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Layered Transparency: the Performance of Exposure, the Exposure of Performance

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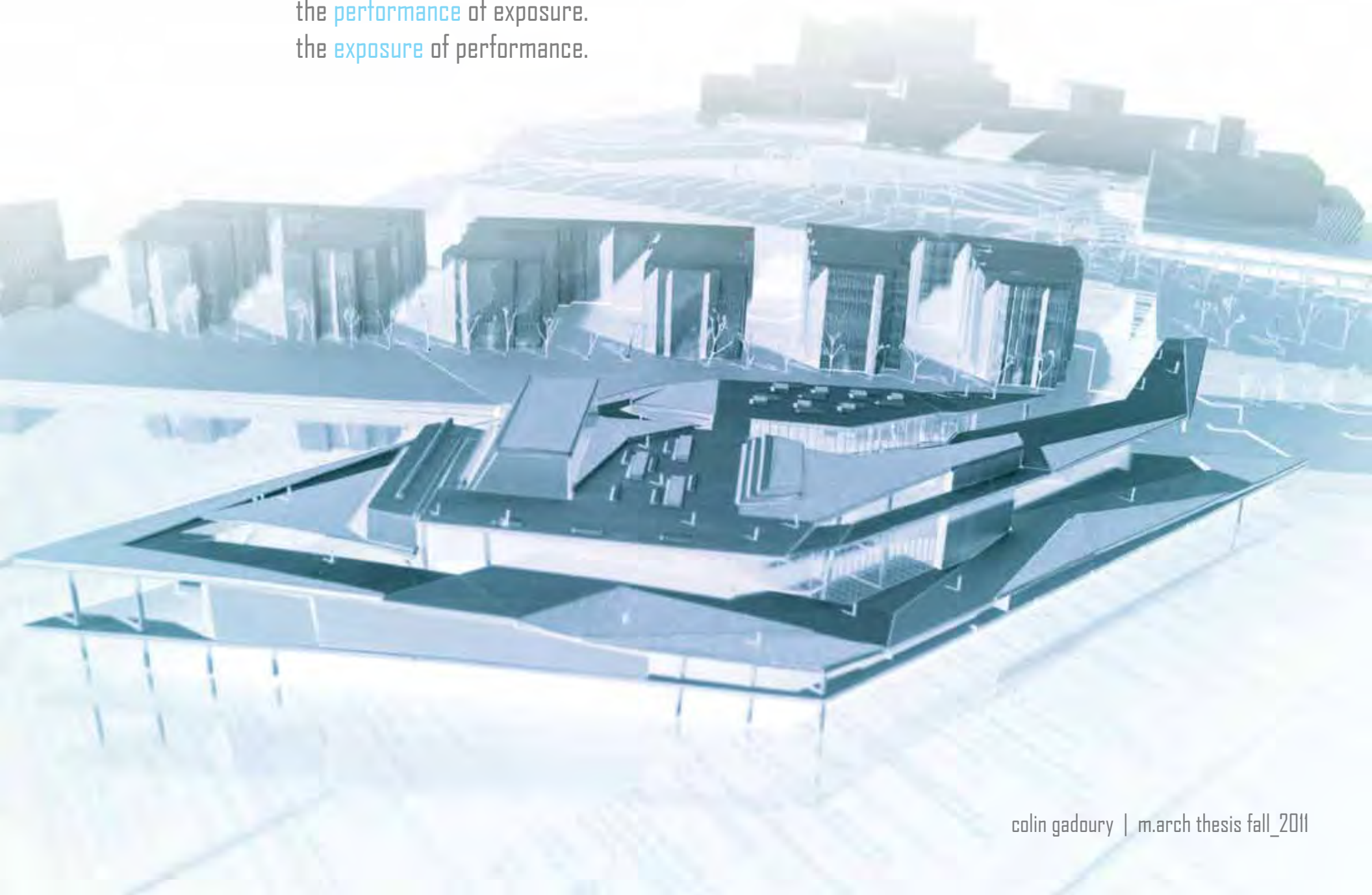
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layered transparency.

the performance of exposure.
the exposure of performance.



“You need three things in the theater - the play, the actors and the audience,
and each must give something”

Kenneth Haigh

cast.

Layered Transparency

The performance of exposure.

The exposure of performance.

Colin Gadoury

Thesis submitted to the Faculty of the

Roger Williams University School of Architecture, Art, & Historic Preservation

in partial fulfillment of the requirements for the degree of

Master of Architecture

May 19, 2012

Bristol, Rhode Island

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Date

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Date

curtain speech.

For my family, without whom this thesis investigation would not have been possible.

For Bridget, who never lost faith in me, despite having lost it in myself at times along the way.

To all of you I am greatly indebted.

brief.

ex·po·sure

Within the context of architecture, the notion of exposure defies the traditional division of public and private zones. In a world that is exponentially shrinking due to advances in technology, the opportunity presents itself to introduce a new architectural investigation -- the performance of exposure.

The thesis seeks to explore the performance of exposure within architecture in order to introduce a stronger dialogue between people, place, and architecture. The use of layering, opacity, and movement will each serve as catalysts for an architecture that disrupts the passivity of the current environment and enlivens the urban fabric.

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the play.

manifesto

Architecture is a social dialogue, a conversation which takes place between built form and inhabitant. It can manipulate our sense of existence within the world, alter preconceived notions about its use, and foster social change. Such a dialogue shapes and structures activities, experiences, and relationships within the spatial environment.

Within the dialogue of architecture, there exists a multitude of catalysts which serve to initiate reactions between constructed space and society. These catalysts add a dynamic quality to the public condition by inviting curiosity, surprise, anticipation, and even fear to the built environment. As society and technology simultaneously evolve at a rapid pace, the notion of dialogue begins to get lost amidst the demands for security. However, such a condition presents rich opportunities for the exploration of an architecture that transforms the solid condition of building into a stimulating energetic and spatial experience. Architecture should be able to generate an experience that frees the user, and itself, from the tensions between privacy and community.

To generate such an experience, the programmatic elements of the building need to be unveiled, to be put on display for the community to participate in a dialogue with. This is accomplished by introducing a **“multi-layered experience”** into the urban condition. The multi-layered experience exposes elements of the built environment, both form and occupant, and combines them with several other moments within the experience to develop a new spatial sequence for the inhabitant.

The notion of exposure presents an interesting dynamic into the built environment, as it has the capacity to reveal stories that unfold everyday. Additionally, the multi-layered experience is not strictly limited to relationships of looking into a work of architecture but also those of looking out. The development of this type of transparent architecture, a voyeuristic experience within the city, has the capacity to investigate new relationships between people and place while also exploring relationships of movement, time, and space.

The introduction of such forces into the built environment articulates both an individual and

Fig. 1 Juif, Francis. *Terrain de jeu [Playground]*. 2006. Photograph. Bienal de São Paulo, São Paulo, Brazil. Flickr. 4 Nov. 2006. Web. 5 May 2011.





Fig. 2 Highline NYC. 2010. Photograph. *Blogspot.com*. May 2010. Web. 15 Mar. 2011. <<http://nyclovesnyc.blogspot.com/2010/05/public-art-on-high-line-featuring.html>>.

a collective identity previously hidden within the built environment. A transparent architecture fosters relationships between occupant and observer and places a strong emphasis on who is doing the looking and who or what is looked at.

The city is a **living, breathing entity** occupied and engaged by the interactions that take place between people. Its architecture should be addressed with the same charismatic quality. The interconnection between people within the dense urban condition can act as a generator, - a stimulant - for activity, while instigating social interaction.

Architecture has the capacity to exploit the relationships presented by a multi-layered experience in order to enhance the individual experience within the built environment.



Fig. 3 Corradi-Dell'Acqua, Corrado. *Lonely Walk*. 2008. Photograph. Flickr.com. 23 Mar. 2008. Web. 12 Apr 2011. <http://www.flickr.com/photos/_asterione/2766665568/>.

Fig. 4 *Cell Phone Booth*. Photograph. Geekologie.com. 16 Nov. 2007. Web. 12 Apr 2011. <http://www.geekologie.com/2007/11/personal_cell_phone_booths_mak.php>.

Fig. 5 Nawrath, Enrico. *Bayreuth Festival Theatre*. 2008. Photograph. Bayreuth, Germany. Wagneropera.net. Web. 18 Mar. 2011. <http://www.wagneropera.net/Images/BayreuthPix/Naw-28_OGraben_093_08_EnricoNawrath.jpg>.

problem

Within society there exists a physical and emotional disparity in regards to communication. The influences of technology, social media, and even security have implied an individualist attitude towards the environments within which we inhabit.

As one walks the streets of the urban condition, the observations of most passersby is of the sidewalk or the next text message being typed on their cell phone. The social camaraderie of the urban fabric is being lost as people are becoming disconnected from their surroundings. Due with the personal nature of these methods of communication, the communal interactions that serve to animate and enliven the built environment are lacking.

Based on Jeremy Betham's prison proposal of 1791, these technological panopticons track our every move within the modern world.¹ As clearly evidenced within recent years, such panopticons have a great influence on our day-to-day lives. Additionally, the transparency of the public zone and visual dialogues between people serve as social panopticons. The consequence: a blur between public and private space, the

development of spaces that become excluded, spaces that become divided, and **public space becomes a stage.**

There is no doubt that visual stimuli are incredibly important within our environment which prompts the question:

Can the visual activities that shape our world be exploited as performance?

An example of such disparity exists within the conventional theater typology: purchase your ticket, take your seat, and passively enjoy the show. However, despite the lack of visual confirmation, it should be noted that there is a great deal of effort that goes in to producing a stage performance - effort that often goes unrecognized.

The passivity of such an environment needs to be re-evaluated in order to introduce a stronger dialogue between people, place, and architecture.

¹ Bentham, Jeremy. "Panopticon (Preface)." *The Panopticon Writings*. Ed. Miran Bozovic. London: Verso, 1995.

rehearsal.

**“Unlike any theatrical experience you’ve ever had.
... like wandering through a dream that someone else
is having.”**

- Boston Herald

008

sleep no more [punchdrunk]

The realms of architecture, theater, and cinema are constantly crossing paths, each serving as inspiration to the next. However, does the situation ever develop when all three realms simultaneously exist within a single environment, wherein each element is equally participating in the event?

An abandoned school.
Shakespeare's fallen hero.
Hitchcock's shadow of suspense.¹

Above exist three, seemingly unrelated, sentences. The first, an architectural work. The second, a reference to William Shakespeare's *Macbeth* and the third, the feelings developed through the cinematic techniques of legendary filmmaker Alfred Hitchcock. The goal of The award-winning British theater company *Punchdrunk* was to combine all of these stimulants into a unitary social experience.

Punchdrunk, along with *The American Repertory Theater*, transformed an abandoned school in Brookline, Mass. into a sensory journey. The journey exposes the most visceral feelings and

emotions of the human condition. Not only does the performance of actors take place, but a secondary performance of the audience is developed within the re-claimed environment.

The performance presents a new type of experience for theatergoers. The show begins as you walk past the deserted playground, ascend up a flight of exterior metal stairs, and enter through a heavy metal door onto the second floor.² You are now standing in a dark and disorienting room within which you are presented with a mask, each visitor's identity now erased.

Music can be heard as you make your way through the building past a parlor where the strong scent of perfume overtakes you. It does not take long before you realize that the performance is almost entirely based on the movement of the audience through the various sets developed within the dreary abandoned school. At a point, you recognize that your explorations have taken you through a stranger's bedroom. The path you took to get there was one of a lingering explorer, captured by the discovery and intrigue of the space.

Fig. 6 Dobbie, Stephen. *Vinicius Salles*. 2009. Photograph. *Sleep No More*, Brookline, Massachusetts. Web. 12 Mar. 2011. <<http://www.americanrepertorytheater.org/events/show/sleep-no-more>>.



“This is immersion theater taken to the level of high art.
... an experience impossible to shake, even days later.”

- Edge Boston



7



8



9

Fig. 7 *Sleep No More*. 2011. Photograph. *Popten.net*. 9 Mar. 2011. Web. 12 Apr 2011. <<http://www.popten.net/2011/03/sleep-no-more/>>.

Fig. 8 Dobbie, Stephen. *Careena Melia*. Photograph. *Sleep No More*, Brookline, Massachusetts. Web. 12 Mar. 2011. <<http://www.americanrepertorytheater.org/events/show/sleep-no-more>>.

Fig. 9 Dobbie, Stephen. *Tori Sparks*. Photograph. *Sleep No More*, Brookline, Massachusetts. Web. 12 Mar. 2011. <<http://www.americanrepertorytheater.org/events/show/sleep-no-more>>.

When you reach a heavy curtain and pull it back you realize you have entered into the realm of the acted performance. Behind the curtain, a staged 1930s bar unveils the source of the melody - a full band on stage with a bartender serving drinks of the strangest ingredients. Not only are all of these performances, as a whole, the production you paid to see, but, you are beginning to realize that you are not solely acting as the audience in the experience. With the mask, your ghostly appearance and lack of identity have made you a character within the show. As you move through the labyrinthine landscape, the choices of where to go, and therefore what you see, are solely left up to your own discretion.

You recognize throughout your journey that the entrance you came through on the second level may not have been the only one. You may be lead up the stairs to the third floor after hearing a crash or you may follow another ghosted spectator down a flight of stairs. At the bottom of the stairs you may veer off into a seemingly abandoned room where you search through drawers and cupboards. An actor may come up behind you, whispering in your ear or you may be stared in the face and made to feel like you shouldn't

be here. All are elements to be explored. The beauty of the performance is that the audience indulges their own interests, no experience is like the other but rather each is constantly evolving. The traditional theater experience is thrown out here; you do not sit in your seat and watch the activities unfold on stage.

¹ "Sleep No More." *American Repertory Theater*. 8 Oct. 2009
<<http://www.americanrepertorytheater.org/events/show/sleep-no-more>>.

² Anderman, Joan. "Mystery Theater." *Boston Globe*. 4 Oct. 2009: Web.

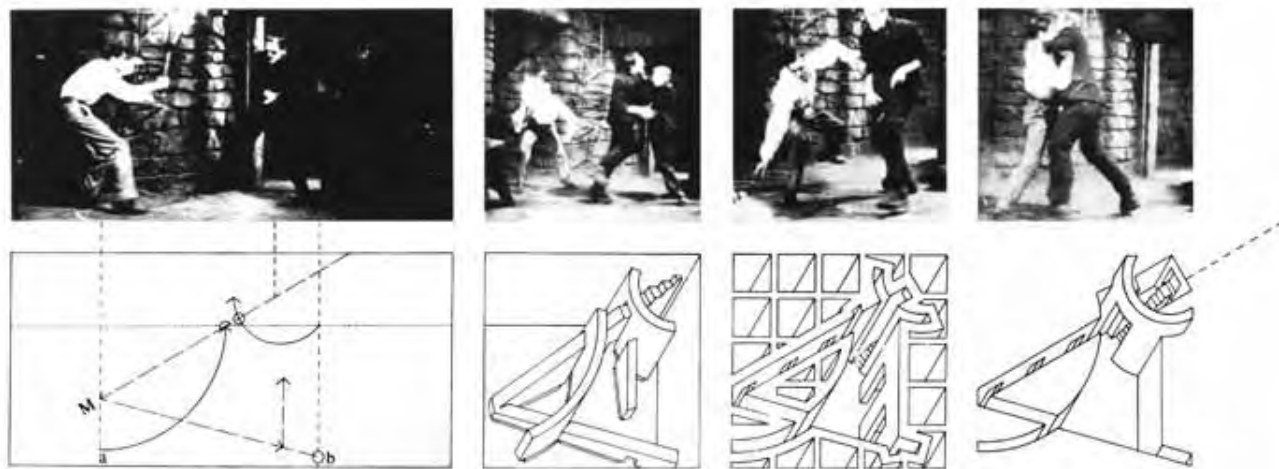


Fig. 10 ¹ Tschumi, Bernard. "Projects | Screenplays"
Bernard Tschumi Architects. Web. 26
 Feb. 2012. <[http://www.tschumi.com/
 projects/50/#](http://www.tschumi.com/projects/50/#)>.

the manhattan transcripts [bernard tschumi]

Notions of sequence and seriality within architecture, investigations into architectural experience based on the concepts of time, space and movement as well as the relationships that develop between architecture and occupant are key determinants for how architecture operates. Both film and theater rely on a continuous exploration into the presentation and representation of events. However, architecture takes an interesting stance in the realm of the arts, not only can it be influenced from other disciplines but it can also impress its findings outside the field.

Within his study of screenplays from 1976, architect Bernard Tschumi stated,

There is no architecture without action,
no architecture without event,
no architecture without program.¹

His observations demonstrate that the parallels that exist between film and architecture are evident. For Tschumi, the parallels break down into three distinct categories: *material*, *device*, and *counterpoint*.

In regards to issues of *material*, Tschumi is dealing with generators of form such as abstraction, movement, and event. The *device* relates to the repetition and distortion of elements. The *counterpoint* is suggestive of the relationships that exist or are created between movement and space.

Each of these elements act as pivotal tools in the development of architecture space. Architecture is not a static element, fixed and stable like the printed content of this document. On the contrary, architecture is dynamic, variable, and erratic. The inhabitant, a steadfast entity within the architecture, remains constant.

Tschumi's work explores the construction of a sequences of events within an architectural space. The transformation that could be derived from them may be of particular interest to similar sequences that could be part of the thesis investigation.

¹ Tschumi, Bernard. "Projects | Screenplays" *Bernard Tschumi Architects*. Web. 26 Feb. 2012.
<<http://www.tschumi.com/projects/50/#>>.

the scene.

project [statement]

The performance theater is a typology which serves to satisfy a thirst for interpersonal contact. As mentioned previously, the digital individualism that has developed within society has significantly hindered the "community" aspect of our built environment.

The theater offers an escape from the rules and regulations of the real-world, a characteristic that draws appeal to the theatrical and cinematic arts communities. Within these communities, people meet to explore issues of the human condition - opportunities that are not afforded elsewhere in the built environment.

The power of theater is also an incredibly valuable entity. Experiences from theater can cause great changes to both the personal and societal relationships that exist in the modern world. A performance has the potential to change the mentality on one's life, influence political policy, inform the unaware, or simply provide an exciting experience for the audience.

Despite the intrigue presented by the theater performance, all of the aforementioned experiences take place within the confines of a

traditional sequence. Following the purchase of a ticket, the audience member may briefly socialize in the lobby space or grab a drink/snack from a concessions area before proceeding to their seat. Light conversation takes place in anticipation of the performance, the lights flash to signal the start of the show, and the performance begins. After the completion of the show, the audience member leaves their seat, exits the theater, and goes on with the remainder of the evening.

However, they have missed one of the most exciting performances of the evening while stuck in the confines of their seat. A secondary show, one with equal excitement and intrigue to present to an audience, was taking place behind stage - hidden from anyone's view other than the actor's themselves.

Why are we hiding such an incredible experience? Why not expose this performance? For every single performance taking place on stage there is actually a multiplicity of performances being expressed behind the solid walls of the theater.

There are so many entities within the theater experience, social events that have the potential



Fig. 1 Blake, Abigail. *Costume Shop*. 2009. Photograph. 24 July 2009. Web. 10 May 2011. <<http://abigailblake.com/sugarapple/?p=1020>>.



2



3



4

Fig. 2 *Lock-rail System*. Photograph. Flickr.com. Web. 10 Apr. 2011. <http://farm4.static.flickr.com/3477/3964950200_a227e37a9b.jpg>.

Fig. 3 *Dressing Room*. Photograph. Berkeleyrep.org. Web. 12 Mar. 2011. <http://3.bp.blogspot.com/_es-qICsVsTc/THVUX-hwtgI/AAAAAAAAAo8/U8JuoKcn_rQ/s1600/Pikeplace.jpg>.

Fig. 4 Nawrath, Enrico. *Bayreuth Festival Orchestra Pit*. 2008. Photograph. Web. 12 Mar. 2011. <http://www.wagneropera.net/Images/BayreuthPix/Naw-28_OGraben_093_08_EnricoNawrath.jpg>.

to capture incredible intrigue through observation. As the images to the left begin to explore, there are a whole collection of elements that exist in supporting roles to major programmatic function of a theater.

The fly rail system, a series of ropes, pulleys, and counterweights that control the heights, movement, and position of curtains, props, and lighting bars along the stage, is not expressed. The costume shop, an incredibly active and dynamic space full of fabrics and mannequins are placed out of sight in the back of house. Scene shops, equipped with the necessary tools and materials for the construction for performances of past, present, and future acts are hidden from view. Orchestra pits, areas set beneath the main stage for the musical support accompanying a performance or to create dramatic falls of actors off the stage, are typically not visible to the general audience. All of these components play vital roles in the success of a production, their successful collaboration serves as a performance in itself that should be explored within the development of such an architecture.

The project defined here seeks to explore and,

furthermore, to expose the relationships that can exist within the theater experience, shattering the traditional typology and embracing a much more visceral character of the human condition. The world that exists on stage is a distant, magical world. The world that coexists behind the stage is a mysterious realm that has yet to be expressed, to be embraced, within the architectural world.



5



6



7

Fig. 5 *Black Box Theater*. Photograph. *Valleysound.com*. Web. 10 Mar. 2011. <http://valleysound.areavoices.com/valleysound/images/black_box_pic.jpg>.

Fig. 6 *Luccon Translucent Changing Room*. Photograph. Web. 12 Mar. 2011. <<http://www.luccon.com/de/>>.

Fig. 7 *Woman (and man) on Yonge street at Dundas on a rainy day in Toronto.. 2009*. Photograph. 2 June 2009. Web. 12 Mar. 2011. <<http://wvs.toleftpixel.com/09/06/02/>>.

program [urban theater]

The thesis seeks to explore relationships between people based on their proximity and condition of viewing to an event. As evidenced in the images to the left, the inspiration for such a thesis draws on ideas of privacy, voyeurism, retail and most importantly performance.

Each element of inspiration presents elements of intrigue to the proposed theater. As one walks the streets of Times Square in New York City, you cannot help but let yourself be enveloped by the marketing of hundreds of retailers - each drawing the customer in with exploitation of their products through the transparent medium of glass. Architecture can similarly act as a medium, one of revelation of the activities that take place within its walls.

Not only will the level of exposure be influential in the development of the thesis, but, similarly, movement will also play an integral role. The notion of sequence and discovery affiliated with movement from place to place are incredibly valuable to the public character with which an architecture develops.

Each of these attitudes will serve as the foundation

for an exploration into the performance of exposure within architecture.

opaque

translucent

transparent

	sq. ft.
Back of House	
Administrative Offices	
Director	120
Finance	120
Public Relations	120
Conference	300
Technical Director	120
Design Team (4-5 people)	300
Janitorial Storage	200
Restrooms (affiliated w/ dressing room)	
Men's (w/ 2 showers)	300
Women's (w/ 2 showers)	300
Mechanical	3,000
Performance Chamber	
Multi-Purpose Theater (500 Seats)	9,000
Flat-Floor, Proscenium, Thrust Stage (further uses: gallery/exhibition)	
Actor Seclusion Rooms	3 @ 70
Front of House	
Restrooms (public)	
Men's	600
Women's	600

	sq. ft.
Back of House	
Dressing Room (w/ lockers)	
Men's	250
Women's	250
Green Room	600
Equipped with kitchen/vending	
Fly-Rail System	150
Performance Chamber	
Black Box Theater	3,500
Soundbooth 1 (Main)	300
Soundbooth 2 (Rehearsal)	250
Front of House	
Coat Check	600
Restaurant w/ Kitchen	6,000

** Parking will be addressed through on-street parking as well as dependant on the public transit systems along Alaskan Way. Major lots are also open to the public to the South of the site at each stadium.

	sq. ft.
Back of House	
Costume Shop	750
Props Room	1000
Scene Shop (incl. wood shop)	2500
Performance Chamber	
Rehearsal Space (intimate)	2,000
Urban Viewing Court (ext. plaza)	10,000
Digital Projection (ext.)	400
View-boxes	2(min) @ 1,000
Areas for viewing contextual events (ferries/traffic/etc)	
Front of House	
Lobby	10,000
Ticket Booth	400
Theater Bar(s)	2 @ 800
Performance bartenders	
Restaurant w/ Kitchen	8,000
Includes outdoor seating	

net sq. ft.	65,840
gross sq. ft. (net + 30%)	85,592

program [urban theater]

The program is divided into three categories of transparency based on the amount of exposure that can take place, or be performed within the building. The exposure gradient transitions from the most solid and opaque conditions, such as restrooms, offices, and the actual theater volumes themselves, through translucent/semi-transparent spaces (dressing rooms, green room, etc) and into the most transparent elements of the program (lobby, props room, costume shop, etc). The amount of exposure is based on the needs of the user as well as the successful function of a performance within such an environment.

The programmatic requirements for the urban theater proposal are listed to the left. Each programmatic element is categorized according to the level of exposure with which its function can be expressed either to the interior or the exterior of the architecture. Although the programmatic elements may share several exposure levels, the diagram begins to suggest the relationships that will be expressed between spaces.

Every element within the building, from actor, to audience, to building material, will be part of the performance in some way, shape, or form. A new

theater performance will be unveiled, exposing the behind-the-scenes makeup of productions as a secondary performance for pedestrian viewers on the street. To see the events of the backstage production, one does not need a ticket, but merely needs to activate the public plazas that will serve as open air viewing environments for the public experience.

You choose the performance you wish to see and, in doing so, also choose the level of participation within the event.

PIER = PARK
THEATER = PUBLIC
SUPPORT ACTOR

program [organization]

Pivotal to the success of such a thesis investigation are the interactions among people. In order to foster an environment that exposes performance, the environment as a whole must be treated as a *stage*.

As you can see from the diagram to the left, the site (later to be defined as a pier) must be equivalent to both the activities that take place on it and the people that occupy its architecture. The diagram represents an initial design structure that will help shape the thesis investigation - one that sees the park, theater, and its support spaces as equal performers to the public, the audience, and the actors on stage.

When these initial elements begin to work together, or, better yet, to stand apart, the true beauty of theater is allowed to be showcased. For it is the hard-work that often goes unnoticed within the depths of the theater that this thesis seeks to explore, to interest passersby in a world that may have never otherwise been known.

narratives

Within the process of design, it becomes critical to understand what the experiences with and around the architecture will be like. Whether it be an employee or a visitor, each individual has an account of the events that take place in their own experiences with a place.

The following narratives search to investigate the quality of experience that individuals will have in regards to the thesis proposed.

narrative one. (audience member)

Only having walked by the new theater on my way to the aquarium, I finally got tickets to see the performance of *Macbeth*. The new theater really has caught my interest as of its opening, I have never seen anything like it.

To start, the building just presents a seductive quality - it's form like draped silk across a woman's body. The combination of layered glass allow people to see the activities happening behind the stage while the performance within the theater is taking place. I would have never guessed so many things take place, and at

such a rapid rate! It was astonishing to see how quickly the crew needs to pull the ropes to close the curtains at the change of scenes or how many times the main character had to change his costume. I had stopped there a few nights into the first week or performances, to explore the new public plaza that was designed out in front. I was so happy that the architects decided to resolve the condition that was there before, such a run down area of the downtown.

Now...you should see it now! It's hopping, every night of the week. When I visited I was just mesmerized by the exposure of the activities that took place inside. Actually, once I had seen it a few times I found it more exciting to watch people recognize it for the first time, I could watch them for hours. People surprised at moments, shocked at others, it was like they were kids again exploring the great big world around them.

But back to the performance I saw inside. After entering the lobby, I took a gently sloping ramp down to the lower level. The hallway wrapped around what seemed to be the back of the theater, I could see the orchestra practicing in a room below the stage that I never knew existing. I then

made my way back up to ground level where I found a small cafe and bar that looked out at the mountains. People on the floors above me were looking down at me as I walked across the room, I actually felt for a moment like I was on the stage and maybe took a wrong turn somewhere. After I had assured myself that the show hadn't begun yet, I made my way to my seat. The building was like a labyrinth, nothing was really marked, it seemed as if the architect wanted me to choose my own routes within the building, to explore whatever intrigued me.

narrative two. (external spectator)

I had just finished dinner at that nice restaurant in the downtown with my wife. We left the dimly light atmosphere of the small Italian establishment as dusk was beginning to fall over the city. We had walked to dinner that evening, a bit of a new year's resolution of ours to reduce the dependence on our gas guzzling vehicles. Not to mention that we had wanted to go for a stroll through the city, with our busy schedules we hardly get to go out together anymore. But, tonight we had finally found a baby sitter for the kids and had some time to just walk together on a brisk summer evening.

We walked down by the library, passed the old high school where I had first met Bridget, continued around the corner past the building where I used to work. We had heard from several friends that we needed to go and see the new theater that had just opened down the block. Apparently it was a sight to see, especially at night.

Upon rounding the corner, we saw the illuminated glass panels of the new theater. As we got closer,

shadows danced across the front of the building, maybe we would make it before the last show of the evening began. I mean, it wasn't our original plan, but there wasn't a wait at the restaurant and we can call the baby sitter and let her know we'd be a few hours later.

Though, as we got closer, we realized that the show had very much already started. What we had been seeing from up the street were the shadows of the cast members and stage hands as the moved on and off the stage. Back and forth from room to room they went, some just sat in the hallway like they were mentally preparing themselves for the character they must have been portraying that evening.

We were able to walk around the building, but that in itself was a spectacular performance. We got to see the costume shop through the glass windows and then came across what I think was a dressing room. All I could make out were shadows before my wife shuffled me along, past what looked to be a wood shop, and onto an outdoor amphitheater that looked right out to the water. The seating was oriented just like a theater and we sat there for what must have been

an hour, just watching the ferries pass by every so often.

the venue.

site

The elements of movement are equally important to the ideas about transparency within the thesis investigation. The theater typology proposed here demands heavy participation at the pedestrian scale. Therefore, when looking for a site it becomes important to investigate the site in a series of layers. From the macro scale (x100) to the micro scale (x1), the following investigation explores the site in Seattle, Washington and its ability to address such issues.

Fig. 1 *Rave Costume Lights*. 2007. Photograph. *Wendyco.com*. Web. 15 May 2011. <<http://wendyco.com/mvp/rave-05110.html>>.





seattle, washington [x100]

Located in the Pacific Northwest within the state of Washington, the city of Seattle is not only a major city but also a major seaport on the Pacific Ocean. Situated on a narrow isthmus between Puget Sound to the West and Lake Washington to the East, the city serves as the most influential economic, cultural, and educational center in the region.

