UPPER LUTHER BURBANK PARK BIKE SKILLS AREA ASSESSMENT

MARCH 2022



Report Prepared For:

City of Mercer Island 9611 SE 36th Street Mercer Island, WA 98040

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PROJECT LOCATION

The City of Mercer Island is home to a designated bike park, located within Upper Luther Burbank Park. The bike park, currently known as the Bike Skills Area, is situated at the southwest corner of the park, in a ravine that parallels 84th Ave SE (see Figure 1). The closest entry to the Bike Skills Area is located along 84th Ave SE, at SE 32nd St, which is marked with a parks sign. Park hours are 6 am to 10 pm.

Parking for users is located on 84th Ave SE, across from the entry and adjacent to residential homes. The Bike Skills Area is accessed from the park's pedestrian-based trail system, which runs alongside the lower section of the bike course.

BIKE SKILLS AREA BACKGROUND

The Bike Skills Area (BSA) was originally created by neighborhood BMX riders in the 1970s. At that time, the park was owned and managed by King County. Use of the area continued over the years, with users creating and shaping jumps and trails within the ravine area. In 2003, King County transferred Luther Burbank Park to the City of Mercer Island, and in 2006, the City



Figure 1. Location of Bike Skills Area within Upper Luther Burbank Park

adopted a Master Plan for the entirety of Luther Burbank Park. The bike area was identified in the plan, which indicated that the 'existing bike track would remain' (Luther Burbank Park Master Plan, page 5).

Since 2006, the City has provided oversight of the area, posting rules signage and at times, providing users with jump building materials and tools. City staff have engaged with users of the BSA to establish lines of communication and educate users on appropriate use of the site. Starting in approximately 2016, City staff noted that the bike area was expanding and installed fiberglass markers to demarcate the boundary of the bike park. Use of the area began to increase notably in 2018-2019, and even more with the onset on the COVID-19 pandemic (2020), likely due to the lack of other recreation and sports program offerings.

Over the last several years, increased use and unauthorized expansion of the Bike Skills Area has led to damage to surrounding hillsides and vegetation, the construction of unauthorized off-shoot trails, and jumps that exceed the posted height limits. In 2020 and 2021, the City's Parks Maintenance team visited the site often to post advisory signage, re-install the fiberglass boundary markers and deconstruct large unauthorized jumps. Use of the site continued to increase, compounding the issues, and City staff determined that they could no longer keep up with the maintenance tasks that are vital to protecting

the surrounding forest and keep the site safe for users. This led the City to temporarily close the Bike Skills Area in October 2021.

Recognizing the need for professional consultation on the Bike Skills Area, the City contracted Action Sports Design, LLC (ASD) in October 2021 to perform a full assessment of the site and make recommendations to improve the operations and safety of the Bike Skills Area while minimizing environmental impacts.

PROJECT OBJECTIVES

The primary goals for this assessment are:

- Determine the condition of the Bike Skills Area
- Identify potential areas of concern with the current layout and operations
- Provide recommendations about the future design and operation of this facility

To meet these objectives, Action Sports Design provided a full assessment of the site, evaluating environmental elements, course layout and use, and circulation around the site. ASD also worked closely with City staff to gather input from park users through social media, a public meeting, and two user surveys.

Recommendations resulting from this assessment are focused on:

- Minimizing the environmental impact of the course on this forested park
- Improving safety both within and around the course
- Reducing site maintenance and management needs
- Clarifying rules for users
- Improving the bike course for users

Safety and sustainability are critical to the long-term success of the Bike Skills Area, and were key elements of ASD's assessment, analysis, and recommended next steps.

ASSESSMENT INFORMATION

On November 10, 2021, Mike McIntyre, Principal with Action Sports Design, visited the Upper Luther Park Bike Skills Area to perform an on-site site assessment of existing conditions. Weather conditions were overcast with a slight drizzle, approximately 55 degrees F, and good visibility throughout the park site lines.

During this on-site assessment, areas evaluated included the flow of the park, how the riders were using the trails, jumps, access to enter the park and potential conflict with pedestrian trail users. In addition, drainage conditions, soil used for construction, vegetation, borrow pits and tree crown locations were assessed.

Aerial photography took place via drone footage, Trail GPS (Gaia) was utilized to map existing trails, all surrounding trails were walked, jump profiles were photographed and reviewed to be utilized for the assessment.

Photography of site conditions and existing concerns were gathered for future diagrams and information to be utilized within the public meeting presentation. Photos were taken at specific angles and locations to be utilized later in the report for design direction and suggested conflict modifications for trail and bike park users. All markers and existing signage were documented during the onsite analysis.

ASD requested a topographic survey of the site showing the grades, trees, and trails to provide an accurate snapshot of current conditions, and for use in defining the limit of work for future renovations. City staff retained True North Surveying to perform this topographic analysis of the site (see Appendix D).

BIKE AREA DESCRIPTION

At the time of this assessment, the Bike Skills Area consisted of approximately 290 linear feet of bike flow trail system with the following elements:

- Session pad: Primary starting point at the top of a flow trail system that descends to a series of jumps along the flow trail.
- Jump line: The series of jumps along the line consists of a tabletop jump, double jump, and tabletop jump. The tabletop jump feeds into the berm.
- Berm/berm return: The semi-circular feature that defines the end of the jump line and the northernmost extent of the bike course. Cyclists use this berm to change direction and gain speed as they enter the return line back to the session pad.
- Return line: Coming out of the berm, the line splits into a return line to the session pad, and a bypass pad/ jump off on the east edge of the bike area. The return line back to the session pad consists of approximately three rollers (small, rounded mounds that allow riders to generate momentum riding uphill).

ASSESSMENT CRITERIA, METHODS AND OBSERVATIONS

Bike Skills Area site components that were reviewed and assessed are as follows:

Soils: The composition of soils used for existing trails, jumps, and profiles were assessed for their ability to maintain angle of repose (stable side slopes that are not prone to slumping), compaction, and appropriate shaping/profiles for bicycle activity. A visual analysis and ribbon test were used to determine sand, silt, clay, and organic matter composition. Soils are higher than recommended in organic matter, likely due to the extraction of soils from embanked slopes and areas around the course. Soil has higher silt and sand content and lacks the necessary high clay content to repel water and hold a stable angle of repose and dirt jump profile.

Drainage: Existing low spots where water was presently collecting indicates that there are no channels or swales that drain the bike area. Some short swales to the sides of the trail do exist but do not extend beyond the boundaries of the bike area. To function as a four-season amenity, the drainage issues at this site must be addressed comprehensively.

Grading: The primary reason for lack of positive drainage on the site is the use of adjacent hillsides as "borrow pits." Native soil has been pulled from hillsides near the jumps, creating undetermined or vertical embankments which are highly subject to erosion. Soils have also been removed from the ground level adjacent to jumps, creating areas for water to pool and steepening the sides of the jumps beyond a stable angle of repose.

Trees and vegetation: Due to the large amount of "borrow pits" outside of the project limit markers, the soil around tree crowns and vegetation needed for slope stabilization have been removed in several areas. Tree crowns have also been deeply covered and used as retaining structures for soil in some areas.

Circulation: One of the more obvious concerns is the existing trail circulation for both bikers and trail hikers and walkers. The BSA has one primary point of entry, located at the bottom of the course where the pedestrian trail runs alongside the bike area. The slope of the hiking trail down to the bike park is very steep (approximately 21% grade), causing bikes to have to brake and slow down considerably before entry. Entry into the bike area is located at one of the higher velocity points in the course, as riders exit the last jump and enter the turnaround berm.

Shared use of the hiking trail and bike park feeder line is identified as an area of concern, as there is potential here for conflict or collision between bikers and pedestrians. There is a critical need to explore options to alter the point of entry to the BSA, in order to separate users in the park.

Wayfinding: There is currently no wayfinding signage that alerts parks visitors and trail users to the location of or entrance to the Bike Skills Area within Upper Luther Burbank Park. Signage with park maps should be added to the main park entry points and near the bike course to educate pedestrians and bikers about the best routes for their activity.

Signage: The placement of current BSA signage indicates the main point of entry to the course, which has contributed to the pedestrian/ biker conflict zone. Bike area signage should be removed and placed at a newly defined entry for the bike course, in order to separate these trail uses. The existing signage

contains both important and outdated information. Signage should be updated to reflect current rules and user guidelines when the area is re-opened to the public.

Jump line layout: The current jump line layout follows a functional flow from top to bottom, with a decent berm return. However, exiting the berm return, the return line to the top of the course breaks into several lines, none of which are a proper return line to the session pad/flow trail start. The spacing of jumps and angles of features, lips and overall diversity of features was lacking. Having been constructed from softer soils, the lips of the jumps were extremely flat and rolled out. It was clear that BSA users utilized unsuitable soil found on-site adjacent to the features, resulting in substandard elements of the course.

Initial findings from the site analysis identified areas in need of revegetation, angles of repose to be restored to appropriate grade, circulation and trail route concerns, and problems with drainage. Preliminary recommendations were to restore the course to its original profile and address the damage to vegetation while future decisions on the design and operation of the BSA were under consideration. ASD supported the closure of the BSA and fencing of the area in order to preserve and address vegetation while planning for the area was in progress.

ASD advised City staff of preliminary findings from the site assessment, including confirmation of previously acknowledged and newly identified areas of concern. ASD provided these preliminary findings through written report, graphics, and during Zoom format meetings in preparation for the public meeting.

ANALYSIS

Data gathered during the onsite analysis was formulated into a preliminary site analysis, which includes diagrams and maps of the existing bike skills area, illustrate existing conditions, areas of concern, future opportunities, and potential recommendations to the City.

Once the topographic survey was complete, a base map was created of the existing BSA layout using AutoCAD software. Drainage issues at the existing site highlight areas in need of native soil replacement to restore the site to its original grade. The base map also identifies tree crowns of concern, and trail and bike conflict areas within the BSA.

ASD reviewed current points of entry to the park and identified potential conflict areas between where bikers enter and walkers utilize trails. Currently, walkers and bikers share the descending trail to the bottom of the BSA along the ridge. Additionally, the return berm shares an edge with the trail, resulting in riders in close proximity with trail walkers. The descent down the hill to the entrance to the BSA is excessively steep for bike users and walkers alike. Reconfiguring the entrance to the BSA to the top of the area was identified as a possible modification to the park as part of a potential future design.

The site analysis and resulting graphics were used to generate a summary of existing conditions, identify areas of concern, and to offer City staff and community members suggestions on priority actions for site improvements.

Action Sports Design worked with the City to create opportunities for the public to learn about the BSA assessment, provide comments, and give input into potential improvements to the bike course layout and elements. Each forum for public input is outlined below.

Social Media

Community members were invited to follow the City's social media profiles for updates and visit the "Let's Talk" Bike Skills Area page for details about the work being performed, engagement opportunities, and upcoming events.

Online Survey #1

Three weeks after the closure of the BSA, a survey was launched to gather data from course riders. This survey was open from October 25 to November 4, 2021 and received a total of 95 responses. The survey generated a great deal of information about current Bike Skills Area users and their opinion on the current site. Some survey highlights includes:

- 93% of respondents use mountain bikes at the BSA.
- 81% of respondents travel to the park via bicycle.
- Most respondents were interested in the development of more mountain bike specific jumps and a better return line to the top of the course.
- 75% of respondents reported that they also ride at off-island facilities

Full survey results can be found in Appendix A, including specific responses about elements of the bike park that are most liked and disliked by riders.

Public Meeting

On November 15, 2021, the City of Mercer Island and Action Sports Design conducted a virtual public meeting to present information about the project status, assessment process, initial findings, preliminary recommendations, and next steps. The meeting was attended by 67 members of the public, in addition to City Councilmembers and several members of the City's boards and commissions. Participants were asked to provide input via poll questions and given the opportunity to ask questions of the presenters. The full slide presentation can be found in Appendix B.

Online Survey #2:

A second online rider survey was launched December 14th and received 27 responses. This survey focused on specific elements that BSA users would like to see incorporated into a conceptual design for the bike course. 48% of respondents characterized themselves as intermediate skilled riders, while 22% and 29% classified themselves as beginner and advanced riders, respectively. Survey responses showed that tabletops are the most desirable jump profile, followed by step-up jumps and doubles. Most respondents indicated that they were most interested in seeing a wall ride skill element, and secondarily, a roller skill element. All respondents indicated that they ride mountain bikes at the BSA. Full survey results can be found in Appendix C.

