

Sacred Soil

journeys of the unsuspected
modernpilgrim



Masters of Architecture
Kendall College of Art & Design

Anne Schnitzenbaumer
May 2016



COMMITTEE

THESISADVISOR

BryanKoehn

directorofdesignProgressiveAE

THESISCOMMITTEE

JuliBrode

professor,DepartmentofArchitecture

BrianCraig

directorofM.Arch&professor,DepartmentofArchitecture

TravisWilliams

adjunctprofessor,DepartmentofArchitecture

ABSTRACT

The importance of faith within the members of society in the United States has been diminishing slowly over the last one hundred years. Although there are pockets of revitalized communities of faithful, more and more Americans now claim no religious affiliation. In the 21st century, the Catholic Church experiences this decline specifically in its youth and young adult populations.

While Catholics still make up the largest religious group in the United States, many have been inadequately taught the doctrines of the faith in their youth and subsequently no longer faithfully practice their faith. Furthermore 88% of Catholics enter the Church and develop through the reception of its seven sacraments throughout their youth and young adult years of life. Yet 80% leave the Catholic faith before the age of 23. If the Church is to grow in the 21st century, a new approach to evangelization needs to reach all peoples and new generations will need to better equip themselves to be ambassadors for the gospel.

The Catholic Church seeks growth in its evangelization efforts and it has begun initiatives to expand the catechesis and sacramental preparation for youth and young adults. A specific teaching method utilized around the world includes immersive retreats. These offer a place to rejuvenate and strengthen communities and can be powerful teaching tools.

This specific retreat center is a place where groups of young teens can be led on retreat in preparation for the sacrament of confirmation and to build community. It is a place where engaged couples could be led in a marriage pre-retreat. It also could

be a place of intimate personal retreat or where one could come to discern a religious or priestly vocation. The center's focus is to be an environment that fosters someone's ability to learn, prepare, and engage with the sacraments of the Church, with themselves, and with God. Furthermore, it encourages communal growth leading others to a deeper understanding of their faith and inspires them to pass it onward. Most importantly, this is a place not solely focused on Catholicism but promotes inclusion of the unsuspecting passerby.

In Colorado, Boulder and Denver are attracting the younger millennial generation with their vast natural playground, vibrant cities, and environmentally sensitive culture. Yet their percentages of Catholics by population are low compared to other US dioceses. The existing Boulder and Denver young adult communities are small but vibrant, and they work hard towards connecting with existing high school and university student groups. With adequate resources, ways to connect, and an inspiring place centered within the natural creation, these communities would grow.

This thesis engages the opportunity and potential for how the design of a retreat center could foster a faith strengthening experience amid an increasingly secular world. It explores the ways sacred space and a place for retreat can employ material and sensual qualities to develop a renewed sense of community and belonging and enhance one's connection with the environment. Through the principles of approach, engagement, immersion, and nourishment, this retreat center seeks to provide a fresh and authentic response to the responsibility of evangelizing in the 21st century.

ACKNOWLEDGEMENTS

BRYAN

Thank you for your continual encouragement and belief in the basis of this project. Your wisdom and design guidance through this time together has been greatly enriching. I am grateful for your time and dedication.

BRIAN, JULI, TRAVIS

My gratitude to the faculty of the department of architecture and the critical role you played in guiding us along this thesis journey. I am thankful for your time and dedication to this program and to its first inaugural class.

ALICIA, COURTNEY, DAN & GEENA

To the people who struggled with me the whole way, gave me critical feedback and support when I needed it most, and for the community we formed within our own intellectual pursuits- thank you for your time and your friendship.

FAMILY

Thank you for walking this journey with me, from its initial conceptions at the kitchen table over a decade ago, for always believing in me, never telling me the answers, and always inspiring me forward.

FRIENDS

Andrew, Jenn, Natalie, David, Amy, Mary, Sam, Zach, Julie, Matt, Katie, Chelsea, Leandra, Jeff, John, Kaitlin, & Verso L' Alto community- thank you for giving me a rich community and a place of retreat and for always pushing me 'to the heights'.

MICAH

My gratitude towards you is unbounded by limits. Thank you for your never-ending support, listening ear, and enduring encouragement. How I am overjoyed to climb to the heights our whole lives, in search of truth and love.

TABLE OF CONTENTS

	INTRODUCTION
2	Committee
3	Abstract
4	Acknowledgements
	THE SITUATION
8	The Catholic Church in the 21st Century
9	The Young Church
10	Retreat, Retreat!
11	Location Statistics
	HISTORICAL ANALYSIS
14	Influences of History on Christian Sacred Architecture
22	Sacred Spaces: Learning Common Elements of Sacred
	PEOPLE, PROGRAM, & PRINCIPLES
27	People
28	Program Relationships
29	Design Principles
30	Program Development
	THE STRUCTURE OF LANDSCAPE
34	Location
35	Analysis
36	Wayfinding, journey, path
40	Environmental context
	DESIGN
44	Large site plan
46	Parti Development
48	Plans, sections, elevations, perspectives
	PROCESS
62	Appendix A: Focus group summary
64	Appendix B: Precedent studies
72	Appendix C: Design iterations & exploration
80	Appendix D: Final Presentations
86	Bibliography
88	Image Sources

THECHURCHINTHE21STCENTURY

“In young people is founded the **hope** for the **future of the Church** and society. I ask you to intensify your attention toward this special and promising portion of your dioceses. Looking to the future, you must put in the first place the **formation of the new generations**. Urgent and irreplaceable is the care you must take in announcing Christian truth to youth. Especially through updated, modern, persuasive, and attractive catechesis; the teaching of religion in the schools; sacramental pastoral work conducted in depth, especially in regard to the Eucharist and Penance, for the journey of faith and conversion; in missionary promotion; in the **proposal of a life** that is **distinguished from mediocrity** and tends toward the difficult heights of evangelical consistency, because young people are very demanding and will not settle for mediocrity. Particular sectors are also to be considered, so that the evangelization willed by the Synod might reach all spheres of youth: I am thinking in particular, about university students, young workers, and those in the military or armed forces in general.”

St. John Paul III

Compendium on the New Evangelization 2015, 313

THE CATHOLIC CHURCH IN AMERICA

THE SITUATION

For an organization that was instituted over two thousand years ago, the Roman Catholic Church has seen its fair share of history – of changing cultures and mainstream ideologies, wars and disputes, internal corruption and reform, discovery of new lands, and the pressures of a secularized world. Yet it has endured through these changes, albeit sometimes more gracefully than others. As the Church enters a new millennia, it finds itself in a position not too dissimilar from periods of its past.

Our ever increasingly secularized culture promotes a rugged individualistic, hyper-sexualized, self-interested lifestyle. The American culture is a place where death and violence sees more media attention than good will and life. The last 100 years has witnessed the bloodiest years in the history of our world due to war and the rapidly increasing effectiveness and accessibility of weaponry. The Church has experienced new waves of scandal, the effects of which still pervade and affect many who grew up in and around the church or witnessed it through media. While a new continent hasn't been discovered for a few hundred years, our whole world has become radically accessible through the rapid growth of technological advances, which continue to change and reshape how people connect not only to each other but also to the world. The societal pressures upon this age-old institution continue with demands for them to “get with the times” and update their doctrines on marriage, abortion, contraception, and the role of women in the church. All of these factors, combined with the lingering effects the last century brought us, shows that the Church is at odds with the world. Furthermore, it has drastically affected those who identify with the Catholic Church and the religiosity of its people.

In 1990, the late Pope John Paul II exhorted to Catholics that everyone is called – lay and religious alike – to spread the news of the gospel to all peoples. The term the “New Evangelization” was coined; not in a way that meant the message being taught was new in its essence, but the approach in which it is taught needed to be renewed and refreshed. It similarly responds to the lack of effective catechesis in the 20th century and the re-evangelization or re-teaching of the faith that needs to occur. The 21st century of the Church ushers in this renewed role of the laity, leading every lay person to the universal call of holiness and to spread the Gospel within a secular society.¹ The last 25 years has already seen an influx of lay movements of evangelization that define themselves within the secular sphere rather than under structured ecclesiastical leadership.

One of the larger deficits or challenges the Catholic Church still has is religious education at every level. This is especially true in preparations for the sacraments of confirmation and marriage. When reform of Catholic liturgy happened during the mid 20th century under the Second Vatican Council in 1965, many within the Church took personal liberties at editing or reinterpreting Church doctrine or teachings that were not in fact aligned with the Vatican. This in conjunction with the social movements in the secular society of America in the 1960s and 70s, led to many baptized Catholics being poorly taught the doctrines of the faith. This had an important effect on Catholicism in America. It takes only one generation from inadequate adult catechesis to non-church attendance, and then it only takes one more generation from non-church attendance to unbelief. The result: a series of generations that have lost connection with the visceral teachings of the Church and the inquisitional drive to seek truth.²

1 Compendium on the new evangelization 2015

2 Smith, Longest, Hill, Christofferson 2014

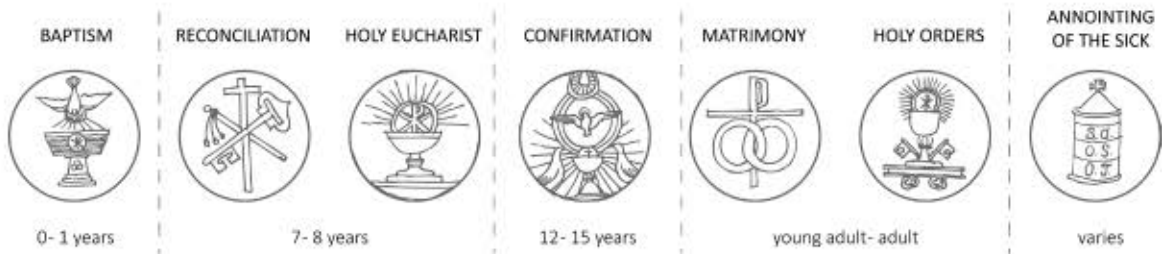
THE YOUNG CHURCH

At the heart of this situation are the hearts of youth. While some people may grow up with a familial connection to the Church, most find themselves lost as they reach young adulthood as to what the Church really teaches and why. 84% of Catholics enter the Church as infants through Baptism, a choice made by their parents to commit to raising their children in the faith. 7% of Catholics are received into the Church as adults, 48% of which do so between the ages of 18 and 29. That results in about 88% of Catholics entering the Church and developing spiritually through the reception of

its seven sacraments throughout their youth and young adult years of life. Yet 80% leave the Catholic faith before the age of 23.³ This points to a key relationship between sacramental preparation and long term retention. If the Church is to grow and flourish in the 21st century, a new approach to catechesis and evangelization needs to reach all peoples, but those already particularly within the Church's educational influence. Furthermore, new generations will need to become better equipped to be ambassadors for the gospel and examples within their workplaces, homes, and families.

3 Gray, Perl 2008

Seven Sacraments of the Catholic Church



88% of Catholics enter the Church and are spiritually formed through reception of 7 sacraments in their youth and young adult years of life



80% of those who leave the Catholic faith do so by the age of 23

RETREAT

Retreats are important as they provide a time of rejuvenation, a time of rest for the mind, for the body, and for the soul. These are all elements sought after in people's daily lives but are found hard to achieve. They psychologically are good for a person's well being.¹ It is a time of pause, one that causes a higher degree of interior introspection and contemplation. In the current society of instant information, people experience information overload daily. Physical environments impact our capacity in restoring attention functioning.² If environments can restore attention and refocus the mind, these same environments can foster rest for the soul. Upon achieving this, an individual's heart and mind can become more open to growth.

A special place set apart from the normal throws of life allows for a removal of daily life distractions and opens the mind to breathe. Even the most disciplined or intelligent person can become stagnant and need a new place, new scenery. An example of this is Dr. Jonas Salk, the inventor of the polio vaccine. After feeling burnt out on research, he decided to go away on retreat to the basilica in Assisi to rest, rejuvenate, and reflect. He attributed his time away and in such an exquisite architectural setting with eventually helping him make the intellectual breakthrough.³

1 Sullivan 2015
2 Sullivan 2015
3 Eberhard 2015

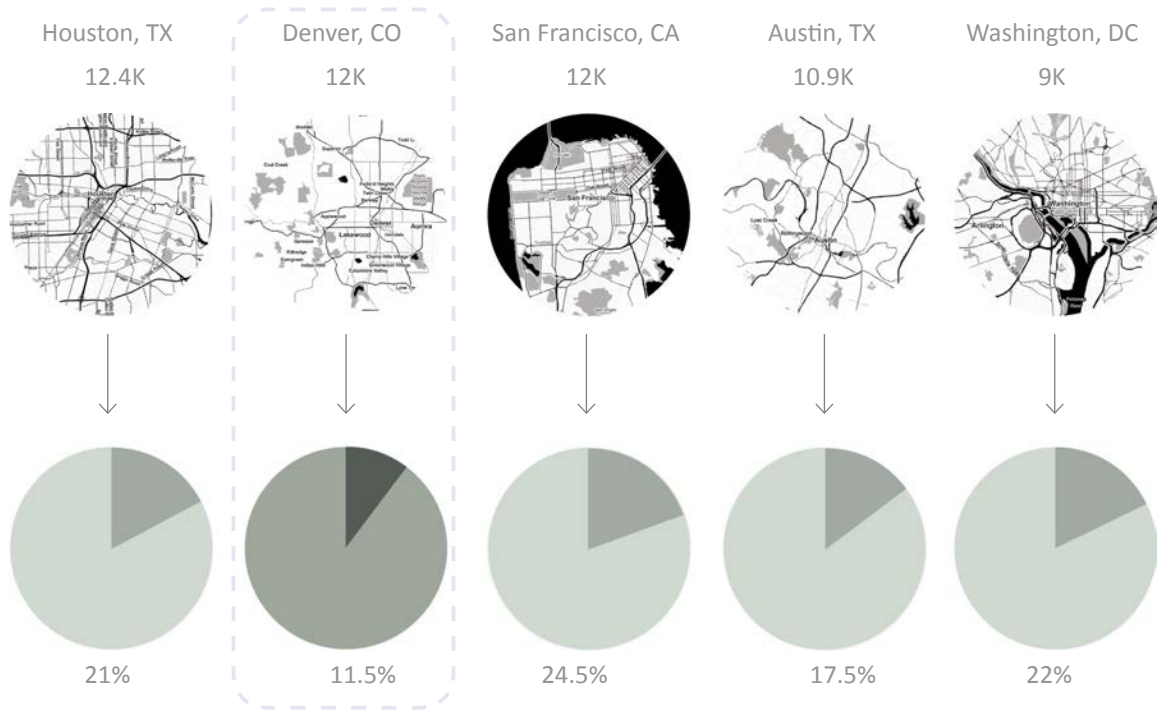
Taking a look within the Church as a model of learning and growth, Holy Scripture points us to Jesus Christ. Even he compelled his disciples to retreat and solitude in order to rejuvenate their minds and bodies. "He [Christ] said to them, 'Come away by yourselves to a deserted place and rest a while.'" (Mark 6:31) Stepping out into nature, into a natural setting of beauty, it allows for a new poverty of worldly cares to exist.

Complimentary to this imagery is the classical military definition of retreat which is this: to leave the front, return to your own people, and then once healed and restored, re-enter into battle again. This mental image is a clear example of a response to the need presented in the situation: our world is a battlefield of distraction, busyness, power struggles, violence, oversexualization, and more. For a young person to leave their sports teams, video games, annoying siblings, jobs, homework, and internet to trade for a weekend long retreat – the removal of those distractions will open up opportunities for internal growth. Providing great spaces for community building also allows for re-relationships to build with others and a support network to flourish. In this example, it is accurate to portray the Church – and more specifically this retreat center – as a field hospital. It is a place that fosters healing, safety, challenges, and support throughout change. A well designed and well crafted environment can enrich a person's neurological experience of space, of the place in which they are, better relate to others and to their own interior life.



LOCATION STATISTICS

Top 5 cities showing population growth of Millennials since 2010



Percentage of Catholics by population

WHY COLORADO & WHY ARCHDIOCESE OF DENVER?

Denver is among the leading cities attracting the younger Millennial generation¹ yet their percentage of Catholics by population is on the lower end compared with other United States dioceses.²

The Archdiocese of Denver is home to growing and vibrant groups of youth and young adults as well as flourishing new nationally known institutions such as the Augustine Institute and the Fellowship of Catholic University Students.

Colorado is a naturally beautiful area with a diversity of lakes and topography changes, serene and set apart from the hectic lives of the average everyday person. It is a great outdoor playground in all seasons.

1 (Stewart 2015)

2 (Cheney 2015)

HISTORICAL ANALYSIS

the development of Catholic sacred spaces



Sacred | A. Schnitzenbaumer

THE EARLY CHURCH

30- 300 A.D.

