



DESIGNING THROUGH THE EYES OF A CHILD

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DESIGNING THROUGH THE EYES OF A CHILD

A CHILDRENS' TOY MUSEUM

Edmonton, Alberta, Canada

By: David S. Cheetham

MONTANA STATE UNIVERSITY

School of Architecture

Bozeman, Montana

A thesis paper submitted in partial fulfillment of the requirements for the degree

of

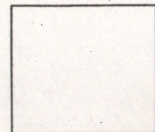
BACHELOR OF ARCHITECTURE

Approved

Jerry Bancroft, Advisor

Thomas R. Woods

Thomas Woods, Director of Architecture



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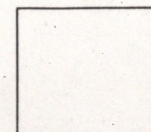
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David S. Cheetham

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DEDICATION

This document is dedicated to my wife Carolyn in thanks for all the encouragement, love and support she has shown me.

Secondly, to my children, Elise, Daelyn and Jenelle who have provided inspiration for this project. Through their everyday activity the real meaning of life is understood.

Finally, to my advisors for all their shared knowledge and constructive advice.

Sitting at the window, a rainstorm suddenly turns to hail.
"Look, they're making popcorn."

Daelyn Cheetham, 2 1/2

Talking to her uncle about his bad habits
"You shouldn't smoke those sticks, you'll get cancelled."

Elise Cheetham, 6

Dediction

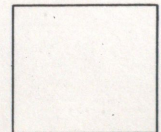


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INTRODUCTION

There are three major reasons why I have chosen "A Childrens' Toy Museum" as my thesis project. First, through the observations of my own children, each at a unique level of play, I realized they hadan ability of uninfluenced creativeness and enthusiasm to play and learn. These observations have also made me very aware that these levels are soon over, and perhaps never captured again in our adult life. It is through such play that the children, who will become our future, develop into the adults who will, or will not, impact life.

Secondly, although such a topic interests myself, as I am both a parent and a designer, there should be an awareness in all architects of the importance of such a significant and influential period of the development of a human being. Facilities designed for children merit distinct functions and creativness.

Finally, as thesis approached, I felt I would benefit the most as a designer, to develop myself extensively where I may be the weakest. Hence, I have decided to approach my thesis in a child like manner and to be as creative as possible. The challenge will be to model a child. This concept will be reinforced by the creativness required by such a facilities clients children.

THESIS STATEMENT

Children are intimately affected by all aspects of design, ranging from safety to sustaining their curiosity, interests and excitement. Although being the most affected group of users, they are the least able to influence the design of their environment. Usually, the needs of a child are often forgotten when facilities are being designed. To design environments for children, it would be ideal for a child to design the space himself. Because children are not trained architecturally, this cannot be done. As well, this period of life is short and has passed by quickly for most of us. It is nearly impossible to re-live this period of life, but never too late to re-learn what it is about children that makes them so special. Architecture is the study of human behavior and its interaction with the built environment. To be sensitive to a child's needs we should re-learn our childhood awareness skills and what it is that makes children so uniquely creative. What have we as adults lost as we have grown.? Can we as designers, design through the eyes of a child?

PROJECT STATEMENT

The purpose of my thesis is to explore the creativity and awareness skills of children and then to apply them to my design process. By focusing on these two qualities of children, the uniqueness that comes from within can then be carried into many different projects.

For this project, I will design a Childrens' Toy Museum and its site. Its specific user will allow me to explore the effects children have on the built environment.

The primary goal of this project is to create a very experiential facility that maintains a unique character and experience for each and every user.

"No theoretical teaching knowledge, no psychological theory, is worth anything in relation to play if it is not part of a personality which clearly shows a fondness for children and their way of living-playing while living. No playroom - tools - materials - offered to children by adults will fulfil their function unless adults, by their attitude and manner, show an understanding of the spirit and substance of the play."

Johan Huizinga



EDUCATIONAL GOALS

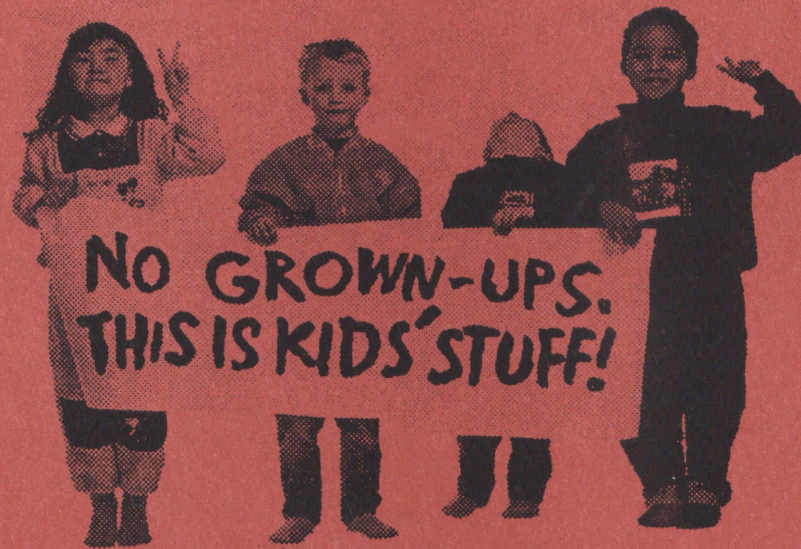
- o to stimulate my creative thought process
- o to explore intuitive design ideas in a freer methodology
- o to learn about a specific user, children, and their effects upon design
- o to use my advisors' knowledge to the fullest
- o to document my project and process in an informative presentation that will add to the quality of my portfolio

PROJECT GOALS

- o to create a facility which can be identified with children
- o to provide an interaction of built form and the human experience
- o to create a facility that will attract users back again and again
- o to create a tie between the new facility and existing structure
- o to encourage public interaction throughout the site and built form
 - winter/summer
 - day/night
 - children/adults
- o to create a facility that one can look back on and re-experience it in their mind both in reality and fantasy

"Youth is wholly experimental."

Robert Louis Stevenson



CREATIVITY

For the child' creativity is natural. He confronts a world that is new to him. Spontaneously he responds to it, seeing what it will do through testing and trying it. He has no attachments to break. The child has not yet acquired the habits of the mind that are the restraints to the creativeness in an adult. The creation of structure results from this free experimentation. Babies look at objects as an independent phenomenon whose internal principals and external relationships are open to redefinition. Not knowing purpose, use or what up or down is they turn it, taste it and feel it. This freedom of mind can stimulate the whole spectrum of innovation. Their imagination is wide open, they are free to seek solutions which may not be realistic. Included with their imagination is usually their fantasies, wishes and dreams, most of which seem to be very undirected at best. Unlike adults, children are very spontaneous in what they do or create. They don't sit and ponder for a solution to what they are doing. Their spontaneity could be defined as a fine careless rapture, full of energy and spirit.

Maslow suggests the following as characteristics of a child's creativity;
"spontaneous, expressive, effortless, innocent, unfrightened by the unknown other characteristics."
Also, noted by Maslow are" ambiguity, ability to accept tentativeness and uncertainty, the ability to create bipolarity, and to integrate opposites."

When children create in the drawing form ,they often exaggerate in size and number. Strange, meaningless forms begin to show up along with the unrealistic. Often omissions are present. Their creativity is based on impulsive feelings at a self- expressive level.

For adults, creativity does not come as easily. Adults often become overanxious and over conventional in our thinking, much of which is at the associative level. We often stop and look over our shoulders to see what conclusions other people are making. Our creativity sometimes becomes blocked out from the habits of the mind that have formed as we have developed and as we have grown and experienced the world.

"What lies behind us and what lies before us are tiny matters compared to what lies within us."

Oliver Wendall Holmes

AWARENESS

A very important characteristic of creative behavior is the developing of a keen awareness to life's details. It is said to be one of those creative behavioral 'abnormalities.' This behavior of man was not always so abnormal. Because we were all children at one point in our life, this behavior was natural for intellectual growth. In order to see bigger pictures, we as adults stopped improving and using this so very useful tool. Thus missing out on much of life's delights.

Everyday children amaze adults with their awareness for life's basic details. We tend to think that this is a distinctive situation for children. Unfortunately, we forget that in order for children to learn and develop, they must be sensitive to life's patterns and details. Adults are forever longing to have this freedom. For they truly believe that it has passed us by. A child looks at another child as being very ordinary when behaving in this manner. They do not think of this as being creative.

A child's understanding and perception of the world around us is totally distinct from that of an adult. For one the child is a lot closer to the ground. Thus producing a greater sense of awareness to what we walk on, over and around. Because a child is learning and developing, their awareness for everyday things becomes intensified.

The awareness of a child is very visual but does not end there. Their sense of smell, touch, and hearing also play an important role in their development. They notice everything they come into contact with, light and heavy, wet and dry, cool and warm, soft and hard, things that make sounds and odors, shiny and dull, dark and bright, huge and tiny, high and low, all of which enliven the environment they are in.

"If being unique is what you seek, re-learning childhood awareness skills should definitely become a part of your fitness agenda,"

Don Koberg and Jim Bognall

QUALITIES OF SPACE

The qualities of space for children are very different to that of an adult. The feeling of defined space and seclusion is very important to a child. They enjoy spaces that enable them to create their own kind of world which is quite different from ours. Children require quiet places where the young can interact and engage in small group play. A child's space can be defined from the most basic, a blanket on the floor, the pattern on a rug, an elaborate maze of a snow fort in the winter, or perimeters of bunched up leaves in the fall. Most important to children is their need for movement which requires quality space to expel their boundless energy.



CHILD CAVES

Most of the world around us is adult size. Children seek spaces that are their own size. We have all seen or even made ourselves, our first child cave beneath our parents kitchen table. Covering it with blankets, pillows or anything our parents would let us get away with to make it our own personal space. Outside, children build tree houses only they can fit into. A box, or leaning bicycles against a building becomes a cave for a child. Children will use their imagination to seek out special places just for themselves.

A child will take up about 5 square feet in such spaces but usually likes to build them within a group thus, taking up about 15 to 25 square feet. The ceiling heights should be low, about 2.5 feet to 4 feet. When along, a child sometimes prefers to have a space he can barely squeeze into using very tiny doorways, thus leaving no options for the adult world to be a part of this space. For some, a better cave is dark or can be darkened.

Left over spaces are easily adapted into such spaces for children. Under stairs or entrances, or simply existing in the texture of the wall by carving out spaces within a thickened wall.

