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A New Palavela: A Temporal and Enduring Home for the Arts

Jennifer Parkening

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A New Palavela: A Temporal and Enduring Home for the Arts

Jennifer Parkening
A Terminal Project
Presented to the Faculty of
The College of Architecture at the University of Nebraska
In Partial Fulfillment of Requirements

For the Degree of Master of Architecture
Major: Architecture
Under the Supervision of Professor Ted A. Erdman
Lincoln, Nebraska
May, 2006
In choosing a thesis project the desire was to design a facility where similar structures had not done the event justice. The sport of figure skating represented this desire well. This idea transformed into a design for an Olympic site in Turin Italy for the 2006 figure and short track speed skating. The facility will become a permanent fixture in Turin as a civic-center. Pierre Baron de Coubertin, developer of the foundation for the modern Olympic games, defined what Olympic architecture should strive to achieve:

The Olympic City should captivate the visitor as a dignified and grandiose complex by monumentality and impressive appearance; a mere glance at the facilities should clearly display their double character, athletic and artistic by overlapping of functions and the unmistakable nature of the townscape; the silhouette and the landscape should as far as possible form a harmonious unit- games on green plots, buildings integrated into the landscape, interrelationship between interior space and the open space (Wimmer, 23).

I chose to do an Olympic arena because of the design significance and the importance to both the host city of Turin. The Olympics is a worldwide event, but it is the host country that bears the major financial investment. Each building is looked at critically as to if and what its future use will be, at the same time as how it will function for the Olympic games. Here Coubertin has laid out the three main functions of an Olympic building: monumentality, integration between inside and out, and harmony.

The design will strive to achieve these goals through the master planning of the site and the design of an Olympic facility.

While Olympic architecture in recent years has embraced design, and the 2006 is no different, the Palavela still does not represent Coubertin’s vision of a facility that embodies the spirit of the sport or takes into account the landscape. Turin has decided to house the skating in the Palavela, a structure created in 1961 as a commemoration to the unification of Italy. The reasoning for remodeling this building was because of its iconic status and sail-like roof structure. They have chosen to gut the building leaving only the soaring concrete roof structure. It is my opinion that the current Palavela’s roof structure is not worth saving simply because of its unique look. In fact, the structure is very similar to that of the 1968 winter Olympics’ Grenoble Ice Sports Arena. Therefore, I have chosen to use the same site, but design a new facility to better represent the sport and the city.

The program for the building will cater to the needs both during and after the Olympics. The building will later become an integral part of Turin as a convention center. The program calls for a 30x60m rink with seating for 8500 people that can be transformed later into a multi functional space for activities such as a concert stage, arena for indoor sports, and a place for community fairs. The program should be versatile, similar to that of Omaha’s new Qwest Center. Coubertin was said to have found, “antique Olympia was a city of athletics, art and religious festivals. The city of athletics had a temporary character, the city of art and culture a permanent one (24).” One must take note that this building and site will be just as significant to the people of Turin after the Olympics, therefore it should both represent the fluidity and dynamic nature of figure skating, but also have a lasting home for the
nature of figure skating, but also have a lasting home for the arts.

The three objectives are similar to that of Coubertin:

- The building should be an **artistic gesture of the sport with the presence of an Olympic structure**, but in doing so should also fluidly meld with the overall park landscape.

- The building and site should foremost become a place for gathering and activity for the **community** of Turin, and secondly, welcome visitors to the Olympics as a place of **celebration**.

- The building and site should function civically paying close attention to the **aesthetic of the townscape**, and by doing so become a positive statement about the Olympics and Turin both inside and out.
Situated at the foot of the Alps, Turin Italy has long been one of the largest and most condensed industrial cities in Europe. With 170,000 residents on 2,600 square miles, (about the size of Delaware with twice the population) Turin is a densely populated area. It is a city with an immensely rich history of over 2,000 years, and less than 200 years ago it had a brief stint as the capitol of Italy. However, after the Capitol was moved, Turin did not really boom economically until the onset of World War II. The Fiat car manufacturer based in Turin expanded more than a thousand percent in a year becoming the lifeblood of the city. However, the war left Turin in ruins and it has struggled through the 1900’s against various political issues and changes to the economy. It was not until the 1960’s, with the Unification of Italy, that Turin once again became the cultural center of its past. This included the building of the Palazzo del Vela (the Palavela) as its signature icon. As Fiat closed its main factory in the 1980’s Turin has refocused their economy, and to much success, has become an ITT hub. It also still remains the nucleus for railway activity in Italy.

The Olympics has a significant impact on any of its host cities. For Turin it means the addition of many modern amenities such as an underground rail system. More importantly, it is a chance for Turin to show Italy that it is no longer a purely industrial city. With new Olympic facilities and public works Turin will add to its already diverse cultural attractions. Upon visiting the city I found it to be the most welcoming city in Italy. As tourism is not a major income for the city, many residence’s were surprised that one might travel to visit their city. I found the city to be less attractive to its counterparts: Venice, Florence, and Milan, but it was clear the city was getting a face-lift. Turin, although still very industrial has many beautiful old buildings and well designed urban areas. Upon my
visit it was clear that the Olympics had already made a profound impact on the landscape of the city, but the future of it as well.

The Olympics has already impacted the city both aesthetically and financially, but the impact will not be as great as if it were the summer Olympics. Much of the popularity of Italian sport's rests on warm weather sports such as soccer. So, while Turin will become a tourist center for the period of the Olympics, it is predicted that attendance, especially from the rest of Italy, will be low in comparison to past years. Therefore it is important that these Olympic structures be able to support themselves post Olympics. The Palavela is one, if not the most important example of this needed reuse. Post Olympics it will need to function successfully as a civic center. Once used for a similar purpose the Palavela had become underutilized, it is the hope of the city that the Palavela can become a symbol of the new Turin as a cultural center.

As the next section looks closer at the Palavela itself it is important to reiterate the important relationship this site and structure will have to the community as a whole as a home for the arts.
1. View looking from electrical building to parking lot

2. View looking West at residential apartments

3. View looking Southwest at pond and playground

4. View looking North at Palavela and playground

5. View looking East at Palavela and park
6. View looking North to South at tennis courts and a trade school

7. View looking East from daycare

8. View looking East at pond

9. View looking South at colonnade

10. View looking east at ring road
critique of the site

The building forms an unattractive wall at the end of the site.

The site does little to address or welcome the neighborhood.

This is a very attractive feature that could be played up.

There is no easy way to cross the street.

Needs to be rebuilt.

Too far away from users (daycare).

Awkward and visible on entrance.

The view leads into nothing, the building does not address the angle in which people would come from.

The building has no relation to the main structure.

The parking is scattered in too many separate areas.

The site is a wonderful park, and was chosen because of its many possibilities, and because it will become a civic building it is important to have the connection with the neighborhood. Its main problem is that it lacks a cohesive plan.
The colonnade has a very gestural feel, I would like to keep it, but better connect it with the site.

Access to activities for all ages is a positive. However, it is underutilized, and could be brought together through a new more condensed arrangement.

the new subway will also provide public transport, but a crossing would still be desirable.

this area would be the best main entrance because of the street traffic and view facing the neighborhood.

I would like to see all of the structures have a cohesion to each other.

