Ritual Resilience

a self-directed exploration
elizabeth cagle
fall 2012

jennifer akerman
brian ambroziak

Contents

01_positioning 4

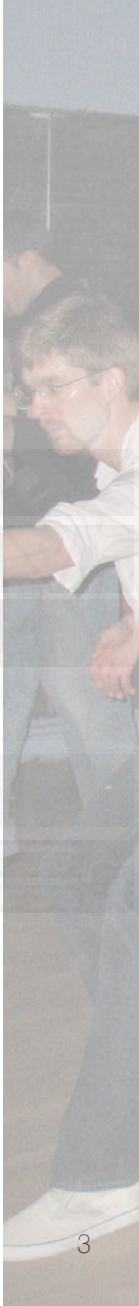
02_framing 8

03_locating 12

04_forming 16

05_programming 20

06_referencing 22



spatial music

[Architecture] is music in space, as it were a frozen music.
-Philosophie der Kunst, Friederich Schelling[1]



1. architecture moves the user

Architecture has great potential to learn from music and dance. The compositional principles of all disciplines come from the same roots[2], and thus overlap and resonate with one another.

Music is embodied and made spatial through dance—visceral music.

The ritual of social dance, the tensions and connections involved therein, the conversation between two dancers, and the way in which dancers move through space have the potential to inform an architecture of rich relationships.

history of swing

Swing dance, specifically Lindy Hop, was developed in the United States in 1928 by George "Shorty" Snowden in response to the new jazz music that had become popular in the dance halls of Harlem[3]. It is based in African dance, with the dancers exhibiting passion and focus. It is an energetic dance in which lead and follow react to one another to improvise within the framework of jazz.

Throughout its history, swing has been both rebellion and escape.

The Savoy ballroom, the premier Harlem dance establishment, was home to Whitey's Lindy Hoppers, a group of both black and white dancers. At the time, it was radical for white and black to do anything together, but on the dance floor, all that mattered was a dancer's skills[4].

Swing quickly spread to Nazi-occupied Europe, but was banned because most of the popular artists were black or Jewish. Underground jazz dance clubs quickly sprung up. Some were tied to resistance movements; others were simply for dancers who wanted to escape from the fighting for a time[5].

Although swing re-emerged in much of Europe in the 1980s and 90s through the neo-swing movement[6], it did not make its way into the Soviet Bloc.

dance as ritual

Swing is a social ritual. From the finding of a partner to the conversation within the dance itself, the most important aspect is a shared experience between two partners.

As jazz is improvised over a commonly-understood structure (melody) to communicate a new idea, so the lead in a dance sequences a shared vocabulary of dance movements to converse with the follow. In turn, the follow responds, suggesting new and further sequences through her movements. This type of conversation through improvisation does not occur in choreographed dance.



2. no future in poland
postcard from kraków

polish resilience

Throughout Poland's history, she has been invaded, carved up, subsumed, and reclaimed. The Tatars, Teutonic Knights, Prussians, Austrians, Russians, and Nazis have all coveted her position, a buffer between Germany and Russia[6].

Most recently, her occupation by the USSR has left deep scars on her people and her landscape. Stark gray concrete blocks and towers blend into the gray of the winter sky; people bundled into great gray overcoats and boots make their way through the gray slush. Heads are down, voices hushed. They are introverts, with their tenacity and resilience buried deep, deep down.

Occupation had left an effect not only on Poland's people, but on her architecture. A chain of frontier fortifications of the Austrian-Hungarian empire are the foundation for Kopiec Kościuszko, a Kraków landmark[8]. Concrete housing blocks mar the skyline of every Polish town and city.

Perhaps most disturbing are the housing units built by the Soviets in the 1950s and 1960s. From 1947 to 1974 a typical Polish apartment was 68 m^2 and housed six people. The pathological space threshold is 8-10 m^2 per person. Housing the majority of Poland's population within 11 m^2 per capita left an architectural and psychological scar on the country[9].

But deep in the basement clubs of old city Kraków and hidden within the universities of Warsaw and other major cities, there is a rebellion brewing among the younger generation. These young people have discovered that to be Polish means never to give up one's identity or one's joy. Seeds of rebellion lay dormant in the older generation, but have sprouted in the younger. A rebellion of joyfulness begins.

A tiny part of this rebellion is a group of swing dancers in Kraków.

In the early 2000s, the swing movement finally made its way to Poland, where a few small groups of young Poles in Kraków and Warsaw have picked up on swing dance[10]. They dance to celebrate life and youth and to spread swing traditions.



3. kraków juwenalia 2012
a citywide celebration of being young

embodied music

Music is composed of layers: beat, melody, harmonies, repetitions, alterations, and improvisations, all of which have spatial implications. Dance adds another layer to music. The motions of both dancers: feet, legs, hips, head, hands, and the communication, connection, tension, conversation between them form visceral music. A conversation between two dancers will never occur in quite the same way ever again.

Music creates a spatial shell which the dancers inhabit through their movements.

Dance embodies music, gives it a visible, tangible form. Through dance movements, dancers translate an auditory experience to a spatial experience.

Although dance is spatial, it is fleeting, temporal, and constantly moving. Architecture endures. And yet architecture is not without animation. The play of light and shadow across the surface, the weathering of materials, the marks of users, animate architecture at a slower pace.

When dance is slowed to the point of a building, the essence can be retained.

What can architecture learn from the ritual of swing dance?



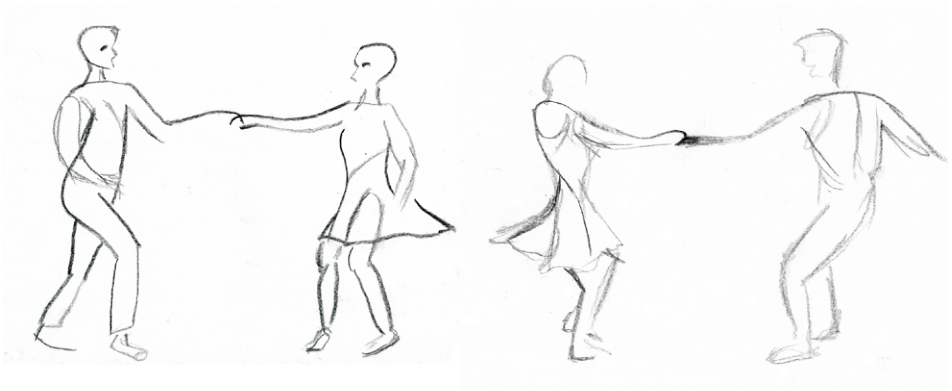
4. inhabiting the space of the music

Rhythm establishes a framework for habitation, melody forms space. As the intensity of the music increases, so does the intensity of habitation. Steps are indicated by the rhythm, improvisation occurs along the melody.

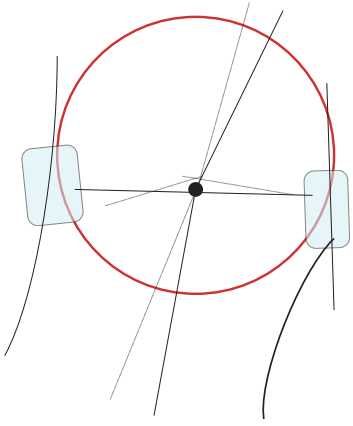
6. the dancer's movement becomes architectural

Each move has a particular sphere of separation, angle of tension, line of connection, anchor point, and center of rotation. Bodies in motion could be dancers, planets, structures.

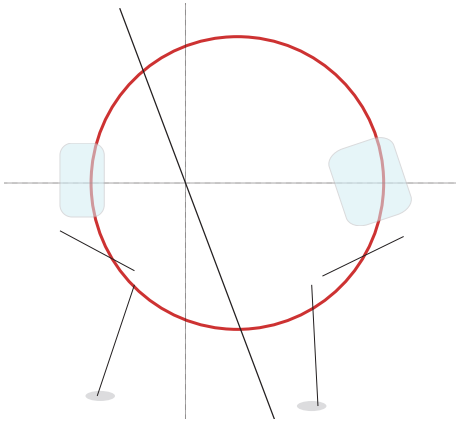
The melody indicates opportunities for choreography-- composition, progression, improvisation. The moves become sequenced.