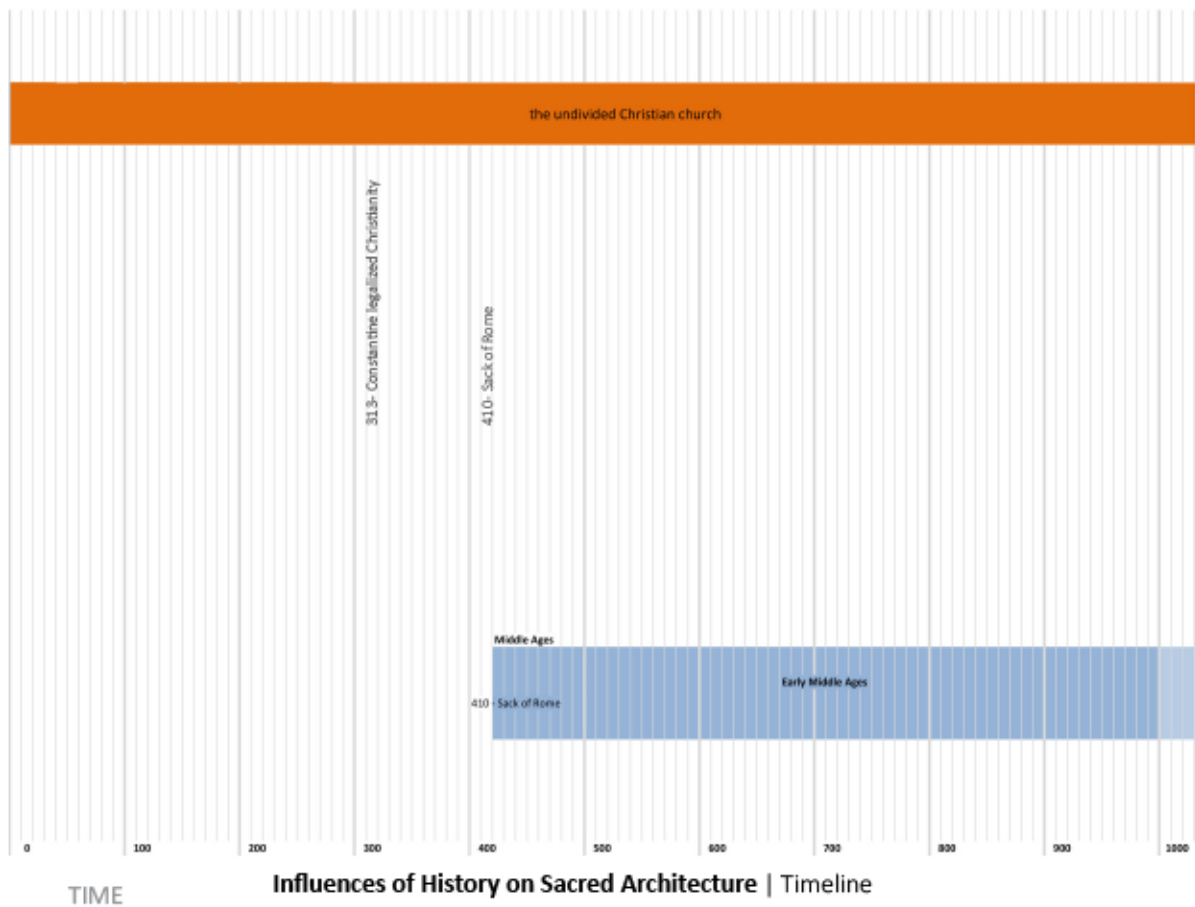
A GATHERING SPACE

The infancy of the Christian Church was a time full of persecution and trials, yet tremendous growth. Although Romans were adamant about hindering the Christians' ability to gather together in community, gather they did in small private homes or in underground catacombs.¹

1 Kilde 2008, 18-33

ROOTS OF CHRISTIANITY

ARCHITECTURAL MOVEMENTS



CONSTANTINE

300- 700 A.D.

PROCESSIONAL ARCHITECTURE

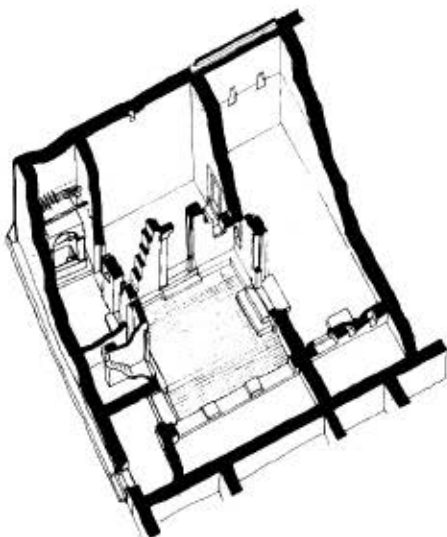
In 313 AD Constantine legalized Christianity and became the first major patron of large, Christian churches. He structured these buildings off of the imperial Roman Basilicas as it was associated with dignity, it was imperial in concept, & the dominance among its surrounding buildings set it distinctly apart.

The location of where the emperor was known to sit became the place of the tabernacle and the

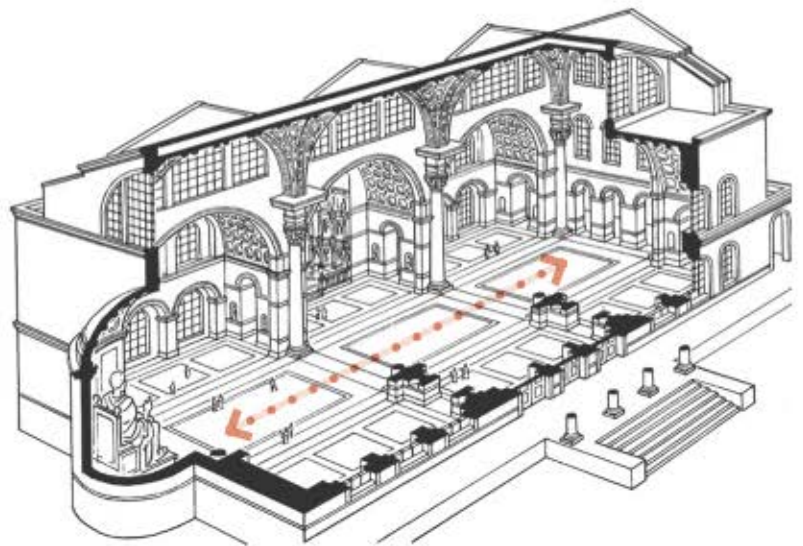
altar, signifying with symbolism the importance of the Christian doctrine of the Eucharist which taught Christ's presence body, blood, soul, and divinity.¹

This processional architecture of colonnaded naves and apsed sanctuaries set an important precedent of an archetypal vocabulary adopted by Christian sacred spaces that has pervaded each architectural period after it and is continued into the present day.

1 Kilde 2008, 39



Early Church | Example of a House Church
Figure 15.1



Constantine | Basilica of Maxentius
Figure 15.2

MEDIEVAL ROMANESQUE

1000-1180A.D.

DAWN OF THE PILGRIMAGE

In the 11th & 12th centuries many people began to travel in large numbers as traders, soldiers, and groups of Christians on pilgrimages.

Churches began to be epicenters within towns and larger in scale so as to be easily spotted from a distance.

To accommodate the faithful and instruct them in Church doctrine, many new churches along highly traveled routes were built with grand altars, and

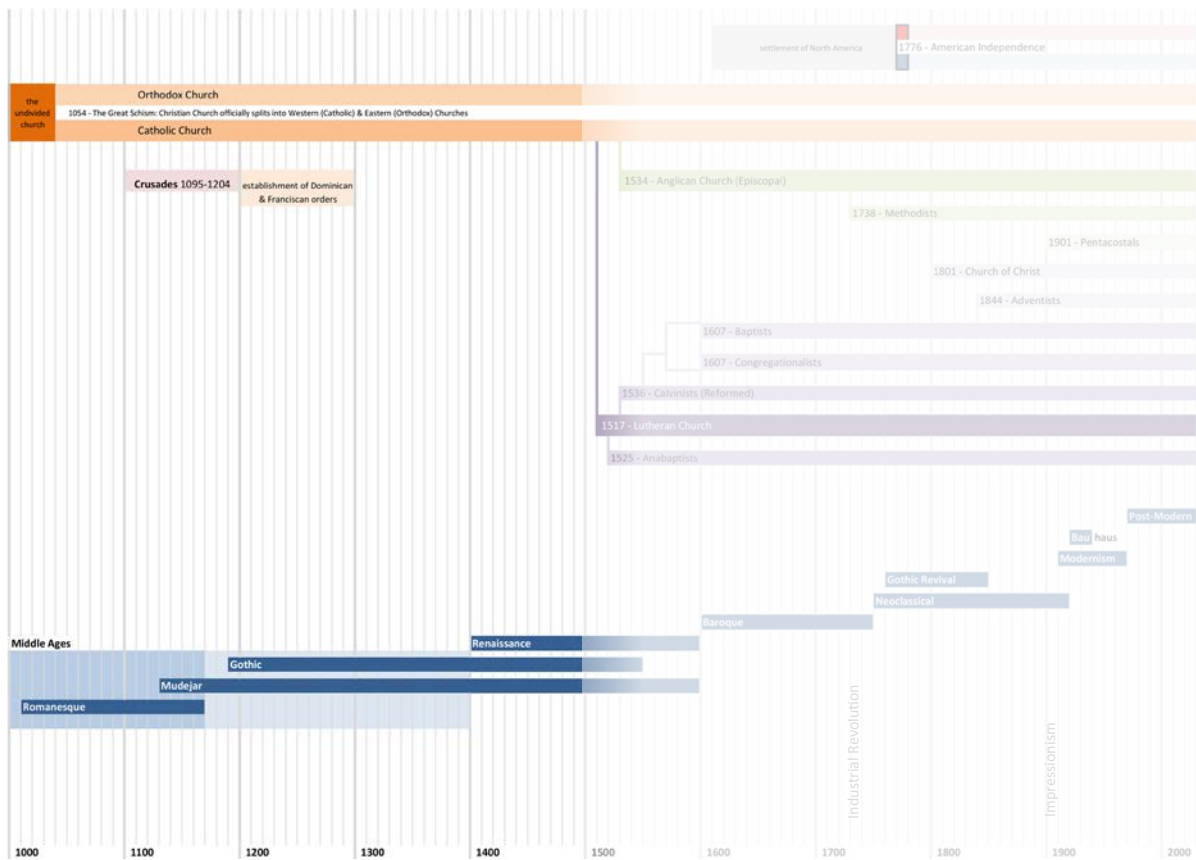
a magnitude of sculptures and paintings on the walls to illustrate important religious stories and doctrines.

To capitalize on the ways of the pilgrim, many Romanesque churches developed side aisles and apses with radiating side chapels for the pilgrim to process through the church, viewing everything within it.¹

1 Stokstad2005,516

ROOTS OF CHRISTIANITY

ARCHITECTURAL MOVEMENTS



TIME

Influences of History on Sacred Architecture | Timeline

MEDIEVAL GOTHIC

1200- 1500 A.D.

DIVINE LUMINOSITY & THE STORY OF STAINED GLASS

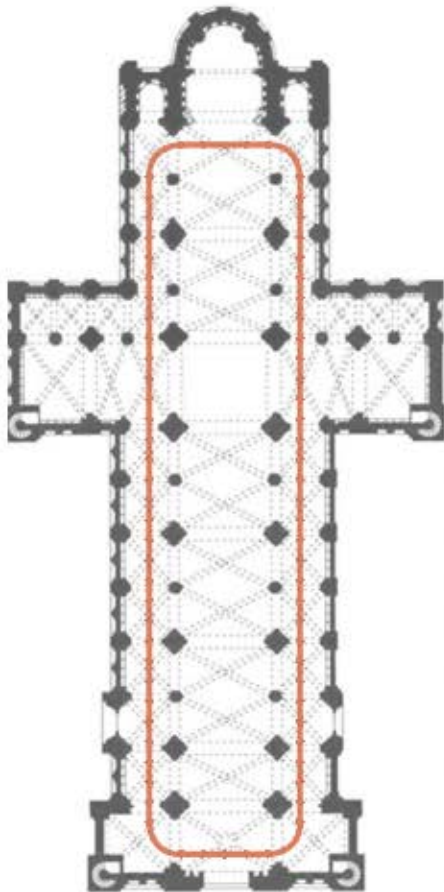
Towns and cities saw significant growth as urban centers and stimulated intellectual life and great centers of artistic patronage.

Romanesque architecture was adapted to reflect this concept of divine luminosity into the walls of the church. This led to soaring vertical heights and large expanses of stained glass.

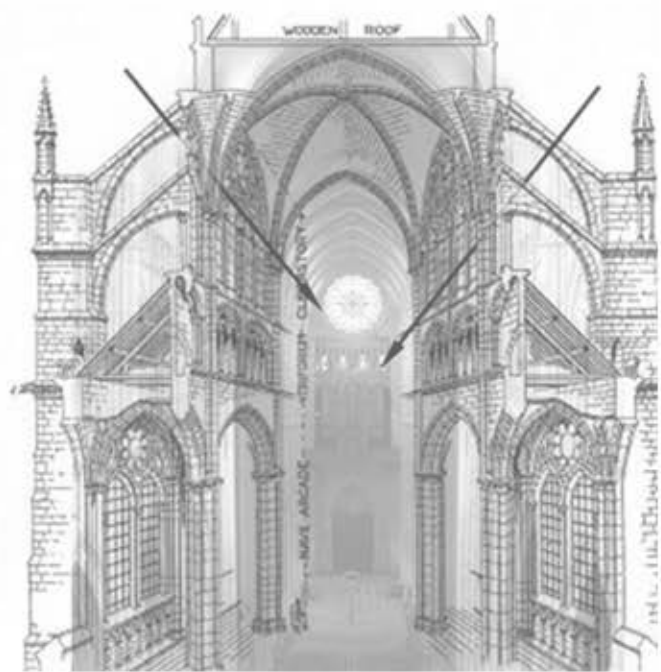
This offered a greater chance to tell the story of Christ and the early Christians through the medium of colored glass. People still recognize they are affected by the soaring heights of these structures paired with the beauty of its acoustics and its fostering of a phenomenology of light.

Due to political events, primarily the crusades, of the 12th & 13th centuries and the destruction of fires, a boom of church building took place.¹

1 Stokstad 2005, 556



Romanesque | Durham Cathedral
Figure 17.1



Gothic | Amiens Cathedral
Figure 17.2

THE RENAISSANCE

1400- 1600 A.D.

IMPORTANCE OF THRESHOLD

The Renaissance ushered in the introduction of printing, a substantial growth within cities, and a culture embracing a rapid secularization. It's architecture returns to a classical influence with an added emphasis to the design of facades.

Important since they are multifaceted in their function and role for sacred architecture, facades

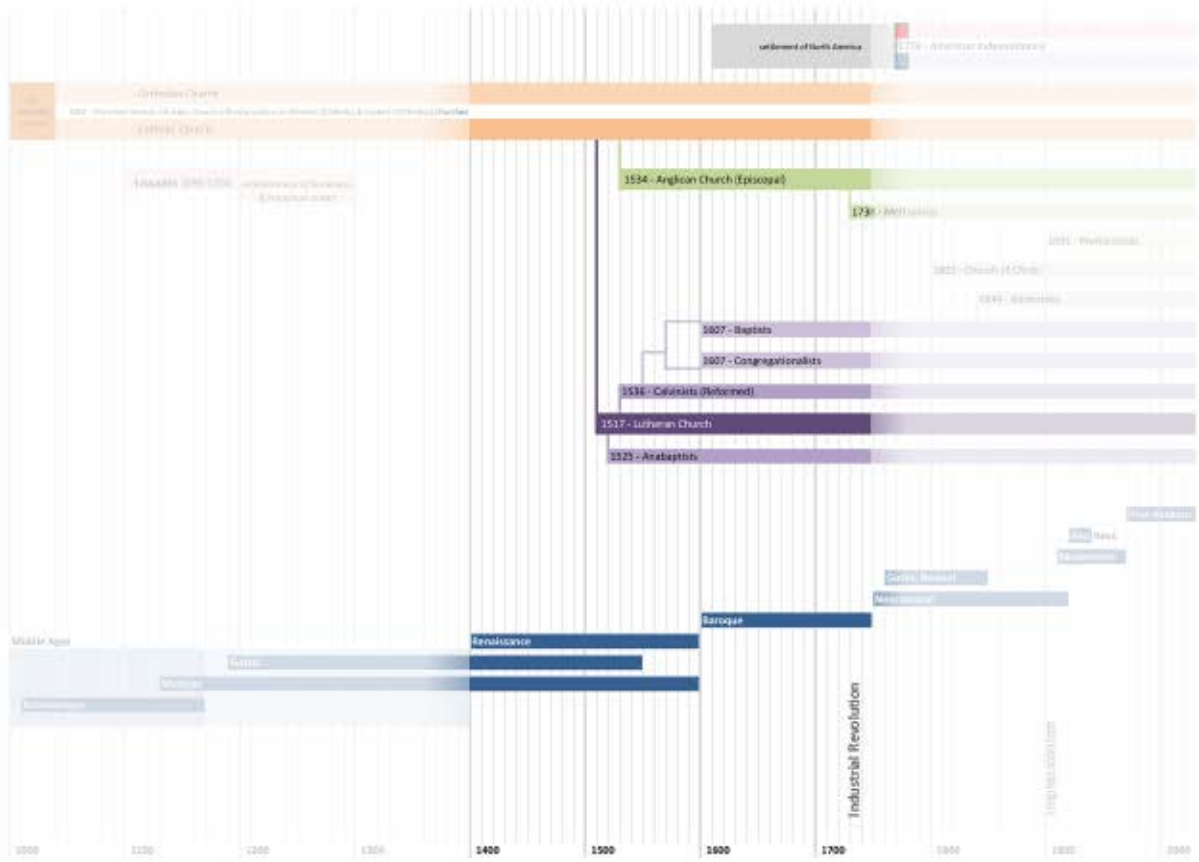
should invite the visitor in, inform or tell a story about the place, and act as a threshold between the world and the sacred.

Churches, such as the Church of San' Andrea, develop depth to their facades, increasing it's role as a threshold from outside to inside.¹

1 Kilde 2008

ROOTS OF CHRISTIANITY

ARCHITECTURAL MOVEMENTS



TIME

Influences of History on Sacred Architecture | Timeline

THE BAROQUE

1600- 1750 A.D.

RE-EMPHASIS ON APPROACH

In response to the Protestant Reformation of the early 16th century, the Roman Catholic Church embarked on a program of renewal that became known as the Counter-Reformation.

During this time, the Church employed the use of art to encourage piety among the faithful and to persuade those who left the Church to return.

The opulent taste and spectacular visual effects aimed to heighten the emotional involvement of worshippers.¹

Counter-Reformation art was intended to be both doctrinally correct and visually and emotionally appealing so that it could influence the largest possible audience. The growing use of baldachinos, or a large sculptural canopy located above the altar, was employed to emphasize the doctrine of the Eucharist.²

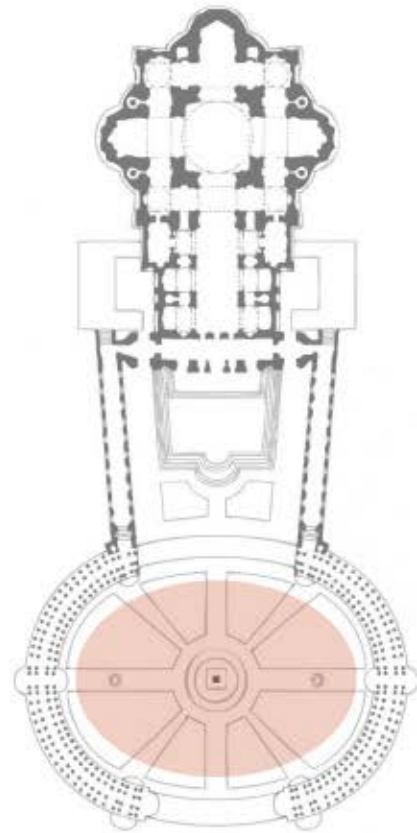
Along with the undulating facades and ornamentation, the emphasis on approach toward the church and developing plazas outside the entry grew in importance.

1 Stokstad 2005, 619

2 (Kilde 2008, 91)



Renaissance | Church of San Andrea
Figure 19.1



Baroque | St. Peter's Basilica square
Figure 19.2

AMERICAN INDEPENDENCE & NEOCLASSICAL REVIVALS

1750- 1920 A.D.

