

Friendship Community and Fitness Center

May, 2002

by

Barbara J. Sebastian

Thesis submitted to the faculty of the Virginia Polytechnic and State University, College of Architecture and Urban Studies in partial fulfillment of the requirements for the degree of

Master of Architecture

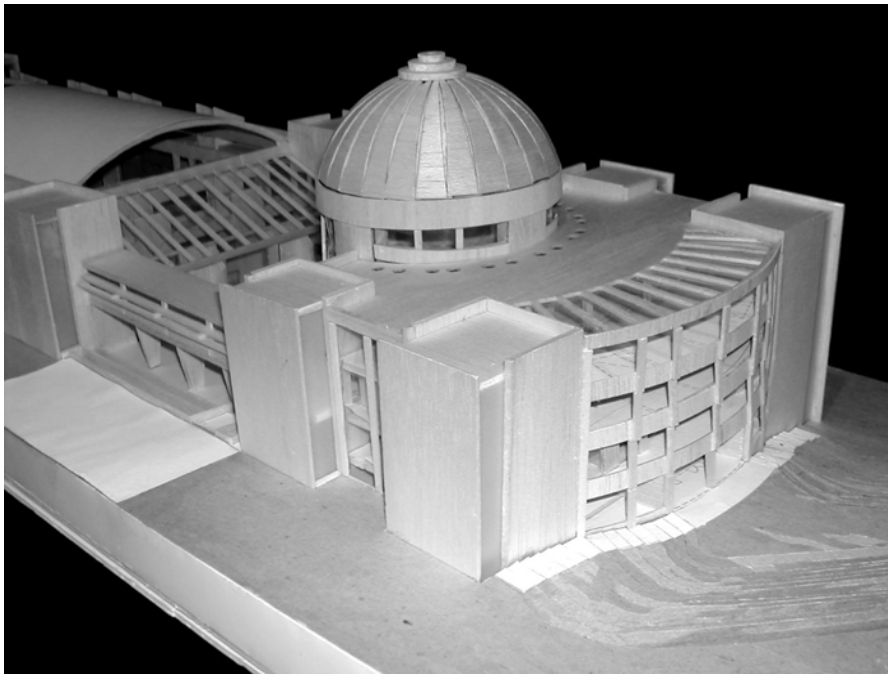
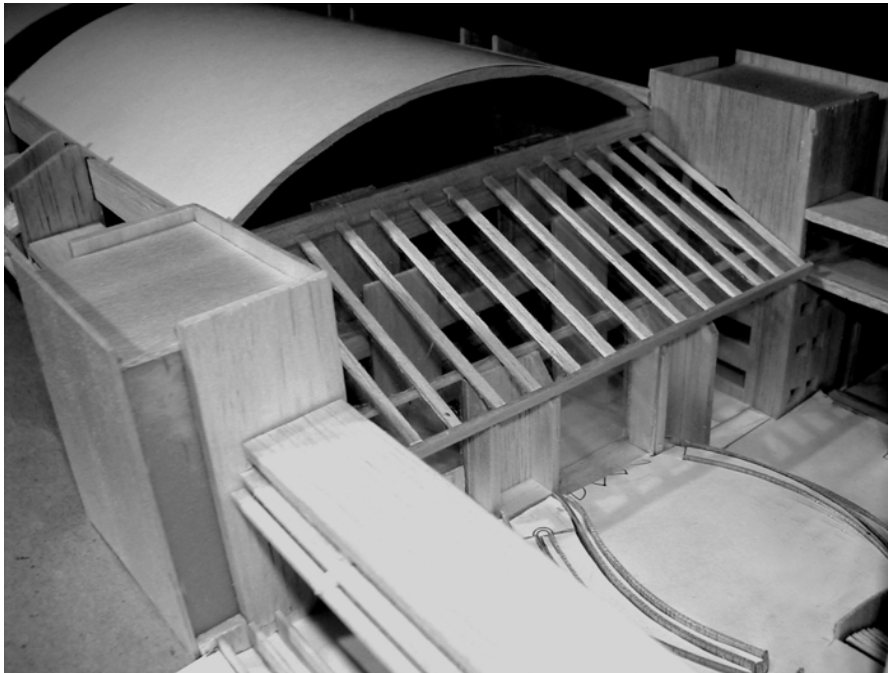
APPROVED:

Jaan Holt, Chairman

Marco Frascari

Joe Wheeler

May, 2002
Alexandria, Virginia



Abstract

I propose to design a facility that will be both a fitness center and a community center. The building will integrate a fragmented site, making the site a cohesive whole and making all parts of the site navigable through extensive terracing, inside and outside of the structure. Emphasis will be placed on making the community center more important visually than its larger counterpart, the fitness center.

Contents

Location	1
Project History	1
The Program	1
The Site	1
Concept Development	2
The Process	2
Final Drawings and Model	22
Conclusions	35
Vita	36

LOCATION

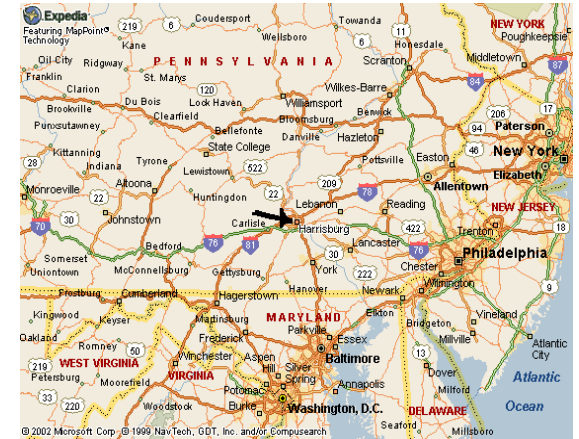
The project is located in Lower Paxton Township on the eastern boundary of Harrisburg, Pennsylvania. Harrisburg is the capital of Pennsylvania and is located in the south-central part of the state, about 50 miles north of Baltimore, Maryland. Lower Paxton Township is the second largest township in the state, with senior citizens being the single largest demographic group.

PROJECT HISTORY

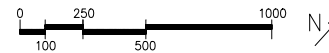
Originally, the senior citizens of Lower Paxton Township had wanted the township to provide them with a senior center, somewhere they could gather for socializing and meals. The township wanted to do this for them but realized that the other citizens of the township would resent having tax dollars spent on a facility to which they had no access. The township was also not willing to bear the expense of maintaining the requested facility. But the seniors persisted, and it was decided that the township would provide a facility with space allocated for each age group. The seniors would get their center, younger adults would get a fitness center with babysitting facilities, teens would get a teen center, and young children would get a preschool.

THE PROGRAM

The township's Department of Parks and Recreation occupied a small space in one of the township's buildings and desperately needed more room, so new offices for that department became a part of the program. Fitness center membership dues, preschool fees and rental office spaces would generate the income needed to sustain the building. The seniors planned to use their center from early morning to just after lunch. That space could then be rented in the afternoons, evenings and on weekends, providing additional income. The fitness center was to include a weight room, an aerobic room, one or two gymnasiums with a basketball court and enough room for three volleyball courts, a regulation size lap pool and a leisure pool that was to be rented to physical therapists during the day. On the wish list was an indoor running track and a diving pool. The program did not include any space where all age groups could come together or the public could gather for cultural activities.



EXISTING SITE PLAN



THE SITE

The site chosen by the township was Brightbill Park. The park had facilities for outdoor sports including softball fields, tennis courts, a soccer field, outdoor basketball and volleyball courts, and outdoor walking paths. There was also a playground for children and a picnic pavilion. The park is bordered on the north, west and east by residential areas. To the south is commercial property, mainly retail. One block to the south is Route 22, a very busy, major shopping strip. Access to the site would be primarily from that strip.

A nearby construction project had significant impact on the park. A shopping center was built on the lot abutting the park to the south and southeast. The land where the shopping center was built had been a hill prior to construction. The site was leveled and the excavated earth was held on site. During building, the part of the site adjacent to the park on the south was used to dump construction debris. The earth that had been removed was then used to cover the debris, creating a platform 20 feet higher than Brightbill Park and abutting the park on the south. That piece of land was then given to the township and became an extension of the park.

It was difficult to see the new enlarged park as one continuous property. The 20-foot high slope between the original park and the new addition was too steep to navigate and effectively split the site in two. I decided that the community and fitness center project should address this problem.

Another feature of the site is a view to the north of the Allegheny Mountains. These mountains affect the daily lives of the citizens in many ways.

CONCEPT DEVELOPMENT

One way to create a sense of cohesiveness on the site was to continue the existing paved walking paths onto the platform area. At the slope this would mean designing stairs and/or terraces. Terracing the entire slope would make it navigable but would not address the problem of site cohesiveness. By placing the new building on the slope and pulling terraces through the building itself, the two parts of the site would be connected and cohesive.

Bringing the approach to the building from south to north would keep the view of the mountains in front of you the whole way, incorporating the mountains into the design.

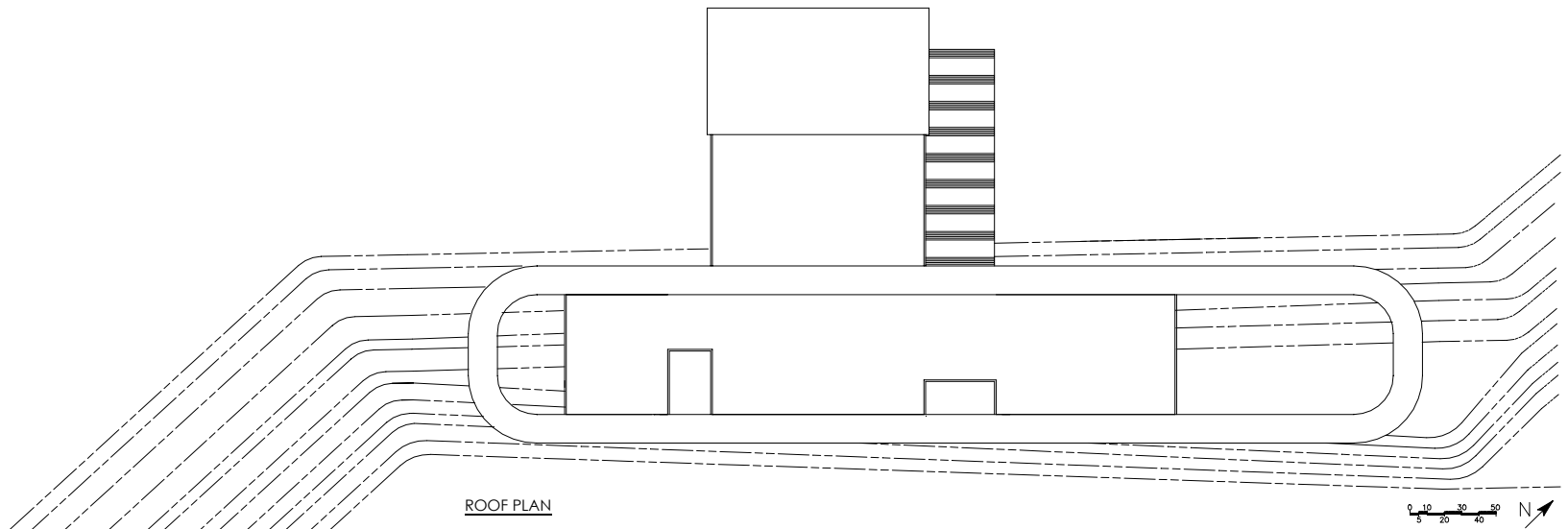
Research showed that walking/running and volleyball are the two leading leisure sports. The township's program already included space for three volleyball courts so they could accommodate tournaments here. An indoor running track was on the "wish list". There is only one indoor running track open to the public in the Harrisburg Area, and it is fifteen miles away from Brightbill Park. However, local joggers and walkers frequently take advantage of the malls for this activity. The local shopping malls open their doors early, around 6:00 a.m., to allow jogging. As Architects, we resent what shopping malls have done to our cities, but one must admit that they are interesting places to be. There is plenty for the joggers to look at while they run. Since walking/running was one the top leisure activities, the track would have to come off the "wish list" and go into the program, but it would have to be designed carefully. It would have to be unique and interesting to compete with the malls. A regulation size track would be best, if possible, so that competitive activities could be accommodated. That would mean a huge element on the facade, which would tend to give the track importance that it doesn't necessarily deserve.

Research of similar facilities indicated that noise was usually a problem. The noise comes from the squeak of athletic shoes and the bouncing of balls on the floor, and the shouting that typically accompanies athletic functions. In order to insure quiet in the community center, the program was split in two: a community center would hold all but the athletic type functions. A separate fitness center would house the athletic functions.

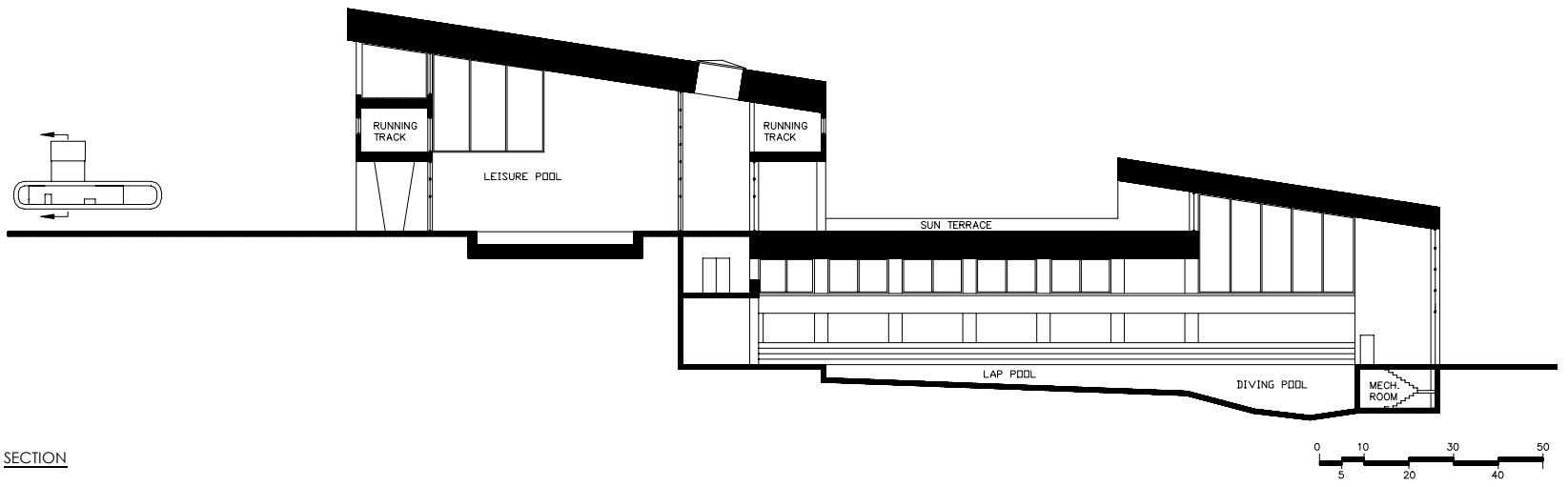
The seniors worked for many years to bring this project to fruition. They did most of the fund-raising and sat on all of the building committees. To reward them a very special space, if not the best space, would be allocated to the new senior center.

THE PROCESS

The slope on which the building was to be sited is very long. In order to build on as much of it as possible, the larger of the two buildings would have to go there. The largest building would be the fitness center, so design started there.

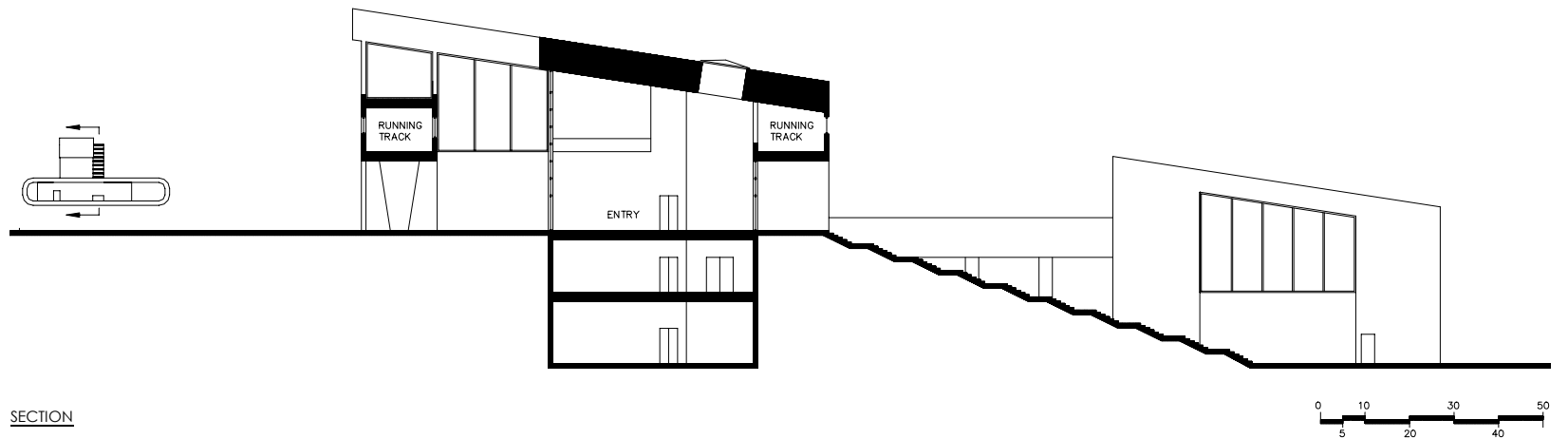


The building is sited on the slope. The running track is 1/5 mile long, smaller than the preferred quarter-mile track, but with such a large element there wasn't enough program to justify the larger version. The plan below shows part of the building extending beyond and below the running track and out into the relatively flat land north of the slope.



SECTION

The above section shows an early attempt to incorporate terraces into the building. The diving and lap pools are shown at the bottom of the slope extending out into the relatively flat land to the north. The leisure pool is at the top of the slope and a sun terrace extends out over the lap pool at the same elevation as the leisure pool.

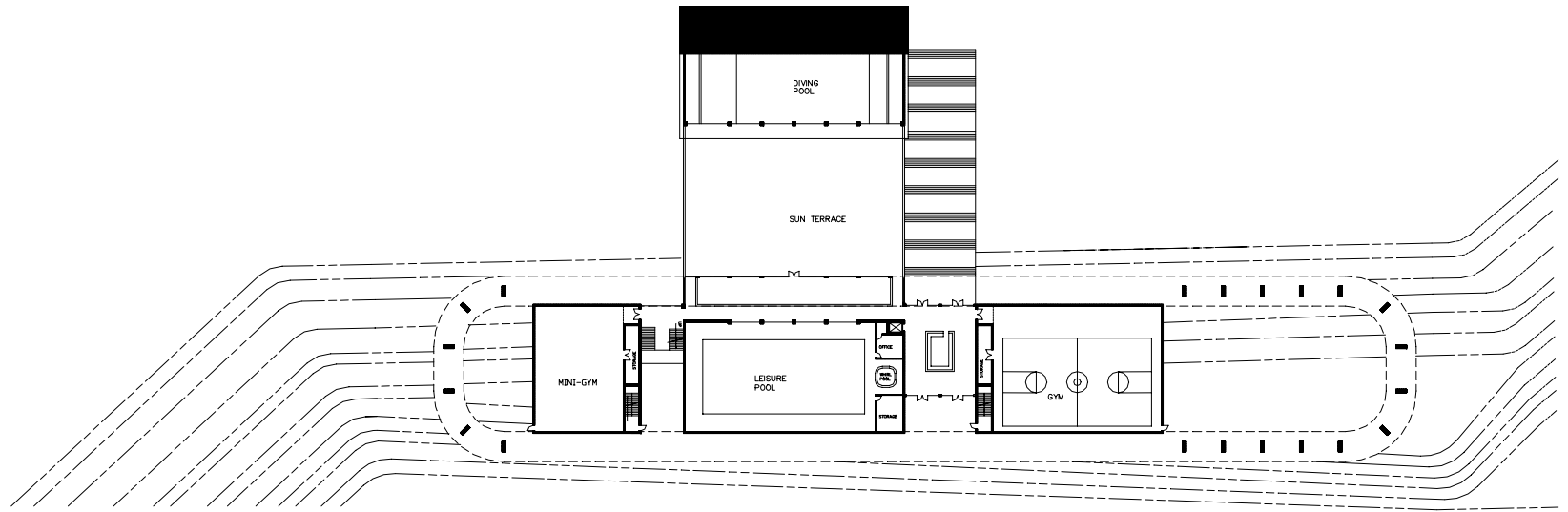


SECTION

This section shows the entry to the fitness center as a wall of glass recessed from the front of the building. Also shown are stairs outside the lap pool leading to another glass wall on the north side of the entry. This idea of accessing the building from both north and south will be carried through to the final design.