To invite children into these spaces an element of mystery and intrigue should be present. This can be achieved by an irregular layout of spaces or by simple lighting, this can include clerestory lighting and blackened walls.

PLAY SPACES

The master architects of play spaces are children themselves. Instead of ready made play equipment, children should be given safe play materials to construct and reconstruct spaces day after day. A child will make do with as little as a large box, or a sidewalk and piece of chalk.

For preschoolers, sand boxes and access to water, complete with various containers are most important. Children in the early grades should be exposed to planks and blocks of various sizes. Loose items are essential to the development of children this age. Pull carts, tents, dress-up cloths are excellent suggestions for children age three to teens.

Young children prefer to play close to adults. If an adult is occupied some distance away, the child of this age will often reject the designated play area, or tag back and forth. Somewhere between the ages five through eight children begin to prefer a private space and independence.

Although "clutter" increases the chances of an accident, children expand creative efforts in an environment of "apparent untidiness". Soft surfaces, for example cushions encourage less aggressive play. For group play, large pieces of equipment are more successful than small toys.

A child's play is at least equal to education in importance. Play is essential to a child's development.

MOVEMENT

Movement to a child means a lot of things. Movement is life, compulsiveness, self discovery and most of all freedom. It is needed and enjoyed by all children. For a child, movement is natural, it is their means of learning about the world. To learn about the world, a child needs opportunities for exploratory movement, both instinctive and spontaneous.

Movement is an important factor in self discovery for a child. For infants, this begins at an early age. They are fascinated with their own toes and hands, soon after, they look about at the environment which surrounds them.

Movement to a young child is the discovery of the environment, to them movement is life. Children move their heads to focus upon a toy or object. New objects are then discovered, examined and named in their expanding new world.

Lastly, movement for a child means freedom. Free flowing movement experiences that are natural are important to a child. This freedom enables them to explore the world around them.

The medium in which the child moves is space. When a child is free to explore his environment, a keen awareness of space develops. If allowed to explore, children soon become aware of what is in their space both general and personal. Children explore in terms of where their body is in space. Testing how it moves and what it can do. They do this by trying to understand direction, levels, patterns, heights and distances.

"Space as an effort quality involves flexible and direct movement elements. Direct qualities involve feelings of linear or thread like movement. Flexible qualities include movements that envelope space such as wriggling or wavy movements."

David J. Staniford

"The development of space awareness and relationships is essential towards establishing a broad movement base on which children can draw for later use."

David J. Staniford

In order to broaden space awareness in children, one must be concerned with space both personal and general. This includes is direction, pathways, levels, planes and extensions.

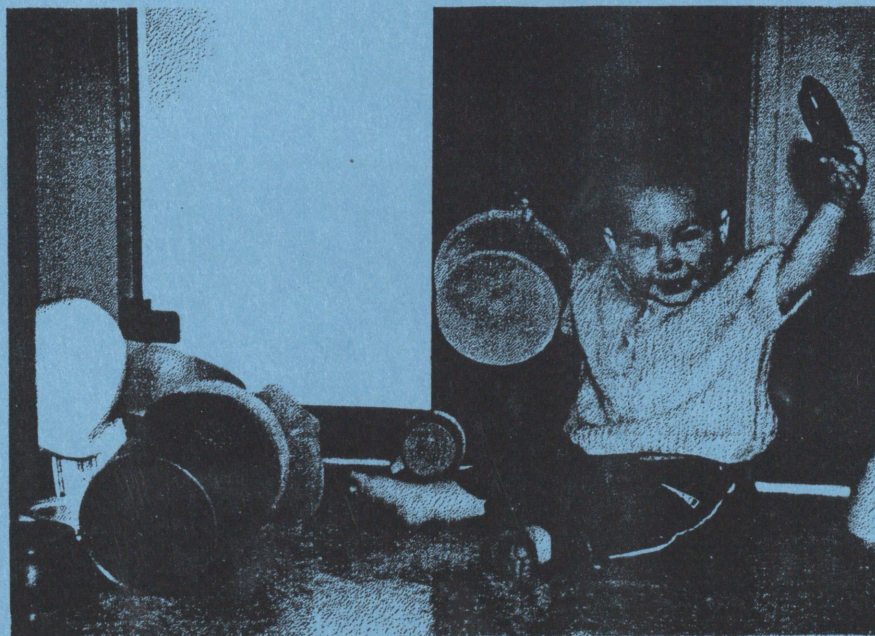
Relationships are important to children as movement proceeds. These relationships can occur with many different things, objects, individuals and groups. Also included would be relationships to equipment apparatus, rules and boundaries.

At a very early age children respond to rhythm. This may be a mother rocking her baby, a musical beat, the bouncing on a knee or the simple clapping of a hand.

When designing for children, a good recommendation is to expose them to a number of mediums combined with movement. This includes varying surfaces, textures, visual stimuli and music. These variations present opportunities for exploration.

"The child's toys and the old man's reasons are the fruits of the two seasons."

William Blake



TOYS

TOYS

When talking about toys for children, Websters Dictionary says,
"toys are an article for the playtime use of a child either representational (as of persons, creatures, or implements) and intended especially to stimulate imagination, mimetic activity, or manipulative skill or nonrepresentational and intended especially to encourage manual and muscular dexterity."

To sum this up there are three main types of toys, those that stimulate imagination and creativity, those that help children attain adult skills and toys that help the development of physical and mental abilities. Because these three type of toys are so influential, it is clear that toys are a very important element in the life of a child.

To a child, imagination is developed through dreams and fantasies. To begin this step, a toy usually becomes the starting point. If this is true, then toys become very important to a child. They help them guide what type of fantasies they will form. A child's fantasies develop a toy into something more important than a mere trifle. A toy to a child can be anything they imagine. They create their imaginary world from the most simple and inexpensive objects that become available to them. For children, less meaning is imposed on a toy if it is of general form. For example, a stick could have infinite purposes as a toy, where as a toy designed specifically as a wand stifles a child's imagination in play as its purpose is very specific. Mounds of dirt or empty boxes will amuse a child in play and imagery for hours. The more general the toy the more allowance there is for freedom. Such freedom stimulates imagination and fantasy in a child's play.

Toys help a child adapt to adult skills that will be required at a future date. Toys that mimic adult functions develop a child's skills through play and imitation. A child's sensory, perceptual and motor skills do not magically develop on their own. It is toys that are the developing tool to teach and strengthen these skills. Unknowingly a child develops these skills as she is being entertained while playing with these toys, which specifically develop sensory, perceptual and motor skills

*"It is a fatal fault to reason whilst observing; though
so necessary beforehand and so useful afterwards."*

Charles Darwin



DESIGN PROCESS

DESIGN PROCESS

For this project, my foremost goal was to design through the eyes of a child. A major difficulty was to model a child's views, and not just design in a child like manner.

The design process began with short weekly charrettes that involved three dimensional concept models. They were produced quickly, and at this point, not set to a finite space program. Although very abstract, they were designed to conform to my chosen site both in size and orientation to the elements.

The first two models were used to search for an idea to build my concept from. My previous research on children was always in the back of my mind as I did this searching. The first model was built of rectangular, modular lengths of foam core. It was constructed very quickly and crudely with not a lot of time put into it. It didn't look like much, but surprisingly a lot of ideas came from this. Like a child, a lot of the ideas were verbalized as I had pictured during the process and after completing this model. The main ideas that came from this concept can be summarized as movement, user effects to the built form, and change. Possibilities to explore were that of building as toy, or a building that moves and can be changed by the actual user while they are present.

The second model was done as a volume study of space and what implications this would have upon the previous ideas. Styrofoam spheres, cones and rectangles were used as whole and part to portray various volumes. The results were, from a visual point of view, not very exciting but helped generate more possibilities for a solution. The idea of movement was expressed by the volume penetrating the ground at one point, and by resurfacing again at a further point. Upon further study of the model the volumes could either represent the skin surface of the building or, the interior volume envelope with an additional skin separate from it.

The third model study was constructed at a larger scale which now incorporated the existing structure into the concept at a more detailed level. The model was built from cardboard and was still very crude and quick. At this point, the site was very important to the concept both in safety for children and access to the site. By sinking the site, a safety buffer from the street was provided, while still maintaining an open feeling for its occupants. Access to the site from the main parking lot was noted. As well, access from the north end parking would address the major corner of the site.

At this point, the idea of maintaining the mind of a child was very important to me. Equally important to me was how they might feel experiencing this museum I was designing. To do this, I wrote a story of a child possibly five years old coming with her mother to my museum. The significance of the story was to try to think and feel like the child who would journey to and through my museum.

A CHILD'S STORY - 1

Mom has finally promised to take me to the new Childrens' Toy museum. I'm pretty excited, but I hate being buckled in the back seat of our car, I just can't see anything. I really want to see this place. All I know is that its bright and sunny outside today. Oh, there's the Mcdonald's sign, sure is nice they put it so I could see it. I really want to tell mom to stop and go to Mcdonald's, but I've heard so much about this place from my friends. Lets keep going, "Are we there yet mom?" "No," she says, "but I can see it up ahead." Sure mom, I can't see it from here. It's been hours since we left home, I begin to think we are never going to get there when the car finally comes to a halt and mom says "We're here."

Out I jump. The first thing I notice is that the pavement is so hot, it's sticking to my shoes. How neat, I can see my shoe print embedded in the pavement. "David are you coming." Mom says, as she patiently waits as I unstick myself from the pavement. I finally make it to the sidewalk, but it's not like our sidewalk. It has a neat pattern in it, diamonds that I begin to follow back and forth. I go on the sidewalk trying not to step out of the shapes.

I begin to look around as we head for the museum. It looks like it's across the street. I can't see much because there is a bunch of trees in front of us. Actually, the whole parking lot is full of trees and grass that is made into hills. I climb up on the grass where I can see a pool of water in front of us. It seems to follow us as we continue towards the trees. I pick up a stick and drop it into the water to see if it will follow us, sure enough it does. We come through the trees out the other side. "Watch for cars mom." I tell her, but she says not to worry as this street is closed off. I can see this now as I notice some kids at the end playing a game of street hockey with their rollerblades on, looks like fun.

I quickly remember my stick that was following us. It has now disappeared, but where did it go, and the water too? I can hear it up ahead, so I take off running ahead of mom. I cannot see the water, but I know it is behind this tall wall in front of me. I don't know what this wall is, but I think it's the building we are going into. It has some bricks just like our fireplace and a dull type of metal that has funny ripples in it, just like the water at the lake when I throw a rock into it.