Culture, particularly that of the performance arts, is of particular interest to the selection of this thesis site location. The Seattle Symphony Orchestra, the Seattle Opera, and Pacific Northwest Ballet are all nationally recognized for their distinguished performances.

However, it is not merely the organizations that bring vitality to Seattle, but also the locations. The Moore Theatre, the oldest remaining theatre in Seattle, was built in 1907 and established Second Avenue as the “film/theatre district” for Seattle. As will be explored in greater detail later, Second Avenue is located two blocks north from the proposed site location.

The city of Seattle has roughly 100 theatrical production companies and over two dozen live theatre venues. These venues include the

5th Avenue Theater and the Seattle Repertory Theatre.¹ The Seattle Repertory Theatre is actually the largest nonprofit resident theatre in the Pacific Northwest and is recognized as one of the most renowned regional theatres in the country.²

The history of “walking the boards” in the city of Seattle coupled with the intrigue presented by progressive development within the production of the theatre performance emphasize the ‘fit’ Seattle places as a location for such an architectural investigation.

¹ “Old Timers, New Theater.” *Stranger*. 31 Jan. 2008: 27.

² “History of Seattle Rep.” *SeattleRep.com*. Arts Fund, 22 Apr. 2011. <<http://www.seattlerep.org/About/History/>>.

Fig. 2 *Seattle Skyline*. 2007. Photograph. *Flickr.com*. 3 July. 2007. Web. 12 Mar. 2011. <<http://www.flickr.com/photos/justintl/709915477/>>.



Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Average high °F (°C)	44.9 (7.17)	49.0 (9.44)	52.2 (11.22)	57.5 (14.17)	64.1 (17.83)	69.4 (20.78)	75.1 (23.94)	74.8 (23.78)	69.4 (20.78)	59.4 (15.22)	50.4 (10.22)	45.5 (7.5)	59.3 (15.17)
Average low °F (°C)	35.1 (1.72)	36.6 (2.56)	38.2 (3.44)	41.3 (5.17)	46.5 (8.06)	51.3 (10.72)	54.6 (12.56)	54.9 (12.72)	51.4 (10.78)	45.4 (7.44)	39.5 (4.17)	36.0 (2.22)	44.2 (6.78)
Precipitation inches (mm)	5.79 (147.1)	4.02 (102.1)	3.71 (94.2)	2.55 (64.8)	1.70 (43.2)	1.45 (36.8)	.77 (19.6)	1.10 (27.9)	1.72 (43.7)	3.50 (88.9)	5.97 (151.6)	5.81 (147.6)	38.09 (967.5)
Snowfall inches (cm)	5.1 (13)	1.7 (4.3)	1.3 (3.3)	.1 (0.3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	.1 (0.3)	.9 (2.3)	2.6 (6.6)	11.8 (30)
Avg. precipitation days (≥0.01 in)	17.8	15.7	16.4	13.6	11.6	8.5	5.3	5.5	8.3	11.7	17.9	17.8	150.1
Avg. snowy days (≥0.1 in)	1.8	.9	.4	.1	0	0	0	0	0	0	.6	1.6	5.4
Sunshine hours	71.3	110.2	179.8	207.0	254.2	267.0	313.1	282.1	222.0	143.6	72.0	52.7	2,174.0

Fig. 3 *Period of Record Monthly Climate Data. 2000.*
 Graph. National Oceanic and Atmospheric
 Administration. 6 Jan. 2011. Web. 15 May 2011.

climate [47°36'35"N 122°19'59"W]



As with much of the Pacific Northwest, the city of Seattle's climate is categorized as *Oceanic*. The weather is fairly mild and wet in the winter with the average lows being in the mid 30's °F. During the summer months, the climate is, again, mild and relatively dry with the average highs around 75°F.

Being surrounded by Puget Sound, Lake Washington, and the Pacific Ocean regulates temperature extremes that take place at similar latitudes. Additionally, the Olympic Mountains

protect Seattle from storms coming off the Pacific (to the West) and the Cascade Range protects from cold Arctic air (from the North). It is important to recognize this zone, known as the Puget Sound Convergence Zone, because it is the reason for much of Seattle's mild climate.

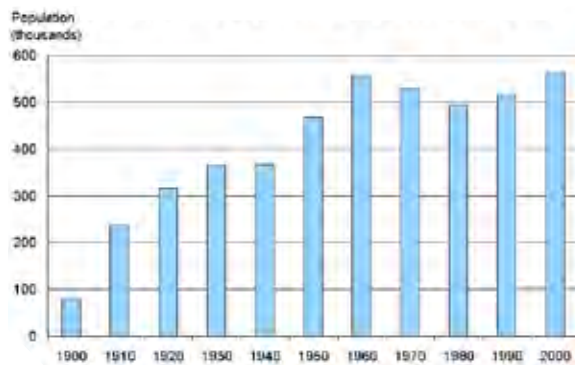
Technically, the city lies within a rain shadow created by the Olympic Mountains, however the city has a reputation for being an incredibly wet and rainy environment. Seattle has a very high frequency of precipitation (150 days of the year have precipitation > 0.01 inches). Winter is the wettest season for the city, with the rainy season beginning on October 1st. Additionally, the city is cloudy for roughly 201 days a year and considered partly cloudy for 93 days.¹ Between the months of October and May, the city of Seattle is cloudy 6 out of 7 days a week. During the winter months, Seattle will often see some of this rain turn to snowfall but heavy storms are rarely endured. The months of July and August are the driest and often the city will not see rain for months during this time of year.

¹ "Cloudiness: Mean Number of Days." *National Climate Data Center*. National Oceanic and Atmospheric Administration. Web. 25 Apr 2011. <<http://lwf.ncdc.noaa.gov/oa/climate/online/ccd/cldy.html>>.

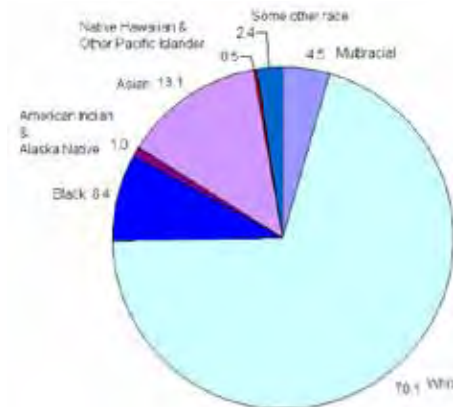
Fig. 4 *Blue Umbrella in the Rain*. 2011. Photograph. 20 Feb. 2011. Web. 12 Mar. 2011. <<http://missrosalle.blogspot.com/2011/02/under-his-umbrella.html>>.



Population History



Racial Diversity



Total Population by County

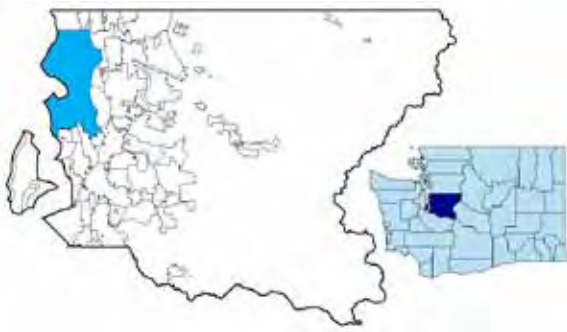


Fig. 6 *Population History*. 2000. Map. United States. *Census 2000 Data for the State of Washington*. 2000. Web. 15 May 2011.

Fig. 7 *Racial Diversity*. 2000. Map. United States. *Census 2000 Data for the State of Washington*. 2000. Web. 15 May 2011.

Fig. 8 *Total Population by County*. 2000. Map. United States. *Census 2000 Data for the State of Washington*. 2000. Web. 15 May 2011.

demographics



According to the 2010 Census, located in King County, the City of Seattle had a population of 608,660 and a racial composition as follows;

White (Non-Hispanic):	69.5%(66.3%)
African American:	7.9%
American Indian:	0.8%
Asian:	13.8%
Pacific Islander:	0.4%
Other:	2.4%
Two or more Races:	5.1%
Hispanic/Latino:	6.6%

English is the most commonly spoken language, spoken by 78.9% of residents, followed by Asian languages, spoken by 10.2% of residents. The

City of Seattle, influenced highly by location, has a significant immigrant population, mainly Chinese from mainland China, Hong Kong, Taiwan, and Southeast Asia. Additionally, Seattle is also home to a large Vietnamese population. It is estimated that Seattle is home to roughly 100,000 illegal aliens.

The medium income of a household in Seattle, as of 1999, was \$45,736 and the medium income for a family was \$62,195. With the city, 11.8 percent of the population are below the poverty line, 13.8 percent of this population is below the age of 18, 10.2 percent of this population is 65 or older. As with many major cities, Seattle has a high population of homeless individuals. On any given night, roughly 8,000 homeless people call Seattle home. However, in 2005 the city adopted a "Ten Year Plan to End Homelessness," which is shifting funds from homeless shelters to permanent housing projects.

Following a steady increase in the population over the last 16 years, city planners expect the population of Seattle to grow by 200,000 people through 2040.¹

¹ United States. *Census 2000 Data for the State of Washington*. 2000. Web. 15 May 2011.



[x1]

harborfront

downtown harborfront [x10]

The site overlooks Elliot Bay of Seattle's Puget Sound and has an incredibly rich public presence due to the wealth of waterfront activity/attractions.

The Northeast segment of the district is home to the oldest, continuously operating public marketplace in the country. Established in 1907 the market is home to fresh food vendors, artists, and shops. In 1971, it was threatened to be demolished but the citizens of Seattle fought to preserve their marketplace. The Historical Commission voted to preserve 7 acres of the site and since then it has continued to flourish. Pike Place Market is often recognized as the "soul of Seattle".¹

To the North, the Seattle Art Museum's Olympic Sculpture Park (Weiss + Manfredi Architects), two cruise ship docks, and the Washington State Ferry terminal. To the South, the Seattle Aquarium, Qwest Field (home of the Seattle Seahawks Football team), and Safeco Field (home of the Seattle Mariners Baseball team).

The district places a heavy emphasis on the pedestrian movement through the city, as well as the circulation to and along the water. Likewise,

the urban theater proposal wants to exploit this condition as well. The interactions between people, the trains passing through, the load/off-load of various ferries and the beautiful landscape of downtown Seattle can all be "exposed" through a performance related program.

Additionally, the city of Seattle has long been a haven to the art and music community. As a young and modern city the location serves the new and exciting program well.




Fig. 9 Dennis, Catherine. *Pike Place Market*. 2006. Photograph. Web. 10 May 2011. <<http://catherine-dennis.com/bonustwo.html>>.




existing influences [downtown harborfront]


Open Public Space

-  1 Olympic Sculpture Park
- 2 Victor Steinbrueck Park
- 3 Westlake Park
- 4 Waterfront Park


Cultural Centers

-  5 Olympic Sculpture Park
- 6 Seattle Cinerama
- 7 Bell Harbour Convention Center
- 8 Moore Theatre
- 9 Pike Place Market
- 10 Seattle Aquarium
- 11 Seattle Art Museum

Education

-  12 Argosy University
- 13 North Campus Art Institute
- 14 Mars Hill Graduate School
- 15 The Art Institute of Seattle
- 16 Seattle Glassblowing Studio

Restaurants*

-  17 Waterfront Seafood Grill
- 18 Brazino
- 19 Anthony's Pier 66 Diner
- 20 94 Stewart Restaurant

- 21 Place Pigalle Restaurant
- 22 Wild Ginger Asian Restaurant
- 23 McCormick & Schmick's Seafood

Hotels*

-  26 Seattle Edgewater Hotel
- 27 Ace Hotel
- 28 Seattle Marriott Waterfront
- 29 Pensione Nichols B+B
- 30 Moore Hotel
- 31 Inn at the Market
- 32 Green Tortoise Hostel
- 33 Four Seasons Hotel Seattle
- 34 Hotel 1000
- 35 Alexis Hotel
- 36 Best Western Pioneer Square

Transportation

-  37 Clipper Vacations (Victoria, BC)
- 38 Bell Street Pier Cruise Terminal
- 39 Bell Harbour Marina
- 40 Seattle Ferry Terminal

* sampling for the area, not all locations are represented in the *existing influences* mapping.



Fig. 11 Gooi, Andrew. *Pike Place Market*. 2010. Photograph. *Andrewgooi.com*. 24 July 2010. Web. 13 May 2011. <<http://andrewgooi.com/2010/07/seattle-pike-place-market/>>.

pike place market [influences]

Pike Place Market, coined “the soul of Seattle”, has an incredibly rich history. One of America’s most successful farmer’s markets began between 1906 and 1907. It was during this time that the price of onions increased tenfold. Outraged at the cost of paying middle-men for their produce, citizens gathered behind their City Councilman Thomas Revelle. Revelle proposed a public street market that would allow direct connections to be developed between grower and consumer.

On August 17, 1907 Pike Place Market was born and the motto “Meet the Producer” became a philosophy that still holds true within the marketplace. On the first day of operation, eight farmers with wagons made their way to the corner of First Avenue and Pike Street. Over 10,000 customers quickly overwhelmed the marketplace and by 11:00am all the produce was sold out - a sign of the success to come.¹

By the end of 1907 the first building was erected at the Market and each space within was quickly filled. Today, the market district occupies roughly 7 acres and serves as one of the oldest continuously operated farmer’s markets in the United States. Additionally the market acts as

one of the biggest tourist attractions for the state of Washington and is home to small farmers, merchants, and crafts people.

The market itself overlooks the Elliot Bay waterfront in Seattle, Washington. The market is built on an incredibly steep site and the market utilizes multiple terraced lower levels to add additional shops below the main level. The upper level, however, is where the action is. The famous “Meet the Producer” sign can be seen at the three-story Leland Hotel, where the market began.

The life and colors of Seattle are showcased within the Pike Place Market. The food stalls of fruits and vegetables in the main arcade coupled with the many fresh flower shops bring an exciting dynamic to the communication that exists between grower and consumer. The products are showcased in colorful arrangements that will make your mouth water.

As one strolls through the many food stalls and shops, the lively music of street performers enlivens the arcade experience. The sounds of jazz music and even the occasional a capella



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13



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Fig. 12 *Pike Place Market busker at main entrance*. 2008. Photograph. *Wikipedia.org*. 30 May 2008. Web. 10 Apr 2011. <http://en.wikipedia.org/wiki/File:05_Pike_Place_Market_busker_at_main_entrance.jpg>.

Fig. 13 *Fruit and Vegetable Vendor*. Photograph. Web. 12 Mar. 2011. <http://3.bp.blogspot.com/_es-qICsVsTc/THVUx-hwtgI/AAAAAAAAAo8/U8JuoKcn_rQ/s1600/Pikeplace.jpg>.

Fig. 14 *Tossing Fish at Pike Place Market*. 2009. Photograph. Web. 12 Mar. 2011. <<http://onemansblog.com/wp-content/uploads/2009/03/tossing-fish-at-pike-place-market.jpg>>.

group can be heard while you make your way from Pike Street to Virginia Street.

Fishmongers attract great crowds as they prepare orders and toss fish at the Pike Place Fish Market. The world-famous fish market is an open-air market located on the corner of Pike Street and Pike Place. But, the fish market did not become famous simply because of their fish, it is the dynamic the employees create with the customers. Employees throw fish customers have purchased before they are wrapped, play games, and even perform for the audiences they attract.

If fish isn't your cup of tea, maybe you would like to grab a cup of coffee from the original Starbucks coffee shop. Opened in 1971 at the Pike Place Market, the store has retained its original look to keep within the design guidelines of the historic district.² The special blend of Pike Place roast is now a favorite around the world.

The beauty of Pike Place Market is based on the relationships between people. These relationships and interactions are what founded the market and continue to drive its success

today. The thesis proposal will capitalize on these pre-existing relationships present within the context of Pier 62/63 in order to further illuminate interactions between people.

Interactions between people will serve as a stimulate for the Seattle waterfront, continuing the relationships of the market into additional centers of performance.

¹ "History of Pike Place Market." *Pike Place Market*. Pike Place Market PDA, n.d. Web. 10 Apr 2011.

² "Original Starbucks." *Seattle.gov*. City of Seattle, n.d. Web. 10 Apr 2011.



15

Fig. 15 *Seattle Aquarium Panorama*. 2009. Photograph.
Flickr.com. 19 June 2009. Web. 13 May
2011. <<http://www.flickr.com/photos/excelglen/3687537572/>>.

seattle aquarium [influences]

Located on the adjacent pier to the South, Pier 59 is home to the Seattle Aquarium. Opened in 1977 the aquarium along the shores of Puget Sound's Elliott Bay allows visitors to see, explore, and even touch the marine life of the Pacific Northwest.

Being built atop a pier, visitors could not get any closer to the action. Pier 59, is actually the oldest pier in the downtown waterfront that is still standing. It was constructed in 1872, serving as a terminal for the loading and shipping of coal. However, marine organisms damaged the pier and it had to be rebuilt in 1896. A pier shed was constructed in 1905 atop Pier 59 that utilized a heavy timber construction. The shed was sheathed in ship lap wood siding atop wood deck and was supported by wood piles.¹

Pier 59 originally served as a terminal for the Northwest Steamship Dock Co., later Dodwell & Co. Originally named Pier 8, the pier was renamed to "Pier 59" in the 1940's. The shed was renovated along with Pier 60 to house the current Seattle Aquarium. The aquarium was designed by Bassetti/Norton/ Metler/ Rekevics Architects, now Bassetti Architects, in 1971 and serves as

the neighboring pier to the Southeast of Pier 62 and Pier 63 (thesis proposal site).

What makes the aquarium unique is that after it was completed the building served as a prototype for an aquarium typology that served to both educate and entertain. The experience through the aquarium is one of discovery as hallways lead visitors into a variety of encounters with marine life through a multitude of exhibition spaces.

Unique spatial environments, such as the underwater dome, utilize innovative glazing and structural systems to literally place visitors underwater. When visitors enter the dome, they are immersed into the marine life of sharks, octopi, salmon, and otters. Given the importance of the salmon migration cycle on the shores of Elliott Bay, the design integrated a salt water fish ladder throughout the complex - emphasizing and revealing the salmon spawning cycle that takes place between the Duwamish River (to the South) and Puget Sound's Elliott Bay.

The original (1977) structure was approximately 30,000 square feet and involved a renovation of



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- Fig. 16 *Seattle Aquarium*. 2011. Photograph. *Stroupecondoblog.com*. 20 Feb. 2011. Web. 22 Apr. 2011. <<http://www.stroupecondoblog.com/2011/02/waterfront-seattle%E2%80%99s-meeting-of-the-minds-%E2%80%93-all-of-them/>>.
- Fig. 17 *Seattle Aquarium Dome*. 2007. Photograph. 3 Sep. 2007. Web. 22 Apr. 2011. <<http://www.flickr.com/photos/beaster725/1317371756/>>.
- Fig. 18 Savery, Marsha. *Window on Washington Waters Exhibit*. 2007. 22 June 2007. Photograph. Web. 22 Apr. 2011. <<http://www.djc.com/news/le/ah.html?id=11190530>>.

the existing timber pier piles. Given the wear on the timber piles, these had to be replaced with new concrete piles in 2005.² In 2007, the Seattle Aquarium received a makeover while expanding an additional 18,000 square feet. Designed by Mithun Architects of Seattle, the expansion, allowed for the development of new exhibits, a gift shop, a food court, and necessary meeting, conference, and event spaces.³

Continuing on the tradition of developing an educational experience, the expansion introduced a new exhibit called "Windows on Washington's Waters". The exhibit space was developed through the installation of a 120,000 gallon 17 ft. high x 39 ft. wide viewing tank; a 27.5 ton acrylic viewing window and a 40 ft. x 8 ft. x 6 ft. tall wave tank.⁴

The building is open daily and in 2009 welcomed over 836,000 visitors. Since it opened, the Seattle Aquarium has hosted 20.8 million visitors, over 1.6 million of which are visiting school children learning about the marine environment. Currently, the Seattle Aquarium is the 7th largest aquarium in the United States by attendance and Puget Sound's 3rd largest paid visitors attraction.⁵

¹ Seattle Parks and Recreation (September 2006), "Chapter 3 – Affected Environment, Environmental Impacts, and Mitigation Measures", *Final Environmental Impact Statement (FEIS) for the Central Waterfront Master Parks Plan*, Seattle: Department of Parks and Recreation.

² Ibid, 66.

³ "City Attractions: Seattle Aquarium." *Seattle.gov*. City of Seattle. 24 Apr. 2011. <<http://www.seattle.gov/tour/aquarium.htm>>.

⁴ Matta, Cecilia. "Seattle Aquarium: Turner Construction Manages Extreme Makeover for Sea Creatures." *STEPS*. Spring 2007: 6-14.

⁵ "Quick Facts: Seattle Aquarium." *Seattle Aquarium*. Seattle Aquarium Society, 2007. 24 Apr. 2011. <<http://www.seattleaquarium.org/page.aspx?pid=445>>.



transportation [downtown harborfront]



Ferry Terminal

- 1 Victoria, British Columbia
- 2 Bainbridge Island
- 3 Bremerton, WA
- 4 Vashon Island
- 5 West Seattle



Alaskan Way Tunnel



Sound Transit Link Light Rail



Sounder Commuter Rail



Sound Transit



Seattle Center Monorail

Westlake Center Mall -
Seattle Center



site

pier 62/63 [x1]

Pier 62 and 63 has a interesting history within the city of Seattle. Native Americans once used the site, prior to the construction of the pier, as a boat landing for their fishing boats. Later, the piers were constructed as Seattle's port developed into a major hub for fishing, commerce, and trade.

Up until 1989¹, the site was activated by the outdoor performances of the annual Summer Nights at the Pier concert series. Lively music and events could be heard taking place on the waters edge as ferry boats, trolleys, and trains passed nearby. Despite the social gathering that the concert series provided to the city, for most of the year, the site stood as a public outcropping into Elliot Bay for pedestrians to take in the sights and sounds of Puget Sound, the majestic Olympic Mountain range, and the Seattle city skyline.

Due to their age, the two piers are in a state of deterioration and the large activities that once called Pier 62 and 63 home can no longer be supported safely.

Given the site's history and importance to the downtown community of Seattle, it presents a great opportunity for a new and exciting

architectural proposal for the area. The urban theater proposal will allow for the development of vital social interaction across the site while salvaging the "pier plaza" that has developed over the years for the community of downtown Seattle.

The decision as to whether both piers will remain is yet to be determined. Given their structural weakness, it will most likely require a re-build of the pier(s) within the given site footprint.

site conditions

existing pier(s) sq. footage:	77,700 sq. ft.
acreage:	1.78 acres
proposed theater sq. footage:	47,488 sq. ft.

¹ Shawmash, Diane, and Steven Huss. *A Field Guide to Seattle's Public Art*. Seattle, WA: Sasquatch Books, 1991.

Fig. 19 Pier 62/63. 2003. Photograph. Flickr.com. 12 Jan. 2003. Web. 13 May 2011. <<http://www.flickr.com/photos/17655239@N02/2172611729/>>.





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21



22

Fig. 20 *Seattle Waterfront at Washington Street.* c. 1890-1892. Photograph. *Wikipedia.org*. Web. 24 Apr. 2011. <http://en.wikipedia.org/wiki/Duwamish_tribe>.

Fig. 21 *Pier 9 Building.* 1935. 21 Mar. 1935. Photograph. *Seattle Municipal Archives: Item 9514*. Web. 22 Apr. 2011.

Fig. 22 *Railroad Avenue; Pier 9.* 1935. 21 Mar. 1935. Photograph. *Seattle Municipal Archives: Item 9513*. Web. 22 Apr. 2011.

history of pier 62/63 [influences]

Like many of the piers along Alaskan Way, Pier 62 and Pier 63 were constructed at the turn of the 20th century. Pier 62 was built in 1901 and Pier 63 quickly followed in 1905.¹ However, the site has a long history that pre-dates these coastal constructions.

The area of downtown Seattle within which the pier deck is located is within the territory of the Duwamish Indians, the indigenous people of Seattle. The Duwamish Indians were a fishing-hunting-gathering people whose territory stretched across western Washington. Unlike many indigenous tribes, many Duwamish chose not to move to reservation lands and, rather, chose to retain much of their heritage within the city of Seattle. The pier deck itself is built atop a site originally used by the Duwamish people to land their boats.

The coast of Elliot Bay in the downtown area of Seattle is home to a number of these piers. The city of Seattle purchased Piers 57-61 in 1978. In 1989, the City traded Pier 57 for Piers 62 and 63.² The oldest pier on the site overlooking Elliot Bay is actually Pier 59, constructed in 1872.

Pier 62 and 63, as mentioned previously, were built in 1901 and 1905, respectively. Each had a pier shed located on their site similar to that on Pier 59. Additionally, Pier 62 was originally known as Pier 9, or Gaffney Dock, and was home to Puget Sound Freight Lines. Pier 63 was known as Pier 10, the Virginia Street Dock.

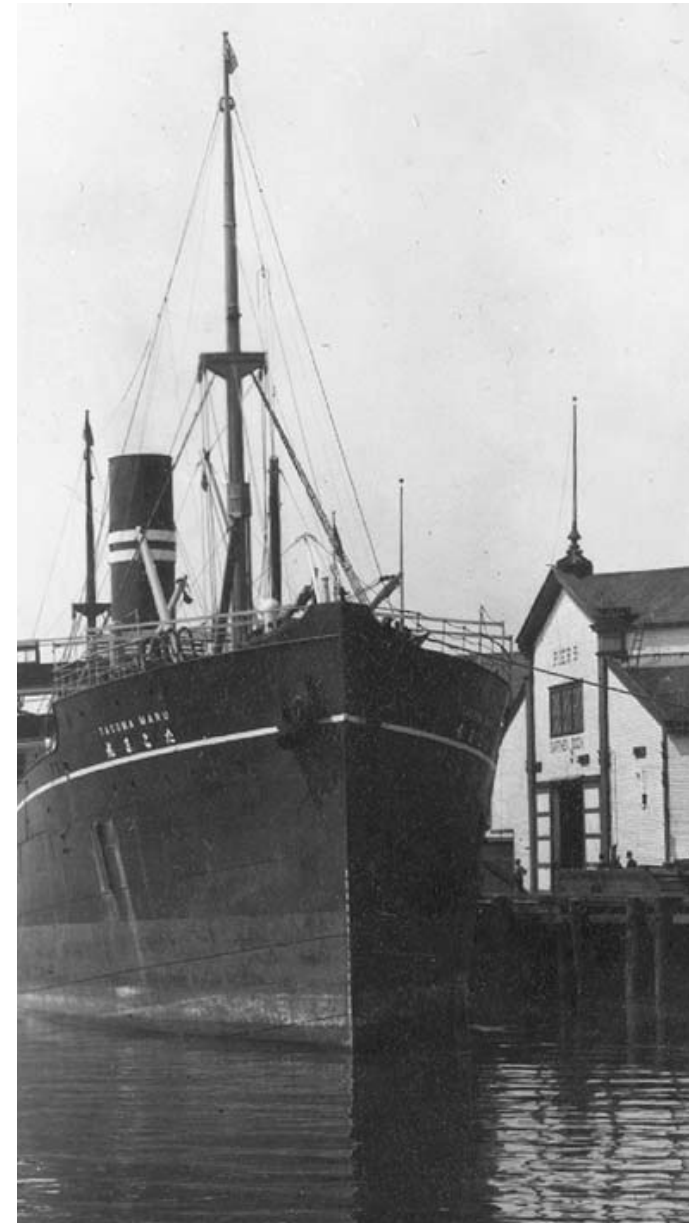
The construction of these piers was similar to that of Pier 59, as mentioned when analyzing the Seattle Aquarium. The piers were constructed using heavy timber and the sheds were sheathed in ship lap wood siding atop wood decking. All of these structures were supported atop wood piles that have since been damaged by either water or marine borers.

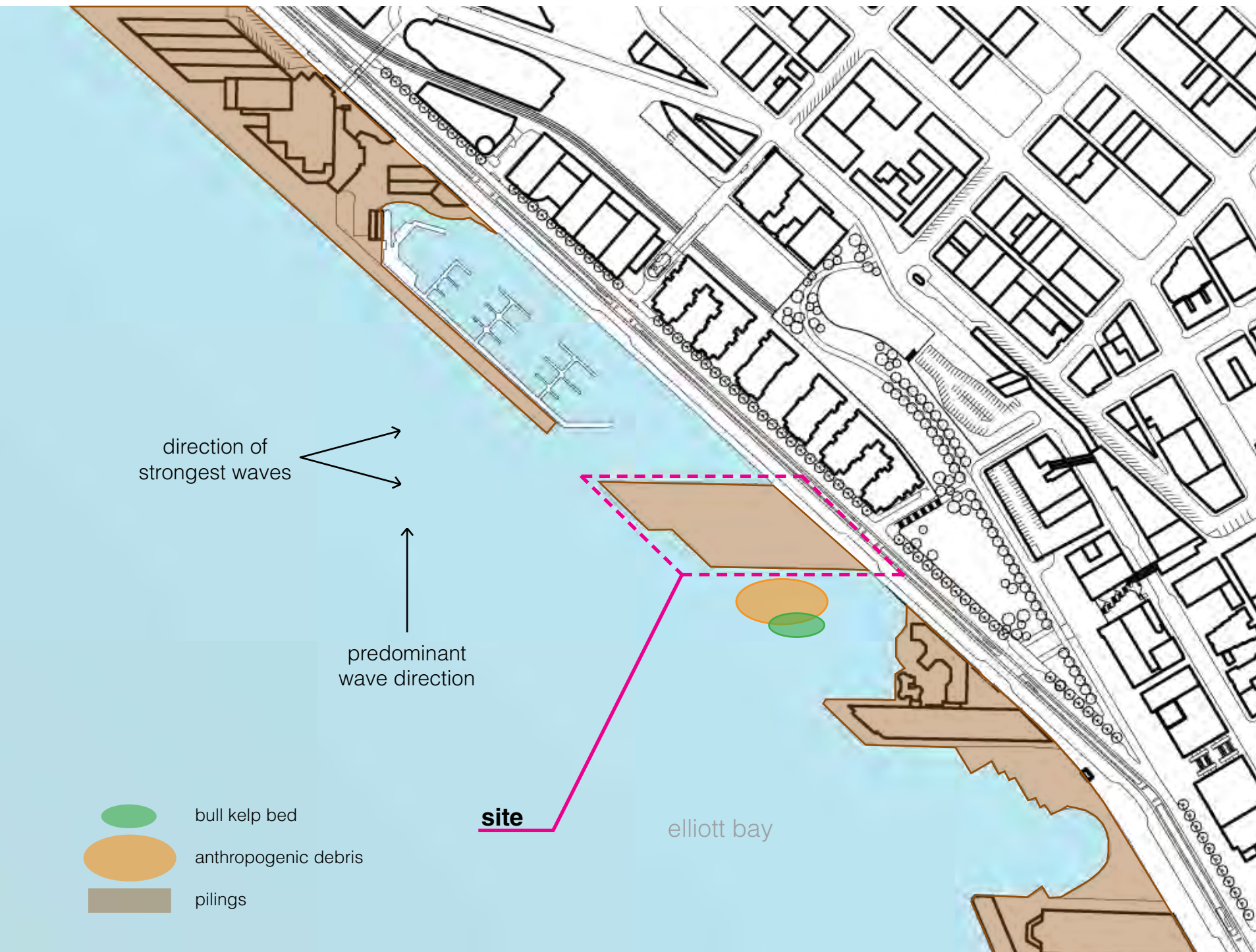
¹ Seattle Parks and Recreation (September 2006), "Chapter 3 – Affected Environment, Environmental Impacts, and Mitigation Measures", *Final Environmental Impact Statement (FEIS) for the Central Waterfront Master Parks Plan*, Seattle: Department of Parks and Recreation.