Following the site assessment and public input forums, Action Sports Design compiled all site information, survey responses, and public comment to formulate recommendations for the City. These recommendations are based on the original goals of making the site sustainable for the long term, prioritizing safety, minimizing impacts on the ecological health of Upper Luther Burbank Park, and creating a stimulating and useful bike course for Island youth.

The first and most time sensitive recommendation was the redistribution of soil from existing jumps to stabilize undermined hillsides, and provide a planting medium for native shrub installation immediately adjacent to the course. In addition, ASD recommended that soil around tree bases be regraded to more closely meet the natural soil level, in order to prevent root exposure or trunk decay. The City completed this work in January 2022, in preparation for a February volunteer planting event. The City also performed assessments of all trees in the immediate vicinity, and consequently removed four big leaf maples that were dead or in severe decline.

Action Sports Design recommends that the City consider the following if this site is to be renovated for future bike course use:

- Construction of drainage system, flow lines and jumps, as outlined in the Conceptual Design should be professionally designed & maintained in their designed form. See Appendix for the full design, including drainage, signage and limit of work.
- Graphics of the bike course layout, features, direction of flow, flow line skill levels, and drainage line locations should be posted at the site.
- The renovated Bike Skills Area should remain within the recommended footprint of the Conceptual Design.
- Provide revegetation to the regraded site to establish roots and prevent future erosion.
- Create new bike park entry access path that terminates at the session pad (south end of the course). See Appendix E for suggested trail location.
- Eliminate access to the bike park from the bottom of the pedestrian trail to avoid user conflicts and safety issues.
- Install guard railing / fencing system along northwest edge of the bike course to separate pedestrian trail from the course. See Appendix E for location of suggested fencing.
- Add robust drainage system to the entire course, in order to eliminate water pooling and muddy conditions. This will extend the life of the course and allow users to ride during the winter months. See Appendix F for a preliminary design of this drainage system.
- Install new rules signage in several locations within the bike course. See Appendix G for recommended sign text.

The conceptual design for the Upper Luther Burbank Bike Skills Area was developed through a process of site analysis, public input defining user types, validation and selection of elements, circulation studies, and opportunities to repair and enhance the existing vegetation.

ASD worked through defining the limits of park development based on slope, vegetation, drainage, pedestrian and bicycle circulation. Signage locations and park points of entry and return were reviewed, analyzed and conceptually designed. Once the overall limits and circulation were defined, ASD integrated the jump profile preferred by the majority of riders surveyed, to create a progressive flow meeting the needs and preferences of the BSA rider community.

The Conceptual Design implemented a new point of entry and signage location for the BSA, placing the riders at the top of the flow trail on a session pad. The central flow line has a tabletop, roller to double jump before splitting into a decision maker. On the left flow line is a tabletop and roller before the berm return. On the right flow line is a larger step-up jump, transitioning into a roller before the berm to the return line. Once the rider turns right on the berm, they hit a series of rollers on the return line which allow them to pump to the top without pedaling. All outer lines and inner trail lines have a designed drainage system to prevent the low parts of the course from collecting standing water.

ESTIMATE OF PROBABLE COST

Based on the conceptual design and drainage plan, Action Sports Design has determined that construction of the project is likely to cost approximately \$232,441. Figure 2 (below) shows projected costs of each element of the design, including additional site revegetation.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE		TOTAL
02300 EARTH						
	Grading-Site Preparation	8,450	s.f.	\$ 10.75	\$	90,837.5
	Import Fill-Clay mix material (70% clay/ 30% sand/ silt)-flow lines surface	97	c.y.	\$ 52.00	\$	5,044.0
	Import Fill-Clay mix material (70% clay/ 30% sand/ silt)-jumps/ features	90	c.y.	\$ 78.00	\$	7,020.0
2600 STOR	DRAINAGE					
	Drain Inlets-12"	21	ea.	\$ 450.00	\$	9,450.0
	Drain Line-10" HDPE (french drain)	846	l.f.	\$ 65.00	\$	54,990.0
	Main Drainline & outlet-Allowance	100	l.f.	\$ 85.00	\$	8,500.0
	Storm Drain Junction Box-18" Cleanout	4	ea.	\$ 450.00	\$	1,800.0
02820 FENCI	NG AND RAILINGS					
	4'-0" Vinyl Coated Chain Link Fencing-Green	80	l.f.	\$ 110.00	\$	8,800.0
028900 PLAN	ITING					
	Revegitation	6,200	s.f.	\$ 3.75	\$	23,250.0
02870 SITE F	URNISHINGS					
	Skills feature Manufactured-Roller	1	e.a.	\$ 8,750.00	\$	8,750.0
02890 SIGNA	GE					
	Rules and Regulations Signage	3	e.a.	\$ 2,800.00	\$	8,400.0
	Track Flow Line Markers limit of work	16	e.a.	\$ 350.00	\$	5,600.0
					,	
STIMATE O	PROBABLE CONSTRUCTION COST				Ś	232,441.5

Figure 2. Estimate of Probably Construction Cost worksheet

The Upper Luther Burbank Park Bike Skills Area is a significant asset to the community of Mercer Island, serving a need for diverse recreation opportunities for Island youth and teens. Over the years, and particularly during the COVID pandemic, use of the bike area has increased. Unfortunately, this increased interest has led to expansion of the site, which has negatively impacted the surrounding slopes and native forest.

Upon final evaluation of the site, working with the community through a project site analysis and concept design, ASD feels the Bike Skills Area can continue, be environmentally sensitive, provide the design elements the community desires

Several design pages attached in the appendices demonstrate and exhibit the space allocation limit of development, flow lines desired, jumps and skills elements requested and professional drainage concept.

It is recommended that the Bike Skills Area be designed and constructed by a professional and that screened and properly mixed clay import is used for construction. Design will need to incorporate public feedback regarding the skill elements and will need to incorporate drainage improvements for a four-season facility. Wayfinding signage will also be needed.

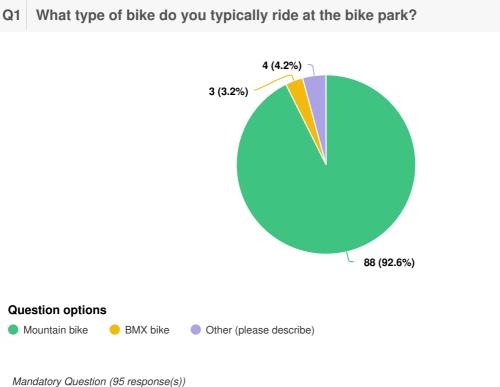
In conclusion, the Bike Skills Area can coexist within Upper Luther Burbank Park with a professionally designed course including elements driven by the community.





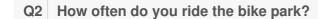
- A Online Survey #1 Responses
- **B** Public Meeting Presentation
- C Online Survey #2 Responses
- D Topographic Survey
- E Conceptual Design
- F Drainage System Design
- G Proposed Rules Sign

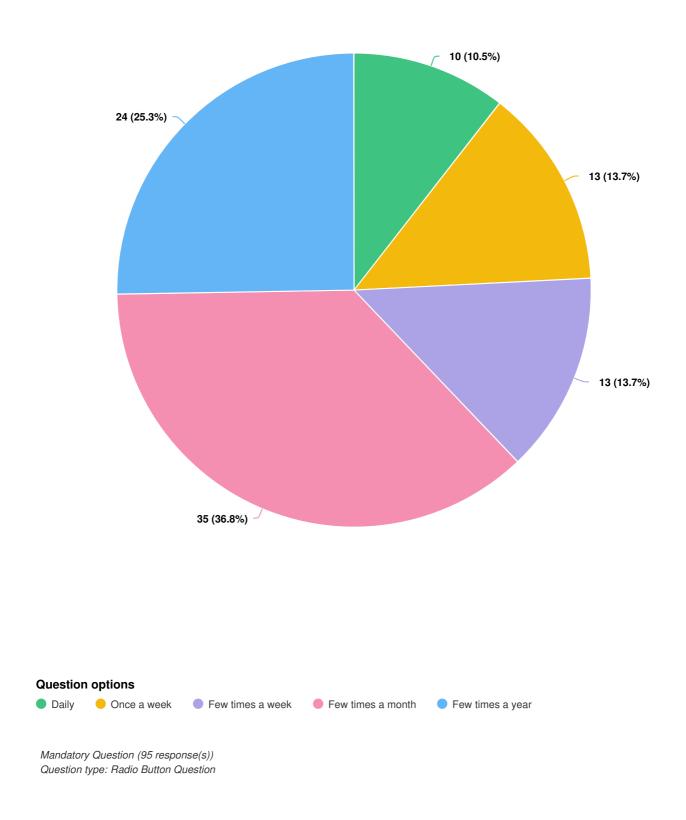




Mandatory Question (95 response(s)) Question type: Radio Button Question

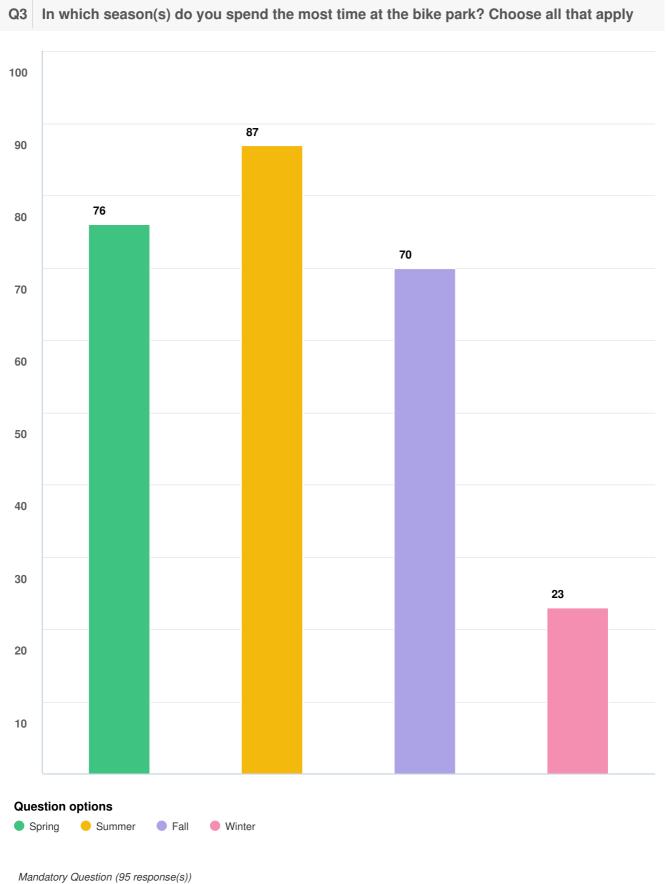






Q3

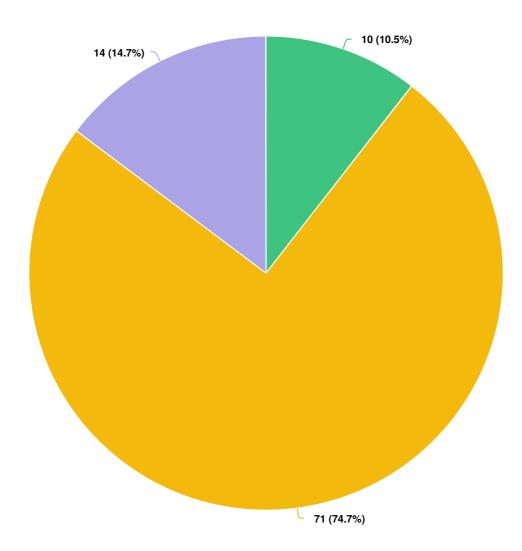




Question type: Checkbox Question



Q4 What time of day do you typically ride the bike park?



