



PARKS & RECREATION COMMISSION STAFF REPORT

Item 4
May 6, 2021
Regular Business

AGENDA ITEM INFORMATION

TITLE:	Mercerdale Park Playground Renovation Design	☐ Discussion Only
RECOMMENDED ACTION:	Develop a preferred design from the options presented; make a recommendation to City Council.	☒ Action Needed: ☒ Motion ☐ Ordinance ☐ Resolution
STAFF:	Jason Kintner, Chief of Operations/Public Works Director Paul West, CIP Project Manager	
COUNCIL LIAISON:	Jake Jacobson	
EXHIBITS:	A. Public Meeting #2 Poll Results, dated April 14, 2021 B. Equipment and Layout Options 1 and 2 C. Accessible Whirl modification for Option 2 D. Inclusive Playground Rating (not current) E. Surfacing Options F. Color Palette Options	

SUMMARY

The Parks and Recreation Commission (PRC) will consider design options for the Mercerdale Park playground about equipment selection, colors, and surfacing materials and recommend a preferred design to City Council. The specific choices are:

- Playground configuration – Option 1 (72" platform height) or Option 2 (60" platform height) with associated ground level play equipment
- Addition of Accessible Whirl to Option 2, if selected
- Playground surfacing – mixed surfacing with simple or more elaborate embedded design, or synthetic play grass
- Playground color palette – palettes of neutral and cool colors with or without complementary accent colors

BACKGROUND AND BUDGET

The Mercerdale Playground was built in 2002. Parks Maintenance staff, comprised of Certified Playground Safety Inspectors, have conducted routine inspections of the playground equipment over the course of its life. The inspectors have documented increasing deterioration in the condition of the equipment over the past five years. This is consistent with the common expectation that playground equipment lasts 15-20 years on average. Ultraviolet light and environmental impacts cause the materials to degrade in this time span.

In the winter of 2019, the playground flooded after heavy rain, causing the playground to be intermittently closed. City staff determined the cause was decomposed wood chip material clogging the drain intake.

Flooding and subsequent playground closures occurred repeatedly in the winters of 2020 and 2021. This drainage malfunction has increased the urgency to renovate the playground. City staff proposed a renovation project for the playground in the Capital Improvement Program (CIP) budget in the fall of 2020. The project included replacing the equipment, fixing the drainage, and installing a resilient rubber play surface to make the playground more accessible and easier to maintain. City Council passed the 2021-2022 biennial budget with this project budgeted at \$490,000.

The playground designs presented in this report are responsive to the input staff has received from the community. However, addressing the issues through design has increased the cost for the playground beyond what was budgeted. The Project Team anticipates making an appropriation request to the City Council to increase the budget for this project and solicit private contributions to the project to help offset the additional cost.

PUBLIC INVOLVEMENT AND PARTNERSHIPS

The Project Team, consisting of various City staff and representatives from Northwest Playground, conducted two public meetings on the playground renovation using Zoom teleconferencing technology. The [first meeting was held on February 8, 2021](#) to discuss the scope of the project and seek general input on project direction. Twelve citizens attended the meeting. The City heard from a number of people advocating for a playground that would be more accessible to range of physical abilities in both children and their caregivers. Participants also asked that the City consider the play styles of children with sensory processing and cognitive differences.

The first meeting and a subsequent draft design spurred additional community conversation. City staff received many emails expressing concerns and desires about the proposed playground design. The Project Team set up a [Let's Talk project page](#) to provide project information and collect comments and questions. The initial input can be summarized as follows:

Design the playground to be:

- Accessible to a range of users
- Inclusive of different play styles
- Provide several levels of challenge
- Fun and inviting
- Keep the train theme

Construct the playground in a way that is:

- Expedient: get it done this summer
- Cost effective: provide value to Mercer Island taxpayers
- Environmentally-friendly: use non-toxic materials, preserve open space, use sustainable methods

A second meeting was held April 14, 2021 ([Meeting #2](#)). At this meeting, the City asked for more specific input on design choices using the polling feature available on the Zoom platform. Options for colors, surfacing, platform heights, climbing equipment and spinning equipment were presented. A robust question and answer session followed. More than 20 citizens, including future playground users, attended the meeting. See Exhibit A for meeting polling and questions and answers.

The Mercer Island Preschool Association (MIPA) has been a partner in supporting funding and design of several of the City playground projects, including the original Mercerdale Playground and more recently in the

Luther Burbank and South Mercer playgrounds. At the beginning of 2021, City staff contacted MIPA to advise its leadership that the City would be replacing the playground and to ask for its involvement in the project. Three members of the board participated in an initial meeting and have continued to be involved in the project as it has progressed. MIPA has supported the project by advertising the public meetings to its membership. It has also conducted polling and facilitated discussion among its membership to help the Project Team understand the range of needs and interests in the project.

