and experience, work standards, annual work plans and other efficiency enhancing strategies and tools.

User group interviews indicate there is potential for new partnerships with the City to further improve sports field maintenance at one or more sites. If a user group and the City enter a partnership agreement to enhance field maintenance services, the Department may need appropriate budget authority/flexibility to increase seasonal staffing to provide the services specified in the partnership agreement. Partnerships may provide for some or all the cost of materials and equipment; however, City staff time will be necessary to ensure the work is done. City staff should be used to perform or oversee the application of fertilizers, herbicides, setting irrigation clocks, and mowing. The City may use partners to fund specialized services and activities such as aeration, topdressing, and supplemental fertilization above and beyond what the City provides as part of its base park maintenance.

To optimize sports field services, the Department's Park Maintenance Unit has developed a work plan to guide the timing and use of staff resources, equipment, and operating funds for routine seasonal and cyclical maintenance needs for sports fields. Staff indicates the work plan can be further developed, refined, and used to help establish and control the staff time and costs to provide the services.

Where no annual or limited-term formal agreement is in place for a facility regularly used for scheduled games by an organized user group, the City should continue to require a limited term scheduled Park Use Permit. A modest fee for each use period should continue to be assessed in accordance with City cost recovery policy or adopted fee schedule.

Current Sports Field and Ball Field agreements

The City's park system is over 100 year old. Many relationships and partnerships have occurred to make the City's parks, open space and trail system what it is today. What worked in the past in regards to agreements and understandings, is not necessarily the way the City should continue to manage the park system.

Amend Park is the City's first agreement for third party management of a major park facility. The agreement was approved in 2002 with terms for annual automatic renewal unless revoked. A similar agreement, with substantially the same provisions was subsequently adopted for the City's Softball complex.

The Purpose Provisions of the Amend Park agreement include:

"**WHEREAS**, from its beginning, Amend Park has served as the 'home' of soccer in Yellowstone County, including the site for YSA's spring and fall seasons of recreational play, BSA's site for adult recreational play, the site for Magic City Soccer Club's competitive youth soccer play, and the location for practice and competition of both JV and varsity men's and women's teams from all four high schools in Billings."

"**WHEREAS**, the City believes that it is in the best interest of the community to continue to support APDC's efforts to secure funding to develop Amend Park and desire to manage and maintain Amend Park, as provided herein, consistent with the Park's historical development and use as a multi-use soccer complex."

One question is if the above purpose provisions are still applicable, equitable and reflective of community need? Another question is if the City is getting the most value and an appropriate level of care at the facility to benefit residents. A variety of data should be available from the operators to assess the above answers if and as required. The parties may determine it is appropriate to renegotiate the terms of the agreement or seek an alternative to the existing management arrangement.

To assess if the agreement and its terms are valid, efficient, and transparently meeting the public's needs and expectations, the performance obligations of APCD and the City can serve as a frame work to assess conditions, operating costs, revenue, and use.

Performance Obligations of APCD and the City

5.2.1. *Maintain the pavilion buildings, soccer goals and Park signage; provide playing field layout and marking;*

5.2.2. *Provide for playing field turf maintenance and cultural practices including the fertilization of the playing fields on the Premises and the application of turf grass weed control and turf maintenance cultural treatments thereon*

5.3. Utilities: *The APDC shall be responsible for all utility costs associated with the Premises with the exception of water service and electrical services related to irrigation of Amend Park.*

Fees and Charges: *The APDC may establish and charge:*

5.5.1. *A Special event fee for all approved special uses including sport camps and schools, special sporting events, and other special events;*

5.5.2. *A fee for each individual and/or each organization for each approved Use Permit applied for based on registration records for the most recent program period of that organization. Any such fee shall be equitably applied, charged, and collected from all users, groups, organizations, or entities, public or private;*

5.5.3. *Reasonable fees for furnishing toilets, providing field layout, line painting, goals, nets, maintenance and repair and related services and supplies for the organizations using the fields or, in the alternative, require the organization using the field to supply such at the cost of the organization;*

5.5.4. *The forgoing notwithstanding, events scheduled by the City shall not be subject to any fee established by the APDC in accordance with this agreement.*

5.9 Reports*: The APDC shall submit an annual report and financial statement to the City on or about March 15, 2003 and subsequent years throughout this Agreement and any renewals thereof, and shall submit a proposed operating budget showing anticipated revenues and expenditures for review by the City Council by April 1, 2003 and subsequent years throughout this Agreement and any renewals thereof.*

6. CITY'S RIGHTS & DUTIES: *In addition to the other provisions of this agreement and those provided by law, the City shall have the following rights and duties;*

6.1. Maintenance Responsibilities: *The City will:*

6.6.1. *Irrigate the playing fields and adjacent park areas as necessary to maintain healthy turf;*

6.6.2. *Mow all grasses and weed areas in the Park fields during the growing season as needed consistent with historical maintenance practices;*

6.1.3. *Control weed growth on fences, along curb lines and walkways;*

6.1.4. *Maintain all City sewer lines, City water lines, and all underground electrical lines, electrical services, and asphalt entrances and adjacent streets.*

6.1.5. *Empty the dumpsters serving the complex as needed;*

6.1.6. *Turn on water lines and plumbing in the spring as early as weather permits and drain and disconnect the same in the fall as appropriate to protect plumbing systems from damage that may be caused by freezing.*

6.4. Cost Reimbursement: *Any expenses incurred by the APDC as a result of an event scheduled by the City shall be reimbursed to the APDC as approved by the Operations Committee.*

The City is the owner of Amend Park and the separate softball complex, including all the infrastructure and improvements. As such it carries the liability to ensure its facilities are being managed in a safe, legal, professional and fiscally responsible way. The contract specifies the City's responsibility to review the Operator's costs, maintenance standards and business practices to ensure public benefit. The City's obligations must be sufficient that they will withstand public inspection and scrutiny based on the merits.

The public contract agreement recognizes that the City is ultimately responsible and liable to ensure the park is operated for the greatest public benefit. Factors such as condition, upkeep and maintenance, changes in operational costs, fees and charges, facility use characteristics, and trends in use rates are reasons to evaluate the cost and benefit of the agreement every 3 to 5 years. A concerted review of conditions and costs every few years gives either or both the City and Operator opportunity to determine if there is reason to cancel, renew or up-date terms to ensure the public interest is being met by continuing operation of the park through agreement.

Little League is an important partner agency; however, when funds are being directed towards maintenance by a private entity, the City potential liability and disclosure/reporting obligations become more complicated. Little League District's that want to improve or maintain City owned facilities may generally be accommodated provided there is a clear use agreement in place that reflects all agreed upon goals, activities, standards, and plan provisions to ensure the facility is operated in a safe, legal and equitable manner.

Were no use agreement is in place, the City should require use permits to reserve and use sports facilities. Meeting with Leagues should be done during the winter off-season. The timing provides staff and individual user group opportunity to inspect facilities, discuss current conditions needing attention; update agency and league contacts; prepare a calendar for each site's routine and cyclical maintenance needs; identify responsibility for various maintenance programs, schedule improvements or site development activities, and review City operating rules and restrictions related to public safety and liability.

The Parks Maintenance program has the necessary equipment and staff expertise to maintain sports fields. It does not appear to have sufficient funding for the needed materials or staff times to cover all such existing facilities. As a result, the Department must look for sustainable operating efficiencies, increased funding, user fees, and partnerships to if it is to improve its sports field facilities.
The Department's Park Maintenance Unit should identify its current base services and establish the cost and priority to align services for all parks and sports fields. Costs such as water, mowing, trimming, fuel, trash removal, restroom cleaning, playground maintenance, tree care, and vandalism repair are typical of core services needed to ensure a park is clean, safe and operates as a community asset. Maintenance needs such as picnic reservation set up and cleaning, biannual fertilization, aeration, weed treatments, parking lot sweeping, pathway striping, facility painting, and field lining, may be included in base costs, or identified as additional services that may be funded through a combination of tax support, user fees and facility charges.

Once base maintenance and operating costs are established, deficiencies and needs in the sports field maintenance program can be identified and addressed in a number of ways including 1) seek additional tax support; 2) establish user fees – cost to provide specific services above and beyond bases; 3) sustain or establish partnerships with user groups and leagues, and 4) seek donations/volunteers.

Recommendations

1. The City should continue to foster and advance partnerships with sports organizations to develop and utilize sports fields needed to serve current and future residents.

2. Existing user groups that have made significant improvements to the park system, but that do not have formal use agreements, should be encourage to seek an agreement with the City. Formal agreements should: acknowledge the value of the facility and improvements; ensure public safety and liability concerns are addressed; specify the facility or facilities involved; provide for a period of use (10 to 20 years); establish guidelines for scheduled use of facilities; address development standards for improvements and renovations; and specify maintenance responsibilities, and include provisions to adjust costs or fees to reflect changes in the economy.

3. Where use agreements do not provide for scheduled use of an existing sports field facility, the department should evaluate the facility's condition and determine if it can be reserved or scheduled or if the lands should be converted to another use.

4. The City should identify its base level of maintenance and costs for all park and recreation facilities it operates.

5. A fee schedule for additional sports field services that may be provided for user group facility needs should be developed.

6. The Department should establish a funding mechanism to enhance/provide supplemental sports field maintenance services through partnerships with user groups. A memorial account or enterprise fund could be established and utilized to provide additional staffing services, equipment or materials for sports fields.

7. The City should establish standards and costs for baseline park maintenance services to best ensure it is providing equitable services to all users.

8. The Department should consider encouraging the Park & Recreation Board to request the Mayor and Council provide for an audit of the Amend Park Operating Contract to ensure the site is being operated in the best interest of the public.

9. Terms of the Amend Park agreement should be evaluated and amended if needed to make sure fair access is being provided for all user groups.

10. If needed, the Department should work with user groups to address any deficiencies identified by an audit of the Amend Park agreement.

CHAPTER 7 – PLAN ALTERNATIVES

Current Master Plan of Record:

The current Master Plan of Record for Centennial Park (Appendix A) was prepared by Worth Design Associates which includes a "clover leaf" of four baseball fields at the north with three of the fields indicated as existing and the southeast field labeled as a Proposed T-ball Field. Restrooms, concessions and storage buildings are shown in the center of the clover leaf. A Proposed Little League baseball field is located in the center of the site south of the intersection of Howard Street and 33rd Street West. A large Ice Arena facility is proposed at the southeast portion of the site with large areas of parking at the north of the facility and additional parking at the south off of St. Johns Avenue. A wide tree-lined promenade extends from the ice arena north through the parking lots to the clover leaf baseball fields. The western area of the site is planned for passive uses with a large multi-use open playfield which also serves as a broad shallow stormwater retention pond with stormwater inlets located on the east and west sides. This stormwater retention area serves neighborhood runoff needs. The stormwater inlets are connected to storm sewer lines that run to the north and daylight into the open ditch along the north side of Broadwater Avenue. A picnic shelter and restrooms are located at the north of the open playfield with a parking area adjacent to Howard Street. A second picnic shelter is located south of the open playfield with a parking lot adjacent to St. Johns Avenue. A playground is located at the southeast portion of the open playfield. Perimeter sidewalks at the street sides are linked with and interior pathway system.