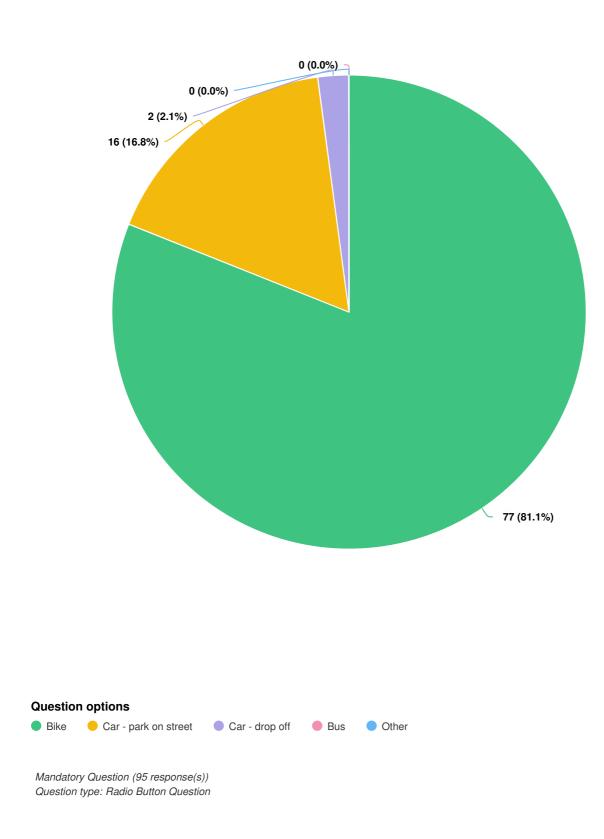
Question options

Morning
Afternoon
Evening

Mandatory Question (95 response(s)) Question type: Radio Button Question

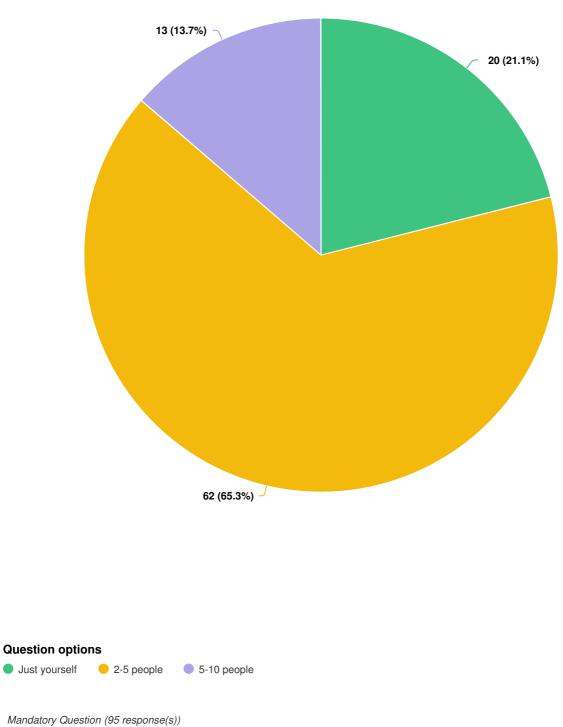


Q5 How do you typically get to the bike park?





Q6 When you ride the park, how many people do you usually see there (including yourself)?



Question type: Radio Button Question



What features do you like about the current bike park? Q7 Screen Name Redacted Screen Name Redacted All features are rollable and safe if I don't commit. Screen Name Redacted Everything exept for the flow line 10/25/2021 05:08 PM Screen Name Redacted Jump lines Screen Name Redacted Jumps Screen Name Redacted Jumps and drops Screen Name Redacted the berm is really nice and the trick jump is nice. Screen Name Redacted terrain features Screen Name Redacted Lot's of different features. 10/25/2021 05:51 PM Screen Name Redacted That it is on island and I can bike to it. The jumps are good. Screen Name Redacted The jumps are fun for practicing and I like that I can bike to it. Screen Name Redacted It's the perfect difficulty for me to practice and improve my skills of biking Screen Name Redacted I like the size of the jumps, not too big and not too small

Bike Skills Area Questionnaire : Survey Report for 24 October 2021 to 06 November 2021



10/25/2021 06:28 PM

Screen Name Redacted	The ability to change what I dont like and work together with other members of the community to improve it.
Screen Name Redacted	I like the big table tops and safe jumps. It flows well and is safe and fun.
Screen Name Redacted	I like the smaller features off the sides of the main line because they are unique.
Screen Name Redacted	convenience
Screen Name Redacted	Fun jumps and good atmosphere
Screen Name Redacted	The jumps.
Screen Name Redacted	Accessibility, community involvement
Screen Name Redacted	All of them
Screen Name Redacted	Area that I can mountain bike on MI
Screen Name Redacted	Jumps
Screen Name Redacted	The progressive jumps and the ability to make new features
Screen Name Redacted	How it is buit by the community. And the style of the current jumps
Screen Name Redacted	Close to home.



Screen Name Redacted	I love the big jumps.
Screen Name Redacted	You can make it what you want. All skill levels
Screen Name Redacted	non-dangerous jumps. The rules that were already posted about jumps were great and kept the park safe some expert riders seemed to reshape jumps in ways that didn't fit the rules posted.
Screen Name Redacted	The center line run from the top to the 180 degree berm
Screen Name Redacted	The table tops
Screen Name Redacted	Big jump into the bowl or the first jump from the main line
Screen Name Redacted	Love the jumps
Screen Name Redacted	The hole trail
Screen Name Redacted	The variety of levels.
Screen Name Redacted	I enjoy the various sizes of jumps and the fact that they are tabletops, meaning that if I don't clear them fully, I can still roll across them as opposed to falling into a gap.
Screen Name Redacted	I like pretty much everything about the bike park. I love this park. I first discovered it when I went on a bike ride with some friends. It's a great community of kids and we all help eachother.
Screen Name Redacted	It's great the way it is, I like that it's available to multiple skill levels
Caroon Nama Dadaatad	Accessibility

Accessibility

Screen Name Redacted



10/26/2021 08:22 AM

Screen Name Redacted	That there is a bike park on MI
Screen Name Redacted	Many different levels of jumps
Screen Name Redacted	jumps
Screen Name Redacted	Proximity to my workplace, great family activity for my kids
Screen Name Redacted	smaller bumps and banked tracks
Screen Name Redacted	The smooth jumps, with good transitions. Progressive jumps. That the community maintains it. Convenient place to meet friends and practice riding.
Screen Name Redacted	communtity
Screen Name Redacted	The main jumps in the middle.
Screen Name Redacted	It is fun
Screen Name Redacted	Jumps
Screen Name Redacted	jump line
Screen Name Redacted	The trail guidance and obstacles provide great skill building for the sport
Screen Name Redacted	Variety of jump lines and the friendly attitude of the people using it. The birm and varied height jumps also make for a well rounded



	space.
Screen Name Redacted	The simplicity and quick access to the top so I can do lots of reps for practice
Screen Name Redacted	Natural feeling with options for most skill levels
Screen Name Redacted	Ability to practice bmx and mountain biking
Screen Name Redacted	Location and just the rollers
Screen Name Redacted	Just learned about it
Screen Name Redacted	It is on the island
Screen Name Redacted	Answering this survey for my 7 yr old son. We just love that this park exists on the island at all! And as my son gets older, we know for a fact that he'll use the park!
Screen Name Redacted	I like the big blue step up line
Screen Name Redacted	Something for everyone. Varied jumps. Trails were cool though I know they were out of boundaries.
Screen Name Redacted	I haven't been able to go recently but saw a video and it all looked good. In general, anything that does not require clearing a gap is good.
Screen Name Redacted	Ease of access
Screen Name Redacted	I like the main line. The whole park is good



Screen Name Redacted	the smaller jumps mostly and bumps around the edge. We like to go when noone is there so we can explore without pressure
Screen Name Redacted	It gives kids the opportunity to build, fail, and learn.
Screen Name Redacted	I practice cyclocross skills
Screen Name Redacted	Everything
Screen Name Redacted	It's a great park for my kids ages 3 and 12. They both enjoy the ramps and we feel very safe there to ride our bikes in the forest.
Screen Name Redacted	Banked turns and jumps
Screen Name Redacted	Community for kids and new riders
Screen Name Redacted	I like the jumps and enjoy them ALOT
Screen Name Redacted	Accessible
Screen Name Redacted	Jumps
Screen Name Redacted	X
Screen Name Redacted	The jumps at Snake Hill are very well built and are great for progressing my skills.
Screen Name Redacted	I like the berms and other features that makes riding smooth and very "flowy"



Screen Name Redacted	Jumps
Screen Name Redacted	Fun hills
Screen Name Redacted	Jumps and Bermed Corner at the end.
Screen Name Redacted	The slopes are so fun!
Screen Name Redacted	like the jumps and the ramps and the banked circle at the bottom
Screen Name Redacted	Jumps
Screen Name Redacted	The jumps
Screen Name Redacted	test
Screen Name Redacted	its accessible and local
Screen Name Redacted	The jumps and the option to build jumps
Screen Name Redacted	Jump runs for the kids
Screen Name Redacted	It's a place I can hang out with friends outside exercise.
Screen Name Redacted	I am practicing jumping techniques to be a better trail rider in the local mountains
Screen Name Redacted	There are a couple of trail runs with fun jumps. It has helped me become a better mountain biker while getting exercise and seeing



friends.

Screen Name Redacted	modifiable jumps and lines, independent, creative work
Screen Name Redacted	different from other places on mercer island, can try different things
Screen Name Redacted	Mountain bike features
Screen Name Redacted	The jumps we make
Mandatory Question (95 response(s)) Question type: Single Line Question	
Q8 What elements of the curre	ent jump lines do you not like?
Screen Name Redacted	
Screen Name Redacted	Lack of a dedicated walk up line puts you in harms way of other riders. Also seems it would make sense to have a path to get to the top from the road vs. going down the shared path on a steep hill.
Screen Name Redacted	Flow line but it would be good if it stayed
Screen Name Redacted	Wish they could be longer
Screen Name Redacted	Not enough
Screen Name Redacted	No strong opinion here

Screen Name Redacted

walking up the jump trail instead of a having a biking back up path



Screen Name Redacted	poorly designed landing areas
Screen Name Redacted	No organized routes graded by ability allowing you to know which route to stay on and which ones you would be capable of doing.
Screen Name Redacted	I'm really just happy that we have jumps on the island.
Screen Name Redacted	nothing really
Screen Name Redacted	None they are perfect
Screen Name Redacted	They are perfect as they are
Screen Name Redacted	At the middle of the main line there isn't a lot of variety on where you can go.
Screen Name Redacted	We need more of a verity of jumps, larger and smaller jumps. We need trick jumps, jumps that are tall with a landing higher than the take off.
Screen Name Redacted	The small area at the top of the main jump line. It is way too small for more than 4 people at once.
Screen Name Redacted	more symmetrical take-off/landing angles; clean lip edge
Screen Name Redacted	Lack of rules or regulations
Screen Name Redacted	N/A
Screen Name Redacted	nasty neighbors

UPPER LUTHER BURBANK PARK BIKE SKILLS AREA ASSESSMENT - APPENDIX A



Screen Name Redacted	None
Screen Name Redacted	Wish the jumps would be reopened and we had more freedom to design the jumps
Screen Name Redacted	Dust
Screen Name Redacted	It's hard to practice and get better at biking with only one jump line
Screen Name Redacted	Nothing, for the space that is there thats the most they can do
Screen Name Redacted	Mellow jumps
Screen Name Redacted	I don't like the big hill to the left.
Screen Name Redacted	Many jumps aren't great for beginners
Screen Name Redacted	jumps that undermined the mature trees root system. Trees are important and add to the overall ambiance and fun of the bike park. Please don't remove trees!
Screen Name Redacted	none
Screen Name Redacted	I'm a beginner - some are to big for me
Screen Name Redacted	quality of the dirt / sand
Screen Name Redacted	Its all great



Screen Name Redacted	None
Screen Name Redacted	None
Screen Name Redacted	Blackberry bushes surround the lines and sometimes reaches into the air above the jump path. This prevalent in the line with the rollers.
Screen Name Redacted	There is nothing there that I don't like.
Screen Name Redacted	Short!
Screen Name Redacted	NA
Screen Name Redacted	More and Better Need more Blue level jumps for MTB riders.
Screen Name Redacted	Too small
Screen Name Redacted	too small. no trails.
Screen Name Redacted	Too small! Bikes are a large and growing part of the culture here, we need to dedicate more resources to it.
Screen Name Redacted	Large jumps. Downhill sled ride.
Screen Name Redacted	Limited size. Dangerous and ugly boundary markers
Screen Name Redacted	nothing
Screen Name Redacted	The ant hill jump to the right side of the main jump line by a tree. It's



