

Casa Museo Ismael Rivera Pocket Park Design Portfolio

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For more information regarding this project: <https://wp.wpi.edu/puertorico/projects/2023-mar-may-2/rivera/>

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INTRODUCTION

The Casa Museo Ismael Rivera is a ‘house museum’ located in Barrio Machuchal, San Juan that pays tribute to the renowned artist, Ismael Rivera. Using his masonry skills, Ismael Rivera built this house for his mother, but she turned it into the Casa Museo Ismael Rivera after Ismael’s death in 1987. The Casa Museo currently features many pictures, awards, and artifacts that celebrate the impact that Ismael Rivera had on Puerto Rican culture. Additionally, the Casa Museo Ismael Rivera is the headquarters of the Ismael Rivera Foundation, a nonprofit organization whose purpose is to preserve Ismael Rivera’s legacy. A rectangular yard resides outside the front of the Casa Museo. Prior to Hurricane Maria in 2017, the yard was regularly alive with cultural events for the local community and others from far and near. Events such as Las Fiestas de Cruz and the Festival Al Son de Maelo were celebrated in the front yard each year, bringing the community closer together. When Hurricane Maria hit, the community lost this space due to the hurricane’s destruction and havoc. The Ismael Rivera Foundation embraces community involvement as a vital component of its mission to promote culture.

By revitalizing the front yard of Casa Museo with input from the local community, the Ismael Rivera Foundation looks to further fulfill its mission of fostering cultural engagement within the community.



This portfolio and the “Casa Museo Ismael Rivera Park and Performance Space” project was completed in 2023 by four students from Worcester Polytechnic Institute: Nathaniel Dixon, Spencer Granlund, Scott Pena, and Andrew Sosa. The project’s purpose was to gather community input and present design options for a community space in the front yard of the Casa Museo. The team’s participatory design approach involved stakeholders such as Ivelisse Rivera (the owner of the house and a previous president of the Ismael Rivera Foundation), local organizations, and area residents. With their ideas, the team created multiple design drawings and CAD (Computer Aided Design) models using the architectural modeling software Sketchup.

This Pocket Park Design Portfolio reflects community input and design options explored to date. Each design will display a 3D model of the community space, showing park features and their positioning in the yard. Each design will also have a description explaining the unique features of the design, the design’s creation process, and community feedback and reception to the design. The portfolio will then break down each feature in each design and describe its purpose within the context of the design, as well as any pros and cons about the specific feature. The document also displays a variety of aesthetic options for common park features used in many assorted designs alongside each park feature description. Lastly, a cost estimate is provided for the most favored design.



Next Steps

This project originated from through Taller Creando Sin Encargos, an architectural design collective based in San Juan, Puerto Rico, whose mission is to “investigate, construct and support architecture that promotes equity in all scenarios.” The organization is co-led by Omayra Rivera Crespo, who founded and oversees the “Casa Museo Ismael Rivera Park and Performance Space” project. Omayra Rivera Crespo graduated with a PHD in Architecture, Art, and Ephemeral Space from the Polytechnic Institute of Catalonia, is a board member of the Ismael Rivera Foundation, and is an expert in participatory design. The work done by our team from Worcester Polytechnic Institute was utilizing participatory design events in the community surrounding the Casa Museo Ismael Rivera. We engage with individuals within the community, but also key informants such as a neighboring day care, Divino Niño Day Care, and Ivelisse Rivera, the sister of Ismael Rivera and former president of the Ismael Rivera Foundation. The participatory design process resulted in a handful of strong community-made pocket park designs for the Casa Museo Ismael Rivera.





However, the design process is not completed. Continuing the participatory design process would allow for more diverse input from more individuals and increase the quality of specific feature aesthetics. Engagement with the local elderly home and with the children in the day care would be a wonderful place to continue the design process. The participatory design process would accumulate into a final park design, which would be approved by the community in a way that the project partners would deem fit. For the design to become a reality, future project partners need to research and approach potential funders and supporters. This portfolio can be used to present to potential benefactors about plans surrounding the pocket park, as well as be a physical form of the community's interest in the project. Once proper funding and support has been gathered and a final design has been settled upon, the last step is to engineer and build the park design. Taller Creando Sin Encargos can lead in the engineering of the park, but the building process can be helped by community effort. For example, interested community members can assist with planting flowers along the fence, or receive help from the La Goyco community center to continue the cleaning of weeds from the park.

Participatory Design

All design ideas were created from community input through participatory design activities. Conversations with individuals within the community created 2D drawings of their visions and memories, which allowed us to create 3D models of each discussed design and layout. Our processes are further explained in our Participatory Design Toolkit, accessible through WPI's Puerto Rico Project Center website.

For example, the first event we held was a Participatory Park Mapping activity. We met with community members and discussed potential park features that could be implemented within the pocket park. This sparked many conversations about the Casa Museo Ismael Rivera's history with community events and the community's history with Hurricane Maria and cultural events. These memories were reflected within multiple 2D drawings depicting designs that could bring these vital events back better than ever.