The park lends itself to great views from the Palavela, and contributes to the civic function of the site.

the fact that the building opens to all sides is a plus because of views and the ability to address both sides of the street.

I would like to see the parking become less of a feature and more compact.

My desire for the site and the building is for them to relate to each other but still maintain their own function and presence. The area should convey the importance of the Olympics. The building should also address the neighborhood, the civic, first and foremost because it will be a civic building and site for many years after the Olympics.
This facility is for the 2006 Winter Olympics located in Turin Italy. The facility will house the short track speed skating and figure skating events. After the Olympics the facility will become a civic center for the community of Turin. It will house activities such as concerts, fairs, and sports. The building will house an Arena the seats approximately 8,500 during the Olympics and can be scaled down to 6,000 for post-Olympic activities. The facility will contain all the activities essential to both Olympic and post-Olympic functions such as: concessions, athlete and media support, venue support, and service areas. The space should be one that is unified within as well as with the exterior. The building should evoke the nature of sport, as well as, embrace the community through its position in the park.

As previously explained, the building is situated in a large public park. To the North lies more park area as well as an underground access road connecting to a busy ring road to the East of the site. The site program will include incorporating existing programs such as: playground, day-care, and game areas, with new and adjusted programs. The program for the site lies in its connection with the overall concept. The sites amenities such as playground and tennis courts may be moved around, but will still remain part of the overall master plan. The reason for readjusting the program is to give new life to the park, but also to incorporate it into the functions of the Olympics. The park will be a permanent reminder of the Olympic festivities, but will address the neighborhood and serve civic functions year round.
<table>
<thead>
<tr>
<th>Venue Staff</th>
<th>Athletes</th>
<th>Olympic Family</th>
<th>Spectators</th>
<th>Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical</td>
<td>Space: 75000 sq.ft. (6+ buses and 70 cars)</td>
<td>Space: combined with athletes parking</td>
<td>Space: 0 sq.ft. (Parking for spectators is street parking only. Most Visitors will be traveling by public transportation via: bus and subway)</td>
<td>Space: combined with staff</td>
</tr>
<tr>
<td>Adjacency: Athletes direct entrance and Media Mixing area</td>
<td>Adjacency: entrance</td>
<td>Adjacency: Via Ventimiglia, both sides of the street</td>
<td>Adjacency: staff entrance</td>
<td></td>
</tr>
<tr>
<td>Concerns: Security, Adjacency to Media, Coverage from the elements</td>
<td>Concerns:</td>
<td>Concerns: The main concern is getting people from the right side of the street to the left</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desires: The entrance should be safe, but also maintain a sense of arrival to the event.</td>
<td>Desires:</td>
<td>Desires: To Create some form of pedestrian walkway to get people from across the street</td>
<td>Desires:</td>
<td></td>
</tr>
</tbody>
</table>

Venue Staff
Space: 300 sq.ft. (4 cars)  
Adjacency: Electrical Facility  
Furnishings: N.A.  
Concerns:  
Desires: close the electrical building

Venue Staff
Space: 8000 sq.ft. (33 cars)  
Adjacency: Staff Entrance  
Furnishings: N.A.  
Concerns:  
Desires:
**Venue Staff**

**Main Electrical**
- Function:
- Space: 2500 sq.ft
- Adjacency:
- Furnishings:

**Fire pump/Water Supply**
- Function:
- Space: 600 sq.ft
- Adjacency:
- Furnishings:

**Auxiliary MEP Room**
- Function: electrical, telephone, video, and shaft
- Space: 4200 sq.ft
- Adjacency:
- Furnishings:

**Maintenance Shop**
- Function: work shop
- Space: carpentry (900)
- welding (700)
- paint (200) = 1800 sq.ft
- Adjacency: to ice level
- Furnishings: tools
- Concerns:
- Desires:

**Boiler Rm**
- Function:
- Space: 2000 sq.ft
- Adjacency:
- Furnishings:

**Main telephone and data**
- Function:
- Space: 400 sq.ft
- Adjacency:
- Furnishings:

**Emergency Generator**
- Function:
- Space: 400 sq.ft
- Adjacency:

**Auxiliary MEP Room**
- Function: electrical, telephone, video, and shaft
- Space: 4200 sq.ft
- Adjacency:
- Furnishings:

**Lockers**
- Function: storage
- Space: 10 at 2'x2'x6' = 200 sq.ft
- Adjacency: work shop
- Furnishings: lockers, benches, toilets
- Concerns:
- Desires:

**Lockers**
- Function: storage
- Space: 10 at 2'x2'x6' = 200 sq.ft
- Adjacency: work shop
- Furnishings: lockers, benches, toilets
- Concerns:
- Desires:
### Venue Staff

<table>
<thead>
<tr>
<th>Staff entrance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function: entrance for staff and media</td>
</tr>
<tr>
<td>Space: 1200 sq.ft</td>
</tr>
<tr>
<td>Adjacency: dock</td>
</tr>
<tr>
<td>Furnishings: N.A.</td>
</tr>
<tr>
<td>Concerns:</td>
</tr>
<tr>
<td>Desires:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function: storage</td>
</tr>
<tr>
<td>Space: 22000 sq.ft</td>
</tr>
<tr>
<td>Adjacency: stage side</td>
</tr>
<tr>
<td>Furnishings:</td>
</tr>
<tr>
<td>Concerns: security</td>
</tr>
<tr>
<td>Desires:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Event Rigging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function: setup</td>
</tr>
<tr>
<td>Space: 1500 sq.ft.</td>
</tr>
<tr>
<td>Adjacency: ice</td>
</tr>
<tr>
<td>Furnishings:</td>
</tr>
<tr>
<td>Concerns: quick turnover</td>
</tr>
<tr>
<td>Desires:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Floor Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function: storage for pendeums</td>
</tr>
<tr>
<td>Space: 1500 sq.ft.</td>
</tr>
<tr>
<td>Security and Fire Command</td>
</tr>
<tr>
<td>Function: 24 hour security</td>
</tr>
<tr>
<td>Space: 1500 sq.ft.</td>
</tr>
<tr>
<td>Adjacency: staff entrance</td>
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<td>Furnishings: desks</td>
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<tr>
<th>Event Rigging</th>
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<tbody>
<tr>
<td>Function: setup</td>
</tr>
<tr>
<td>Space: 1300 sq.ft.</td>
</tr>
<tr>
<td>Adjacency: ice</td>
</tr>
<tr>
<td>Furnishings:</td>
</tr>
<tr>
<td>Concerns: quick turnover</td>
</tr>
<tr>
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<table>
<thead>
<tr>
<th>Turnstile Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function: storage for goals, drapes</td>
</tr>
<tr>
<td>Space: 5500 sq.ft.</td>
</tr>
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<td>Furnishings: desk</td>
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<table>
<thead>
<tr>
<th>Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function: storage</td>
</tr>
<tr>
<td>Space: 1000 sq.ft.</td>
</tr>
<tr>
<td>Adjacency: offices</td>
</tr>
<tr>
<td>Furnishings: shelving for supplies and chemicals, room for vacuums and two cleaning carts. This is not storage for the facilities janitorial staff.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Janitor Closet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function: storage</td>
</tr>
<tr>
<td>Space: 200 sq.ft.</td>
</tr>
<tr>
<td>Adjacency: Venue Offices</td>
</tr>
<tr>
<td>Furnishings: desk, 4 chairs, and coffee table</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reception and Secretary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function: waiting</td>
</tr>
<tr>
<td>Space: 1000 sq.ft.</td>
</tr>
<tr>
<td>Adjacency: Venue Offices</td>
</tr>
<tr>
<td>Furnishings: desk</td>
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<table>
<thead>
<tr>
<th>Security- athlete side</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function: 24 hour security</td>
</tr>
<tr>
<td>Space: 500 sq. ft.</td>
</tr>
<tr>
<td>Adjacency: athlete entrance</td>
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<td>Furnishings: desk</td>
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</table>
Venue Staff

