



**Parks and Recreation Board Agenda**  
**Department of Public Services**  
**851 South Eton-Conference Room**  
**Tuesday, August 1, 2023**  
**6:30 PM**

- I. Call to order**
- II. Roll Call**
- III. Announcements, Introductions of Guests & Chairpersons Comments**
- IV. Open To The Public for Items Not On the Agenda** *(two minutes per person)*
  - No one may speak a second time until everyone in the audience has spoken.
  - The chairperson may alternate speakers pro & con on issues being discussed.
- V. Approval of the minutes of: July 11, 2023** *(regular meeting)*
- VI. Unfinished Business**
- VII. New Business-** *Written and submitted by 5pm Monday at the Birmingham Ice Sports Arena, one week prior to the meeting.*
  - 1. Parks and Recreation Master Plan-Evaluation of the Current Plan Goals and Objectives
  - 2. Trail Improvements Concept Plan
  - 3. Crestview Pickleball Courts-Sound Mitigation
- VIII. Miscellaneous Communications**
- IX. Reports From Staff**
- X. Items for Next Meeting: September 12, 2023**
- XI. Adjournment**

Individuals requiring accommodations, such as interpreter services, for effective participation in this meeting should contact the City Clerk's Office at (248) 530-1880 at least one day in advance of the public meeting. Las personas que requieren alojamiento, tales como servicios de interpretación, la participación efectiva en esta reunión deben ponerse en contacto con la Oficina del Secretario Municipal al (248) 530-1880 por lo menos el día antes de la reunión pública. (Title VI of the Civil Rights Act of 1964).

*If you cannot attend the meetings, please contact Connie Folk at the Birmingham Ice Arena (248) 530-1642.  
Minutes are available for review at the Birmingham Ice Sports Arena, 2300 East Lincoln, Birmingham, MI 48009*

**PARKS & RECREATION BOARD MISSION STATEMENT**

*The Parks and Recreation Board strives to provide opportunities for the enjoyment, education, and inspiration for present and future generations of residents and visitors through stewardship of natural, cultural and recreational resources. By continuously elevating the beauty and quality of the parks and recreation system of Birmingham, the Parks and Recreation Board will promote health and wellbeing, and strengthen the community.*

Should you have any statement regarding the above, you are invited to attend the meeting in person or virtually through  
**ZOOM:** <https://zoom.us/j/98191466679> **Meeting ID:** 981 9146 6679  
You may also present your written statement to:  
City of Birmingham, Parks and Recreation Board  
851 South Eton, Birmingham, Michigan 48009 prior to the meeting.

**PARKS AND RECREATION BOARD MEETING MINUTES**  
**July 11, 2023**

Heather Carmona, Chairperson, called the meeting to order at 6:30 pm at 851 South Eton.

**MEMBERS PRESENT:** Heather Carmona  
Susan Collins  
Pam Graham  
Anne Lipp  
John Rusche  
Steve Sweeney  
Joseph Wrobel

**MEMBERS ABSENT:** Sarah Kupczyk

**STUDENT REPRESENTATIVES PRESENT:** Katie Glasier, Seaholm High School  
Archie Reynolds, Seaholm High School

**ADMINISTRATION:** Scott Zielinski, Director of Public Services  
Carrie A. Laird, Parks and Recreation Manager  
Leah Blizinski, City Planner  
Connie J. Folk, Recreation Coordinator

**GUESTS:** Jack Burns, Jessica Einstein and David Young

**ANNOUNCEMENTS, INTRODUCTIONS OF GUESTS & CHAIRPERSON COMMENTS:**

No announcements, introductions of guests & chairperson comments

**OPEN TO THE PUBLIC FOR ITEMS NOT ON THE AGENDA:**

No public comments

**APPROVAL OF THE MINUTES:**

It was moved by Graham, seconded by Lipp, to approve the minutes of the Tuesday, June 6, 2023, regular meeting as submitted.

**Ayes,** Heather Carmona, Susan Collins,  
Pam Graham, Anne Lipp, John Rusche,  
Steve Sweeney and Joseph Wrobel

**Nays,** None  
**Absent,** None

**UNFINISHED BUSINESS:**

No unfinished business

**NEW BUSINESS:**

No new business

**MISCELLANEOUS COMMUNICATIONS:**

No miscellaneous communications

**REPORTS FROM STAFF:**

**1. Parks and Recreation Master Plan Update**

PM Laird reviewed with the Parks and Recreation Board the Parks and Recreation Master Plan Public Engagement Program. PM Laird stated that the second public engagement session will be Friday, July 14, 2023 at the City of Birmingham Movie Night.

PM Laird stated that McKenna has completed 40% of park inventory. PM Laird showed on the City of Birmingham website where information can be found regarding the Recreation Master Plan surveys and parks comment map.

PM Laird stated that at the August 1, 2023 Parks and Recreation Board meeting that McKenna will be providing an update on the Parks and Recreation Master Plan.

Collins suggested that the schools be contacted to identify the stakeholders of the school organizations.

**2. Pickleball Update (*verbal*)**

PM Laird stated that the hours for pickleball is 9am-8pm, open play hours are 9am-12pm and Birmingham residents may make reservations from 12pm-8pm daily, however all are welcome to use the pickleball courts but reservations take priority. The hours are being enforced and there is a park attendant monitoring the activity.

PM Laird stated that there have been some complaints about noise and parking from the neighboring residents. The parking situation has been visited by the police department.

PM Laird stated at the August Parks and Recreation Board meeting there will be a staff report for different ways, potential options for noise deafening. Pickleball has a distinct sound.

DPS Director Zielinski stated that any immediate issues that people are in violation of practices should be called in on the non-emergency police line if the park attendant is not available and if there are generalized complaints they should file on govpiilot.

PM Laird stated there has been a lot of positive comments and currently we have not opened it up for instructors or for large group happenings.

**3. Lincoln Hills Updates (*verbal*)**

DPS Director Zielinsk stated that construction is getting closed as finalizing the renovations for tee one cart path and some final work on irrigation that had to be put in based on re-grading the area and then the final landscaping will occur.

**4. Dog Park Update**

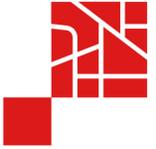
RC Folk provided to the Parks and Recreation Board the current revenue and expenses of the dog park that is located at Lincoln Hills Dog Park.

**ITEMS FOR NEXT MEETING:**

Carmona stated the next regular meeting will be held on Tuesday, August 1, 2023 at 6:30 pm, at 851 South Eton.

Chair Carmona adjourned the meeting at 7:15 pm

Connie J. Folk, Recreation Coordinator



**MCKENNA**

# Memorandum

**TO:** City of Birmingham Parks and Recreation Board  
**FROM:** Paul Urbiel, AICP and the McKenna Team  
**SUBJECT:** **Agenda for Parks and Recreation Master Plan Discussion at the August 1<sup>st</sup> Board Meeting and Exercise: Evaluation of the Current Plan Goals and Objectives**  
**DATE:** July 25, 2023

We look forward to discussing the progress of our early planning activities for the Parks and Recreation Master Plan with you at the August 1<sup>st</sup> Parks and Recreation Board meeting! During the meeting, we will provide a short presentation on the key topics listed below, followed by a facilitated exercise on the goals and objectives of the current 2018 Recreation Master Plan.

## **PROGRESS DISCUSSION**

McKenna's presentation will cover the following key topics:

### **I. Introduction**

### **II. Strategic Plan Issues and the Document Outline**

- Trends Analysis
- Demographic Findings / Implications
- The Plan's Updated Table of Contents (TOC)
- What does Sustainability Mean for Birmingham Parks?
- What does Inclusivity Mean for Birmingham Parks?

### **III. Public Engagement: What We've Heard So Far**

- Engagement Timeline
- Summary of Input Received: In-Person Engagement, Survey, and the Online Mapping Exercise
- Summary of Parks Board Feedback Received
- Feedback Themes to Date

### **IV. Next Steps**

**HEADQUARTERS**  
235 East Main Street  
Suite 105  
Northville, Michigan 48167

O 248.596.0920  
F 248.596.0930  
**MCKA.COM**

**Communities for real life.**

New Business #1



## GOALS DISCUSSION AND EXERCISE

An important step in this planning process is to review and evaluate the current goals of the 2018 Plan.

Please review the following worksheet and rank your priorities ahead of the August 1<sup>st</sup> Board meeting, so there can be a spirited discussion on park and recreation goals and objectives.

### INSTRUCTIONS

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#### **Step 1: Prioritization.**

On each of the following pages, the seven (7) goals of the 2018 Plan are listed. These are represented as listed in the Recreation Master Plan, they do not appear in a ranked order. Please rank them, starting with “#1” as the highest priority for this Plan to address. If you feel that any goals are no longer applicable, please note that as well.

The final prioritization will impact the Action Plan of the Parks and Recreation Master Plan, which will outline projects to be completed over the next five-plus years in the city.

#### **Step 2: Objectives.**

Consider how each of the goals will be accomplished. Each goal’s related objectives from the current plan are listed. Please identify any objectives that are no longer relevant.

#### **Step 3: Additional Goals or Objectives.**

Underneath each table in which it’s applicable, note any additional goals or objectives that you think are missing and should be included with this update.