,	
10/26/2021 05:17 PM	really sandy and out of shape.
Screen Name Redacted	Nothing
Screen Name Redacted	
Screen Name Redacted	flow
Screen Name Redacted	There's nothing specific that I don't like
Screen Name Redacted	They are mostly table tops. I would like to see some gap jumps too.
Screen Name Redacted	Second jump not a flat table, but I don't care that much because most people like it
Screen Name Redacted	Limited area could be bigger
Screen Name Redacted	Different levels from novice to expert
Screen Name Redacted	Don't do big jumps
Screen Name Redacted	Just learned about it
Screen Name Redacted	N/a
Screen Name Redacted	None
Screen Name Redacted	8. The first jumps lip is to poppy so then you can't get enough speed for the second jump; there are a couple of breaking bumps that could be filled in



Screen Name Redacted	Not much space for return to top. Conditions vary wildly.
Screen Name Redacted	gaps
Screen Name Redacted	Not wide enough
Screen Name Redacted	I like everything except there needs to be more space for more jumps
Screen Name Redacted	Some are way too big for anyone in my family
Screen Name Redacted	Too rough for younger kids, but I think it is great the teens can experiment.
Screen Name Redacted	no comment
Screen Name Redacted	Everything
Screen Name Redacted	We like the jumps the way they are
Screen Name Redacted	It's too small. Expand it!
Screen Name Redacted	All levels of skill should be included
Screen Name Redacted	Would like to see more jumps and features
Screen Name Redacted	Nothing it's great



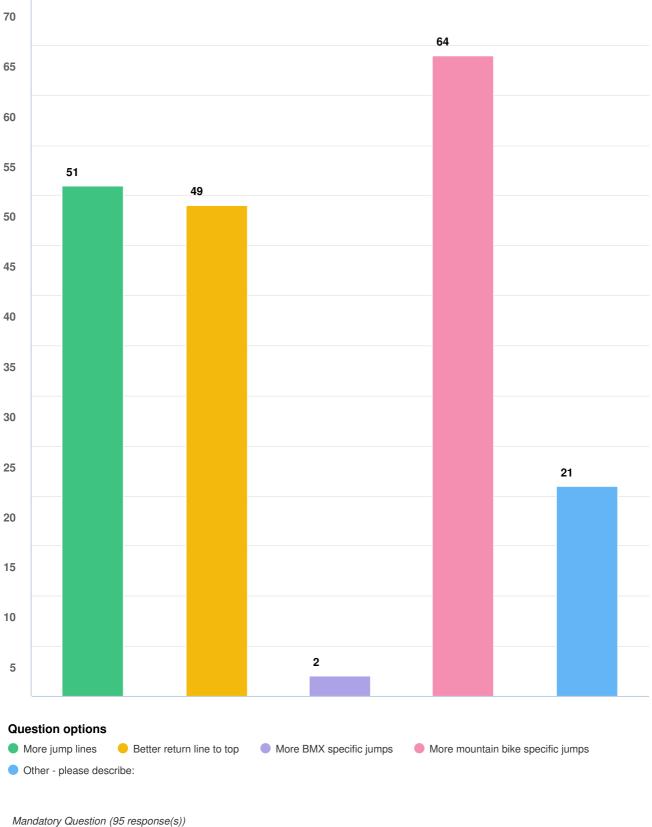
Screen Name Redacted	Too big for younger and beginning riders
Screen Name Redacted	X
Screen Name Redacted	The only problem is that there are thorns on the far right or the trail. Other than that, nothing.
Screen Name Redacted	nothing I love them
Screen Name Redacted	Would like to see a smaller line
Screen Name Redacted	Wish there was a separate return path to the top
Screen Name Redacted	The return line to the top could be better positioned
Screen Name Redacted	I can't think of anything except I don't like that the park is currently closed.
Screen Name Redacted	some of the jumps are a little tall/steep. Some of the dips are a little low and can gather puddles
Screen Name Redacted	People who say bikes arent allowed in the park
Screen Name Redacted	None
Screen Name Redacted	test
Screen Name Redacted	it is not challenging enough, it does not accelerate as one improves, there is nothing to work towards, the jumps are not challenging enough



Screen Name Redacted	none
Screen Name Redacted	not a lot of options for beginners
Screen Name Redacted	not sure
Screen Name Redacted	It would be nice if there were more options
Screen Name Redacted	None.
Screen Name Redacted	some are too big to use for my skill
Screen Name Redacted	i like that we have it; would like to see different things though
Screen Name Redacted	None
Screen Name Redacted	Na
Mandatory Question (95 response(s)) Question type: Single Line Question	



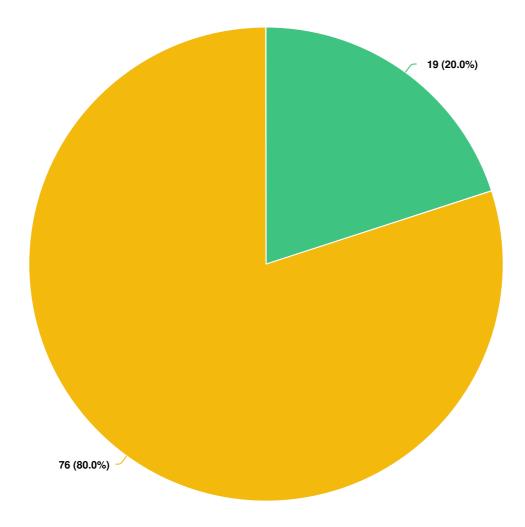
Q9 If new jump lines/features were added, what would you like to see considered?Choose all that apply



Mandatory Question (95 response(s)) Question type: Checkbox Question



Q10 Are you involved with the jump shaping/building efforts at the current bike park?



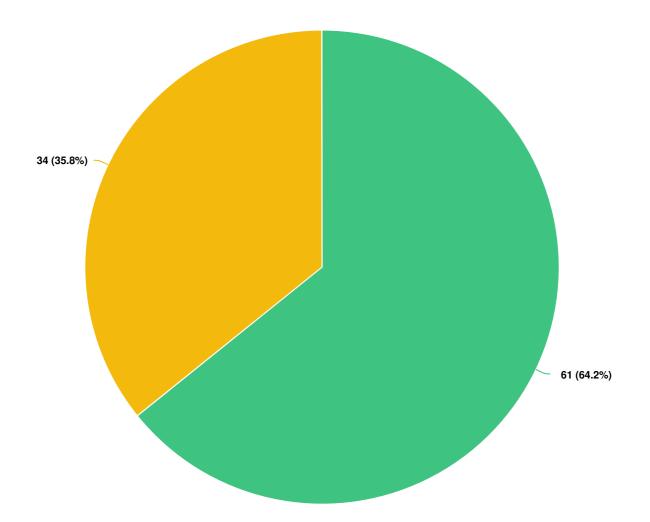
Question options

🔵 Yes 🛛 😑 No

Mandatory Question (95 response(s)) Question type: Radio Button Question



Q11 If new jump lines were designed, would you be interested in assisting with the initial build process?

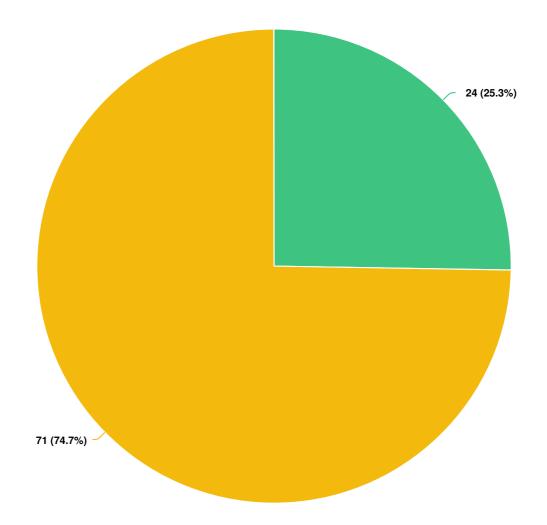




Mandatory Question (95 response(s)) Question type: Radio Button Question



Q12 Do you ride at any off-island facilities/parks?

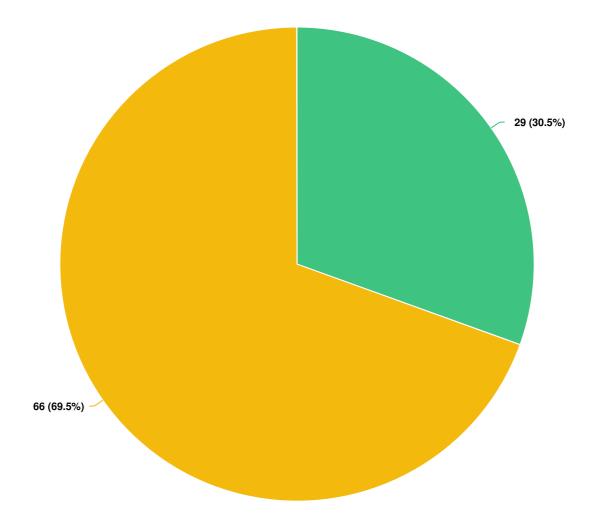


Question options

Mandatory Question (95 response(s)) Question type: Radio Button Question



Q13 Do you participate in other City recreation programs or use other Mercer Island parks?



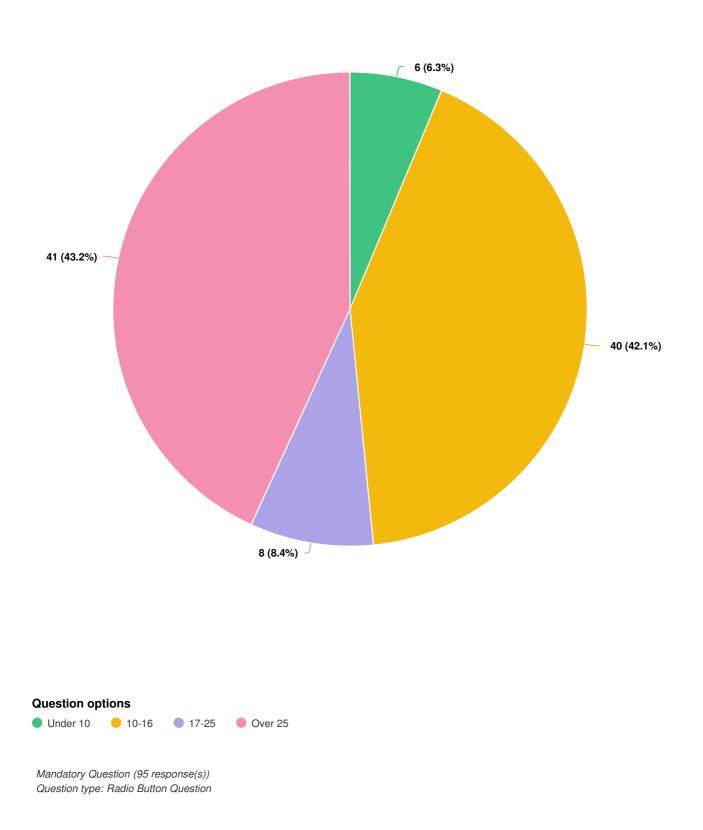
Question options

No
Yes - please list which ones

Mandatory Question (95 response(s)) Question type: Radio Button Question

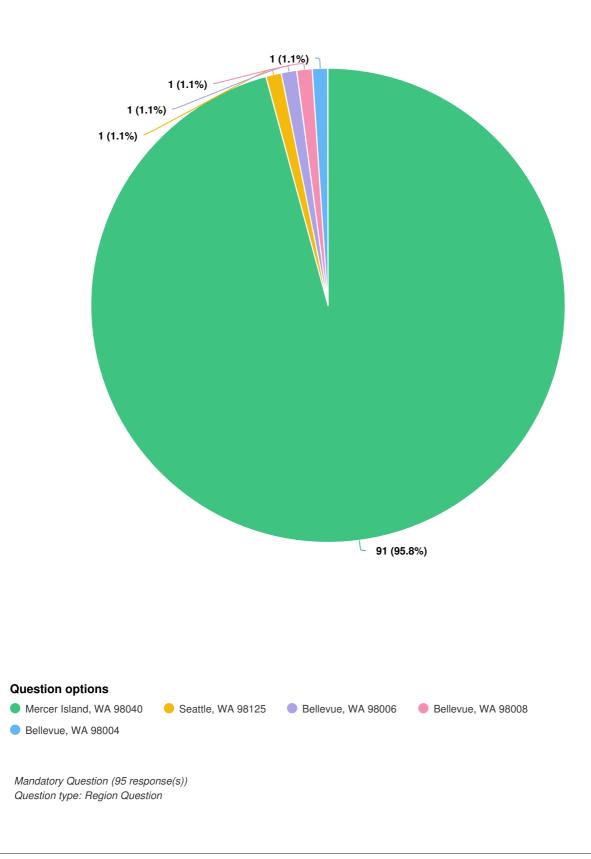


Q14 What is your age?