Safety office
- Function: office
- Space: 550 sq.ft
- Adjacency: venue offices
- Furnishings: long table with three workstations (computers), 2 chairs, and file cabinet

Main office
- Function: office
- Space: 350 sq.ft
- Adjacency: lounge and safety office
- Furnishings: desk, 2 chairs, bookshelf, and file cabinet

CEO office
- Function: office
- Space: 450 sq.ft
- Adjacency: venue offices
- Furnishings: desk, 2 chairs, bookshelf, and file cabinet

Staff Lounge
- Function: break room
- Space: 750 sq.ft
- Adjacency: offices
- Furnishings: tables

BIP, PBX, CATV Office
- Function: office
- Space: 400 sq.ft
- Adjacency: CCB office
- Furnishings: desk, 2 chairs, bookshelf, and file cabinet

Mail/Printer Room
- Function: office functions
- Space: 1500 sq.ft
- Adjacency: offices
- Furnishings: shelving and copier

Protocol Office
- Function: office
- Space: 400 sq.ft
- Adjacency: ISU office
- Furnishings: desk, 2 chairs, bookshelf, and file cabinet

Concerns: removable

Mail/Printer Room
- Function: office functions
- Space: 1500 sq.ft
- Adjacency: offices
- Furnishings: shelving and copier

Locker Room
- Function: storage for personal belongings
- Space: 1200 sq.ft
- Adjacency: lounge
- Furnishings: lockers

Concerns: removable

Storage
- Function: storage
- Space: 1000 sq.ft
- Adjacency: offices
- Furnishings: shelving for supplies and chemicals, room for vacuums and two cleaning carts. This is not storage for the facilities janitorial staff.

Concerns: removable

CCB Office
- Function: office
- Space: 0 sq.ft
- Adjacency: results office
- Furnishings: desk, 2 chairs, bookshelf, and file cabinet

Concerns: removable

Storaget

Concerns: removable

Post-olympics

Storage
- Function: storage
- Space: 1000 sq.ft
- Adjacency: offices
- Furnishings: shelving for supplies and chemicals, room for vacuums and two cleaning carts. This is not storage for the facilities janitorial staff.

Concerns: removable

CCB Office
- Function: office
- Space: 0 sq.ft
- Adjacency: results office
- Furnishings: desk, 2 chairs, bookshelf, and file cabinet

Concerns: removable

Rest room
- Function: storage for personal belongings
- Space: 1200 sq.ft
- Adjacency: lounge
- Furnishings: lockers

Concerns: removable

CEO office
- Function: office
- Space: 450 sq.ft
- Adjacency: venue offices
- Furnishings: desk, 2 chairs, bookshelf, and file cabinet

Mail/Printer Room
- Function: office functions
- Space: 1500 sq.ft
- Adjacency: offices
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Concerns: removable

Staff Lounge
- Function: break room
- Space: 750 sq.ft
- Adjacency: offices
- Furnishings: tables

Mail/Printer Room
- Function: office functions
- Space: 1500 sq.ft
- Adjacency: offices
- Furnishings: shelving and copier

Concerns: removable

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Concerns: removable

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- Adjacency: lounge
- Furnishings: lockers

Concerns: removable

Staff Lounge
- Function: break room
- Space: 750 sq.ft
- Adjacency: offices
- Furnishings: tables
Venue Staff

ISU President's office
Function: office
Space: 700 sq.ft
Adjacency: secretary's office
Furnishings: desk, 2 chairs, bookshelf, and file cabinet
Concerns: removable

Office of Ceremonies
Function: office
Space: 150 sq.ft
Adjacency: protocol office
Furnishings: desk, 2 chairs, bookshelf, and file cabinet
Concerns: removable

N.2. Results office
Function: office
Space: 150 sq.ft
Adjacency: office of ceremonies
Furnishings: desk, 2 chairs, bookshelf, and file cabinet
Concerns: removable
Desires:
### Athletes and Family

<table>
<thead>
<tr>
<th>Space</th>
<th>Function</th>
<th>Adjacency</th>
<th>Furnishings</th>
<th>Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rink</td>
<td>speed skating and figure skating</td>
<td>rink</td>
<td>full height lockers, counter and mirror space, w.c.‘s, lavatories, urinals, and showers.</td>
<td>Privacy</td>
</tr>
<tr>
<td>Locker room (8)</td>
<td>toilets/showers</td>
<td>rink</td>
<td>full height lockers, counter and mirror space, w.c.‘s, lavatories, urinals, and showers.</td>
<td>Privacy</td>
</tr>
<tr>
<td>Function: speed skating and figure skating</td>
<td>Space: 200 ft x 100 ft = 200,000 sq.ft</td>
<td>Adjacency: rink</td>
<td>Furnishings: (1 men 1 woman), full height lockers, counter and mirror space, w.c.‘s, lavatories, urinals, and showers.</td>
<td>Privacy</td>
</tr>
<tr>
<td>Medical treatment area</td>
<td>injury treatment</td>
<td>home locker room</td>
<td>4 curtain enclosed treatment areas with a bed, counter with sink, storage, and chair</td>
<td>Privacy</td>
</tr>
<tr>
<td>Skate Sharpening</td>
<td>sharpening</td>
<td>main locker room</td>
<td>@mailbox</td>
<td></td>
</tr>
<tr>
<td>Coaches Lounge</td>
<td>lounge</td>
<td>main locker room</td>
<td>Furnishings: lockers and tables</td>
<td>Privacy</td>
</tr>
<tr>
<td>Judges Lounge</td>
<td>lounge</td>
<td>main locker room</td>
<td>Furnishings: lockers and tables</td>
<td>Privacy</td>
</tr>
<tr>
<td>Waiting area</td>
<td>scoring and first interview</td>
<td>main entrance</td>
<td>Furnishings: bench large enough for three people</td>
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</tr>
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### Athletes/Performers and Family

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<th>Concerns</th>
</tr>
</thead>
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<tr>
<td>Rink</td>
<td>concerts, fairs, and sports</td>
<td>rink</td>
<td>full height lockers, counter and mirror space, w.c.‘s, lavatories, urinals, and showers.</td>
<td>Privacy</td>
</tr>
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<td>full height lockers, counter and mirror space, w.c.‘s, lavatories, urinals, and showers.</td>
<td>Privacy</td>
</tr>
<tr>
<td>Function: concerts, fairs, and sports</td>
<td>Space: 200 ft x 100 ft = 200,000 sq.ft</td>
<td>Adjacency: rink</td>
<td>Furnishings: (1 men 1 woman), full height lockers, counter and mirror space, w.c.‘s, lavatories, urinals, and showers.</td>
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</table>
Spectators and Media

