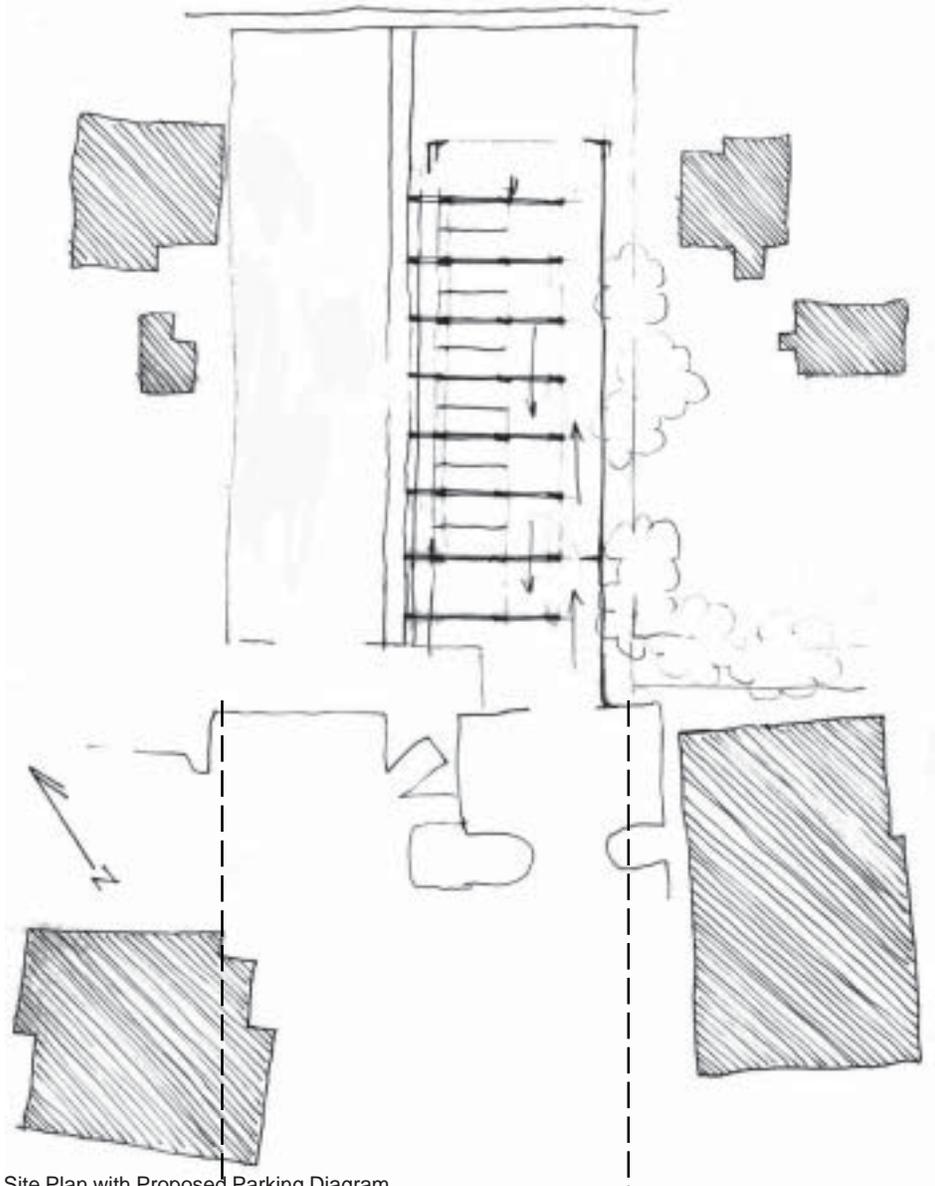


Lawn





Site Plan with Proposed Parking Diagram



Existing Lawn



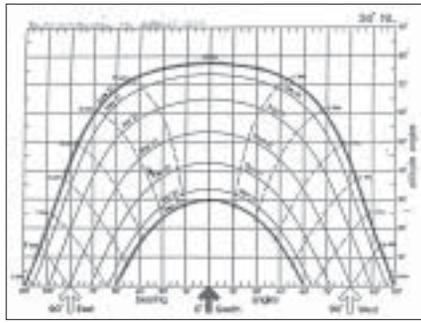
Context Model 1



Context Model 2



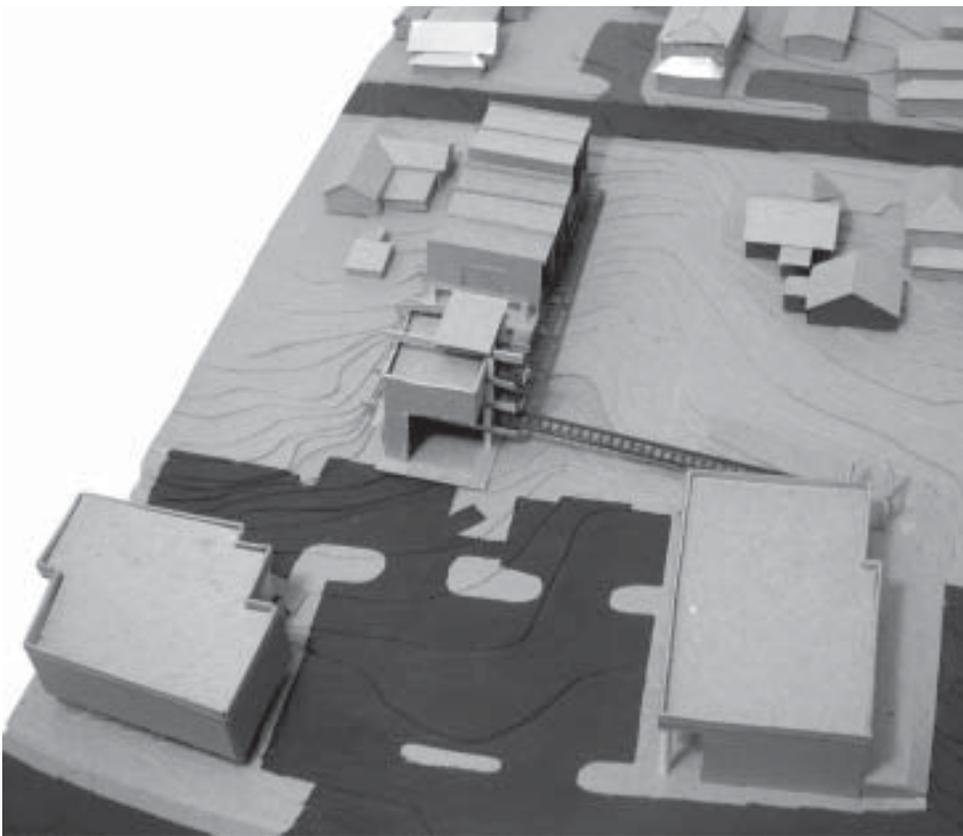
Context Model 3



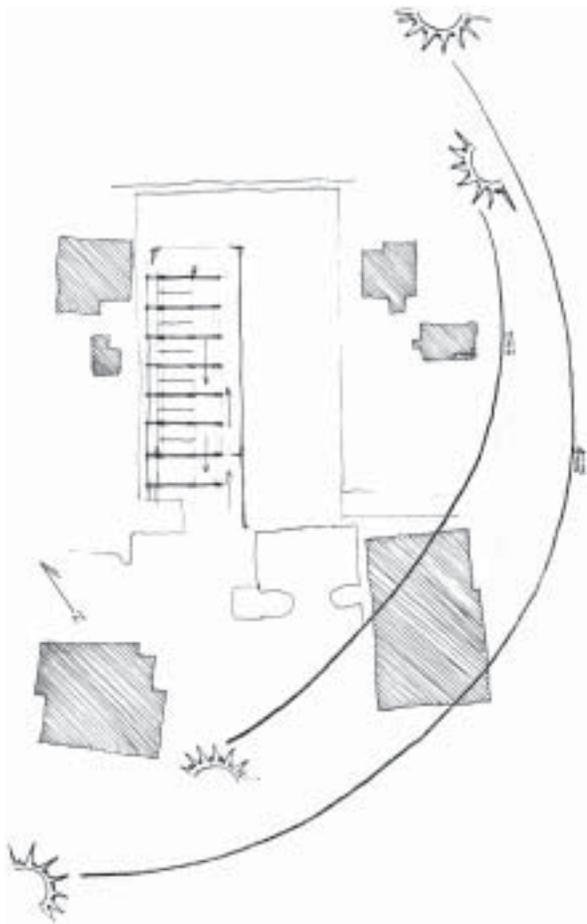
Sun Angle Chart

The Blacksburg zoning ordinance calls for open spaces in transitional residential districts. Though not public, the vacant lot at 707 Progress Street provides a lawn that is a key open space. The form of the building, long and narrow, is such that the lawn can be maintained.

In Initially siting the building, consideration is made as to how the sun path will affect the apartments, the view from the bar, and the condition of the lawn. Two siting strategies were studied, siting along the southern property line and along the northern property line. Locating the proposed building on the southeast side of the site, aligns the entrance to the parking garage with an existing entry curb. Siting the commercial building along the southern property line minimizes the impact of the existing office building (712 Main Street) on views of the sunset from the upper floors of the commercial mass. This places the lawn on the northwest side and therefore in shadow most of the day. The existing berm on the southeast would block morning sun from entering the apartments. The building is relocated to the northwest side of the site in order to preserve the sunniest lawn and facilitate the morning sun entering the apartments. Because of its height the fourth floor bar has access to western light.