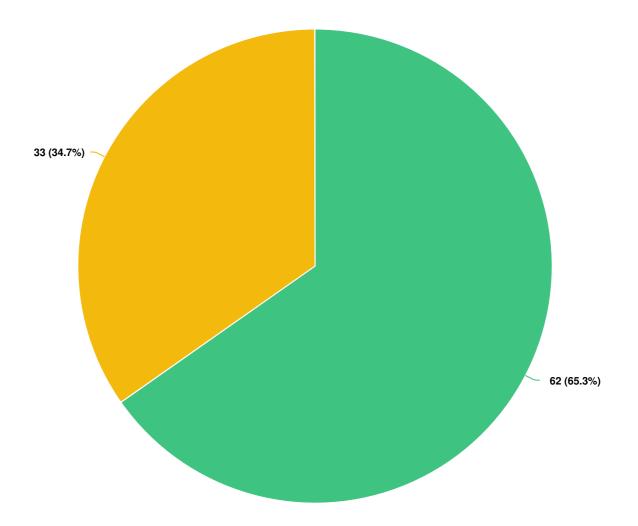








Q16 Would you like us to stay in touch with you?

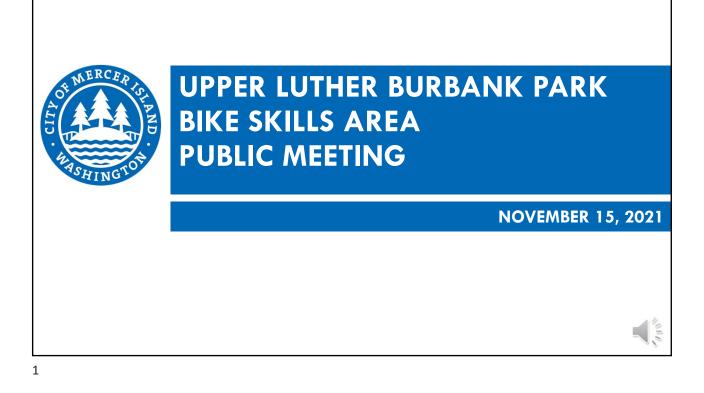


Question options

No, please keep my survey anonymous

• Yes, please! Here's my contact info:

Optional question (95 response(s), 0 skipped) Question type: Radio Button Question





BIKE SKILLS AREA PUBLIC MEETING | NOVEMBER 15, 202

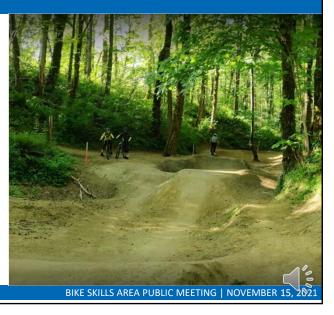
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MEETING AGENDA

- Project overview
- Team introduction
- Assessment
- Survey results
- Initial findings
- Preliminary recommendations
- Next steps
- Q & A

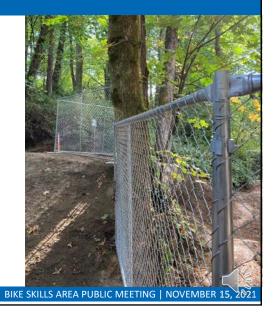
CMI

3



PROJECT OVERVIEW

- Bike Skills Area (BSA) has long history!
- Interest & use have increased
- Ongoing issues with course expansion, new trails, and large jump building
- Maintenance exceeded staff capacity
- Contacted Evergreen Mtn Bike Alliance
- Extended search for qualified consultant
- Fall 2021 temporary shutdown



4

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TEAM INTRODUCTION



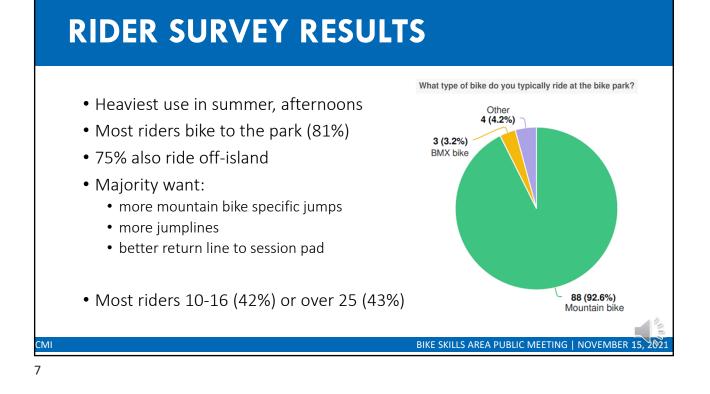
ACTION Sports Design, LLC

Professional planning, design and development of public bike parks, BMX Racetracks and skateparks worldwide.

Mike McIntyre, PLA- Founder/ Principal/ Rider



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RIDER SURVEY COMMENTS

What features do you like?

- Nice variety of skill levels
- Close to home, easy to get to
- Great source of exercise and skill building

What don't you like about current jumplines?

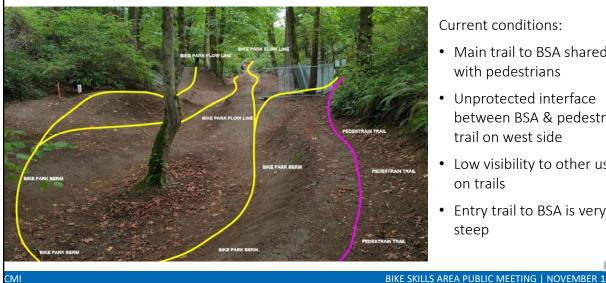
- Lack of dedicated return line to top
- Need more jumps for beginners, young riders
- Really like it just as it is!



BIKE SKILLS AREA PUBLIC MEETING | NOVEMBER 15

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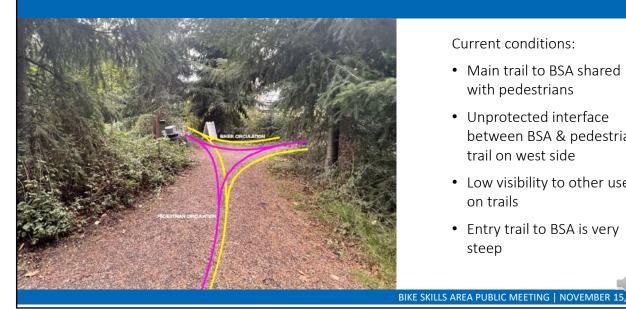
INITIAL FINDINGS | Circulation issues



Current conditions:

- Main trail to BSA shared with pedestrians
- Unprotected interface between BSA & pedestrian trail on west side
- Low visibility to other users on trails
- Entry trail to BSA is very steep

INITIAL FINDINGS | Circulation issues



Current conditions:

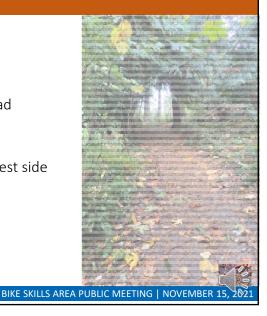
- Main trail to BSA shared with pedestrians
- Unprotected interface between BSA & pedestrian trail on west side
- Low visibility to other users on trails
- Entry trail to BSA is very steep

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POLLING QUESTION | Trail issues

How would you like to see trail circulation issues addressed in Upper Luther Burbank Park?

- Create dedicated trail for bikers to access session pad
- Require bikers to walk bikes on trails to BSA
- Add barrier between bike area and hiking trail on west side of BSA
- No changes are needed
- Other (please describe in Q&A box)



INITIAL FINDINGS | Expansion & excavation



- Jumps are constructed from on-site fill
- Surrounding slopes have been dug out to 'borrow' fill for jump building
- Excavation on edges of BSA has resulted in:
 - Undermining/instability in adjacent slopes
 - Damaged/removed vegetation
 - Active erosion

СМІ 11

INITIAL FINDINGS | Soils

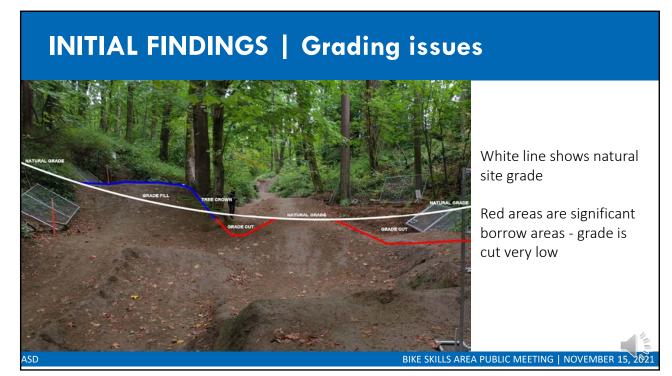


Jumps are built from adjacent hillside 'borrow'

Native, on-site soils aren't suited for jump building

- High organic content → organics break down, creating uneven surface
- Sand content \rightarrow difficult to compact
- Non-uniform texture \rightarrow soil settles unevenly
- Low clay content → jumps do not hold shape over long periods, higher erosion

BIKE SKILLS AREA PUBLIC MEETING | NOVEMBER 1



INITIAL FINDINGS | Drainage



- Use of on-site soils to build jumps is creating low spots where soil is 'borrowed'
- Currently, there is no positive drainage off the site
- Water is pooling in low spots, creating standing water in several areas across BSA

BIKE SKILLS AREA PUBLIC MEETING | NOVEMBER

• Limits winter use of site

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INITIAL FINDINGS | Tree assessment



- Trees closest to and within active use area declining
- Likely causes:
 - Root damage from digging
 - Soil compaction
 - Grade changes
- Accelerated by hot, dry weather
- Four trees slated for removal, remaining trees to be monitored regularly

BIKE SKILLS AREA PUBLIC MEETING | NOVEMBER 15, 2021

INITIAL FINDINGS | Jumpline layout



Current course layout:

- One primary jumpline with four jump features
- Turnaround berm

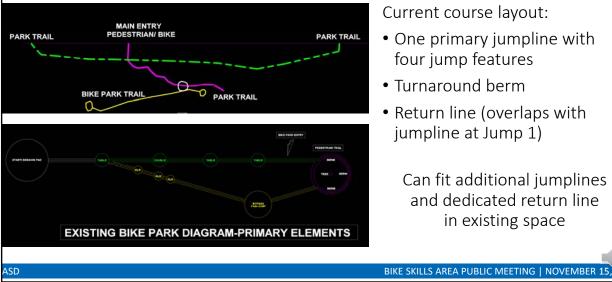
ASD

• Return line (overlaps with jumpline at Jump 1)

> Can fit additional jumplines and dedicated return line in existing space

17

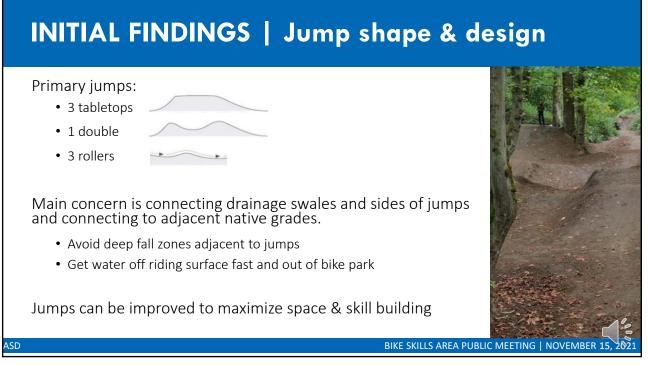
INITIAL FINDINGS | Jumpline layout



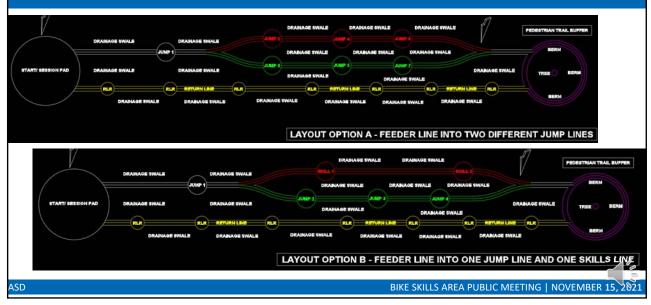
Current course layout:

