NOTE: THIS DOCUMENT IS 256 PAGES.

105TH ANNIVERSARY | MILWAUKEE COUNTY PARKS

5-Year Capital Request

Status of Audit Recommendation

2013 Capital Development Request Summary

Summary Narrative

Background Narrative

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Policy Recommendation #1

Policy Recommendation #2

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5 Year Spending Plan

105TH ANNIVERSARY | MILWAUKEE COUNTY PARKS

Status of Audit Recommendations

STATUS OF IMPLEMENTING DEPARTMENT OF AUDIT REPORT RECOMMENDATIONS

Audit Title: A Tale of Two Systems: Three Decades of Declining Resources Leave Milw. Cty. Parks Reflecting the Best and Worst of Times

File Number: 10-52

Audit Date: December 2009 **Status Report Date:** February 16, 2012 **Department:** Parks

Number & Recommendation	Deadlines Established		Deadlines Achieved		Implementation Status		Comments
	Yes	No	Yes	No	Completed	Further Action Required	
1. Work with DTPW to develop a comprehensive, accurate and updated list of Parks infrastructure maintenance needs. This will require completing the inventory and facility condition assessment for all Parks locations.	X			X		Yes	Auditee: **March 2010 Response** The DPRC and DTPW will continue to work together in developing a comprehensive, accurate and updated inventory of all Parks Infrastructure. This objective is ongoing and will be completed as funding and staffing become available. The DPRC and DTPW will continue to work with DAS to secure the internal and external funding needed to fully populate our information database with current conditions assessment information. To meet this objective, a budget request will be prepared for the 2011 budget cycle. **September 2010 Response** The DTPW is requesting funding in the 2011 Budget to perform updated assessments of County Facilities. This needs to be completed before we can develop an accurate and updated list. The DTPW and DPRC staff will continue to update the VFA System as repairs are made and other deficiencies in infrastructure and maintenance needs are identified. **April 2011 Response** The DTPW requested funding in the 2011 Budget to perform updated assessments of County Facilities. The funding request was adopted in the 2011 Budget using funding from the County Grounds Lands sale to UWM. Due to the 2011 payment deferral request from UWM, the funding has been suspended by DAS. DAS is currently researching alternative funding sources that may be allocated to complete this work. This work needs to be completed before we can develop an accurate and updated list.

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	Yes	No	Yes	No	Completed	Further Action Required	
							September 2011 Response The DTPW requested funding in the 2011 Budget to perform updated assessments of County Facilities. The funding request was adopted in the 2011 Budget using funding from the County Grounds Lands sale to UWM. Due to the 2011 payment deferral request from UWM, the funding has been suspended by DAS. DAS is currently researching alternative funding sources that may be allocated to complete this work. This work needs to be completed before we can develop an accurate and updated list. However, the Parks Department and DTPW-A&E are continuing to perform our annual evaluations and assessments on Parks Infrastructure. These include: Parkway Roads, Parking Lots, Walkways, Tennis Counts, Basketball Courts, Boat Launches, Multiuse Trails, Bridges, Pools, Storm and Sanitary Sewers, Playgrounds and Security Systems. Parks is in receipt of the 8-22-11 Informational Report on Internal and External Inspections of County Parks Buildings, the current Assets listing and Operations and Inspection Manual. Funding for on-going specialized evaluations is required to maintain sufficient level of inspections and assessments. **February 2012 Response** See attached.
2. Work with DTPW to develop an appropriate condition assessment cycle for buildings and related equipment contained in the VFA system, and follow it.	X			X		Yes	Auditee: **March 2010 Response** The DPRC and DTPW will continue to work together in developing a comprehensive condition assessment cycle for all building and equipment currently included in the VFA system along with other assets that are not currently included in the VFA system. This objective is ongoing will be completed as funding and staffing become available. The DPRC and DTPW will continue to perform

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	Yes	No	Yes	No	Completed	Further Action Required	
							internal asset assessments utilizing existing staff, funding and expertise, as it has in the past. The DPRC and DTPW will continue to work with DAS to secure the funding needed hire external consultants to perform the assessments that internal staff cannot perform. To meet this objective, a budget request will be prepared for the 2011 budget cycle. **September 2010 Response** The DTPW is requesting funding in the 2011 Budget to perform updated assessments of County Facilities. The DPRC and DTPW have continued to perform internal asset assessments utilizing existing staff, funding and expertise, as it has in the past. **April 2011 Response** The DTPW requested funding in the 2011 Budget to perform updated assessments of County Facilities. The funding request was adopted in the 2011 Budget using funding from the County Grounds Lands sale to UWM. Due to the 2011 payment deferral request from UWM, the funding has been suspended by DAS. DAS is currently researching alternative funding sources that may be allocated to complete this work. This work needs to be completed before we can develop an accurate and updated list. **September 2011 Response** The DTPW requested funding in the 2011 Budget to perform updated assessments of County Facilities. The funding request was adopted in the 2011 Budget using funding from the County Grounds Lands sale to UWM. Due to the 2011 payment deferral request from UWM, the funding has been suspended by DAS. DAS is currently researching alternative funding sources that may be allocated to complete this work. For complete and accurate reports, funding will need to be allocated to perform the assessments.

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	Yes	No	Yes	No	Completed	Further Action Required	
							However, the Parks Department is working with the Department of Transportation and Public Works do develop inspection criteria for all County Facilities. This inspection criteria and cost estimates will provide the information needed to allow the County Board to set policy on whether a building should be fixed, replaced or demolished. **February 2012 Response** See attached.
3. For reporting of accumulated deferred maintenance, include only amounts that represent current rather than future repair and maintenance needs. Include information on outside revenue sources available to offset reported costs.	X			X		Yes	Auditee: **March 2010 Response** The DPRC and DTPW will continue to develop a process that will ensure that the costs included in any future reports or tracking systems only include current cost estimates. In addition, we will work to identify all of the individual projects that may be eligible for external funding. ie State and Federal Grants and other non-governmental sources. Researching alternative funding sources is ongoing and has always been a priority with the Parks Department. **September 2010 Response** The DTPW is requesting funding in the 2011 Budget to perform updated assessments of County Facilities. The DPRC and DTPW have continued to perform internal asset assessments utilizing existing staff, funding and expertise, as it has in the past. The DPRC and DTPW will continue to develop a process that will ensure that the costs included in any future reports or tracking systems only include current cost estimates. In addition, we will work to identify all of the individual projects that may be eligible for external funding as we have done in the past.

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	Yes	No	Yes	No	Completed	Further Action Required	
							April 2011 Response The DPRC and DTPW will continue to develop a process that will ensure that the costs included in any future reports or tracking systems only include current cost estimates. In addition, we will work to identify all of the individual projects that may be eligible for external funding as we have done in the past. **September 2011 Response** The DPRC and DTPW will continue to develop a process that will ensure that the costs included in any future reports or tracking systems only include current cost estimates. In addition, we will work to identify all of the individual projects that may be eligible for external funding as we have done in the past. Although no funding has been allocated to complete the needed information to produce an accurate reports, a number of maintenance/repair projects have been identified as critical: 1. Security & Fire protection systems 2. Noyes Pool Roof. 3. Washington Pool Roof 4. Zablocki Service Yard roof 5. Humboldt Bandshell Roof. 6. Jackson Service Yard Roof 7. Oakwood Clubhouse Roof 8. Wehr Nature Ctr. Roof 9. Noyes & Pulaski Pool Renovations. 10. Parkway Roads 11. HVAC Systems at MLK Center, Kosi Center and Sherman Park Boys and Girls Club.

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	Yes	No	Yes	No	Completed	Further Action Required	
4. Work with DTPW to use the VFA system to record the results of pool condition assessments, and avoid duplicating the reporting of deferred pool maintenance.	X			X		Yes	Auditee: **March 2010 Response** The DPRC and DTPW will work together to ensure that the annual pool condition assessment report is entered into the VFA system and is not included in any other data files. This objective will be completed when the 2010 pool condition assessment report is completed. **September 2010 Response** The 2010 Pool Assessments Report will be incorporated into the VFA. The pool condition assessment inspections are being completed at this time. **April 2011 Response** The 2010 Pool Assessments Report will be incorporated into the VFA. The pool condition assessment inspections are incorporated at this time. **September 2011 Response** The 2010 Pool Assessments Report has been incorporated into the VFA. The 2011 Pool Assessments will be conducted after the current swim season has concluded. The 2010 Pool Report is attached. **February 2012 Response** See attached.

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Policy Related Recommendations Contained on page 9000-6 of the 2011 Adopted Budget for Parks, Recreation and Culture							
1. Establish criteria for determining whether a facility should be fixed or demolished.		X		X		X	**April 2011 Response** The Parks Department will work with the Long Range Strategic Planning Committee in developing a comprehensive facilities plan for Milwaukee County. **September 2011 Response** The Parks Department is working with the Department of Transportation and Public Works do develop inspection criteria for all County Facilities. This inspection criteria and cost estimates will provide the information needed to allow the County Board to set policy on whether a building should be fixed, replaced or demolished. In addition, the Parks Department is evaluating all existing and proposed projects to determine the revenue producing potential of the projects. These evaluations will be included the facility review. **February 2012 Response** See attached.

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	Yes	No	Yes	No	Completed	Further Action Required	
2. Replace some current facilities with alternative structures that have lower construction and/or maintenance costs.		X		X		X	**April 2011 Response** The Parks Department will work with the Long Range Strategic Planning Committee in developing a comprehensive facilities plan for Milwaukee County. **September 2011 Response** The Parks Department is working with the Department of Transportation and Public Works do develop inspection criteria for all County Facilities. This inspection criteria and cost estimates will provide the information needed to allow the County Board to set policy on whether a building should be fixed, replaced or demolished. The Parks Department has established a Purchasing Standardization Team to identify products and structures that can be used to lower construction and/or maintenance costs. The Purchasing Standardization Team will be working with the Planning Staff to evaluate all existing and proposed projects to determine the revenue producing potential of the projects. **February 2012 Response** See attached.
3. Expand opportunities for the types of public/private partnerships that have successfully leveraged private capital in the maintenance and improvement of several Parks locations.		X		X		Ongoing	**April 2011 Response** The Parks Department will continue to pursue public/private partnerships that leverage additional resources into the department. **September 2011 Response** The Parks Department will continue to pursue public/private partnerships that leverage additional resources into the department

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	Yes	No	Yes	No	Completed	Further Action Required	
							February 2012 Response See attached.

105TH ANNIVERSARY | MILWAUKEE COUNTY PARKS

2013 Capital Development Request Summary

MILWAUKEE COUNTY PARKS

CHRIS ABELE, MILWAUKEE COUNTY EXECUTIVE
SUE BLACK, DIRECTOR OF PARKS, RECREATION AND CULTURE

Date: February 17, 2012

To: Sue Black, Director, Department of Parks, Recreation and Culture

From: Jim Keegan, Chief of Planning, Policy & Development

Subject: **2013 Capital Development Budget Request**

Director's Objectives

The Milwaukee County Parks Department has developed its Capital Development Budget based on two priorities and objectives.

- Revenue Stabilization & Enhancement
- Infrastructure Repair & Replacement

The following Capital Development Projects will enable the Parks Department to stabilize and enhance the revenue streams that currently generate approximately $17 million per year from a number of sources.

Hot Topics

- County Grounds Park
- South Shore Break wall
- South Shore Beach re-location
- Parkway Roads & Lighting
- Estabrook Dam & Sediment Remediation
- Moody Park Development
- Greenhouse Development/Zoo Interchange Project
- ATC Power Lines
- Johnsons Park Re-Development
- Flushing Channel Dredging

ADDRESS
9480 Watertown Plank Road
Wauwatosa, WI 53226-3560

PHONE/FAX
ph: 414 / 257 PARK (7275)
fax: 414 / 257 6466

EMAIL
parks@milwcnty.com

WEBSITE
countyparks.com

Revenue Generation

- Bender Park Campground

- Organized Sports Complex's
  - Baseball and Softball Facilities
  - Field Lighting Retrofits

- McKinley Marina
  - Electrical System Upgrades
  - Restroom & Shower Upgrades
  - Parking Lot Replacement

- Pavilion and Rental Facility Replacements and Upgrades

- Countywide Golf Course Improvements
  - Irrigation Systems Replacement & Upgrade
    - Greenfield Golf Course
    - Whitnall Golf Course
    - Dretzka Golf Course
  - Tees, Bunkers and Drainage Upgrades
    - Greenfield Golf Course
    - Oakwood Golf Course
  - Asphalt Cart Paths
    - Currie Golf Course
    - Oakwood Golf Course
    - Dretzka Golf Course
  - Clubhouse Improvement
    - Brown Deer Golf Course
    - Whitnall Golf Course
    - Dretzka Golf Course

- Southside Aquatic Facility

Cost Saving

- HVAC System
  - King Community Center
  - Kosi Community Center
  - Sherman Park - Mary Ryan Boy's & Girl's Club
  - Noyes Indoor Pool
  - Pulaski Indoor Pool
  - Wilson Recreation Facility

- Organized Sports Complex's
  - Baseball and Softball Facilities
  - Field Lighting Retrofits

- Parkway Roads Replacements
  - Priorities will be based on annual hard surfaces assessment, see attached
- Parkway Lighting Replacements
  - Priorities will be based on annual hard surfaces assessment, see attached
- Parkway and Turf Naturalization
- McKinley Marina
  - Electrical System Upgrades
- Southside Aquatic Facility
  - Close several Southside Deep well Pools
- New Turf and Snow Management Equipment
- Snowplowing Reduction Plan

Infrastructure Repair & Replacement

- Tennis Court Replacement
  - Priorities will be based on annual hard surfaces assessment, see attached
- Basketball Court Replacement
  - Priorities will be based on annual hard surfaces assessment, see attached
- Park Walkways
  - Priorities will be based on annual hard surfaces assessment, see attached
- Parking Lots
  - Priorities will be based on annual hard surfaces assessment, see attached
- Park Roads
  - Priorities will be based on annual hard surfaces assessment, see attached
- Oak Leaf Trail
  - Priorities will be based on annual hard surfaces assessment, see attached
- Furnaces, Boilers and HVAC Systems
  - Priorities will be based on annual Skilled Trades assessment.
- Park Restroom Upgrades
  - Priorities will be based on assessment table, see attached
- Park Roofs
  - Priorities will be based on annual roof assessment.

Summary Narrative

Summary

In December 2009, the Department of Audit released an audit entitled "A Tale of two Systems: Three Decades of Declining Resources Leave Milwaukee County Parks Reflecting the Best and Worst of Times".

The audit contained four operational recommendations that Parks Management should incorporate into its strategic decision-making processes and three policy based recommendations for the County Board to consider.

The main premise of the operational recommendations is for the Parks Department to continue to work with the former Department of Transportation and Public Works to facilitate the population of the VFA System that the county has been using for approximately ten years.

For a number of years, the County has not allocated sufficient resources to continue the asset management assessments. Due to this fact, the VFA System information available for the Parks Department is antiquated and inadequate to develop a long term Capital Development Plan to address the deferred maintenance in the Parks Department. To address this problem, the Parks Department has developed an alternative plan for consideration by the County Executive and the County Board of Supervisors.

The Parks Department has the following categories of capital assets.

- Parkway Roads
- Internal Park Roads
- Parking Lots
- Walkways
- Tennis Counts
- Basketball Courts
- Boat Launches
- Multiuse Trails
- Bridges
- Pools
- Beaches
- Playgrounds
- Security Systems
- Restrooms
- Storm Sewers
- Sanitary Sewers
- Stream Banks
- Lagoons
- Marinas
- Boat Launches
- Buildings
- Baseball Fields
- Softball Fields
- Soccer Fields
- Football Fields
- Dog Exercise Areas
- Volleyball Courts
- Golf Courses
- Disc Golf Courses
- Picnic Shelters
- Soft Trails
- Parkway Electrical Systems
- Dams
- Culverts
- Wells

This alternative plan is based on the Parks Department requesting to be allocated $15 million in Capital Development funding annually for the next five years to address the priorities of our backlog of maintenance needs to be addressed.

Background Narrative

Background

The Milwaukee County Parks System has evolved over the years, spanning parts of three centuries during its acquisition and development. Currently, the Milwaukee County Parks system has 156 parks and nearly 15,000 acres for recreational, cultural and aesthetic enjoyment. The system includes several indoor and outdoor pools, tennis courts, basketball courts, golf courses, band shells, pavilions, athletic fields and many other amenities. The Milwaukee County Parks system also includes two community centers, two indoor sports complexes, 153 miles of biking/hiking trails, four marinas/boat launch sites, the Mitchell Park Horticulture Conservatory (the Domes), Boerner Botanical Gardens, and many other attractions. Within the system, approximately 120 miles of roadway and 133 parking lots must be maintained.

In December 2009, the Department of Audit released an audit entitled "A Tale of two Systems: Three Decades of Declining Resources Leave Milwaukee County Parks Reflecting the Best and Worst of Times".

The audit contained four operational recommendations that Parks Management should incorporate into its strategic decision-making and three policy based recommendations to be considered. They are as follows:

Operation Issues/Recommendations

1. *Work with DTPW to develop a comprehensive, accurate and updated list of Parks infrastructure maintenance needs. This will require completing the inventory and facility condition assessment for all Parks locations.*
2. *Work with DTPW to develop an appropriate condition assessment cycle for buildings and related equipment contained in the VFA system, and follow it.*
3. *For reporting of accumulated deferred maintenance, include only amounts that represent current rather than future repair and maintenance needs. Include information on outside revenue sources available to offset reported costs.*
4. *Work with DTPW to use the VFA system to record the results of pool condition assessments, and avoid duplicating the reporting of deferred pool maintenance.*

Policy Issues/Recommendations

1. *Establish criteria for determining whether a facility should be fixed or demolished.*
2. *Replace some current facilities with alternative structures that have lower construction and/or maintenance costs.*
3. *Expand opportunities for the types of public/private partnerships that have successfully leveraged private capital in the maintenance and improvement of several Parks locations.*

Each of the recommendations presented will be addressed in separate sections to follow.

Operations Recommendation #1

Operation Issues/Recommendations
Recommendation # 1

Work with DTPW to develop a comprehensive, accurate and updated list of Parks infrastructure maintenance needs. This will require completing the inventory and facility condition assessment for all Parks locations.

The main premise of this recommendation is for the Parks Department to continue to work with the former Department of Transportation and Public Works to facilitate the population of the VFA System that the county has been using for approximately ten years.

For a number of years, the County has not allocated sufficient resources to continue the asset management assessments. Due to this fact, the VFA System information available for the Parks Department is antiquated and inadequate to develop a long term Capital Development Plan to address the deferred maintenance in the Parks Department.

The Parks Department currently has assessment and evaluation rankings for the following categories of assets.

- Parkway Roads,
- Internal Park Roads
- Parking Lots,
- Walkways,
- Tennis Counts,
- Basketball Courts,
- Boat Launches,
- Multiuse Trails,
- Bridges,
- Pools,
- Storm and Sanitary Sewers,
- Playgrounds
- Restrooms
- Organized Sports Fields
- Stream Banks
- Lagoons
- Buildings
- Security Systems.

The alternative plan is based on the Parks Department requesting to be allocated $15 million in Capital Development funding annually for the next five years to address the priorities of our backlog of maintenance needs to be addressed

105TH ANNIVERSARY | MILWAUKEE COUNTY PARKS

Parkway Roads

Milwaukee County Parks Department - Parkway Condition Evaluations

Park or Parkway	Location	(miles)	Estimate	Rating	Rebuilt
Underwood Creek Parkway	Theodore Trecker Way extended to Fairview	0.61	$549,000	20	
Root River Pkwy	W. College Ave. extended from from parkway to 92nd St.	0.4	$360,000	20	
Kinnickinnic Pkwy	S. 57th St to 60th St.	0.21	$189,000	26	
Oak Creek Pkwy	Railroad tracks east of high school to Chicago	0.57	$513,000	28	
Underwood Creek Parkway	Parkway drive Watertown Plank to Swan Blvd.	1.7	$1,530,000	30	
Root River Pkwy	Cleveland to Oklahoma (east side of river south of bridge)	0.31	$279,000	32	
Root River Pkwy	Lincoln to Cleveland (east side of river)	0.69	$621,000	36	
Kinnickinnic Pkwy	S. 68th St. to S. 76th St.	0.46	$414,000	36	
Kinnickinnic Pkwy	S. 68th St. to W. Cleveland Ave.	0.59	$531,000	36	
Menomonee River Parkway	Burleigh to Hwy 100	1.01	$909,000	38	
Root River Pkwy	124th St. to Cleveland S/W of river	0.42	$378,000	40	
Kinnickinnic Pkwy	Spur to S. 22nd St.and W. Oklahoma Ave.	0.19	$171,000	40	
Kinnickinnic Pkwy	S. 31st St. to 35th St.	0.25		42	
Menomonee River Parkway	Church St. to North Ave. (including Charles Hart Parkway)	1.57		44	
Menomonee River Parkway	North Ave. to Burleigh	1.1		44	
Kinnickinnic Pkwy	S. 43rd St. to S. 51st St.	0.59		46	
Root River Pkwy	Oklahoma to Morgan	0.55		48	
Milwaukee River Parkway	W. Hampton Ave. to W. Silver Spring Dr.	1.18		48	
Honey Creek Parkway	St. Anne Ct. (Honey Creek Parkway to	0.16		50	
Underwood Creek Parkway	Parkway drive, Bluemound to 119th St.	0.41		50	
Kinnickinnic Pkwy	S. 29th St. to S. 31st St.	0.13		50	
Honey Creek Parkway	S. 70th St. to Portland	0.66		52	
Menomonee River Parkway	Hwy 100 to Congress	0.92		52	
Root River Pkwy	Layton Ave. to 92nd St. (northside river)	0.75		52	
Menomonee River Parkway	Between 60th St. and 70th Streeet	0.68		54	
Grantosa Parkway	Hwy 100 to Capitol (west side of creek)	0.31		54	
Grantosa Parkway	Menomonee River Pkwy to Capitol (east side of Creek)	0.35		54	
Root River Pkwy	Forest Home Ave. to 84th St. (north side of	0.5		60	
Oak Creek Pkwy	Chicago Ave to Grant Park	0.96		62	
Kinnickinnic Pkwy	S. 27th St. to S. 29th St.	0.11		64	
Honey Creek Parkway	Portland to W. Bluemond Rd.	0.5		68	
Root River Pkwy	Cleveland to Oklahoma (west side of river)	0.59		68	
Root River Pkwy	Cleveland to Oklahoma (east of river, north of	0.27		68	
Honey Creek Parkway	W. Bluemond Rd. to S. 84th St.	0.54		70	
Kinnickinnic Pkwy	S. 20th St. to S. 27th St.	0.54		70	
Oak Creek Pkwy	Rawson Ave. to railroad tracks just east of high	1.03		72	
Root River Pkwy	Meadow Drive to Forest Home (south side river)	0.55		72	
Lincoln Memorial Drive	(S/B) Lake Drive to Lafayette Hill	2.06		78	
Lincoln Memorial Drive	(N/B) Lafayette Hill to Lake Drive	2.05		78	
Lincoln Memorial Drive	(S/B) Lafayette Hill to Michigan	1.35		78	
Lincoln Memorial Drive	(N/B) Michigan to Lafayette Hill	1.53		78	
Oak Creek Pkwy	East of Howell Ave.	0.18		80	
Root River Pkwy	92nd St. to 84th St. (south side of river)	0.59		82	
Root River Pkwy	76th St. to Loomis	0.66		82	
Lincoln Creek Parkway	Teutonia to Villard	0.47		84	
Honey Creek Parkway	76th St.to W. Beloit Rd.	0.32		90	2008
Root River Pkwy	84th St. to Grange	0.37		90	
Lincoln Creek Parkway	48th St. to 51st St.	0.19		92	
Lincoln Creek Parkway	51st St. to 60th St.	0.63		92	
Underwood Creek Parkway	Swan Boulevard between Underwood Creek and Menomonee River	0.29		96	
Estabrook Park	Between Capitol and Hampton	1.32		100	2010

Milwaukee River Parkway	Silver Spring to Sunny Pt. Rd.	0.68		100	
Milwaukee River Parkway	Sunny Pt. Rd. to Bender	1.03		100	
Root River Pkwy	Grange to 76th St.	2.26		100	2010
		38.34	$6,444,000		

Internal Park Roads

Milwaukee County Parks Department - Park Roads Condtion Evaluations

Park or Parkway	Location	(miles)	Estimate	Rating	Rebuilt
Wilson Recreation Center	Recreation Center service road between main parking lot and 20th St.	0.36	$324,000	20	
Doctors Park	Road to Picnic Area #3 from Fox Lane	0.16	$144,000	28	
Grant Park	Main drive from Lake Drive entrance to 700' south of 7 Bridges parking	0.34	$306,000	30	
Lake Park	Road into park at north end of park	0.21	$189,000	35	
Brown Deer Park	Park circumference road - nouth	1	$900,000	36	
Brown Deer Park	Park circumference road - south	1.08	$972,000	36	
Grant Park	Oak Creek Parkway to fork between picnic area 1,5 &6	1.28	$1,152,000	36	
Grant Park	Access road from park drive to beach	0.11	$99,000	36	
Brown Deer Park	Road to Boathouse	0.23	$207,000	38	
Warnimont Park	Road to Golf Course	0.19	$171,000	38	
Greenfield Park	S. 124th St. to W. Rogers Ext'd.	0.59	$531,000	40	
Greenfield Park	116th Street entrance to parking lot for Picnic Areas 1 & 5	0.14	$126,000	40	
Washington Park	Community Center access road	0.16	$144,000	40	
Brown Deer Park	Roads in front (north) of clubhouse	0.21	$189,000	40	
Kletzsch Park	Road to lower parking lot	0.18	$162,000	40	
Whitnall Park	Segment between College and park drive thru center of park	0.14		42	
Currie Park	Golf Clubhouse Road	0.3		44	
Kletzsch Park	Green Bay Rd to park drive	0.12		44	
Kletzsch Park	Park drive, Bender to Green Tree	0.77		44	
Bender Park	East Ryan Rd. ext'd to Boat Launch	0.87		44	
Sport Complex	Ryan Rd. to Complex	0.37		44	
Washington Park	NW corner of park between bandshell and deadend near Lloyd	0.39		46	
Washington Park	Drive through park between US 41 and Vliet	0.38		48	
Dretzka Park	From park road to Ski Chalet	0.14		48	
Lincoln Park	Hampton Ave., between Green Bay Ave. and Port Washington Rd.	0.76		48	
Dretzka Park	124th Street entrance road	0.23		50	
Sherman Park	Park entrance road	0.14		50	
Whitnall Park	Drive on west side of park between spur to 108th and Whitnall Way	0.5		54	
Dretzka Park	Bradley Road entrance road, access to clubhouse	0.42		56	
Sheridan Park	Layton Ave. extended	0.13		56	
Whitnall Park	Drive from comfort building/play area up to Lilac Lane	0.47		56	
Lake Park	Ravine Drive	0.21		60	
Sheridan Park	Road through park, Armour Ave. to Pulaski Ave.	0.83		60	
Wilson Recreation Center	Public access drive to Recreation Center between Howard and 20th St.	0.41		60	
Grant Park	Road along south end of golf course, extension of Hawthorne Ave.	0.26		66	
Humboldt Park	Park drive	0.57		66	
Oakwood Golf Course	Road to Golf Course	0.23		70	
Whitnall Park	Drive at SE area of park from College, south past golf course to 92nd	0.62		70	
Wilson Park	Drive to Parking Lot west of 13th Street	0.1		70	
Brown Deer Park	Spur to Calumet Rd. entrance from park circle drive and golf parking lot	0.24		72	
Whitnall Park	Nature Center Rd.	0.25		72	

South Shore Park	Road thorugh Park, Estes St. to Meredith St.	0.29		74	
Doctors Park	Service Drive to Lake	0.3		76	
McKinley Park	LaFayette Hill	0.15		80	
Whitnall Park	NW corner of park from Lilac Ln. through 108th St. park entrance	0.35		80	
Greenfield Park	Road to Golf Clubhouse	0.13		88	
Mitchell Boulevard	Bluemound to freeway off-ramp south of Story Pkwy	0.36		88	
Grant Park	Spur east from main drive picnic areas 5 & 6	0.17		92	
Mitchell Park	Park road north side of Domes and spur to northeast	0.21		94	
Greenfield Park	Lincoln Ave. entrance to Picnic Area 3	0.2		98	2009
Mitchell Park	Park entrance, circle drive and around northwest side of Domes	0.23		100	2009
Veterans	Lagoon Drive, LMD to Sailing Center	0.53		100	2011
Lake Park	Newberry entrance and spurs to golf course/pavilion and to sport fields	0.38		100	2011
Lake Park	Bus turn-around at Locust St. extended (not assessed) Concrete	0.05			Concrete
		19.44	$5,616,000		

Parking Lots

Milwaukee County Parks Department - Service Yard Condition Evaluations

Park or Parkway	(Sq Yds)	Estimate	Rating
Jackson Park	5,431.0	$249,826	14
Humboldt Park	1,640.0	$75,440	18
Washington Park	2,823.0	$129,858	20
Currie Park	2,462.0	$113,252	20
Grant Park	4,518.0	$207,828	20
Wilson Park (NE of main parking lot)	879.0	$40,434	20
Zablocki Park	2,745.0	$126,270	20
Dineen Park	1,854.0	$85,284	24
Greenfield Park	2,602.0	$119,692	28
Kosciuszko Park	1,225.0	$56,350	28
Brown Deer Park	3,159.0	$145,314	30
Doctors Park	715.0	$32,890	30
Drekzka park	1,817.0	$83,582	30
Noyes Park - 2	719.0	$33,074	30
Whitnall Park (Boerner)	3,806.0	$175,076	34
Lincoln Park - 5 / Golf Club	888.0	$40,848	38
McCarty Park	912.0	$41,952	38
Park Maintenance	9,535.0	$438,610	40
McGovern Park	2,213.0	$101,798	40
Hales Corners	1,234.0	$56,764	40
Whitnall Park (Golf)	1,224.0		44
Oakwood Golf Course	1,941.0		52
Mitchell Park	3,700.0		56
Esterbrook Park-4	2,279.0		56
Lincoln Park (former pool area)	1,282.0		70
Madison Park	774.0		72
Lake Park	2,009.0		86
Sheridan Park	3,297.0		92
Hansen	2,310.0		96
O'Donnell (SE corner)	580.0	Concrete	NA
Root River Parkway (across from Kulwicki)			NA
South Shore Park (north)	608.0		NA
South Shore Park (south)	510.0		NA
Sports Complex	3,780.0		NA
Wilson Park (NW of main parking lot)	241.0		NA
Wilson Recreation Center (SW corner of building)	1,830.0		NA
		$2,354,142	

Milwaukee County Parks Department - Parking Lots Condition Evaluations

Park or Parkway	Location	Size	Budget	Rating
Brown Deer Park	Between golf clubhouse and service yard	58,318	$279,926	<10
Brown Deer Park	Adjacent to Tennis Courts	65,716	$315,437	<10
Brown Deer Park	Between Green Bay Ave and Range Line Rd. entrances	40,672	$195,226	<10
Currie Park	Service yard	23,289	$111,787	<10
Currie Park	Clubhouse	71,292	$342,202	<10
Dineen Park	NW quadrant of park between service yard and splash pad	43,795	$210,216	<10
Dineen Park	Pavilion/wading pool	32,945	$158,136	<10
Dineen Park	SE corner of park	21,717	$104,242	<10
Doctors Park	Dean Rd. extended	74,319	$356,731	<10
Dretzka Park	Chalet	69,292	$332,602	<10
Dretzka Park	Golf Clubhouse	84,450	$405,360	<10
Estabrook Park	Dam	17,320	$83,136	<10
Esterbrook Park	Adjacent to TV tower at south end of park	26,026	$124,925	<10
Esterbrook Park	Adjacent to service yard	24,876	$119,405	<10
Esterbrook Park	Central quadrant, west of drive, near waterfall	69,221	$332,261	<10
Former North Shore ROW	At County Line Road	4,116	$19,757	<10
Gordon	Pavilion	16,967	$81,442	<10
Granville Dog Exercise Area	Facility lot	12,810	$61,488	<10
Kletzsch Park	Mill Rd. extended across from Picnic Area #1	34,153	$163,934	<10
Kletzsch Park	North end of park near Picnic Area 3	13,279	$63,739	<10
Kletzsch Park	Northeastern corner of park near soccer field and Picnic Areas 5 & 7	55,060	$264,288	<10
Kletzsch Park	Adjacent to pavilion and play area	22,937	$110,098	<10
Lincoln Park	Former swimming pool lot at south end of park	49,965	$239,832	<10
Lincoln Park	Blatz Pavilion and aquatic center	93,648	$449,510	<10
Lincoln Park	Westcentral side of park adjacent to Picnic Area 6	28,387	$136,258	<10
Lincoln Park	Golf Clubhouse	41,630	$199,824	<10
Madison Park	Splash Pad/ Golf Course/basketball	81,903	$393,134	<10
McGovern Park	Picnic Areas 4, 5, and service yard	25,782	$123,754	<10
McGovern Park	Senior Center	49,116	$235,757	<10
McGovern Park	West quadrant near basketball Courts / Tennis Courts	49,256	$236,429	<10
Meaux	East of Green Bay Road, adjacent to basketball courts	15,979	$76,699	<10
Moody Pool	East side of park	21,105	$101,304	<10
Noyes Park	Swimming Pool / Golf Course	26,651	$127,925	<10
Schoenecker Park	Along N. Hopkins, east side of park	18,473	$88,670	<10
Uihlein Soccer Park	Northwest corner of park	93,862	$450,538	<10
Uihlein Soccer Park	Northcenter lot	114,904	$551,539	<10
Uihlein Soccer Park	East side of main soccer field	69,427	$333,250	<10
Webster Park	Adjacent to west side of Mayfair Road	12,265	$58,872	<10
McKinley Marina	E-K Slip Renters, immediately south of former Coast Guard Station	131,809	$632,683	10
Grant Park	Golf clubhouse south of Hawthorne (overlfow)	17,465	$83,832	16
McKinley Marina	Marina including boat storage, pavilion, & launch	415,664	$1,995,187	20
Falk Park	Pavilion	15,100	$72,480	20
Grant Park	West of Picnic Area #2	12,383	$59,438	20
Scout Lake	At Loomis Rd. entrance to park	33,242	$159,562	20
Sheridan Park	Northeast of pool near Picnic Areas 3 and 4	12,034	$57,763	22
Greenfield Park	Service Yard/aquatic park north side of drive	88,290	$423,792	24
Grant Park	Wil-O-Way	35,430	$170,064	26

Holler Park	East lot at 6th Street entrance	9,489	$45,547	26
Cudahy Nature Center	NW corner of park	10,013	$48,062	28
McKinley Marina	Yacht Club	30,549	$146,635	30
Washington Park	Adjacent to service yard	64,098	$307,670	30
Wisconsin Avenue Park	Pavilion	29,509	$141,643	30
Root River Pkwy	Picnic Area 2-2A, south of Grange, west and north of parkway drive	18,544	$89,011	30
Zablocki Park	Golf Course, service yard	28,244	$135,571	30
Kinnickinnic Pkwy	22nd St. & Oklahoma at Simmons Field	46,230	$221,904	32
KK Sports Center	Along east side of S. 20th Street, just north of Oklahoma	19,486	$93,533	32
Bradford Beach	Northpoint concessions stand	82,474	$395,875	34
Grant Park	South of Picnic Area 1	36,422	$174,826	34
Grant Park	North Picnic Areas 7,8,& 9	33,465	$160,632	34
Doyne Park	Golf course	43,032	$206,554	35
Greenfield Park	Picnic Areas 5 & 1, east side of park at 116th Street entrance	29,976	$143,885	36
Pulaski (Milwaukee)	At Cleveland & 16th Street, serves pool users	19,108	$91,718	36
Washington Park	Bandshell	14,750	$70,800	36
Greene Park	Pavilion	23,886	$114,653	36
King Park	Smaller lot at west side of community center	8,661	$41,573	38
McCarty Park	West quadrant of park adjacent to service yard	58,716	$281,837	38
Warnimount	South Kelly lot between nutrition center and dog park	31,990	$153,552	38
McKinley Marina	Sailing Center boat storage	69,963	$335,822	40
Park Maintenance	NW quadrant of site	16,496	$79,181	40
Veterans	Between picnic shelter and bike/kite rentals	40,186	$192,893	40
Zablocki Park	Tennis Courts & Pavilion	54,682	$262,474	40
War Memorial & Art Center	North of building (3 lots total)	140,104		42
Root River Pkwy	Picnic Area 1-1A, just east of intersection of 92nd & College	20,980		42
Carver Park	W. Brown St. Carver Little League Field	31,256		44
McKinley Marina	A-D Slips	41,299		44
Sherman Park	Immediately east of Boys & Girls Club	12,067		48
Washington Park	Swimming Pool	35,233		48
Grant Park	Picnic areas 3&4 and service yard	29,607		48
King Park	Larger lot at northeastern corner of park	28,518		50
Warnimount	Golf Course	30,349		50
Holler Park	Lot nearest building	2,794		52
Oakwood Golf Course	Golf Course Parking	66,414		52
Whitnall Park	West Picnic Areas 5 & 7, north of College Avenue	27,551		52
Wilson Recreation Center	Rec. Center, Pool, Senior Center	244,688		52
McKinley Marina	Alterra	20,667		54
Hales Corners Park	East side of park adjacent to pavilion and pool	33,243		54
McKinley Marina	Sailing Center	41,687		56
Jackson Park	Northwest corner of park along S. 43rd St.	23,371		56
South Shore Park	Yacht Cub	181,909		56
McKinley Marina	L-P Slip Renters, north of Lagoon Dr. across from kite/bike rentals	84,081		58
Grant Park	Golf Clubhouse	28,600		58
Washington Park	Senior Center	105,685		60
Hales Corners Park	West side of park adjacent to Picnic Area #1	25,129		60
Kosciuszko Park	Community Center & Pool	38,891		62
Baran Park	60' south of pavilion	28,718		62
Whitnall Park	Nature Center	59,005		62
Wilson park	Smaller lot in southeast corner of park along S. 13th St.	9,100		62
Kulwicki Park	Pavilion	40,819		64

Wilson Park	Larger lot in southeastern corner of park adjacent to Picnic Area #2	54,345		70
Bender Park	Waterfront park lot	104,073		72
Root River Pkwy	Gravel lot at Ross Lodge	13,187		72
Whitnall Park	Golf Clubhouse	83,311		72
Grant Park	Beach / Launch	67,728		76
Mitchell Park	South side of 27th Street entrance	84,536		80
Froemming	Pavilion	21,713		80
Whitnall Park	Visitor Center & Service Building	145,811		80
Lake Park	Pavilion / Golf Course	46,647		82
Rainbow Park	Pavilion and wading pool	34,469		82
Underwood Creek Parkway	Camp Wil-O-Way	45,030		82
Oak Creek Pkwy	Immediately east of Howell Ave. near Ryan Road	17,133		82
Rose Park	Large lot off of 3rd Street	38,058		84
Greenfield Park	Aquatic park parking lot south of drive	35,405		86
Greenfield Park	Golf Clubhouse	77,622		86
Lake Park	Adjacent to service building	6,280		92
Mitchell Park	Northcentral area of park near Picnic Areas 2 & 3	77,818		92
Grant Park	Picnic Areas 5 & 6	58,575		92
Sheridan Park	On west side of service building	7,162		92
Warnimount	North Kelly lot, adjacent to west side of Nutrition Center building	31,828		92
Hansen Golf Course	Golf Clubhouse	14,876		96
Lake Park	South end of park across from Bradford Beach	29,266		96
Greenfield Park	Picnic Area 3A & 3B, south end of park	31,411		100
Hoyt Park	Swimming Pool	104,507		100
Mitchell Park	North side of 27th Street entrance	20,044		100
Bender Park	Upper Lot (Gravel)	73,023		NA
			$15,350,357	

Walkways

Milwaukee County Parks Department - Park Walk Condition Evaluations

PARK	Seg_ID	Length	CONDITION	ESTIMATED	REMARKS
King Park	07	2,399	<20	$86,351	
Kosciuszko Park	06	1,456	<20	$52,402	
Lake Park	24	737	<20	$26,546	
McKinley Park	04	435	<20	$15,659	
McKinley Park	09	964	<20	$34,718	
McKinley Park	10	668	<20	$24,049	
McKinley Park	11	690	<20	$24,856	
McKinley Park	12	783	<20	$28,173	
Mitchell Boulevard Park	03	645	<20	$23,216	
Mitchell Park	12	1,299	<20	$46,764	
Pere Marquette Park	01	569	<20	$20,497	
Estabrook Park	10	352	<20	$12,654	
Kletzsch Park	04	135	<20	$4,861	
Lincoln Park	03	473	<20	$17,036	
Meaux Park	02	507	<20	$18,270	
Menomonee River Parkway	01	372	<20	$13,408	
Menomonee River Parkway	02	150	<20	$5,408	
Menomonee River Parkway	03	669	<20	$24,068	
Menomonee River Parkway	04	964	<20	$34,718	
Menomonee River Parkway	05	741	<20	$26,683	
Milwaukee River Parkway	02	2,598	<20	$93,530	
Webster Park	01	86	<20	$3,111	
Barnard Park	02	432	<20	$15,547	
Bender Park	02	1,756	<20	$63,221	
Dale Creek Parkway	01	4,324	<20	$155,659	
Euclid Park	04	835	<20	$30,069	
Hales Corners Park	06	1,289	<20	$46,399	
Jackson Park	15	1,236	<20	$44,487	
Oak Creek Parkway	11	1,773	<20	$63,830	
Oak Creek Parkway	12	316	<20	$11,367	
Oak Creek Parkway	13	199	<20	$7,158	
Scout Lake Park	08	142	<20	$5,098	
Whitnall Park	02	429	<20	$15,446	
Whitnall Park	03	406	<20	$14,602	
Whitnall Park	04	2,152	<20	$77,476	
Whitnall Park	05	564	<20	$20,316	
Whitnall Park	06	1,363	<20	$49,084	
Whitnall Park	07	916	<20	$32,974	
Whitnall Park	08	327	<20	$11,755	
Whitnall Park	09	386	<20	$13,902	
Whitnall Park	10	1,171	<20	$42,142	
Whitnall Park	11	1,000	<20	$36,007	
Whitnall Park	12	1,696	<20	$61,059	
Whitnall Park	13	608	<20	$21,899	
Lindsay Park	03	1,926	<20	$69,336	
Humboldt Park	13	2,181	20	$78,501	
Lincoln Creek Parkway	08	370	21	$13,312	

PARK	Seg_ID	Length	CONDITION	ESTIMATED	REMARKS
Gordon Park	02	473	24	$17,044	
Grant Park	11	764	24	$27,510	
Madison Park	06	1,809	27	$65,131	
Madison Park	07	158	27	$5,687	Sub-grade issues
Lincoln Creek Parkway	04	409	29	$14,708	
Pulaski-Cudahy Park	02	373	29	$13,420	
King Park	02	687	30	$24,746	
Humboldt Park	11	965	30	$34,741	
Baran Park	04	858	32	$30,888	
Baran Park	05	52	32	$1,879	
King Park	04	1,451	32	$52,246	
Kosciuszko Park	04	1,747	32	$62,904	
Kosciuszko Park	05	2,818	32	$101,457	
Lafollette Park	04	866	32	$31,173	
Lake Park	22	3,769	32	$135,678	
Washington Park	12	746	32	$26,860	
Washington Park	17	922	32	$33,195	
Algonquin Park	03	1,204	32	$43,329	
Big Bay Park	02	1,199	32	$43,166	
Lincoln Creek Parkway	03	265	32	$9,558	
Smith Park	01	885	32	$31,874	
Smith Park	07	1,001	32	$36,029	
Smith Park	08	1,441	32	$51,859	
Bay View Park	06	2,592	32	$93,303	
Grant Park	02	359	32	$12,926	
Holler Park	06	438	32	$15,782	
Jackson Park	13	617	32	$22,215	
Kinnickinnic River Parkway	05	664	32	$23,903	
Kinnickinnic River Parkway	06	841	32	$30,262	
Kinnickinnic River Parkway	07	955	32	$34,393	
Oak Creek Parkway	02	627	32	$22,566	
Zablocki Park	07	325	32	$11,706	
Pulaski Park	05	809	33	$29,138	
Rawson Park	01	510	33	$18,354	
King Park	01	646	34	$23,249	
Tiefenthaler Park	01	717	34	$25,802	
Lincoln Park	11	1,389	34	$50,018	
Humboldt Park	12	1,508	35	$54,291	
Grant Park	09	217	37	$7,795	
Holler Park	04	364	37	$13,094	
Johnsons Park	03	1,420	38	$51,131	
Washington Park	15	457	39	$16,468	
Washington Park	21	182	39	$6,552	
Copernicus Park	03	784	39	$28,214	
Jacobus Park	01	235	40	$8,458	
Jacobus Park	02	756	40	$27,225	
King Park	03	1,818	40	$65,434	
Kosciuszko Park	03	1,714	40	$61,690	
Lake Park	19	2,163	40	$77,857	

PARK	Seg_ID	Length	CONDITION	ESTIMATED	REMARKS
Rose Park	08	237	40	$8,515	
Tiefenthaler Park	04	1,129	40	$40,653	
Washington Park	19	1,069	40	$38,471	
Smith Park	03	908	40	$32,673	
Vogel Park	02	200	40	$7,201	
Humboldt Park	16	2,254	40	$81,145	
Schoenecker Park	02	585	41	$21,059	
Honeycreek Parkway	01	266	42	$9,576	
Honeycreek Parkway	02	319	42	$11,478	
Juneau Park	01	2,031	42	$73,108	
Juneau Park	02	394	42	$14,169	
Juneau Park	03	2,332	42	$83,952	
McKinley Park	07	1,791	42	$64,478	
Tiefenthaler Park	03	518	42	$18,652	
Lincoln Park	06	2,139	42	$77,004	
Lincoln Park	07	1,295	42	$46,604	
Lincoln Park	08	495	42	$17,831	
Lincoln Park	09	1,263	42	$45,472	
Oak Creek Parkway	01	2,663	42	$95,855	
Dineen Park	06	828	43	$29,796	
Dineen Park	07	2,668	43	$96,040	
Dineen Park	08	651	43	$23,443	
Lafollette Park	02	515	44	$18,536	
Kinnickinnic River Parkway	01	425	44	$15,284	
Kinnickinnic Sports Center	01	302	44	$10,883	
McCarty Park	02	1,219	44	$43,900	
South Shore Park	02	884	44	$31,819	
Pulaski Park	03	2,142	45	$77,096	
Rainbow Park	03	342	45	$12,330	
Rainbow Park	04	205	45	$7,371	
Milwaukee River Parkway	01	1,521	45	$54,750	
Lake Park	05	583	46	$20,988	
Oak Creek Parkway	08	1,746	46	$62,866	
Meaux Park	01	966	47	$34,778	
Greenfield Park	03	776	48	$27,953	
Lake Park	07	634	48	$22,841	
Mitchell Park	02	778	48	$28,020	
Tiefenthaler Park	05	264	48	$9,515	
Veteran's Park	04	1,301	48	$46,834	
Washington Park	11	1,188	48	$42,768	
Brown Deer Park	01	1,790	48	$64,452	
Dretzka Park	02	855	48	$30,778	
Lindsay Park	01	107	48	$3,841	
Wahl Park	02	875	48	$31,510	
Wahl Park	03	422	48	$15,204	
Armour Park	01	1,050	48	$37,815	
Jackson Park	06	822	48	$29,605	
McCarty Park	01	31	48	$1,133	
McCarty Park	04	247	48	$8,897	

PARK	Seg_ID	Length	CONDITION	ESTIMATED	REMARKS
Root River Parkway	01	249	48	$8,958	
Wedgewood Park	02	757	48	$27,268	
Wilson Park	07	397	48	$14,293	
Wilson Recreation Center	01	1,703	48	$61,325	
Wilson Recreation Center	02	643	48	$23,135	
Wilson Recreation Center	03	1,563	48	$56,255	
Wilson Recreation Center	04	1,667	48	$60,025	
Wilson Recreation Center	05	578	48	$20,820	
West Milwaukee Park	02	797	49	$28,706	
Johnsons Park	01	2,071	50		
Lake Park	21	932	50		
McKinley Park	08	156	50		
Kletzsch Park	01	127	50		
Lincoln Park	04	684	50		
Copernicus Park	01	979	50		
Copernicus Park	04	683	50		
Sheridan Park	08	868	50		
Humboldt Park	08	750	51		
Rose Park	05	794	52		
Veteran's Park	03	1,740	52		
Cooper Park	03	718	53		
McCarty Park	05	938	53		
South Shore Park	01	1,593	53		
West Milwaukee Park	06	2,764	53		
Lake Park	15	601	54		
Moody Pool	01	625	54		
King Park	05	203	55		
Lake Park	11	312	55		
Rose Park	01	158	55		
Rose Park	06	959	55		
Veteran's Park	05	1,346	55		
Veteran's Park	06	2,942	55		
Washington Park	18	746	55		
Brown Deer Park	05	249	55		
Doctor's Park	01	130	55		
Lincoln Creek Parkway	05	536	55		
Lincoln Park	10	1,542	55		
Copernicus Park	02	540	55		
Maitland Park	01	2,198	55		
Maitland Park	02	1,244	55		
West Milwaukee Park	01	703	55		
Cooper Park	01	675	56		
Cooper Park	02	666	56		
Chippewa Park	01	893	57		
Chippewa Park	02	358	57		
Lake Park	09	372	57		
Washington Park	03	1,046	57		
Greenfield Park	02	1,068	58		
Johnsons Park	02	634	58		

PARK	Seg_ID	Length	CONDITION	ESTIMATED	REMARKS
Hales Corners Park	03	633	58		
Hales Corners Park	04	755	58		
Hales Corners Park	05	740	58		
McCarty Park	06	622	58		
Oak Creek Parkway	10	1,409	58		
Lafollette Park	05	603	59		
Lincoln Creek Parkway	02	310	59		
Falk Park	01	52	59		
Whitnall Park	01	731	59		
Doyne Park	02	115	60		
Lake Park	04	714	60		
Lake Park	17	360	60		
Sherman Park	06	628	60		
Washington Park	06	638	60		
Maitland Park	03	1,044	60		
Manitoba Park	01	702	60		
Oak Creek Parkway	03	3,209	60		
South Shore Park	04	1,175	60		
McGovern Park	04	939	61		
Noyes Park	02	1,022	61		
Smith Park	04	1,140	61		
Currie Golf Course	04	659	62		
Schoenecker Park	01	659	62		
Carver Park	07	288	63		
Carver Park	08	1,144	63		
King Park	06	778	63		
Washington Park	10	1,057	63		
Big Bay Park	01	328	63		
Madison Park	04	1,747	63		
Smith Park	05	749	63		
Alcott Park	02	555	63		
Hales Corners Park	01	1,248	63		
Hales Corners Park	02	854	63		
Jackson Park	01	1,042	63		
Warnimont Park	01	1,370	63		
Wilson Park	09	2,733	63		
Bluff Park	01	1,770	64		
Cathedral Square	1		64		
Jackson Park	11	1,962	64		
Greenfield Park	01	3,306	65		
Kosciuszko Park	01	1,304	65		
Sherman Park	07	620	65		
Veteran's Park	01	2,914	65		
Veteran's Park	02	2,231	65		
Veteran's Park	07	3,716	65		
Froemming Park	01	825	65		
Lyons Park	02	1,231	65		
Lyons Park	04	851	65		
Lyons Park	05	600	65		

PARK	Seg_ID	Length	CONDITION	ESTIMATED	REMARKS
Tippecanoe Park	01	1,685	65		
McKinley Park	06	1,339	67		
Currie Golf Course	01	2,330	67		
Greene Park	01	1,073	67		
Saveland Park	01	1,013	67		
Saveland Park	02	1,031	67		
Doyne Park	03	260	68		
Dretzka Park	03	2,554	68		
Dretzka Park	05	238	68		
Popuch Park	01	807	68		
Kinnickinnic River Parkway	03	384	68		
Oak Creek Parkway	09	322	68		
Oakwood Park	01	316	68		
Oakwood Park	03	1,058	68		
Oakwood Park	05	481	68		
Rose Park	07	449	69		
Dineen Park	04	1,936	69		
Doctor's Park	02	845	69		
Euclid Park	02	669	69		
Wedgewood Park	01	323	69		
McGovern Park	05	1,100	70		
Humboldt Park	02	1,692	70		
Humboldt Park	03	1,147	70		
Humboldt Park	15	1,839	70		
Riverton Meadows Park	01	988	70		
St. Martin's Park	01	1,275	70		
Carver Park	06	961	71		
Greenfield Park	05	1,740	71		
Kosciuszko Park	02	1,376	71		
Rainbow Park	01	1,345	71		
Rainbow Park	02	531	71		
Washington Park	23	1,343	71		
Algonquin Park	01	457	71		
Lincoln Creek Parkway	01	361	71		
Lincoln Creek Parkway	07	229	71		
Lincoln Park	01	1,507	71		
Lindbergh Park	01	1,590	71		
McGovern Park	09	1,307	71		
Smith Park	06	547	71		
Alcott Park	03	1,181	71		
Alcott Park	04	538	71		
Zablocki Park	01	1,544	71		
Zablocki Park	05	155	71		
Lafollette Park	03	1,366	72		
Wahl Park	01	811	72		
Wahl Park	04	355	72		
Greenfield Park	06	816	73		
Wisconsin Avenue Park	02	546	73		
Zeidler Park	01	820	73		

PARK	Seg_ID	Length	CONDITION	ESTIMATED	REMARKS
Brown Deer Park	08	2,647	73		
Brown Deer Park	09	929	73		
Brown Deer Park	10	2,304	73		
Madison Park	03	657	73		
Euclid Park	03	1,028	73		
Humboldt Park	17	979	73		
Jackson Park	08	1,165	73		
West Milwaukee Park	04	694	73		
Kinnickinnic Sports Center	03	503	74		
Sheridan Park	06	998	74		
Baran Park	01	746	75		
Carver Park	01	994	75		
Carver Park	09	154	75		
Lake Park	01	309	75		
Lake Park	16	850	75		
Lake Park	18	350	75		
Lake Park	20	86	75		
Rainbow Park	05	831	75		
Sherman Park	01	1,309	75		
Sherman Park	02	578	75		
Sherman Park	03	808	75		
Sherman Park	04	542	75		
Walker Square Park	01	1,483	75		
Algonquin Park	04	427	75		
Currie Golf Course	02	665	75		
Currie Golf Course	03	571	75		
Lincoln Park	02	114	75		
Greene Park	04	510	75		
Greene Park	05	411	75		
Jackson Park	10	2,467	75		
Kulwicki Park	03	839	75		
Lyons Park	01	767	75		
McCarty Park	10	1,479	75		
Tippecanoe Park	05	482	75		
Zablocki Park	02	602	75		
Zablocki Park	03	315	75		
Zablocki Park	04	599	75		
Zablocki Park	06	957	75		
Rose Park	03	355	76		
Brown Deer Park	03	1,712	76		
Cooper Park	04	280	76		
Jackson Park	03	1,074	76		
Jackson Park	04	917	76		
Scout Lake Park	06	3,190	76		
West Milwaukee Park	03	594	76		
Greenfield Park	04	52	77		
Lake Park	14	1,707	77		
McKinley Park	03	2,854	77		
Dretzka Park	01	448	77		

PARK	Seg_ID	Length	CONDITION	ESTIMATED	REMARKS
Lindsay Park	02	304	77		
Smith Park	02	557	77		
Holler Park	05	173	77		
Clarke Square Park	01	552	78		
Oakwood Park	04	370	78		
McKinley Park	01	1,534	79		
Riverside Park	01	2,211	79		
Rose Park	04	147	79		
Brown Deer Park	06	297	79		
McGovern Park	08	64	79		
Nash Park	01	1,436	79		
Nash Park	02	1,770	79		
Bay View Park	02	169	79		
Bay View Park	03	101	79		
Humboldt Park	19	376	79		
Kulwicki Park	01	172	79		
Kulwicki Park	02	1,100	79		
Oak Creek Parkway	04	225	79		
Wedgewood Park	03	817	79		
Jacobus Park	03	500	80		
Jacobus Park	04	509	80		
Jacobus Park	05	303	80		
Jacobus Park	06	850	80		
Jacobus Park	07	1,247	80		
Jacobus Park	08	1,181	80		
Jacobus Park	09	870	80		
Mitchell Boulevard Park	02	2,155	80		
Pulaski Park	01	1,088	80		
Pulaski Park	02	510	80		
Pulaski Park	04	1,075	80		
Valley Park	01	180	80		
Washington Park	16	319	80		
Doctor's Park	03	464	80		
Noyes Park	06	712	80		
Noyes Park	07	1,007	80		
Alcott Park	01	758	80		
Bender Park	01	2,926	80		
Copernicus Park	05	899	80		
Cudahy Park	05	434	80		
Grant Park	10	752	80		
Holler Park	01	487	80		
Holler Park	03	374	80		
Humboldt Park	04	706	80		
McCarty Park	09	410	80		
Mitchell Airport Park	01	1,546	80		
Sheridan Park	03	516	80		
Wilson Park	10	1,136	80		
Wilson Park	11	167	80		
Mitchell Park	04	1,236	81		