5. the dancer's movement

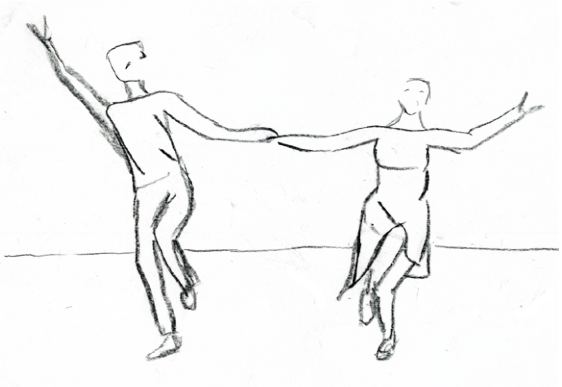


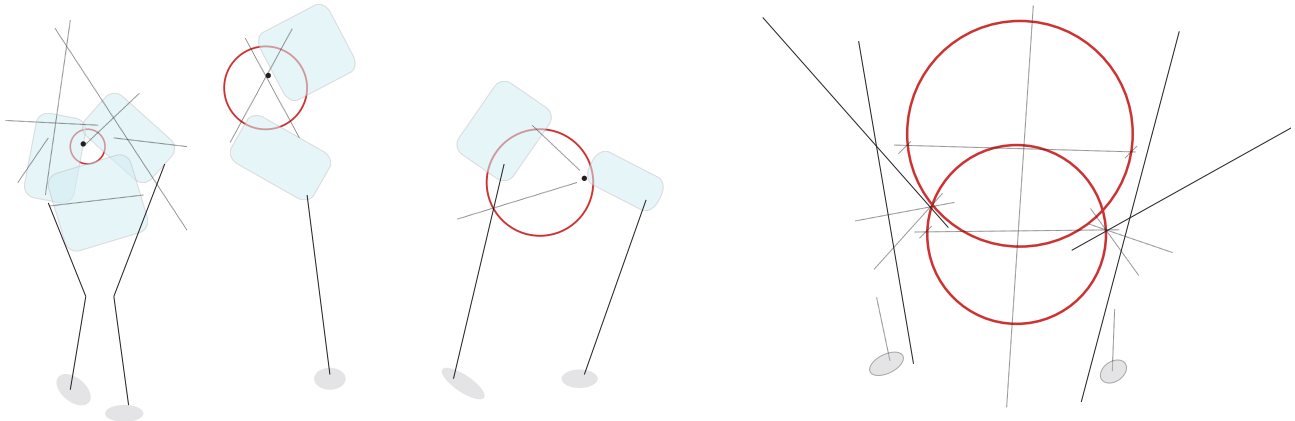
connection



tension







burst *pull* *gravity* *exuberance*

locating

The project is located in southern Poland, in the Podhale region in the Tatra mountains.

Poland offers much more historical context than the United States. Resilience through change over time is inherent in the Polish psyche, due to the continual invasions and redrawing of their borders throughout history. Therefore, the passing of time is an inherent site consideration.

Poland offers a wide variety of topographical conditions, from dense forests and high mountains in the southern Tatras to dense urban conditions to rural farms and suburbs. The topography of the High Tatras offers a landscape of valleys and peaks that can begin to contain music and serve as a place of resonance.

The small, rural villages scattered throughout the Tatras, the largest of which is Zakopane, offers a strong, direct connection to the people and folk culture of Poland, including folk musical and dance traditions. Rural Poles are known for the tenacity with which they cling to their tradition and identity, making rural Poland the extreme case as a testing ground for resilience.

The project is located in Małe Ciche, a small, one-street skiing village whose name means ***small quiet.***



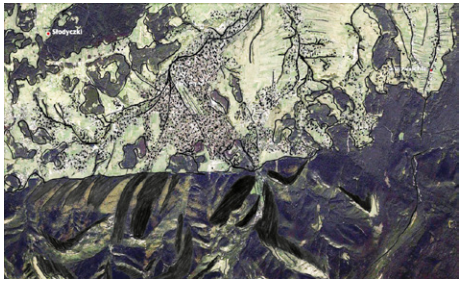
7. location of the high tatras



8. topography of the zakopane region



9. section through high tatras and hills, highlighting małe ciche



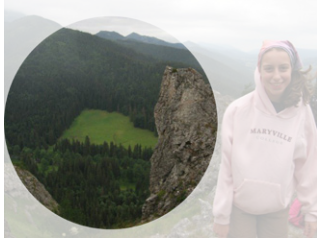
10. villages meet forest



11. małe ciche, a one-street village



12. tourism



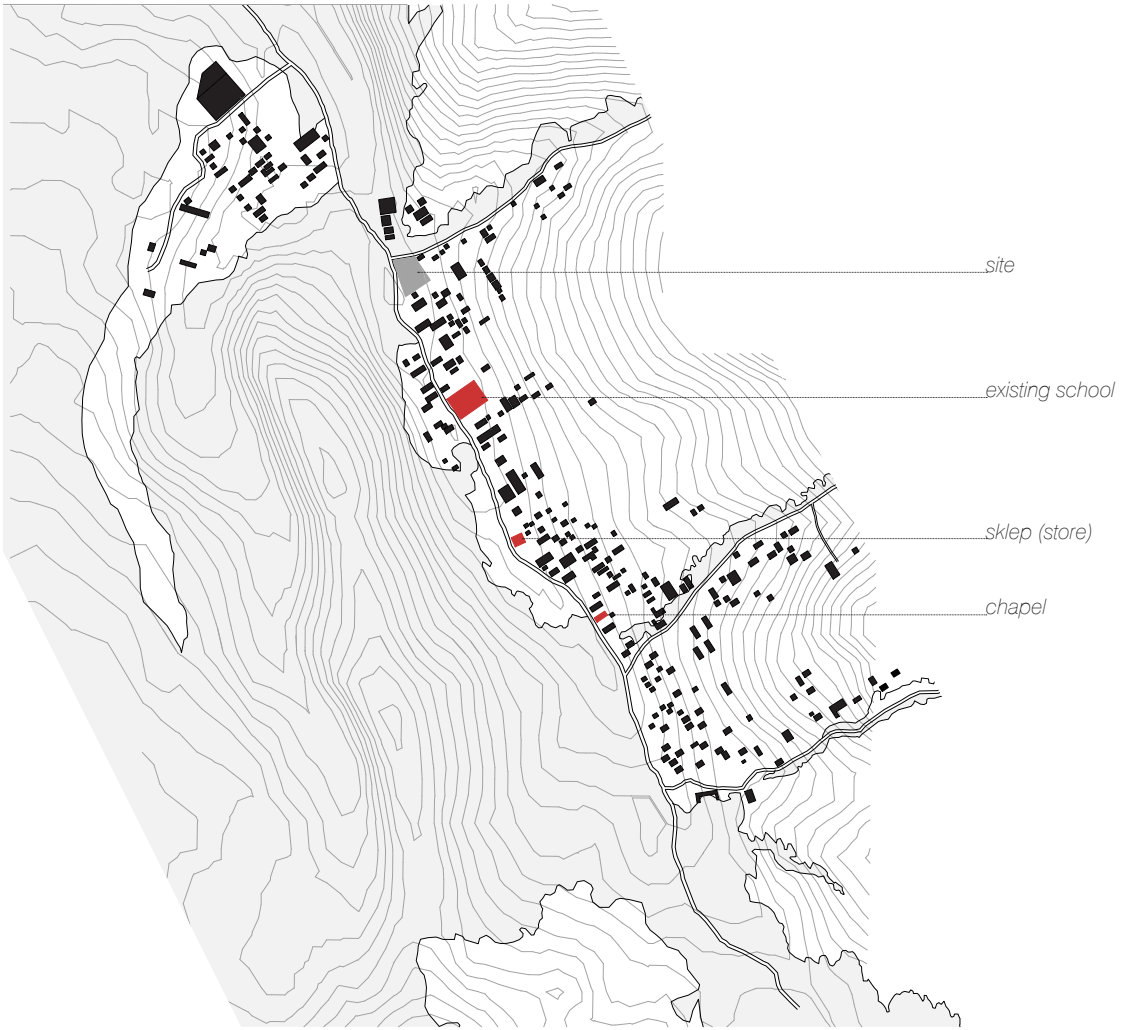
13. topography



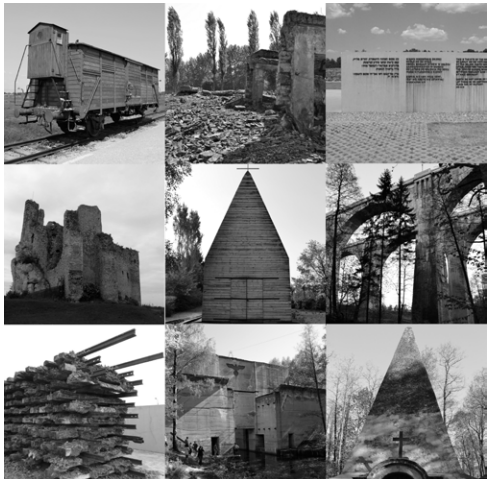
14. landscape



15. culture



16. site map



17. ruins
precedents from the polish landscape
an architecture of stillness, quieted over time