Centennial Park has some developed areas with the majority of the site remaining undeveloped. The three existing baseball fields indicated in the current master plan are built in the location indicated in the plan with supporting concessions, restroom, and storage buildings. The "forth" southeast field location is currently used as an informal gravel parking area with access off of 32nd Street West. A baseball field has been constructed in the approximate location indicated for the proposed Little League field. This facility also utilizes the existing gravel parking lot as well as on street parking on Howard Street. The broad stormwater retention area remains in place and has been modified wrapping around the south of the baseball field. This stormwater retention area must be accommodated and integrated into the overall master plan. Care must be taken to ensure required stormwater storage capacity is provided and outflow continues into the existing stormwater inlets.

As previously noted in Chapter 1, various organizations have recently shown interest in developing new facilities at Centennial Park that do not fit within the current Master Plan of record. Apparent through this update process as discussed in Chapter 5, Billing's recreation facility needs are changing to reflect the characteristics of its growing population. The current Centennial Park Master Plan should be amended to better anticipate current and future growth demands in the park's service area, reflect changing demand for organized sports, and provide new partnership opportunities for advancing development of Centennial Park. Multiple use opportunities for both programmed activities and drop-in needs of the surrounding neighborhood need to be provided for in Centennial Park. This ensures a balance that helps maintain user satisfaction and better accommodates growth and changing demographics.

The existing improvements at Centennial Park do fill current community needs and should be retained in the master plan update. As recommended in Chapter 5, the proposed ice arena and extensive supporting

parking should be removed from the master plan as the park is not sufficiently large enough both for a facility of this size and to accommodate the recreational needs of the surrounding neighborhood, besides the commercial nature of such a facility impacting the neighborhood. The other amenities should be refocused with effort to more efficiently utilize the site and provide more multi-use and adaptable spaces.

Schematic Plans:

The analysis and synthesis phase of the master plan update process generated use recommendations for Centennial Park. These determined program elements were used to develop three schematic plans (Appendix C) for further design exploration and use options in the park. As noted in the public process narrative in Chapter 1, these schematic plans were used for public input and preferences to help guide the design process.

Three schematic design alternatives were developed based on the Centennial Park program determined through the needs analysis and synthesis and city staff input. The following lists the Centennial Park program items used in the development of the three schematic plans.

- Accommodate the existing three minors baseball fields and possibly a fourth field.
- Accommodate the existing Little League baseball field.
- Provide for a multi-purpose athletic field.
- Provide a range of services expected of both a community and neighborhood park – restrooms, picnic shelters, playground, splash pad, basketball, ADA walking paths, parking lot, park signage, dog off-leash area, and trees.

Preferred Schematic and Draft Master Plan:

The presentation of the three schematic plans to the PRPL Parks Board and in the Public Meeting provided key input for public preferences in plan options. As noted previously in Chapter 1, several iterations of feedback and revisions pursued the schematic plans. The resulting preferred schematic plan was developed based on the given board and public preferences (Appendix E). The Preferred Schematic Plan provided the basis to develop a more detailed Final Draft Master Plan for city staff and PRPL Park Board approval (Appendix F).

CHAPTER 8 – FINAL MASTER PLAN

Upon approval of the Final Draft Master Plan, the 2015 Centennial Park Master Plan (Figure 8.1) was prepared as shown in the next page. The following narrative describes the features of the 2015 Centennial Park Master Plan.

CENTENNIAL PARK MASTER PLAN

SEPTEMBER 2015

Centennial Park

HORIZONTAL SCALE: 1" = 80'

0 80' 160'

Prepared for:
BILLINGS PARKS, RECREATION, AND PUBLIC LANDS

Prepared by:
PLANET DYNAMICS, LLC
and
THE LAND GROUP, INC.

Little League Minors Baseball Fields (clover leaf):

The three existing minors baseball fields and support structures including concessions, restroom, and storage buildings at the center should be retained and any future development focused on improving and updating these facilities including backstops, fencing, bleachers, etc. The existing gravel parking area should be removed and compacted soils remedied for future turf development. Service access to the center facilities is provided via a driveway from 33rd Street West. Any future baseball storage buildings should be located at this service access. Pedestrian access is provided from the walkway along 32nd Street West and from the proposed parking at the south and southwest. During the Stakeholder interviews interest was expressed for a special needs baseball field for individuals with disabilities. This type of specialty facility will require unique features including specialty surfacing, ADA accessibility to all areas of the field as well as access to the field from parking and unique maintenance and operation requirements. As leagues or groups form, and as funding is secured, the plan identifies the southeast field of the clover leaf that may be evaluated along with other park sites as a possible location for future field development.

Little League Baseball Field:

The existing Little League baseball field should be retained and any future park development focused on improving and updating this facility including backstops, fencing, bleachers, buildings, etc. Primary service access to this field should be accommodated from Howard Street at the north. An existing service gate in right field is easily accessed through a curb cut just to the north on Howard Street and this route should remain free from obstruction. Additional pedestrian access is provide from the northeast. A turf area is provided adjacent to the east of the infield which could provide team camp and warm up area.

Multi-use Playfields:

Two multi-use playfields with a north-south oriented axis are located running parallel to 32nd Street West. As determined these playfields are key for providing adaptability for the growing recreational needs of the community. They are adequately sized to accommodate soccer, lacrosse, rugby, and football. They are also intended to provide free play open space for neighborhood needs. Sports field netting should be provided at both the north and south ends of these fields to prevent errant balls from leaving the fields. Also, to address the concern with balls entering the busy 32nd Street West a low berm topped with hedging should be maintained to deter balls from entering the street while maintaining an open landscaped view into the park. Special attention should be placed on turf design and maintenance in these fields as they are expected to receive extensive use. Proper design should be given in turf development to ensure sustainable turf resilience to wear and compaction.

Multi-use Court:

A multi-use court is provided to give additional flexibility to park use. It should be striped for both basketball and pickleball use. Permanent basketball standards should be installed and provisions for temporary pickleball netting allowing for the alternative uses of these court games. The location of this court is situated to enhance the flexible use of this area. Its close proximity to the street provides good

visibility of this area for security. It is easily accessed from the street and adjacent parking lot for those quick pick up games. The location also provides paved court area for special venues possibly servicing special baseball events or other events that could utilize the adjacent open turf space to the east. A 10 foot perimeter chain-link fence should be provided with the ability to "roll" open both the east and west sides to provide free access of the paved court area to the adjacent use areas. These options will provide greater flexibility for multi-uses of this court area.

Restrooms:

Restroom facilities are located to be central to the park providing use for all areas of the park. The location just adjacent to the east parking area accommodates both ease of access for maintenance and good visibility for safety. The restroom doorways should be oriented to the east so to be easily seen from the parking lot and 32nd Street West. The restroom is located in close proximity to key uses including picnic shelters, playground, splash pad, multi-use court, multi-use playfields and the baseball fields. To further provide flexibility in the use of the restroom building it is recommended that storage be provided with an access door facing the west so to provide service and access to the open turf area to the west. This storage could be used to store recreational materials/equipment for various programmed activities that may utilize the adjacent spaces.

Playground/Splash Pad:

Large areas are provide for both playground and splash pad toys. These uses are well sized to both meet the needs of the neighborhood/community and provide for additional users associated with the baseball and multi-use playfields. The location is centrally located to supplement the needs of families using the sports fields and other venues of the park keeping the play areas somewhat visible to these other venues. A shade structure and benches are provided between the playground and splash pad. The location also provides a key focal point to the central activity area of the park.

Large Picnic Shelter:

A large 100 person picnic shelter is located south of the clover leaf baseball area and adjacent to the northern multi-use playfield. This location allows its use in relation to these two venues for various associate events. The shelter is easily accessible from the eastern parking lot and in good proximity to the restrooms. The adjacent open turf area at the west and the open turf area of the multi-use playfield at the east of this shelter allow great flexibility for various uses of this venue. Further flexibility and use of this shelter can be accommodated by provisions in the structure to drop down a divider or curtain to separate the structure into two 50 person areas that can be used independent of each other.

Small Picnic Shelter:

A smaller 36 person picnic shelter is located on the east of the playground. It is easily accessible from the eastern parking lot and in good proximity to the restrooms, playground, and splash pad. Its location at the northwest corner of the southern multi-use playfield allows its function associated with any venues and

events of this playfield and open space. It can also be utilized for any special events associated with the adjacent dog park.

Parking Lots:

Three parking lots totaling 164 car parks are provided conveniently for access and to serve the various uses of the park. The largest accommodating 97 cars is located at the east between the two multi-use playfields with access from 32nd Street West. This lot also provides a drop-off zone at the west end near the restrooms. This parking is centrally located to service the multiple needs of both baseball areas, multi-use playfields, picnic shelters, playground, multi-use court, and the off-leash dog area.

A 34 space parking lot is provided with close proximity to service the Little League baseball field and the multi-use court. Access is off 33rd Street West. A dumpster enclosure is located within this parking lot.

A 33 space parking lot is provided at the west with access off 34th Street West and Howard Street. It primary use is to service the off-leash dog area with adjacent parking.

Pathways:

The existing walks along the park road perimeters will be maintained and connected by a path along the northern end to form a continuous perimeter loop pathway around the park that is near a mile in length (0.95 mile). This pathway will be further linked by interior pathways connecting the various venues and parking lots. This path system could be developed into a prescription trail with exercise equipment pods located in areas adjacent to the path. The pathway also accommodates pedestrian access from adjacent neighborhood areas. Special care should be considered in providing safe crossing zones for neighborhood access to the park with attention particular to key controlled crossings at 32nd Street West. Bikes are accommodated with the addition of a bike corral centrally located near the drop-off at the west end of the eastern parking lot. Ten foot wide pathways should be provided in key locations to provide maintenance vehicle access on the pathways to avoid damage to turf and irrigation. Trash receptacles should be locate along these wider pathways for ease of service from parks staff vehicles.

Park Signage:

Park monument signs are located at the entrance to the parking lot off 32nd Street West and the southwest corner of the park off St. Johns Avenue providing identification for the park. Park signage should follow the guidelines of the PRPL Signage Framework Plan. A kiosk is provide north of the drop-off in this central location to provide park information, wayfinding, and space for special events information.

Dog Off-leash Area:

Location:
The dog off-leash area strives to meet the great demand in the community to the best extent possible within Centennial Park. This location works well in that it does not immediately adjoin any residential lots and is bound by public spaces on all sides. This can help alleviate any concerns for noise and smell

which tend to be primary public concerns with implementing dog off-leash facilities. Based on studies and the consultant's experience, these concerns tend to be relatively infrequent in reality and can be greatly mitigated through proper location, design, maintenance, and management. Local neighbors and baseball user groups expressed concern with current problems of free reign dogs within the existing areas of Centennial Park and uncontrolled feces management. The establishment of a well maintained and responsibly used off-leash area in Centennial Park will greatly reduce the tendency for people to allow their dog off-leash throughout Centennial Park.

The off-leash area overlays the stormwater retention pond area that must be maintained for neighborhood stormwater management. Provisions for required stormwater volume storage must be accounted for in the final grading of this area. The layout of this area readily supports these measures with the inclusion of a meandering stream and pond area to accept stormwater with outflow provisions into the existing storm drain system. Grading for the retention ponding area coupled with other land forms will also provide visual interest and enhancements to the user experience.