OLD FORMS, NEW PLACES

A revival of the classical orders in Neoclassical and Gothic Revival occurs as an influence of colonizing nations seek to spread their faiths in the "New World".

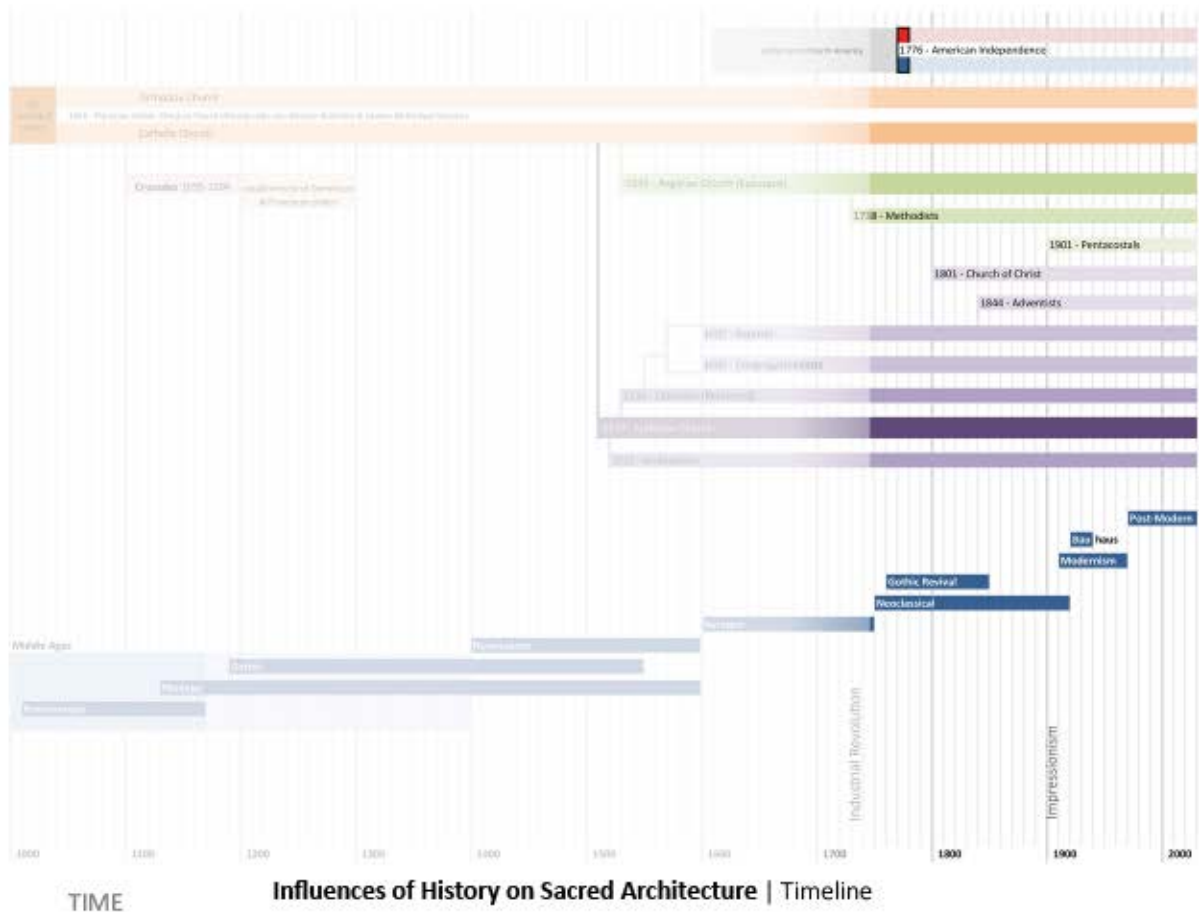
In earnest attempts at legitimizing their roots and latching on to the beauty and splendor of the older orders of architecture, many new churches were built in America to remind immigrants where their roots stemmed from.

The Protestant and Catholic churches really begin to impacting each other. The meetinghouse and auditorium plans developed in colonial America end up further impact the design of Catholic churches, eventually leading to deviations from the basilica plan.¹

1 Chiat 2004

ROOTS OF CHRISTIANITY

ARCHITECTURAL MOVEMENTS



20thCENTURY

1900-2000A.D.

BIRTHOFMODERNISM

The 20th century witnessed the birth of modernism and a search for a new architectural vocabulary as a response to the rigidity of the 19th century and the Victorian era. It also was a booming age of new technologies and new ways to utilize building materials.

Reforms in liturgical practices come about in many ways throughout this time period. A movement began in the early 20th century to remove the kitsch statues and “distracting” ornamentation so as to allow worshippers to be more focused on the Eucharistic sacrifice of the mass. Much like the Reformers of the 16th century it was believed by removing these extraneous things, people could find more focus in the purity of space.¹

Early modernists, like Le Corbusier, while drastically changing the appearance of the Christian church, still retains the depth and richness of important ecclesiastical architectural elements.

With another wave of drastic social change and increasing secularization of society, reinterpretations of Christian sacred spaces are made, heavily diversifying the landscape of church design.

1 McDannell 1995, 171



Revival | St. Joseph's Church, Detroit, MI
Figure 21.1



Modern | Notre-Dame du Haut chapel
Figure 21.2

SACREDSPACESTUDIES

learningcommonelementsofsacred

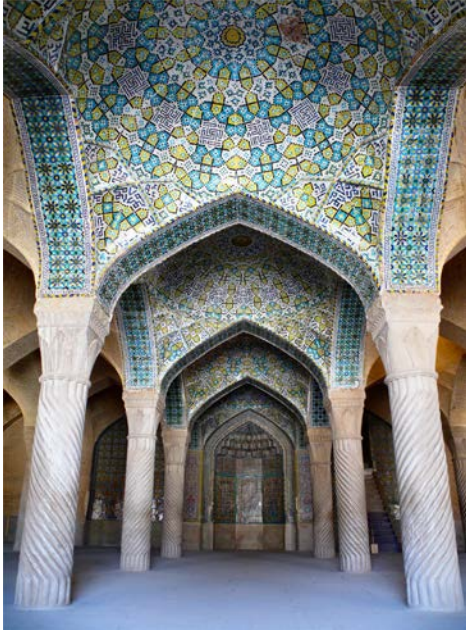
SEQUENCINGOFSPACES

The sequencing of spaces is important two-fold. First, it is a way the architecture can give cues to the visitor that they are entering a different kind of space, and one that requires contemplation and introspection. Second, this allows for varying functions of size, scale, or social items to happen within the greater context of the space. Ordered architectural elements direct your gaze. ¹

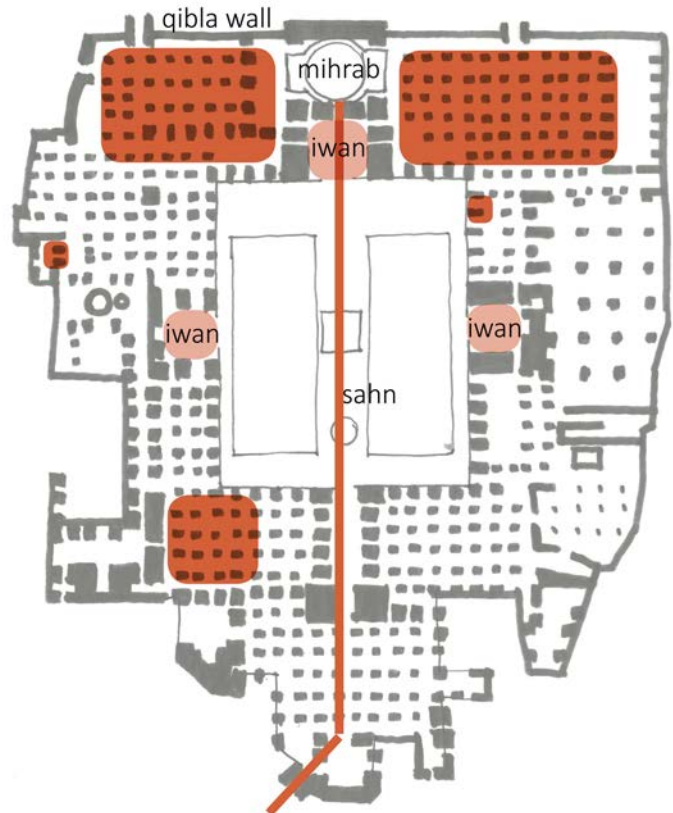
QUALITATIVEVSQUANTITATIVE

The sacred spaces of many major religions evidence a common importance given to the physical experience of the space and how that affects a person.

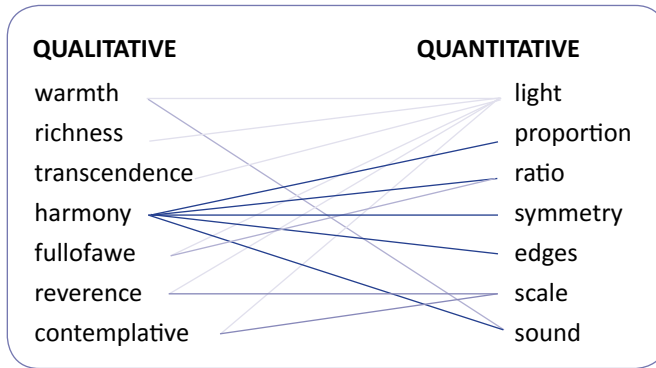
1 Mohebbi2015



Muslim | Qibla wall in Vakil Shiraz Mosque
Figure22.1



Muslim | plan of Vakil Shiraz Mosque describing the sequencing of spaces & sense of approach



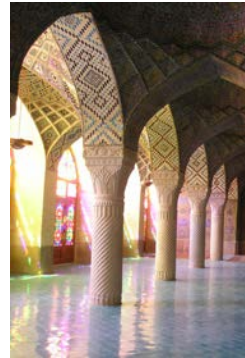
Catholic | St. Laud



Catholic | St. Ignatius



Protestant | LaGrave
Figure23.1



Mosque | Vakil Shiraz



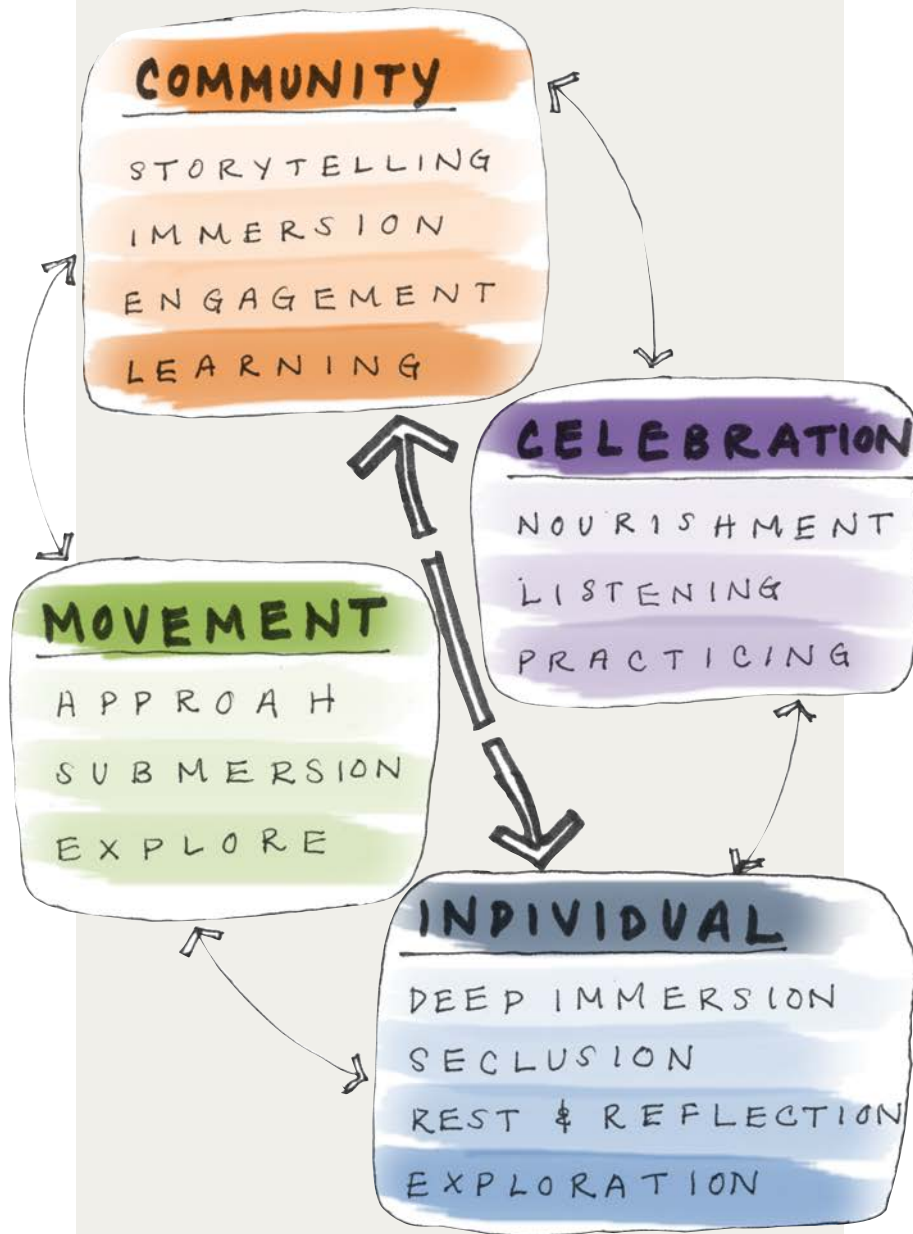
Synagogue | OrchardSt.

A STUDY OF OVERLAPPING ARCHITECTURAL PROGRAMMATIC FUNCTIONS

	Catholic Church	Protestant	Mosque	Synagogue
directional focus	altar	altar/stage	mihrab	ark
<i>element containing important sacred item</i>	tabernacle		qibla	aron hakodesh
<i>architecturale element signifying importance</i>	baldacchino		maqsurah	rabbis seat
proclamation of sacred scriptures or messages	ambo	pulpit	dikka	bimah
main function of space	nave & transept	sanctuary	prayer hall	sanctuary
place for side chapels	apse & ambulatory			
penitential thought	confessional		sacred corners	
place of preparation for spiritual leaders	sacristy			
entrance into sacred space	narthex	narthex	patio/courtyard	lobby
	vestibule		iwan	
water for ritual washing/symbolic of washing	baptismal font	baptismal pool	sahn	
ritual supported by art/architectural element	stations of the cross			
	choir loft	choir		
	crucifix	cross		
visual focal point & used for the call to prayer	bell tower	steeple	minaret	
dome/cupola/ornamented vaulting	dome/cupola		muqarnas	

PEOPLE, PROGRAM, & PRINCIPLES

the development of Catholic sacred spaces



Schematic Programming | relationships between qualities of space



People | University students gathered at the base of the Chautauqua Trailhead
Figure26.1

PEOPLE

The location of this retreat center is within the foothills of the Flatiron Mountain range in a section of public land owned by the City of Boulder within their Open Space and Mountain Parks land area. This location provides a great opportunity to utilize the well-maintained pre-existing trail systems that are well populated by Boulder citizens, visitors, and outdoor enthusiasts. As this retreat center is focused towards promoting and enriching spiritual growth and understanding of the Catholic faith, this is a place open to the engagement of all people: young and old, rich and poor alike, from the passerby to the intentional seeker. Specifically addressing both the deficit in effective sacramental preparation and catechesis of the Church's young adult populations, the focal people group of this retreat center is the youth and young adult populations.

As mentioned previously, the Archdiocese of Denver has become a growing epicenter for many various organizations that began in the last twenty years with the focus of engaging in the call set for by Pope John Paul II for a New Evangelization. The Archdiocese's primary retreat center, Camp Malo, suffered incredible damage to its facilities due to a large fire in 2011 and a landslide in 2013 causing it to close its doors.¹ Since then, not only has the Archdiocese been in need of a new retreat center but these emerging new flourishing organizations need a place to bring not only their staff for training and foundational faith development but the young adult populations which they serve.

FOCUS – the Fellowship of Catholic University Students – is a growing national and international

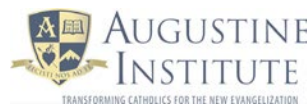
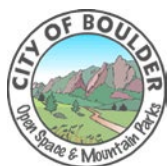
organization based out of the Archdiocese of Denver which trains and leads many college students throughout the country to grow more in their understanding of the Catholic faith.² The Augustine Institute is a new college founded in 2005, also in response to the New Evangelization and they offer a variety of degree programs for faith ministers as well as classes and many lectures accessible for the education and access by the laity.³ In Boulder and located within a mile of the location of this retreat center is the Catholic university student group for the University of Colorado Boulder called Buffalo Catholic. This retreat center allows access to each of these organizations to a premier location nestled within their beloved mountain range to lead, engage, and participate in personal and group retreats.

This specific retreat center is a place where groups of young teens can be led on retreat in preparation for the sacrament of confirmation and to build community. It is a place where engaged couples could be led in a marriage prep retreat. It also could be a place of intimate personal retreat or where one could come to discern a religious or priestly vocation. The center's focus is to be an environment that fosters someone's ability to learn, prepare, and engage with the sacraments of the Church, with themselves, and with God. Furthermore, it encourages communal growth leading others to a deeper understanding of their faith and inspires them to pass it onward. Most importantly, this is a place not solely focused on Catholicism but promotes inclusion of the unsuspecting passerby.