These are examples of the resilience of Poland as exhibited in its architecture. Some sites are intentionally ruined to efface atrocities, others are forgotten, and still others are intentional ruins, designed to show the effects of time. Poland has always been comfortable with itself and with the passing of time. Its identity is secure, if sometimes buried.

clockwise from upper left:
boxcar, auschwitz
gaschamber, auschwitz
bełzec death camp memorial, bełzec
incomplete bridge
pyramidal tomb, near russia
incomplete canal
train tracks, bełzec
castle, sosnowiec
new chapel

architecture learns of swing dance

Learning of swing dancing results in an architecture of tensions and rotations. Bodies in motion around one another are held about a central point.

Architecture also learns joy of swing dance. The exuberant and resilient mood of the dance carries into space. For an architecture to be joyful is not merely for it to be bright and cheery, or for it to somehow make people happy. Joy is a deep-seated contentment expressed as an affirmation of life. In this context, an architecture of joyfulness celebrates life through the creation of humane space and connection to a Polish identity.

The spaces that people inhabit in their daily lives have the most potential to be joyful architectures—the spaces that surround daily life and are marked on by people.

The converse is also true. The spaces that people inhabit every day have the most responsibility to respond to the needs of people, because these are the spaces that most affect them.

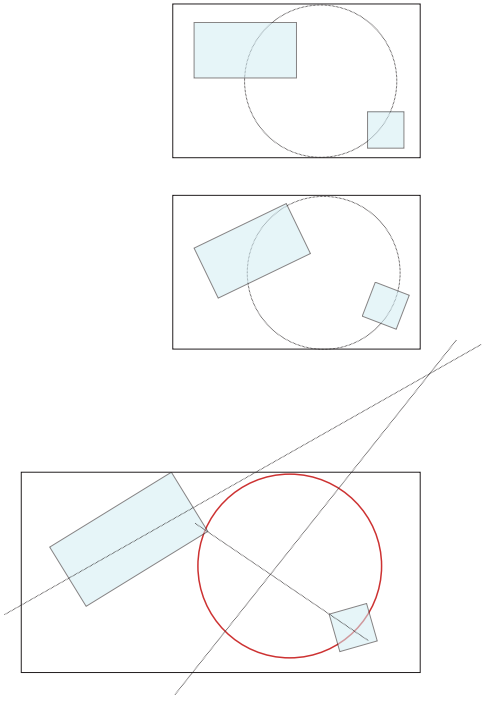
Much of Polish architecture, especially of the Communist era, the blocks of flats where families spend every day[11] does not meet the needs of its inhabitants and detracts from the comfort of its occupants.

The architecture must convey two main points: a Polish identity and an affirmation of life. The first will be accomplished through an understanding of the Polish relationship with space and construction. The second will be accomplished through the use of natural lighting and humane scale, providing a connection to place and a reassurance of what is good in daily life. Actually, the two goals and two strategies are completely intertwined.

The vernacular architecture of the Podhale region is dominated by timber construction[12]. Materiality and an understanding of the vernacular language will root the project in place.



18. typical małe ciche farmhouse



19. transformation of partí
an architecture of tensions and rotations



1. rhythm implies movement

The perspective draws the user to move through. Moving past the columns as a sequence establishes the rhythm of the space. Light and shadow form a complimentary rhythm on the wall and ground.



20. an architecture for people

Natural lighting
Views out/ connections out
Local materials

I propose to test an architecture of rotations and tensions through a primary school. As the current rebellion in Poland is carried out mainly by students, it is imperative to their cause to engage children in understanding that the joy they have by nature is something to be fought for and kept.

The new school will be for the children of Małe Ciche. With a population of 400[13], and a national average of 15% of the population between ages 0-14 years[14], there will be about sixty students attending the school, plus eight teachers and a headmaster.

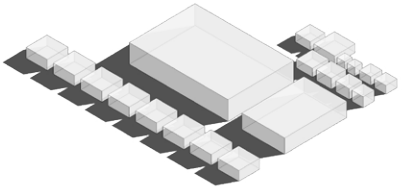
In the Polish educational system, children attend primary school beginning at age 6, with an optional year of preschool at age 5. At 16, children enter either the liceum, a high school for university preparation, or a vocational high school. Most rural teenagers travel to a city to attend liceum[15]. The students at the Małe Ciche Primary School will range in age from 5-15 years.

In addition to the daytime educational program, the school will be used in the evenings by the entire community. The auditorium and gymnasium provide the only secular gathering spaces in the community, giving opportunity to bring cultural and sporting programming to the village.

Intimate, repetitive classroom elements and large communal gathering spaces contrast and are in tension with one another.

I find both the house and the school to be extremely compelling because their occupants spend such a great percentage of their life there. They are daily programs, with rhythms of occupation at the level of the day, the week, the season, the year, and even longer.

I propose to address this problem through the design of a primary school by learning of swing dancing. The joyfulness (through energy and escapism) inherent in the dance is thus transferred to the space of learning. By being in a space designed for people, children's eyes are opened to the possibility of life beyond the introversion of their parents.



21. program

Instructional space: classrooms

2 preschool/ early educational classrooms for 8-10 students	500 sf each
6 elementary classrooms for 8-10 students	500 sf each

Instructional space: gathering

Auditorium for 120 people	3000 sf
Gymnasium (104' x 70')	7280 sf

Administrative space

Headmaster's office	150 sf
Reception	200 sf
Misc. office space	300 sf
Teacher lounge	250 sf

Servant space

Restrooms	
Student	2 at 150 sf
Administrative	2 at 70 sf
Storage	250 sf
Mechanical	400 sf

Paspels School

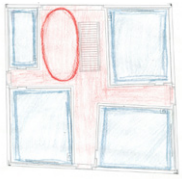
Valerio Olgiati
Paspels, Switzerland
1998



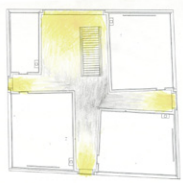
22. light draws the user through circulation



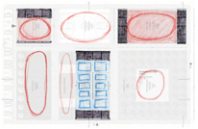
23. classroom



24. repetitive classrooms vs. gathering space



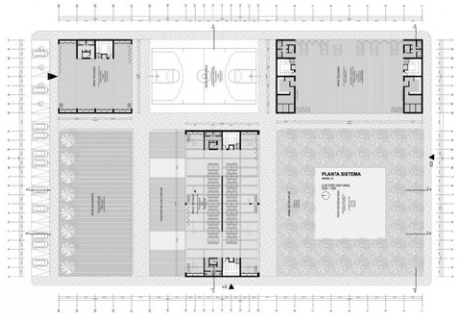
25. light



26. repetitive classrooms vs. gathering space

School Farm

Felipe Grallert Architects
Antilhue, Los Lagos Commune, Chile
2010

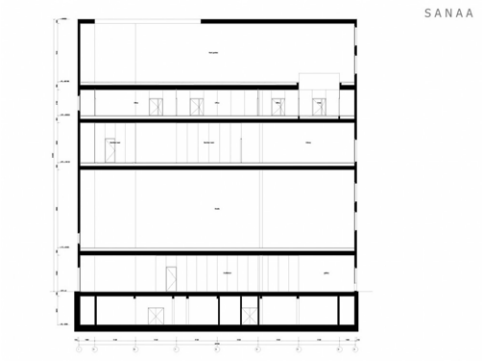


27. plan

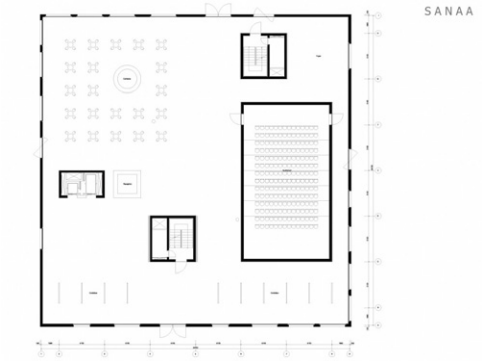


28. rural school

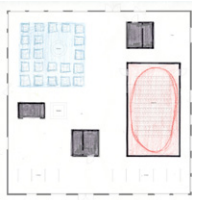
Zollverein School of Management and Design
SANAA
Essen, Germany
2006