Size and Use Area:
The size of off-leash areas is very important to their overall success. Studies show a correlation between the size of the area and ranking of its success. Larger off-leash areas rank more successful. The larger the better. Size contributes positively to capacity, wear and tear, dog behavior, safety, aesthetic, and versatility. The overall dog off-leash area provided in Centennial Park is 6.6 acres with a given 0.42 acre small dog area and 0.28 acre agility training area, with the remaining area designated as large dog space. The agility training area provides area to specific dog training that should have both fixed agility equipment and moveable equipment/flexible space. The agility area could benefit from a higher level of interaction and use by dog clubs and organizations reserved for special use. The gate could be controlled by card swipe to regulate use and scheduling. There are opportunities for special dog events to be hosted here with the benefits of the proximity of the parking lot, restrooms, adjacent picnic shelter and multi- use open space.

Entrances and Parking:
Three entrances to the off-leash area are provided to give more options to the dog owner in consideration of their dog's behavior traits and accessing the area. A northeast entrance is provided that serves the small dog use area, agility training area, and the large dog area. The small dog and agility training areas are located at the northeast corner of the off-leash area to be better served by the nearby onsite parking anticipating greater manageability of these dog groups over larger dogs. There is a tendency for some small dog owners to carry their dogs from the parking lots to entry gates. While it is hoped dog owners would take their dog on-leash from the parking lots to the off-leash areas, there are those who do not. Another entrance to the large dog area is provided at the northwest immediately adjacent to the parking lot providing a quick and direct entrance from parking into the large dog off-leash area. A third entrance is located at the southwest corner of the large dog area which primarily will be used by neighborhood users. The mass majority of dog off-leash area users drive to the location. The entrance points need to best relate to given parking and allow multiple choices for parking and access. Entrances must utilize a double safety self-closing gate configuration to help keep dogs within the fenced area during ingress/egress to the park.

Fencing:
Fencing as a rule of thumb should generally allow the dog to see through it. Solid opaque fencing can promote undesirable behavior. It is recommended a dark colored vinyl coated chain-link fence be used as it will provide desired transparency, durability, and budget savings. The darker color as opposed to the standard brightness of galvanized material will help the fencing to aesthetically blend into the surrounding park. Generally a 4 foot fence height is adequate but there can be those rare high jumpers that would be better contained with a 6 foot fence. Top and bottom fence rails should be utilized to help retain the chain-link fabric. Ensure that fabric selvages are knuckled both top and bottom to avoid injury. To the fullest extent possible interior right angles and acute fence corner angles should be avoided as they can become entrapment areas for dogs who may get bullied or ganged up on. The fence layout in the off-leash areas utilizes radii and wide angles for this purpose while it also encourages movement of the dogs and is more aesthetic.

Pathways:
The off-leash area must be accessible to all users. An approximately half mile looping ADA accessible pathway is provided throughout the large dog and small dog areas. Small loops are provided at both ends for more variety and those who may have physical limitation desiring a "shorter walk". It is recommended this accessible pathway is paved in concrete as opposed to asphalt both for durability and heat reflection. Asphalt tends to be hotter in summer months which can burn the pads on the dog's paws. An informal pathway is also provided which provides a more natural surface that undulates and meanders through the topography and landscape features.

Water Features, Trees, Shade Structures, and Topography:
Water features, trees, shade structures, and topography not only provide aesthetic value but they also provide other services and aid in dog behavior. The user experience, both dog and owner, is greatly enriched through the use of these features. They provide visual breaks, points of interest, variety, shelter, micro-climate, and increased play and exploration opportunities. They also encourage greater interaction between dog and owner. The topography in the large dog area is both mounded and depressed creating high and low spots lending to the enhancement of the pathways and water features. Boulders are included to strategically work with the interface of the topography, water, and pathways lending both to the aesthetic, play, and dog behavior. Trees greatly help provide visual breaks, shelter, interest, and micro-climate. The water feature includes small waterfalls and pools at the eastern berm area providing a source of flow through a meandering stream that crosses under bridged pathways with various access and play points. The stream finds its way to a larger shallow pool on the west side providing greater water play opportunities. The shade structures provide a shelter from sun and weather and a place for seating and rest. They can also provide character and aesthetic value to the area. The base of the shade structures should be concrete to handle the wear and prevent dogs digging at the posts and benches searching for cool shaded dirt to cool down in.

Substrate:
Substrate materials should be considered based on the intended use of the area. Substrates must withstand the intense use given by dogs and should be selected accordingly. It is recommended a variety of substrate be used here. Some have more advantages than others given certain conditions that influence maintenance, safety, and dog behavior. The recommended use of the concrete vs. asphalt for the ADA

pathway exemplifies this. For the majority area within the large and small dog areas and agility training area, it is recommended to utilize a low-maintenance turf. This is by far most desirable for the dogs as it provides a soft, resilient and cool surface. It does however require watering and mowing and can get worn down into muddy areas if not designed and managed properly. A turf specie to consider is Buffalo Grass as it is proven to handle traffic, require less watering and fertilizing, and can mowed frequently or infrequently. A decomposed granite surfacing is recommended for all informal pathways and buffer areas at each entrance. It is relatively easy to maintain, allows adequate drainage, and feces are easily detected and removed. As the turf areas are used and any wear patterns appear, it is recommended those bare dirt areas in turf be turned into decomposed granite surfacing to better handle the given wear in that spot. Any substrate is susceptible to digging dogs. Maintenance efforts should be proactive in quickly repairing any holes before they get too big and encourage more digging. The use of cobbles and sand at the meandering stream and pools are appropriate uses and will help naturalize the feature. The use of the various recommended substrates offers the dogs different opportunities and choices of footing types enhancing their experience.

Design relating to Dog and Owner Behavior:

Dog off-leash areas have some inherent disadvantages in congregating dogs that can impact behavior which can be exacerbated by improper design and layout. Dogs are social creatures and all are individuals with differing tendencies and social maturity. Particular care is taken in the dog off-leash area layout to mitigate conflict and encourage good behavior.

A guiding premise used in the design for Centennial Park is to discourage dogs from congregating into groups. Conflict is more prominent when dogs congregate. The park is designed to disperse dogs throughout the off-leash area. This increases the carrying capacity of the off-leash areas, avoids conflict situations by keeping dogs positively engaged with their owner, and disperses wear throughout the park. Primary to this strategy is the "dumbing down" of the entrances to the off-leash area.

Commonly off-leash areas are designed with entrances oriented to the dog owners rather than the dog. The entrances tend to be celebrated with design features including decorative gateways, structures, and amenities such as benches, drinking fountains, etc. which invites both owner and dog to congregate at the entrances. Dogs have a natural tendency to greet other dogs as they enter an area and their preference is to hang out at those entrance points. Many wear patterns observed at entrances are not so much the wear at the gate entry as it is the wear along the insides of the fence from dogs pacing back and forth along fence lines anticipating the arrival of new dogs. The dogs that arrive are often rushed by others inside and mobbed often getting body slammed and muzzle bumped. The specific design of the entrances mitigates these issues and are designed for the dog's behavior and experience.

Upon approach to the entrances, the double gated areas sit outside the perimeter fence line so not to jet out into the off-leash area. This serves a dual purpose. It prevents the creation of entrapment points at the entrance where dogs can be mobbed without a way out, and it reduces points that tend to become urination markers as the tendency is to urinate on corner or vertical elements right immediately upon entrance to the area. The only vertical element in close proximity to any of the entrances are "sacrificial" fire hydrants immediately visible within the decomposed granite buffer radius allowing for urine

saturation without harming any turf or landscape areas. The decomposed granite buffer extends beyond the gate adequately to handle any wear patterns of potential pacing dogs at the entrance. Effort is made to visually screen the gated entrance area with a semi-transparent fencing material so to distract attention from incoming dogs. No amenities whatsoever are located at the entrances. They are all dispersed throughout the off-leash area along the pathways encouraging the immediate movement of dogs and owners away from the entrance and discourages congregating in specific locations. The pathways encourage the movement of the dogs with their owners through the area. Older dogs tend to not be interested in playing with other dogs and the pathways and site features provides opportunity for dogs and owners to walk together where the dog can run and explore while checking in with their owner. Berms are located so to block the view of the entrances from dogs within the off-leash area to both detract from and prevent the rush on new dogs entering the area. The berms also provide visual breaks and points of interests further distracting the dogs from the entrance points. The irregular shape of the off- leash area also provides visual breaks from entrance points and encourages dispersed use of the area. This shape also provides an increased "visual" carrying capacity as more users can be in the space unseen by others elsewhere. It is common to provide dog leash posts or holders however, it is not recommended. Policy should require owners carry leashes as they are more ready to control their dog in any event as necessary.

APPENDIX

A. Current Master Plan of Record
B. Stakeholder/User Group Questionnaire
C. Schematic Plans A, B, and C
D. Summary of Public Meeting Comments
E. Preferred Schematic Plan
F. Final Draft Master Plan
G. Baseball/Softball Field Inventory and Condition Assessment
H. Sports Field Maintenance Practices Described
I. Sample Northern Turf Field Maintenance Program
J. Budgetary Cost Estimate

EXHIBIT A:
CURRENT MASTER PLAN OF RECORD

Centennial Park Master Plan

Prepared for:
The City of Billings Department of Parks
Recreation and Public Lands

Prepared by:
WIRTH DESIGN
ASSOCIATES

NORTH SCALE: FEET

EXHIBIT B:
STAKEHOLDER/USER GROUP QUESTIONNAIRE

BILLINGS PARKS, RECREATION & PUBLIC LANDS SPORTS FIELD USER QUESTIONNAIRE:

1. Name of Organization: _____

2. Sport: _____

3. Season: From _____(Month) to _____(Month)

4. What is the length of your playing season? Number of weeks_____

5. Total number of teams formed from most recently completed season (2013/2014): _____

6. Total number of people registered for 2013/2014 season: _____

7. Do you serve residents and non-residents: Yes No

8. Primary populations served: Male Female Both

9. Age: Youth (12 and Under) Teens (13 – 18) Young Adults (19 – 29) Adults (30 – 60) Seniors (Over 60)

10. # Home fields used: _____ # Fields used for practices: _____

11. What is the total number of games each team plays during your season? _____

12. What is the frequency of games played per week? _____

13. How would you rate the general condition of your home fields: poor fair good excellent

14. How would you rate the maintenance services provided for your home fields by Parks & Recreation?

    poor fair good excellent Comment?_____

15. How would you rate the maintenance services provided for your home fields by your organization?

    poor fair good excellent Comment?_____

16. What site services are provided by the Parks and Recreation Department? Check all that are applicable

Utilities: Power	Water	Sewer	Trash
Restroom cleaning	Portable toilets	Storage	backstop/fence upkeep
Concession building	Parking lot upkeep	Weekend Trash pick up	Weed control
Field lining	In-field prep	Trim/treat fence lines	Fertilization
Turf aeration	Sod repairs	Other _____	Other _____

17. Do you have a formal agreement for use of fields with PRPL? Yes No

18. Do you sublease/rent your fields to others? Yes No

City of Billings Parks and Recreation Department

Mark Jarvis

Park Planner

Memorandum

Date: October XX, 2014

Subject: Centennial Park Master Plan Update – User Group questionnaire and Interviews.

Dear User group:

As you are aware Billings Parks and Recreation Department has engaged the Land Group, a Landscape Architectural and Planning firm to do a master plan up-date study of Centennial Park. Part of this study is to solicit information from interested user groups about their thoughts and comments related to Centennial Park and sports field needs in general.

Attached is a questionnaire we would like you to fill out and return to our office by Monday, October 27th. Please return by e-mail jarvism@ci.billings.mt.us fax or by mail, address below.