Mixing Area
Function: This is a place where the media can hold interviews.
Space: 2000 sq.ft
Adjacency: Ice and Athletes entrance
Furnishings: N.A.
Concerns: Security and blocking of flow of other traffic

Desires: This space should allow the media to get interviews, but it should remain removed enough from the ice that it does not disturb other athletes and Olympic workers. There should be enough space where multiple interviews can be conducted without being on top of each other. Traffic on and off the ice and to other parts of the facility should not be disrupted either.
<table>
<thead>
<tr>
<th>Venue Staff</th>
<th>Media</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Storage</strong></td>
<td><strong>Media Stand</strong></td>
</tr>
<tr>
<td>Function: extra storage</td>
<td></td>
</tr>
<tr>
<td>Space: 18000 sq.ft</td>
<td></td>
</tr>
<tr>
<td><strong>Kitchen</strong></td>
<td><strong>Function:</strong> large press area</td>
</tr>
<tr>
<td>Function: food for meeting rooms and staff</td>
<td></td>
</tr>
<tr>
<td>Space: 1100 sq.ft</td>
<td></td>
</tr>
<tr>
<td>Adjacency: meeting rooms and staff eatery</td>
<td></td>
</tr>
<tr>
<td>Furnishings: typical kitchen</td>
<td></td>
</tr>
<tr>
<td><strong>Staff Eatery</strong></td>
<td><strong>Rest room</strong></td>
</tr>
<tr>
<td>Function: staff meals</td>
<td></td>
</tr>
<tr>
<td>Space: 1500 sq.ft</td>
<td></td>
</tr>
<tr>
<td>Adjacency: kitchen</td>
<td></td>
</tr>
<tr>
<td>Furnishings: tables and chairs</td>
<td></td>
</tr>
<tr>
<td>Janitor Closet (2)</td>
<td></td>
</tr>
<tr>
<td>Function: storage</td>
<td></td>
</tr>
<tr>
<td>Space: 300 sq.ft. combined</td>
<td></td>
</tr>
<tr>
<td>Adjacency: kitchen and elevator</td>
<td></td>
</tr>
<tr>
<td><strong>Press Room</strong></td>
<td><strong>Meeting Area</strong></td>
</tr>
<tr>
<td>Function: press conferences</td>
<td></td>
</tr>
<tr>
<td>Space: 3000 sq.ft.</td>
<td></td>
</tr>
<tr>
<td>Adjacency: interview room</td>
<td></td>
</tr>
<tr>
<td>Furnishings: long tables</td>
<td></td>
</tr>
<tr>
<td><strong>Interview Room</strong></td>
<td><strong>Desires: movable walls</strong></td>
</tr>
<tr>
<td>Function: interviews</td>
<td></td>
</tr>
<tr>
<td>Space: 3000 sq.ft.</td>
<td></td>
</tr>
<tr>
<td>Adjacency: press room</td>
<td></td>
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<td>Furnishings: long tables</td>
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<td></td>
</tr>
<tr>
<td>Adjacency: kitchen and elevator</td>
<td></td>
</tr>
<tr>
<td><strong>Rest room</strong></td>
<td><strong>Press Room</strong></td>
</tr>
<tr>
<td>Space: 1600 sq.ft.</td>
<td></td>
</tr>
<tr>
<td>Adjacency: Media areas</td>
<td></td>
</tr>
<tr>
<td><strong>Press Room</strong></td>
<td><strong>Meeting Area</strong></td>
</tr>
<tr>
<td>Function: press conferences</td>
<td></td>
</tr>
<tr>
<td>Space: 1000 sq.ft.</td>
<td></td>
</tr>
<tr>
<td>Adjacency: interview room</td>
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<td></td>
</tr>
<tr>
<td><strong>Meeting Area</strong></td>
<td><strong>Desires: movable walls</strong></td>
</tr>
<tr>
<td>Function: conferences</td>
<td></td>
</tr>
<tr>
<td>Space: 13000 sq.ft.</td>
<td></td>
</tr>
<tr>
<td>Adjacency: press room</td>
<td></td>
</tr>
</tbody>
</table>
**Venue Staff**

**Ticketing and Security**
- Function: main security
- Space: 3500 sq.ft.
- Adjacency: entrance
- Concerns: security of entrance and ticket funds

**Kitchen**
- Function: food for meeting rooms and staff
- Space: 1100 sq.ft.
- Adjacency: banquet hall
- Furnishings: typical kitchen

**Blue/Red Cross Station**
- Function: Medical Services
- Space: 1500 sq.ft.
- Adjacency: entrance
- Furnishings: Cabinetry for Medical Supplies, three Medical Beds for patients to lie down.
- Concerns: exit to exterior for ambulance

**Information and Security**
- Function: Arena info.
- Space: 800 sq.ft.
- Adjacency: entrance
- Furnishings: information desk and large computer desks for security

**Concessions + storage**
- Function: Serve food and Beverages
- Space: 7600 sq.ft.
- Adjacency: stands
- Furnishings: Temporary Structures containing counter and food preparation space, access to all electrical needs for food preparation. Large one is for sponsor, McDonald's.

**Vendor Lobby**
- Function: sales
- Space: 6500 sq.ft.
- Adjacency: entrance

**Athletes and Family**

**Athlete’s Lounge**
- Function: a space for teams to gather and cheer for their teammates
- Space: 600 sq.ft.
- Adjacency: Athlete’s seating
- Furnishings: sitting area pods, several chairs and tables, telecommunication hookups
- Concerns: privacy and intimacy
- Desires: This should be a place that athletes can sit in a more comfortable environment. It should have a similar setting as VIP lounges.

**Lounge**
- Function: allows the family to get away from the rink and have private conversations with the athletes
- Space: 350 sq.ft.
- Adjacency: Olympic family seating
- Furnishings: sitting area pods, several chairs and tables, telecommunication hookups
- Concerns: privacy and intimacy
- Desires: This should be a place that families can go escape the happenings on the ice for a more intimate setting.

**Athletes/Performers and Family**

**Concessions + storage**
- Function: Serve food and Beverages
- Space: 1 p.o.s /300 fan 5000 sq.ft
- Adjacency: stands
- Furnishings: Temporary Structures containing counter and food preparation space, access to all electrical needs for food preparation. Large one is for sponsor, McDonald's.

**Vendor Lobby**
- Function: sales
- Space: 6500 sq.ft.
- Adjacency: entrance
Spectators and Media

North Entrance
Function: entry from subway
Space: 6000 sq.ft
Adjacency: security

South Entrance
Function: entry from park
Space: 4000 sq.ft
Adjacency: security

Public Gallery
Function: displays
Space: 3500 sq.ft.
Adjacency: lobby

Cafe
Function: year round cafe
Space: 2500 sq.ft.
Adjacency: exterior
Furnishings: tables and bar
Desires: For this to become used by the community

Concessions + storage
Function: Serve food and Beverages
Space: 1 p.o.s /300 fan 5000 sq.ft
Adjacency: stands
Furnishings: Temporary Structures containing counter and food preparation space, access to all electrical needs for food preparation. Large one is for sponsor, McDonalds.