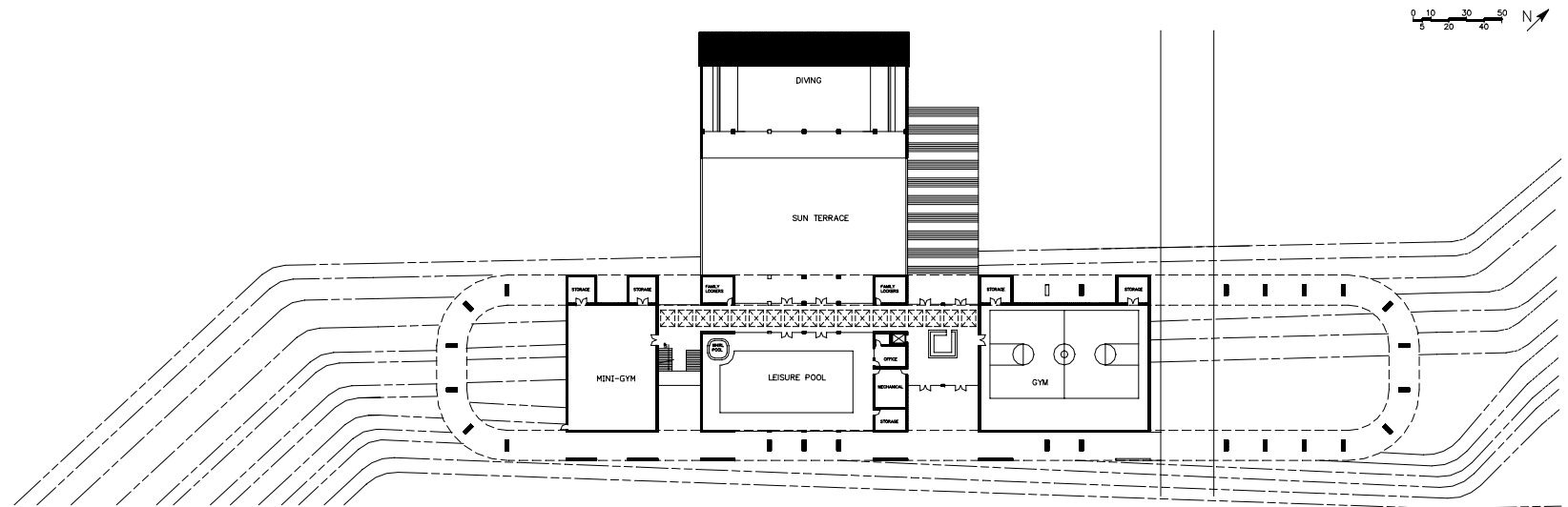
It is dangerous to have pedestrian traffic crossing a running track. With most of the building being placed inside the track, this became a major issue. The section shows the running track elevated one floor above the entry (on the top of the slope) which allows people to walk under it to enter the building.

In order to minimize the impact of the running track on the facade, a separate structural system was designed for it. This minimized the size of the beams supporting the track. The track is about movement and travel, and in some places it extends out in the landscape free of the building, like a bridge. Therefore, a support common in highway bridge construction, also shown above, was chosen.



PLAN - MAIN LEVEL

This floor plan shows the running track extending out from the building with most of the fitness center inside it. Since a standard size gymnasium is too small for three volleyball courts, a “mini-gym” has been added.

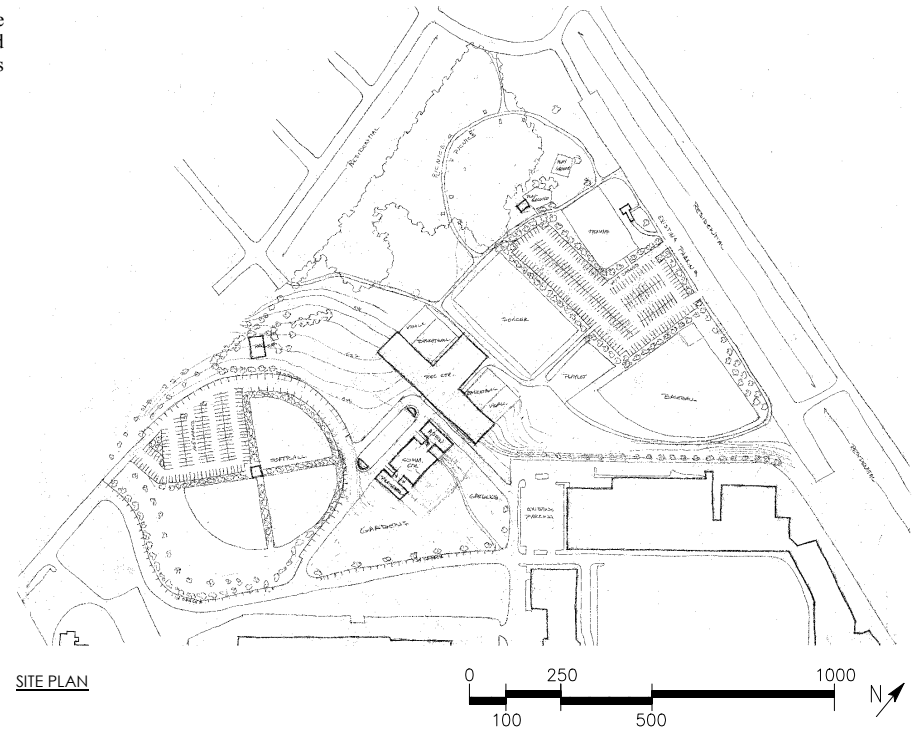


PLAN - MAIN LEVEL

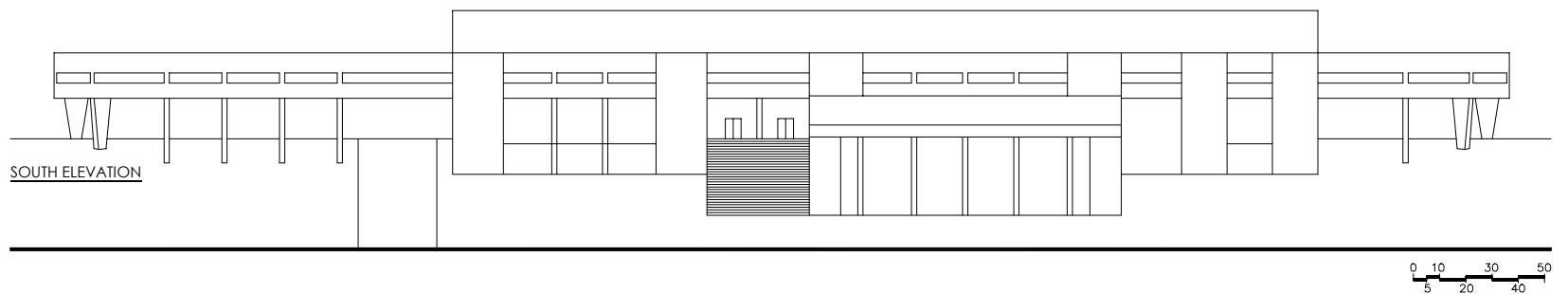
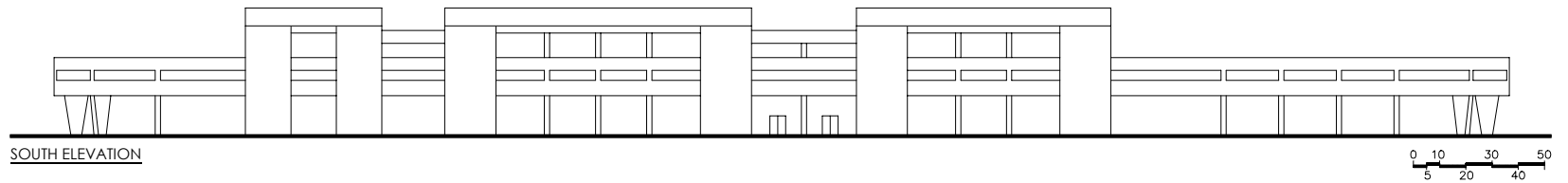
This plan shows an early attempt to utilize the slope outside the building. A road has been added on the east side of the building, an attempt to connect the higher and lower parts of the site for vehicular and well as pedestrian traffic.

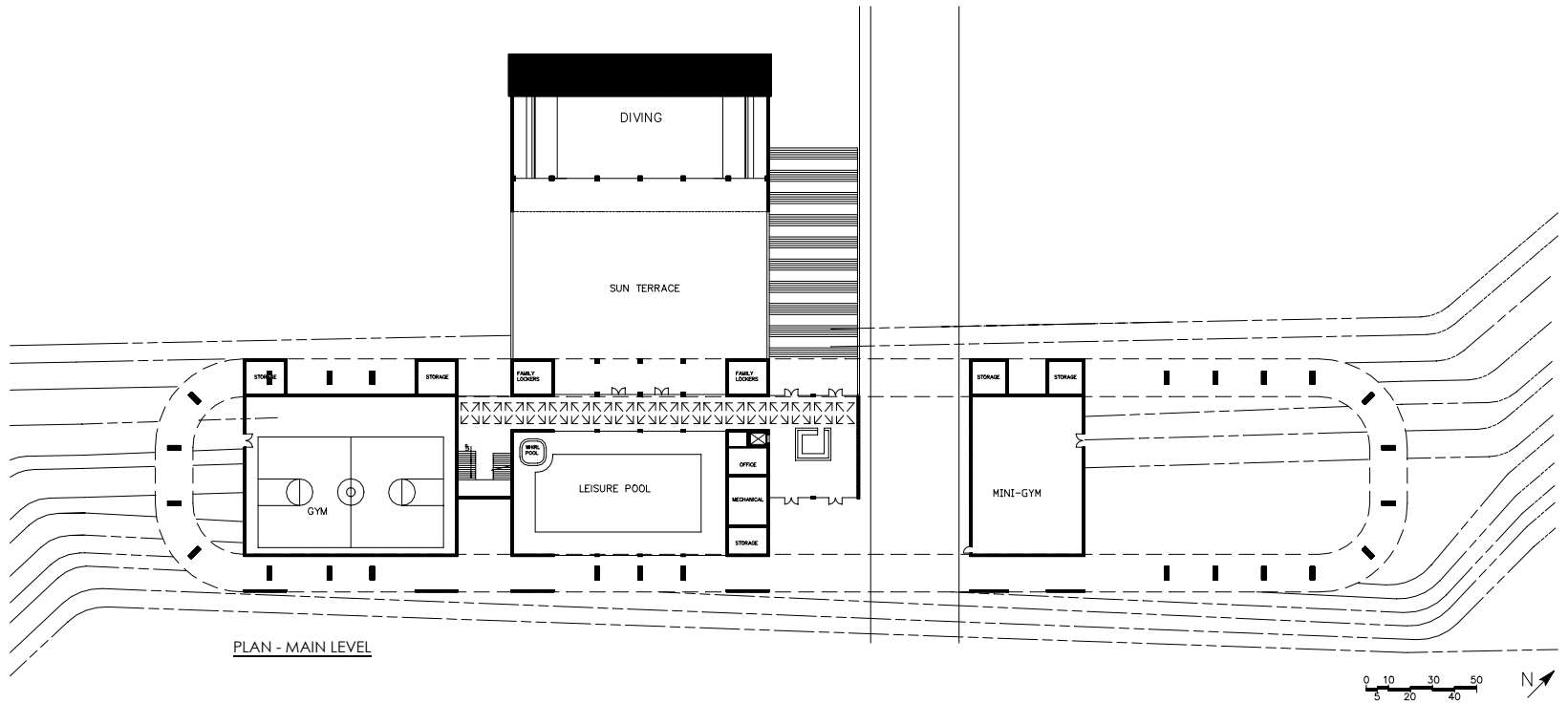
Also shown is another attempt to minimize the impact of the track on the facade. In the front (south) of the building, piers have been added at the ends of the three main interior spaces. They extend up along the outside of the running track, breaking it up on the facade (see the elevation next page). On the north side of the building these walls have been filled in and become rooms for support services, i.e., storage and locker rooms.

Until the addition of the road on the east side of the fitness center, the location of the community center was undetermined. This site plan shows the community center located south of the fitness center and along the road. This allowed the approach to both buildings to be from the south, keeping the mountain view in front of you at all times.



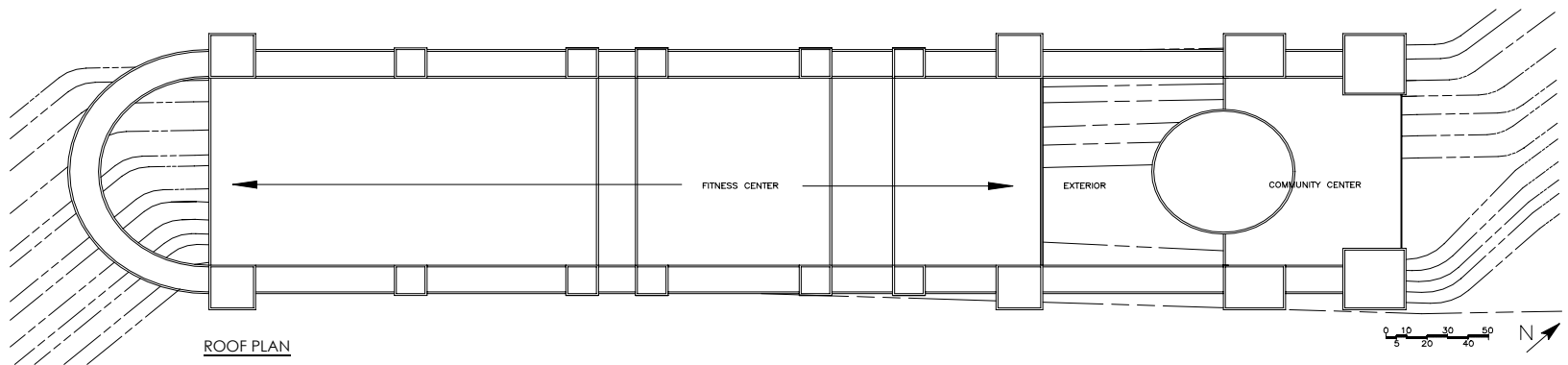
The elevations below show the running track extending out of the building. Although running inside a building and all of a sudden being up in the air and outside the building would be dramatic, this feature makes the track too strong of an element on the facades. The spaces inside the community center are actually the most important spaces socially.



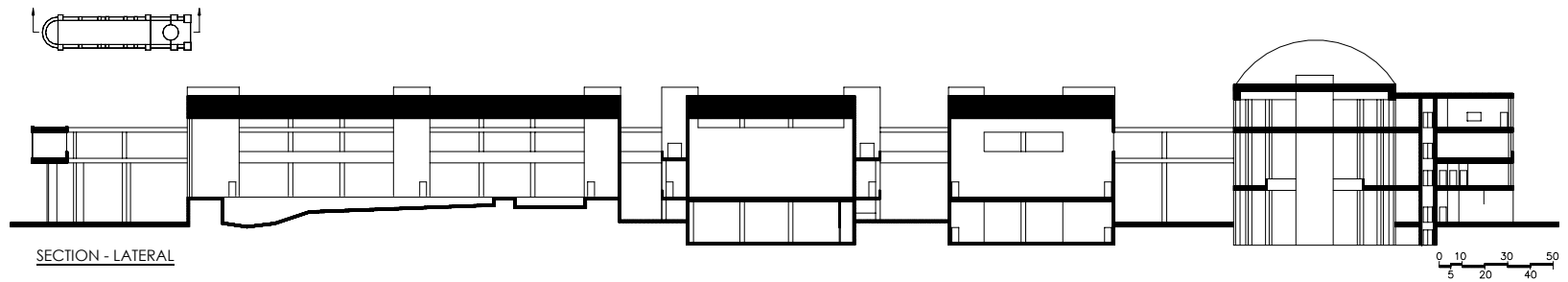
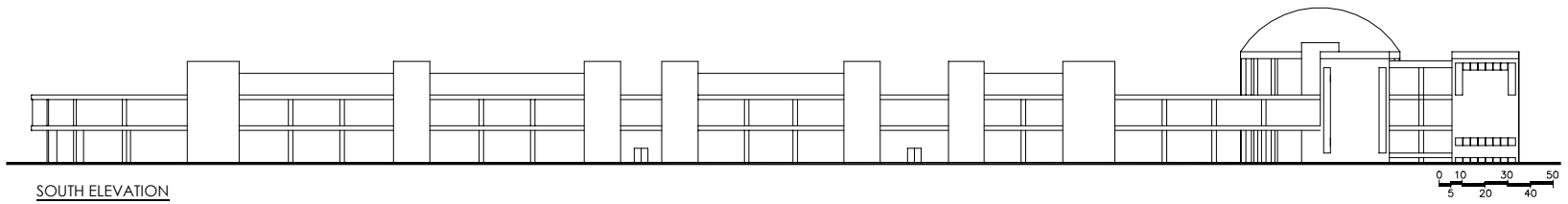
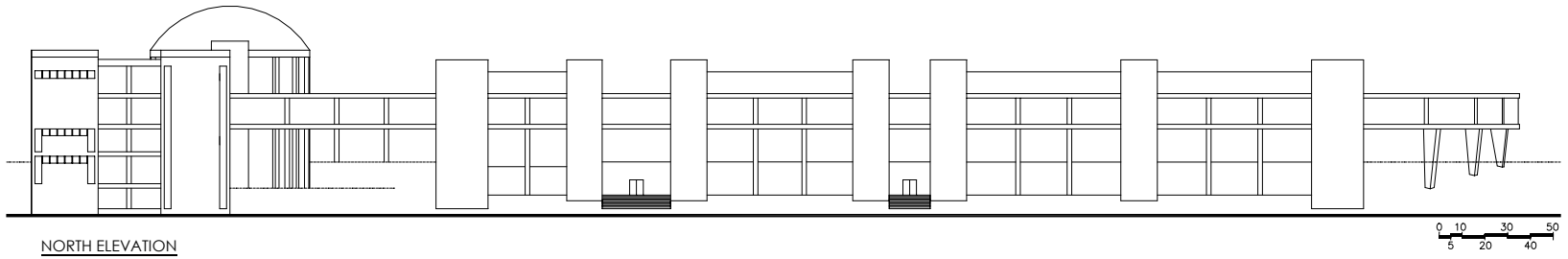


This plan shows the building inside the track being split in two, with the road separating the two parts, thus filling in more of the inside of the track and reducing its impact on the facades.

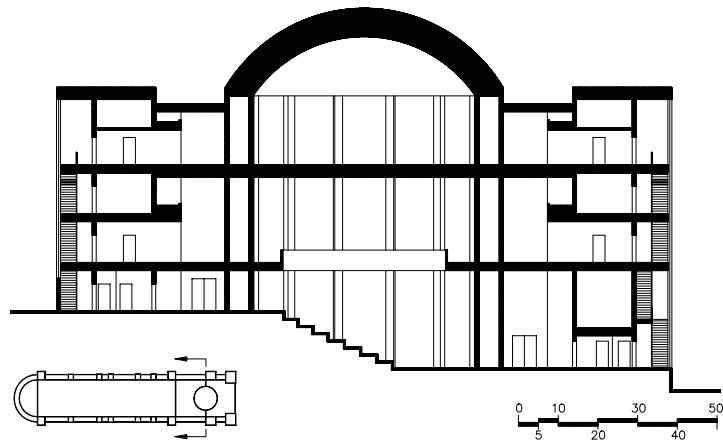
The reception area has been relocated so it is adjacent to the road. This allows access to the building from the road.



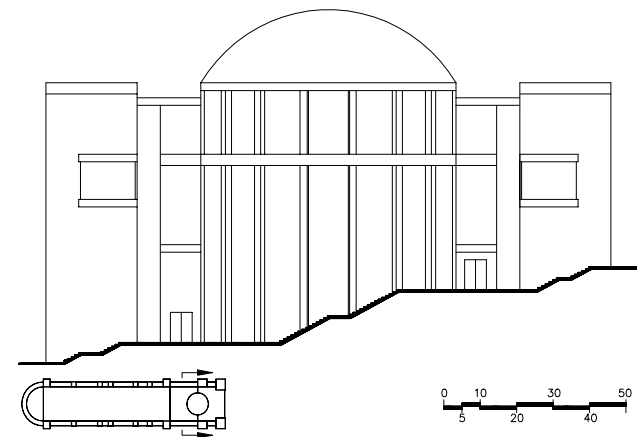
Thus far the location of the community center had been arbitrary. The section of the building housing the lap and diving pools was not working as a terraced space and appeared to be stuck onto the building. So the lap and diving pools were moved to the inside of the track, as was the community center. This plan shows how all of the program was moved to the interior of the track. The fitness center is on the west, the community on the east. The two buildings are separated by outdoor space.



The above elevations and section show the new configuration with the community center inside the track. The piers that appeared on the facade of the fitness center have become corner towers in the community center. Locating the community center inside the track eliminated the large section of track that had been so overpowering on the east side of the fitness center. The track disappears at the community center, which is appropriate since the community center is the most important part of the project



SECTION - COMMUNITY CENTER

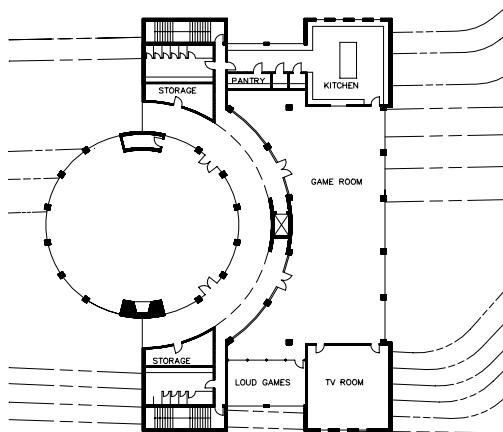


SECTION - COURTYARD

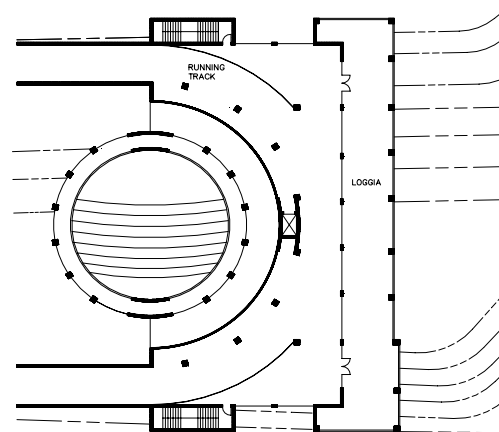
The section through the community center shows the auditorium, a space added to give people a place to gather socially. The township sponsors concerts in Brightbill Park throughout the spring, summer and fall. These are held outside in the park. If it rains the concerts are canceled, because there is no alternate indoor space in which to hold them. The auditorium will provide that space, as well as allow the concerts to be held in the winter also. The auditorium is an informal space that could be left open at all times. Drinks and snacks could be made available, newspapers could be left lying around, to draw people in so they can meet new neighbors and visit with old friends. The seats are not actually seats, but big, carpeted steps that you sit on, adding to the desired informality. These steps grew out of the terraced building idea. The section shows that the auditorium is either a three or four-story space, depending on whether you are at the lower or upper entry level. A balcony area bisects that space vertically.