Participatory Park Mapping

Summary:
The participatory park mapping activity is focused on surveying the community for an ideal layout of the park and specific features that participants would like to see in the designs. This activity works by inviting the participants to fill out blank park templates with their ideal park layout. This allows designers to spot trends in the participant's designs on where features should be located, and which features should be included in the design. This activity can also be run by having participants tell designers how to draw their preferred designs.

Procedure:

1. The facilitator goes over the instructions and speaks to the whole group
2. Blank templates and set of cutouts are handed out to participants
3. The participants are then asked to draw or describe their optimal design
4. After the participants have completed their designs, the facilitators will ask them if they would like to share their designs

MATERIALS:
Blank Park Template
Scale Cutouts
Instruction page
Tape or Glue
Scissors
Pens

TIME: 60 MINS

MOST EFFECTIVE FOR:

Design Workshops One on One Design Sessions

Figure 10: Community made design

Most importantly these cutouts need to be to scale of the park template and must encompass a wide variety of possible features that participants might want. It is also important to add a blank cutout template for participants who might want to add a feature that was not previously thought of

PAGE 10 OF THE PARTICIPATORY DESIGN TOOLKIT, DEPICTING THE PARTICIPATORY PARK MAPPING ACTIVITY.

Image Ranking

Summary:

The image ranking activity is meant to survey the opinions of the community on the designs that have already been created using participatory feedback from previous design events. This activity presents all the current design profiles that have been created by the designers using participatory input. The participants are then asked to vote for which designs they like the most. Facilitators will maintain an open dialog with the participants and explore the reasons why the participants chose the design that they did.

Procedure:

1. Lay out paper with all your designs and its description on a table or flat surface
2. Explain to each participant how to vote for their favorite design using sticky notes
3. Have participants vote for their favorite design and explain why they chose that design by writing it down on a sticky note or through conversation
4. Once all the votes are in, ask participants what they would add, delete, or improve on the designs
5. Thank everyone for their time and their design input

MATERIALS:
Design Images
Sticky Notes
Notebook
Pens
Tape

TIME: 60 MINS

MOST EFFECTIVE FOR:

- Door to Door
- Design Workshops
- One on One Design Sessions

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Figure 11: Image ranking results

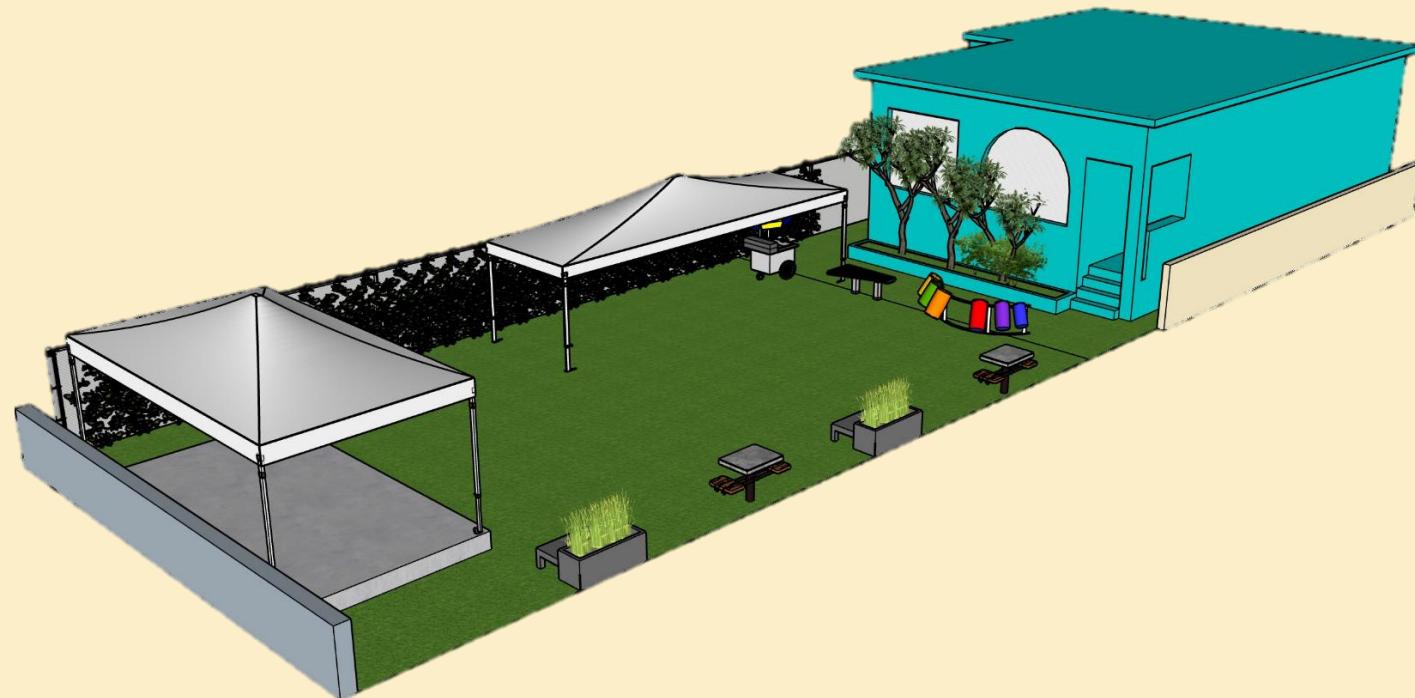
PAGE 12 OF THE PARTICIPATORY DESIGN TOOLKIT, DEPICTING THE IMAGE RANKING ACTIVITY.