Also, we would like to visit with you or a member of your organization to discuss your organization, athletic field needs, park features, development and programming at Centennial Park. A staff person will contact you to set up a 30 minute appointment to meet with The Land Group and Parks and Recreation staff on October 29th 30th and 31st.

We look forward to meeting with you and hearing you thoughts regarding the future development of Centennial Park.

Sincerely,

Mark Jarvis, Park Planner

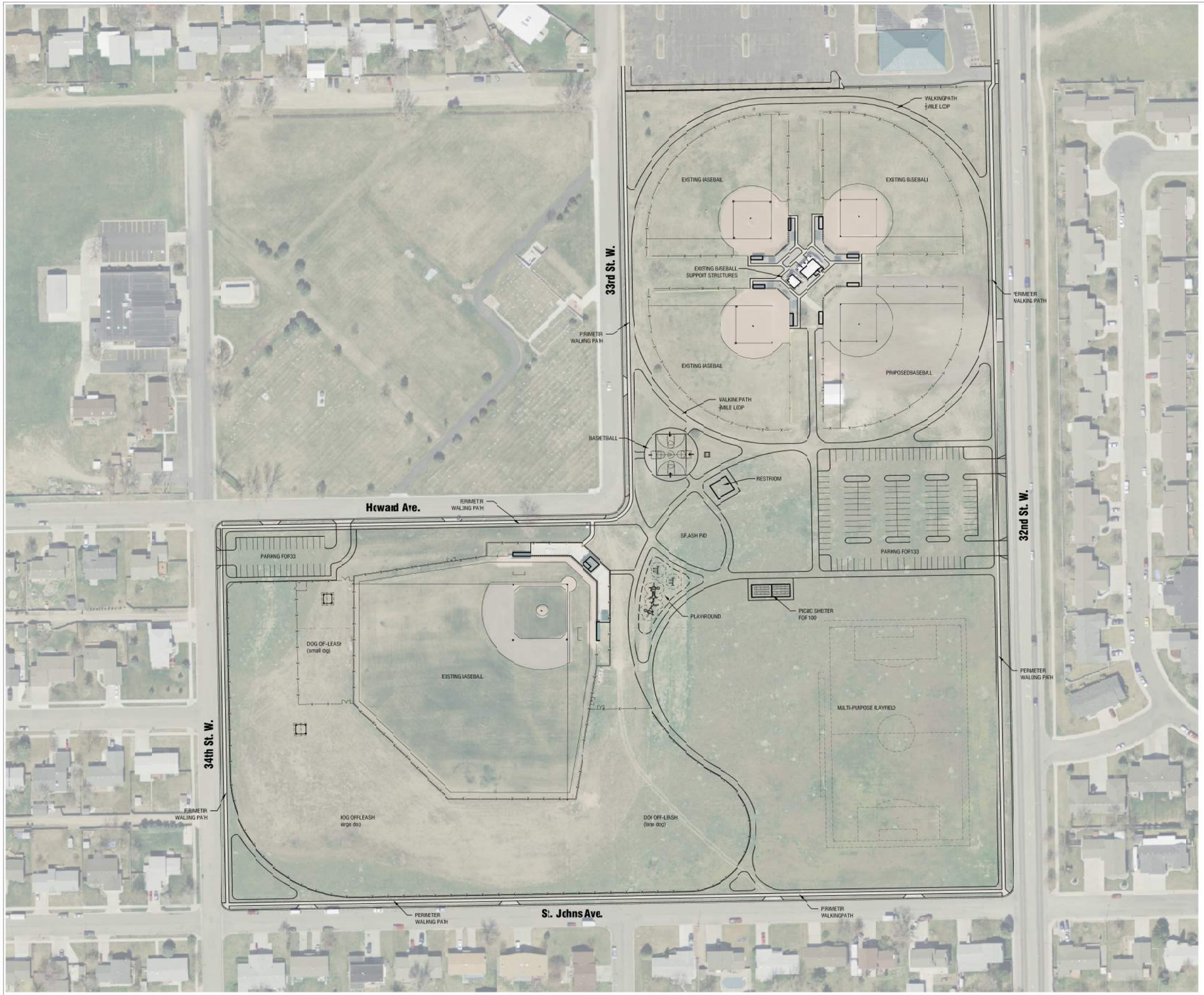
390 North 23rd Street
Billings, MT 59101

Phone: 406-657-8371
Fax: 406-247-8641
Website: www.prpl.info

EXHIBIT C:
SCHEMATIC PLANS A, B, AND C

CENTENNIAL PARK MASTER PLAN

Schematic Plan A DRAFT



Centennial Park

HORIZONTAL SCALE: 1" = 80'

0 80' 160'

Prepared for:
BILLINGS PARKS, RECREATION, AND PUBLICLANDS

Prepared by:
PLANET DYNAMICS, LLC
and
THE LAND GROUP, INC.

CENTENNIAL PARK MASTER PLAN

Schematic Plan B DRAFT

Centennial Park

HORIZONTAL SCALE: 1" = 80'

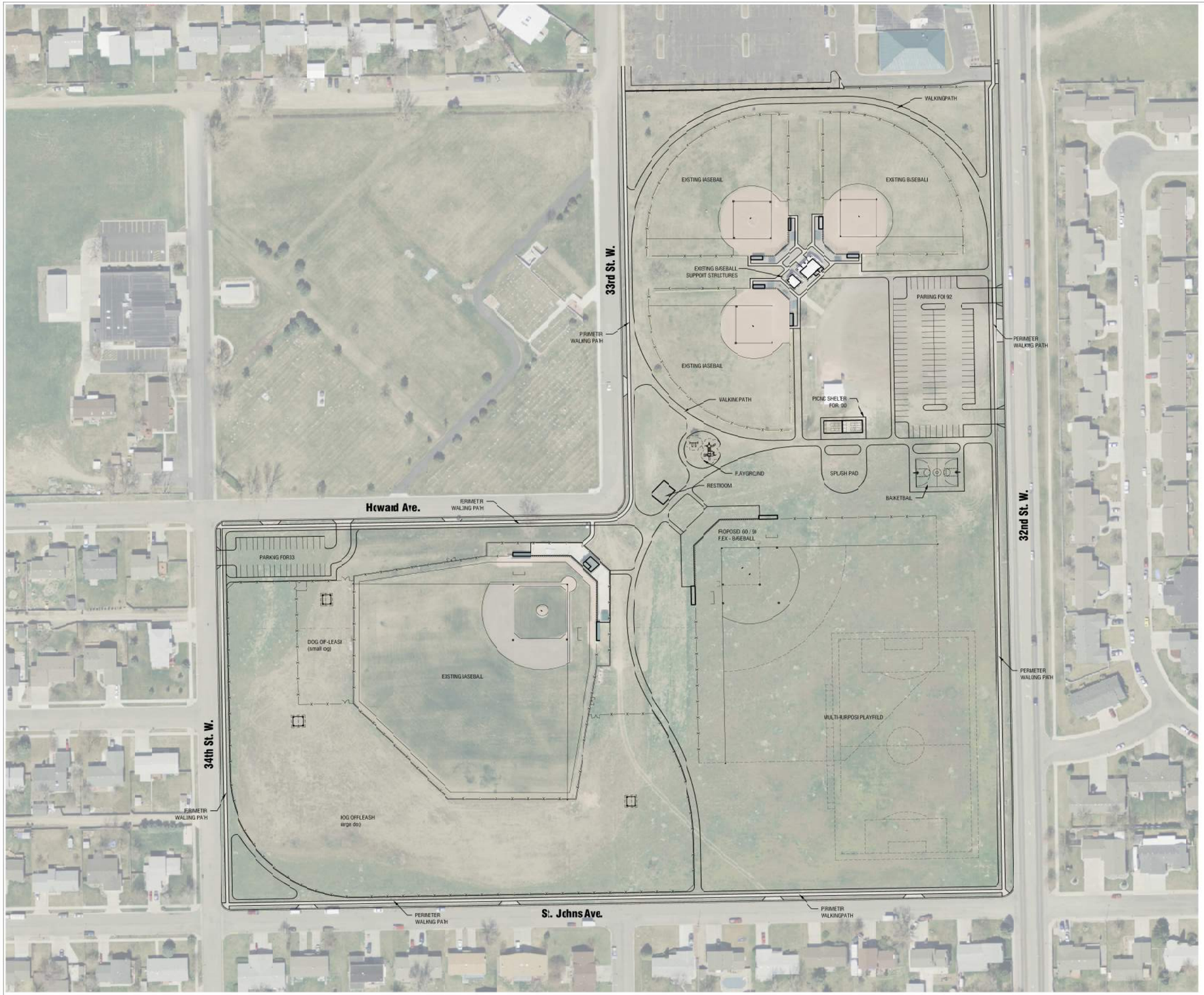
0 80' 160'

Prepared for:
BILLINGS PARKS, RECREATION, AND PUBLIC LANDS

Prepared by:
PLANET DYNAMICS, LLC
and
THE LAND GROUP, INC.

CENTENNIAL PARK MASTER PLAN

Schematic Plan C DRAFT



Centennial Park

HIRIZOITAL SCALE: 1" = 80'

0 80' 160'

Prepared for:
BILLINGS PARKS, RECREATION, AND PUBLICLANDS

Prepared by:
PLANET DYNAMICS, LLC
and
THE LAND GROUP, INC.

EXHIBIT D:
SUMMARY OF PUBLIC MEETING COMMENTS

SUMMARY OF PUBLIC MEETING COMMENTS

The following is a summary of the comments received at the March 25th public meeting. The comments are not listed in any order or priority.

Categories

1. Dog Park – The majority of those in favor of the dog park preferred Schematic Plan B with little changes in walks and access. There was also an additional comment suggesting agility components added to the dog park.
    a. Sizes
        i. "I like the larger area for dog park. Would be great!"
        ii. Schematic Plan B "enlarge small dog area a bit"
    b. Amenities
        i. Two gates
            1. "I'd like to see more than one entry into the dog park, with more garbage cans"
        ii. Closer parking
            1. "I like plan be B but would suggest taking a section of dog park for additional parking which gives another entry for dog park and the rest of park."
2. Accessibility – These individuals were primarily for more walking paths, entry's, and access from St. Johns Ave.
    a. Elderly/Handicap within the proposed dog park areas
        i. "The elderly and disabled have the same rights as everyone else. So accommodations should be rightly made for them and service dogs also."
    b. Parking
    c. St. Johns Ave. access
        i. "I like plan B but would suggest taking a section of dog park for additional parking which gives another entry for dog park and the rest of park."

3. Sports Facilities – Those in favor of more fields were sports specific (a.k.a., Baseball and Lacrosse) but the general consensus was additional storage for field equipment and maintenance.
    a. Storage/maintenance
    b. Amenities
        i. Spectator protection
        ii. Batting cages
        iii. Primary field
    c. Amount of use per year – There are a couple of individuals voicing concern of additional sports facilities versus the amount of expense involved in addition to amount of use per year.
    d. Number of fields
    e. Multi-use
4. Traffic – The amount of traffic on 32nd St. seemed to be a sticking point for those in favor of a flex field and its proximity to the street. In addition, it was seen as a safety issue to get to the park crossing 32nd.
    a. 32nd St.
    b. Crosswalks
5. Aquatic center – There was an individual that strongly encouraged the addition of an aquatic center that could be a source of revenue and open year round versus additional fields.