The room at the top of the building underneath the dome is the most important space in the whole project. Because the seniors did most of the work to make this project a reality, this space was allocated to them, becoming the senior center.

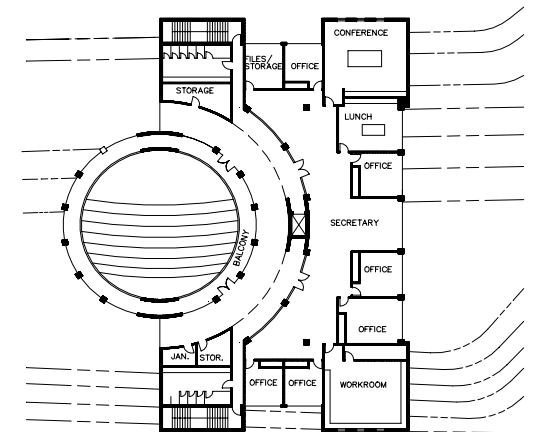
The above section on the right shows that a terraced courtyard has replaced the road that had been on the east side of the fitness center and is now the entry courtyard for the community center.



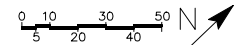
PLAN - SENIOR CENTER LEVEL



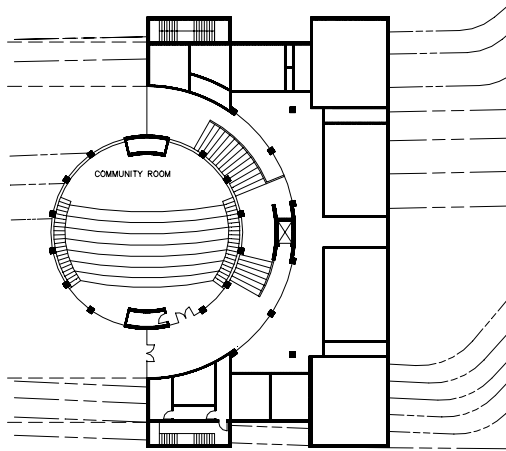
PLAN - TRACK LEVEL



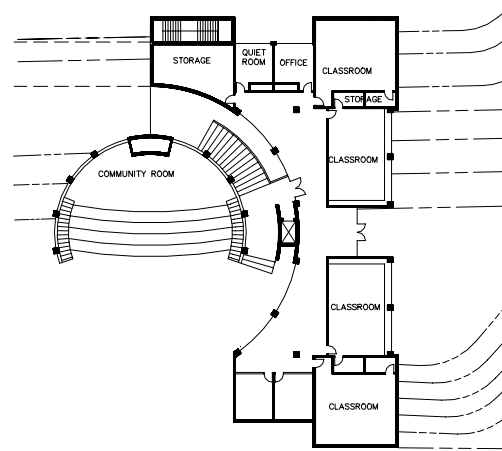
PLAN - BALCONY/OFFICE LEVEL



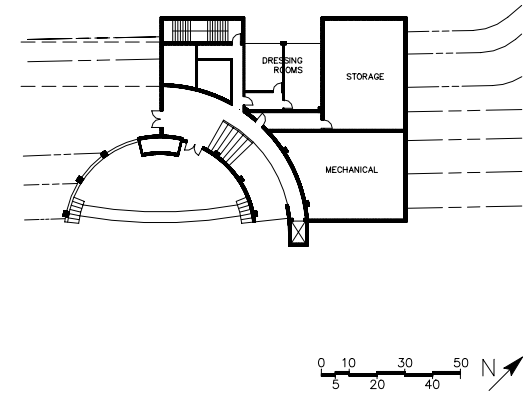
The following floor plans show the community center from top floor to bottom floor. The plan of the senior center shows the top level. The circular room is the domed senior center. A kitchen in the east tower will be used to prepare breakfast and lunch for the seniors. The senior center is separated from the teen center by a corridor and glass partitions. The west corner towers house stairs and rest room on most floors. Below the senior center is the running track level. The track is closed off from the community center by a solid wall. To the interior of the running track is the multi-height space of the auditorium. Outside the track on the east is a loggia. Below the track is the balcony level. The balcony is separated from the offices for the Department of Parks and Recreation by a wide corridor and glass partitions. The dotted line outside the interior wall of the offices indicates a soffit, which creates a low transition space at the entry to the offices. Above the soffit is a plant and light trough. The edges of the individual, orthogonal offices play off the circular glass partition.



PLAN - UPPER ENTRY LEVEL

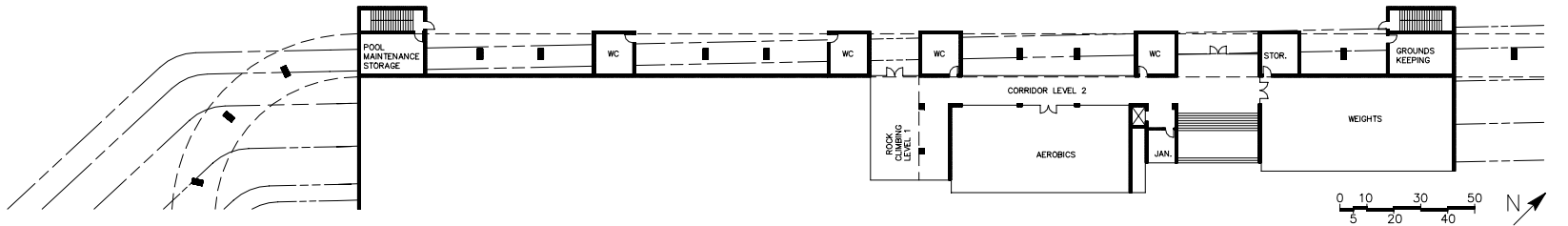


PLAN - SCHOOL LEVEL

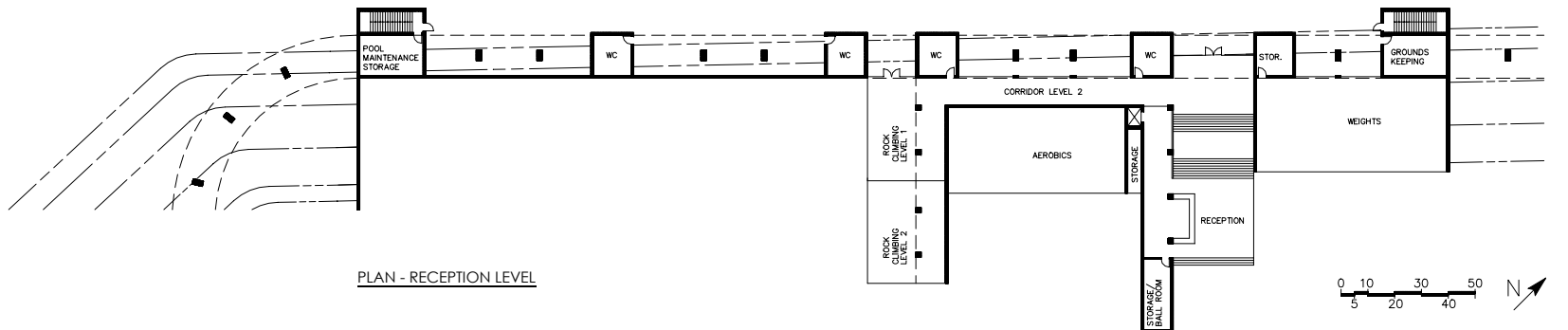


PLAN - LOWER ENTRY LEVEL

Below the balcony level is the upper entry level. This level is small, including only the southeast corner tower, an entry to the auditorium, and a walkway to the elevator. The ceiling of this space is continuous with the ceiling of the lower entry (above right). So even though they are shown on separate plans, they are one continuous room containing three levels and a grand staircase. This is another idea that was generated from the concept of a terraced building. In the center of that grand staircase is a landing through which you can access the school (above middle). The school can also be accessed from the outside of the building on the east. These drawings show the large steps that form the seats in the auditorium, and regular stairs at the east and west sides of the room. Below the school is the lower entry level, another small level which includes the north towers and the lower entry to the community center.

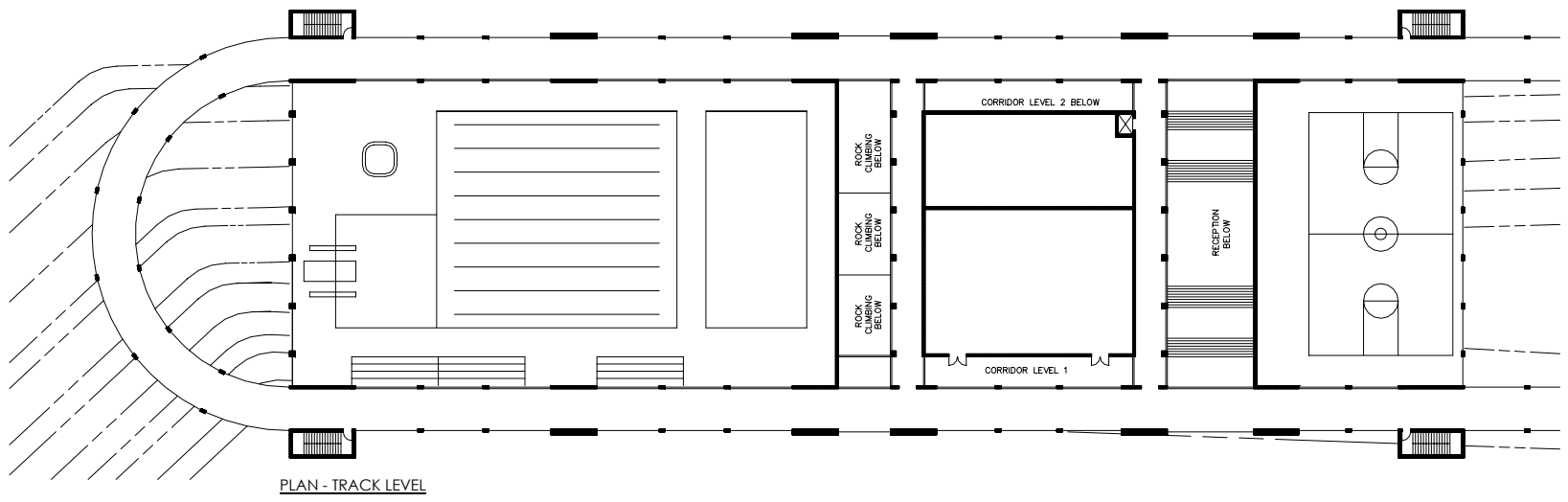
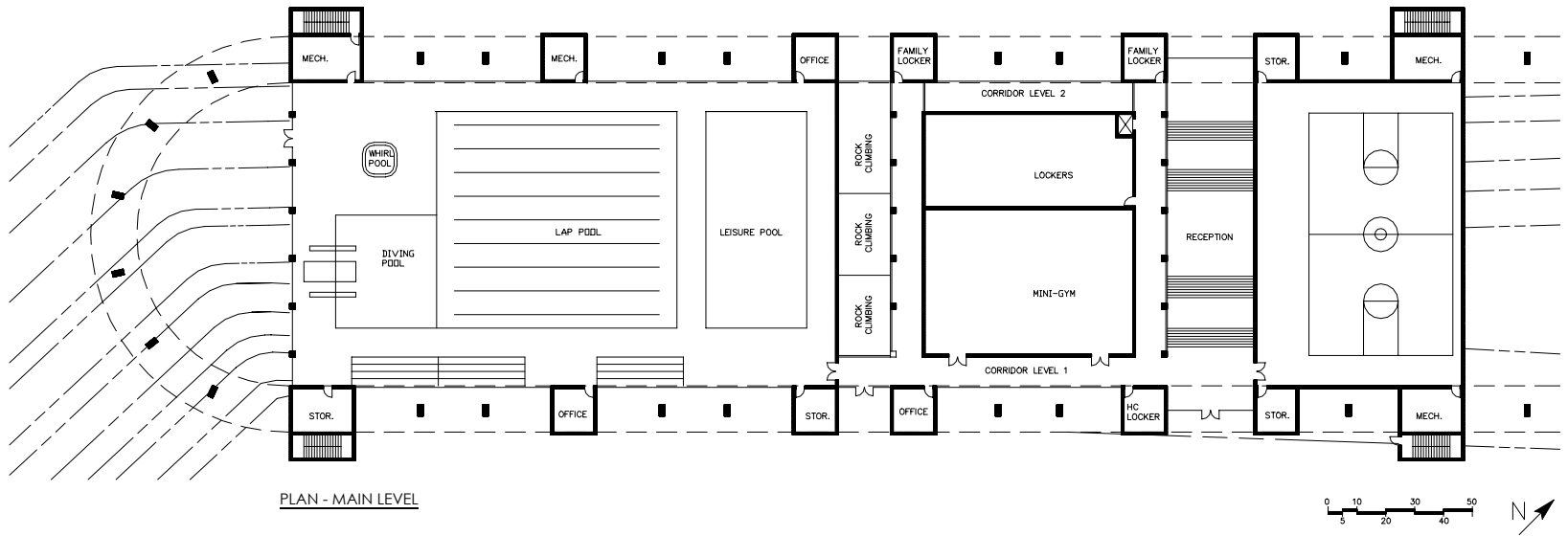


PLAN - LOWER LEVEL



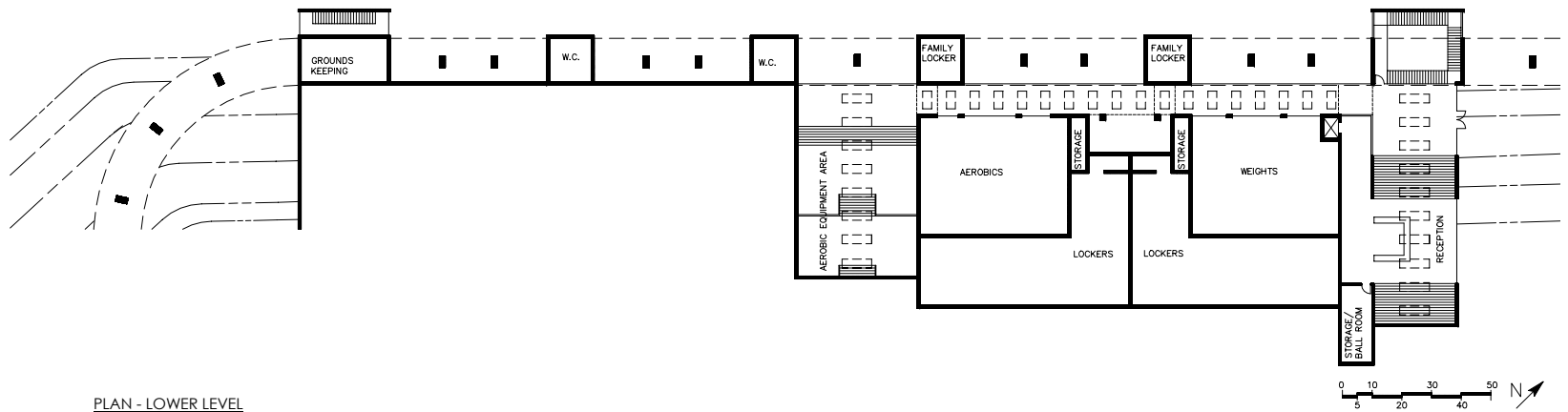
PLAN - RECEPTION LEVEL

An attempt to terrace the floors within the fitness center is shown in the above plans showing the two lowest levels. The lower level shows aerobics, weights, and level one of the newly added rock climbing area. The reception level shows the reception area and level 2 of rock climbing. There is an elevated walkway from the reception area to the elevator.



The main level floor plan shows that all of the pools have been placed in the same room on the west side of the fitness center. The piers that had broken up the track on the facade have been enclosed, becoming towers and providing room for support spaces. The top level of rock climbing is also shown. Elevated walkways cut across rock climbing and reception, providing access to the towers on the north side of the building.

The track level floor plan shows elevated walkways over rock climbing and reception, providing areas in the track where one can step off the running area to stretch, talk, or watch what is going on below. The walkway over reception also allows elevator access to this level. Relocation of the fire stairs to the corner towers provides required egress.



PLAN - LOWER LEVEL

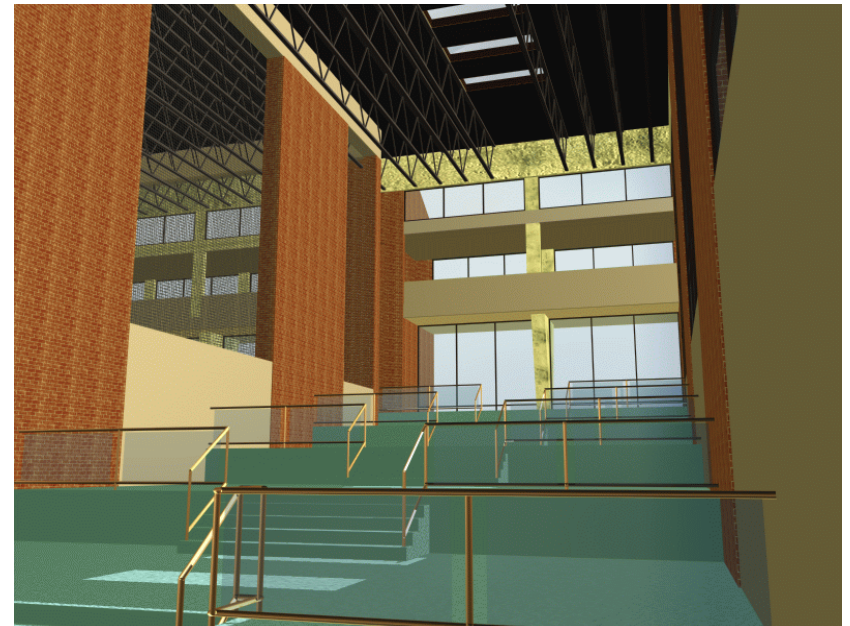
The reception area has been relocated so it is adjacent to the entry courtyard of the community center. This allows the courtyard to be used as the entry for the fitness center as well as the community center. The approach is now the same as for both the community center and the fitness center, with a view of the mountains continuously until you are in the entry courtyard and you turn to enter the building.

The exterior wall at reception is glass. A secondary structural system to support the windows and break up the massiveness of the glass walls is introduced here. These brick-faced piers extend from floor to roof and echo the curved piers in the community center.

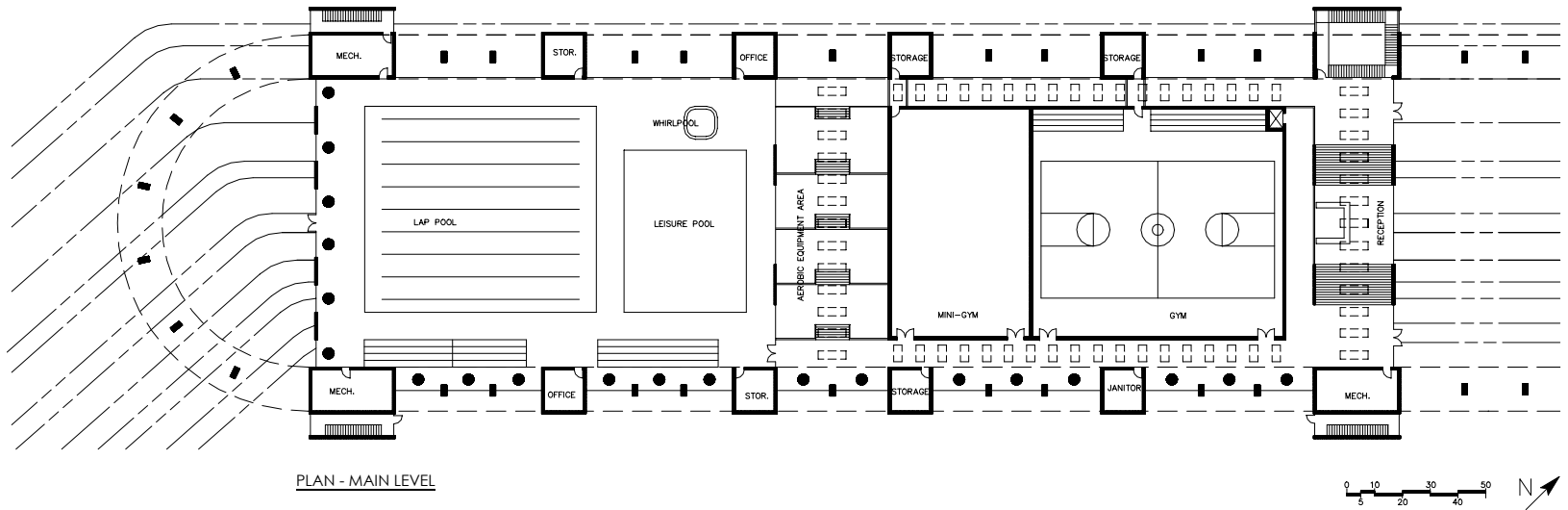
The weight room, aerobics and locker rooms are now under the two gyms, which are adjacent.