Another event we held was an image ranking activity. We converted each of the 2D drawings received from previous conversations with the community and leaders into 3D models using the CAD software Sketch-Up. We returned to the community with posters displaying all the models of the community's designs to continue our conversations and receive input on which designs were the most favorable. The outcomes of this event resulted in two designs standing out to the individuals we talked with, as well as recommended input to combine features between the two popular designs.

COMMUNITY DESIGNS

DESIGN 1: Performance & Play

Throughout the participatory design process, many different park features became favorites within the community. During a participatory event, many participants expressed interest in combining features into one design, so this design highlights all the favorite features in one. The planters and domino tables line the edge of the park to provide seating and function as a barrier to cars. Most of the people that attended the events liked the idea of having instruments for children, so the drums and xylophone are added to this design as well. This design would provide plenty of shade for the park, with the covering over the stage and in the grass. Trees could also be planted on the edge of the park to provide additional shade, however they are removed from the model to allow better visibility of the other features.



COVERED STAGE

The stage would be a place for local artists to perform during events at the Casa Museo and once again celebrate the legacy of Ismael Rivera. Before Hurricane Maria, the park used to host numerous public events to celebrate Puerto Rican art and culture and Ismael Rivera's impact. In the past, the community held many musical performances during these events, so the stage would be one of the most important pieces to bring that kind of celebration back to the Ismael Rivera Casa Museo lot. We believe it is crucial for the park to have an area for artists to celebrate the local music and culture.

In the design, the covering would provide some much-needed shade in the park. When not being used, the stage would serve as another shaded area for residents to socialize. In this design, the stage would be made from concrete to make it durable and low maintenance. The stage would be simple and in the shape of a rectangle to keep the price down while still being aesthetically pleasing, as well as being at a low height for additional seating options. In this model, it is in the center of the back wall with a covering to provide shade for the performers and protect them from the rain. The participants of the Participatory Mapping activity unanimously chose this location. The simple design also allows for more innovation surrounding the feature, such as adding speakers for performers, or adding string lights across the tent to add lighting in the park at night.



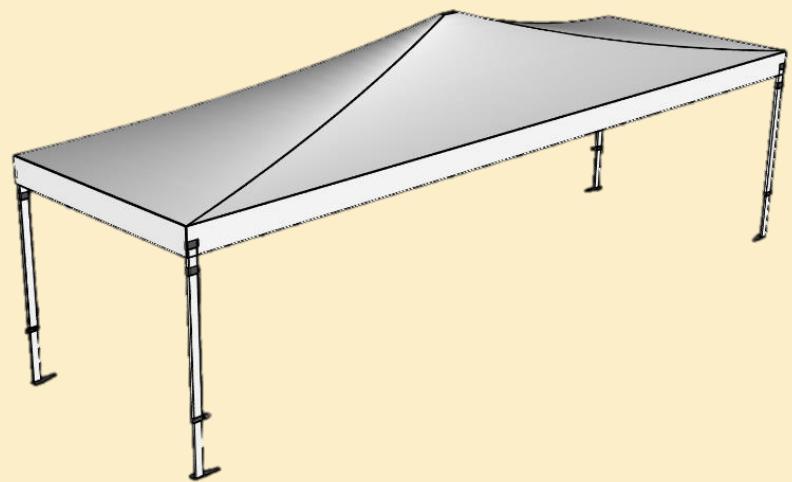
STAGE OPTIONS



SHADED AREAS

After Hurricane Maria, many of the trees surrounding the Ismael Rivera Casa Museo and provided shade to the park were no longer standing. Without a place for shade and protection from the rain, the lot of the Casa Museo is a much less enjoyable place to be. Adding shade and protection from the weather, the community will be eager to host more events in the lot and celebrate the art and culture of the area.

The absence of these trees has created a large need for some sort of shade in the park. The addition of a shaded area would benefit everyone in the park and allow people to be there longer. In this model, the shaded area was placed along the fence to maintain a large open area for people to gather, dance, and socialize while still providing a significant amount of shade. Shade could also be provided to the park by planting trees around the edge of the lot. Although this option may seem to be more expensive, it would add much more vegetation and be more aesthetically pleasing in the long term. Based on the feedback at the participatory design events, many people favored the idea of a large tent to provide shade, as it is the much quicker, cost-effective option for the short term. In the future, trees could be planted to eventually take the role of providing shade in the park.