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Thank you, we look forward to hearing all your ideas and feedback on August 1<sup>st</sup>!

If you have any questions or comments, please contact Paul Urbiel at [purbiel@mcka.com](mailto:purbiel@mcka.com)



# Goals and Objectives Exercise

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## **GOAL #1: Foster an inclusive and unique community.**

### **OBJECTIVES:**

1. Continue working with local organizations, clubs, and institutions to provide a wealth and variety of organized activities and programs within the community. This includes:
  - a. Senior Walking Clubs.
  - b. “Theatrical” programming that involves schools, library, residents, and the Community House.
  - c. Seasonal, including winter activities.
  - d. Art and cultural programs.
  - e. Teen and youth programming during the summer and utilizing extended hours.
2. Celebrate the community by participation in festivals, community functions and events
3. Support and encourage new developments to include areas for active and passive recreation.
4. Provide volunteer opportunities in program delivery and improvement projects.

### **Please Complete for Discussion at the August 1<sup>st</sup> Meeting:**

*Prioritize this goal, using #1 as the highest priority and #7 as the lowest:*

# \_\_\_\_\_

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*Are there objectives that are no longer relevant?*

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*Additional Objectives to consider:*

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**GOAL #2: Provide parks and recreation facilities that are beautiful and high quality, that respect history, offer a variety of experiences, both passive and active, are well maintained and that are accessible to all residents of the community.**

**OBJECTIVES:**

1. Analyze and improve universal accessibility.
2. Maintain and improve designated wetlands, Rouge River Corridor, and open space.
3. Incorporate art/sculptures into park design.
4. Encourage central entry areas for sitting and gathering in park design.
5. Maintain and update park equipment and facilities as needed, such as playground equipment, ball fields, open space areas including natural landscaping.
6. Continue implementation of standardized park design for all City of Birmingham Parks including signage, installation of trees, tree transplanting, improved landscaping, benches, bike racks, and waste receptacles.

**Please Complete:**

*Prioritize this goal, using #1 as the highest priority and #7 as the lowest:*

# \_\_\_\_\_

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*Are there objectives that are no longer relevant?*

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*Additional Objectives to consider:*

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**GOAL #3: Create a community of healthy residents by providing opportunities that promote and encourage active lifestyles and mobility.**

**OBJECTIVES:**

1. Increase non-motorized transportation connections between parks, historical sites, community facilities and shopping districts that allow residents to cycle, walk, and run.
2. Develop and promote programming that encourages active lifestyles for all ages.
3. Work with Oakland County to develop pathway connections with surrounding communities that include Beverly Hills, Bloomfield Hills, Bloomfield Twp., Royal Oak, Southfield, and Troy with the existing Rouge River Corridor.
4. Promote the establishment of the Rouge River Corridor along the Rouge River to encourage the preservation, enhancement and increase community understanding of this important watershed.
5. Develop a wayfinding program for the trail / greenway network that directs users of the non-motorized paths to City parks and other destinations.

**Please Complete:**

*Prioritize this goal, using #1 as the highest priority and #7 as the lowest:*

# \_\_\_\_\_

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*Are there objectives that are no longer relevant?*

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*Additional Objectives to consider:*

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**GOAL #4: Provide recreation programming and facility opportunities that meet the needs and interests of the entire community.**

**OBJECTIVES:**

1. Monitor the use of athletic fields and facilities to determine additional needs.
2. Create opportunities that go beyond the traditional team sports such as educational components, individual sporting pursuits, training/self-improvement courses.
3. Provide additional environmental-oriented programs and use parks as outdoor classrooms and art theater.
4. Coordinate with the Arts Board regarding public art at parks. Coordinate location, lights to illuminate, sprinkler locations, etc.

**Please Complete:**

*Prioritize this goal, using #1 as the highest priority and #7 as the lowest:*

# \_\_\_\_\_

*Are there objectives that are no longer relevant?*

*Additional Objectives to consider:*



**GOAL #5: Use existing community resources efficiently and to demonstrate fiscal responsibility and to coordinate and partner with other entities to ensure the available and opportunity for comprehensive, quality services and facilities.**

**OBJECTIVES:**

1. Explore opportunities with private partnerships and Oakland County Parks to jointly provide desired services and facilities, while minimizing duplication and competition between the agencies.
2. Coordinate efforts with Oakland County for opportunities to preserve open space and provide public access along the Rouge River Corridor.
3. Recruit civic and business organizations for assistance with park improvement projects.
  1. Partner for grants & outside funding.
  4. Foster, promote and encourage cooperative relationships with public and private entities.
  6. Promote a system for people to approach the city with ideas to collaborate on park improvements.
  7. Increase opportunities for donation, sponsorships, and fundraising efforts.
  8. Review and update the Parks and Recreation Master Plan every five years to maintain a current assessment and ensure grant funding eligibility.

**Please Complete:**

*Prioritize this goal, using #1 as the highest priority and #7 as the lowest:*

# \_\_\_\_\_

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*Are there objectives that are no longer relevant?*

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*Additional Objectives to consider:*

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**GOAL #6: Become a leader in sustainable, innovative maintenance practices to protect our natural community resources, demonstrate environmental stewardship and reduce adverse health effects to all residents, while maintaining public use, access, and enjoyment.**

**OBJECTIVES:**

1. Continue to implement ‘best practices’ and safer alternatives in cultivating healthy lawn care in City properties and parks such as heat and hot water weed control techniques and low-maintenance landscape designs.
2. Expand existing practice techniques to include applications such as adding beneficial insects to control destructive pests, and various natural and synthetic mulch materials.
3. Continue to implement Integrated Pest Management (IPM) practices and develop an IPM policy based on current IPM practices for park maintenance activities.
4. Research programming with area school districts to decrease and possibly eliminate spraying at properties surrounding public schools.
5. Develop an interpretive signage program in parks to expand educational opportunities about environmental protection.
6. Create demonstration projects within parks to showcase native Michigan plants and promote appreciation for natural landscape techniques.
7. Develop and implement standards and timeline for achieving sustainable lawn care maintenance practices for parks and recreation facilities.
8. Implement a pilot “Pesticide Free Park” program at a City Park.
9. Develop maintenance Design Guidelines for future capital and park improvements that encourage low maintenance alternatives.
10. Reduce and minimize usage of chemicals in all parks to lessen the potential for adverse health effects to the extent that is practicable.

**Please Complete:**

*Prioritize this goal, using #1 as the highest priority and #7 as the lowest:*

# \_\_\_\_\_

*Are there objectives that are no longer relevant?*

*Additional Objectives to consider:*



**GOAL #7: Operate the department of public services in an effective and efficient manner so as to maintain a high level of customer service.**

**OBJECTIVES:**

1. Expand web-based marketing efforts to inform residents of programs and events.
2. Review Parks and Recreation Master Plan annually to establish priorities and responsibilities with Parks and Recreation Board.

**Please Complete:**

*Prioritize this goal, using #1 as the highest priority and #7 as the lowest:*

# \_\_\_\_\_

*Are there objectives that are no longer relevant?*

*Additional Objectives to consider:*



## MEMORANDUM

Department of Public Services

**DATE:** August 1, 2023  
**TO:** Parks and Recreation Board  
**FROM:** Carrie Laird, Parks and Recreation Manager  
**APPROVED:** Scott Zielinski, DPS Director  
**SUBJECT:** Trail Improvements Concept Plan

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### INTRODUCTION:

Improving the City's trail system is a priority Parks and Recreation Bond project. In order to accomplish upgrades, as a first step, a concept plan is to be accepted by the City Commission. The Parks and Recreation Board will review the updated concept plan prepared by MCSA Group, Inc. and make a recommendation.

### BACKGROUND:

In early 2022, the city engaged the services of MCSA Group, Inc, to prepare a concept plan for the trail system (originally prepared by them in 2006). The Draft Trail Improvement Concept Plan was reviewed by the Parks and Recreation Board at the [October 11, 2022 Parks and Recreation Board Meeting](#) and again at an advertised Public Input Session for Trail Improvements at the [November 1, 2022 Parks and Recreation Board Meeting](#). A survey was published and promoted on our Engage Birmingham site: <https://engage.bhamgov.org/trail-improvements> during this timeframe as well.

Since November, the Draft Trail Improvement Concept Plan has undergone various applicable board reviews including the Multi-Modal Transportation Board, the Museum Board, and the Martha Baldwin Park Board. Staff sustainability liaisons in addition to each of the City departments have examined this plan as well. Comments and feedback have been gathered and, wherever appropriate, incorporated into an updated Concept Plan dated 6.30.2023, attached.