Context Model Relocating Building to the North of the Lot



Sun Path to Site Relationship



Photographed June 21st

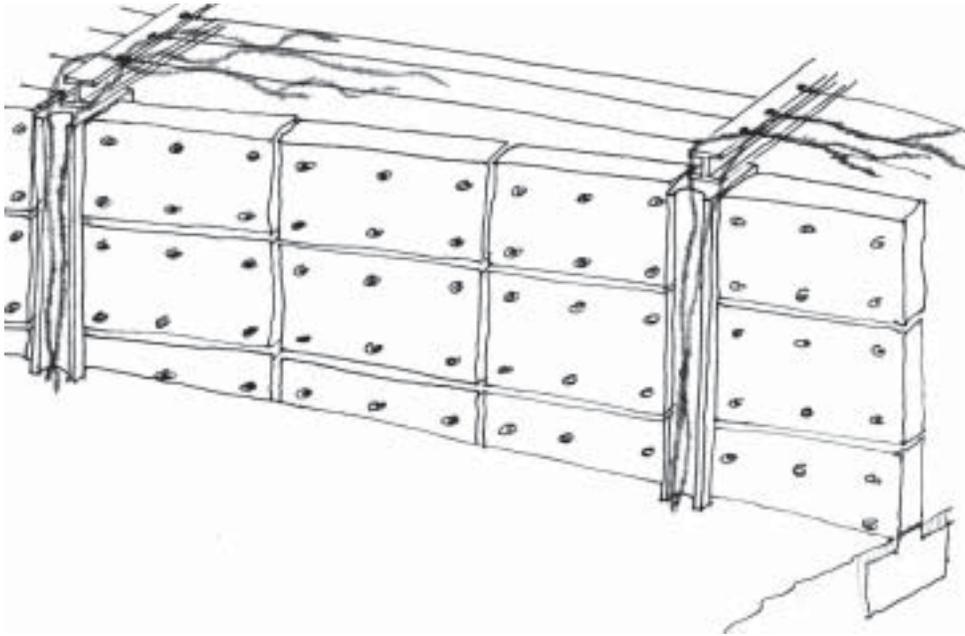


Photographed December 21st



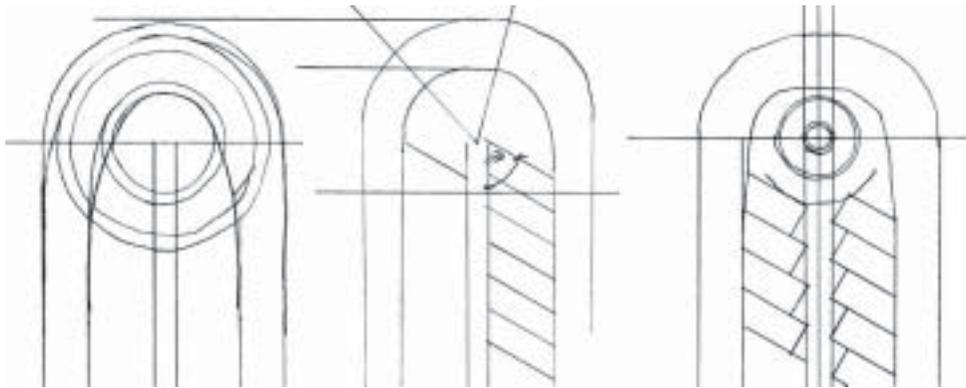
View of Retaining Wall from Model

Setbacks are not required for retaining walls, fences, and driveways in this zoning district. Therefore the northwest retaining wall is sited at the lot line, similar to retaining walls and driveways in the neighborhood. This wall will act as a garden wall to conceal the garage from neighborhood view. Ivy or Wisteria is to be planted at the base of the wall, and grown on a cable trellis stretched across the beams.

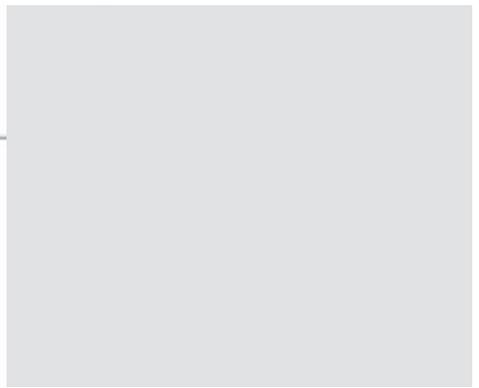


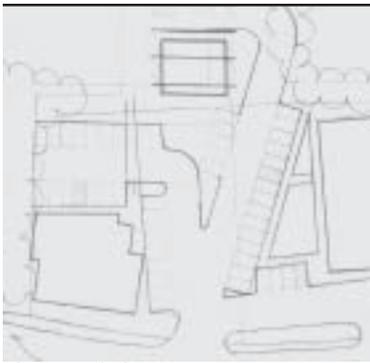
Exterior of Retaining Wall Showing Cable for Vine





Parking





advantage: gain plaza  
disadvantage: acute angles



advantage: direct lane to garage  
disadvantage: acute angles



advantage: green space increase  
disadvantage: open space decrease



advantage: increased number of spaces  
disadvantage: indirect lane to garage



advantage: central walkway  
disadvantage: columns displacement



advantage: central walkway  
disadvantage: column displacement



advantage: increased number of spaces  
disadvantage: indirect lane to garage



advantage: increase number of spaces  
disadvantage: green space decrease



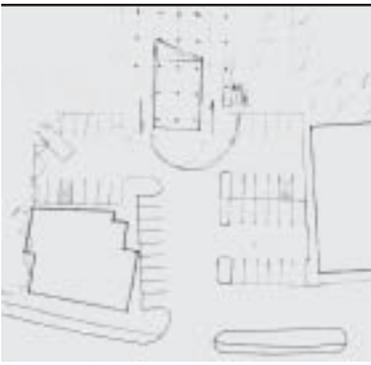