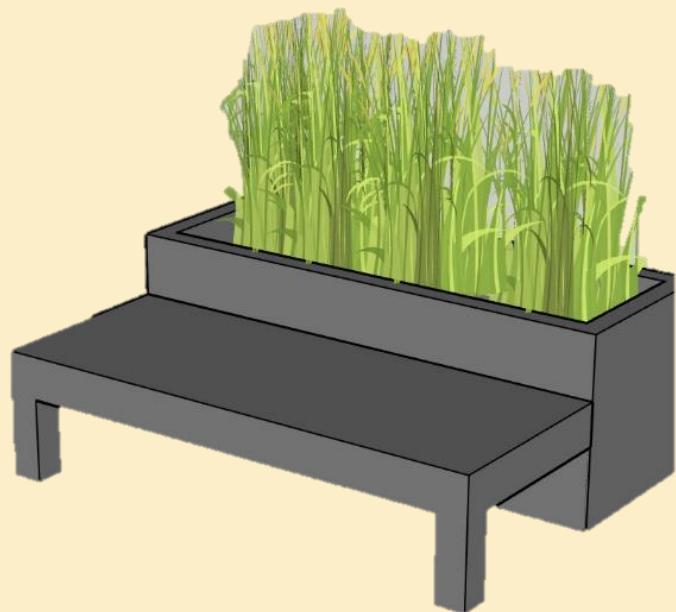
SHADED AREA OPTIONS



PLANTER BENCHES

The Casa Museo used to be a place of community gathering and celebration, and the remodel of the park aims to restore the park to what it once was. Filling the park with art and vegetation from the local community would bring the life back to the Casa Museo front yard. Having planters that double as benches in the park is a way to serve multiple purposes. While providing seating and a place to plant flowers, these benches can also be a place for members of the community to preserve Ismael Rivera's legacy by engraving his lyrics or decorating the benches.

A large point of discussion during the participatory design events was about the need for benches or seating within the park. Although benches can provide great seating options during events and throughout the regular day, community members feared that benches would get in the way of dancers and attendees during large community events. Therefore, the benches are placed toward the side of the park. Benches doubling as planters would be a fantastic way to improve the benches' visual appeal, while also functioning as a barrier to prevent vehicles from parking in the yard. This feature was very well received by the members of the community at the Image Ranking activity and given their many purposes within the park, they are well worth their modest cost. The aesthetics of the planter benches can be pushed further, as they can be painted to display illustrations of Ismael Rivera, or even have notable lyrics from popular Ismael Rivera songs.



PLANTER BENCH OPTIONS



DOMINO TABLES

Domino tables in the park would allow for people in the local community to gather and play dominoes on days when there is not a large event in the park. Dominoes were a popular game among the older community, a large demographic around the Casa Museo, making it a wonderful way to include them in the remodeled park.

Many people have expressed interest in having these tables implemented into the park's design and this layout allows for the tables while still having additional seating and being open enough for people to gather and enjoy a performance. This feature could also double as extra seating if there is not enough during popular community events. In this design, the domino tables line the edge of the park, alternating with the benches to create a barrier to help keep cars off the lot. The domino tables would also serve as another way to attract people to visit the park outside of events, promoting socialization and connection between residents. Future adaptations to the domino table may include painting art on the top face of the table, such as Ismael Rivera album covers or other important figures in Ismael Rivera's life and career. Currently, the design of the domino tables is made of concrete and fixed into the ground to provide resilience against weather conditions with the trade-off of preventing these features to be removed after installation. Regardless, this idea was popular among the community at our design events, as it would not be significantly expensive but still provides many different benefits, making it a great addition to the park.



DOMINO TABLE OPTIONS

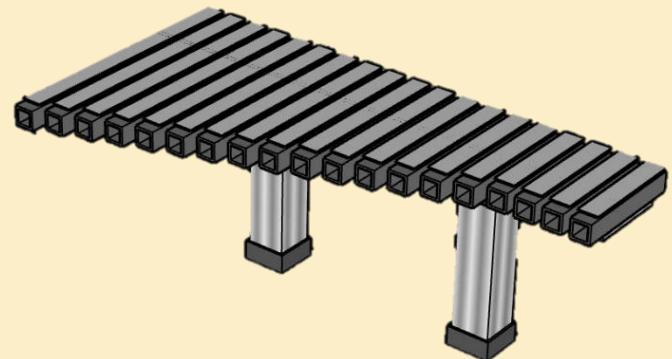


CHILDREN'S AREA

This area of the park would be a place specifically made for kids. Having instruments in the park for kids to play fits the park's theme of music and culture and is a fun way to allow them to have a space to enjoy the park. By implementing these instruments, the kids can celebrate music and art with their friends and family as well as learn about the significant impact Ismael Rivera had in their community.

This park layout provides a small kids area comprised of two instruments mounted in the park. These instruments would allow the kids to have an area to play during an event and create their own music. The members of the community that suggested this idea said that the instruments should be in front of the Casa Museo to allow kids to have their own space away from the stage and to not disturb the performances. This feature would be inexpensive, as most of it could be constructed using recycled materials, such as using barrels for the drums in this design. This was a popular feature among the members of the community during our participatory design event and with the day care that is located next to the Casa Museo.

Instruments are not the only way to implement an area for kids, but there are many different opportunities! Through the participatory design methods, a few individuals suggested a community garden to help educate children on plants and agriculture or having a more traditional playground to occupy children during large community events. These are just a few alternatives to the instruments but provide similar benefits.