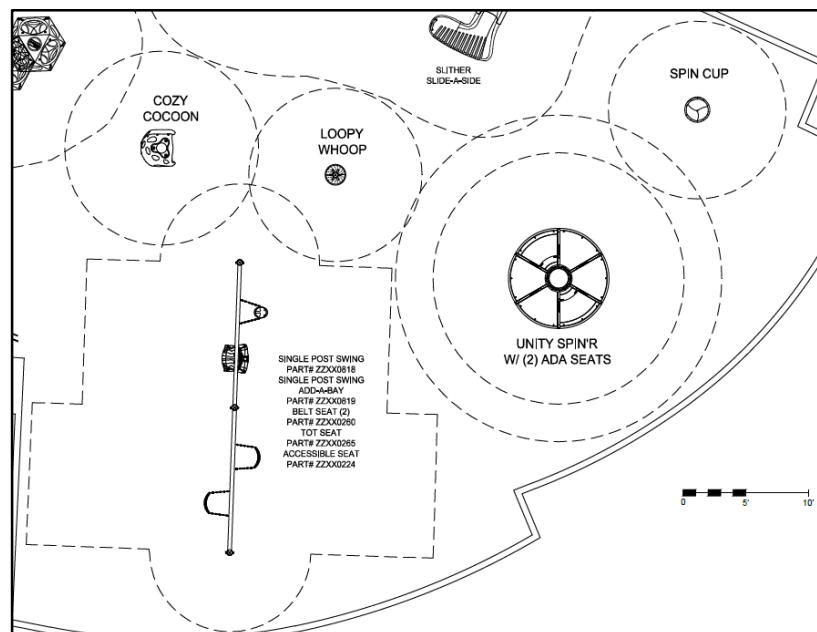
PROJECT APPROACH

Playground renovations are public works projects that require competitive bidding. For projects that have a large commodity component such as play equipment, competitive bidding may take place through purchasing contracts. King County Directors Association (KCDA) is a purchasing cooperative for government and school district agencies that solicits competitive purchasing bids and awards purchasing contracts with vendors according to the laws of the State of Washington. The City uses KCDA to purchase commodities and allied services on a wide range of products from garbage cans to the Island Crest Park synthetic turf field. It is an efficient means of procurement when much of the project is the purchase of commodities with predictable installation needs. It is also a faster process than the phased design/bid/construct process that is typical in more complex or site-specific public works projects.

The City of Mercer Island began working with Northwest Playground, an approved KCDA vendor, as a potential supplier for this project in April of 2020. They had been the supplier for the Luther Burbank and South Mercer playgrounds. City staff has had experience with the company as an efficient, capable and responsive vendor.

DESIGN ISSUES SUMMARY

Playground Design in General – playgrounds are designed to engage children from toddlers through pre-teens in play activities. A good playground offers multiple levels of challenge and includes both ground play and elevated play. The playground equipment is designed with buffers or “use zones” that must be considered in their placement. Dependent on the types of equipment, use zones may overlap in some situations, while they must remain separated in others, as illustrated in the following plan excerpt:



Accessibility – Play opportunities should be available to children and caregivers with a range of physical abilities. The Americans with Disabilities Act (ADA) defines minimum standards for access routes and proportions of equipment that must be accessible. A more holistic approach designs the main activities to be fully accessible and supplements with other features to diversify challenge levels.

Climbing and height are key aspects of most playground designs. Getting up high is compelling for children of all abilities. Perhaps for this reason, most (61%) participants in Meeting #2 favored the playground option with the tallest (72 inch) accessible platform structure. See Option 1 in Exhibit B. This design would enable all users the ability to access the tallest platform. It also offers thrilling sliding experiences for those who are able to transfer to the slides.

The City also received input from families that the playground was not providing older children enough engaging options. Option 2 provides for a Cone Spinner feature that is responsive to this feedback. It was the most popular (40%) stand-alone climbing option at Meeting #2. The trade-off is a reduction in the main climbing structure to a 60-inch platform height with a proportional reduction in accessible activities. Another result of Option 2 is that the Cone Spinner does draw some of the play focus away from the main climber, reducing social interactions among users of differing abilities. However, the cone spinner can be enjoyed by users that can transfer to the main platform, so it has some inclusive potential. Options 1 and 2 are two of the best choices possible in the available space.

	Option 1	Option 2
Key features	Ramps provide access to six platforms with a max. height of 72 inches; the new train is relocated to the east side, one cup spinner, swings, sensory panels, musical instrument ensemble	Ramps provide access to five platforms with a max. height of 60 inches; the train is replaced in its current location, climbable cone spinner, two single spinners, swings, sensory panels, musical instrument ensemble
Number of Platforms	6	5
Height of Highest Platform	72"	60"
Height of Tallest Slide	96"	72"
Number of Slides	5	3
Number of Swings	4	4
Number of Spinners	1	3
Number of Under-platform Features	14	10
Number of Shades	4	4
Cost (as shown)	\$774k (does not include contingency, permits, project management)	\$755k (does not include contingency, permits, project management)
Pros:	Allows wheelchair access to a significant height with lots of climbing and sliding activities;	Provides much of the accessible and inclusive play as Option 1; provides a challenging freestanding

	imaginative play features underneath structure also provide social/sensory regulation options	climber; provides spinning activity choices (inclusivity)
Cons:	Limited spinning; train less visible;	Wheelchair users do not gain as much height, have fewer interactions with other users

Accessible Whirl – The top-ranked (58%) spinning option for the playground at Meeting #2 was the Accessible Whirl. This equipment provides wheelchair users self-supported access to a social spinning activity. It currently does not fit in either layout option. However, with a minor modification of the perimeter curbing, it could be added to Option #2. See Exhibit C. This would be a significant enhancement of accessibility.