But where is the front door? There is a small opening which I go through only to find myself standing on a large balcony. From here I can see the whole world. I turned back to tell mom to hurry up and come in here, but I can see she could never fit through that little opening, but I can see her peeking through a small little square in the wall.

I turn back to see the place again, just so I can tell mom all about it. There is that water that had followed us and my stick, which I could barely see as it floated off out of my view below this, this building? Looks more like a lunar spaceship that has landed and dented the dirt in the middle of this park.

It looks like a piece of it has shattered and broken off here and there. You can see into the ship in places, as though the exterior of it has peeled away. I can see below me, kids are riding their bikes and, "David hurry up, we have to get going."

Oh yea, I guess I can't stand here all day long. I can go to my right or my left. I hear mom's footsteps go to the left, so that's the way I go. The platform begins to slope down, I follow it and the wall beside me. It takes me in and out through the wall. "Hi mom" I say as I pass by her on my way down the incline. Ahead of us I notice a lot of trees. They look huge. The diamond shapes that I continue to follow now disappear and turn into large flat rocks that form a small seating area beneath the trees. Hey, that looks like grandpa and grandma sitting down there. The sun has disappeared above the trees but still trickles through the leaves. I begin to follow the long shadows that the trees make on the ground and up the grass covered hill where I can see more kids walking above looking down at us.

We are coming out through the trees to again see the building ahead of us. I'm now very curious to see what is inside this place. All I can see is glimpses of kids that poke out through glass openings and scurry overhead on a bridge. I can see from below, their feet as they walk above us. Sure looks like fun. We continue on now, looking around for a door to get into this place. All I can see is a huge pond of water in front of us where my stick has floated, beyond this I can see some doors. They look very small but that's because we are so far away. But how can we get to them? It looks like they are in the middle of the water.

I spot another stick on the ground. I pick it up immediately and begin to drag it along the wall next to the water that has continued with us. It makes a great clanking sound against the ripply metal wall that has begun again. The path has begun to open up leaving it up to us to find our way to the doors. We begin to follow the edge of the pool of water hoping that it will lead us to the entry. I can now see an opening in the wall around the pool of water. This leads us down a ramp and sure enough to an open space just in front of the doors, which are smaller than usual. I go in my little doors hoping that mom can find her own way in.

These doors lead me into a big space. I begin to look up into it. It's way up there at the top, near the clouds I'm sure. An oval light of sun beams on the floor in front of me, just like my flashlight does. I can see some kids in front of me going up, I begin to follow to see where they are going. It's a huge ramp, wider than my grampas bus. Down one side are several poles with kids sitting and hanging from them. I begin to dart in and out of them as I continue up. The ramps wind back and forth, stopping at different levels. I decide to look out one of the levels which goes out into a huge space. It's like my tree house that I have at our lake. I can see mom down below talking to a lady at a small counter. I hurry to the top of the ramp only to find to my surprise a huge slide, wow, down I zip coming out at the bottom, very near my mom.

"We are now ready to see the museum" she says. Off we go, climbing into this box. As the man pushes a button, we head off skyward. My stomach drops to the floor. I'm sure we are going to shoot out of the top of that hole. The door opens as we walk across another bridge towards to what looks like a giant tree house. We are at the highest level. Looking down I can see lots of kids below playing with different toys. But how do I get down to that space? As we wind our way downward, the noise from the kids gets louder but we never really reach the level they're at. I can see now that they are playing with toys I have never seen before. Boy what fun that would be. The path takes us out of the giant tree house and away from all those new toys, I'm disappointed.

My feet are getting sore now. It seems all we have done is walked. Mom is beginning to sense this too, as moms do. The soreness of my feet disappears as I smell the aroma of; could it be popcorn? It is. "Come on mom, let's sit down and eat something." I grab a seat next to the small food bar in a small house like structure. This is great I think to myself. I spot a small opening to my left. In I go, being curious as I am. I find a perfect hiding place. It isn't very dark because the sun is coming in somewhere. I look out of a small round window that is in front of me. Here I can see that a kid is right beside me. I can almost reach out and touch him, if it were not for the glass between us. I can't hear anything he is trying to say, so I just make an ugly face back at him.

"David," I hear mom calling. "In here" I say just as she came into the room. I jump out and scare her, nearly making her spill the popcorn she has for me. I take my popcorn and return to the room I was in.

He is not there any more so I climb onto the small seat I was sitting on. From here, I can see lots of peoples' feet as they walk in and around small boxes looking at something. What is it they are looking at? I just have to see. I gobbled the last of my popcorn. Hurrying out, I grab mom and continue on, trying to find these places everyone else has discovered.

We continue on, following the pattern of the floor. I just knew it had to lead somewhere. We arrive back into a large space which looks very familiar. As I get closer, I can see the huge slide that I had come down earlier. Down below us we can see the lady at the small desk talking to another mom.

Ahead of us, I can see a big dark box, and the floor begins to change. It is like it is opening up. I am a little scared to walk on this. I brake down and have to ask mom to hold my hand, I hope no other kids see me doing this. On the bridge we go. I can barely look down through the metal floor below, but when I do, I can see lots of kids gathered below. It looks like a school class or something. We get closer to the black box, through the doors we went. Now inside it is very dark. The lights must have burnt out in here. If it wasn't for a skinny strip of light at the floor of the wall, and at the top of the wall, it would be night in here. It kind of looks like the wall is floating.

We open the next set of doors. My eyes are flooded with the bright sun. Squinting, I try to see where we are going. The sun is suddenly blocked out, as this nice curved roof comes over top of us, just like when I cover my eyes from the sun. This is much better. Still scared, I hold on tightly to this cold handrail next to me. The wall that the handrail is attached to slowly fades to the ground, opening up to the view of kids below. I can now see the bridge we are on, as it curves ahead to a large building that sinks into the grass that I had played on earlier. All along the sloped grass, are tiny spaces with kids heads poking in and out of. The building I think we are going to, looks like a big hand reaching out of

the ground, ready to grab the bridge we are walking on. It looks as if it inside a huge box or frame that stretches out onto the rest of the site. I spin my head around only to see the same thing joining up with the space we had just come from.

As I look below, I can see the trees that had been by the gramma and grampa. These trees continue lining the walkway I think we had been on, I don't know. I can see now, as we continue on the bridge, that those trees go right through the glass and into the building we were in. It looks like they have grown right inside the building. I can see a boy sitting up in one. As we turn the curve of the bridge, we walk under brightly colored metal pieces that are above and below us. I can fit under these very low pieces, but mom has to walk way over to the right. It is kind of fun. I swing on them a couple of times, but I'm am getting bushed. "Mom lets go home, I'm tired, there is nothing more to see." She says, "after we look in here." We reach this large wall in front of us. It looks very similar to the one we came through. We walk to the right, and then to the left, only to confront another wall in front of us. Each time, the wall changes color and material, from metal to plastic, to brick and finally, to a wire fence. Above us is closed in. It is dark under here, but the sun shines through small openings from above. We walk down a ramp to the right of us, which winds outside a concrete wall. From here, through openings, I can see the main building we were in, and to the other side of the site. Overhead, I can see another ramp that connects to the building above. It looks like it is dangling short of the wall. I can see as we get close to the ground, a whole pile of kids sitting listening to a man talking. There must be a million kids down there. It looks as if they are sitting in the middle of an island. Water surrounds almost every side of the platform they are sitting on. Over head glows the sun. There are three huge kites floating from giant strings. I don't know what is holding them up. "Why don't they fly away?" I ask mom. She says she doesn't know, and that we had better take a closer look before we begin to go home. Bushed from all the activity I convince mom to take me home.

CONTINUED DESIGN PROCESS

A tighter space program was now required for the next model. It was built from museum board and now more precise than the previous ones. Space is defined more accurately now. This model was built on ideas taken from the previous story I wrote. The movement throughout the facility, and site, were very strong, reflecting the importance of movement to a child. Images and ideas for the model, came from the story and from forms that were produced through the movement through the site. The main curved element, that enclosed part of the existing structure, came to life as a fish. Like a child, these images and fantasies become very important, with each person imagining it as something else. The images become something to identify with. The form of a fish and toy blocks became very dominate in this scheme. To maintain the idea of movement, and change in the model, resulted in a retractable roof and consideration of a crane. A crane would allow for moving pieces throughout the site, and enable parts to move from outside to inside. It also represented the idea of a construction site in which children are fascinated. Also, it would give the image of, being unfinished, and static. It also originated from the idea of a fishing pole,

A CHILD'S STORY - 2 (CENTRAL EXHIBIT SPACE)

Mom is talking to the receptionist, getting information from her. I can't wait any longer. In the distance high above us I can see some kids walking on a narrow platform. Following their movement, I can see them climbing into something. What could it be? Mom finishes talking to the lady and off we go. I run ahead over a bridge, down below I can see a pool of water with kids floating remote control boats in. That sure looks like fun. Almost forgetting about what I had seen earlier, a huge shadow blackens over us like a swooping bird.

I quickly look up to see that it's not a bird, but a huge airplane floating over top of us. I can now see this is where those kids had climbed into. "Mom, I want to go in that plane to." mom tells me to just wait. We have just begun to tour this museum. Ahead of us, I can hear some kids laughing and playing. I can't see them, but every once in a while I can see through the low wall ahead, a face peeking through. We follow a low curving brick wall around. As we begin to get closer to where the noise is coming from I notice toys inside the wall in small, box shaped shelves. I try to get a closer look at a neat looking truck, when all of a sudden it disappears out of a hole. I peer through the glass where the truck used to be. I see lots of kids playing behind this wall. I can hardly wait now to get there. The wall finally take us to where all the noise is coming from. I see the truck I had spotted earlier and begin to make my own roads from the long shadows on the floor. After about an hour, I think I am bored with the truck and the new friends I have been playing with. I lie back on some soft pillows and look back up at the plane over head. I can now see where the long shadows came from. Above the plane, are a bunch of squares. Hanging between each are banners and kites and moving mobiles, I guess. Watching the things above me flutter and move, I soon feel as if I'm on a boat. Or could it be like pinocchio, in the belly of a whale. I can see all the ribs around me and even hear the splash of water as he dives deeper into the sea. As I stare at the clouds rushing past above, my stomach begins to swirl. I again spot the plane over head. Hoping to get to it, I grab mom by the arm, following the low wall out this time. It takes us to an opening. Here I see a small doorway, curiously I open it. A chill runs up my back because it looks as if I am going to fall out to the floor below. Slowly, I creep forward, to see a huge slide that curves down into a black hole. Now, completely forgetting about the airplane that I was once headed for, I gather my courage and tell mom to meet me at the bottom. Down I zoom. Into a black hole at a hundred miles an hour. I begin to wish I had went with mom when all of a sudden, the black hole opens up above me and a bright light fills my face. Feeling a little relieved, I take away my hands from my eyes to see a small group of kids sitting on a huge ramp listening to a lady talking to them. Boy, she must all be telling a great story. Behind them, I can see mom walking along a walkway around the kids, disappearing and reappearing as she follows the curving walkway.