EXHIBIT E:
PREFERRED SCHEMATIC PLAN

CENTENNIAL PARK MASTER PLAN

Preferred Schematic Plan DRAFT
July 2015

Centennial Park

HORIZONTAL SCALE: 1" = 80'

0 80' 160'

Prepared for:
BILLINGS PARKS, RECREATION, AND PUBLICLANDS

Prepared by:
PLANET DYNAMICS, LLC
and
THE LAND GROUP, INC.

EXHIBIT F:
FINAL DRAFT MASTER PLAN

CENTENNIAL PARK MASTER PLAN

DRAFT FINAL PLAN
July 29, 2015

Centennial Park

HIRIZOITAL SCALE: 1" = 80'

0 80' 160'

Prepared for:
BILLINGS PARKS, RECREATION, AND PUBLICLANDS

Prepared by:
PLANET DYNAMICS, LLC
and
THE LAND GROUP, INC.

EXHIBIT G:
BASEBALL/SOFTBALL FIELD INVENTORY AND CONDITION ASSESSMENT

Baseball/Softball Field Inventory 2014

GREEN = SERVICEABLE FOR LEAGUE GAMES (35)

RED = NON SERVICEABLE; PRACTICE ONLY (23)

SCHOOL DISTRICT LAND - NON P&R LAND (10)

	Dugouts	Backstops	Infield Mix	Outfield Fence (and distance)	Basepath Distance	Base Acnhors	Home Plate	Pitcher's Plate	Bleachers	Warm-up Area	Concession Stand	Bathroom Facilities	Field Mainteance Storage	Foul Poles	Scoreboards	Serviceable for League Sanctioned Competition	Comments
Clevenger Park; Baseball Field #1	GOOD/safety concerns	FAIR	SCORIA	C 295 R 295 L 295	70 ' & 90'	Safety Breakaway	FAIR	60' 6" w/ mound	2 Aluminum	FAIR	FAIR	Water Closets	YES	NO	YES	YES	Backstop needs repair. Several holes half way up where a ball could get through and into the crowd.
Clevenger Park; Softball Field #1	EXCELLENT	EXCELLENT	SCORIA	C 174 R 178 L 176	60'	Safety Breakaway	FAIR	35' & 40'	2 Aluminum	FAIR	FAIR	Water Closets	YES	YES	YES	YES	Field is stubbed out for both 35' and 40' pitching distance but only 1 pitcher's plate on hand. Plugs are in 40' plate distance.
Clevenger Park; Softball Field #2	EXCELLENT	EXCELLENT	SCORIA	C 176 R 165 L 176	60'	Safety Breakaway	FAIR	35' & 40'	2 Aluminum	FAIR	FAIR	Water Closets	YES	YES	YES	YES	Field is stubbed out for both 35' and 40' pitching distance and there are 2 pitcher's plates on hand in the field of play.
Arrowhead Park; Baseball Field #1	Poor/needs repair	Poor/needs repair	Grass infield/Sand mix	C 202 R 201 L 176	60'	Safety Breakaway	FAIR	46'	2 Aluminum	Poor	Needs repair	Water Closets	YES	YES	YES	NO	Backstop needs repair. Several areas of fencing that are sharp and hazardous in the field of play. Serious safety issues.
Castlerock Park; Softball Field #1	Fair/Graffiti on bricks	Poor/needs repair	SCORIA Weeds	C 195 R 195 L 195	Unknown	Safety Breakaway	Unknown	Unknown	2 Damaged	Poor	NO	In Park	NO	NO	Posts - No board	YES	In its current condition, field is completely unusable. However, with a little Mx, it could be useable. No parking area, and bleachers need repair.
Castlerock Park; Softball Field #2	NO	Poor/needs repair	SCORIA Weeds	Unknown	Unknown	Unknown	Unknown	Unknown	2 Damaged	Poor	NO	In Park	NO	NO	NO	NO	Refer to pictures taken. Field is under tumbleweeds and growing weeds below those. Needs complete renovation.
Castlerock Park; Backstop only	NO	FAIR	Grass Only	NO	NO	NO	NO	NO	NO	NO	NO	In Park	NO	NO	NO	NO	This field is in the NW Corner of park. Backstop only.
North Park; Baseball Field #1 ("Area 1 Park" Info states there are 2 fields)	Good/Minor repair	FAIR	Clay + Turface Mix	C 275 R 275 L 243	75'	Safety Breakaway	FAIR	53' w/ mound	4 Aluminum	Poor	Needs repair	In Park	YES	YES	YES	YES	Playing surface in excellent condition. Backstop, Dugouts, and Concession Stand/Field Mx Storage needs minor repairs.
Pioneer Park; Softball Field #1	NO	Poor/needs repair	Sand + Soil Mix	NO	60'	Male/Female Anchor	NO	Wooden Stake	NO	FAIR	NO	In Park	NO	NO	NO	NO	Basic layout for field is ok, sporadic weeds in the infield, practice field only recommended.
Grandview Park; Field #1	NO	FAIR	Grass	NO	NO	NO	NO	NO	NO	NO	NO	In Park	NO	NO	NO	NO	Backstop only, large tree roots growing from the bottom it; area is worn through w/no grass.
Primrose Park ("Area 1 Park File" states there is a field, none found)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	No field or backstop present on park grounds, although "Area 1 Park File" states there is.
South Park; Softball Field #1	FAIR	Good/small repairs	Play Ball	C 172 R 175 L 174	60'	Safety Breakaway	FAIR	40'	2 Wood	FAIR	NO	In Park	YES	NO	YES	YES	In good shape; minor repairs to bleachers and to backstop; lip on infield/outfield with weeds.
South Park; Softball Field #2	NO	Good/small repairs	Play Ball + weeds	NO	Unknown	NO	FAIR	NO	2 Wood	FAIR	NO	In Park	YES	NO	NO	NO	Rec use only; infield is full of weeds.
Optimist Park; Baseball Field #1	FAIR	GOOD	Play Ball	C 196 R 182 L 189	60'	Safety Breakaway	FAIR	46' w/ mound	2 Wood	GOOD	YES	Water Closets	YES	YES	YES	YES	Good/excellent shape.
Optimist Park; Baseball Field #2	FAIR	GOOD	Play Ball + Scoria	C 293 R 293 L 293	90'	Safety Breakaway	FAIR	60' 6" w/ mound	2 Wood	GOOD	In Field #1	Water Closets	YES	YES	YES	YES	Good/excellent shape with some sporadic weeds around backstop area.
Optimist Park; Baseball Field #3	NO	FAIR	Play Ball + Scoria	C 206 R 181 L 193	60'	Safety Breakaway	FAIR	46' w/ mound	2 Wood	GOOD	In Field #1	Water Closets	YES	YES	NO	Safety concerns	Dugouts are uncovered; right-center field fence has section missing; sporadic weeds.
Optimist Park; T-Ball Field #4	NO	GOOD	GRASS	NO	FLEX	NO	FAIR	NO	2 Wood	GOOD	In Field #1	Water Closets	YES	NO	NO	T Ball only	Basic grass field for T Ball; no base anchors; uncovered bench dugouts.
Central Park; Baseball Field #1	GOOD/safety concerns	GOOD	Play Ball + Scoria w/grass	C 186 R 192 L 192	59' 1 FOOT SHORT	Safety Breakaway	FAIR	46' w/ mound	4 Wood	GOOD	YES	Water Closets	YES	YES	YES	YES	Good shape; foul poles are inadequate; basepath distance is short of 60' by 1; safety concerns about front top of dugouts facing infield-1 foot gap.
Central Park; Baseball Field #2	GOOD/safety concerns	GOOD	Sand + Soil Mix w/grass	C 332 R 307 L 324	90'	Safety Breakaway	FAIR	60' 6" w/ mound	2 Wood	POOR	YES	In Park	YES	YES	YES	YES	Poor shape; grass infield is full of weeds, and very uneven-safety concerns; dugouts are not completely covered; bullpens/warning track full of weeds.
Central Park; Softball Field #1 (Senior High School)	GOOD	GOOD	SCORIA	~ 200'	~60'	Safety Breakaway	FAIR	~40' or 43'	2 Aluminum	EXCELLENT	YES	Water Closets	YES	YES	YES	YES	Unknown distances because field was locked; overall very good shape with a lot of extras for warmup area.
Terry Park; Recreational Field #1	NO	Poor/needs repair	GRASS	NO	Unknown	NO	NO	NO	NO	NO	NO	In Park	YES	NO	NO	NO	Rec use only; benches and backstop are damaged and in need of repair.
High Sierra Park; Backstop only	NO	Poor/needs repair	GRASS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	Rec use only; backstop is damaged and in need of repair.