29. section



30. ground plan



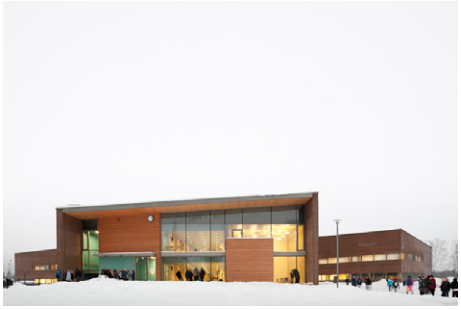
31. repetitive classrooms vs.gathering space

Kirkkojärvi Comprehensive School

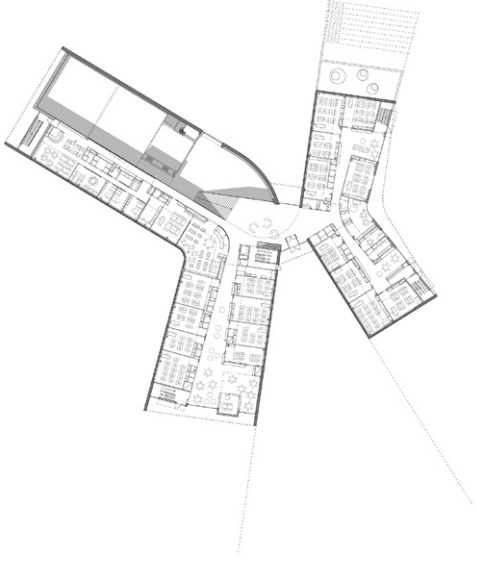
Verstas Architects
Espoo, Finland
2010



32. repetitive classrooms vs. gathering space



33. outdoor rooms are major gathering spaces in this scheme



34. the secondary school and corporate gathering spaces occupy the left bar, the primary school, the right.



35. finnish children are encouraged to spend their breaks outdoors

Notes

1. Friederich Wilhelm Joseph von Schelling. *Texte Zur Philosophie Der Kunst* (P. Reclam, 1986 reprint).

2. Rudolf Wittkower. *Architectural Principles in the Age of Humanism* (New York: Random House, 1962), p. 101.

3. Peter Loggins. "The Jassdancer: Shorty George Snowden." Last modified 28 Oct. 2012, http://jassdancer.blogspot.com.

4. SundayArts. "Frankie Manning: Never Stop Swinging." 2009. Last modified 21 May 2009, http://www.thirteen.org/sundayarts/video/dance/frankie-manning-never-stop-swinging/291/#.UI8zLrQ5c21.

5. Thomas Carter."Swing Kids." 114 minutes, 1993.

6. "Frankie Manning: Never Stop Swinging."

7. James A. Michener. *Poland* (New York: Random House, 1983).

8. Visit to Kopiec Kośiuszko museum, Kraków, Poland. 23 March 2012.

9. Anna Palej. "Approaches to Urban Space in City Planning in the Twentieth Century." Politechnika Krakówska, Kraków, Poland, 2012.

10. Visit to Studio Tańca Swing & Sway. Kraków, Poland. March 2012.

11. Anna Palej. "Approaches to Urban Space in City Planning in the Twentieth Century."

12. Maciej Krupa. *Zakopane*. Translated by James Richards. Warsaw, Poland: Wydawnictwo Parma Press, 2004.

13. Głowny Urząd Statystyczny (Central Statistical Office). "National Register of Territorial Land Apportionment Journal" http://www.stat.gov.pl/broker/access/prefile/listPreFiles.jspa. Accessed via Wikipedia, 26 November 2012.

14. Central Intelligence Agency. "The World Factbook: Poland" https://www.cia.gov/library/publications/the-world-factbook/geos/pl.html (accessed 9 December 2012).

15. CASE Foundation. "Improving Rural Education in Poland." Warsaw Delegation of the European Commission, 2001.

Image Credits

1. Sketch by author. September 2012.

2. Postcard by Jan Walczewski.

3. Photo by author. April 2012.

4. Drawing by author. November 2012.

5. Sketches by author. November 2012.

6. Diagrams by author. December 2012.

7. Image courtesy of Google Earth.

8. Image courtesy of Google Earth.

9. Drawing by author. November 2012.

10. Diagram by author. November 2012.

11. Image courtesy of Google Earth.

12. Photo courtesy of Katie O'Connell. March 2012.

13. Photo by author. July 2007.

14. Photo by author. July 2007.

15. Photo by author. July 2007.

16. Map by author. December 2007.

17. Montage by author. September 2012.

18. Photo by author. July 2007.

19. Diagram by author. December 2012.

20. Drawing by author. November 2012.

21. Diagram by author. December 2012.

22. Photo courtesy of *Architecture + Urbanism.* April 2002.

23. Photo courtesy of *Architecture + Urbanism.* April 2002.

24. Diagram by author. December 2012.

25. Diagram by author. December 2012.

26. Photo courtesy of ArchDaily. Accessed December 2012.

27. Photo courtesy of ArchDaily. Accessed December 2012.

28. Diagram by author. December 2012.

29. Image courtesy of ArchDaily. Accessed December 2012.

30. Image courtesy of ArchDaily. Accessed December 2012.

31. Diagram by author. December 2012.

32. Diagram by author. December 2012.

33. Photo courtesy of ArchDaily. Accessed December 2012.

34. Image courtesy of ArchDaily. Accessed December 2012.

35. Photo courtesy of ArchDaily. Accessed December 2012.

allied works architecture. "National Music Centre of Canada." Calgary, Canada, 2009.

Botton, Alain De. *The Architecture of Happiness*. London: Hamish Hamilton: Penguin Books, 2006.

Carter, Thomas. "Swing Kids." 114 minutes, 1993.

CASE Foundation. "Improving Rural Education in Poland." Warsaw Delegation of the European Commission, 2001.

Central Intelligence Agency. "The World Factbook: Poland" https://www.cia.gov/library/publications/the-world-factbook/geos/pl.html (accessed 9 December 2012).

Darden, Douglas. *Condemned Building*. New York: Princeton Architectural Press, 1993.

Głowny Urząd Statystyczny (Central Statistical Office). "National Register of Territorial Land Apportionment Journal" http://www.stat.gov.pl/broker/access/prefile/listPreFiles.jspa. Accessed via Wikipedia, 26 November 2012.

Grallert, Felipe. "School Farm." Antillhue, Los Lagos Commune, Chile, 2010.

Hollis, Edward. *The Secret Lives of Buildings*. New York: Metropolitan Books, 2009.

Jardí, Enric. *Paul Klee*. New York, Barcelona: Rizzoli, 1991.

Kilkenny Swing. "The History of Jazz Music and Swing Dancing" http://www.youtube.com/user/kilkennyswing?feature=watch.

Loggins, Peter. "The Jassdancer: Shorty George Snowden" http://jassdancer.blogspot.com (accessed 30 Oct. 2012).

Martin, Elizabeth, ed. "Architecture as a Translation of Music." Vol. 16, *Pamphlet Architecture*. New York: Princeton Architectural Press, 1994.

Michener, James A. *Poland*. New York: Random House, 1983.