Changes made to the Draft Concept Plan include:

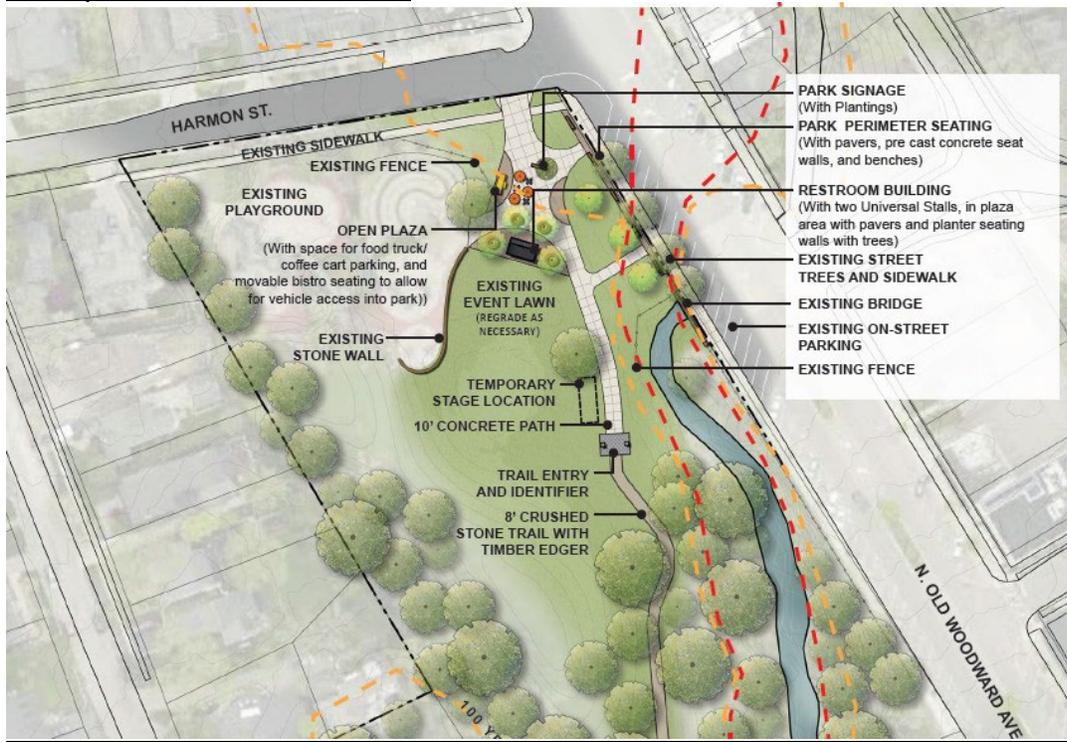
#### Booth Park Section:

Entry plaza: The addition of a rain garden in the swale area.

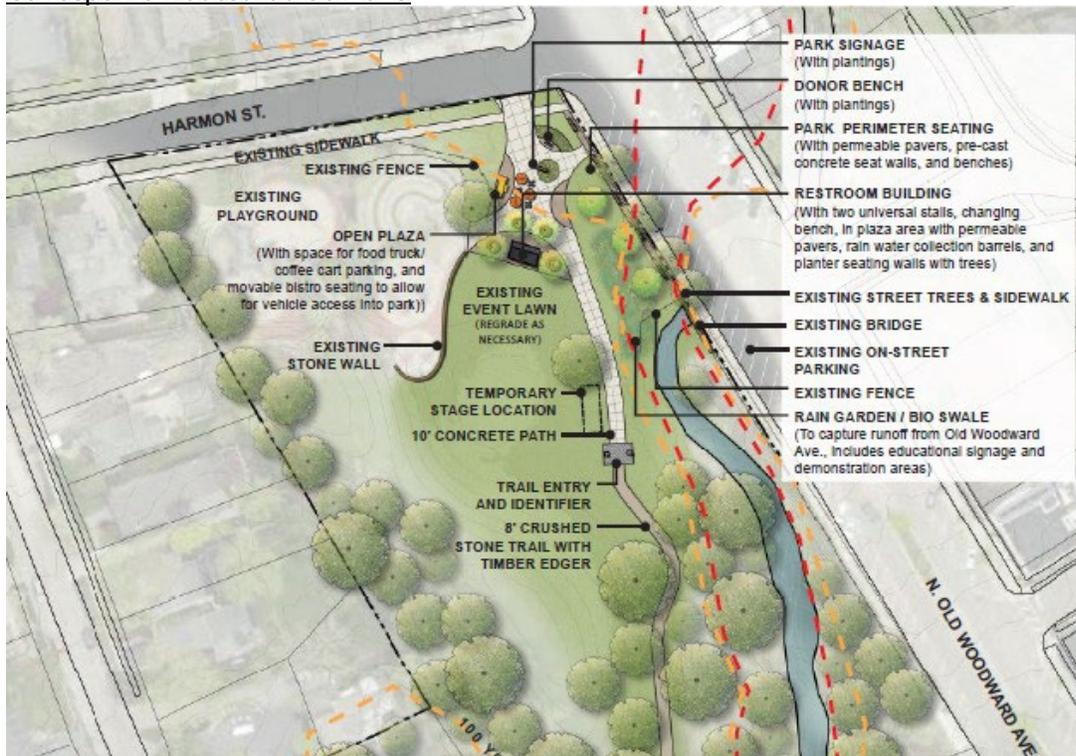
Addition of more sustainability features such as rain barrels, native plantings, utilizing chip stone, Pave Drain® block, and recycled or reclaimed products.

The addition of a Donor Bench and landscape bed. (We have a donor that would like to contribute a custom style bench, could serve as an art piece/destination selfie/photo opportunity).

Concept Plan dated 10.19.2022



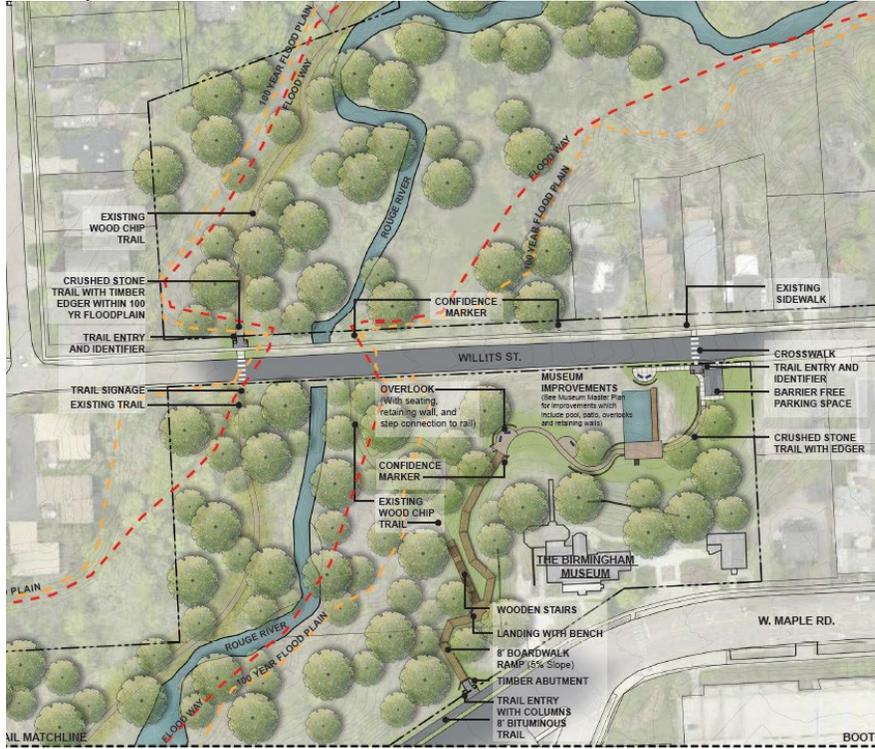
Concept Plan dated 06.30.2023



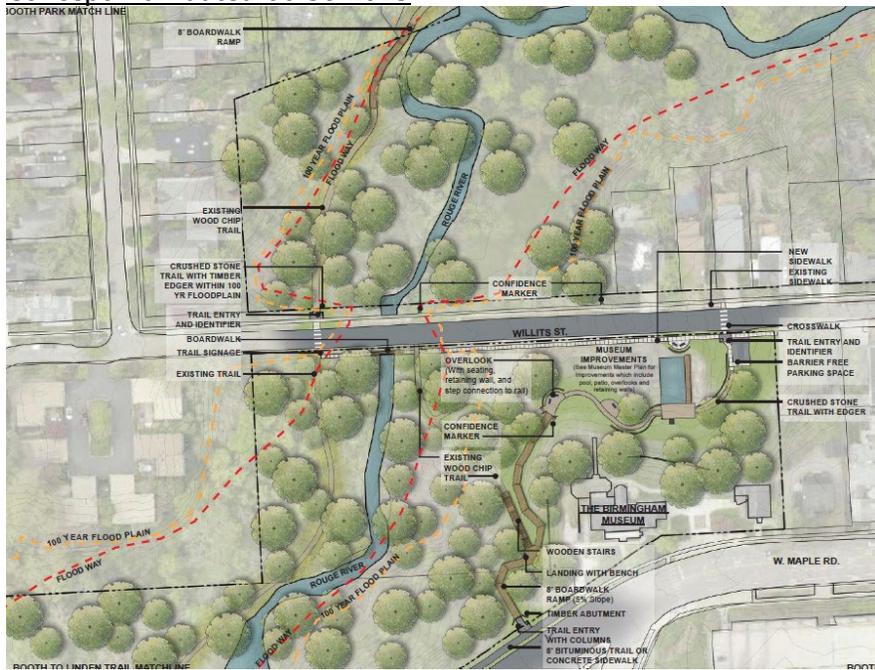
**Museum Section:**

The addition of a boardwalk in the narrow section north of Willits street.  
The addition of a sidewalk along the south side of Willits street.  
An option for concrete pathway along Maple has been identified.