² Ibid, 66.

³ Ibid, 66.

Fig. 24 *Japanese Steamer Tacoma Maru at Gaffney Dock.* c.1911. Photograph. [Pauldorpat.com](http://pauldorpat.com). Web. 13 May 2011. <<http://pauldorpat.com/seattle-now-and-then/the-u-s-army-transport-burnside-at-the-foot-of-lenora-street/>>.





existing in-water conditions [influences]

Overwater structures cover the majority of the shoreline in the downtown waterfront of Seattle. Roughly a dozen piers cover about two-thirds of the shoreline. Within the project area, from the northern edge of Pier 6263 to the southern edge of Waterfront Park, piers cover about 80 percent of the shoreline.

As evidenced through the brown hatch pattern, dense creosote pilings currently litter the shallow waters off of the immediate shoreline. Although several of the densely constructed creosote pilings are being replaced under the Seattle Aquarium, Pier 6263's structure has been compromised by these deteriorating pilings.

In an effort to reduce the impact on marine life, construction of pilings for the new proposal on Pier 6263 will utilize widely spaced concrete pilings. This will help to extend the life of the Pier structure long-term and will minimize the introduction of any additional chemical treatment into the Puget Sound.

In addition to the pilings, a large pile of anthropogenic remains, or human created debris, exist to the south of Pier 6263.

The debris consists mainly of a large bed of aluminum cans that has become covered in algae. A remediation plan will be established for Pier 6263's proposal to be removed and recycled as appropriate during the construction of concrete pilings.

These characteristics, defined in the diagram left, present an opportunity for the city of Seattle to utilize the development of Pier 6263 as a model of environmental sustainability. Couple these actions with the goals presented on subsequent pages regarding the juvenile salmon routes and Pier 6263 could begin a new approach to construction on the waterfront.



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21



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Fig. 20 *Condylac Anemones*. Photograph. *Animal-world.com*. Web. 20 Feb. 2012. <http://animal-world.com/encyclo/reef/anemones/images/condylac_s.jpg>.

Fig. 21 *Seastars*. Photograph. Smithsonian Museum of Natural History. *Mnh.si.edu*. Web. 22 Feb. 2012. <<http://www.mnh.si.edu/livingfossils/seastar/gallery.htm>>.

Fig. 22 Boon, Jim. *Coonstripe Shrimp*. 2011. Photograph. *Flickr.com*. 09 Feb. 2011. Web. 22 Feb. 2012. <<http://www.flickr.com/photos/jimboon/5434431354/>>.

biological communities [influences]

A significant influence and motivation for developing the site of Pier 6263 are the various habitats that exist along the downtown waterfront. According to the Central Waterfront Park Planning Feasibility Study, commissioned by the Seattle Parks and Recreation in , four basic habitats exist and are as follows;

- + hard substrate (riprap at the seawall)
- + fine sand and silt
- + pilings (supporting the existing piers)
- + anthropogenic (human-made debris)

Table 1 Biological Communities Thought to Exist in Project Area
Modified from *Central Waterfront Master Plan, 1995*

¹The specific composition of species varies with elevation as a result of tidal inundation.

² Kelp beds are designated as saltwater habitats of special concern because of the valuable function they serve in the developmental history of fish and shellfish (WAC 220-110-250). A bull kelp bed is centered in the demolition debris of Pier 61 along the south side of Piers 62/63 (*Central Waterfront Master Plan, 1995*). Kelp beds have also begun to establish themselves in the Pier 66 marina, located just north of Piers 62/63, since it was constructed in 1994.

³Except riprap.

⁴There is little evidence of shelled mollusks (clams, mussels, etc).

	hard substrate	fine sand and silt	pilings ¹	anthropogenic debris
anemones	●		●	●
bottom dwelling fish (skates, flounders, sole)	●	●	●	●
bryozoans	●			
bull kelp²	●			●
crustaceans	●	●	●	
echinoderms	●	●		
marine algae	●			
mollusks (nudibranchs, octopi, squid) ⁴	●	●	●	
near-bottom dwelling fish (spiny dogfish, rockfish)	●		●	
pelagic fish (salmon, Pacific sand lance Pacific herring)	●	●	●	
sponges	●		●	
tunicates	●		●	
worms	●	●	●	



elliott bay

juvenile salmon migration [influences]

Juvenile salmon, also known as fingerlings or smolt, play a key role in establishing the constraints for the proposed investigation. Currently, Pier 6263 sits atop existing juvenile salmon migration routes.

Fingerlings utilize shallow waters near shore for their migration, remaining in close proximity to the shoreline and often within only 3 to 6 feet of the water's surface. Within Elliot Bay, these fingerlings travel North from the mouth of the Duwamish River up the shoreline to Piers 90 and 91 before entering the deeper waters of Puget Sound.

The journey, lasting approximately three to four weeks, is interrupted by moments of rest and congregation in protected areas. In addition to areas of shelter, fingerlings are very dependant on sunlight penetration into the water. Traveling close to the water's surface allows minimal adjustments to darkness - extreme contrasts are not easy for juvenile salmon to adjust to.

However, over water structures block valuable light penetration and often forcing fingerlings to venture into deeper waters too soon. As you can

see from the diagram (left), the juvenile salmon migration route is dramatically influenced by the Piers that stretch into the sound.

By introducing setbacks along the shore and providing under-pier lighting to the marine habitat below, the proposal for Pier 6263 can serve as a precedent for environmental sustainability. A key aspect of the design proposal will be accommodating this juvenile salmon migration path into the design scheme - allowing for the enhancement of places of rest, rood, and increase their rate of survival.

Salmon Development

Fingerlings	30 mm - 90 mm
Smolts	90 mm - 160 mm
Adults	>400 mm



Fig. 23 *Salmon Fingerlings* - Seattle Aquarium. 2005. Photograph. Flickr.com. 27 Nov. 2005. Web. 22 Feb. 2012. <<http://www.flickr.com/photos/liz/83250070/>>.

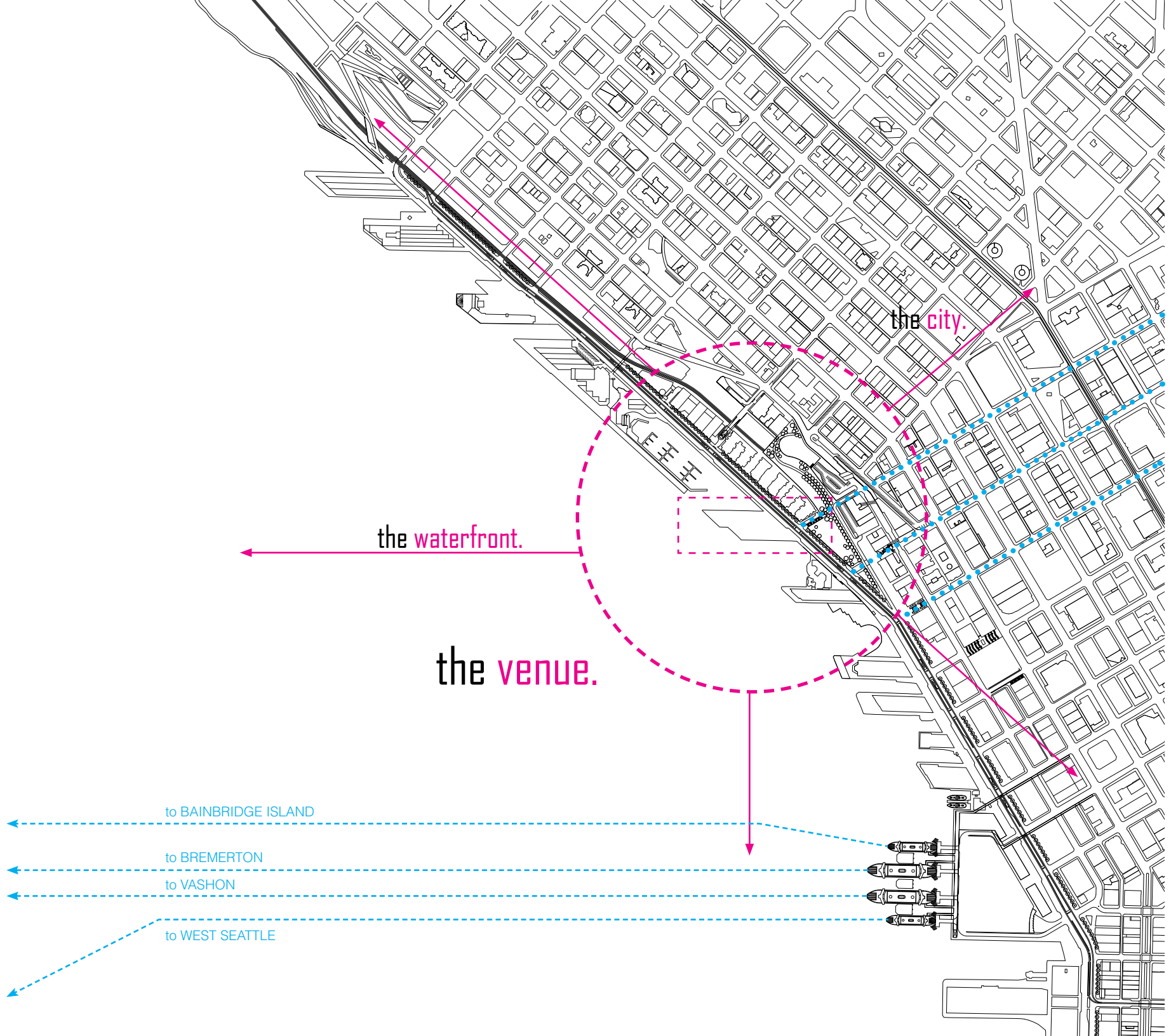
curtain up.

act I. [prologue]

A large wooden structure anchors herself into the deep blue waters of the Puget Sound. She sits idle now in the summer sun as the morning fog burns off the waves. Her moorings no longer cradle the hulls of Seattle's fleet. Her deck no longer sees the hustle of fisherman and their daily catch, yet a changing cast of characters continues to bring her old stage to life...

the performance begins on an abandoned pier.

[curtain up, cue lights]



'site' as stage

The proposed site, or performance venue of Piers 62 and 63, is located within the downtown of Seattle, Washington along Alaskan Way. The site overlooks Puget Sound's Elliott Bay and has an incredibly rich public presence due to the wealth of waterfront activities and local attractions. The central location along the waterfront, couple with its close proximity to Pike Place Market (over 10 million visitors a year), creates an environment that roughly 6,000 pedestrians pass by each day.

Combine that with the fact that the site is the terminus of three major entertainment/commercial streets in Seattle:

- Pine Street
- Pike Street
- Union Street

These avenues provide an incredibly active, engaging environment for an architectural intervention.

Up until recently, the site was used to host a summer concert series and has long stood as a social gathering space for the downtown Seattle public. Unfortunately, the existing creosote

piers are deteriorating and can no longer support the demands of larger public activities.

As evidenced by the diagram (right), the existing pier is currently only occupied around its perimeter - leaving the majority of the pier unused. The question then becomes;

How do we develop the surface of the pier deck in order to engage its surface entirely?

By coupling a theater proposal with the cast list of performers that exist currently on the site (as evidenced on the following pages), Pier 62 and 63 - collectively Pier 6263 - can develop into a vital social node along the newly refocused Seattle waterfront that utilizes the entire footprint as a stage for city life.

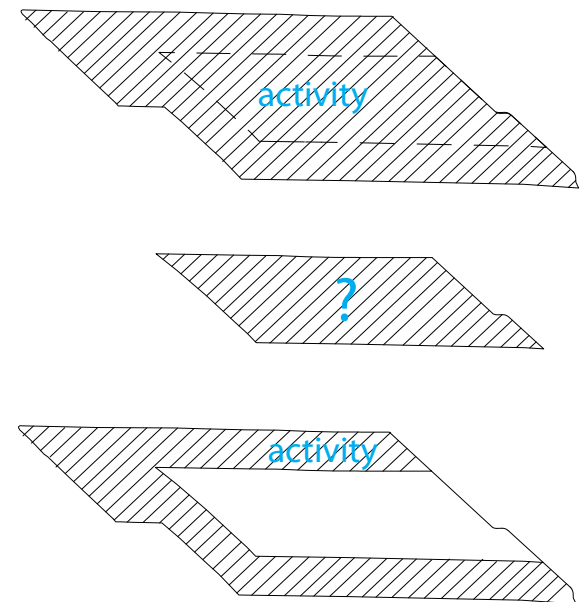


Fig. 1 Diagram of current activity on Pier 6263



pike place market

2



olympic sculpture park

3



seattle aquarium | stadiums

4



cast of characters

As mentioned earlier, the site in its entirety can actually be treated as a stage. A critical component of Pier 6263's proposal is the understanding that the existing pier was successful because it gave pedestrians - the audience - a place to view the activities of downtown Seattle.

Even when a "theater" performance is not occurring, performances are taking place in every direction around Pier 6263.

The following are just a few of the many stage performers that influence Pier 6263:

Ferry
Cargo Ship
Fishing Vessel
Dock Crane

Terrestrial Life
Marine Life

Pike Place Market
Seattle Aquarium
Olympic Sculpture Park
Space Needle
Waterfront Park

Elliot Bay Trail
Olympic Mountains
Bainbridge Island

Vehicles
Pedestrians

Fig. 2 Gooi, Andrew. *Pike Place Market*. 2010. Photograph. *Andrewgooi.com*. 24 July 2010. Web. 13 May 2011. <<http://andrewgooi.com/2010/07/seattle-pike-place-market/>>.

Fig. 3 Berner, Alan. *Olympic Sculpture Park*. Photograph. *The Seattle Times*. 2010. Web. 10 Mar. 2012. <<http://seattletimes.nwsource.com/html/photo-galleries/artsentertainment2003515222/>>.

Fig. 4 *Seattle Aquarium Panorama*. 2009. Photograph. *Flickr.com*. 19 June 2009. Web. 13 May 2011. <<http://www.flickr.com/photos/excelglen/3687537572/>>.

Fig. 5 Soderquist, Jeff. *Urban Drum Kit*. 2011. Photograph. *Flickr.com*. 08 Feb. 2011. Web. 07 Mar. 2012. <<http://www.flickr.com/photos/flapjacksrule/5433905052/>>.





Fig. 6 Pier 62/63 Seattle Panorama. 2008. Photograph. Flickr.com. 22 Mar. 2008. Web. 11 May 2011. <<http://www.flickr.com/photos/jpguk/2467163211/>>.

A black and white photograph showing a wide, wooden pier in the foreground, leading towards a city skyline. The pier is made of weathered wooden planks and has a metal railing on the right side. In the background, a dense cluster of skyscrapers and buildings is visible, including a prominent tall building with a grid-like facade. The sky is clear and bright.

what if this...

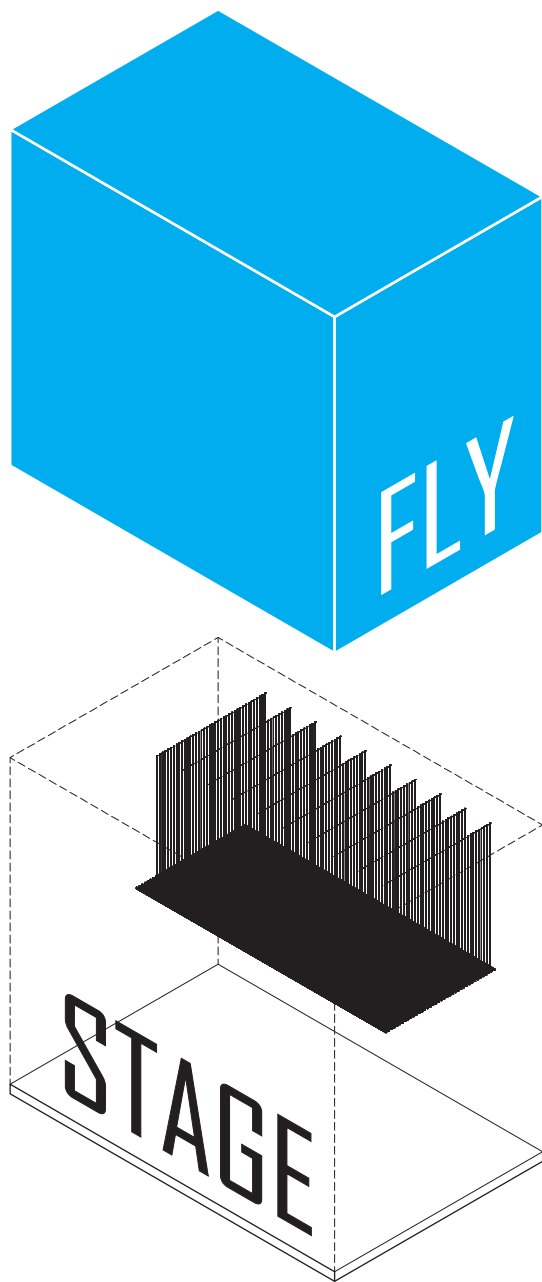


Fig. 7 Jackson, Gordon. *Crash of Elysium*. 2011. Photograph. *Blogspot.com*. 13 July 2011. Web. 26 Mar. 2012.
<<http://wonderingsinthefourthdimension.blogspot.com/2011/07/crash-of-elysium-real-must-for-fans-of.html>>.

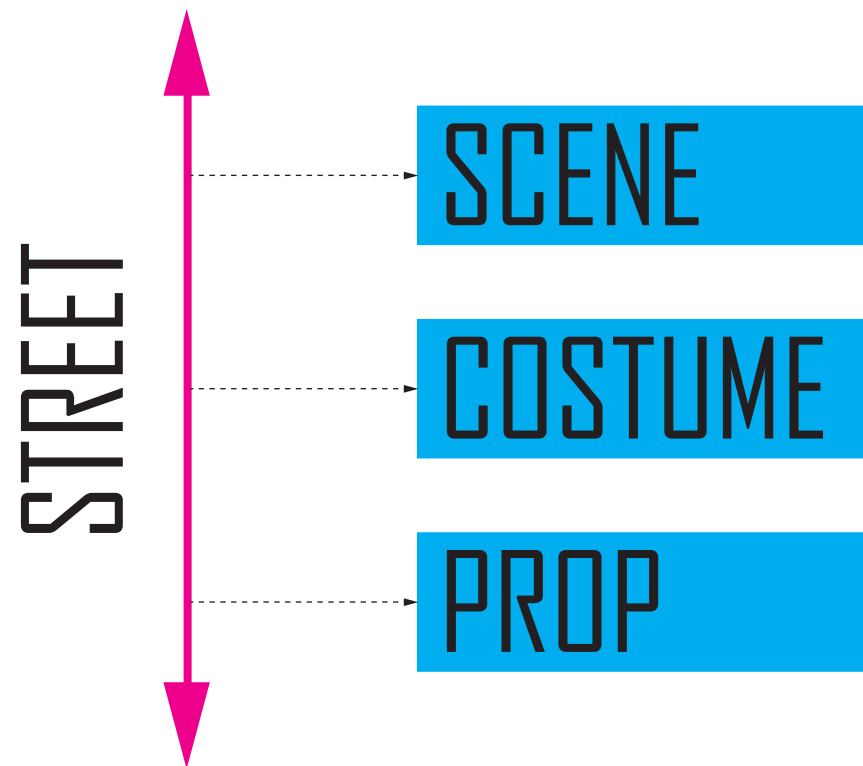


068

became this?



8. Exposing the flytower diagram



9. Relationship of back-of-house to street

act 1, scene 1 [thesis investigation]

The exposure of performance or the performance of exposure? That is the question.

Pier 6263 will serve as a stage for the exposure of performance. A stage capitalizing on any and every performance imaginable, a theater experience that is different from any other - by revealing elements that we never get to see. Shadowy dressing rooms, fly spaces, and even stage hands become critical performers on Pier 6263.

As the diagrams to the left begin to illustrate, in essence, there is always a secondary performance accompanying every show - a performance never revealed to the public audience.

The stage, a sacred element within the theater, serves as the initial source of inspiration for the architecture of Pier 6263's proposal. However, unlike most theater proposals, the stage, in its simplest form, is not the most important element of the architecture. What is important are the kinetic movements of the fly tower above.

The fly tower houses the theatrical rigging

systems. Lines, blocks, and counterweights are constantly being quickly and, most importantly, quietly being moved by stage crew members to adjust curtains, scenery, stage effects, and even people. These riggings serve as the ligaments of a beautiful performance - and are only seen by the rare few who operate counterweights backstage to manipulate scenes for the audience. The intention of Pier 6263 is to "pull the lid off" the fly tower, establishing a performance for the public audience of downtown Seattle.

Despite the magic and intrigue presented by the "unknown" of theater, a similar condition of awe can arise through the exposure of the inner machine that is theater. In order to stimulate this attitude of stage, public participation plays a critical role in it's success.

Inspired by such a notion, the street, Alaskan Way, will serve as an audience to all of the back-of-house elements of the theater. By pulling these programmatic elements towards the public realm, public participation in the production is not only encouraged but expected.

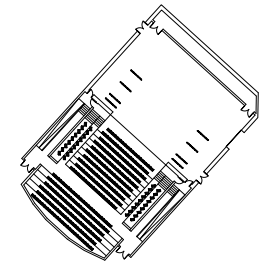
Fig. 10 Ho, Lawrence K. *Stage Hands*. 2009. Photograph. *LATimes.com*. 16 May 2010. Web. 13 Mar. 2012. <<http://articles.latimes.com/2010/may/16/entertainment/la-ca-ring-critic-20100516>>.



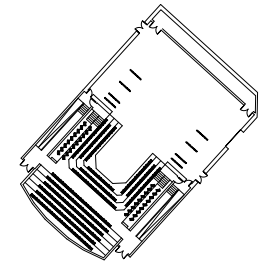
070

set change

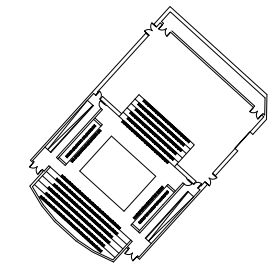
stage directions.



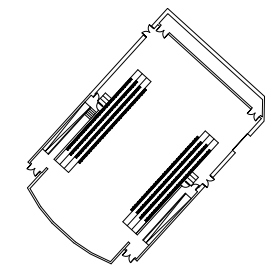
proscenium



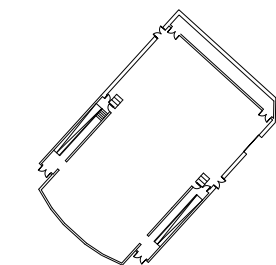
thrust



arena

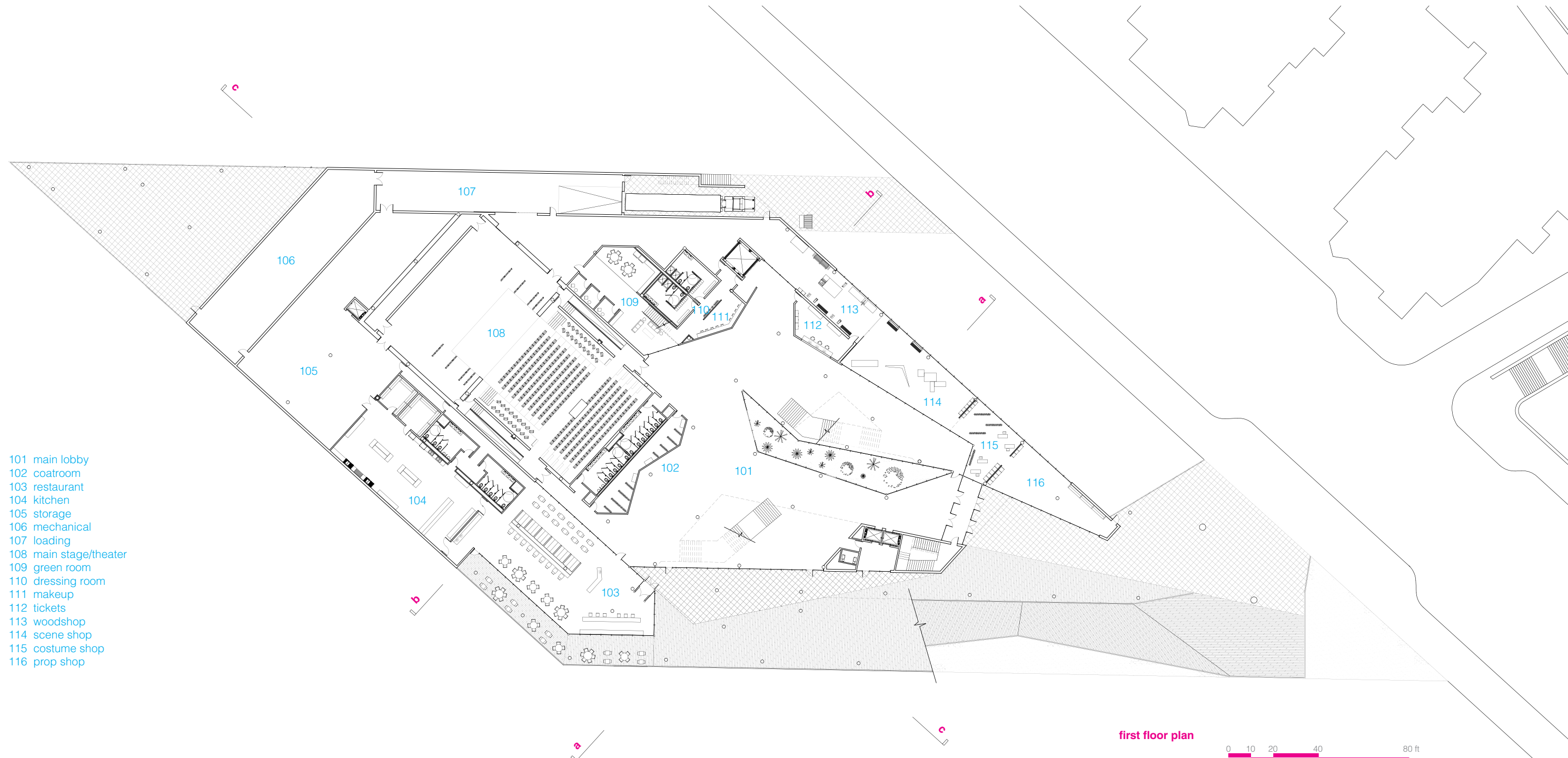


traverse



flat ...?

- 101 main lobby
- 102 coatroom
- 103 restaurant
- 104 kitchen
- 105 storage
- 106 mechanical
- 107 loading
- 108 main stage/theater
- 109 green room
- 110 dressing room
- 111 makeup
- 112 tickets
- 113 woodshop
- 114 scene shop
- 115 costume shop
- 116 prop shop



first floor plan

0 10 20 40 80 ft

act 1, level_1 [civic stage]

Whether you understand the investigation as an exposure of performance or a performance of exposure is a question left for the participant. It is critical that a distinction *not* be made between actor and audience member when speaking about the performance as a whole - for each continuously switches roles during a given theatrical experience.

The pier level, or first floor plan, of the proposal for Seattle's Pier 6263 is envisioned to function as a civic stage for the downtown. A generous circulation factor is instituted within the lobby space of the theater to accommodate events outside the scope of the theaters. Art galleries, festivals, galas....the list of events that Pier 6263 could offer the downtown is endless.

The versatility of the main lobby is fundamental to the success of the architecture. Not only will the flexibility allow the space to generate revenue regardless of theater performances.

However, given that theater is at the forefront of this thesis investigation - the theater itself offers an incredible level of flexibility in its own right. As you can see from the diagram on the fold (left),

an independence of the seating arrangement from the floor plate allows for seemingly limitless potential of the main performance chamber.

Similar to the attitude present within the black box setting, an environment that has flourished in recent years as experimental theater becomes more popular, the main performance chamber will be constantly changing depending on the needs/wants of the theater director at the time.

Just as the many of the investigations into exposure presented here have to do with the mechanics of theater, the main performance chamber begins to function as a theater machine - its constantly moving parts a reminder of the dynamic experience found within the performing arts.

Static seating within the theater environment will soon be a thing of the past - modern technologies as well as modern thinking about spatial experience will continue to foster this type of development within the architectural realm.