DESIGN PROCESS CONTINUED

At this point I was ready to analyze some spaces in detail. To do this a story was written for a journey through that specific space. One of the toy blocks was chosen for the story. It is as follows.

A CHILD'S STORY - 3 (NUMBER 2 EXHIBIT SPACE)

We are heading to the number 2 block of the complex. Mom says this is another exhibit space. I hope it's as much fun as the last one we were in. We take the bridge over the block. Walking along, mom points out to me the city's downtown, which we can see in the distance. It looks so small, like a toy city and the people on the sidewalk across the street look so small from up here too. I bet we are the kings of the city from up here. Ahead it looks like the corner of the building has been knocked off. It looks like this is where we will enter the box. Inside, we go through a broken chunk only to find the sky opens up over us. I rush over to a railing next to me and look down. I can see below the ramps that we had used to get to the main doorway. I can see kids running up and down these ramps, vanishing beneath my feet. Ahead the path splits into two. I decide to go one way and mom goes the other. The railing leads me around a shiny curved wall that I can see myself in. I stop and make some goofy faces. They seem goofier than usual due to the curvature of the wall. The sun slowly disappears as I continue along the curved wall. Suddenly, out of the darkness shines a huge shadow on the wall in front of me. Curious to see what it is, I continue around the ramp. The railing has reappeared and in front of me is mom. "What took you so long?" she says as she opens the door in front of her. Inside the sound of laughter is heard below as we cross a ramp. We both look over the edge to see small rooms below. I can see kids in what looks like a kitchen and small tiny bedrooms. We can see a whole house below us. It's as if someone took off the entire roof of a house.

The ramp ahead opens up, offering a single pole ahead. I slide down leaving mom stranded uptop. I see her above making her way back off the brige to a set of stairs that wind their way down to the house. Here she sits in a small dining room watching kids. I offer her a glass of water from the kitchen I'm playing in.

DESIGN PROCESS CONTINUED

A larger scale model of this space was now constructed taking ideas from the previous story and applying them. Carried through again was the idea of movement and spatial experience for the child. Options and choices to the child where also important. This was shown in the spiral slide that occurred in one corner of the block. In order to allow daylight into the space, a corner of the block was removed. This broken corner not only allowed light into the space, but also depicted a more realistic block that becomes broken or chewed on from kids or pets.

Throughout the process, the ideas of movement and changing experiences were reinforced. The experience I felt was very important for the child within this facility. To heighten this experience, I felt that foremost, I had to stimulate the senses. The sense of sight could be stimulated with spectacular views, the use of color and strong objects. The sense of hearing will be stimulated by the sound of water and the dominate sound of other children in echo chambers. The sense of smell will be stimulated by incorporating a snack bar and introducing flowers and plants within the building. The sense of touch will be stimulated by using various textures and materials.

I also wanted to address the ideas of intrigue, mystery and curiosity. This, I felt could be done by exposing glimpses of items. Revealing spaces along the circulation path which they would not get to until later in the journey. By varying space from light to dark, and large to small, mystery would also be included.

*"Life can, perhaps, be understood backwards,
but it must be lived forwards."*

Soren Kierkegaard



CLIMATE

Climatic Data - Edmonton, Alberta, Canada

Temperature		Min. Avg.	Max. Avg.
	Average Annual Temp	5.7 F	42.5 F
	Mean Range	-45 F	90 F

Sun/ Angles	Average Hours of Sunshine/month	175 hours
	Mean Hours of Sunshine	2150 hours

Edmonton experiences extensive sun coverage in the summer. On July 21, the sunrise azimuth angle is 58 degrees Northeast, reaches a peak altitude of 63 degrees at 163 degrees southeast and sunset occurs at an azimuth angle of 310 degrees northwest in a total range of 230 degrees. In the winter, on December 21, the sunrise azimuth is 130 degrees southeast and reaches its peak altitude of 17 degrees at 169 degrees southeast, and sets at an azimuth of 230 degrees - a range of 100 degrees.

Winds	Winds	Direction	Avg. Speed
	spring	S	8-12 mph
	summer	S	8-12mph
	autumn	W	8-12mph
	winter	SW	4-7 mph

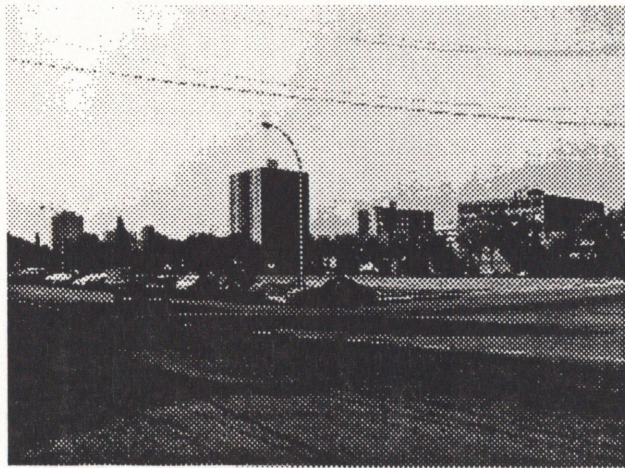
Precipitation	Mean Snowfall	45"
	Rainfall	10"
	Mean total precipitation	15"

THE SITE

The site is located in Edmonton, Alberta, Canada. It is located near the outer edge of the downtown area. It is unique because it consists of several different zoning areas. To the South are residential and high rise elderly apartments. To the West and North are commercial and retail buildings. Directly East are commercial buildings. This area was chosen because of its unique location among residential and commercial areas. The area to the East is presently being developed for a large community college, with further college development adjacent to that site occurring in the future. The existing railroad spur line will eventually be removed and made into a walking path connecting directly to the downtown.

The choice of this site was spontaneous and child like. Initially I was intrigued by the existing structure which sat dormant upon the site in such a vital area. The structure not only looked abandoned, but sat on the site at an unusual angle. There were no clues as to why it was abandoned, or apparent reasons as to why it sat in the position it did.

Upon further investigation of the site, and a meeting with a former owner of the site, it was revealed that the site at one time had housed the very first Imperial bulk oil filling station which operated initially in the early 1930's. The railroad line at that time followed a path east onto the site thus producing the building to be built on angle to the now existing property lines. Over time, the buildings were sold and made into a barrel refurbishing center. Before the buildings became classified as historic preservation buildings, the present owner stripped the buildings of its materials and sold off what he could. Nobody wanted to buy the structure, and it was too costly to remove by the owner, so it was abandoned. Over time, the structure has been a playhouse for neighborhood kids and on occasion been used as a backdrop for local music videos.



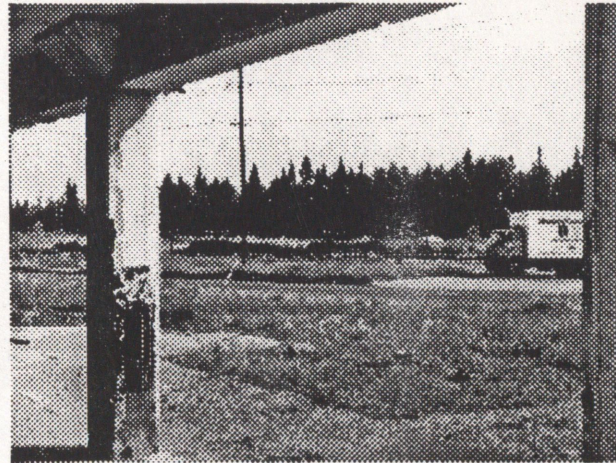
View South to parking Lot



View East to downtown



View North to parking



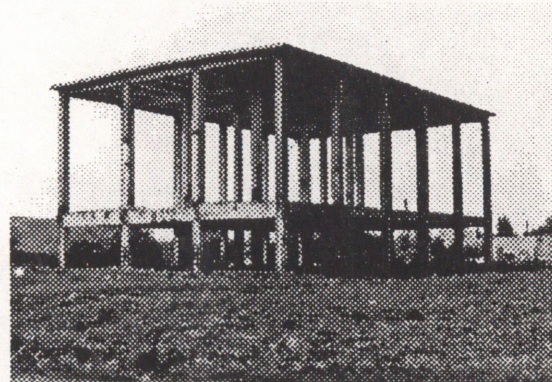
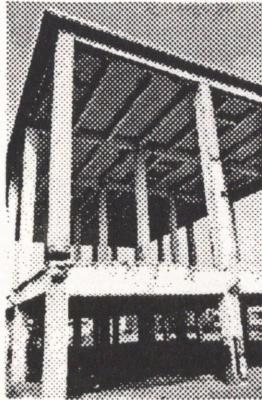
View NorthEast to the park

EXISTING STRUCTURE

The existing structure on the site consists of two concrete floor slabs, concrete columns, and a wood deck roof. The roof is supported by concrete beams running in both directions.

The second floor is 12.5 feet from the ground floor slab. The roof deck is 27 feet to the underside of the outside edge. The columns are 1.5 feet square and are on a grid of 16.5 feet center to center. The overall dimension of the floor slab is 51 feet by 84 feet.

Originally, the building was a bulk oil filling station made of brick and glass. It was subsequently stripped of all its internal materials leaving us the structure present today.



"Nature, so our reasoning mind tells us, could just as easily have given her children all those useful functions of discharging superabundant energy, of relaxing after exertion, of training for the demands of life, of compensating for unfulfilled longings, etc. in the form of purely mechanical exercises and reactions. But no, she gave us play, with its tensions, its mirth, and its fun."

Johan Huizinga



SPACE PROGRAM

CHILDREN'S HALL

LOBBY	= 2,100 s.f.
RECEPTION/INFORMATION	= 1,000 s.f.
AUDITORIUM (150 SEATS @ 7.5 s.f./ seat)	= 1,125 s.f.
EXHIBITIONS (4 @ 3000 S.F.)	= 12,000 s.f.
TEMPORARY EXHIBITS	= 2,000 s.f.
AMUSEMENT CORNER	= 1,000 s.f.
INVENTORS WORKSHOP	= 1,500 s.f.
EATING NOOK	= 1,000 s.f.
TOY SHOP	= 500 s.f.
LIBRARY	= 3,000 s.f.
ADMINISTRATION	= 2,000 s.f.