1 Filby 2014

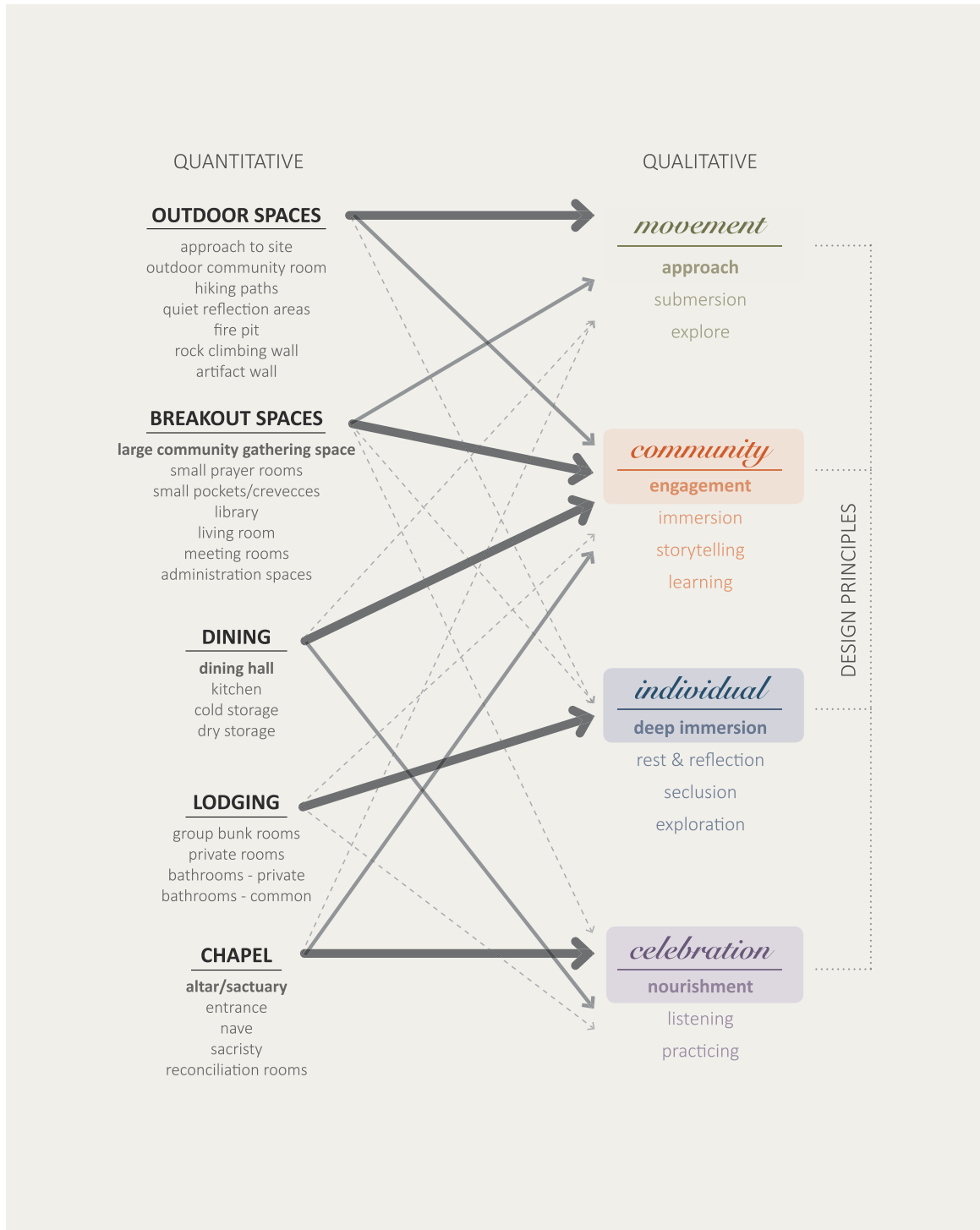
2 FOCUS 2016

3 Augustine Institute 2015



Stakeholders | Organizations based within Boulder and Denver and have regional and national reaches.
Figure 27.1

PROGRAM RELATIONSHIPS

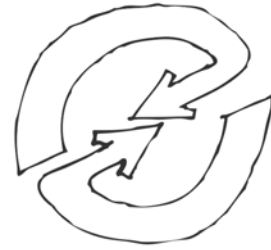


DESIGNPRINCIPLES



APPROACH

The approach will provide a sense of anticipation by creating vistas, respite, and curious mystery. It will communicate a sense of arrival and a reflection of your journey.



ENGAGEMENT

The site's landscape naturally engages the person, yet this project will capitalize on the natural beauty of the land, intrigue the passerby through occupying the public realm, attract someone through wonder and be inclusive of all people.



IMMERSION

The immersive experience begins at the base of the Flatiron Mountains and continues as someone begins the ascent of trails before them. A place set apart allowing for moments of solitude, reflection, sacramental celebration, and an immersion of sensory engagement and the natural environment. The immersion brings on physical, mental, and spiritual challenges allowing one to experience growth.



NOURISHMENT

Nourishment is targeted towards rejuvenating and challenging the body, mind, and spirit.

This center will serve the needs of bodily nourishment through food, areas for rest, relaxation, and engaging exercise. It serves the needs of mental nourishment through removing a person from their daily life and placed in community with fellow retreatants to learn and grow. It serves the needs of spiritual nourishment through provisions of the sacraments and space to grow in fellowship, individual introspection and contemplation.




PROGRAM DEVELOPMENT

PROGRAMMED SPACE	# of people	SF per person/space	TOTAL SF	COMMUNITY			
				storytelling	immersion	engagement	learning
Number of participants	60						
Breakout Spaces							
1 large group community gathering space	60	15	900				
2 small prayer room	10	10	200				
places for individual time -							
8 pockets/crevecces		70	560				
1 library			250				
1 living room	30	20	600				
5 meeting rooms	7	10	350				
administration spaces	2	80	160				
Chapel							
entrance							
narthex	75	11	825				
altar/sanctuary			200				
sacristy			150				
2 reconciliation rooms	2	40	160				
Lodging							
5 group bunk rooms (sleeps 8)	40	250	1,250				
10 private room (sleeps 2)	20	200	2,000				
10 bathrooms - private	20	70	700				
bathrooms - common	50	20	1,000				
Dining							
1 dining hall	65	15	975				
1 kitchen	60	7.5	450				
storage - walk-in fridge, dish storage, dry storage			260				
Outdoor Spaces							
approach to site							
1 outdoor community room	25	20	500				
hiking paths			existing				
quiet reflection areas							
- interventions along a path							
fire pit			600				
rock climbing wall			150				
NET SQUARE FEET (NSF)			10,990				
grossing factor		0.5	5,495				
GROSS SQUARE FEET (GSF)			16,485				

KEY QUALITATIVE ATTRIBUTES OF SPACE

CELEBRATION			MOVEMENT			INDIVIDUAL			
nourishment	listening	practicing	approach	submersion	explore	deep immersion	seclusion	rest & reflection	exploration

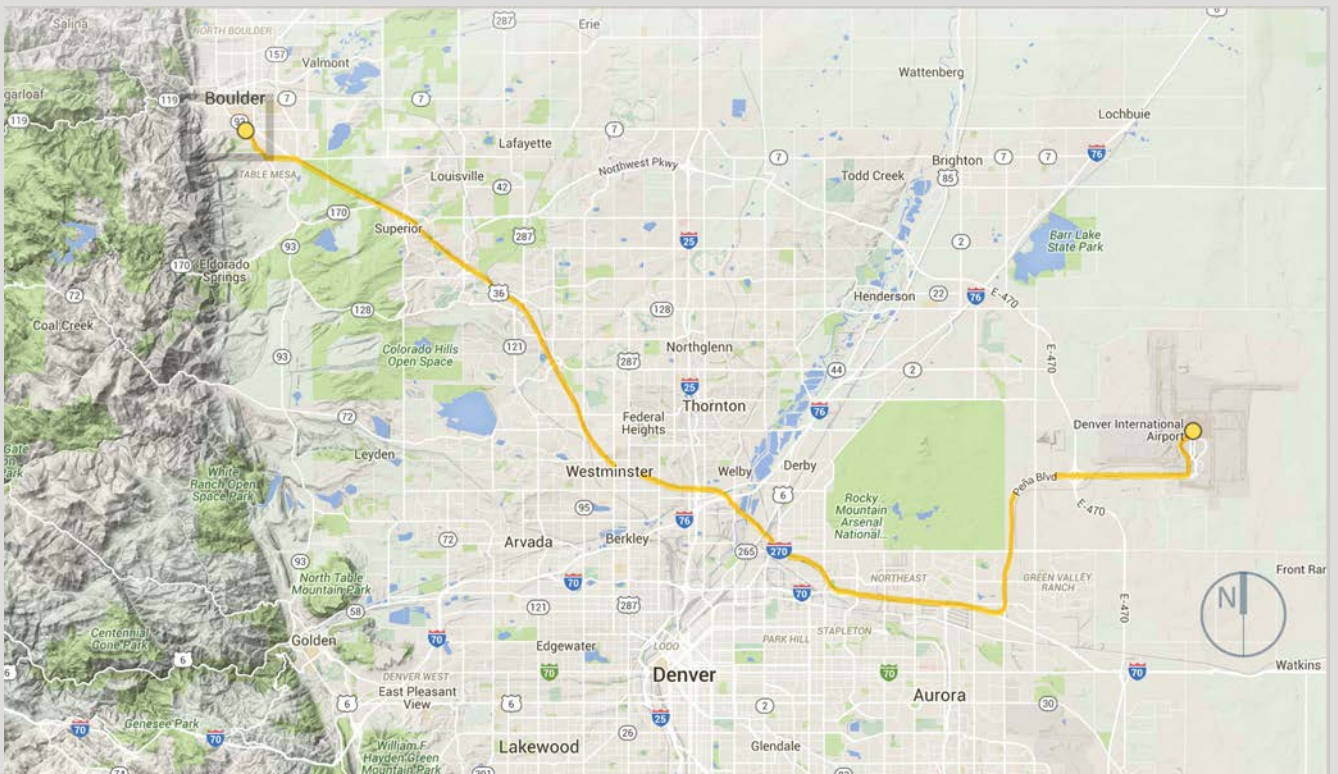
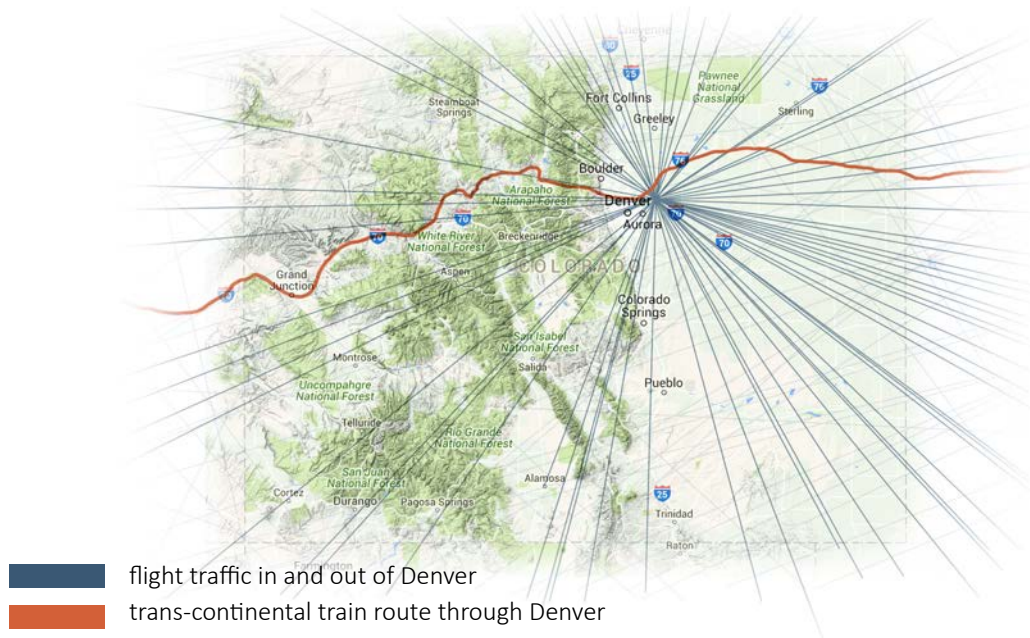


-  KEY MAJOR AREA - places that exhibit significant areas of four key attributes
-  KEY MINOR AREA - places that exhibit significant areas of three key attributes
-  SUBSIDIARY AREA - places that exhibit significant areas of two key attributes

STRUCTURE OF LANDSCAPE

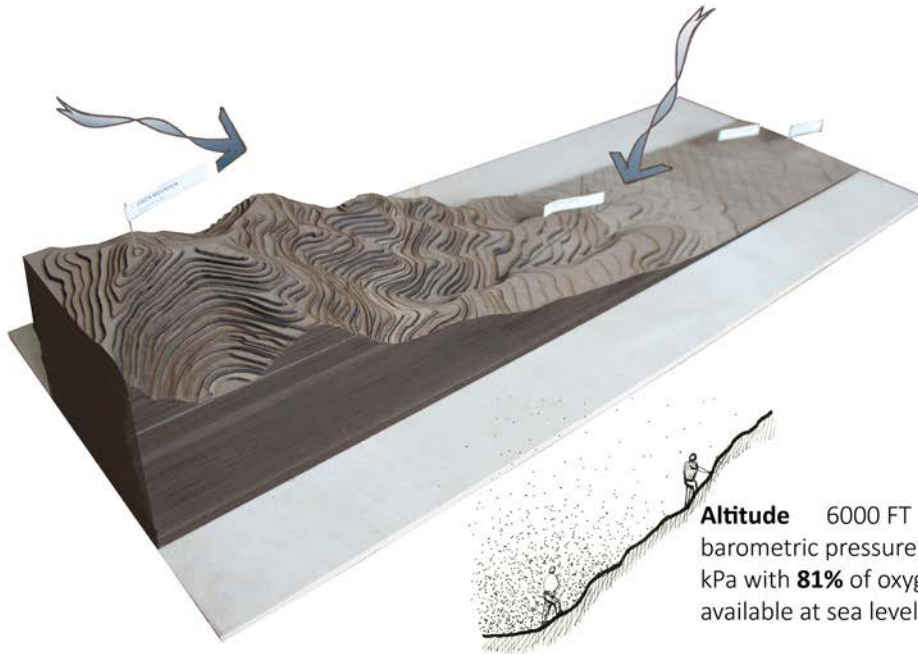


LOCATION



■ RTD bus route from Denver to Boulder

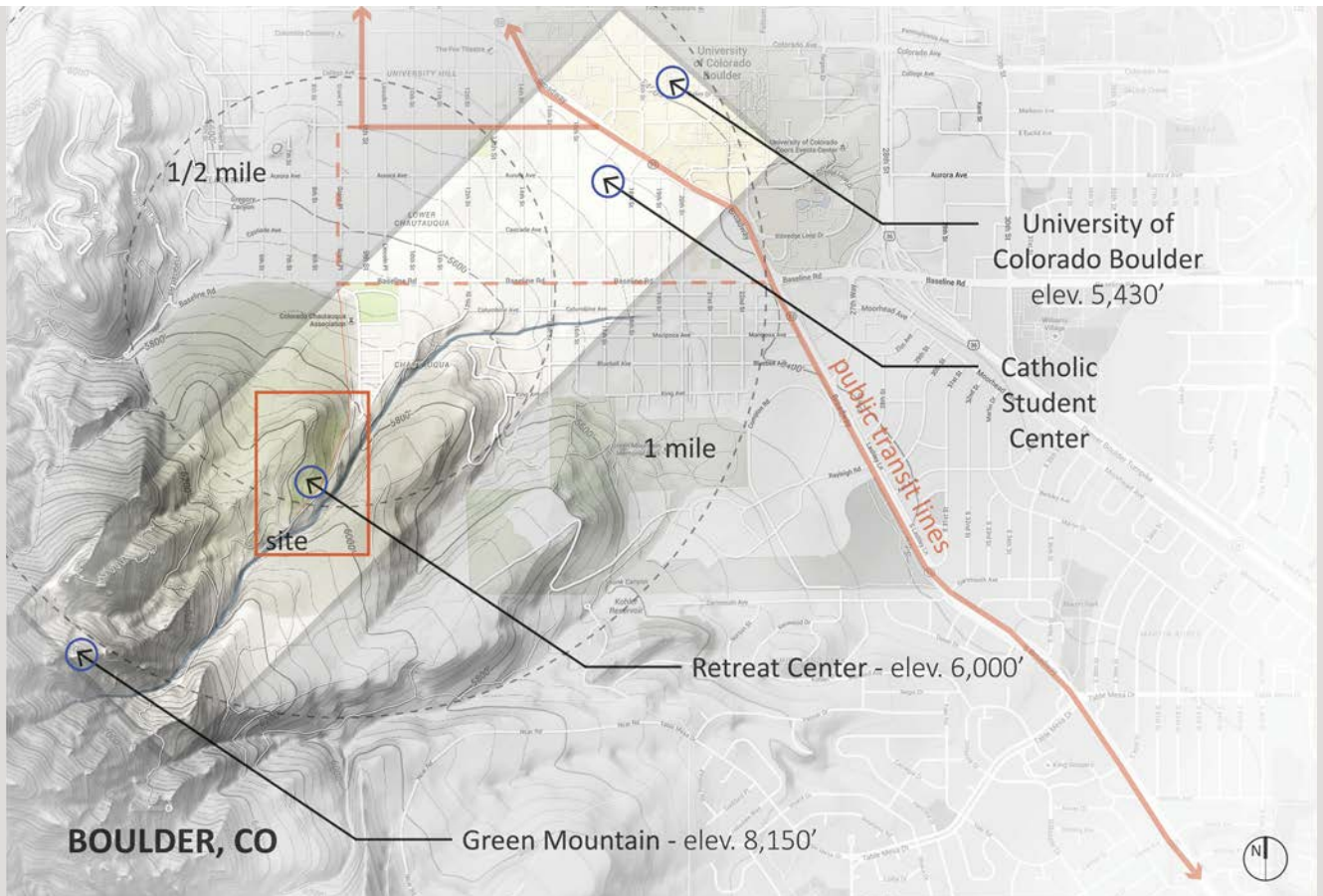
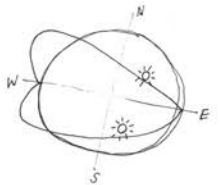
ANALYSIS



Wind summer- N
winter- W

Sun Angle summer- 73°
winter- 23°

Altitude 6000 FT
barometric pressure is 82 kPa with **81%** of oxygen available at sea level