Fig. 11 Analog model - aerial approach from Southeast

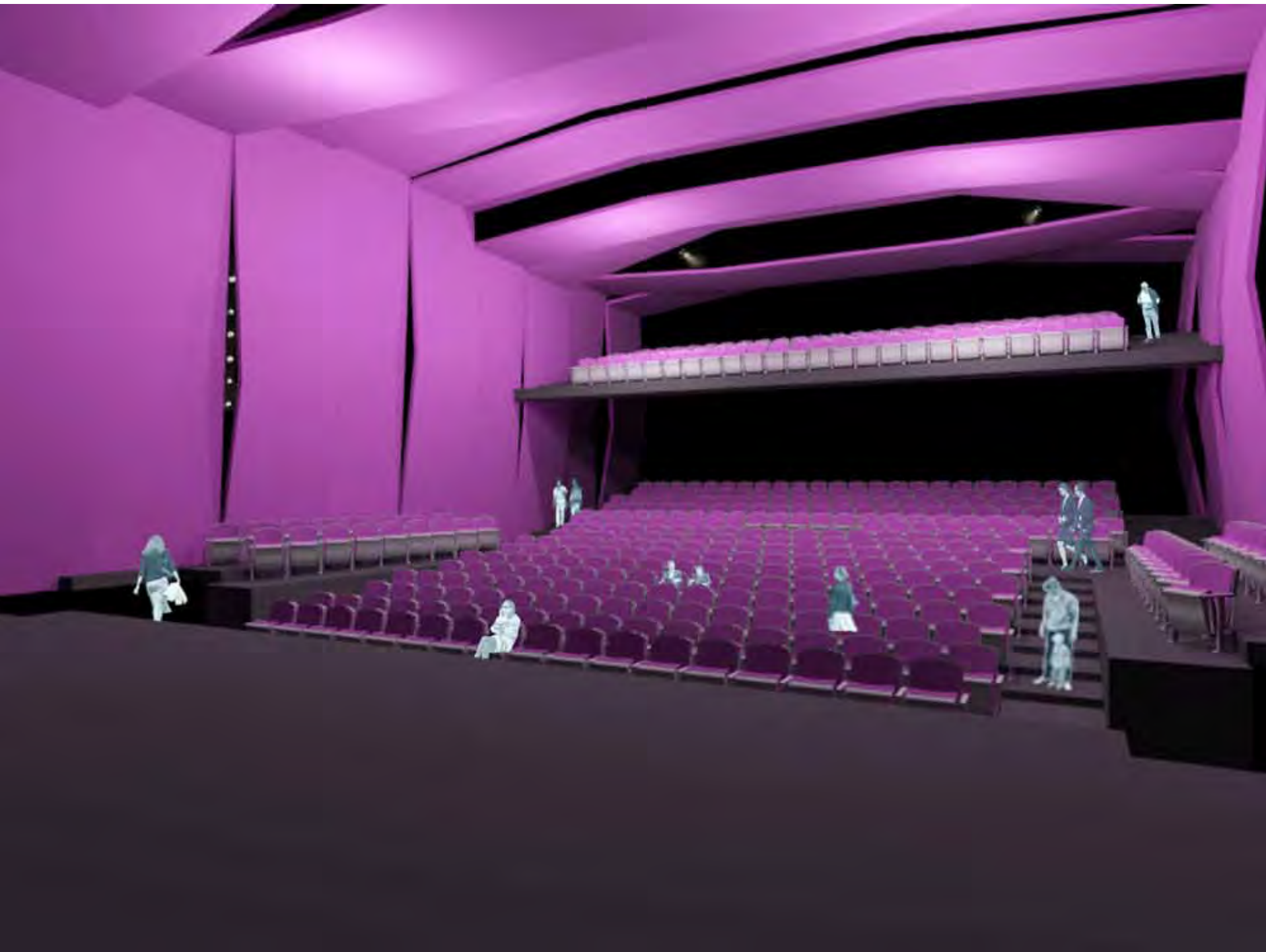


Fig. 12 Performance chamber [view from main stage]

main stage [performance chamber]

The “theater machine”, referencing attitudes presented by Joshua Prince-Ramus of the firm REX in his proposal for the Wyly Theater [Dallas, TX], is the nucleus from which all experiences on Pier 6263 stem.

This machine, an organism to the arts, is constantly shifting, continuously manipulating its configuration to alter the experience of the audience - the participant in the event.

Coupled with the limitless seating potential, mentioned previously, the performance chamber maximizes the flexibility of a “main-stage” typology. In doing so, Pier 6263 does not limit its potential, either as a theater or as a venue for other events within the downtown.

As you can see from the rendered interior left, showcasing a view out from the stage towards a typical proscenium seating configuration, the theater is very dynamic. Playing off the notion that this environment is constantly shifting, the walls of the performance chamber are articulated as a fragmented shell.

Together with the seating fabric, the segmented

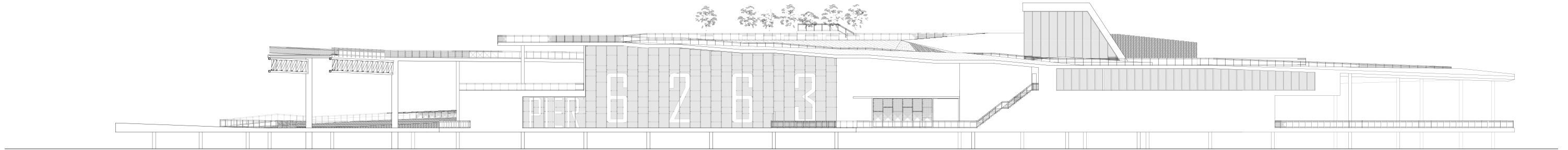
acoustical shells are bold magenta in color. The chamber explores the notion of integrating sculpture into the architecture, activating elements typically considered as static elements of construction.

Additionally, the undulations and folds, occurring at panel joints, allow for lighting and sound equipment to be easily and unknowingly integrated into the performance space on a performance basis.

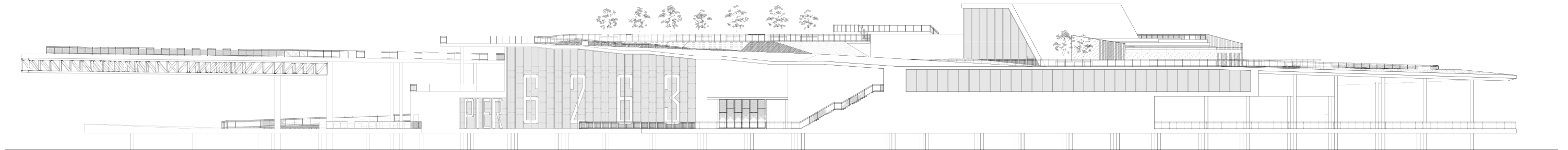
The vibrant form and shades of color within the acoustical shells seek to inspire rich and creative ideas within the theater. By introducing intriguing and inspiring elements into form, the architectural elements are showcased as events - revelations of the multiple creative interventions of this exposure of performance.

Fig. 13 Door - Punchdrunk's *Sleep No More*. 2011. Photograph. *Quitecontinental.net*. 12 May 2011. Web. 4 Apr. 2012. <<http://quitecontinental.net/tag/punchdrunk/>>.





east elevation



north elevation



enclosure...or exposure [elevations]

The elevations for Pier 6263 deal with a multitude of issues brought on, not only, by the program but also the site conditions. The proposal for the pier takes place within Elliot Bay - albeit along the shore, the Sound plays a critical role in the development of the facades of this architecture.

Given the present deterioration of the existing pier structure (creosote wood pilings), as described earlier in the document, coupled with a slight enlargement of the pier to satisfy necessary park/ramp needs, new concrete pilings will be poured for construction. It is important to recognize that the construction of these pilings, considered in-water work, needs to be completely during a strict time frame due to the salmon spawning/migration season.

Given concrete's capacity to resist extremes and maintain its strength despite heavy exposure to water, it will be used to construct the piers, deck, and all exterior walls of the proposal.

Integral to this investigation is the capacity for exposure and/or transparency within the facade of Pier 6263's proposal. Glass, therefore, in transparent, translucent, reflective and even

opaque form was fundamental in the development of the facades for the pier.



Fig. 14 Analog model - aerial approach from East

expose production



15



16



17

Fig. 15 Groller, Scott. *CalArts Theater Classes*. Photograph. *Flickr.com*. 7 Apr. 2006. Web. 15 Apr. 2012. <<http://www.flickr.com/photos/calarts/3766913426/>>.

Fig. 16 Blake, Abigail. *Costume Shop*. 2009. Photograph. 24 July 2009. Web. 10 May 2011. <<http://abigailblake.com/sugarapple/?p=1020>>.

Fig. 17 *Prop Furniture Storage*. 2010. Photograph. *Seattle Rep*. Web. 15 Apr. 2012. <<http://www.prophandbook.com/PROPS/Strike.html>>.



18



19



20

Fig. 18 Bennett, Rob. *Backstage at the Acorn Theater on 42nd Street*. Photograph. *wsj.com*. 23 June 2011. Web. 15 Apr. 2012. <<http://online.wsj.com/article/SB10001424052702304791204576401752987546480.html>>.

Fig. 19 *Lock-rail System*. Photograph. *Flickr.com*. Web. 10 Apr. 2011. <http://farm4.static.flickr.com/3477/3964950200_a227e37a9b.jpg>.

Fig. 20 *Dressing Room*. Photograph. *Berkeleyrep.org*. Web. 12 Mar. 2011. <http://3.bp.blogspot.com/_es-qICsVsTc/THVUx-hwtgI/AAAAAAAAAo8/U8JuoKcn_rQ/s1600/Pikeplace.jpg>.



Fig. 21 Entry bridge approach exposing back-of-house

“production” takes center stage

Typically, when one thinks of the word “production”, the first thing that comes to mind

As the pedestrian crosses the threshold from Alaskan Way to Pier 6263, they are immediately presented with the back-of-house *productions* of the theater venue. The expansive glass curtainwall places the activities that contribute to the seamless success of a performance at center stage.

The transparency affords the opportunity to expose, to unveil, elements of a production that the public realm is never exposed to. In immediate adjacency to Alaskan Way, from left to right on the waterfront, are the props room, costume shop, scene shop, and wood shops/materials lab.

In traditional theater, these elements are reserved only to performers, technicians, and stagehands. This realm of the theater is uncharted territory, an unknown world to the average theatergoer. Pier 6263 places these elements at the forefront of the experience, adding elements of secondary (back-of-house) and tertiary (audience members interactions with these elements) performance to

the pier experience.

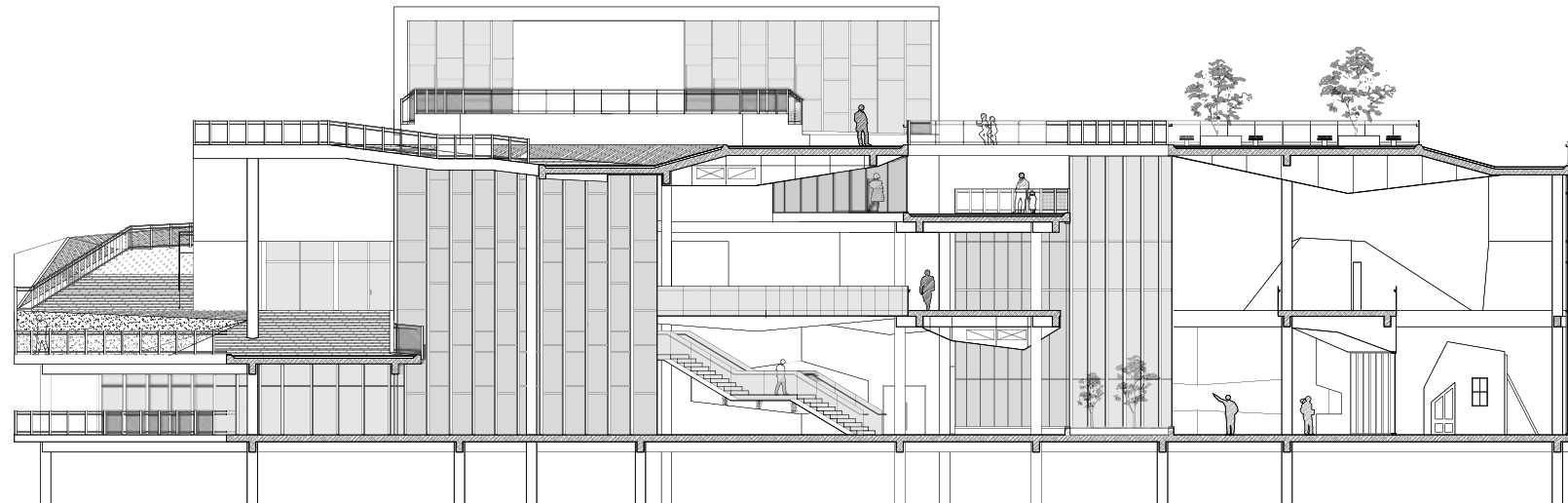
Some may argue that exposing these elements compromises the mystery and magic afforded by the theater production. Pier 6263 re-frames the traditional concept of theatrical performance, showcasing not only the drama of the stage itself, but also that of every discrete component of the production as a whole.

For example, let us look to a cinematic experience. Does viewing the ‘Behind the Scenes’ feature of a Blu-Ray or DVD adversely affect one’s suspension of disbelief for the film itself? No. Rather, I would contend that such insight only enhances one’s appreciation for the art and craft of the work as a whole.

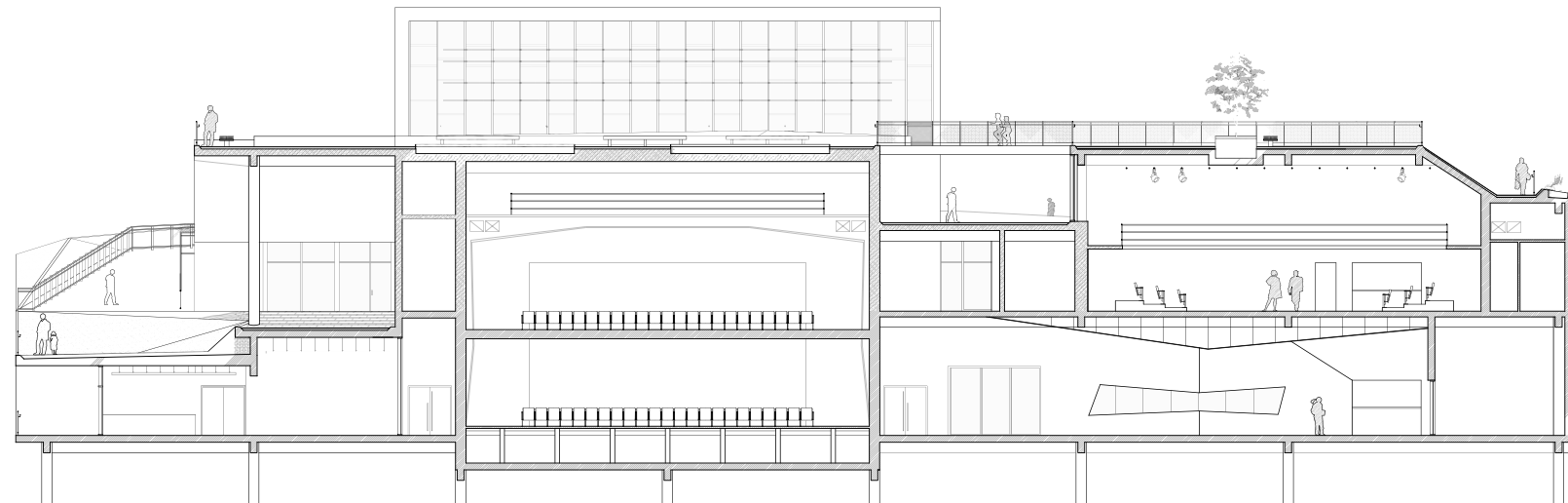
While the traditionalist might find this infraction of convention appealing, Pier 6263 offers a performance experience not available anywhere else.

Fig. 22 *Paly Theater*. 2011. Photograph. *Palyvoice.com*. 4 May 2011. Web. 7 Apr. 2012.
<<http://www.palyvoice.com/node/27376>>.





section_a



section_b



inter-relationships of cast

Pier 6263 is unique from the traditional theater in a variety of ways, yet the most unique is certainly the relationship between the performance “cast” members. When I say cast, I do not mean strictly the actors who are putting on the performance - rather I mean everyone who serves as a participatory member of the production. Stage hands, actors, actresses, back-of-house personnel, the front office, and, most importantly, the audience.

These inter-relationships, or mutual relationships between involved parties, serve as the driving agent for the development of a rich sectional experience within the theater complex. As evidenced within the sections (left), the complex circulation patterns - both inside and outside - shape the participatory experience. As the exterior pier deck wraps the performance chambers, glass curtain walls open up views to the interior guests of the theater. Likewise, anyone occupying either the first or second floor levels of the pier have views out to the public occupants of the parkscape.

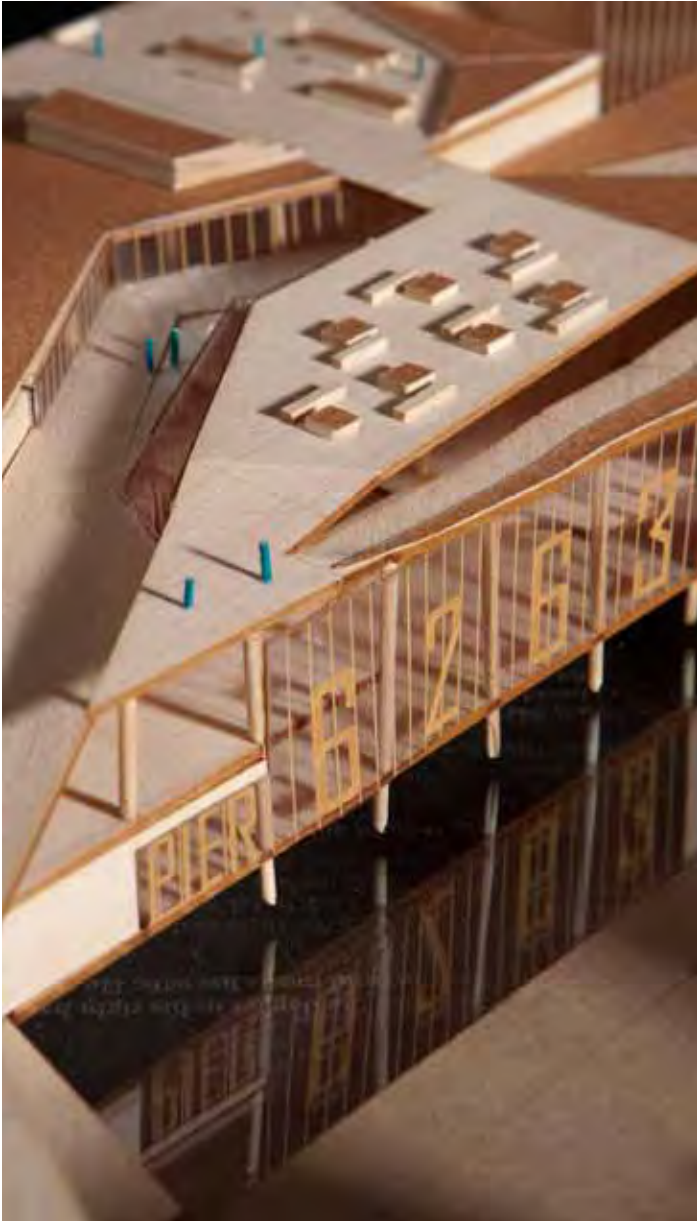
The most dynamic of these inter-relationships is evident in the ‘cut’ that takes place, dividing

the two performance chambers with an exterior circulation path. The cut, showcased both in the sections and in the model photograph (right) allows parkscape visitors to become cast members themselves.

As defined earlier, these cast members are not necessarily actors but participants that can serve as performers from another occupants perspective. For example, if an audience member is waiting in the lobby of Pier 6263, they have the ability to look at the glass-walled circulation cut above and see pedestrians progressing up and down the pier’s parkscape.

The goal of exposing these relationships is to spark intrigue and prompt investigation by members visiting the pier. By establishing an engaging environment, Pier 6263 can provide a successful architecture in an urban/waterfront insertion.

Fig. 23 Analog model - detail view of the “cut”



[action]

[exterior event]

[interior event]

[restaurant]

One of two restaurants on Pier 6263 that serve to activate the pier at. The restaurants seeks to bring additional audience members to the park-scape and capitalize on the breathtaking views of Elliott Bay.

[ampitheater]

Capitalizing on the open green park behind the flytower, a series of ramps with integrated ampitheater seating will be available for outdoor performances to take place on the pier's elevated surface.

[flytower + main stage]

The flytower projects through the roof deck of the pier to expose to major technical components that allow a performance to be successful. The elements are visible via a glass curtainwall to public park patrons above the performance chamber.

[seating chamber]

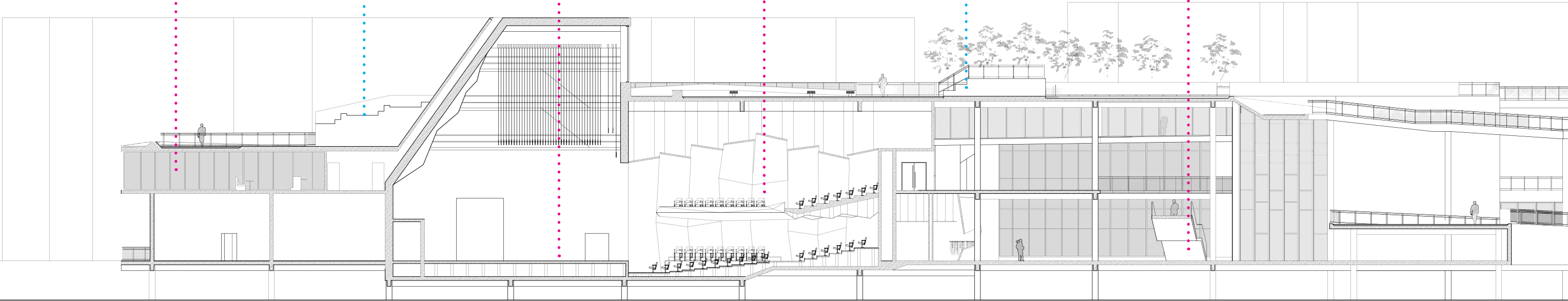
Audience member seating for main stage of performance chamber. Seating has unlimited configuration potential due to the fact that no seat on the first floor is fixed in place.

[cinema seating]

When the flytower is not in use, the glass curtain is equipped with an integrated projection screen to be used for screening films.

[public lobby]

A public realm capable of serving a variety of public functions for the downtown in addition to serving as the major mixing bowl for all of Pier 6263's performances.



[entrance/back-of-house]

The entrance to Pier 6263's lobby space provides theatergoers with first-hand exposure to the back-of-house elements of the theater. Audience members are immersed in the elaborate work and processes that go into a production.

[pedestrian bridge]

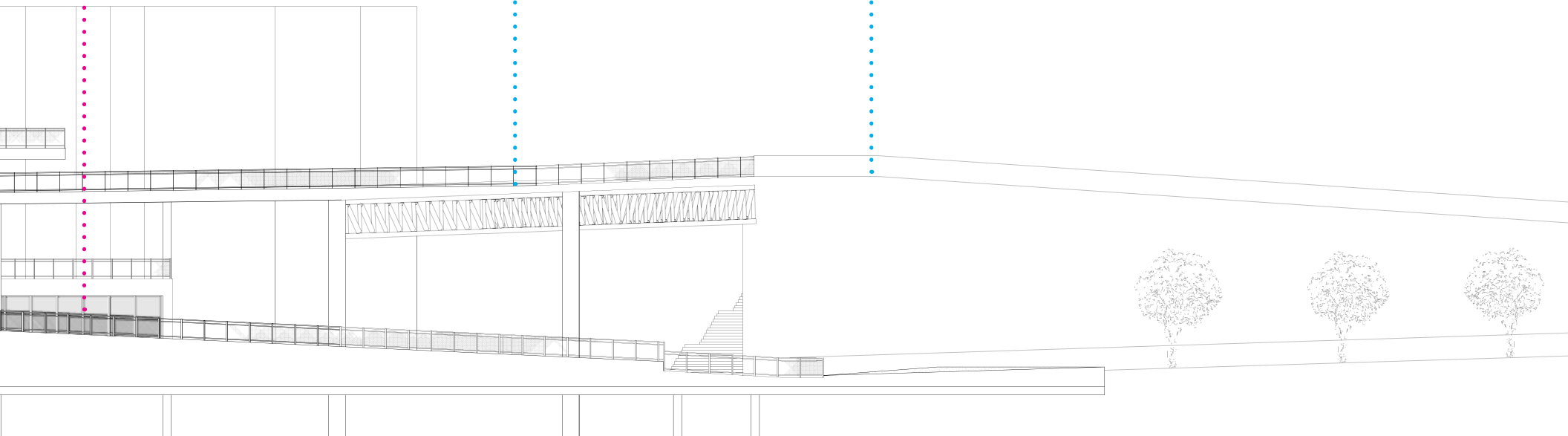
A connector developed to ease the pedestrian transition from Victor Steinbrueck Park to Alaskan Way. The element allows pedestrian immersion in parkscape rather than "pavedscape" - leading to a safer and more enjoyable transition to the waterfront.

[victor steinbrueck park]

Existing park scheduled to be extended down to Alaskan Way following the demolition of the existing viaduct. The viaduct received irreparable damage in an earthquake leading to master planning for this area of Seattle's waterfront.

[exterior event]

[interior event]



section_c





Fig. 24 Progression up parkscape from Alaskan Way

urban parkscape [green ribbon]

Recognizing early in the design process that integrating public green space into the proposal would be

Taking inspirational cues from Weiss/Mafredi's Olympic Sculpture [Seattle, WA] and Snøhetta's Oslo Opera House [Oslo, Norway], the design connects Victor Steinbrueck Park (elevation: 52 ft.) with Alaskan Way (elevation: 16 ft.) with a pedestrian pier deck, descending thirty-six feet from the city to the water.

The connection capitalizes on the views of Elliott Bay, the downtown, and, most importantly, the performance venues, to stitch the pedestrian traffic of Pike Place Market back to the revitalized waterfront.



The pier functions as a continuous landscape, populated by various public "stages" within the waterfront landscape. The landform cloaks the performance chambers below, linking the downtown with the waterfront through a dynamic pedestrian route.

The pedestrian deck cuts through the landscape, setting the stage for the dynamic vistas that make Puget Sound and the Olympic Range a beautiful environment in juxtaposition with the city's urban center.

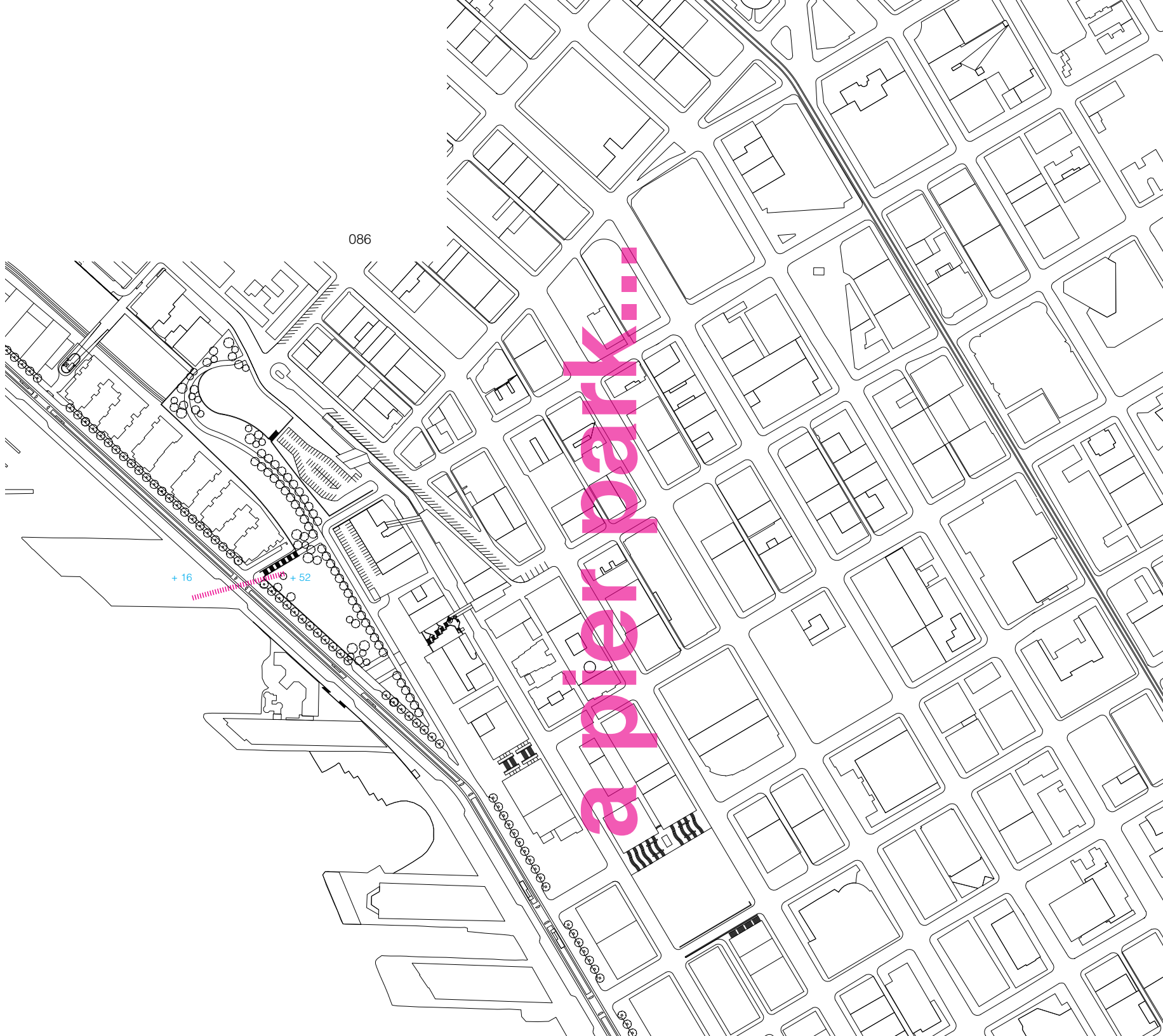
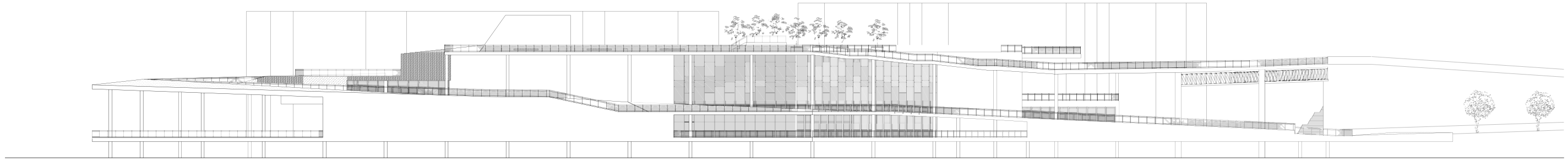
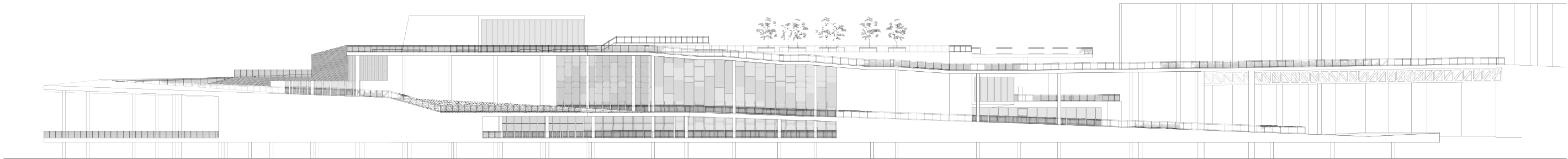


Fig. 25 (Above) Axonometric showing parkscape
Fig. 26 Contextual plan emphasizing topography of site



west elevation



south elevation



enclosure....or exposure [elevations]

Although often feared as being a very wet and rainy climate, the weather of Seattle is very mild in terms of temperature and the summer months are very enjoyable to be outside. However, a significant concern in this proposal was how to “brighten” the architecture meant to hold up against the elements seen along the waterfront. Two significant elements were introduced to populate the pier with warmth and color regardless of the weather; natural wood decking and native species plantings.