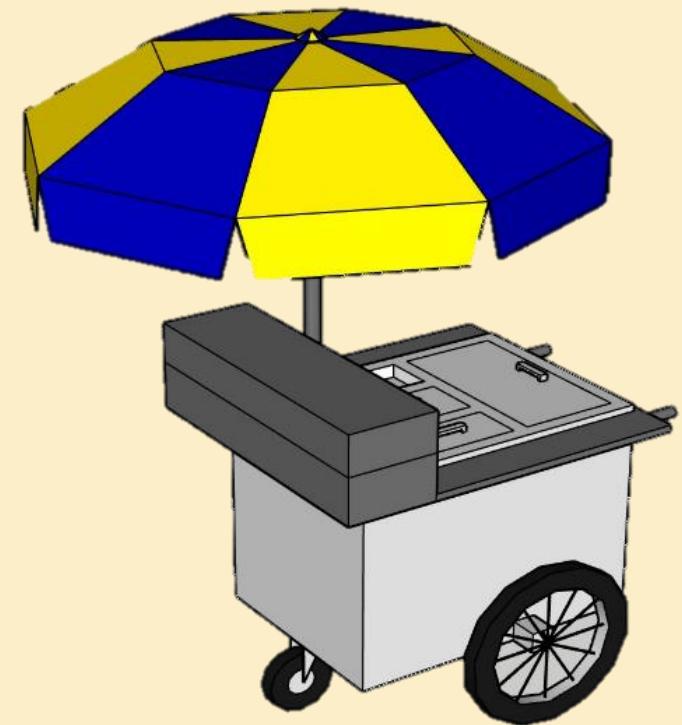
INSTRUMENT OPTIONS



KIOSK

Around the Casa Museo, many residents sell food to the community for a living. Dedicating a spot in the redesign of the park would allow vendors to set up a small stand and sell different merchandise at large events and throughout the regular day. This is a great way for the people with a small business to make money as well as being a strong pull for outside visitors when an event is not occurring. It could also be a great place for children to come to after school for a bite to eat with their friends.

The design provides a dedicated shaded area for kiosks during events and throughout the regular day. The shade is important to protect the vendors and the merchandise from the weather conditions and help prevent food spoiling or melting. The Ismael Rivera Foundation can also utilize the space to continue to sell Ismael Rivera merchandise, such as clothing or posters, as they have done in the past. This area is located against the fence close to the Casa Museo and would be a cost-free feature in the lot, as all it would need is an open area for members of the community to set up their own stands.



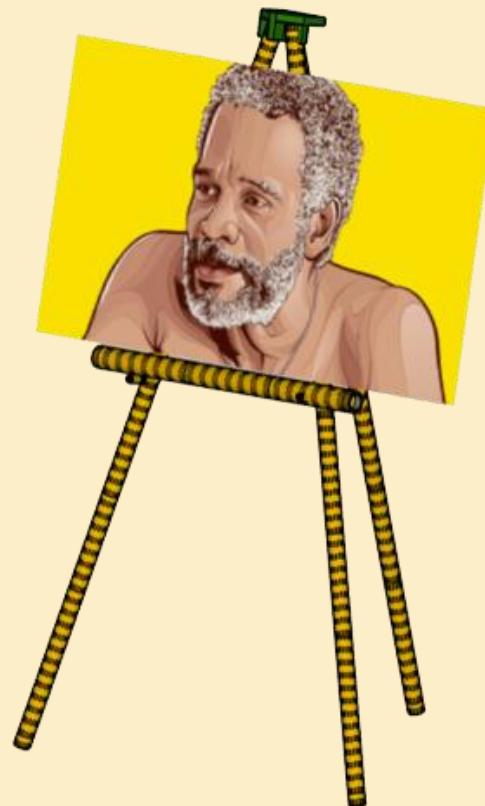
KIOSK OPTIONS



ISMAEL RIVERA MURAL

The park and house are dedicated to Ismael Rivera and his impact on Puerto Rican culture, so it is important for a piece of the space to be dedicated for a mural in his honor. The mural depicting Ismael Rivera would remind attendees of his legacy, as well as promote his work to tourists or educate new generations of his legacy.

The mural can be accomplished in a variety of different ways. According to participants in the Participatory Park Mapping Activity expressed that a picture of Ismael Rivera would be put up on an easel alongside flowers during community events that celebrated his legacy. It would be a temporary mural, only being set up for events, then being brought back inside the Casa Museo to protect it from weather or to prevent it from being lost. Another option would be to create a banner that would reside on the side of the Casa Museo, which would be much larger than the easel and could be seen from the surrounding roads, attracting more people into the park. A more permanent mural could be to paint a section of the Casa Museo or the side wall to pay respects towards Ismael Rivera. This would be much more permanent and protected from weather and theft but would also mean making alterations to the home that Ismael Rivera built for his mother.