Two “tower rooms” to the west of the aerobic equipment terraces have become toilets accessible from the exterior for use by people enjoying the park

AEROBIC EQUIPMENT TERRACES FROM BELOW



Bringing everything to the interior of the track limited space. Rock climbing had been a “wish list” item. More people would use aerobic equipment, like treadmills, stationary bikes and stair climbers, than would climb rock walls, so rock climbing was replaced by an aerobic equipment area. The idea of terraced spaces was incorporated into the design of the aerobic equipment area.



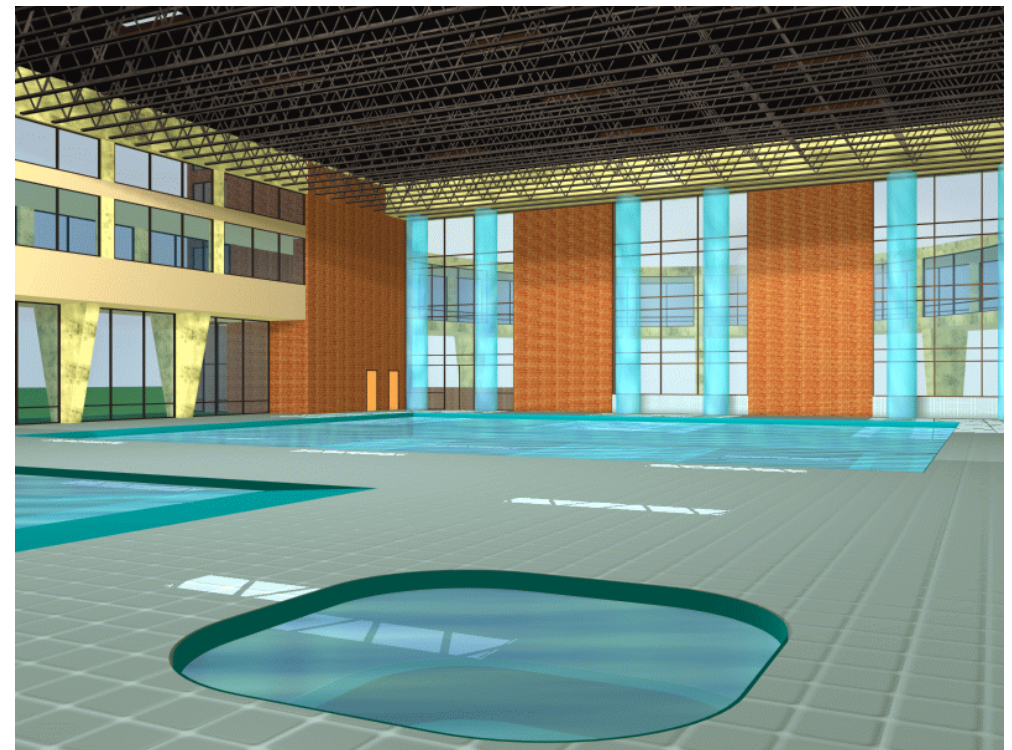
As seen in the main level plan above, the two gyms are now adjacent. Here you can see the four levels of the aerobic equipment area. This area is enclosed on the north and south with glass walls. The equipment on these terraces would face north, so that those using the equipment would have a view of the mountains while exercising.

The new layout creates a walking/climbing route. You walk up the stairs in the reception area, across the upper corridor to the aerobic equipment terraces, down the stairs in aerobic equipment, across the lower corridor to the reception area, and back up again. This route can take the place of the stair climbing equipment, the same way the track replaces the treadmills for those who are not motivated by the lights and controls of the equipment. The building becomes the equipment.

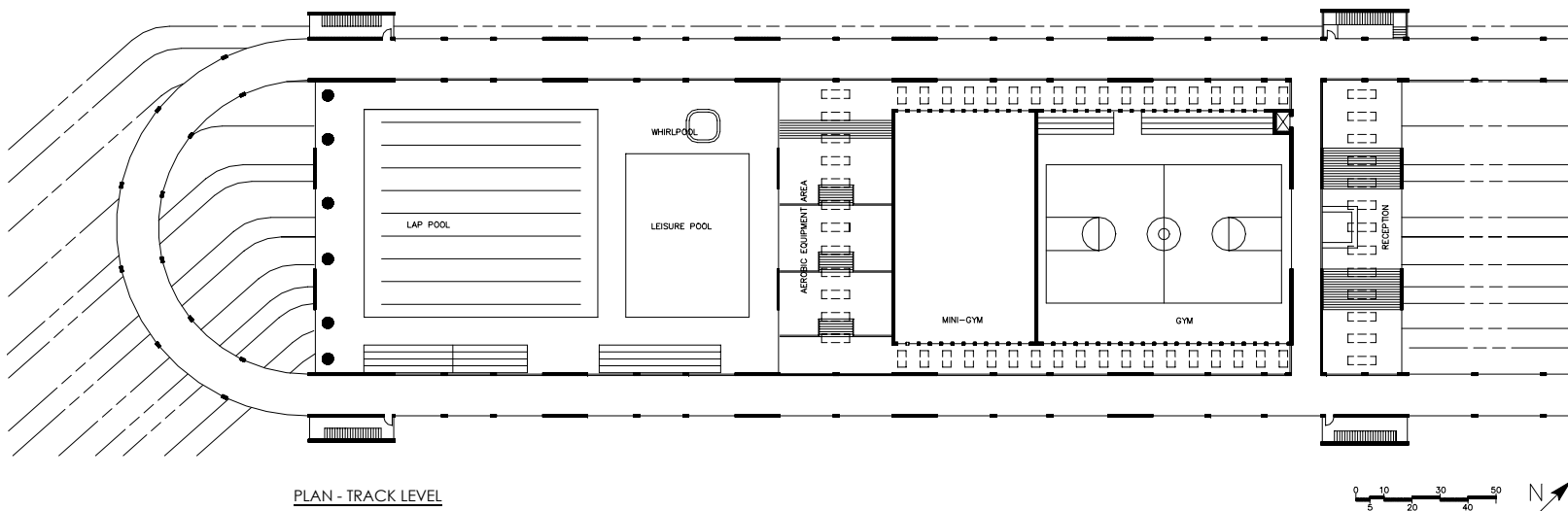
The exterior glass wall along the south side of the building has been pushed out. It now bisects the track supports, enlarging the upper corridor which had been rather narrow. Solar collectors that look like water columns have been placed in this area to help allay some of the energy costs of the building

Because the aerobic equipment area does not require solid walls from floor to ceiling the way rock climbing had, the solid walls that had enclosed this area were replaced with glass walls, enabling views between the spaces. The same brick-faced piers used in reception are used here to break up the massiveness of the glass and support it.

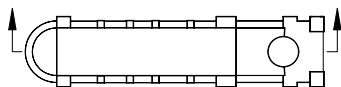
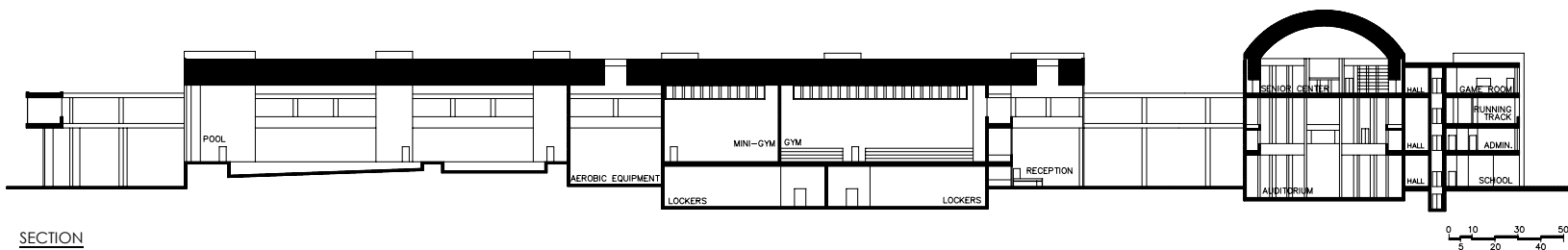
Another item that had been on the "wish list" that was removed due to space demands is the diving pool. The entire room housing the pools got smaller to allow more space at the entry courtyard. The solar collectors continue into the pool area along the south and west walls.



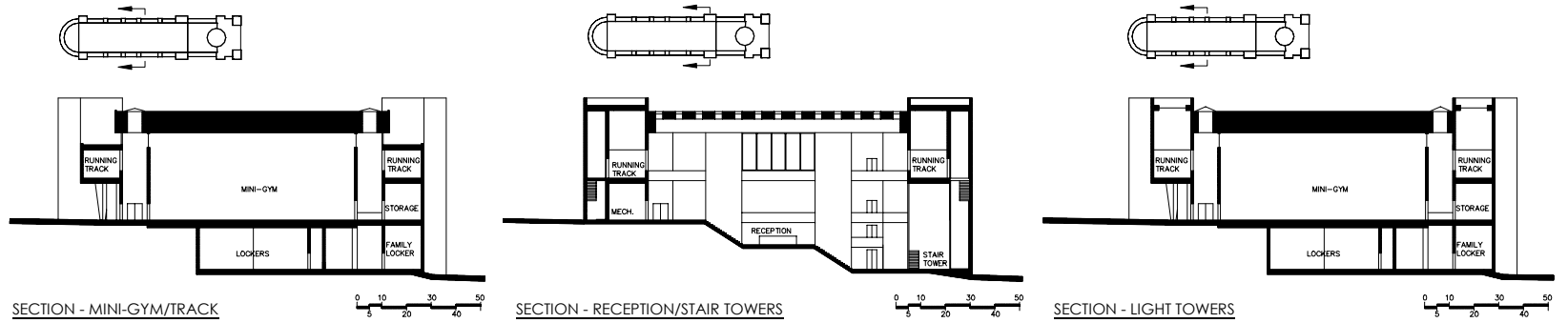
POOL



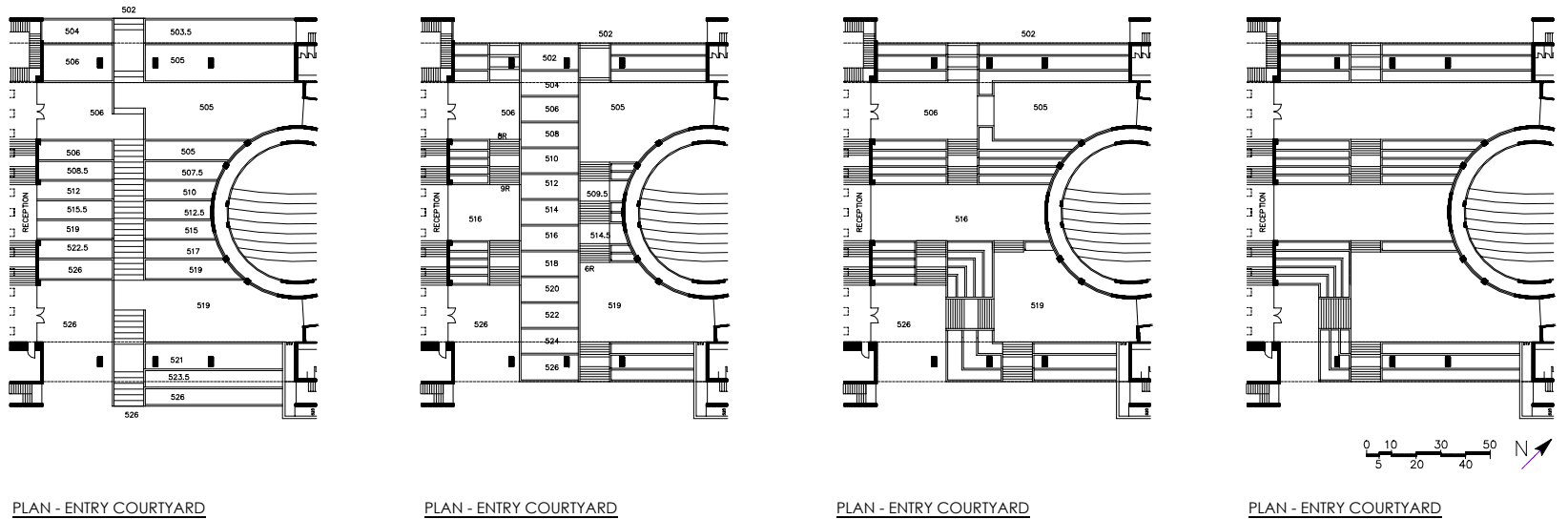
The track plan shows that the upper portions of the gym walls have been replaced by netting, allowing air flow and light into the gym. The walkway above reception allows one to stop and watch activities in the gym below. This also provides a stepping-off space for stretching or socializing.



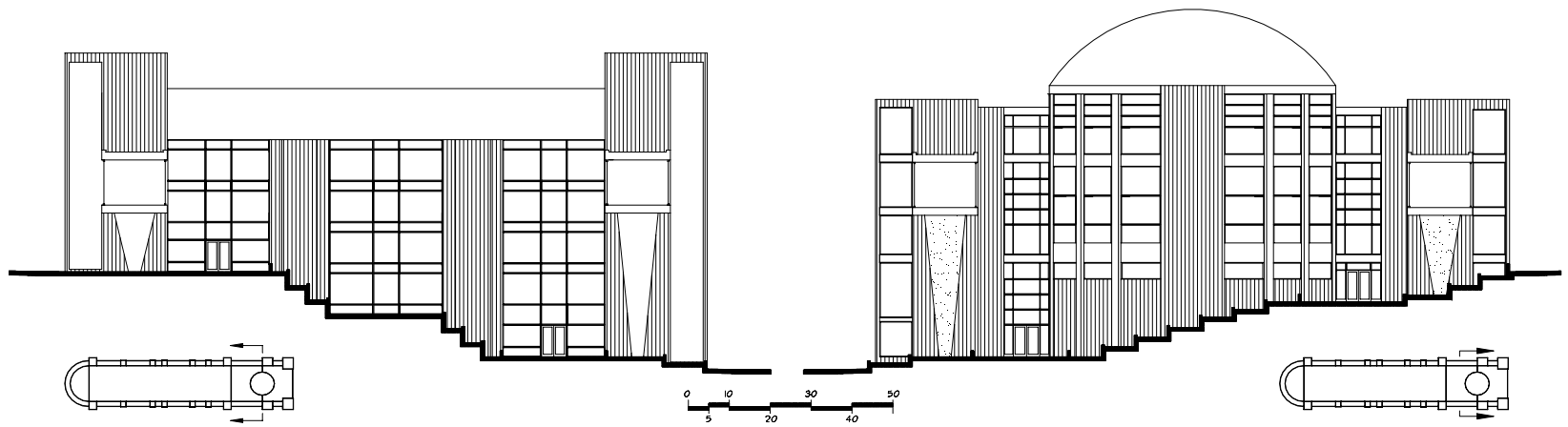
Elevator access to a sun deck on the roof was required. Since the elevator is near the opposite end of the building, everything between the elevator and the sun deck would have to be flat, so the entire roof of the fitness center became continuous and flat, as shown in the above section.



The terracing of the building is shown in the sections through the mini-gym and reception above. The section through the “Light Towers” shows large skylights that allow light to enter into the running track as it passes through the towers.



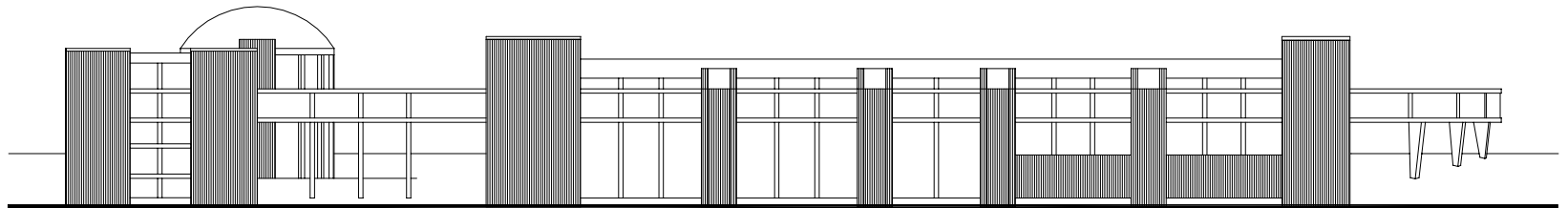
The above plans show initial development of the entry courtyard. The first two are like corridors with room-like places to stop. In the third plan, the space begins to feel more like a series of rooms connected by stairs. The fourth acknowledges that the lower entries of both buildings are at the same elevation.



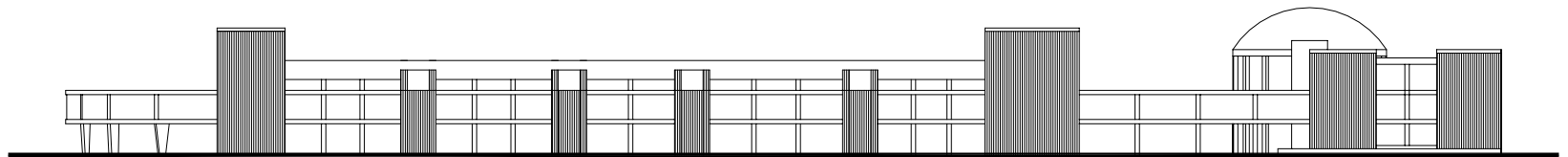
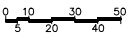
SECTION

SECTION

The best layout thus far for the terraces at the community center has a large terrace at the top and bottom of the slope where the entries are located. The fitness center has three levels directly inside the reception area which, when extended into the courtyard, fall at the top, middle and bottom of the slope. The lower entry levels of both buildings are at the same elevation, while the upper entries are not



NORTH ELEVATION



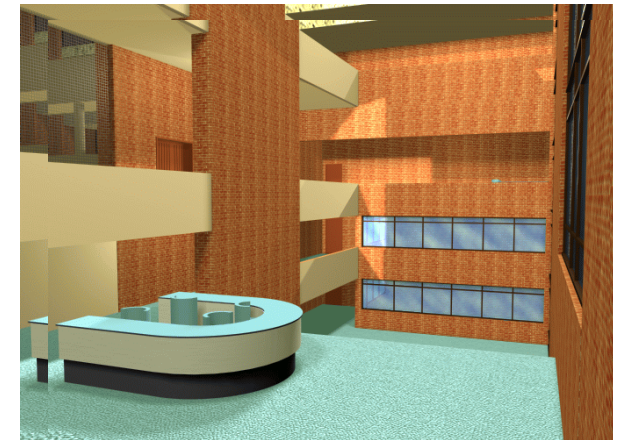
SOUTH ELEVATION

As shown above, the towers throughout the complex are covered in brick, as are the piers that form the secondary structure for the large walls of glass. The roofs of the light towers on the south side have been lowered and sloped to allow in more light. The towers on the north side followed suit.



PLAN - MAIN LEVEL

RECEPTION FROM ABOVE



The two east towers of the fitness center have been redesigned to accommodate more program. The west wall of the towers moved to align with the edge of the gym, enlarging the towers and increasing that bay to include all of the elevated walkways in the reception area (right). The elevated walkways were then extended across the lower corridor to provide access to all the levels of the northeast tower. A snack bar was added at this level. The stairs were redesigned to match the fire stair configuration in all the other corner towers.

Entry to the fitness center was relocated to the center level of the reception area, right in front of the check-in desk. This solved the security problem created by having two entrances. Security is an issue with this building because you have to pay to use the center.

The two gymnasiums have been combined into one oversized gym, increasing the flexibility of the space. Walls were not required to enclose the gym, since noise is not an issue. To keep the balls in, the nets that had used at the track level to allow air flow and light into the gym were extended all the way down to the floor, enabling people to see through the building at the gymnasium, as they can everywhere else except at the towers (see image next page - right top).

The same brick-faced piers used elsewhere in the complex to support the glass walls are now used in the gym to support the nets and allow for solid surfaces in which to place doors.

Program has been placed at each level in the northeast tower and three more elevators have been added.

The depth of the running track wasn't permitting enough sunlight in below the track to justify solar collectors along the south wall. Removing the solar collectors permitted a more spatial corridor (right top). The exterior glass partition enclosing the lower corridor has been moved out to enlarge that corridor. That partition now bisects the track supports, the same as on the south side of the building. This also created more space in the pool area.