PROCESS OF APPROACH & ASCENT





an neighborhood of high end homes
reaching toward the outskirts of town
the incline ever increasing
as you come upon

the Flatirons
the culmination of your view
from the city, visible
their mystery, invisible

my eyes, my body,
drawn
forward to the mountains
my point of reference

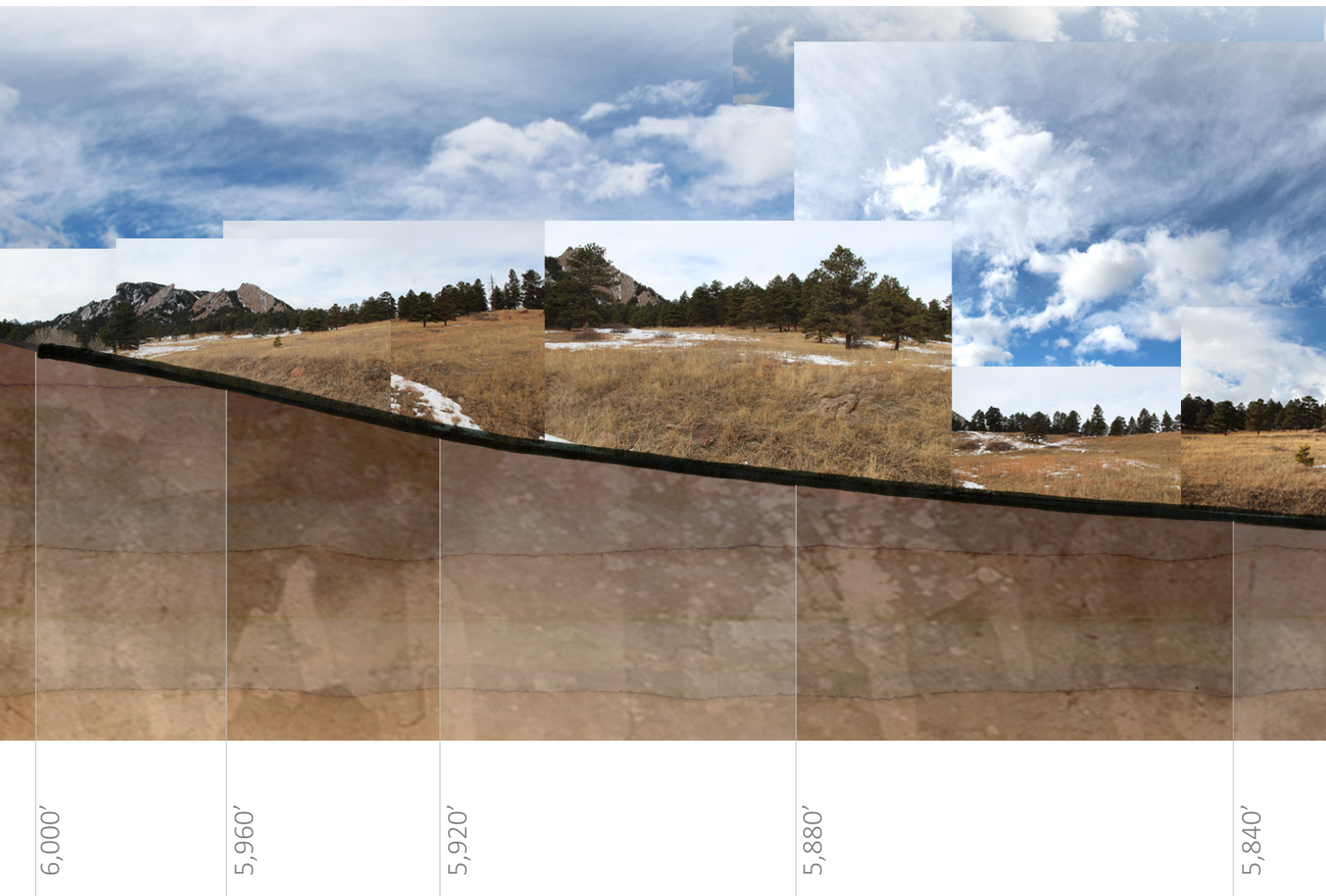
with each step forward
you are one step removed
one step higher
one breath shorter

your lungs ask for reprieve,
leg muscles tire
but the heart quickens with excitement
as the journey continues

the air fresh with scents of
removal, of nature
the sounds of which softly
sift through the trees

new elevation, senses heightened
a look over your shoulder
clear view of from where you came
reflection, arrival.

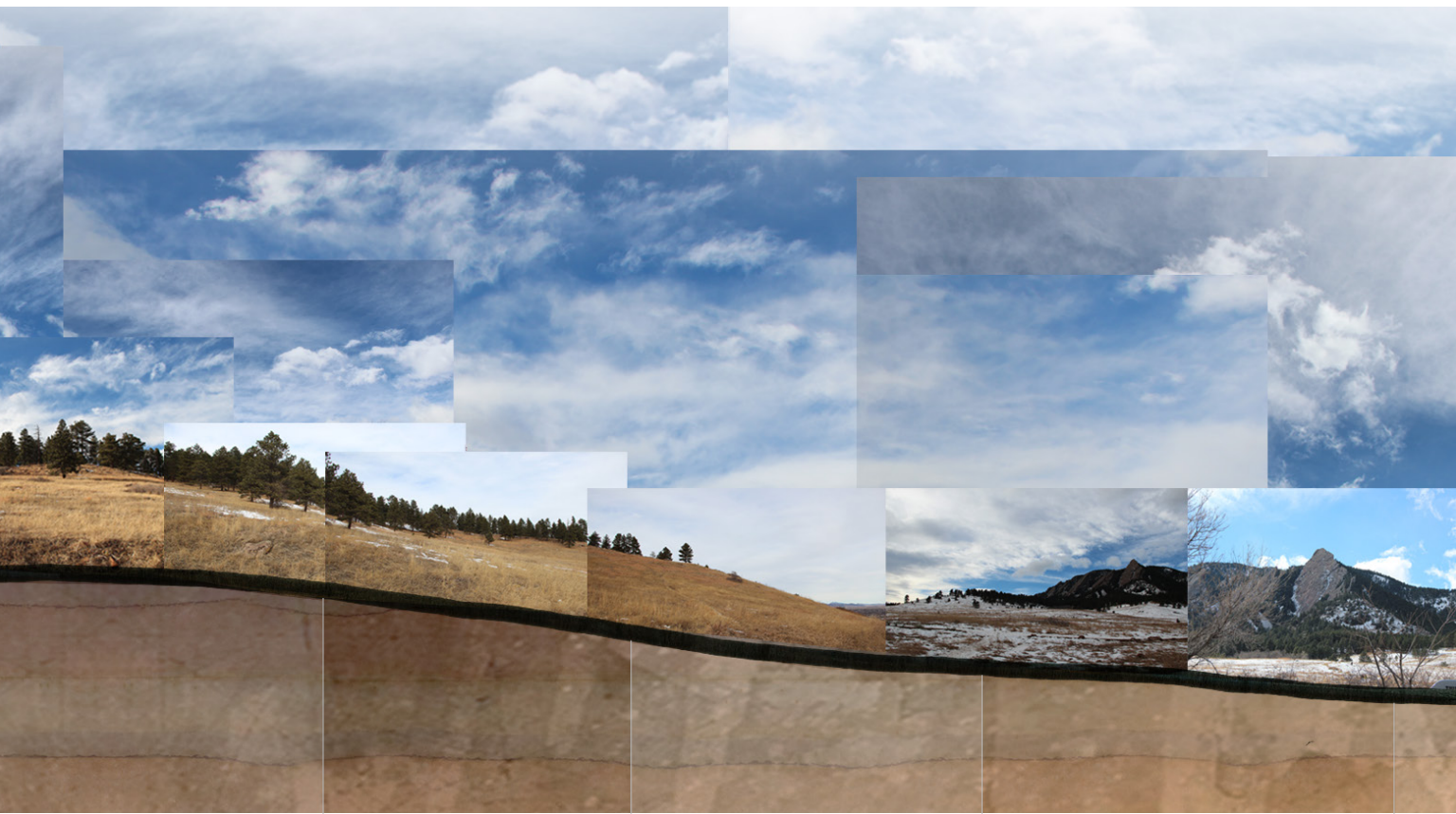
MOUNTAINTOCITY



experiential site section along Bluebell Road

The approach will provide a sense of anticipation by creating vistas, respite, and curious mystery. It will communicate a sense of arrival and a reflection of your journey.

mountain ←————→ city



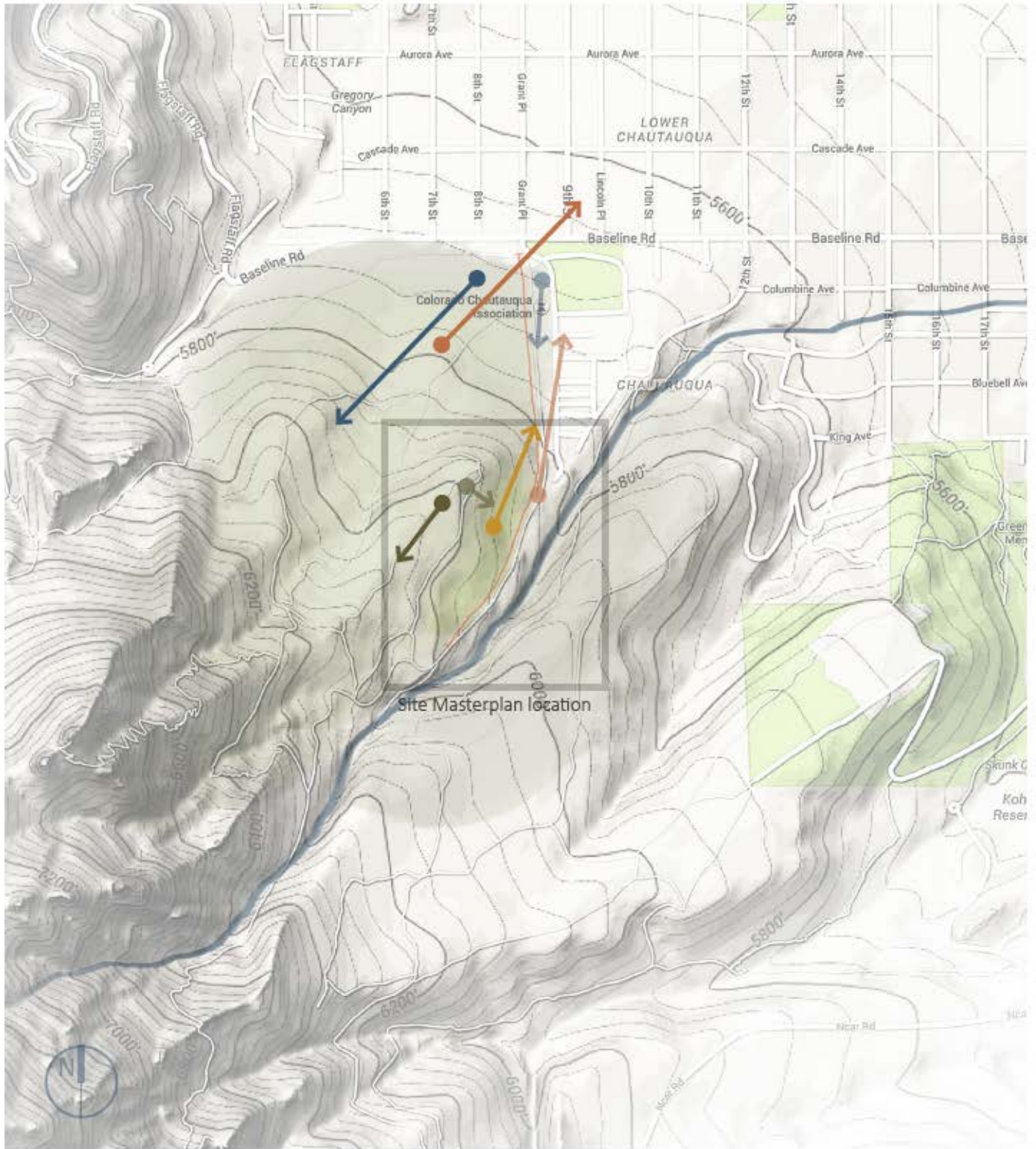
5,800'

5,760'

5,720'

5,680'

ENVIRONMENTAL CONTEXT



Site Ethos | Site area map with photograph locations and directions



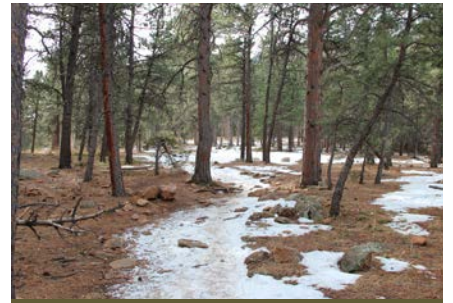
view of Flatiron on Chautauqua Trail



beginning of path to site



path looking back to Boulder



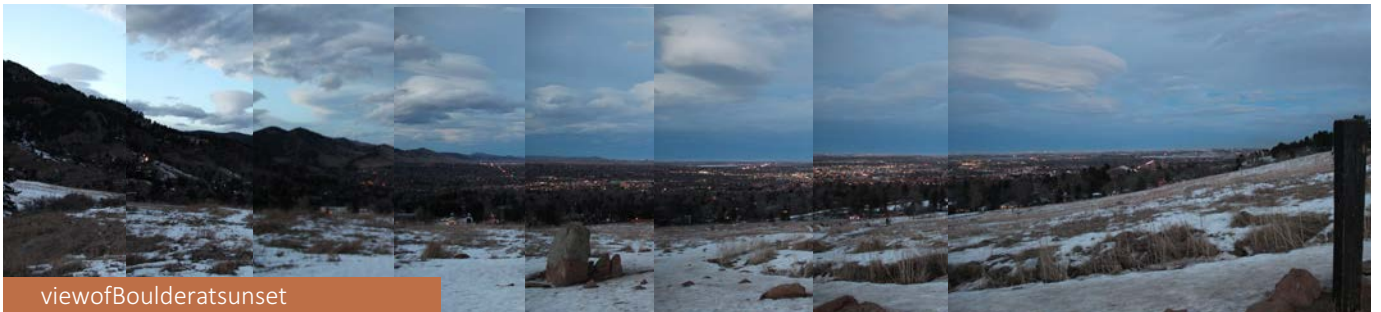
path on existing trails



area of site scoop out of landscape



location of outdoor chapel



view of Boulder at sunset

DESIGN DEVELOPMENT



SITEPLAN



EVENT TERRITORIES

ENGAGEMENT & PATH

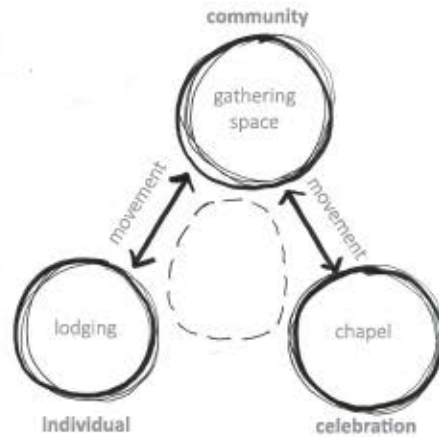
The location of the site was aimed towards the ability to leverage the public realm with a goal of developing various touch points allowing some element of inclusion for all passing by. There are multiple entry points, but the primary one (A) takes you along a snaking pathway the both dives into and submerges itself into the landscape before bringing you upward and to an opening that reveals a pristine view of the mountains. At this similar area, a kinetic memory wall (B) leads you up the earthen ramp towards the main entrance (C). The concept of the memory wall was to allow people to leave an imprint onto a place which hopefully impacted them. Further up the Bluebell Road path, if you turned back around from the direction you came from, you would have this view (D). Further along the upper Bluebell Spur and Mesa trails is a rustic outdoor chapel space overlooking the city of Boulder as well as an outdoor firepit nestled near a path.



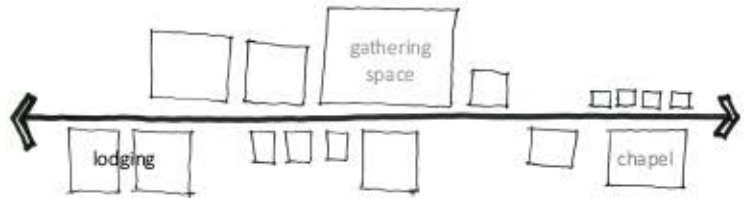
PARTI DEVELOPMENT

The building's program is linked with four qualitative attributes:

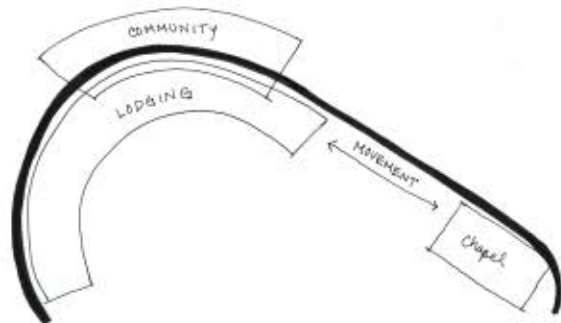
MOVEMENT
INDIVIDUAL
COMMUNITY
CELEBRATION

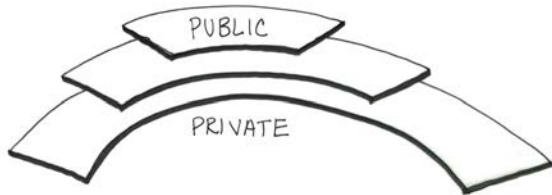


The functions are organized along a main axis to reinforce journeying along a path.

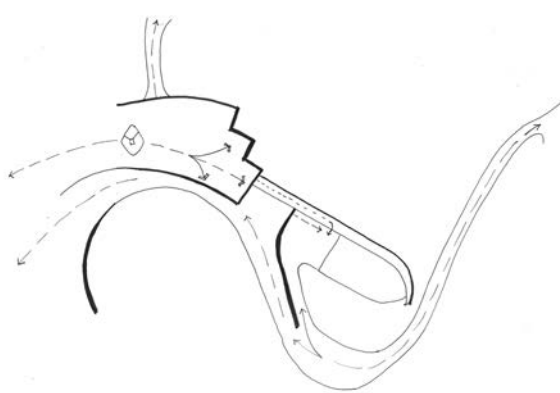


The central axis becomes a heavy rammed earth wall creating a clear path of circulation & intriguing sense of journey.





To optimize the topography of the site, the program was then layered in three tiers: private, semi-private, & public. A central core of community space links the three of these layers together.



The building is then nestled into the landscape creating views back to the city & to the mountains. Furthermore, the earth begins to ramp up & into the building, allowing the retreat center to become one with the path.



The heavy rammed earth wall signifies the rich foundation of tradition in the Church and the embodied experience we can have with its history.