**Concept Plan dated 10.19.2022**



**Concept Plan dated 06.30.2023**

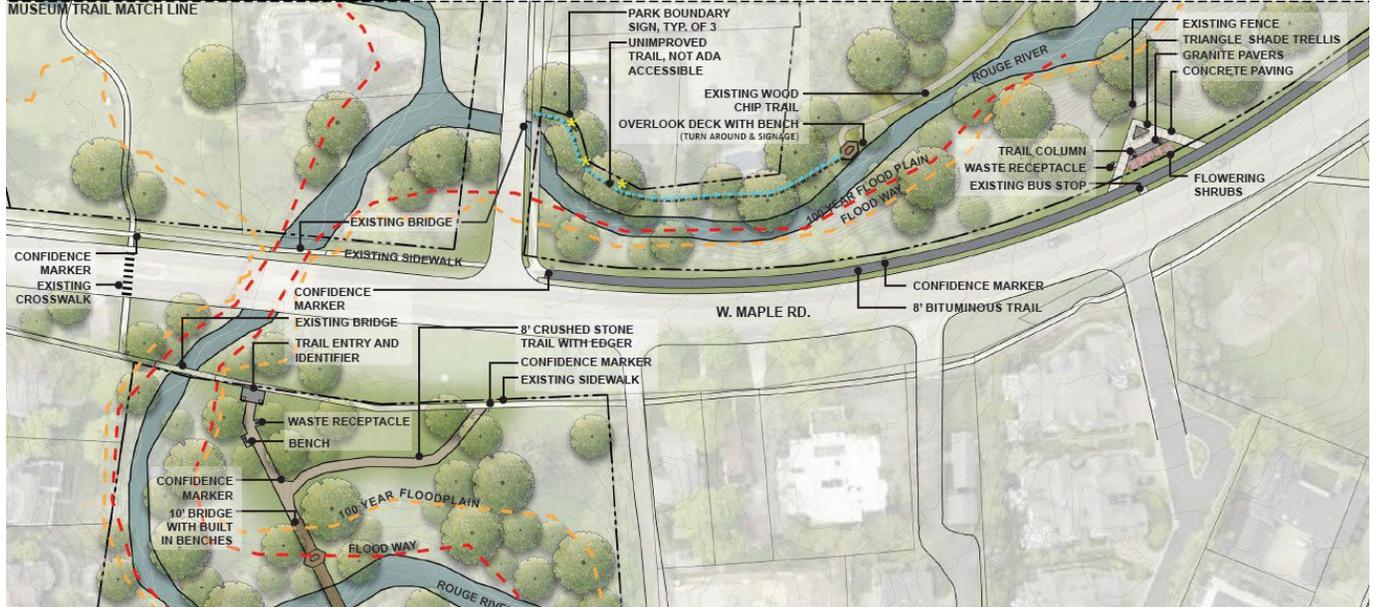


Linden Section:

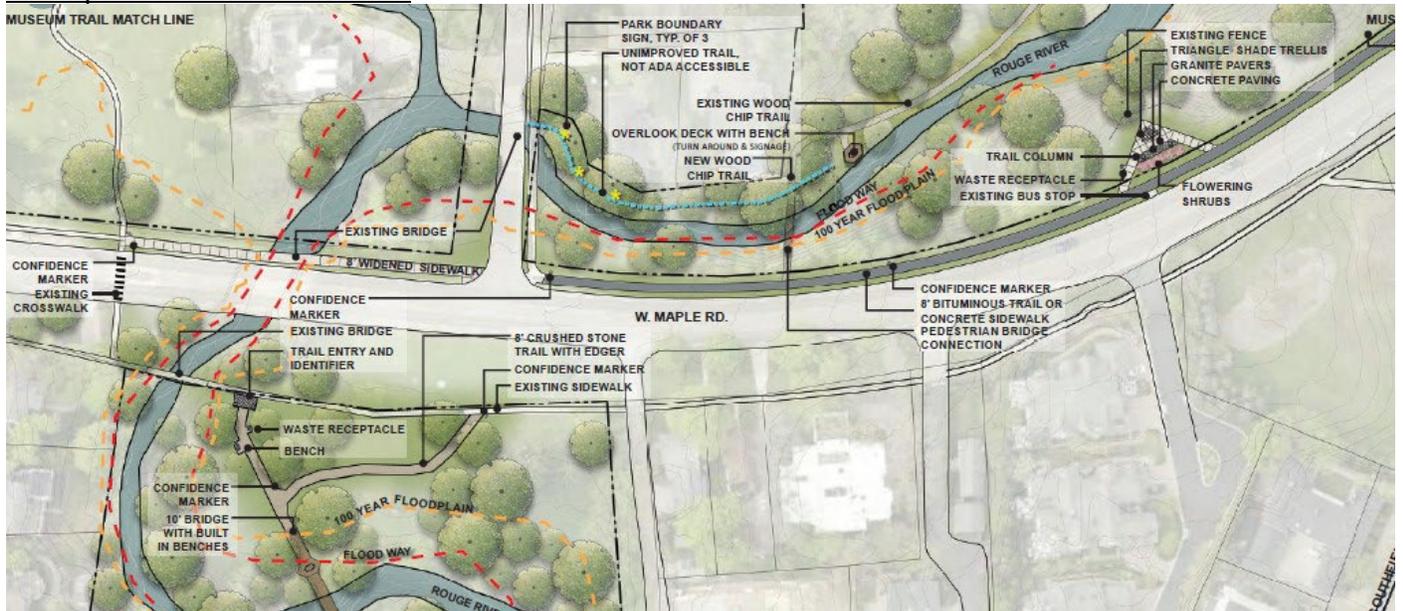
The addition of a pedestrian bridge connection over the Rouge River, north of Maple, east of Baldwin.

Widened 8' Sidewalk west of Baldwin, up to the Maple Rd pedestrian crosswalk.

Concept Plan dated 10.19.2022



Concept Plan dated 06.30.2023



#### FISCAL IMPACT:

Remaining bond funds from the first bond issue total \$181,492 as of June 30, 2023. In 2024, we are planning for the second bond issue in the amount of approximately \$6,500,000.

The Trail Improvements Cost Estimate totals \$2,967,990.82 , broken down into three sections: Booth Park Section: \$648,824.13, Museum Section: \$1,472,627.74, Linden Park Section: \$846,538.95. The previous cost estimate before the changes to the plan was \$2,095,531.62.

The City applied for a pre-development grant for trail improvements in the amount of \$25,000 (the maximum amount) through the Oakland County Parks and Recreation Grant Program, expected announcement early August. If awarded this will help to prepare construction drawings

The City applied for round two of the MI Sparks Grant Program in the amount of \$350,000 for development of the Booth Park Section of the plan.

#### SUSTAINABILITY:

The plan calls for features such as native plants, rain gardens, alternate hard surface materials such as chip stone, recycled/reclaimed products, among others. Staff is dedicated to considering utilizing environmentally friendly alternatives whenever possible.

The City's staff liaisons to the Ad Hoc Environmental Sustainability Committee have reviewed the Trail Improvement Concept Plan and provide the following comments:

- The Planning Division acknowledges and appreciates the sustainability-minded approaches that are included in several aspects of this plan. In general, the notes about using recycled materials, and capturing rainwater in certain areas is good and should be applauded. Areas like the trail entry/identifier points could be more pervious/less impactful. Any pergola or shade structure could be made from recycled materials instead of something newly fabricated. The Planning Division looks forward to any future opportunities to go greener, and will make itself available at any point to offer opinions or ideas to that end.
- Any new plantings along the trail should absolutely be native and support the functions of the river ecosystem.
- Efforts should be made to ensure that any improvements do not interfere with the natural environment or hydrological functions of the river, and should be able to be easily removed in the future without causing damage if ever called for.

#### PUBLIC COMMUNICATIONS:

To date:

- Promotion of the November 2022 Public Input Session at the Parks and Recreation Board Meeting.
- Trail Improvements Survey on Engage Birmingham
- Multimodal Transportation Board Agenda- December 2022
- Museum Board Meeting-December 2022
- Martha Baldwin Park Board Agenda- April 2023
- Promotion of the August 1, 2023 Parks and Recreation Board meeting

**SUMMARY:**

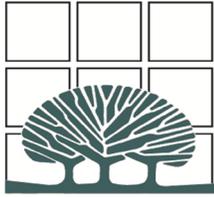
Trail improvements is a priority Parks and Recreation Bond project with funding available with next bond issue slated for 2024. The first step toward improving the trail system is acceptance of a concept plan by the City Commission, of which the Parks and Recreation Board makes the recommendation.

**ATTACHMENTS:**

- [Trail Improvement Concept Plan 06.30.2023](#) (as web link)
- [Trail Improvement Concept Plan 10.19.2022](#) (as web link)
- Updated Cost Estimate 06.30.2023
- Cost Estimate 11.01.2022

**SUGGESTED PARKS & RECREATION BOARD ACTION:**

Make a motion supporting the Trail Improvement Concept Plan and recommending that the plan be presented to the City Commission for acceptance.