PARK	Seg_ID	Length	CONDITION	ESTIMATED	REMARKS
Mitchell Boulevard Park	01	1,291	82		
Washington Park	25	1,064	82		
Humboldt Park	01	2,123	82		
Humboldt Park	05	1,248	82		
Humboldt Park	18	1,270	82		
McCarty Park	07	1,298	82		
Center Street Park	01	570	83		
Center Street Park	02	345	83		
Doyne Park	01	361	83		
Lake Park	02	2,358	83		
Lake Park	03	1,016	83		
Lake Park	10	958	83		
Rose Park	02	442	83		
Washington Park	01	1,827	83		
Wisconsin Avenue Park	01	123	83		
Grant Park	04	1,224	83		
Jackson Park	14	477	83		
Root River Parkway	02	244	83		
Root River Parkway	03	203	83		
Root River Parkway	04	538	83		
Scout Lake Park	07	1,060	83		
South Shore Park	03	591	83		
South Shore Park	05	1,435	83		
Atkinson Park	01	609	84		
Columbus Park	01	1,778	84		
Columbus Park	02	504	84		
Dineen Park	01	1,521	84		
Dineen Park	02	1,576	84		
Dineen Park	03	1,140	84		
Dineen Park	05	1,510	84		
Dretzka Park	04	968	84		
Estabrook Park	01	1,102	84		
Estabrook Park	02	593	84		
Lincoln Creek Parkway	06	1,548	84		
Madison Park	01	716	84		
Madison Park	02	807	84		
Madison Park	05	216	84		
Vogel Park	01	784	84		
Jackson Park	02	860	84		
Jackson Park	05	966	84		
McCarty Park	08	1,002	84		
Wilson Park	02	2,407	84		
Wilson Park	08	621	84		
Carver Park	05	97	85		
Clarke Square Park	02	404	85		
Hansen Park	01	1,562	85		
Highland Park	01	104	85		
Lafollette Park	01	749	85		
Lake Park	06	1,576	85		

PARK	Seg_ID	Length	CONDITION	ESTIMATED	REMARKS
Lake Park	08	702	85		
Lake Park	23	494	85		
Sherman Park	05	975	85		
Cudahy Park	02	560	85		
Cudahy Park	04	594	85		
Grant Park	05	110	85		
Grant Park	14	656	85		
Holler Park	02	763	85		
Jackson Park	09	1,220	85		
Jackson Park	12	672	85		
Kinnickinnic Sports Center	02	1,014	85		
Lyons Park	03	1,357	85		
McCarty Park	03	744	85		
McCarty Park	11	2,137	85		
Oakwood Park	02	1,166	85		
Scout Lake Park	01	853	85		
Scout Lake Park	02	1,228	85		
Scout Lake Park	03	499	85		
Tippecanoe Park	02	1,390	85		
Tippecanoe Park	03	323	85		
Tippecanoe Park	04	450	85		
West Milwaukee Park	05	583	85		
Back Bay	01	316	87		
Baran Park	02	581	87		
McKinley Park	02	2,004	87		
McKinley Park	05	1,889	87		
Mitchell Park	01	621	87		
Washington Park	05	684	87		
Brown Deer Park	07	1,161	87		
Bay View Park	05	197	87		
Humboldt Park	06	371	87		
Humboldt Park	09	1,748	87		
Humboldt Park	14	283	87		
Scout Lake Park	04	974	87		
Gordon Park	01	2,305	88		
Kern Park	02	1,012	88		
Noyes Park	03	236	88		
Noyes Park	04	953	88		
Noyes Park	05	633	88		
Servite Park Preserve	01	1,849	88		
Greene Park	03	1,486	88		
Pulaski-Cudahy Park	03	697	88		
Carver Park	02	933	89		
Scout Lake Park	05	885	89		
Carver Park	03	944	90		
Carver Park	04	1,404	90		
Clarke Square Park	03	426	90		
Doyne Park	04	220	90		
Doyne Park	05	247	90		

PARK	Seg_ID	Length	CONDITION	ESTIMATED	REMARKS
Mitchell Park	03	448	90		
Mitchell Park	05	517	90		
Mitchell Park	06	1,744	90		
Mitchell Park	07	1,310	90		
Mitchell Park	08	1,343	90		
Mitchell Park	09	621	90		
Mitchell Park	10	1,093	90		
Mitchell Park	11	359	90		
Tiefenthaler Park	02	451	90		
Algonquin Park	02	783	90		
Brown Deer Park	02	854	90		
Doctor's Park	04	75	90		
Noyes Park	01	642	90		
Barnard Park	01	550	90		
Cudahy Park	01	1,240	90		
Cudahy Park	03	453	90		
Euclid Park	01	547	90		
Grant Park	03	194	90		
Grant Park	08	521	90		
Grant Park	12	3,079	90		
Grant Park	13	982	90		
Greene Park	02	1,676	90		
Jackson Park	07	1,155	90		
Johnstone Park	01	2,608	90		
Kinnickinnic River Parkway	02	752	90		
Kinnickinnic River Parkway	04	327	90		
Kinnickinnic Sports Center	04	490	90		
Milwaukee County Sports Com	01	43	90		
Oak Creek Parkway	05	3,108	90		
Oak Creek Parkway	06	691	90		
Oak Creek Parkway	07	6,022	90		
Pulaski-Cudahy Park	01	899	90		
Sheridan Park	01	638	90		
Sheridan Park	09	1,057	90		
Sheridan Park	10	313	90		
Sheridan Park	11	919	90		
Wilson Park	01	1,095	90		
Wilson Park	03	1,108	90		
Wilson Park	04	2,681	90		
Wilson Park	05	1,475	90		
Wilson Park	06	1,177	90		
Washington Park	22	2,168	91		
Kern Park	06	1,271	91		
Baran Park	03	324	92		
Bradford Beach	01	963	92		
Greenfield Park	07	1,545	92		
Washington Park	24	1,710	92		
Big Bay Park	03	871	92		
Brown Deer Park	04	1,030	92		

PARK	Seg_ID	Length	CONDITION	ESTIMATED	REMARKS
Brown Deer Park	11	2,220	92		
Dineen Park	09	1,304	92		
Kern Park	01	625	92		
Kletzsch Park	03	330	92		
Kops Park	01	1,001	92		
Kops Park	02	976	92		
Lincoln Park	05	249	92		
McGovern Park	02	1,720	92		
Grant Park	01	142	92		
Grant Park	06	389	92		
Grant Park	07	682	92		
Humboldt Park	07	1,019	92		
Humboldt Park	10	1,893	92		
Pulaski-Cudahy Park	04	687	92		
Sheridan Park	04	1,191	92		
Sheridan Park	05	528	92		
Washington Park	26	1,830	93		
Hoyt Park	04	384	95		
Washington Park	02	549	95		
Washington Park	04	765	95		
Bay View Park	01	157	95		
Sheridan Park	02	312	95		
Sheridan Park	07	1,151	95		
Cannon Park	01	287	96		
Cannon Park	02	603	96		
Cannon Park	03	731	96		
Washington Park	13	1,319	96		
Washington Park	14	735	96		
Washington Park	20	850	96		
Estabrook Park	03	1,260	96		
Estabrook Park	04	230	96		
Estabrook Park	05	1,112	96		
Estabrook Park	06	519	96		
Estabrook Park	07	1,150	96		
Estabrook Park	08	1,046	96		
Estabrook Park	09	190	96		
Garden Homes Square	01	249	96		
Kern Park	03	1,527	96		
Kern Park	04	755	96		
Kern Park	05	751	96		
Kern Park	07	553	96		
Washington Park	07	1,234	98		
Washington Park	08	515	98		
Washington Park	09	1,721	98		
Hoyt Park	01	1,142	100		
Hoyt Park	02	1,271	100		
Hoyt Park	03	1,028	100		
King Park	8	150	100		
Lake Park	12	844	100		

PARK	Seg_ID	Length	CONDITION	ESTIMATED	REMARKS
Lake Park	13	872	100		
Tiefenthaler Park	06	594	100		
Doctor's Park	05	454	100		
Kletzsch Park	02	499	100		
Lincoln Park	12	1,213	100		
Lindsay Park	04	802	100		
McGovern Park	01	543	100		
McGovern Park	03	253	100		
McGovern Park	06	863	100		
McGovern Park	07	148	100		
Popuch Park	02	352	100		
Vogel Park	03	737	100		
Kosciuszko Park	7	118			Not Rated
Dineen Park	10	749			Not Rated
Kletzsch Park	5	342			Not Rated
Lindbergh Park	02	143			Not Rated
Madison Park	8	128			Not Rated
McGovern Park	10	160			Not Rated
Noyes Park	08	340			Not Rated
Cupertino Park	01				Not Rated
Cupertino Park	02				Not Rated
Whitnall Park	14	88			Not Rated
Whitnall Park	15	1,993			Not Rated
				$5,394,260	

Tennis Courts

Milwaukee County Parks Department - Tennis Court Evaluations

Park Location	Courts	Estimate	Rating	Comments
Kinnickinnic River Parkway	5.0		36	
Brown Deer Park	4.0		38	
Rainbow Park	3.0	$165,000	40	Funded - 2012 Construction
LaFollette Park	3.0		42	
Kosciuszko Park	5.0	$275,000	44	Funded - 2012 Construction
Pulaski Park	2.0		48	
Froemming Park	2.0		48	
Zablocki Park	3.0	$165,000	49	Funded - 2012 Construction
Washington Park	6.0		56	
McCarty park	4.0		57	
West Milwaukee Park	3.0		59	
Noyes Park	3.0		63	
Sherman Park	6.0		68	
Lake Park	5.0		70	
Madison Park	4.0		70	
McKinley Marina	6.0		75	
Humboldt Park	4.0		88	
McGovern Park	1.0		90	
Sheridan Park	2.0		90	
Lincoln Park	4.0		91	
Wilson Recreation Center	2.0		91	
Kern Park	1.0		95	Nets removed
Jackson Park	3.0		96	
Greene Park	3.0		100	Under construction
Dineen Park	4.0		100	
Grant Park (North Courts)	3.0		100	
Grant Park (South Courts)	3.0		100	
Hales Corners Park	1.0		100	
Columbus Park	2.0			Converted to Batting Cage
Oak Creek Parkway	8.0			Not Rated

Total of 105 Courts systemwide

Basketball Courts

Milwaukee County Parks Department - Basketball Court Evaluations

Park Location	Courts	Budget	Rating	Comments
Moody Park	6.0		20	
Barnard Park	3.0	$165,000	39	2012 Construction
Copernicus Park	1.0	$55,000	40	2012 Construction
Cudahy Park	2.0	$110,000	42	2012 Construction
Pulaski Park	1.0	$55,000	44	2012 Construction
Kinnickinnic Sports Center	2.0	$110,000	44	2012 Construction
Zablocki Park	2.0		53	
Rose Park	2.0		56	
LaFollette Park	2.0		60	
Madison Park	2.0		64	
Holler Park	1.0		64	
Wahl Park	2.0		65	
McCarty	1.0		66	
Popuch Park	2.0		68	
Washington Park	4.0		69	
Wil-O-Way(Underwood)	1.0		69	
King Park	4.0		70	
Sherman Park	1.0		70	
Lindbergh Park	2.0		70	
McGovern Park (North Courts)	4.0		72	
Chippewa Park	1.0		76	
Carver Park	3.0		80	
Euclid Park	1.0		81	
Cannon Park	two 1/2		83	
McGovern Park (South Courts)	2.0		85	
Sheridan Park	1.0		86	
Kosciuszko Park	0.5		87	
Tiefenthaler Park	2.0		89	
Lindsay Park	2.0		89	
Grant Wil-O-Way	two 1/2		91	
Jackson Park	1.0		92	
Atkinson Park	2.0		100	
Doyne Park	1.5		100	
Dineen Park	2.0		100	
Kops Park	two 1/2		100	Rims taken down
Meaux	6.0		100	
Greene Park	1.0		100	Under construction
Hales Corners Park	1.0		100	
Mitchell Park	4.0		Gone	Sodded over
Kern	2.0			Not Rated
Riverton Meadows	1.0			
St. Martins Park	2.0			Leased

Total of 84 Courts systemwide

Boat Launches

Milwaukee County Parks Department Boat Launch Assessment Report

	Construction	Engineering	Total	
McKinley Marina	$440,000	$73,000	$513,000	New pavement needed
Bender Park				
River Front				MMSD Rebuild 2009
South Shore Park				
			$513,000	

Multi-use Trails

Milwaukee County Parks Department - Oak Leaf Trail Condition Evaluations

Section	Location	(Miles)	Estimate	Rating	Comments
East Side Bike Trail	East side of O'Donnell Park	0.2		0	Concrete
Underwood Creek Parkway	Underwood Creek Parkway on west side of Swan Blvd.	0.2	$53,756	20	
Milwaukee River Parkway	Lincoln Park Milwaukee River branch	1.1	$286,000	30	
Lincoln Creek Spur	Meaux between Green Bay Ave. & WE Energies ROW	0.3	$76,208	39	
Oak Creek Parkway	South side of Drexel between Howell Ave. and S. 13th St.	1.0	$255,265	40	
South Lakefront	Sheridan Park between Lunham Ave. & Pulaski Ave.	1.2	$324,678	41	
Underwood Creek Parkway	Underwood Creek Parkway between Bluemound Rd. & Fairview Ave.	0.5	$126,600	42	
South Lakefront	Grant Park between College Ave. & 400' north of Grant Golf parking lot	1.9	$485,795	42	
KK Sports Center	KK Sports Center segment	0.3	$69,688	44	
Little Menomonee River Parkway	Between Leon Terrace and foot bridge over Little Menomonee River	0.8		50	
Milwaukee River Parkway	Lincoln Park Lincoln Creek branch	0.6		50	
South Lakefront	Cupertino Park between South Shore Marina and Russell Ave.	0.3		50	
Little Menomonee River Parkway	Good Hope Road between 115th St. & 124th St.	0.3		60	
Northwest Loop	South side of Bradley Road between 91st and 94th	0.2		60	
Root River Parkway	Greenfield Park New Berlin trail spur	0.2		60	
South Lakefront	Warnimont between Pulaski Ave. & College Ave.	1.8		61	
Underwood Creek Parkway	Underwood Creek Parkway between Hwy 100 & 115th St.	0.6		62	
McCarty Park Segment	McCarty Park segment	0.3		62	
Root River Parkway	Root River Parkway between Rawson Ave. & 68th St.	0.8		68	
Little Menomonee River Parkway	Between Silver Spring Dr. & Bobolink Ave.	0.4		70	
Milwaukee River Parkway	Milwaukee River Parkway between Green Tree Rd. & Bender Rd.	0.8		70	
Northwest Loop	Between 94th St. & 107th St.	0.8		70	
Northwest Loop	Between 107th St. & Bradley Rd. entrance to Dretzka Park	0.8		70	
Lakefront Loop	Between Michigan Ave. & Veterans parking lot	0.9		71	
Milwaukee River Parkway	Milwaukee River Pkwy between Silver Spring and Lincoln Park	0.5		71	
South Lakefront	Between South Shore Marina parking lot & South Shore Park play area	0.2		71	
Lincoln Creek Spur	Lincoln Creek Parkway between Teutonia Ave. & Cameron Ave.	0.2		73	
Lincoln Creek Spur	Meaux between WEEnergies ROW & Villard Ave.	0.2		73	
East Side Bike Trail	East Side bike trail between Mason St. & Lafayette access	1.2		75	
Lakefront Loop	In Lake Park between golf course parking lot & North Ave.	0.7		75	
East Side Bike Trail	East Side bike trail between Riverside Park access & Lafayette access	1.2		76	
East Side Bike Trail	East Side Bike Trail-Mason St. spur	0.3		76	
Root River Parkway	Greenfield Park between service yard & golf course parking lot	0.3		76	
Lakefront Loop	Between North Ave. & Lake service yard (lake side of Lincoln Memorial Dr.)	1.4		77	
Lakefront Loop	In Lake Park between north entrance to Newberry entrance	0.4		77	

Section	Location	(Miles)	Estimate	Rating	Comments
East Side Bike Trail	East Side bike trail between Providence Ave. & Congress St.	1.2		80	
East Side Bike Trail	East Side bike trail between Providence Ave. & Riverside Park access	1.0		80	
Northwest Loop	Between Bradley Road entrance to Dretzka Park and Fond du Lac Ave.	0.4		80	
North Shore ROW	Former North Shore ROW between Ryan Rd. & Puetz	1.6		80	
North Shore ROW	Oak Creek Parkway between Shepard & Howell	0.4		80	
Oak Creek Parkway	Oak Creek Parkway between Nicholson Ave. & Drexel Ave. at C&NW RR	0.9		80	
Oak Creek Parkway	Oak Creek Parkway between Missouri Ave. & Nicholson Ave.	1.1		80	
Root River Parkway	Root River Parkway Kulwicki Park spur	0.2		80	
South Lakefront	Sheridan Park between Howard Ave. endpoint & Bottsford Ave.	0.9		80	
South Lakefront	Along east side of Lake Dr. between Packard Ave. end & Howard Ave. end	0.3		80	
South Lakefront	Between Bay View Park top of bluff & Packard Ave.endpoint	0.5		80	
North Shore ROW	Former North Shore ROW between Drexel Ave. & Manitoba	0.5		81	
North Shore ROW	Former North Shore ROW between Drexel Ave & Puetz Rd.	1.1		81	
Oak Creek Parkway	South side of Drexel Ave. between C&NW RR & Howell Ave.	1.0		81	
Underwood Creek Parkway	Underwood Creek Parkway between parkway drive and Hwy. 100	0.1		82	
Lakefront Loop	Between Brady St. & North Ave. (east side of Lincoln Memorial Dr.)	0.8		86	
Menomonee River	Doyne Park north to Hawley Road	0.7		86	
Menomonee River Parkway	Menomonee River Parkway between Swan Blvd & Harmonee Ave.	1.1		86	
East Side Bike Trail	East Side Bike Trail-Brady St. ramp and bridge	0.2		88	
Menomonee River Parkway	Menomonee River Parkway between Harmonee Ave. & Honey Creek Parkway	0.5		90	
East Side Bike Trail	East Side Bike Trail between Congress St. & Berkley Ave.	0.5		90	
North Shore ROW	Former North Shore ROW between Ryan Rd. & County Line Rd.	2.1		90	
Root River Parkway	Root River Parkway between 108th & 116th @ Morgan	1.0		90	
Root River Parkway	Root River Parkway between Layton and S. 108th	1.1		90	
Root River Parkway	Root River Parkway between Drexel Rd. & Rawson Ave.	1.4		90	
Root River Parkway	Root River Parkway between Puetz Rd. & Drexel Ave.	1.1		90	
Root River Parkway	Root River Parkway between Sports Complex & Puetz Rd.	0.8		90	
Root River Parkway	Root River Parkway between Nicholson Rd. & Howell Ave.	1.3		90	
South Lakefront	Between South Shore Park play area & Bay View Park at top of bluff	1.0		90	
Little Menomonee River Parkway	Between W. Good Hope Rd. & W. Bradley Rd.	1.1		91	
Milwaukee River Parkway	Segment in Estabrook Park	1.6		92	
Root River Parkway	Greenfield Park, in woods in SE corner of park	0.5		96	New in 2009
Root River Parkway	Root River Parkway between 68th Street parking lot and Parkway drive at Loomis	0.4		100	

Section	Location	(Miles)	Estimate	Rating	Comments
Milwaukee River Parkway	In Gordon Park and Milwaukee River Pkwy between Locust and North (Beerline)	0.8		100	New in 2010
Little Menomonee River Parkway	Between Congress St. & Silver Spring Dr.	2.4		100	New in 2010
Little Menomonee River Parkway	Between bridge over Little Menomonee River & Good Hope Rd.	0.3		100	
Root River Parkway	Beloit Road underpass	0.1		100	

105TH ANNIVERSARY | MILWAUKEE COUNTY PARKS

Bridges

Milwaukee County Parks - Bridge Assessment Report

Bridge Ref. #	State I.D. Number	LOCATION	Length (ft.)	No. of Lanes	Sufficiency Rating	Estimate
84*	P-40-0568	Jackson Park Dr. over north branch of Kinnickinnic River	40.3	2	38.2	$950,000.00
59*	P-40-0721	Whitnall Park Drive over branch of Root River	28.0	2	43.5	$950,000.00
54*	P-40-0561	Root River Parkway over Root River	46.0	2	63.9	$950,000.00
60*	P-40-0713	Whitnall Park Drive over branch of Root River	24.5	2	64.8	$925,000.00
69*	P-40-0771	W. Vienna Avenue @ Grantosa Pkwy	37.0	2	66.6	$925,000.00
61*	P-40-0564	Whitnall Park Drive over branch of Root River east of STH 10(	28.0	2	67.9	$925,000.00
62*	P-40-0565	Whitnall Park Drive over branch of Root River east of STH 10(	28.0	2	67.9	$925,000.00
53*	B-40-0936	Mill Road over Oak Creek	48.0	2	68.9	$300,000.00
82*	P-40-0750	W. Hampton Avenue over Milwaukee River-Lincoln Park	291.0	4	74.2	$1,400,000.00
63*	P-40-0566	Root River Parkway Connector over Root River	42.5	1	74.5	$10,000.00
80*	B-40-0502	E. North Avenue over the Oak Leaf Bike Trail	95.6	4	76.0	$1,800,000.00
70*	B-40-0511	Swan Boulevard over Menomonee River	127.6	4	77.6	$1,400,000.00
81*	B-40-0503	N. Oakland Avenue over the Oak Leaf Bike Trail	124.0	4	78.4	$1,800,000.00
47*	B-40-0218	Oak Creek Parkway over Oak Creek	70.8	2	80.4	$10,000.00
48*	P-04-0740	Oak Creek Parkway over Oak Creek east of Mill Road	48.0	2	82.7	$10,000.00
43*	B-40-0636	E. Locust Street over the Oak Leaf Trail	78.0	4	84.0	$30,000.00
71*	P-40-0572	Brown Deer Park Road over Lagoon @ Pavilion	28.0	2	85.5	$10,000.00
65*	P-40-0778	Honey Creek Pkwy over Honey Creek @ St. Anne Court	48.0	2	88.0	$950,000.00
68*	B-40-0341	Meno. River Pkwy over branch of Meno River east of STH 10(	26.5	2	89.0	$10,000.00
64*	P-40-0570	Honey Creek Pkwy over Honey Creek S. of Bluemound Road	48.0	2	89.4	$950,000.00
51*	B-40-0601	Oak Creek Parkway over Oak Creek @ Oak Street	49.8	2	93.2	$150,000.00
83*	B-40-0524	E. Mason Street over Lincoln Memorial Drive	674.9	4	93.4	$2,000,000.00
50*	B-40-0026	Oak Creek Parkway over Oak Creek @ 9th Avenue	52.0	2	94.0	$50,000.00
72*	B-40-0646	Milw. River Pkwy over north branch of Milwaukee River	61.2	2	96.0	$2,000,000.00
79*	B-40-0559	E. Lafayette Pl. & N. Summit Ave. over the Oak Leaf Bike Trai	75.1	4	97.2	$1,400,000.00
46*	B-40-0558	E. Belleview Place over the Oak Leaf Trail	74.5	2	97.9	$10,000.00
56*	B-40-0564	Root River Parkway (east) over Hale Creek	26.5	2	97.9	$925,000.00
74*	P-40-0573	Lake Park Drive over Ravine south of Lake Drive	50.0	2	100.0	$1,500,000.00
85*	P-40-0569	Kinnickinnic River Parkway	124.0	4	100.0	$1,500,000.00
44	P-40-0575	Oak Leaf Bike Trail over Hubbard Park Drive	42.0	N/A	N/A	$10,000.00
		Lake Park: Lion Bridges, Ravine Drive Bridge, West Bridge				$5,000,000.00
		Lyons Park Bridges				$300,000.00
		Grant Park Bridges				$800,000.00
		Pedestrian, Golf Courses, Recreational Multi-Use Trail Bridges				$4,500,000.00
Total preliminary estimate to repair, rehabilitate, or replace parks bridges:						$35,375,000.00

This list identifies both vehicular and multi-use/pedestrian/recreational bridges under the maintenance jurisdiction of Parks. Vehicular bridges listed in the State and FHWA inventory and eligible for 80% of State and Federal matching funds under the Local Bridge Program and normally budgeted for major rehabilitation or replacement capital expenditures under DTPW are identified with an (*). A sufficiency rating of 50 or less is required for use of State or Federal funds for structure replacement and 80 or less for structure rehabilitation. This preliminary estimate provide cost to perform needed maintenance and cost to rehabilitate or replace difficient bridges. It reflects a 10-Year Rehabilitation & Replacement Program.

Pools

Milwaukee County Parks - Pool Evaluations Summary

SWIMMING POOL COST ESTIMATE
SUMMARY OF LONG-TERM WORK (FOR SERVICE LIFE OF 30-YEARS)

LOCATION	COST ESTIMATE
CARVER	$34,000
GREENFIELD	$80,000
GROBSCHMIDT	$270,000
HALES CORNERS	$400,000
HOLLER	$120,000
JACKSON	$200,000
KOSCIUSKO	$350,000
McCARTY	$1,010,000
SHERIDAN	$320,000
WASHINGTON	$480,000
WILSON	$50,000
TOTAL ESTIMATE	$3,314,000

NOTE: THE ABOVE ESTIMATES INCLUDE PLANNING AND DESIGN FEES.

Note: The 2010 Pool Report is attached in the Section titled "Operations Recommendation #4"

105TH ANNIVERSARY | MILWAUKEE COUNTY PARKS

Storm and Sanitary Sewers

Milwaukee County 2/16/2012
Parks Sanitary Sewer Overview *

Overview table

	Sanitary Features	Lengths of San. Pipe	Lift Stations	Dentention Sumps	Grease Traps	Septic Tanks	Standard Manholes
Parks - North	236	55,128	7	2	3	0	224
Parks - South	256	63,262	11	7	3	1	234
Total	492	118,390	18	9	6	1	458
		linear feet					

County Lift Station List

Parks North	MH-01	Doctors Park	Outdoor		2
	MH-11	Dretzka Park	Outdoor		3
	MH-01	McKinley Park	Outdoor		4
	MH-09	McKinley Park	Outdoor		5
	MH-11	McKinley Park	Outdoor		6
	MH-05	Dineen Park	Outdoor		7
	LS1	Brown Deer Park	Indoor	Clubhouse	8
Parks South	MH-03	Oakwood Park	Outdoor		9
	MH-16	Mitchell Park	Outdoor		10
	LS2	South Shore - Fish Cleaning Bldg	Outdoor		11
	LS1	South Shore - Yacht Club	Outdoor	City or Yacht Club takes care of	12
	LS3	South Shore - Pavilion	Indoor	Pavilion	13
	LS1	Bender	Outdoor		14
	MH-29	Grant Beach	Indoor	Has own Building	15
	LS1	Cupertino	Indoor	Comfort	16
	LS1	Oak Creek Skate	Indoor	Mill Pond on Grank Pkwy	17
	LS1	Whitnall Park	Indoor	Area 8 Picnic Shelter	18
	LS2	Whitnall / Boerner	Indoor	Vistor Center	19

Detention Sumps / Basins

Parks North	684-004	Dineen Park	Wading Pool	1
	679-001	Lindsay Park	Wading Pool	2
Parks South	782-013	Mitchell Park	Wading Pool	3
	616-002	Hales Corners Park	Wading Pool	4
	600-001	Alcott Park	Wading Pool	5
	619-001	Humboldt	Wading Pool	6
	766-020	Greenfield	Cool Waters	7
	614-001	Greene	Wading Pool	8
		Pulaski - Cudahy	Wading Pool	9

Grease Traps at the following locations:

Whitnall	North of Building	2 mh covers	MH-010	2
Oakwood	North of Building			3
South Shore	Yacht Club		GT1	4
Lake Park	Lake Park Bistro		MH-005	5
Brown Deer	Inside Clubhouse			6
Bradford Beach	Inside Concession Bldg.			7

Septic Tanks at the following locations:

Franklin LF	**MH-018**	3

COMBINED Sewer Areas:

1	**Gordon Park**
2	**Humboldt Park**
3	**Moody Park**
4	**Washington Park**

San. Sewer Ownership Notes:

1	**Cooper Park: San. Sewer not owned by Milw Cnty**
2	**Bradford Beach: Half owned by Milw Cnty**
3	**Jacobus Park: Partially owned by Milw Cnty**
4	**Madison Park: Half owned by Milw Cnty**
5	**Franklin Sports Complex: San. Sewers not owned by Milw Cnty**
5A	**Wehr Nature Center (Whitnall): San. Sewers owned by City of Franklin**
5B	**Pulaski (Milw): City of Milw. Has San. Sewers running thru park.**
7	**O'Donnel Park: Partially owned by Milw Cnty**
8	**Kletsch Park: Partially owned by Milw Cnty**
9	**McGovern Park: Partially owned by Milw Cnty (City at South-East)**
10	**Washington Park: Partially owned by City**
11	**Moody Park: Partially owned by Milw Cnty**
12	**KK Sports / Simmons Field - Sewer crosses land owned by trucking company**

PIPES to watch - Clean manholes / pipes more often

P A R K S - S O U T H		**Reasons:**
Doyne	**(763-001-002)**	Pipe settlement due to landfill settlement
Scout Lake	**(637-003-001)**	Reverse Pitch
Grant	**(613-IN-021)**	Low flow
Warnimont	**(644-IN-002)**	Debris (low flow?)
Baran	**(751-IN-001)**	Past problems - Surcharging
Wilson	**(649-007-006)**	Past problems - Surcharging
P A R K S - N O R T H		**Reasons:**
Juneau Park	**(772-IN-003)**	Human error (rags, etc.)

Playgrounds

Milwaukee County Parks - Playground Assessment Report

Park Name	Class	Installed	Age	Replaced	CostEstimate
LaFollette	3	1994	15		
Lincoln No. 2 (Pool)	4	1992	17		
Pulaski-Cudahy	3	1995	14		
Rainbow	3	1995	14		
Mitchell Airport	3	1995	14		
Manitoba	3	1995	14		
Kulwicki No. 1	3	1995	14		
Riverton Meadows	3	1994	15		
Carver	2	1996	13		
Dineen	2	1997	12		
Lyons	3	1996	13		
South Shore	1	1996	13		
Jackson	2	1998	11		
Jacobus	1	1998	11		
Center Street	3	1997	12		
Wisconsin Avenue	3	1997	12		
Cooper	3	1998	11		
Tippecanoe	3	1997	12		
Mitchell Boulevard	3	1996	13		
Hales Corners	2	1998	11		
A.C. Hanson	3	1998	11		
Greenfield (Cool Waters)	4	1997	12		
Kosciuszko (Pelican Cove)	4	1997	12		
Zablocki	2	1999	10	1999	
Wilson	2	1999	10	1999	
Sheridan No. 1	2	1999	10	1999	
Holler	2	1999	10	1999	
Greene	2	1999	10	1999	
Kops	3	1999	10	1999	
Columbus	3	1999	10	1999	
Madison	2	1999	10	1999	
Vogel	3	1999	10	1999	
Lindsay	3	1999	10	1999	
Algonquin	3	1999	10	1999	
Cudahy	3	1999	10	1999	
Hoyt	2	2000	9	2000	
Alcott	2	2000	9	2000	
Kern	2	2000	9	2000	
Copernicus	2	2000	9	2000	
Washington No. 2	2	2000	9	2000	
Kulwicki No. 2	2	2000	9	2000	
Grobschmidt Pool	3	2000	9	2000	
Popuch	3	2000	9	2000	
Chippewa	3	2000	9	2000	
Doyne	3	2000	9	2000	
Grant No. 2	3	2000	9	2000	
Estabrook No. 2	3	2000	9	2000	
K.K. Sports Center	3	2000	9	2000	
Gordon	2	2001	8	2001	
Noyes	2	2001	8	2001	
Doctors	2	2001	8	2001	
Valley	2	2001	8	2001	
Maitland	2	2001	8	2001	
Back Bay	3	2001	8	2001	
Barnard	3	2001	8	2001	

Park Manor	4	2001	8	2001	
Root River Parkway No. 1	4	2001	8	2001	
Root River Parkway No. 3	4	2001	8	2001	
Root River Parkway No. 2	4	2001	8	2001	
Oak Creek Parkway No. 1	4	2001	8	2001	
Oak Creek Parkway No. 4	4	2001	8	2001	
Oak Creek Parkway No. 3	4	2001	8	2001	
Grant Park Beach	4	2002	7	2002	
Wil-O-Way Grant	1	2002	7	2002	
Wil-O-Way Underwood	1	2002	7	2002	
Pulaski-Milwaukee	3	2004	5	2004	
McKinley Beach	2	2004	5	2004	
Greenfield No. 1	2	2004	5	2004	
Whitnall	1	2004	5	2004	
Rose	3	2005	4	2005	
Garden Homes	3	2005	4	2005	
Nash	3	2005	4	2005	
Underwood Creek Parkway	3	2005	4	2005	
Kletzsch	2	2005	4	2005	
Euclid	3	2005	4	2005	
Estabrook No. 1	2	1989	20	2007	
Lindbergh	3	1989	20	2007	
Wahl	3	1989	20	2007	
Tiefenthaler	3	1991	18	2007	
Brown Deer	2	1991	18	2007	
Meaux	3	1990	19	2007	
Grant No. 1	1	1990	19	2007	
Kosciuszko	2	1991	18	2008	
McGovern	2	1990	19	2008	
Baran	3	1990	19	2011	
West Milwaukee	3	1991	18	2011	
Southwood Glen	3	1989	20	2011	
Froemming	3	1992	17	2011	
Scout Lake	2	1990	19	2011	
Armour	3	1993	16	2011	
McCarty	2	1991	18	2011	
Wyrick	3	1993	16	2011	
Greenfield No. 2 (Swings)	4	1989	20	2011	
King	2	1993	16	2011	
Mitchell	2	1993	16	2011	
Atkinson	3	1992	17	2011	
Humboldt No. 1	2	1992	17	2011	
Wedgewood	3	1993	16	2011	
Sheridan No. 2 (Pool)	4	1990	19	2011	
Johnsons	3	1994	15	2011	
Clarke Square	3	1995	14	2011	
Smith	3	1995	14	2011	
Cathedral Square	3	1990	19	2012	
Cannon	3	1993	16	2012	
Saveland	3	1992	17	2012	
Highland	4	1992	17	2012	
Sherman	2	1993	16	2012	
Humboldt No. 2	3	1992	17	2012	
Lincoln No. 1	1	1992	17	2012	
Lake	1	1994	15	2012	
Washington No. 1	1	1994	15	2012	
Walker Square	3	1995	14	2012	

Restrooms

Milwaukee County Parks Department - Bathroom Evaluations

Park	Bldg. ID	Grade	Potential Total Score	Actual Score	% Score	Status
Greenfield	15th Tee	F	90	40	44.44%	
Zablocki	Service Bldg.	F	50	24	48.00%	
Humboldt	Bandshell	F	70	34	48.57%	
Simmons Field	Shelter	F	100	50	50.00%	
Saveland	Wading Pool	F	85	43	50.59%	Complete
South Shore	Boathouse Lower	F	80	45	56.25%	Complete
Greenfield	Shelter #3	F	105	60	57.14%	
Greenfield	Shelter #5	F	105	60	57.14%	
Juneau	Comfort Bldg.	F	105	61	58.10%	Complete
Clarke Square	Shelter	F	90	53	58.89%	Complete
Tippecanoe	Park Bldg.	F	95	56	58.95%	
Wilson Rec	Public Restrooms	D	90	54	60.00%	Complete
Jackson	Boathouse	D	75	45	60.00%	
Golf	5th Hole	D	100	61	61.00%	
Wilson	Shelter	D	95	58	61.05%	
Wilson Rec	Pool Locker Rooms	D	85	52	61.18%	
Tiefenthaler	Lower Pav.	D	75	46	61.33%	
Washington	Bandshell-Lower	D	70	43	61.43%	
Grant	Service Yard	D	65	40	61.54%	
Warnimont	17th Hole	D	110	68	61.82%	
Zablocki	Golf	D	90	56	62.22%	
Johnsons	Pavilion	D	80	50	62.50%	
King Comm. Ctr.	Aerobics	D	80	50	62.50%	
Center Street	Pavilion	D	75	47	62.67%	
Washington	Bandshell-Upper	D	65	41	63.08%	
Greene	Wading Pool	D	95	60	63.16%	
Humboldt	Community Bldg.	D	90	57	63.33%	
Grant Golf	Clubhouse Lower/Upper	D	105	67	63.81%	
Greenfield	Lower Pav.	D	85	55	64.71%	
Lyons	Wading Pool	D	80	52	65.00%	
Pulaski-Milwaukee	Shelter	D	80	52	65.00%	
Kern	Pavilion	D	110	72	65.45%	
Manitoba	Park Bldg.	D	85	56	65.88%	
North Point	Concessions	D	85	56	65.88%	
Smith	Comfort Bldg.	D	105	71	67.62%	
Pulaski-Cudahy	Park Bldg.	D	90	61	67.78%	
Whitnall	Picnic #2	D	110	75	68.18%	
Marina	Main Bldg.	D	95	65	68.42%	
Falk	Rental Bldg.	D	95	65	68.42%	
Wilson	Lower Pav.	D	90	62	68.89%	
KK Sports Cmplx	Park Bldg.	D	90	62	68.89%	
Sheridan	Skate Shelter	D	110	76	69.09%	
Cudahy	Park Bldg.	D	110	76	69.09%	
Whitnall	Picnic #1	C	100	70	70.00%	
Veterans	Comfort Bldg.	C	110	77	70.00%	
McCarty	Service Yard	C	80	56	70.00%	
Cupertino	Shelter	C	105	74	70.48%	
McCarty	Baseball Fieldhouse	C	80	57	71.25%	
Humboldt	Service Yard	C	75	54	72.00%	
King Comm. Ctr.	Exterior	C	80	58	72.50%	
Washington	Boathouse Rental	C	85	62	72.94%	
McCarty	Lower Pav.	C	80	59	73.75%	
Doctors	Pavilion	C	115	85	73.91%	

Milwaukee County Parks Department - Bathroom Evaluations

Golf	Clubhouse	C	70	52	74.29%	
Schoeneker	Baseball Fieldhouse	C	115	86	74.78%	
Whitnall	Picnic #8	C	105	79	75.24%	
Bradford Beach	Bathhouse	C	115	87	75.65%	
Smith	Pavilion	C	80	61	76.25%	
Golf	5/11 Club	C	85	65	76.47%	
Kletzch	Pavilion	C	90	69	76.67%	
Lincoln	Aaron Field	C	105	81	77.14%	
Jacobus	Wading Pool	C	110	85	77.27%	
Brown Deer	Boathouse rental	C	90	70	77.78%	
Wahl	Pavilion	C	90	70	77.78%	
Hales Corners	Wading Pool	C	90	70	77.78%	
Menom.River Pkwy	Stone Bldg.	C	90	70	77.78%	
Alcott	Park Bldg.	C	90	71	78.89%	
Meaux	Comfort Bldg.	C	100	79	79.00%	
Zablocki	Upper Pav.	B	90	72	80.00%	
Rainbow	Park Bldg.	B	105	84	80.00%	
O'Donnell	Transit 1st Floor	B	100	80	80.00%	
Wehr	Nature Center	B	90	72	80.00%	
Tiefenthaler	Upper Level	B	85	68	80.00%	
King Comm. Ctr.	Lower Level	B	80	64	80.00%	
Zablocki	Lower Pav.	B	75	60	80.00%	
Mitchell	Domes	B	70	56	80.00%	
King Comm. Ctr.	Lower Lockers	B	80	64	80.00%	
Washington	Bandshell-Exter.	B	65	52	80.00%	
Gordon	Pavilion-Unisex	B	30	24	80.00%	
King Comm. Ctr.	Computer Lab	B	40	32	80.00%	
Jackson	Service Yard	B	80	64	80.00%	
South Shore	Fish Cleaning Station	B	105	85	80.95%	
Bender	Boathouse	B	100	81	81.00%	
Wilson	Upper Pav.	B	95	77	81.05%	
Dretzka	Chalet	B	95	77	81.05%	
Humboldt	Service Yard Public	B	95	77	81.05%	
Carver	Pavilion	B	90	73	81.11%	
King Comm. Ctr.	Upper Level	B	90	73	81.11%	
Ice Rink	Locker Rooms	B	90	73	81.11%	
Greenfield	Upper Pav.	B	85	69	81.18%	
McCarty	Upper Pav.	B	85	69	81.18%	
LaFollette	Lower Pav.	B	85	69	81.18%	
LaFollette	Upper Pav.	B	85	69	81.18%	
Wedgewood	Park Bldg.	B	85	69	81.18%	
West Milwaukee	Park Bldg.	B	85	69	81.18%	
Jackson	Stone Bldg.	B	80	65	81.25%	
Golf	Clubhouse	B	100	82	82.00%	
Dineen	Pavilion	B	95	78	82.11%	
King Comm. Ctr.	New Concepts	B	45	37	82.22%	
Wilson Rec	Lifeguard Office	B	45	37	82.22%	
Wilson Rec	Referee Locker Rooms	B	85	70	82.35%	
Grant Beach	Guardhouse	B	140	116	82.86%	
South Shore	Boathouse Upper	B	95	79	83.16%	
Froemming	Park Shelter	B	95	79	83.16%	
Golf	10th Tee	B	60	50	83.33%	
Gordon	Pavilion	B	90	75	83.33%	
Algonquin	Pavilion	B	120	100	83.33%	
O'Donnell	Transit 2nd Floor	B	90	75	83.33%	
Mitchell Blvd.	Pavilion	B	95	80	84.21%	

Milwaukee County Parks Department - Bathroom Evaluations

Dretzka	Clubhouse	B	95	80	84.21%	
Noyes	Golf	B	95	80	84.21%	
O'Donnell	Main Bldg.	B	95	80	84.21%	
O'Donnell	Promontory	B	85	72	84.71%	
Lake	Bistro - Lower	B	85	73	85.88%	
Cooper	Pavilion	B	95	82	86.32%	
Warnimont	Clubhouse	B	100	87	87.00%	
Wisconsin Ave.	Pavilion	B	120	105	87.50%	
Kopps	Pavilion	B	105	92	87.62%	
Columbus	Wading Pool	B	95	84	88.42%	
Cooper	Pavilion	B	100	89	89.00%	
Golf	Clubhouse	B	94	84	89.36%	
McGovern	Community Bldg.	A	95	86	90.53%	
Jacobus	Lower Pav.	A	85	78	91.76%	
Madison	Pool Bldg.	A	95	89	93.68%	
Lindsay	Pav/Wading Pool	A	95	89	93.68%	
Kulwicki	Park Bldg.	A	110	104	94.55%	
Disc Golf	Concessions	A	95	90	94.74%	
Hoyt	Pool Bldg.	A	85	81	95.29%	
Lindsay	Wading Pool Only	A	95	91	95.79%	
Baran	Shelter	A	120	115	95.83%	
Golf	Clubhouse	A	105	102	97.14%	
Cannon	Lower Pav.	A	90	88	97.78%	
Red Arrow	Park Bldg.	A	95	93	97.89%	
Vogel	Wading Pool	A	95	94	98.95%	
Boerner	Main	A	80	80	100.00%	
Golf	Clubhouse	A	80	80	100.00%	
Cannon	Upper Pav.	A	95	95	100.00%	
Hanson Golf	Clubhouse	A	95	95	100.00%	
Jacobus	Upper Pav-Unisex	A	35	35	100.00%	
Boerner	Main-Family	A	45	45	100.00%	
Froemming	Sports Complex	A	80	80	100.00%	
Columbus	Wading Pool	A	95	95	100.00%	
Boerner	Lower	A	75	75	100.00%	
Boerner	Upper	A	75	75	100.00%	

Sport Fields

MILWAUKEE COUNTY PARKS
BASEBALL FIELD EVALUATION - 2012

LOCATION	OVERALL CONDITION OF FACILITY	INFIELD			BASE LINES		OUTFIELD			MISCELLANEOUS								
		DRAINAGE	TURF	BACKSTOP	1ST	3RD/HOME	DRAINAGE	FENCE	TURF	P.A.	SCOREBOARD	LIGHTS	BLEACHERS	Field Enclosed	Dugouts	# Of Games Per Week	# Of Games Per Season (26 wks)	# Of Users
PRIMARY BASEBALL DIAMONDS																		
LINCOLN (AARON)	A	A	A	A	A	A	A	A	A	B	A	A	A	YES	A	11.0	286	22,880
MCCARTY (ZIRKEL)	C	D	D	C	C	C	D	C	D	N/A	A	B	D	YES	D	12.0	312	24,960
RAINBOW (KUENN)	B	B	C	D	B	B	C	C	C	N/A	A	C	D	NO	D	12.0	312	24,960
SIMMONS	C+	D	C	C	C	C	D	C	B	N/A	A	B	F	NO	D	11.0	286	22,880
ZABLOCKI (HARDEN)	C	B	B+	B	B	B	B	C	B	N/A	A	C+	D	NO	D	10.0	260	20,800
TOTAL: 5																56	1456	116,480
SECONDARY BASEBALL DIAMONDS																		
BARAN	C	D	C	D	C	C	D	C	C	N/A	D	N/A	C	YES	C	6.0	156	12,480
CARVER	C+	C	C	C	B	B	C	B	C	N/A	N/A	N/A	C	NO	NO	9.0	234	18,720
DINEEN	F	F	C	D	C	C	F	N/A	C	N/A	N/A	N/A	F	NO	NO	2.0	52	4,160
FROEMMING	C+	C	C	B	B	B	C	B	B	N/A	N/A	N/A	C	NO	B+	6.0	156	12,480
GREENE	D+	C	D	C+	C	C	F	N/A	D	N/A	N/A	N/A	C-	NO	C	5.0	130	10,400
GREENFIELD	C-	F	C	C	C	D	C	N/A	C	N/A	N/A	N/A	D	NO	NO	5.0	130	10,400
HALES CORNERS	B	C	B	C	C	C	B	N/A	B	N/A	N/A	N/A	B	NO	NO	2.0	52	4,160
HUMBOLDT (KELTNER)	C-	C	C	C+	C	C	B	N/A	C	N/A	N/A	N/A	D	NO	C	5.0	130	10,400
JACKSON	F	F	D	D	D	D	D	N/A	D	N/A	N/A	N/A	C	NO	NO	1.0	26	2,080
MADISON #1	B	A	C	A	C	C	C	B	B	N/A	N/A	N/A	C	YES	NO	12.5	325	26,000
MADISON #2	F	D	D	B	D	D	D	N/A	D	N/A	N/A	N/A	C	NO	NO	12.5	325	26,000
SCHOENECKER	C	C	C	D	C	C	C	B	C	N/A	D	N/A	D	YES	NO	7.0	182	14,560
SHERIDAN	B	B	B	B	B	B	C	A	C	C	A	N/A	C	YES	B	12.5	325	26,000
WILSON #1	A-	A	A	A	B	B	A	N/A	B	N/A	Manual	B	A	NO	B	10.0	260	20,800
WISCONSIN AVE	B	B	C	A	B	C	A	N/A	C	N/A	N/A	N/A	C	NO	NO	12.0	312	24,960
ZABLOCKI #2	D-	F	B	C	B	B	C	N/A	C	N/A	N/A	N/A	C	NO	NO	8.0	208	16,640
TOTAL: 16																115.5	3003	240,240

DRAFT

MILWAUKEE COUNTY PARKS
SOFTBALL FIELD EVALUATION - 2012

LOCATION	OVERALL CONDITION OF FACILITY	INFIELD			BASE LINES		OUTFIELD			MISCELLANEOUS								
		DRAINAGE	TURF	BACKSTOP	1ST	3RD/HOME	DRAINAGE	FENCE	TURF	P.A.	SCOREBOARD	LIGHTS	BLEACHERS	Field Enclosed	Dugouts	# Of Games Per Week	# Of Games Per Season (26 wks)	# Of Users
SOFTBALL DIAMONDS																		
ALCOTT #1	NR	*Scrub Field Only																
ALCOTT #2	NR	*Scrub Field Only																
ALGONQUIN																		
BARAN #2																		
BARAN #3																		
BARAN #4																		
BARAN #5																		
BROWN DEER #1	NR	*Scrub Field Only																
BROWN DEER #2																		
BROWN DEER #3	NR	*Scrub Field Only																
CARVER #2																		
CARVER #3																		
CARVER #4																		
CARVER #5																		
CENTER STREET #1																		
CENTER STREET #2																		
COLUMBUS #1																		
COLUMBUS #2																		
COLUMBUS #3																		
COOPER #1																		
COOPER #2																		
CUDAHY #1																		
CUDAHY #2																		
ESTABROOK																		
FROEMMING																		
GRANT #1																		
GRANT #2	NR	*Scrub Field Only																
GRANT #3	NR	*Scrub Field Only																
GREENE #3																		
HALES CORNERS																		
JOHNSONS	NR	*Scrub Field Only																
KERN																		
K.K. #1																		
K.K. #2																		
KLETZSCH #1																		
KLETZSCH #2																		
KLETZSCH #3																		
KLETZSCH #4	NR	*Scrub Field Only																
KOPS #1	NR	*Scrub Field Only																
KOPS #2																		
KULWICKI #1																		
KULWICKI #2																		
KULWICKI #3																		
KULWICKI #4																		
LAFOLLETTE #1																		

DRAFT

MILWAUKEE COUNTY PARKS
SOFTBALL FIELD EVALUATION - 2012

LOCATION	OVERALL CONDITION OF FACILITY	INFIELD			BASE LINES		OUTFIELD			MISCELLANEOUS								
		DRAINAGE	TURF	BACKSTOP	1ST	3RD/HOME	DRAINAGE	FENCE	TURF	P.A.	SCOREBOARD	LIGHTS	BLEACHERS	Field Enclosed	Dugouts	# Of Games Per Week	# Of Games Per Season (26 wks)	# Of Users
SOFTBALL DIAMONDS																		
LAFOLLETTE #2																		
LAFOLLETTE #3																		
LAKE																		
LINDSAY #1																		
LINDSAY #2	NR	*Scrub Field Only																
Madison																		
MCCARTY #1																		
MCCARTY #2																		
MCCARTY #3																		
MCGOVERN																		
MEAUX																		
MITCHELL	CLOSED FOR 2012																	
PULASKI-CUDAHY #1																		
PULASKI-CUDAHY #2																		
RAINBOW																		
ROSE																		
SCHOENECKER #2																		
SCHOENECKER #3																		
SCHOENECKER #4																		
SHERIDAN #1	NR	*Scrub Field Only																
SHERMAN																		
SMITH																		
TIEFENTHALER	NR	*Scrub Field Only																
TIPPECANOE #1																		
TIPPECANOE #2	NR	*Scrub Field Only																
TIPPECANOE #3																		
TIPPECANOE #4																		
WAHL	NR	*Scrub Field Only																
WEST MILWAUKEE #1																		
WEST MILWAUKEE #2																		
WEST MILWAUKEE #3																		
WEST MILWAUKEE #4																		
Wilson Park #2																		
Wilson Park #3																		
Wilson Park #4																		
WILSON REC #1																		
WILSON REC #2																		
WILSON REC #3																		
WILSON STADIUM																		
WISCONSIN AVE #1																		
WISCONSIN AVE #3																		
ZABLOCKI																		
TOTAL: 87																		

MILWAUKEE COUNTY PARKS

SOCCER FIELD EVALUATION - 2012

DRAFT

LOCATION	OVERALL CONDITION OF FACILITY	SOCCER FIELD			SOCCER GOALS		NETS		MISCELLANEOUS				
		SIZE	DRAINAGE	TURF	GOAL #1	GOAL #2	SUPPLIED	CONDITION	LIGHTS	BLEACHERS	# Of Games Per Week	# Of Games Per Season	# Of Users
Algonquin		150' X 275'							N/A				
Brown Deer #1		250' X 360'					N/A		N/A				
Brown Deer #2		170' X 300'					N/A		N/A				
Cannon #1		80' X 120'					N/A		N/A				
Cannon #2		80' X 120'					N/A		N/A				
Chippewa #1		116' X 120'							N/A				
Chippewa #2		80' X 144'					N/A		N/A				
Dineen		90' X 150'					N/A		N/A				
Estabrook #1		210' X 310'							N/A				
Estabrook #2		150' X 210'					N/A		N/A				
Estabrook #3		Varies							N/A				
Estabrook #4		Varies							N/A				
Gordon		150' X 300'					N/A		N/A				
Grant #1 West		210' X 310'							N/A				
Grant #2 East		150' X 210'							N/A				
Grant #3 Middle		100" X 150'							N/A				
Grant #4 U-08		60' X 120'							N/A				
Hales Corners #1		150' X 275'					N/A		N/A				
Hales Corners #2		210' X 310'					N/A		N/A				
Hawthrone #1		130' X 215'					N/A		N/A				
Hawthorne #2		190' X 300'					N/A		N/A				
Kletzsch #1 (Closed for 2012)		210' X 310'							N/A				
Kletzsch #2		120' X 240'					N/A		N/A				
Kletzsch #3		200' X 300'					N/A		N/A				
Kletzsch #4		90' X 140'					N/A		N/A				
Kletzsch #5		210' X 310'							N/A				
Lake #1		120' X 240'					N/A		N/A				
Lake #2		150' X 300'					N/A		N/A				
Lincoln #1 (Closed for 2012)		215' X 310'							N/A				
Lincoln # 1A (Closed for 2012)		180' X 300'							N/A				
Lincoln #2		180' X 300'							N/A				
Lincoln #3		210' X 310'							N/A				
Madison		210' X 310'							N/A				
Meaux #1 (Closed for Fall 2012)		210' X 310'							N/A				

Menomonee River Pkwy #1		80' X 120'					N/A		N/A				
Menomonee River Pkwy #2		80' X 120'					N/A		N/A				
Menomonee River Pkwy (Gully)		80' X 120'					N/A		N/A				
Nash #1		150' X 240'							N/A				
Nash #2		150' X 240'							N/A				
Pulaski-Milwaukee		210' X 310'							N/A				
Rainbow #1		210' X 310'							N/A				
Rainbow #2		210' X 310'							N/A				
Washington #1		210' X 300'							N/A				
Washington #2		200' X 310'							N/A				
Wyrick		225' X 360'							N/A				
Zablocki #1													

Stream Banks

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Kinnickinnic River	43rd Street Ditch	The entire reach is polluted with large amounts of urban and industrial trash along the banks and in the stream. The banks are eroding and unstable.	The entire reach should be considered to be reconstructed to reduce the amount of pollution and sediment introduced to Lake Michigan. Existing infrastructure such as storm sewer inlets are failing, but no work should be done without addressing the globa	R,B,O, F	This will be an expensive project and additional funding partners such as the City, WDNR, MMSD and perhaps the USACE or EPA should be contacted to see if there are cost sharing opportunities. It is not immediately clear who should lead this effort and it
Kinnickinnic River	Edgerton	Concrete lined channel has minimal ecological and aesthetic benefit	Remove concrete lining realign channel incorporating more natural channel design elements/increased capacity.	R	
Kinnickinnic River	Holmes Ave Creek	Concrete lined channel has minimal ecological and aesthetic benefit	Remove concrete lining realign channel incorporating more natural channel design elements/increased capacity.	R	
Kinnickinnic River	Kinnickinnic River	Concrete lined channel has minimal ecological and aesthetic benefit	Remove concrete lining, WPA walls and drop structure and realign channel incorporating more natural channel design elements/increased capacity.	R	USACE / MMSD are presently reviewing opportunities
Kinnickinnic River	Kinnickinnic River	Failing concrete below outfall	Failing pavement below West Forest Home	O	Road authority should perform repairs
Kinnickinnic River	Kinnickinnic River	Failing concrete	Repair pavement / grout injection	O	Lower priority
Kinnickinnic River	Kinnickinnic River	Failing concrete where culvert meets channel	Repair pavement / protect outlet	O	Lower priority
Kinnickinnic River	Kinnickinnic River	Needs protection - slab failing	Repair pavement	O	Lower priority
Kinnickinnic River	Kinnickinnic River	Vertical displacement on right bank above CMP, failing pavement below CMP	Repair pavement	O	Lower Priority
Kinnickinnic River	Kinnickinnic River	Concrete deterioration	Repair edges at channel edge	O	Low Priority
Kinnickinnic River	Kinnickinnic River	Outlet repair	Recommend local concrete patch and replace pin in flap gate	O	Lower priority

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Kinnickinnic River	Kinnickinnic River	Failing right bank exposing pipe of unknown origin, maybe sanitary sewer. Very visible and in immediate danger of failure	Removal and replacement of 150 feet of wall, armor 150 feet of toe and investigate bioengineering options	O	Could introduce pollutants if failure, active fishing area, immediate attention needed
Kinnickinnic River	Kinnickinnic River	Storm sewer outfall on rigth bank - concrete joint is separating	Provide additional support and protection at outlet	O	
Kinnickinnic River	Kinnickinnic River	Failed gabion bank on rigt bank (260 ft) and left bank (200 ft)	Repair bank stabilization - potentially using a bioengineered approach	B	Could time repair with concrete removal or watermain protection
Kinnickinnic River	Kinnickinnic River	Exposed water main on upper right bank.	Upper bank stabilization	O	Potential funding partner/sponsor is water main owner.
Kinnickinnic River	Kinnickinnic River	Failing concree wall with culvert on right bank	Repair concrete wall	B, O	
Kinnickinnic River	Kinnickinnic River			R,F,O	BETWEEN 43RD AND 60TH STREET - MANY PROBLEMS! - MMSD and USACE are contemplating performing some work
Kinnickinnic River	Kinnickinnic River				
Kinnickinnic River	Lyons Park Creek	Pipe outfall section being undercut and failing	Armor embankment, fix the outlet section, and provide transition to channel bottom	O	Should be done as part of the entire reach treatment
Kinnickinnic River	Lyons Park Creek	Upstream EarthTech project will reduce sdiment input significantly	Review potential impact of sediment supply reduction on downstream channel stability by performing a sediment conveyance continuity analysis - note especially just downstream of State Highway 24 where there is presently some aggradation occurring	B	
Kinnickinnic River	Lyons Park Creek	Eroding bank - has abandoned previous riprap treatment and incised channel criss-section	Perform detailed geomorphic analysis and treat entire reach to increase stability and connection to floodplain.	G, R	Should look for potential funding partners - part of Lyons Park
Kinnickinnic River	Lyons Park Creek	Concrete lined channel has minimal ecological and aesthetic benefit	Remove concrete lining realign channel incorporating more natural channel design elements/increased capacity.	R	

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Kinnickinnic River	Vile Man Creek	Concrete outlet protection is failing on downstream end beneath I-43	Repair concrete protection	O	Road authority should perform repairs
Kinnickinnic River	Vile Man Creek	Concrete lined channel has minimal ecological and aesthetic benefit	Remove concrete lining realign channel incorporating more natural channel design elements/increased capacity.	R	
Kinnickinnic River	Wilson Park Creek	The channel has been straightened and offers little in-stream habitat complexity	Realign channel, adding sinuosity and habitat elements.	R	
Kinnickinnic River	Wilson Park Creek	Concrete lined channel has minimal ecological and aesthetic benefit	Remove concrete lining realign channel incorporating more natural channel design elements/increased capacity.	R	
Kinnickinnic River	Wilson Park Creek	Concrete lined channel has minimal ecological and aesthetic benefit	Remove concrete lining realign channel incorporating more natural channel design elements/increased capacity.	R	
Kinnickinnic River	Zablocki Park Creek	Knickpoint in Zablocki Park that is progressing upstream	Stabilize knickpoint to prevent future scouring	G	Higher prioritiy - will save money if done sooner than later
Kinnickinnic River	Zablocki Park Creek	Knickpoint in cemetary that is progressing upstream	Stabilize knickpoint to prevent future scouring	G	Higher prioritiy - will save money if done sooner than later
Kinnickinnic River	Zablocki Unnamed Trib	Triple pipe culverts embedded in concrete in fair condition but causing water to backup	Remove and replace with wooden footbridge	O	Inside park boundary
Menomonee River	Honey Creek	Channel is incised and banks have been stabilized with stone, gabions and WPA wall segments. Grade control structures and drop structures, along with gabion treatments and WPA segments are in various stages of disrepair.	Redesign and restoration of channel bed and banks throughout Reach 01 and 02 is warranted. A feasibility study is recommended to assess cost: benefits.	B	Should be coordinated with Hart Park restoration projects
Menomonee River	Menomonee River	Scour due to constriction was noted in the upstream 1/3 of the bridge at North Avenue.	Perform detailed bridge scour analysis.	O	

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Menomonee River	Menomonee River	Eroding bank along industrial property caused by general bank erosion and constriction upstream of erosion site.	Bioengineered bank treatement with rock to or vegetated riprap. Additional components include soil borings and geotechnical analysis to determine risk to WPA wall segments.	B	Is under consideration as part of the Hart Park restoration project
Menomonee River	Menomonee River	The middle bridge pier on the 70th Street Bridge has scoured and a gravel bar has formed to the right downstream of the pier.	Investigate bridge hydraulics to determine infrastructure risk.	O	
Menomonee River	Menomonee River	Approximately 1300 feet of the left bank is failing WPA wall.	Replace wall with rock toe and fabric encapsulated soil lifts with native vegetation.	B	Is under consideration as part of the Hart Park restoration project
Menomonee River	Menomonee River	A 20 foot section of WPA wall has degraded as a result of poor sewer outfall design.	Redesign storm sewer outlet and repair wall	B	Very low benefit to cost ratio
Menomonee River	Menomonee River	Approximately 0.5 miles of the river is channelized and deepened artificially.	Realign channel, adding sinuosity and habitat elements. Adjacent wooded and meadow floodplain offers ample opportunity for increased belt width.	R	Very high benefit to cost ratio, despite estimated total project cost of $1.6 M (Menomonee River Sediment Transport Study)
Menomonee River	Menomonee River	The right bank abutment at the pedestrian bridge shows scour and erosion.	Maintenance and repair using riprap is recommended.	O	
Menomonee River	Menomonee River	General bank erosion complicated by channel constriction along an industrial property.	Bioengineered bank treatement with rock to or vegetated riprap. Additional components include excavation of channel overbank (right bank).	B	WDNR property
Menomonee River	Underwood Creek	Existing small dam is a physical fish passage barrier and reduces habitat variability due to sedimentation upstream.	Remove dam and either allow natural restoration or replace with a rock ramp grade control structure.	G	Should be inexpensive unless grade control is necessary, then a rock riffle should be installed. This is likely a simple removal with small equipment only. Should be considered at the same time as MRST-10 dam removal.