PERSPECTIVE



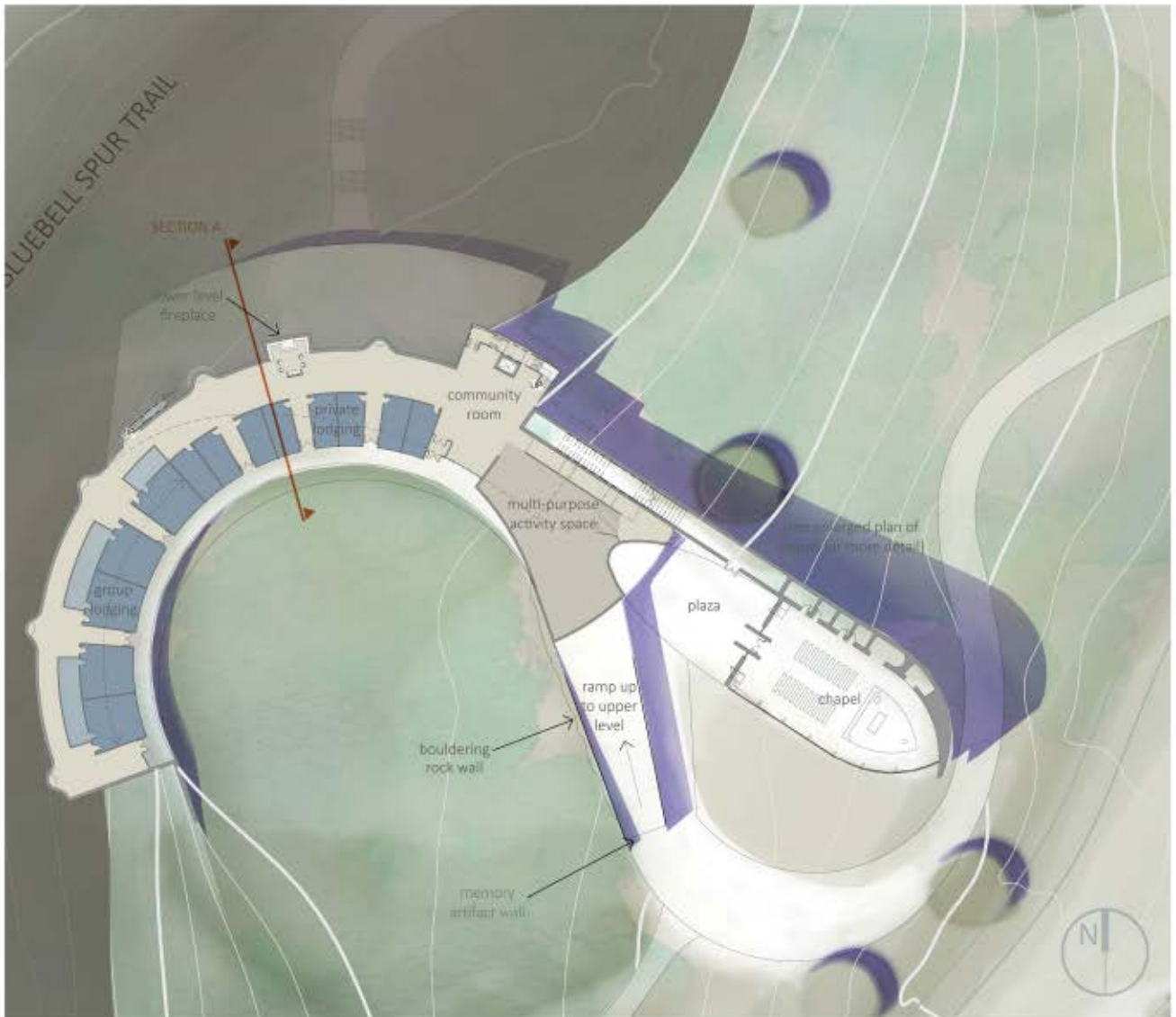
View F | Vista from Bluebell Spur Trail looking north-northeast towards the retreat center with the view of Boulder, Colorado in the distance.



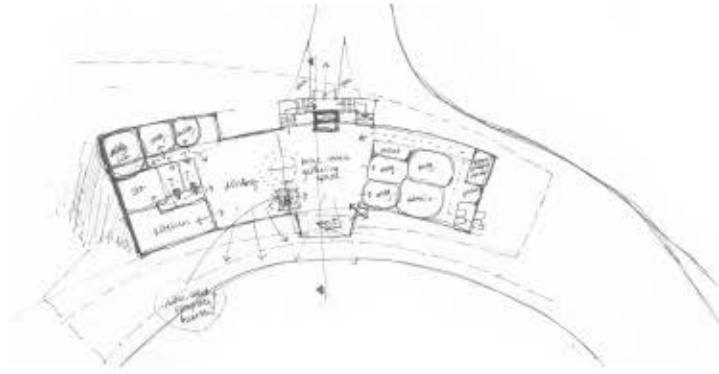
LOWER LEVEL PLAN

LEGEND

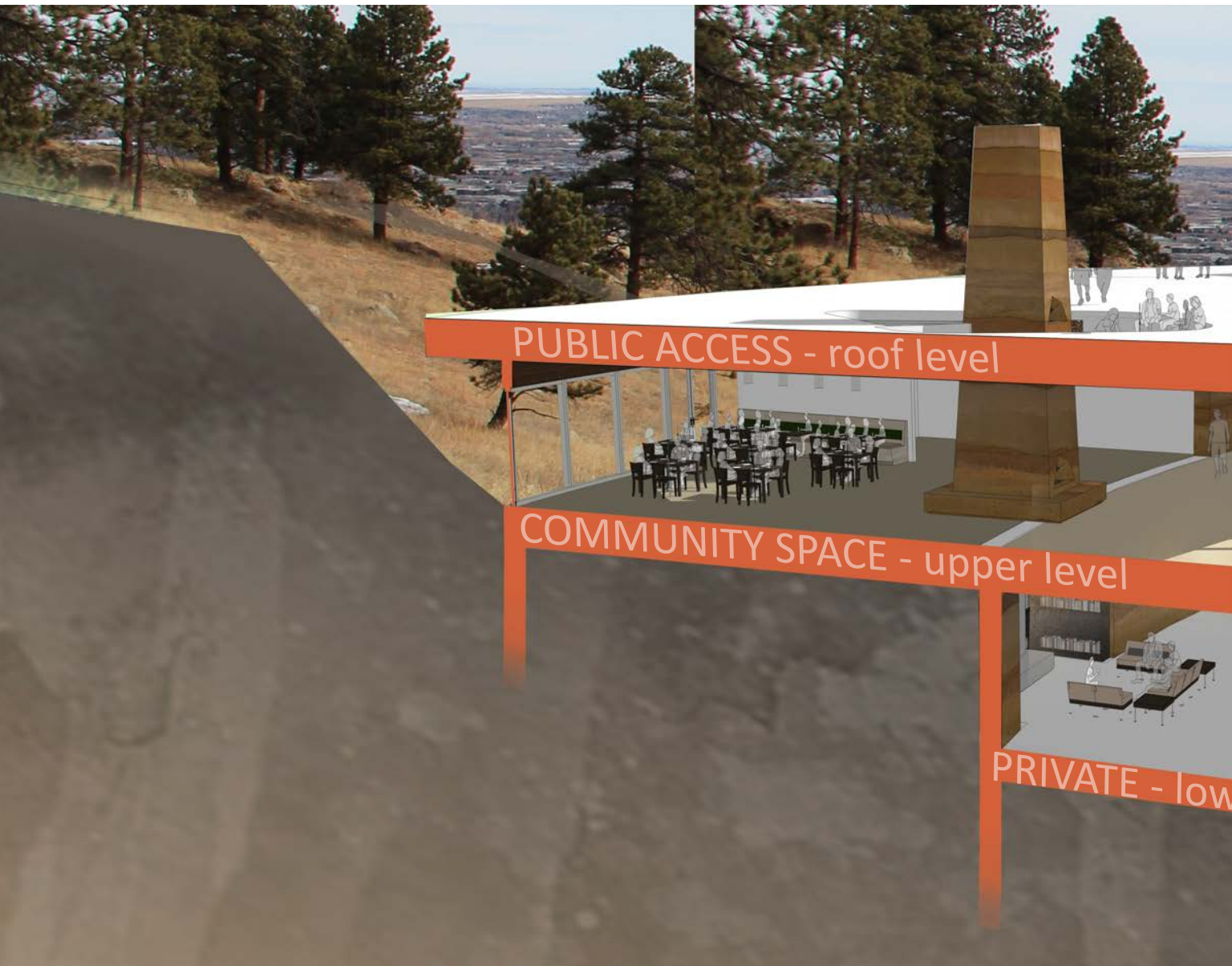
- circulation & community space
- lodging- group rooms & private rooms
- private bathrooms
- kitchen
- meeting rooms
- administration



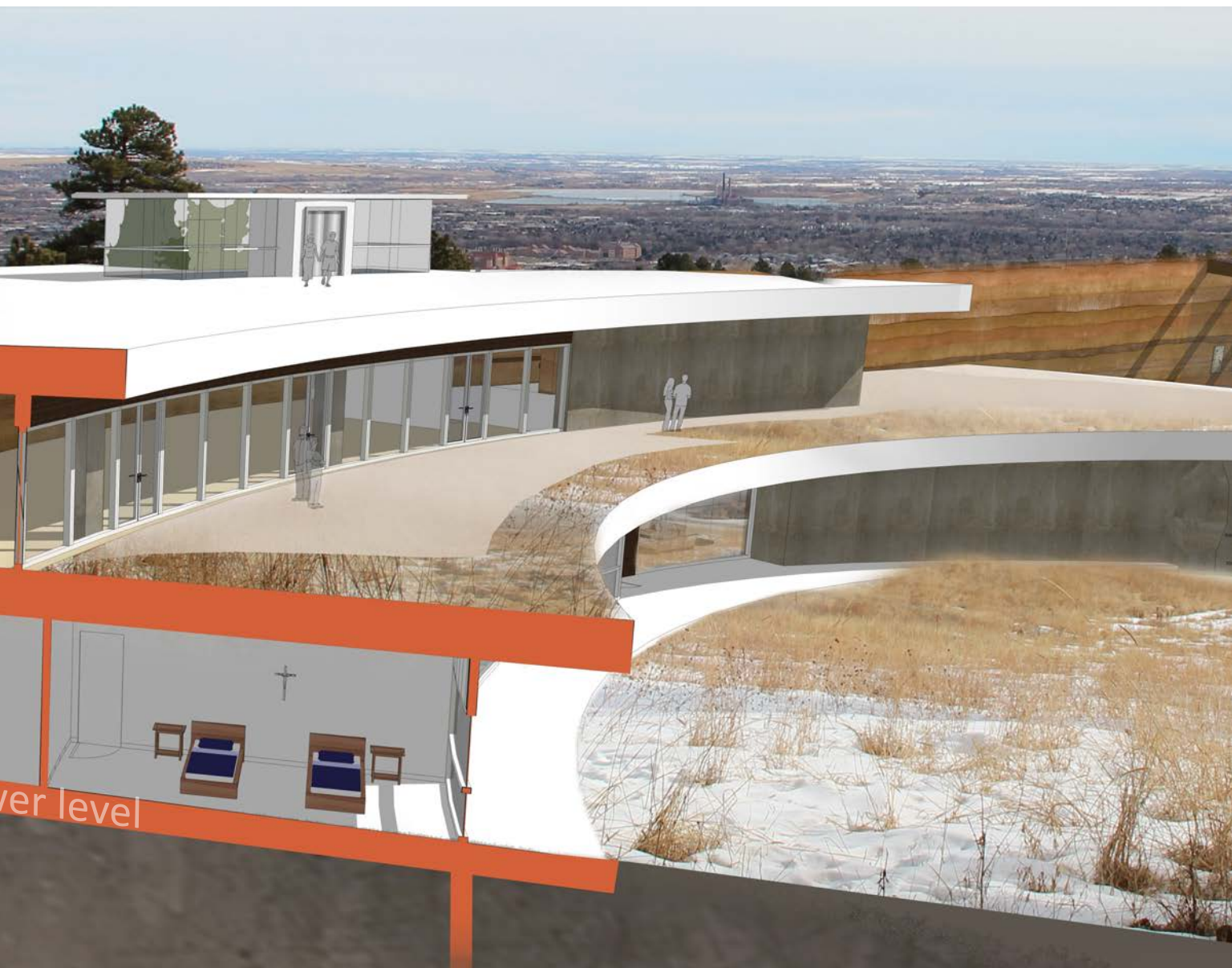
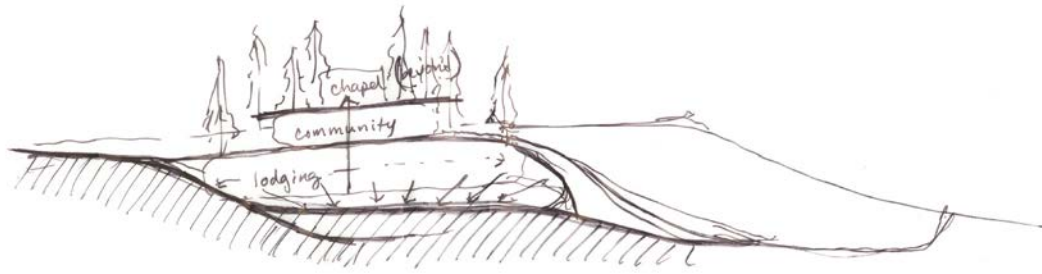
UPPER LEVEL PLAN



BUILDINGSECTION



Section A | Building cut shows the way the retreat center was nestled into the landscape and how the three community spaces- private, community, & public- are stacked upon each other and linked spatially with gathered seating opportunities and fireplaces on each level.



The upper level's deck area directs views back towards the Flatiron mountains while the roof deck level provides 360 views spanning from the city to the mountains.

RENDERINGS



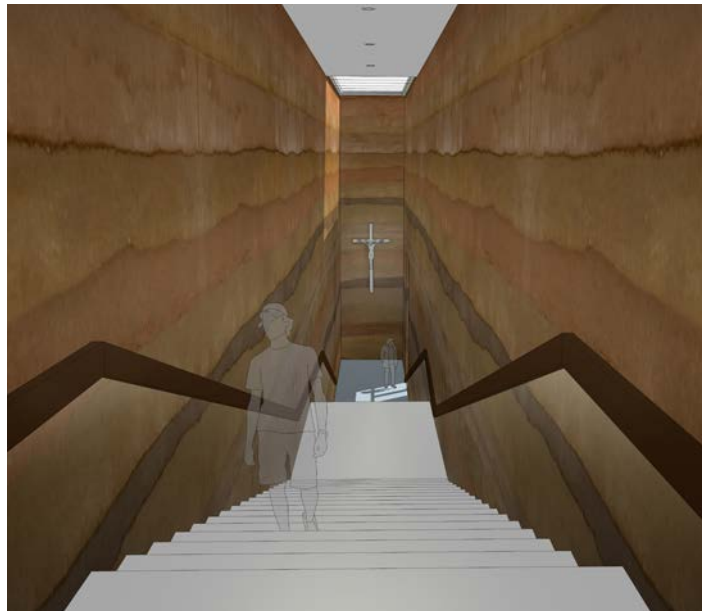
Fireplace and Library | As you traverse the lower level to get to your lodging rooms or to make your way to the chapel, a fireplace and library nook nestled within the earthen wall compels small groups to take a seat and rest while building community.



Bouldering Wall | A whole wall dedicated to outdoor play and adventure exists on the protected west side of the entrance ramp. As a place that opens out to the shared multipurpose open green space, it acts as a catalyst for fun and is an intriguing element for those hiking on the trails above.



Wall Niches of Saints | Along the earthen wall there are a few niches that exist to depict the lives of vivacious and lively saints. It is a way for youth to be inspired by other holy people and to deepen the connection of the whole body of Christ.

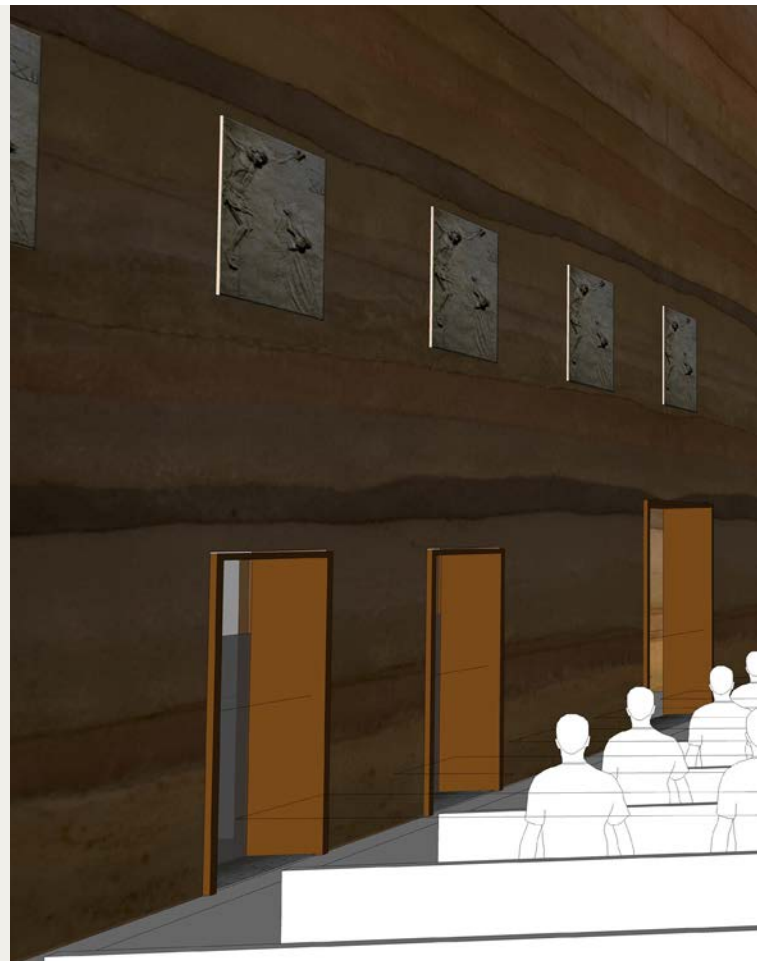


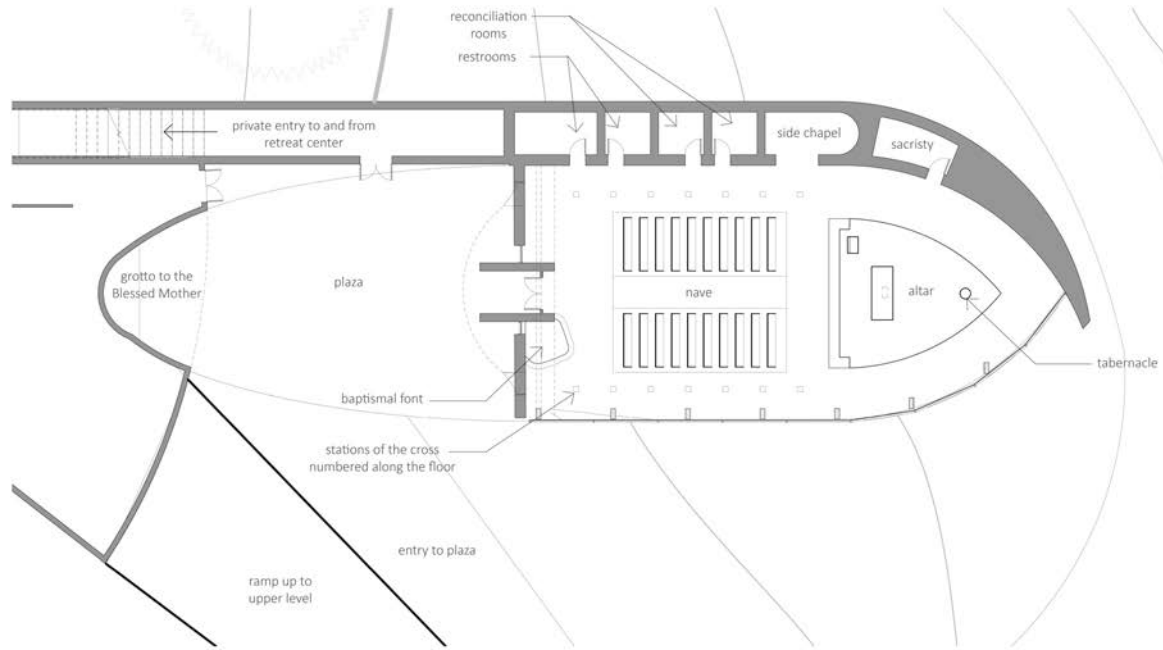
Hidden Staircases | There are two secret staircases made predominantly for the exclusive use of retreat participants. This stairway allows you to walk the embodied experience within the earthen wall from the community space on the main level to the chapel.