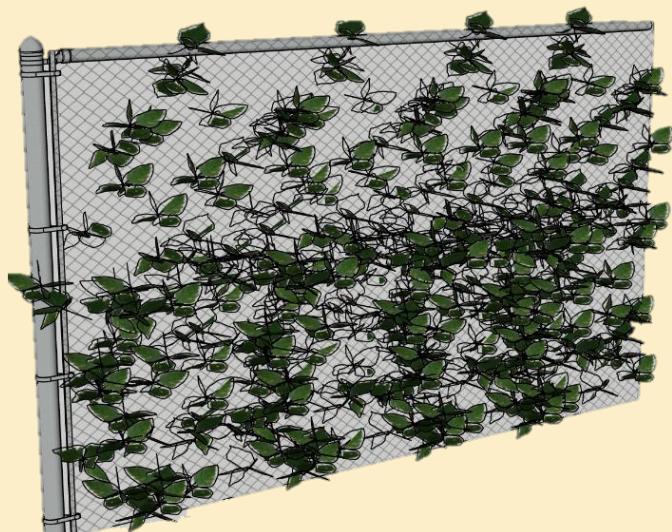
MURAL OPTIONS



FLOWER FENCE

The chain link fence in the Casa Museo lot is a blank canvas ready to be used to promote Ismael Rivera's legacy and the community's culture. A great idea that has been suggested is to implement vegetation such as climbing vines or the Heliconia flower, which was said to be Ismael Rivera's favorite flower.

Adding flowers or another kind of vegetation to the fence in the park would be an aesthetically pleasing way to provide some privacy in the park. The fence has also been damaged over time and vegetation would be a cheap and easy way to drastically improve the aesthetic of the fence and the park. This would be an excellent feature to add into the park as it could be done using vegetation native to Puerto Rico and does not take up any other space in the park.



VEGETATION



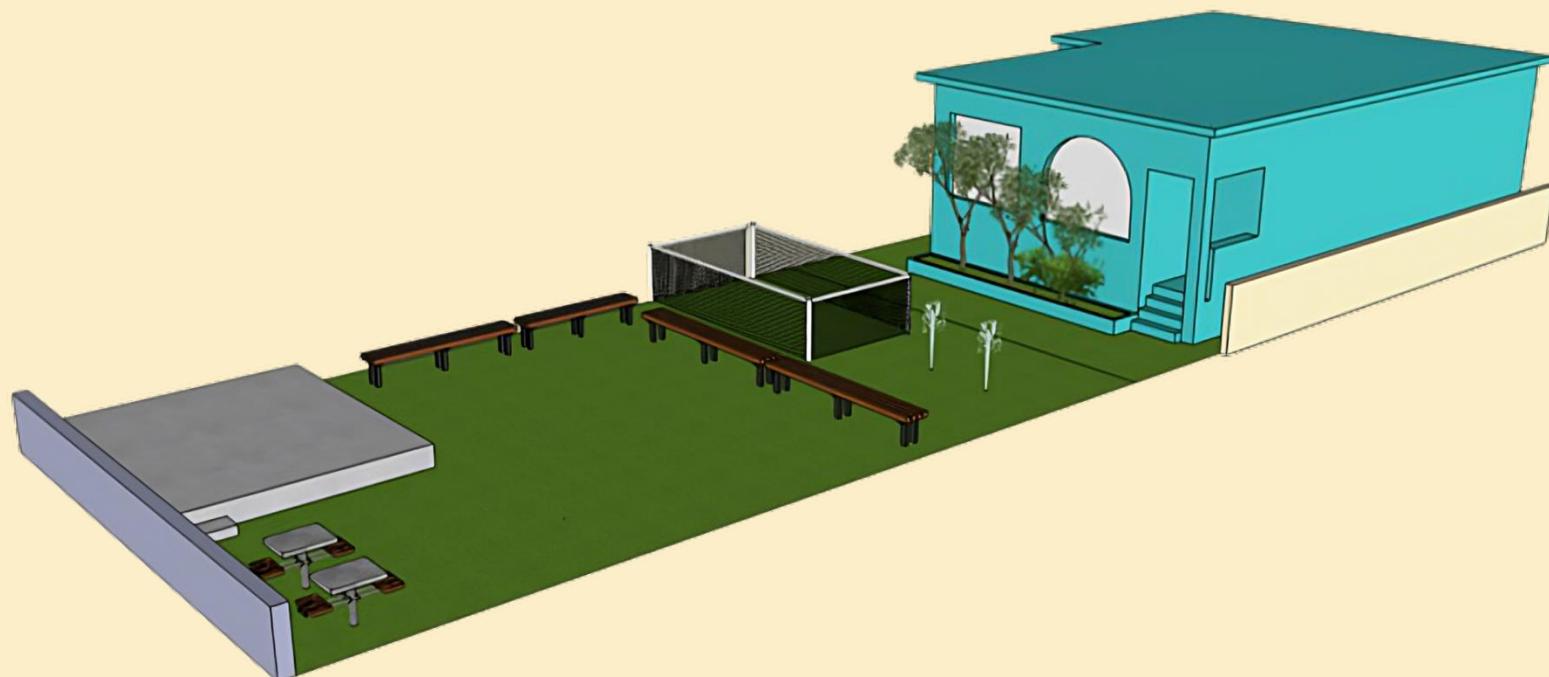
Top Left – Cruz de Marta: Easy to grow, maintain, and can grow in large bushes. It is also a common flower in Puerto Rico.

Top Right – Gardenia Flower: Currently planted in front of the Casa Museo Ismael Rivera.

Bottom Row – Heliconia Flowers: This is Ismael Rivera's favorite flower, being a great fit throughout the park.