The first element, utilized to contrast the cool tones of the concrete and glass construction, is the circulation deck. The pier deck, mentioned previously, will be constructed of reclaimed pier deck boards from the existing piers (62 and 63). All deck boards that have the capacity to serve the new structure will be removed, salvaged, and reused from the original pier remains during demolition. Not only will this element recycle material, otherwise discarded, it will serve as a reminder to all pedestrians of the rich history that the site has to offer.

The second element, developed to begin to break down the shear mass of the pier structure, were

a variety of native plant species. The intention was to create a variety of similar, albeit unique, landscapes or “stages”. Each will serve as an area for performance on the pier as well as a natural ecosystem for native plants and animals in the Pacific Northwest.



Fig. 27 Analog model - aerial approach from Southwest



28



29



30

Fig. 28 *Camas Flowers*. Photograph. *xylemclothing.com*.
Web. 10 Apr. 2012. <[http://xylemclothing.com/
blog/?tag=camas-educational-network](http://xylemclothing.com/blog/?tag=camas-educational-network)>.

Fig. 29 *Western Columbine*. Photograph. 31 May 2006.
Flickr.com. Web. 10 Apr. 2012. <[http://www.
flickr.com/photos/73254522@N00/157628343/
in/faves-joeysplanting/](http://www.flickr.com/photos/73254522@N00/157628343/in/faves-joeysplanting/)>.

Fig. 30 Blakely-Smith, Matt. *Oregon Iris*. 2010. Photograph.
Native Plant Society of Oregon. Web. 9 Apr.
2012. <[http://bentonswcd.org/projects/treesale/
fgg](http://bentonswcd.org/projects/treesale/fgg)>.

urban parkscape [meadow]

Pier 6263's proposal incorporates thousands of native plant and grass species to carpet the waterfront canvas. Once an old fishing/processing pier along the waterfront of Elliot Bay, the re-purposed pier will integrate a Northwest landscape into the downtown waterfront.

Two different planting zones have been established on Pier 6263 to reflect the native ecosystems of the Pacific Northwest. Around the perimeter of the pier, the vegetation will receive the most exposure to the wind and salt-water. Therefore, the planting at fringe conditions will be typical shoreline flora.

Inboard of the perimeter, where the pier structure provides greater protection from the elements, more traditional meadow species will be integrated. Bright flowers and rich colored plantings will enliven the parkscape of Pier 6263 - creating not only a public park but also an installation of art. These landscapes will be stitched by the pier deck that weaves across the site, immersing the public audience into native habitats of the Northwest.

The meadow landscape establishes the largest

domain on the site. Through a combination of native grasses and wildflowers, the parkscape seeks to restore natural habitats across its folded surface. Flowers such as the Western Columbine and Oregon Iris will add a dynamic quality to the pier in contrast with the wood and concrete construction. Juvenile dogwood trees will be planted on the eastern-most roof deck creating a gentle place of refuge and quiet contemplation that is reminiscent of the surrounding cityscape. These meadows allow flexible spaces to accommodate various seating elements, artwork, and, most importantly, create breathtaking views out into Puget Sound.

The intention of the meadows are to attract birds, wildlife and engage pedestrians to this ambitious parkscape. Drawing on the success of the Olympic Sculpture Park, North on Alaskan Way, the proposal for Pier 6263 integrates a similar array of plantings with an over arching goal of redefining what it means to occupy the downtown waterfront in Seattle.

Fig. 31 *Wildflowers at Olympic Sculpture Park*. 2007. Photograph. Flickr.com. 30 June 2007. Web. 7 Apr. 2012. <<http://www.flickr.com/photos/orinjus/680007563/>>.





32



33



34

Fig. 32 Elder, Will. *Beach Strawberry*. Photograph. *nps.gov*. Web. 10 Apr. 2012. <<http://www.nps.gov/prsf/naturescience/beach-strawberry.htm>>.

Fig. 33 Morrow, Brian. *Dune Grass at Paradise Point Beach*. Photograph. 2011. *Iloveoregon.com*. Web. 10 Apr. 2012. <<http://iloveoregon.com/Aug17-19.htm>>.

Fig. 34 Ellingboe, James. *Blue Wildrye*. 2010. Photograph. *wnps.com*. Web. 10 Apr. 2012. <http://www.wnps.org/plants/elymus_glaucus.html>.

urban parkscape [shore]

As mentioned previously, the perimeter of the pier will be receiving the effects of constant wind and salt-spray off the Sound. Given these conditions, the approach to plantings at the edge of Pier 6263 was simple - treat it as the shoreline.

The plantings introduced to the shore landscape are typically found within the coastal zone and include, but are not limited to, beach strawberry, various dune grasses, and blue wild rye. The approach to select specific plantings is based around an attitude that, although the pier is designed as a flexible environment for public activities, it is unique in that the site reaches into Elliott Bay. Despite being elevated from the water level, occupants should still be immersed within the typical shoreline landscape.

Pier 6263 does not seek to create an environment that is alien to the Pacific Northwest. Rather, the goal of the architectural investigation is to insert nature, specifically landscape, into the urban fabric of the downtown. Despite the proximity to the waterfront, much of the downtown is a paved hardscape - lacking green relief on the shoreline.

By integrating the parkscape at Pier 6263 and

recognizing the significance that the Olympic Sculpture Park has had on the community, the Seattle Waterfront can serve as a basis for how to develop future waterfront community spaces - creating an environment that has both aesthetic and functional qualities.

Just as the theater presents a rich diversity of environments for the audience to occupy, so does the urban parkscape that blankets the surface. As the pier deck weaves across the site, pedestrians are engaged by a variety of stimuli - further enhancing the experience of exposure. The days of walking Alaskan Way on a concrete sidewalk as lanes of traffic pass by are over. Pier 6263 is a new beginning for Seattle's downtown pedestrian circulation. Hopefully, the success of attitudes expressed here will serve as a catalyst for the development of other urban experiences - not only in Seattle but all over the world.

Fig. 35 Fetner, Ashley. *Seagrass - Sunset Beach, North Carolina*. 2010. Photograph. *Flickr.com*. 9 Jan. 2010. Web. 7 Apr. 2012. <<http://www.ashleyfetnerportraits.com/blog/?p=998>>.



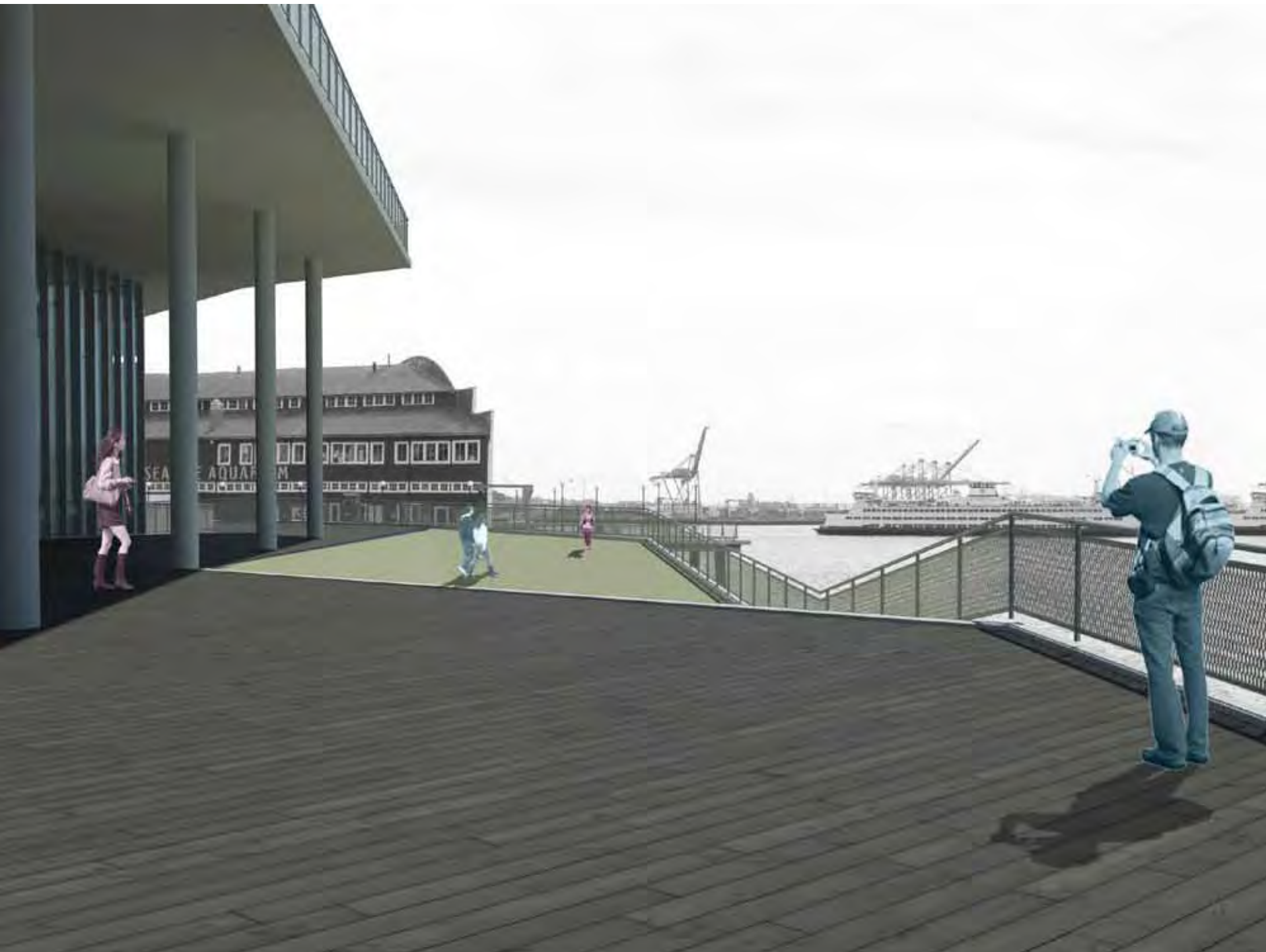


Fig. 36 Progressing down exterior parkscape

across the stage [ramp progression]

The title “across the stage” lends itself very well to the attitudes with which Pier 6263 was conceived. The idea of the pier acting as a stage, or as an “seating” area to be the audience of Puget Sound, is perfectly exemplified in the rendering to the left.

The pier deck is meticulously shaped and manipulated, to achieve the correct slope for accessibility while capturing and orienting the pedestrian occupiers to the incredible performances taking place all around them in downtown Seattle.

Areas beyond the extents of the pier structure, such as the Seattle Aquarium or the ferry traffic evidenced here, seem to be set on a stage of water. Similarly, moments within the bounds of the structure also show this attention to “activity as performance”.

The way in which green space is articulated, seemingly carved out of the surface of the pier in this particular rendering, begins to imply that the pedestrian will experience what it is like to be on stage, similar to the feelings an actor, when they cross the threshold from circulation space

to parkscape.

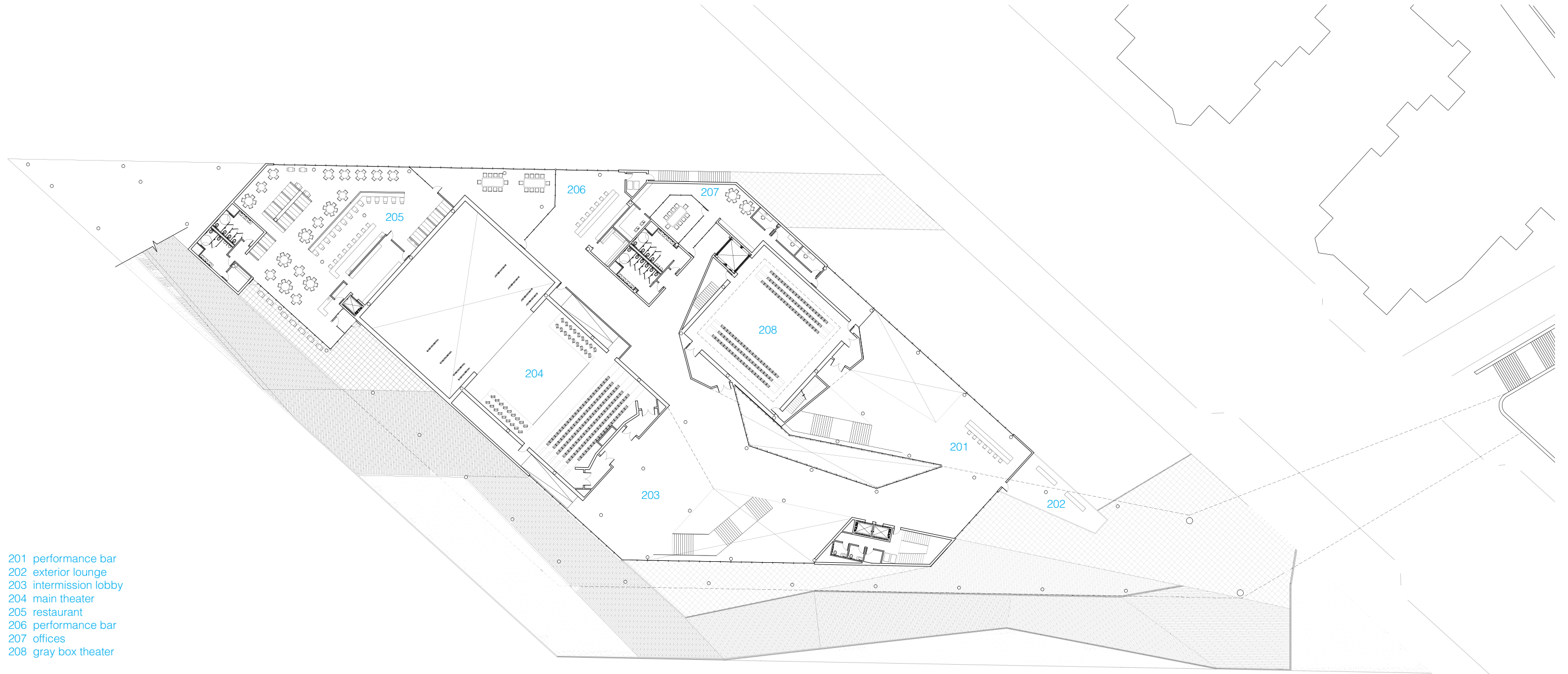
This notion of being a performer on stage, on a pier stage, was an attitude that was impressed upon me from my first visit to the site. Similar to the idea of the stage within the theater, the pier stands apart from its context. With three of its four sides surrounded by water, the only way to access the pier is from one side along Alaskan Way. Occupants of the pier have the capacity of viewing you entering into the pier, and occupiers of the Victor Steinbrueck Park, above, can look down on the activity taking place below.

Crossing the threshold from sidewalk to pier deck, like stepping out from behind a velvet curtain, you can immediately recognize that you are occupying another environment. The uneven deck boards beneath your feet instill an internal awareness of your movement across the pier and the vast expanse of open pier makes you feel like almost anything could happen here - only further amplifying this concept that the pier is a stage and downtown Seattle it's audience.

[*intermission*]



Fig. 37 *I am Actor - Pier 6263*. Photo by author.



- 201 performance bar
- 202 exterior lounge
- 203 intermission lobby
- 204 main theater
- 205 restaurant
- 206 performance bar
- 207 offices
- 208 gray box theater

second floor plan



act 1, level_2 [performance venues]

Level 2 is dedicated to the performance venues of Pier 6263. By elevating the majority of the theater space to the second floor, the first floor square footage, or major civic space, is left free to be used for a variety of activities.

As you progress up one of two flights of stairs, you reach exterior lobby spaces. These lobby spaces exist as theater spill spaces for social gathering before, during, and after the show. The design intent focuses on activating these spaces during performance intermission with two performance bars, which are discussed in further detail on the following page.

The gray box theater, only accessible from the second level, floats above the ticket lobby - developing a dynamic relationship spatially within the lobby space as audience members interact with the back-of-house elements.

The circulation between theater chambers occurs across catwalk-style bridging elements with areas open to below on either side. This articulation allows for a dynamic relationship to be established between occupants of the first floor with occupants of the second floor. The

relationship establishes a level of theater between participants of the two lobby levels. Whether looking up from below, down from above, or out to the parkscape from either level you are viewing interactions and relationships between participants of Pier 6263.

Given the depth of the venue, at roughly 120 feet across the building in the east-west direction, the curtainwalls on either side do not provide adequate natural daylight to penetrate into the center of the lobby. To resolve this issue in plan, a vertical penetration was introduced, bisecting the two theaters. The exterior light well, enclosed in glass on the interior spaces, penetrates the pier and captures light from the parkscape level above to filter down to the spaces below. By introducing the vertical light well, the demand for artificial lighting within the lobby spaces on both floors is significantly reduced.

Additionally, the light well supports small vegetation to add a rich color to the interior lobby space. The layers of glass surrounding the light well further aid in the layered transparency presented by the proposal.

Fig. 38 The Duchess of Malfi. 2010. Photograph. *Blogspot.com*. 2 Jan. 2012. Web. 26 Mar. 2012. <<http://jessicabanting.blogspot.com/>>.





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Fig. 39 Dowse, Haydee. *Ngo Thanh Van*. Photograph. *AnyArena.com*. 29 Jul. 2009. Web. 18 Mar. 2012. <<http://anyarena.com/en/magazine/view/white-night>>.

Fig. 40 *Simon Hough*. Photograph. *RudeAgency.com*. Web. 19 Mar. 2012. <<http://www.rudeagency.com/simon-hough/>>.

Fig. 41 *Iron Bartender Competition*. 2011. Photograph. *NightlifeDenver.com*. 04 May 2011. Web. 19 Mar. 2012. <<http://www.seattlemet.com/blogs/sauced/bartenders-from-sambar-barrio-vitos-sun-liquor-and-serafina-will-compete-in-iron-bartender-competition/>>.

performance 'art bars'

Every element of the design proposal for Pier 6263 is center stage, including the bartenders. The proposal integrates two intermission bars, servicing the theaters on the second level, to continue the show before, during, and after the scheduled productions.

Pier 6263's 'art bars' seek to engage current visitors to the Pier while also stimulating interest from the city's nightlife - attracting more customers to support the venue.

Each bar will be equipped with performance bartenders, highly skilled professionals capable of extreme and sophisticated tricks involving the art of mixology. Otherwise known as flair bartending, made famous by Tom Cruise in the movie *Cocktail* (1988), this support performance is more popular than ever and will play a hand in the success of Pier 6263.

These bartenders are typically the best in the world and often showcase their talents at world-class competitions. Given the venue within which they will typically be performing, Pier 6263 could present itself with the opportunity to hold such a competition on its newly constructed pier

architecture.

The art bars are meant to generate excitement, adding to the already memorable experiences that will take place within the building. Not only will Pier 6263's bars have a competitive edge over other nightlife locations in the downtown but they will stand out as must-see places in Seattle.



Fig. 42 *Boy Scout Shot*. 2011. Photograph. *Blogspot.com*. 23 Feb. 2011. Web. 17 Mar. 2012. <<http://italy-jenna.blogspot.com/2011/02/219-220-barcelona.html>>.



Fig. 43 'Black box' performance chamber interior

'black box' [performance chamber]

Considered to be one of the most flexible performance venues, the black box theater is a critical component to most theater companies. A black box is simply that, an enclosed volume that has absolutely nothing in it - and it's typically painted all black.

Now why introduce a space such as a black box into an experimental theater venue, it seems rather typical no? Well, the truth behind developing a "black box" within Pier 6263 was to assist in exploiting performance.

A black box is solely dependant on *production*, theater staff to craft, assemble, and break down a performance. *Production* will bring in chairs and risers for the audience depending on the type of stage, or lack there of, the performance requires.

An infinite number of configurations - both for the arrangement of the audience members as well as for the development of the set/stage itself with the performers. Within the realm of the black box - production is given free reign to make it's mark on the whole experience of the performance.

The configuration of space is illustrated in the diagrams to the right of the page. The stage can be placed in a variety of locations depending on the needs of the production. Through providing a re-configurable architecture, such as the black box, the participating occupants, in this case the audience, are key members of the performance. Their visual experience combined with an up close and personal relationship with the cast of characters make the black box experience highly emotional.

This type of performance chamber offers an extensive toolset for experimental performance, and additionally allow them to take place at a very low-cost to the venue.

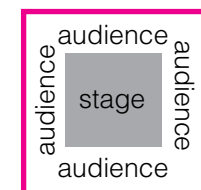
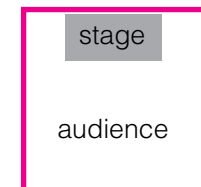
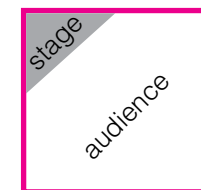


Fig. 44 Black box theater typologies.

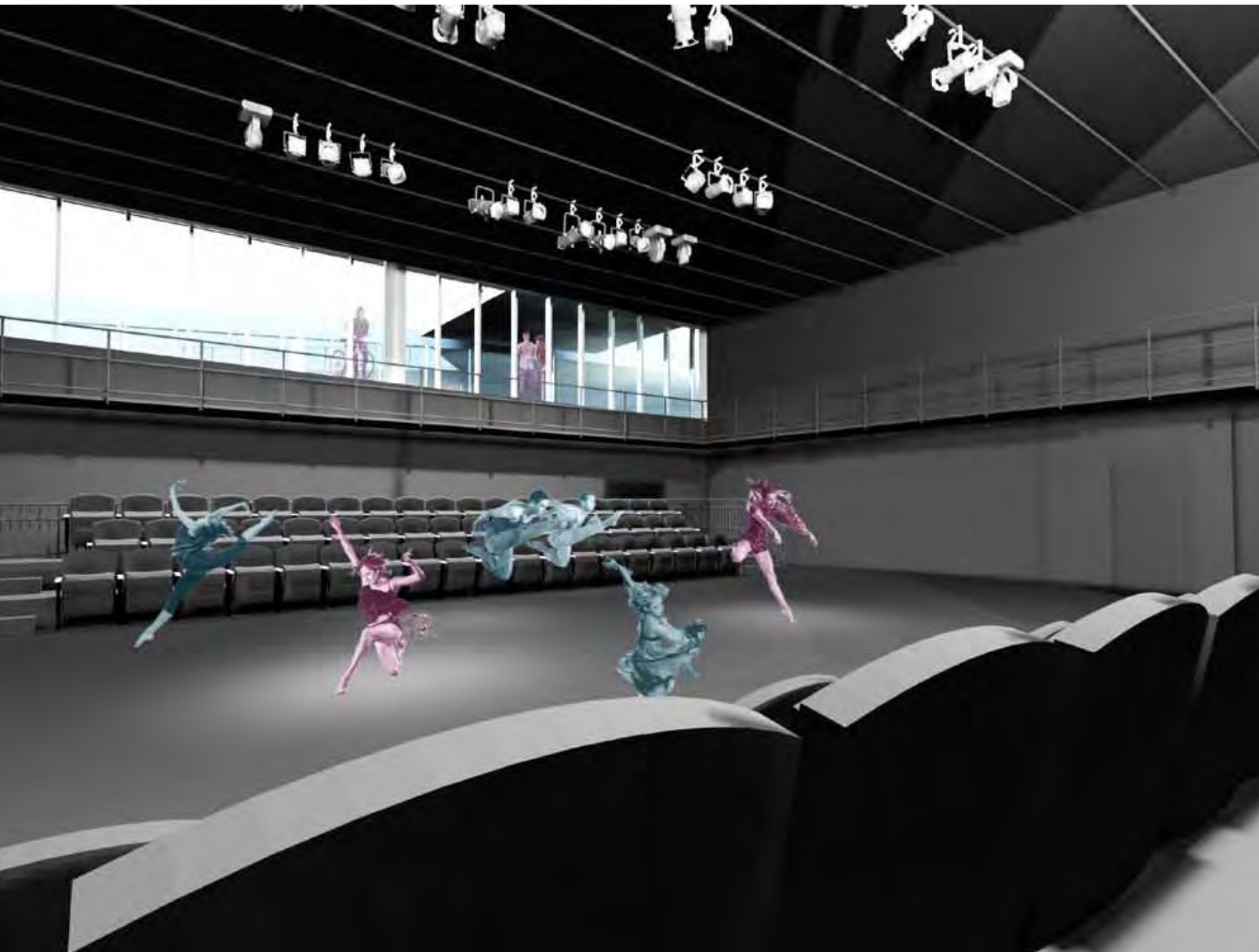


Fig. 45 'Gray box' performance chamber interior

'gray box' [performance chamber]

The "black box" theater of old has been replaced at Pier 6263. One entire wall of the performance chamber will be glass, connecting pedestrians traversing the parkscape with the performance taking place within the *gray box*.

As evidenced through the previous pages rendering of the performance chamber, the *gray box* does have the capacity to be "blacked out" with the addition of a solid blackout curtain. This will allow the chamber to be utilized by performances that require daylight control and/or total darkness.

However, when the shades are open the performance chamber becomes a public event - a performance that goes beyond the experience of theatergoers and introduces another participant into the equation.

The *gray box* is intended to introduce the general public to the workings of a traditional "black box" theater. While allowing typical "black box" program, the *gray box* allows Pier 6263 added versatility. By introducing more daylight into the venue, the performance chamber could serve as a dance studio or music room for practices and/

or performances.

By introducing this level of flexibility, Pier 6263 is not locked into a single typology - but rather can encompass a variety of typologies that could be constantly changing, constantly *performing*, for Seattle's downtown.

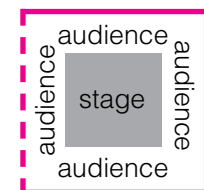
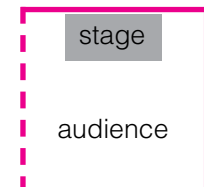
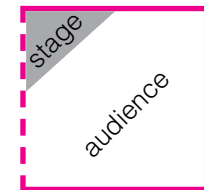
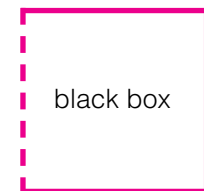


Fig. 46 "Gray box" theater typologies.



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Fig. 47 *Cutting Plywood*. Photograph. *DIYadvice.com*. Web. 02 Apr. 2012. <<http://www.diyadvice.com/diy/carpentry/tools/power-cutting/>>.

Fig. 48 *Drilling Plywood for Braces*. Photograph. *Instructables.com*. Web. 19 Mar. 2012.<<http://www.instructables.com/id/Make-a-snow-rake-from-your-shop-broom/step5/Drill-plywood-for-braces/>>.

Fig. 49 *Applying Paint*. 2011. Photograph. *DIYnetwork.com*. 04 May 2011. Web. 19 Mar. 2012. <http://img.diynetwork.com/DIY/2011/05/18/DKIM513_chalkboard-organizer-step-2_s4x3_lg.jpg>.

materiality [performance chambers]

Each theater within Pier 6263 presents rich opportunities for exploration in the creative arts. To further enhance these opportunities, however, it becomes crucial that the interior finishes of the performance chambers not be of the finest grade materials.

Both the main theater and the gray box theater incorporate low-cost, often paint-grade, finish materials for the wall and floor constructions. Utilizing a furniture-grade plywood for the main stage construction, as well as the majority of the gray box theater, Pier 6263 affords the performance directors a significant creative freedom.

Similar to efforts employed by REX in the development of the Wyly Theater in Dallas, Texas, the performance chamber is intentionally made of materials that are not precious to encourage alterations. Stage surfaces and/or wall surfaces can be cut, drilled, painted, welded, sawed, nailed, and glued at a minimal cost to the performance venue.

By minimizing the cost of these interior theater “shells”, the venue is capable of producing

theater experiences that are much more radical, disregarding any need to preserve or protect lavish interior finishes. Not only will this introduce a different genre of performance theater to downtown Seattle but it can help solidify Pier 6263 as being a cutting-edge theater venue; constantly allowing its directors to shape new experiences for the audiences will encourage directors from all over the country to put on performances on this site.



Fig. 50 Opportunity to manipulate existing stage construction.