Neveu, Mark. "Thesis on Thesis." Knoxville, TN: The University of Tennessee College of Architecture + Design, 2010.

Olgiati, Valerio. "Paspels School." Paspels, Switzerland, 1998.

Palej, Anna. "Approaches to Urban Space in City Planning in the Twentieth Century." Politechnika Krakówska, Kraków, Poland, 26 March 2012.

Palej, Anna. "Wooden Poland: Missing Chapter." Politechnika Krakówska, Kraków, Poland, 21 May 2012.

Payne, Philip W., ed. *The Swing Era 1941-1942: Swing as a Way of Life*. New York: Time-Life Records, 1971.

SANAA. "Zollverein School of Management and Design." Essen, Germany, 2006.

Schelling, Friederich Wilhelm Joseph von. *Texte Zur Philosophie Der Kunst*: P. Reclam, 1986 (reprint).

SundayArts. 2009. "Frankie Manning: Never Stop Swinging," http://www.thirteen.org/sundayarts/video/dance/frankie-manning-never-stop-swinging/291/#.UKsjdKU5c22 (accessed 30 Oct 2012).

Verstas Architects. "Kirkkojärvi Comprehensive School." Espoo, Finland, 2010.

Wittkower, Rudolf. *Architectural Principles in the Age of Humanism*. New York: Random House, 1962.

the threshold of insanity

self-directed design project
elizabeth cagle
spring 2013

brian ambroziak


FOUNDRY 2013





1. restricted views



2. 730 ft² apartment for six occupants, typical in 1940s-70s



3. the woman

Communist-era block apartments drove occupants to the brink of insanity, with a mere $11m^2$ per person, and six people crowded into two bedrooms. There was no communal gathering space and very little natural light.

Despite the repeated invasion and division of their country by Tatars, Teutonic Knights, Russians, Prussians, and Austrians, Nazis, and Soviets, the Poles have maintained a strong national identity, something that is expressed in their approach to space and use of materials.





5. the youth

An architecture of release is an architecture of freedom after oppression. The Case Study Houses, built in the free and open culture of midcentury Southern California, epitomize release. Expansive views out, luxurious finishes, and hundreds of square feet of glass could only be built in a flourishing Capitalist society.

Taking the Case Study Houses as a precedent, an architecture of release on this site must learn also what it means to be Polish, and what it means to exist in this harsh climate.

4. opposite. case study house #22 in the tatras



6. vernacular podhale architecture



7. national style developed by stanisław witkiewicz (witkacy)



8. typical małe ciche farmhouse, a kitsch interpretation of vernacular



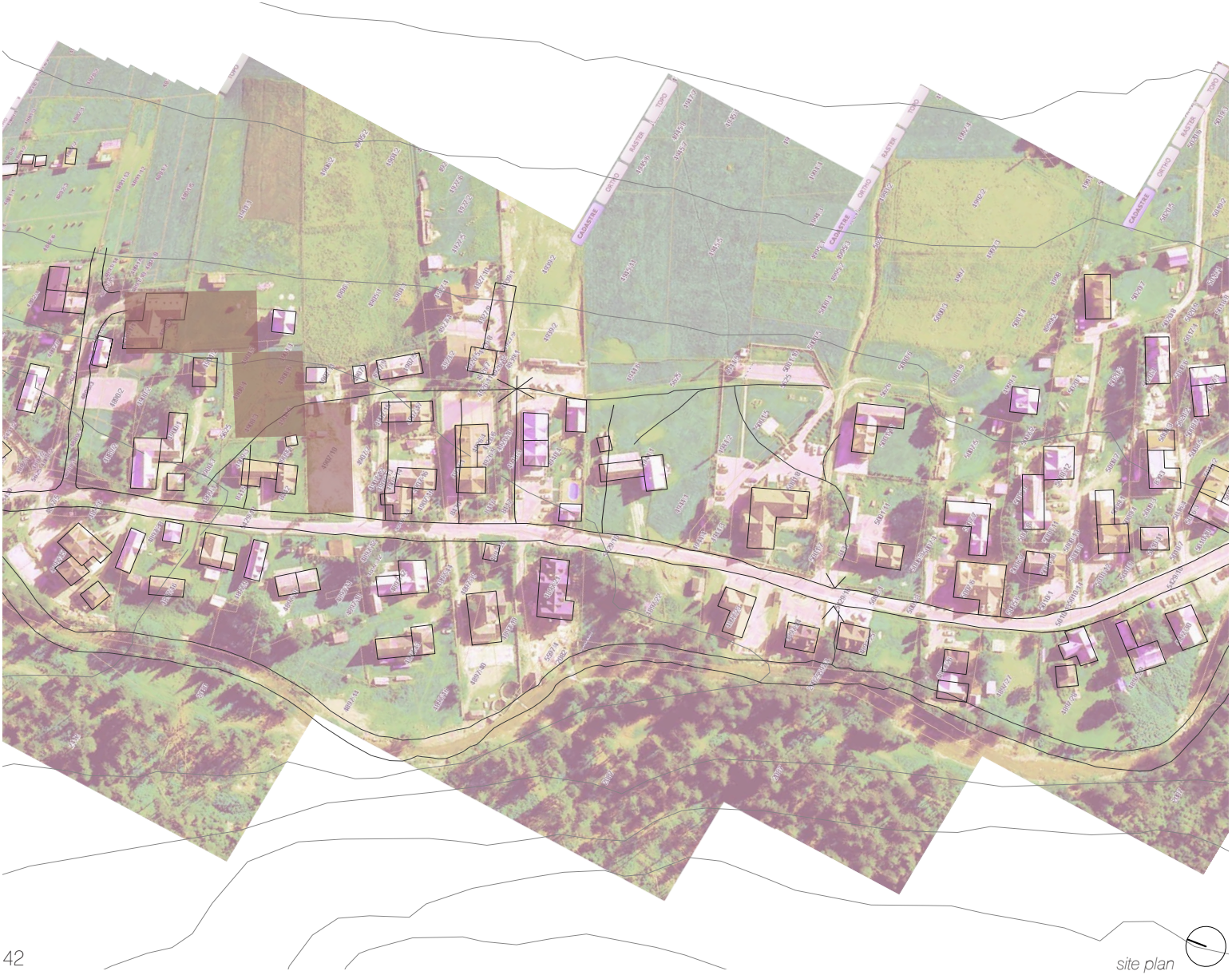
9. muzeum wsi opolskie learns from regional styles, while being very clearly contemporary.

Many activities among the Polish youth embody the rebellion of joyfulness, such as skiing, open debate, and Juwenalia, the annual students' festival. Swing dance was the most intriguing to me for its clear relationship between bodies in motion- tension and rotation.

The elementary school takes swing as a precedent of architectural bodies in motion.