CHAPELPLAN

The chapel engages a dialogue between earth and sky, between the secular and the sacred, between things created by man and things created by God. The design of the retreat center and chapel reflects this intricate relationship between earth and sky. The project is situated along a path, yet becomes part of the path in and of itself. The heavy rammed earth wall signifies the rich foundation of tradition in the Church and the embodied experience we can have within it. It guides a person's journey throughout the whole retreat center. Juxtaposed on the other side of this earth wall are glass façades representing enlightenment, transparency, and mystery. The beauty of the stained glass façade at the chapel is activated only through the penetration of light from the sky.

At the center axis of the chapel is where the earth and sky meet behind the altar, symbolic of the incarnation of Christ when God becomes man. The stations of the cross are embedded sculptures into the earthen wall and are along the wooden glu-lam beams. Reconciliation rooms are embedded within the earthen wall, symbolizing this doctrine's strong teaching throughout the traditions of the church.





SITesection

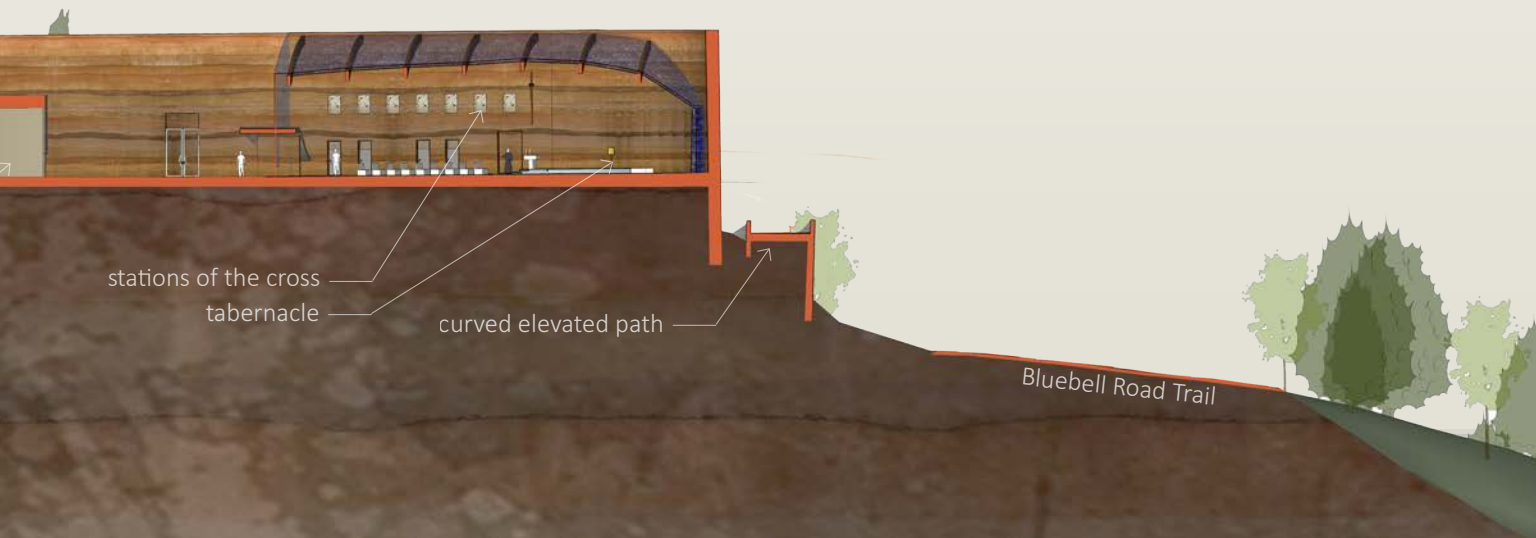
Nourishment is targeted towards rejuvenating and challenging the body, mind, and spirit.

This center will serve the needs of bodily nourishment through food, areas for rest, relaxation, and engaging exercise. It serves the needs of mental nourishment through removing a person from their daily life and placed in community with fellow retreatants to learn and grow. It serves the needs of spiritual nourishment through provisions of the sacraments and spaces to grow in fellowship, individual introspection and contemplation.

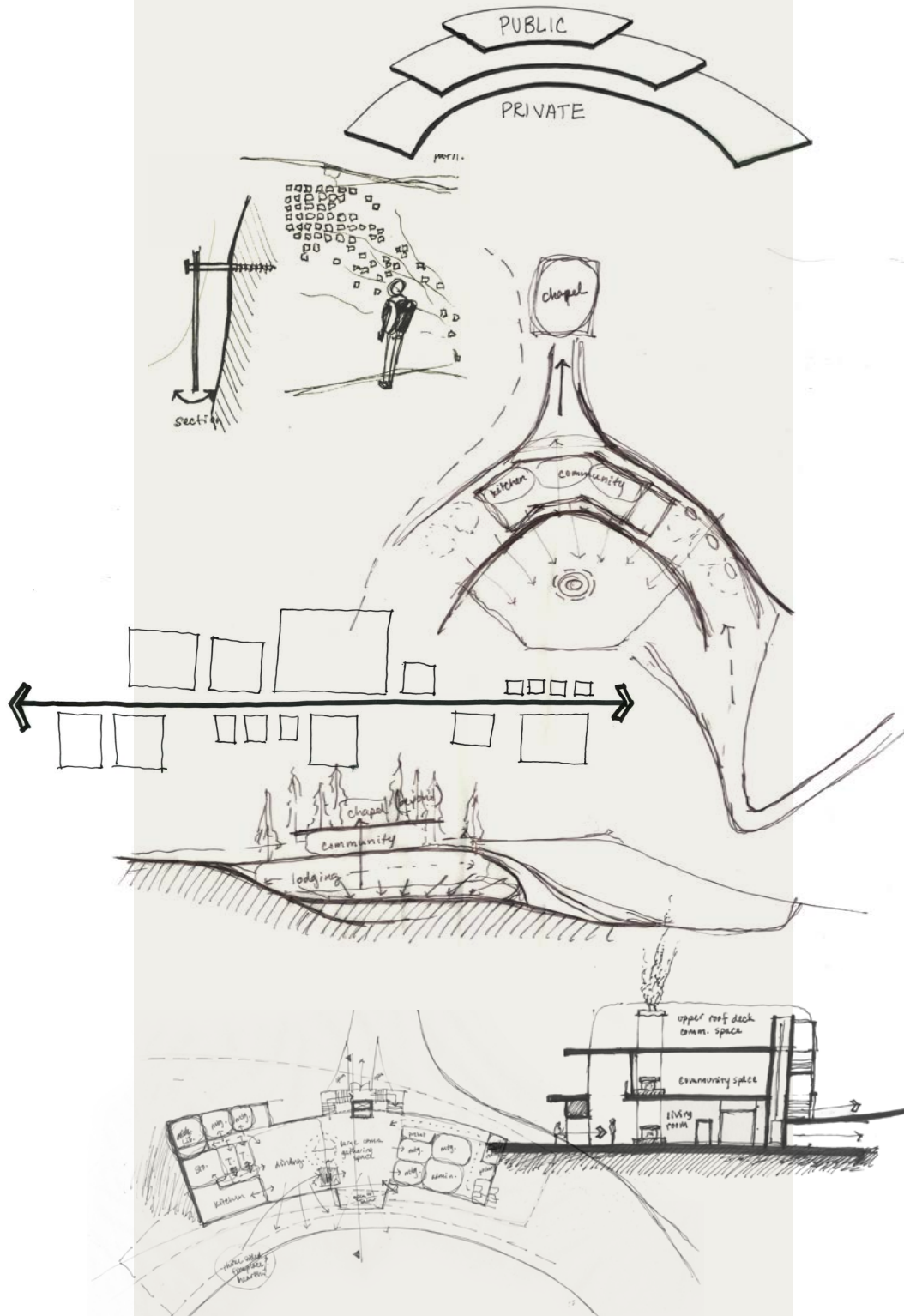




Dining and Community | Nourishment happens not only in spirit but also in body. Eating together is an age old tradition of growing in communion with one another, strengthening the bonds of friendship and family.



PROCESS
the journey



APPENDIX A: RETREAT FOCUS GROUP



SUMMARY

RETREATS:

- a withdraw from day to day motions of life
- time to slow down, seek out silence and reflection
- a time of community building with those whom you are with
- a time to learn
- a time to be challenged
- exercise intentionality with those around you - have meaningful conversations, ask the hard more compelling questions

WHAT DOES RETREAT MEAN TO YOU:

peace, stillness, rest

nature, beauty

spiritual, prayerful, contemplation

removed, solitude

safe

rejuvenating & strengthening

challenging

community building space

APPENDIX B: PRECEDENT STUDIES

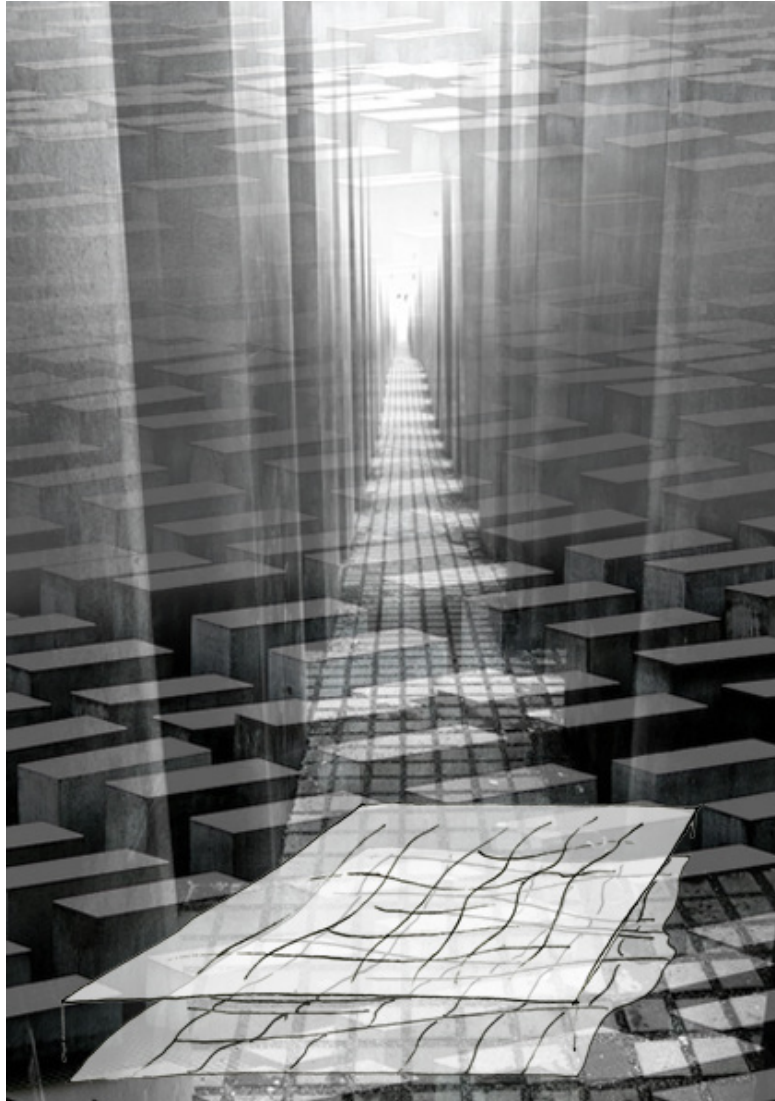


THERME VALS | Peter Zumthor

- spa that emulates a secular retreat experience
- embedded into the landscape of the mountainside
- highly sensual experience grounded in the materiality of place
- form of the building functions as a frame directing your gaze to the landscape across the valley
- the volume of space accentuates the sounds of the open-air pool just behind it



PRECEDENTS



THE JEWISH MEMORIAL | Peter Eisenman

- a secular project that aims to impart the importance of not losing the significance of the Holocaust
- powerful spatial experience incorporating strong concepts of overview and embedment
- Eisenman designed two topographies, one of the ground, the other of the mass of blocks- neither of which ever come together as a single entity

PRECEDENTS



NK'MIP DESERT CULTURAL CENTRE
by Hotson Bakker Boniface Haden
architects + urbanistes

- use of rammed earth to indicate solidity with ground and concern for sustainability due to the fragility of the landscape
- use of varigated entry sequence through a narrow path
- plaza used for collecting medium to large groups
- channel of water draws people towards the entry



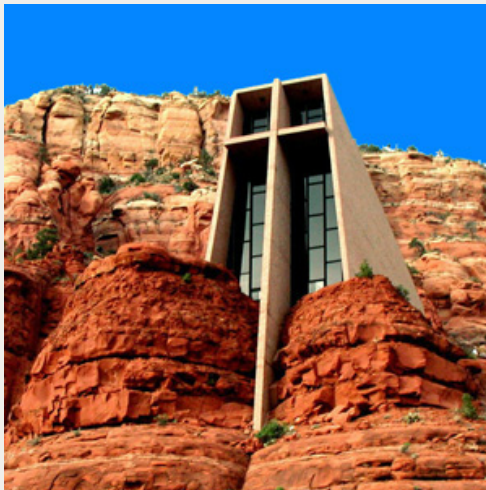
PRECEDENTS



CASADERETIROESPIRITUAL | by Emilio Ambasz

- submerged buildings within the landscape
- use of light crevices to build intrigue and guide the process of what is happening below

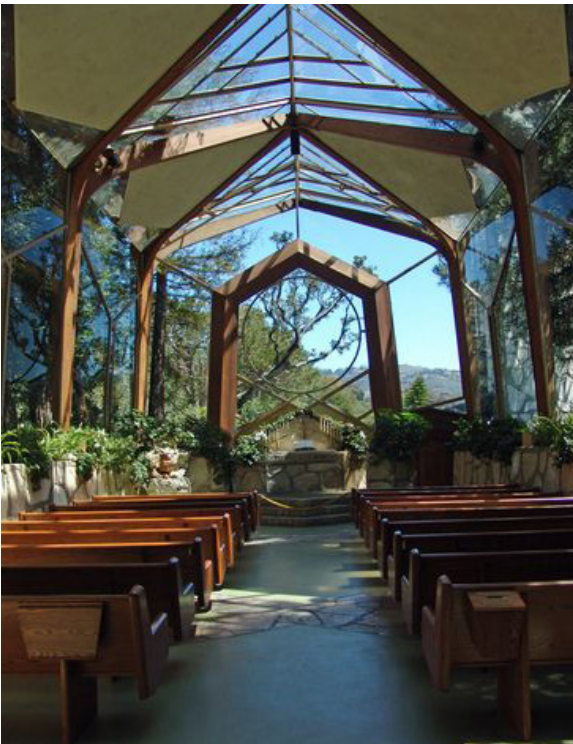
PRECEDENTS



CHAPELOFTHEHOLYCROSS | by Richard Hein

- small chapel in Sedona, Arizona with view overlooking the town
- placed up among the rocks, embedded into the landscape
- winding, vertical approach

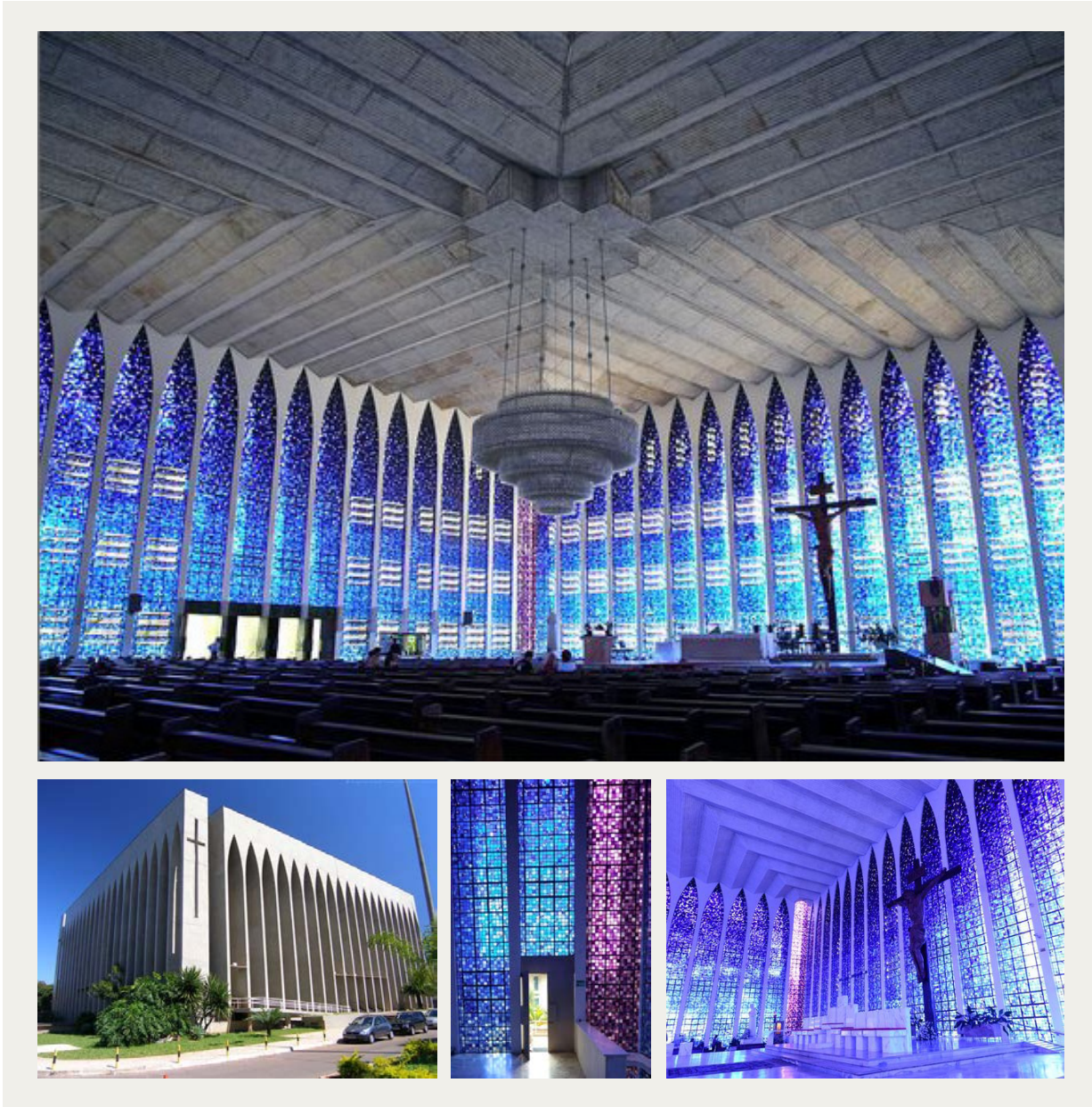
PRECEDENTS



WAYFARER'S CHAPEL | by Lloyd Wright

- partially submerged into the landscape with elegant glass roof structure
- allows for high sense of transparency and connection to nature
- long approach towards chapel from parking area engaging with landscape, paving, and views glimpsing the chapel