SUBTOTAL

= 17,225 s.f.

TESTING

PLAY LABORATORIES	
NURSERY	= 600 s.f.
INFANT/TODDLER	= 600 s.f.
AFTER SCHOOL PROGRAM	= 600 s.f.
CONFERENCE ROOMS (2 @ 600 s.f.)	= 1,200 s.f.
VIEWING	= 150 s.f.
STORAGE	= 100 s.f.
OFFICES (4 @ 100 s.f.)	= 400 s.f.

SUBTOTAL

= 3,650 s.f.

SUPPORT AREAS

JANITORIAL	=	300 s.f.
WASHROOMS	=	800 s.f.
STORAGE	=	400 s.f.

SUBTOTAL	=	1,300 s.f.
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TOTAL	=	22,175 s.f.
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MECHANICAL (14% of total)	=	3,100 s.f.
CIRCULATION (20% of total)	=	4,750 s.f.

GRAND TOTAL	=	30,025 s.f.
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EXTERIOR SPACE

PARKING (STALLS)

OUTDOOR SEATING (100 SEATS)

"A building cannot be a human building unless it is a complex of still smaller parts which manifest its own internal social facts."

Christopher Alexander, Sara Ishikawa and Murray Silverstein



CHILDRENS' MUSEUMS

Childrens' Museums in the last decade have increased in number and popularity. This increase is not just a passing fad in our society, but a very worthy facility with today's social conditions. For example, there is 40% less family time shared than twenty years ago. In part, it is demographic. Museums provide after school activity for many families with working mothers. It also is frequented by divorced fathers as their need for indoor entertainment during visitation periods has increased.

These museums are becoming increasingly popular and in demand by our present society. These museums range from large new facilities to small ad hoc institutions. The users range from the very young to about twelve years of age, as adolescents tend to loose interest. They come in pairs, child and adult or two friends, after school or in large groups as a school classroom. Sometimes they are accompanied by a parent or with the entire family. Not only do children enjoy these museums but on occasion grownups will drift in after they have taken the children home. Childrens' Museums are places were children learn and develop (basically grow up) and where adults can imagine they haven't.

PLAYGROUNDS

Playgrounds are a very important place for a child to learn and play, both by themselves and with others. At a playground, the source of satisfaction is not only for the child but also for the observer. The parents are one such observer that benefit by this activity. But it may be easier for an unrelated adult to enjoy more freely because he is not so intimately involved.

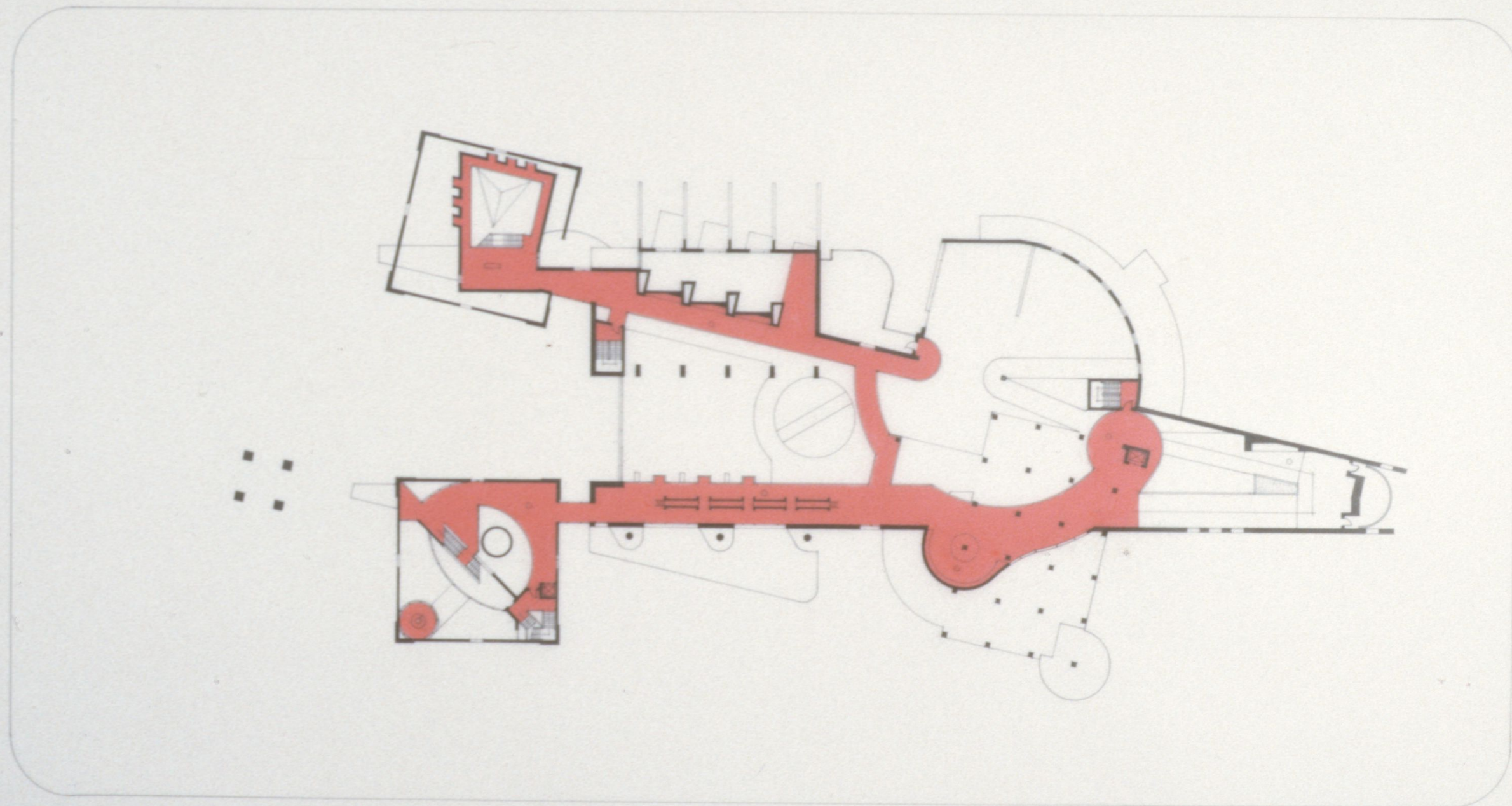
Most prefabricated playgrounds force a child to conform to someone else's ideas. A child's creative sources are cut off when the assembly line overpowers the creativity. If playground equipment is used, it should be blended into the landscape so as not to suppress the imagination.

A playground should be an nonobjective environment with nonobjective spaces, that are big, little, dark, bright, square, round, irregular and regular. A number of interesting experiences that can be controlled by the child should be presented. There can be opportunities for the child to move over, under, around or through. He should also be able to change his relationship to any one, or all of these aspects.

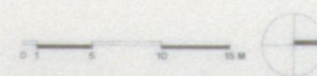
Along with the actual spaces of importance are the systems of pathways that link these key activity areas together. Pathways are a very important aspect to children. They usually delineate movement, and to some, this is synonymous with play. Pathways should vary in both size and shape as well as the challenge they present. They should intersect with one another to promote spontaneous use. The enclosure of the path can also vary, ranging from tunnels to open spaces both above ground and below ground to provide a number of exciting and challenging spaces for children. A three- dimensional juxtaposition of the part can be layered during design. By interacting vertically with spaces, platforms and paths, one can provide for a number of experiences.

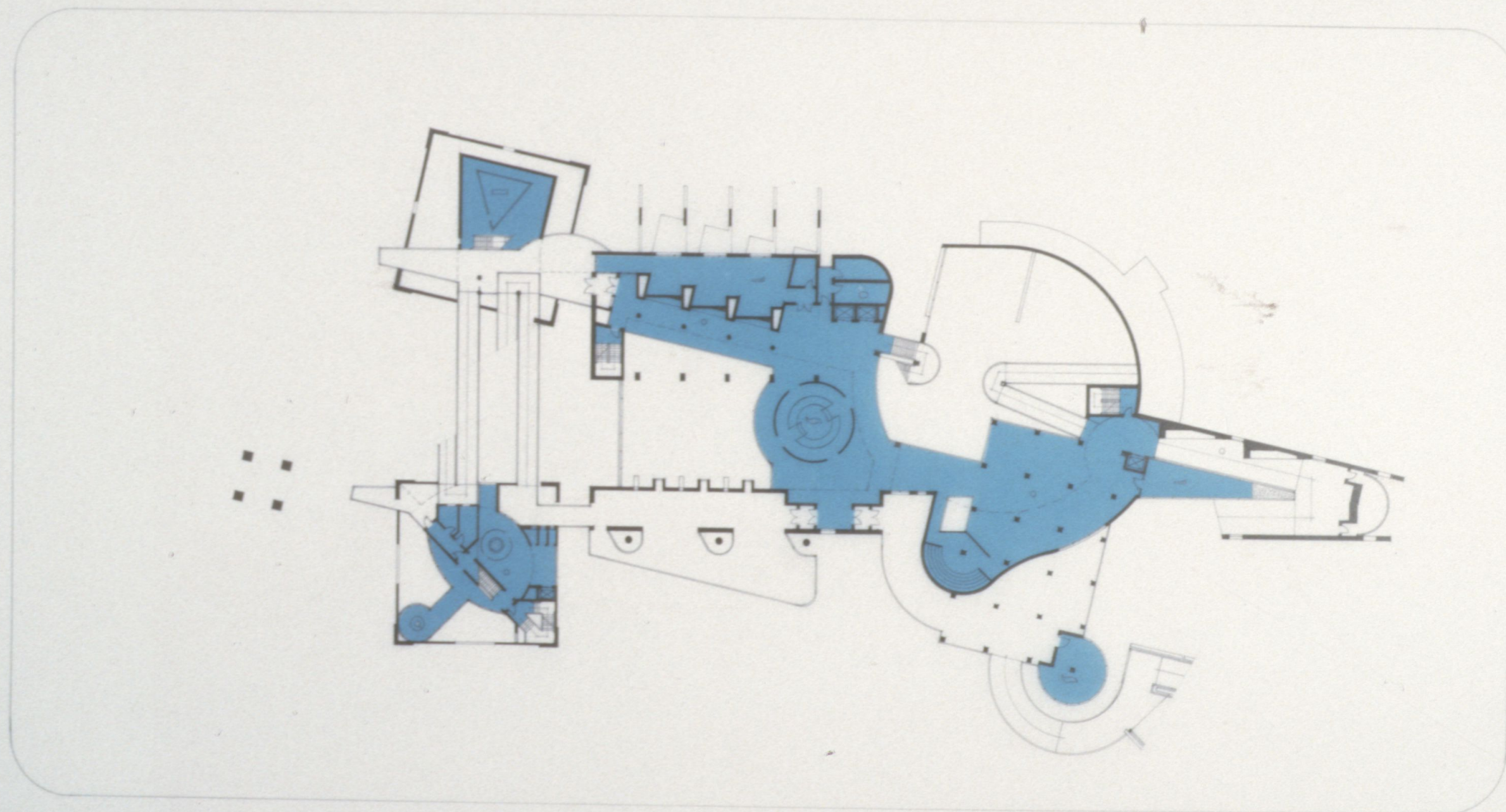
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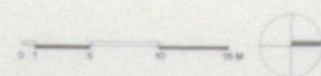