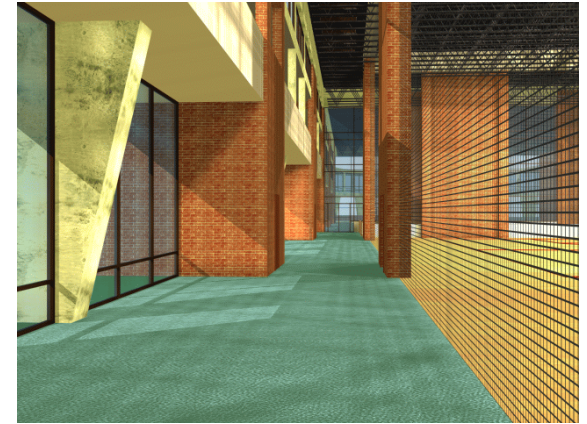
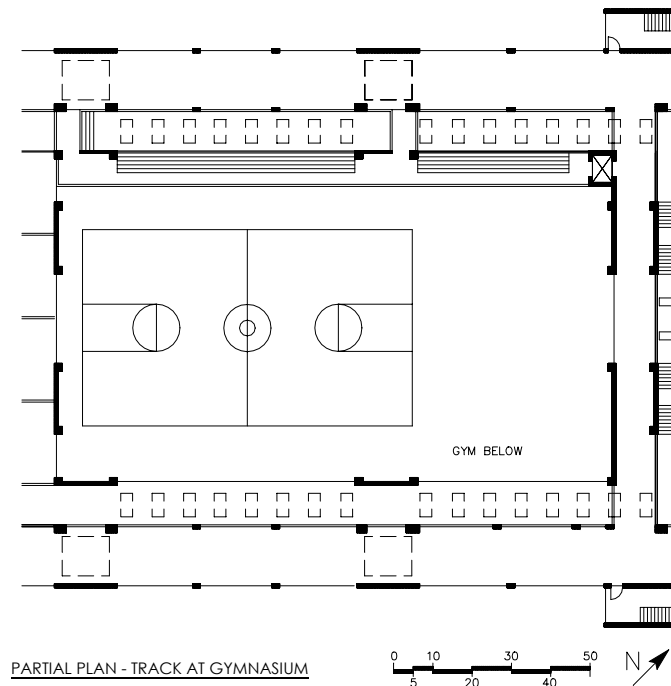
Skylights were added in the pool to allow in more light, and the brick-faced piers along the exterior west wall were redesigned to match and align with the other piers running through the fitness center.

Solar collectors were left along the west wall since that is where most of the heat load occurs in the warm months, and most of the energy use will occur during that time of year.

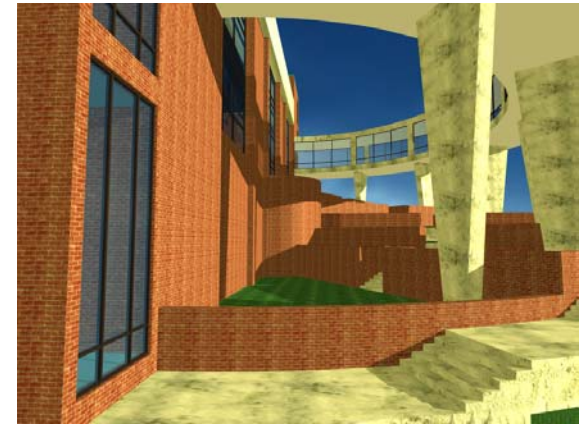
Terraced sun decks have been designed to utilize the slope on the west side of the building (right middle and bottom). The terraces are enclosed for security reasons by a low brick wall that aligns with the outside of the running track overhead. Stairs run along the outside of that wall, allowing people to climb the slope and look into the terraces. Centrally located stairs follow the curvature of the track above and provide access to all the sun terrace levels.

Two "tower rooms" in the pool area on the south side were changed to toilets accessible only from the exterior for use by people enjoying the park.

Low hedges and trees define outdoor rooms on the south side of the building. Inside these "rooms" benches invite people in. These rooms are bounded by sidewalks that run parallel to the building and lead to the entry courtyard. Sidewalks were also added on the north.



UPPER CORRIDOR



SUN TERRACES



SUN TERRACES

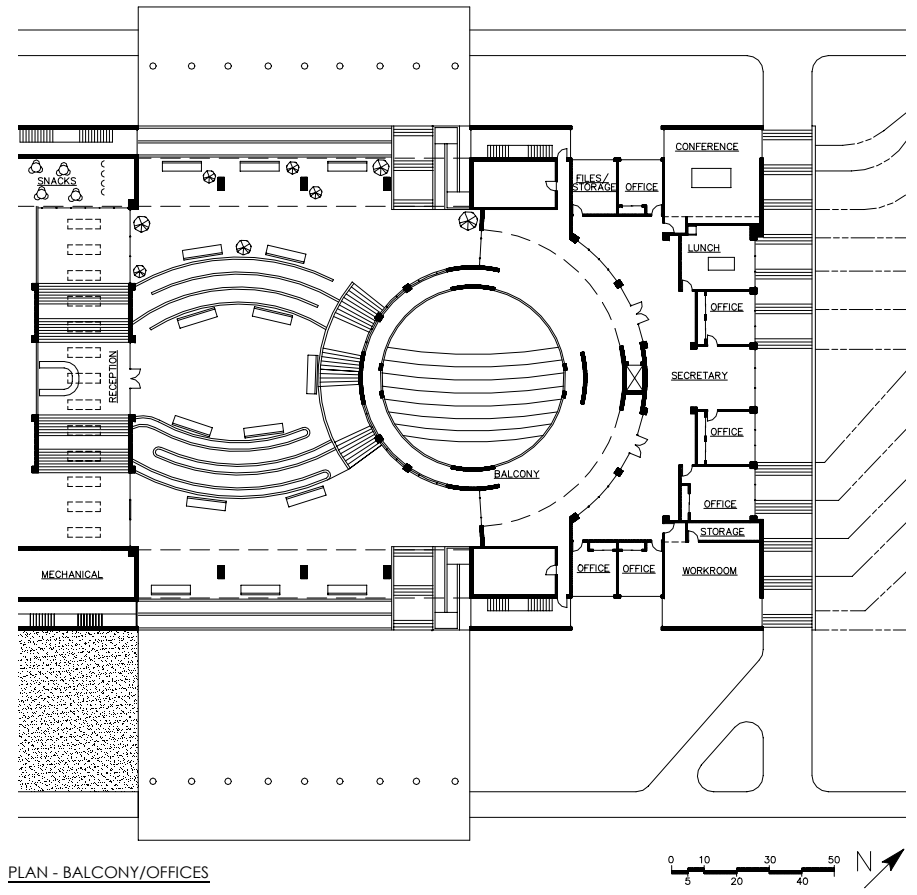
At the track level a balcony was added that allows people to observe activities in the gym below. Elevated walkways over the lower corridor provide access to the balcony

Moving the fitness center entry to the center of the reception area eliminated the doors on the lower and main levels. Now only three terrace levels were required in the courtyard, one in the middle for the fitness center entry, and one each at the lower and upper entries to the community center.

The upper and lower levels are mirror images. Ramps are placed alongside the stairways leading to these levels. The levels are enclosed east of the stairs by low brick walls to be used as planters. Ramps are used to separate the lower and upper terraces from the middle terrace and to define their boundaries. Stairs wrap the outside of the auditorium and provide access to the levels for ambulatory people. Potted trees and benches invite people to relax and enjoy the spaces.

Brick-faced piers have been added at the west and east sides of the auditorium to provide adequate support for fireplaces that have been added in the senior center above and to continue that language through the community center.

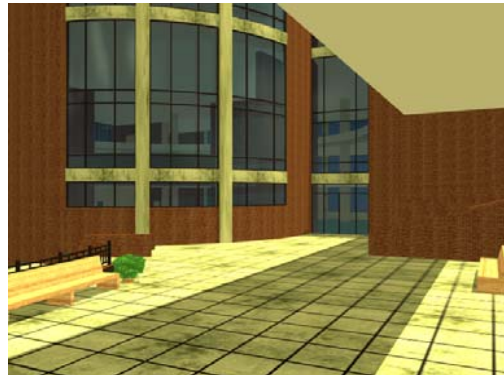
At the balcony level of the community center, the glass partitions enclosing the auditorium have been removed. This creates a more open plan, better circulation, and a strong tie to the auditorium through all but the top floor of the building.



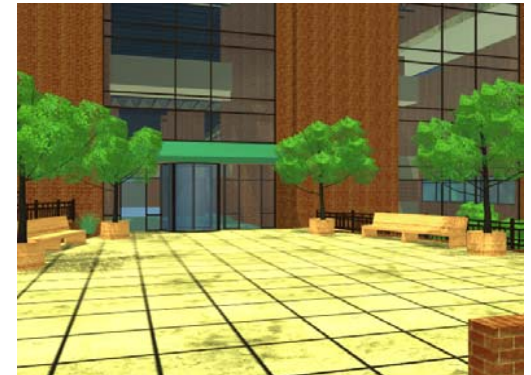
COURTYARD FROM BELOW



UPPER TERRACE OF COURTYARD



MIDDLE TERRACE OF COURTYARD

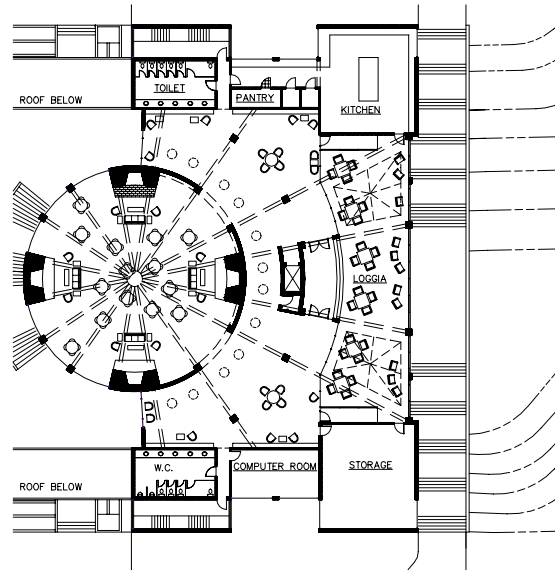


The teen center and the loggia have switched positions. The teen center is now at the track level, and the loggia is on the top floor, giving the seniors an outdoor space to enjoy. Doors to the east of the elevator access an exterior vestibule, and from there stairs descend to the loggia.

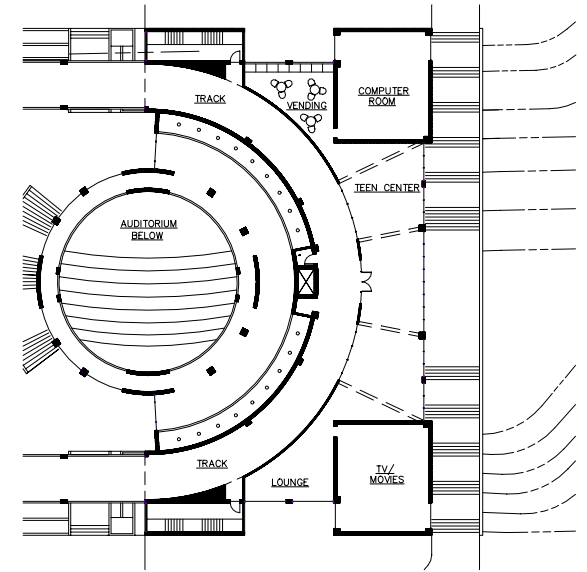
Large skylights in the roof over the loggia allow more light into this deep space. Skylights have also been added in the circulation space outside the domed area.

Three more fireplaces have been added, for a total of four, to the central room. Seating is grouped around the fireplaces. Dining tables and chairs are scattered throughout the room.

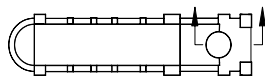
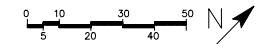
The teen center on the track level is cut off from the building by the track. Doors access the teen center from the track, but this requires you to cross the track to get from the elevator to the teen center, which isn't safe and which also creates a security breach at the fitness center. Elevator access at this level in the community center needs to be keyed and limited to staff, because access can be gained to the fitness center from here.



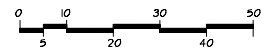
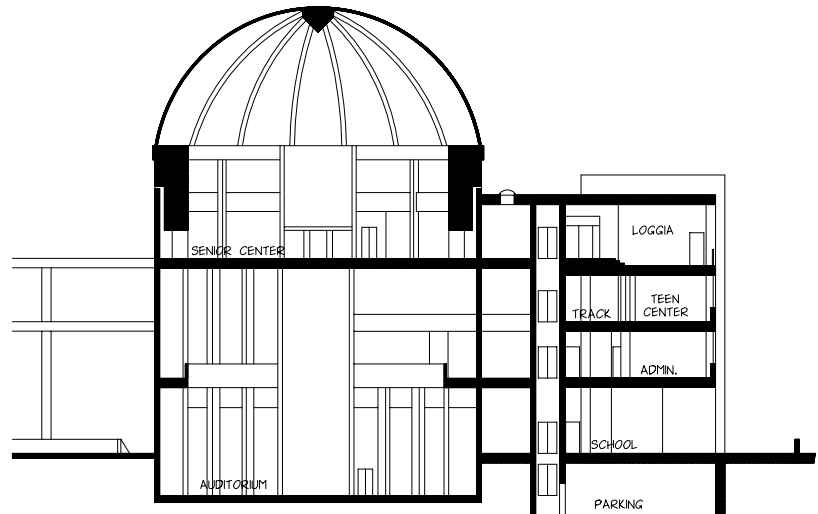
PLAN - SENIOR CENTER LEVEL



PLAN - TRACK LEVEL



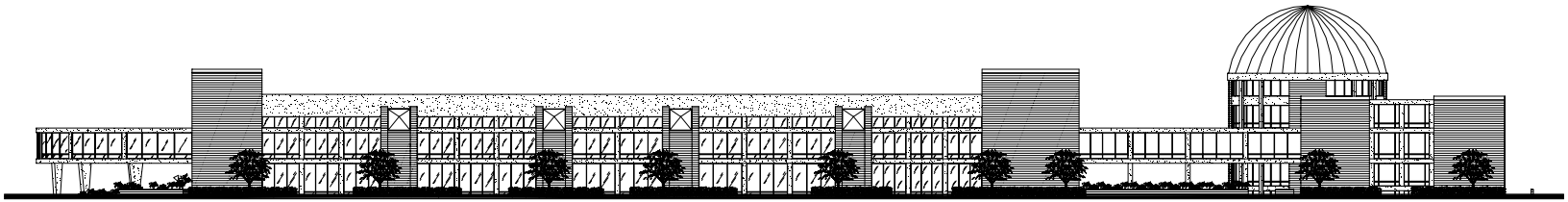
The section below shows the skylights above the circulation space in the senior center. The fireplaces are vented through the wall. The loggia is shown stepped down from the senior center. The teen center is shown in its new location outside the track.



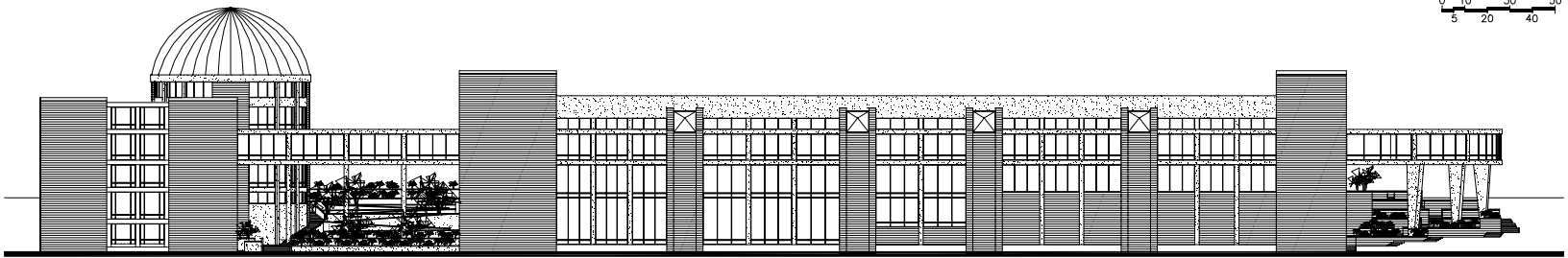
SECTION



DOMED ROOM IN SENIOR CENTER

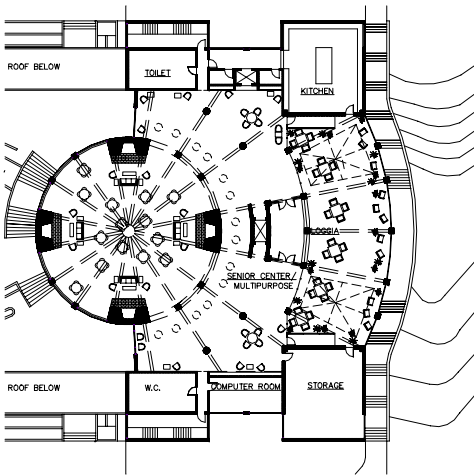


SOUTH ELEVATION

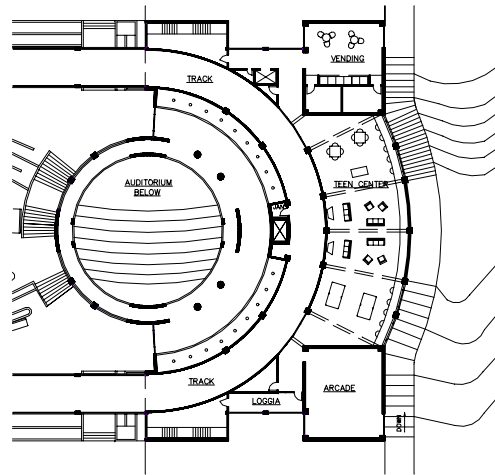


NORTH ELEVATION

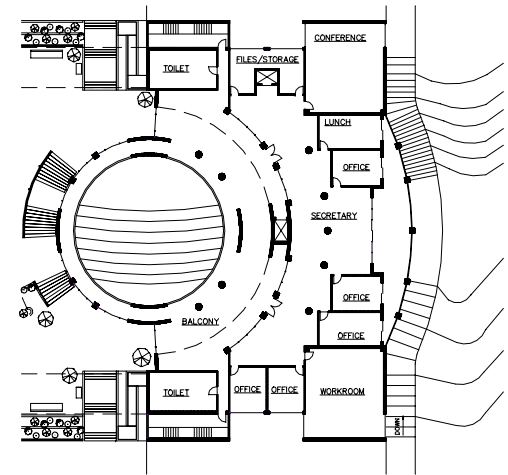
The dome was raised, making it closer to a true hemisphere. The height of the exterior walls under the dome was increased, emphasizing that part of the complex hierarchically.



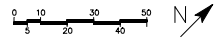
PLAN - SENIOR CENTER



PLAN - TRACK LEVEL

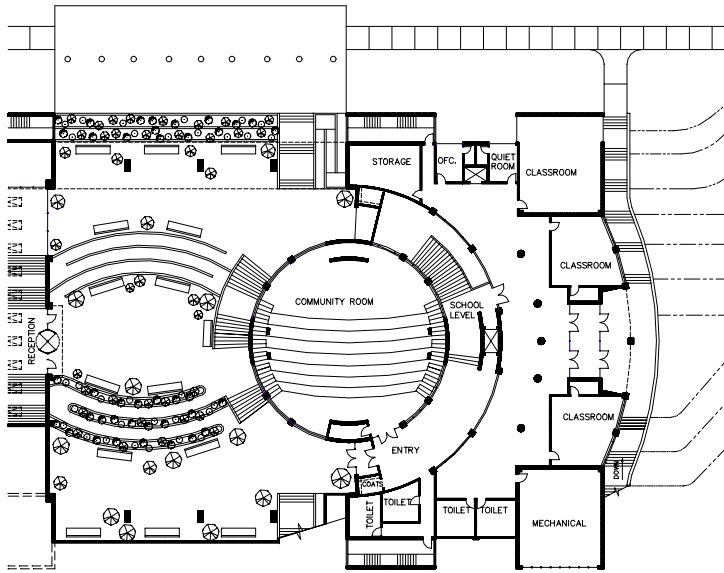


PLAN - BALCONY/OFFICES

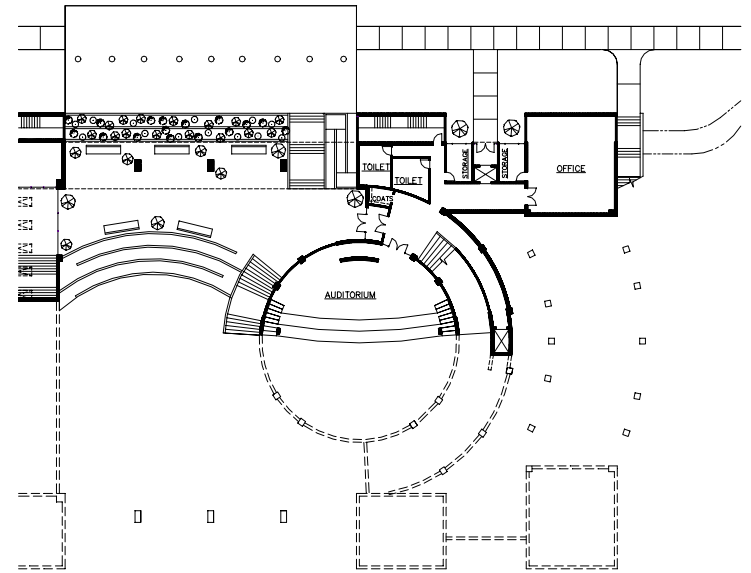


Extending the exterior east wall between the corner towers outward in a curve gave the loggia and the teen center needed space. At the office level more room wasn't needed, so a balcony was added on the exterior, a place for taking breaks or eating lunch.

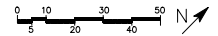
An elevator was added between the two north towers. The spaces inside the building, but outside the running track at each level could now be accessed by elevator from the outside of the building, and disabled people now had access to the building without having to use ramps.