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Menomonee River	Underwood Creek	Existing small dam is a physical fish passage barrier and reduces habitat variability due to sedimentation upstream.	Remove dam and either allow natural restoration or replace with a rock ramp grade control structure.	G	Should be inexpensive unless grade control is necessary, then a rock riffle should be installed. This is likely a simple removal with small equipment only. Consider removing in tandem with MRST-11 dam.
Menomonee River	Underwood Creek	Channel is confined by bridge and walled stream segment, causing possible flooding problems and limiting habitat quality. Channel is also straightened through Wirth Park.	Realign channel, replace bridge crossing and create a more natural channel and riparian area.	R	Could have potentially high recreation impact if public education precedes project development
Menomonee River	Underwood Creek	Existing private bridge culvert is undersized and poorly constructed. Adjacent utility pole has footing within channel bed and is inappropriately protected.	Reconstruction of a small bridge or larger culvert, relocate utility pole.	O	Private land owner.
Menomonee River	Underwood Creek	Existing dam structure under Woodbridge Road is a physical fish passage barrier and may be a flooding concern.	The existing structure could be notched or modified for fish passage in addition to placement of a rock ramp downstream of the structure. Replacement with a low profile grade control riffle is prudent.	G	Simple project design and construction
Menomonee River	Underwood Creek	The existing bank located west of Legion Drive north of Elmhurst Parkway within Elm Grove Village Grounds is eroding rapidly due to insufficient rooting depth and inappropriate riparian vegetation (turfgrass).	Revegetation using shrub and woody native species should stabilize the bank without expensive construction or bioengineering efforts.	F	Simple planting of live stakes and potted plants. Consideration should be given to nearby construction activities outlined in SEWRPC Community Assistance Planning Report no. 236. *Stormwater and Floodland Management Plan for the Dousman Ditch and Underwood*

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Menomonee River	Underwood Creek	Existing concrete lined channel has no habitat value at any flow, creates a public safety hazard.	Low flow from the existing concrete lined channel could be diverted north to a historical channel alignmnemt. The existing channel would be used for conveyance of flood flows. A culvert could be installed beneath the existing railroad embankment, and a d	R	Should be coordinated with County Grounds project
Menomonee River	Woods Creek	Existing channel is concrete lined and walled through park property. Fish passage barrier exists at RM 0.48. Concrete channel lining and WPA walls are cracked and failing.	Remove concrete lining, WPA walls and drop structure and realign channel incorporating more natural channel design elements/increased capacity.	R	Feasibility study is warrented to determine costs and impacts
Milwaukee River	Beaver Creek	Concrete bed of former trapezoidal ditch has been abandoned by the laterally migrating channel. Stone walls are also failing in this reach.	Remove concrete, install grade control and repair streambanks using bioengineering.	B, G	Private property owners will need to sign on to any project, expecially if it involves introduction of meanders and expansion of floodplain.
Milwaukee River	Brown Deer Creek	Bridge is failing. Concrete is flaking and large chunks of material have fallen out, leaving exposed rebar or large holes.	Replace bridge.	O	Project should consider relocating the stream and having one crossing at the intersection of Highway 57 and West Bradley Road, rather than the current double bridge system.
Milwaukee River	Beaver Creek	Bank erosion on right bank of pond is aggravated by goose traffic and trampling by park users.	Plant a shrub and tree riparian buffer to minimize erosion	F	No design needed, simple planting plan only
Milwaukee River	Brown Deer Creek	Three dams creat ponds in the golf course but are fish passage barriers.	This problem can be solved by a variety of methods, including routing the stream around the ponds, creating fish passagways, or modifying the structures to allow for free passage during non-golf months (remove boards).	G	

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Milwaukee River	Brown Deer Creek	A 30 ft section of the right bank is eroding to within 10 feet of Range Line Road. This is a potentially serious infrastructure failure problem and should be addressed immediately. The bank is approximately 4 feet high at this location.	Move stream channel west or stabilize bank with hard armor and bioengineering.	B	Immediate risk due to proximity to Range Line Road
Milwaukee River	Brown Deer Creek	Stream is channelized and has poor vertical complexity. Some bank erosion is occuring in the more incised areas.	Realign channel, add sinuosity and vertical complexity, working within the forested corridor and also the golf course. May include dam removal or rerouting of flows around dams.	R	
Milwaukee River	Brown Deer Creek	The streambanks are eroding on both sides of the channel due to turfgrass mangement up to the stream edge (insufficient root protection).	Stabilize banks using bioengineering and golf-course friendly plantings.	B	Milwaukee Country Club private property
Milwaukee River	Brown Deer Creek	Small dams are fish passage barriers.	Design bypass structures to allow for fish passage but still allow landowners to keep their ponds in place. The upstream pond at 26+00 has a good bypass system that just needs updating.	G	Dam failure could endanger road and cause erosion problems downstream and in the golf course.
Milwaukee River	Brown Deer Creek	A 200 foot segment of the stream channel is in a large culvert going underneath the northwestern most fairway.	Daylight the channel and restore the streambanks to allow for clear play.	O	Fairly simple project with minimal design effort needed
Milwaukee River	Dineen Park Creek	Streambank erosion has exposed a manhole and continues to erode.	Move stream channel west and stabilize bank with hard toe and bioengineering to prevent lateral movement around the pipe.	B	Should be coordinated with bank restoration through the golf course
Milwaukee River	Dineen Park Creek	Severe bank erosion caused by removal of riparian vegetation and management of turfgrass to the stream edge	Grade banks, stabilize toe and stabilize with bioengineering	B	

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Milwaukee River	Lincoln Creek	The riparian forest cover on the entire right bank has been removed. Turfgrass is maintained along this bank and only a scattered distribution of large trees remains.	Establish a larger buffer (100 ft) planted in flood tolerant hardwoods such as black willow, cottonwood and silver maple.	F	
Milwaukee River	South Branch Creek	The entire reach is eroding laterally. Frequent sediment deposition enhances bar pressure and is stimulating channel migration outside of concrete lining. All of the areas of concrete channel bottom are severely degraded by disintegration, vertical displ	Remove concrete channel bottom and replace with grade control base, riffle-pool sequences and stable riparian zone.	G	
Milwaukee River	South Branch Creek	The left bank along Teutonia Avenue is eroding severely over a 30 ft segment (8 ft. high). The bank is predominantly sand with a clay toe.	Stabilize streambank with hard armored toe and bioengineered upper banks. Will require some geotechnical analysis and replacement of topsoil.	B	May require soil encapsulation and/or geogrid installation due to extreme slope and physical constraints.
Oak Creek	Mitchell Field Drainage	The abutment placed opposite a stormwater outfall, combined with black willow roots, form a potentially unstable grade control. If this grade control fails, headcut migration could occur rapidly upstream.	Remove concrete abutment and stabilize banks, incorporating a stepped grade control structure	G	If the current grade control fails, which is likely, a 2-3 ft headcut could move up through the system, eventually affecting the airport channel and Highway 38 crossing.
Oak Creek	Mitchell Field Drainage	The stream is channelized and straightened, and as a result has incised approximately 4 feet. Banks are currently very unstable.	The floodplain here is extremely wide (>500 ft). Realign channel, add sinuosity and vertical complexity, restore forested riparian corridor.	R	Access and availability of space depend on landuse and likely purchase or permanent easement
Oak Creek	North Branch Oak	Four (4) culverts are deteriorated	Replace four culverts with small footbridge	O	Simple project design and construction
Oak Creek	North Branch Oak	Dikes near stream edge	Future development should have dikes set back from riparian area to minimize encroachment and floodplain constriction	F	This project is mainly planning

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Oak Creek	North Branch Oak	Bank erosion threatens compost/solid waste management facility for City of Oak Creek	Bioengineered bank stabilization	B	
Oak Creek	North Branch Oak	3.5 foot headcut has migrated up to RR bridge crossing. This crossing represents a significant fish passage barrier.	Elevate channel bed downstream of crossing, restore channel	G	Fish passage barrier and would also reconnect stream with floodplain. This grade control should not be removed but replaced, as it is preventing incision from moving upstream.
Oak Creek	North Branch Oak	Culvert is degraded	Replace CMP and outlet structure	O	
Oak Creek	North Branch Oak	Channelized through park area, no riparian zone, turfgrass managed to stream edge	Realign channel, add sinuosity and vertical complexity, restore forested riparian corridor.	R	Wide floodplain area (800 ft) could be utilized to maximize belt width.
Oak Creek	North Branch Oak	Stream and floodplain are managed in turfgrass. Entire reach is channelized and straightened.	Replant riparian zone and manage for forest, restore meanders.	R	
Oak Creek	North Branch Oak	Former road crossings servicing an old junkyard. These dams are fish passage barriers and safety hazards.	Remove dams, restore banks and bed - combine with floodplain and stream restoration project	D	
Oak Creek	North Branch Oak	Channelized and incised channel	Raise channel bed slightly, excavate floodplain and restore meanders	R	
Oak Creek	North Branch Oak	Sheet piling and riprap dam likely a fish passage barrier	Remove dam and install grade control wier	D	In UPS facility area, easy access
Oak Creek	North Branch Oak	Dike on right bank (west) prevents inundation of wide floodplain wetlands. Stream is channelized throughout.	Remove dike and restore a sinuous channel in the floodplain wetland area	F	This project has added merit due to access and ease of construction.
Oak Creek	North Branch Oak	Direct stormwater drainage from 27 different impervious lot drainage culverts	Retrofit stormwater detention basins to accept water from the industrial park.	O	
Oak Creek	North Branch Oak	Channelized and straightened channel	Realign channel, add sinuosity and vertical complexity, restore forested riparian corridor.	R	
Oak Creek	North Branch Oak	Turfgrass managed to stream edge, no riparian zone	Plant riparian forest and manage a no-mow zone within 50 feet of stream channel (both sides)	F	Could be incorporated into a stream relocation project

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Oak Creek	Oak Creek	Turfgrass bank is failing along 60 feet of a sharp bend in the stream.	Project should include realignment of this segment, bioengineering bank stabilization and buffer reestablishment	B	
Oak Creek	Oak Creek	The stream is channelized throughout this reach. This area in particular has low bank height and good floodplain access.	Realign channel, add sinuosity and vertical complexity, restore forested riparian corridor.	R	Much of the floodplain is wetland, and would not likely be difficult to obtain project partnership with landowners, as the land is undevelopable.
Oak Creek	Oak Creek	Concrete box culverts under the railroad crossing are improperly placed and sized. One has filled in completely and another, two tiered box has flow going over the top. Additional culvert pipes upstream are also degraded	Remove culvert pipes and replace both road crossing and railroad box culverts with bridge.	O	May require partnership with landowner and railroad.
Oak Creek	Oak Creek	Dam acting as potential fish passage barrier	Remove dam and install grade control wier	G	Simple project design and construction
Oak Creek	Oak Creek	Former mill dam (15' ht.) creates a significant fish passage barrier	Remove dam and restore sinuous stream channel through the former impoundment. Alternative project would install fish passage channel.	D	Skating rink may need relocation.
Oak Creek	Oak Creek	Severe bank erosion from 444+00 to 475+00 due to removal of riparian zone vegetation and changes in landuse/hydrology. Buffer has been replaced with grass. Parks department recently cut all riparian trees on the right bank along a 50 foot wide road from 4	Restore channel and floodplain cross-section to more stable form. Replace grass buffers with unmaintained, forested plantings of 30-50 feet wide or more.	F	Further cutting of this type should be strongly discouraged
Oak Creek	Oak Creek	Streambank erosion compounded by unpaved walking path near bank edge. Excessive riprap installation near sewer outlet.	Restore channel banks and redesign sewer outfall. Incorporate bioengineering elements.	B	Good construction access
Oak Creek	Oak Creek	Eroding bluff, gully erosion	Stabilize bluff using bioengineering slope stabilization	B	Power plant on top of terrace

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Oak Creek	Oak Creek	Eroding bank (8ft x 50 ft. long) in park area, caused by incision, geotechnical failure and bank shear at the toe. Removal of riparian vegetation likely contributed to this problem, but this is an example of the stream trying to recover a stable planform	Shape and plant, temporary toe protection likely required	B	
Oak Creek	Oak Creek	Pond control structure is unstable and eroding, pond failure could result.	This pond should have a control weir or a transitional wetland area	O	
Oak Creek	Oak Creek	Old Pine Street bridge abutments are still in place.	Remove abutments and stabilize banks. Will require redesign of stormwater outfall on left bank.	O	
Oak Creek	Oak Creek	Channelization and incision are common throughout 90% of this reach. Cultivated fields and parkland border much of the stream with wide floodplain areas.	Realign channel, add sinuosity and vertical complexity, restore forested riparian corridor.	R	The entire reach is a good candidate for restoration, but could be done in several smaller phases, starting with the County Park between 444+00 and 488+00. Floodplain widths are generally 1000 feet and would provide excellent meander belt width
Oak Creek	Oak Creek	Buckthorn infestation of riparian forest	Actively remove buckthorn	F	
Root River	Crayfish Creek	Historic channelization actities have isolated the channel from its floodplain	Restore sinuosity to the channel and expand the riparian forest to maximum beltwidth allowable.	R, F	
Root River	Crayfish Creek	Rookery in wetland appears active	Steps should be taken to ensure this rookery is protected, continues to be functional, and is not disturbed by direct or nearby development activities	F	
Root River	Dale Creek	Trampling of banks and removal of understory vegetation could destabilize the stream.	Restrict foot traffic through planting of thorny species, encourage a shrub dominated understory to replace the managed lawn and exotic groundcover.	F	

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Root River	Dale Creek	Fire station is dumping yard waste onto floodplain surface near stream, deterring the growth of stabilizing vegetation and adding nutrient pollution.	Eliminate dumping of yardwaste.	F	
Root River	Dale Creek	Buckthorn infestation of riparian forest	Remove buckthorn and encourage native plants.	F	
Root River	East Branch Root River	Outlet pipe installed near top of slope	A manhole drop structure should probably be installed upstream of the outlet and the stormwater should be introduced at a lower elevation. If this is not feasible then additional protection to armor the bank or a steeper pitch of the outlet pipe is neede	O	
Root River	East Branch Root River	Historic channelization actities have isolated the channel from its floodplain. Potential instablity due to impending residential development and existing residential development	Restore sinuosity to the channel and expand the riparian forest to maximum beltwidth allowable. Ensure sufficient land use controls exist to protect the corridor from further disturbance.	F	
Root River	East Branch Root River	Buckthorn infestation of riparian forest	Remove buckthorn and encourage native plants.	F	
Root River	East Branch Root River	Erosion at overland inlet	Additional erosion protection needed	O	
Root River	East Branch Root River	Failed pipe section	Pipe section needs to be re-set, tie-backs should be included as well as flared end section (FES) with an armored outlet protection	O	
Root River	East Branch Root River	Old field crossing is a constriction in the channel corridor	Remove old field crossing	F	Could perform when development site grading is performed
Root River	East Branch Root River	Old crossing is a constriction in the channel corridor	Remove old township road bridge, restore banks with grading and bioengineering techniques	F	
Root River	East Branch Root River	Failing wall along 35th Street	Repair failing wall along 35th Street - replaement likely	B	Could possibly wait until road is reconstructed

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Root River	East Branch Root River	Potential instablity due to impending residential development and existing residential development	Ensure sufficient controls in the form of fee title transition, permanent easements that will protect the existing stream buffer and not allow destruction of the riparian fringe. Controls in the future runoff rate and delivery mechanism will also help av	F	
Root River	East Branch Root River				
Root River	Legend Creek	Riparian fringe is managed as a golf course / put into pipe and ponds are a fishery barrier	Convert piped section into open section, modify riparian fringe to increase ecological condition, and review impact of ponds within the stream system	R, F	Private property issues and land use will complicate implementation
Root River	Legend Creek	Riparian management - turf grass	May want to include in a larger watershed education program	F	Could be part of a larger educational project
Root River	Legend Creek	Appears to be an informal or old crossing that is acting as a grade control - if it fails will cause some local instability.	May want to have a more formally designed grade control	G	Relatively low priority
Root River	Legend Creek	Berm instability within golf course	Should modify berm to ensure long-term stability	B	Risk is generally to private property - relatively low priority
Root River	Legend Creek	Old crossing abutments (cobble and concrete) in riparian fringe	Remove when a nearby project is being constructed	F	Lower priority
Root River	Root River	Twin 30" CMPs on right bank are failing, failed seepage collar	Armor bank, cut pipe back to armored area	O	Access may be an issue here. Should check sanitary line first.
Root River	Root River	Development pressure within the floodplain	Ensure sufficient controls in the form of fee title transition, permanent easements that will protect the existing stream buffer and not allow destruction of the riparian fringe. Controls in the future runoff rate and delivery mechanism will also help av	F	Ensure the entire beltwidth is protected
Root River	Root River	Two pipes whose ends are filled with sediment	Reconstruct pipe outlets	O	Low Priority

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Root River	Tuckaway Creek	Channelized and straightened channel	Realign channel, add sinuosity and vertical complexity, restore forested riparian corridor.	R	Good access, wide floodplain make this and excellent candidate for restoration.
Root River	Tuckaway Creek	Pond outlet is perched approximately 4 feet and is a fish passage barrier. This pond is held by an earthen dam. The stream channel is headcutting into the dam and may threaten the structure.	Redesign pond outlet.	O	This pond outlet is elevated and likely prevents water from draining the pond during much of the year. Rerouting the channel is not advised as the pond acts as stormwater detention and prevents damage from intense rainfall runoff peaks.
Root River	Tess Corners Creek	Buckthorn infestation of riparian forest	Remove buckthorn and encourage native plants.	F	
Root River	Tess Corners Creek	Buckthorn infestation of riparian forest	Remove buckthorn and encourage native plants.	F	
Root River	Whitnall Park Creek	Streambank has been stabilized with large riprap toe in an otherwise natural channel.	Remove riprap and stabilize toe. The riprap used in the armored banks is rounded field stone and could be used as boulder habitat in the channel.	B	
Root River	Whitnall Park Creek	Small check dam is aggrading sediment and creating a wetland condition and causing warming of stream temperatures.	Remove dam and allow the stream to resume its former course. Active restoration is likely not necessary. Some tree planting could speed up the recovery process.	G	
Root River	Whitnall Park Creek	Ponds aggrade channel, attract geese and warm streamwater, thereby degrading habitat. Dams are a fish passage barrierat all flows.	Solutions could include dam removal and restoration of the riparian zone and streambanks. Alternatively, the stream channel could be rerouted to the north and east of roadway, bypassing the ponds.	G, R	
Root River	Whitnall Park Creek	Channelization and riparian zone removal have limited the ability of the stream to move sediment and provide habitat.	Restore sinuosity to the channel and expand the riparian forest to maximum beltwidth allowable.	R	Park area has extensive floodplain width to utilize.

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Root River	Whitnall Park Creek	Development fill for the car dealership has constricted the floodplain so all flow is confined to a narrow V-shaped valley form. Bank erosion threatens the current infrastructure.	Widen channel and create a small floodplain. This would require moving the parking lots back 10-20 feet on either side of the channel.	F	
Root River	Whitnall Park Creek	Failed drop structure is eroding around the right bank and is a fish passage barrier. Deposition has filled 2/3 of the channel.	Remove dropstructure and replace with a series of rock wiers that control grade but do not present fish passage barriers.	G	
Root River	Wildcat Creek	No detention storage causes flashy flooding conditions and severe erosion downstream	Retrofit stormwater detention basins to accept water from developments.	O	
Root River	Wildcat Creek	Bank erosion caused by lateral migration after incision and removal of riparian vegetation.	Stabilize toe, bioengineer bank stabilization and plant riparian buffer with large trees.	B	Private land owner.
Root River	Wildcat Creek	Severe bank erosion caused by incision and compounded by removal of riparian vegetation and management of turfgrass to the stream edge	Toe stabilization, bioengineered bank stabilization using deep rooted shrubs and trees.	B	Both banks are a problem. Incorporation of a native buffer could greatly improve the fish and wildlife habitat of this reach.
Root River	Wildcat Creek	Channelization and recent bank stabilization have negatively impacted the ecological value of the stream and limited the amount of vertical complexity that can develop. Heavy riprap throughout the reach.	Complete detailed hydraulic analysis to determine the appropriateness of the installed treatments (cost: benefit ratio). The floodplain is relatively undisturbed through the reach and channel meanders could be restored, adding to habitat complexity.	R	Large riprap represents a public health risk (trapping). A meandering channel with an available floodplain would greatly improve the ecological value of this reach.
Menomonee River	Menomonee River	Concrete lined channel has minimal ecological and aesthetic benefit	Remove concrete and replace with naturalized channel and more environmentally bed and banks.	R	
Menomonee River	Woods Creek	Concrete lined channel has minimal ecological and aesthetic benefit	Remove concrete and replace with naturalized channel and more environmentally bed and banks.	R	

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Menomonee River	Honey Creek	Concrete lined channel has minimal ecological and aesthetic benefit	Remove concrete and replace with naturalized channel and more environmentally bed and banks.	R	
Menomonee River	Grantosa Creek	Concrete lined channel has minimal ecological and aesthetic benefit	Remove concrete and replace with naturalized channel and more environmentally bed and banks.	R	
Menomonee River	Underwood Creek	Concrete lined channel has minimal ecological and aesthetic benefit	Remove concrete and replace with naturalized channel and more environmentally bed and banks.	R	
Menomonee River	South Underwood Creek	Concrete lined channel has minimal ecological and aesthetic benefit	Remove concrete and replace with naturalized channel and more environmentally bed and banks.	R	
Menomonee River	Menomonee River	Straightened reach	Realign channel, add sinuosity and vertical complexity, restore forested riparian corridor.		
Menomonee River	Underwood Creek	Straightened reach	Realign channel, add sinuosity and vertical complexity, restore forested riparian corridor.		
Menomonee River	Menomonee River	Innapropriate riparian vegetation has resulted in moderate bank erosion through the golf course.	Create a riparian buffer using shrub, tree and grass species more efficient at holding soil in place. Some simple grading may be necessary		
Menomonee River	Little Menomonee River	The entire length of the Little Menomonee River was channelized and straightened prior to 1930 and the floodplain drained for agricultural use. The floodplain is relatively undeveloped floodplain forest.	Restore sinuosity to the entire length upstream of Brown Deer Road. Use one-pass construction to minimize riparian disturbance, add large woody habitat and stable cross-section, riffle/pool sequences.	R	This project could be done in multiple, low cost stages over several seasons. The opportunity for wide meander restoration is rare in urban areas. The floodplain here is undeveloped and over 400 feet wide in most places.

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Menomonee River	Dousman Ditch	The entire length of Dousman Ditch is a straight, trapezoidal ditch with well vegetated banks. This planform condition, although currently stable, is unstable in the long-term and has little in-stream habitat complexity.	Excavate small inset floodplain and create a meandering stream channel with riffle/pool sequences and vertical habitat complexity. Riparian zone should be restored to healthy forested condition.	R	
Menomonee River	Butler Ditch	Development threatens riparan zone quality	Purchase land starting at the headwaters and moving downstream. Implementation of stormwater BMPs and infiltration, minimizing impervious surface drainage would all help to preserve water quality and flow regime in this small stream	F	
Menomonee River	Butler Ditch	This segment of channel is straight, trapezoidal ditch with minimal habitat quality	Realign channel, add sinuosity and vertical complexity, restore forested riparian corridor.		
Menomonee River	Butler Ditch	This segment of channel is straight, trapezoidal ditch with minimal habitat quality	Realign channel, add sinuosity and vertical complexity, restore forested riparian corridor.		
Menomonee River	Butler Ditch	This segment of channel is straight, trapezoidal ditch with minimal habitat quality	Realign channel, add sinuosity and vertical complexity, restore forested riparian corridor.		
Menomonee River	Grantosa Creek	The entire length of Grantosa is either a straight, trapezoidal ditch or underground pipe. This planform condition, although currently stable, is unstable in the long-term and has little in-stream habitat complexity.	Excavate small inset floodplain and create a meandering stream channel with riffle/pool sequences and vertical habitat complexity. Riparian zone should be restored to healthy forested condition.	R	
Milwaukee River	Indian Creek	Concrete lined channel has minimal ecological and aesthetic benefit	Remove concrete and replace with naturalized channel and more ecologically functional bed and banks.	R	
Milwaukee River	Milwaukee River	Large dam	Remove dam or develop fish passage and recreation alternatives		Removal is likely not feasible due to hydropower issues, but fish passage may be a viable alternative.

Milwaukee County Parks Department - Stream Bank Evaluations

Potential project sheet

Watershed	Stream	Problem	Project description	Code*	Notes
Milwaukee River	Milwaukee River	Large dam	Remove dam or develop fish passage and recreation alternatives		Removal is preferable here since the dam is not used for any hydropower generation and does not appreciably change the width of the river. This lowhead dam could potentially be dangerous for watercraft.

Code
D = Dam
R = Realingment
B = Bank erosion
G = grade control
F = Floodplain or riparian zone restoration
O = Outfall, sewer or other infrastructure

Lagoons

Milwaukee County Parks Department - Lagoon Evaluations

Name	Total Points	Rank
Washington Park Lagoon	11	1
Wilson Park Lagoon	11	2
Mitchell Park Lagoon	11	3
Humboldt Park Lagoon	10.5	4
Greenfield Park Lagoon	10.5	5
Jackson Park Lagoon	10	6
Sheridan Park Lagoon	10	7
McGovern Park Lagoon	9.5	8
McCarty Park Lagoon	9.5	9
Brown Deer Park Lagoon	8	10
Saveland Park Lagoon	8	11
Dineen Park Lagoon	7.5	12
Jacobus Park Lagoon	7	13
Scout Lake Park	6	14
Whitnall Park Arboretum Pond - North of Drive	5	15
Oak Creek Parkway Pond	5	16
Holler Park Lagoon	5	17
Kosciuszko Park Lagoon	4	18
Whitnall Park Arboretum Pond - South of Drive	4	19
Estabrook Park Lagoon	3	20
Lake Evinrude	2.5	21
Veterans Park Lagoon	2	22
Greenfield Golf Course - east side of course	1	23
Aviary Ponds		24
County Zoo - Monkey Island		25
Humboldt Park Lily Pond		26
Grant Park Lagoon (Central)		27
Grant Park Lagoon (North)		28
Greenfield Park Lagoon - east of baseball diamond (N)		29
Greenfield Park Lagoon - east of baseball diamond (S)		30
Greenfield Park Lagoon (by entrance)		31
Grobschmidt Park Pond - Mud Lake		32
Moose Yard		33
Noyes Park Pond		34
Wehr Nature Center - Whitnall Park		35
Whitnall Park Arboretum Pond		36
Lincoln Park (Milwaukee River)		37
Little Menomonee River Pkwy. (North Lake)		38
Menomonee River Parkway Pond.		39
Oak Creek Parkway Pond		40
Root River Parkway Pond		41
Root River Parkway Pond		42
Root River Parkway Pond - Anderson Lake		43
County Grounds Pond #1 (3 basins in series)		44
County Grounds Pond #10		45
County Grounds Pond #2 (3 basins in series)		46
County Grounds Pond #3 (3 basins in series)		47

County Grounds Pond 87th & Watertown Plank Road		48
Wisconsin Ave Park - Pond 7 - N.E. of Ball Diamond		49
Brown Deer Golf Lagoon Hole #1		50
Brown Deer Golf Lagoon Hole #16		51
Brown Deer Golf Lagoon Hole #18		52
Dretzka Park Golf Course Pond - C		53
Dretzka Park Golf Course Pond - N		54
Dretzka Park Golf Course Pond - S		55
Grant Park Golf Course		56
Hansen Golf		57
Oakwood Golf (Central)		58
Oakwood Golf (North)		59
Oakwood Golf (South)		60
Warnimont Golf		61
Whitnall Park Golf Course Pond - #13 Fairway		62
Bender Park (2 dry basins)		63
GMIA Parking Structure		64
Research Park - Pond 5 - S.E. of Research Park		65
Timmerman Airfield Basin		66
Uihlein Soccer Park		67
Underwood Creek Detention Pond		68

Fishing: 1= fishing occurs; 2= fish stocking; 3= fishing clinics
WQ: 1= mesotrophic, 2= eutrophic; 3 = hypertrophic
Aq Plant: 1=<25%; 2=25-50%, 3=>50%
Erosion: 1=>200 ft, 2=>500, 3=>1000
Siltation: 1= spot location, 2 = many areas, 3 = extensive

Buildings

Milwaukee County Parks Department - Building Assessment Criteria

Category

ADA Accessibility
Air and Water Quality
Air VAV and Central AHU Units
Backflow Protection
Boiler Replacements
Boiler Room Piping
Branch Circuits
Branch Wiring Devices
Building Envelope
Cabinet Unit Heaters
Cathodic Protection
Caulk and Paints
Ceiling Finishes
Ceilings
Chimney
Communications and Security
Concrete Deck Sealant
Concrete Sidewalks
Concrete Walls
Condenser & Chiller
Controls and Instrumentation
Conveying Systems
Cooling Generating Systems
Doors and Screens
Exterior Light Fixtures
Lenses
Railings and Columns
Window Louvers
Tables and Trash Receptacles
Distribution System
Domestic Water Distribution
Door Hardware
Doors
Drinking Fountains
Duct Smoke Dampers
Ductwork
Electrical Service and Distribution
Elevators
Emergency Battery Units
Emergency Generators
Emergency Light and Power Systems
Equipment and Furnishings
Exhaust Ventilation Systems
Exit Lighting System
Exit Signs
Expansion Joints
Exterior Doors
Exterior Enclosure
Exterior Metalwork
Exterior Overhead Doors
Exterior Stairs and Patio
Exterior Surfaces
Exterior Wall Finishes
Exterior Windows
Fences and Gates
Filtration Systems
Fire Alarm Systems
Fire Extinguishers
Fire Protection Systems
Fire Separations
Fireproofing
Floor Finishes
Flooring
Fuel Distribution
Furnaces
Building Exhaust Systems
Guardrails
Handrails
Hazardous Materials
Heat Tracing
Heating Hot Water Pumps
HVAC Air Conditioners
Interior Doors
Interior Enclosure
Interior Overhead Doors
Interior Walls
Kitchen Fixtures
Landscaping
Life Safety
Lighting and Branch Wiring
Lighting Fixtures
Occupancy Sensors
PA Systems
Parking Area
Parking Lots
Toilet Partitions
Pathway
Pedestrian Paving
Perimeter Lighting
Plumbing Fixtures
Pool Heater Exhaust
Protective Coating
Receptacles
Restroom Exhaust Systems
Roll Down Fire Doors
Roof Drains Gutters
Roof Drains Gutters
Roof Mounted Condenser Units
Roof Mounted DX Systems
Roof Replacement
Sanitary Waste
Showers
Signage
Skylights
Stairs
Stairwells
Stairway
Steam Heating Distribution System
Superstructure
Telephone Systems
Terminal and Package Units
Utility Sinks
Walkway
Wall Finishes
Water Circulation Piping
Water Tempering Systems
Windows

Other Criteria

Revenue Generation
Expenditures
Historical Significance
Architectural Design
Demographics
Use Patterns

COUNTY OF MILWAUKEE
MEMORANDUM

DATE: July 28, 2011

TO: Milwaukee County Department of Parks,
Recreation and Culture: Planning & Development

FROM: Walter L. Wilson, FAIA, NOMA, NCARB
Principal Architect
Milwaukee County - DTPW - AE&ES

Chris Travanty, AIA
Milwaukee County - DTPW - AE&ES

SUBJECT: Wehr Nature Center: Condition Report
1. Building Repairs
2. Long-Term Facility Improvements

Background:

DTPW-AE&ES received a request for an assessment and cost estimate from the Parks Department on 06/15/11 for repairs and capital improvements for,

Wehr Nature Center
9701 W. College Ave.
Franklin, WI 53132
Site No: 851
Building No: 3260

DTPW-AE&ES conducted a site visit on 06/17/11 and meet with Debra McRae, Wehr Nature Center Director, to discuss required repairs to the existing building and future long-term improvements to the facility.

The Wehr Nature Center does not currently have an evaluation in the VFA system. The building was constructed in 1974 and enlarged and remodel in 1992. The roof over the 1992 addition was repaired in 2010.

1. Building Repairs:

Lounge (Fireplace Room / Lobby):

A. Condition: Roof leak: Water damage is visible on lounge ceiling.
Repair: Replace roof drain cover and ring seal. Cutout & patch water damage on gypsum ceiling and replace corroded access hatch hardware.

Multi-Purpose Room (Garden Room / Large Classroom):

B. Condition: Dry rot is present on the interior window frames. Existing window glazing is not suitable (an improvised net currently protects the windows from bird strikes etc.).
Repair: Replace windows (new frames and glare-free glazing).

C. Condition: Animal damage on ceiling (temporarily patched).
Repair: Cutout & patch damage on gypsum ceiling. Patch holes and provide fiberglass animal screens at existing soffits. Inspect attic space and remove any nesting animals and debris.

Electrical Distribution:

D. Condition: Electrical Power at Main Distribution Panel "B" (MDB).
Repair: Check distribution of electrical loads in 3 phase, 4 wire, "Y" circuit board, rebalance existing system as required, and provide new circuits from basement panel to existing computer workstations.

E. Condition: Electrical Power at Main Distribution Panel "A" (MDA).
Repair: Check distribution of electrical loads in 3 phase, 4 wire, and "Y" circuit board and rebalance existing system as required.

Exterior Fascia Board, Wood Trim and Window Frames:

F. Condition: Animal Damage and Wood Rot at Fascia, Trim, and Window Frames.
Repair: Replace rotten and damaged fascia boards. Sand, seal, and repaint all fascia and soffit boards. Sand, seal, and repaint all wood window trim on south elevation, Patch animal damage and sand, seal, and repaint entrance sign.

Exterior Siding, Soffit and Gutter Boxes at 1992 addition:

G. Condition: The finish on the wood siding and wooden gutter boxes has weathered away allowing the exposed wood to rot.
Repair: Repair minor damage to existing asphalt shingles. Replace existing wood siding with new cement fiber siding (color and finish to match existing). While siding is removed the existing wall assembly should be repaired and improved (sheathing, vapor barriers, and insulation etc). Replace existing wood gutter boxes with cement fiber or treated wood board. The aluminum gutters are in good repair, but they should be cleaned of debris and the seams should be inspected and resealed as needed.

Exterior Basement Door at 1992 addition:

H. Condition: Existing basement doors do not properly close.

Repair: Replace door hinges, weather seals, threshold and sweeps. Repaint Door and Frame to match existing.

Exterior Asphalt Pavement and ADA Accessibility at Entrances:

I. Condition: Existing exterior asphalt pavement is deteriorating. Entrance routes are not ADA accessible.
Repair: Replace existing asphalt pavement with permeable brick pavement.

2. Long-Term Facility Improvements:

J. Renovate existing restrooms to meet current ICC/ANSI A117.1 ADA accessibility standards.

K. Provide additional space for approximately (5) five new offices with a loft over the existing offices or expand building to the northwest.

L. Provide additional laboratory / classroom space for a "wet" lab with mudroom. Provide an open porch / deck above "wet" lab - accessible from Multi-Purpose Room.

M. Provide accessibility to the building's mechanical systems by replacing existing gypsum / plaster ceilings with a suspended ceiling system.

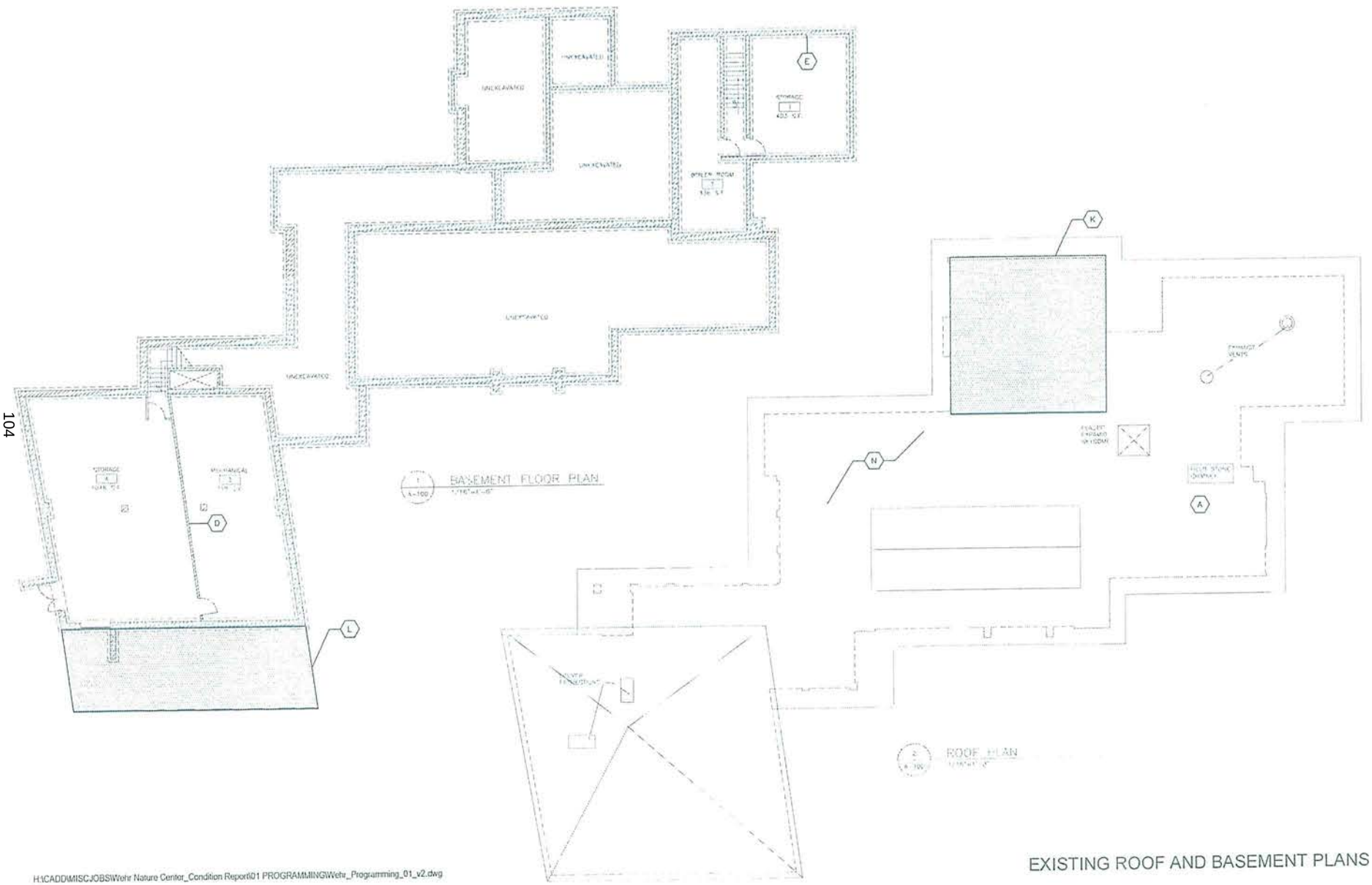
N. Incorporate Milwaukee County Greenprint Initiatives by providing Solar Hot Water assist for the existing gas Hot Water Heater and a Photovoltaic Panel System on existing flat roofs.

O. Renovate amphitheater, fire pit, and stage. Provide additional ADA accessible seating. Replace deteriorating asphalt pavement with permeable pavement at amphitheater.

P. Replace all exterior asphalt pavement with permeable brick.

Q. Replace existing phone system with an IP Phone / Data system

Attachments:
1. Building and Site Diagrams & Photos
2. Cost Estimate: Repairs
3. Cost Estimate: Long-Term Improvements



EXISTING ROOF AND BASEMENT PLANS

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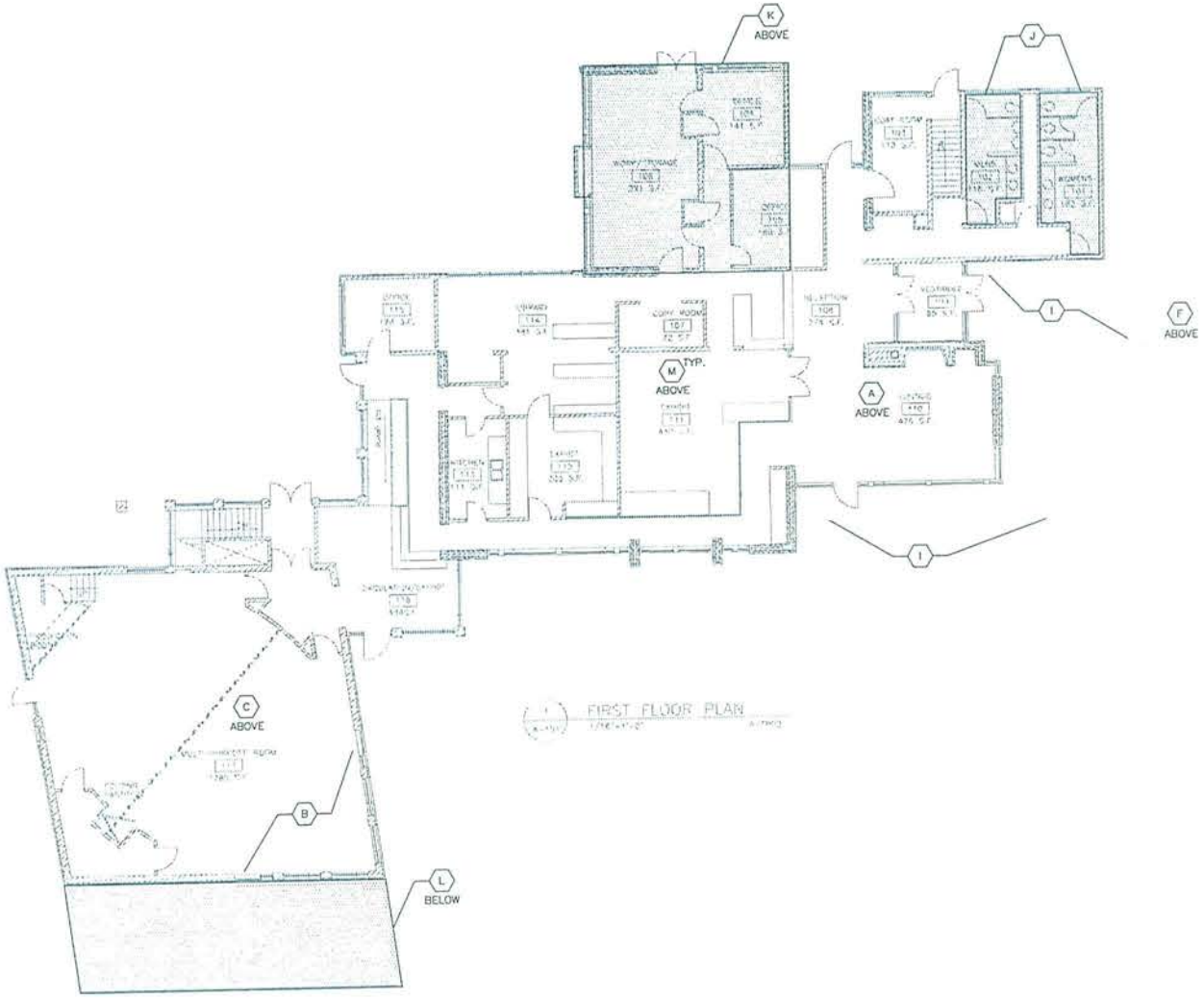
DEPARTMENT OF PARKS, RECREATION & CULTURE
WEHR NATURE CENTER
9701 W College Ave, Franklin, WI 53132

MILWAUKEE COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
CITY CAMPUS 2711 W. WELLS ST - 2ND FLOOR MILWAUKEE WI 53208

REVISIONS

DATE 07/14/2011
PROJECT N/A
SITE NO 851
BUILDING NO 3260

A-100



EXISTING FIRST FLOOR PLAN

DEPARTMENT OF PARKS, RECREATION & CULTURE

WEHR NATURE CENTER

9701 W College Ave, Franklin, WI 53132

MILWAUKEE COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

CITY CAMPUS 2711 W WELLS ST. 2ND FLOOR MILWAUKEE, WI 53208

REVISIONS

DATE 07/14/2011

PROJECT N/A

SITE NO 851

BUILDING NO 3260

A-101

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DEPARTMENT OF PARKS, RECREATION & CULTURE

WEHR NATURE CENTER

9701 W College Ave, Franklin, WI 53132

MILWAUKEE COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

CITY CAMPUS 2711 W WELLS ST - 2ND FLOOR MILWAUKEE WI 53208

REVISIONS

DATE 07/14/2011

PROJECT N/A

SITE NO 851

BUILDING NO 3260

SITE PLAN

A-102

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DEPARTMENT OF PARKS, RECREATION & CULTURE

WEHR NATURE CENTER

9701 W College Ave, Franklin, WI 53132

MILWAUKEE COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

CITY CAMPUS 2711 W. WELLS ST. - 2ND FLOOR MILWAUKEE, WI 53208

REVISIONS

DATE 07/14/2011

PROJECT N/A

SITE NO 851

BUILDING NO 3260

A-201

EXISTING ELEVATIONS

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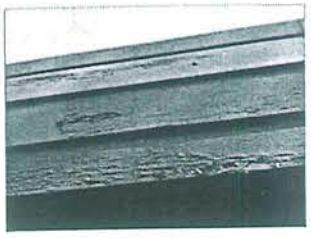
A: ROOF LEAK – DRAIN
NTS

A: ROOF LEAK – CEILING
NTS

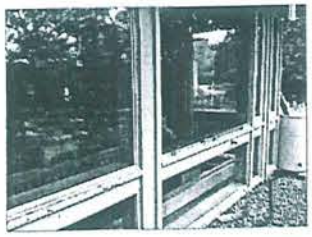
B: WINDOW – FRAMES
NTS

B: WINDOW – FRAMES
NTS

F: FASCIA – TYP.
NTS



F: FASCIA – TYP.
NTS



F: WINDOW FRAMES – TYP.
NTS

G: SIDING / GUTTERS
NTS

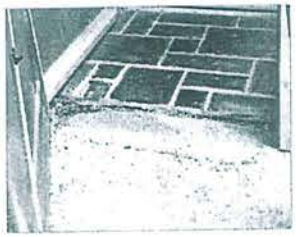
G: SIDING / GUTTERS
NTS

G: SIDING / GUTTERS
NTS

G: SOFFIT / GUTTERS
NTS

G: SOFFIT / GUTTERS
NTS

H: BSMT. DOOR
NTS



I: ADA: SITE
NTS

I: ADA: SITE
NTS

BUILDING AND SITE PHOTOS

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DEPARTMENT OF PARKS, RECREATION & CULTURE
WEHR NATURE CENTER
9701 W College Ave, Franklin, WI 53132

MILWAUKEE COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
CITY CAMPUS 2711 W WELLS ST - 2ND FLOOR MILWAUKEE WI 53208

REVISIONS

DATE 07/14/2011
PROJECT N/A
SITE NO. 851
BUILDING NO. 3260

A-301

MILWAUKEE COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
ARCHITECTURAL, ENGINEERING & ENVIRONMENTAL SERVICES

2012 COST ESTIMATE SHEET

FOR: DEPARTMENT OF PARKS, RECREATION & CULTURE	Date of Estimate 07.14.11	Life Expectancy in Years 20

Description of Project:
The project consists of critical building repairs at the Wehr Nature Center.

Description	Unit	No	Cost	Cost Estimate
A: Roof Leak: Lounge Ceiling				
07 05 05.10: Selective Demolition, Roofing and Drain	SF	100	3	$ 300
07 51 13.20: Built-Up Roofing Systems: New Roof / Patch	SF	100	17	$ 1,700
07 71 16.10: Roof Drain Boot: Replace Drain Boot	UNT	1	275	$ 275
08 31 13: Access Doors and Frames: New Ceiling Access Hatch	UNT	1	280	$ 280
09 05 05.10: Selective Demolition, Ceilings: Demo Ceiling Water Damage at Roof Leak	UNT	1	300	$ 300
09 23 20.10: Gypsum Plaster, Ceilings: Patch Ceiling Water Damage at Roof Leak	UNT	1	650	$ 650
09 91 23: Interior Painting: Lounge Ceiling	SF	500	0.72	$ 360
22 14 26.13: Roof Drains: Replace 4" Roof Drain & Misc Plumbing Fittings	UNT	1	550	$ 550
Subtotal:				**$ 4,415**
B: Window Replacement: Multi-Purpose Room				
08 05 05.20: Selective Demolition, Windows	UNT	1	225	$ 225
08 52 00: Wood Windows: Double Insul., Low -E, Glare-Free Glazing (5'-6" X 9'-6")	UNT	4	2750	$ 11,000
08 52 00: Wood Windows: Double Insul., Low -E, Glare-Free Glazing (2'-0" X 9'-6")	UNT	2	1200	$ 2,400
Subtotal:				**$ 13,625**
C: Repair Ceiling: Multi-Purpose Room				
07 72 00: Roof Accessories: Fiberglass Soffit Screens	UNT	1	1500	$ 1,500
09 05 05.10: Selective Demolition, Ceilings: Demo Ceiling Damage	UNT	1	500	$ 500
09 29 10: Gypsum Board: Ceiling: Patch Ceiling Damage	UNT	1	1200	$ 1,200
09 91 23: Interior Painting: Multi-Purpose Room Ceiling	SF	1500	0.72	$ 1,080
Subtotal:				**$ 4,280**
D: Electrical Distribution Panel "B" (MDB)				
26 01 40: Operation & Maintenance of Electrical System: Balance System (By Parks Staff)	N/A	0	0	$ -
26 05 00: New Circuits to Multi-Purpose Room Computers	UNT	1	3500	$ 3,500
Subtotal:				**$ 3,500**
E: Electrical Distribution Panel "A" (MDA)				
26 01 40: Operation & Maintenance of Electrical System: Balance System (By Parks Staff)	N/A	0	0	$ -
Subtotal:				**$ -**
F: Exterior Fascia Bd, Trim, and Window Frame Repair				
06 05 05.10: Selective Demolition and Patch, Fascia Bd	LF	600	1.78	$ 1,068
06 11 10.30: Roof Framing: Replace Damaged Fascia Bd. & Sign Bd.	LF	600	7.54	$ 4,524
09 91 03.30: Painting, Exterior Surface Prep, Fascia Bd. & Window Trim	SF	1800	1.32	$ 2,376
09 91 13.62: Painting, Exterior, Fascia Bd, & Window Trim	SF	1800	1.78	$ 3,204
Allowance: Window Trim Replacement	TYP	1	10%	$ 1,117
Subtotal:				**$ 12,289**
G: Exterior Siding, Soffit and Gutter Boxes (at 1992 addition)				
06 05 05.10: Selective Demolition, Wall Sheathing, Supports	SF	1850	0.8	$ 1,480
06 11 00: Wood Framing, Gutter Box Supports	UNT	1	300	$ 300
06 16 36: Sheathing	SF	1850	1.3	$ 2,405
07 05 05.10: Selective Demolition, Gutter Boxes	LF	200	2	$ 400
07 05 05.10: Selective Demolition, Siding	SF	1850	1.18	$ 2,183
07 05 05.10: Selective Demolition, Insulation, Bdg Wrap	SF	1850	0.52	$ 962
07 21 16: Wall Insulation, R30 Batt	SF	1850	1.55	$ 2,868
07 25 10: Weather Barrier	SF	1850	0.39	$ 722
07 46 23: Wood Siding: Gutter Boxes	SF	250	4.75	$ 1,188
07 46 46.10 Cement Fiber Siding	SF	1850	3.88	$ 7,178
07 72 00: Roofing Accessories, Fiberglass Animal Screen at Soffits	LF	200	2	$ 400
Allowance: Siding & Gutter Boxes	TYP	1	10%	$ 1,550
Subtotal:				**$ 21,634**
H: Exterior Basement Doors				
08 05 05: Selective Demolition, Door Hardware	UNT	2	55	$ 110
08 71 00: Door Hardware	UNT	2	280	$ 560
09 91 13: Painting, Exterior Doors & Frames	UNT	2	75	$ 150
Subtotal:				**$ 820**
I. Pavement and ADA Accessibility at Entrances				
02 41 13: Selective Site Demolition, Pavement at Entrances & Adjacent Pathways	SY	250	9	$ 2,250
32 14 16: Brick Unit Paving: Permeable	SF	1000	7.5	$ 7,500
Subtotal:				**$ 9,750**
General Conditions:	TYP	1	15%	$ 10,547
Allowance:	TYP	1	3%	$ 2,109
Total Construction Costs				$ 82,970
CITY OF MILWAUKEE PLAN REVIEW - Building Plan	N/A	1	0	$ -
CITY OF MILWAUKEE PLAN REVIEW - HVAC	N/A	1	0	$ -
CITY OF MILWAUKEE PLAN REVIEW - Plumbing	N/A	1	0	$ -
Environmental Remediation: Inspection & Testing	N/A	1	0	$ -
Environmental Remediation: Removal (est. 2%)	N/A	1	0	$ -
Environmental Remediation: Compliance / Clearance (air samples etc)	N/A	1	0	$ -
Copying and Printing	EST	1	500	$ 500
Advertising	EST	1	500	$ 500
Project Management				$ 1,245
Owners Services				$ 830
Planning & Design				$ 9,956
Construction Management				$ 4,563

Total County Cost = $ 100,564

Estimated by: Chris Travanty, AIA, Milwaukee County - DTPW - AE&ES

WEHR NATURE CENTER_BUILDING REPAIRS.xls

MILWAUKEE COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
ARCHITECTURAL, ENGINEERING & ENVIRONMENTAL SERVICES

2012 COST ESTIMATE SHEET

FOR: DEPARTMENT OF PARKS, RECREATION & CULTURE	Date of Estimate	Life Expectancy in Years
	07.14.11	20

Description of Project:
The project consists of long-term capital improvments to the Wehr Nature Center.