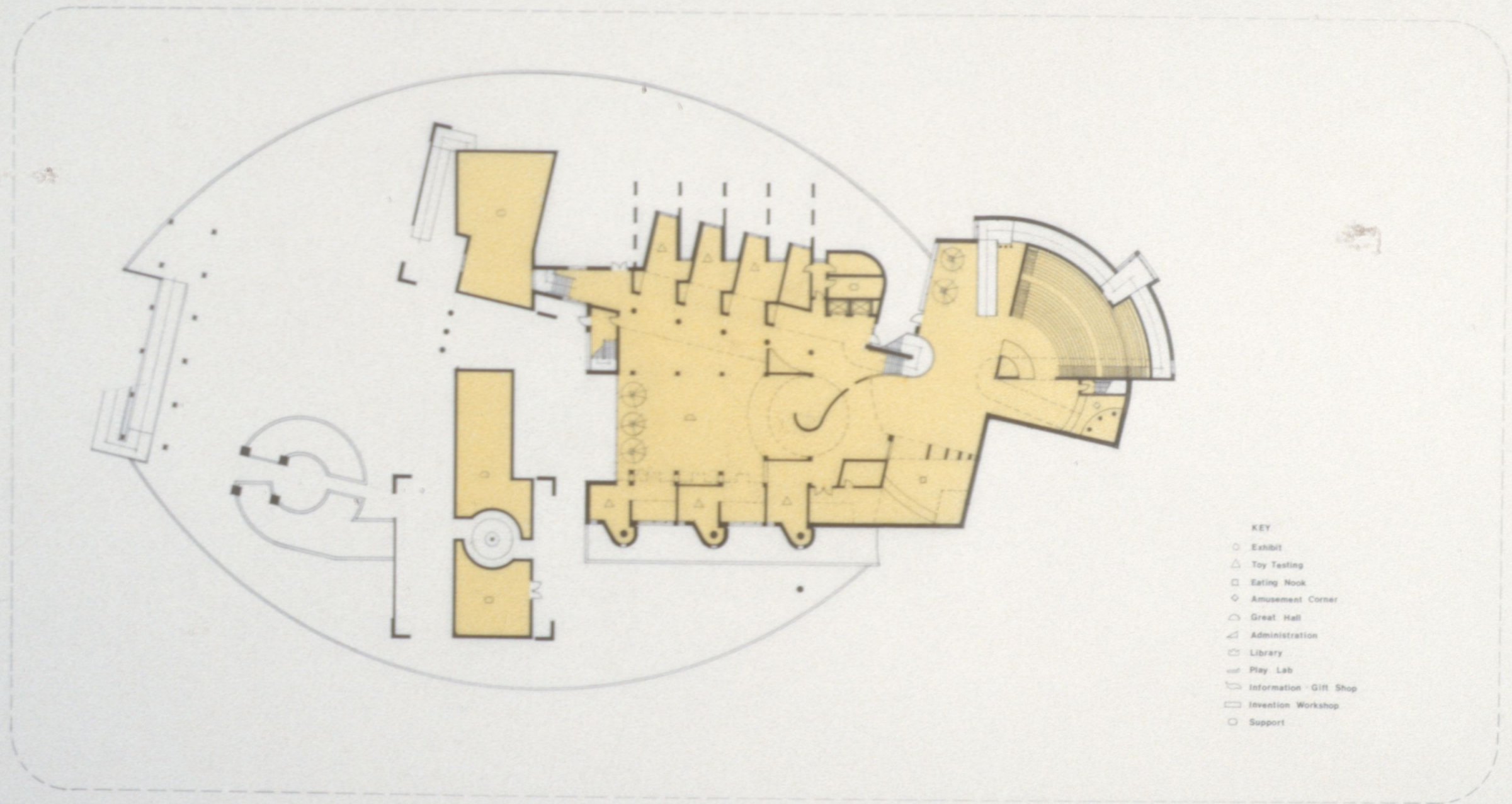
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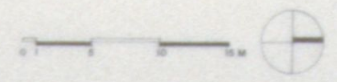
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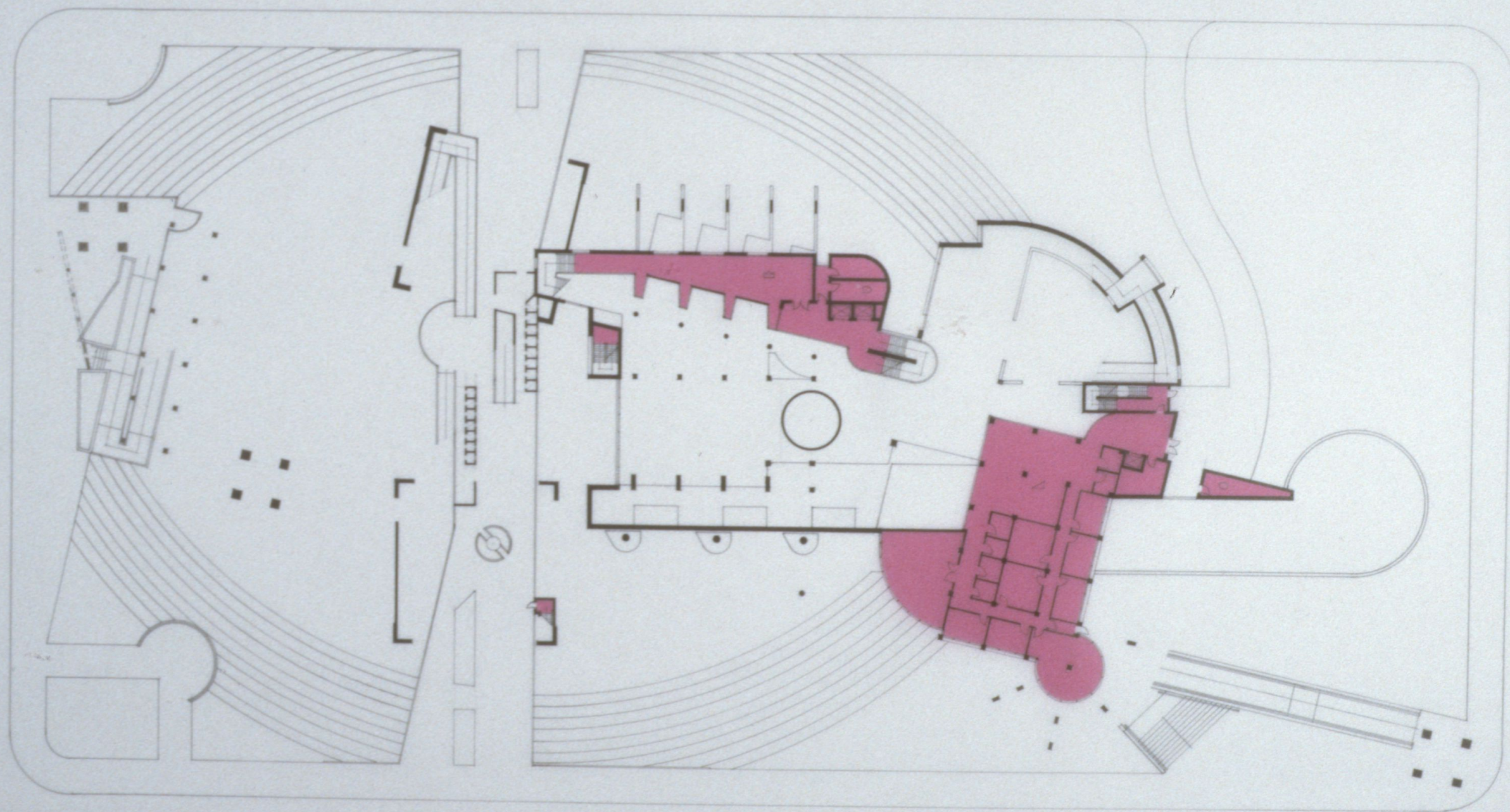




- KEY
- Exhibit
 - △ Toy Testing
 - Eating Nook
 - ◇ Amusement Corner
 - ⬢ Great Hall
 - ⬤ Administration
 - ⬢ Library
 - ⬢ Play Lab
 - ⬢ Information Gift Shop
 - ⬢ Invention Workshop
 - Support