Baseball/Softball Field Inventory 2014

	Dugouts	Backstops	Infield Mix	Outfield Fence (and distance)	Basepath Distance	Base Acnhors	Home Plate	Pitcher's Plate	Bleachers	Warm-up Area	Concession Stand	Bathroom Facilities	Field Mainteance Storage	Foul Poles	Scoreboards	Serviceable for League Sanctioned Competition	Comments
Veteran's Park; Baseball Field #1	GOOD	Fair/Safety Concerns	SCORIA + SAND	C 182 R 182 L 182	59'	Safety Breakaway	FAIR	46' w/mound	4 Wood	GOOD	GOOD	In Park	YES	YES	YES	YES	Fair condition; gap between 1st base dugout and backstop; fence poles need covers on 3rd base side; basepath 1 foot short.
Veteran's Park; Backstop Field #2	NO	Poor/needs repair	GRASS	NO	NO	NO	NO	NO	NO	NO	NO	In Park	YES	NO	NO	NO	Rec use only; grass field; backstop needs repair
Burlington Baseball Field #1	FAIR	Fair/Safety Concerns	GRASS + SCORIA	C 178 R 178 L 177	59'	Male/Female Anchor	GOOD	46' w/mound	2 Wood	FAIR	GOOD	Water Closets	YES	YES	YES	YES	Good condition; Sprinkler heads and covers in the field of play; bullpen in field of play.
Burlington Rec Field #2	NO	Poor/needs repair	GRASS	NO	FLEX	NO	POOR	NO	NO	FAIR	NO	Water Closets	YES	NO	NO	NO	Rec use only; grass field; backstop needs repair; home plate is hazardous.
Gorham Park; Backstop Field #1	NO	Poor/needs repair	GRASS	NO	FLEX	NO	NO	NO	NO	FAIR	NO	In Park	NO	NO	NO	NO	Rec use only; grass field; backstop needs repair.
Sacajawea Park; Baseball Field #1	Good/Minor repair	Good/Minor repair	GRASS + SCORIA	C 180 R 180 L 180	60'	Safety Breakaway	GOOD	46' w/mound	4 Wood	FAIR/Minor repair	GOOD	Water Closets	YES	YES but inadequate	YES	YES	Good condition; Dugouts have gap at top-safety concerns; backstop needs minor repairs; bleachers need painting; sporadic weeds.
Sacajawea Park; Baseball Field #2	NO	Fair/Safety Concerns	GRASS + SCORIA	NO	60'	Safety Breakaway	FAIR	46' w/mound	1 Aluminum	FAIR	NO	Water Closets	YES	NO	NO	YES	Fair condition; no covered dugouts-benches only; lots of weeds in grass; needs an edge VERY BADLY; concrete pitcher's plate.
Sacajawea Park; Backstop Field #3	NO	Fair/Safety Concerns	GRASS	NO	FLEX	NO	NO	NO	NO	FAIR	NO	In Park	YES	NO	NO	NO	Backstop needs repair; no covered dugouts-benches only; grass field is badly damaged.
Sacajawea Park; Backstop Field #4	NO	Poor/needs repair	GRASS	NO	FLEX	NO	NO	NO	NO	FAIR	NO	In Park	NO	NO	NO	NO	Sign says T Ball Field, but no home plate or bases; backstop needs repair.
Arrowhead School; Senior Field #1	Good/Minor repair	Good/Minor repair	GRASS + TURFACE	C 300 R 290 L 260	70'/90'	Safety Breakaway	TARPED	60' 6" w/movable mound	3 Wood	FAIR	GOOD	Water Closets	YES	YES	YES	YES	Good condition; minor repairs to dugouts and backstop;
Arrowhead School; Major Field #1	GOOD	Good/Minor repair	GRASS + TURFACE	C 202 R 199 L 199	60'	Safety Breakaway	TARPED	46' w/mound	2 Wood	GOOD	GOOD	Water Closets	YES	YES	YES	YES	Good condition; minor repairs to dugouts and backstop;
Arrowhead School; Major Field #2	Good/Minor repair	GOOD	GRASS + TURFACE	C 209 R 196 L 196	60'	Safety Breakaway	TARPED	46' w/mound	2 Wood	GOOD	GOOD	Water Closets	YES	YES	YES	YES	Good condition; minor repairs to dugouts;
Arrowhead School; Softball Field #1	GOOD	Good/Minor repair	SCORIA + PLAY BALL	C 198 R 195 L 195	58'	Safety Breakaway	FAIR	40'	4 Wood	FAIR	NO	Water Closets	YES	YES but inadequate	YES	YES	Good condition; backstop and front of dugouts need minor repairs; bleachers need paint; foul poles in the field of play.
Arrowhead School; Tee Ball Field #1	NO	Good/Minor repair	GRASS + SOIL	NO	FLEX	Safety Breakaway	FAIR	FLEX	1 Wood	FAIR	NO	Water Closets	YES	NO	NO	YES	Tee Ball Field in Fair condition; grass needs minor edging; sporadic weeds; bleachers need paint;
Rose Park; Rec Field #1	NO	Poor/needs repair	SOIL	NO	FLEX	NO	NO	NO	1 Wood	FAIR	NO	In Park	YES	NO	NO	NO	Rec use only; backstop needs repair; sporadic weeds.
Rose Park; Rec Field #2	NO	Poor/needs repair	SOIL	NO	FLEX	NO	NO	NO	1 Wood	FAIR	NO	In Park	YES	NO	NO	NO	Rec use only; backstop needs repair; sporadic weeds.
Rose Park; Baseball Field #1	Fair/Minor repair	Poor/needs repair	SCORIA	C 198 R 192 L 198	59'	Safety Breakaway	FAIR	46' w/mound	4 Wood	Poor/needs repair	GOOD	In Park	YES	YES	YES	YES	Fair condition; fair/foul territory and fence are too close-safety concerns; infield needs edging; minor repairs to backstop and dugouts.
Rose Park; Tee Ball Field #1	FAIR	Fair/Safety Concerns	GRASS	NO	59'	Safety Breakaway	FAIR	FLEX	1 Wood/needs repair	FAIR	NO	In Park	YES	NO	NO	YES	Tee Ball Field in Fair condition; sporadic weeds; bleachers need paint and repair.
Rose Park; Tee Ball/Minor League Field #2	FAIR	Fair/Safety Concerns	GRASS	NO	59'	NO	FAIR	35'	1 Wood/needs repair	FAIR	NO	In Park	YES	NO	NO	YES	Tee ball/Minor League Softball Field; grass infield needs edging; sporadic weeds; no base anchors.
Rose Park; Softball Field #1	Good/Minor repair	Good/Minor repair	Soil +Clay + Scoria	C 1976 R 197 L 199	60'	Safety Breakaway	GOOD	35'/45'	4 Wood	FAIR	NO	Water Closets	YES	NO	YES	YES	Fair; Pitcher's plates at 35' and 45'????; infield mix needs to be remixed; right field has a mud road running through it; weeds in the outfield grass.
Rose Park; Softball Field #2	Good/Minor repair	Good/Minor repair	SCORIA	C 187 R 177 L 184	60'	Safety Breakaway	GOOD	35'/40'	1 Wood	FAIR	NO	Water Closets	YES	YES but inadequate	YES	YES	Good conition; minor repairs to backstop and dugouts; infield mix needs water BADLY; pithcer's plates stubbed out for 35' and 40'-only 1 pitcher's plate on hand.

Baseball/Softball Field Inventory 2014

	Dugouts	Backstops	Infield Mix	Outfield Fence (and distance)	Basepath Distance	Base Acnhors	Home Plate	Pitcher's Plate	Bleachers	Warm-up Area	Concession Stand	Bathroom Facilities	Field Mainteance Storage	Foul Poles	Scoreboards	Serviceable for League Sanctioned Competition	Comments
Centennial Park; Softball Field #1	Good/Minor repairs	Fair/Needs repair	SCORIA	C 197 R 196 L 196	59'	Male/Female anchor	GOOD	40'	2 Wood	FAIR	YES	Water Closets + in park	YES	Yes but inadequate	YES	YES	Good condition; infield mix needs water BADLY; outfield fence has a gap at the bottom all around.
Centennial Park; Softball Field #2	Good/Minor repairs	Fair/Needs repair	SCORIA	C 196 R 197 L 199	60'	Male/Female anchor	GOOD	40'	2 Wood	FAIR	YES	Water Closets + in park	YES	Yes but inadequate	YES	YES	Fair condition; infield is very uneven; minor repairs to backstop and dugouts.
Centennial Park; Baseball Field #1	Fair/Needs repair	Fair/Needs repair	SCORIA	C 196 R 196 L 196	59'	Male/Female anchor	GOOD	46' w/mound	2 Wood	FAIR	YES	Water Closets + in park	YES	Yes but inadequate	YES	YES	Fair condition; pitcher's plate needs repair; gopher holes in outfield; minor repairs to dugouts.
Centennial Park; Baseball Field #2	Excellent	GOOD	Grass + Scoria	Approx 300 ' all around	~90'	Safety Breakaway	GOOD	60' 6" w/mound	2 Aluminum	Poor/Needs repair	YES	Water Closets	YES	Excellent	Excellent	YES	Good condition; however, bullpens are full of weeds and the infield grass is in dire need c maintenance-especially edging; field was locke up, so measurements are estimates, but it appeared to be a Senior League field.
Country Manor Park; Backstop Only	NO	Fair/Needs repair	GRASS	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	Backstop only and it needs some repairs.
Poly Vista Park; Softball Field #1	Poor/Needs repair	Poor/Needs repair	SCORIA	C 252 R 252 L 252	65'/70'/80'/90'	Male/Female anchor	FAIR	50'	3 Wood	FAIR	Poor/Needs repair	Poor/Needs repair	GOOD	NO	Yes but inadequate	NO	Poor condition; lots of repairs are needed to fencing and dugouts; scoreboard requires repairs; grass is in need of re-seeding; treeline deposits dead branches and leaves in grass-if not removed, causes damage to grass.
Poly Vista Park; Softball Field #2	Poor/Needs repair	Poor/Needs repair	SCORIA	C 250 R 250 L 250	60'	Safety Breakaway	FAIR	43'	2 Wood	FAIR	Poor/Needs repair	Poor/Needs repair	GOOD	NO	Yes but inadequate	NO	Poor condition; lots of repairs are needed to fencing and dugouts; scoreboard requires repairs; grass is in need of re-seeding; treeline deposits dead branches and leaves in grass-if not removed, causes damage to grass.
Poly Vista Park; Softball Field #3	Poor/Needs repair	Poor/Needs repair	SCORIA	C 250 R 251 L 249	70'/80'	Male/Female anchor	FAIR	45'/50'/55'	2 Wood	FAIR	Poor/Needs repair	Poor/Needs repair	GOOD	NO	Yes but inadequate	NO	Poor condition; lots of repairs are needed to fencing and dugouts; scoreboard requires repairs; grass is in need of re-seeding; treeline deposits dead branches and leaves in grass-if not removed, causes damage to grass.
Poly Vista Park; Softball Field #4	Poor/Needs repair	Poor/Needs repair	SCORIA	C 253 R 253 L 253	60'	Safety Breakaway	FAIR	43'	2 Wood	FAIR	Poor/Needs repair	Poor/Needs repair	GOOD	NO	Yes but inadequate	NO	Poor condition; lots of repairs are needed to fencing and dugouts; scoreboard requires repairs; grass is in need of re-seeding; treeline deposits dead branches and leaves in grass-if not removed, causes damage to grass.
Poly Vista Park; Softball Field #5	Poor/Needs repair	Poor/Needs repair	Unknown Soil Compound	C 250 R 250 L 250	Unknown	Unknown	NO	NO	1 Wood	FAIR	Poor/Needs repair	Poor/Needs repair	YES	NO	NO	NO	Poor condition: field is unplayable; needs many repairs to fencing, grass, and infield mix; needs bases, plates, etc.
Millice Park; Backstop Field #1	NO	Poor/needs repair	GRASS	NO	FLEX	NO	NO	NO	1 Wood	FAIR	NO	Water Closets	YES	NO	NO	NO	Rec use/T Ball (maybe)-backstop in need of MAJOR repairs; large hole in batter's box (RH); no covered dugouts-benches only.
Stewart Park; Softball Field #1	Poor/Needs repair	Fair/Needs repair	Sand and Clay	C 290 R 290 L 290	69'	Male/Female anchor	GOOD	50'	6 Wood	FAIR	YES	YES	YES	Yes but inadequate	YES	YES	Fair condition; dugouts and backstops need to be repaired and infield mix is very rocky.
Stewart Park; Softball Field #2	Poor/Needs repair	Fair/Needs repair	Sand and Clay	C 290 R 290 L 290	69'	Male/Female anchor	GOOD	50'	6 Wood	FAIR	YES	YES	YES	Yes but inadequate	YES	YES	Fair condition; dugouts and backstops need to be repaired and infield mix is very rocky.
Stewart Park; Softball Field #3	Poor/Needs repair	Fair/Needs repair	Sand and Clay	C 290 R 290 L 290	69'	Male/Female anchor	GOOD	50'	6 Wood	FAIR	YES	YES	YES	Yes but inadequate	YES	YES	Fair condition; dugouts and backstops need to be repaired and infield mix is very rocky.
Stewart Park; Softball Field #4	Poor/Needs repair	Fair/Needs repair	Sand and Clay	C 290 R 290 L 290	69'	Male/Female anchor	GOOD	50'	3 Wood	FAIR	YES	YES	YES	Yes but inadequate	YES	YES	Fair condition; dugouts and backstops need to be repaired and infield mix is very rocky.
Stewart Park; Softball Field #5	Poor/Needs repair	Fair/Needs repair	Sand and Clay	C 290 R 290 L 290	69'	Male/Female anchor	GOOD	50'	1 Wood	FAIR	YES	YES	YES	Yes but inadequate	YES	YES	Fair condition; dugouts and backstops need to be repaired and infield mix is very rocky.
Stewart Park; Softball Field #6	Fair/Needs repair	Fair/Needs repair	SCORIA	C 290 R 290 L 290	60'/72'	Safety Breakaway	GOOD	35'	2 Wood	FAIR	YES	YES	YES	Yes but inadequate	YES	YES	Fair condition; dugout roof needs to be repaired-safety concerns.
Stewart Park; Softball Field #7	Fair/Needs repair	Fair/Needs repair	SCORIA	C 290 R 290 L 290	60'/71'	Safety Breakaway	GOOD	See pictures	2 Wood	FAIR	YES	YES	YES	Yes but inadequate	YES	YES	Fair condition; dugout roof needs to be repaired-safety concerns; recommend entire basepath and pitcher's plate-home plate be reset.
Stewart Park; Baseball Field #1	Fair/Needs repair	Fair/Needs repair	SCORIA	C 290 R 290 L 290	71'	Safety Breakaway	GOOD	50' w/mound	2 Wood	FAIR	YES	YES	YES	Yes but inadequate	YES	YES	Fair condition; dugout roof needs to be repaired-safety concerns.
Stewart Park; Baseball Field #2	Fair/Needs repair	Fair/Needs repair	SCORIA	C 290 R 290 L 290	89'	Safety Breakaway	GOOD	60' 6" w/mound (too high)	2 Wood	FAIR	YES	YES	YES	Yes but inadequate	YES	YES	Fair condition; dugout roof needs to be repaired-safety concerns; pitcher's mound is too high?
Stewart Park; Pirtz Field	Excellent	Excellent	Play Ball and Turface	C 398 R 320 L 330	90'	Male/Female anchor	Excellent	60' 6" w/mound	6 Wood	Excellent	YES	YES	Excellent	Excellent	Excellent	YES	Excellent condition; grass to infield could use some edging and fencing could use minor repairs.
Boulder Park; Baseball Field #1	Fair/Needs repair	Fair/Needs repair	SCORIA	~180 ' & Fence needs repair	60'	Safety Breakaway	GOOD	45' (small mound)	2 Wood	FAIR	YES	NO	NO	Yes but inadequate	Excellent	YES	Fair condition; outfield fence is in need of repair; new scoreboard; infield mix needs some maintenance.
Boulder Park; Baseball Field #2	NO	Poor/Needs repair	SCORIA + GRAVEL	NO	45'	Safety Breakaway	GOOD	NO	2 Wood	FAIR	NO	NO	NO	NO	NO	NO	Practice only;
Boulder Park; Baseball Field #3	NO	Poor/Needs repair	SCORIA	NO	45'	Safety Breakaway	GOOD	NO	1 Wood	FAIR	NO	NO	YES	NO	NO	NO	Practice only;
Urbaska Baseball Field	YES	Excellent	Sand and Clay	~ 280'	90'	Male/Female anchor	GOOD	60' 6" w/mound	6 Aluminum	GOOD	YES	YES	YES	YES	YES	YES	Field is on Rocky Mountain College's land; Excellent condition.