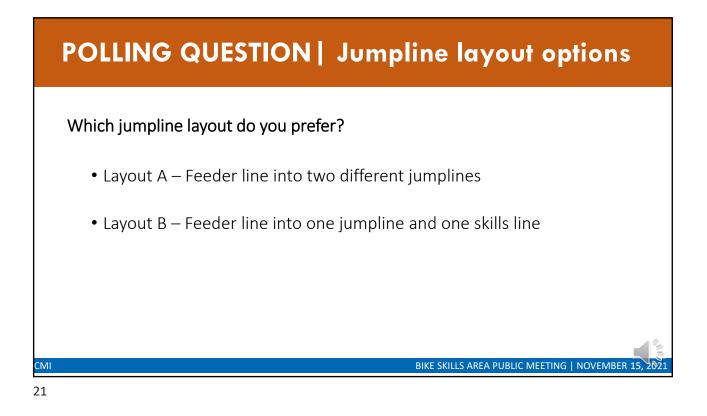
- One primary jumpline with four jump features
- Turnaround berm
- Return line (overlaps with jumpline at Jump 1)

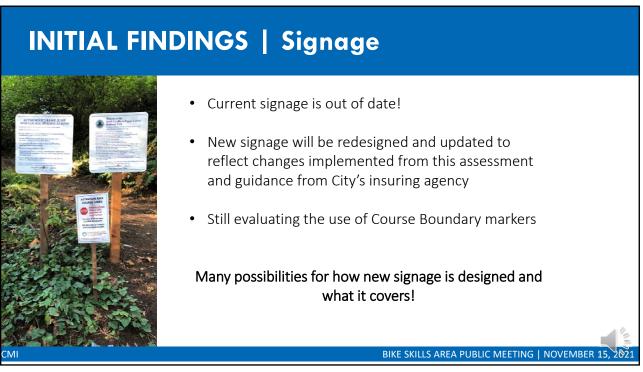
Can fit additional jumplines and dedicated return line in existing space

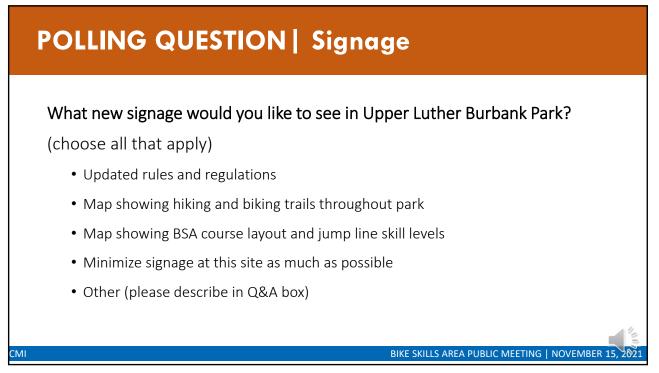


INITIAL FINDINGS | Jumpline layout options

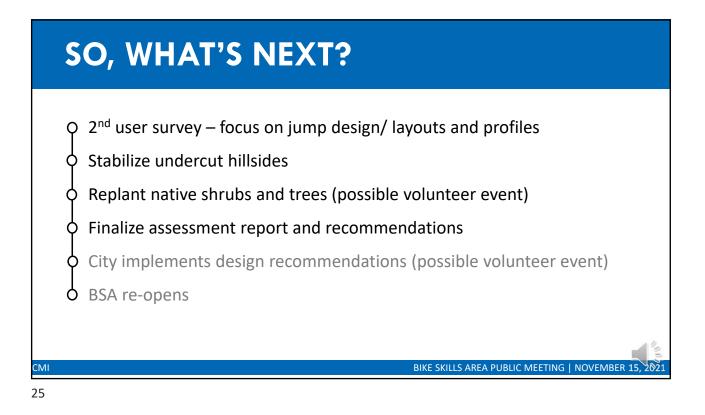


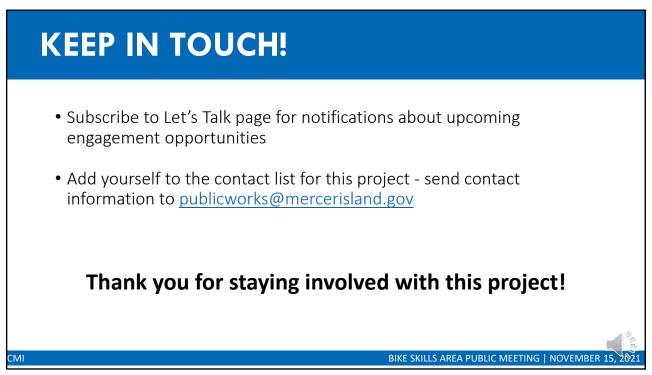






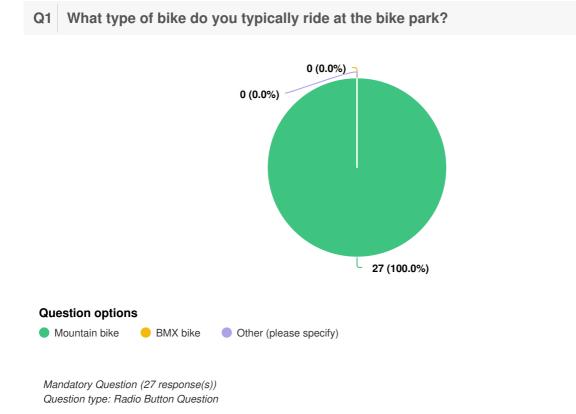
PRELIMINARY RECOMMENDATIONS				
	 Jumps will be professionally designed & maintained in their designed form Bike Skills Area will remain within existing footprint Restore soil to undercut hillsides and tree root zones Recommendations are likely to include: Install drainage system Import appropriate soil for designed jumps Improve quality & layout of jumps Create return line to session pad Create clear wayfinding signage 			
ASD	BIKE SKILLS AREA PUBLIC MEETING NOVEMBER 15, 2021			





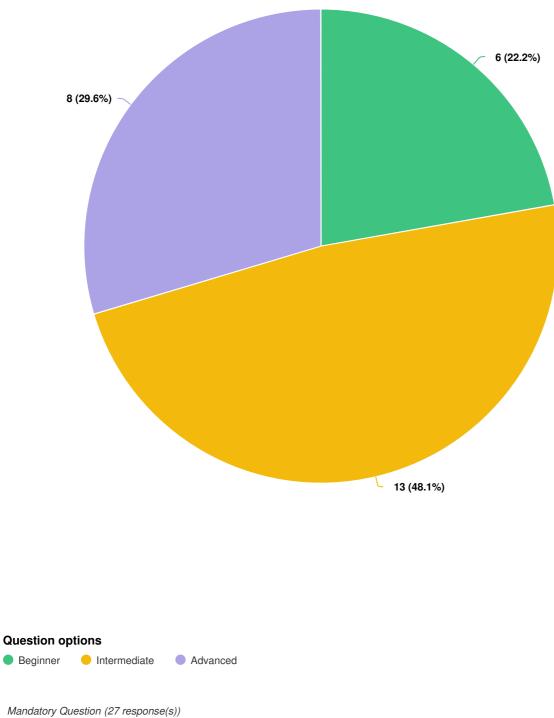








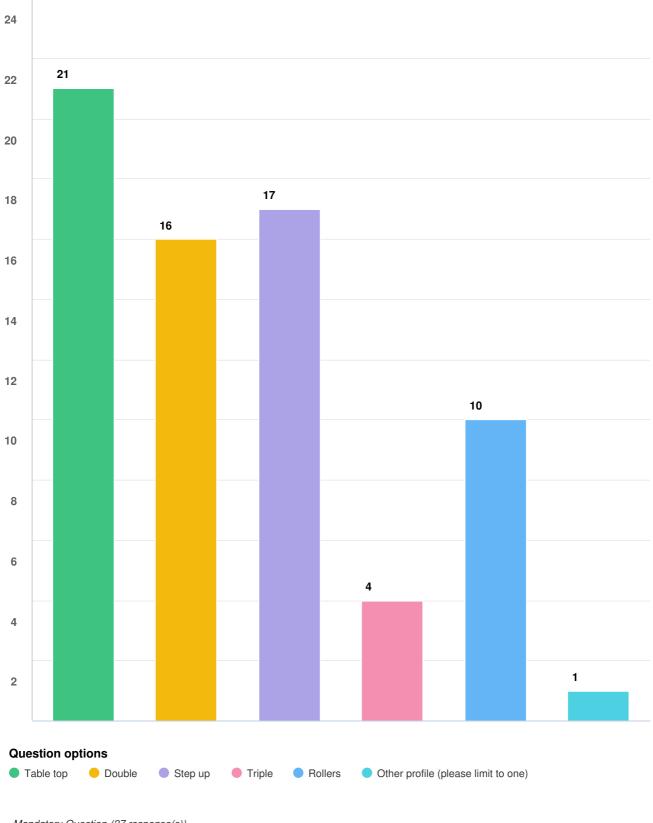
Q2 How would you describe your skill level for riding on dirt jumps?



Question type: Radio Button Question



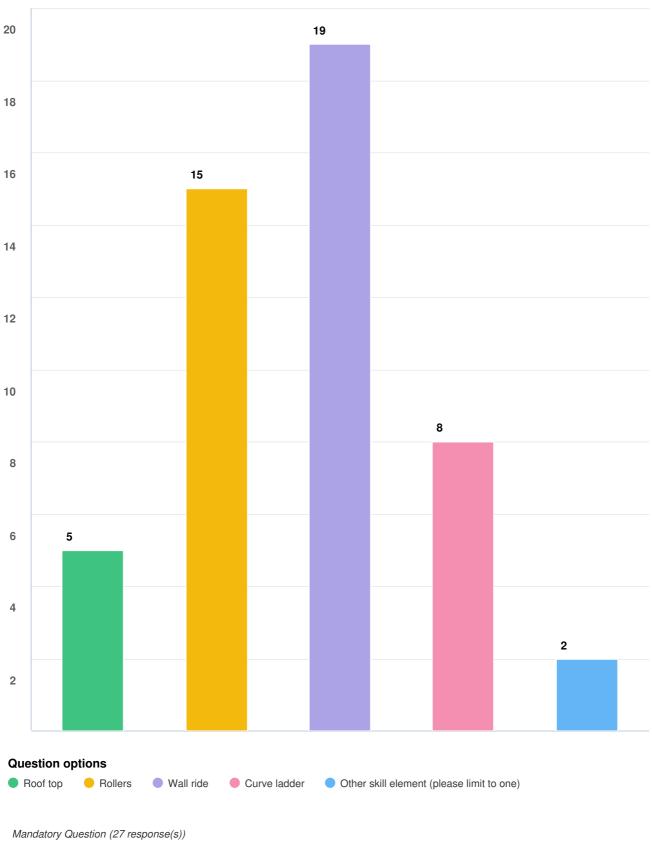
Q3 Please indicate the three dirt jump profiles that you would be most interested in seeing included at the Bike Skills Area. See the illustration below for examples of jump profiles.