Fig. 51 Topography of proposed parkscape for Pier 6263

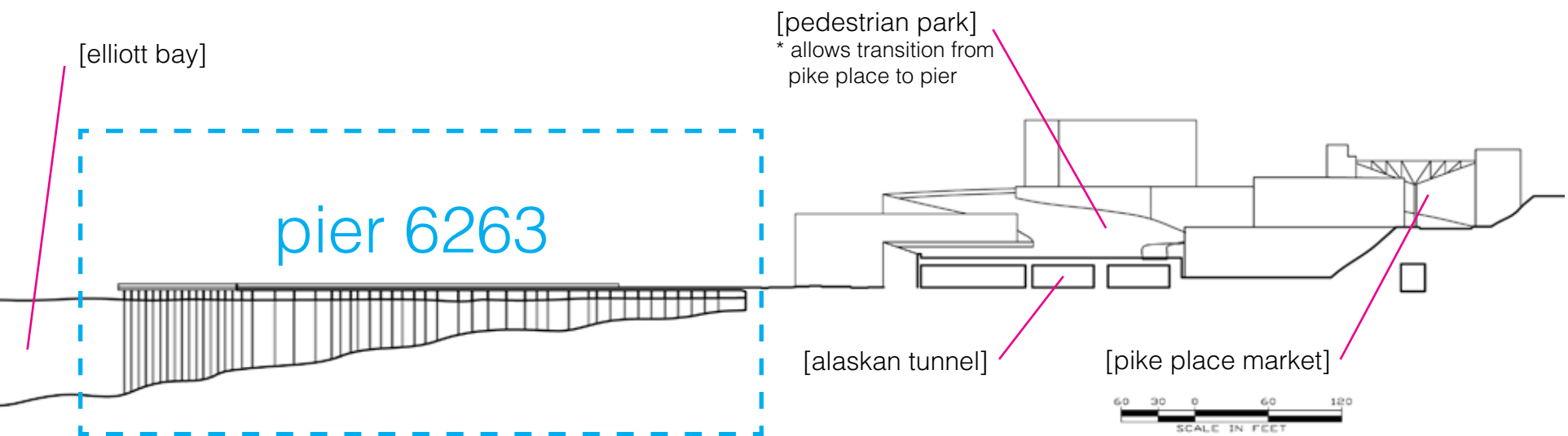


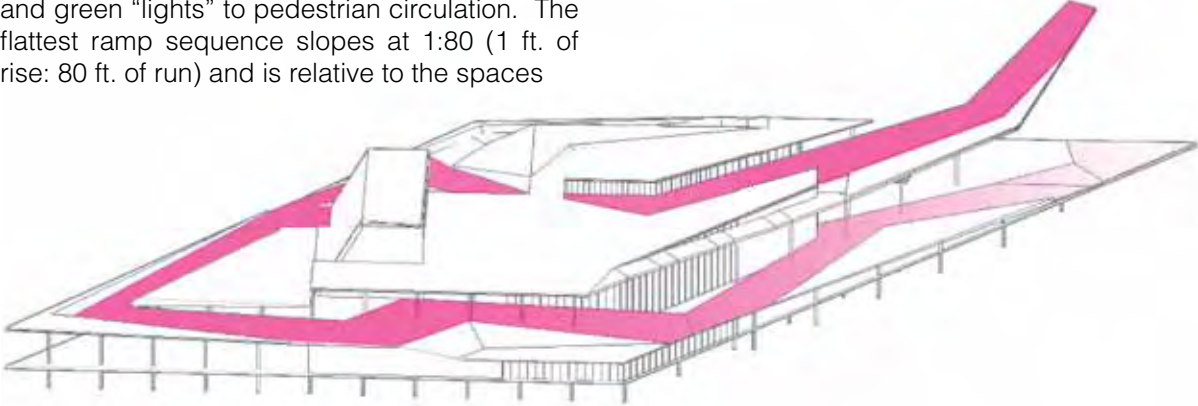
Fig. 52 Section through existing site conditions

urban parkscape [sequenced ramp]

To couple with access from the waterfront below, the proposal for Pier 6263 bridges across the traffic of Alaskan Way - merging the site with the active public realm of Pike Place Market and Victor Steinbruek Park.

The pier deck that cuts across the site, in juxtaposition with the green spaces, serves as a major pedestrian access to resolve the significant topographic change as evidenced in the diagram to the right.

Resolving a grade change of thirty-six feet is no small task. The proposed deals ramp sequence is analogous to a traffic light - relating red, yellow, and green "lights" to pedestrian circulation. The flattest ramp sequence slopes at 1:80 (1 ft. of rise: 80 ft. of run) and is relative to the spaces



within which the pedestrian can view from the deck. The most casual sequence (red), with the most areas of pedestrians to stop, takes place in areas that offer views of the black box theater, fly tower mechanics, and interior lobby spaces.

The yellow ramp sequence slopes at 1:25 and is specific to boundary circulation routes. Although, activities still take place within the yellow sequence, their presence is more sporadic.

The green ramp sequence are the quickest, or steepest, ramp sequence. At a slope of 1:12 these ramps serve to quickly connect pedestrians with the upper pier deck.

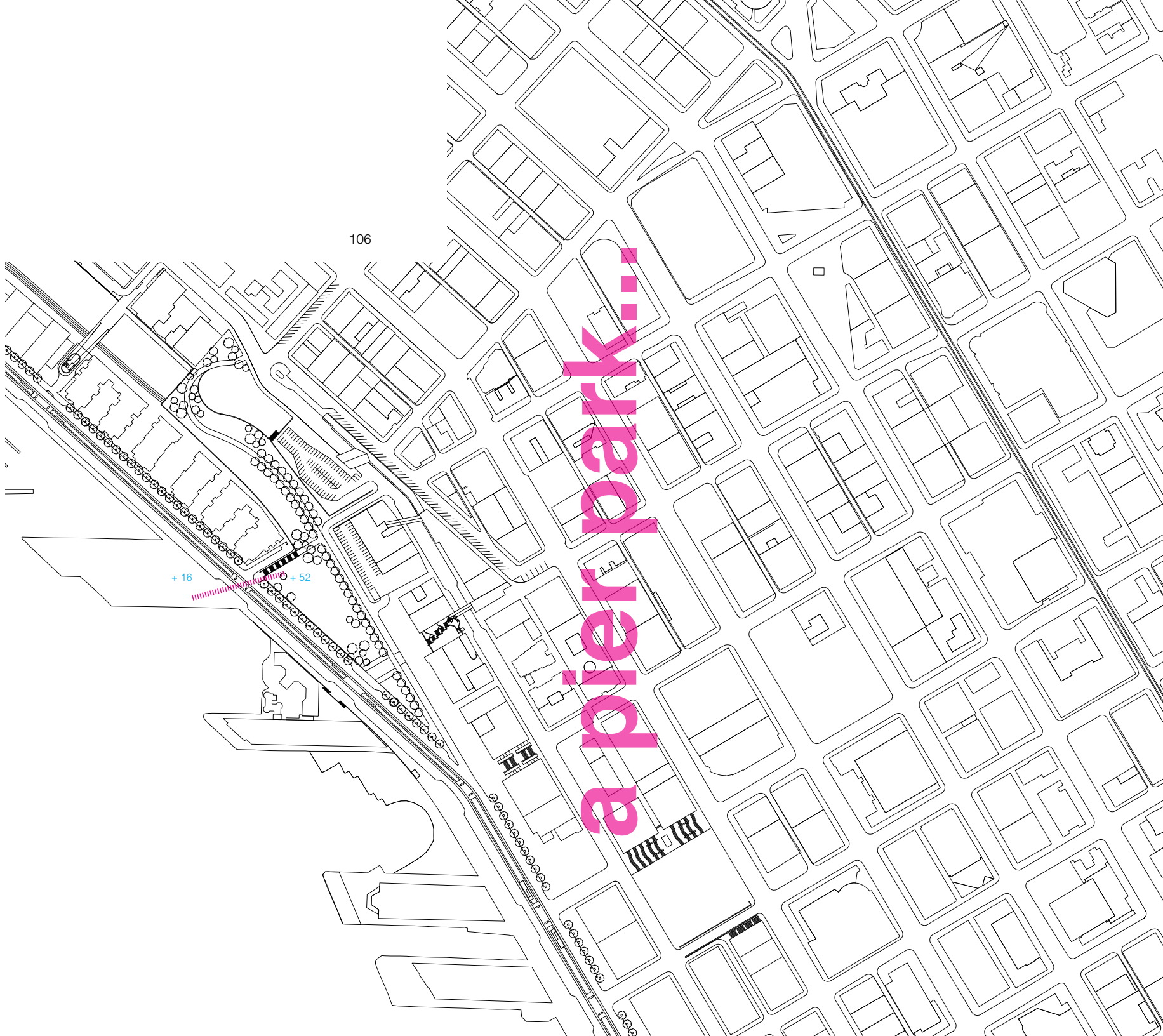
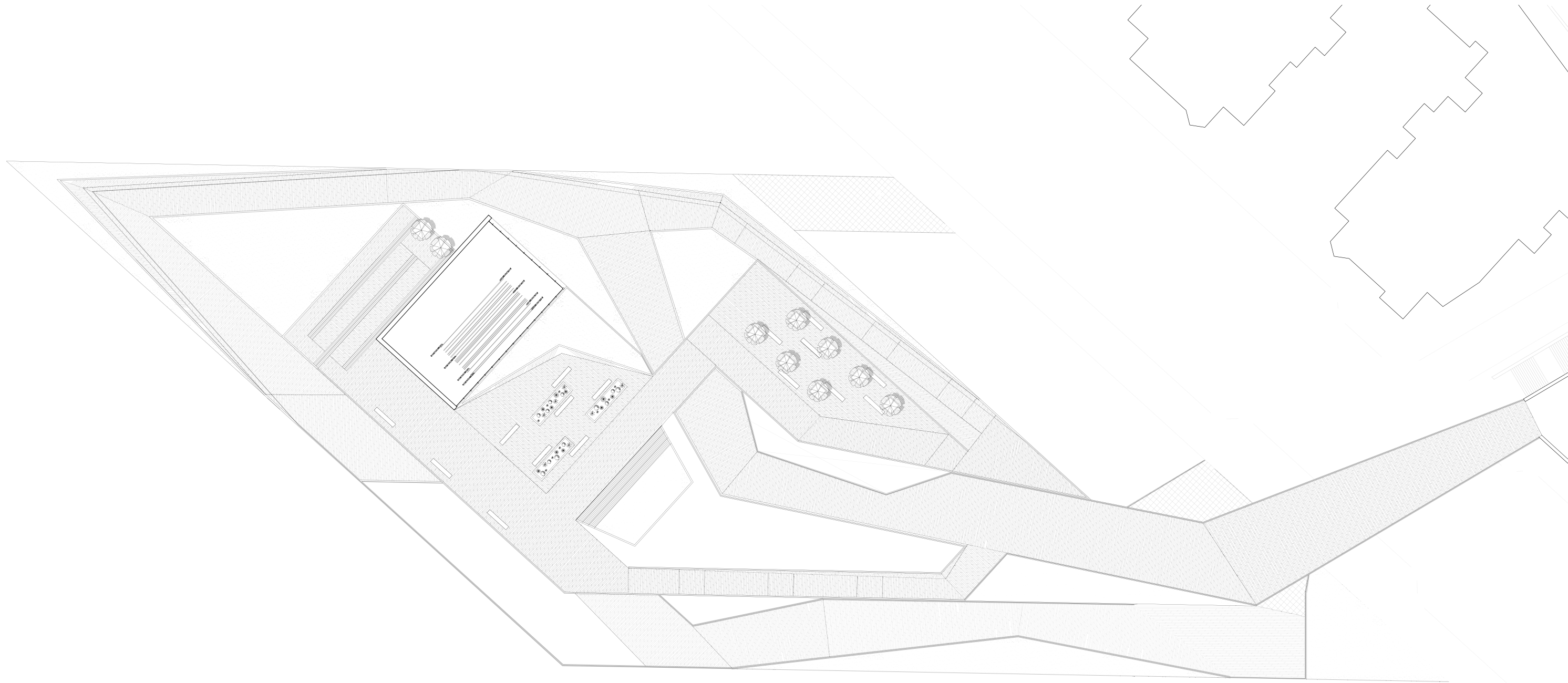


Fig. 53 (Above) Axonometric showing pier circulation
Fig. 54 Contextual plan emphasizing topography of site



parkscape / roof plan



act 1, level_3 [parkscape]

The most dynamic, and largest driver of the design for the Pier proposal was unquestionably the parkscape. Given the volume of pedestrian traffic along Alaskan Way below, and Pike Place Market above, the connection between the two became a challenge in the design proposal.

Integrating significant moments of exposure to the theater while, simultaneously, imagining the pier structure in a manner similar to Weiss/Manfredi's Olympic Sculpture Garden just north of Pier 6263's site resulted in an active, occupiable building envelope.

In a sense, an additional layer of the facade is the pedestrian sequencing through the park. At moments when pedestrians are gathered in groups, a nearly solid mass is perceived by the interior occupants. Happening simultaneously with groups gathered as solid masses, periodic ripples dance across the facade as pedestrians progress up or down the ramp sequence - populating activity zones along the way.

The richness of the elevations is best illustrated through an active participation of people utilizing the ramp structure to sequence from Victor

Steinbrueck Park/ Pike Place Market down to the waterfront activities along Alaskan Way.

The relationship of hard and soft landscape also plays a role in the success of Pier 6263's public space. By organizing softscape elements (grass, planting, etc) in juxtaposition with the hardscape elements (concrete building masses, wooden pier deck), the Pier takes on a character that is in keeping with the urban setting.

Pier 6263 seeks to serve as a retreat from the hustle and bustle of the downtown by elevating the pedestrian off the street. Instituting a separation between vehicle and pedestrian not only enhances safety but integrates a seamless 360 degree experience of all that the downtown waterfront of Seattle has to offer.



Fig. 55 Analog model - aerial approach from Northwest



Fig. 56 Exterior performance stage + ramp sequence

external stage(s)

Anyone who has ever walked around Pike Place Market can quickly realize that what makes the environment so successful is the active street life. Not only are the market stalls engaging, but so are the people who both work at them and perform outside of.

The street performer served as the inspiration for a large, open exterior space on the roof deck of the proposal. Incorporating seating to the rear of the fly tower, pedestrians can view performances - either formal or informal, on a green located at the north west corner of the pier.

What becomes special to Pier 6263's proposal, given the wealth of activity taking place on Elliott Bay, is that even without performers being set within the scene, performances are constantly taking place around the site. Whether its the dock cranes or the ferry fleet - each can activate the various seating areas located within the parkscape.

Not evident from the rendering to the left, the proposal also seeks to provide adequate restaurant space to engage the site during the evening hours. One of two restaurants actually

sits beneath the external stage, accessible from the parkscape and providing patrons with an incredible, elevated view of Puget Sound and the majestic Olympic Mountain Range.



Fig. 57 Street Performers Dressed like Copper Statues. 2009. Photograph. *Fenlason.com*. 7 July 2009. Web. 26 Mar. 2012. <<http://www.fenlason.com/fenfun/741>>.



Fig. 58 Exterior "viewing cut"

making the 'cut' [pun intended]

The diagram (right) is representative of an attitude within the theater experience that would serve the public realm of Seattle at large. In order to get people interested in an idea, in this case an architectural event, you must first expose them to it.

As pedestrians begin to descend down the pier deck from Pike Place Market and Victor Steinbrueck Park, they quickly find themselves in the middle of a theater complex. They have entered into one of the most dynamic features of Pier 6263's proposal, the 'cut', developed through the bifurcation of the two theater volumes.

The 'cut' seeks to, similar to the attitudes presented by placing the back-of-house elements along the street front of Alaskan Way, introduce passersby to the world of theater. As one descends the ramp (the experience is equally as successful for pedestrians ascending the ramp), they pass by the 'gray' box theater which, if the curtains are not drawn, will offer them the opportunity to explore the workings of the black box environment. Maybe they will even get the opportunity to catch a group of performers rehearsing or dancers putting on a number.

If you look to the other side of the deck, you can look into the activities of the main lobby space as well as the fly tower of the main theater.

Two sides of the fly tower (those facing the downtown) are constructed of curtain wall glass, exposing the mechanics of the machine that is the theater. One such side, housing the fly rail, a system of ropes and counterweights that control rigging for props, lights, curtains, and even performers, is presented to the circulation sequence.

As one progresses across the parkscape of Pier 6263, a seemingly limitless number of performances reveal themselves - oftentimes creating situations where the pedestrian very well may become the performer as viewed by others from another area of the pier structure.

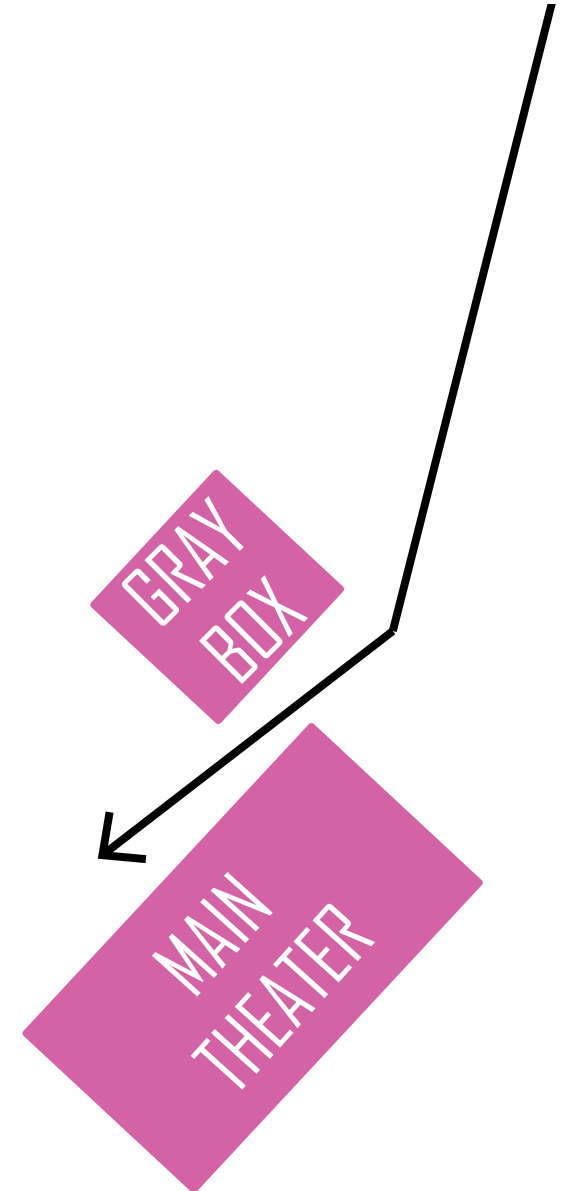


Fig. 59 Diagram emphasizing the dynamic "cut" between the two performance chambers of Pier 6263



Fig. 60 Flytower exterior seating deck



expose the fly



Fig. 61 Flytower cinema space

the fly tower [a theater beacon]

As evidenced in the renderings, the relationship of the fly tower with the downtown waterfront community is unquestionably dynamic. The stripping away of the traditional solid mass that is the fly tower presents a variety of opportunities within the design for the pier.

By replacing the two walls that reflect the downtown with glass, the fly tower will serve as a theater beacon. At night, the volume will illuminate - expressing the shadowy inner workings of the main performance chamber. When there is no performance taking place, the rectangular volume will glow brilliantly on the Elliot Bay waterfront. However, when a performance is taking place, blackout curtains, similar to those used within the gray box theater, will be drawn - signifying to the city that a theatrical performance is currently taking place.

The fly tower will become a new fixture of the downtown skyline. Not only does the tower seek to inspire people not typically interested in the performance arts but it seeks to utilize its enclosure to activate the public realm of the park surface surrounding it.

Recessed into the roof of the tower, a large, back-lit, projection screen will allow Pier 6263 to host community movie nights or showcase experimental film/art. These activities harken back to the events that the original pier provided space in the community for.

The pier deck, surrounding the fly tower, is programmed as exterior park space. Large planter beds and park benches seek to generate public space not strictly dedicated to the theater but also to the working force of the downtown district to be used during lunch breaks. The focus of the proposal is as much about building community as it is about an investigation into exposure and performance.

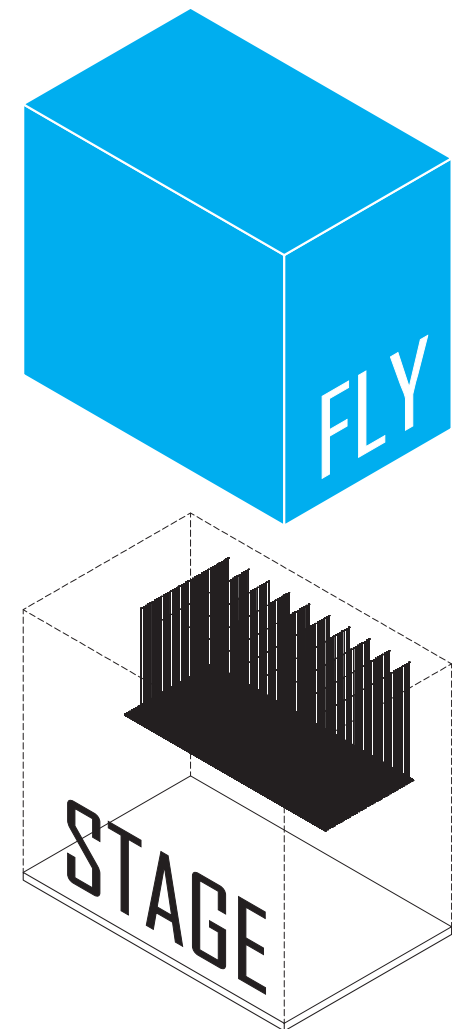


Fig. 62 Exposing the flytower diagram



Fig. 63 Exterior pier deck(s) emphasize multi-level interaction(s)

multi-level interaction

Relationships become critical within the proposed architectural experience. As you begin to think about the way in which a pier of this magnitude needs to function, you can see the equal roles that the pier, the theater, and the audience will play in the performance.

Many times, as we see, specifically, in theater, there are aspects of an architectural experience that are taken for granted - elements that are not treated with the same level of importance due to their function and/or relationship to the “bigger idea”. However, Pier 6263 is seeking to make a break from this status-quo.

As evidenced in the equation to the right, the pier, theater, and audience all sit on equal planes - none more important than the rest. Coupled with these major players (black text) are the secondary performers (cyan text) who make the entire experience come alive.

The relationships that are established vertically and horizontally within the proposal seek to provoke interactions between the players on stage. Watch them play out, and you will find yourself at the heart of the theater experience.

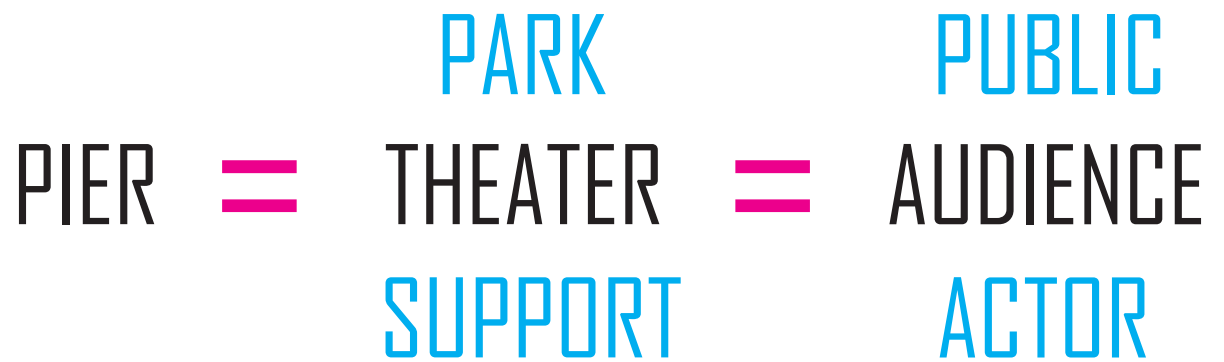


Fig. 64 Conceptual diagram of relationships between programmatic elements of Pier 6263



Fig. 65 Progression down parkscape, crossing over Alaskan Way

I want to give the audience a hint of a scene. No more than that. Give them too much and they won't contribute anything themselves. Give them just a suggestion and you get them working with you. That's what gives the theater meaning: **when it becomes a social act.**

Orson Welles

[curtain down]



Fig. 66 + 67 Analog model photographs



A detailed architectural model of a building complex, featuring a prominent ramp and a bridge structure. The model is constructed from light-colored wood or cardboard, with various components held together by small blue pins. The bridge has a railing with vertical slats and is supported by a series of vertical posts. The building has a complex, angular roofline and a series of rectangular openings. The model is set against a dark background, and the lighting creates strong shadows, highlighting the geometric forms.

encore.



Fig. 68 + 69 Analog model photographs



A detailed architectural model of a building complex, likely a school or institutional building, constructed from light-colored wood. The model features a large, multi-level structure with a prominent, angular, and somewhat irregular roofline. The building is supported by a series of thin, vertical wooden posts. The surrounding area includes a dark, textured base representing the ground, and a series of smaller, rectangular blocks in the background, possibly representing other buildings or a landscape. The lighting is dramatic, with strong shadows and highlights, emphasizing the geometric forms and textures of the wood.

encore.

finding the character.

precedent studies

An actor's role within performance involves a careful reading of the script, a study and understanding of what the intentions of the performance will be, and then the work of finding the character within.

Within the thesis investigation, influential building typologies, strategies, and organizations were explored in order to serve as inspiration for the theater proposal. The character has been created before, but needs to be re-evaluated, organized, and articulated in order to suggest a new role within the theater typology.

The investigation looks at the following works in order to inspire and direct future design decisions. The works include;

Dee + Charles Wyly Theater
Dallas, Texas

The San Martín Theatre
Buenos Aires, Argentina

Eyebeam Museum of Art + Technology
New York, New York

Perry and Marty Granoff Center for the Creative Arts
Providence, Rhode Island

Fig. 1 Williams, Marianne. *Curtain Up*. 2006. Photograph. Flickr.com. 8 June 2006. Web. 13 May 2011. <<http://www.flickr.com/photos/halfasecond/163373506/in/faves-mercurian/>>.





Fig. 2 Wyly Theater Exterior. 2009. Photograph. *Rex-ny.com*. Web. 26 Apr. 2011. <<http://www.rex-ny.com/work/wyly-theatre/>>.

dee + charles wyly theater

Program: 80,300 ft²
 Multi-Purpose Theater
 Sky Lounge
 Education Center
 Open-Air Lounge

Architect: REX/OMA
 Year: 2009
 Location: AT&T Performing Arts Center
 Dallas, Texas

Architects Joshua Ramus-Prince [REX] and Rem Koolhaas [OMA] faced a difficult challenge when asked to design a theater to be added to the AT&T Performing Arts Center in Dallas, Texas. The site, an expansive arts district, was already home to buildings designed by Foster and Partners [The Winspear Opera House] and I.M. Pei [The Meyerson Symphony Center]. The challenge for REX/OMA was to create a building that would hold its ground against these strong architectural works and acquire an identity all its own.

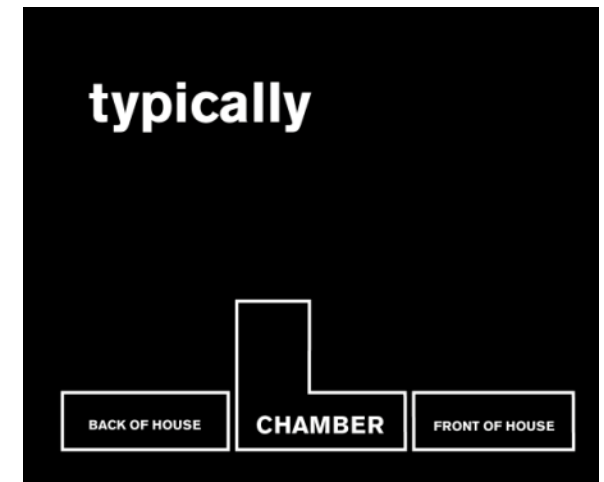
The client, Dallas' Art District Theater (ADT), had previously set up performances within a

dilapidated metal shed. Despite the buildings unsightly exterior, the interior space allowed for multiple configurations of the stage and additional modifications to the stage as per the request of directors given its inexpensive interior finishes.

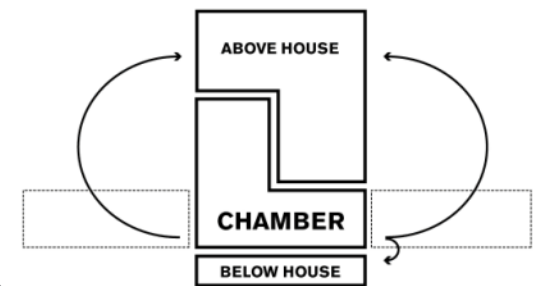
REX and OMA's solution was to re-configure the traditional theater building. Unlike the conventional approach which wraps the front of house and back of house around the theater chamber, the Wyly Theater strategy stacks all of the programmatic elements into a vertical, 12-story, structure.

Rem Koolhaas, when giving on lecture on the Wyly Theater, explained the reasoning behind their new approach to the theater typology with the following statement;

"By stacking all facilities necessary for the functioning of a theatre in a single vertical volume, we create a situation where the technologies of the stage define an infinite variety of stage arrangements, from the completely open to the completely enclosed."



what if?



3

Fig. 3 *Conceptual Approach*. 2009. Diagram. *Rex-ny.com*. Web. 13 May 2011. <<http://www.rex-ny.com/work/wyly-theatre/>>.