PLAN - SCHOOL & UPPER ENTRY LEVELS

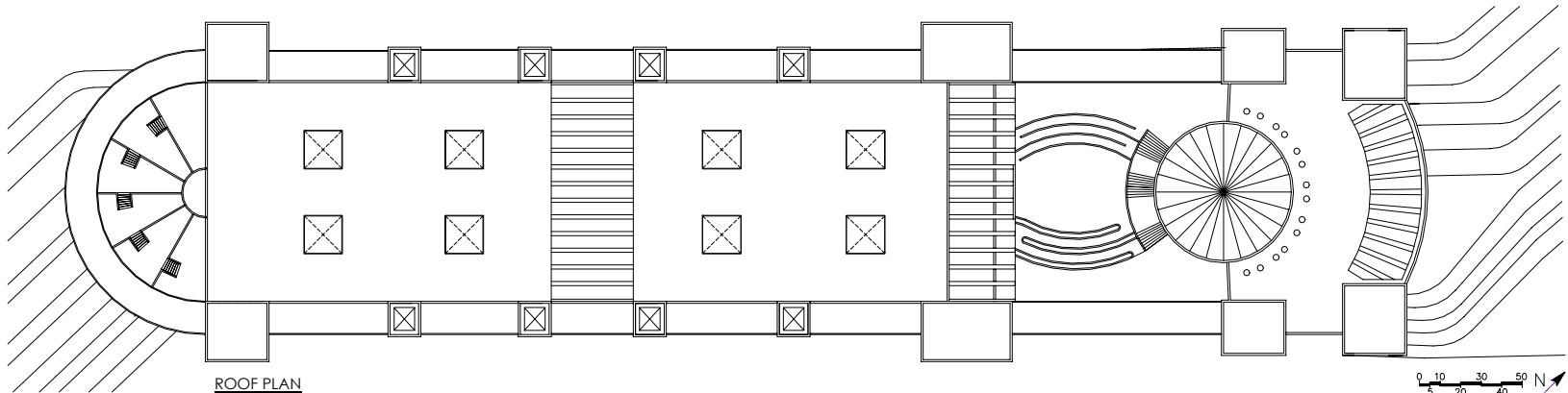


PLAN - LOWER ENTRY LEVEL

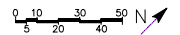


At the school level two of the classrooms move out to the new curve of the exterior wall, enlarging them and freeing up the interior columns. An entry vestibule has been added to keep out cold air.

At the ground level a walkway leads to the elevator vestibule. The lower entry level is actually higher than ground level, so an elevator stop is needed to access that level.



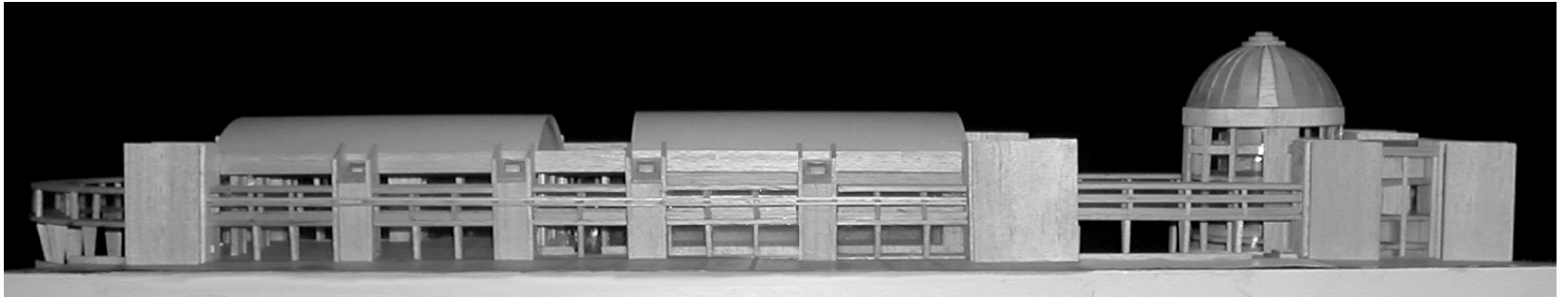
ROOF PLAN



With sun terraces outside the building rather than a sun deck on the roof, there is more freedom with the roof design. The roof has been divided so that each area in plan has its own roof. The roofs over aerobic equipment and reception are glass held in place by small box-type beams. The roof over the loggia in the community center is given the same treatment to continue this language throughout the complex.

The skylights over the corridors to the north and south of the gym in the fitness center weren't providing enough light to the gym. They were replaced by large skylights directly over the gym. Skylights over the pool were revised to match those in the gym.

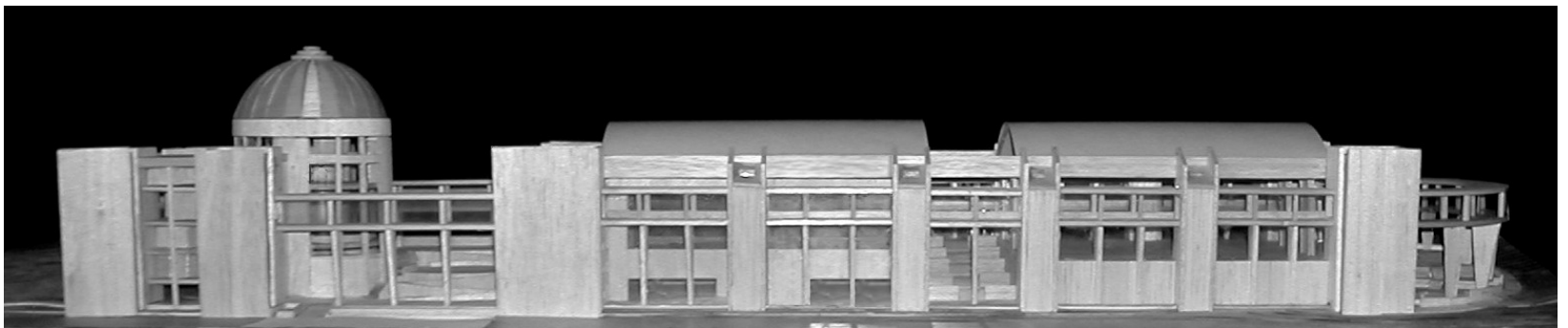
The Final Drawings



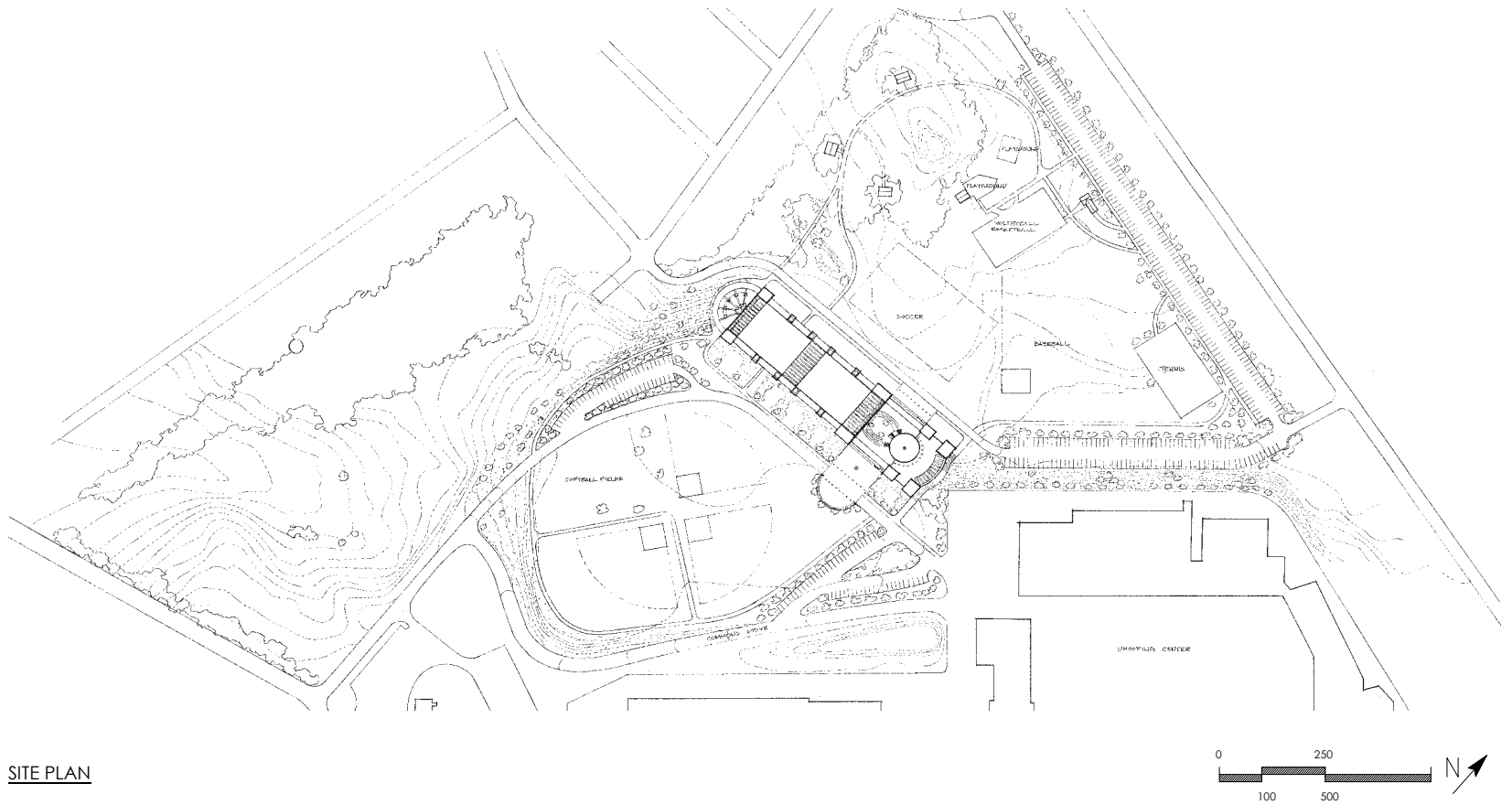
MODEL - SOUTH SIDE

The remaining images are the final drawings and model for the project. These drawings will be used to explain the final steps in my design process. Thus far the line drawings you've seen have been Autocad drawings. The final drawings are hand-drawn, graphite on Mylar.

Since the development of this project has been discussed in detail, discussion will be limited to changes that appear here for the first time.



MODEL - NORTH SIDE



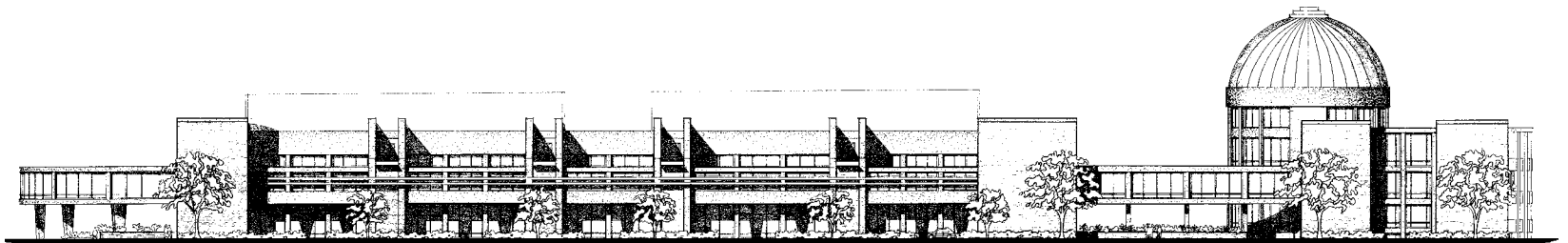
SITE PLAN

The final site plan shows that the slope that had originally split the site in two is now filled with the buildings and exterior terraces, integrating the two parts of the site and creating a cohesive whole.

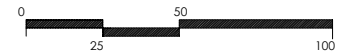
The paving from the entry courtyard extends on the north to a new street. Originally there had been a dead-end street on the west side of the site at the bottom of the slope and another on the east side (see Existing Site Plan on Page 2). The new street connects these two previously existing streets and provides vehicular access to the north side of the building. To the east of the building the street widens to accommodate a new parking lot. Handicapped parking would be located here, close to the elevator foyer on the north side of the community center. The existing parking lot at the north edge of the site has been reworked to accommodate more cars.

The paving of the entry courtyard extends on the south across a new street and then forms a semicircular plaza. This new street starts at the southeast corner of the site, continues north past another new parking area, turns east and runs parallel to the new building before exiting at the east end of the site. New parking areas on the east are accessed by this new street and the existing Commons Drive.

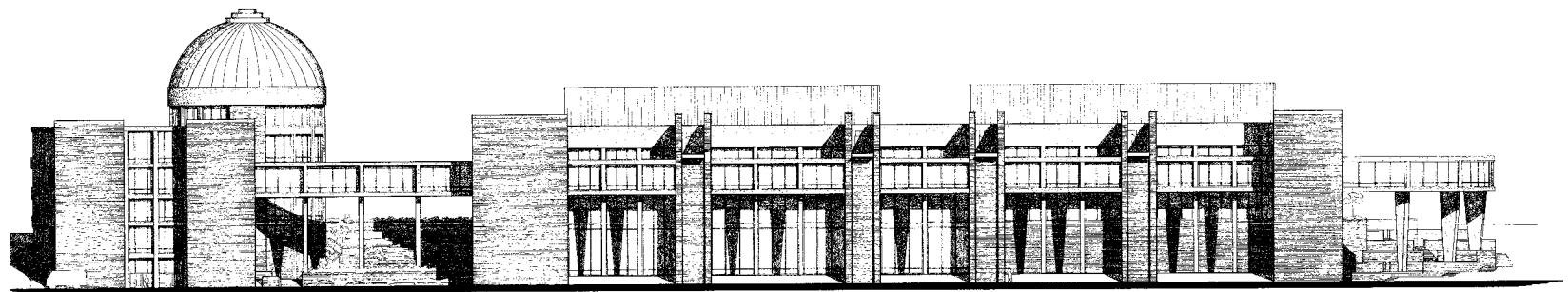
The elevated south part of the site now accommodates three new softball fields. The existing foot paths on the north edge of the site have been extended into the wooded area, up along the stairs bordering the sun terraces, around the perimeter of the north plateau, back down the stairs on the east side of the building and finally back to the existing paths on the north edge of the site. New trees shelter the path all along its route.



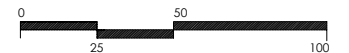
SOUTH ELEVATION

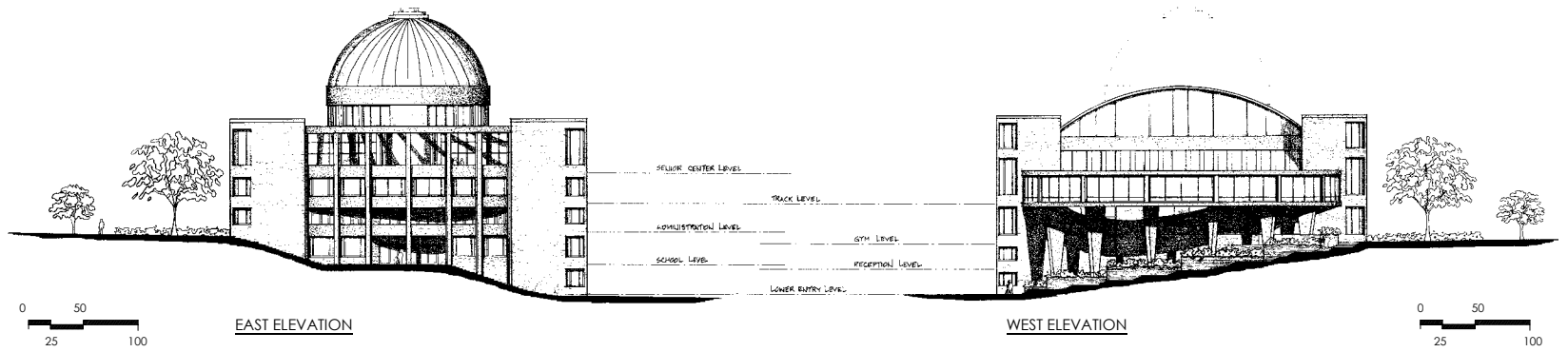


The south and north elevations show further changes made to accentuate the importance of the community center. Previously the corner towers of the fitness center were higher than those of the community center. To remedy this the tower roofs in the fitness center were lowered as far as possible, and the height of the community center towers was increased. This made all of the corner towers equal in height. The cornice at the base of the dome was made deeper to give it needed weight. The dome was also given a cap. The height of the light towers was increased to the same height as the corner towers, strengthening the relationship between them

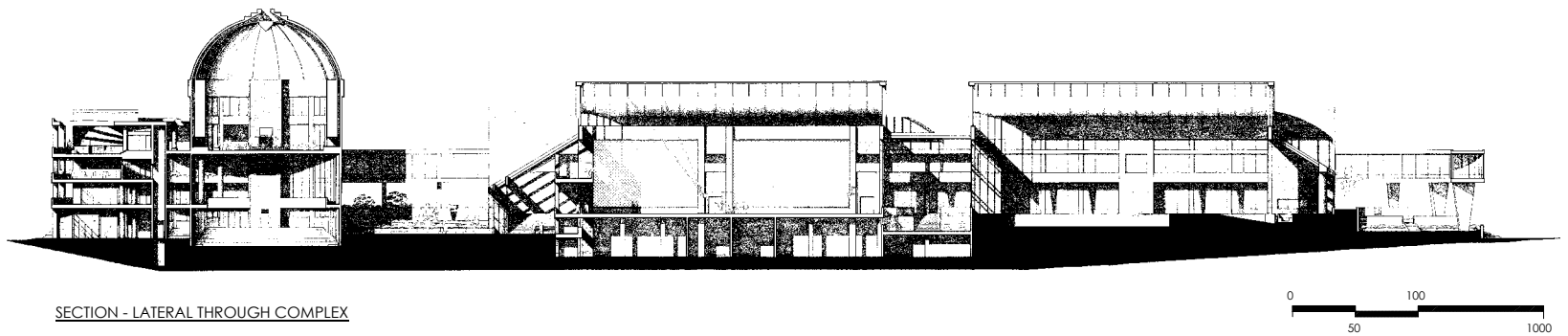
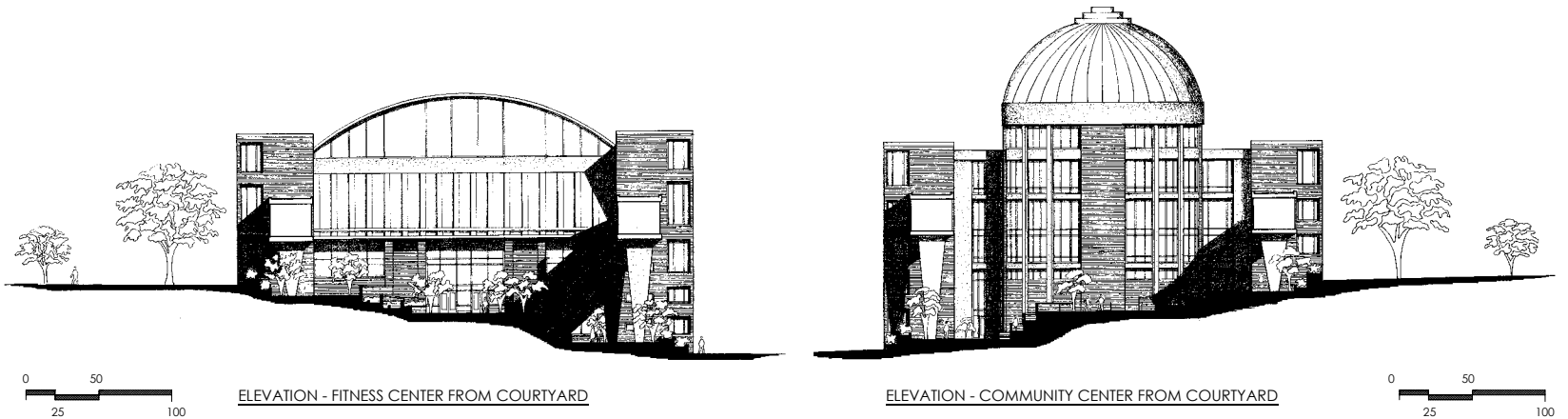