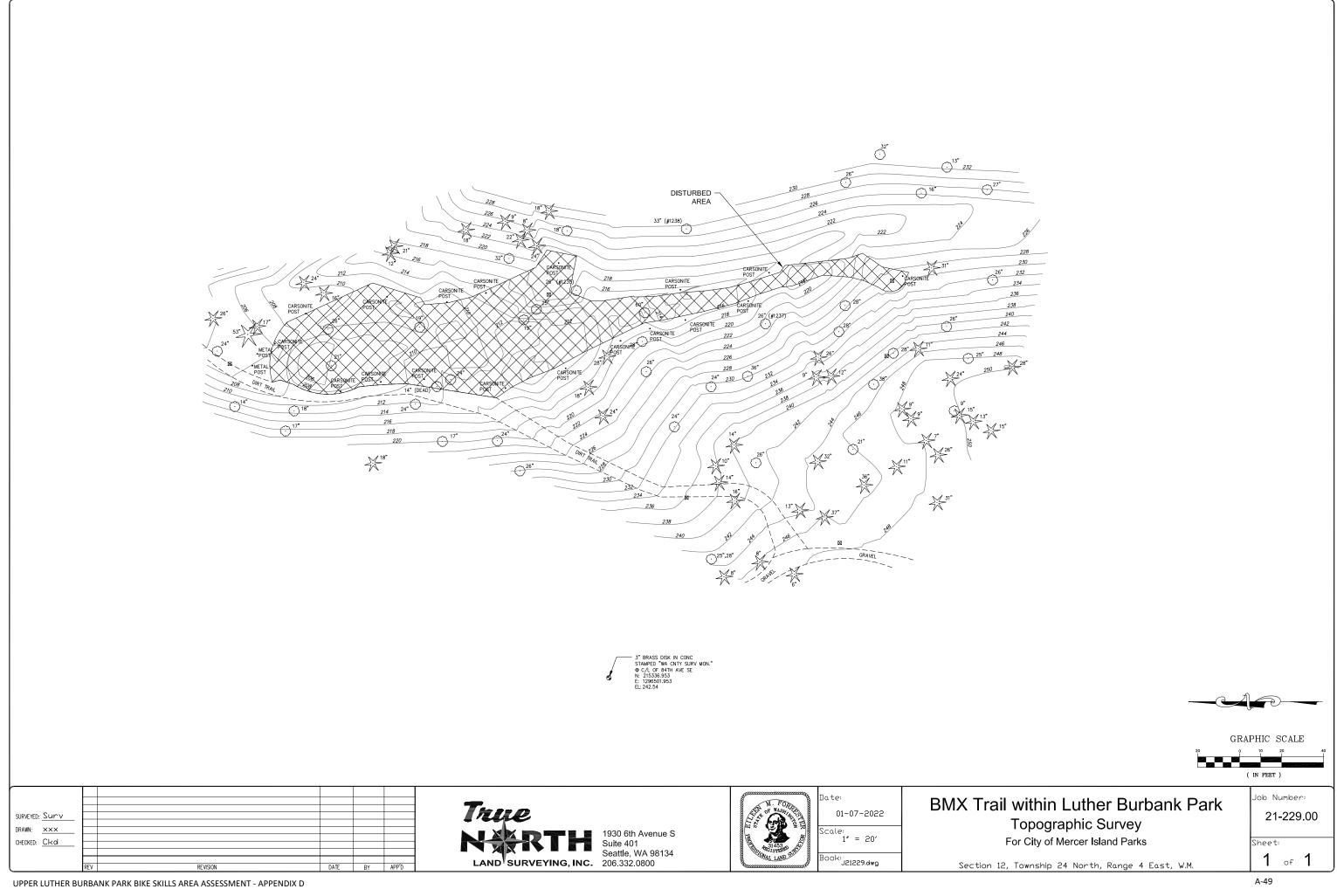
Mandatory Question (27 response(s)) Question type: Checkbox Question

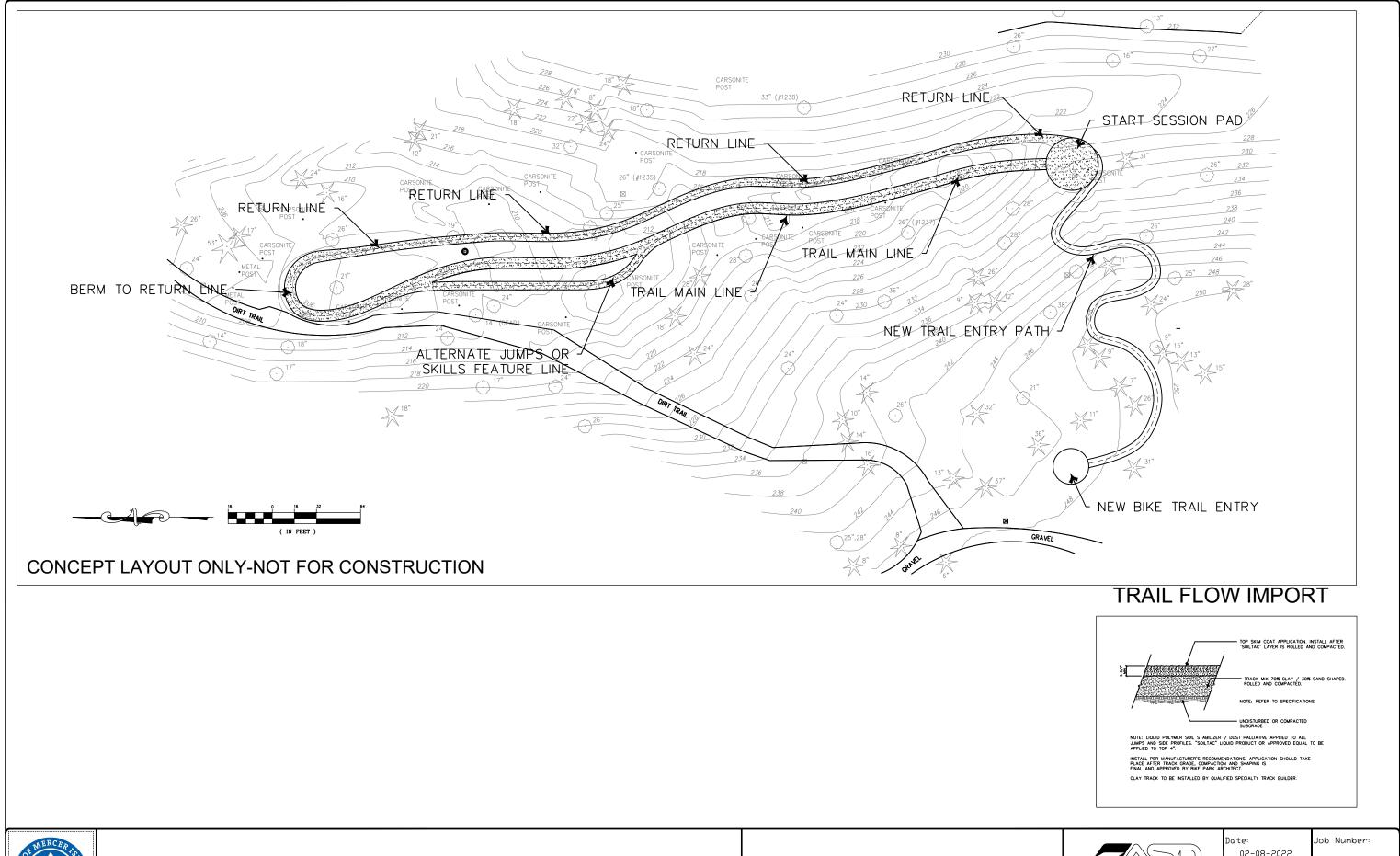


Q4 Please indicate the two manufactured skill elements that you would be most interested in seeing included at the Bike Skills Area. See the illustration below for examples of skill elements.