DESIGN 2: Water Feature & Dog Park

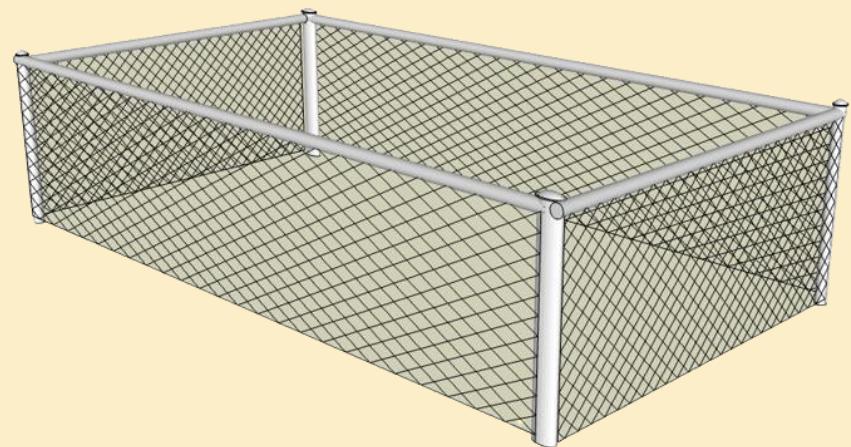
This design for the park provides a large open space for people to gather in the center of the park while still having areas for seating. This layout also implements some unique features such as the domino tables, a dog area, and a water feature. This design was based off feedback by one community member and was the second highest voted design in the image ranking activity.



DOG PARK

A crucial aspect of park design is making sure the park caters to its unique community. Certain features may be successful in one community and unsuccessful in another. This is why it is crucial to listen to each community's specific wants and needs.

Some community members indicated that dogs are popular in the area and wished to see a dog area included in the park to allow residents to have a safe area to bring their dogs and enjoy the park. The woman who shared this idea indicated most people in the area have dogs, and that having a dog area in the park would draw more people in. If implemented, this feature could be placed close to the Casa Museo and away from the stage, leaving space for people to gather and enjoy a performance. At the Image Ranking activity, some people were strongly for this feature and some people were strongly against it.



WATER FEATURE

Having a unique and exciting feature is a great way to ignite people's excitement in a park. This excitement could lead to more people being invested in the park, causing organizations to hold more events in the park and more people being interested in the space.

Having a water feature in the park would allow for a fun way for people to cool off on hot and sunny days. This feature would certainly draw people's attention in the park and make it standout. A water feature would be placed near the edge of the lot close to the Casa Museo to keep it away from the stage and make sure there is still enough space to gather and enjoy a performance. During our imaging ranking activity, we received mixed feedback about the idea of having a water feature, as some people really liked the idea and others were strongly against it.



WATER FEATURE OPTIONS



BENCHES

The benches in this design would surround the open space, providing plenty of seating throughout the park. Many of the benefits are similar to the benefits described in the Planter Benches, as these benches can be a place for residents to come sit and socialize during and outside of community events. Benches such as these may be permanent fixtures within the park, but using benches that could be moved around depending on the needs of the community could make the feature significantly improved. That way, they would not get in the way of larger event where large crowds are inside the park. Like the planter benches, these benches can be decorated to further represent Ismael Rivera, through painting murals or song lyrics on the bench's face or side.