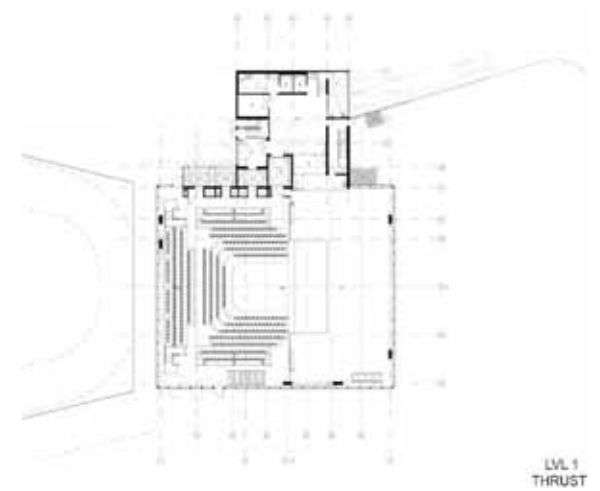
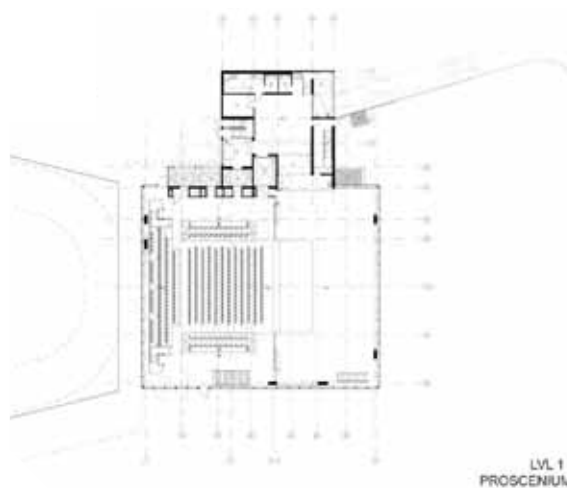
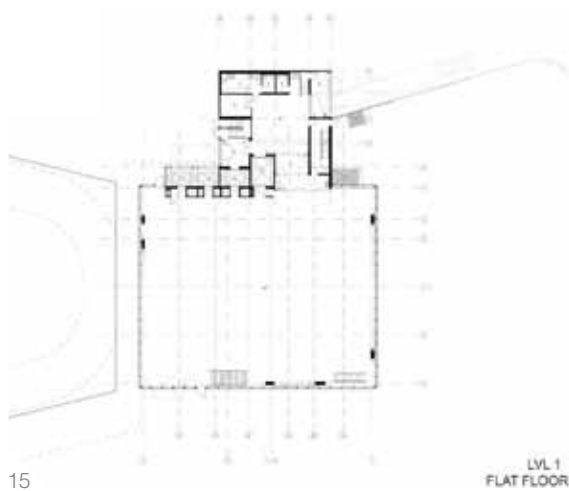


Fig. 15 *Level 1 Possibilities*. 2009. Plans. *Rex-ny.com*. Web. 13 May 2011. <<http://www.rex-ny.com/work/wyly-theatre/>>.

[vertical theater]

When deciding to build a new theater, The Dallas Theater Center [DTC], wanted to be sure to maintain its reputation as one of the most innovative theater companies. Previously, what allowed their flexibility was their location in an old dilapidated metal shed.

Although makeshift, the building freed the artistic explorations from the constraints presented in other areas by the surrounding architecture. The challenge the architects faced was to create a building that had a much stronger architectural presence while being sure to maintain the capacity to foster creativity that was so characteristic of the original DTC.

Secondarily, money would play a critical role in the design process. The development of a single stage/style was not cost effective for the DTC, as they had adapted their old building a a variety of different configurations in order to be successful.

Key to the success of the Wyly Theater is the integration of what REX/OMA call the "superfly." Not only does the chamber allow ample room vertically for the fly tower needs, it also provides adequate balcony fly space to accept accept

raised seating from below. The fly spaces allow the performance chamber to open up to city of Dallas, a continuous stage for the performing arts community.

The vertical nature of nature of the structure gives the building prominence on the site, maintaining attention and intrigue despite the surrounding works of architecture. The Wyly Theater presents itself as being one of the most flexible theaters in the world and certainly will act as a precedent for future theater designs that seek flexibility within their construction.



Fig. 6 *Sectional Relationships within the Wyly*. 2009. Diagram. *Rex-ny.com*. Web. 13 May 2011. <<http://www.rex-ny.com/work/wyly-theatre/>>.



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Fig. 6 *Wyly Theater Stage*. 2009. Photograph. *Rex-ny.com*. Web. 13 May 2011. <<http://www.rex-ny.com/work/wyly-theatre/>>.

Fig. 7 *Seating Arrangements*. 2009. Photograph. *Rex-ny.com*. Web. 13 May 2011. <<http://www.rex-ny.com/work/wyly-theatre/>>.

[multiple stage configurations]

The most appealing and significant aspect of the Wyly Theater is the capacity for an infinite number of stage configurations. Using sporting arena lifts, the seats can be repositioned or lifted out of the way in order to provide a multitude of seating opportunities as seen and/or developing through the director's vision for the performance.

In the images, immediately left, the multiple stage configurations are evidenced. The opportunities for a flat-floor room, proscenium, and thrust-stage are all made possible by the lifts. Additionally, the floor is equipped with opera house technology that allows the ground plane to be raised, lowered, rotated, or tilted to accept the variety of seating configurations.

Interestingly, the performance area is intentionally constructed out of non-precious materials so that every aspect of the stage can be edited. Whether it needs to be cut, drilled, painted, etc it will not cost much to fix. This allows full-creative license for any and all performances that will take place in this environment.

The intrigue presented by the stage configurations is two-fold. The seating allows for a versatile

interior while also allowing direct contact with the external environment. This is made possible since the stage is surrounded by glass, which integrates a black curtain system to be used as needed. When combined with the fact that there exist no auxilliary functions (lobby, tickets, etc) on either side of the chamber

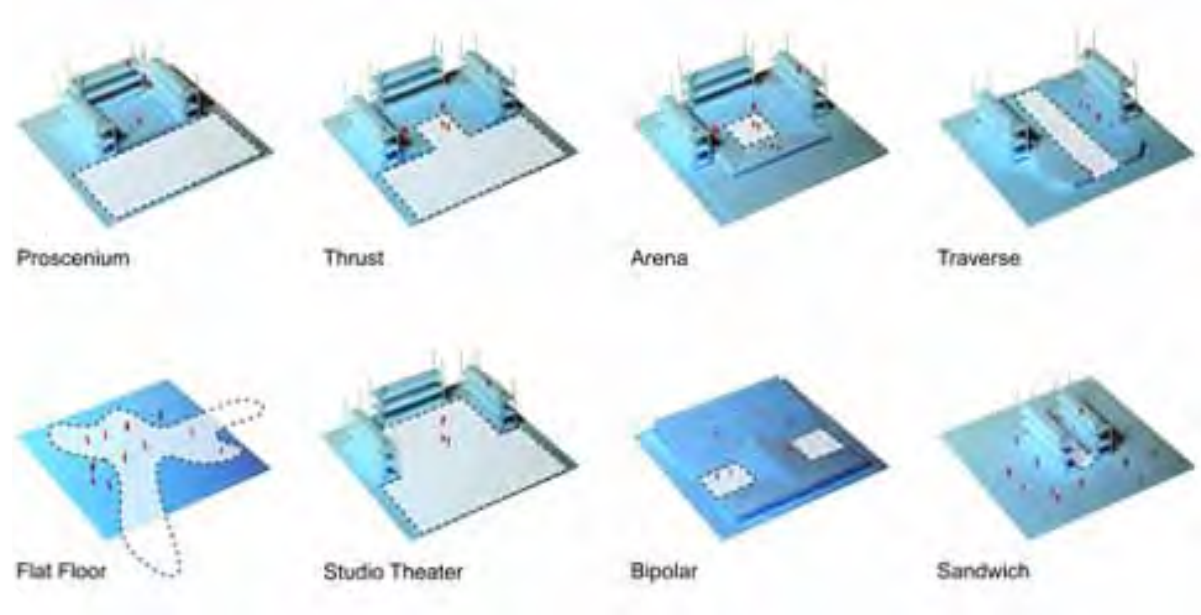


Fig. 8 *Stage Configurations*. 2009. Diagram. *Rex-ny.com*.
 Web. 13 May 2011. <<http://www.rex-ny.com/work/wyly-theatre/>>.



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Fig. 9 *Wyly Theater Proposal*. 2005. Rendering. *Arcspace.com*. Web. 24 Apr. 2011. <http://www.arcspace.com/architects/koolhaas/wyly_theater/wyly_theater.html>.

Fig. 10 *Aluminum Tubular Facade Mock-up*. 2010. 20 Mar. 2010. Photograph. *Blogspot.com*. Web. 4 May 2011. <http://humanscribbles.blogspot.com/2010_03_01_archive.html>.

Fig. 11 *Construction Process*. 2009. 10 Feb. 2009. Photograph. *Archdaily.com*. Web. 4 May 2011. <<http://www.archdaily.com/12521/wyly-theatre/>>.

[materiality]

The materiality of the exterior facade of the Wyly presents another interesting investigation/exploration. After experimenting with a variety of screen facades that served to expose the interior conditions of the theater (seen on the top far left), the final design aimed at creating the illusion that the building was wrapped in a closed curtain.

Such an illusion was created through the development of an extruded aluminum, tubular rainscreen system. The varying profiles, as seen in the image to the left, allow the facade to undulate like a theater curtain.

Not only is the facade innovative, but it also very lightweight, reducing the demands on the structural elements within the building. It is composed of six varying aluminum extrusions, arranged in the six different combinations that can be seen immediately left.

As can be told from the images, the facade introduces a lot of ideas about transparency and exposure within the theater environment. Although the performance area itself is clad in 30 feet of glass, the remaining programmatic elements are contained within this aluminum

skin which seems to add a dynamic condition of movement to the facade on the site.

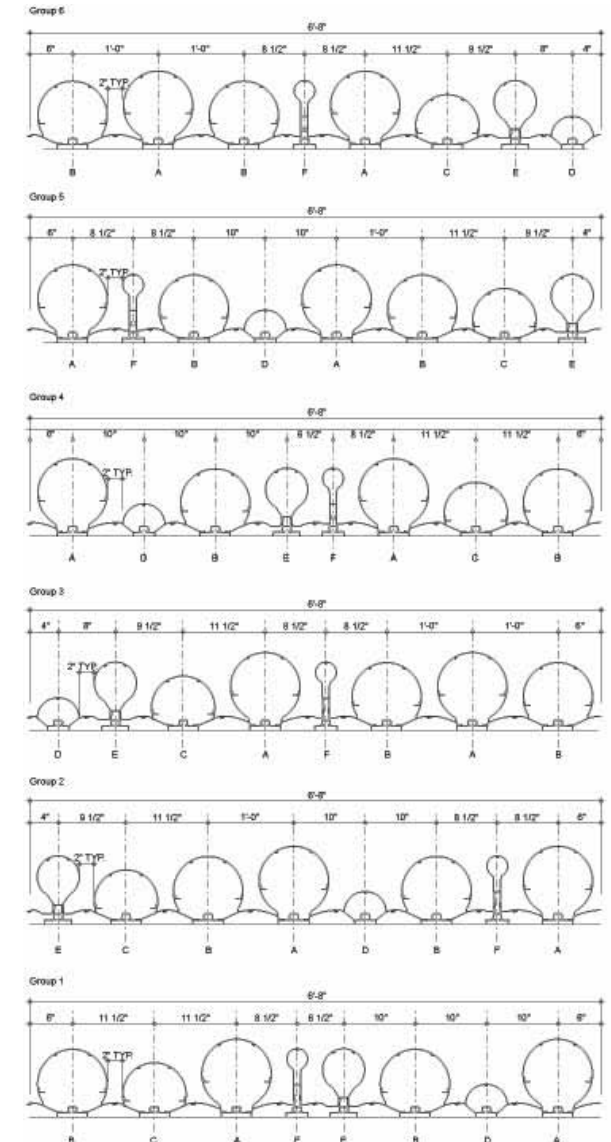


Fig. 12 Six combination modules of the aluminum extrusions on the facade. 2010. Plan. Blogspot.com. 20 Mar. 2010. Web. 4 May 2011. <http://humanscribbles.blogspot.com/2010_03_01_archive.html>.



Fig. 13 *Centro Cultural San Martín*. Photograph. Buenos Aires. *Blogspot.com*. 9 May 2011. Web. 16 May 2011. <<http://ldflounge.blogspot.com/2011/05/centro-cultural-san-martin-una.html>>.

teatro general san martín

Program: Center for Performing Arts
(3 stages)
30,000 m²

Architect: Mario Roberto Alvarez

Year: 1950

Location: Buenos Aires, Argentina

The San Martín Theatre in Buenos Aires, Argentina is one of the major theaters in Argentina. Developed out of the international style, the 13-story building houses three stages to present theater performances, film productions, and art exhibitions within a single artistic venue.

The most interesting and intriguing quality of the San Martín Theatre is that coupled with the 13-stories above ground are four basements. These basements play a critical role in the successful representation of a performance. The basements are utilized to house the mechanical systems required to raise and lower the incredibly complex stages.

The largest of the three theaters' (1049 seats), the Martín Coronado Salon, is the most complex stage. It has a central section that can move

vertically while also having 9 additional segments that move up and down independently. The image to the lower left demonstrates the depth of these basement levels and the intricate system of lifts and pulleys that raise, lower, and rotate various floor segments.

With the exception of the orchestra pit set below the traditional stage, the San Martín Theatre utilized what was typically a static element of the theater performance and added the dynamic condition of movement. This notion of movement will serve as inspiration for how to approach the theater thesis proposal. The possibilities to raise or lower the stage, as well as introduce the capacity to view the inner workings of such a system could present a very powerful architectural event.



Fig. 14 Murch, Beatrice. *Underneath the Movable Stage*. 2008. Photograph. Buenos Aires. [Flickr.com](http://www.flickr.com/photos/blmurch/2249219031/in/photostream/). 7 Feb. 2008. Web. 16 May 2011. <<http://www.flickr.com/photos/blmurch/2249219031/in/photostream/>>.



Fig. 15 *Eyebeam Museum*. 2002. Photograph. New York. *ArcSpace.com*. 8 Apr. 2002. Web. 16 May 2011. <<http://www.arcspace.com/architects/DillerScofidio/eyebeam/>>

eyebeam art and technology center

Site: 15,000 ft²

Program: 90,000 ft²

Exhibition Space
Artist-in-Residence Studios
Education Center
Multimedia Classrooms
Digital Archive
Restaurant
Bookstore

Architect: Diller + Scofidio

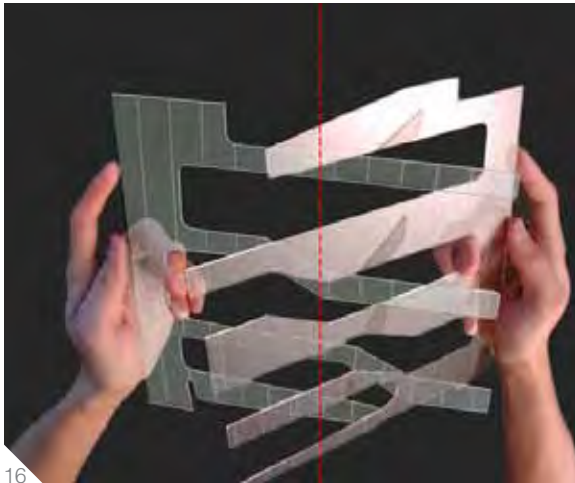
Year: 2002_unrealized

Location: Museum of Art + Technology
New York, New York

Numerous proposals by architects from around the world allowed Eyebeam to develop a stronger attitude towards what the program of their building would actually become. Within the project brief, there were four conceptual themes to be addressed within each proposal:

- + adaptation (to technical change)
- + transformation (mixed-use to institutional)
- + interrelation (between program and function)
- + intersection (public and museum space)

Eyebeam was founded as an institution that would foster the creation of digital artwork, encourage research, and expand awareness of new media. After purchasing a garage building in Chelsea, New York, executive director John S. Johnson recognized that the building would contain a completely unique program, one that had yet to be explored/designed before. He decided that a competition needed to be held in order to draw as many new ideas towards how the project should evolve.



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Fig. 16 *Parti*. 2010. Diagram. New York. *Wordpress.com*. 27 Jan. 2010. Web. 16 May 2011. <<http://cthogge.wordpress.com/2010/01/27/concept-as-operation/>>.

Fig. 17 *Interior Perspective*. 2002. Rendering. New York. *ArcSpace.com*. 8 Apr. 2002. Web. 16 May 2011. <<http://www.arcspace.com/architects/DillerScofidio/eyebeam/>>.

Fig. 18 *Interior Perspective 2*. 2002. Rendering. New York. *ArcSpace.com*. 8 Apr. 2002. Web. 16 May 2011. <<http://www.arcspace.com/architects/DillerScofidio/eyebeam/>>.

[occupancy relationship]

The proposal from Diller + Scofidio was based on a two-ply ribbon which folded over itself to create a multitude of levels vertically on the small footprint of a site. As the ribbon itself undulates, it acts as a floor while also serving to form walls and ceilings.

The two-ply ribbon allowed for a separation to be established between production and presentation - an important attitude to the Eyebeam organization.

The conceptual approach was further enhanced by the relationship that such a ribbon constructed between the residents of the building and the visitors - each occupied a single ply of the ribbon. In doing so, Diller + Scofidio developed strong visual connections between the occupants of the building.

Within the thesis proposal presented here, such relationships will be incredibly important. Developing a similar attitude between actor and audience will be a strong driver of the buildings appearance, layout, and use.

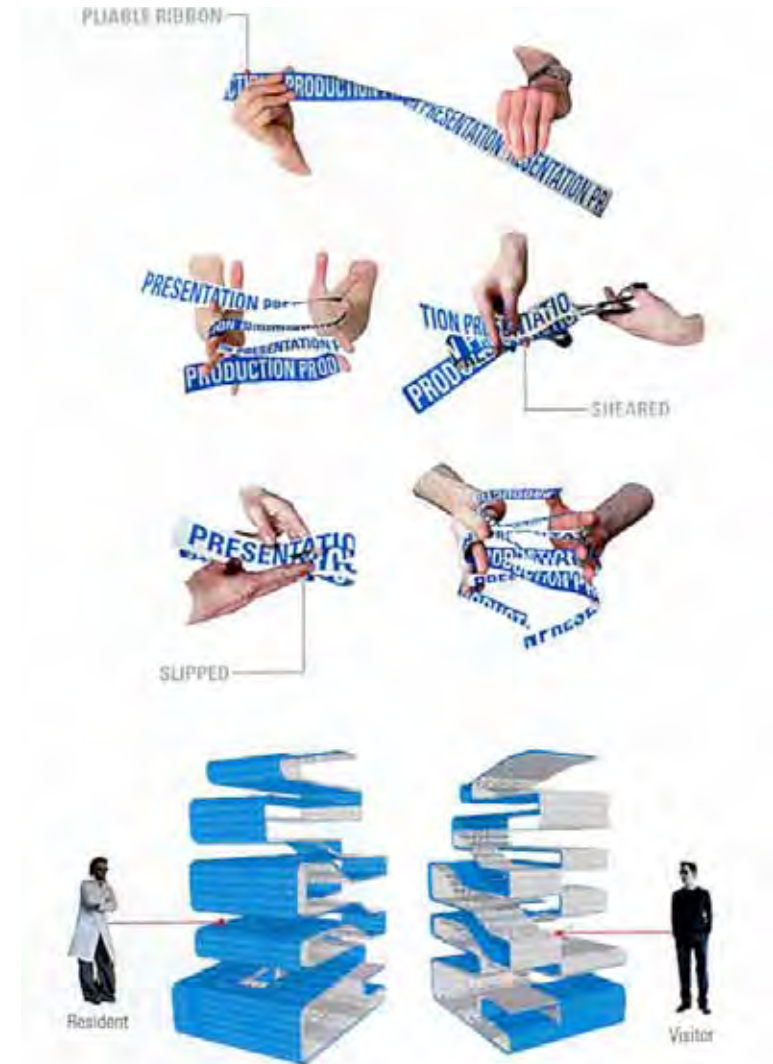


Fig. 19 *Pliable Ribbon*. 2010. Diagram. New York. Wordpress. com. 27 Jan. 2010. Web. 16 May 2011. <<http://cthogge.wordpress.com/2010/01/27/concept-as-operation/>>.

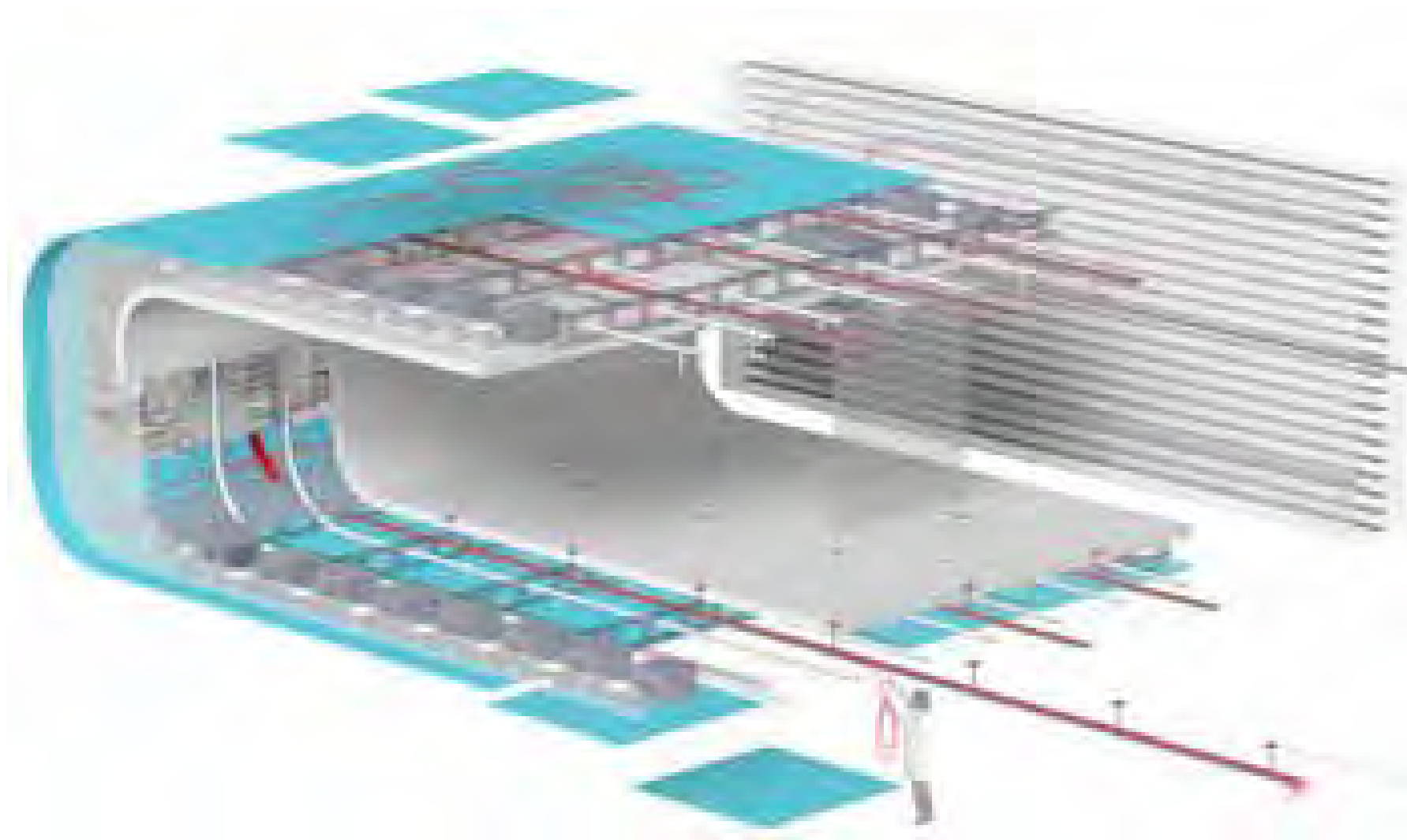


Fig. 20 *Systems Detail*. 2002. Photograph. *Domusweb.it*. 21 Mar. 2002. Web. 16 May 2011. <<http://www.domusweb.it/en/architecture/dillerscofidio-museum-of-art-and-technology-in-new-york/>>.

[technologies]

One of the big advantages of the two-ply ribbon proposal is the development of an interstitial space between the floors. As can be seen in Fig. 3, the floor is comprised of a concrete ply and a composite panel ply.

The concrete ply is constructed with precast “service pores” to allow easy access to components within the floor slab. The composite panel ply is constructed in a repetitive panel nature in order to allow access into the floor interstitial spaces.

Diller + Scofidio paid close attention to the fact that the Eyebeam organization would constantly be developing new systems and new approaches to technological systems in their work - it is what started the Eyebeam in the first place. Therefore, the interstitial space developed between floors allows the buildings two-ply wrapper to adapt to changes in technology.

Additionally, the floors act like a nervous system within the building as they harness all of the workings that make the Eyebeam function from day to day.

While the obsolescence of technology played a large role in how Diller + Scofidio approached the Eyebeam proposal, technologies greatly impacted the way visitors interacted within the spaces themselves as well.

As seen in Fig. 4, occupants would be able to wear this device in order to communicate with other members of the buildings. Secondly, electronic notification systems (Fig. 5) would allow text-based messages to be displayed on the floors and walls throughout the museum.

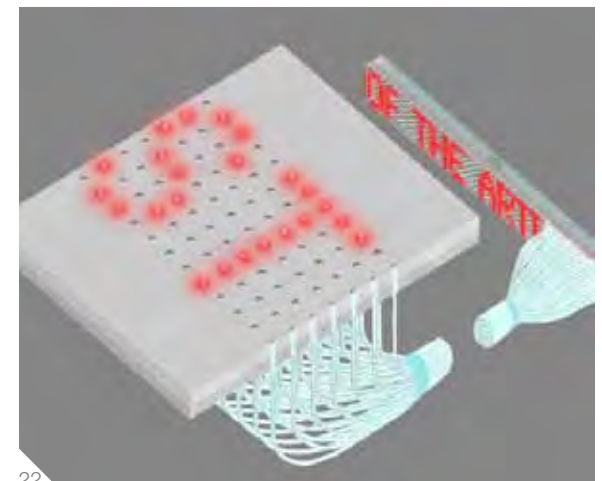


Fig. 21 *Communication Device*. 2002. Rendering. *Dsrny.com*. Web. 15 May 2011. <<http://www.dsrny.com>>.

Fig. 22 *Floor Signage*. 2002. Rendering. *Dsrny.com*. Web. 15 May 2011. <<http://www.dsrny.com>>.



Fig. 23 *Creative Arts Center Brown University*. 2011. Photograph. Providence. *Design-Daily.com*. 18 Feb. 2011. Web. 15 May 2011. <<http://design-daily.com/2011/02/brown-university-by-diller-scofidio-and-renfro/>>.

perry and marty granoff center for the creative arts

Program: 36,000 ft²

Recital Hall
Recording Studio
Multimedia Lab
Studios

Architect: Diller Scofidio + Renfro

Year: 2010

Location: Brown University
Providence, Rhode Island



The proposal for Brown University utilizes ideas similar to the Eyebeam proposal in order to generate spaces which maintain connections despite their differing programmatic functions.

The program is segmented into 4 levels of floorplates which are then cut along a sheer line and displaced from one another in sections. The development of half-levels, allows the program to overlap and interact through a glass wall that is constructed along the sheer plane.

The opportunities within theater for such interactions have yet to be explored. Much of what takes place behind-the-scenes has stayed hidden and secretive. However, the opportunity presents itself to capitalize on these existing spaces and exploit them to the public realm in a similar way that Diller, Scofidio + Renfro tackle the performance spaces at Brown's Center for the Creative Arts.

The intrigue presented within their research is appealing and will help to facilitate investigations that will take place in the design of the urban theater thesis proposal.

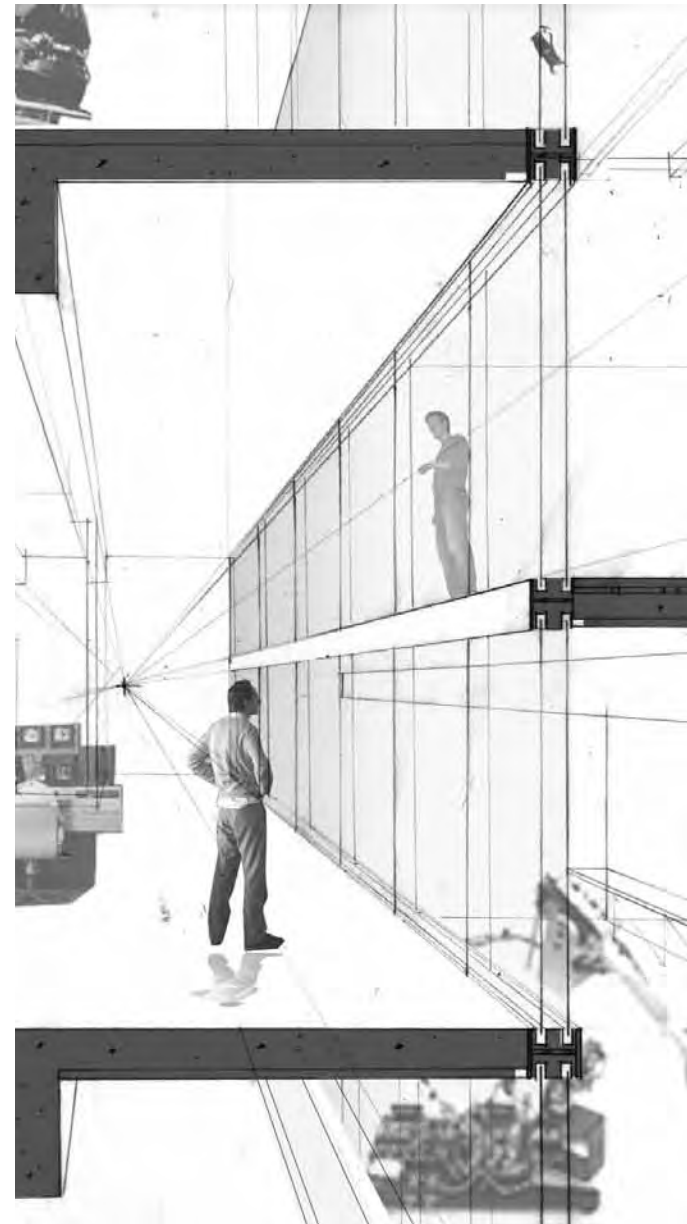


Fig. 24 *Sectional Relationships*. 2011. Photograph. Providence. *Design-Daily.com*. 18 Feb. 2011. Web. 15 May 2011. <<http://design-daily.com/2011/02/brown-university-by-diller-scofidio-and-renfro/>>.

stage directions.

zoning regulations - seattle, wa

Pier 62 and Pier 63 are categorized within the Downtown Harborfront 1 (DH1). The DH1 zone exists to facilitate the following conditions;

- + encourage waterfront revitalization
- + promote water-dependant uses and opportunities for public access and recreation
- + preserve historic maritime character

Land use regulations within the DH1 zone present the following requirements;

SMC 23.49.300 Downtown Harborfront 1, uses.