advantage: increase number of spaces  
disadvantage: column displacement



advantage: open space preserved  
disadvantage: acute angle



advantage: number of spaces preserved  
disadvantage: open space decreases

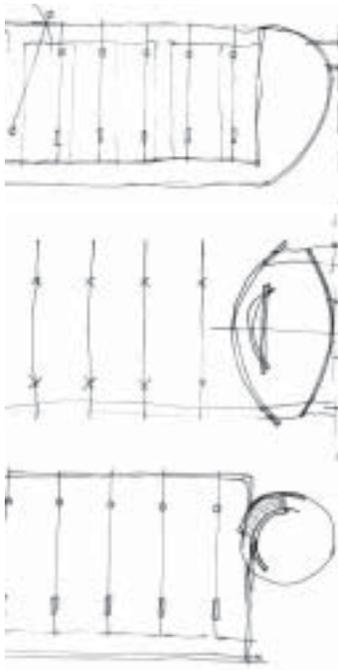


Selected Relationship

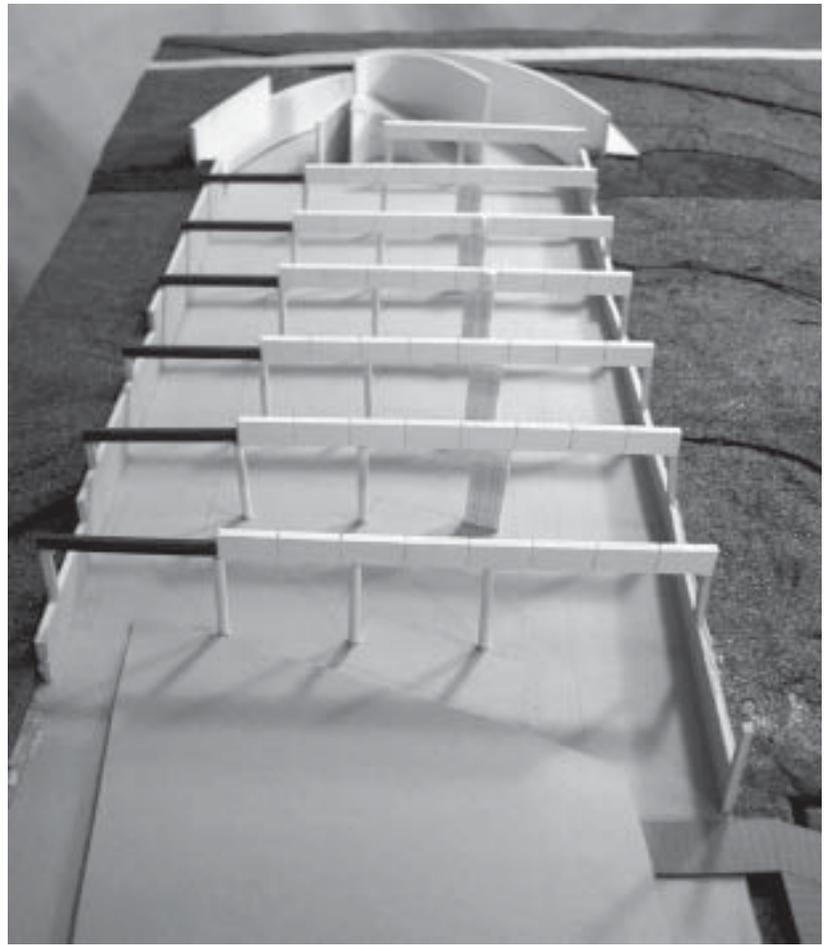
Four paths, entering and exiting the parking garage, were studied for their impact on the existing parking lot. Consideration was given to maintain the greater number of existing spaces, and improving handicapped space distribution while adding an entrance and exit to the new garage. The least intrusive approach is to enter the garage on the southeast side of the building and exit on the southwest. A lane from the entrance to the existing parking lot on Main Street takes drivers to the garage. In the lot the southeast parking is rotated perpendicular to the new drive and parking spaces are added to the northwest side of the lot. This changes the green space to parking space ratio. Current parking parameters state that there should be the equivalent of 18' X 18' of green space for every ten parking spaces. The lawn is considered to meet the green space required for the parking lot. Of the original fifty spaces, forty-four are maintained outside the garage. The other six spaces are provided in the parking garage along with spaces needed to accommodate the proposal.