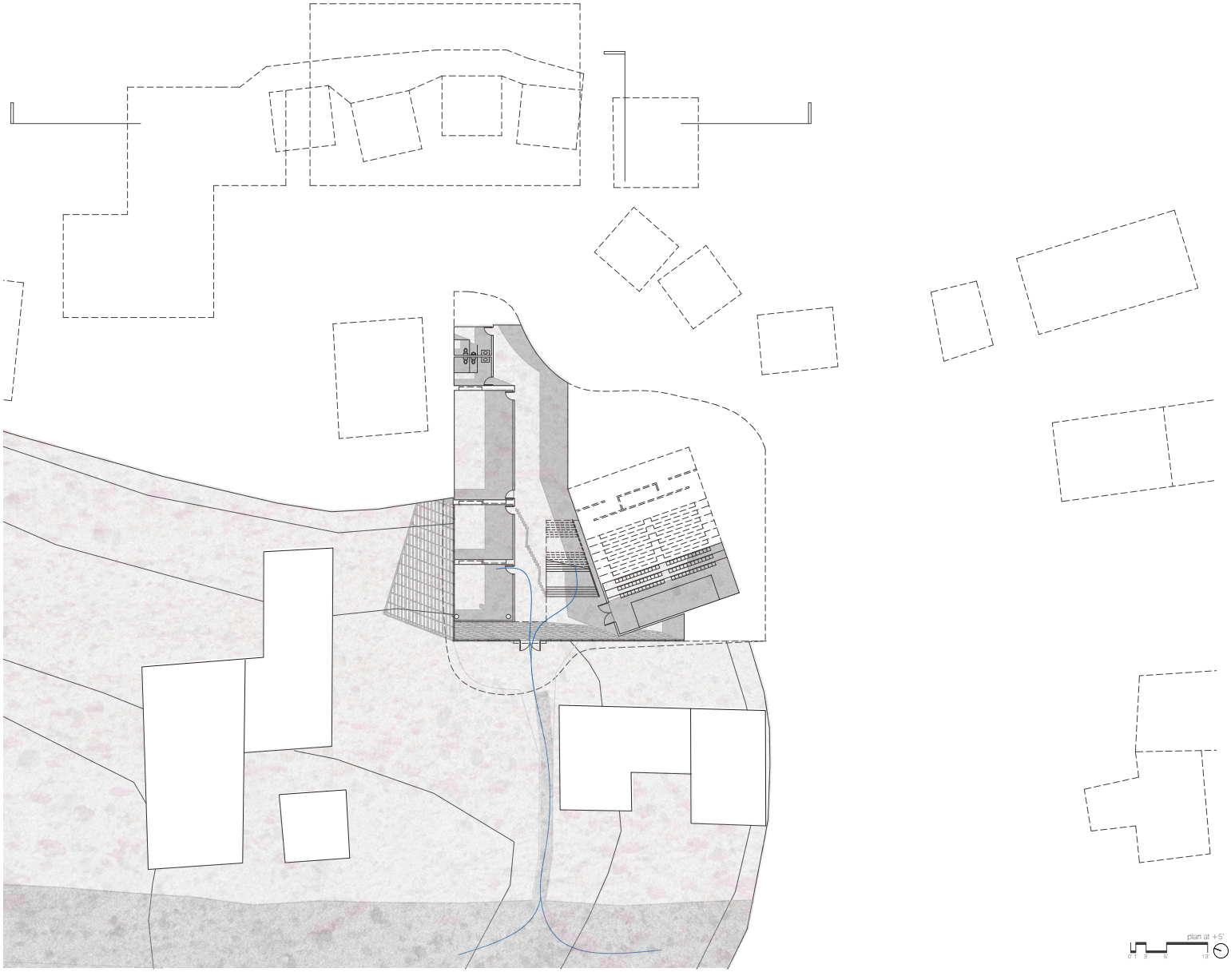


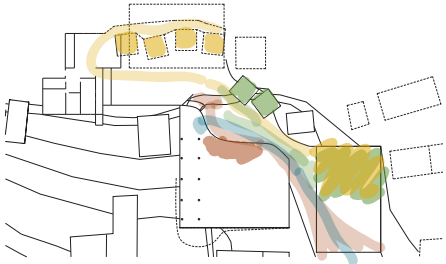
10. the child



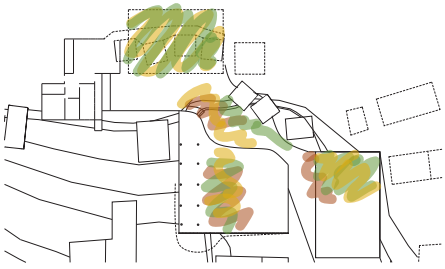
site plan


roof plan


plan at +5'
0 1 3 6 12



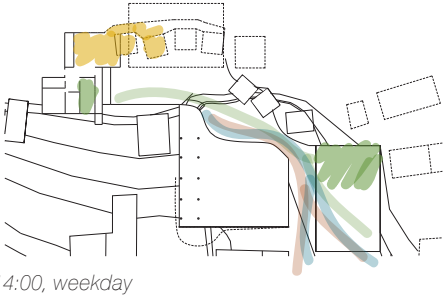
08:00, weekday
arriving



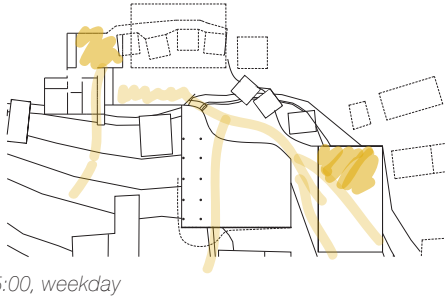
11:00, weekday
recess



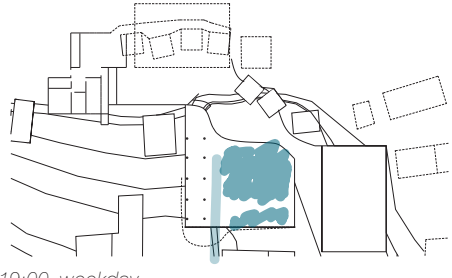
12:00, weekday
return to afternoon classes



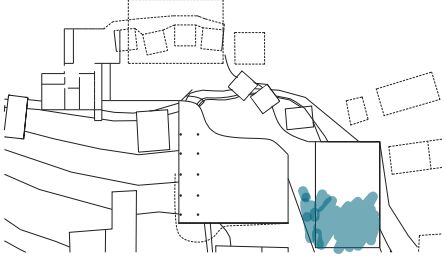
14:00, weekday
younger students walk home