Rest room
Space: 2 men and women’s at 1200 sq.ft., 1 at 1600 sq.ft.

VIPs Lounges
Space: 8 at 500 sq.ft.
Adjacency: stands
Furnishings: sitting area and bar
Concerns: privacy and intimacy

Meeting Hall
Function: Olympic announcements
Space: 20 000 sq.ft.
Adjacency: kitchen

Media Lounge
Function: a space for media to watch the events off of the clock
Space: 600 sq.ft
Adjacency: rink
Furnishings: sitting area pods, several chairs and tables, telecommunication hookups
Concerns: privacy and intimacy
a place that athletes can

Banquet Hall
Function: civic functions
Space: 20 000 sq.ft.
Adjacency: kitchen

Cafe
Function: year round cafe
Space: 2500 sq.ft.
Adjacency: exterior
Furnishings: tables and bar
Desires: For this to become used by the community

Rest room
Space: 2 men and women’s at 1200 sq.ft., 1 at 1600 sq.ft.

VIPs Lounges
Space: 8 at 500 sq.ft. and 3 at 700 sq.ft.
Adjacency: stands
Furnishings: sitting area and bar
Concerns: privacy and intimacy

Cafe
Function: year round cafe
Space: 2500 sq.ft.
Adjacency: exterior
Furnishings: tables and bar
Desires: For this to become used by the community
| Spectators and Media |
|-----------------------|-----------------|-----------------|-----------------|
| **Cafe**              | **Rest room**   | **TV broadcast/ Scoreboard Control** |
| Function: upper level sitting area | Space: 1 mens and 1 womens: 1200 sq.ft. | Function: control area for TV stations and central computer system |
| Adjacency: lower level cafe | Furnishings: tables and chairs | Adjacency: rink |
| Furnishings: tables and chairs | Concerns: no access to upper level concourse | Furnishings: room long desk with computer outlets |

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| Spectators and Media |
|-----------------------|-----------------|-----------------|
| **Cafe**              | **Rest room**   | **TV broadcast/ Scoreboard Control** |
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The following section is some of the precedence I used to inform my program and concept. The diagram to the right came at the same time as I was searching for how the concept of motion could influence architecture. The motion precedence helped with this as well. Before deciding how I would represent motion and the idea of trace in my design I first had to look at the ways in which it had been done.

In looking for precedence I also wanted to look at theories that could serve as a guide for my design. The final precedence is the work of the Italian Futurists. Their theories were guided by the notion of designing for the times with materials and ideas that represent it, which for their time (and I see as still relevant today) is speed/motion and dynamic form. Filippo Marinetti expressed this idea in the 1908 Foundation Manifesto of Futurism, “Time and Space died yesterday. We already live in the absolute, because we have created eternal, omnipresent speed.” It was also expressed in the first architectural work of the Italian Futurists, The fiat factory in Turin. Turin was also home to the first Italian Futurist exhibition. After discovering this I felt even more strongly about using these theories as a guide, because Turin seemed its birthplace. It seemed only right to continue in a style that was truly theirs.
The Qwest Center has become my main focus for precedents because it has a very similar function to the Palavela, in that it can change functions between sport and civic venues. The ease at which it can become different events attracted me to the project. From sport to concert to trade show in a matter of hours in an impressive feat. The 1,030,000 sq.ft complex houses many functions easily accessible (or not depending on the occasion) to one another as both convention center and arena. The goal of the Qwest center is not only to bring first class entertainment to Omaha, but also to anchor the development of the area. Situated on 10th street along the interstate corridor to Iowa the Qwest center has become an icon viewed from I-480 with its massive roof that could fit a 6-story house underneath. Its program includes:

- Exhibition Hall 194,000 sq.ft
- Assembly Space 60,000 sq.ft
- Public Lobbies/Pre-function and Registration 93,000 sq.ft
- Support Spaces 16,400 sq.ft
- Service Areas 15,985 sq.ft
- Food Service Areas 11,400 sq.ft

Although its capacity is much larger than that of the Palavela it functions in much the same way. Ideas such as how people move through the space and what type of facilities will be necessary in the program were derived from the Qwest center for my project. How the space expands and contracts based on the event will be a primary focus of my research. Although even at half house the arena seats much more than the Palavela's capacities:

- Basketball 15,500
- Hockey 14,700
- Arena Football 14,300
- Center Stage 17,000
- End Stage 15,000
- Half House 12,500
8,500, the methods in which the size decreases will be similar. Through the use of movable walls of seating and curtains the facility is able to transition and create more intimate or unique setting. As said before, this can all be done within a matter of hours. Which not only increases flexibility but also revenue. The Palavela was at one time a theatre that was not doing well towards the end, so in order for it to survive taking cues from the Qwest Center will be important to create a post-Olympic center that appeals to the many needs of the community, like the Qwest Center does.

Flexibility of space is done through many means in the Qwest Center, and not only in the arena. Areas such as the exhibit and banquet halls can be opened up or divided through the use of moveable partitions. This feature will be used in my scheme as well in order to create new spaces one the Olympics is over. The flexibility of the arena is very impressive in that there seem to be an unlimited amount of possibilities. The space has been used for everything from sports; to circuses, rodeos, and will this year hold the Olympic swimming trials in which two temporary swimming pools will be built. What is used such as structure and materials will be studied in order to better understand how the space can be as flexible as possible.

The Qwest center used a variety of materials to create the structure. One important aspect is the long span roof. The roof was constructed of a single-ply EPDM membrane system roofing with exposed structure. To give an idea of the span the cantilever roof spans 575 feet with a typical truss depth of 13’-6”. Truss spans include 75, 84, 90, and 150 foot lengths. Overall the building was constructed using 10,000 tons of structural steel and 18,000 yards of concrete. Its structure will also serve as a precedent when deciding what material might best be used in my own design.

The Qwest center, through the help of the DLR Group, will become an ongoing study of how a building of this type functions in both the human aspect and the technical.
I chose this civic center because like Gehry’s other works it has an expressive form. One can see that the interior of the arena is unlike most, in that attention has been paid to the form of the seating instead of going with a standard bowl form. The design also pays attention to the site and how people activate the building. Because it is an urban site the design uses the space for performance events as well as civic functions, such as, an ice skating rink on the rooftop. Its space usage and expressive form made it an ideal precedence.
The Munich Olympic Park may seem like an odd precedent because it is an outdoor facility, but there were two different ideas about the park that related to my project; the first being that all of the structures in the park were given the same structural language. By using these tensile roof structures throughout the park the buildings become unified no matter their function. In my own design I hope to connect the park functions and electrical building in a similar fashion.

The second aspect of the design that attracted me was the Plexiglas roofing system and the idea behind it. Not only was it an inventive and inexpensive way to protect viewer from the elements, it also served a much greater audience, the television audience. Television was becoming increasingly important to the success of the Olympics during this period. The Germans took every advantage to create structures that would enhance the viewing experience. The Plexiglas enclosure was designed to enhance the color viewing of the Olympics, as well as, take the heat that was produced by the lighting. Martin Wimmer in the book Olympic Buildings, states the importance of television on the Olympics, "Due to television transmissions, the sports grounds themselves are brought into the limelight as a permanent background and environment. Their design must be telegenic and, at the same time, produce an effect which sets architectonic standards. As permanent objects of site, they have become the most popular buildings in the world, impressing the idea of modern architecture on millions of people both consciously and involuntarily (70)."