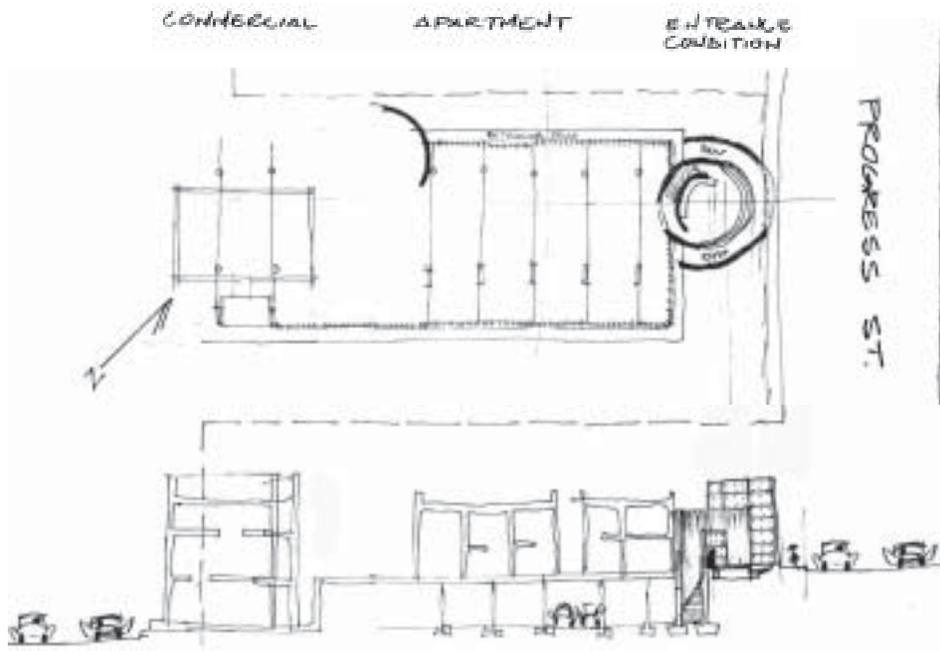
Final Parking Proposal



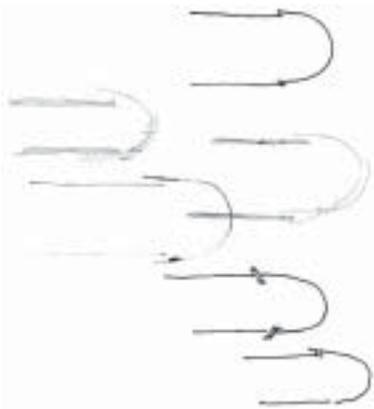
Curve Explorations



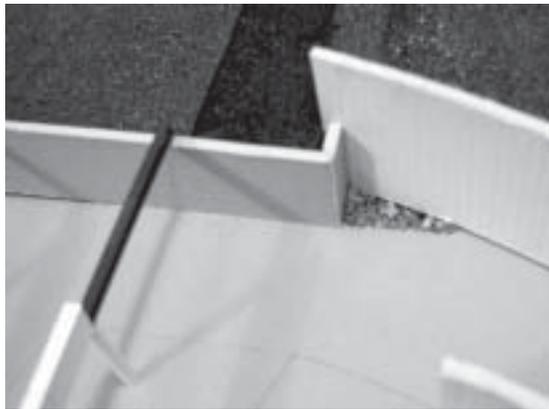
Final Garage Configuration



Examination of Relationship Between Upper and Lower Floors

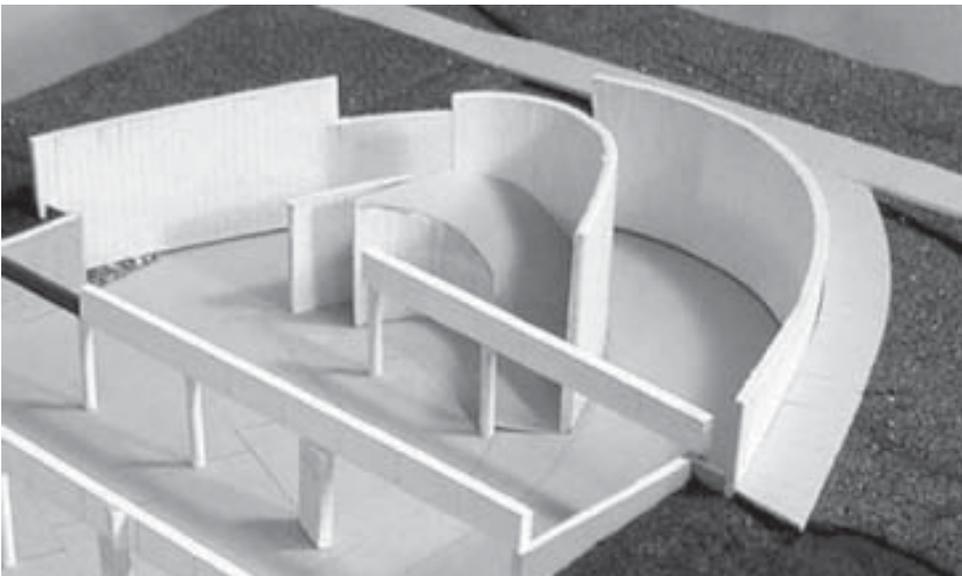


Retaining Wall Schematic



Retaining Wall Detail

The single lane of traffic circling the parking spaces at the northeast end of the site defines the area adjacent to Progress Street. Several alternatives to traffic circulation are explored as to how they project to the street above. The curved retaining wall [bottom right] defines a circular form on Progress Street. A stair is added, leading to the apartment resembling the radius of the traffic circle that moves cars through the garage. As a result of the radius of traffic and the change in retaining wall heights, the circular retaining wall [top right] is broken free from the straight side walls.