EXHIBIT H:
SPORTS FIELD MAINTENANCE PRACTICES DESCRIBED

SPORTS FIELD MAINTENANCE PRACTICES DESCRIBED

Soil testing
This is the first place to start. The test provides a baseline understanding of the "nutrient values" of the soil. This will determine how much fertilizer - and what kind - a field needs. A soils test saves time and money in terms of avoiding wastes of fertilizer, staff time, use of equipment, and getting reliable results, etc…

Inspection Monitoring
To keep fields in top condition, maintenance staff should perform a quick but regular and systematic inspection every other week all year round (even during the off season). A check list should be used and approximately five minutes allocated per field per week to complete the inspection and checklist task. Proactive inspections can save a lot of time, work, and the headaches of rescheduling games once the team sports season starts. When play begins, field inspection should be scheduled to occur once or twice a week. In-season inspection and checklists should be assigned to mowing or site crews who are trained on what to look for and how to assess and report the concerns and needs related to the care of sports fields during seasonal use.

When turf grass is actively growing, staff must keep an eye out for mowing problems. If there's a thick layer of clippings on the turf after it's been mowed, the field is being allowed to get too high between cuttings, and then is being cut too short. That's bad; a thick layer of clippings on the turf can literally kill the grass. What's more, cutting off more than one third of the plant weakens the grass and makes it less resistant to all kinds of stresses - like drought, insects, disease, and even weeds.

It is also important to keep mowing equipment sharp. Staff should off a couple of blades of grass and look closely at the cut ends to see if they are being sheared off cleanly, or if they have ragged edges, which is a sign of dull mower blades that tear the grass blades and can make the turf vulnerable to disease. Another sign of needing to sharpen mowing equipment is if, from the field edge, staff observe that a field has a whitish cast after it's been mowed, that's a sign of mower blades that need to be sharpened. Most people let their blades get much too dull before they sharpen them.

Checking turf for moisture and drainage regards whether a field may be too wet or too dry, underscores the importance of off-season inspections. If it's too wet or too dry, it's best to solve those problems during the off-season, when staff don't have to worry about getting the field ready for a game. Walking around the field sometimes during or just after a hard rain, will let staff see (and feel) for themselves how the turf is draining.

Another quick way to check soil moisture is to push a "soil probe" or "soil profiler," into the turf until some resistance is encountered. It should easily penetrate 4" to 6" into the soil. If it doesn't, the field probably needs watered. A soil probe also allows for checking soil compaction, thatch accumulation and root structure.

Checking for weeds is also necessary. Especially in the parts of the field that get the most traffic, like the areas in front of the goals. These areas are the most compacted areas, where weeds can get a toehold. On northern fields, the appearance of knotweed is usually a sign that the area is becoming too compacted. Aerating relieves soil compaction, promotes turf grass growth, and thus helps prevent weeds by crowding out plants like knotweed.

A sample field inspection form is provided in Appendix A. The cost of regular inspection services should be treated as a base service cost by the Department. Staff time, training, vehicle use, reporting and

programming to address needs are a core business practices that best ensure the City can deliver services to its customers.

Fertilization
A cool season field should get no more than 30% of its annual nitrogen needs in the spring, with the rest applied in the fall. Fertilizing too heavily in the spring can cause excessive shoot growth, and restrict the growth of strong roots, which are important to the health of the turf. At the first fertilization of the spring, a "starter fertilizer" should be applied at the correct rate for the tested soil conditions in order to help stimulate plant growth and establishment.

In the summertime, nitrogen and potassium are generally applied to protect the grass during the heat of the summer, to help resist disease, promote recovery from use, and promote growth. Iron may also be applied if the soils lack iron in a form that the plant can uptake to maintain a health dark green color.

Applying most of the nitrogen in the fall helps the turf recover from the stresses that competition puts on it. The very best time to apply nitrogen is right after the last mowing of the season, while the grass is still green. At this point, shoot growth slows to a stop, but the roots continue to grow. The extra nitrogen you put down will be stored by the root system, and will help the turf green up early in the spring, as well as helping it withstand summer stresses the next year. In many parts of the arid west, an additional shot of nutrients can be provided to the turf and soil by mulching fallen leaves in place.

PRPL's Park Maintenance unit does have funding to provide limited fertilization treatments. Some of the Little League and youth sports organizations have provided for their own field fertilization treatments. Unless records are required to be kept, shared and applications coordinated between the City and sports leagues; the City will not have important information regards the type, rate, composition, and any additional pesticides or chemicals that were used.

Aeration
Aerating frequently with different equipment at different times will help make the turf stronger. In April, we recommend core aerating the entire field, followed by topdressing with sand (and slit-seeding, if the budget allows). Later in the year, use solid tine aeration to reduce compaction without leaving cores all over the field, and core aerate again at the end of the fall playing season.

Topdressing and Over-Seeding
Performing these two processes together really improves the health of the turf, and helps to level the surface for better ball response. Utilize topdressing and seeding on established fields for a couple of years and it will not be long before users see how much difference it makes.

Mowing
Most northern fields are a mixture of Kentucky bluegrass and perennial ryegrass. The ryegrass starts growing first in the spring, so it's a good idea to set mowing heights lower – down to about 1.5" so sunlight can reach the bluegrass underneath. When the bluegrass starts growing in the middle of the spring, raise the height by one-half inch". The cutting height should be at its highest in July.

About a month before the fall playing season starts, gradually begin reducing the cutting height to get the field to the desired height for competition. Remember not to cut off more than 1/3 of the grass plants at a time. Reducing the cutting height gradually lets the turf adjust to the lower cutting height in time for games.

When the playing season ends, keep mowing as long as the grass is growing. If you let the grass grow too long and leave it that way over the winter, you increase the risk of snow mold. (But don't scalp it in the fall either - that can expose the crowns of the plant to winter weather and weaken the turf.)

If there is demand to regularly cut field grass shorter than 2", it is recommended that a reel mower be used. This is the most appropriate method for cutting grass multiple times per week. When turf is maintains so short, watering and fertilization frequency and rates will increase to keep the turf vital.

Watering
In the spring, it's good to water lightly but frequently, to help nurture newly seeded grass plants. For healthy established turf, infrequent supplemental watering will help roots reach deep for water increasing the plant's capacity for growth and drought tolerance during the peak of summer. As the season progresses, park maintenance will gradually decrease the frequency and increase the amount of water applied to the field.

If the fall season is dry, irrigate with an eye on the weather forecast. It's usually better to keep the turf a little dry than too wet during the playing season. That reduces the chance that sudden heavy rains could severely compromise competition.

Weed Control
As a rule, annual weed treatments on a soccer field are not usually recommended. To have a really good field, turf grasses should be substantially weed free, deeply rooted, fast draining and well nourished. Routine mowing practices with sharp blades stimulates health grass growth which out-competes weeds.

Areas of turf that are weak from wear are most susceptible to weed growth and may require resting, fertilization, or more intensive maintenance such as aerating, topdressing and over-seeding to recover for additional use. Since re-seeded may be done annually or bi-annually, use of pre-emergent herbicides is discouraged, since they can retard and stop grass germination. Post-emergent herbicides, which kill weeds after they appear, should not be applied until new turf grasses are fully established.

When the turf is being kept healthy, weed infestation is usually pretty easy to control. One spot treatment a few weeks before the playing season will usually control the weeds until long after the last game. If you run into an infestation that seems to call for a blanket application, make sure the turf grass and the weeds are actively growing, and that the soil has at least normal moisture levels. Don't apply herbicides any time the turf is under drought stress.

Rotation & Resting
Healthy turf grass has a natural ability to recover from moderate levels of use. Moderately worn areas in an otherwise, healthy, well fertilized field can heal themselves through resting or rotation of fields so these areas receive only light if any use for a week or two. When a field is rested and/or the playing pattern is changed, the entire field continues to receive regular mowing and adequate watering. In this way worn but vigorously growing turf grasses will push new leaves to replace those that were damaged. When a sports field park is purpose built, it allows room for sports field layout to be shifted (restriped) so that the field can be shifted half to one-third of a standard field layout width or length to allow wear spots to recover.

User Education
The best sports field maintenance program can be undone all too easily and quickly by one bad use. Users of sports fields often want to get a jump on the competition by practicing as early in the season as practicable. In northern climates, this means demand for soccer and other spring sports fields before winter ends, and the next growing season begins. Most damage occurs to turf, soils, and field condition

when play occurs in too wet conditions. While not ideal, much less damage is done to the turf, fields, and soils when the ground is dry or frozen. User coaches should receive annual training on how to tell when a field is too wet. They should also be provided information on parks with practice areas of between ½ field to nearly a full size field. Practice fields and user education are worth the effort to save the cost of rehabilitating a field or having to assess a penalty to league users for damaging fields.