The text Olympic Architecture by Barclay F. Gordon also refers to the impact the structure had on the camera and vice versa, "The forms are full of excitement and posses all the potential energy of a drawn bow. So powerful is the solution, in fact, that it becomes no bad metaphor for sport itself: for muscle and sinew straining toward their ultimate, but captured by the stop-action camera in an instant of extraordinary kinetic grace (125)."

Munich’s attention to how the camera affects the building is something I hope to explore throughout my design. As more viewers watch the games from their couch than the stands it is the camera that captures the motion and emotion of the sport.
The reason I chose the Oslo ice-skating rink was simply because it seemed so clear and simple in its representation. It was almost because it seemed so clear that it became kitschy, a Venturi example of a duck. I could find very little information on this building so I am only speculating when I say this, but its fluid, snow covered hill form seemed to very simply to represent its Norwegian surroundings. I am drawn to the simplicity of form, and what I assume is an attempt to relate to its surroundings. I would almost go on to further suggest, at least from this aerial perspective that it very much portrays a sense of motion, as if nestled in the hillside it might become the site for some slalom skiing. I do know however, that the facility seated 11,000 fans and is still in use today in as a hockey and skating facility. However, it was given a roof in the 1960’s. Much of my analysis may only be speculation, but I thought it an interesting example nonetheless.
The Palazzo Dello Sport is the most well known structure of Rome’s 1960’s Olympic games. The building was originally designed for basketball seating 16,000 people. It is praised both for its interior aesthetics and almost perfect sightlines. But, its greatest achievement is the stunning concrete dome. The dome is 100 meters in diameter formed from 144 pre-cast, reinforced concrete ribs. Its luminosity comes from 288 lamps within the ribs. It is a dome mastered through its details harking back to Rome’s ancestry.

The details do not end in the arena, but a throughout the structure. As one can see from the photograph of the corridor attention to detail and for create a stunning formal grace. One might also notice the stairs against the place and the wall of windows wrapping the corridor. Nervi’s attention was also drawn to how people view from both inside and out.

I found this structure so provoking at first glance with its ethereal dome. I think it’s a fantastic example of a large span concrete roof that yields a sense of lightness about it. While the exterior might not be as light, looking very mechanical due to a collaboration of architects and battling of wills; the interior manages to make up for it in an elegant grace. I find this example to be a precedent for both structure and interior space.
The Velodrome was the venue for track cycling for the 2000 Summer Olympics.

The first thing that caught my eye about the Velodrome was its roof structure. It is a 130 x 150 meter dome diagonal gridded steel structure. Not only is it aesthetically pleasing but also is extremely efficient in its design, as is the entire building. Not only does the roof let in daylight, but it also vents the space. As a sustainable design the Velodrome heats and cools its 3000 spectators using entirely passive means. The day lighting and buoyancy driven ventilation system is fully integrated into the architecture. While I do not plan of undertaking LEED accreditation in my project, the use of day lighting was one that I thought was very practical and beautiful. The roof structure is also interesting in its form from the exterior. The design based on a cyclist’s helmet portrays the technology of the sport through their equipment.

Another aspect about the design that was very successful was the designing of the building around the very organic nature of the track itself. The design responds to its curves and does not try to distract from the event. From the color choices to the placement of offices and stairs it responds to the organic track and works with it to form a very energetic space.
An important aspect of creating my concept is the study of motion. For a sport, motion is the very basic essence its foundation. Motion can be represented in many medias: art, architecture, photography, etc... The next section will concentrate on the effect motion has on architecture. In order to better understand motion architecture I began by breaking the subject into groups:

- Architecture as a representation of motion or speed
- Architecture that moves
- Architecture creating the experience of movement
- Architecture being created from a language evolved from motion

These first two objects are other media showing that motion can traverse medias, as well as, be represented in 2D and 3D, but still evoke movement.
Motion

Architecture as a representation of motion or speed

Einsteinturm
architect: Erich Mendelsohn

Designed around Einstein’s theory of relativity, the Einsteinturm was inspired by the currents of electromagnetic fields. He turned to concrete in order to create his ideal organic form, a form very much inspired by movement.

Aquatic Center London 2012
architect: Zaha Hadid

The S-shaped roof was inspired by the flow of water prevalent on the building’s riverside location, but has also been said to represent the butterfly stroke of a swimmer.

The Blur Building
architect: Diller & Scofidio

The Blur Building by is a media pavilion for Swiss Expo 2002. In the Glass Box, a space surrounded by glass on six sides, visitors will experience a “sense of physical suspension only heightened by an occasional opening in the fog.” Visitors receive a smart raincoat as protection and for communication with the cloud’s computer network.
The Walking City  
architect: Archigram

Archigram came about in a time of great social change for Europe. These cities were meant to challenge and provoke thought among all, not just designers. These cities were explorations of technology being used to create cities of change and adaptability. A place where the globe could be explored by an entire city, a place of flow and movement.

Flat Factory  
architect: Giaccomo Matte-Trucco

Considered the first work of Italian Futurism the Flat Factory’s design was based on a rooftop test track. Designed by a naval engineer the factory in considered a mastery of concrete and steel, and a true embodiment of Italian Futurist ideals.

Tatlin’s Tower  
architect: Vladimir Tatlin

Tatlin’s futuristic tower was to be built in iron, glass and steel taller than the Eiffel Tower. The form was similar to that of a DNA double helix. The design called for three building blocks inside, which would rotate at different speeds. The first one, a cube, once a year; the second one, a pyramid, once a month; the third one, a cylinder, once a day. The buildings would also display new as it was happening.
Arnhem District Station
architect: UN Studio

This station supports six different transport systems. The idea was that these systems can be channeled, incorporating all of the functions, and then create a new type of interrelated movement. This then creates a new form of moving landscape.

United Airlines Terminal
architect: Helmut Jahn

“Rather than using form as quotations as orthodox duplications of a historic style, we seek conceptual relationships to response of a building to site and to context, entry and procession, spatiality, ornamentation, symbolic associations of historic forms.” - Jahn

Lights seem to trace the movement.

Bibliothèque Jussieu
architect: Rem Koolhaas and OMA

In this unrealized scheme Koolhaas folds the actual levels of the floor creating a promenade through the entire building. The folding allows for access and views. The creation of this path is to entice the visitor to keep moving and interact, as if it were a city street.
Arnhem H2O Pavilion  
architect: NOX Architects

This structure was used by meshing two different languages, one being water and the second digital media. Not only does it use water's various forms to generate its organic form, but it also uses interaction from the visitor. The form responds to the movement of the visitor changing the rhythm of the building.