Description	Unit	No	Cost	Cost Estimate
J: ADA Renovation: Existing Public Restrooms				
General Demolition	UNT	1	3000	$ 3,000
New Doors and Hardware: Interior	EA	2	1700	$ 3,400
New ADA Power Assist Door Operators	EA	2	3500	$ 7,000
Painting: Walls and Ceiling	SF	1275	2	$ 2,550
Floor: Expoxy	SF	280	8	$ 2,240
New Toilet Partitions and Accessories	UNT	4	1200	$ 4,800
Plumbing Work:	UNT	1	5000	$ 5,000
HVAC / Mechanical Work:	UNT	1	2000	$ 2,000
Electrical Work:	UNT	1	3000	$ 3,000
General Conditions:	TYP	1	15%	$ 4,949
Allowance:	TYP	1	3%	$ 1,138
Subtotal:				**$ 39,077**
K: New Office Space: Loft				
New Office Space	SF	900	176	$ 158,400
Subtotal:				**$ 158,400**
L: New Classroom: Wet Lab / Mud Room				
New Lab / Classroom	SF	700	155	$ 108,500
Subtotal:				**$ 108,500**
M: New Suspended Ceiling System				
General Demolition	UNT	1	5000	$ 5,000
New Suspended Ceiling System: Lounge, Vestibule, Reception, & Circulation Areas	SF	1700	3	$ 5,100
New Suspended Ceiling System: Multi-Purpose Room	SF	1780	3	$ 5,340
New Suspended Ceiling System: Work Room, Office Space, & Storage	SF	1100	3	$ 3,300
New Suspended Ceiling System: Library, Exhibit, & Kitchen	SF	1000	3	$ 3,000
Electrical Work	UNT	1	15000	$ 15,000
General Conditions:	TYP	1	15%	$ 5,511
Allowance:	TYP	1	3%	$ 1,268
Subtotal:				**$ 43,519**
N: Greenprint Items: Solar PV & Solar Hotwater				
6 kW Photovolatic Panal System	UNT	1	50000	$ 50,000
Solar Hotwater System	UNT	1	30000	$ 30,000
Subtotal:				**$ 80,000**
O: Amphitheater Renovation				
Demolition, Pavement Pathways	SY	330	9	$ 2,970
Brick Unit Paving: Permeable	SF	3000	7.5	$ 22,500
Stage Renovation	SF	600	35	$ 21,000
Fire Pit Renovation	SF	400	25	$ 10,000
General Conditions:	TYP	1	15%	$ 8,471
Allowance:	TYP	1	3%	$ 1,948
Subtotal:				**$ 66,889**
P: Replace Exterior Asphalt Pavement				
Demolition, Pavement Pathways	SY	1110	9	$ 9,990
Brick Unit Paving: Permeable	SF	10000	7.5	$ 75,000
Subtotal:				**$ 84,990**
Q: IP Phone and Data System				
IP Unified Data & Communications System & Cabling	UNT	1	4000	$ 4,000
IP Phones	UNT	20	175	$ 3,500
Subtotal:				**$ 7,500**
Total Construction Costs				**$ 588,874**
CITY OF MILWAUKEE PLAN REVIEW - Building Plan	CT	1	1500	$ 1,500
CITY OF MILWAUKEE PLAN REVIEW - HVAC	CT	1	1500	$ 1,500
CITY OF MILWAUKEE PLAN REVIEW - Plumbing	CT	1	750	$ 750
Environmental Remediation: Inspection & Testing	N/A	1	1000	$ 1,000
Environmental Remediation: Removal	N/A	1	3000	$ 3,000
Environmental Remediation: Compliance / Clearance (air samples etc)	N/A	1	500	$ 500
Copying and Printing	EST	1	500	$ 500
Advertising	EST	1	500	$ 500
Project Management				$ 8,833
Owners Services				$ 5,889
Planning & Design				$ 70,665
Construction Management				$ 32,388

Total County Cost = $ 715,899

Estimated by: Chris Travanty, AIA, Milwaukee County - DTPW - AE&ES

Milwaukee County Parks Department - Building Inventory

Park	Asset_No	Type
Alcott	2350	bathhouse/pavilion
Alcott	2360	storage shed
Algonquin	1020	bathhouse/pavilion
Algonquin	1015	storage shed
Baran	3946	announcer's booth
Baran	3950	pavilion
Baran	3948	pumphouse
Baran	3944	storage shed
Baran	3942	storage shed
Bender	2955	comfort station/concessions
Bradford Beach	0	Beach house
Bradford Beach	1800	comfort station/concessions
Brown Deer	980	boathouse/pavilion
Brown Deer	1005	chemical storage
Brown Deer	970	comfort station
Brown Deer	0	Communications building
Brown Deer	0	Communications building
Brown Deer	0	Communications building
Brown Deer	955	driving range shed
Brown Deer	900	golf clubhouse
Brown Deer	950	golf comfort station
Brown Deer	930	golf shelter (16 green)
Brown Deer	940	golf shelter (7 green)
Brown Deer	910	golf starter shed
Brown Deer	961	hopper
Brown Deer	1000	pumphouse/substation
Brown Deer	960	service building
Brown Deer	964	storage shed (east)
Brown Deer	962	storage shed (west)
Cannon	2370	bathhouse/pavilion
Carver	1648	announcer's booth
Carver	1645	announcer's booth (east)
Carver	1647	announcer's booth (west)
Carver	1640	bathhouse
Carver	1642	comfort building
Carver	1644	concession stand
Carver	1650	indoor baseball practice facility
Carver	1641	picnic shelter (area #1)
Carver	1649	storage shed (east)
Carver	1651	storage shed (west)
Center Street	2010	pavilion
Center Street	2012	storage shed
Clarke Square	3980	pavilion
Columbus	2020	bathhouse/pavilion
Columbus	2015	storage shed
Cooper	2560	pavilion
Cooper	2570	storage shed
Cudahy	2970	pavilion
Cudahy Nature Preserve	0	shelter/comfort building
Cupertino	4125	comfort building (north)
Cupertino	0	unknown
Currie	2520	chemical storage shed
Currie	2530	gas pump shed
Currie	2460	golf clubhouse
Currie	2545	golf dome
Currie	2480	pump house

Currie	2500	sand storage shed (A)
Currie	2510	sand storage shed (B)
Currie	2470	service building
Currie	2490	ski shed
Dale Creek Parkway	0	gazebo
Dineen	0	Former bathhouse
Dineen	2040	golf starter building
Dineen	2060	pavilion
Dineen	0	Service building
Dineen	0	Storage
Dineen	0	Storage
Dineen	0	Storage
Doctors	1030	bathhouse (beach)
Doctors	1040	service/comfort station
Doctors	1050	storage shed
Doyne	2160	pavilion
Doyne	2162	storage shed (north)
Doyne	2165	storage shed (south)
Doyne	2167	storage shed (west)
Dretzka	1122	chemical storage
Dretzka	1110	driving range shack
Dretzka	0	gas tank?
Dretzka	1060	golf clubhouse
Dretzka	0	golf shelter (between 2 green and 3 tee)
Dretzka	0	golf shelter (east of 16 tee)
Dretzka	0	golf shelter (near 8 tee)
Dretzka	1119	hopper
Dretzka	1080	pumphouse
Dretzka	1120	service building
Dretzka	1070	ski chalet
Dretzka	1100	ski/tow shelter (east)
Dretzka	1090	ski/tow shelter (west)
Dretzka	1125	storage building
Dretzka	1129	storage shed (large equipment)
Dretzka	1127	storage shed (small equipment)
Dretzka	1115	storage shed (supply)
Dretzka	0	unknown structure
Estabrook	1240	benjamin church house
Estabrook	1250	comfort station (central)
Estabrook	1230	comfort station (north)
Estabrook	1260	comfort station (south)
Estabrook	1225	gas pump shed
Estabrook	1210	servicee building
Estabrook	1220	storage shed
Falk	0	pavilion
Falk	0	residence
Froemming	895	comfort/shelter building
Froemming	0	observatory
Froemming	0	storage shed
Gordon	1663	bathhouse/pavilion
Gordon	1665	picnic shelter
Grant	0	beach bathhouse/shelter
Grant	2920	bridge shelter
Grant	2855	chemical storage
Grant	2930	comfort building (area 3 & 4)
Grant	2850	comfort/shelter building (areas 7, 8, & 9)
Grant	2820	fertilizer storage shed
Grant	2790	garage building
Grant	2860	golf clubhouse

Grant	2880	golf shelter (13 tee)
Grant	2795	golf shelter (3 tee)
Grant	2890	golf shelter (7 tee)
Grant	2870	golf starter house (10 tee)
Grant	0	Greenhouse
Grant	0	hopper
Grant	2892	irrigation pumphouse
Grant	2810	metal storage shed
Grant	2720	overnight lodge
Grant	2830	park garage (brown)
Grant	2730	pavilion (area 5 & 5A)
Grant	2840	quonset storage building (east)
Grant	2770	service building
Grant	0	Storage
Grant	2740	storage shed
Grant	2760	storage shed
Grant	2800	storage shed (brown)
Grant	2857	storage tank
Grant	0	unknown structure
Grant	0	unknown structure in service yard
Grant	0	Wil-O-Way
Grant	0	Wil-O-Way unknown structure
Greene	3990	pavilion
Greene	4000	skating shed
Greenfield	2175	aquatic center building
Greenfield	2178	aquatic center shelter (east)
Greenfield	2177	aquatic center shelter (west)
Greenfield	2215	chemical storage shed
Greenfield	2310	comfort station (15 tee)
Greenfield	2290	golf clubhouse
Greenfield	2300	golf comfort building
Greenfield	2340	golf shelter (east of 16 green)
Greenfield	0	golf shelter (south of 4 green)
Greenfield	2295	golf storage shed
Greenfield	0	hopper
Greenfield	0	MMSD building
Greenfield	2170	pavilion
Greenfield	2180	pool mechanical equipment building
Greenfield	2240	quonset garage
Greenfield	2210	service building
Greenfield	0	shelter (north side of clubhouse)
Greenfield	2190	shelter/comfort building (#3A & #3B)
Greenfield	2200	shelter/comfort building (#5)
Greenfield	2260	storage building (D)
Greenfield	2220	storage shed (#3A & #3B)
Greenfield	2230	storage shed (#5)
Greenfield	2250	storage shed (C)
Greenfield	2270	storage shed (E)
Greenfield	2280	storage shed (F)
Greenfield	0	unknown structure in service yard
Greenfield	0	unknown structure south of aquatic shelter
Greenfield	0	unnknown structure in service yard
Greenhouse Complex	4231	Boiler house
Greenhouse Complex	4222	Center area garage
Greenhouse Complex	4229	Chemical storage
Greenhouse Complex	4230	Greenhouses
Greenhouse Complex	4220	Landscape Services education/storage
Greenhouse Complex	4237	Poly/hoop house
Greenhouse Complex	4238	Poly/hoop house

Greenhouse Complex	0	Poly/hoop house
Hales Corners	3430	bathhouse
Hales Corners	3440	Comfort building
Hales Corners	0	storage shed
Hansen	2580	clubhouse
Hansen	0	hopper
Hansen	2600	service building
Hansen	2602	storage building
Hansen	2605	storage building
Hansen	2597	storage building
Hansen	2597	storage building (near 12)
Hansen	0	unknown structure (south end of service yard)
Holler	3720	bathhouse
Holler	3730	pavilion
Holler	3735	recreation center
Hoyt	2590	bathhouse
Hoyt	2587	concession stand
Hoyt	2595	pumphouse/shelter building
Hoyt	2588	storage shed
Hoyt	2592	ticket booth
Humboldt	3930	bandshell chalet
Humboldt	3940	bathhouse/service building
Humboldt	3920	pavilion
Jackson	3580	bathhouse
Jackson	3550	boathouse
Jackson	3570	comfort station (area #10)
Jackson	3620	gas pump shed
Jackson	3631	gas tank
Jackson	3590	pavilion
Jackson	3600	picnic shelter (area #2)
Jackson	3610	service building
Jackson	0	unknown structure
Jackson	0	unknown structure
Jackson	0	unknown structure
Jackson	0	unknown structure (service yard)
Jackson	0	unknown structure (service yard)
Jacobus	2070	pavilion
Jacobus	2090	storage building
Jacobus	2080	wading/comfort building
Johnsons	1670	shelter/comfort building
Johnstone	0	shelter
Juneau	1700	comfort station
Juneau	1710	solomon juneau memorial cabin
Kern	1280	pavilion
Kern	1290	storage shed
King	2100	comfort shelter
King	2110	community center
King	2105	skate shelter
Kinnickinnic River Parkway	3800	announcer's booth
Kinnickinnic River Parkway	3770	comfort building (Simmons Field)
Kinnickinnic River Parkway	3810	storage building (Simmons Field)
KK Sports Center	4005	pavilion
KK Sports Center	3740	storage shed
Kletzsch	1140	service building (day camp)
Kletzsch	1130	Shelter Building
Kletzsch	1160	storage shed
Kletzsch	1150	transformer building
Kops	2550	bathhouse/pavilion
Kops	2555	storage shed

Kosciuszko	4010	aquatic center office/bathhouse
Kosciuszko	0	aquatic center shelter
Kosciuszko	4070	community center
Kosciuszko	4030	Miscellaneous
Kosciuszko	4020	pump/filter house
Kosciuszko	4060	quonset/storage shed (east)
Kosciuszko	4050	quonset/storage shed (west)
Kosciuszko	4040	service building
Kulwicki	5780	pavilion
Kulwicki	0	unknown baseball support structure
LaFollette	2390	pavilion/bathhouse
LaFollette	2395	storage shed
Lake	1540	comfort building (north)
Lake	1570	golf starter shack
Lake	1580	golf storage building
Lake	1610	lawn bowling building
Lake	0	Lighthouse
Lake	0	Lighthouse keepers' house
Lake	1620	restaurant/pavilion
Lake	1520	service building
Lake	1590	storage shed #1 (south of golf storage building)
Lake	1600	storage shed #2 (behind 9 green)
Lake	1522	storage shed (eastern corner service yard)
Lake	1528	storage shed (service yard)
Lincoln	1303	announcer's booth
Lincoln	0	Aquatic park slide tower
Lincoln	0	Associated with aquatic park
Lincoln	0	baseball dugout
Lincoln	0	baseball dugout
Lincoln	0	Bathhouse
Lincoln	1305	chemical storage shed
Lincoln	1350	comfort station #1 (ball diamond)
Lincoln	1360	comfort station #2 (golf course)
Lincoln	1307	filter/pump building
Lincoln	1320	golf clubhouse
Lincoln	1325	golf service building
Lincoln	1327	golf shelter (hole #2)
Lincoln	0	hopper
Lincoln	1330	park service building
Lincoln	0	Pavilion
Lincoln	1390	picnic shelter building
Lincoln	1340	storage shed (service yard north)
Lincoln	1335	storage shed (service yard south)
Lincoln	0	transmission tower building
Lindburgh	1400	bathhouse/pavilion
Lindsay	2610	bathhouse/pavilion
Lyons	3750	bathhouse/pavilion
Madison	2620	bathhouse
Madison	2630	golf starter building
Madison	2655	service building
Madison	2640	storage shed (north)
Madison	2650	storage shed (south)
Manitoba	3760	pavilion/utility building
McCarty	2430	announcer's booth
McCarty	2400	bathhouse/pavilion
McCarty	2420	comfort station
McCarty	2410	service building
McCarty	2405	storage shed
McCarty	0	unknown structure

McGovern	1410	pavilion
McGovern	1412	picnic shelter (area #3)
McGovern	1415	picnic shelter (area #4)
McGovern	1435	senior center
McGovern	1440	service/comfort building
McGovern	1450	storage shed
McGovern	1420	storage shed (east side of pavilion)
McGovern	1430	storage shed (west side of pavilion)
McKinley	1720	concession building (Roundhouse)
McKinley	1730	fish cleaning station
McKinley	1732	fueling station
McKinley	1734	lifeguard station
McKinley	0	marina pavilion
McKinley	0	Picnic shelter
McKinley	1780	shelter/comfort building
McKinley	1790	shower/comfort building
McKinley	1740	shower/comfort building
McKinley	0	Storage
McKinley	1736	storage building
McKinley	1770	storage shed (north of yacht club)
McKinley	1765	storage shed (north of yacht club)
McKinley	1760	storage shed (north of yacht club)
McKinley	0	storage shed (north of yacht club)
McKinley	1750	toll booth
McKinley	0	unknown sailing center structure
McKinley	0	unknown sailing center structure
McKinley	0	unknown sailing center structure
McKinley	0	unknown structure (north of yacht club)
McKinley	0	water sport rental shack
McKinley	0	water sport rental shack
McKinley	0	yacht club
McKinley	0	yacht club bathhouse
McKinley	0	yacht club entrance station
Meaux	1370	comfort building
Meaux	1380	service building
Menomonee River Parkway	2660	comfort station
Mitchell	4160	conservatory
Mitchell	4170	pavilion
Mitchell	4180	storage/comfort building
Mitchell	4195	wading pool building
Mitchell Boulevard	2125	comfort building
Moody	1460	bathhouse/pavilion
Noyes	1180	bathhouse/pavilion
Noyes	1170	golf starter/service building
Noyes	0	unknown structure (north of golf starter/service)
Noyes	0	unknown structure (NW of tennis courts)
Oak Creek Parkway	3000	bathhouse
Oak Creek Parkway	2990	pavilion
Oak Creek Parkway	0	unknown structure (north of Grobschmidt pool)
Oakwood	3463	chemical storage
Oakwood	3450	clubhouse
Oakwood	3454	driving range shack
Oakwood	3458	golf shelter (13 green)
Oakwood	3456	golf shelter (15 tee)
Oakwood	3452	golf shelter (8 tee)
Oakwood	3464	hopper
Oakwood	3465	pump building
Oakwood	3460	pump building
Oakwood	3470	service building

Oakwood	3462	storage shack (west side of service yard)
Oakwood	3466	storage shed (east side of service yard)
O'Donnell	74	Miller pavilion
O'Donnell	75	parking structure
O'Donnell	0	shelter
O'Donnell	0	shelter
O'Donnell	0	shelter
O'Donnell	0	shelter
Park Maintenance	4240	administration building
Park Maintenance	4258	cold storage building
Park Maintenance	4260	incinerator shed
Park Maintenance	4254	quonset (center)
Park Maintenance	4252	quonset (east)
Park Maintenance	4256	quonset (west)
Park Maintenance	4250	service garage & warehouse
Pere Marquette	1705	gazebo
Pulaski	0	bathhouse
Pulaski	4080	pavilion
Pulaski (Cudahy)	3010	bathhouse/pavilion
Pulaski (Cudahy)	3009	picnic shelter
Pulaski (Cudahy)	3008	unknown structure (south of pavilion)
Rainbow	2445	announcer's booth
Rainbow	2440	pavilion
Rainbow	2450	storage shed
Rawson	3020	comfort building
Red Arrow	0	Outdoor Ice Rink
Red Arrow	1690	pavilion
Riverside	1810	comfort building
Riverside	1815	storage shed
Riverton Meadows	0	Gazebo
Root River Parkway	3520	comfort/shelter (areas 1 & 1A)
Root River Parkway	3510	comfort/shelter (areas 2 & 2A)
Root River Parkway	3500	comfort/shelter (areas 3 & 3A)
Root River Parkway	0	Model airplane storage
Root River Parkway	0	Pope residence
Root River Parkway	0	Pope residence garage
Root River Parkway	0	Pope residence stables
Root River Parkway	0	Pope residence storage
Root River Parkway	0	Pope residence storage
Root River Parkway	3350	ross lodge outpost (north of lodge)
Root River Parkway	3420	Ross overnight lodge
Root River Parkway	0	tobbagan slide (north rails)
Root River Parkway	0	tobbagan slide (south rails)
Root River Parkway	3300	tobbogan storage shed (north)
Root River Parkway	3410	toboggan slide shelter
Root River Parkway	3250	toboggan storage shed (south)
Root River Parkway	3352	wood storage bin (Ross Lodge)
Root River Parkway	0	
Rose	1830	senior center
Rose	1835	wading pool building
Saveland	4100	pavilion
Schoenecker	1200	comfort building
Schoenecker	1205	concession building (east)
Schoenecker	1207	concession building (west)
Scout Lake	3530	pavilion
Scout Lake	3540	storage shed
Sheridan	3040	bathhouse
Sheridan	3060	concessions shed
Sheridan	3055	park service building

Sheridan	3030	pavilion/skate shelter
Sheridan	3050	service building
Sherman	2145	boys/girls club
Sherman	2130	storage shed #1 (west)
Sherman	2140	storage shed #2 (east)
Smith	1480	comfort station
Smith	1470	pavilion
Smith	1500	storage shed
Smith	1485	storage/service building
South Shore	0	City of Milwaukee sewer/water facility
South Shore	4120	fish cleaning/comfort building
South Shore	4110	pavilion/maintenance/concession building
South Shore	0	Storage
South Shore	0	unknown structure in parking lot
South Shore	0	unknown structure in parking lot
Sports Complex	5800	sports complex
Sports Complex	0	unknown structure (immediately west of Froemming)
St. Martins	2980	pavilion
Tiefenthaler	2150	pavilion
Tippecanoe	4140	pavilion
Tippecanoe	0	storage shed
Trimborn Farm	0	Trimborn residence
Trimborn Farm	0	unknown
Trimborn Farm	0	unknown
Trimborn Farm	0	unknown
Trimborn Farm	0	unknown
Trimborn Farm	0	unknown
Trimborn Farm	0	unknown
Trimborn Farm	0	unknown
Trimborn Farm	0	unknown
Trimborn Farm	0	
Uihlein Soccer Park	5760	Uihlein champion building
Uihlein Soccer Park	5770	Uihlein soccer building
Underwood Creek Parkway	2682	barn storage shed
Underwood Creek Parkway	2690	comfort building
Underwood Creek Parkway	0	MMSD facility
Underwood Creek Parkway	0	MMSD facility
Underwood Creek Parkway	2680	Wil-O-Way recreation center
Veterans	0	concessions
Veterans	0	parking booth
Veterans	0	rentals
Veterans	1505	shelter/comfort building
Veterans	0	storage
Veterans	1507	storage building
Veterans	0	unknown
Veterans	0	unknown
Vogel	2700	pavilion
Vogel	2695	storage shed
Wahl	0	Pavilion
Wahl	1515	storage shed
Walker Square	4150	pavilion
Walker Square	0	unknown
Warnimont	3090	golf clubhouse
Warnimont	3100	golf comfort building (8 tee)
Warnimont	3085	golf course office
Warnimont	3080	golf storage shed
Warnimont	3070	golf storage/maintenance building
Warnimont	3110	golf storage/service building

Warnimont	3120	house trailer (shooting range)
Warnimont	3125	Kelly nutrition building
Warnimont	3130	Kelly senior center
Warnimont	3135	Kelly storage building
Warnimont	3119	storage container
Warnimont	3118	storage container (green)
Warnimont	3117	storage container (green)
Washington	1930	announcer's booth
Washington	1840	bathhouse
Washington	2000	community building
Washington	1960	gas pump shed
Washington	0	gazebo
Washington	1880	pump/filter house
Washington	1990	senior center
Washington	1950	service building
Washington	1850	storage shed #1 (south)
Washington	1860	storage shed #2 (north)
Washington	0	unknown
Washinton	0	Bandshell
Webster	1797	storage/picnic shelter
Wedgewood	3820	pavilion
Wedgewood	0	storage shed
West Milwaukee	3830	pavilion
West Milwaukee	3840	storage shed
West Milwaukee	0	storage shed
Whitnall	3236	brick trellis
Whitnall	3220	comfort building (areas 5, 6, 7, 8)
Whitnall	3170	comfort building (Gardens)
Whitnall	3204	concessions stand (Gardens)
Whitnall	3160	garden house
Whitnall	3232	gazebo (Gardens)
Whitnall	3270	golf clubhouse
Whitnall	3330	golf comfort building (5 tee)
Whitnall	3285	golf shelter (3 tee)
Whitnall	3280	golf shelter (8 tee)
Whitnall	3305	hazardous materials container
Whitnall	0	hopper
Whitnall	3260	nature center
Whitnall	3340	red barn (golf course)
Whitnall	3240	red barn/silo (conifer collection)
Whitnall	3200	service building (Gardens)
Whitnall	3310	service building-north (golf course)
Whitnall	3315	service building-south (golf course)
Whitnall	3210	storage building (ccc)
Whitnall	0	ticket booth
Whitnall	0	unknown (Gardens service yard)
Whitnall	0	unknown (golf course)
Whitnall	0	unknown (golf course)
Whitnall	3266	unknown (Nature Center)
Whitnall	3264	unknown (Nature Center)
Whitnall	3265	unknown (Nature Center)
Whitnall	3262	viewing shed (Nature Center)
Whitnall	0	Visitor and Education Center
Whitnall	0	weather box
Wilson	3850	boathouse/pavilion
Wilson	3870	comfort building (area #1)
Wilson	0	Gas
Wilson	3882	gazebo
Wilson	0	Storage

Wilson	3880	storage shed (north)
Wilson	3890	storage shed (south)
Wilson Recreation Center	3902	announcer's booth
Wilson Recreation Center	3860	recreation center
Wilson Recreation Center	3845	senior center
Wilson Recreation Center	3900	ticket/comfort building
Wisconsin Avenue	2705	chemical storage shed
Wisconsin Avenue	2710	pavilion
Wisconsin Avenue	0	storage shed
Zablocki	0	Community building
Zablocki	3710	service building
Zablocki	0	storage building
Zeidler Union Square	0	gazebo

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Security Systems

Milwaukee County Parks Department - Security System Evaluations

Location	Type of System	# of Cameras	Locations	Notes	Work Performed
Schulz	IP	12	Admissions	2009 Installation	Installed new operating system on server to
			Admissions Safe Room	Some storage and power issues	stop connection losses resulting in the
			Concessions staff side	Integrated Technology	inability to record data (4/11)
			Concessions Counting Room		
			Concessions Safe Room		
			Parking Lot		System check on 6/28/11 - all cameras functional
			Concessions Patron Side	Authorized IP users include Schloesser, Black, Sanchez	and no server issues since new server was
			Lockers	Baudry, Pritzlaff, and Temke.	installed on 6/7/11.
			3 Pool Views		
			Entrance		Failing hard drive in server replaced (11/11).
MLK CC	DVR	11	2 East Lot	Wires cut	4/27/11 - replaced office camera. Outside cameras
			2 West Lot	Stolen	need replacing from theft but new conduit needs
			Lobby	DVR working	to be run in order to make the cameras inaccessible
			Office	New power source and wiring installed by Toepfer in 2009.	from the roof.
			Basement hall		
			Boxing ring	Priority?	Will get quote from Omnivident after July 4th to
			Gym		reposition lot cameras.
			Library		
			Gym		
O'Donnell	DVR	22	3 LMD Ticket Lanes		New 8-channel DVR installed 7/1/10.
			3 Michigan Ticket Lanes		New cameras and a new 16-channel DVR installed
			4 paystation cams		6/21/11.
			4 license plate cams		
			3 main office		License plate camera for west lane of the
			2 loading dock		Michigan Ave. exit replaced 02/14/12.
			2 storage cage		
			1 parking office back room		
Whitnall Golf	DVR	4	Kitchen	working	New DVR installed 7/2/10.
			Pro Shop	Repositioned and installed new color/infrared dome	Camera/wiring work 5/6/11
			Outside by Deck	working	
			Outside towards Carts	working	

Greenfield Golf	DVR	3	Pro Shop	Repositioned and installed new color/infrared dome	New DVR installed 7/1/10.
			Kitchen/Concessions	working	Camera/wiring work 5/5/11
			Outside towards Carts	working	
Currie Golf	DVR	3	Pro Shop	Repositioned and installed new color/infrared dome	New DVR installed 7/1/10.
			Kitchen/Concessions	working	Camera/wiring work 5/5/11
			Outside towards Carts	working	
Doyne Golf	DVR	4	3 Outside Corners	Repositioned southeast camera to view sheds	New DVR installed 7/1/10.
			1 Inside shack	Cleaned housings	System check 5/9/11
Dretzka Golf	DVR	4	1st Tee	Replaced/installed new color/infrared dome	New DVR installed 7/1/10.
			10th Tee	Bad wiring - needs to replace cable - not for security	Camera/wiring work 5/5/11
			Pro Shop	Working	
			Kitchen/Concessions	Working	
Brown Deer Golf	DVR	5	1st Tee	Operational use only - not for security - non-functional	New DVR installed 7/1/10.
			Kitchen towards safe	Working	Camera/wiring work 4/27/11
			Restaurant on register	Working	
			Concessions office	Working	
			Pro Shop on register	Working	
Lincoln Golf	DVR	4	East side facing practice green	Working	New DVR installed 7/1/10.
			West side facing 1st tee	Working	Camera/wiring work on 5/9/11
			Starter area on register	Working	
			Safe room	Working	
Grant Golf	DVR	3	Outside facing door to pro shop	Replaced/installed new color/infrared dome	New DVR installed 7/2/10.
			Starter area on register	Replaced/installed new color/infrared dome	Camera/wiring work 5/6/11
			Restaurant on register	Working	

McKinley Marina	DVR	7	Fuel dock South marina Office Center marina North marina Government Pier Ramps	Priority?	New DVR installed 7/1/10. Only 2 camera views Have 4 outdoor cameras available to replace non-functioning units. Need vendor to evaluate problem.
Bender	VHS	6	Top of building Inside on register Open outside area Under eaves Under eaves Under eaves	System not functional. Originally set-up to feed to OC PD. Looks like cameras work but need a DVR to replace outdated VHS recorder. Priority??	
Hoyt Aquatic Center	Installed by Friends of Hoyt Park and Pool as part of the Tosa Pool project.				
Grant Beach	DVR	4	Under eaves		Installed 8/16/11. Paid for by Grant Park Friends ($1,800)

SITES RECOMMENDED FOR CCTV:

Sports Complex
Domes
Oakwood Clubhouse
Hansen Clubhouse
Kozy Community Center
Noyes Indoor Pool
Pulaski Indoor Pool

Operations Recommendation #2

Operation Issues/Recommendations
Recommendation # 2

Work with DTPW to develop an appropriate condition assessment cycle for buildings and related equipment contained in the VFA system, and follow it.

Staffs from the DPRC and DOT/DAS -A&E are continuing to perform our annual three-year rolling evaluations and assessments on Parks Infrastructure. This process allows staff to evaluate these facilities once every three years. These evaluations include:

- Parkway Roads,
- Internal Park Roads
- Parking Lots,
- Walkways,
- Tennis Counts,
- Basketball Courts,
- Boat Launches,
- Multiuse Trails,
- Bridges,
- Pools,
- Storm and Sanitary Sewers,
- Playgrounds
- Security Systems.

This rolling three-year evaluation and assessment cycle has worked well evaluating these assets.

Criteria, staffing, and funding for on going specialized evaluations are required to maintain sufficient level of inspections and assessment cycles.

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Operations Recommendation #3

Operation Issues/Recommendations
Recommendation # 3

For reporting of accumulated deferred maintenance, include only amounts that represent current rather than future repair and maintenance needs. Include information on outside revenue sources available to offset reported costs.

The DPRC will continue to utilize a process that will ensure that the costs included in any future reports or tracking systems only include current cost estimates. The following table represents the numerical evaluation scale for action.

0-40	Immediate/Critical
41-60	2-4 Years
61-80	5-10 Years
81-90	Normal Maintenance
91-100	Excellent Condition

In addition, we will continue to work to identify all of the individual projects that may be eligible for external funding as we have done in the past. The following tables shows the grant programs and funding amounts that the DPRC has successfully achieved since 2000. The DPRC have been awarded approximately $21 million since 2000.

Milwaukee County Parks - Grants 2000-2012

Grant Program	Project Title	Award	Local Match	Total Cost
Federal Transportation (ISTEA)/SAFETEA-LU (80/20 matching ratio)		**80%**	**20%**	
2000	Brady Street Bike Access	$265,000	$66,250	$331,250
2001	Estabrook Bike Trail Reconstruction	$810,000	$202,500	$1,012,500
2001	Brady Street Pedestrian Bridge	$887,000	$221,750	$1,108,750
2002	Beerline Conversion to Bikeway	$320,000	$80,000	$400,000
2002	OLT - City of St. Francis Segment	$240,000	$60,000	$300,000
2002	North Point Lighthouse	$984,000	$246,000	$1,230,000
2003	OLT - Drexel to Loomis	$805,000	$201,250	$1,006,250
2004	South Shore Park Bike Trail Replacement	$130,000	$32,500	$162,500
2005	OLT - Beloit Road Underpass	$118,000	$29,500	$147,500
2005	OLT - Congress to Silver Spring Redevelopment	$444,000	$111,000	$555,000
2006	OLT - Lakefront To Ozaukee Interurban Phase 1	$840,960	$210,240	$1,051,200
2007	OLT - Lakefront To Ozaukee Interurban Phase 3	$448,000	$112,000	$560,000
2008	Survey and Management of Historic Parkways	$158,400	$39,600	$198,000
2008	Pedestrian Bridge at Riverside Park	$100,000	$25,000	$125,000
2009	OLT - Lakefront To Ozaukee Interurban Phase 4 (Acquisition)	$2,400,000	$600,000	$3,000,000
2010	OLT - Lakefront To Ozaukee Interurban Phase 4 (Dev.)	$1,820,000	$455,000	$2,275,000
	Subtotal:	**$10,770,360**	**$2,692,590**	**$13,462,950**

Stimulus - Local ARRA 2010, STP Urban or TE/BPFP		100%	0%	
2009	Estabrook Park Drive Reconstruction - Capitol Dr. to Hampton Ave.	$1,202,300	$0	$1,202,300
2009	Reconstruction of Hampton Avenue through Lincoln Park	$1,191,400	$0	$1,191,400
2009	The Rehabilitation of the Lake Park Lion Bridge (South)	$1,501,200	$0	$1,501,200
	Subtotal:	**$3,894,900**	**$0**	**$3,894,900**
Stewardship		**50%**	**50%**	
2001	Grant Park Beach Improvements	$200,000	$200,000	$400,000
2001	Kohl Park Development	$427,500	$427,500	$855,000
2002	Jacobus Park Trails Renovation Phase 1	$15,000	$15,000	$30,000
2003	Kinnickinnic River Bridge Replacement (WDNR)	$50,625	$0	$50,625
2003	Kinnickinnic River Bridge Replacement (RTA)	$50,625	$0	$50,625
2003	Jacobus Park Trails Renovation Phase 3	$15,000	$15,000	$30,000
2004	Grant Park Bridge Replacement	$93,750	$93,750	$187,500
2004	Beerline Conversion to Bikeway	$40,000	$40,000	$80,000
2004	Lake Park Locust Street Ravine - Phase 1	$15,000	$15,000	$30,000
2005	Lake Park Lion Bridges Rehabilitation	$141,900	$141,900	$283,800
2005	OLT Bridge Replacement - Little Menomonee	$88,692	$0	$88,692
2005	OLT Bridge Replacement - Little Menomonee	$63,208	$8,000	$71,208
2006	OLT - Congress to Silver Spring Redevelopment	$55,000	$55,000	$110,000
2006	OLT - Beloit Road Underpass	$14,750	$14,750	$29,500
2006	Riverside Park Public Access Developments	$244,207	$244,207	$488,414
2006	Riverside Park Public Access Developments	$45,000	$45,000	$90,000
2007	Lake Park Lion Bridges Rehabilitation (updated request0	$291,341	$291,341	$582,682
2008	OLT Improvments - Bluemound Rd. to Rainbow Prk	$140,128	$140,128	$280,256
2008	OLT Improvments - Leon Terr. To 2007 Bridge	$130,000	$130,000	$260,000
2011	OLT - Lakefront to Ozaukee Interurban Phase 4 (Acquisition)	$309,100	$309,100	$618,200
	Subtotal:	**$2,121,726**	**$2,185,677**	**$4,616,502**
Recreational Trails Act		**Varies**	**Varies**	
2011	The Reconstruction of the Oak Leaf Trail in Meaux Park	**$45,000**	**$74,100**	**$119,100**
Community Development Block Grant (CDBG)		**100%**	**0%**	
2000	Carver Park Asphalt	$15,000	$0	$15,000
2001	Wil-O-Way Underwood Play Equipment (Wauwatosa)	$150,000	$0	$150,000
2002	Wil-O-Way Grant Play Equipment	$70,000	$0	$70,000
2002	Wil-O-Way Grant Play Equipment (South Milwaukee)	$5,000	$0	$5,000
2002	Jacobus Park Trails Renovation Phase II (Tosa)	$37,536	$0	$37,536
2003	Carver Park Basketball Courts Rehabilitation	$40,000	$0	$40,000
2003	Play Equipment Replacement at Underwood Creek	$65,000	$0	$65,000
2004	Tiefenthaler Park Basketball Courts Rehabilitation	$45,000	$0	$45,000
2004	Reconstruction of Play Area at Garden Homes Park	$63,650	$0	$63,650
2005	Reconstruction of the Basketball Courts at Kosciuszko	$38,400	$0	$38,400
2005	Removal, Reshaping of Land Forms at Johnsons Park	$70,000	$0	$70,000
2006	Replacement of Kosciuszko Community Center Gym Floor	$70,000	$0	$70,000
2006	Wahl Park Play Environment Safety Sufacing	$45,560	$0	$45,560
2006	Washington Park Community Building Improvements	$45,000	$0	$45,000
2007	Removal, Reshaping of Land Forms at Johnsons Park	$76,095	$0	$76,095
2007	Lindbergh Park Basketball Court Reconstruction	$84,100	$0	$84,100
2007	Youth Based Programming at King Community Center	$63,200	$0	$63,200

2007	Play Surface Replacement at Madison Park (Tosa)	$21,205	$0	$21,205
2008	Lindbergh Park Basketball Court Reconstruction	$60,000	$0	$60,000
2008	Rose Park Bleachers	$20,000	$0	$20,000
2008	Dineen Community Room	$30,000	$0	$30,000
2009	Meaux Park Basketball Court Resurfacing	$100,000	$0	$100,000
2010	Selective Demolition & Rehabilitation at Lindbergh Park Pavilion	$92,400	$0	$92,400
	Subtotal:	**$1,214,746**	**$0**	**$1,214,746**

Wisconsin Coastal Management		**40%/50%**	**50%/60%**	
2002	Milwaukee River Trail	$90,000	$90,150	$180,150
2002	South Shore Park Storm Water Treatment	$20,000	$20,000	$40,000
2006	Milwaukee River Soft Trail Improvements at Riverside Park	$150,000	$225,000	$375,000
2007	Public Access, Site Enhancements at Lakefront	$90,000	$135,000	$225,000
2008	Access Creation & Resource Protection at Wanimont Bluffs	$42,320	$63,490	$105,810
2011	Publc Access & Resource Protection at Cambridge Woods	$19,400	$19,400	$38,800
	Subtotal:	**$411,720**	**$553,040**	**$964,760**

Wisconsin Nonpoint Source Water Pollution Abatement		**Match varies**		
2003	Wehr Drainage Channel - South	$146,875	$146,875	$293,750
2003	Wehr Drainage Channel - North	$150,000	$151,250	$301,250
2008	Wetland Creation & Drainageway Repair at Franklin SNA	$49,000	$21,000	$70,000
2008	North Point Lighthouse - Porous Pavement	$60,000	$70,000	$130,000
	Subtotal:	**$405,875**	**$389,125**	**$795,000**

Recreational Boating Facilities (Waterways Commission)		**Match generally is 50%/50%**		
2001	McKinley Marina Aquatic Plant Harvesting Equip	$145,000	$145,000	$290,000
2002	Sailing Center ADA Improvements	$60,469	$15,117	$75,586
2004	South Shore Park Boat Launch Extension	$145,790	$145,790	$291,580
2006	Bender Park Dredging Project Feasibility Study	$39,500	$39,500	$79,000
2007	Bender Park Dredging Project	$328,725	$328,725	$657,450
2011	Boat Launch Improvements Program - South Shore Park	$29,400	$40,600	$70,000
2011	Boat Launch Improvements Program - McKinley Park	$53,025	$73,225	$126,250
2011	Boat Launch Improvements Program - Bender Park	$29,400	$40,600	$70,000
	Subtotal:	**$831,309**	**$828,557**	**$1,659,866**

Urban Park & Recreation Recovery Program (UPARR)		**70%**	**30%**	
2000	Gordon Park Redevelopment	$239,363	$102,584	$341,947
	Subtotal:	**$239,363**	**$102,584**	**$341,947**

Wisconsin Urban Forestry Program		**50%**	**50%**	
2007	Emerald Ash Borer Preparedness Project	$14,354	$14,353	$28,707
2008	Implementing Milwaukee County's EAB Plan	$17,271	$17,271	$34,542
	Subtotal:	**$31,625**	**$31,624**	**$63,249**

Root-Pike Win		**100%**	**0%**	
2006	Franklin Park Oak Savanna Restoration	$8,200	$0	$8,200
2008	Franklin Park Restoration Plan	$5,000	$0	$5,000

	Subtotal:	$13,200	$0	$13,200
Motorboat Access				
2003 Replace Fish Grinder at Fish Cleaning		$25,349	$13,296	$38,645
Great Lakes Basin Program				
2003 Bender Park Bluff Stabilization		$100,000	$130,000	$230,000
2006 The Slope Stabilization of 2 Ravines in Lake Park		$24,450	$8,150	$32,600
	Subtotal:	$124,450	$138,150	$262,600
WDNR Gypsy Moth Suppression Program				
2008 WDNR Gypsy Moth Suppression Program		$7,719	$6,406	$14,125
2009 WDNR Gypsy Moth Suppression Program		$13,534	$8,303	$21,836
	Subtotal:	$21,253	$14,709	$35,962
WDNR Urban Wildlife Damage Abatement and Control Program		50%	50%	
2008 Milw. County Urban Wildlife Damage Abatement & Control		$5,000	$5,000	$10,000
2009 Milw. County Urban Wildlife Damage Abatement & Control		$5,000	$5,000	$10,000
2010 Milw. County Urban Wildlife Damage Abatement & Control		$5,000	$5,000	$10,000
2011 Milw. County Urban Wildlife Damage Abatement & Control		$5,000	$5,000	$10,000
2012 Milw. County Urban Wildlife Damage Abatement & Control		$5,000	$5,000	$10,000
	Subtotal:	$25,000	$25,000	$50,000
MMSD Best Storm Water Management Practices		50%	50%	
2009 Installation of Storm Water BMPs at Boerner Gardens		$100,000	$100,000	$200,000
2010 Green Roof Installation at the Mitchell Park Domes		$101,295	$101,295	$202,590
	Subtotal:	$201,295	$201,295	$402,590
Wisconsin Municipal Dam Grant Program		Varies	Varies	
2011 Estabrook Dam		$400,000	$1,092,260	$1,492,260
Total Grant Funding		$20,752,171	$8,317,007	$29,428,277

*DNR official has said requested funding would be available once acquisition negotiations complete

105TH ANNIVERSARY | MILWAUKEE COUNTY PARKS

Operations Recommendation #4

Operation Issues/Recommendations
Recommendation # 4

Work with DTPW to use the VFA system to record the results of pool condition assessments, and avoid duplicating the reporting of deferred pool maintenance.

The 2010 Pool Assessments Report has been incorporated into the VFA. The 2011 Pool Assessments will be conducted after the current swim season has concluded. The 2010 Pool Report is included in this report.

The 2011 Pool Assessment was conducted after the swim season had concluded. The report is now being prepared and it will be incorporated into the VFA when it is finalized.

2010

POOL

REPORT

TABLE OF CONTENTS

DESCRIPTION PAGE NO.

INTRODUCTION

Enclosed is the report for the 2010 pool inspections. Pool inspections were performed after pool closing (9/16, 9/23, and 9/30). The season end pool inspections included the four aquatic centers and eight exterior swimming pools. The indoor pools, wading pools, and splash pads were not part of this inspection.

This report covers pool tank and deck condition. Park buildings and site work are not generally included in the evaluations unless otherwise noted. The enclosed information is to be used as a general guideline. Input from Park's staff members should be used to arrive at an overall picture of the condition of the pools.

The County budgeted $1.5 million for miscellaneous pool repairs as part of the three-year capital budget for 2010, 2011 and 2012. Because there are no additional capital improvement projects planned during this time period, cost estimates were not prepared as part of the 2010 pool report.

cc:

G. High
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VIRGINIA GRAEME BAKER (VGB) ACT

The Virginia Graeme Baker (VGB) Pool and Spa Safety Act, effective December 20, 2008, requires:

1. **Drain Covers**
   Each public pool and spa (as defined), both new and existing, shall be equipped with drain covers conforming to the American National Standard ASME A112.19.8 - 2007 Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs published by the American Society of Mechanical Engineers (ASME). Compliance with this Standard will be enforced by the CPSC as a consumer product safety rule.

2. **Drain Systems**
   Each public pool and spa (pump) with a single main drain, other than an unblockable drain, shall be equipped with one or more additional devices or systems designed to prevent suction entrapment that meet the requirements of any applicable ASME/ANSI Standard or applicable consumer product safety rule. In addition to a compliant drain cover, such additional devices or systems include a safety vacuum release system (SVRS), or suction limiting vent system, or gravity drainage system, or automatic pump shutoff system, or drain disablement, or other system determined by the CPSC to be equally effective in preventing suction entrapment.

The goal is to avoid all five entrapment hazards:

- haïr entrapment
- limb entrapment
- body suction entrapment
- evisceration/disembowelment
- mechanical entrapment

In Wisconsin, the Department of Commerce, Safety and Buildings Division, has jurisdiction over public swimming pool and water attraction construction standards. All modifications, including installation of VGB drain covers, must go through the plan approval process.

Milwaukee County Aquatic Facilities consist of the following:

- 34 wading pools
- 9 outdoor swimming pools (4 with detached wading pools)
- 2 indoor swimming pools
- 4 aquatic centers
- 5 splash pads

ALL POOLS HAVE GRAVITY DRAINAGE SYSTEMS

All Milwaukee County aquatic facilities have gravity type drain systems, which automatically comply with the drain system requirement to prevent suction entrapment. The County has never had an incident of entrapment. It would be nearly impossible for any type of entrapment to occur with the current gravity drain systems and the current drain covers. The wading pools have been in service for over 50 years and our oldest swimming pools, Jackson and Sheridan pools have been in service for over 70 years. Despite this, we are required to have VGB approved drain covers on all drains that are part of the recirculation system. This includes our 34 wading pools,

Jackson swimming pool, Sheridan swimming pool, Cool Waters Aquatic Center, David Schultz Aquatic Center, and Carver Family Water Playground.

VGB COMPLIANCE OF SPLASH PADS

According to the State of Wisconsin Department of Commerce, the splash pads do not need to comply with the VGB Act since they have no standing water and are served by gravity systems.

VGB COMPLIANCE OF INDOOR POOLS

Our two indoor swimming pools, Pulaski and Noyes, have "reverse flow" type recirculation systems. "Reverse Flow" means a design in which the water enters at or near the pool bottom and leaves at or near the waterline. Drain covers on "reverse flow" pools comply with four of the five entrapment hazards since there is no flow (suction or gravity) through the main drain grates during pool operation. Drain covers for reverse flow pools need to comply with the limb/finger entrapment requirements of ASME/ANSI.

VGB COMPLIANCE OF OUTDOOR SWIMMING POOLS

Most of our outdoor swimming pools have "reverse flow" type recirculation systems, with the exception of Jackson and Sheridan. Jackson and Sheridan swimming pools each have two unblockable drains with field fabricated covers that comply with all entrapment criteria as outlined in ASME A112.19.8.

VGB COMPLIANCE OF AQUATIC CENTERS

Three of our four aquatic centers require VGB compliant drain covers. They include Cool Waters Aquatic Center, David Schultz Aquatic Center (DSAC), and Carver Family Water Playground. The exception is Pelican Cove Aquatic Center, which is a "reverse flow" type recirculation system. DSAC was constructed in 2009 with appropriate VGB compliant drain covers. Cool Waters and Carver have standard size pool drain covers which were replaced with standard VGB compliant covers prior to the 2010 pool opening.

VGB COMPLIANCE OF WADING POOL

The wading pools were not inspected in 2010. Instead, we prepared submittals to the State of Wisconsin Department of Commerce (State) to obtain approval for VGB compliant drain covers for 31 of the 34 wading pools . Moody, Dineen, and Lindbergh wading pools were not scheduled for opening any time soon, so they were not included in the submittal to the State.

Retro-fitting the wading pools with VGB compliant drain covers was not an easy task. The single main drain in each pool is not a modern pool fitting, but a standard floor drain for which there exists no VGB covers on the market. Extensive research and investigation into VGB products did not yield a perfect replacement drain cover. With new VGB products being developed, we hoped that something would come along. It did not, and we settled for VGB approved drain covers that complied with state code, but protruded ½-inch above the pool finished floor. Additionally, the material for the plastic VGB cover is inferior to the bronze drain cover that we replaced at each pool.

In the spring of 2010, Park Maintenance installed the new VGB compliant drain covers on 31 wading pools in order to achieve VGB compliance.

AQUATIC CENTERS AND SWIMMING POOLS

The four aquatic centers and 8 swimming pools have been evaluated and assigned grades (A - F) for the condition of each of the following: pool concrete, pool joints, pool protective coatings, deck concrete, deck joints, dressing yards, and water loss. The results of this evaluation are shown in the Aquatic Center and Swimming Pool Evaluation Table on Page 7. The overall condition of each facility is an average of the components. The facilities that are in the most need of rehabilitation are those with an overall condition grade of C- or lower. Three of the twelve facilities fall into that category and they are **Hales Corners, Holler, and Washington**.

Hoyt swimming pool is being demolished and a new aquatic center is being constructed in its place.

Lincoln was demolished and the new Schultz Aquatic Center at Lincoln Park was opened in the spring of 2009.

TRANSITE DRESSING YARD PANELS

Two of the eight swimming pools have transite walls and divider panels in the dressing yards: **Hales Corners and Holler**. Transite contains asbestos and should be encapsulated or abated. Jackson, Sheridan, and McCarty had their transite panels and lead paint abated during the 2007-2008 off-season. Salvaged divider walls and panels from Gordon Park and surplus divider walls that were purchased for the old Greenfield Park bathhouse were used at Jackson and Sheridan in addition to new panels.

EXCESSIVE WATER LOSS

One of the major concerns at the swimming pools and aquatic centers is water loss. Excessive water loss is usually a symptom of an operational or physical problem. Excessive water usage is also costly in terms of the cost of the water and the chemicals used to stabilize and disinfect the water. Water usage for the swimming pools is shown on the Aquatic Center and Swimming Pool Water Usage Table on Page 8. Two of the twelve facilities (**Holler and Washington**) had excessive water loss (Percent Water Loss > 10%). Potential reasons for excessive water loss is described in the individual condition reports for the pool.

AQUATIC CENTER AND SWIMMING POOL EVALUATION TABLE

MILWAUKEE COUNTY
AQUATIC CENTER AND SWIMMING POOL EVALUATION - 2010

LOCATION	POOL OPEN	OVERALL CONDITION	POOL CONC	POOL JOINTS	PROT COATING	DECK CONC	DECK JOINTS	DRESSING YARDS	WATER LOSS
CARVER	1996	B-	B	B	A	B	D		C
GREENFIELD	1997	B-	A	C	B	B	C		C
GROBSCHMIDT	1966	C	D	C	C	C	C	B	C
HALES CORNERS	1968	C-	D	C	F	C	D	B	B
HOLLER	1962	C-	C	B	C	C	D		D
JACKSON	1939	B-	B	C	B	C	C	B	B
KOSCIUSKO	1997	C+	B	D	F	B	C		A
LINCOLN (pool)	2009	A-	A	C		A	A		A
LINCOLN (lazy river)	2009	A-	A	B		A	A		A
McCARTY	1959	C+	C	C	D	C	D	A	A
SHERIDAN	1938	C	B	C	C	C	D	C	C
WASHINGTON	1964	C-	C	C	D	C	D	B	D
WILSON (diving)	1971	B-	C		A	C	D		A
WILSON (lap)	1971	B	B	A	A	C	D		A

RATING: A VERY GOOD
B GOOD
C FAIR
D POOR
F VERY POOR

AQUATIC CENTER AND SWIMMING POOL WATER USAGE TABLE

MILWAUKEE COUNTY
AQUATIC CENTER & SWIMMING POOL WATER USAGE - 2010

Pool Name	Pool Volume (Gallons)	Water Usage: Meter Reading Beginning Date	Beginning Reading	Ending Date	Ending Reading	No. of Days	* Water Usage (Gallons)	** Irrigation Volume Deduct: Meter Readings Beg.	End	Total Irrigation (Gallons)	*** Average Water Loss (GPD)	**** Percent Water Loss %	Comments
Carver	40,000	9/25/09	6,411,200	9/16/10	6,799,200	71	388,000	672,800	829,800	157,000	2,690	6.73%	Beginning meter readings are from end of 2009 season and end meter readings are from pool inspection.
Greenfield	378,524	5/24/10	41,048,900	9/6/10	43,330,400	105	2,281,500	4,496,000	4,751,000	255,000	19,300	5.10%	
Grobschmidt	291,400	6/19/10	30,866,500	8/19/10	32,495,000	61	1,628,500				26,697	9.16%	
Hales Corners	285,000	6/19/10	18,650,000	8/22/10	19,400,000	64	750,000				11,719	4.11%	
Holler	100,500	6/19/10	3,209,000	8/22/10	4,051,000	64	842,000				13,156	13.09%	
Jackson	559,330	6/19/10	39,190,000	8/21/10	40,260,000	63	1,070,000				16,984	3.04%	
Kosciusko	306,722	6/19/10	38,450,000	8/22/10	38,740,000	64	290,000				4,531	1.48%	
Lincoln	424,332	5/24/10	3,655,300	8/31/10	4,201,400	99	546,100				5,516	1.30%	Meter also measures irrigation water usage
McCarty	464,885	6/19/10	51,079,600	9/16/10	51,299,900	67	220,300				3,288	0.71%	No last day meter reading. Used pool inspection day reading instead.
Sheridan	689,230	6/19/10	68,415,000	8/22/10	71,144,000	64	2,729,000				42,641	6.19%	Main Drain plugged
Washington	472,735	6/19/10	49,320,000	8/22/10	54,800,000	70	5,480,000				71,286	15.08%	Wading pool is drained every night
Wilson	985,000	6/19/10	43,600,000	9/23/10	44,280,000	67	680,000				10,149	1.03%	No last day meter reading. Used pool inspection day reading instead.

* Water Usage is the Ending Meter Reading minus Beginning Meter Reading.
** Irrigation Deduct is the Ending Irrigation Meter Reading minus Beginning Irrigation Meter Reading.
*** Average Water Loss is the Water Usage divided by the Number of Days.
**** Percent Water Loss is Average Water Loss divided by Pool Volume.

PERCENT WATER LOSS:
<2%= Very Good (A)
2-5%= Good (B)
5-10%= Fair (C)
10-20%= Poor (D)
>20%= Very Poor (F)

AQUATIC CENTER AND SWIMMING POOL CONDITION REPORTS

The following sections include an overview of the general condition of each swimming pool and aquatic center.

CARVER WATER PLAYGROUND

The overall condition of the pool is good (B).

Water Usage: This pool used 388,000 gallons in 2010, 157,000 gallons of which was used for irrigation and 40,000 gallons for initial pool fill. Carver averaged 2,700 gallons per day (gpd), which is almost 7% of the pool volume. The water loss over the last several years is as follows:

1997	9,700 gpd	2004	4,400 gpd
1998	11,300 gpd	2005	4,400 gpd
1999	3,100 gpd	2006	1,800 gpd
2000	2,300 gpd	2007	1,600 gpd
2001	5,600 gpd	2008	800 gpd
2002	2,100 gpd	2009	3,200 gpd
2003	8,700 gpd	2010	2,700 gpd

Discussion of Excessive Water Usage:

Water usage at Carver Water Playground has been excessive six of the fourteen years that the pool has been in service since the facility was opened in 1997. Prior to 2006 season, the pool water meter placement was not correct for accurate measurement of flow. The pool water meter piping was reconfigured during the 2005-2006 off-season to have the required straight runs of

pipe before and after the meter to establish laminar flow through the meter. Recent water usage has been more accurate as verified by the City of Milwaukee water meter readings for the same years.