Final Retaining Wall and Stair Configuration

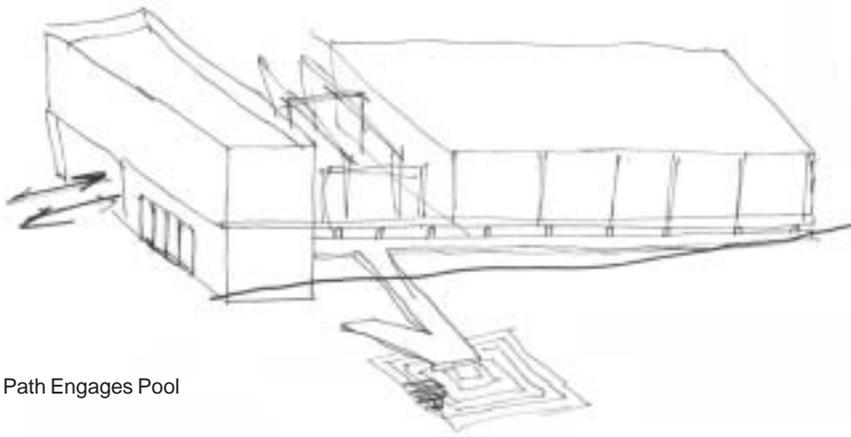


Retaining Pool

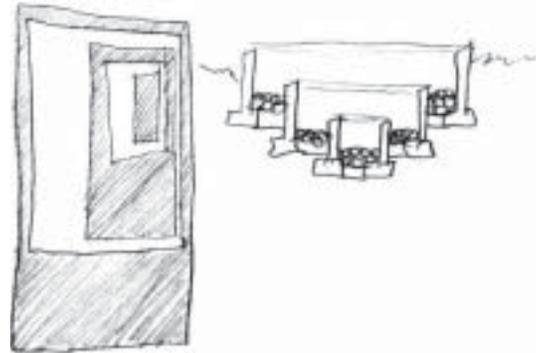




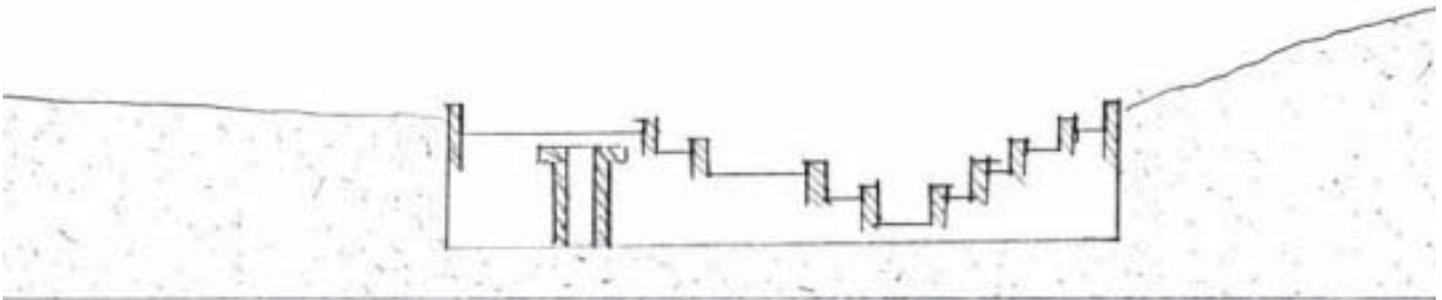
Existing Retaining Pond



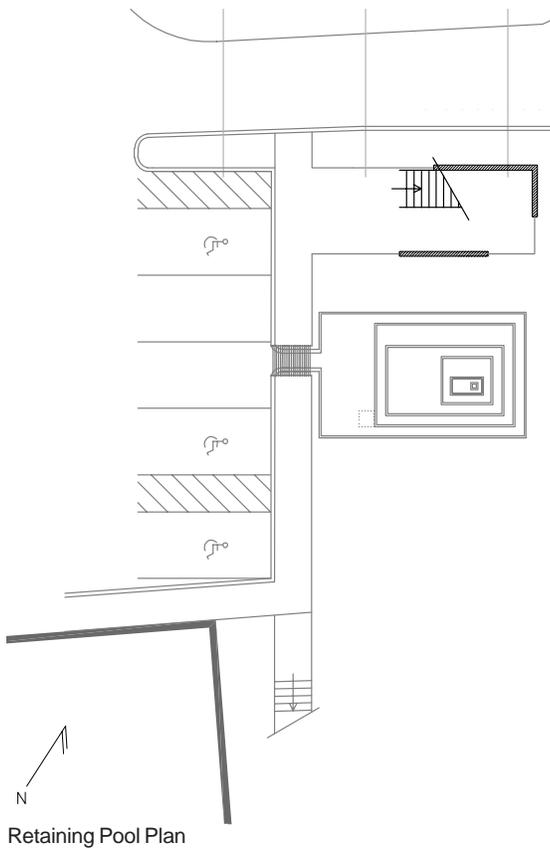
Path Engages Pool



Pool Sketches

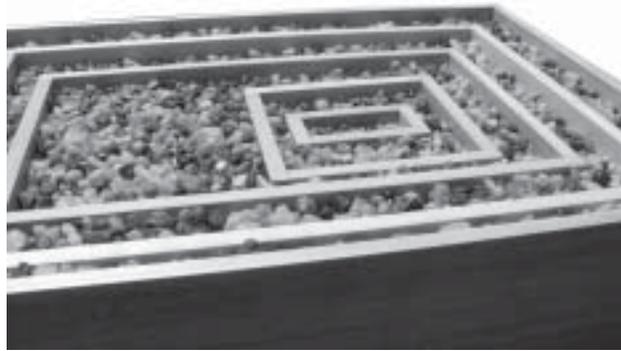


Retaining Pool Section



Retaining Pool Plan

A stormwater retaining pond [top left] sits along the southwest boundary of the site. The pond has an approximately footprint of 15' X 24' and a 10' to 12' depth. It serves to direct water back into the water table. An overflow inlet, connected to the city storm drain system, stands about nine feet above the hole's floor. The pond directs runoff from the site, the adjacent parking lot, and the roof of the building at 712 Main Street. The existing pond is not maintained, and as a result the pond is overgrown with weeds. A new retaining pool [right center] is designed to direct existing runoff as well as the needs of the new building. The overflow inlet is concealed under the rocks in the highest level of the pool. The pool is designed to become a visual feature on the site.



Pool Detail



Pool in Context



Public Path





A1



A2



A3



A4



A5



Site Plan with Path Indicators



Three distinct paths can be taken in walking to and across the site. The first is the path from the commercial end of the site offered by the building at 712 Main Street [A1 through A5]. Second, is the path that is routinely mowed across the site [B]. This