Practice Fields
A team with one practice field can use that facility for up to approximately 100 practices over the course of a season. There may be several bare spots by the last practice, especially if preseason aerating and supplemental fertilization isn't provided. Turf that is good and strong before game or practice uses start are much more resilient and less costly to recover. With careful mowing and watering, annual sports field maintenance, and proper fertilization for the level of intended use, a sports field should stand up to the demands of a season.

Source J. Puhalla, J. Krans, M. Goatley. "Sports Fields: A Manual for Design, Construction and Maintenance" 1999, Ann Arbor Press, Inc., Chelsea, Michigan)

EXHIBIT I:
SAMPLE NORTHERN TURF FIELD MAINTENANCE PROGRAM

SAMPLE NORTHERN TURF FIELD MAINTENANCE PROGRAM

Cool Season Maintenance Program

Sample Maintenance Schedule
(Cool Season)

Field Name:	Ohio Wesleyan Soccer Field	Address:	
Type of Field:	Game Field		Delaware, Ohio
Condition:	good	Compaction:	yes - goal and bench areas
Type of Grass:	blue/rye	Drainage:	installed drain system
Type of Mower:	60" reel	Irrigation:	installed automatic system
Type of Soil:	clay/loam	Thatch:	none
Soil Test:		Notes:	some clover - sattered
Year:	1997 Phosphor: 95		knotweed - goal area
pH:	6.8 Potassium: 450		check sprinkler head elevations

Time of Year	Fertilization	Aeration	Topdress	Slit-seed	1/3 Rule Mowing Ht	1" Week Watering	Weed Control
April	18-24-12 ¾ lb N 50% SRN	core entire field	for surface leveling	bluegrass entire field	1¼"		
May	24-5-11 ¾ lb N 50% SRN				1½"	light frequent intervals	
June		solid tine aeration			1½"	deeper less frequent	
July	16-0-31 ½ lb N 25% SRN				1¾"	deeply	
August					1½"	deeply	spot treatment
September	32-5-7 1 lb N 50% SRN	solid tine aeration			1¼"	cautiously	
October	20-5-10 ¾ lb N 50% SRN				1¼"	cautiously	
November	1 lb N after last mowing	core entire field			1½"		

EXHIBIT J:
BUDGETARY COST ESTIMATE

THE LAND GROUP, INC.

601 E Sherman Ave Suite 5, Coeur D' Alene, ID 83814
P|208.667.3263

Budgetary Cost Estimate

JOB TITLE: **Centennial Park Master Plan**
Billings, MT USA

JOB NUMBER: 114145
DATE: 9.01.15

Description of Work/Materials	Units	Quantity	Price Per Unit	Total Amount
1.0: Sitework, Mobilization, Demolition & Site Preparation				
1.1 Site engineering & staking	LS	1		$20,000.00
1.2 SWPPP measures	LS	1		$10,000.00
1.3 Temporary construction fence	LS	1		$10,000.00
1.4 Site demolition	LS	1		$18,000.00
1.5 Clearing & grubbing	SF	484,384	0.07	$33,906.88
1.6 Excavation & rough grading (±6" no import)	CY	8,970	5.00	$44,850.00
Mobilization, Demolition & Site Preparation Subtotal:				**$136,756.88**
2.0: Site Utilities				
2.1 Electrical transformer and service (from 32nd St. W)	LS	1	12,500.00	$12,500.00
2.2 Conduit and J-boxes for future	LS	1	1,250.00	$1,250.00
2.3 Dry utilities: gas, data, phone (from 32nd St. W)	LS	1	10,000.00	$10,000.00
2.4 Domestic water service (from 32nd St. W)	LS	1	7,200.00	$7,200.00
2.5 Sanitary sewer service (from 32nd St. W)	LS	1	8,000.00	$8,000.00
2.6 Parking lot storm water drainage	LS	1	25,500.00	$25,500.00
2.7 Multi-purpose field storm water drainage	LS	1	10,000.00	$10,000.00
Site Utilities Subtotal:				**$74,450.00**
3.0: Site Concrete, Flatwork and Asphalt Paving				
3.1 Standard concrete flatwork and base	SF	67,856	5.00	$339,280.00
3.2 Heavy duty concrete flatwork and base	SF	999	5.75	$5,744.48
3.3 Parking lot curb and gutter	LF	2,183	16.00	$34,928.32
3.4 Asphalt paving and base at parking lot	SF	56,616	3.50	$198,156.00
Site Concrete, Flatwork and Asphalt Paving Subtotal:				**$578,108.80**
4.0: Site Furnishings				
4.1 SML Picnic Shelter	LS	1	45,000.00	$45,000.00
4.1.1 LRG Picnic Shelter	LS	1	100,000.00	$100,000.00
4.1.2 Picinc Shelter Seating & Tables (incl. ADA)	LS	1	18,000.00	$18,000.00
4.2 Restroom Facilities	LS	1	85,000.00	$85,000.00
4.3 Playground Equipment	LS	1	155,000.00	$155,000.00
4.3.1 Playground Surfacing	SF	8,063	12.50	$100,784.38
4.4 Splash Pad Equipment	LS	1	150,000.00	$150,000.00
4.4.1 Splash Pad Surfacing	SF	6,667	5.50	$36,670.87

4.4.2	Splash Pad Shade Structure	LS	1	35,000.00	$35,000.00
4.5	Site Signage	LS	1	20,000.00	$20,000.00
4.5.1	Traffice Signage	LS	1	3,500.00	$3,500.00
4.5.2	Kiosk	LS	1	7,000.00	$7,000.00
4.6	Multi-purpose Field Sport netting 20'	EA	4	2,000.00	$8,000.00
4.7	Basketball Court/Pickleball Surface	SF	5,800	15.00	$87,000.00
4.7.1	Basketball Court/Pickleball Striping	LS	1	3,000.00	$3,000.00
4.7.2	Basketball Court Standards	EA	2	3,750.00	$7,500.00
4.7.3	Basketball Court Chainlink Fencing 12'	LF	327	45.00	$14,715.00
4.9	Parking lot Lighting	LS	1	35,000.00	$35,000.00
4.10	Drinking Fountain w/ Drain Sump	EA	1	4,500.00	$4,500.00
4.11	CMU Trash Enclosure (complete)	LS	1	1,000.00	$1,000.00
4.12	Trash Receptacle	EA	6	1,000.00	$6,000.00
4.13	Bollard	EA	6	1,000.00	$6,000.00
4.14	Bench	EA	10	1,200.00	$12,000.00
4.15	Bike Rack Tubes	EA	13	250.00	$3,250.00
				Site Furnishings Subtotal:	**$911,170.24**

5.0: Landscape & Irrigation

5.1	Imported Top Soil placement and grading	SF	353,113	0.05	$17,655.65
5.2	Soil amendments & finish grading	SF	353,113	0.10	$35,311.30
5.3	Multipurpose field soil amendments	SF	123,296	0.80	$98,636.80
5.5	Irrigation system & components	SF	353,113	0.65	$229,523.45
5.5.1	Point of Connection	LS	1		$10,000.00
5.5.2	Irrigation control system	LS	1		$10,000.00
5.5.3	Irrigation booster pump	LS	1	15,000.00	$15,000.00
5.5.4	Irrigation Upgrade	SF	211,994	0.65	$137,796.10
5.6	Trees (2" caliper & 6-7')	EA	276	345.00	$95,220.00
5.7	Planting Beds (topsoil, plant mats, mulch)	SF	26,760	5.00	$133,800.00
5.10	Turf Hydroseed	SF	353,113	0.08	$28,249.04
				Landscape & Irrigation Subtotal:	**$811,192.34**

				Construction Subtotal:	**$2,511,678.00**

Dog Off-leash Sub Area

Description of Work/Materials	Units	Quantity	Price Per Unit	Total Amount
1.0: Sitework, Mobilization, Demolition & Site Preparation				
1.1 Site engineering & staking	LS	1		$5,000.00
1.2 SWPPP measures	LS	1		$5,000.00
1.3 Temporary construction fence	LS	1		$8,000.00
1.4 Site demolition	LS	1		$12,000.00
1.5 Clearing & grubbing	SF	290,780	0.07	$20,354.60
1.6 Excavation & rough grading (±12" no import)	CY	10,800	5.00	$54,000.00
Mobilization, Demolition & Site Preparation Subtotal:				**$104,354.60**

2.0: Site Utilities					
2.1	Storm water drainage	LS	1	8,500.00	$8,500.00
				Site Utilities Subtotal:	**$8,500.00**
3.0: Site Concrete, Flatwork and Asphalt Paving					
3.1	Standard concrete flatwork and base	SF	17,582	5.00	$87,910.00
3.3	Decomposed Granite	SF	24,000	3.00	$72,000.00
				Site Concrete, Flatwork and Asphalt Paving Subtotal:	**$159,910.00**
4.0: Site Furnishings					
4.1	Sml Training/agility Course	LS	1	4,800.00	$4,800.00
4.1.1	Med Training/agility Course	LS	1	6,000.00	$6,000.00
4.1.2	Lrg Training/agility Course	LS	1	10,300.00	$10,300.00
4.2	Shade Structure (Steel)	EA	4	45,000.00	$180,000.00
4.3	Drinking Fountain (Double)	EA	5	4,700.00	$23,500.00
4.4	Washing Station	LS	1	1,500.00	$1,500.00
4.5	Site Signage	LS	1	2,000.00	$2,000.00
4.7	Waste Station	EA	6	600.00	$3,600.00
4.8	Trash Receptacle	EA	6	1,100.00	$6,600.00
4.9	Bench	EA	8	1,300.00	$10,400.00
4.10	6' Chain Link Fence	LF	3,041	22.00	$66,902.00
4.11	4' Chain Link Fence	LF	474	22.00	$10,428.00
4.12	12' Chain Link Service Gates	EA	5	1,000.00	$5,000.00
4.13	Double Chain Link Gate Entry	LS	1	2,000.00	$2,000.00
4.14	Triple Chain Link Gate Entry	LS	1	1,500.00	$1,500.00
4.15	Water Feature (Excavation, Material, and Labor)	LS	1	50,000.00	$50,000.00
4.16	Storm Drainage System	LS	1	8,500.00	$8,500.00
4.17	Drain(Clean out) System	LS	1	8,500.00	$8,500.00
4.18	ADA Bridges	EA	2	2000	$4,000.00
4.19	Gravel Pathway Bridges	EA	2	2000	$4,000.00
				Site Furnishings Subtotal:	**$334,530.00**
5.0: Landscape & Irrigation					
5.1	Imported Top Soil placement and grading	SF	33,400	0.05	$1,670.00
5.2	Soil amendments & finish grading	SF	33,400	0.10	$3,340.00
5.3	Irrigation system & components	SF	290,780	0.65	$189,007.00
5.4	Boulders	TON	20	350.00	$7,000.00
5.5	Trees (2" caliper & 6-7')	EA	90	300.00	$27,000.00
5.9	Turf Hydroseed (Low Maintenance)	SF	241,009	0.10	$24,100.90
				Landscape & Irrigation Subtotal:	**$252,117.90**
				Construction Subtotal:	**$859,413.00**
				Estimated Construction Budget:	**$3,371,091.00**

CENTENNIAL PARK

PREPARED FOR:
City of Billings
Parks, Recreation, and Public
Lands Department
390 North 23rd Street
Billings, MT 59101

Phone: 406-657-8371
http://www.prpl.info/

PREPARED BY:
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