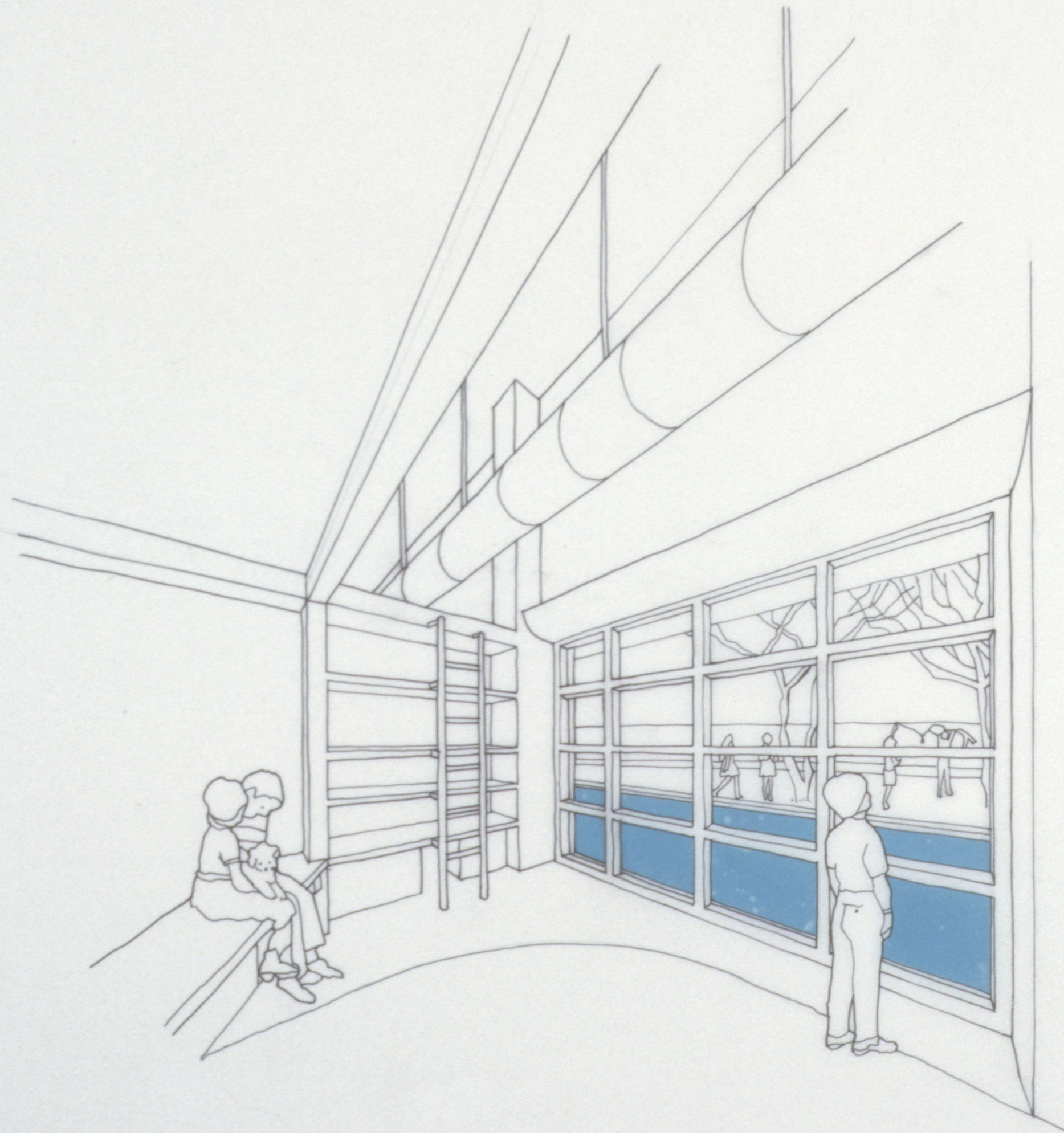
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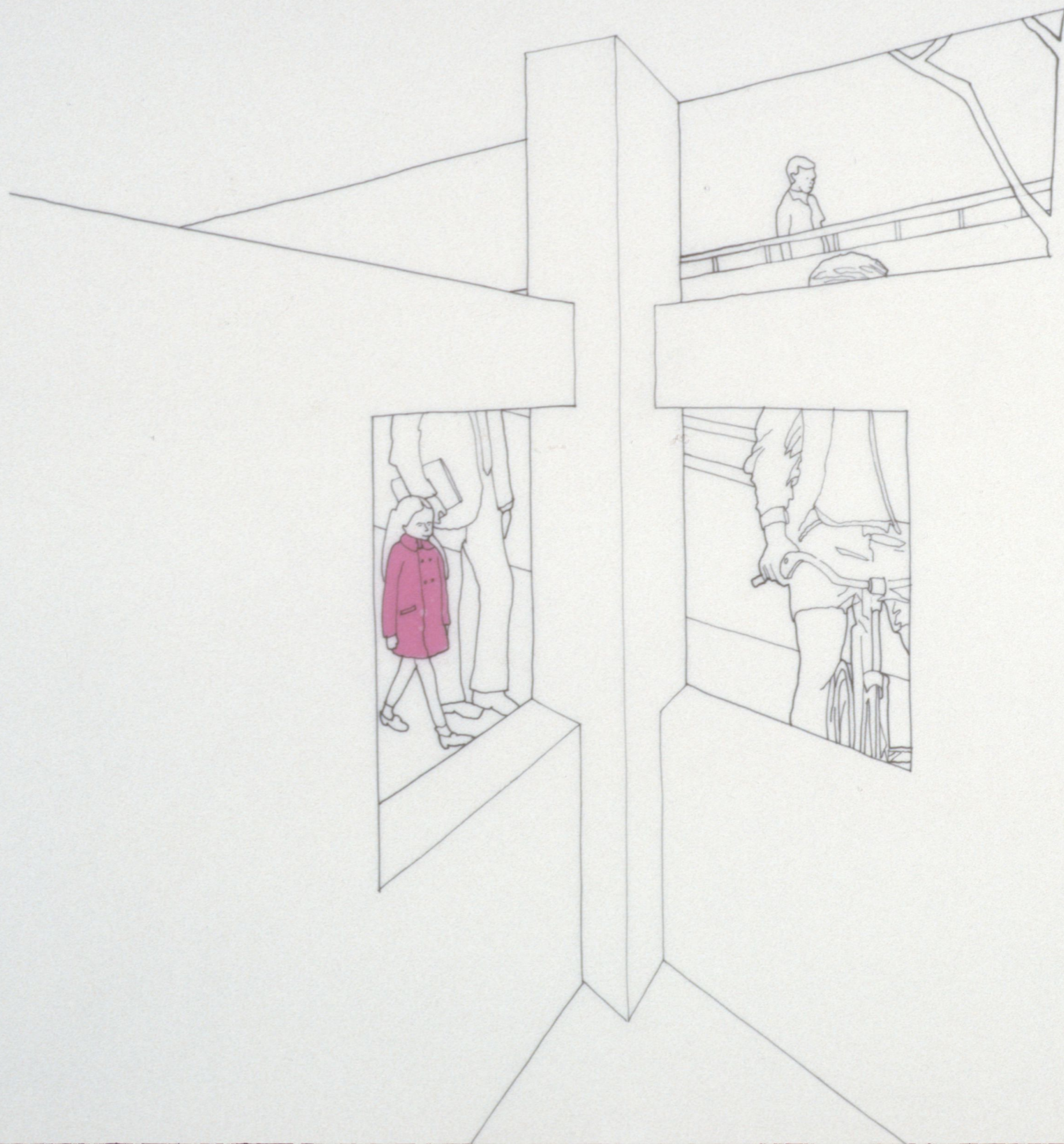