A. Uses that shall be permitted or prohibited in Downtown Harborfront 1 are determined by the Seattle Shoreline Master Program.

B. Essential Public Facilities. Permitted essential public facilities shall also be reviewed according to the provisions of Chapter 23.80, Essential Public Facilities.

(Ord. 117430 Section 70, 1994; Ord. 112303

Section 3(part),1985.)

SMC 23.49.302 Downtown Harborfront 1, general provisions.

All uses shall meet the development standards of the Seattle Shoreline Master Program.

(Ord. 112303 Section 3(part), 1985.)

SMC 23.49.306 Downtown Harborfront 1, parking.

Parking located at or above grade shall be screened according to the following requirements:

A. Parking where permitted on dry land at street level shall be screened according to the provisions of Section 23.49.019, Parking quantity, access and screening/landscaping requirements.

B. The perimeter of each floor of parking garages above street level shall have an opaque screen at least three and one-half (3 1/2) feet high.

(Ord. 122054 Section 69, 2006; Ord. 112303 Section 3(part),1985.)

seattle shoreline master program [ssmp]

In addition to the DH1 zoning, Pier 62 and Pier 63 also fall within the UH Shoreline Environment, a management zone set up by the State of Washington's Shoreline Management Act. The UH zone exists to facilitate the following conditions;

- + encourage economically viable water dependent uses to meet the needs of waterborne commerce
- + facilitate the revitalization of the downtown waterfront
- + provide opportunities for public access and recreational enjoyment of the shoreline
- + preserve and enhance elements of historic and cultural significance
- + preserve views of Elliott Bay and land forms beyond

zoning regulations	DH1 Zone [Downtown Harborfront 1], UH Shoreline Environment
permitted uses	Water-dependent or water-related uses (SMC 23.60.090 B,E); marine retail sales and services, eating and drinking establishments, entertainment uses, waterdependent or water-related public facilities, public facilities as part of an approved public improvement plan adopted by Council, shoreline recreation ¹ (SMC 23.60.660).
prohibited uses	Residential uses, specific commercial uses, general and heavy manufacturing, some institutional uses, non-water-dependent public facilities or projects except those that are part of a public improvement plan adopted by Council, landfill which creates dry land (SMC 23.60.668).
height limit	45 feet (SMC 23.60.692).
lot coverage	50% (SMC 23.60.694) Could increase to 65% if considered a water-dependent use. Requires a conditional use permit from the Council under the Water-Dependent Incentive (SMC 23.60.666 A.2.a(3)).
setbacks	50 feet from side lot lines. May use half of adjacent submerged street ROW towards requirement (SMC 23.60.696).
view corridors	30%, minimum, of lot width measured along Alaskan Way. May be split into two sections, each a minimum of 20 feet wide. May use half of adjacent submerged street ROW towards requirement (SMC 23.60.698 A). Structures may be located in the view corridor if the slope of the lot permits full, unobstructed view of the water over the structures (SMC 23.60.162 B.2).
public accesss + visual corridors	5-foot, minimum, improved walkway on a 10 foot easement (SMC 23.60.160 A.2) along one side and the seaward end of the pier. Must comprise either 15% of lot area or 5000 square feet, whichever is greater. May be located on the required pier apron (SMC 23.60.702).
moorage	18 foot apron, on sides and end of pier (SMC 23.60.700).

existing in-water conditions [pier 62/63]

The design of Pier 62 and Pier 63 must be consistent with the regulations and requirements associated with the salmon migration routes from the Duwamish River.

These conditions include the following;

- + A 50-foot setback from the shoreline to provide a welllit migration corridor
- + Grated or glass decking within 50 feet of the shoreline
- + Concrete or steel pilings
- + Means to brighten the undersurface of the deck, such as reflective foil or lights

All of the above provisions are a means of enhancing the shallow water habitat for the juvenile salmon migration route. Juvenile salmon travel in shallow waters by the seawall and if the majority of the shallow water is covered by piers they have trouble navigating the route out into open waters.

The Piers will also be in need of being re-structed

with either steel or concrete piles. These piles and all other in-water construction will be limited by the fish window that precludes work from February 15 to July 15 each year.

All of the constructions that have taken place along the downtown waterfront have had a negative impact on the shallow water habitats of Puget Sound. The proposal for Pier 62 and Pier 63 can capitalize on the need improve the coastal habitat of Seattle's Central Waterfront while also providing a stimulating experience for residents of the area.

special detailed requirements [2009 seattle building code]

SECTION 410 STAGES AND PLATFORMS

410.1 Applicability. The provisions of Sections 410.1 through 410.7 shall apply to all parts of buildings and structures that contain stages or platforms and similar appurtenances as herein defined.

410.2 Definitions. The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.

FLY GALLERY. A raised floor area above a stage from which the movement of scenery and operation of other stage effects are controlled.

GRIDIRON. The structural framing over a stage supporting equipment for hanging or flying scenery and other stage effects.

PINRAIL. A rail on or above a stage through which belaying pins are inserted and to which lines are fastened.

PLATFORM. A raised area within a building used for worship, the presentation of music, plays or other entertainment; the head table for special guests; the raised area for lecturers and speakers; boxing and wrestling rings; theater-in-the-round stages; and similar purposes wherein there are no overhead hanging curtains, drops, scenery or stage effects other than lighting and sound. A temporary platform is one installed for not more than 30 days.

PROSCENIUM WALL. The wall that separates the stage from the auditorium or assembly seating area.

STAGE. A space within a building utilized for entertainment or presentations, which includes overhead hanging curtains, drops, scenery or stage effects other than lighting and sound.

410.3 Stages. Stage construction shall comply with Sections 410.3.1 through 410.3.7.

410.3.1 Stage construction. Stages shall be constructed of materials as required for floors for the type of construction of the building in which such stages are located.

Exceptions:

1. Stages of Type IIB or IV construction with a nominal 2-inch (51 mm) wood deck, provided that the stage is separated from other areas in accordance with Section 410.3.4.
2. In buildings of Types IIA, IIIA and VA construction, a fire-resistance-rated floor is not required, provided the space below the stage is equipped with an automatic fire-extinguishing system in accordance with Section 903 or 904.
3. In all types of construction, the finished floor shall be constructed of wood or *approved* noncombustible materials. Openings through stage floors shall be equipped with tight-fitting, solid wood trap doors with *approved* safety locks.

410.3.1.1 Stage height and area. Stage areas shall be measured to include the entire performance area and adjacent backstage and support areas not separated from the performance area by fire-resistance-rated construc-

tion. Stage height shall be measured from the lowest point on the stage floor to the highest point of the roof or floor deck above the stage.

410.3.2 Galleries, gridirons, catwalks and pinrails. Beams designed only for the attachment of portable or fixed theater equipment, gridirons, galleries and catwalks shall be constructed of *approved* materials consistent with the requirements for the type of construction of the building; and a *fire-resistance rating* shall not be required. These areas shall not be considered to be floors, stories, *mezzanines* or levels in applying this code.

Exception: Floors of fly galleries and catwalks shall be constructed of any *approved* material.

410.3.3 Exterior stage doors. Where protection of openings is required, exterior *exit* doors shall be protected with *fire door assemblies* that comply with Section 715. Exterior openings that are located on the stage for *means of egress* or loading and unloading purposes, and that are likely to be open during occupancy of the theater, shall be constructed with vestibules to prevent air drafts into the auditorium.

410.3.4 Proscenium wall. Where the stage height is greater than 50 feet (15 240 mm), all portions of the stage shall be completely separated from the seating area by a proscenium wall with not less than a 2-hour *fire-resistance rating* extending continuously from the foundation to the roof.

410.3.5 Proscenium curtain. Where a proscenium wall is required to have a *fire-resistance rating*, the stage opening shall be provided with a fire curtain complying with NFPA

80 or an *approved* water curtain complying with Section 903.3.1.1 or, in facilities not utilizing the provisions of smoke-protected assembly seating in accordance with Section 1028.6.2, a smoke control system complying with Section 909 or natural ventilation designed to maintain the smoke level at least 6 feet (1829 mm) above the floor of the *means of egress*.

410.3.6 Scenery. Combustible materials used in sets and scenery shall meet the fire propagation performance criteria of NFPA 701, in accordance with Section 806 and the *International Fire Code*. Foam plastics and materials containing foam plastics shall comply with Section 2603 and the *International Fire Code*.

410.3.7 Stage ventilation. Emergency ventilation shall be provided for stages larger than 1,000 square feet (93 m²) in floor area, or with a stage height greater than 50 feet (15 240 mm). Such ventilation shall comply with Section 410.3.7.1 or 410.3.7.2.

410.3.7.1 Roof vents. Two or more vents constructed to open automatically by *approved* heat-activated devices and with an aggregate clear opening area of not less than 5 percent of the area of the stage shall be located near the center and above the highest part of the stage area. Supplemental means shall be provided for manual operation of the ventilator. Curbs shall be provided as required for skylights in Section 2610.2. Vents shall be labeled.

[F] **410.3.7.2 Smoke control.** Smoke control in accordance with Section 909 shall be provided to maintain the

smoke layer interface not less than 6 feet (1829 mm) above the highest level of the assembly seating or above the top of the proscenium opening where a proscenium wall is provided in compliance with Section 410.3.4.

410.4 Platform construction. Permanent platforms shall be constructed of materials as required for the type of construction of the building in which the permanent platform is located. Permanent platforms are permitted to be constructed of *fire-retardant-treated wood* for Types I, II and IV construction where the platforms are not more than 30 inches (762 mm) above the main floor, and not more than one-third of the room floor area and not more than 3,000 square feet (279 m²) in area. Where the space beneath the permanent platform is used for storage or any purpose other than equipment, wiring or plumbing, the floor assembly shall not be less than 1-hour fire-resistance-rated construction. Where the space beneath the permanent platform is used only for equipment, wiring or plumbing, the underside of the permanent platform need not be protected.

410.4.1 Temporary platforms. Platforms installed for a period of not more than 30 days are permitted to be constructed of any materials permitted by the code. The space between the floor and the platform above shall only be used for plumbing and electrical wiring to platform equipment.

410.5 Dressing and appurtenant rooms. Dressing and appurtenant rooms shall comply with Sections 410.5.1 through 410.5.3.

410.5.1 Separation from stage. The stage shall be sepa-

rated from dressing rooms, scene docks, property rooms, workshops, storerooms and compartments appurtenant to the stage and other parts of the building by *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both. The minimum *fire-resistance rating* shall be 2 hours for stage heights greater than 50 feet (15 240 mm) and 1 hour for stage heights of 50 feet (15 240 mm) or less.

410.5.2 Separation from each other. Dressing rooms, scene docks, property rooms, workshops, storerooms and compartments appurtenant to the stage shall be separated from each other by not less than 1-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both.

410.5.3 Stage exits. At least one *approved means of egress* shall be provided from each side of the stage and from each side of the space under the stage. At least one means of escape shall be provided from each fly gallery and from the gridiron. A steel ladder, *alternating tread device* or *spiral stairway* is permitted to be provided from the gridiron to a scuttle in the stage roof.

[F] 410.6 Automatic sprinkler system. Stages shall be equipped with an automatic fire-extinguishing system in accordance with Chapter 9. Sprinklers shall be installed under the roof and gridiron and under all catwalks and galleries over

the stage. Sprinklers shall be installed in dressing rooms, performer lounges, shops and storerooms accessory to such stages.

Exceptions:

1. Sprinklers are not required under stage areas less than 4 feet (1219 mm) in clear height that are utilized exclusively for storage of tables and chairs, provided the concealed space is separated from the adjacent spaces by not less than $\frac{5}{8}$ -inch (15.9 mm) Type X gypsum board.
2. Sprinklers are not required for stages 1,000 square feet (93 m²) or less in area and 50 feet (15 240 mm) or less in height where curtains, scenery or other combustible hangings are not retractable vertically. Combustible hangings shall be limited to a single main curtain, borders, legs and a single backdrop.
3. Sprinklers are not required within portable orchestra enclosures on stages.

[F] 410.7 Standpipes. Standpipe systems shall be provided in accordance with Section 905.

SECTION 411 SPECIAL AMUSEMENT BUILDINGS

411.1 General. *Special amusement buildings* having an *occupant load* of 50 or more shall comply with the requirements for the appropriate Group A occupancy and Sections 411.1 through 411.8. Amusement buildings having an *occupant load*

of less than 50 shall comply with the requirements for a Group B occupancy and Sections 411.1 through 411.8.

Exception: Amusement buildings or portions thereof that are without walls or a roof and constructed to prevent the accumulation of smoke.

For flammable *decorative materials*, see the *International Fire Code*.

411.2 Definition. The following word and term shall, for the purpose of this section and as used elsewhere in this code, have the meaning shown herein.

SPECIAL AMUSEMENT BUILDING. A *special amusement building* is any temporary or permanent building or portion thereof that is occupied for amusement, entertainment or educational purposes and that contains a device or system that conveys passengers or provides a walkway along, around or over a course in any direction so arranged that the *means of egress* path is not readily apparent due to visual or audio distractions or is intentionally confounded or is not readily available because of the nature of the attraction or mode of conveyance through the building or structure.

[F] 411.3 Automatic fire detection. *Special amusement buildings* shall be equipped with an automatic fire detection system in accordance with Section 907.

[F] 411.4 Automatic sprinkler system. *Special amusement buildings* shall be equipped throughout with an *automatic*

SECTION 424 WATERFRONT STRUCTURES: PIERS, WHARVES AND BUILDINGS

424.1 General.

424.1.1 Scope. Structures with at least 20 percent or 8,000 square feet (743 m²), whichever is greater, of their area over water shall comply with Section 424. They shall also comply with all other requirements of this code unless otherwise specified in Section 424. Unless otherwise specified, all wood dimensions are nominal size as defined in Section 2302.

Exceptions:

1. Fire-resistance-rated walls specified in Section 424.6.6 are permitted to be used as 1-hour fire-resistance-rated *fire barriers* and as a separation between repair garages not classified as Group S-1 and occupancies in Group A, including the specified opening protection in buildings of Types IIB, IV and VB construction.
2. Structures accessory to Group R-3 occupancies.
3. Floating homes that comply with the *Seattle Residential Code*.

See Chapter 45 of the Fire Code for additional requirements for fire protection systems.

424.1.2 Definitions. For the purposes of this Section 424, certain terms are defined as follows:

COVERED BOAT MOORAGE. A pier or system of floating or fixed accessways to which vessels on water may be

secured, which is covered by a roof.

DOCK. A natural open or artificially closed basin in which vessels may remain afloat when berthed at a wharf or pier.

PIER. A structure, usually of greater length than width, of timber, stone, concrete or other material, having a deck and projecting from the shore into waters so that vessels may be moored alongside for loading, unloading, storage, repairs or commercial uses.

SUBSTRUCTURE. The portion of the construction below and including the deck immediately above the water.

SUPERSTRUCTURE. The portion of construction above the deck.

Exception: *Covered boat moorage.*

WHARE. A structure or bulkhead constructed of wood, stone, concrete or similar material built along and parallel to waters for vessels to lie alongside of, and to anchor piers or floats.

424.2 Allowable area and height for waterfront structures. The height of structures to be built over water shall be measured as provided in Title 23 of the Seattle Municipal Code, Sections 23.60.952 and 23.60.930 for Shoreline Districts. Height and area shall comply with the requirements of Table 503, except that the increases allowed in Section 507.1 are not applicable to waterfront structures.

Exceptions:

1. In *covered boat moorages*, the areas in Table 503 are permitted to be increased not more than 400 percent

when an approved automatic sprinkler system is provided throughout.

2. Each covered area of a boat moorage is permitted to be considered a separate building subject to the following conditions:
 - 2.1. Maximum individual areas shall be 8,000 square feet (743 m²). The maximum width of connecting walkways shall be 10 feet (3048 mm).
 - 2.2. Walkways, finger piers and other decked areas shall not exceed 30 percent of the area of the roof that extends over water.
 - 2.3. Covered areas shall be separated by not less than 16 feet (4877 mm). The intervening areas are permitted to be used for moorage provided the adjacent covered areas comply with Item 2.4 below.
 - 2.4. Covered roof areas constructed in a manner that would trap smoke or hot gases shall be provided with the following:
 - 2.4.1. Vents or monitors of not less than 5 percent of the roof area.
 - 2.4.2. A draft stop of splined or tongue-and-groove planking not less than 1 inch (25 mm) in thickness, 1/2-inch (13 mm) exterior-type plywood or 26 gauge

steel shall extend across the end of each roof area when the roof is closer than 30 feet (9144 mm) to an adjacent building. The draft stop shall extend to not less than 24 inches (610 mm) below the lower edge of the roof. A draft stop constructed in accordance with Section 421.5 shall be provided under the walkway at each location where draft stops are required at the end of roofed areas.

424.3 Accessory uses. Uses accessory to the principal occupancy shall be permitted, provided they are conducted in an area separated from the moorage area by not less than 16 feet (4877 mm) and the exposed side of the moorage area is protected by a one-hour fire-resistance-rated fire barrier extending 2-1/2 feet (762 mm) above the roof line. One-story superstructures shall be permitted for accessory uses but shall not exceed 1,000 square feet (93 m²) in area nor 20 feet (6096 mm) in height.

Exception: Storage is allowed in the moorage area, provided it conforms to the following:

1. One unprotected moorage equipment locker of not more than 150 cubic feet (11.5 m³) is permitted for each slip.
2. Where groups of three or more lockers are provided, they shall be separated from each other with 1-hour

fire-resistance-rated *fire partitions*, and openings in the separation shall have 1-hour protection.

3. Storage of flammable liquids shall be in accordance with NEPA 31 and the Fire Code.

424.4 Location on property. Exterior walls shall have fire resistance and opening protection as determined by Section 705.

Exceptions:

1. Fire-resistance-rated construction and opening protection required because of proximity to property lines are permitted to be omitted for waterfront structures that are located on the same property, separated by an unobstructed deck not less than 16 feet (4877 mm) wide, and have a draft stop constructed according to Section 424.5.2 installed in the substructure between the buildings.
2. In *covered boat moorages*, exterior walls that are built entirely over water are permitted to be of tongue-and-groove or splined planks not less than 2 inches (51 mm) in thickness, covered with 26 gauge sheet metal, $\frac{3}{8}$ -inch (9.5 mm) exterior type plywood or equivalent on both sides, regardless of proximity to property lines. Walls at the substructure are permitted to be constructed as specified in Section 424.5.2 for draft stops. Where such walls (even though part of such *covered boat moorage*) are built on land, this exception shall not apply.

424.5 Substructure.

424.5.1 Construction. Substructures are permitted to be of any type of construction permitted in this code subject to the area limitations of Section 424.2, except that, when constructed of wood, the members shall not be less than the following in any dimension, exclusive of piling:

MEMBER	SIZE UNLIMITED USE $\times 25.4$ FOR MM	PIERS FOR BOAT MOORAGE ONLY, NOT EXCEEDING 10 FEET (3048 MM) IN WIDTH $\times 25.4$ FOR MM
Caps and girders	8"	6"
Joists, beams and other members	4"	3"
Flooring or deck	3" T & G or splined or 4" square edged	2"
Bracing	3"	2"

For SI: 1 inch = 25.4 mm.

If the flooring or deck is under a roof or is used for parking, there shall be applied over the flooring or deck a tight-fitting wearing surface of softwood not less than 2 inches (51 mm) thick and not more than 6 inches (152 mm) wide, 1-inch (25 mm) thick hardwood, 2-inch (51 mm) thick asphaltic concrete or other material of equivalent fire resistance.

Exception: Covered piers used for moorage only need not have a wearing surface.

424.5.2 Draft stops. Draft stops shall be installed in all substructures constructed of combustible materials, exclusive

of piling and pile bracing. They shall be placed not more than 100 feet (2540 mm) apart measured along the main axis of the pier or wharf. They shall fit tightly around all joists, beams, etc., and extend from the underside of the deck to city datum if over salt water or to low water if over fresh water. See Section 424.6.7 for draft stops in superstructures.

Substructure draft stops shall be constructed of at least two layers of lumber not less than 2 inches (51 mm) in thickness laid with broken joints or materials of equal fire resistance.

424.6 Superstructure.

424.6.1 Construction. Superstructures are permitted to be of any type of construction permitted by this code subject to the height and area limitations of Section 424.2 and the requirements of this section.

424.6.2 Floors. See Section 424.5.

424.6.3 Exterior walls. Exterior walls of Type IIA, IIB, III, IV and V buildings, when not subject to the requirements of Section 424.4 because of their proximity to property lines, are permitted to be constructed of matched or lapped lumber not less than 2 inches (51 mm) thick and not more than 6 inches (153 mm) wide, or not less than 1-inch (25 mm) thick with a weather covering of noncombustible material applied directly to the wood. Fireblocking is required as specified in Section 717. Openings in exterior walls shall be protected by a fire assembly having a $\frac{3}{4}$ -hour fire-protection rating when fire-resistive openings are required by Table 705.8 and 1027.

424.6.4 Roof coverings. Roof coverings shall be fire-retardant as specified in Chapter 15.

424.6.5 Roof construction. In Type IV buildings the roof is permitted to be constructed of corrugated galvanized steel attached directly to wood or steel purlins in lieu of that specified in Section 602.4.

424.6.6 Fire-resistance-rated walls. In Type IIA, IIB, III, IV and V buildings, there shall be at least one fire-resistance-rated wall from the deck to at least 3 feet (914 mm) above the roof for each 500 feet (152 m) of length. Areas greater than 100,000 square feet (9290 m²) shall be divided with such fire-resistance-rated walls. There shall be a draft-stop constructed, as specified in Section 424.5.2, installed in the substructure immediately below every required fire-resistance-rated wall when the deck is of combustible materials.

Fire-resistance-rated walls shall be constructed as required for 2-hour fire-resistance-rated walls or are permitted to consist of at least two layers of tongue-and-groove or splined lumber, not less than 2 inches (51 mm) thick and not more than 6 inches (153 mm) wide, with a sheet of not less than No. 26 gauge galvanized steel or $\frac{3}{4}$ -inch (3.2 mm) exterior type plywood between the two layers, placed vertically with broken joints, or equivalent fire-resistive construction.

Openings in fire-resistance-rated walls shall be protected by opening protectives having a $1\frac{1}{2}$ -hour fire-protection rating.

424.6.7 Draft stops. Superstructure draft stops shall be installed as specified in Section 717. Substructure draft stops constructed as specified in Section 424.5.2 shall be installed in line with the superstructure draft stops above. See Section 424.11 for draft curtain requirements.

424.6.8 Means of egress. Means of egress shall be provided as specified in Chapter 10.

Exceptions:

1. Where two means of egress are required from an occupancy, they shall not terminate on the same open deck.
2. An open deck is permitted to be considered an exit court and shall not be less than 10 feet (3048 mm) in width.
3. In Group A occupancies, the maximum travel distance shall not be more than 75 percent of that specified in Section 1016.
4. Boat moorages that have no sales, service or repair facilities are permitted to have a single means of egress not less than 3 feet (914 mm) wide and shall be exempt from the requirements of Section 1016 if a Class I standpipe is provided as specified in Section 424.8.

424.7 Width of piers. Floats, piers and walkways shall provide an aisle not less than 3 feet 6 inches (1067 mm) in width for the purpose of fire department access.

Exception: Floats, piers and walkways that are less than 40

feet (12 192 mm) in length and that are not open to the public.

424.8 Standpipe systems. A manual Class I standpipe system (or Class III standpipe system when approved by the fire code official) in accordance with NFPA 14 shall be provided for piers, wharves, and floats where the hose lay distance from the fire apparatus to the most remote accessible portion of the pier, wharf or float exceeds 150 feet (45 720 mm). *Approved* plastic pipe may be used when installed underwater, or other *approved* method of protection from fire is provided. The standpipe piping shall be a minimum of 4 inches (102 mm), sized to provide a minimum of 500 gpm at 130 psi at the most remote hose connection, with a simultaneous flow of 500 gpm at the third most remote hose connection on the same pier while maintaining a maximum system pressure of 175 psi. Existing standpipe systems providing equivalent performance to the specification listed above may be acceptable when approved by the fire code official.

424.8.1 Hose connections. Hose connection stations on required standpipes shall be provided at the water end of the pier, wharf, or float, and along the entire length of the pier, wharf, or float at spacing not to exceed 150 feet (45 720 mm) and as close as practical to the land end.

Exception: The hose connection at the land end of the pier, wharf or float may be omitted when a hose connection is located within 150 feet (45 720 mm) of the fire apparatus access road.

Each hose connection shall consist of a valved 2- $\frac{1}{2}$ -inch (64 mm) fire department hose outlet. Outlet caps shall have

a predrilled $\frac{1}{4}$ -inch (3.2 mm) hole for pressure relief and be secured with a short length of chain or cable to prevent falling after removal. *Listed* equipment shall be used.

424.8.2 Hose stations. Hose stations on required standpipes shall be provided at spacing not to exceed 100 feet, with the first hose station located as close as practicable to the land end of the pier. Each hose station shall have 100 feet of $1\frac{1}{2}$ -inch hose mounted on a reel or rack and enclosed within an *approved* cabinet. A valved $2\frac{1}{2}$ -inch fire department hose outlet shall be provided at each hose station. Outlet caps shall have a $\frac{1}{4}$ -inch predrilled hole for pressure relief and be secured with a short length of chain or cable to prevent falling after removal. *Listed* equipment shall be used. Hose stations shall be labeled FIRE HOSE—EMERGENCY USE ONLY.

424.8.3 Freeze protection. Standpipe systems shall be maintained dry when subject to freezing temperatures, and always from November 1 through March 31. The $1\frac{1}{2}$ -inch hose stations shall be tagged out-of-service when the system is drained. The main water supply control valve shall be readily accessible and clearly labeled so that the system may be quickly restored to full service during periods when the system is drained down.

Exception: Other methods of freeze protection, such as *listed* freeze valves, are permitted to be provided when approved by the fire code official.

424.9 Automatic sprinklers.

424.9.1 Covered boat moorage. Automatic sprinklers

shall be provided for *covered boat moorage* exceeding 500 square feet in projected roof area per pier, wharf or float.

The sprinkler system shall be designed and installed in accordance with NFPA 13 for Extra Hazard Group 2 occupancy.

If sprinklers are required by this section, they shall be extended to any structure on the pier, wharf or float exceeding 500 square feet in projected roof area.

424.9.2 Substructure. Automatic sprinklers shall be installed under the substructure of every new waterfront structure in accordance with NFPA 307 and as specified in Chapter 9.

Exceptions:

1. Combustible substructures whose deck area does not exceed 8,000 square feet (743.2 m²) supporting no superstructures.
2. Combustible substructures whose deck area does not exceed 8,000 square feet (743.2 m²) supporting superstructures not required to be provided with an *approved automatic sprinkler system* as specified in Section 424.9.3.
3. Noncombustible substructures with or without superstructures.
4. Substructures over other than tidal water, where sprinkler heads cannot be installed with a minimum clearance of 4 feet (1219 mm) above mean high water.

5. Substructures resulting from walkways or finger piers that do not exceed 10 feet (3048 mm) in width.

424.9.3 Superstructure. Automatic sprinklers shall be provided in superstructures as specified in Chapter 9.

424.9.4 Monitoring. Sprinkler systems shall be monitored by an *approved* central station service.

424.10 Smoke and heat vents. *Approved* automatic smoke and heat vents shall be provided in *covered boat moorage* areas exceeding 2,500 square feet (232 m²) in area, excluding roof overhangs.

Exception: Smoke and heat vents are not required in areas protected by automatic sprinklers.

424.10.1 Design and installation. Where smoke and heat vents are required they shall be installed near the roof peak, evenly distributed and arranged so that at least one vent is over each covered berth. The effective vent area shall be calculated using a ratio of one square foot of vent to every fifteen square feet of covered berth area (1:15). Each vent shall provide a minimum opening size of 4 feet by 4 feet.

424.10.2 Automatic operation. Smoke and heat vents shall operate automatically by actuation of a heat-responsive device rated at between 100°F (56°C) and 220°F (122°C) above ambient.

Exception: Gravity-operated drop out vents.

424.10.3 Gravity-operated drop out vents. Gravity operated dropout vents shall fully open within 5 minutes after

the vent cavity is exposed to a simulated fire represented by a time-temperature gradient that reaches an air temperature of 500°F (260°C) within 5 minutes.

424.11 Draft curtains. Draft curtains shall be provided in *covered boat moorage* areas exceeding 2,500 square feet (232 m²) in area, excluding roof overhangs.

Exception: Draft curtains are not required in areas protected by automatic sprinklers.

424.11.1 Draft curtain construction. Draft curtains shall be constructed of sheet metal, gypsum board or other approved materials that provide equivalent performance to resist the passage of smoke. Joints and connections shall be smoke tight.

424.11.2 Draft curtain location and depth. The maximum area protected by draft curtains shall not exceed 2,000 square feet (186 m²) or two slips or berths, whichever is smaller. Draft curtains shall not extend past the piling line. Draft curtains shall have a minimum depth of 2 feet (609 mm) below the lower edge of the roof and shall not extend closer than 8 feet (2438 mm) to the walking surface on the pier.

424.12 Fire department connections. Standpipe and sprinkler systems shall be equipped with not less than a two-way 2½-inch fire department connection, which shall be readily visible and located at the fire department apparatus access. The fire department connection for Class I standpipe systems may be located at the shore end of the pier, wharf, or float if the distance between the fire apparatus access road and fire depart-

ment connection is less than 150 feet (45 720 mm). See Chapter 48 of the Seattle Fire Code for requirements for fire hydrants.

424.13 Marina fire protection confidence testing. Standpipe and sprinkler systems shall be inspected and tested in compliance with the Seattle Fire Code.

424.14 Fire department access. Fire department apparatus access lanes, not less than 20 feet wide and capable of supporting a 50,000-pound vehicle or 24,000 pounds per axle (HS20 loading), shall be provided and so located as to provide fire department apparatus access to within 50 feet travel distance to the shore end of all piers, wharves and floats.

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