**MCSA**  
GROUP, Inc.

Landscape Architects and Architects  
EAST GRAND RAPIDS • MICHIGAN

Landscape Architecture  
Park & Recreation Planning  
Architecture • Urban Design  
Sports Facility Planning

**CITY OF BIRMINGHAM**  
**ROUGE RIVER TRAIL IMPROVEMENTS**  
**ORDER OF MAGNITUDE COST ESTIMATE**

July 26, 2023

**BOOTH PARK IMPROVEMENTS**

**GENERAL CONDITIONS**

Mobilization	LS	1	\$15,000.00	\$15,000.00
Insurance, Permits, and Bonds	LS	1	\$20,000.00	\$20,000.00
Project Sign	LS	1	\$2,000.00	\$2,000.00
Layout and Staking	LS	1	\$10,000.00	\$10,000.00
General Conditions (M, O & P @5%)	LS	1	\$29,979.00	\$29,979.00
<b>SUBTOTAL</b>				<b>\$76,979.00</b>

**SITE PREPARATION AND REMOVALS**

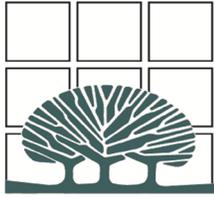
Soil Erosion & Sedimentation	LS	1	\$10,000.00	\$10,000.00
Site Preparation & Grading	SY	3,494	\$5.00	\$17,470.00
Concrete and Curb Removal	LS	1	\$2,000.00	\$2,000.00
<b>SUBTOTAL</b>				<b>\$29,470.00</b>

**TRAIL ENTRY**

Columns	EA	2	\$15,000.00	\$30,000.00
Granite Pavers	SF	320	\$60.00	\$19,200.00
<b>SUBTOTAL</b>				<b>\$49,200.00</b>

**PLAZA IMPROVEMENTS**

Concrete Plaza Paving (6" depth)	SF	5,966	\$10.00	\$59,660.00
Seat Wall Curb Planter	LF	70	\$350.00	\$24,500.00
Entrance Sign	LS	1	\$15,000.00	\$15,000.00
Cobblestone Pavers	SF	1311	\$25.00	\$32,775.00
Curb and Gutter Patch	LS	1	\$5,000.00	\$5,000.00
Crushed Stone Trail	SY	268	\$18.00	\$4,824.00
Timber Edging	LF	612	\$30.00	\$18,360.00
Bench	EA	2	\$3,000.00	\$6,000.00
<b>SUBTOTAL</b>				<b>\$166,119.00</b>



**MCSA**  
GROUP, Inc.

Landscape Architects and Architects  
EAST GRAND RAPIDS • MICHIGAN

Landscape Architecture  
Park & Recreation Planning  
Architecture • Urban Design  
Sports Facility Planning

**RESTROOM BUILDING**

Easi Set Restroom	LS	1	\$120,000.00	\$120,000.00
Waterline and Connections	LF	118	\$85.00	\$10,030.00
Sanitary Line and Connections	LF	147	\$65.00	\$9,555.00
Electric Line and Connections	LF	172	\$55.00	\$9,460.00

**SUBTOTAL**

**\$149,045.00**

**LANDSCAPE IMPROVEMENTS**

Tree Grates	EA	2	\$4,000.00	\$8,000.00
Trees	EA	2	\$750.00	\$1,500.00
Restoration Seeding and Topsoil	SY	285	\$3.50	\$997.50
Perennial Planting in Planter	LS	1	\$2,500.00	\$2,500.00

**SUBTOTAL**

**\$12,997.50**

**SUBTOTAL**

**\$483,810.50**

**Design and Bidding Contingency (10%)**

**\$48,381.05**

**Construction Contingency (10%)**

**\$48,381.05**

**Professional Fees (9%)**

**\$52,251.53**

**Topographic Survey**

**\$6,000.00**

**Soil Borings**

**\$8,000.00**

**EGLE PERMIT**

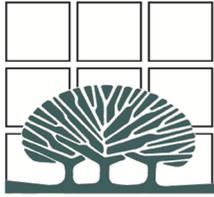
**\$2,000.00**

**TOTAL**

**\$648,824.13**

**ALTERNATE**

Locate Restroom Farther to the South	LF	165	\$190.00	\$31,350.00
Traditional Restroom Building	LS	1	\$110,000.00	\$110,000.00



**MCSA**  
GROUP, Inc.

Landscape Architects and Architects  
EAST GRAND RAPIDS • MICHIGAN

Landscape Architecture  
Park & Recreation Planning  
Architecture • Urban Design  
Sports Facility Planning

## MUSEUM TRAIL IMPROVEMENTS

Description	Unit	No. of Units	Price	Extension
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### GENERAL CONDITIONS

Mobilization	LS	1	\$15,000.00	\$15,000.00
Insurance, Permits, and Bonds	LS	1	\$10,000.00	\$10,000.00
Project Sign	LS	1	\$2,000.00	\$2,000.00
Layout and Staking	LS	1	\$10,000.00	\$10,000.00
General Conditions (M, O & P @5%)	LS	1	\$28,568.00	\$28,568.00
<b>SUBTOTAL</b>				<b>\$65,568.00</b>

### SITE PREPARATION AND REMOVALS

Soil Erosion & Sedimentation	LS	1	\$8,000.00	\$8,000.00
Site Preparation & Grading	SY	5,534	\$3.75	\$20,752.50
Concrete and Curb Removal	LS	1	\$2,000.00	\$2,000.00
<b>SUBTOTAL</b>				<b>\$30,752.50</b>

### TRAIL ENTRY

Columns	EA	6	\$10,000.00	\$60,000.00
Granite Pavers	SF	583	\$60.00	\$34,980.00
Confidence Markers and Trail Signage	EA	8	\$750.00	\$6,000.00
Bench	EA	3	\$3,000.00	\$9,000.00
Waste Receptacle	EA	3	\$2,500.00	\$7,500.00
Concrete Paving	SF	2960	\$7.00	\$20,720.00
Crushed Stone Trail	SY	75	\$18.00	\$1,350.00
Timber Edging	LF	245	\$30.00	\$7,350.00
Trellis	LS	1	\$20,000.00	\$20,000.00
<b>SUBTOTAL</b>				<b>\$166,900.00</b>

### BOARDWALK

Boardwalk Ramp and Overlook	SF	3525	\$200.00	\$705,000.00
Boardwalk Steps	SF	575	\$150.00	\$86,250.00
Timber Abutment at Boardwalk	EA	4	\$3,750.00	\$15,000.00
<b>SUBTOTAL</b>				<b>\$806,250.00</b>

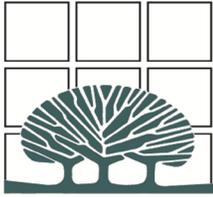


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Sports Facility Planning

Description	Unit	No. of Units	Price	Extension
<b>LANDSCAPE IMPROVEMENTS</b>				
Restoration Seeding and Topsoil	SY	285	\$3.50	\$997.50
Shrubs at Trellis Seating	EA	19	\$300.00	\$5,700.00
				<b>\$6,697.50</b>
<b>SUBTOTAL</b>				<b><u>\$1,076,168.00</u></b>
<b>Design and Bidding Contingency (10%)</b>				<b>\$107,616.80</b>
<b>Construction Contingency (10%)</b>				<b>\$107,616.80</b>
<b>Professional Fees (9%)</b>				<b>\$116,226.14</b>
<b>Topographic Survey</b>				<b>\$5,000.00</b>
<b>EGLE Permit</b>				<b>\$5,000.00</b>
<b>Hydrologic Study</b>				<b>\$40,000.00</b>
<b>Soil Borings</b>				<b>\$15,000.00</b>
<b>TOTAL</b>				<b><u>\$1,472,627.74</u></b>



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Description	Unit	No. of Units	Price	Extension
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## LINDEN TRAIL IMPROVEMENTS

### GENERAL CONDITIONS

Mobilization	LS	1	\$15,000.00	\$15,000.00
Insurance, Permits, and Bonds	LS	1	\$10,000.00	\$10,000.00
Project Sign	LS	1	\$2,000.00	\$2,000.00
Layout and Staking	LS	1	\$3,000.00	\$3,000.00
General Conditions (M, O & P @5%)	LS	1	\$25,309.00	\$25,309.00
<b>SUBTOTAL</b>				<b>\$55,309.00</b>

### SITE PREPARATION AND REMOVALS

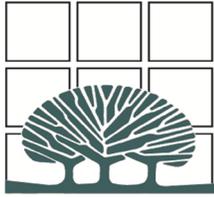
Soil Erosion & Sedimentation	LS	1	\$20,000.00	\$20,000.00
Site Preparation & Grading	LS	1	\$8,000.00	\$8,000.00
<b>SUBTOTAL</b>				<b>\$28,000.00</b>

### TRAIL ENTRY/ OVERLOOK

Columns	EA	2	\$10,000.00	\$20,000.00
Granite Pavers	SF	240	\$60.00	\$14,400.00
Confidence Markers and Trail Signage	EA	2	\$750.00	\$1,500.00
Bench	EA	1	\$3,000.00	\$3,000.00
Waste Receptacle	EA	1	\$2,500.00	\$2,500.00
<b>SUBTOTAL</b>				<b>\$41,400.00</b>