NORTH ELEVATION

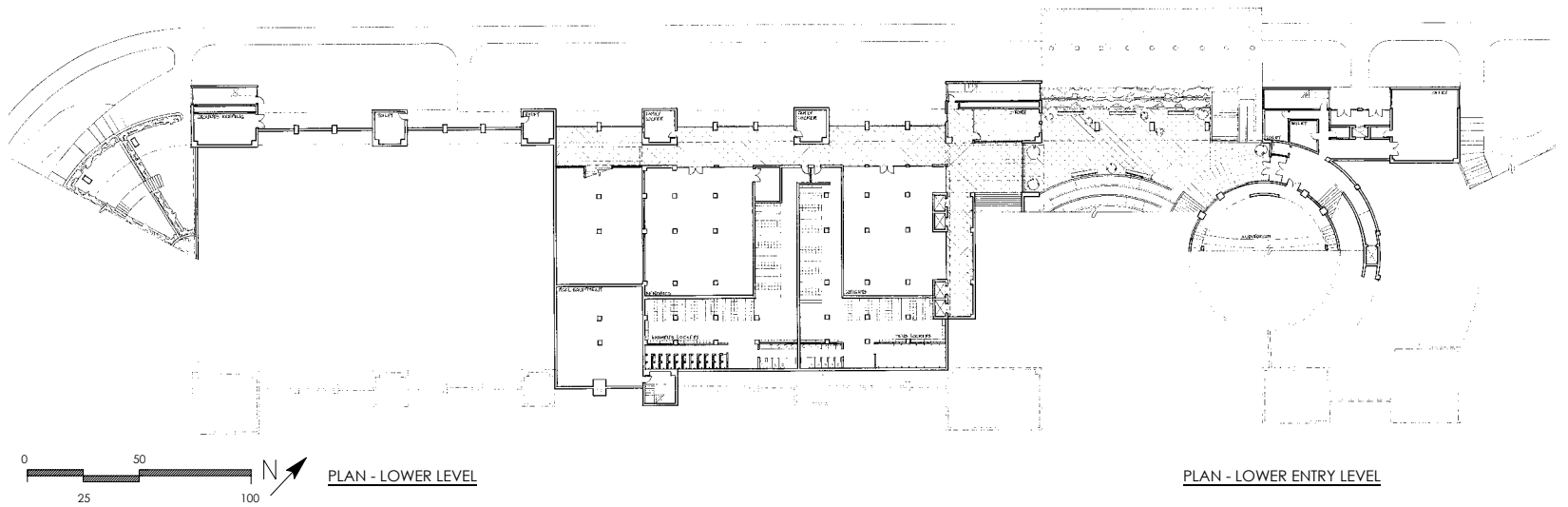




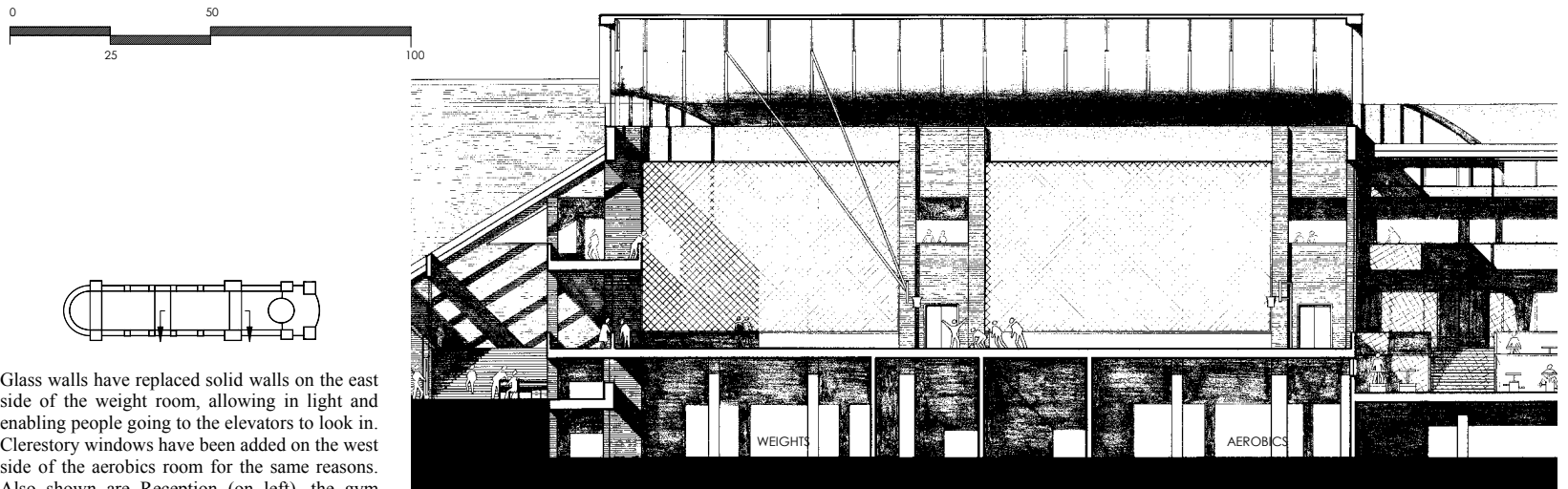
The roofs over the gym and pool became barrel vaults. The height of the vaults was kept below the dome to acknowledge the importance of the community center. The glass walls on the east and west sides of these rooms were extended up to the curve of the roof, allowing light into the spaces and eliminating the need for skylights. The light that makes its way down to the floors in the pool and gym will now be indirect, reducing glare for the athletes.



The above section is taken laterally through the center of the complex. It displays the relationship between all of the levels in each building.

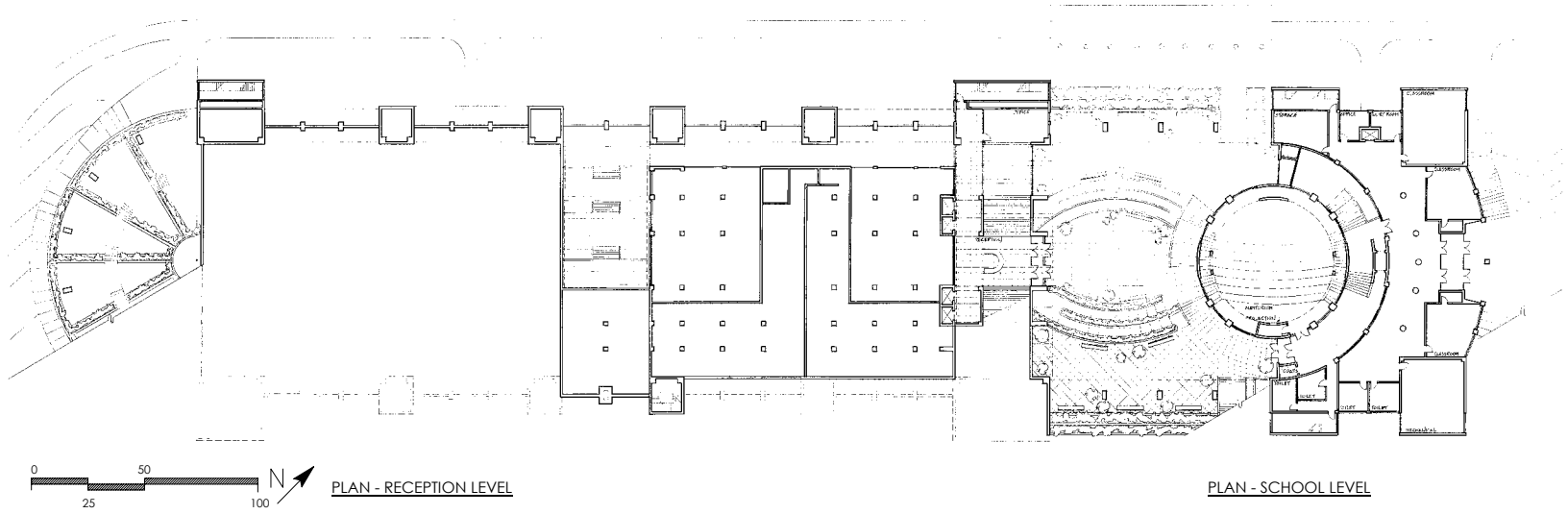


The concrete paving of the courtyard is extended out to the streets on the north and south and into the fitness center. The elevators have been relocated to within two of the brick-faced piers, which have been deepened to accommodate them.

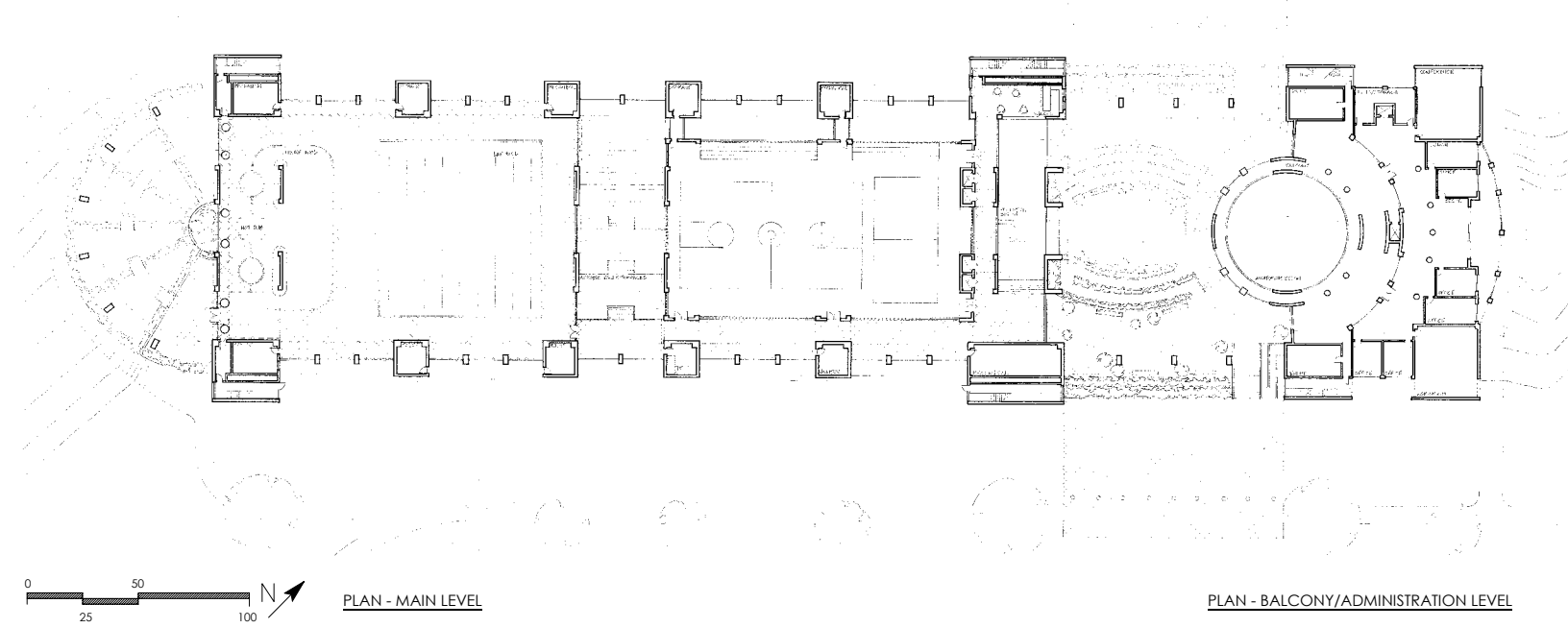


Glass walls have replaced solid walls on the east side of the weight room, allowing in light and enabling people going to the elevators to look in. Clerestory windows have been added on the west side of the aerobics room for the same reasons. Also shown are Reception (on left), the gym (center) and Aerobic Equipment (right).

PARTIAL SECTION



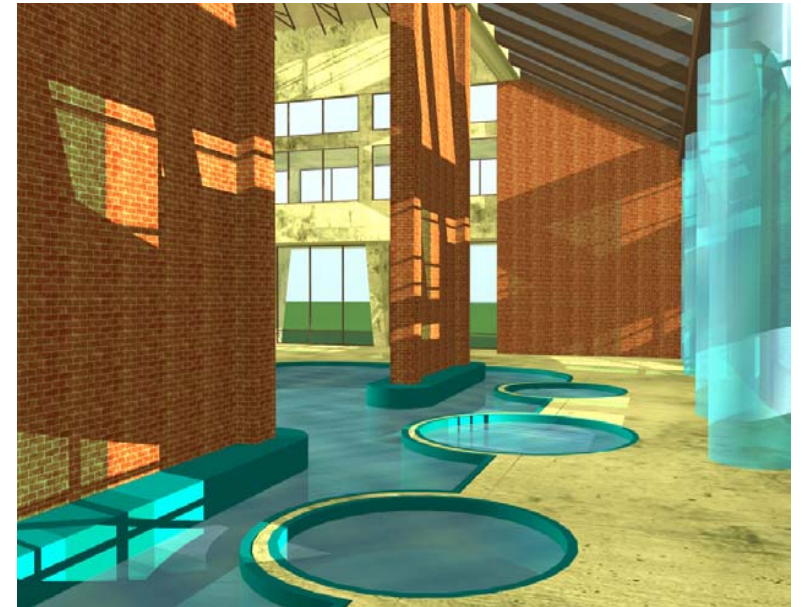
Paving from the courtyard is extended throughout the reception level. An entry vestibule has been added at Reception in the Fitness Center to keep out cold air. Windows have been added between Reception and the Weight Room to allow views between these spaces. These windows appear as clerestory windows from inside the weight room (See Partial Section previous page).



The courtyard paving is pulled through the fitness center at the main level and extends out into the top level of the sun terraces. Brick planters surround the perimeter walls of the sun terraces. Openings were placed in the perimeter walls to allow people traversing the slope to enjoy the sun terraces. That meant that, in order to prevent a security breach, the doors leading out to the sun terraces would have to be locked from the outside. So anyone in the pool who wants to go out on the sun terraces will get an electronic key from the attendant.

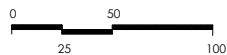
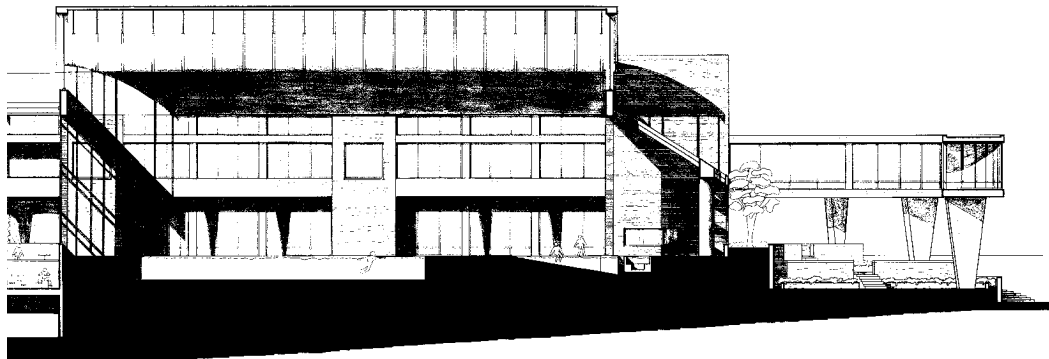


POOL FACING HOT TUB AREA

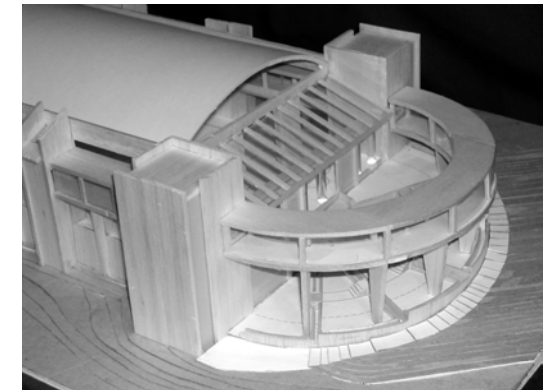


HOT TUB AREA

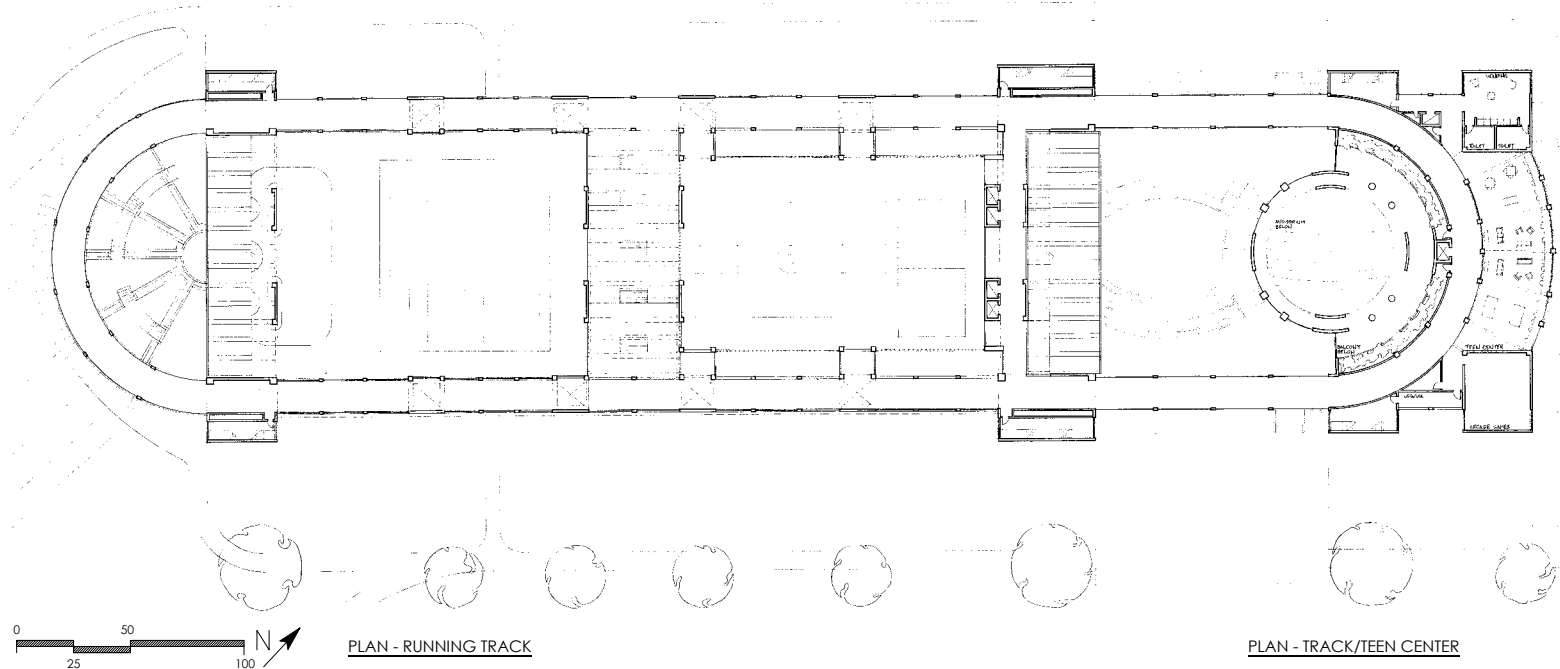
The room containing the pools has been redesigned. Previously the hot tub had seemed to float, needing to be anchored, and the curve of the newly vaulted roof over the pool was clashing with the curve of the running track outside the pool. A hot tub area containing one large and two small tubs was created under its own roof at the end of the building between the two west towers. The leisure pool was located so that it spills into the hot tub area, with the hot tubs being attached to the side of the leisure pool. The pool's vaulted roof was pulled back to align with the east wall of the corner towers, placing its end over the leisure pool. Two more brick-faced piers inserted there provide support for the beam that carries the clerestory windows above. Small islands in the leisure pool support the brick piers and provide a place to sit and rest or talk to people in the hot tubs. The hot tub area is covered with a sloped glass roof that matches the one covering reception.