Geneva-1995

conceived for the 50th anniversary of the United Nations in Geneva, the project is a frozen trace of a disappearing dance (a duet) - a capture of movement or difference. Materialized as a double tessellated surface of aluminium, both structure and surface, alternately ephemeral or visceral, benign or aggressive, the piece celebrates the potential offered by computer generation.

taken from http://www.newitalianblood.com/show.pl?id=687
ITALIAN FUTURIST MANIFESTOS

Dynamic, light and shadow, virtue of scientific discoveries, animation of crowds, interaction of planes, undorned materials, dynamic lines, economy of materials, harmonize with the environment, lightness of materials, necessity = form, emotion, tactile sensation, designed for speed.

- architecture
  - Harmonize with the environment
  - Materials have lightness and elasticity
  - No reproductions
  - No costly massive materials
  - No decoration
  - Colored, elliptical lines are dynamic

- painting
  - No longer fixed but dynamic sensations
  - Rebels against "harmony"
  - Paints at the table, crazy
  - Rapid presentation between courses

- music
  - Enharmonic music a conquest of futurism
  - Musical animation to crowds, aeroplanes, trains, battle ships
  - Introduce sound, weight, and smell
  - Express the materiality and its nakedness
  - The symmetry of light and interpretations of light and line

- literature
  - Destroy syntax
  - Use symbols of math and music instead of punctuation

- cinema
  - Show emotion instead of speaking
  - Combine painting, sculpture, and architecture

- textiles
  - Practical and comfortable
  - Brilliant color

- sculpture
  - Destroy noble materials: bronze and marble

- cooking
  - No utensils, it gets rid of the tactile sensation
  - Create food that deals with the fast lifestyle, suited for speed

- architecture
  - No reproduction

- textiles
  - Economy of materials
  - Helpful color

- sculpture
  - The synthesis of the vibration of light and line

- literature
  - Destroy syntax

- cooking
  - Create food that deals with the fast lifestyle, suited for speed

- architecture
  - No reproduction

- textiles
  - Economy of materials

- sculpture
  - The synthesis of the vibration of light and line

- literature
  - Destroy syntax
The following page is the initial site design.

The site has two main concepts:
- movement
- water

The site had an inherent movement going from both North to South and East to West. In both case there is a movement from the organized to the organic. On the North edge of the site, lines of trees previously existed. The site design began by taking those lines and extending them through the site in the form of paths and foliage. These lines stretch through the park, but becomes organic when it meets the boundary of the existing park.

The primary paths break this movement. The concept for these paths was a drop of water and using the ripple to affect the landscape. These ripple would not only be a way to create interest and motion on a relatively flat site, but to also create areas of boundary in some case and places to sit. An example of this would be area 20, the idea was that the landscape would become small areas where one could rest their back, similar to the idea of Hyde Park in London, when public chairs are brought out during nice weather, but in this case the landscape itself creates the chair. Around the playground the ripples

The overall design goal for the site was to bring activity through the entire site. This activity is meant to bring the community, as well as, visitors through the entire site instead of being isolated to either the existing park or the area around the arena. The building is a continuation of that fluid movement, as it becomes a continuation of the existing colonnade. The building was placed in the area seen here because of three key factors. Firstly, by pushing the building to the North end of the site the park is lengthened creating more area for activity. Secondly, The building is placed on top of the ring road that cuts through the site. This allows the motion of the traffic to become incorporated in the building. It also makes the building a focal point from that road. Thirdly, the boundary of the building was created from extending the trace of the pond’s colonnade into the trace of a figure skater’s jump on the site.
conceptual design

The succeeding site design is similar to the initial in most respects. The main change is the direction of the primary paths. As one can see, initially they were lined up to match the grid of the streets so that there would be a straight sight line for anyone walking towards the building. However, they did not emphasize a progression and movement towards the building. In the second scheme I went back to my earlier idea of using the diagonal lines based of the lines of the original Palavela roofline. This both creates a progression to the entrance and café, but also makes a nod to the trace of the old structure. Rearrangement of the main paths also makes more sense with the public transportation in the area.

The second change was to the design of the three nodes along the primary path. The concept goes beyond just the ripple and looks at three different movements of water. The North-most node is the idea of frost. A grid of poles that produce steam are set amongst a grid of trees. In the winter the poles will create frost in the trees, and in the summer a cooling mist. The area would serve as a platform for vendors during the Olympics, with the poles becoming their electrical outlets. The second node is the concept of fog. Mesh rectangles with fans blow cool air over heated water creating fog. These blocks not only produce cool air, but also remain as obstacles that the fog must surround, similar to the way fog settles in valleys. Also, blocks are made of a fine screen mesh that catches the fog and recycles it back into the pond. This idea was taken from fog catchers used in countries in need of water. The final node is the ripple, but simplified a great deal more now. The ripple is still a playground. The rolling hills become areas of play and observation. In the middle of the play area are fountains for children to play in.

The changes from the initial design create a better flow between the park and the building as a whole. The previous scheme’s paths were cutting the motion across the site instead of enhancing it. This scheme bridges the park and the building both from a birdseye view as well as the pedestrians.
These are the three initial study models. At the end of the first semester the first two had led me to the third. Here the first two have explanations along with criticism. With both of these study models the concept is similar. The idea is that the back of the building (the North-West side) a fluid motion corresponding to the fluidity of the fast paced traffic going underneath and alongside the building. This smooth motion then becomes disjointed as it transitions to the front through the building. The idea is that the building is thrusting in motion. The back edge represents the grace of a skaters’ blade edge while the front represents the break of this motion in the form of a skaters’ stop. When a skater stops the fluidity of the motion disintegrates into a chaotic spray of ice. This is done through the structure of the building as the façade becomes fragmented towards the front. The structure then becomes a trace of this chaos as the building disintegrates into bits and pieces of its materials.
In the next iteration the roof will become a combination of the two schemes. From the first scheme the scale of the roof seemed too high so it was not becoming part of the landscape. However, it seemed successful in that by lifting it off the ground it allowed the park to pass underneath. By combining the grace of the curve from the second and raising it off the ground from the first it will still be monumental but will be better integrated into the landscape.

The second entry is more successful in conveying the concept of fluid to disjointed movement. However, the function of the building (the rink) becomes disguised. In the next iteration this function should be more prominent.

In neither scheme was the park design being addressed enough. At the start of the design it was thought that the building would be integrated into the existing park. However, as time progressed it became clear that the site was too important not to design it as well. In the last half of the semester more of the project focus has been shifted to the park design with the building becoming a part of it rather than dominating it.

The existing colonnade should still be incorporated into the building design, which will disguise the electrical building.
This third iteration came about in order to do two things. Firstly, it was done in order to see the building on the newly designed site. Secondly, it was to try a third iteration of the roof. The idea was to try and combine the graceful curve of the second with the raised up curve of the first. It achieved a graceful curve, but did not achieve the ideal look on the other side. I consider the second iteration to be most successful and representative of my concept, as far as the roof goes, thus far.

In this iteration more of the rink become revealed from the exterior. One could see this view from the apartments across the street.

This again is the idea that the rink would break through the fluid line of the front façade.

Another benefit to moving the electrical building to this spot is that it provides a visual and to the playground, and by doing so creates a wall between it and the highway.

This shows the flat site becoming more dynamic, as well as, becoming strongly tied in with the overall concept.