path is used by pedestrians and bicyclists on their way to the commercial buildings in the area, to downtown Blacksburg, and to the Virginia Tech campus. The third path is located behind the northeast exterior wall of the building at 708 Main Street [C1,C2]. This small opening and stair provide pedestrian circulation for tenants in this building, as well as a connection from the path through the site. There is no defined connection to the existing alleyway [plan left], which is approximately twelve feet away.

B



C1



C2



Site Plan with Path Indicators



D1



D2



D4

The existing stair [D1 through D4] sits between the commercial building and the city alleyway. The alleyway is terminated as an automobile route by an electrical transformer just above the upper entrance to the stair. However, pedestrians use this alleyway from the stair as a footpath to downtown. Existing conditions prove cumbersome for bicyclists.



D3

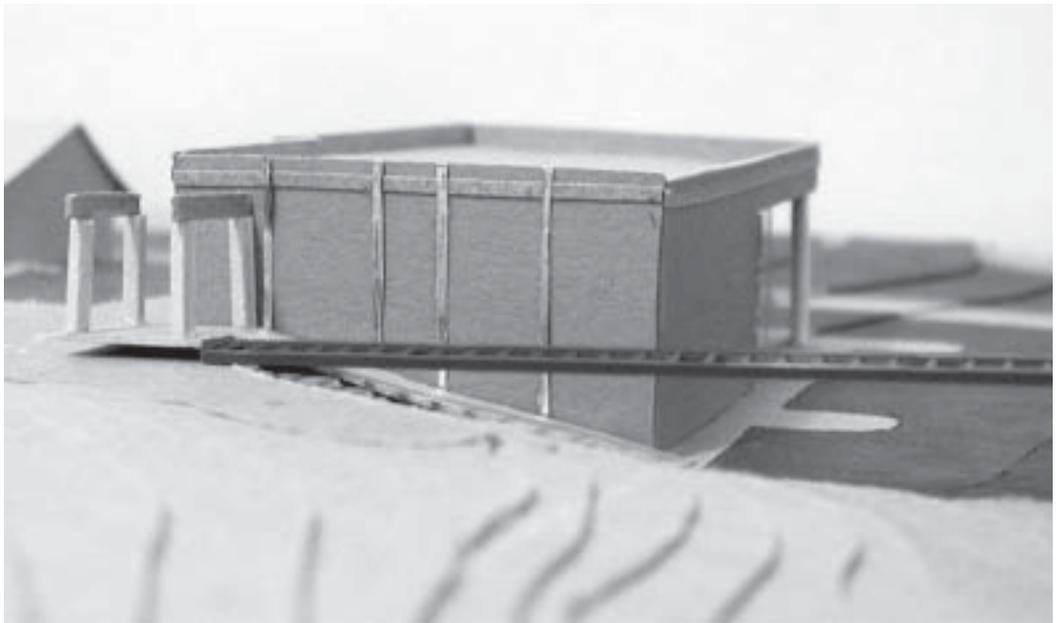


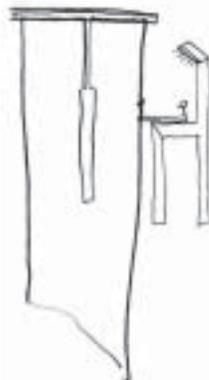
Diagram Model of Bridge



Whittemore Pedestrian Bridge



Detail



Bridge Sketch



Castelvecchio

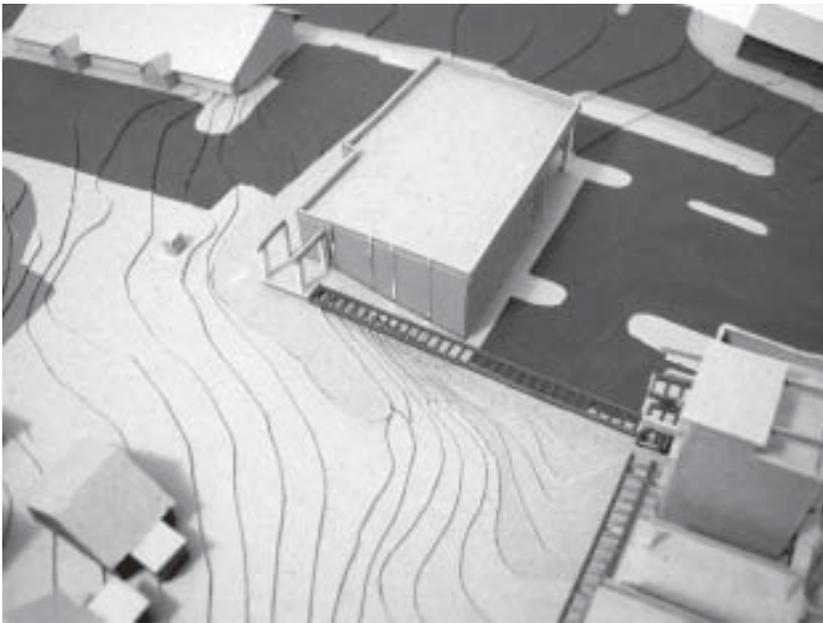


Diagram Model of Bridge and Commercial Mass

The needs of the greatest number of people are considered in order to provide the best available path. A bridge is introduced to assist bicyclists, people with strollers, and wheelchair users. The elevator designed for the new proposal will be accessible by these people to navigate the changing elevations of the site.