Pool Tank: The concrete has many chert pops in the northwest slab, but is in otherwise good condition. The pool was caulked in 1998 and the joints are in good condition. The caulk has a sticky, chalky residue.

Protective coatings: The pool had new protective coatings installed in the spring of 2007 including one prime coat and one finish coat. The pool perimeter was texturized with sand to reduce slipping. The protective coatings are very good. The pool toys need to have new protective coatings applied.

Prior to 2007, the pool had protective coatings applied in the fall of 2001. The pool protective coatings were rated as follows: 2002-A, 2003-B, 2004-C, 2005-C, and 2006-F.

Deck: The deck concrete is in good condition since the concrete around the deck drains was replaced in the 2002-2003 off-season. Concrete around two of the deck drain cutouts is spalled with patches, caulk, and cracks.

Carver Family Water Playground September 2009
Deck Drain

Carver Family Water Playground September 2009
Deck Drain

The caulk in the joints is separating and in fair/poor condition. Two slabs are heaved southeast of the pool and the pool needs the perimeter caulk replaced. Some of the perimeter caulk appeared to have been replaced during the 2008-2009 off-season, although it was done poorly.

The concrete in the pan cover of the Bilco access door on the north side of the deck is failing.

Carver Family Water Playground
Bilco Access Door

September 2009

The spring mechanism on the door is completely rotted away, leaving the door to slam closed and causing the in-laid concrete to crack and spall. We recommend replacing the door, hinges, and spring mechanism with a Bilco Aluminum Door so that if the spring mechanism fails again, the surface of the door is not broken.

Equipment Room: The high-pressure sand filters are in good condition. The operators backwashed the filters only once during the 2005 season. In 2006, the filters were backwashed every 2-3 days and in 2007 and 2008 they were systematically backwashed every other day (Tues-Thurs-Sat).

Additional Comment: During the summer of 2005, pile driving adjacent to Carver for a new MMSD facility cause major vibrations.

GREENFIELD AQUATIC CENTER (COOL WATERS)

The overall condition of the pool is good (B-).

Water Usage: This pool used over two million gallons after initial pool fill in 2010. Irrigation water usage was deducted from pool water meter value to arrive at the average daily pool water loss. Water loss at Greenfield averaged almost 20,000 gpd, which is about 5% of the pool volume. The water loss over the last several years is as follows:

1997	16,000 gpd	2004	6,000 gpd
1998	20,000 gpd	2005	10,000 god
1999	43,000 gpd	2006	9,000 god
2000	13,000 gpd	2007	18,000 gpd
2001	11,000 gpd	2008	18,000 gpd
2002	9,000 gpd	2009	56,000 gpd
2003	8,000 gpd	2010	19,300 gpd

Discussion of Excessive Water Usage:

Water loss in 2009 was excessive. We were informed during pool inspections that the valve in the drain pit was left open all season, which explains the excessive water loss. In 1999 water loss was excessive because two of the four hydrostatic relief valves in the main pool had their caps sheared off and pool water was leaking directly into the granular sub-base. Park's Plumbers replaced the plastic hydrostatic relief valves in the main pool with brass hydrostatic relief valves.

In 1999 water loss was excessive because two of the four hydrostatic relief valves in the main pool had their caps sheared off and pool water was leaking directly into the granular sub-base. Park's Plumbers replaced the plastic hydrostatic relief valves in the main pool with brass hydrostatic relief valves.

Pool Tank: The concrete is in very good condition. There are cracks appearing about six inches from some of the slab edges in the middle of the activity pool as follows:

- From 3'-0" to 3'-6"
- At 4'-0"
- At 1-9"

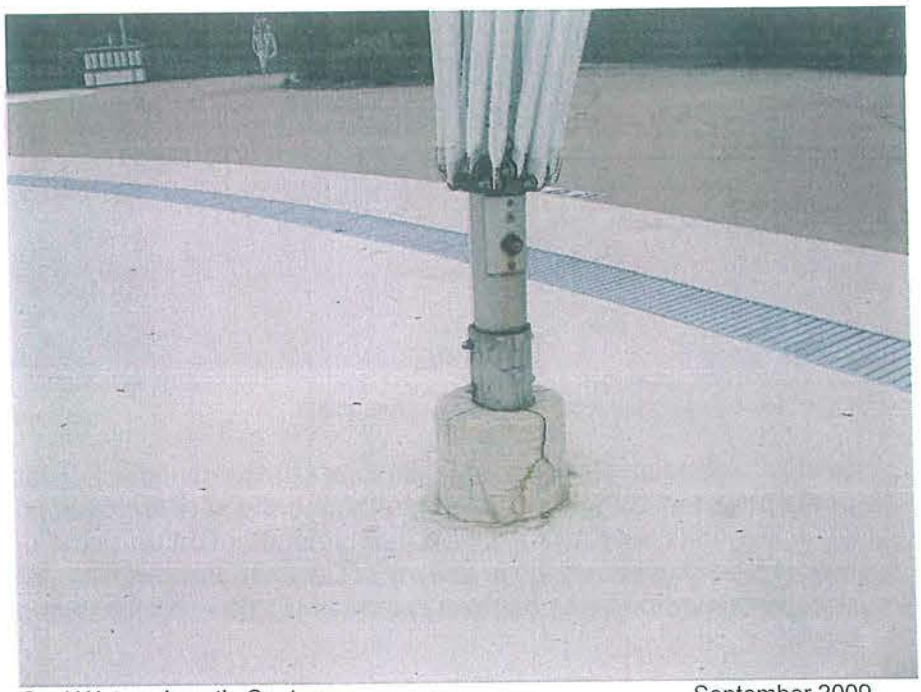
In 2007 we noted loose tile lane markers near the expansion joint and one chipped main drain grate. Both were fixed during the 2008-2009 off-season.

The pool joints were caulked in the fall of 2003. The caulk is thin in some areas and missing from at least four areas (about 9-inches each) of the joint at the 2.5-foot depth marker. Caulk is splitting in the joint west of the spray toy area and a few other joints. The caulk is also low where wall expansion joints meet the pool rim. The caulk is rated in fair condition.

In 2005, the plumber noted that approximately fifteen inlet heads were being driven into the inlets, stripping the threads, especially in the shallow end. Eventually we will need to replace the stripped inlets, which will involve cutting and patching the concrete pool floor.

Protective coatings: The pool was abrasive blasted and had a new protective coating system applied in the fall of 2003 and the protective coatings look good, despite some pin-holes that do

not appear to go all the way to the concrete. The protective coating is starting to show signs of wear near the slab edges. In the spring of 2005, the park painter added another coat of protective coatings with a slip resistant additive (Sharks grip) in the zero-depth entry area up to six-inches deep. He painted the caulk. Protective coatings are chipping at the caulk between the coping mortar and top of the pool wall near the lily pad walk. There are five chips in the protective coating at the east end of the pool near the geysers and 64 chips just inside the zero depth gutter between the snack bar and the water curtains. There are two chips between the zero depth gutter and deck at the north end of the pool.



Cool Waters Aquatic Center
Cracked Concrete Umbrella Base

September 2009

Precast Pool Coping Stones: The precast pool coping stones at the Greenfield Park Aquatic Center have failed over the past several years. The company that made the pieces is no longer in business and no replacement pieces exist. The estimated cost for new coping stones to replace the existing coping stones around the non-zero depth portion activity pool was included in the 2008 capital budget and scheduled for 2010-2011 construction.

Cool Waters Aquatic Center September 2008
Precast Pool Coping Stones – temporary corner piece

Deck: The concrete is in good condition and the joints are in fair condition. The repairs done shortly after the pool opened in 1997 to the concrete around many of the deck drains are holding up well. The caulk in the joints is separating. We recommend not caulking the deck joints unless they are greater than 1/2–inch wide, which is okay with Gene Andrzejak (Park Maintenance Manager). The pool perimeter joint was caulked in the fall of 2003 and looks good.

Water Slides:

2010: Welders installed plates and sandwiched with bolts the longitudal seam between the 1st and 2nd joint and it now only occasionally drips. Welders still need to address the minor leaks through the remainder of the slides. The carpenter sealed the tops of the railing posts and connected rail sections with plates.

The tot slide was extremely worn and delaminating at the entry well to slide flume connection:

Cool Waters Aquatic Center
May 2010
Tot Slide Entry Well to Flume
Delaminating fiberglass

Prior to pool opening, Colorblend Services cut that section out and fiber glassed in a new section. This year we hope to replace the protective coatings in the entry well.

Pool report history on the slides:

2009: The body slide had a major leak along the longitudinal seam between the 1st and 2nd joint from the top and three minor leaks at the 4th, 17th, and 19th joints from the top. The tube slide had minor leaks at joints 1, 2, 3, 5, 6, 21, and 23 from the top. The overall structure was rated good to fair with no loss of section. There was corroded galvanized steel hardware and localized timber rotting and steel rusting. The concrete footings had no cracks or other damage.

Cool Waters September 2009
Concrete Footings – no cracks or other damage

Cool Waters September 2009
Moss growing on timber structural members

There was moss growing on some timber structural members. Where timber rests on metal, a rubber membrane should be sandwiched between the timber and the metal to protect metal the metal from oxidation. When splicing wood, use plates on both sides to protect wood. East of the tube slide there was a rotting skirt. Some timber structural timber members may require replacement in 3-5 years. The steel Flume Supports had no loss of section. The ends of the structural members should be closed to avoid bird nesting. Protective coatings were good. We had missing nuts at railings around top platform and some gaps along the handrails. The fiberglass entry well at the top of the slide was worn. Throughout the flume, we had chips in clear coat. The slide flume needs a gel coat. There was a stress crack in corner of the water outlet at top. There were no reported rider complaints about interior of slides. We need to watch for further deterioration in the tube slide at one joint about ½ way up.

Cool Waters September 2009
Fiberglass entry well at tome of tube slide

Cool Waters September 2009
Fiberglass entry well at tome of tube slide

The timber railings were rotting, especially at top of posts. Weak rails at top deck east of tube slide needed to be strengthened immediately. The fiberglass decking was in good shape.

2008: Pool staff reported no major leaks. The body slide has small leaks due to missing caulk in the joints. Recommend using a syringe to inject a thin sealant into the joints. Then the sections can be tightened. The timber post at the bottom of the stairs is still missing and the slide staircase needs some general tightening and maintenance by the park carpenters.

2007: The steelworkers caulked the tot slide and it was no longer leaking. On the tube slide entry well the coating has worn off two areas, exposing the fiberglass. At the bottom of the stairs there was a timber post missing.

2006: During the 2005-2006 off-season, the steelworkers made plates to sandwich the slide flume sections together. The tot slide was leaking at the 2nd seam from the top, right side as you face the slide.

2005: The slides were only slightly leaking. During the inspection the steelworker foreman noted loose hardware.

2004: Park's steelworkers tightened the flanges in the areas that were leaking. There were still some leaks and the flume was showing signs of wear and in need of gel coating.

2002/2003: The tube slide was making a loud noise during the season. Park Maintenance inspected the slide and determined that the metal shims had shifted slightly. In the off-season, the welders' loosened the bolts, adjusted the shims, and tightened them down again. They also added locking bolts and nuts to decking attachments.

2001/2002 off-season: Park Maintenance caulked the water slide flume seams, but they still leaked.

2000/2001 off-season: The Park's steelworkers tightened the bolts in the flume sections and support arms. This resulted in less movement of the slides and reduced the leaks.

Toys: In the spring of 2004, the pool toys were blasted, protective coatings were applied, and the base of each toy was caulked to prevent water from sitting around the base during the off-season. In 2005, the plumbers tapped some of the toys for draining after standing water in the

leg of the arch jet froze and cracked the pipe over the winter.

Cool Waters Aquatic Center September 2009
Note rusting at base of pool toys

The condition of the pool toy protective coatings is fair, except there is fading, peeling, and rusting below the water line. The yellow water curtain and yellow arch jet are severely corroding and rusting below the water line. Park Maintenance should treat the rusting and apply new protective coatings to the steel below the water line in the off-season. The horizontal piping in the red/blue and yellow/red short arch jets has chipping primarily near the spray holes. The protective coating is peeling from the stainless steel leg of the red/blue arch jet.

The entry and exit pads for the log and lily pad walks received new protective coatings in the fall of 2004. The coating system performed well for five years, but there is now extensive chipping in the pads for the log walk and some chipping in the northeast pads for the lily pad walk.

Cool Waters Aquatic Center September 2009

Cool Waters Aquatic Center September 2009

Equipment Room: The high pressure sand filters are in good condition. During the 2009-2010 off-season, parks rebuilt both recirculation pumps because there were holes in the impellers.

Pool Heaters: In the past, condensation within the pool heaters had created corrosion on critical heater components. Part of the problem was related to the draft to the flue and part of the problem was that the incoming water temperatures early in the season are colder than what the boilers can handle. Parks modified the flue during the 2006-2007 off-season by extending the flue pipes above the architectural chimney and raising the chimney cap to increase the distance from the top of the flue pipes to the cap. The size of the chimney cap was also increased to block precipitation to the flue.

In 2007, the pool water heating system worked at least 50% better than the previous year, according to parks staff. In 2008, staff reported no problems with the pool water heaters.

In 2009, the burner ports were plugged at the beginning of the season. After they were cleaned, the heaters worked well. The copper is corroding and some of the components may need to be replaced.

GROBSCHMIDT PARK POOL

The overall condition of the pool is fair (C).

Water Usage: This pool used 1.6 million gallons of water after initial pool fill in 2010. Grobschmidt averaged 27,000 gpd, which is just under 10% of the pool volume. The water loss rate over the past several years is as follows:

1996	8,200 gpd	2004	16,300 gpd
1997	10,200 gpd	2005	Meter not working
1998	10,300 gpd	2006	Meter not working
1999	10,000 gpd	2007	18,000 gpd
2000	12,200 gpd	2008	28,000 gpd
2001	14,100 gpd	2009	58,000 gpd
2002	10,100 gpd	2010	27,000 gpd
2003	21,500 gpd		

Discussion of Excessive Water Usage:

The excessive water loss at Grobschmidt pool in 2009 had no explanation. There were no reported surge tank overflows. It was not discovered that the main drain was open during the season. The building meter was not working, so we cannot compare it to building water usage. We will evaluate the water loss at the end of the 2010 season.

Pool Tank: The pool floor has some small cracks and spalls, especially in the diving well.

Grobschmidt (Oak Creek) Swimming Pool September 2009
Diving Well – note extensive patching and caulking of deteriorated slabs.

The diving well needs half of its slabs replaced, some edge repair, and some joint reconstruction. The concrete is popping off near the joints in the diving well and chunks can be removed by hand. Patches failed in the diving area during the Spring 2010 power washing. The caulk is holding the concrete in place. The deep well needs about 175-feet of edge repair because patching is becoming ineffective. Existing patches have many hollow spots. The joints were replaced in the shallow end in 1994. There is splitting and missing caulk in joints. The tank wall joints have loose caulk and should be recaulked. There are lots of unpainted patches

Gutter: The scum gutter is not level. It is high (not skimming) along the west gutter and the diving well gutter. It is low (lots of skimming) along the east gutter and the north and south and south gutters skim okay.

There is some loose wall concrete behind the scum gutter in a few spots, especially at the corners. The spalled gutter lip at the northwest corner of the deep well was replaced similar to the southwest corner of the deep well.

Grobschmidt (Oak Creek) Swimming Pool September 2010
SW corner deep area Repaired concrete gutter lip

September 2008 September 2009
Grobschmidt (Oak Creek) Swimming Pool - Scum Gutter NW Corner deep area – note repaired concrete gutter lip

The northwest corner of the shallow area has a long crack in the scum gutter back wall.

Grobschmidt (Oak Creek) Swimming Pool September 2009
Scum Gutter NW Corner shallow area – note long crack in gutter back wall

There is a hollow section of gutter lip at the northeast corner of the pool. About 25% of the scum gutter needs replacement, especially at the corners.

The gutter drain grates are failing.

Protective coatings: The pool had new protective coatings applied in the spring of 1997. The protective coatings are in fair condition. There are many bare patches, especially in the diving well. The diving board frames and guard chairs need protective coatings.

Deck: The sundeck has some many patches and "band-aid" caulk. Some of the patches are loose. The joints need caulk.

Dressing Yards: The concrete slabs in both dressing yards are in fair/good condition with only a few cracks. The wood benches in both yards need proper preparation and protective coatings. The wall panels and frames are in good condition. The women's side has changing stalls with aluminum benches.

Bathrooms & Showers: Both bathroom ceilings need preparation and protective coating. The men's room is in worse condition than the women's room. The showers are interior, adjacent to the bathroom. The women's shower ceiling and walls need preparation and protective coating, especially the ceiling. The men's shower ceiling is in good condition. Several shower and sink faucets in both bathrooms were replaced in the 2006-2007 off-season, but some are missing.

Equipment Room: The diatomaceous earth filter tank has many rust spots. The rust spots are delaminating and could rust through. The tank needs sandblasting and protective coating.

In 2007, the surge tank sump pump was not working and there was a problem with the lift pump tripping out on auto. The electrician changed the mercoid in the lift pump, which resolved the issue.

In 2009, the lift pump and the recirculation pump were noisy. The pH minus pump burned out, the slurry pump could not drain the slurry tank, and the chlorine pump could not hold prime.

The equipment room flooded during the torrential rain on 6/7/08. As a result, the following equipment was replaced:

1. Surge tank sump pump
2. Transformer
3. Water heater
4. Hot water recirculation pump

A new chemical controller system was installed prior to 2008 pool opening. The sample draw from the pool water piping was just downstream of the pH minus injection point, which created inaccurate readings. In the 2008-2009 off-season, the sample draw was moved to the threaded tapping about eight feet upstream to capture the pool water chemistry before the pH minus is added.

The recirculation pump impeller, bearings, and seals were replaced in the spring of 2010. The damaged lift and recirculation pump motors were both replaced in June 2010. The Becsys 3 Controller probes were not functioning properly all season.

The basement flooded on August 19, about 3-days before the pool was scheduled to close. This flooding was not related to a precipitation event, and Parks is not sure what happened. WE Energies said that the power to the building was not disrupted. Gary Pitroski thinks it is an electrical problem in the building because the sump pumps should have done something to alleviate the flooding. Parks has purchased a battery backup sump pump to install at Grobschmidt.

Building Exterior: The overhang around the building needs repair and protective coating. Parks staff said that they cleaned the gutters in the fall of 2007. During the 2008 inspection it was raining and water was leaking from the roof, behind the fascia, and through the soffits. The metal lathe on the soffits is exposed. This problem needs to be addressed or the water damage could weaken the soffit until it falls, potentially hurting somebody.

HALES CORNERS PARK POOL

The overall condition of the pool is fair (C-).

Note: the YMCA operated this pool in 2004, 2005, and 2007.

Water Usage: The pool used 750,000 gallons after initial pool fill for the 2010 season. Water loss at Hales Corners averaged about 12,000 gpd, which is 4.1% of the pool volume. Water loss for the last several years is as follows:

1996	12,300 gpd	2004	19,100 gpd
1997	7,600 gpd	2005	46,000 gpd
1998	meter did not work	2006	49,000 gpd
1999	6,800 gpd	2007	55,000 gpd (before main drain plugged)
2000	8,800 gpd		5,000 gpd (after main drain plugged)
2001	12,800 gpd	2008	10,000 gpd
2002	13,200 gpd	2009	7,700 gpd
2003	13,500 gpd	2010	12,000 gpd

Discussion of Excessive Water Usage:

For three years in a row (2005-2007), water usage was excessive at Hales Corners.

In 2006, the pool shut down overnight every other day. The PRV to the valve that controls flow (Fisher valve) from the pool to the filter tank was malfunctioning, causing the control valve to stay open and pool water to flow out the filter tank overflow. This solenoid and PRV was repaired during the 2006-2007 off-season. Joe & Dave think that the Fisher valve is okay, but that there is a problem with the bladder valve from the filter room to the pool (above the surge tank).

In 2007, the pool continued to lose excessive amounts of water. The Village of Hales Corners, Carrico Aquatic Resources, and the Southwest YMCA ran the pool. On August 9, 2007, they sent a diver into the pool to dye test and found that the main drain was losing water. The diver plugged the drain and the pool stopped leaking. Water loss dropped to under 5,000 gpd, less than 2% of the pool volume.

In 2008 and 2009, the main drain was plugged in the pool at the beginning of the season and the plug removed at the end of the season.

Pool Tank: The diving well in this pool is subject to the constant flow of groundwater through the joints and cracks in the concrete. Water also seeps in from the aluminum sides in the diving well from as high as the foot ledge. The groundwater relief valves in the floor of the diving well do not appear to relieve the groundwater pressure. The joints have algae and mold growing in them. Caulk cannot stick in the joints in the diving well due to water seepage. Protective coating on the south wall of the diving well is constantly peeling. Patches in the deep well are lifting along the edges.

Hales Corners Swimming Pool – Diving Area: Note peeling and worn protective coatings, concrete spalls and patches, deteriorated joints and cracks

September 2005

September 2009

Any work done to correct the problems in the diving well must address the groundwater issue. Possible solutions include:

1. Coat the diving well with 100% polyurea protective coating, similar to the Zoo's Sea Lion Show Pool. This needs to be researched to determine if groundwater flow behind the coating will be a problem and if the aluminum walls can be coated.
2. Install PVC pool liner similar to Wilson Park Diving Pool. Include port to relieve groundwater from below the liner.
3. Remove the concrete floor in the diving well, install a well designed drainage system, and build a new floor. The diving well can be made shallower or deeper, depending on if the County wants to allow diving. When the YMCA ran the pool in 2004, 2005, and 2007, their insurance carrier did not allow diving because the sloped floor from the shallow end was not compliant with current pool codes for diving.

Masonry repairs and caulk replacement was done in the diving well in June of 2007, just before the pool opened. The shallow pool floor has a few cracks that should be repaired and recaulked. The pool needs a complete recaulking. Lack of expansion joint causes concrete next to edge repair to fail.

In the shallow area, there are cracks missing caulk, failed patches and a need for edge repair.

Hales Corners Pool September 2010

Giant Crack in Pool Floor

Gutter: The scum gutter is not level. It is only skimming at the stairs and along the south and southwest walls.

Protective coatings: The pool had new protective coatings applied in the spring of 1996. The pool protective coatings are very poor with many patches and bare spots on the walls. The protective coatings on the south diving well wall are peeling. It is difficult to cure protective coatings in the diving well because the concrete is always moist due to the constant groundwater flow. We may want to consider a 100% polyurea coating, similar to what we used in the sea lion show pool, for the concrete slabs in the diving well. Another option would be a PVC liner for the entire pool.

Deck: The sundeck is in fair condition. Most of the caulk is hard and separating. At least two slabs need to be leveled. The slabs at the west end of the deck, adjacent to the fence are in very poor condition and need replacement. There are many hairline cracks in the bigger slabs. A T&M Contractor caulked the deck to pool joint in the spring of 2003.

Hales Corners Swimming Pool September 2009
Pool Deck – note out of level concrete slabs

Equipment Room: In 2007, the company that ran the pool installed a chemical sensing & control device for chlorine and pH and Park maintenance rewired the electrical box. The automatic chemical system is working great.

The diatomaceous earth filter tank is in fair condition. The tank has hard water deposits from the former well water supply. In 2008 there was DE in the pool from the filter bed. The manifold connections in the DE tank were corroded because the rubber gasket was not sealing flush. They were sealed with epoxy putty during the 2008-2009 off-season. The manifold ultimately needs to be replaced.

In 2008 there were problems with the Fisher valves on the return lines from the pool. Park plumbers replaced the solenoid and pressure reducing valve (PRV). This resolved the problem for a few weeks. They suspect that internal rusting in the old galvanized iron water supply pipe to the Fisher valve is damaging the solenoid, as they have needed to replace the valve twice in one season. A week before pool closing they installed a wye strainer to capture the particles. In 2009 there were no problems with the solenoid, but the Fisher valve from the north gutter was slow acting, probably due to dirt and/or the spring needing adjustment. The Fisher valve from the south is fine.

Building Exterior: The overhang around the building needs repair and protective coating, however the gutter and downspout drainage problems need to be addressed or the water damage will reoccur. The roof has several lifted and missing shingles that should be replaced.

Building Plumbing: The lobby drinking fountain had hot water for many years. This was the result of failed mixing valves, which parks replaced (two valves) in February of 2009.

Dressing Yards: The dressing yards have transite walls and divider panels. While the protective coatings on the transite are in good condition, the metal frames are extremely rusting and peeling. The benches are coated and look fair because of wear and the over splatter. Slabs look good with some cracks and patches.

In 2008, the Friends of Hales Corners pool installed a green vinyl material over a portion of the transite panel divider wall on the men's side. It looked nice, but was already coming unglued at the end of the panel. The installation does not appear to be durable long-term. If encapsulating the transite is desired, a PVC lining systems with proper adhesive, welded joints, and finished edges (similar to a pool lining system) may better suited.

In 2010, the transite panels were encapsulated in brown protective coatings. The application appears to be very good.

Hales Corners Swimming Pool September 2010
Protective coatings applied to Transite Panels

HOLLER PARK POOL

The overall condition of the pool is fair (C-). This is the smallest swimming pool in the system.

Water Usage: The pool used 842,000 gallons after initial pool fill during the 2010 season. Water loss at Holler averaged 13,000 gpd, which is 13% of the pool volume. This water loss is considered excessive, it is the highest water loss for this pool in the past six years.

1996	2,500 gpd	2004	41,300 gpd
1997	12,200 gpd	2005	5,800 gpd
1998	17,600 gpd	2006	7,000 gpd
1999	15,100 gpd	2007	1,600 gpd
2000	15,500 gpd	2008	5,500 gpd
2001	15,300 gpd	2009	9,900 gpd
2002	38,400 gpd	2010	13,000 gpd
2003	41,300 gpd		

Discussion of Excessive Water Usage:

The pool "ran awful all season". The diatomaceous earth material became thickly coated on the filters several times. Water left the system through the deck drains and the surge tank overflow.

In 2009, Park staff said that the pool was shutting down overnight. When this occurred, water would overflow from the surge tank to waste.

A new pool meter was installed July 7, 2005.

The reduction in water loss at Holler starting in 2005 was due to significant work in the off-season to isolate and repair the leak. A leak down test at the end of the 2004 pool season resulted in identifying the supply channel as the primary suspect for more than half of the water loss. The supply channel grates were removed the mason found several cracks. The correction was to install a rubber membrane to seal the supply channel. The plumbers then installed new supply piping and inlets and the mason filled the channel with stone and topped it off with concrete to encase the supply channel.

The remaining leak was attributed to the valve from the wading pool for the main drain and supply channel drain. Park plumbers pulled this valve out in October of 2004 and discovered that it may have never closed due to lead in the seat. It appeared that during installation of the pipe, excess lead from the joints spilled into the seat. They replaced the valve.

The 2005 problem of the pump motor to tripping, shutting down the recirculation system and overflowing the surge tank, seems to have been resolved.

Pool Tank: There are several chert pops and spalls in the pool tank. There are numerous spalls and patches that are failing. The pool needs edge repair and joint caulking.

Holler Swimming Pool - Spalls, failed patches, and deteriorated slab edges September 2010

Gutter: The scum gutter is not level. It skims on all four sides, but skimming is not even across each side. It is slightly high on the north and south walls. For the wading pool, the northwest corner is heaved up and the east half of the south gutter is high. There is no skimming in these areas of the wading pool.

Protective coatings: The pool had new protective coatings applied in the spring of 1998. The pool joints were coated. In 2005, there was peeling to bare concrete. The bare spots appear to have been coated during the 2005-2006 off-season. Although the protective coatings are thinning, with the former aqua color showing through in areas, it is in fair condition.

Deck: The sundeck has some remaining tar joints that should be cleaned out and caulked. There are many caulked cracks and patched chert pops. Consider using caulk that will better match the concrete. Concrete around some of the deck drains was replaced in the 2002-2003 off-season. These deck drains were higher than the surrounding slabs, and now they provide adequate drainage. Some slabs should be replaced. Pool/deck perimeter joints needs recaulking.

Wading Pool Dressing Yards: The dressing room screens have some transite panels, which are not encapsulated by protective coatings.

Equipment Room: Prior to the spring of 2007 pool opening, the plumbers had done some work on the Fisher valve in the off-season.

The diatomaceous earth filter tank is in fair condition. In 2007, we observed that the DE was too heavily caked onto the fabric for efficient operation.

When we arrived for inspections in 2007, the pool was still running and the make-up water to the DE filter tank was on and the DE filter tank was overflowing. Sometimes the turbulence of the make-up water holds the float down.

Joe Roszak (former aquatics manager) said that the pool runs better when the flow rate is higher. However, they cannot get the flows as high and they want, even with the Fisher valve fully open. He suspects that the impeller is wearing out.

Chlorine Room: In 2006, the chlorine room got an eyewash and new chlorine pumps.

Balancing the Pools: Balancing the pool water levels between the swimming pool and wading pool is an ongoing problem. The pools share a surge tank, which makes it difficult to regulate the pool water flow back to the filter room. Pool levels can be adjusted by throttling the valves to the pool, but it requires several iterations of adjusting the valve, waiting for the pool levels to balance, and readjusting until both pools have a consistent flow of water over the gutter rims.

In 2006 the guard continued to have trouble balancing the pool water levels. Both pools overflowed to the deck a couple of times each week as if the scum gutter could not get enough flow to the filter room. At the time we recommended checking if the return line from the main drain was open.

During the 2006/07 off season, the flow meters on the discharge side of the pumps to each pool were relocated to the surge tank room where the throttling valves are located. Proper straight runs before and after the meter produce more accurate readings and allow the pools to be more easily balanced by throttling the valves. In 2008 it took about five iterations to balance the flows, but then they remained balanced all season. Parks had trouble balancing the pool all season in 2009. Water loss started in late July.

Bathrooms & Showers: The shower faucets in both the men and women's locker rooms need to be replaced.

JACKSON PARK POOL

The overall condition of the pool is fair (B-).

Water Usage: The pool used 1.1 million gallons after initial pool fill for the 2010 season. Water loss at Jackson averaged 17,000 gpd, which is 3% of the pool volume. We consider this reasonable. This is water loss rate for past several years:

1996	9,200 gpd
1997	5,600 gpd
1998	10,000 gpd
1999	13,500 gpd
2000	15,800 gpd
2001	19,200 gpd
2002	30,000 gpd
2003	36,000 gpd
2004	17,000 gpd
2005	31,000 gpd
2006	20,000 gpd
2007	17,000 gpd
2008	17,000 gpd
2009	16,000 gpd
2010	17,000 gpd

Pool Tank: The pool floor has numerous spalled and pitted slabs. This pool was extensively patched in 1992. There are some soft spots in the middle of the pitched slab near the slide. There is also ten feet of joint in the middle of the pool in need of short-term edge repair. In 2008. the pool needed complete recaulking. Prior to the 2009 pool opening, some of the pool was recaulked, upgrading the joints from poor to fair. The caulk has protective coatings on it.

Gutter: During a mid-season inspection, the gutter did not appear to be completely level as there were several dry spots that were not skimming, mostly in the neck area of the pool between the shallow and deep sides. The gutter near the northeast side of the pool is falling apart.

Protective coatings: The pool had new protective coatings applied in the spring of 1996. The pool was ordered in 2008 by the City of Milwaukee Department of Neighborhood Services to repair the pool lining. The protective coatings were chipping, peeling, wearing thin and there were many unpainted patches. The pool tank coating was in poor condition. Prior to the 2009 pool opening, the pool was power washed and one coat of Tnemec Fascure epoxy was applied to get the pool tank through the season. Now the protective coatings are rated good. Installing a PVC pool membrane is included in the 2010-2012 capital budget.

Deck: The deck is in fair condition. The deck over the filter room needs replacement. The deck slab south of the filter room has settled about 1.5 inches.

Jackson Park Swimming Pool September 2008
Deck slabs out of level

Jackson Park Swimming Pool September 2009
Out of level deck slabs with transition

The sundeck has spalls, cracks and toe stubs, especially between the waterslide and the building. Several slab corners need rebuilding. There are tripping hazards from slabs out of level at the west and east end of the pool near the fence. Several slab corners are very deteriorated. A section of curb on the southwest side of the deck was replaced during the 2005-2006 off-season and looks fair.

Dressing Yards: The transite walls were abated in the fall of 2007. The lead paint on the steel frames was blasted and the frames were primed and had new protective coatings installed. In 2008, there were a few rust spots bleeding through the new coating. New 18 gage metal panels were installed. The dressing yard concrete joints need caulk and the concrete around one of the deck drains on the women's side is cracked and heaved and does not drain the area properly. The benches are not painted and they look good.

Bathhouse: The shower heads, mixing valves, and piping were replaced on the pipe chase side of each shower room during the 2005-2006 off-season. The previous shower push button valves were obsolete and only a few showers in each bathroom were operational.

During the 2006-2007 off-season, the plumbers replaced the one-inch diameter hot water return line from the women's bathroom to the hot water tank. The portion of this piping above the guard room had five repair clamps on a short run of pipe.

In 2007, the shower and sinks were dripping because of faulty valves. This no longer appears to be a problem.

At the 2006 pool inspections, the hot water tank was leaking. In the spring of 2007, the asbestos was abated and the plumber found a leak on top of the hot water tank at a pipe connection. The connection was repaired and the leak appears to have been resolved. The hot water tank and piping needed insulation.

During the 2007-2008 off-season, the plumbers replaced the hot water piping from the 3-inch dia. valve in the utility room to the mixing valve in the men's side pipe chase. They also replaced a portion of the women's hot water piping.

Hot water supply and return piping is being replaced not only due to breakages, but also because the existing hot water piping is so corroded that the plumbers need to flush the system of rust chunks at the beginning of each season. The plumbers plan to replace the two-inch diameter piping from the hot water tank to the men's showers and the guard room. They would also like to convert the men's urinals to flush valve type.

Equipment Room: Structural beams in the filter room were fortified in the 2003-2004 off-season. The concrete filter tank does not have (or need) protective coatings and looks good. The pool distribution pump was re-packed mid-season as ordered by the Milwaukee Health Department because of excessive leaking. The pump still leaked in 2009. The ten-inch diameter butterfly valve between the filter tank and the pool distribution pump was replaced in the spring of 2009. In 2009, the four inch dia. valve on the water supply pipe leaked through the stem.

Tunnel: Several of the electrical boxes in the tunnel are very corroded.

Water Slide: This slide was scheduled to be replaced during the 2008-2009 off-season. We could not get plan approval from the State of Wisconsin Plan Review because the pool did not comply with the code for the recirculation rate. Current code required that the pool turnover every 6 hours. The current code also stipulated that plunge pools for slides turnover every hour. The new slide would plunge into the existing pool, so the code allowed the use a portion of the main pool, 15'x20'x3' to turnover every hour. That resulted in a total required recirculation rate of 1,650 gpm.

Jackson Park pool was designed with an 8 hour turnover rate of 1,165 gpm. On April 5, 2008, we tried to get the pool to recirculate at a higher rate within the required total dynamic head of 50 feet. The pump and piping could not deliver much beyond the design recirculation rate.

The Jackson Park Pool Slide was not opened in the 2009 and was removed after the pool season. The slide pump intake from the pool was a suction entrapment hazard far more serious than any of the pool drain grates.

Jackson Park Pool Slide 2007

KOSCIUSKO AQUATIC CENTER (PELICAN COVE)

The overall condition of the pool is fair (C+).

Water Usage: This pool used about 290,000 gallons in 2010. Water loss at Kosciusko averaged 54,000 gpd (18%). This is considered excessive. The water loss over the last several years is as follows:

1998	39,000 gpd	2005	75,000 gpd (before 7/26/05)
1999	58,000 gpd	2005	14,000 gpd (after 7/26/05)
2000	68,000 gpd	2006	43,000 gpd
2001	76,000 gpd	2007	27,000 gpd
2002	74,000 gpd	2008	17,000 gpd
2003	61,000 gpd	2009	54,000 gpd
2004	18,000 gpd	2010	4,500 gpd

Discussion of Excessive Water Usage:

Pipe leaks to the pool spray toys have been a problem since after the first winter season. The pipes are encased in the concrete pool slabs with flexible couplings at the slab joints. Frost heave and/or differential settlement of the pool components may have caused the pipes to shear. The estimated cost for replacing this piping is included in the 2008 capital budget.

The first pool spray supply pipe leak occurred in the 1997/1998 off-season. Dye testing indicated that the leak was in the water supply to the geysers and water curtain. After the valve to the geysers was closed, the daily water usage dropped. In the 1998/1999 the water curtain toy was connected to an unused supply line and the leaking pipe was capped in the pool and in the valve pit.

The following is a history of the leaks in this pool, year by year.

1998: Early in the season, the pool operator reported a 30,000 gpd unaccounted for water loss. Investigations showed a major leak in the pool because the under drain system discharge was significant. Dye testing indicated that the leak was in the water supply to the geysers and water curtain. After the valve to the geysers was closed, the daily water usage dropped to 5,000 gpd (2,000 gpd water loss and 3,000 gpd filter backwash) and the under drain system discharge was reduced to a trickle. Parks Plumbers have isolated the leak to the water supply line from the island manhole to the water curtain. They are working to locate the leak and repair it before next season.

1999: Connecting the water curtain toy to an unused supply line and abandoning the leaking supply line to the water curtain toy solved the leak from last year. Based on water usage, another leak developed on about June 22, 1999. The slide had a major leak, which could account for some of the water loss. Dye testing during the season indicated that the geysers might be leaking. During post-season inspection, the hydrostatic relief valve appeared to be functioning properly. Parks should fill the pool a few weeks early next spring and perform a leak-down test to help isolate and identify the location of the leak.

2000: The slide was repaired in the 99/00 off-season, but is still leaking. During the season the pool was losing so much water that the normal make-up water pipe did not have capacity to keep the pool full while the toys were running. The pool was filled from an on-site hydrant in order to

keep the water level in the pool above the gutters. During the end of season leak down test, the pool lost only 7-1/2 inches of water over 5-days. Post-season start-up of toys resulted in increased drain tile flow. Therefore, we suspected the pipes to the pool toys were leaking. Park's Maintenance scheduled pressure testing in the off-season to further pinpoint the leak.

2001: In the 2000/2001 off-season, the make-up piping was replaced with a direct manual fill to the surge tank so that the on-site hydrant did not need to be used to keep the pool full. The leak down test at the end of 2000 indicated that the leak is from one of the pipes to the pool toys. Before 2001 pool opening, the pool was "sounded" in order to find the leak. Due to the pump noise, the method was not successful. The Park's plumber planned to make some modifications to the piping in the valve pit to isolate each pool toy, and then do some testing in the spring to find the leak before the pool opened.

2002: In the 2001/2002 off-season, the Parks plumber made some modifications to the piping in the valve pit to isolate each pool toy. In July of 2002, the pool operators closed valves to certain toys during pool operation and recorded the water usage:

	Geysers	Playground	Slides	Water Usage
7/8/02	off	on	on	30,000 gal
7/9/02	on	off	on	100,000 gal
7/10/02	off	off	on	30,000 gal

The results indicated that the pipe supply to the geysers was leaking. The Parks plumber directed Aquatics not to run the geysers next season to see if that reduces the water loss.

2003: The leaking pool toy spray fixtures were fed from spare pipe feeds or not used (geysers). Occasionally this manual feed to the surge tank was inadvertently left on and the surge tank overflowed to waste.

2004: Due to high water usage, the water supply to the arch jet was turned off in early July. Water usage dropped significantly. During the leak-down test at the end of 2004, the pool lost about 3-inches of water over 8-days, which indicated that the pool tank was not leaking. The park plumber reported that the drain tile was flowing ¼ full at the pool inspection.

During the 2004/2005 off-season the plumbers used the see-snake to view the inside of the pipe that was capped in 1999. Just outside the pool wall they encountered a 45-degree fitting and the see-snake could not advance any further. During pool inspections the plumbers aggressively pushed the see-snake past the fitting and were able to see a cracked dresser coupling at the pool joint between the wall and the capped pipe (former water curtain). They then snaked the arch jet and did not find any cracked pipes and the geysers where they found a cracked dresser coupling and a cracked fitting.

2005: All toy zones were on until mid-season pool inspections at the end of July, including the leaking arch jet. Water loss was significant. In response, the plumber turned the arch jet off, significantly reducing the water loss from 75,000 gpd to 14,000 gpd.

One leg of the arch jet is so extremely rusted that we should remove the toy and cap off the water supply if it is not going to be used. We would need to break up the concrete around the toy to remove and properly abandon the toy. However, we may want to break up the concrete and see if we can sleeve the pool water supply with Spiralite spa piping to the arch jet through the existing 4-inch diameter PVC pipe. If this is successful, the same technique can be used on other leaking

pool toys in the future.

2006: Aquatic's Director reported that make-up water kicked-on when the water playground was running.

2007: The geysers & arch water supply piping were leaking as the surge tank drained every time they were turned on. They were only used one day this year. We turned these toys on for 20 minutes during the mid-season pool inspection and the surge tank lost 12-inches of water. We opened the valve vault on the peninsula and saw the following:

- The winterizing drain for the pipe to the structure was open and leaking water into the vault.
- The valve to the geysers was leaking.
- The 4-inch dia. sleeve for the 1-inch dia. pipe to the missile was leaking.

2008: Parks did not run the leaking pool toys. Water loss was reasonable.

2009: Leaking toys running. The arch and the missile leak.

2010: The toys were not run all season. Water loss was minimal.

Pool Tank: The concrete is in good condition and the joints are in poor condition. There is cracking in northeast floor slab between 3'-2" and 3'-6", southeast slab around play area, and in the plunge area. There is also separation of caulk from the concrete.

Gutters: The scum gutter is level, as the skimming seems consistent throughout the pool perimeter.

Protective coatings: The protective coating system has some thin spots and some spots where the protective coatings have peeled to bare concrete. Protective coating on the walls is almost completely worn off and it is in very poor condition.

In the spring of 2008, the northeast wall was coated from the 3'0" depth marker to the 3'11" depth marker.

During the 2008-2009 off-season, the rusted lifeguard stands were recoated as ordered by the City of Milwaukee Department of Neighborhood Services.

Pool Toys: In the spring of 2008, the toys were prepared and protected coated below the water line. The toy bases were recoated again in May 2009. The leg of the arch jet that was extremely rusted was in good shape. Above the waterline, the toys should be cleaned and waxed to keep them looking attractive.

Deck: The concrete is in good condition with only minor chert pops and four cracked slabs. The caulk is hard and separating and in fair condition.

Water Slides: The water slides have had leaks over the past 10-years. During the 2000/2001 off-season, the Park's steelworkers tightened the bolts in the flume sections and support arms to reduce movement of the slides and eliminate the leaks. In 2002, more leaks developed between the flume sections of the slide. In the spring of 2003, the steel workers used aluminum plates along with the bolts to sandwich the flume sections together. In 2004, one of the slides had a major leak in the entry section at the top of the slide. The tubing to the inlets of one of the slides had been gnawed and chewed by an animal. In order to replace the piping, the inlets needed to be replaced. The top of the slide at the entry well also had some repairs by Colorblend.

The flume joints are missing caulk and in 2006 patrons complained that the slide was bumpy. It does not appear that this was rectified in the off-season. In 2008 there were no complaints about the slide. The flume needs gel coating. While the support tower is rusting at the welds, the welds are solid. We could galvanize with a 95% zinc rich coating to slow the rusting.

In 2008, the pool was cited by the City of Milwaukee Department of Neighborhood Services for the portion of the slide that was leaking and dripping onto the electrical equipment.

In 2010, Parks reported no major leaks from the pool slides.

Pool Plumbing: Park plumbers Installed new mercoid switches closer to the pumps and also replaced pump starter switches in the 2003-2004 off-season. In 2008, the float in the surge tank at times would not trigger the make-up water, causing the surge tank to be dry. Ted the plumber fixed this. Pump 1 stopped working the last week of the 2008 season.

Filter Building: The filter building roof has been leaking since at least 2008.

Filters: The high pressure sand filters are in good condition. The operators had problems at the beginning of the 2004 season getting the filters into backwash. This may be due to low municipal water pressure in the area. We recommended backwashing these filters between 8 a.m. and 10 a.m. In 2008, staff had problems getting the filters to backwash. This may have been due to low water pressure as the make-up water was on at the same time. The problem persisted at the beginning of the 2009 season, but was resolved for the remainder of the summer.

Pool Heaters: Condensation within the pool heater creates corrosion on critical heater components. The problem is worse at Kosciusko than Greenfield because of lack of ventilation. Modifications to the building may cost more than moving the heater outside, even if we need to build an enclosure. We recommend hiring a consultant/contractor who has first-hand experience with pool heaters this size to design a correction to the pool water heating system.

Bathhouse: The roof is leaking in the bathhouse at several locations along the north side, causing damage to the interior timber ceiling. In the men's area, there is cracked block at some locations where the ceiling beams rest on the walls. In the women's area there is step cracking on the south interior shower wall. Both areas have chipped and peeling protective coatings from the floors and walls.

The sink faucets installed with the original construction of the building were changed from electric eye to Chicago push during the 2004-2005 off-season. The plumbers also changed the urinal flush valves from the electric eye activated type to concealed push-button. The Bradley shower faucets in both areas should be replaced with Chicago to reduce the maintenance on the regulators.

Playground and Shelter: Since 2006 the pool shelter has needed roof repairs and protective coatings. Sand around the toys in the sand area that squirt water has settled or been carried off, exposing the plastic supply lines. The pipe with the black hoses is leaking at the base.

LINCOLN PARK AQUATIC CENTER (DAVID SCHULTZ)

The overall condition of the aquatic center is very good (A-).

Water Usage: The pool water usage was 550,000 gallons after initial pool fill for the 2010 season. Water usage includes irrigation water. The irrigation system was not used due to leaks in the piping Water loss at Lincoln averaged 5,500 gpd, which is 1.3% of the pool volume. This is unbelievably low water loss. Water loss over the last two years is as follows:

2009	27,000 gpd	2010	5,500 gpd

Pool Tank: Both the pool tank and lazy river are in very good condition. There is some cracking in the activity pool floor where it slopes to the diving area.

Water ponds in the southwest corner of the deep area for the pool. Pool operators report that the stain on the concrete caused by the standing water is difficult to clean.

David Schultz Aquatic Center September 2010
Water ponded in southwest corner of diving area.

The caulk in the joints for the activity pool and lazy river was separating after the maiden season, probably because the concrete was still releasing moisture when it was caulked and the caulk could not properly adhere to the concrete. This caulk was replaced in the spring of 2010.

David Schultz Aquatic Center September 2010
A local contractor fixed the railing near the pool play area in the spring of 2010.

Gutters: The gutters in the plunge area were flooded most of the season due to operator error.

Water Slide: In 2009, there were two gouges in the yellow flume. In the 9th flume section there was an exterior gauge on the lower right side from the top. There was missing caulk in both slides.

In 2010, there was paint peeling from the bottom of the top slide landing. The bonding wires for grounding the steel is exposed behind the pool wall where the slides enter the pool

David Schultz Aquatic Center September 2010
Protective Coatings failing below slide tower landings

David Schultz Aquatic Center September 2010
Grounding wires exposed behind pool wall where slides enter pool

Equipment Room: There is cracking in the surge tank wall and a shoddy fix of a leak.

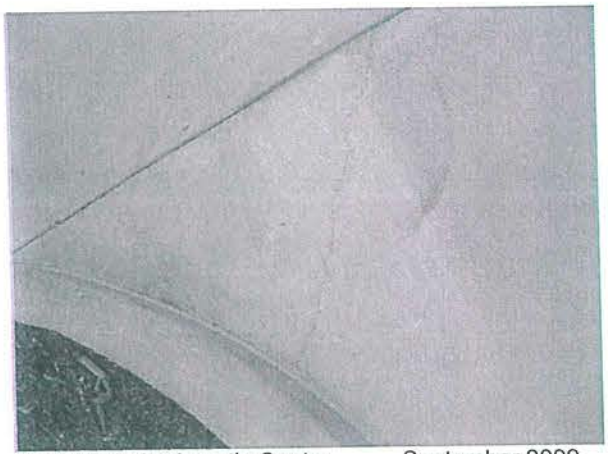
Lincoln Park Aquatic Center
September 2010

Equipment Room
Surge Tank Exterior Wall
Repaired leak from crack in the wall

We have water leaking into the equipment room from the float valve room. The floor penetrations need to be sealed.

The basket strainer gaskets leak and one does not fit. The pressure gauge for the backwash pipe does not work.

Deck: The sundeck concrete has eight slabs with shrinkage cracks. Most are in irregularly shaped slabs with acute angled corners



David Schultz Aquatic Center September 2009
Shrinkage cracks in new deck slabs

David Schultz Aquatic Center September 2009
Shrinkage cracks in new deck slabs

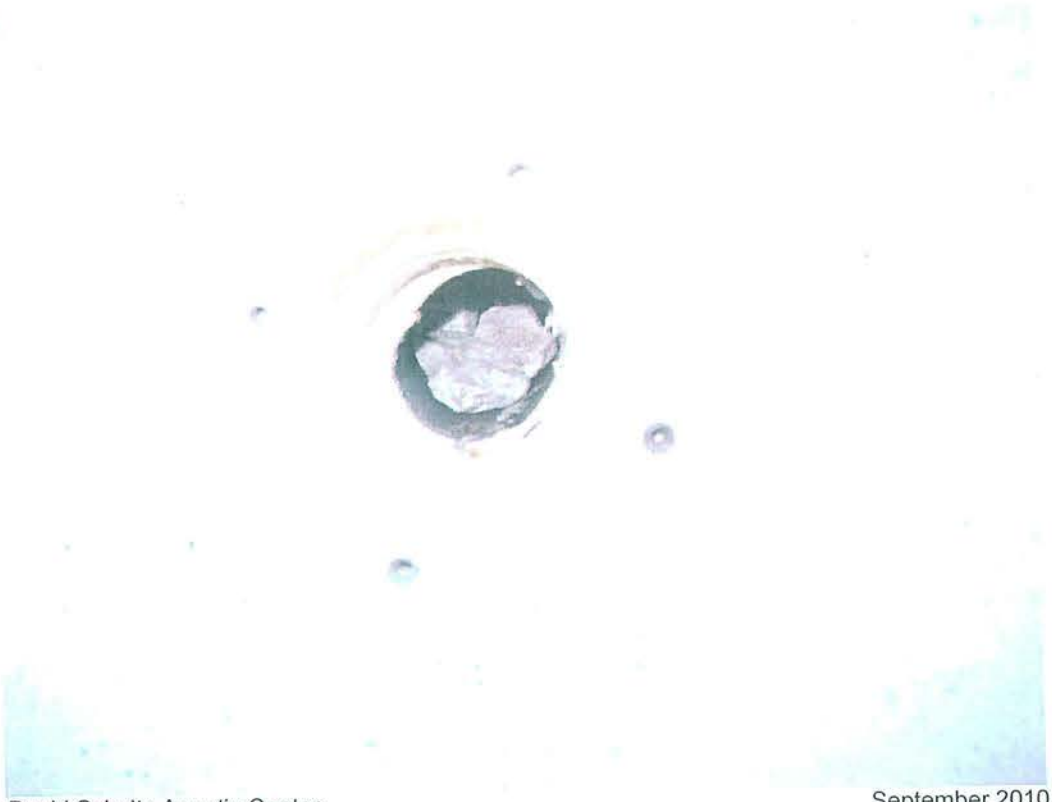
Water ponds on the deck slabs near the gate.

David Schultz Aquatic Center Water ponded near the gate September 2009

There are cracks in the long slabs above the lazy river weirs.

David Schultz Aquatic Center Cracked Slabs above Lazy River Weir September 2009

Piping: During the 2010 pool inspection, we noticed #1 stones in pool return wall inlet on south wall left of yellow slide.



David Schultz Aquatic Center September 2010

Small Stone in Pool Return Wall Inlet

McCARTY PARK POOL

The overall condition of the pool is fair (C+).

Water Usage: The pool water usage was 220,000 gallons after initial pool fill for the 2010 season. Water loss at McCarty averaged 3,300 gpd. This water usage is extremely low and the meter may not be working correctly. The beginning of the season meter reading was less than the end of last year meter reading.

1996	9,500 gpd	2004	66,000 gpd
1997	14,000 gpd	2005	57,000 gpd
1998	16,500 gpd	2006	57,000 gpd
1999	22,000 gpd	2007	22,000 gpd
2000	23,000 gpd	2008	39,000 gpd
2001	34,000 gpd	2009	56,000 gpd prior to July 8th
2002	49,000 gpd		25,000 gpd after August 12th
2003	60,000 gpd	2010	3,300 gpd

Discussion of Excessive Water Usage: Prior to 2007, water usage at McCarty Pool had been excessive for five years in a row. The pool water meter was not working at the beginning of the 2007 pool season. After 7/7/07, water usage was reasonable. It is possible that the water meter was not working correctly.

During the 2005 pool fill, the pool was holding water in the diving well, but began leaking when the water level reached the supply channel (staff witness the shallow drain tile began flowing).

This pool had a leak-down test at the end of the 2006 season. Rather than draining the pool, the pumps were shut off and the drains were closed. The pool was allowed to leak for three days. Staff measured and recorded the level from the gutter rim to the waterline when they arrived and left each day. The pool level dropped two-feet per day during the first 24-hours of the leak down test, which is the equivalent of about 300,000 gallons. This is significant compared to the total pool volume of 465,000 gallons.

The pool water level dropped very quickly until the water level reached the shallow length of the supply channel. After that the pool leaked very slowly. Reasons could be:

1. The supply channel may be leaking. This has occurred at other pools in the past.
2. The supply and return pipe isolation valves may not have been closed during the leak-down.

In 2008, the pool shutdown 4-5 times and lost 6-inch depth of water overnight. During inspection, we noticed that the backwash drain valve is corroded and rusted in the open position.

2009 excessive water loss prior to July 8th could be attributed to a supply pipe leak in the tunnel. Parks replaced two 8-inch dia. PVC elbows.

Pool Tank:

1996-1997: Park Maintenance completed $20,000 in edge and joint repair. The pool steps, which were leaking water into the tunnel, were repaired in 1996. In years previous to 1996, it was reported that the pool tank concrete was very soft (rotten) in both the pool floor and walls, and there were many cracks, spalls and loose patches. The condition of the diving well concrete is

worse than that of the main tank. While the repairs and protective coatings completed in 1996 have extended the life of the concrete, it is still the same soft concrete.

During 2003 mid-season pool inspections, the pool was leaking into the tunnel from the south top step of the south stair where the gutter connects to the stair, from the southeast corner of the diving well and at the north end of the east side of the diving well at the 9-foot depth marker. The Park mason repaired both in the spring of 2004.

In 2006, aquatics reported leaks from both stairs into the pool at the south side of each stair set. Midway in the west tunnel there is rebar exposed on the tunnel ceiling. In 2008, both sets of pool steps were replaced.

Gutter: The scum gutter is not level. It is low in the diving well, at the northwest corner, and on the south side. The wading pool gutter is low at the southwest corner and deteriorating along the north gutter toward the east. The wading pool has many loose sections.

Protective coatings: The pool had new protective coating applied in the spring of 1997. While there are many bare concrete patches, the protective coatings are in fair/poor condition. Installing a PVC pool membrane is included in the 2010-2012 capital budget.

Deck: The sundeck concrete is in need of crack and spall patching and recaulking. Many of the concrete slabs should be replaced. Replacing a portion of the concrete deck is included in the 2010-2012 capital budget.

Tunnel: During the 2005 mid-season tunnel inspection we noted two scum gutter returns leaking into the tunnel. The drain tiles had slight flow with the 8" dia. at 10% and 6" dia. at 5%.

The tunnel top concrete is deteriorated around much of the pool, especially along the pool edge where it also serves at the back gutter wall.

McCarty Park Tunnel Top September 2009


McCarty Park Tunnel Top September 2009

In 2008, we replaced 500 square feet of the tunnel top and both sets of steps into the pool before the pool opened. Replacing a portion of the concrete tunnel top is including in the 2010-2012 capital budget.

Dressing Yards: "McCarty Park Dressing Yard and Outdoor Shower Replacement" project was completed before the pool opened in 2008.

McCarty Park West Side Deck September 2005
Note bare & discolored transit panels

McCarty Park West Side Deck September 2008
New Dressing Yard Panels

Work of the Contract included demolishing the existing outdoor dressing yards and showers and replacing with new changing areas and showers. The existing basket checking shelters were converted to male and female dressing rooms, admission and concession area, family changing area and restroom, and storage. Outdoor showers were rebuilt with partitions connecting the bathrooms to the new dressing rooms. The existing wading area toilets were relocated and enclosed with new partitions. Fencing and gates were installed to configure a new entryway to the pool. Work included demolition, plumbing, concrete, partitions, masonry, carpentry, roofing, fencing, and landscaping. The shower room floor was coated as specified in the spring of 2009. and still looked good at the fall 2010 inspections.