### TRAIL IMPROVEMENTS

Crushed Stone Trail	SY	286	\$18.00	\$5,148.00
Timber Edging	LF	638	\$30.00	\$19,140.00
Bituminous Paving	SY	877	\$45.00	\$39,465.00
Concrete Paving	SF	329	\$7.00	\$2,303.00
<b>SUBTOTAL</b>				<b>\$66,056.00</b>



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Description	Unit	No. of Units	Price	Extension
<b>BOARDWALK AND BRIDGE</b>				
Pre-Fabricated Bridge (75' x 10')	LS	1	\$250,000.00	\$250,000.00
Elevated Boardwalk	SF	770	\$150.00	\$115,500.00
Concrete Abutment at Bridge	EA	2	\$7,500.00	\$15,000.00
<b>SUBTOTAL</b>				<b>\$380,500.00</b>
<b>SUBTOTAL</b>				<b><u>\$573,265.00</u></b>

**ALTERNATE**

Concrete Sidewalk @ W. Maple RD	SF	7891	\$7.00	\$55,237.00
<b>Design and Bidding Contingency (10%)</b>				<b>\$57,326.50</b>
<b>Construction Contingency (10%)</b>				<b>\$57,326.50</b>
<b>Professional Fees (9%)</b>				<b>\$66,883.95</b>
<b>Topographic Survey</b>				<b>\$10,000.00</b>
<b>Soil Borings</b>				<b>\$8,000.00</b>
<b>Hydraulic Analysis Study</b>				<b>\$15,000.00</b>
<b>EGLE PERMIT + Hydraulic Review Fee</b>				<b>\$3,500.00</b>
<b>TOTAL</b>				<b><u>\$846,538.95</u></b>

Evaluations of the Project Budget and Estimates of Construction Cost prepared by MCSA Group represents their judgment as design professionals. It is recognized, however, MCSA Group has no control over the cost of labor, materials or equipment, nor a contractor's methods of determining bid prices, or over competitive bidding, or market conditions. Accordingly, MCSA Group cannot and does not warrant or represent that bids or negotiated prices will not vary from the Project Budget or from any estimate of construction cost or evaluation prepared by MCSA Group.



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**CITY OF BIRMINGHAM**  
**ROUGE RIVER TRAIL IMPROVEMENTS**  
**ORDER OF MAGNITUDE COST ESTIMATE**

**November 1, 2022**

**BOOTH PARK IMPROVEMENTS**

**GENERAL CONDITIONS**

Mobilization	LS	1	\$15,000.00	\$15,000.00
Insurance, Permits, and Bonds	LS	1	\$20,000.00	\$20,000.00
Project Sign	LS	1	\$2,000.00	\$2,000.00
Layout and Staking	LS	1	\$10,000.00	\$10,000.00
General Conditions (M, O & P @5%)	LS	1	\$20,028.00	\$20,028.00
<b>SUBTOTAL</b>				<b>\$67,028.00</b>

**SITE PREPARATION AND REMOVALS**

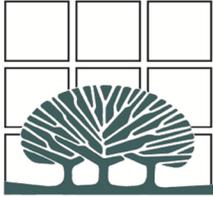
Soil Erosion & Sedimentation	LS	1	\$8,000.00	\$8,000.00
Site Preparation & Grading	SY	3,494	\$3.75	\$13,102.50
Concrete and Curb Removal	LS	1	\$2,000.00	\$2,000.00
<b>SUBTOTAL</b>				<b>\$23,102.50</b>

**TRAIL ENTRY**

Columns	EA	2	\$10,000.00	\$20,000.00
Granite Pavers	SF	320	\$60.00	\$19,200.00
<b>SUBTOTAL</b>				<b>\$39,200.00</b>

**PLAZA IMPROVEMENTS**

Concrete Plaza Paving (6" depth)	SF	6,541	\$10.00	\$65,410.00
Seat Wall Curb Planter	LF	70	\$250.00	\$17,500.00
Entrance Sign	LS	1	\$15,000.00	\$15,000.00
Cobblestone Pavers	SF	1311	\$25.00	\$32,775.00
Curb and Gutter Patch	LS	1	\$5,000.00	\$5,000.00
Crushed Stone Trail	SY	268	\$18.00	\$4,824.00
Timber Edging	LF	612	\$30.00	\$18,360.00
Bench	EA	2	\$3,000.00	\$6,000.00
<b>SUBTOTAL</b>				<b>\$164,869.00</b>



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**RESTROOM BUILDING**

Easi Set Restroom	LS	1	\$90,000.00	\$90,000.00
Waterline and Connections	LF	118	\$85.00	\$10,030.00
Sanitary Line and Connections	LF	147	\$60.00	\$8,820.00
Electric Line and Connections	LF	172	\$45.00	\$7,740.00

**SUBTOTAL**

**\$116,590.00**

**LANDSCAPE IMPROVEMENTS**

Tree Grates	EA	2	\$3,000.00	\$6,000.00
Trees	EA	2	\$650.00	\$1,300.00
Restoration Seeding and Topsoil	SY	285	\$3.50	\$997.50
Perennial Planting in Planter	LS	1	\$1,500.00	\$1,500.00

**SUBTOTAL**

**\$9,797.50**

**SUBTOTAL**

**\$420,587.00**

**Design and Bidding Contingency (10%)**

**\$42,058.70**

**Construction Contingency (10%)**

**\$42,058.70**

**Professional Fees (9%)**

**\$45,423.40**

**Topographic Survey**

**\$6,000.00**

**Soil Borings**

**\$8,000.00**

**EGLE PERMIT**

**\$2,000.00**

**TOTAL**

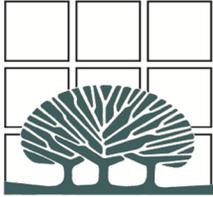
**\$566,127.80**

**ALTERNATE**

Traditional Restroom Building	LS	1	\$110,000.00	\$110,000.00
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**SUBTOTAL**

**\$110,000.00**



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## MUSEUM TRAIL IMPROVEMENTS

Description	Unit	No. of Units	Price	Extension
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### GENERAL CONDITIONS

Mobilization	LS	1	\$15,000.00	\$15,000.00
Insurance, Permits, and Bonds	LS	1	\$10,000.00	\$10,000.00
Project Sign	LS	1	\$2,000.00	\$2,000.00
Layout and Staking	LS	1	\$10,000.00	\$10,000.00
General Conditions (M, O & P @5%)	LS	1	\$28,568.00	\$28,568.00
<b>SUBTOTAL</b>				<b>\$65,568.00</b>

### SITE PREPARATION AND REMOVALS

Soil Erosion & Sedimentation	LS	1	\$8,000.00	\$8,000.00
Site Preparation & Grading	SY	5,534	\$3.75	\$20,752.50
Concrete and Curb Removal	LS	1	\$2,000.00	\$2,000.00
<b>SUBTOTAL</b>				<b>\$30,752.50</b>

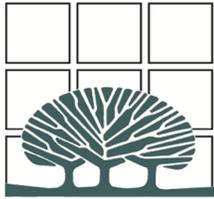
### TRAIL ENTRY

Columns	EA	6	\$10,000.00	\$60,000.00
Granite Pavers	SF	583	\$60.00	\$34,980.00
Confidence Markers and Trail Signage	EA	8	\$750.00	\$6,000.00
Bench	EA	3	\$3,000.00	\$9,000.00
Waste Receptacle	EA	3	\$2,500.00	\$7,500.00
Trellis	LS	1	\$20,000.00	\$20,000.00
<b>SUBTOTAL</b>				<b>\$137,480.00</b>

### BOARDWALK

Boardwalk Ramp and Overlook	SF	2214	\$120.00	\$265,680.00
Boardwalk Steps	SF	575	\$150.00	\$86,250.00
Timber Abutment at Boardwalk	EA	2	\$3,750.00	\$7,500.00
<b>SUBTOTAL</b>				<b>\$359,430.00</b>





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Description	Unit	No. of Units	Price	Extension
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## LINDEN TRAIL IMPROVEMENTS

### GENERAL CONDITIONS

Mobilization	LS	1	\$15,000.00	\$15,000.00
Insurance, Permits, and Bonds	LS	1	\$10,000.00	\$10,000.00
Project Sign	LS	1	\$2,000.00	\$2,000.00
Layout and Staking	LS	1	\$3,000.00	\$3,000.00
General Conditions (M, O & P @5%)	LS	1	\$25,309.00	\$25,309.00
<b>SUBTOTAL</b>				<b>\$55,309.00</b>

### SITE PREPARATION AND REMOVALS

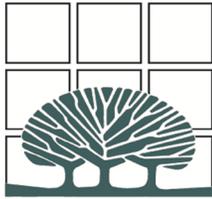
Soil Erosion & Sedimentation	LS	1	\$20,000.00	\$20,000.00
Site Preparation & Grading	LS	1	\$8,000.00	\$8,000.00
<b>SUBTOTAL</b>				<b>\$28,000.00</b>