Inclusivity – Children have different styles of play and find enjoyment in different ways. Those with sensory processing or cognitive differences may need a situation with less stimulation to be able to engage. Solitary activity options can be offered with opportunities for social play. Sound, color and texture stimulation should be considered in the design. At the same time, children with needs for high stimulation should be considered also. No playground can meet all play needs, but attention to these details can provide a play environment that welcomes many different play styles.

Both Options 1 and 2 offer solitary as well as social play options. Two sensory panels would provide engaging mirrors, puzzles, and other manipulative activities. Musical instruments are located at a distance from the main play area. These provide a valuable sensory experience, but are located to provide some acoustic separation. Play features located underneath the main platform structure also offer sensory and social refuges and maximize the use of space. Option 2 also offers both solitary and social spinning activities. Color choices have been considered to avoid bright and stimulating colors except as accent features. Neutral and cool colors are prevalent.

City staff are knowledgeable, but are not experts on accessibility and inclusion. The preliminary design (not the current one presented here) developed by Northwest Playground was rated for inclusivity by [Let Kids Play](#), a consulting firm that specializes in developing inclusive play opportunities. See Exhibit D. We expect to have the same analysis completed for the options that PRC is considering at this meeting. The final design may be modified to improve inclusivity based on the results.

Surfacing – Playground surfacing must meet certain standards to protect users from fall injury. It also must be compatible with wheelchairs and other mobility devices. Engineered wood chips are technically accessible, but in practice are very difficult for people in wheelchair to traverse. Resilient rubber (“poured-in-place”) or synthetic play grass are the two surfaces that are considered fully accessible and provide the required fall protection. Combining the two surface types can help inspire imaginative play with patterns or designs embedded in the surface. The play grass also invites ground-seated play. The polling in Meeting #2 showed a distinct preference (58%) for the mixed surfacing.

The cost of mixing surfaces and creating designs in the surfacing can be significant. For comparison, consider the mixed surfacing in the Option 1 and 2 as the base product. Switching to all play grass would save \$38k. This product would show wear in high use areas and require periodic renovation. Staff does not recommend this option. Switching to a plain, solid color resilient surface without patterning or designs would save only about \$6k. On the other hand, installing a more elaborate design in the rubber surfacing such as shown in

Exhibit E would add about \$20k to the project. For this meeting, staff is asking PRC to consider the added value of this design work in the mixed surface and recommend either the simpler or more elaborate design.

Color Palette – In addition to the sensory considerations around color mentioned previously, we have received comment asking that the playground colors compliment the natural character of Mercedale Park. At Meeting #2, we presented four color palettes that were responsive to these considerations. The polling on the four options showed that participants were split on the preferred color choice. No option gained more than 30% support. Most participants wanted at least some color accents in a more neutral color scheme (56%). For this meeting, we are presenting updated options based on this input (see Exhibit F). A recommendation from the PRC on color will not by itself determine the final color scheme. Staff will complete further work to ensure a harmonious color palette, for example by obtaining material samples of the selected colors and verify compatibility before finalizing the selections.

Additional Issues – We received suggestions that the playground incorporate natural materials and avoid synthetic materials. Suggestions for sensory play with water or sand were brought up. Concerns about the health risks of the rubber surfacing were also raised.

Staff supports natural play opportunities. The Adventure Playground and South Mercer playground have been two staff initiatives to incorporate more natural materials and activities into children’s play. However, it is more complicated to design such a playground, and even more so in concert with other objectives such as accessibility and inclusivity. This is worthy of pursuing at the right site with adequate design support. Given the objectives for this project, staff concluded that natural materials were not a good choice for this project.

Concerns about rubber surfacing may have been the result of widely publicized reports about the use of shredded tire “crumb” rubber that has been used in athletic fields. There has been much debate in the sports and health fields about this product. The resilient rubber surfacing has no exposed crumb rubber. It consists of virgin rubber granules that are mixed with a binder. The solvents in the binder have health risks for the workers that install them. However, once the binder is cured, the remaining resin is stable, and off-gassing is minimal. This product was used at Luther Burbank Park almost ten years ago. It has been a popular and successful surface material for that playground. Given the objective for accessibility on this project, the natural materials such as the engineered wood chips that have been typical at playgrounds are not a good choice here.

RECOMMENDATION

1. Provide input on the following choices:
 - Playground configuration – Option 1 (72” platform height) or Option 2 (60” platform height) with associated ground level play equipment.
 - Inclusion of Accessible Whirl in Option 2, if selected
 - Playground surfacing – mixed surfacing with simple or more elaborate embedded design, or synthetic play grass
 - Playground color palette – select a preferred palette from the options offered
2. Make a recommendation to City Council for Parks and Recreation Commission’s preferred option for Mercedale Park playground.