The electric building again becomes part of the overall design. In this scheme it was moved down to the end of the building in order to block less of the building.
After the first semester review some suggestions had been made as to the form of the building. In the initial designs the rink had been running perpendicular to the building in order to represent the idea of chaos. It was suggested that this gesture cut the fluidity of the overall design. It was here that I took a closer look at my initial concept of fluidity and chaos creating dynamic form both within the roof and the plan.
The floor plans took on many iterations over the next semester. Many of the basic program and room placements were the same, but it was a matter of refining its guiding concept. The concept of the functions “skating” around the rink was a challenge because often in created odd angles. Much of the changes were about fine-tuning the room shapes and placements in order to meld function and concept.
While readjusting the form of my building it was also important to find a structure that would support a long spanning and organic form. My inspiration came from the Waterloo Terminal Station in London. Its space-frame structure provided the necessary 350’ span and still allowed a curving roof form. At the time it was my intention to make the structure pass both inside and out of the building. While in the final design this is no longer the case, the space-frame structure is still the structure used.
Roof Structure

The roof precedents was chosen because these steel truss arches with hinges allow the member to go both inside and outside of the roof. The Waterloo Terminal by Grimshaw also spans the distance necessary for an arena. My structure will have a depth of 12 feet with a span of 350 feet.

Column design with skylights

This crematorium by Axel Schultes Architects attracted me because of both the chaotic nature of the design, and for the light it let in. Because the weight of the roof lies on the exterior walls a different structural design was necessary for my project; instead, concrete beams of 8 foot deep will rest on the column with a skylight on top. The roof above this structure will be a green roof.

Palais Omnisports de Paris-Bercy in France

Window Structure

This mullion design on the Waterloo Terminal was chosen as a precedents because of it’s unobtrusive nature. The idea for the back façade is that it would appear as one seamless curve so as to create a fluidity across the surface like that of the traffic underneath. This structure allows me to do this, as it is minimal in appearance.

motion changing glass
The design concept for this model was the still adhering to the fluidity and chaos that occurs in ice-skating. This model more clearly than the previous represent the dynamic nature of skating. I saw the design of the “motion wall” being the fluid side, as traffic is constantly passing underneath, along with its smooth curvilinear form. I see the fluidity then melding into chaos in the form of the roof. This chaos I compare to when a skater stops or lands from a beautiful jump as the ice scatters in disorder. It is my commentary on skating being not only a picturesque sport, as these athletes make such graceful movements, but one of power and force as well.

In this model the dynamic nature of the building was apparent, but the roof or “chaos” was less dynamic than I had hoped for. Other commentaries concluded that the roof, because it stayed mostly in the same direction, which was perpendicular to the rest of the building, was again cutting off the fluidity of the building. It was clear that I must step back to my previous study models and recapture the sweeping motion across the site. Other suggestions included bring the two areas that bank the area more into the overall design instead of letting them play such a secondary role.
final design
**FOG**

The mesh rectangles have fans inside producing a cold wind over the heated pond creating a fog. The mesh acts as a trap for the fog, a tactic used in countries with water shortages, and re-circulates it back into the pond.

**FROST**

During the Olympics the poles are electrical outlets for vendors to access.

In the summer the poles create a cooling mist.

In the winter the mist will create frost on the trees.
ART- "THE JUMP"

This area connects the colonnade/screen with the building through the trace of a jump, it also creates a space for sculpture, becomes a piece of art itself, and creates an implied boundary between the play area and the highway.

RIPPLE

A play area bound by hills for playing and viewing
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In an age of technology, and the fact that it was a long semester, websites and texts were often visited and left unrecorded. There were also so very many during the span of a year. Here however is a listing of some of many:

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It is hard to write in a few words a thank you to all of the people who helped me get through these past six years.

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Lastly, to Josh, who not only endlessly supported me, but came to the rescue more than once.

With all my love,

Jenny
This is a diagram of the existing site. The numbers represent photographs of the site located on the following pages. In order to better understand the site one must first understand its context. The Palavela is situated in a large mature park, which is bound on the North and West and somewhat South side by dense residential apartments. These apartments are often seven plus stories high and home to many medium to lower income families. This places more importance on the site as a park, because it is the only backyard for these apartments. Another interesting aspect of the site is that while the Western side is residential, the Eastern side is a high-speed ring road that actually cuts underneath the site at its North end. This aspect will later play into the placement of my design on the site. Just East of the ring road is the Poe River, which provides a beautiful lush landscape. As one can see, the context of the site is very diverse from dense residential to the sparse river’s edge.

The site itself is full of lots of amenities that can be a draw to both the Olympic crowd as well as the community. Upon my visit to the site I was dropped off at the Northwest corner. My first view of the site was not the park but rather the parking lot for the Palavela, its electrical building, and docks. (The following pages will provide more information about the positives and negatives of the site) It was not until I made my way around the front/back of the Palavela that I saw this beautiful park. The park has a lot to offer: with a pond, playground, tennis courts, and even a daycare. However, as the site was situated the current Palavela did not really acknowledge the park, but rather seemed an object placed in it. As the Palavela was almost complete upon my visit it was clear to me that the Olympics had no intention of improving what was a beautiful yet somewhat rundown park.

It was here that I saw not only the need for a building that better represented the sport, but also one that represented the community. It was clear that the park and building could work together to create a cohesive Olympic site rather than just an Olympic arena.
1. secondary paths
2. subway station
3. conservatory/public garden
4. This path shows the traffic passing underground. In parts the traffic is revealed through skylights, but in others it is represented by a series of light that are connected in the speed of the cars.

Program of ground level
(seen program in book for space requirements and adjacencies, in the text the second level is not considered ground floor)
5. entry area
6. concessions/vendors/restrooms information
7. circulation space for entry two
8. media boxes
9. circulation to seating leading to a prime viewing point before the end of the access areas
10. entry two
11. exit at level 3 seating
12. public café
13. public gallery
14. ramp to underground parking for athletes/media/family (and public)
15. participating country flags
16. public area where during the Olympics tents could be set up
17. path to entry backwall for digital wall showing the latest scores and information
18. fountain
19. bus drop off and new stand
20. landscape farms/situated
21. electrical building
22. playground area
23. parks building
24. shelter for outdoor events (teachers and cafés)
25. ramps for skater to pond
26. tennis courts
27. basketball courts
28. daycare (existing)
29. colonnade (existing)
30. technical college (existing)
31. neighborhood comprised of high-rise apartment complexes
32. high speed ding roads
33. parkscape with several low rise office parks

Set Site: Concept
KEY
1. subway station
2. conservatory/public garden
3. This path shows the traffic passing underneath. In parts the traffic is revealed through dwellings, but in others it is represented by a series of light that are connected to the speed of the bars.
4. entry one
5. exit at level 3 seating
6. entry two
7. public sash
8. ramp to underground parking for athletes/media/family (no public)
9. participating countries' flags
10. public area where during the Olympics tents could be configured
11. fountain
12. bus drop off and news stand
13. playground area
14. electrical building
15. shelter for outdoor activities (adequate and safe)
16. parks building
17. ramps for skaters to pond
18. tennis courts
19. basketball courts
20. open space in ice, lift mechanism (existing) can continue
21. daycare (existing)
22. technical college (existing)
23. neighborhood comprised of high-rise apartment complexes
24. high speed ring road
25. park-scape with several low rise office parks
Roof Plan