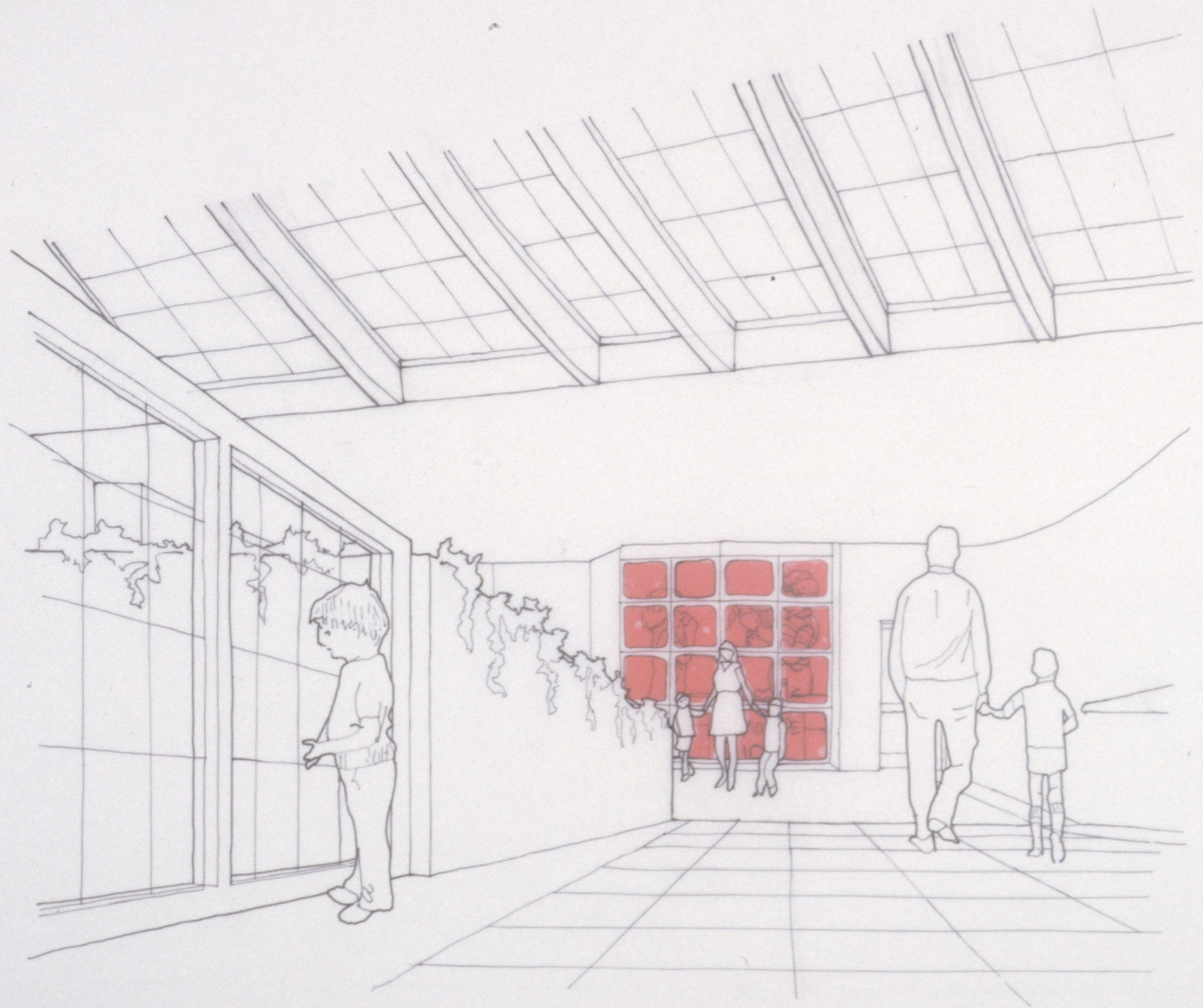


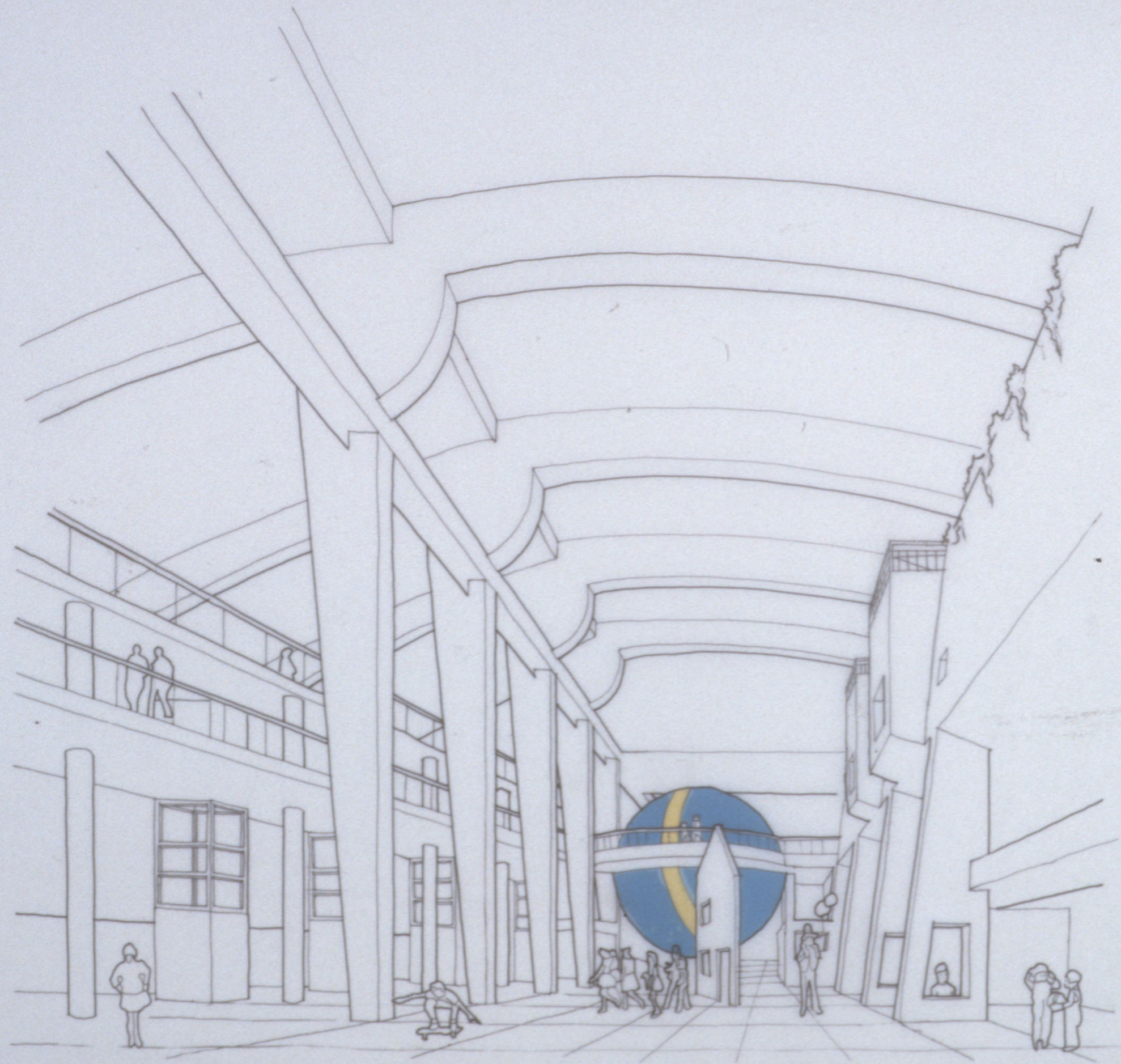
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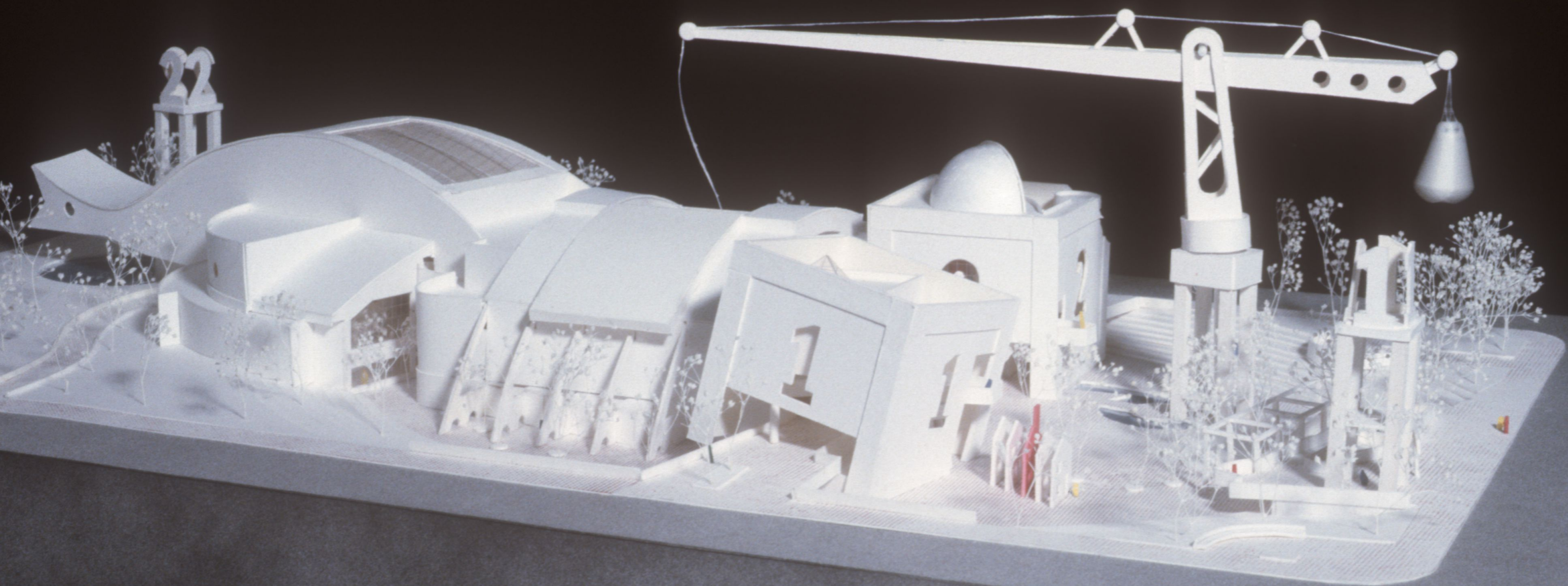






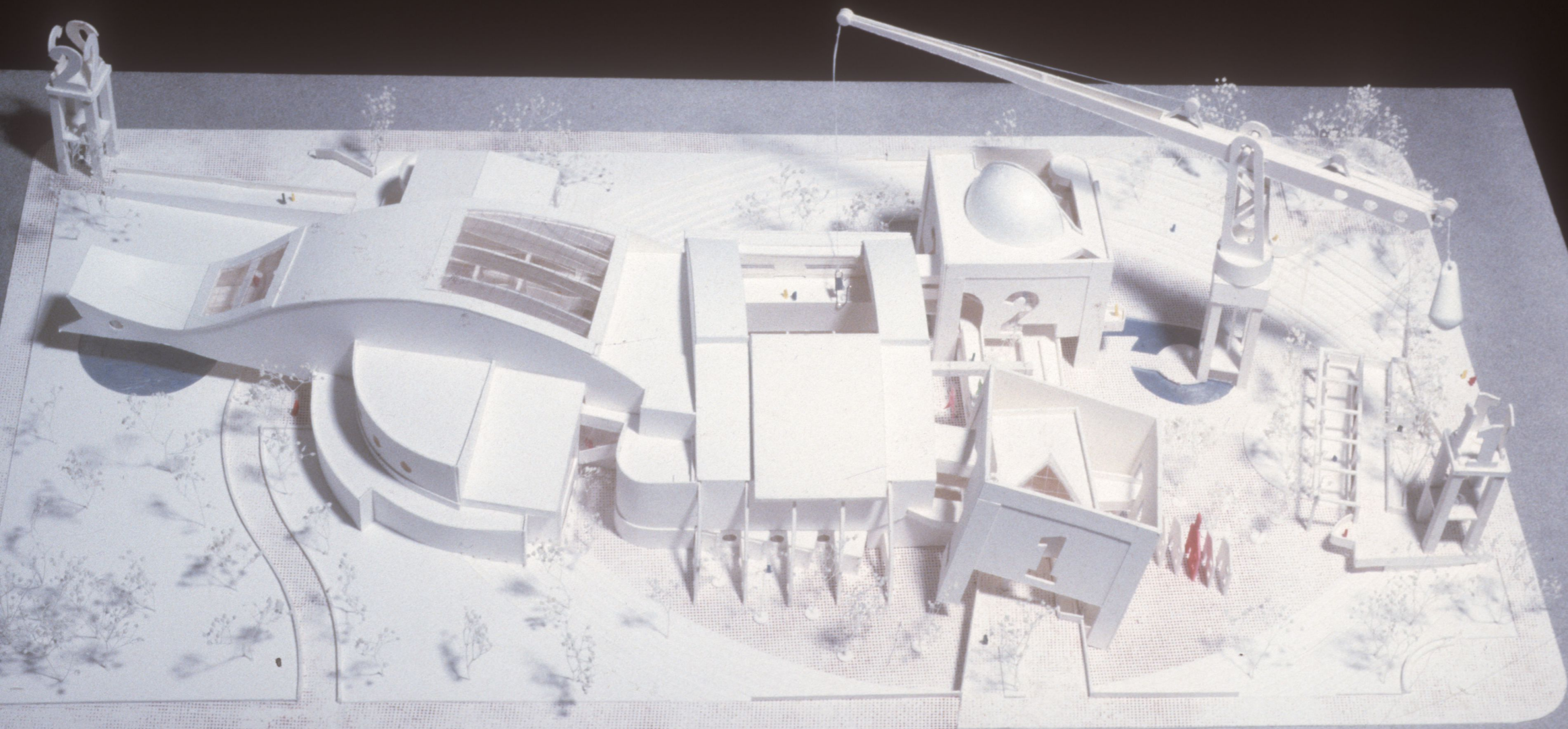














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