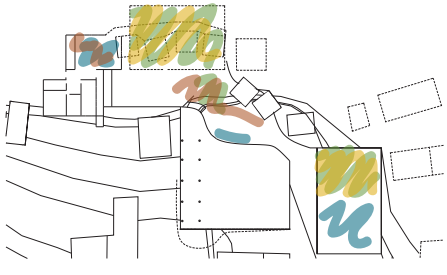
15:00, weekday
older students walk home



19:00, weekday
lecture



09:00, saturday
market



12:00, saturday
pick-up basketball and soccer



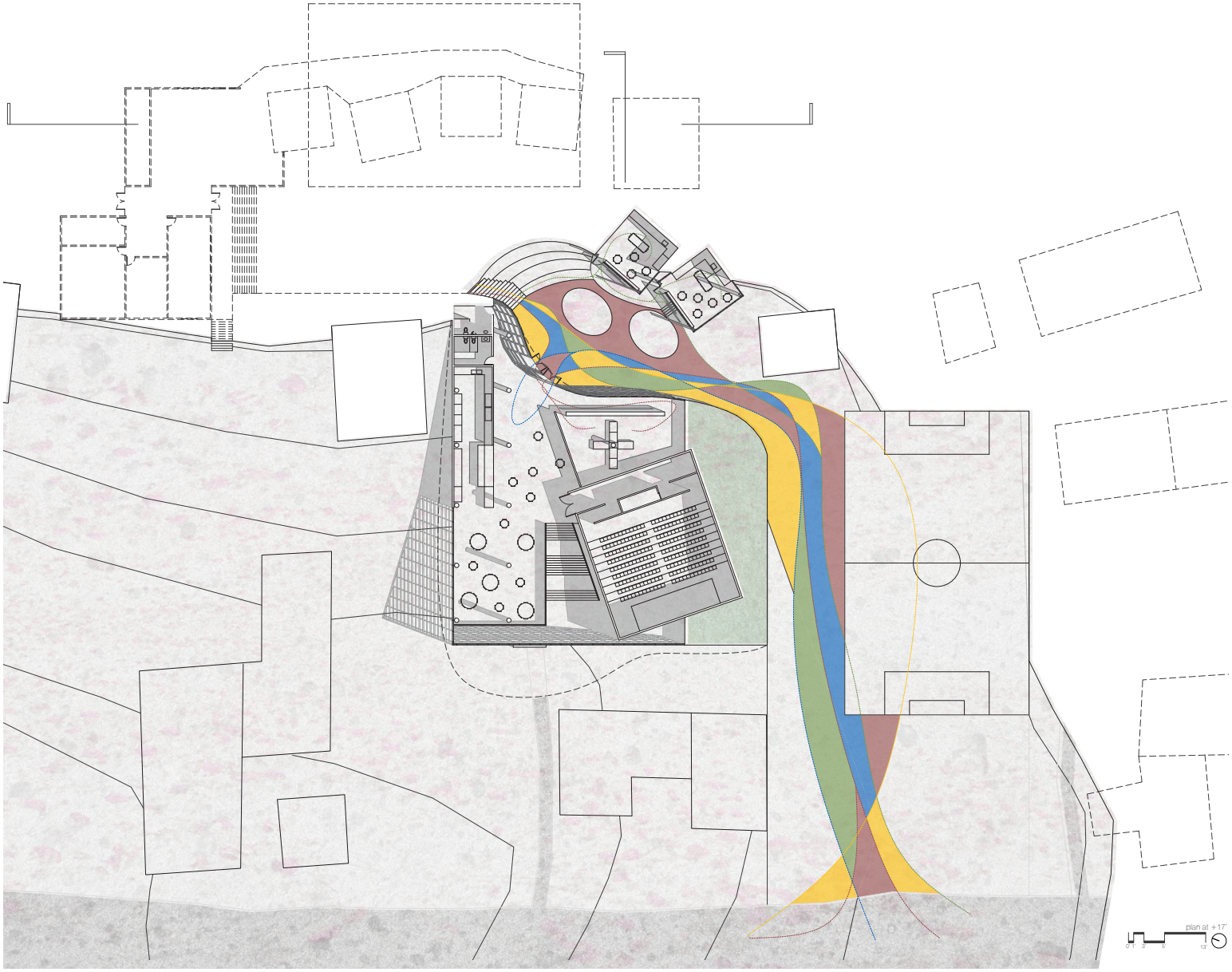
19:00, saturday
school play

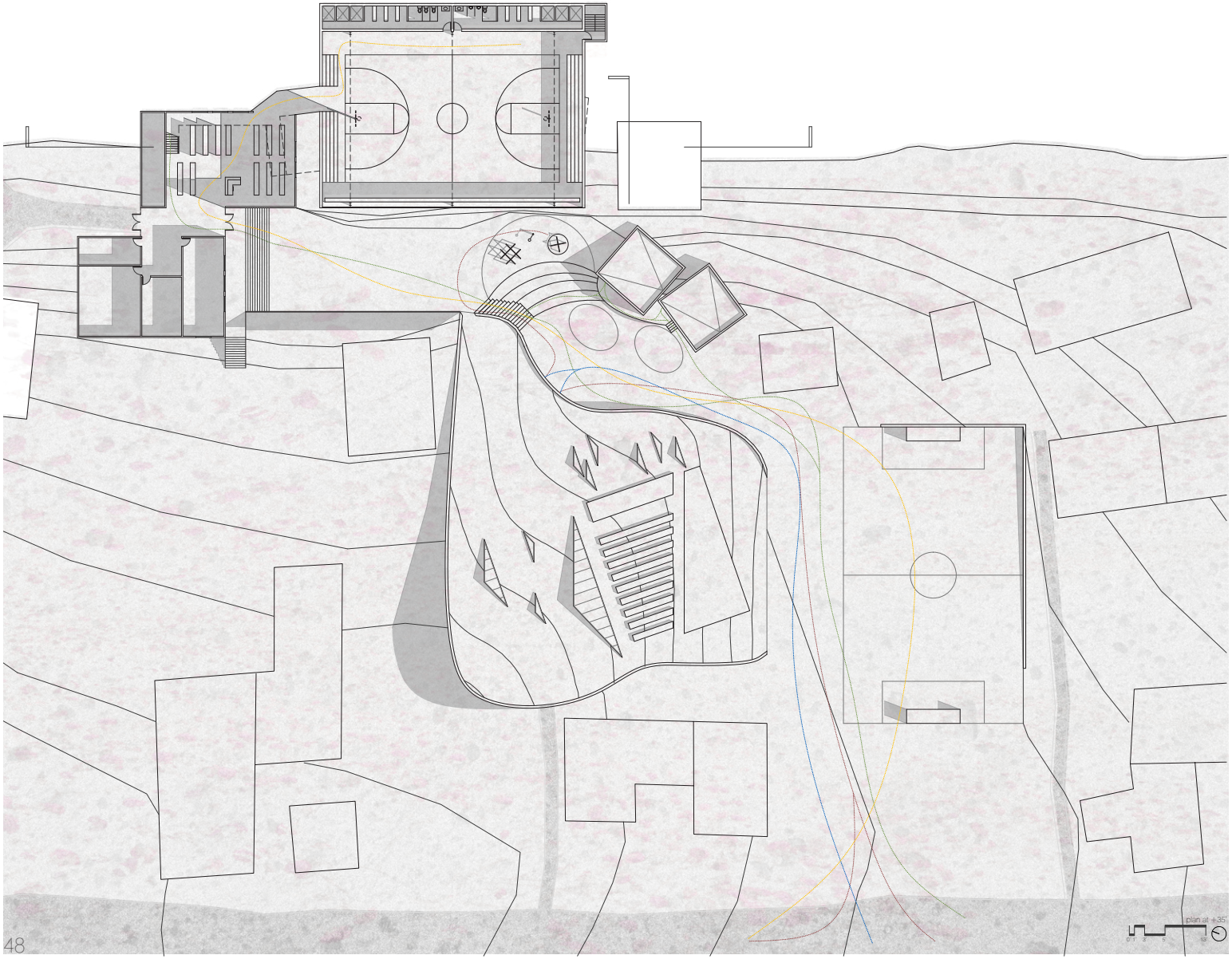
middle school students

elementary school students

kindergarten students

parents


plan at +17'
0 1 3 6 13


plan at +35

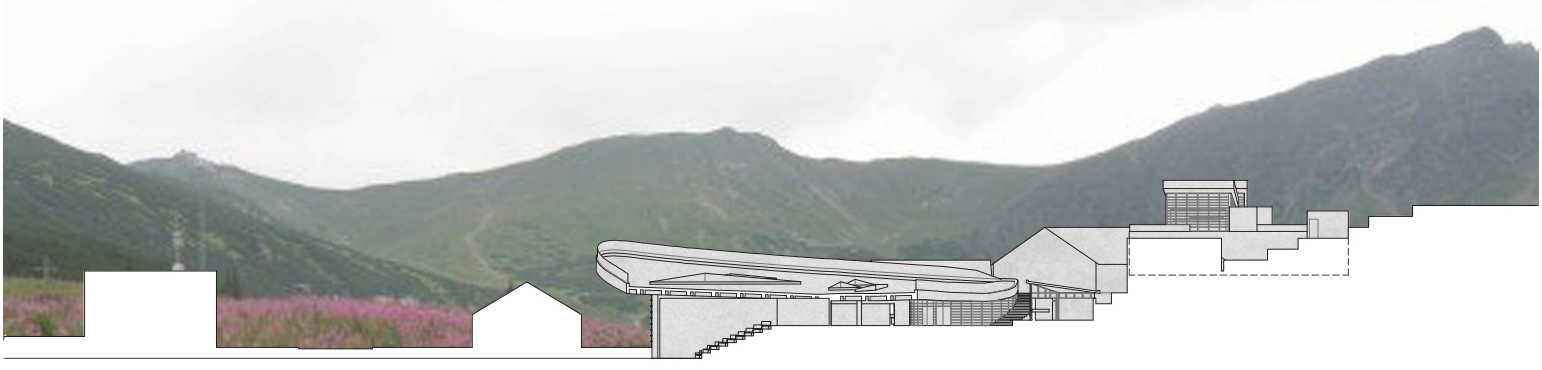

plan at 1:53
0 1 3 5 10



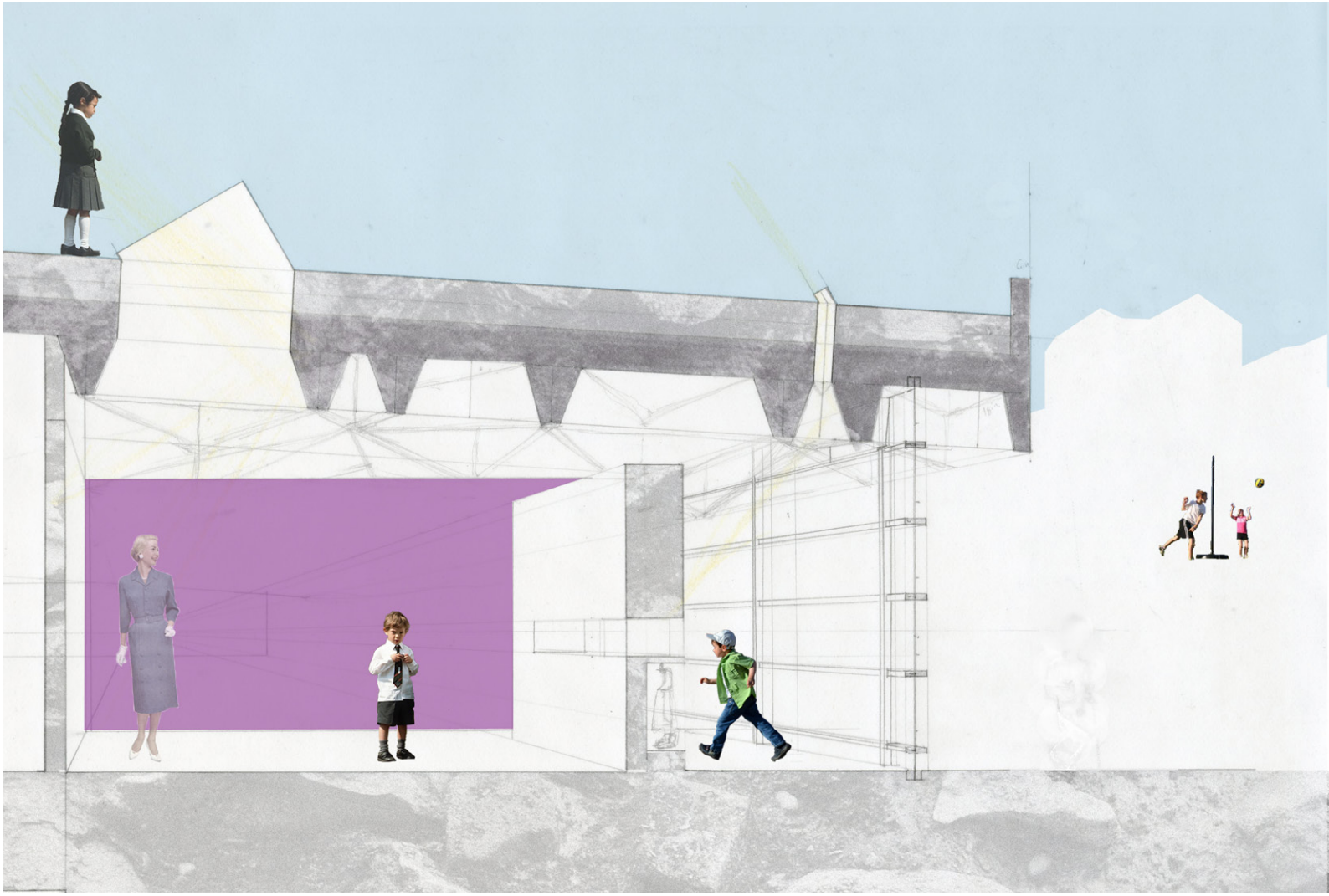
public entrance



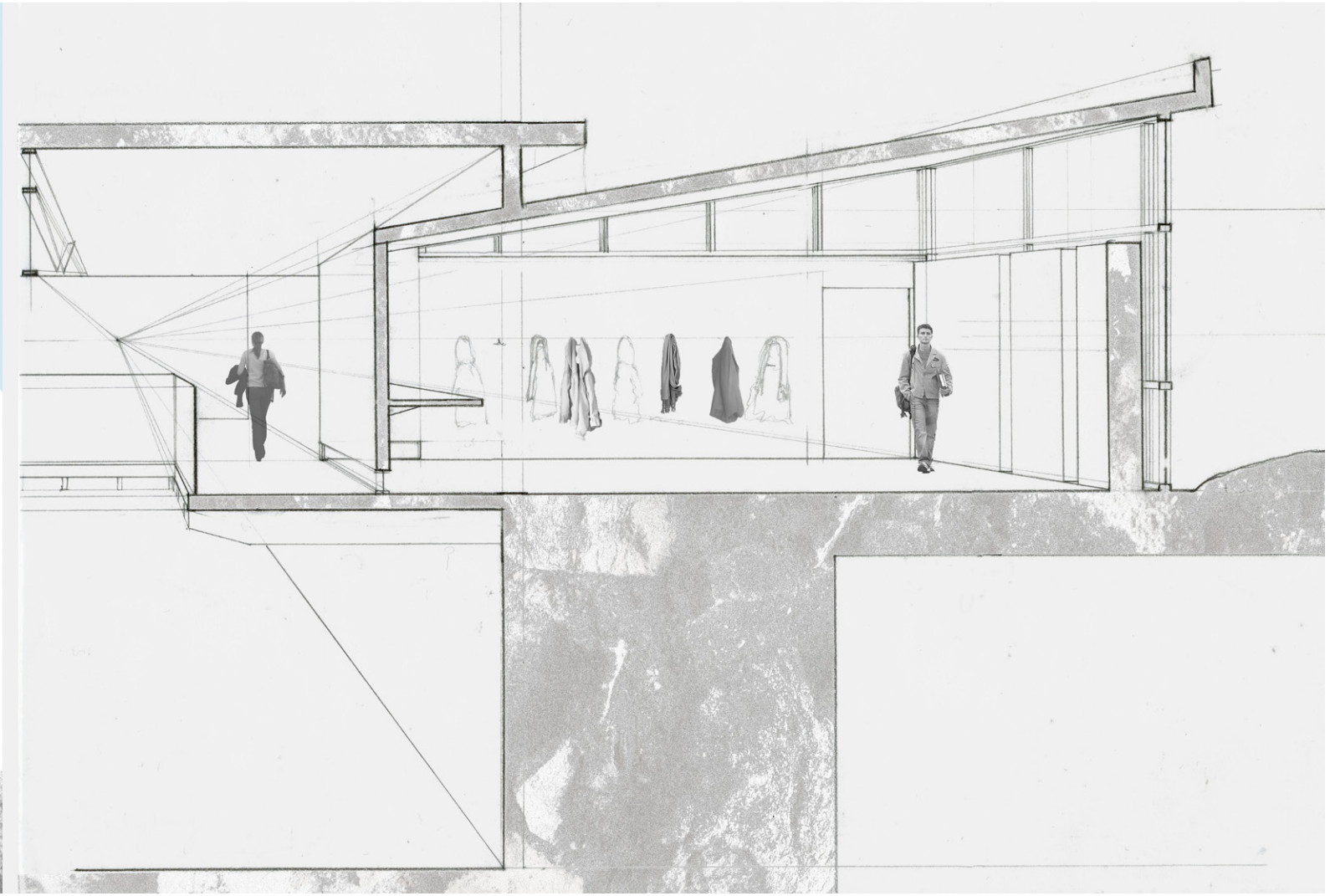
transverse section



longitudinal section



sectional perspective of kindergarten classroom



sectional perspective of middle school classroom and library





kindergarten classroom, sectional model, $^{1}/_{2}$"=1'



kindergarten classroom, sectional model, detail



elementary classroom, sectional model, $^{1}/_{2}$"=1'



middle school classroom, sectional model, $^{1}/_{2}$"=1'



final project on display at the tau sigma delta bronze medal jury, 29 april 2013.

Image Credits

1. Drawing by author. November 2012.

2. Image courtesy of Dr. Anna Palej, Cracow University of Technology.

3. Photo by author. April 2012.

4. Image by author. February 2013.

5. Image courtesy of Google. February 2013.

6. Image courtesy of www.khiart.com. February 2013.

7. Image courtesy of Brian Knox, *The Architecture of Poland.* 1971.

8. Photo by author. July 2007.

9. Image courtesy of www.Bryla.pl . February 2013.

10. Image courtesy of Google. February 2013.

All other images by author.

I am so thankful to have had such a fabulous support system over the last year. This book is dedicated with appreciation, to my classmates: my colleagues, my cheerleaders, and my partners in crime. I am especially thankful for Michael Housley- Tau Sigma Delta Bronze Medal winner, my brother, and dear friend. We made it, nasz Michal!

Much thanks to Brian Ambroziak, loyal advisor. Thanks to my family, Billy, Julie, and Matthew Cagle. Thanks to the staff of The Golden Roast, especially Caroline Wasmund, our favorite barista, and to everyone else who prayed for me or brought me food or just loved me through thesis. You guys are awesome.



image courtesy of michael housley