South (Men's Side) September 2009
McCarty Park Shower Room Floor

North (Women's Side) September 2009
McCarty Park Shower Room Floor

Water Slide: The concrete footings have some minor cracking.

The steel column bases have rusting just under the mil scale, but no loss of section. The structural tubing and columns for the flume look good.

The structural steel support arms for the flume are in fair condition. There is localized heavy corrosion with some section loss. Within the next 3-years, the brackets from the support arms to

the slide flume need be taken apart, cleaned, galvanized, and protective coated. Members with greater than 10% loss of section should be replaced.

McCarty Water Slide September 2009
Structural columns for the slide flume

McCarty Water Slide September 2009
Support tower for the stairs

The major support tower for stairs is made of 6-inch square tubes that are rusting, creating concern for the long-term structural stability of the slide structure. The steel brackets supporting the lumber stairs are rusting. Some step brackets have minor loss of section. On some vertical faces the weld is solid. On some bottom welds there is loss of base metal.

McCarty Water Slide September 2009
Steel brackets supporting the stair treads

McCarty Water Slide September 2009
Underside of stair landing

For the deck support angle on the backside of the frame, part of the weld is failing and there is moderate loss of section.

The fiberglass slide flume is in poor condition and has several inversions, bumps, cracks, surface delamination, and rough patches. There are at least five different types of patches, some better than other others, some cracked and peeling, and the cementitious ones are very rough. There is one tiny leak. The gel coat is worn down to fiberglass in one spot. The slide is in desperate need of new gel coating.

McCarty Water Slide September 2009
Slide flume

McCarty Water Slide September 2009
Surface of slide flume

Several of the 3/4–inch steel tubes that comprise the balusters were replaced but did not have protective coatings applied. These balusters are rusting.

The timber top platform is saturated with moisture. The surface is soft and rotting, especially over the support steel beam. The landings need board and mat replacement. The timber steps are saturated with algae. Rotted and damaged timber pieces should be selectively replaced.

The pump failed during the 2009 season. The replacement pump is from the soon to be demolished Lincoln Swimming Pool. It has been reconditioned. The McCarty motor was rebuilt.

Rehabilitating the pool slide is included in the 2010-2012 capital budget.

Each year some rusting brackets from the support arms to the flume are pulled apart, cleaned and coated or replaced with new brackets.

In 2007, the slide entry well had a lot of movement (it is squishy) due to water getting between the laminated layers. The steel components of the slide structure need protective coatings or they will continue to rust.

In 2006, one of the 6-inch by 3-inch support arms for the flume was replaced on the SE side of the slide. Park's steel workers did several repairs to the flume support mounting brackets, including rust removal, tack welds, and galvanizing.

McCarty Water Slide September 2005
Baluster rusted through

McCarty Water Slide September 2006
Repaired Baluster (new baluster is rusting because protective coatings were not applied)

In 2005, several of the 3/4–inch steel tubes that comprise the balusters were rusting all the way through. The welders replaced them during the following off-season, but they did not have protective coatings applied and they are rusting. The slide pump was rebuilt and has a new motor.

Equipment Room: The high pressure sand filters are in good condition. In 2008, the ten inch dia. knife gate valve between the surge tank and the pump was replaced. The electrical boxes in the filter room are severely corroded from chorine dripping through the ceiling from the chlorine room that lies directly above the filter room. The electrical boxes should be replaced and potentially relocated. In 2009, the chlorine pumps were replaced which should reduce the leaking into the filter room.

SHERIDAN PARK POOL

The overall condition of the pool is fair (C).

Water Usage: The pool water usage was 2.7 million gallons for the 2010 season. Water loss at Sheridan averaged almost 43,000 gpd, which is over 6% of the pool volume. This is considered reasonable. Water use over the past several years is as follows:

1996	23,000 gpd	2001	20,000 gpd	2006	34,000 gpd
1997	46,000 gpd	2002	63,000 gpd	2007	22,000 gpd
1998	10,000 gpd	2003	33,000 gpd	2008	30,000 gpd
1999	16,000 gpd	2004	111,000 gpd	2009	41,000 gpd
2000	16,000 gpd	2005	32,000 gpd	2010	43,000 gpd

Sheridan Park Swimming Pool mid-season pool inspection September 2010

Discussion of Excessive Water Usage: The water loss in 2004 was excessive due to a major pipe break in the supply piping near the northwest corner of the pool. Parks repaired the pipe in the 2004-2005 off-season.

In 2009, the pool was losing so much water at the beginning of the season that it could not be filled. Between the end of the 2008 season and the end of June 2009, the pool had used over 4.4 million gallons of water, which is excessive. At the end of June, the main drain pipe was plugged. The pool was filled and the water usage dropped, indicating that the pool was not leaking. The same thing appears to have happened in June 2010 until the main drain was plugged.

The 15-inch diameter main drain pipe that was plugged is tributary to a valve manhole southeast of the pool. The sluice gate valve is on outgoing pipe on the downstream side of the manhole. This tells us that the leak is from the manhole, the drain pipe, or both. Fixing the leak and/or redesigning the manhole is included in the 2010-2012 capital budget.

Pool Tank: The pool tank concrete is in good condition, except for the diving well where the concrete is soft. The worst spots were patched in 1998 before the pool had new protective coatings applied. Transitional slabs in diving well heaved during 2002-2003 off-season. The slabs subsequently settled, leaving average ¼" lift. Parks T&M caulked to eliminate foot hazard. The pool joints are very wide, but the caulk looks fair. This pool had major repairs in 1991 that are holding up well. In 2008, the pool inlets were clogged from behind the grating. In 2009, dye testing and tunnel inspection revealed that the pool was leaking into the tunnel at the northeast stairs and east 2'-6" depth marker.

The south wall in wading pool is severely cracked and spalled. Parks maintenance replaced a two-foot section of the wall in the fall of 2004 and an 11-foot section in the spring of 2007. A 10-foot section should still be replaced as part of the long-term work. The southeast and southwest corners are severely cracked and the inlets on the steps are heaving the concrete above.

Sheridan Park Wading Pool - Wall cracking at corner September 2009

Step heaving at Inlet September 2009

Gutter: The scum gutter is not level. In 1997, the pool operator said that it was low at the northeast corner. During a mid-season pool inspection, the gutter appeared high along the west wall and at the southeast corner. Cracks in the scum gutter were repaired in 2004. There are several gutter lips that area hollow: Along the north pool wall straight section, the west wall at 3.5' and at 6', and at the ladder east of the pool slide.

Protective coatings: The pool had new protective coating applied in spring of 1998. The pool had minor concrete and edge repair in preparation for protective coatings. The protective coating condition is fair. Installing a PVC pool membrane is included in the 2010-2012 capital budget.

Deck: The deck slabs northeast of the pool and north of the wading pool need replacement, which is included in the 2010-2012 capital budget. The slabs in the northwest had some frost heave. The sundeck has some cracks, spalls, and toe stubs. Some slabs show signs of settling. Caulk is splitting and there is tar seepage through caulk at numerous locations. Minor concrete patching and caulking would take care of most of the sundeck.

Tunnel: In 2009, the tunnel was inspected during pool usage when the gutters were skimming to check for leaks in the scum gutter piping. Leaks were found and eliminated.

During the 2010 mid season inspection, we saw pipe leaks into the tunnel from:
1. A broken valve: The body of the valve is broken and the valve needs to be replaced
2. Abandoned water supply pipe (about 3/4" dia.) to former pool slide: We will properly abandon or encapsulate the water line as part of the pool liner project.

Dressing Yards: The concrete in the dressing yards has several uneven slabs, which can be mud jacked. The concrete slabs adjacent to the building have dropped several inches and are pitched toward the building. Asphalt has been added to make the transitions to the doors smooth. The dressing yard perimeter has a rolled curb poured integral with the slabs. This curb is spalled at the metal frame wall supports, exposing the rebar. The benches are not painted and in good condition.

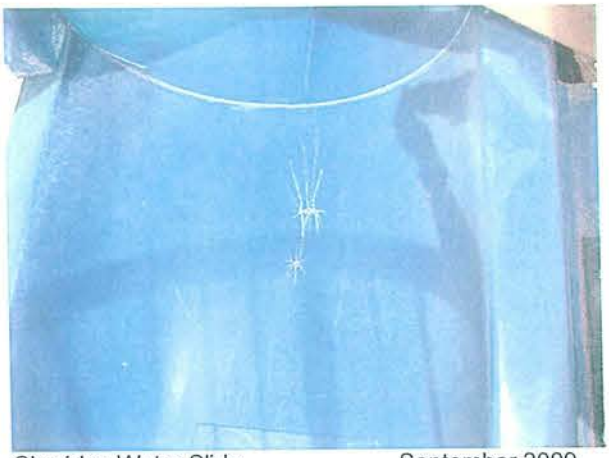
The transite walls were abated in the fall of 2007. The lead paint on the steel frames was blasted and the frames were primed and had new protective coatings installed. New 18 gage metal panels were installed.

Water Slide: The water slide, which is in fair condition, was built in 1992. Steel columns have rusting, but no loss of section. The structural tubing and columns look good.

Sheridan Water Slide September 2009
Steel columns are rusting, but are structurally sound

Sheridan Water Slide September 2009
Steelwork needs blasting and protective coatings

All steelwork is rusting. The entire steelwork structure and handrails need blasting and protective coatings to avoid the need to replace sections that may rust completely if the proper maintenance measures are not taken. This work should be coordinated with carpentry required to replace the rotted timber stair treads (see below). The slide needs to be disassembled so that the steel can be blasted, welded, primed, and protective coated prior to reassembly and installation of the stair treads. The fiberglass slide flume is in good condition with only minor spider cracking.



Sheridan Water Slide September 2009
Slide flume has minor spider cracking

Sheridan Water Slide September 2009
Timber landings were deteriorated

The timber stair landings were both replaced prior to the 2010 season. Removal of the rubber decking during the off-season would prolong the life of the stair treads. No slide Leaks were observed. Rehabilitating the pool slide is included in the 2010-2012 capital budget.

In spring of 2005, the welders added thru-bolts to secure the plastic entry well to the decking on top at the sit down approach.

Equipment Room: The gravity sand filters are in good condition and are working efficiently. During the 2009 pool inspections, the sand filter beds had a horrendous odor. It appeared that they were not properly backwashed at the end of the season, partially because to pool could not be drained until the main drain plug was removed. The doggy dip exacerbates the contamination of the sand cross-section and is not recommended at this pool.

The back wall of the filter tanks leaked to the water heater area of the basement in 2007. In 2008, the leak stopped on its own.

In 2007, the 4-inch dia. make-up water valves to the surge tank were leaking. The make-up water was dripping into the surge tank despite both valves being closed. This water went to waste. These valves were replaced in the 2007-2008 off-season.

During the 2010 mid-season pool inspections, there was confusion regarding valves 3 and 4 to the surge tank. Valve 3 was labeled deep drain and should be for both drains. Valve 4 was labeled center drain and should be for scum drain. We properly labeled the valves on the operation instructions and the pipe. The valve stem for valve 4 (scum drain) is bent and the valve could not be opened all the way. The plumbers plan to fix it in the off-season.

Basement: The basement equipment room continues to have seepage problems, despite hiring a contractor in 2008 to clean the roof drain horizontal pipe runs in the basement from the west of the building foundation. In 2009, Gary Pitroski reviewed the camera of the pipe and ruled out these pipes. Parks added screens to the roof drain scuppers and contacted the contractor for a report of the work he did, but no report exists. Seepage into the equipment room is likely runoff from the slab pitched toward the building or groundwater.

WASHINGTON PARK POOL

The overall condition of the pool is good (C-).

Water Usage: The pool water usage was 5.5 million gallons after initial pool fill for the 2010 season. The wading pool, which is part of the recirculation system, was drained every night. Water loss at Washington averaged almost 71,000 gpd, which is about 15% of the pool volume. We consider this excessive. The water loss for the past several years is as follows:

1996	meter did not work	2004	53,000 gpd
1997	meter did not work	2005	40,000 gpd
1998	51,000 gpd	2006	37,000 gpd
1999	30,000 gpd	2007	40,000 gpd
2000	37,000 gpd	2008	75,000 gpd
2001	51,000 gpd	2009	46,000 gpd
2002	62,000 gpd	2010	71,000 gpd
2003	51,000 gpd		

Discussion of Excessive Water Usage: The pool shut down several times in the beginning of the 2007 pool season, causing the water in the filter tank to overflow to waste.

This pool had a leak-down test at the end of the 2006 season. Rather than draining the pool, the pumps were shut off and all the drains were closed. The pool was allowed to leak for twelve days. Staff measured and recorded the level from the gutter rim to the waterline when they arrived and left each day. The pool level dropped about 3-inches per day (total of 37.5-inches over twelve days), which is the equivalent of about 30,000 gallons per day. This is similar to the results of the leak-down test done in 2005. In 2004, the pool level dropped about 4-inches per day which is the equivalent of about 40,000 gallons per day, which is not excessive.

In 2010, the plumber found the filter tank overflowing on several occasions.

Pool Tank: This pool had major concrete slab edge and joint replacements during the 2004-2005 off-season. Park's T&M contractor performed 1,076-feet of edge repair, eliminating most of the expansion joints. The pool concrete is now cracking on each side of the edge repair. At the 2008 pool inspections, there were three hollow spots in the floor at the floor to wall joints on the west shallow wall and north wall. We removed much of the surface concrete from the west wall hollow spot, which was replaced prior to 2009 pool opening. Slab replacement in the diving well is recommended long-term. The pool should be completely recaulked and will require patching at the same time. The pool tank and joints are rated fair. The tunnel top slabs have horizontal cross sectional cracks at the gutter back wall.

As recommended by the welder, the supply channel grating should be replaced. The pool liner project may eliminate the grating.

The tunnel top along the back gutter is deteriorating in a dozen locations.

Gutter: The scum gutter is not level. It appears high along the shallow wall between the staircases. The scum gutter is in fair shape with only a few repairs needed.

Protective coatings: The pool had new protective coating applied in the spring of 1996. The concrete repairs were protective coated in the spring of 2005. The protective coatings are in fair/poor condition with exposed concrete and numerous unpainted concrete patches. Installing a PVC pool membrane is included in the 2010-2012 capital budget.

Deck: The sundeck concrete has minor cracks, spalls, and patches, especially at the slab corners, and the joints need caulk. Deck slab corner replacements would eliminate most of the trouble spots. About 40% of the deck joints need cleaning and caulking.

Dressing Yards: The concrete in the dressing yards needs replacement around some of the drains, but is in otherwise fair condition. The wall panels and steel frames look good, but the benches need sanding and protective coatings or wood replacement. Two slabs on the men's side need mud jacking. The women's side is in slightly better condition than the men's. There is foliage growing though cracks, joints, and the drains in both dressing yards. The joints need cleaning and caulking.

Equipment Room: The concrete diatomaceous earth filter tank is in good condition. In 2005, parks installed a new pump from the pool to the filter and installed a used pump from Dineen Pool from the filter to the pool. In 2009, the lift pump was very loud.

Tunnel: There are some leaks from expansion joints, especially at the gutter.

Green Space: Per staff, the green space enclosure added in 2005 is not used.

WILSON PARK POOL

The overall condition of both pools is good. The diving pool overall grade is B- and the lap pool overall grade is B.

Water Usage: The pool water usage was 680,000 gallons after initial pool fill for the 2010 season. Water loss averaged 10,000 gpd, which is just about 1% of the pool volume. This is considered reasonable. The water loss for the past several years is as follows:

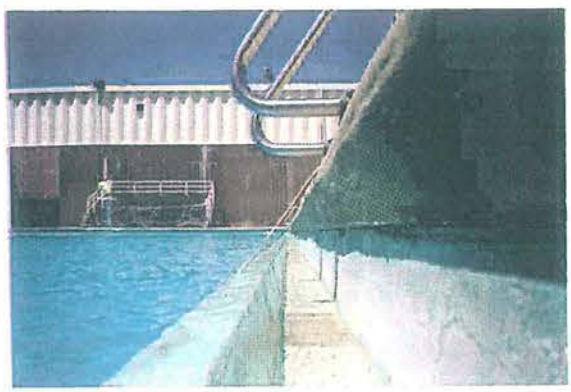
1996	meter did not work	2001	38,000 gpd	2006	Pool not open
1997	meter did not work	2002	47,000 gpd	2007	6,700 gpd
1998	meter did not work	2003	37,000 gpd	2008	19,000 gpd
1999	41,000 gpd	2004	41,000 gpd	2009	24,000 gpd
2000	42,000 gpd	2005	39,000 gpd	2010	10,000 gpd

Water loss at Wilson has never been excessive. At the end of the 2005 season, the pool operator held the water for one week to allow the chlorine level to decrease before draining. There was no drop in the pool water level.

Pool Tank:

Diving Pool: Prior to the liner being installed, the diving pool had full-length cracks in the floor and the wall to floor joint needs caulk. Groundwater flow into the diving pool is constant. In January 2006, the City of Milwaukee Department of Neighborhood Services issued an Inspection Report and Order to Correct Conditions in the Diving Pool. The instructions were to repair and apply protective coatings to the pool tank, repair the gutter and coping, and repair the deck. Park maintenance applied new protective coatings to the top portion of pool walls down to 4-feet below the gutter rim. Where the gutters were spalled, they installed plates.

The diving pool scum gutter piping was replaced in the spring of 2007. In order to expose the piping, the deck slabs adjacent to the pool had to be removed. These slabs rested on the top of an asbestos bearing pad on the pool wall. Removal of the slabs required asbestos abatement. Deteriorated sections of the back gutter wall fell apart and were replaced.



July 1999
Wilson Diving Pool Gutter - Before PVC Pool Liner

September 2009
Wilson Diving Pool Gutter - After PVC Pool Liner

Lap Pool: The lap pool floor heaved at pool start-up in 2006. We suspect that pool inlet pipe breaks under the pool filled the sub grade and floated the pool bottom. The pool floor and pool

inlet piping was replaced in 2006 as part of an insurance claim. There are cracks and chert pops in the new concrete floor.

Gutter: The scum gutter in both pools is not level. They are both high on the east side. A good portion of the diving pool back gutter wall was replaced in spring of 2007 as part of replacing the scum gutter return piping. The lap pool deck rests on asbestos bearing pads that rest on the gutters. Deck movement during the annual freeze and thaw cycle causes friction at the gutters and results in the gutter walls spalling.

Protective coatings:

Diving Pool: A PVC pool liner was installed in the diving pool in the spring of 2008. The liner is 60 mil thick and has a 15-year warranty from Renosys. After two seasons, the liner has no tears or separating joints. However, after the pool was emptied groundwater collected on the deep well floor under the liner. There were at least 6 water pockets that were not relieved by the ports installed for that purpose. The manufacturer/installer of the pool liner (Renosys) assured us that these pockets of groundwater are not detrimental to the pool liner. When the pool is refilled, the groundwater will be forced out and the membrane will return to its proper place.

April 2008
Wilson Diving Pool - Before PVC Pool Liner

September 2008
Wilson Diving Pool - After PVC Pool Liner

Lap pool: Protective coatings were installed in 2006 after the pool floor was reconstructed. The protective coatings are in very good condition despite some chipping paint on the floor. There is thinning and minor chipping of the black lap lane markers, especially on the north wall. This may be due to ultraviolet degradation. In 2010 there were more chips in the coating system, probably due the improper adherence of the paint to the fresh concrete.

Deck: The sundeck has cracks that should be caulked. Deck slabs are out of level at cracks and joints and we suspect many hollow areas under the deck. The concrete deck slabs southwest of the diving well were mud jacked to level and concrete was patched around one deck drain and at one slab corner prior to the pool opening in 2006. The caulk is separating and cracking in caulked deck joints. About 50% of the deck joints need cleaning and caulking.

Equipment Room: The diatomaceous earth filters are in good condition. The tanks were painted in 1997 and look good. Supply piping from the lift pump to the filter tank should be replaced. Every time they start the lift pump after backwashing, scale and corrosion are dumped into the filter tank, making it difficult to keep clean.

This is the 3rd year of the BEC system. The BEC system does not incorporate pH because of lack of electrical connection and probe issues. The diving pool is on the same system as the lap pool.

Both pH pumps need replacement, in addition to the chlorine pump for the dive pool and the recirculation pump for the lap pool. According to the Park Plumbing Supervisor, all pool piping in the filter room is corroding and needs to be replaced, especially lift the pump suction pipe There is a leak in the steam line valve stem from the mechanical room.

Pool Piping:

Diving Pool: After the floor of the lap pool was replaced, the pool was started up in the fall of 2006. The recirculation system was losing 90,000 gpd, which is excessive. Park Maintenance did leak down tests on the surge tank and both pools. The leak was isolated to the piping from the diving pool gutters to the surge tank. The piping was exposed, revealing that is was deteriorated, cracked, separated at the joints, pitted, and had holes in it. All the scum gutter piping from the diving pool to the filter room was replaced.

Lap Pool: In 2006, when the pool floor and inlet piping were replaced, the 6-inch dia. pool return piping from the pool to the filter room did not pass a pressure test and was replaced. At the time that the 6-inch dia. pipe was replaced, Parks examined the 10-inch dia. pool supply piping from the filter room to the pool and determined that the pipe needed to be replaced as well. New pool return and supply piping was be connected to existing piping in the filter room and the 6-inch and 10-inch valves in the filter room were replaced.

Wilson Lap Pool after the floor replacement and new protective coatings. The handicap ramp is being installed on far left..

Wilson Lap Pool September 2008

During the 2004-2005 off-season the main drain valve for diving well and discharge piping, check valve, and gate valve for pumps were replaced in the valve pit..

Milwaukee County Parks - Pool Evaluations Summary

SWIMMING POOL COST ESTIMATE
SUMMARY OF LONG-TERM WORK (FOR SERVICE LIFE OF 30-YEARS)

LOCATION	COST ESTIMATE
CARVER	$34,000
GREENFIELD	$80,000
GROBSCHMIDT	$270,000
HALES CORNERS	$400,000
HOLLER	$120,000
JACKSON	$200,000
KOSCIUSKO	$350,000
McCARTY	$1,010,000
SHERIDAN	$320,000
WASHINGTON	$480,000
WILSON	$50,000
TOTAL ESTIMATE	$3,314,000

NOTE: THE ABOVE ESTIMATES INCLUDE PLANNING AND DESIGN FEES.

105TH ANNIVERSARY | MILWAUKEE COUNTY PARKS

Policy Recommendation #1

Policy Issues/Recommendations

Recommendation # 1

Establish criteria for determining whether a facility should be fixed or demolished.

The following criterion has been developed to assist in the evaluation of buildings within the Parks Department. Facilities must be properly evaluated to estimate the repair costs to bring the facility into compliance.

Milwaukee County Parks Department - Building Assessment Criteria

Category		
ADA Accessibility	Exterior Wall Finishes	Stairs
Air and Water Quality	Exterior Windows	Stairwells
Air VAV and Central AHU Units	Fences and Gates	Stairway
Backflow Protection	Filtration Systems	Steam Heating Distribution System
Boiler Replacements	Fire Alarm Systems	Superstructure
Boiler Room Piping	Fire Extinguishers	Telephone Systems
Branch Circuits	Fire Protection Systems	Terminal and Package Units
Branch Wiring Devices	Fire Separations	Utility Sinks
Building Envelope	Fireproofing	Walkway
Cabinet Unit Heaters	Floor Finishes	Wall Finishes
Cathodic Protection	Flooring	Water Circulation Piping
Caulk and Paints	Fuel Distribution	Water Tempering Systems
Ceiling Finishes	Furnaces	Windows
Ceilings	Building Exhaust Systems	
Chimney	Guardrails	
Communications and Security	Handrails	
Concrete Deck Sealant	Hazardous Materials	Other Criteria
Concrete Sidewalks	Heat Tracing	Revenue Generation
Concrete Walls	Heating Hot Water Pumps	Expenditures
Condenser & Chiller	HVAC Air Conditioners	Historical Significance
Controls and Instrumentation	Interior Doors	Architectural Design
Conveying Systems	Interior Enclosure	
Cooling Generating Systems	Interior Overhead Doors	
Doors and Screens	Interior Walls	
Exterior Light Fixtures	Kitchen Fixtures	
Lenses	Landscaping	
Railings and Columns	Life Safety	
Window Louvers	Lighting and Branch Wiring	
Tables and Trash Receptacles	Lighting Fixtures	
Distribution System	Occupancy Sensors	
Domestic Water Distribution	PA Systems	
Door Hardware	Parking Area	
Doors	Parking Lots	

Drinking Fountains
Duct Smoke Dampers
Ductwork
Electrical Service and Distribution
Elevators
Emergency Battery Units
Emergency Generators
Emergency Light and Power Systems
Equipment and Furnishings
Exhaust Ventilation Systems
Exit Lighting System
Exit Signs
Expansion Joints
Exterior Doors
Exterior Enclosure
Exterior Metalwork
Exterior Overhead Doors
Exterior Stairs and Patio
Exterior Surfaces
Toilet Partitions
Pathway
Pedestrian Paving
Perimeter Lighting
Plumbing Fixtures
Pool Heater Exhaust
Protective Coating
Receptacles
Restroom Exhaust Systems
Roll Down Fire Doors
Roof Drains Gutters
Roof Drains Gutters
Roof Mounted Condenser Units
Roof Mounted DX Systems
Roof Replacement
Sanitary Waste
Showers
Signage
Skylights

Milwaukee County Parks Department - Building Inventory

Building to be Evaluated for Demo

Park	Asset_No	Type
Cudahy Nature Preserve	0	shelter/comfort building
Dineen	2040	golf starter building
Doctors	1030	bathhouse (beach)
Dretzka	1090	ski/tow shelter (west)
Greenfield	2310	comfort station (15 tee)
Kern	1280	pavilion
King	2105	skate shelter
Kinnickinnic River Parkway	3810	storage building (Simmons Field)
KK Sports Center	3740	storage shed
Lindburgh	1400	bathhouse/pavilion
Sherman	2140	storage shed #2 (east)
Smith	1500	storage shed
Smith	1485	storage/service building
Underwood Creek Parkway	2690	comfort building
Wahl	1515	storage shed
West Milwaukee	3840	storage shed

Policy Recommendation #2

Policy Issues/Recommendations
Recommendation # 2

Replace some current facilities with alternative structures that have lower construction and/or maintenance costs.

The technology used in sport field lighting evolved significantly since the DPREC last installed any new lighting on its sport fields. A national lighting company recently performed an analysis on our current lighting. The following reflects the significant savings that could be obtained by replacing our antiquated and outdated lighting with new technology.

The analysis was performed on three sectors of our sport fields. They are:

1. Baseball Fields
2. Softball Fields
3. Tennis Courts

This type of new technology could also be used across the Park System to generate additional saving. The areas that new technology should be considered for use in are:

- Parkway Lighting
- Parking Lot Lighting
- Park Walk Lights
- Exterior Building Lighting

105TH ANNIVERSARY | MILWAUKEE COUNTY PARKS

Baseball Fields

Corporate: 100 1st Ave West · PO Box 808 · Oskaloosa, IA 52577 · 641/673-0411 · 800/825-6020 · Fax: 641/673-4852
Manufacturing: 2107 Stewart Road · PO Box 260 · Muscatine, IA 52761 · 563/263-2281 · 800/756-1205 · Fax: 800/374-6402
Web: www.musco.com · Email: lighting@musco.com

Date: October 6, 2011

To: Milwaukee County Parks

Thank you for your interest in Musco's Green Generation Lighting® technology. We are pleased to present this budget estimate for your preliminary planning purposes. Musco's industry leading technology will provide the following benefits:

- **50% Less Energy Cost**
- **50% Less Spill Light**
- **100% Maintenance Free for 25 years**
- **Guaranteed Light Levels for 25 years**
- **Control & Monitoring System**

This budget estimate is based on the following information:

- Baseball
- Guaranteed light levels of 50 foot-candles infield and 30 foot-candles outfield
- Power: Available but prefer 480 volt 3 phase
- Building Code: 2006, IBC 90 MPH, Exposure C

This estimate includes Musco's Light-Structure Green™ system – engineered from foundation-to-poletop in 5 Easy Pieces™ – and Control-Link® systems. Demolition of existing poles and fixtures, installation and underground wiring are included in the estimate and will be provided by an electrical contractor.

- **The turnkey estimate for Zirkel, Kuenn, Simmons, and Harden is: $190,000 - $210,000 per field.**
- **The total turnkey estimate for all Baseball Fields is: $775,000 - $825,000**

The following is a partial listing of similar projects in your area where Musco's Green Generation Lighting Technology was chosen:

- **Mukwonago Community Baseball**
- **Concordia University Baseball - Mequon**
- **University Wisconsin – Whitewater Football, Soccer, and Baseball**
- **Beaumont Field Baseball – Burlington**
- **Carthage College Baseball - Kenosha**
- **Oak Creek High School Football/Track and Soccer**
- **Brown Deer Football/Track**
- **Hart Park - Wauwatosa**
- **Wauwatosa West High School Football/Track**
- **Greendale Community Park**

Thank you for considering Musco for your sports-lighting needs. We look forward to helping you make your project a success. I will follow-up with you in the near future or contact me with any questions.

Thank you-

Greg Smidt
Musco Sports Lighting, LLC
Phone: 715-697-9643
E-mail: greg.smidt@musco.com

Exhibit A

25-Year Life-Cycle Cost Comparison

Milwaukee County Parks Phase 1

Baseball Fields

Prepared for: Milwaukee County Department of Parks & Recreation & Culture

October 3, 2011

Warranty Period: 25 Years

	Typical Floodlighting Equipment	MUSCO GREEN.	Your Savings
Hours	6,250	6,250	
Average kW	576.7	272.1	304.6
Total kW	3,366,360.0	1,599,972.0	1,766,388.0
Metric Tons of CO2	2,417.0	1,148.8	1,268.3
Energy	**$447,725**	**$212,796**	**$234,929**
Group Relamp	$86,582	$0	$86,582
Lamp Maintenance	$3,750	$0	$3,750
Controls - Energy	$111,933	$0	$111,933
Controls - Labor	$470,000	$0	$470,000
25-Year Life-Cycle Cost	**$1,119,990**	**$212,796**	**$907,194**

Assumptions

Field Name	Annual Operating Hours	Energy Cost per kWh	Typical Floodlighting Equipment No. Fixtures	Typical Floodlighting Equipment Avg. kW	Light-Structure Green™ No. Fixtures	Light-Structure Green™ Avg. kW	Controls Energy Savings	Controls Labor Savings	Fixture Wattage
McCarty (Zirkel)	250	$ 0.13	80	129.60	44	68.82	25%	$125,000	1500W
Rainbow (Kuenn)	250	$ 0.13	80	129.60	44	68.82	25%	$125,000	1500W
Simmons	220	$ 0.13	80	129.60	44	68.82	25%	$110,000	1500W
Zablocki (Harden)	220	$ 0.13	116	187.92	42	65.69	25%	$110,000	1500W
Total	250	$ 0.13	356	576.72	174	272.14	25%	$470,000	1500W

NOTE:

Life-cycle costs are based upon the assumptions given by the customer above. Any variation in this data will change the life-cycle cost proportionately. Typical Floodlighting Equipment total kWh includes base operating hours plus extra kWh consumed if no controls system included. Musco guarantees the average Green Generation Lighting system kW per hour and useful life of the lamp.

MUSCO Lighting

We Make It Happen.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	70'	-	70'	1500W MZ	5	5	0
1	B1	80'	-	80'	1500W MZ	8	8	0
1	B2	80'	-	80'	1500W MZ	8	8	0
4	C1-C2 D1-D2	70'	-	70'	1500W MZ	4	4	0
8	← TOTALS →					42	42	0

SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Zablocki (Harden)
Milwaukee County Parks Phase 1
Milwaukee,WI

Zablocki (Harden)
- Size: 285'/380'/310' - basepath 90'
- Grid Spacing = 30.0' x 30.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Infield	Outfield
No. of Target Points:	25	101
Average:	50 88	30.94
Maximum:	60	46
Minimum:	40	20
Avg/Min:	1.29	1.52
Max/Min:	1.52	2.27
UG (Adjacent Pts):	1.31	1.83
CV:	0.12	0 18

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	42
Avg KW over 5,000:	65.69
Max KW:	71.4

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

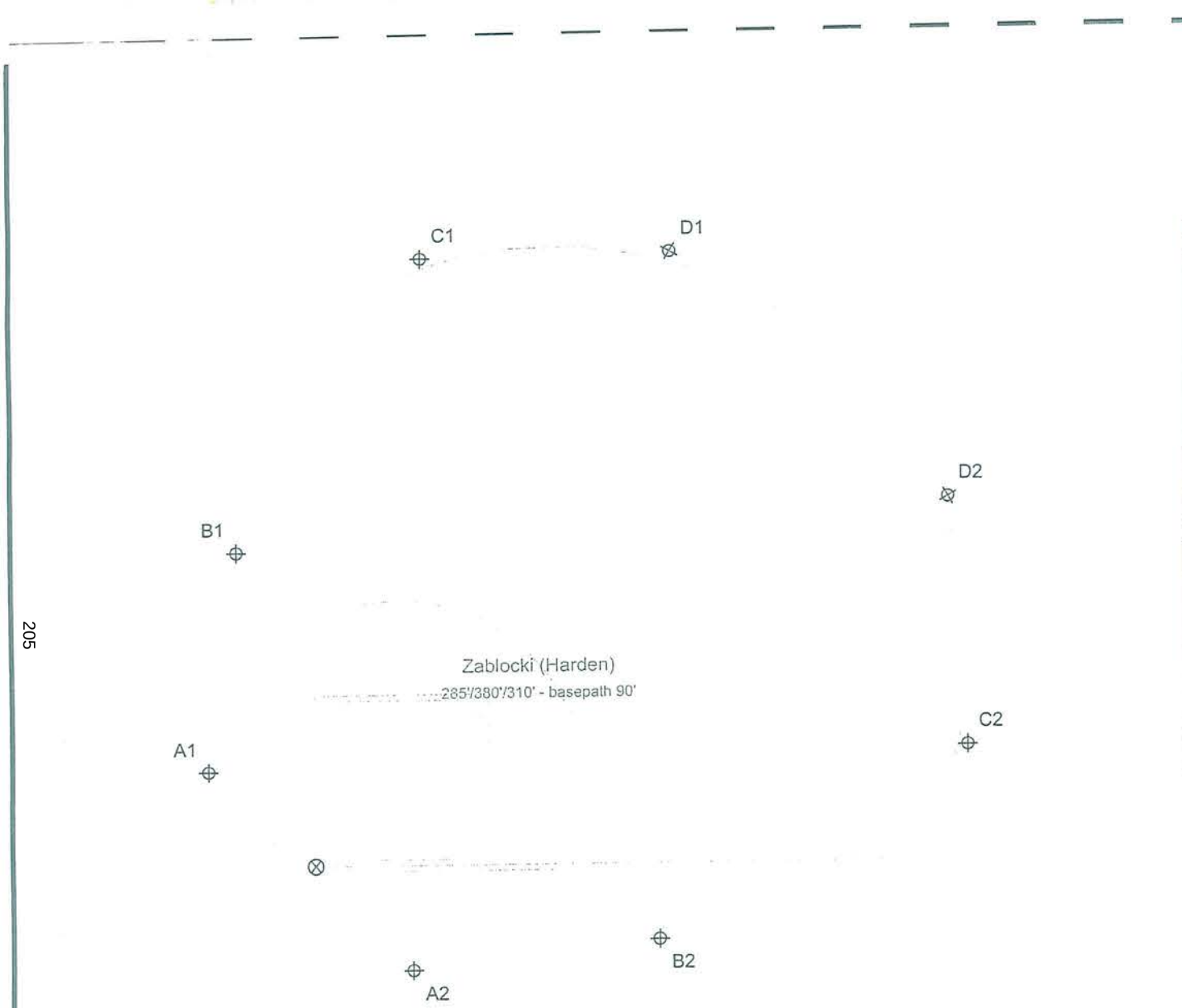
Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations

By: Joel Stout

File #: 148979-Zablocki(Harden) Date: 30-Sep-11

Print Date (30/Sep/2011) & Time (13:41)



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MUSCO
GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

EQUIPMENT LAYOUT

Milwaukee County Parks Phase 1

Milwaukee,WI

INCLUDES:

· Zablocki (Harden)

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE
2	A1-A2	70'	-	70'	1500W MZ	5
1	B1	80'	-	80'	1500W MZ	8
1	B2	80'	-	80'	1500W MZ	8
4	C1-C2 D1-D2	70'	-	70'	1500W MZ	4
8	← TOTALS →					42

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
1500 watt MZ	8.6	7.7	7.5	6.5	5.1	-	3.7

SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

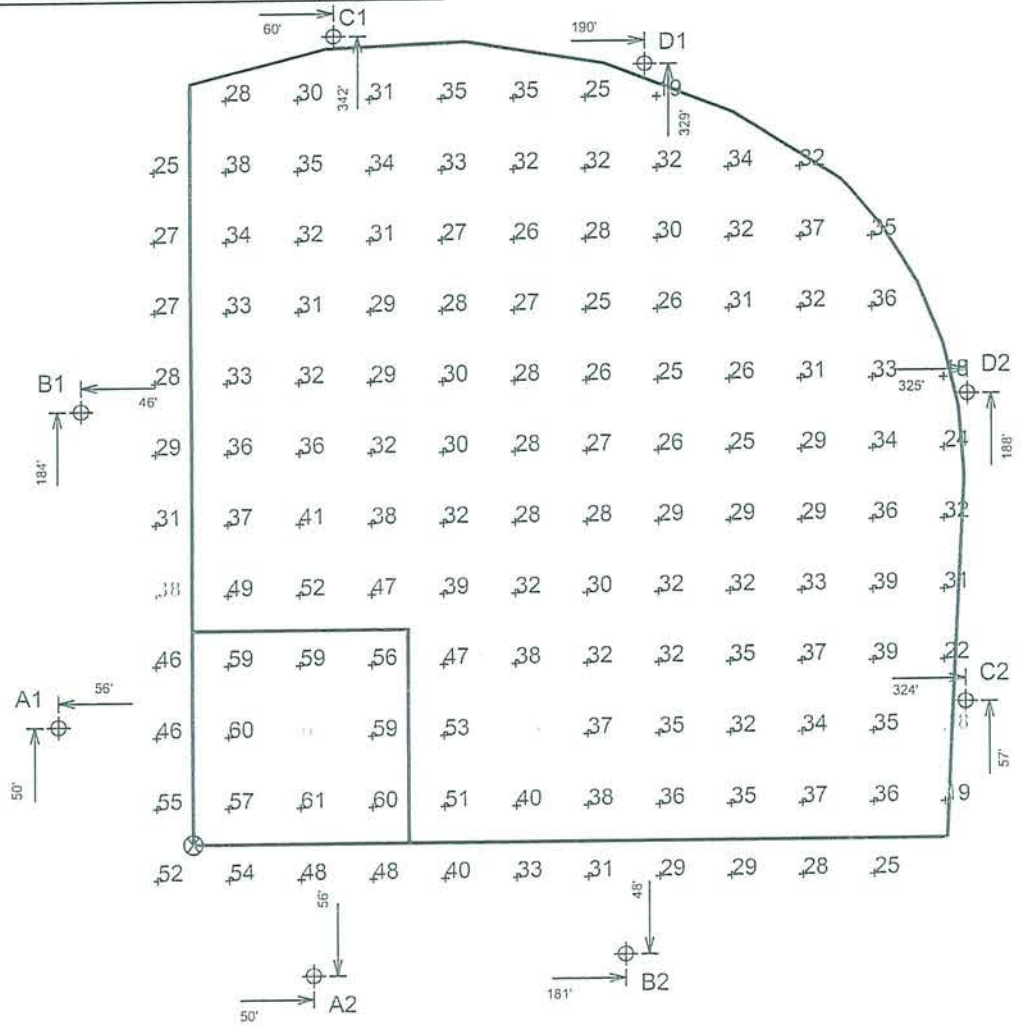
By: Joel Stout

File #: 148979-Zablocki(Harden) Date: 30-Sep-11

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	A1-A2 D1-D2	70'	-	70'	1500W MZ	5	5	0
2	B1-B2	80'	-	80'	1500W MZ	8	8	0
2	C1-C2	70'	-	70'	1500W MZ	4	4	0
8	← TOTALS →					44	44	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production



SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Baseball

McCarty Park (Zirkel Field)
Milwaukee, WI

Baseball
- Size: Irregular
- Grid Spacing = 30.0' x 30.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Infield	Outfield
No. of Target Points:	25	109
Average:	51.9	31.1
Maximum:	63	43
Minimum:	38	18
Avg/Min:	1.38	1.76
Max/Min:	1.66	2.42
UG (Adjacent Pts):	2.00	2.00
CV:	0.14	0.15

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	44
Avg KW over 5000 hours:	68.82
Max KW:	74.8

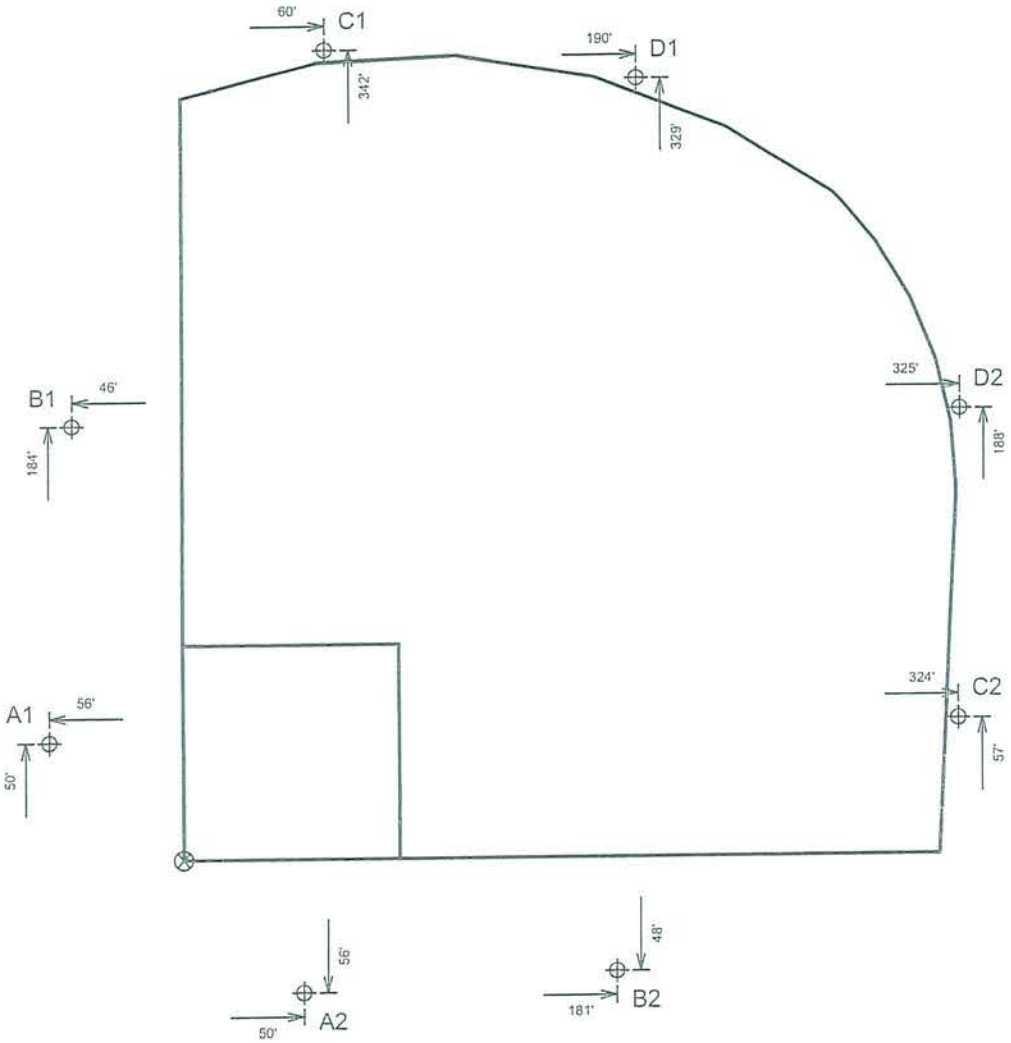
Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production



SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

musco GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

EQUIPMENT LAYOUT

McCarty Park (Zirkel Field)
Milwaukee, WI

INCLUDES:
· Baseball

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE
4	A1-A2 D1-D2	70'	-	70'	1500W MZ	5
2	B1-B2	80'	-	80'	1500W MZ	8
2	C1-C2	70'	-	70'	1500W MZ	4
8	← TOTALS →					44

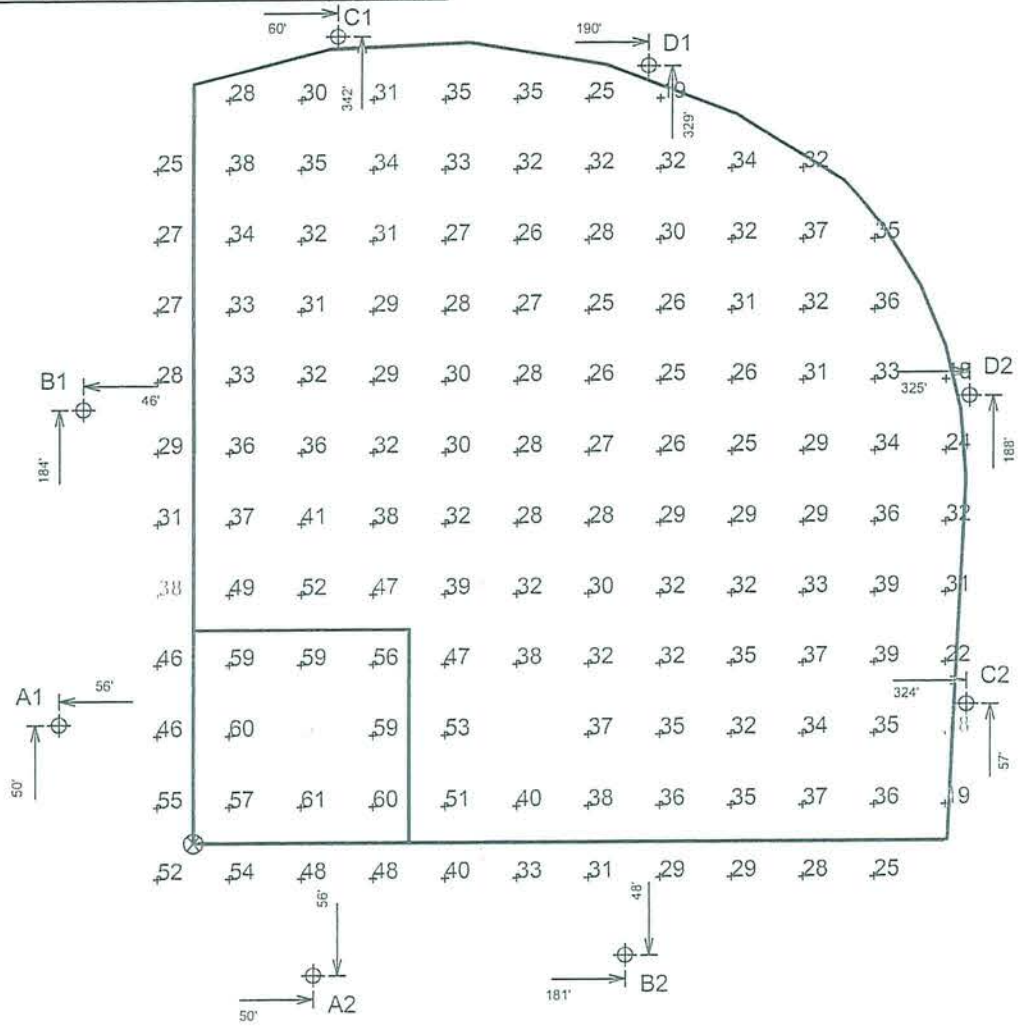
SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)		Line Amperage Per Luminaire (max draw)								
Single Phase Voltage		120 (60)	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	415 (60)	480 (60)
1500 watt MZ	Max	-	8.6	7.7	7.5	6.5	5.1	-	-	3.7
	Min	11.7	6.7	6.0	5.9	5.1	4.0	X	X	2.9

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	A1-A2 D1-D2	70'	-	70'	1500W MZ	5	5	0
2	B1-B2	80'	-	80'	1500W MZ	8	8	0
2	C1-C2	70'	-	70'	1500W MZ	4	4	0
8	← TOTALS →					44	44	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.



GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Baseball

Simmons Field
Milwaukee, WI

Baseball
- Size: Irregular
- Grid Spacing = 30.0' x 30.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Infield	Outfield
No. of Target Points:	25	109
Average:	51.9	31.1
Maximum:	63	43
Minimum:	38	18
Avg/Min:	1.38	1.76
Max/Min:	1.66	2.42
UG (Adjacent Pts):	2.00	2.00
CV:	0.14	0.15

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	44
Avg KW over 5000 hours:	68.82
Max KW:	74.8

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

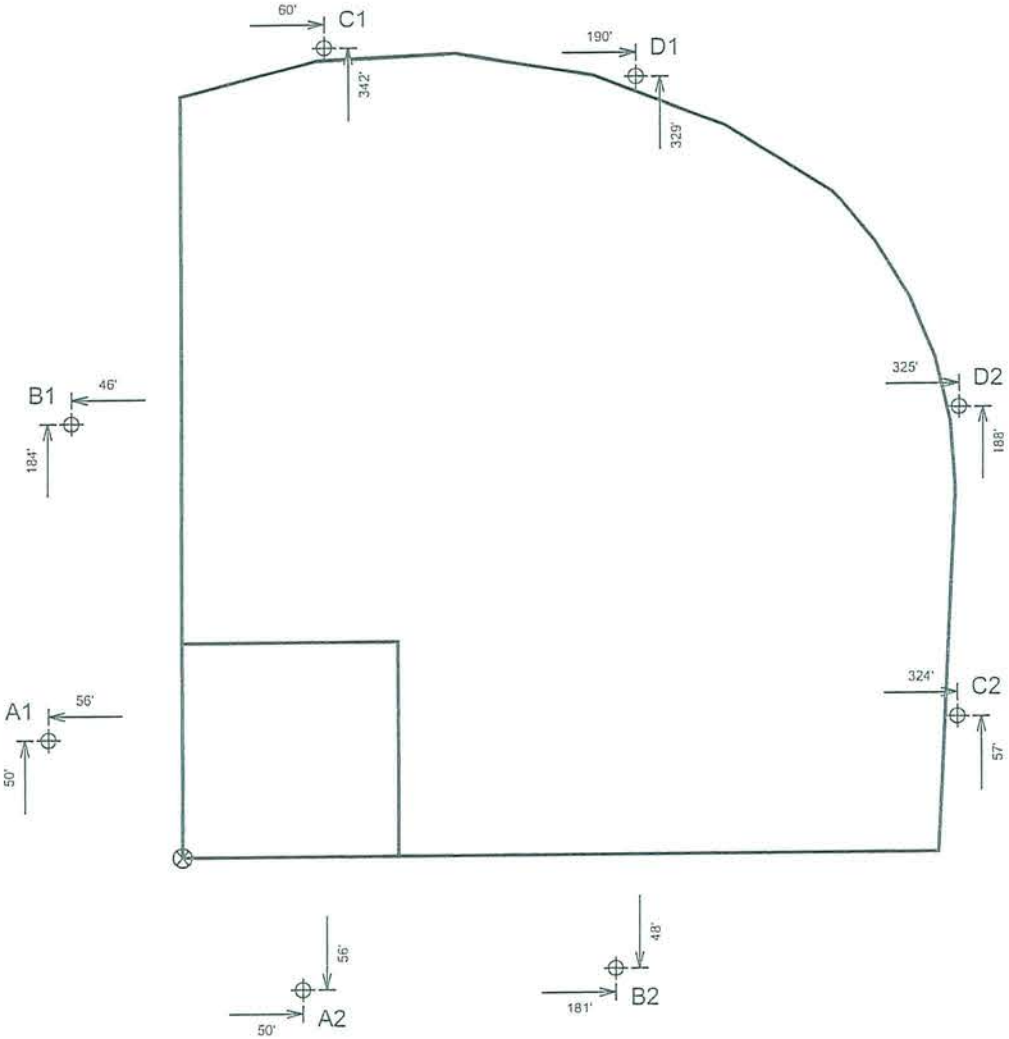
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) + dimensions are relative to 0,0 reference point(s) ⊡

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.



SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

musco
GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

EQUIPMENT LAYOUT

Simmons Field
Milwaukee, WI

INCLUDES:
· Baseball

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE
4	A1-A2 D1-D2	70'	-	70'	1500W MZ	5
2	B1-B2	80'	-	80'	1500W MZ	8
2	C1-C2	70'	-	70'	1500W MZ	4
8	← TOTALS →					44

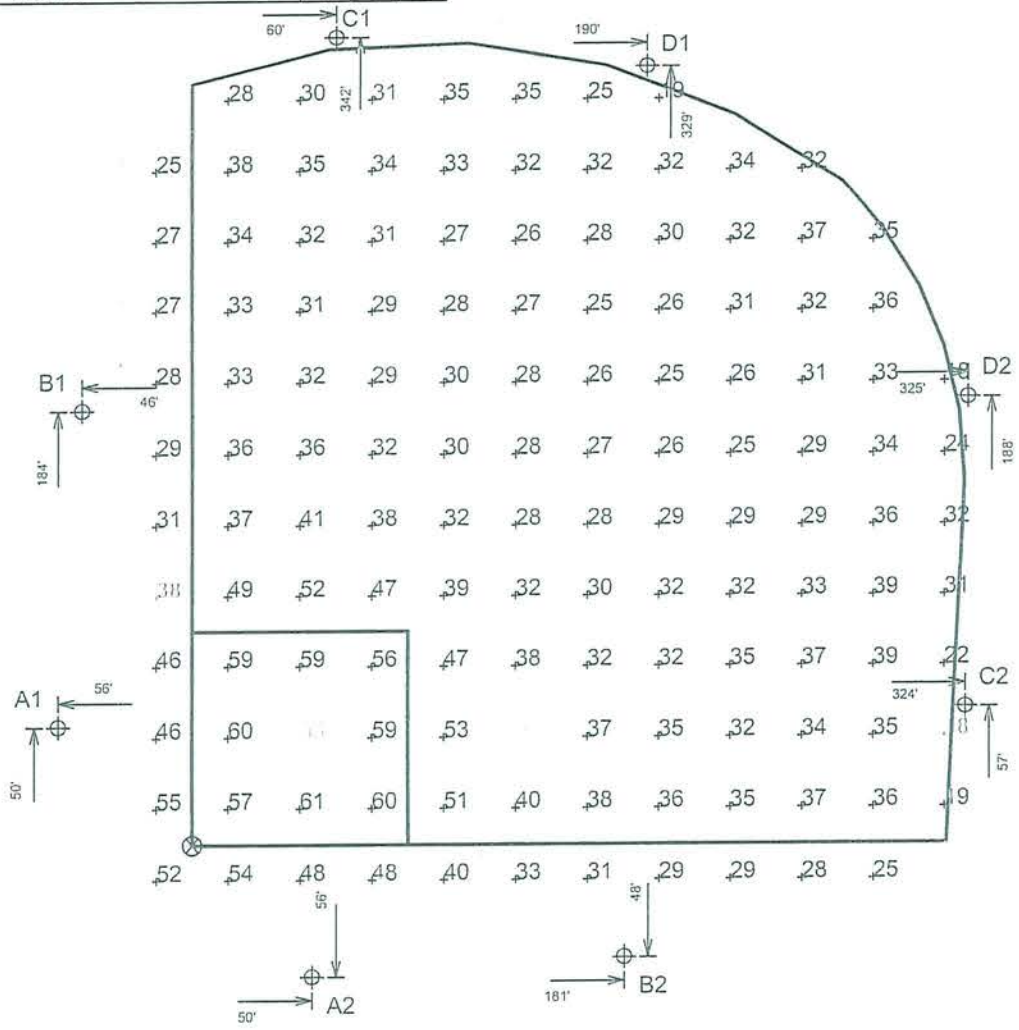
SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)		Line Amperage Per Luminaire (max draw)								
Single Phase Voltage		120 (60)	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	415 (60)	480 (60)
1500 watt MZ	Max	-	8.6	7.7	7.5	6.5	5.1	-	-	3.7
	Min	11.7	6.7	6.0	5.9	5.1	4.0	X	X	2.9

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	A1-A2 D1-D2	70'	-	70'	1500W MZ	5	5	0
2	B1-B2	80'	-	80'	1500W MZ	8	8	0
2	C1-C2	70'	-	70'	1500W MZ	4	4	0
8	← TOTALS →					44	44	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.



SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

musco GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Baseball

Rainbow Park (Kuenn Field)
Milwaukee, WI

Baseball
- Size: Irregular
- Grid Spacing = 30.0' x 30.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION
HORIZONTAL FOOTCANDLES

	Infield	Outfield
No. of Target Points:	25	109
Average:	51.9	31.1
Maximum:	63	43
Minimum:	38	18
Avg/Min:	1.38	1.76
Max/Min:	1.66	2.42
UG (Adjacent Pts):	2.00	2.00
CV:	0.14	0.15

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	44
Avg KW over 5000 hours:	68.82
Max KW:	74.8

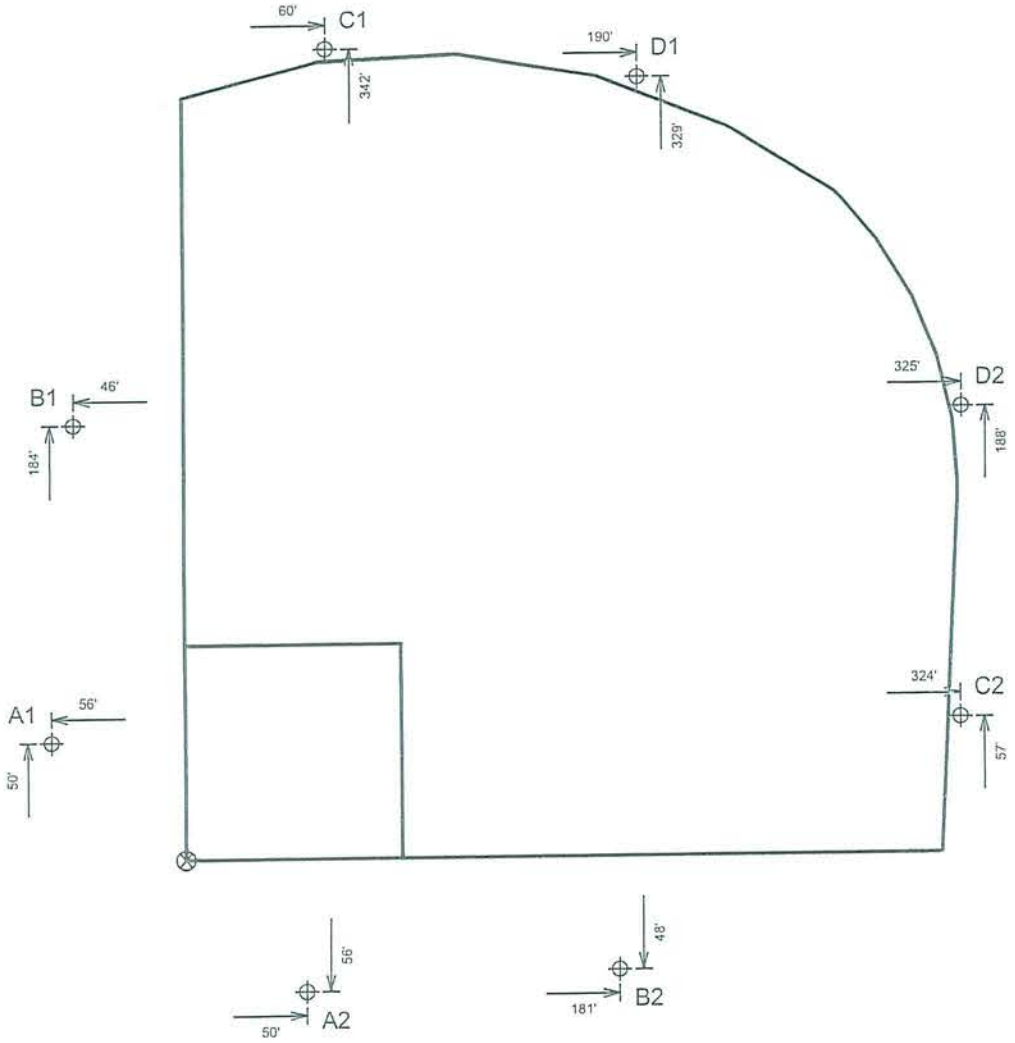
Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.



SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

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GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

EQUIPMENT LAYOUT

Rainbow Park (Kuenn Field)
Milwaukee, WI

INCLUDES:
· Baseball

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE
4	A1-A2 D1-D2	70'	-	70'	1500W MZ	5
2	B1-B2	80'	-	80'	1500W MZ	8
2	C1-C2	70'	-	70'	1500W MZ	4
8	← TOTALS →					44

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)		Line Amperage Per Luminaire (max draw)								
Single Phase Voltage		120 (60)	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	415 (50)	480 (60)
1500 watt MZ	Max	-	8.6	7.7	7.5	6.5	5.1	-	-	3.7
	Min	11.7	6.7	6.0	5.9	5.1	4.0	X	X	2.9

105TH ANNIVERSARY | MILWAUKEE COUNTY PARKS

Softball Fields

Corporate: 100 1st Ave West · PO Box 808 · Oskaloosa, IA 52577 · 641/673-0411 · 800/825-6020 · Fax: 641/673-4852
Manufacturing: 2107 Stewart Road · PO Box 260 · Muscatine, IA 52761 · 563/263-2281 · 800/756-1205 · Fax: 800/374-6402
Web: www.musco.com · Email: lighting@musco.com

Date: October 6, 2011

To: Milwaukee County Parks

Thank you for your interest in Musco's Green Generation Lighting® technology. We are pleased to present this budget estimate for your preliminary planning purposes. Musco's industry leading technology will provide the following benefits:

- **50% Less Energy Cost**
- **50% Less Spill Light**
- **100% Maintenance Free for 25 years**
- **Guaranteed Light Levels for 25 years**
- **Control & Monitoring System**

This budget estimate is based on the following information:

- Softball
- Guaranteed light levels of 50 foot-candles infield and 30 foot-candles outfield
- Power: Available but prefer 480 volt 3 phase
- Building Code: 2006, IBC 90 MPH, Exposure C

This estimate includes Musco's Light-Structure Green™ system – engineered from foundation-to-poletop in 5 Easy Pieces™ – and Control-Link® systems. Demolition of existing poles and fixtures, installation and underground wiring are included in the estimate and will be provided by an electrical contractor.

- **The turnkey estimate for KK #1 and #2 is: $120,000 - $140,000 per field; both West Milwaukee #1 and #2 is: $240,000 - $260,000; Wilson Recreation is: $145,000 - $160,000; and Zablocki is: $160,000 - $180,000**
- **The total turnkey estimate for all Softball Fields: $785,000 - $840,000**

The following is a partial listing of similar projects in your area where Musco's Green Generation Lighting Technology was chosen:

- **Mukwonago Community Baseball**
- **Concordia University Baseball - Mequon**
- **University Wisconsin – Whitewater Football, Soccer, and Baseball**
- **Beaumont Field Baseball – Burlington**
- **Carthage College Baseball – Kenosha**
- **Franklin Little League - Franklin**
- **Brown Deer Football/Track**
- **Hart Park - Wauwatosa**
- **Wauwatosa West High School Football/Track**
- **Greendale Community Park**

Thank you for considering Musco for your sports-lighting needs. We look forward to helping you make your project a success. I will follow-up with you in the near future or contact me with any questions.

Thank you-

Greg Smidt
Musco Sports Lighting, LLC
Phone: 715-697-9643
E-mail: greg.smidt@musco.com

Exhibit A

25-Year Life-Cycle Cost Comparison

Milwaukee County Parks Phase 1

Softball Fields

Prepared for: Milwaukee County Dept. of Parks Recreation& Culture

October 3, 2011

Warranty Period: 25 Years

	Typical Floodlighting Equipment	Musco Green	Your Savings
Hours	Varies by Field	Varies by Field	
Average kW	324.0	192.6	131.4
Total kW	3,402,000.0	1,965,600.0	1,436,400.0
Metric Tons of CO2	2,442.6	1,411.3	1,031.3
Energy	**$452,466**	**$261,426**	**$191,040**
Group Relamp	$39,375	$0	$39,375
Lamp Maintenance	$3,750	$0	$3,750
Controls - Energy	$113,119	$0	$113,119
Controls - Labor	$1,260,000	$0	$1,260,000
25-Year Life-Cycle Cost	**$1,868,710**	**$261,426**	**$1,607,284**

Assumptions

Field Name	Annual Operating Hours	Energy Cost per kWh	Typical Floodlighting Equipment No. Fixtures	Typical Floodlighting Equipment Avg. kW	Light-Structure Green™ No. Fixtures	Light-Structure Green™ Avg. kW	Controls Energy Savings	Controls Labor Savings	Fixture Wattage
K.K. #1	180	$ 0.13	40	43.20	24	26.88	25%	$90,000	1000W
K.K. #2	180	$ 0.13	40	43.20	24	26.88	25%	$90,000	1000W
West Milwaukee #1	540	$ 0.13	40	43.20	30	33.60	25%	$270,000	1000W
West Milwaukee #2	540	$ 0.13	40	43.20	30	33.60	25%	$270,000	1000W
Wilson Rec #1	540	$ 0.13	100	108.00	34	38.08	25%	$270,000	1000W
Zablocki	360	$ 0.13	40	43.20	30	33.60	25%	$270,000	1000W
Total	Varies	$ 0.13	300	324.00	172	192.64	25%	$1,260,000	1000W

NOTE:

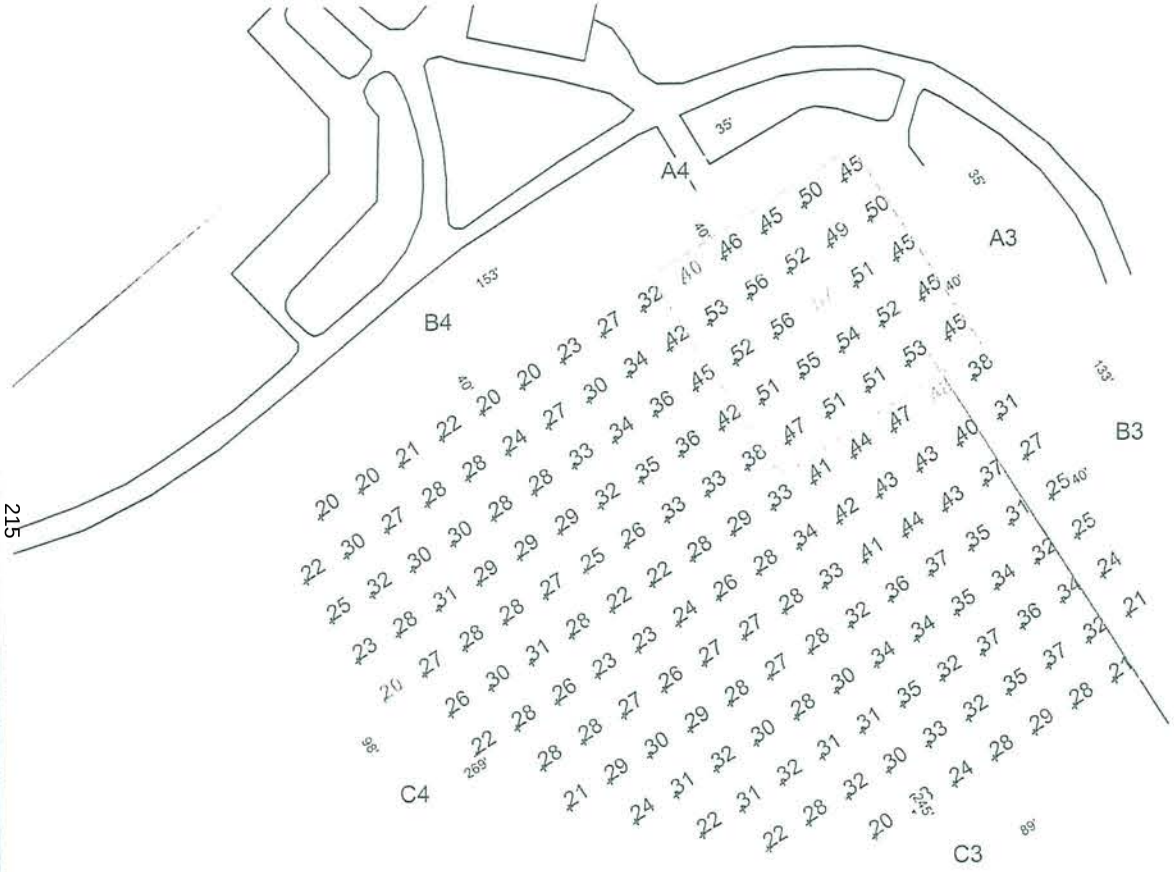
Life-cycle costs are based upon the assumptions given by the customer above. Any variation in this data will change the life-cycle cost proportionately. Typical Floodlighting Equipment total kWh includes base operating hours plus extra kWh consumed if no controls system included. Musco guarantees the average Green Generation Lighting system kW per hour and useful life of the lamp.

Musco Lighting

We Make It Happen.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A3-A4	60'	-	60'	1500W MZ	3	3	0
2	B3-B4	70'	-	70'	1500W MZ	5	5	0
2	C3-C4	60'	-	60'	1500W MZ	4	4	0
6	← TOTALS →					24	24	0



215

SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

KK Field #1
Milwaukee County Parks Phase 1
Milwaukee,WI

KK Field #1
- Size: 235'/275'/275' - basepath 60'
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Infield	Outfield
No. of Target Points:	25	143
Average:	50.09	30.16
Maximum:	57	48
Minimum:	40	20
Avg/Min:	1.25	1.52
Max/Min:	1.42	2.41
UG (Adjacent Pts):	1.33	1.57
CV:	0.09	0.20

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	24
Avg KW over 5,000:	37.54
Max KW:	40.8

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

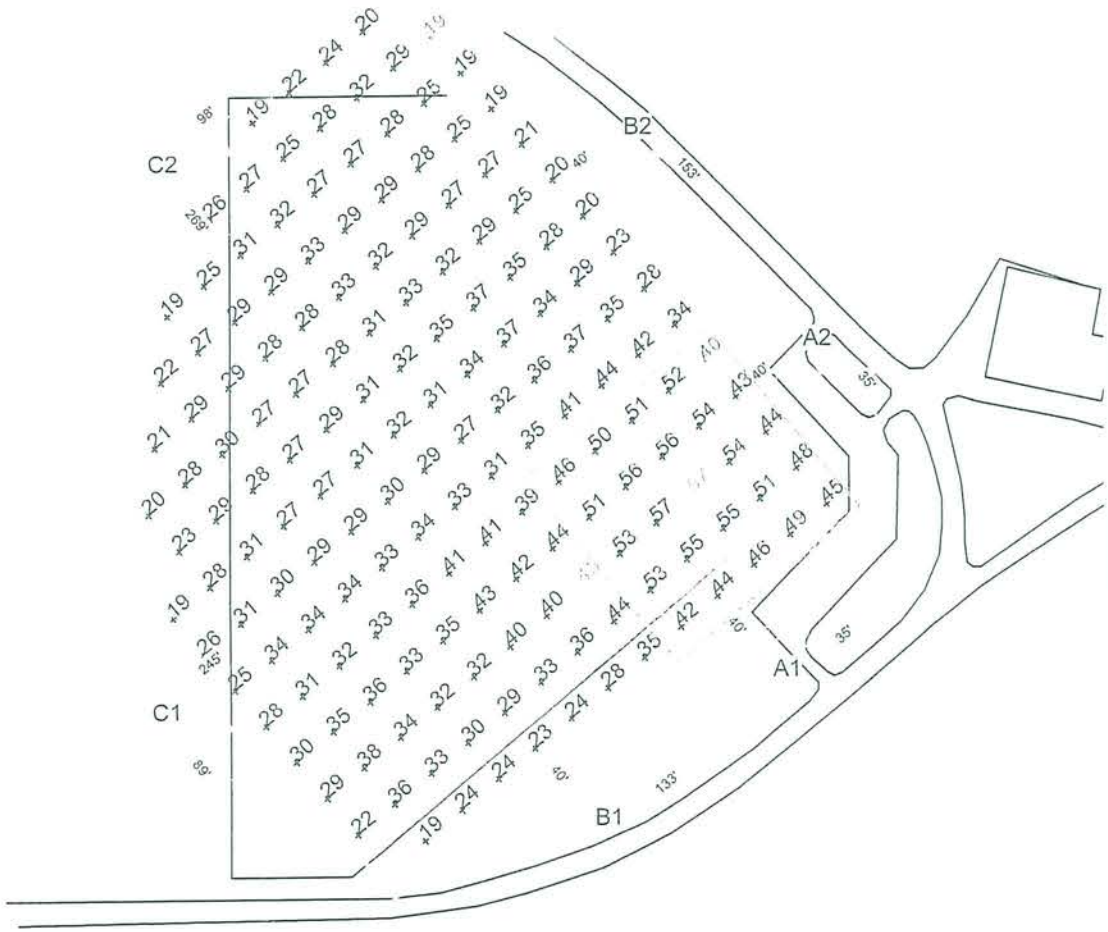
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

By: Joel Stout

File #: 148979-KK 1-2 Date: 30-Sep-11

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	60'	-	60'	1500W MZ	3	3	0
2	B1-B2	70'	-	70'	1500W MZ	5	5	0
2	C1-C2	60'	-	60'	1500W MZ	4	4	0
6	← TOTALS →					24	24	0



SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

KK Field #2

Milwaukee County Parks Phase 1
Milwaukee,WI

KK Field #2

- Size: 235'/275'/275' - basepath 60'
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION
HORIZONTAL FOOTCANDLES

	Infield	Outfield
No. of Target Points:	25	143
Average:	50 12	30.12
Maximum:	57	45
Minimum:	40	19
Avg/Min:	1.27	1.61
Max/Min:	1.45	2.42
UG (Adjacent Pts):	1.31	1.89
CV:	0.10	0.20

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	24
Avg KW over 5,000:	37.54
Max KW:	40.8

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

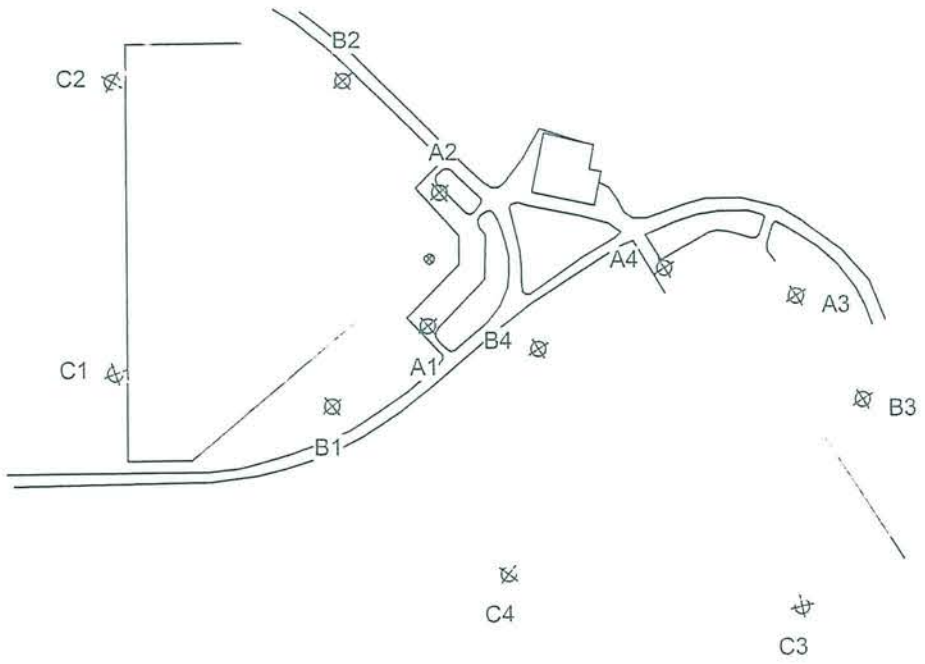
Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

By: Joel Stout

File #: 148979-KK 1-2 Date: 30-Sep-11



SCALE IN FEET 1 : 150

0' 150' 300'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

EQUIPMENT LAYOUT

Milwaukee County Parks Phase 1
Milwaukee,WI

INCLUDES:
- KK Field #1
- KK Field #2

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE
4	A1-A4	60'	-	60'	1500W MZ	3
4	B1-B4	70'	-	70'	1500W MZ	5
4	C1-C4	60'	-	60'	1500W MZ	4
12	← TOTALS →					48

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
1500 watt MZ	8.6	7.7	7.5	6.5	5.1	-	3.7

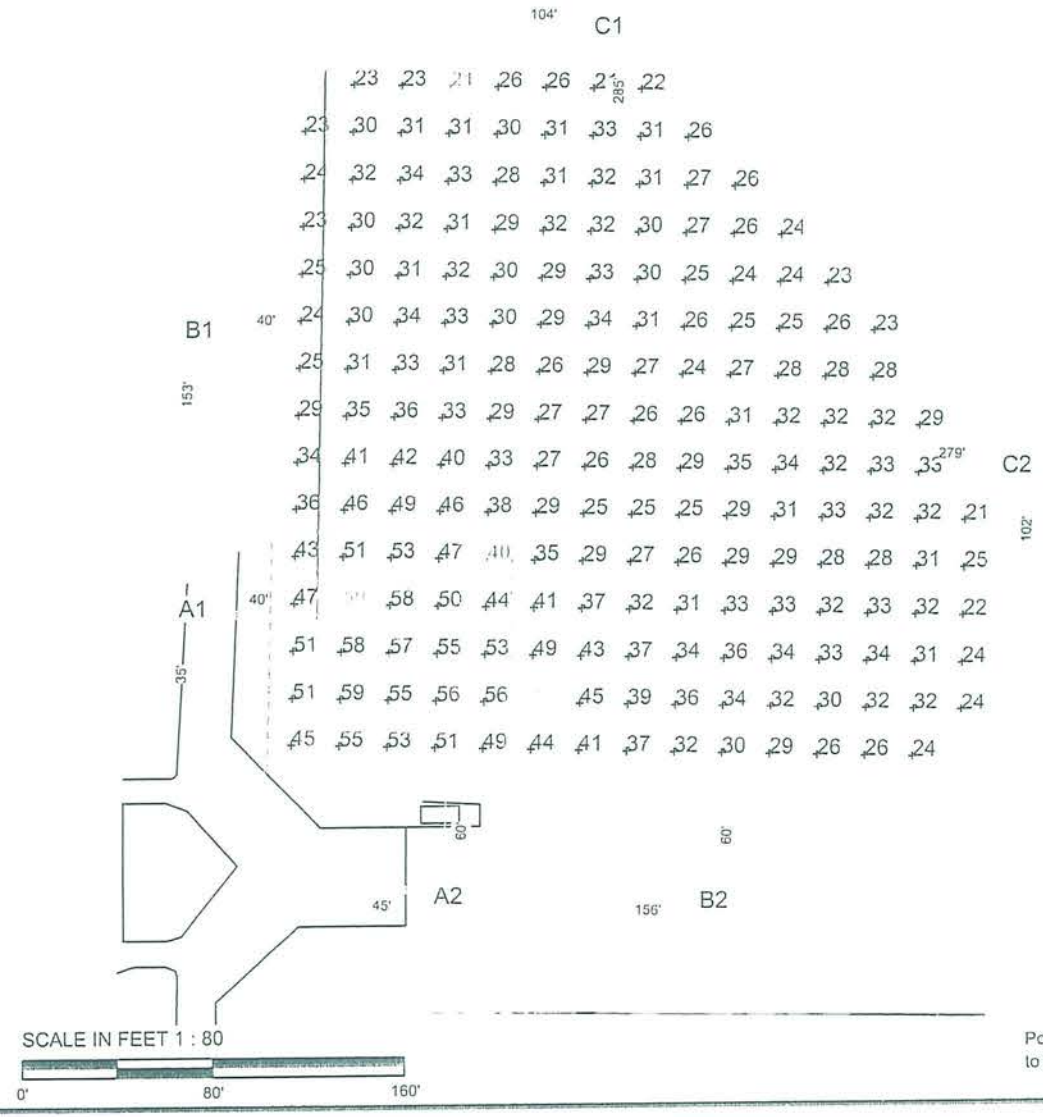
By: Joel Stout

File #: 148979-KK 1-2 Date: 30-Sep-11

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	A1	60'	-	60'	1500W MZ	3	3	0
1	A2	60'	-	60'	1500W MZ	3/3*	3	3
1	B1	70'	-	70'	1500W MZ	7	7	0
1	B2	70'	-	70'	1500W MZ	7/7*	7	7
2	C1-C2	60'	-	60'	1500W MZ	5	5	0
6	← TOTALS →					40	30	10

* This structure utilizes a back-to-back mounting configuration



Pole location(s) + dimensions are relative to 0,0 reference point(s)

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

West Milwaukee #1
Milwaukee County Parks Phase 1
Milwaukee,WI

West Milwaukee #1
- Size: Irregular 277' / 291' / 282'
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Infield	Outfield
No. of Target Points:	25	167
Average:	51.92	30.66
Maximum:	59	52
Minimum:	40	21
Avg/Min:	1.30	1.45
Max/Min.	1.48	2.44
UG (Adjacent Pts):	1.27	1.54
CV:	0.10	0.18

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	30
Avg KW over 5,000:	46.92
Max KW:	51.0

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

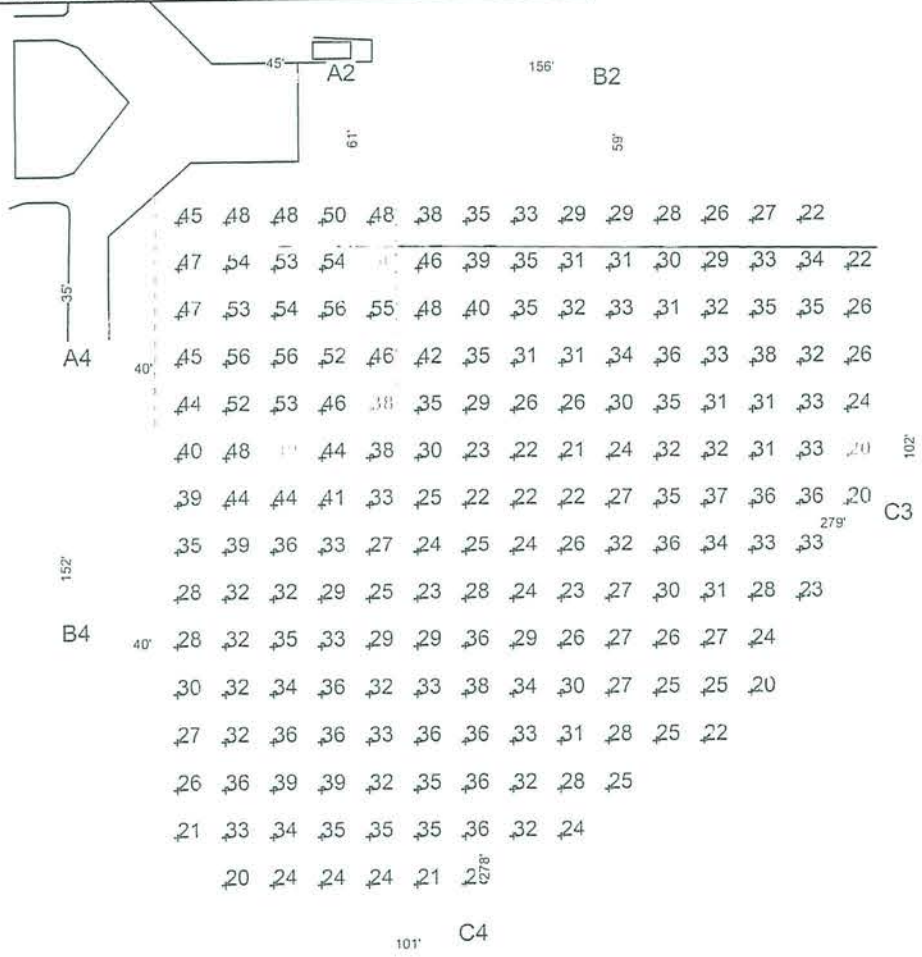
By: Joel Stout

File #: 148979-WM1-2 Date: 30-Sep-11

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	A2	60'	-	60'	1500W MZ	3/3*	3	3
1	A4	60'	-	60'	1500W MZ	3	3	0
1	B2	70'	-	70'	1500W MZ	7/7*	7	7
1	B4	60'	-	60'	1500W MZ	7	7	0
1	C3	60'	-	60'	1500W MZ	5	5	0
1	C4	60'	-	60'	1500W MZ	5	5	0
6	← TOTALS →					40	30	10

* This structure utilizes a back-to-back mounting configuration



SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

musco GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

West Milwaukee #2

Milwaukee County Parks Phase 1
Milwaukee,WI

West Milwaukee #2
- Size: Irregular 280' / 297' / 274'
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

· Luminaire Type:	Green Generation
· Rated Lamp Life:	5,000 hours
· Avg Lumens/Lamp:	134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Infield	Outfield
No. of Target Points:	25	170
Average.	50 27	31.03
Maximum:	56	49
Minimum:	38	20
Avg/Min:	1.32	1.55
Max/Min:	1.47	2.47
UG (Adjacent Pts):	1.26	1.80
CV:	0.09	0.20

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	30
Avg KW over 5,000:	46.92
Max KW:	51.0

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

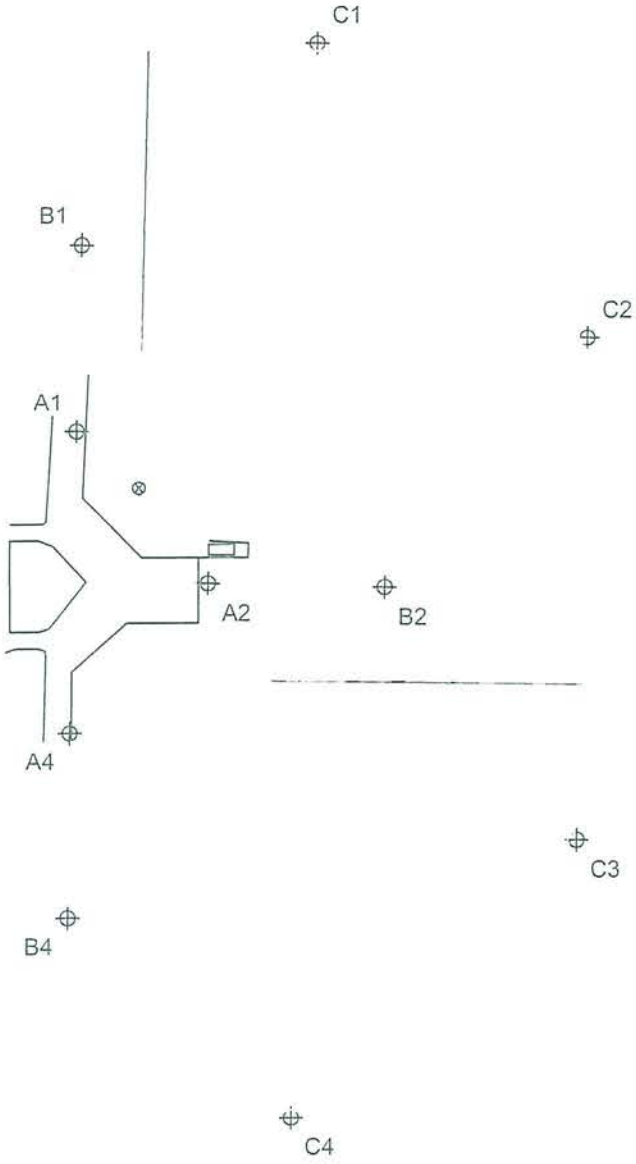
Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

By: Joel Stout

File #: 148979-WM1-2 Date: 30-Sep-11



SCALE IN FEET 1 : 120

0' 120' 240'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

EQUIPMENT LAYOUT

Milwaukee County Parks Phase 1
Milwaukee,WI

INCLUDES:
- West Milwaukee #1
- West Milwaukee #2

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE
2	A1, A4	60'	-	60'	1500W MZ	3
1	A2	60'	-	60'	1500W MZ	3/3*
1	B1	70'	-	70'	1500W MZ	7
1	B2	70'	-	70'	1500W MZ	7/7*
1	B4	60'	-	60'	1500W MZ	7
3	C1-C2, C4	60'	-	60'	1500W MZ	5
1	C3	60'	-	60'	1500W MZ	5
10	←TOTALS→					60

* This structure utilizes a back-to-back mounting configuration

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
1500 watt MZ	8.6	7.7	7.5	6.5	5.1	-	3.7

By: Joel Stout
File #: 148979-WM1-2 Date: 30-Sep-11

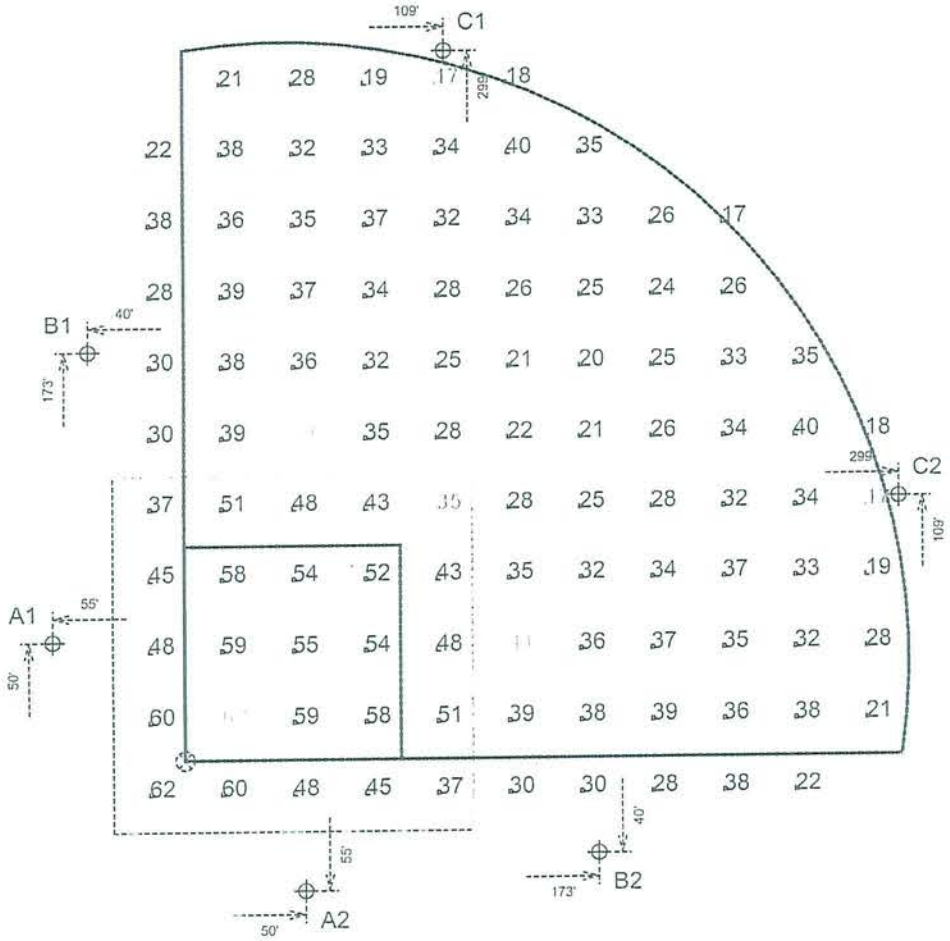
Print Date (30/Sep/2011) & Time (15:59)

220

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	A1-A2 C1-C2	70'	-	70'	1500W MZ	5	5	0
2	B1-B2	70'	-	70'	1500W MZ	7	7	0
6	← TOTALS →					34	34	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production



MUSCO
GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Baseball

Wilson Park, Milwaukee, WI

- Size: 300'/320'/300' - 90' Basepath
- Grid Spacing = 30.0' x 30.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Infield	Outfield
No. of Target Points:	25	80
Average:	50.8	30.5
Maximum:	62	41
Minimum:	35	17
Avg/Min:	1.46	1.81
Max/Min:	1.78	2.41
UG (Adjacent Pts):	2.24	2.24
CV:	0.157	0.222

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	34
Avg KWh Consumption over 5000 hours:	53.04

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet of design locations.

SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) ⊹ dimensions are relative to 0,0 reference point(s) ·

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production

MUSCO
GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

EQUIPMENT LAYOUT

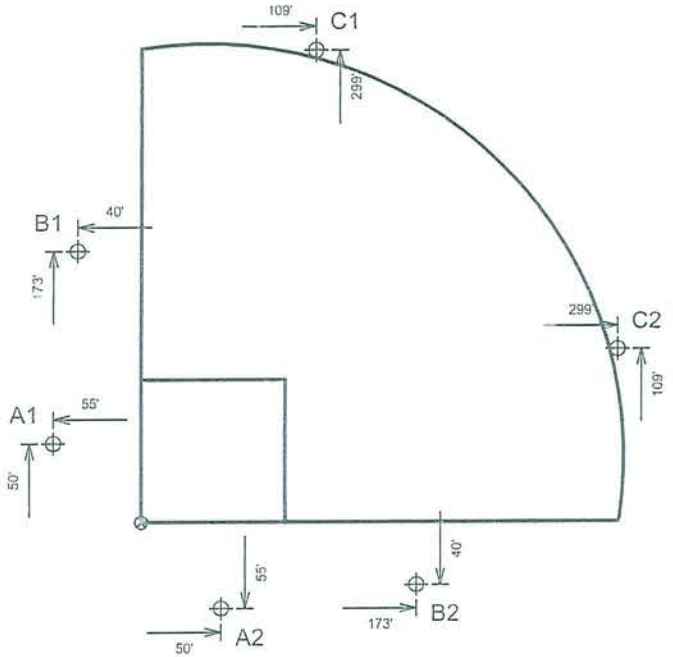
Wilson Park, Milwaukee, WI

INCLUDES:

· Baseball

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet of design locations.



EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE
4	A1-A2 C1-C2	70'	-	70'	1500W MZ	5
2	B1-B2	70'	-	70'	1500W MZ	7
6	← TOTALS →					34

SCALE IN FEET 1 : 120

0' 120' 240'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	60'	-	60'	1500W MZ	3	3	0
2	B1-B2	70'	-	70'	1500W MZ	7	7	0
2	C1-C2	60'	-	60'	1500W MZ	5	5	0
6	← TOTALS →					30	30	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Project Name

Zablocki Park Softball
Milwaukee, WI

Softball

- Size: 300'/300'/300' - 75' Basepath
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Infield	Outfield
No. of Target Points:	36	170
Average:	50.2	30.2
Maximum:	60	40
Minimum:	33	18
Avg/Min:	1.52	1.72
Max/Min:	1.83	2.31
UG (Adjacent Pts):	1.30	1.71
CV:	0.16	0.17

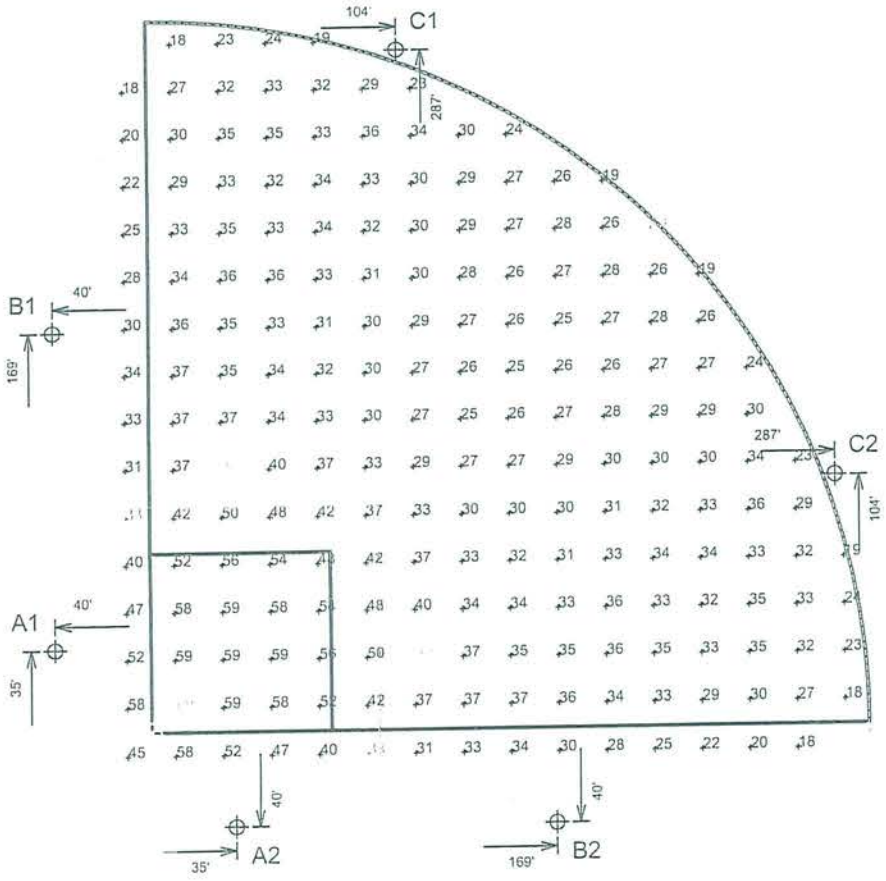
Average Lamp Tilt Factor:	1.000
Number of Luminaires:	30
Avg KW over 5,000 hours:	46.92
Max KW:	51.0

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.



SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) + dimensions are relative to 0,0 reference point(s) ○

105TH ANNIVERSARY | MILWAUKEE COUNTY PARKS

Tennis Courts

Corporate: 100 1st Ave West · PO Box 808 · Oskaloosa, IA 52577 · 641/673-0411 · 800/825-6020 · Fax: 641/673-4852
Manufacturing: 2107 Stewart Road · PO Box 260 · Muscatine, IA 52761 · 563/263-2281 · 800/756-1205 · Fax: 800/374-6402
Web: www.musco.com · Email: lighting@musco.com

Date: October 6, 2011

To: Milwaukee County Parks

Thank you for your interest in Musco's Green Generation Lighting® technology. We are pleased to present this budget estimate for your preliminary planning purposes. Musco's industry leading technology will provide the following benefits:

- **50% Less Energy Cost**
- **50% Less Spill Light**
- **100% Maintenance Free for 25 years**
- **Guaranteed Light Levels for 25 years**
- **Control & Monitoring System**

This budget estimate is based on the following information:

- Tennis
- Guaranteed light levels of 50 foot-candles infield and 30 foot-candles outfield
- Power: Available but prefer 480 volt 3 phase
- Building Code: 2006, IBC 90 MPH, Exposure C

This estimate includes Musco's Light-Structure Green™ system – engineered from foundation-to-poletop in 5 Easy Pieces™ – and Control-Link® systems. Demolition of existing poles and fixtures, installation and underground wiring are included in the estimate and will be provided by an electrical contractor.

- **The turnkey estimate for Humbolt, Jackson, Kosciuszko, Lincoln, and Lake is: $95,000 - $110,000**
- **The turnkey estimate for McKinley is: $135,000 - $150,000**
- **Total turnkey estimate for all Tennis Complexes is: $620,000 - $665,000**

The following is a partial listing of similar projects in your area where Musco's Green Generation Lighting Technology was chosen:

- **Banting Park, Prairie Park Tennis – Waukesha**
- **Hart Park Tennis - Wauwatosa**
- **Concordia University Baseball - Mequon**
- **University Wisconsin – Whitewater Football, Soccer, and Baseball**
- **Beaumont Field Baseball – Burlington**
- **Franklin Little League - Franklin**
- **Brown Deer Football/Track**
- **Hart Park - Wauwatosa**
- **Wauwatosa West High School Football/Track**
- **Greendale Community Park**

Thank you for considering Musco for your sports-lighting needs. We look forward to helping you make your project a success. I will follow-up with you in the near future or contact me with any questions.

Thank you-

Greg Smidt
Musco Sports Lighting, LLC
Phone: 715-697-9643
E-mail: greg.smidt@musco.com

Exhibit A

25-Year Life-Cycle Cost Comparison

Milwaukee County Parks Phase 1

Tennis Courts

Prepared for: Milwaukee County Dept. of Parks Recreation & Culture

October 3, 2011

Warranty Period: 25 Years

	Typical Floodlighting Equipment	MUSCO GREEN.	Your Savings
Hours	Varies by Field	Varies by Field	
Average kW	285.1	118.7	166.4
Total kW	3,886,555.5	1,504,776.0	2,381,779.5
Metric Tons of CO2	2,790.5	1,080.4	1,710.1
Energy	**$516,912**	**$200,136**	**$316,776**
Group Relamp	$65,229	$0	$65,229
Lamp Maintenance	$3,750	$0	$3,750
Controls - Energy	$129,229	$0	$129,229
Controls - Labor	$1,476,000	$0	$1,476,000
25-Year Life-Cycle Cost	**$2,191,120**	**$200,136**	**$1,990,984**

Assumptions

Field Name	Annual Operating Hours	Energy Cost per kWh	Typical Floodlighting Equipment No. Fixtures	Typical Floodlighting Equipment Avg. kW	Light-Structure Green™ No. Fixtures	Light-Structure Green™ Avg. kW	Controls Energy Savings	Controls Labor Savings	Fixture Wattage
Humbolt	415	$ 0.13	27	29.16	16	17.92	25%	$207,500	1000W
Jackson	260	$ 0.13	16	17.28	16	17.92	25%	$130,000	1000W
Kosciuszko	525	$ 0.13	36	38.88	16	17.92	25%	$262,500	1000W
Lake	651	$ 0.13	36	38.88	18	20.16	25%	$325,500	1000W
Lincoln	450	$ 0.13	41	57.78	16	17.92	25%	$225,000	1000W
McKinley	651	$ 0.13	77	103.14	24	26.88	25%	$325,500	1000W
Total	Varies	$ 0.13	233	285.12	106	118.72	25%	$1,476,000	1000W

NOTE:

Life-cycle costs are based upon the assumptions given by the customer above. Any variation in this data will change the life-cycle cost proportionately. Typical Floodlighting Equipment total kWh includes base operating hours plus extra kWh consumed if no controls system included. Musco guarantees the average Green Generation Lighting system kW per hour and useful life of the lamp.

MUSCO Lighting

We Make It Happen.

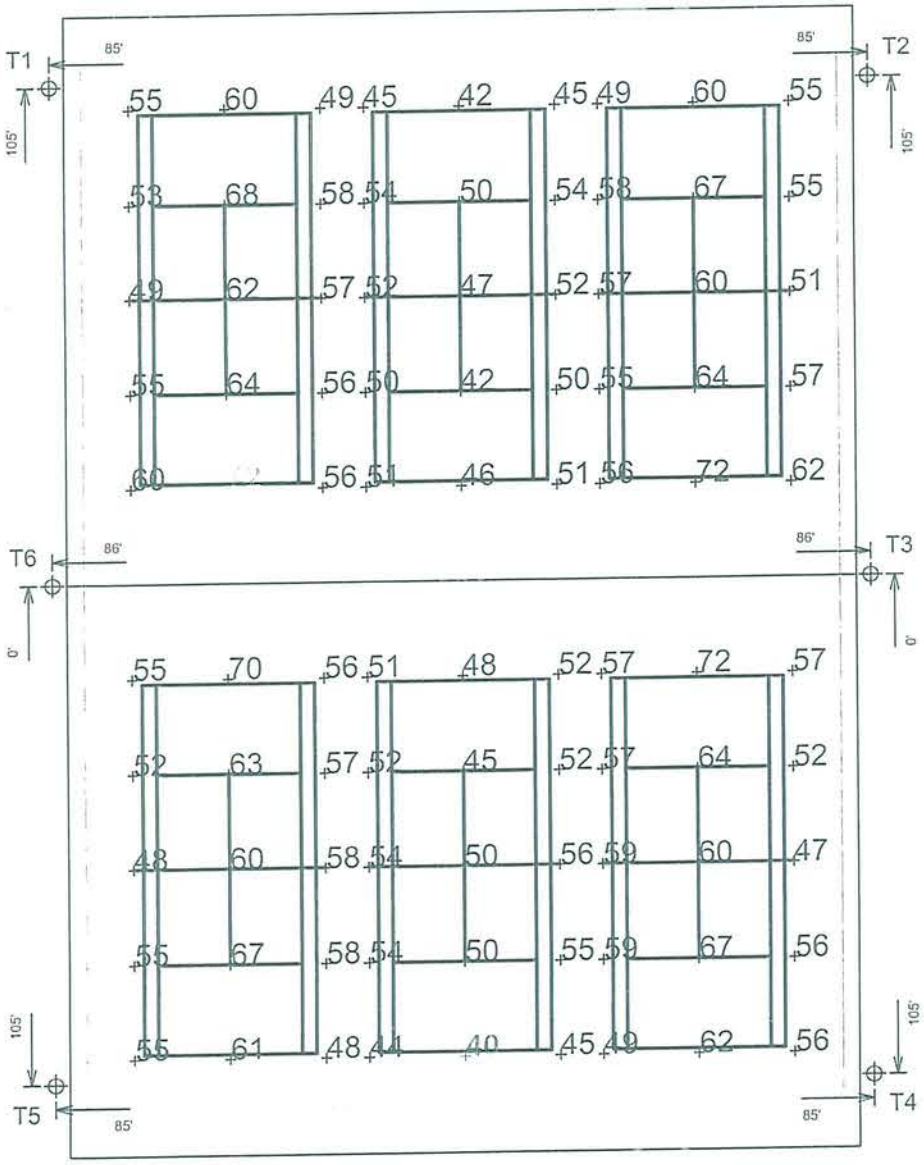
EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	T1-T2 T4-T5	50'	-	50'	1500W MZ	3	3	0
2	T3, T6	50'	-	50'	1500W MZ	6	6	0
6	← TOTALS →					24	24	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE



ILLUMINATION SUMMARY

Project Name

McKinley Park
Milwaukee, WI

Tennis Courts

- Size: N/A
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

· Luminaire Type:	Green Generation
· Rated Lamp Life:	5,000 hours
· Avg Lumens/Lamp:	134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	90
Average:	55.2
Maximum:	72
Minimum:	40
Avg/Min:	1.36
Max/Min:	1.78
UG (Adjacent Pts):	0.00
CV:	0.13

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	24
Avg KW over 5,000 hours:	37.54
Max KW:	40.8

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

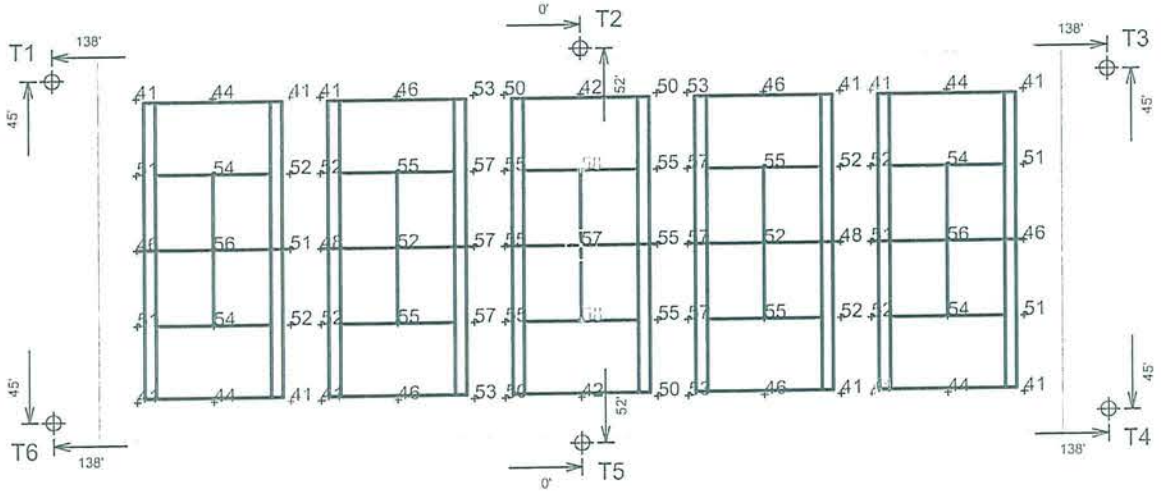
SCALE IN FEET 1 : 40

0' 40' 80'

Pole location(s) + dimensions are relative to 0,0 reference point(s) (2)

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	T1, T3-T4 T6	50'	-	50'	1500W MZ	2	2	0
2	T2, T5	50'	-	50'	1500W MZ	4	4	0
6	← TOTALS →					16	16	0



MUSCO
GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Tennis 1-5
Kosciuszko Park
Milwaukee, WI

Tennis 1-5
- Size: 5 Court - 12' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

· Luminaire Type:	Green Generation
· Rated Lamp Life:	5,000 hours
· Avg Lumens/Lamp:	134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	75
Average:	50.05
Maximum:	58
Minimum:	41
Avg/Min:	1.23
Max/Min:	1.44
UG (Adjacent Pts):	0.00
CV:	0.11

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	16
Avg KW over 5,000:	25.02
Max KW:	27.2

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

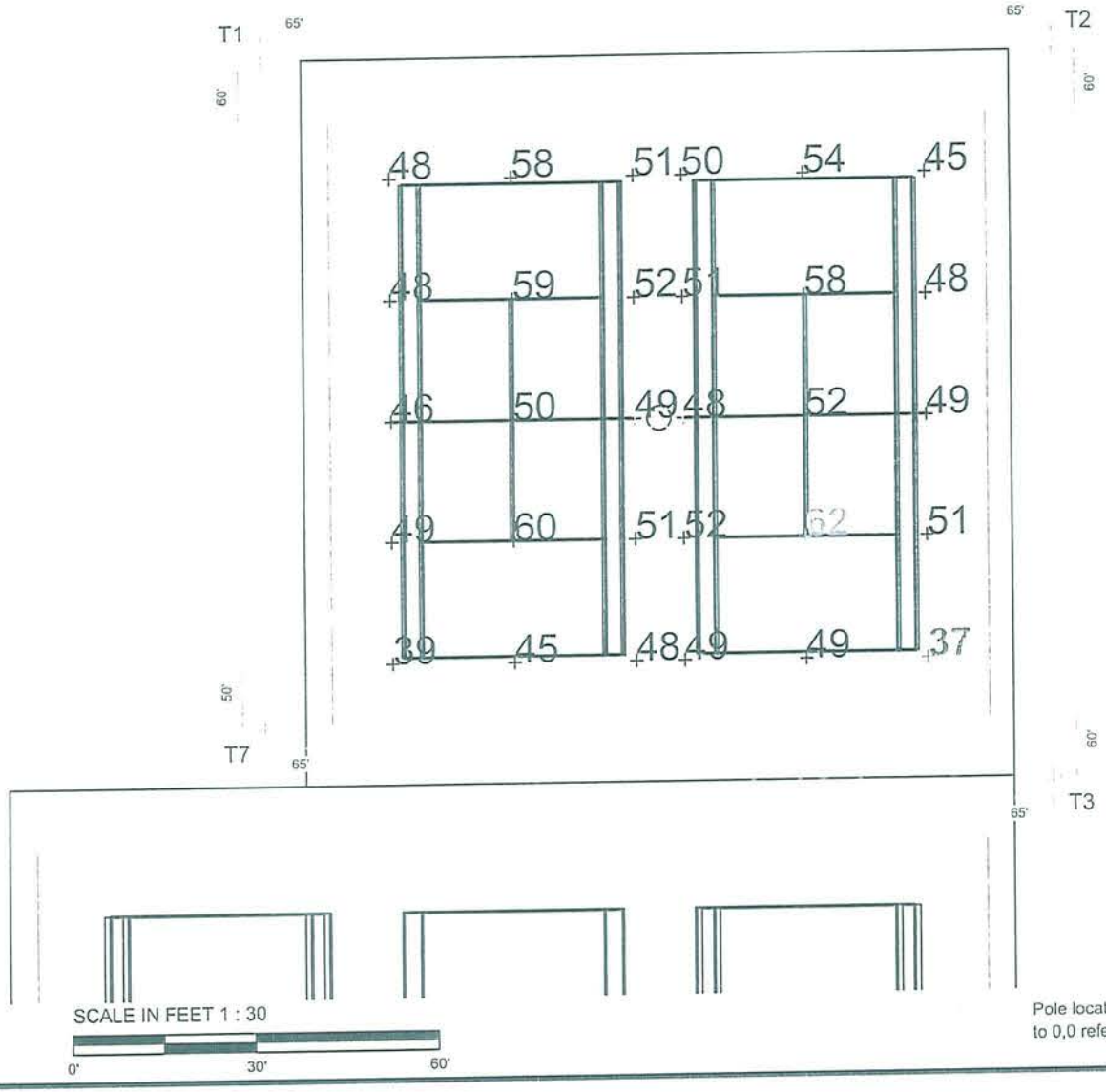
SCALE IN FEET 1 : 50

0' 50' 100'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
3	T1-T2, T7	50'	-	50'	1500W MZ	2	2	0
1	T3	50'	-	50'	1500W MZ	4	2	2
4	← TOTALS →					10	8	2



Pole location(s) + dimensions are relative to 0,0 reference point(s) ○

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Tennis 1-2
Milwaukee County Parks Phase 1
Milwaukee,WI

Tennis 1-2
- Size: 2 Court - 12' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

· Luminaire Type:	Green Generation
· Rated Lamp Life:	5,000 hours
· Avg Lumens/Lamp:	134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	30
Average:	50.25
Maximum:	62
Minimum:	37
Avg/Min:	1.37
Max/Min:	1.68
UG (Adjacent Pts):	0.00
CV:	0.11

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	8
Avg KW over 5,000:	12.51
Max KW:	13.6