### TRAIL ENTRY/ OVERLOOK

Columns	EA	2	\$10,000.00	\$20,000.00
Granite Pavers	SF	240	\$60.00	\$14,400.00
Confidence Markers and Trail Signage	EA	2	\$750.00	\$1,500.00
Bench	EA	1	\$3,000.00	\$3,000.00
Waste Receptacle	EA	1	\$2,500.00	\$2,500.00
<b>SUBTOTAL</b>				<b>\$41,400.00</b>

### TRAIL IMPROVEMENTS

Crushed Stone Trail	SY	286	\$18.00	\$5,148.00
Timber Edging	LF	638	\$30.00	\$19,140.00
<b>SUBTOTAL</b>				<b>\$24,288.00</b>



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Description	Unit	No. of Units	Price	Extension
<b>BOARDWALK AND BRIDGE</b>				
Pre-Fabricated Bridge (75' x 10')	LS	1	\$250,000.00	\$250,000.00
Elevated Boardwalk	SF	770	\$150.00	\$115,500.00
Concrete Abutment at Bridge	EA	2	\$7,500.00	\$15,000.00
<b>SUBTOTAL</b>				<b>\$380,500.00</b>
<b>SUBTOTAL</b>				<b><u>\$531,497.00</u></b>
Design and Bidding Contingency (10%)				\$53,149.70
Construction Contingency (10%)				\$53,149.70
Professional Fees (9%)				\$57,401.68
Topographic Survey				\$10,000.00
Soil Borings				\$8,000.00
Hydraulic Analysis Study				\$15,000.00
EGLE PERMIT + Hydraulic Review Fee				\$3,500.00
<b>TOTAL</b>				<b><u>\$731,698.08</u></b>

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## MEMORANDUM

Department of Public Services

**DATE:** August 1, 2023

**TO:** Parks and Recreation Board

**FROM:** Scott Zielinski, Department of Public Services Director  
Carrie Laird, Parks & Recreation Manager  
Brendan McGaughey, Parks & Forestry Foreman

**SUBJECT:** Crestview Pickleball Courts-Sound Mitigation Options

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### INTRODUCTION:

Due to residential complaints associated with Pickleball, the City Manager requested the Department of Public Services review sound mitigation practices and requests the Parks and Recreation Board to review potential sound mitigation options provided by staff, and recommend appropriate prioritization and implementation of such avenues.

### BACKGROUND:

Pickleball courts were deemed a priority project as part of the 2020 Parks and Recreation Bond. In April of 2022, after significant discussion and review of potential pickleball court locations, and in consideration of surveys on Engage Birmingham, Crestview Park was selected by the Parks and Recreation Board for Pickleball by way of a conversion of the existing tennis courts. It is common practice to create a Pickleball court by converting an existing tennis court as an alternative to new construction because of cost and time savings to create courts.

Crestview Park was selected for court conversion by meeting set criteria: available (on street) parking, lower number of reservations for tennis compared to other tennis courts, sufficient room for six Pickleball courts, a shady area next to the courts to accommodate seating, current park activity levels, no directly adjacent homes located next to the courts (a street barrier between the courts and residences) and no conflicts with future projects.

In May of 2022, the City Commission approved Crestview Park court conversion project from two tennis courts to six pickleball courts. Further, the City Commission directed staff to convert the two existing tennis courts as soon as possible to pickleball due to the increasing demand for pickleball courts. The two tennis courts were changed to pickleball courts only (one over each tennis court) in June of 2022 in order to provide pickleball courts while staff prepared the Request for Proposals (RFP) to accomplish the six new pickleball courts.

Construction of the courts was completed approximately one year later (June 2023). At the time, an alternate of acoustic style fencing was included in the RFP, however, the contractor did not

provide a proposal for it. Staff notes there are funds budgeted for site furnishings and/or acoustic barriers such as fencing and landscaping.

With the opening of the courts, pickleball rules and regulations were posted, including hours of play and "Open Play" rules. Hours of pickleball are 9am-8pm daily. Within the daily hours, two separate blocks of time exist, open play hours and hours that reservations may be made by residents.

Open Play refers to a set time of day players can "meet up" with other players who may be looking for partners to play with. Hours for Open Play at Crestview Park are 9am-12pm daily. Reservations are available between the hours of 12pm-8pm daily for residents only. Reservations are not required, open courts may be used without a reservation, but to guarantee a resident the availability of a court, residents should make a reservation.

Since the opening of the six courts in June of 2023, there has been an abundance of activity. Neighboring residents have been in contact with city officials regarding parking and noise concerns, prompting staff to review some potential options to help with noise mitigation both online and by visiting other communities that provide pickleball courts .

DPS staff visited Grosse Pointe Shores where "Acoustifence®" is currently in use around one side of the single pickleball court, where they also require the use of "quieter" pickleball paddles and balls. A noise reduction was noticeable outside of the Acoustifence®. Difficulty of enforcement was also noted of the required equipment.

Unofficial decibel readings with a smartphone app were taken outside of the Crestview Park pickleball courts, and the highest achieved decibel level was 75 dB during some singular hits to the ball. Note that noise levels are not consistently at 75 decibels, other studies have shown an average of 70 dB over the course of a pickleball match. If "acoustifence®" alone was in place, this should reduce the noise by approximately 10 dB, to 65 dB (which is about as loud as an electric shaver) or 60 dB average over the course of a match (about as loud as a normal conversation). See the attached chart published by Yale University for more examples.

Below are potential options:

**Option #1:** Install "Acoustifence" (1/8" Paneling) Along Southern Fence

Estimated Cost: \$924 per 6' curtain/panel, 146' total: \$25,000-\$30,000 (with installation)

Pros: Timely, approximate 10-12dB reduction outside of the noise restricted area, green

Cons: Will restrict airflow and visibility, not aesthetically pleasing, moderate cost

**Option #2:** Require Sound Muffling Paddles

Estimated Cost: \$100-\$149 each

Pros: Timely, low cost

Cons: Still creates high-pitched sound, additional maintenance to restock City supplied paddles (if any), unable to constantly monitor

**Option #3:** Require Sound Restricting Balls \*(ex. ONIX Fuse G2, not foam)

Estimated Cost: \$3/each

Pros: Timely, low cost

Cons: Still creates high-pitched sound, additional maintenance to restock City supplied balls (if any), unable to constantly monitor  
\*Still plastic balls, foam balls are the least noisy but not recommended for use outdoors

**Option #4:** Install Berm and Landscaping

Estimated Cost: \$7,500-\$15,000

Pros: Green solution, pleasing aesthetics, long-term noise reduction

Cons: Ineffective on its own, not irrigated, additional maintenance for DPS staff

**Option #5:** Completely enclose the pickleball courts with additional 12' fencing and a lockable gate, along with noise reduction paneling, require key FOB for membership/entry

Estimated Cost: \$125,000+ and annual administration costs of selling memberships, etc.

Pros: Highest achievable noise abatement

Cons: Expensive, low visibility, permanent electrical and fencing modifications required, courts would need to close during construction, additional maintenance and labor for membership sales required

**FISCAL IMPACT:**

\$75,000 was budgeted for noise abatement and site amenities for the pickleball courts at Crestview Park.

**PUBLIC COMMUNICATIONS:**

Regarding Pickleball:

- Pickleball Public Input Session-Parks & Recreation Board Meeting - May 11, 2021
- Parks & Recreation Board Meeting Agendas- Pickleball a monthly discussion item June 2021-November 2021
- Engage Birmingham – 2 Surveys on Pickleball Locations during the above listed timeframe
- City Commission Meeting-May 23, 2022
- Parks & Recreation Board Meeting- August 2, 2022
- City Commission Meeting- August 15, 2022
- Parks & Recreation Board Meeting Agendas September 2022-December 2022

**SUMMARY:**

The City is looking to provide noise abatement for pickleball while continuing to have successful use of the courts. The department has budgeted for noise abatement and additional site amenities.

DPS staff is asking the Parks and Recreation Board to make recommendations from the above listed options, and/or suggest other options to explore to help with noise reduction.

**ATTACHMENTS:**

1. Acoustifence photographs and information
2. [Pickleball Paddles](#) and [balls](#) (as weblinks)
3. Decibel level chart

**SUGGESTED PARKS & RECREATION BOARD ACTION:**

Make a motion recommending the City pursue Options \_\_\_\_\_ for sound mitigation.

Attachment #1- Acoustifence Photographs & Information



## **Acoustifence® – Pelican Landing Pickleball Court**

Acoustiblok Inc. was contacted about a noise issue with a Pickleball Court (Of which we supply many). Green Acoustifence Curtains were easily installed on the existing chain link fence. Per the customer: "No more complaints since the Acoustifence has been installed."