On the Virginia Tech campus, Hancock Hall joins Whittemore Hall by a second story bridge [lower left]. The bridge is a simple structure made of wide flange steel beams, corrugated decking, and a concrete slab. Though not code compliant, the thinness of the railing provides a clear visual connection from the ground to the activities taking place on the bridge.

Carlo Scarpa explored many bridge and stair design ideas in his work at Castelvechio [bottom right], in Verona, Italy. The changes in material and construction of the various bridges and paths suggest attributes desired for the proposed public path. Contrasting materials such as steel beams and concrete columns articulate the components of the bridge. The decking, concrete footpath, and beams of the proposed bridge strike a line across the horizon.



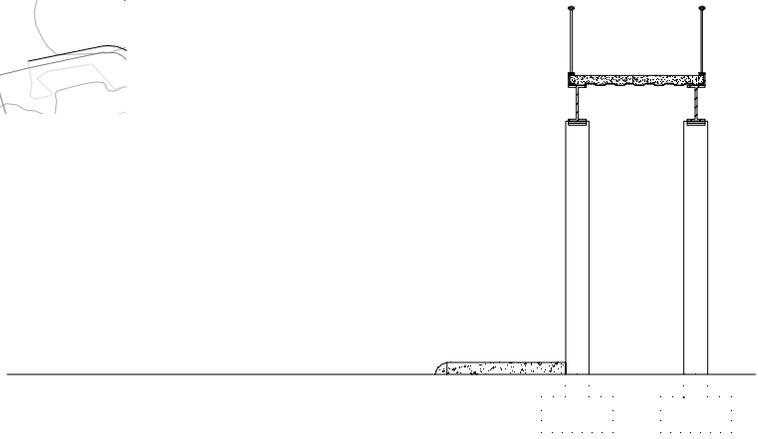
Castelvechio



Castelvechio



Site Plan Indicating Line of Public Path



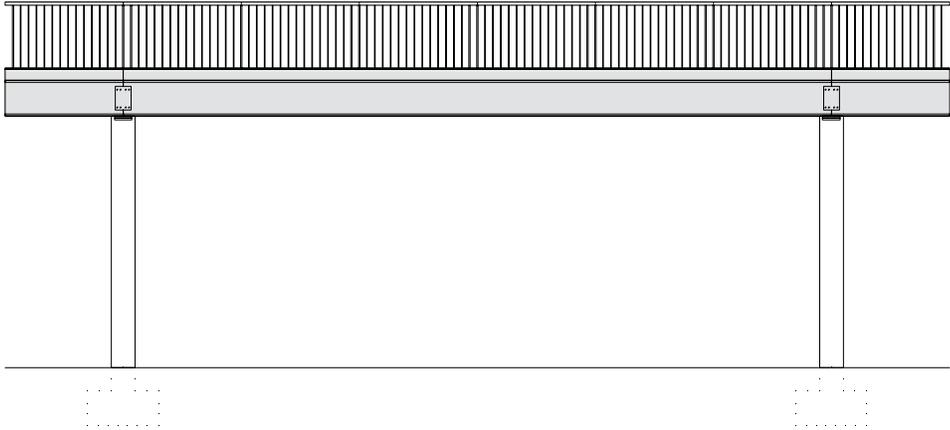
Path Section Detail



Public Path in Relation to Apartments

The public path is supported by steel beams spaced at thirty feet increments. The beams are sized 18-inches in depth. This is half the size of the adjacent concrete beams. The change in depth allows the public path to sit at a lower elevation than the apartment deck [lower left]. In this area, a CMU wall along the one side of the path creates privacy for the apartments.

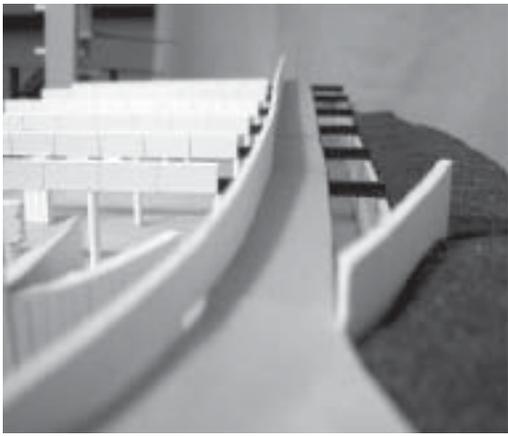
This bridge connects to the existing alleyway. The alleyway [bottom right] is a quieter path to downtown Blacksburg than either Progress Street or Main Street.