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

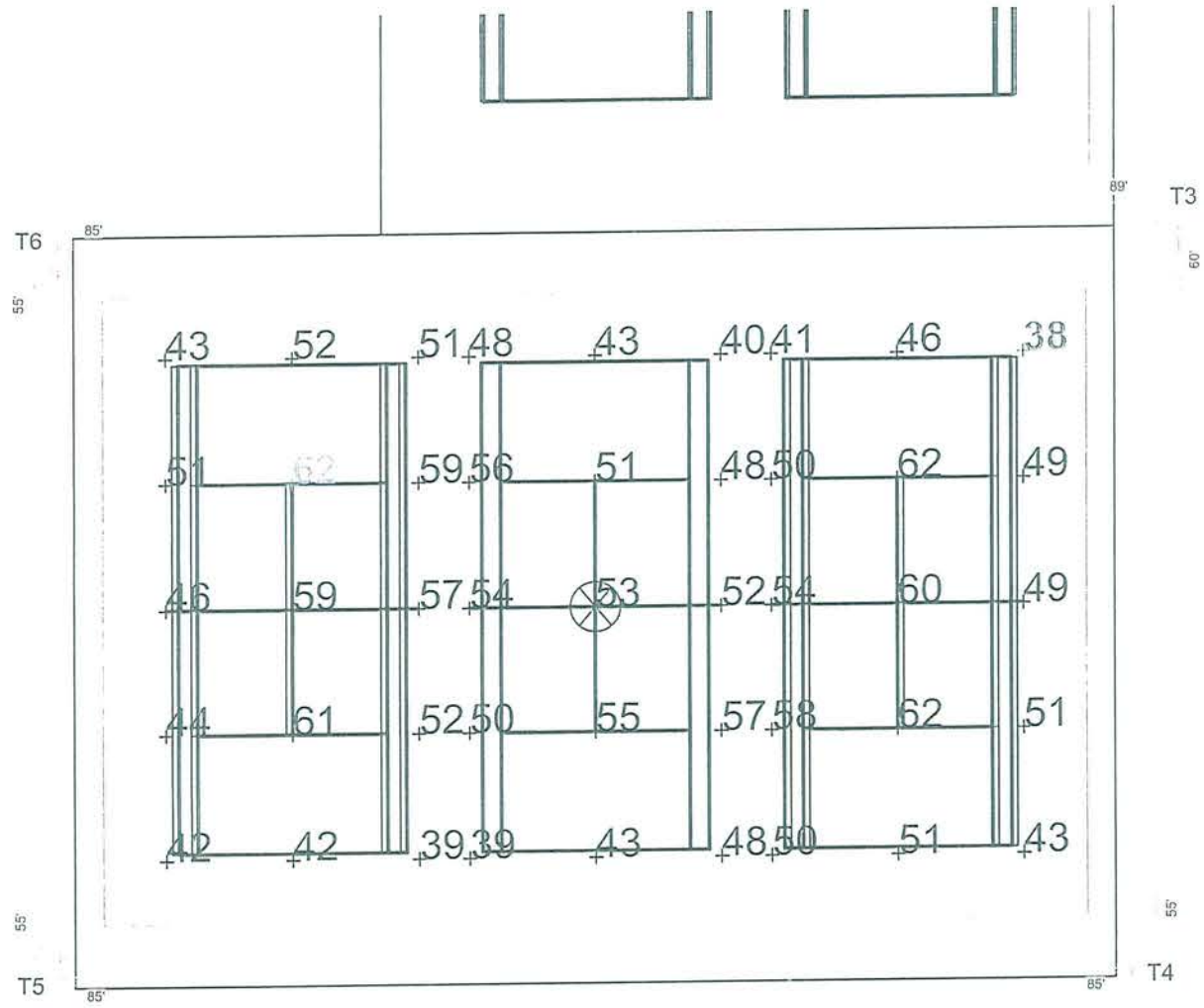
By: Joel Stout

File #: 148979-Lake Date: 30-Sep-11

Print Date (30/Sep/2011) & Time (16:40)

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	T3	50'	-	50'	1500W MZ	4	2	2
2	T4, T6	50'	-	50'	1500W MZ	3	3	0
1	T5	50'	-	50'	1500W MZ	2	2	0
4	← TOTALS →					12	10	2



SCALE IN FEET 1 : 30

0' 30' 60'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Tennis 3-5
Milwaukee County Parks Phase 1
Milwaukee,WI

Tennis 3-5
- Size: 3 Court - 12' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

· Luminaire Type:	Green Generation
· Rated Lamp Life:	5,000 hours
· Avg Lumens/Lamp:	134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	45
Average:	50.33
Maximum:	62
Minimum:	38
Avg/Min:	1.33
Max/Min:	1.64
UG (Adjacent Pts):	0.00
CV:	0.14

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	10
Avg KW over 5,000:	15.64
Max KW:	17.0

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

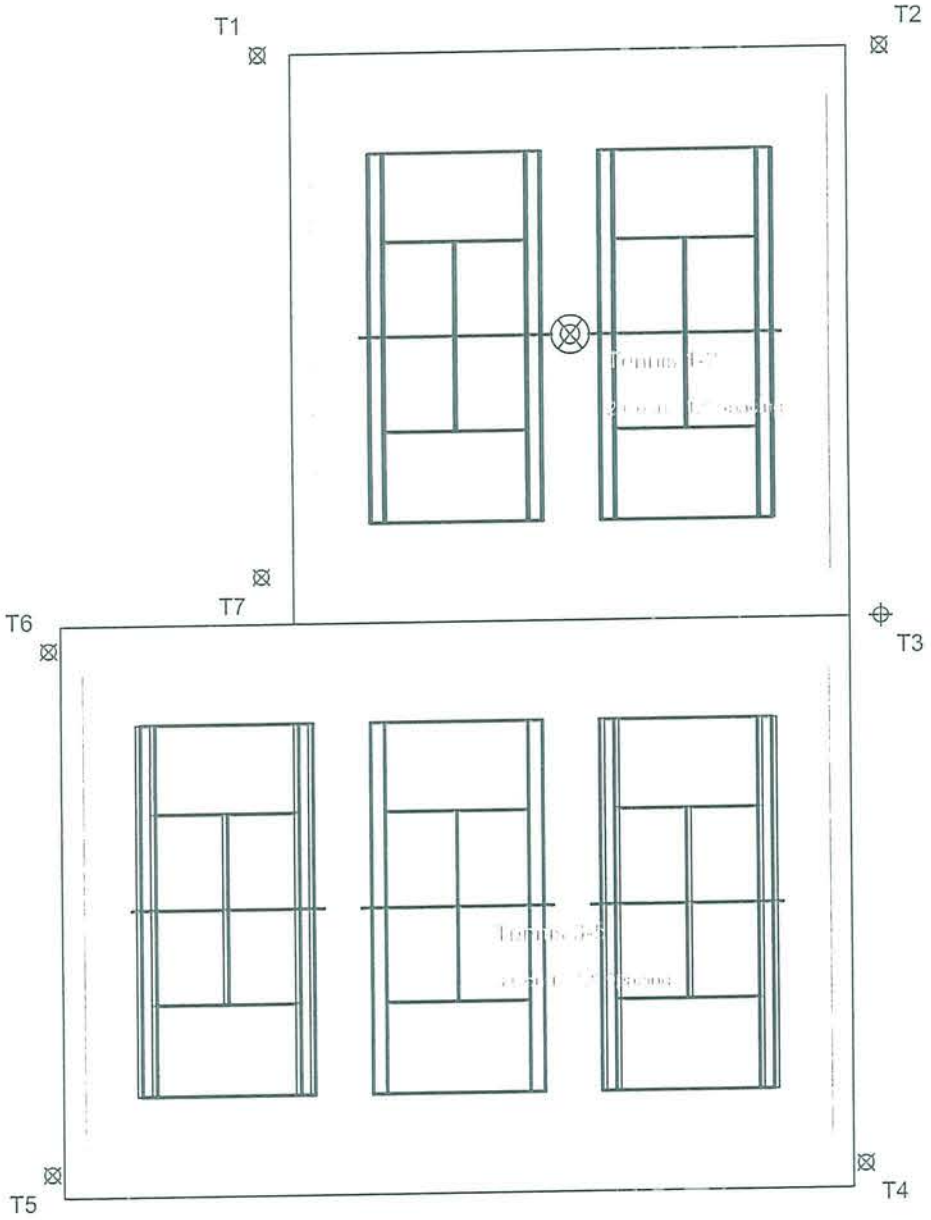
Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

By: Joel Stout

File #: 148979-Lake Date: 30-Sep-11

Print Date (30/Sep/2011) & Time (16:40)



SCALE IN FEET 1 : 40

0' 40' 80'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

EQUIPMENT LAYOUT

Milwaukee County Parks Phase 1

Milwaukee,WI

INCLUDES:

- Tennis 1-2
- Tennis 3-5

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE
4	T1-T2, T5 T7	50'	-	50'	1500W MZ	2
1	T3	50'	-	50'	1500W MZ	4
2	T4, T6	50'	-	50'	1500W MZ	3
7	← TOTALS →					18

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
1500 watt MZ	8.6	7.7	7.5	6.5	5.1	-	3.7

By: Joel Stout

File #: 148979-Lake Date: 30-Sep-11

Print Date (30/Sep/2011) & Time (16:40)

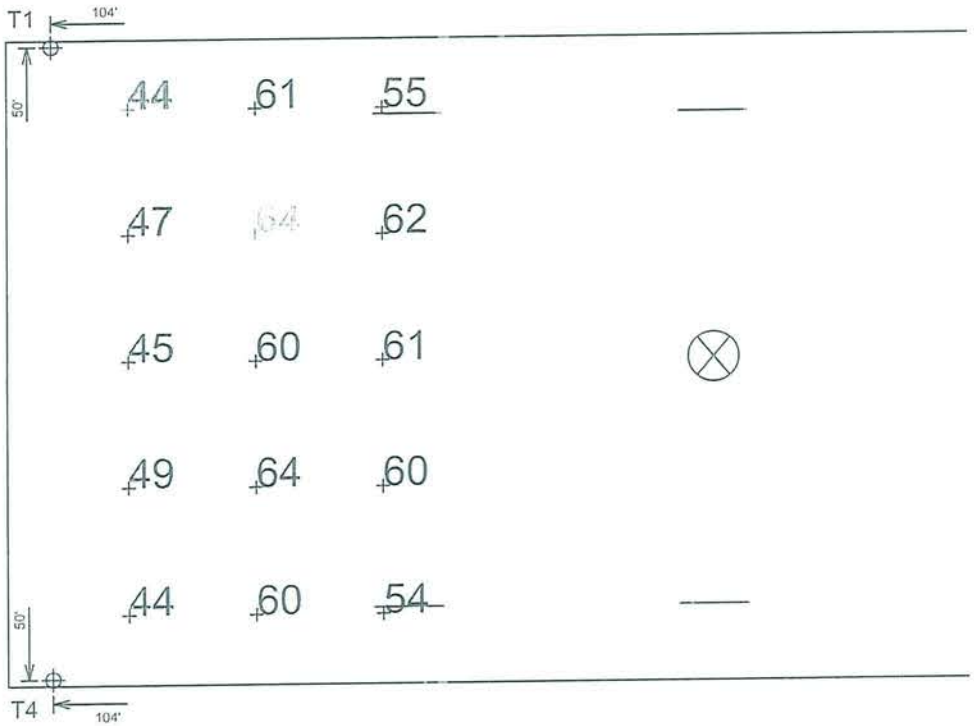
EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	T1-T4	60'	-	60'	1500W MZ	4	4	0
4	← TOTALS →					16	16	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE



ILLUMINATION SUMMARY

Project Name

Jackson Park
Milwaukee, WI

Tennis 1

- Size: 4 Court - 12' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

· Luminaire Type:	Green Generation
· Rated Lamp Life:	5,000 hours
· Avg Lumens/Lamp:	134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	15
Average:	55.4
Maximum:	64
Minimum:	44
Avg/Min:	1.27
Max/Min:	1.48
UG (Adjacent Pts):	1.41
CV:	0.14

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	16
Avg KW over 5,000 hours:	25.02
Max KW:	27.2

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

SCALE IN FEET 1 : 30

0' 30' 60'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

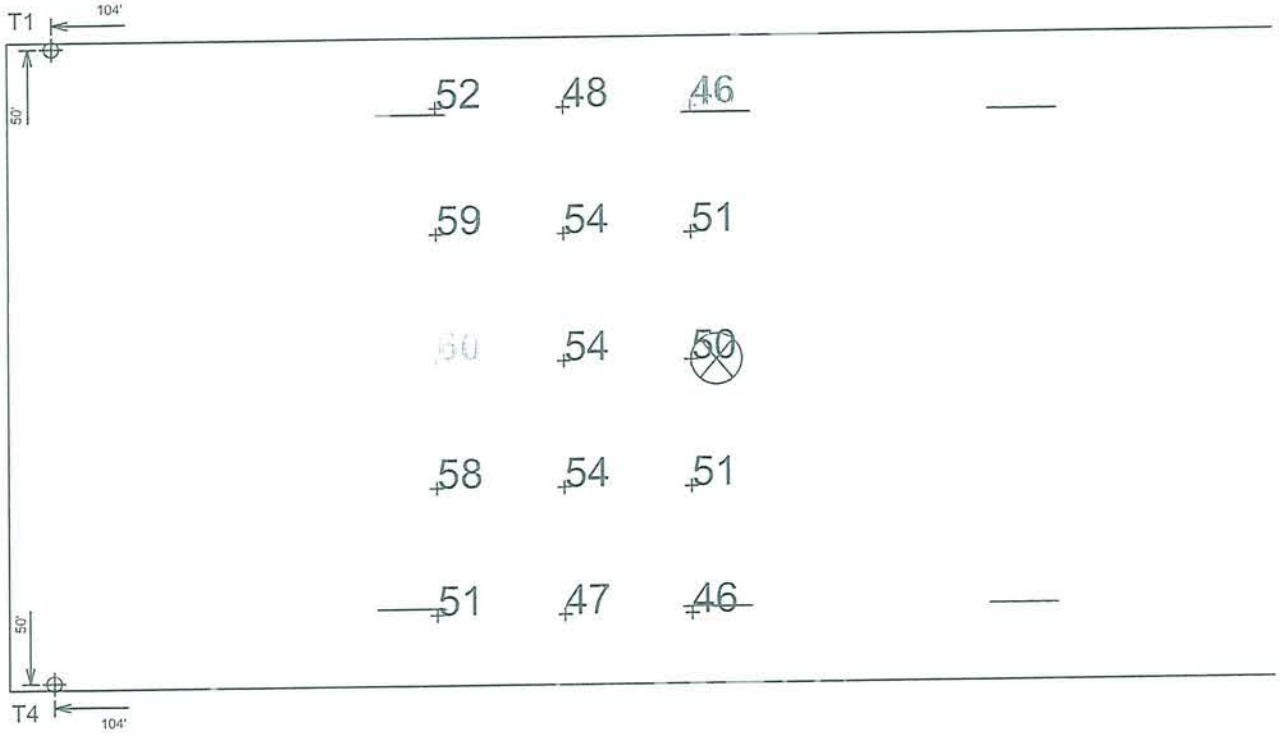
EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	T1-T4	60'	-	60'	1500W MZ	4	4	0
4	← TOTALS →					16	16	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.

musco GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE



ILLUMINATION SUMMARY

Project Name

Jackson Park
Milwaukee, WI

Tennis 2

- Size: 4 Court - 12' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	15
Average:	51.9
Maximum:	60
Minimum:	46
Avg/Min:	1.14
Max/Min:	1.31
UG (Adjacent Pts):	1.15
CV:	0.09

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	16
Avg KW over 5,000 hours:	25.02
Max KW:	27.2

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

SCALE IN FEET 1 : 30

0' 30' 60'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

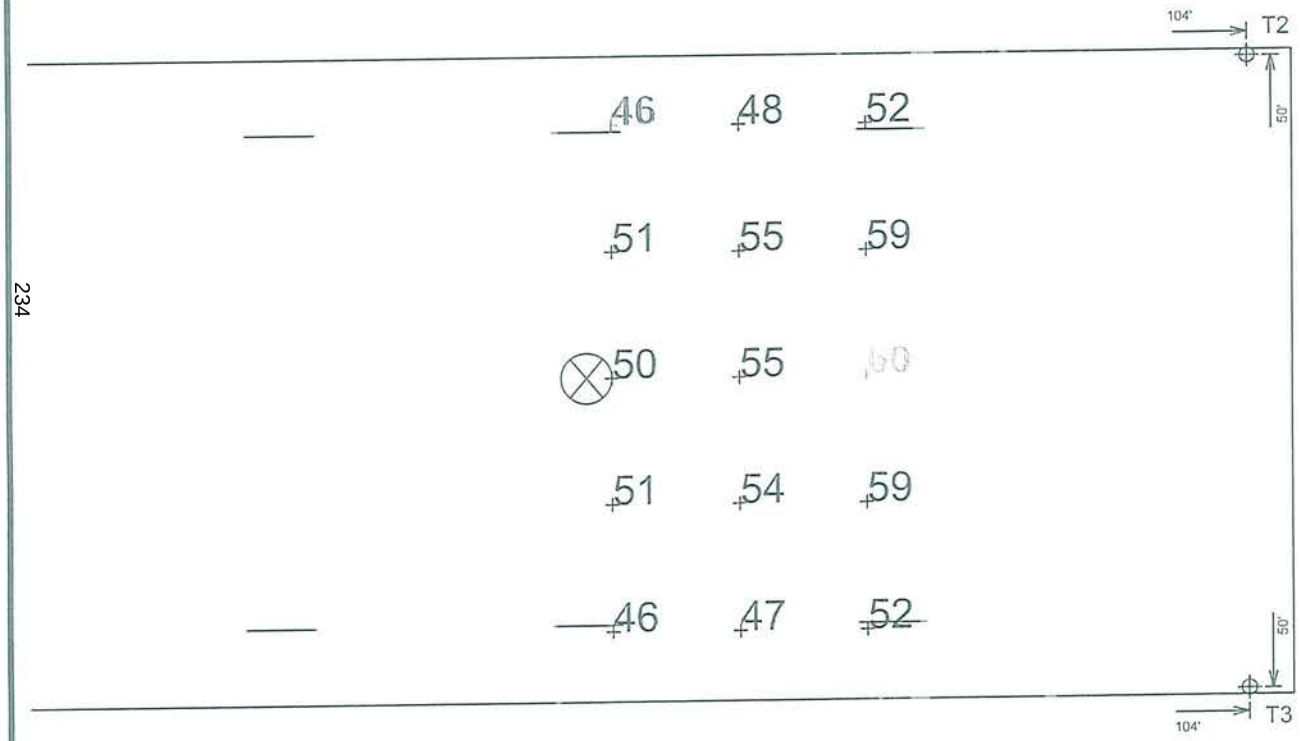
EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	T1-T4	60'	-	60'	1500W MZ	4	4	0
4	← TOTALS →					16	16	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE



ILLUMINATION SUMMARY

Project Name

Jackson Park
Milwaukee, WI

Tennis 3

- Size: 4 Court - 12' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	15
Average:	52.3
Maximum:	60
Minimum:	46
Avg/Min:	1.14
Max/Min:	1.31
UG (Adjacent Pts):	1.15
CV:	0.09

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	16
Avg KW over 5,000 hours:	25.02
Max KW:	27.2

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

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Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

SCALE IN FEET 1 : 30

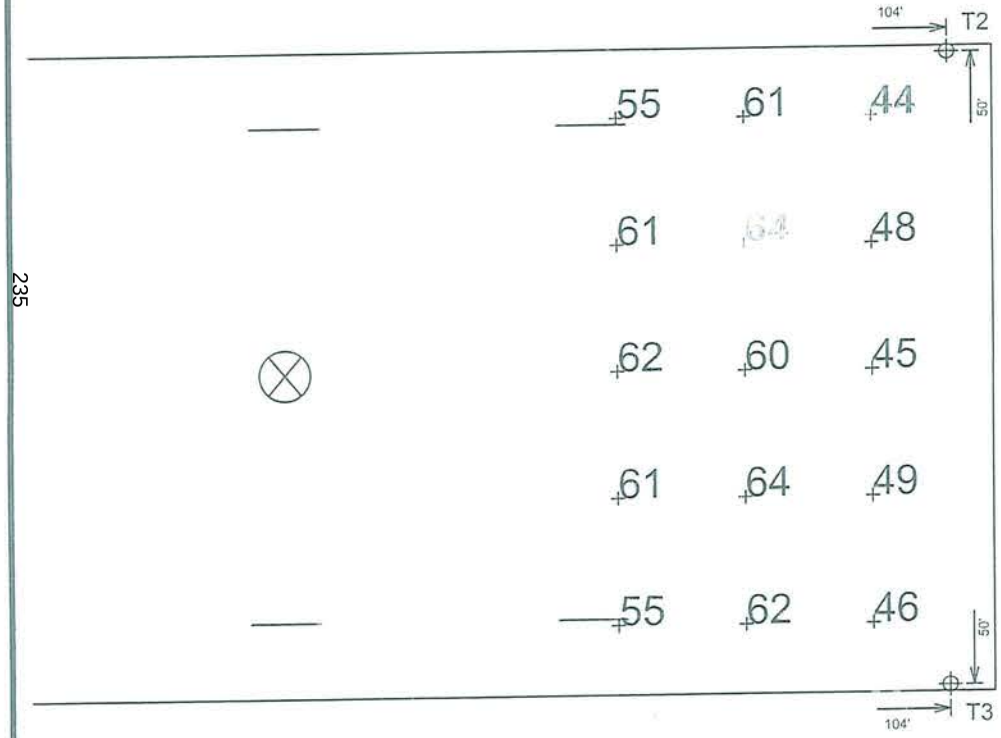
0' 30' 60'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	T1-T4	60'	-	60'	1500W MZ	4	4	0
4	← TOTALS →					16	16	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.



MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Project Name

Jackson Park
Milwaukee, WI

Tennis 4

- Size: 4 Court - 12' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	15
Average:	55.8
Maximum:	64
Minimum:	44
Avg/Min:	1.26
Max/Min:	1.45
UG (Adjacent Pts):	1.38
CV:	0.13

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	16
Avg KW over 5,000 hours:	25.02
Max KW:	27.2

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

SCALE IN FEET 1 : 30

0' 30' 60'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

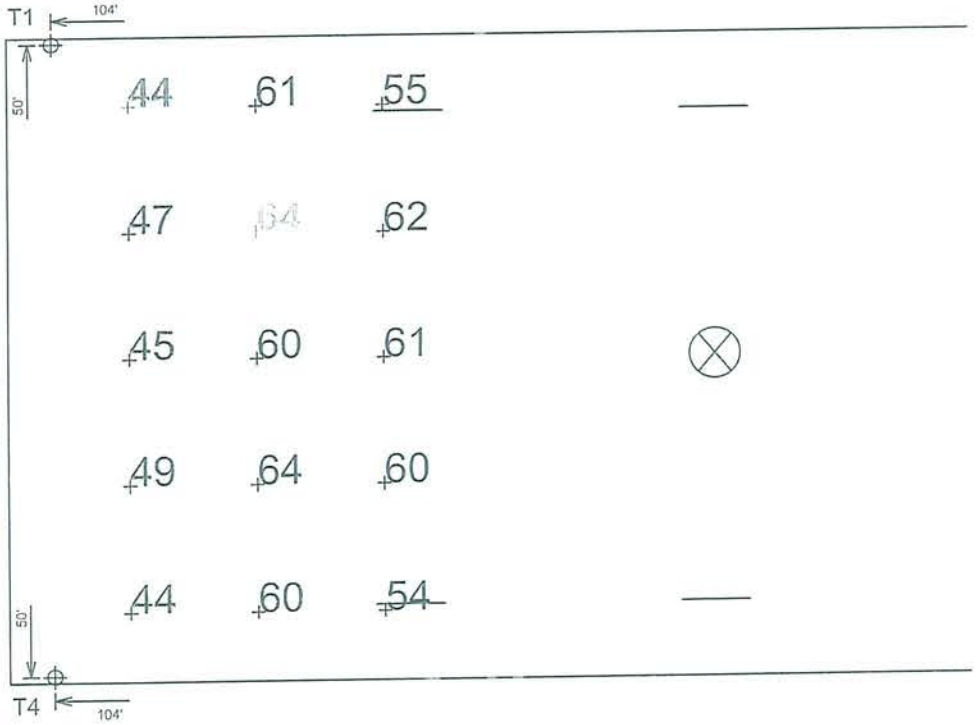
EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	T1-T4	60'	-	60'	1500W MZ	4	4	0
4	← TOTALS →					16	16	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE



ILLUMINATION SUMMARY

Project Name

Lincoln Park
Milwaukee, WI

Tennis 1

- Size: 4 Court - 12' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	15
Average:	55.4
Maximum:	64
Minimum:	44
Avg/Min:	1.27
Max/Min:	1.48
UG (Adjacent Pts):	1.41
CV:	0.14

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	16
Avg KW over 5,000 hours:	25.02
Max KW:	27.2

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

SCALE IN FEET 1 : 30

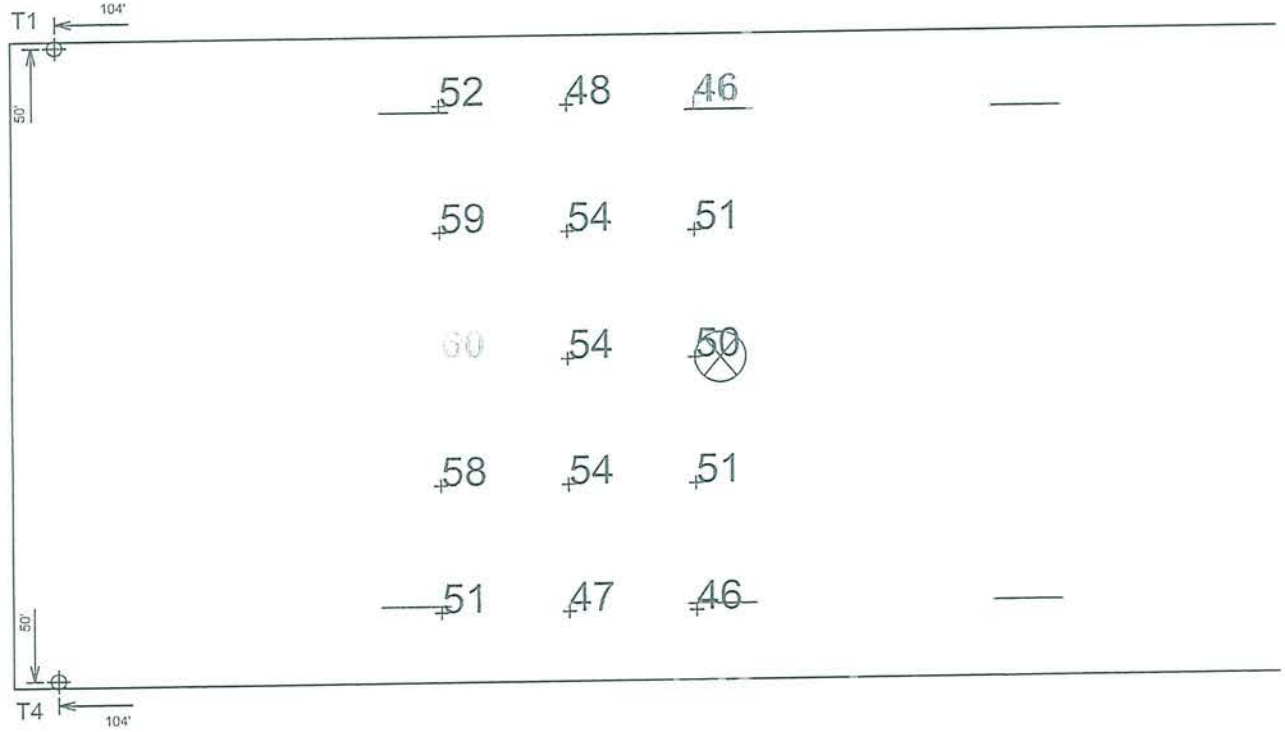
0' 30' 60'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	T1-T4	60'	-	60'	1500W MZ	4	4	0
4	← TOTALS →					16	16	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.



GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Project Name

Lincoln Park
Milwaukee, WI

Tennis 2

- Size: 4 Court - 12' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	15
Average:	51.9
Maximum:	60
Minimum:	46
Avg/Min:	1.14
Max/Min:	1.31
UG (Adjacent Pts):	1.15
CV:	0.09

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	16
Avg KW over 5,000 hours:	25.02
Max KW:	27.2

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

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Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

SCALE IN FEET 1 : 30

0' 30' 60'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

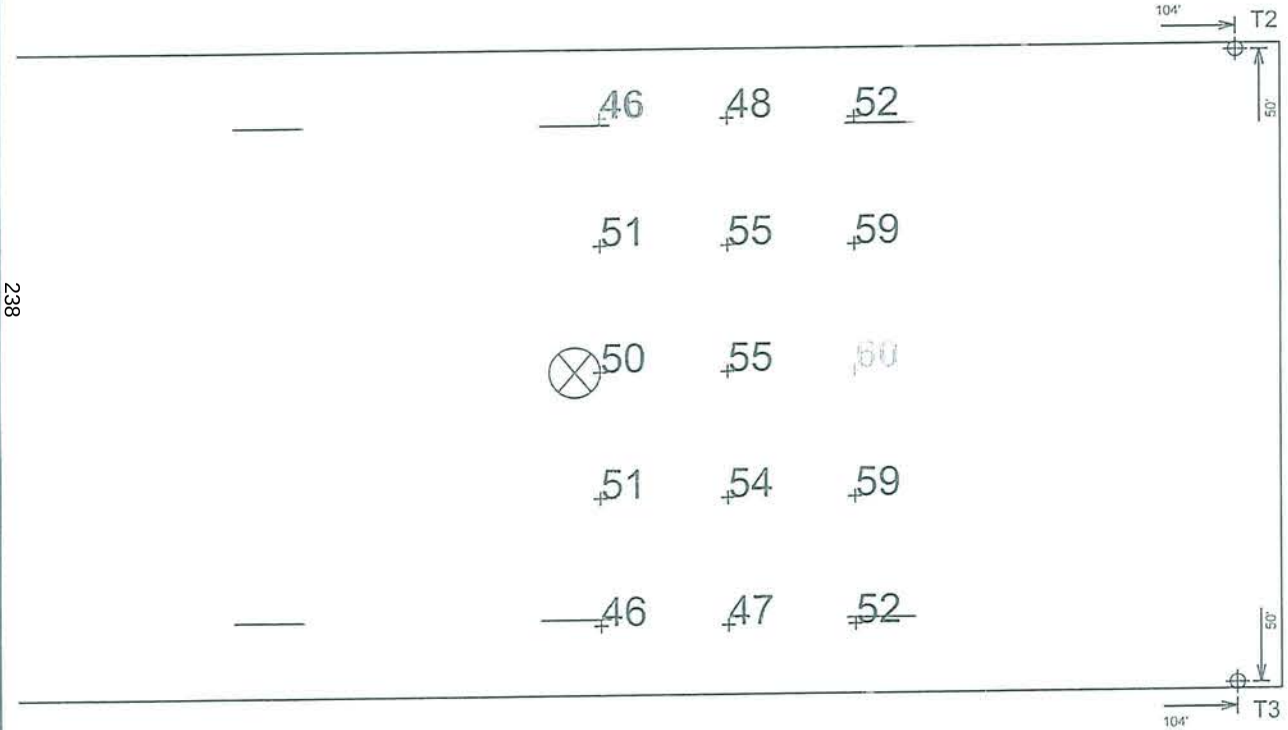
EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	T1-T4	60'	-	60'	1500W MZ	4	4	0
4	← TOTALS →					16	16	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE



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ILLUMINATION SUMMARY

Project Name

Lincoln Park
Milwaukee, WI

Tennis 3

- Size: 4 Court - 12' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

· Luminaire Type:	Green Generation
· Rated Lamp Life:	5,000 hours
· Avg Lumens/Lamp:	134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	15
Average:	52.3
Maximum:	60
Minimum:	46
Avg/Min:	1.14
Max/Min:	1.31
UG (Adjacent Pts):	1.15
CV:	0.09

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	16
Avg KW over 5,000 hours:	25.02
Max KW:	27.2

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

SCALE IN FEET 1 : 30

0' 30' 60'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

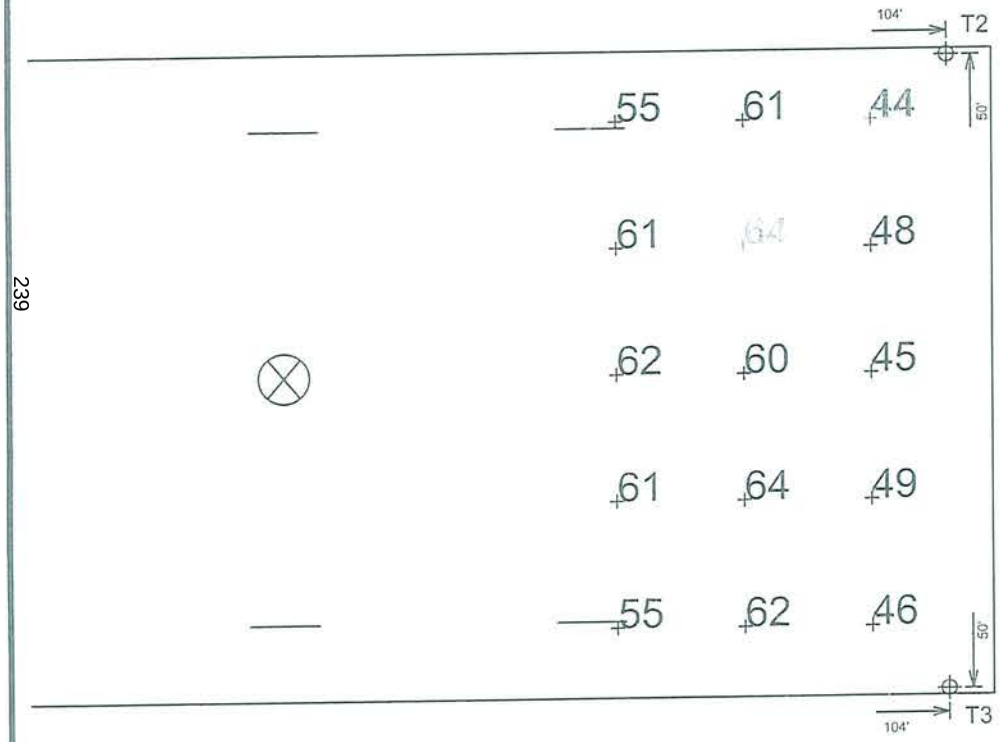
EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	T1-T4	60'	-	60'	1500W MZ	4	4	0
4	← TOTALS →					16	16	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE



ILLUMINATION SUMMARY

Project Name

Lincoln Park
Milwaukee, WI

Tennis 4

- Size: 4 Court - 12' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	15
Average:	55.8
Maximum:	64
Minimum:	44
Avg/Min:	1.26
Max/Min:	1.45
UG (Adjacent Pts):	1.38
CV:	0.13

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	16
Avg KW over 5,000 hours:	25.02
Max KW:	27.2

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

SCALE IN FEET 1 : 30

0' 30' 60'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

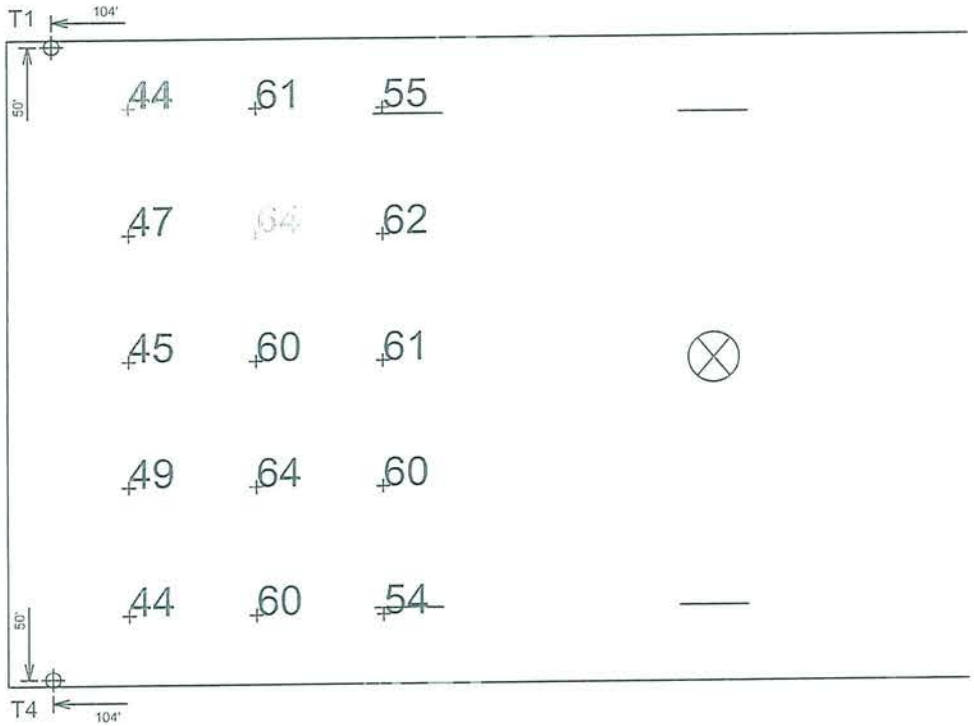
EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	T1-T4	60'	-	60'	1500W MZ	4	4	0
4	← TOTALS →					16	16	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE



ILLUMINATION SUMMARY

Project Name

Humboldt Park
Milwaukee, WI

Tennis 1

- Size: 4 Court - 12' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

· Luminaire Type:	Green Generation
· Rated Lamp Life:	5,000 hours
· Avg Lumens/Lamp:	134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	15
Average:	55.4
Maximum:	64
Minimum:	44
Avg/Min:	1.27
Max/Min:	1.48
UG (Adjacent Pts):	1.41
CV:	0.14

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	16
Avg KW over 5,000 hours:	25.02
Max KW:	27.2

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

By: Joel DeBoef

File #: 113864-AD Date: 30-Dec-09

SCALE IN FEET 1 : 30

0' 30' 60'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

Print Date (30/Dec/2009) & Time (08:11)

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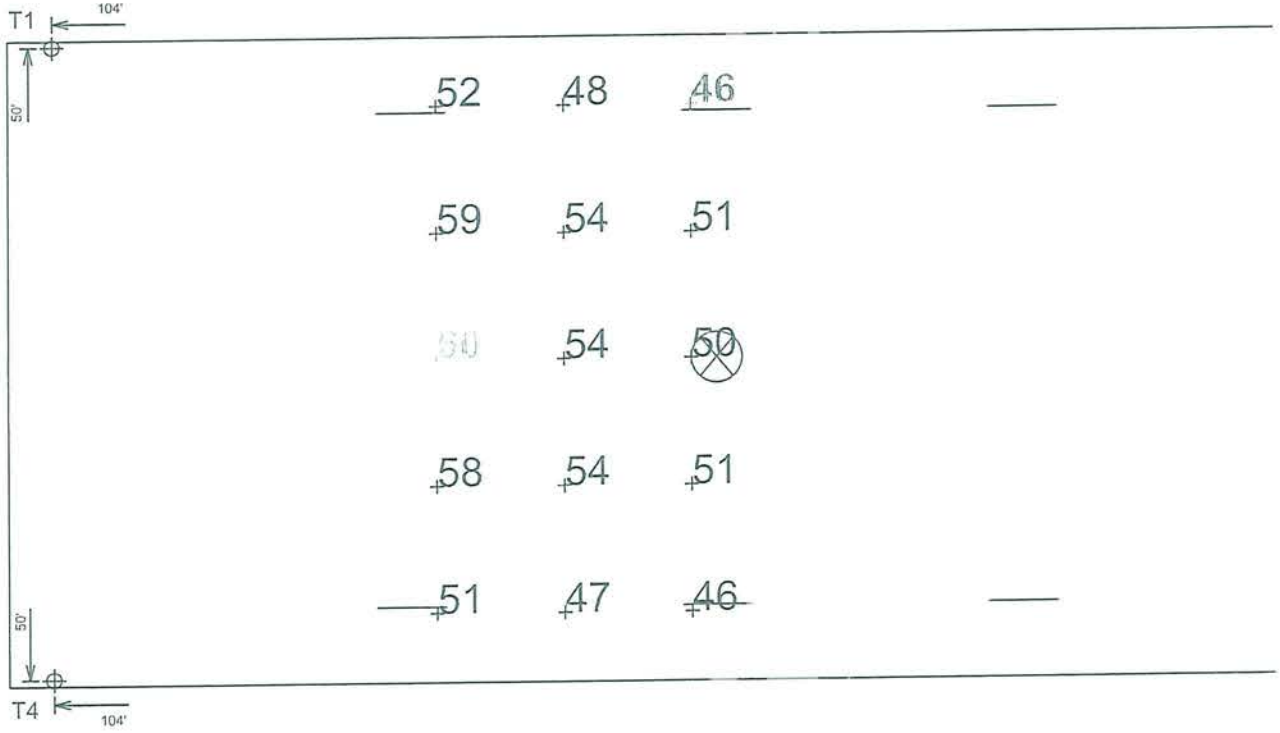
EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	T1-T4	60'	-	60'	1500W MZ	4	4	0
4	← TOTALS →					16	16	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE



ILLUMINATION SUMMARY

Project Name

Humboldt Park
Milwaukee, WI

Tennis 2

- Size: 4 Court - 12' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

· Luminaire Type:	Green Generation
· Rated Lamp Life:	5,000 hours
· Avg Lumens/Lamp:	134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	15
Average:	51.9
Maximum:	60
Minimum:	46
Avg/Min:	1.14
Max/Min:	1.31
UG (Adjacent Pts):	1.15
CV:	0.09

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	16
Avg KW over 5,000 hours:	25.02
Max KW:	27.2

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

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Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

SCALE IN FEET 1 : 30

0' 30' 60'

Pole location(s) + dimensions are relative to 0,0 reference point(s) ○

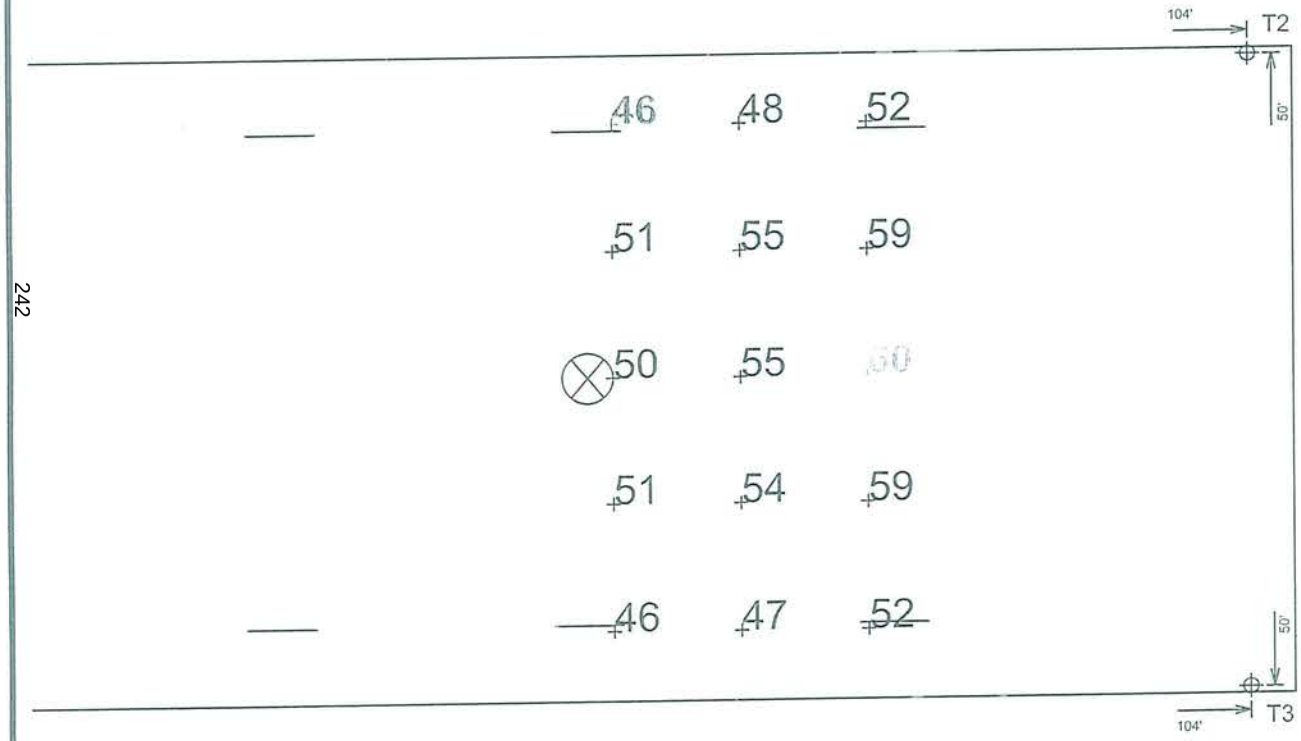
EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	T1-T4	60'	-	60'	1500W MZ	4	4	0
4	← TOTALS →					16	16	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE



ILLUMINATION SUMMARY

Project Name

Humboldt Park
Milwaukee, WI

Tennis 3

- Size: 4 Court - 12' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

· Luminaire Type:	Green Generation
· Rated Lamp Life:	5,000 hours
· Avg Lumens/Lamp:	134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	15
Average:	52.3
Maximum:	60
Minimum:	46
Avg/Min:	1.14
Max/Min:	1.31
UG (Adjacent Pts):	1.15
CV:	0.09

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	16
Avg KW over 5,000 hours:	25.02
Max KW:	27.2

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

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Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

SCALE IN FEET 1 : 30

0' 30' 60'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

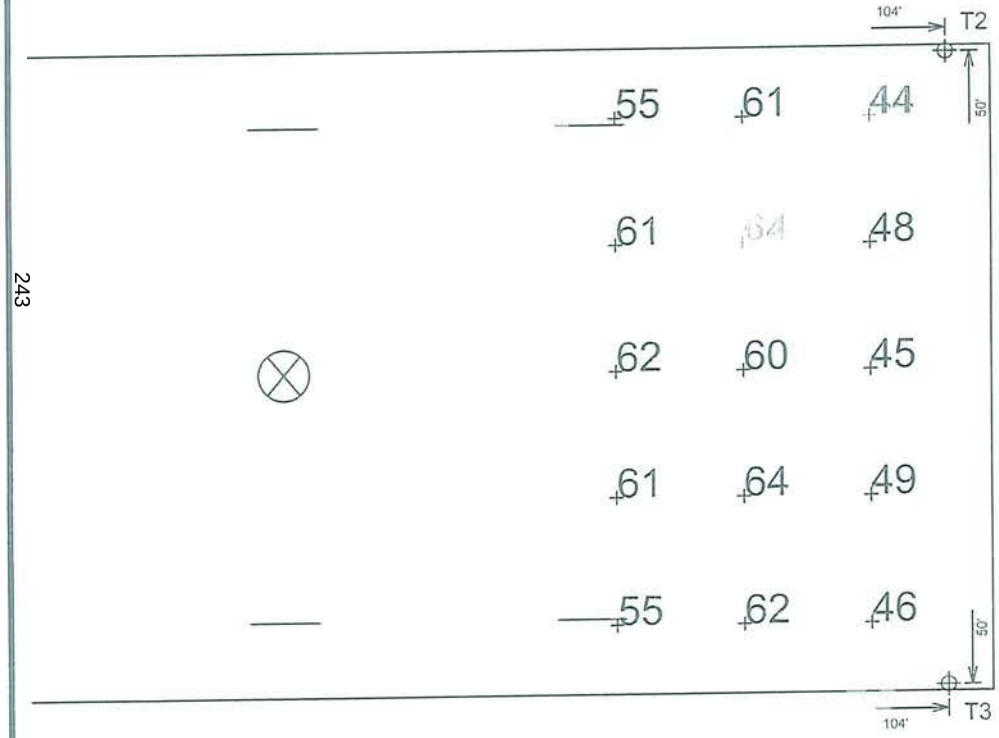
EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	T1-T4	60'	-	60'	1500W MZ	4	4	0
4	← TOTALS →					16	16	0

Preliminary Design Information - Foundation and electrical requirements should be confirmed prior to final design and/or production.

MUSCO GREEN GENERATION LIGHTING™

GUARANTEED PERFORMANCE



ILLUMINATION SUMMARY

Project Name

Humboldt Park
Milwaukee, WI

Tennis 4

- Size: 4 Court - 12' Spacing
- Grid Spacing = 20.0' x 20.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5,000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid
No. of Target Points:	15
Average:	55.8
Maximum:	64
Minimum:	44
Avg/Min:	1.26
Max/Min:	1.45
UG (Adjacent Pts):	1.38
CV:	0.13

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	16
Avg KW over 5,000 hours:	25.02
Max KW:	27.2

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

SCALE IN FEET 1 : 30

0' 30' 60'

Pole location(s) + dimensions are relative to 0,0 reference point(s)

Policy Recommendation #3

Policy Issues/Recommendations

Recommendation # 3

Expand opportunities for the types of public/private partnerships that have successfully leveraged private capital in the maintenance and improvement of several Parks locations.

Opportunities for new Public/Private Partnerships

- Beer Gardens
- Journey House
- Bradford Beach
- Zip Line/High Ropes Courses
- Seasonal Tenting for Outdoor Events

Existing Public/Private Partnerships

- Ace Boxing Club
- AFL-CIO Labor Council
- Agricultural Leases
- Ahmadiyya Movement in Islam
- Alpha Omega of Milwaukee, Inc.
- Andre' Lee Ellis & Co., Inc.
- Aurora Health - St Lukes
- Aurora Health - Trucks
- Aurora Pharmacy-naming rights
- Aurora University
- Bartolotta - Boerner Botanical
- Bartolotta - Lake Park Bistro
- Bartolotta - North Point Snackbar
- Bay View Lions - SS Frolics
- Bay-Lakes Marketing, Inc. (All Canada)
- Beckum - Stapleton Lleague
- Betty Brinn Museum
- Boys & Girls Club
- Bradford Beach Cabana Company
- Brian Zienty
- Brookfield - Underwood Trail
- Business Improvement (BID)
- CAMPAC
- Canadian Pacific Railway
- City of Glendale
- Crystal Ridge Ski Hill
- Cudahy Lions-Sweet Applewood
- Cudahy Little League
- Cudahy Schools - Sheridan
- Cudahy Sportsmen's Club
- Cudahy War Memorial
- DC Sleddogs
- East Town - Bastille Days
- East Town - East Town Market
- East Town - Jazz in the Park
- Easter Seals - Holler Park
- Fine Art by Michael Kmiotek
- First Congregational Church
- Fixx Coffee House
- For My People Productions
- Franklin - trailhead parking
- Franklin - transfer for fire station
- Franklin Public Sch - Parks
- Friends of Boerner Botanical Gardens
- Friends of Hoyt Park Pool
- Friends of Riverside Nature Cente
- Friends of the Domes
- Friends of the Mill Pond
- Friends of Wehr Nature Center
- GE Healthcare Fitness Center
- Gerald Ignace Indian Health Care, Inc.
- Gift of Wings
- Glendale Schools-Music in Glen
- Global Crossing (Frontier)
- Grandview - Coast Restaurant
- Grandview - Harbor Lights
- Grandview - Miller Room
- Grandview - Mitchell Domes
- Grandview - Parking O'Donnell
- Greendale - Dale Creek
- Greenfield Lions - Kulwicki
- Hales Corners Pool
- Harbor Front Marina

- Heavy Hitters, LLC
- Herb Society of America - WI Unit
- Jarr Sales - Frank Furter
- JEK - Oak Leaf Bike Trail
- JM Realty - Billboard
- Journal Broadcast - WTMJ
- JT Bones - Lincoln Park
- Kmiotek, artist
- Lamar Companies - billboard
- Lincoln Park Community Assoc
- Lynmar Tours, LLC
- MATC - Estabrook Park
- Meyer & Wallis - advertising
- Milw Air and Water Show
- Milw Bike Polo Club
- Milw BMX
- Milw Christian Center
- Milw Comm Sailing Cntr
- Milw Comm Service Corps
- Milw County - Underwood Creek
- Milw County - Wis Ave Park
- Milw County Historical Society
- Milw County Public Links Assoc
- Milw Golf Charities (GMO)
- Milw Kickers Soccer Club
- Milw Lawn Bowling Assoc
- Milw Lawn Bowling Assoc. - Aerifier
- Milw River View Development
- Milw World Festival-Hole in One
- Milw Yacht Club
- Milwaukee, city - gas purchases
- Mitchell Airport - dog exercise
- MMSD - Engineer
- MMSD - Greenfield Park
- MMSD - Lincoln Creek #1&2
- MMSD - Lincoln Creek #5
- MMSD - Underwood Parkway
- MMSD - Valley Park
- MPS - Kosciuszko Cntr
- MPS - Riverside Park
- Nates Crepes
- NetZ - McKinley Marina
- North Central Little League
- North Point Lighthouse Friends
- Oak Creek - Oak Leaf Trail
- Oak Creek - Riverton Meadows
- Oak Creek - Water/Sewer Ease
- Oak Creek -Johnstone Park
- Office for Persons with Disabilities
- Partners in Parks - dog park
- Payne & Dolan - easement
- Pitch's Club 113, Inc.
- Pro Slalom Events, LLC
- Qwest Communications
- Rainbow Aero Modelers
- Red Barn House - rental
- Shee Yee Community of Milw., Inc.
- South Milw - sewer easement
- South Milw Schools - Various
- South Milw Schools-Parkway
- South Shore Yacht Club
- Southwest Aquatic Team
- Southwind Marine - McKinley
- Sprecher Brewing - advertising
- St. Francis Development
- Starbucks - Red Arrow Park
- Stark Asphalt, Inc.
- Summit Educational
- TCR- Goose Boy Statue
- Team RNB - Famous Dave's
- Teen Approach - Dineen
- Time Insurance - Assurant
- Time Warner - Greenfield
- Time Warner - Menomonee Riv
- Time Warner - Milw River Pkwy
- Tosa Baseball League
- Tosa Baseball League - Concession
- TPN (AT&T) Advertising
- Urban Ecology - Riverside
- Urban Ecology - Washington
- US Army - Milw Breakwater
- UW Extension - Boerner MOU
- UW Extension - Garden Plots
- UW Extension - Nature in Parks
- UWM - Aaron Field
- UWM - Bradford Beach
- UWM - Soccer Field
- Vendamerica
- Vietnam Vets Memorial
- Village of Shorewood
- War Memorial - Milw County
- Watson Enterprises
- Wauwatosa - Webster Park
- Weigel Broadcasting, Chan 58
- Westown - Market in Park
- Westown - Music in Park
- Westown - River Flicks
- Wildlife Management
- Wimmer Bros - Concerts
- Wis Electric - bike trail
- Wis Fried Cheese Curds
- Wis Golf Domes - Currie
- Wis Historical Society - buoy
- Wis Lutheran College
- Wis Lutheran College
- Wis Lutheran High School

- Wis Park and Rec Assoc
- Wis PGA Golf Services
- Wis PGA Junior Foundation
- WISN TV 12 Hearts Corporation
- WITI TV 6 - Fox Network
- WTMJ TV 4 tower guy wire

105TH ANNIVERSARY | MILWAUKEE COUNTY PARKS

5 Year Spending Plan

Milwaukee County Parks Department - 5 Year Spending Plan

Asset Category	2013	2014	2015	2016	2017
Parkway Roads	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000
Internal Park Roads	$500,000	$500,000	$500,000	$500,000	$500,000
Parking Lots	$500,000	$500,000	$500,000	$500,000	$500,000
Walkways	$500,000	$500,000	$500,000	$500,000	$500,000
Tennis Courts	$200,000	$200,000	$200,000	$200,000	$200,000
Basketball Courts	$100,000	$100,000	$100,000	$100,000	$100,000
Boat Launches	$50,000	$50,000	$50,000	$50,000	$50,000
Multiuse Trails	$500,000	$500,000	$500,000	$500,000	$500,000
Bridges*	$200,000	$200,000	$200,000	$200,000	$200,000
Pools	$500,000	$500,000	$500,000	$500,000	$500,000
Beaches	$50,000	$50,000	$50,000	$50,000	$50,000
Playgrounds	$400,000	$400,000	$400,000	$400,000	$400,000
Security Systems	$50,000	$50,000	$50,000	$50,000	$50,000
Restrooms	$500,000	$500,000	$500,000	$500,000	$500,000
Storm Sewers*	$250,000	$250,000	$250,000	$250,000	$250,000
Sanitary Sewers*	$250,000	$250,000	$250,000	$250,000	$250,000
Stream Banks	$150,000	$150,000	$150,000	$150,000	$150,000
Lagoons	$100,000	$100,000	$100,000	$100,000	$100,000
Marinas	$500,000	$500,000	$500,000	$500,000	$500,000
Buildings	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000
Baseball Fields	$200,000	$200,000	$200,000	$200,000	$200,000
Softball Fields	$200,000	$200,000	$200,000	$200,000	$200,000
Soccer Fields	$100,000	$100,000	$100,000	$100,000	$100,000
Dog Exercise Areas	$50,000	$50,000	$50,000	$50,000	$50,000
Golf Courses	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
Parkway Electrical Lighting Systems	$500,000	$500,000	$500,000	$500,000	$500,000
Revenue Generation Development	$3,650,000	$3,650,000	$3,650,000	$3,650,000	$3,650,000
Totals	**$15,000,000**	**$15,000,000**	**$15,000,000**	**$15,000,000**	**$15,000,000**

- Bender Park Campground
- Organized Sports Complex's
  - Baseball and Softball Facilities
  - Field Lighting Retrofits
- McKinley Marina
  - Electrical System Upgrades
  - Restroom & Shower Upgrades
  - Parking Lot Replacement
- Pavilion and Rental Facility Replacements and Upgrades
- Countywide Golf Course Improvements