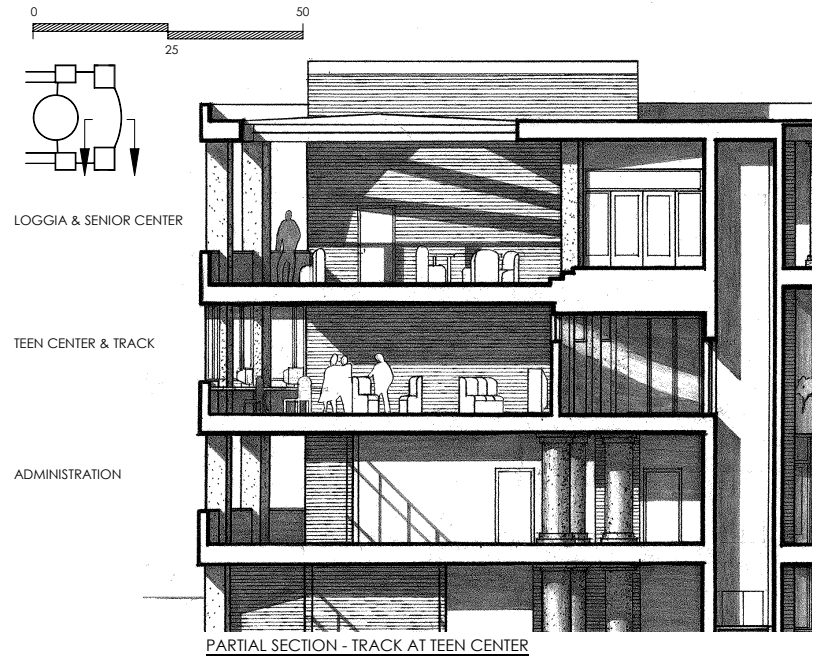
PARTIAL SECTION - POOL, HOT TUB AREA, AND SUN TERRACES

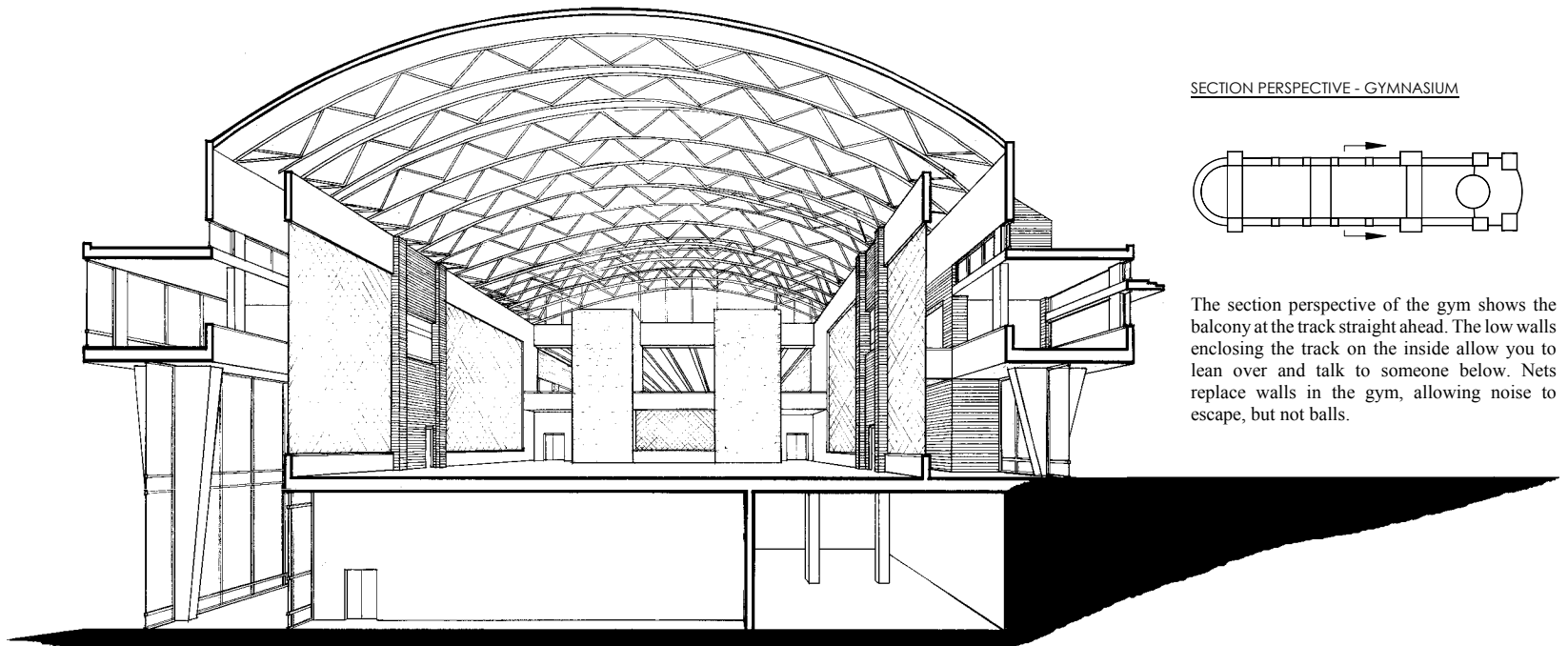


ROOF OVER HOT TUB AREA



As you step off the elevator at the track level you find yourself on an elevated walkway over reception, and above you is the sloping glass roof. The elevated walkway extends into the gymnasium so you can watch the activities below. This area can be used to do warm-up stretches before you begin running. Continuing north, you come to an opening just before the tower where you can look down to the lower corridor below. With the floor of that space being 37 feet below, you get a real sense of just how high you are. Then you enter the enclosed space of the tower. Turning right you can see over a low wall and into the reception area below. Then you are suddenly outside the building, up in the air, looking down into the entry courtyard. Looking across the courtyard to your right you see another bridge, just like the one you're in, another part of the track you'll get to shortly. To the north you see the mountains. The community center looms before you. As you enter the ceiling lowers, and it becomes darker. You start around the curve. Light spills through a glass partition on your left that allows a glimpse of the teen center. The glass panel is shortly replaced by clerestory windows which allow light to enter but provide no views (see above). Then another pool of light from another glass panel, another glimpse into the teen center, and you're back in the darkened space ending the curve. You then burst into the light and out of the building. You're up in the air again crossing the courtyard in the bridge you saw from the other side moments ago. As you enter the corner tower of the fitness center, it again becomes darker. You glance over the low wall down into the reception area. Then you are outside again with glass to your left and a low wall over which you can lean and look down on your right. The view out closes as you enter the light tower, where the light now comes from above you. An elevated walkway over the upper corridor on your right allows you to step off the track and cross over to watch activities in the gym below. Continuing on you pass out of the building again, back in at another light tower and out again. To your right you look down into the aerobic equipment terraces. Passing through another light tower, the view opens on the right to the pool. There is now glass to your right and left. You pass through the darkened space of another corner tower before bursting out into the air and light again. As you negotiate the curve the ground drops farther and farther away. You can see the sun terraces to your right and the mountains to the north. Then you enter the darkness of the corner tower. This experience of darkness, light, inside, outside continues until you reach the elevator area and have completed your first quarter-mile loop.

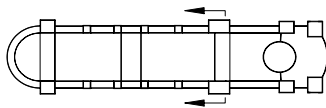




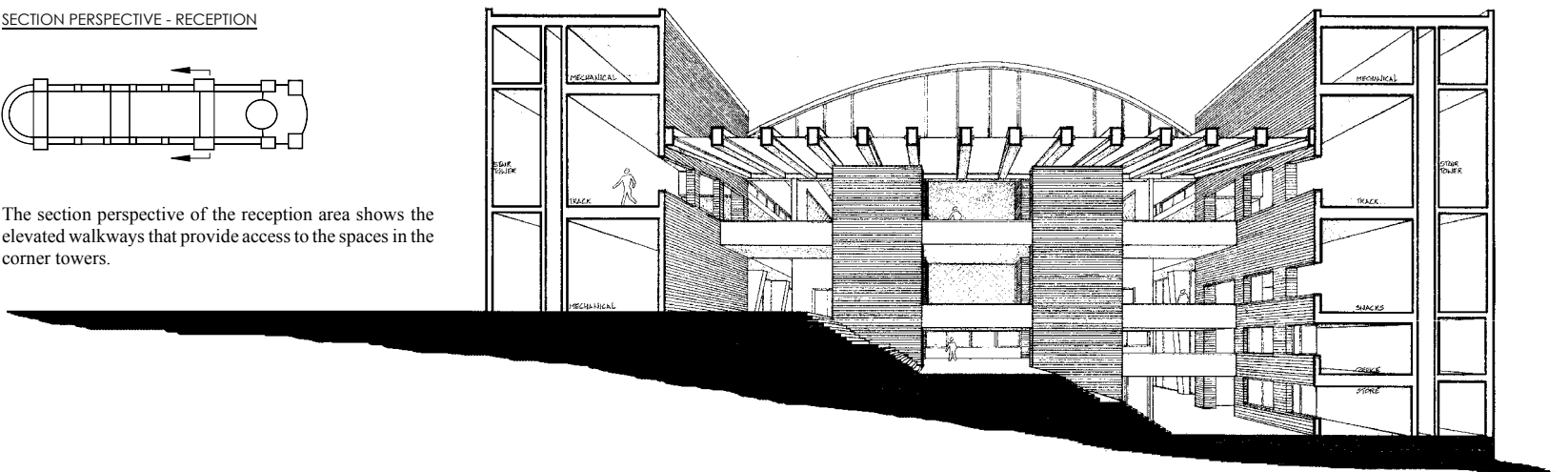
SECTION PERSPECTIVE - GYMNASIUM

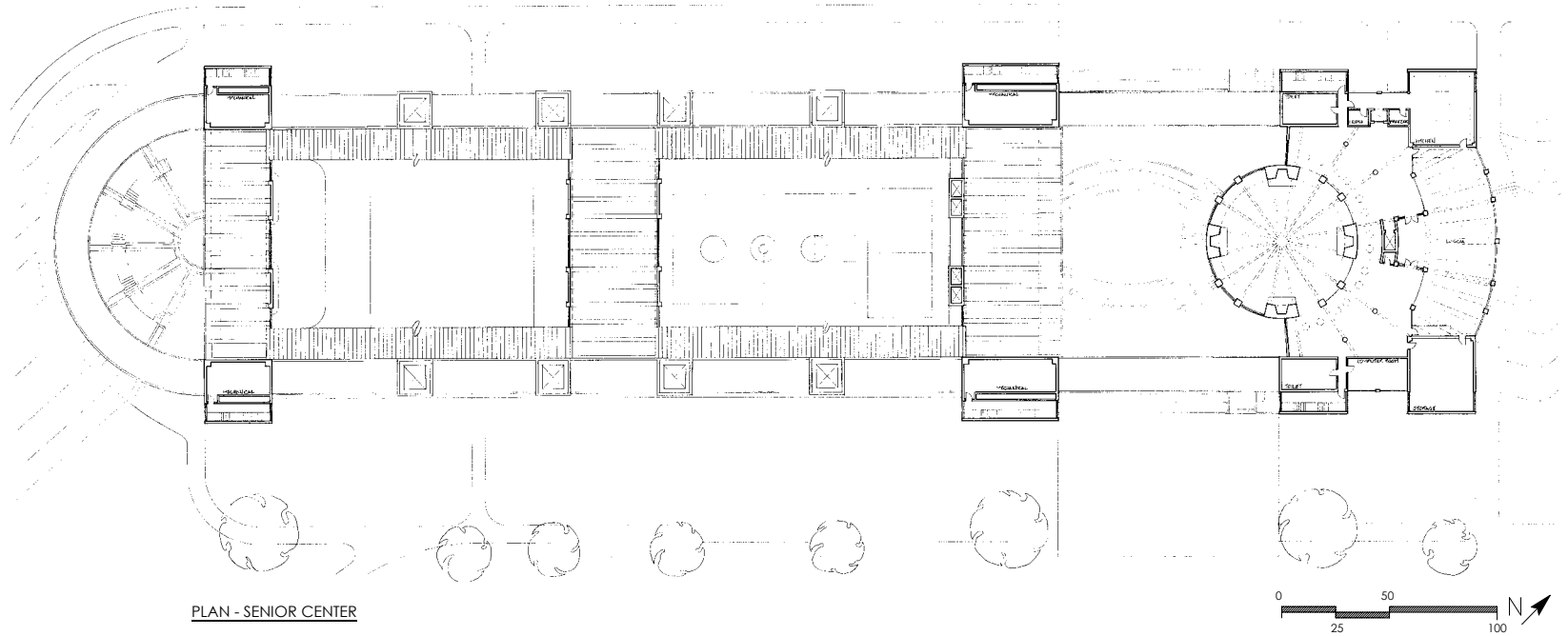
The section perspective of the gym shows the balcony at the track straight ahead. The low walls enclosing the track on the inside allow you to lean over and talk to someone below. Nets replace walls in the gym, allowing noise to escape, but not balls.

SECTION PERSPECTIVE - RECEPTION



The section perspective of the reception area shows the elevated walkways that provide access to the spaces in the corner towers.





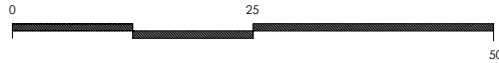
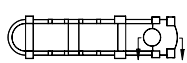
The domed room in the senior center is now enclosed with only a glass partition, allowing space to flow freely throughout the top floor of the community center.

SENIOR CENTER FACING NORTH

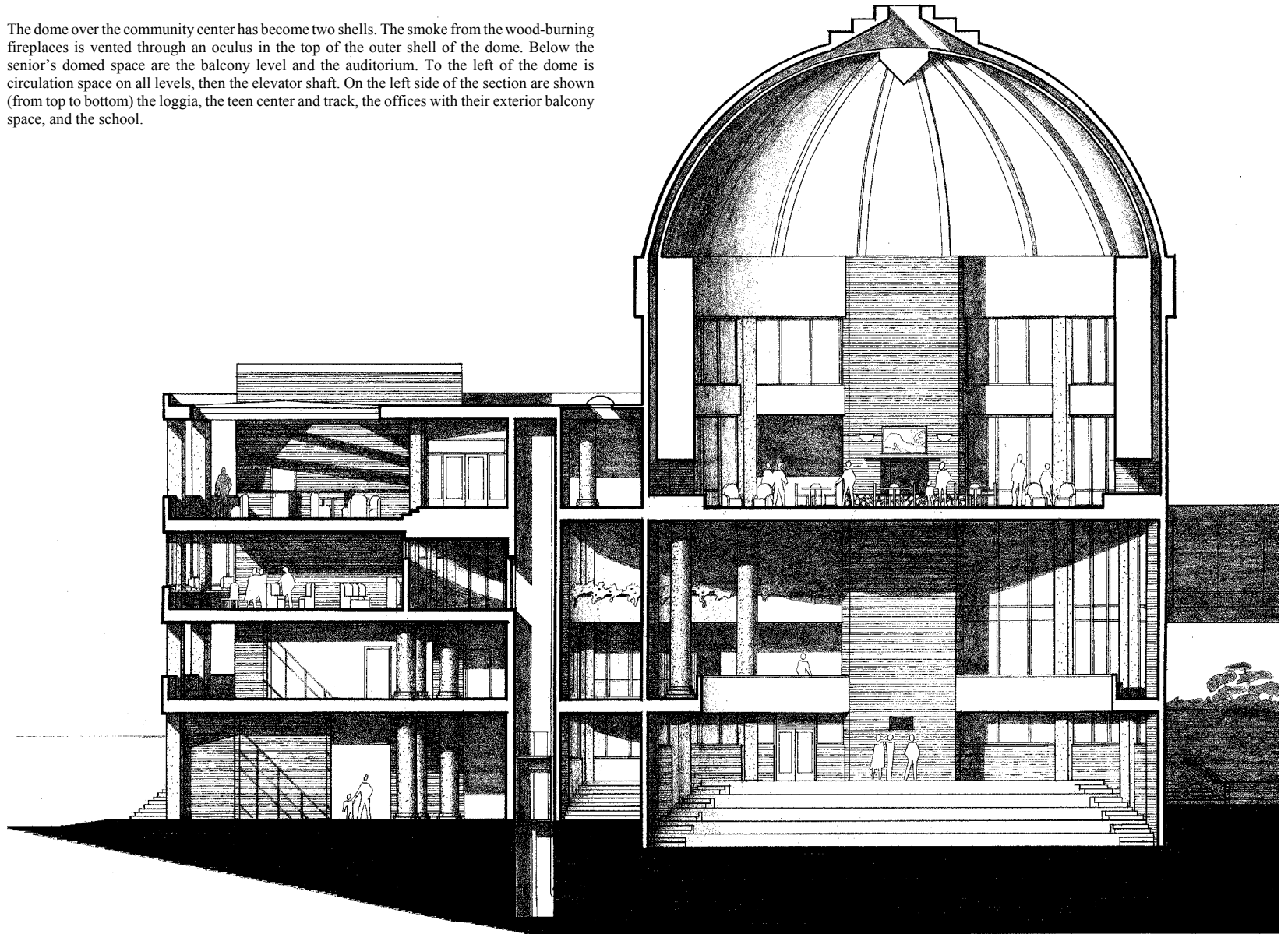


SENIOR CENTER FACING FITNESS CENTER

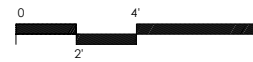
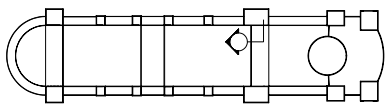




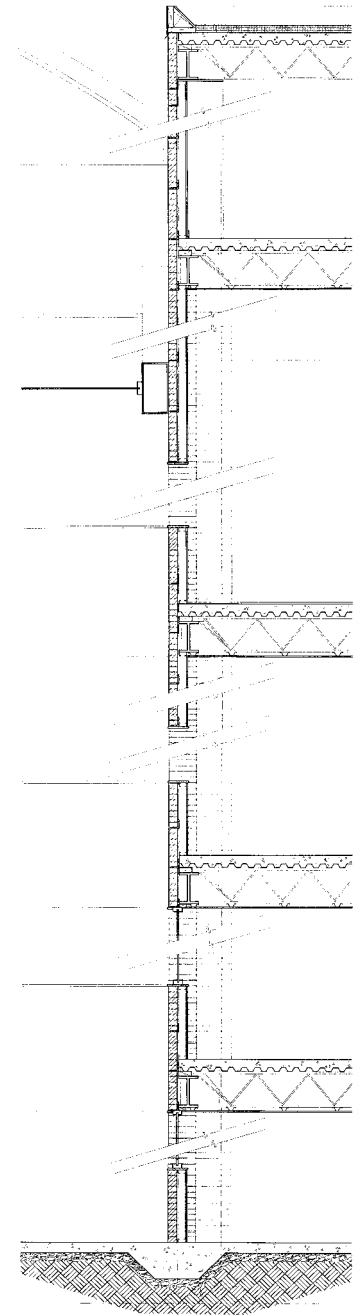
The dome over the community center has become two shells. The smoke from the wood-burning fireplaces is vented through an oculus in the top of the outer shell of the dome. Below the senior's domed space are the balcony level and the auditorium. To the left of the dome is circulation space on all levels, then the elevator shaft. On the left side of the section are shown (from top to bottom) the loggia, the teen center and track, the offices with their exterior balcony space, and the school.



PARTIAL SECTION - COMMUNITY CENTER



This wall section shows the construction of the inside wall of the corner towers. Roof insulation rests on concrete poured over corrugated metal decking. That rests on joists which are supported by steel beams. The beams sit on a bearing plate on top of steel columns. Floors are made from concrete poured over corrugated metal decking. Hat sections attached to the bottom of the joists support drywall ceilings. Steel studs form the walls and are faced with brick on the exterior, drywall on the inside. Relief angles attached to the steel columns, and, if necessary, to a few structural steel studs, support the brick. The steel columns continue down to a huge column footing below. The concrete slab is thickened at the bottom of the wall to receive the small amount of weight not carried by the columns. That concrete slab rests on a bed of crushed stone over compacted earth..

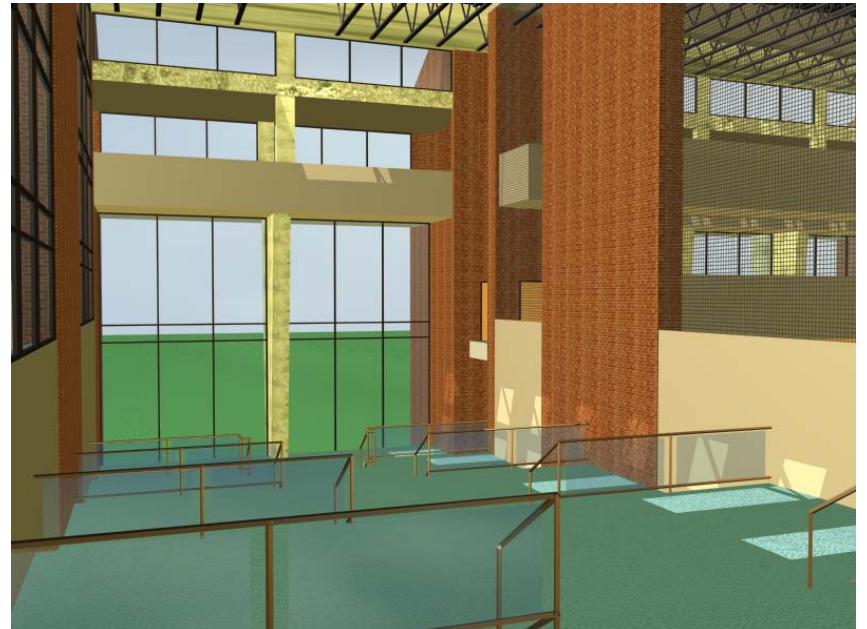


WALL SECTION



LOWER CORRIDOR IN FITNESS CENTER FACING EAST

AEROBIC EQUIPMENT AREA IN FITNESS CENTER FACING NORTH



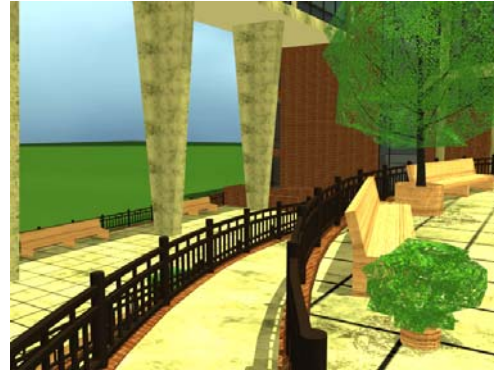
CONCLUSIONS

What we learn primarily in architecture school studio courses is the process of design. I'm glad that I kept so much documentation of my process as I designed this project. Putting this book together caused me to analyze my own process thoroughly, and I've learned a lot about my strengths and weaknesses.

But mostly I've learned to listen carefully to that little voice at the back of my mind that we all hear regularly during design. That voice might be suggesting that I try something that would require a lot of time and energy, so I want to ignore it. Or it may be warning me of a problem in my thinking, and again I want to ignore it. Every time I ignore that little voice, it winds up costing me more in the end than it would have had I listened initially.

I've also learned not to hold back, to give it my all. As soon as you commit your whole self to a design project, creativity starts flowing strongly and steadily.

Vita



Barbara J. Sebastian
May, 2002
Alexandria, Virginia

Education

Master of Architecture
Virginia Polytechnic Institute
Washington Alexandria Consortium
Alexandria, Virginia
2002

Bachelor of Architecture
University of Maryland
College Park, Maryland
1992

Professional Experience

Willigerod & MacAvoy Architects
Harrisburg, Pennsylvania
Project Manager
July 1997 to December 1999

Sebastian Support Services
Self-employed providing project management
and drafting services to Architects and Engineers
May 1996 to August 1996
March 1995 to August 1995

John Butler Davis Associates
Harrisburg, Pennsylvania
Draftsperson
September 1993 to March 1995

JWF Architects
Harrisburg, Pennsylvania
Secretary/Draftsperson
September 1992 to September 1993