Question type: Checkbox Question

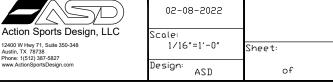


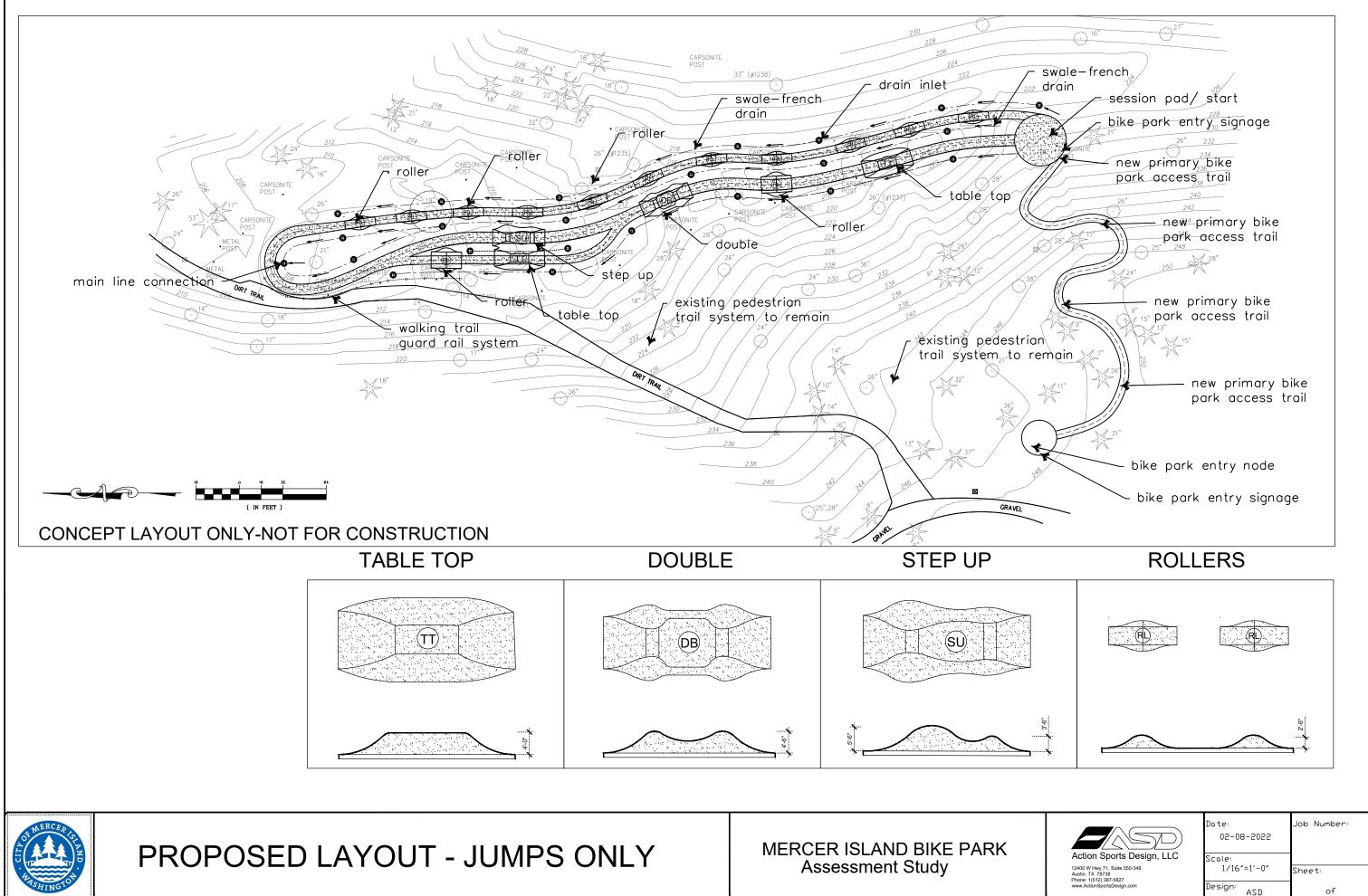


PROPOSED TRAIL FLOW LAYOUT

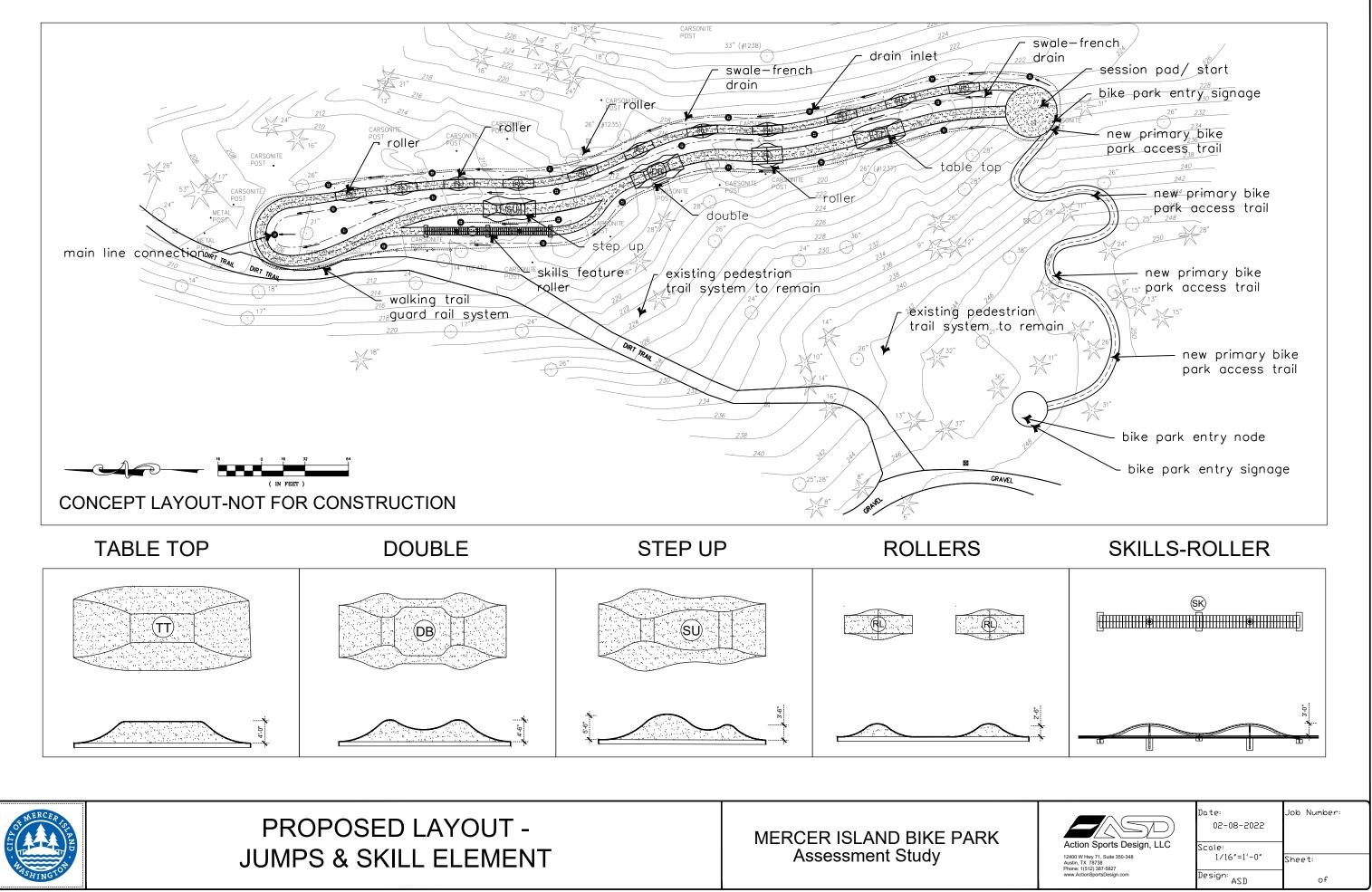
MERCER ISLAND BIKE PARK Assessment Study

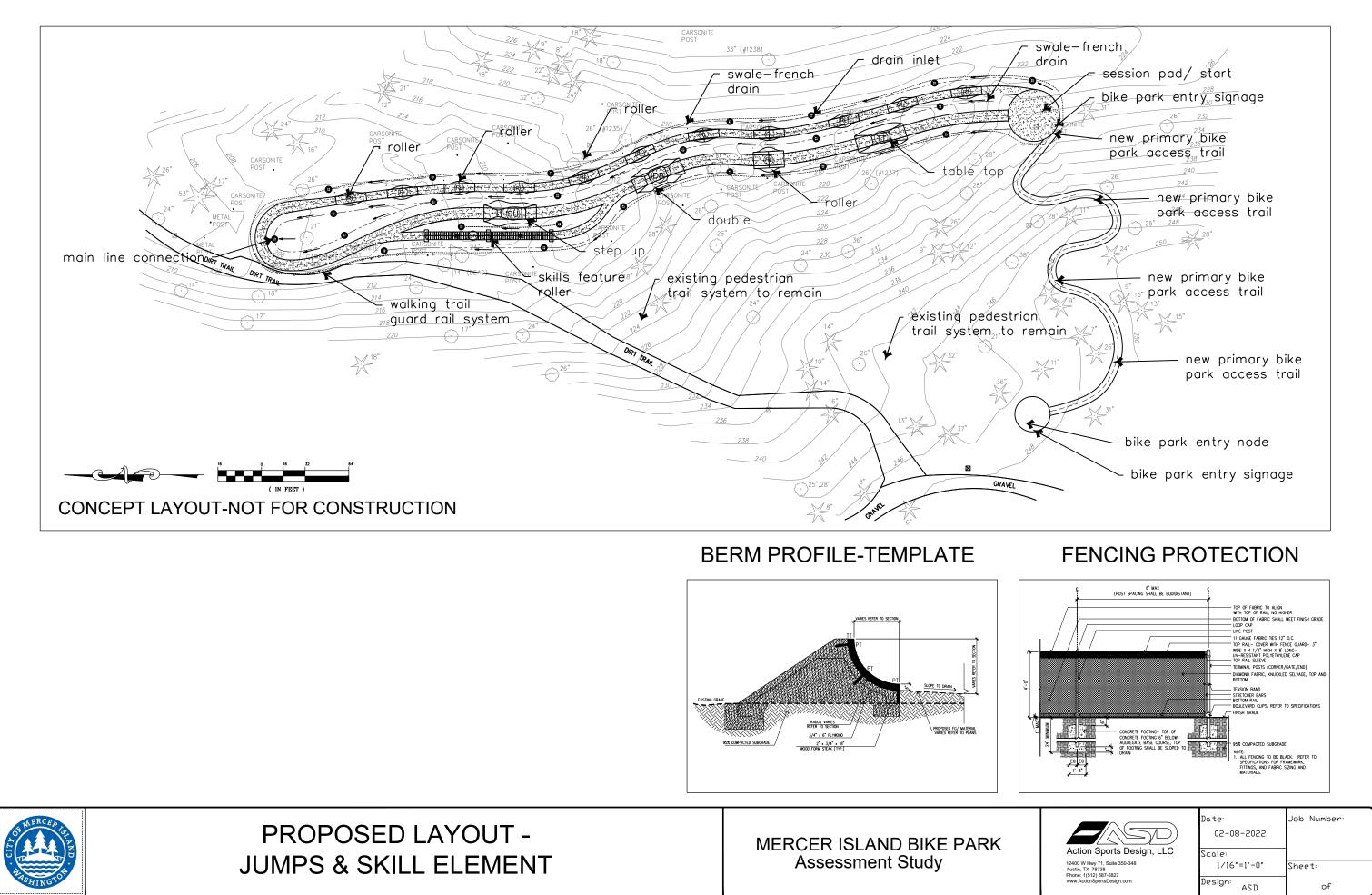
UPPER LUTHER BURBANK PARK BIKE SKILLS AREA ASSESSMENT - APPENDIX E



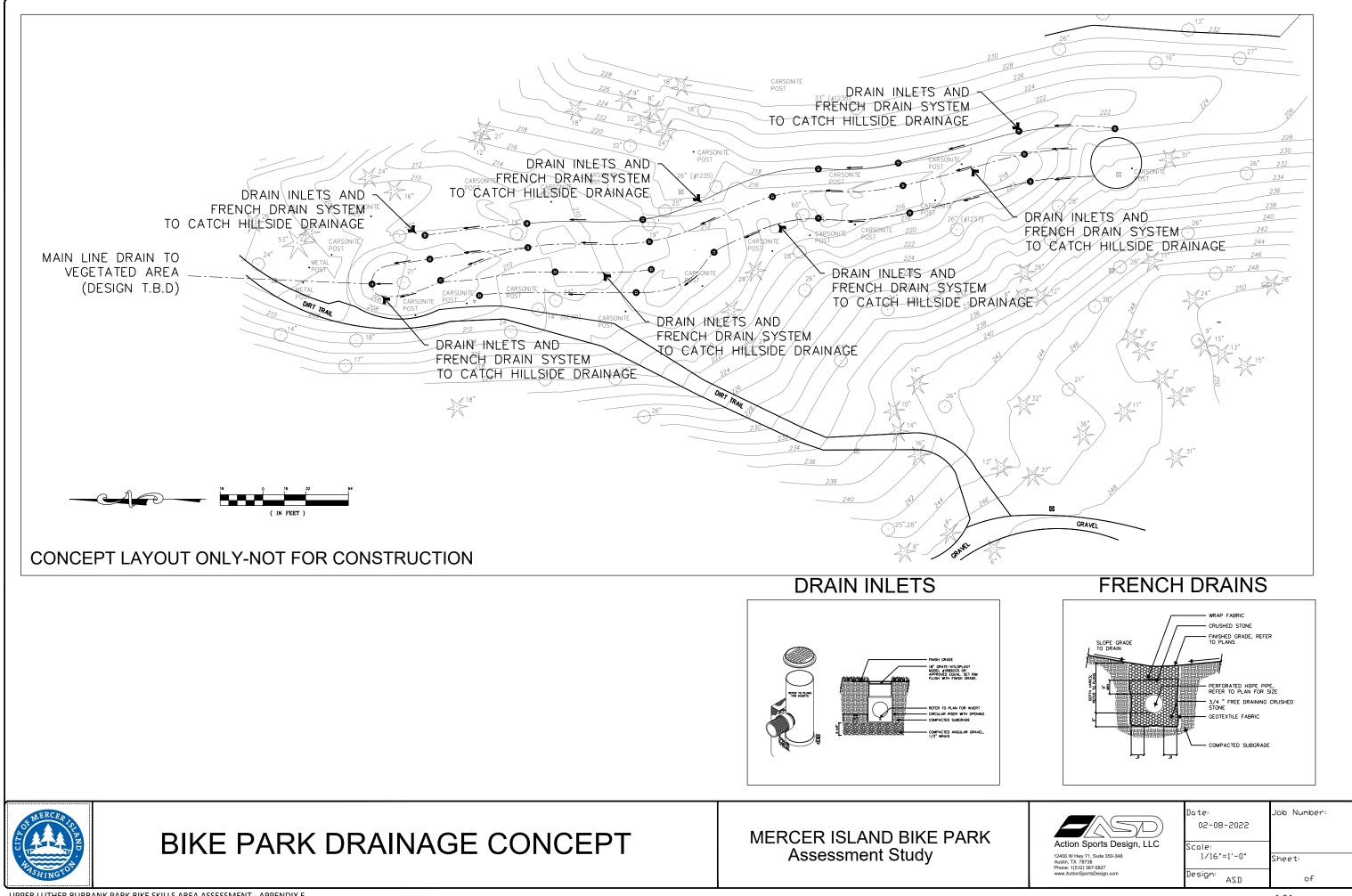


	Date: 02-08-2022	Job Number:
Action Sports Design, LLC 12400 W Hwy 71, Suite 350-348 Austin, TX 78738 Phone: (1512) 387-5827	Scale: 1/16"=1'-0"	Sheet:
www.ActionSportsDesign.com	Design: ASD	of





UPPER LUTHER BURBANK PARK BIKE SKILLS AREA ASSESSMENT - APPENDIX E



UPPER LUTHER BURBANK PARK BIKE SKILLS AREA ASSESSMENT - APPENDIX F

PROPOSED RULES AND REGULATIONS FOR FUTURE PARK SIGNAGE

BIKE PARK HOURS ARE 8 AM TO DUSK

- Use at your own risk. This course is not supervised.
- Use of protective equipment, including securely fastened helmets, knee and elbow pads, wrist and shin guards, is strongly recommended.
- Riders will remain inside course boundary. Ride only on the tracks surface the way that it was intended to be used.
- No riding if the track is muddy, wet, or if it is raining.
- No skidding. Over-braking is only allowed in emergency situations.
- No motorized vehicles are permitted on the course.
- No spectators or other non-riders allowed on the course.
- Ride respectful. Be aware of other riders.
- Ride within your comfort zone.
- Be respectful of other park users: moderate your language, keep music volume down and use trash containers provided.
- Ramps, jumps and other bike course elements may not be modified. Any unauthorized additions will be removed without further notice.
- Damage to surrounding vegetation or other park property is prohibited.
- Smoking, alcohol, drugs and glass containers are not permitted.
- Failure to comply with rules or City staff instruction may result in expulsion from the facility.
- Serious injury or death may result from falling or colliding with objects or other riders. The City of Mercer Island does not assume responsibility for injuries. **Use at your own risk!**

In the event of any unsafe condition contact the City of Mercer Island Parks and Recreation Department 206.275.7609 or via email at <u>miparks@mercergov.org</u>