## Product Name

**AcoustiFence® Noise Reducing Fences**

### For Manufacturer Info:

**Contact:**

Acoustiblok, Inc.  
6900 Interbay Boulevard  
Tampa, FL 33616  
Call - (813) 980-1400  
Fax - (813)849-6347  
Email - [sales@acoustiblok.com](mailto:sales@acoustiblok.com)  
[www.acoustiblok.com](http://www.acoustiblok.com)

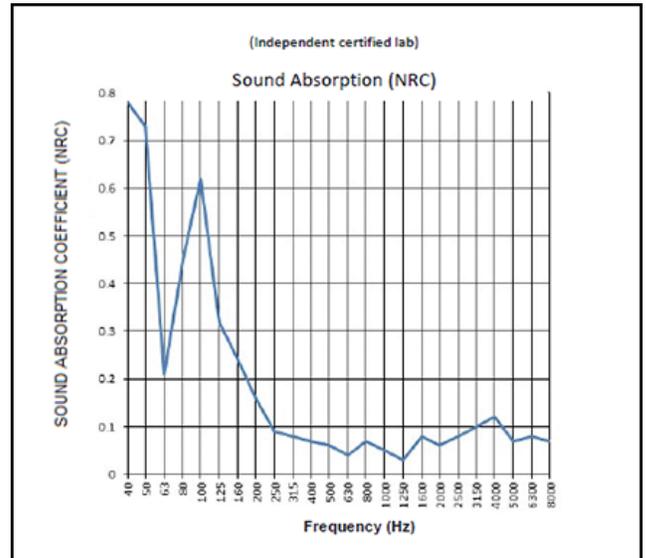
## Product Description

**Basic Use**

AcoustiFence was originally developed by Acoustiblok, Inc. for noise isolation on offshore oil rigs, but has since proven successful in many other demanding outdoor settings, such as construction sites, commercial/industrial facilities, and residential communities.

**AcoustiFence Noise Reducing Fences**

AcoustiFence is a unique, heavy-mineral filled, barium free, viscoelastic acoustical material that is made in the U.S.A. Unlike fences or shrubs, this material does extraordinarily well in blocking direct sound, and a unique characteristic of the material sets it apart from other sound barriers when dealing with very low frequencies.



**Sound Absorption Test Results**

**Benefits:**

- Effectively reduces exterior noise
- Over 300 UL Classifications
- Easy to install
- Resistant to UV, dirt and water
- Resistant to corrosion, mold and mildew

## Product Name

### **AcoustiFence<sup>®</sup> Noise Reducing Fences**

#### **AcoustiFence Noise Reducing Fences continued...**

In frequencies of 50Hz and below, the heavy limp AcoustiFence material actually begins to vibrate from low frequency sound waves. In essence it is transforming these low frequency sound waves into mechanical movement and internal friction energy. Laboratory tests indicate that this transformation process inhibits these lower frequencies from penetrating AcoustiFence, reducing their level by over 60 percent relative to the human ear. In addition, AcoustiFence becomes an absorbent material in these frequencies with test results show an NRC (noise reduction coefficient) as high as 0.78 (with 1.00 being the max). As such it is clear that AcoustiFence not only reduces sound as a barrier, but also acts as an acoustical absorbent material in very low frequencies, as opposed to reflecting those frequencies back like most other barriers. It is worth noting that lead sheets (which are toxic) work in the same manner.

Green AcoustiFence has the same sound deadening properties and features as our original black AcoustiFence. In addition, this new version features advanced reinforced edging and stainless steel cable ties. Made and sourced in the USA, It comes in 6x30 foot sections and is one of the most effective first steps in reducing noise for industrial, commercial and residential projects.

#### **Green AcoustiFence**

One of Acoustiblok's most popular products, designed as an advanced sound barrier that easily attaches to most types of fencing, is now available in a new green shade that easily blends into the environment. This makes it ideal for landscaping projects, residential home use and any outdoor applications where blending into the natural foliage is a concern.

## Product Name

### AcoustiFence® Noise Reducing Fences

#### Sound Transmission Class (STC)

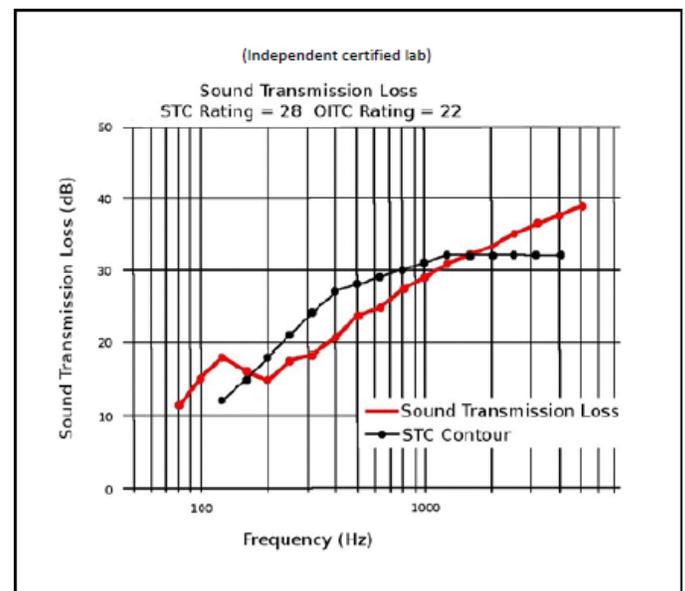
Sound Transmission Class (STC) is a single number that represents the sound blocking capacity of a partition such as a wall or ceiling.

STC numbers are often called out in architectural specifications, to assure that partitions will reduce noise levels adequately. For performance similar to laboratory test numbers, it is necessary to adhere closely to the construction materials and techniques used in the tested partition.

STC is calculated by comparing the actual sound loss measured when 18 test frequencies pass through a partition, with fixed values for each STC level. The highest STC curve that the measured sound loss numbers fit under, determines the STC rating of the partition.

STC calculations emphasize sound frequencies that match the human voice. A high STC partition will block the sound of human speech and block noise that interferes with human speech. To estimate high and low frequency performance, consult the Sound Transmission Loss graph included in STC test reports. Impact Insulation Class (IIC) measure transmitted impact noise and are specified for floor-ceiling assemblies only.

Acoustical test reports for numerous wall and floor/ceiling designs are available from Acoustiblok on request. All our test data is taken directly from independent 3<sup>rd</sup> party laboratories under NVLAP certification.



#### Sound Transmission Loss Test Results

## Product Name

### AcoustiFence® Noise Reducing Fences

#### Physical Properties

- Barium free
- Minimum STC 28 per ASTM E90-02 & ASTM E413-87
- Minimum sound attenuation 24 dBA @ 100Hz & 16dBA @ 40Hz
- Size - 6 ft.(1.83m) x 30 ft.(9.14m) x 0.125 in. (.3mm) – 180 ft<sup>2</sup> (16.83m<sup>2</sup>)
- Color - black or green
- High UV resistance
- Heat tolerance: 200°F (93°C) for 7 days, less than 1% shrinkage with no deformation.
- Freezes at -40°F (-40°C). Do not unroll or flex frozen material. Properties not affected by freeze/thaw cycles.
- No fungal or algal growth and no visible disfigurement, per ASTM D3273 and ASTM D3274 (rating=10)
- Tensile Strength - min. 365 PSI
- Weight per section: 185 lbs. (84Kg)

#### Material Specifications – Part # “Acoustifence 6x30 Industrial”

Acoustical Rating	STC 28 / OITC 22
Size	6 ft. (1.83m) x 30 ft. (9.14m) x 0.125 in. (.3mm) 180 ft <sup>2</sup> (16.72m <sup>2</sup> )
Weight	185 lbs. (84Kg)
Fastening	Black brass grommets every 6 in. (152mm) along top edge with four grommets spaced along the bottom edge. Commonly installed horizontally.
Color	Black
(This is an industrial product and minor surface blemishes are a possibility.)	



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June 2012

To Whom It May Concern:

Country Roads RV Property Owners Association, Inc. recently purchased and installed Acoustifence® on the Pickleball court within our community. Since being installed only a few years ago, the Pickleball court has been considered a nuisance by some of the nearby residents because of the sound that the paddle makes when hitting the ball. Pickleball is a mixture of badminton and tennis however; the ball is a large type of wiffleball.

The Board of Directors saw the need to keep the game because of its growing popularity and abate the noise for the neighboring homes. In researching on the internet, a Board member found the website for Acoustiblok, ® Inc. After much research the Board of Directors voted unanimously to purchase and install the Acoustifence®. Upon installation the neighboring homes noticed a considerable reduction of the repetitive ball play.

With our close proximity to Phoenix, Arizona, other communities have asked to see and test for themselves the Acoustifence® product. I have attached to our testimony the correspondence from Bill Booth, President of The USA Pickleball Association.™

I can attest that Acoustifence® material is not difficult to install, can be easily blended into the aesthetics particularly if you have existing wind screens and does abate any noise pollution.

Feel free to contact me personally if you have any questions about our Community's experience.

Sincerely,

Melissa Wood, CAAM®  
Community Association Manager

## *Decibel Level Comparison Chart*

<b>Environmental Noise</b>	<i><b>dBA</b></i>
Jet engine at 100'	140
<b>Pain Begins</b>	<i>125</i>
Pneumatic chipper at ear	120
Chain saw at 3'	110
Power mower	107
Subway train at 200'	95
Walkman on 5/10	94
<i>Level at which sustained exposure may result in hearing loss</i>	<i>80-90</i>
City Traffic	85
Telephone dial tone	80
Chamber music, in a small auditorium	75-85
Vacuum cleaner	75
Normal conversation	60-70
Business Office	60-65
Household refrigerator	55
Suburban area at night	40
Whisper	25
Quiet natural area with no wind	20
Threshold of hearing	0

Note: dBA = Decibels, A weighted