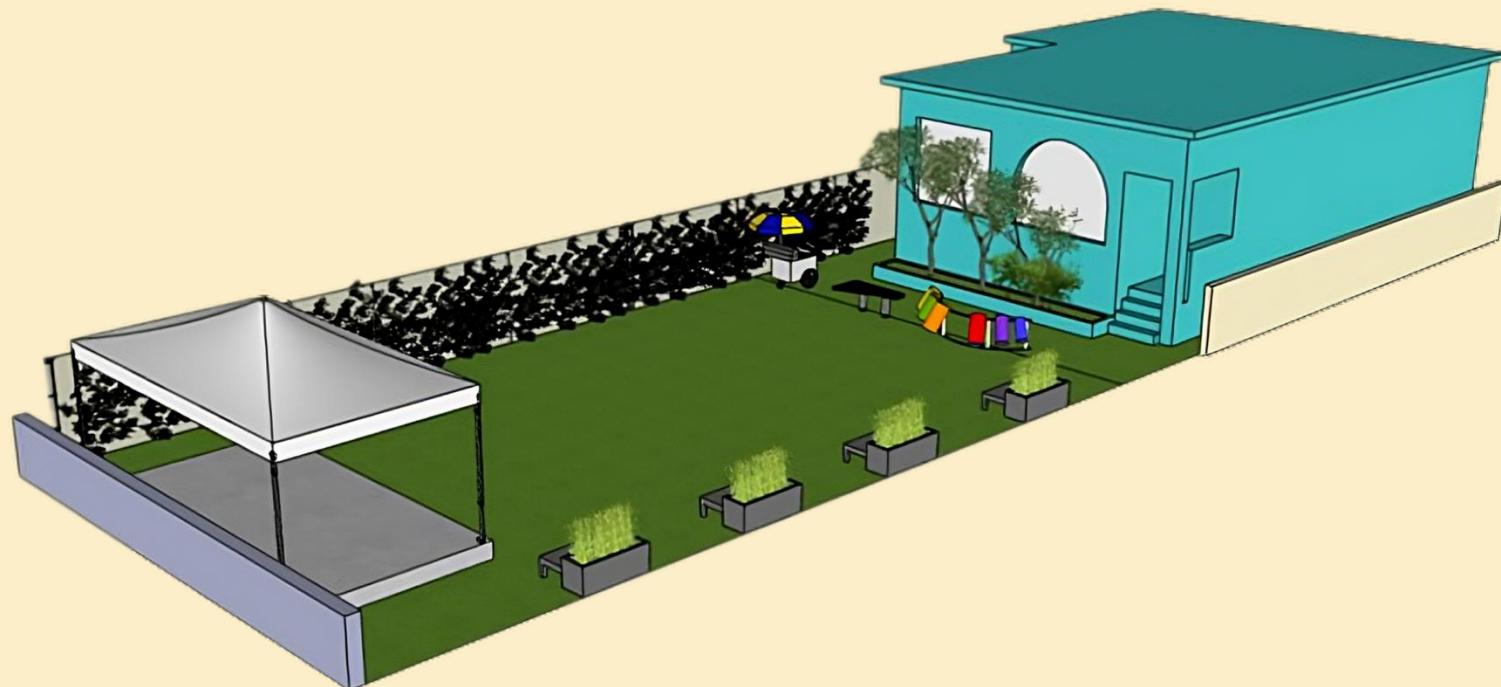


BENCH OPTIONS



DESIGN 3- Open Performance Space

This park layout, based off feedback from Ivelisse Rivera, leaves a significant amount of open space for people to gather and host events. The planters on the side double as small benches to provide seating for those in the park that would want it and function as a barrier to stop cars from parking on the lot. There are also musical instruments mounted in the park for kids to play with and enjoy. This layout also provides plenty of room for people to set up stands or kiosks during an event. This was the most voted for design in the image ranking activity.



POCKET PARK COST ESTIMATOR

To estimate a potential cost of a park design idea, we created a basic tool using Microsoft Excel to calculate the costs of certain park features based on their size, material, and build quality. We also created a template spreadsheet to organize all potential costs and construction fees that may be encountered within the project. Below, we have provided a cost estimate for Design 2, as it was the most favored design when the community voted during a design ranking participatory event. For the future, much more in-depth analysis is required to get a more accurate cost, but this our guess to how much the design may cost.

Item	Description	Dimensions	Quantity	Unit Cost	Subtotal	Notes:
Benches	Concrete Bench	10x1x1 ft.	4	\$ 4,500.00	\$ 18,000	
Stage	Polished Concrete Stage	10x20 ft.	1	\$ 1,000.00	\$ 1,000	
Roof	Tent available from Amazon.com	10x20 ft.	1	\$ 289.98	\$ 290	Link to Buy
In Ground Drums	Playset available from Parkwarehouse.com	n/a	1	\$ 4,179.00	\$ 4,179	Link to Buy
Gravel	Caliche Gravel	2x6 ft	1	\$ 5.40	\$ 5	

Construction Cost	\$ 23,474
General Conditions (8%)	\$ 1,878
Contractor Bonds and Overhead (13%)	\$ 3,296
Subtotal Construction Costs	\$ 28,648
Construction Contingency (15%)	\$ 4,297
TOTAL CONSTRUCTION COSTS	\$ 32,945

How to Use the Pocket Park Cost Estimator

The Pocket Park Cost Estimator is intuitive to use. To estimate the cost of a park feature, first input its dimensions. The estimator will calculate a range of potential costs for the feature, depending on material and quality. The user can choose any of the returned cost estimates and use them in a potential design budget spreadsheet. Since the Pocket Park Cost Estimator was built in Microsoft Excel, the tool can be expanded to estimate more park features. A few examples could be park fences, flowers, and walkways.

How to Use: Input desired dimensions for a park feature shown in the grey cells. Choose between the various costs calculated.				
Stage				
Length (ft): 10	Width (ft): 20	Square Feet: 200		
Stamped Concrete Slab				
Type	Cost per sq. ft.	Low Price (total)	High Price (total)	
Basic	\$ 9	\$ 13	\$ 1,800	\$ 2,600
Mid-End	\$ 14	\$ 19	\$ 2,800	\$ 3,800
High-End	\$ 20		\$ 4,000	
Polished Concrete Slab				
Type	Cost per sq. ft.	Low Price (total)	High Price (total)	
Basic	\$ 2	\$ 7	\$ 400	\$ 1,400
Mid-End	\$ 5	\$ 10	\$ 1,000	\$ 2,000
High-End	\$ 8	\$ 16	\$ 1,600	\$ 3,200
Benches				
Length (ft): 10	Width (ft): 1	Height (ft): 1		
Concrete				
Bench Cost:		\$ 4,500		
Wood				
Bench Cost:		\$ 3,000		
Gravel				
Length (ft): 2	Width (ft): 6	Total Area 12		
Type:	Min Price	Max Price		
Crushed Granite	\$ 12	\$ 36		
Crushed Limestone	\$ 18	\$ 24		
Caliche	\$ 5	\$ 78		
Pea Gravel	\$ 12	\$ 38		