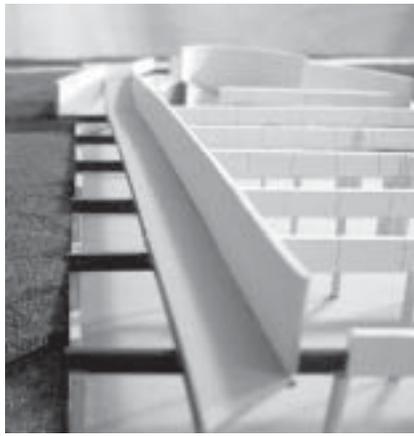
Path Elevation Detail



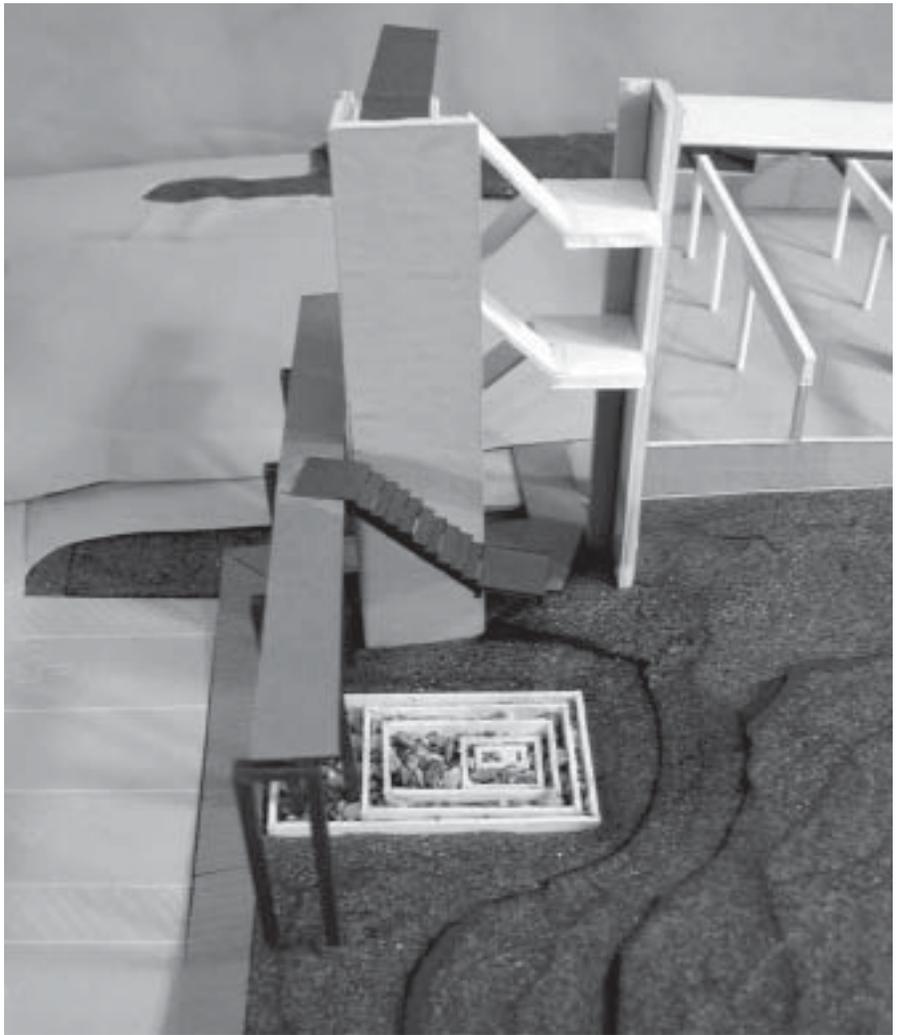
Alleyway to Downtown



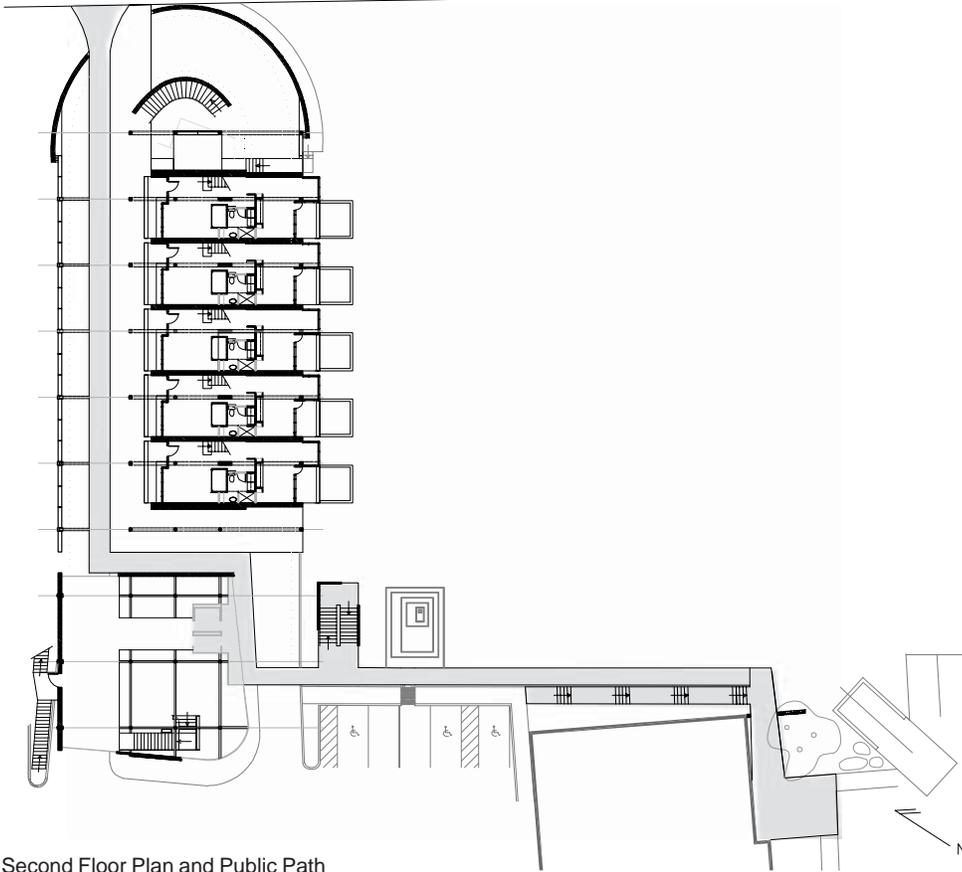
Accessing Path from Progress Street



CMU Detail



Formed Concrete Path and Stair



Second Floor Plan and Public Path

The elevator was originally placed outside of the building to function for both the users of the building and users of the path. The path makes the connection from the elevator to the commercial building. The stair in the building at 712 Main Street [bottom right] is distinguished from the rest of the building by a material change. This stair is wrapped with concrete block rather than brick. Similarly, the vertical components of the path in the proposed building are emphasized by substituting formed concrete walls in place of the concrete block used on the commercial facade.



Stair Enclosure at 712 N. Main Street