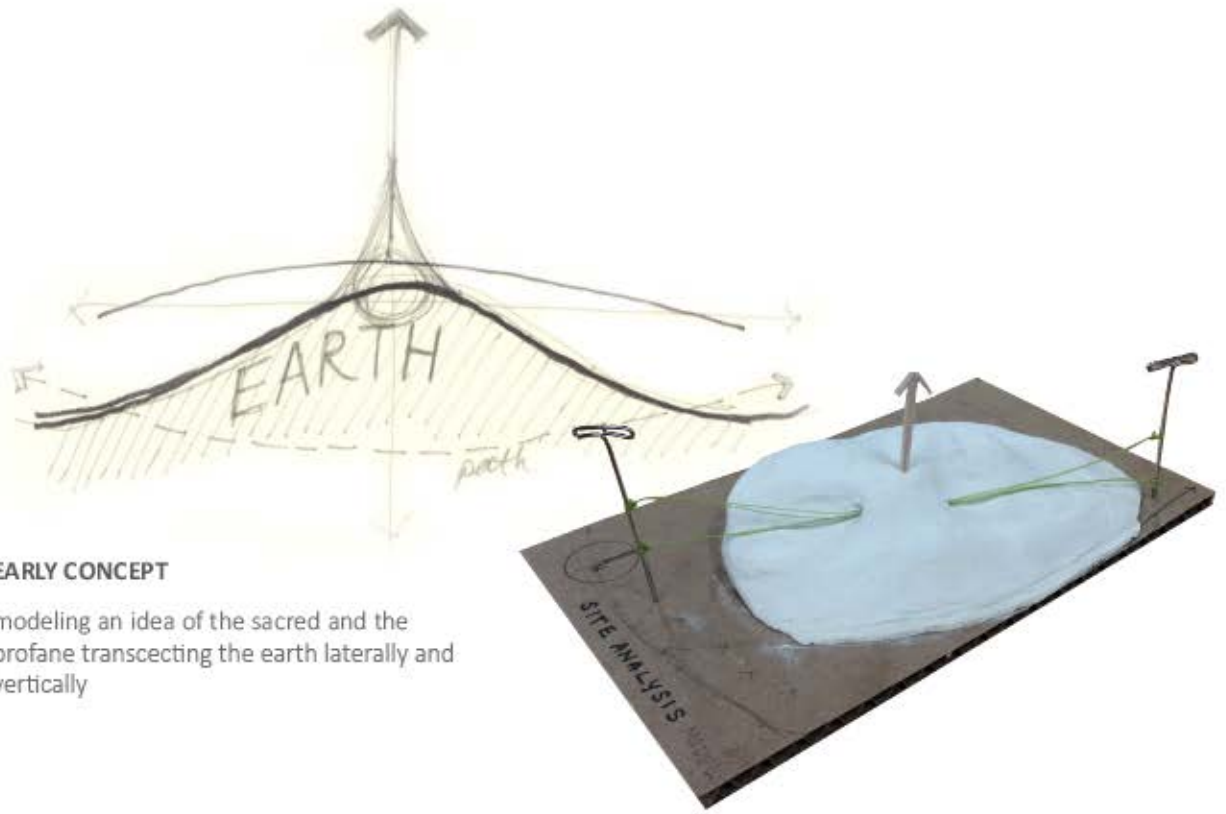
PRECEDENTS



DOM BOSCO CATHEDRAL BRASILIA | by Carlos Alberto Naves

- modern church that incorporates use of traditional Gothic forms within its window design
- facade of glass lets blue light flood the interior of the space and act in a powerful way
- large corpus of Christ on the cross directs your attention to the altar

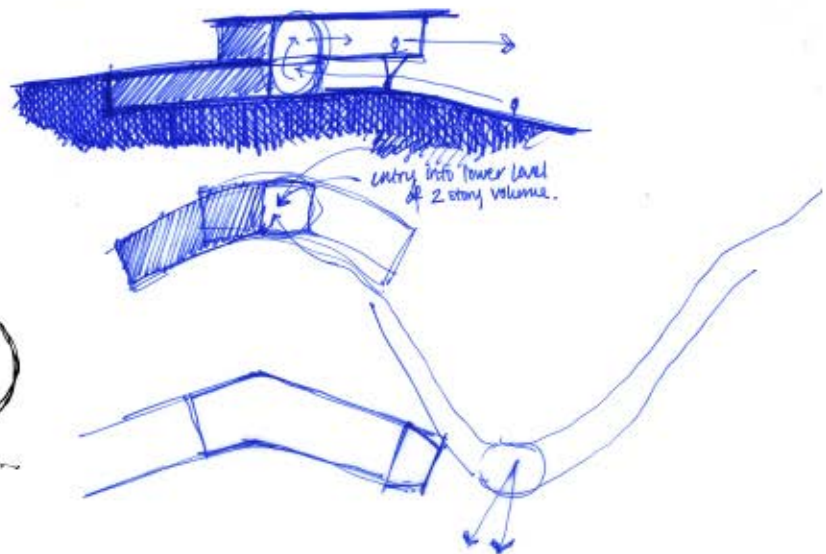
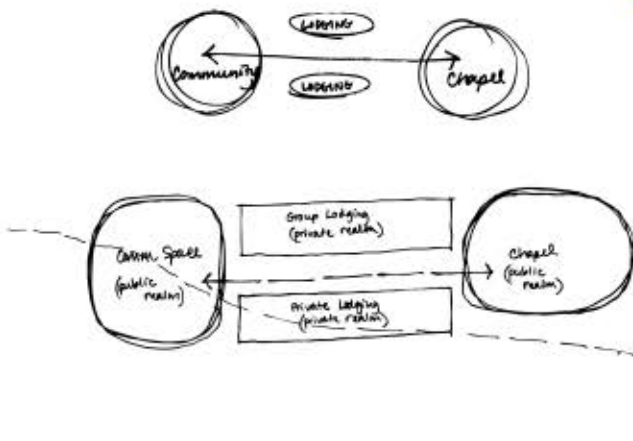
APPENDIX C: DESIGN PROCESS & ITERATIONS

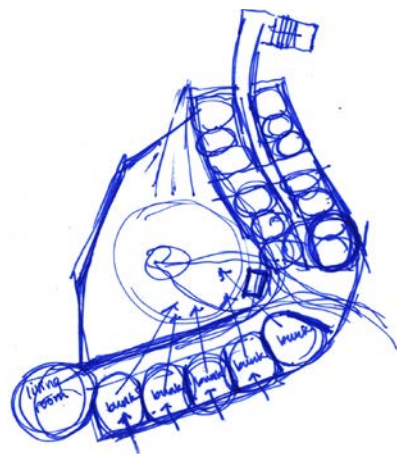
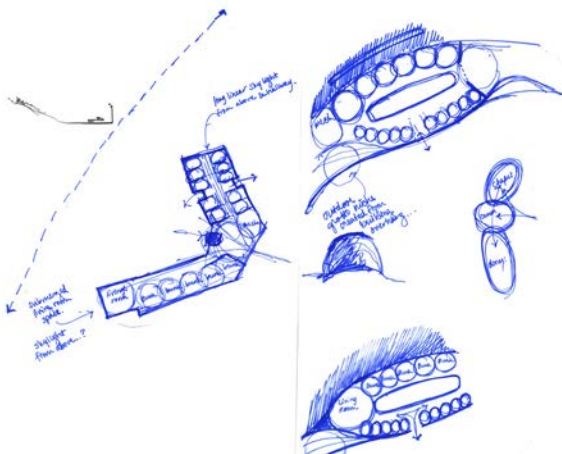
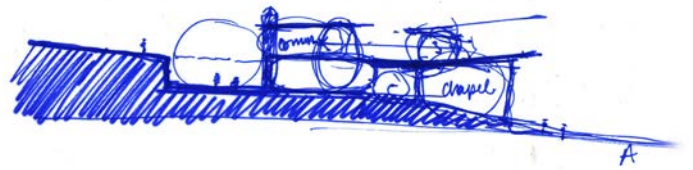
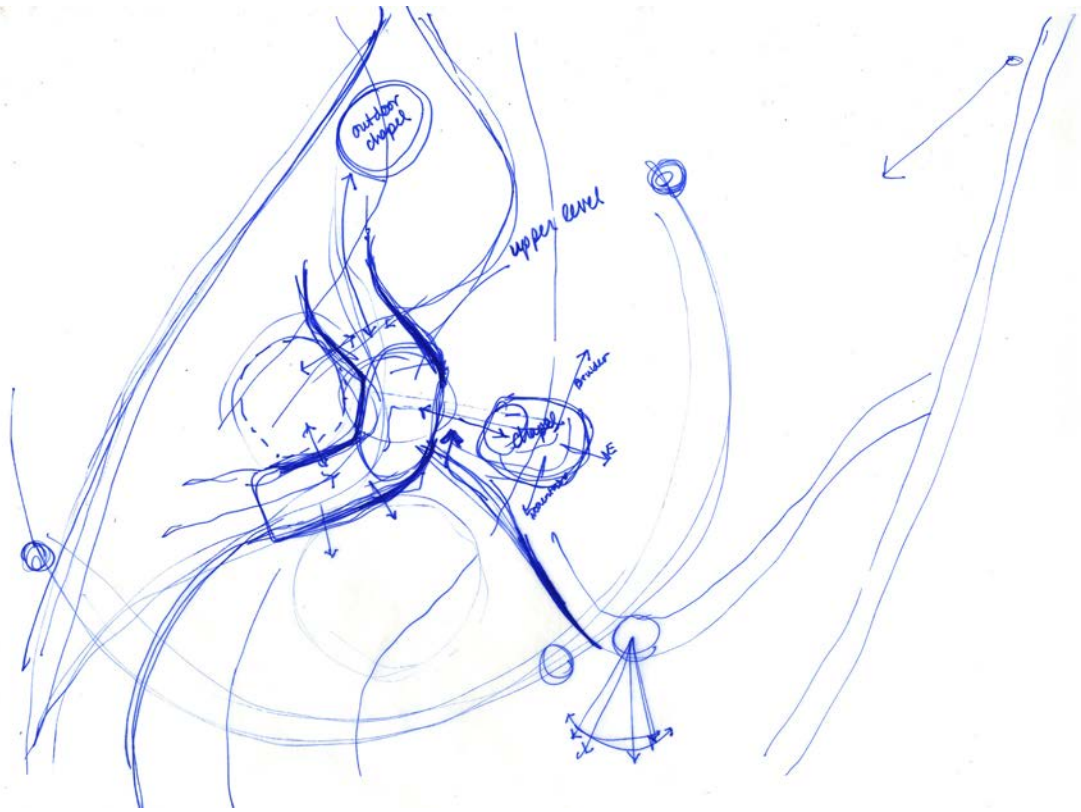


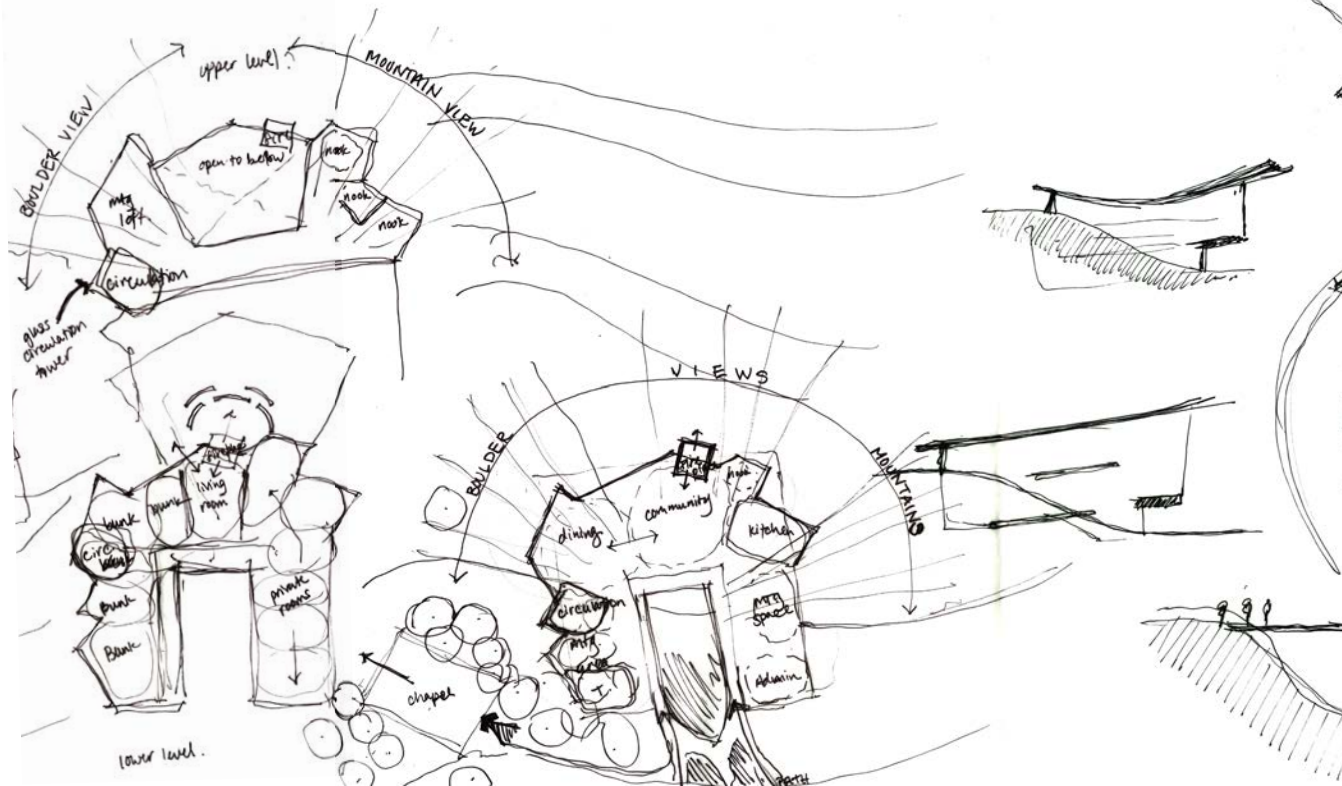
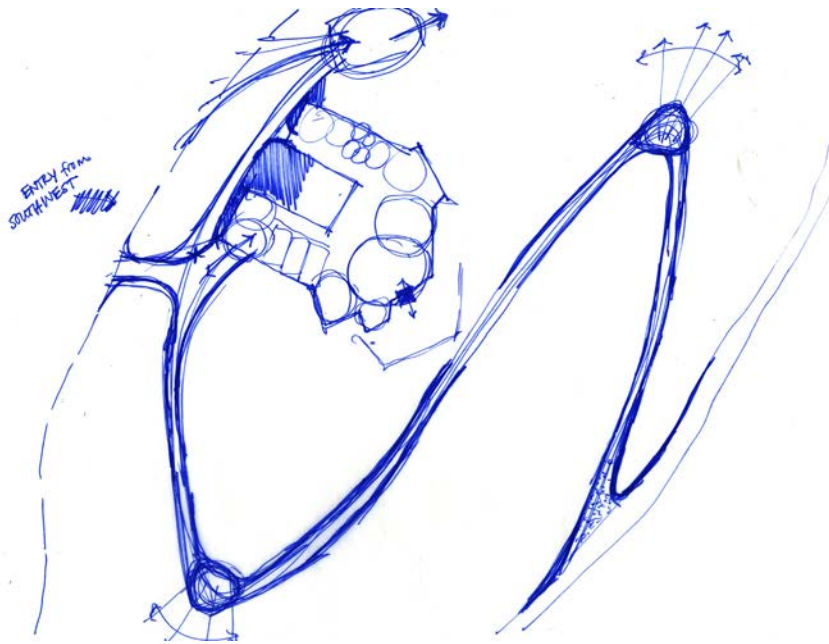
EARLY CONCEPT

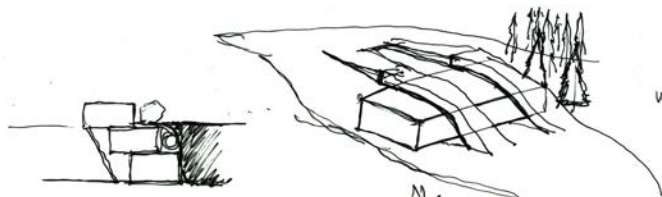
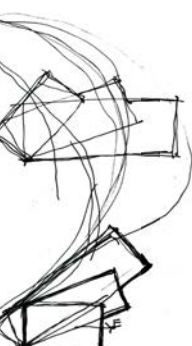
modeling an idea of the sacred and the profane transcending the earth laterally and vertically

 - private, intimate
 - open, transparent, public

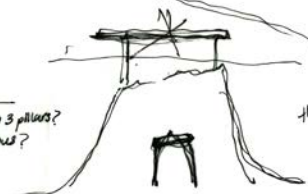






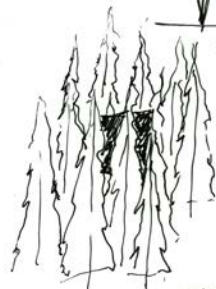


vertical layering
vs. horizontal
layering...



threshold...

supported by 3 pillars?
to oblique?



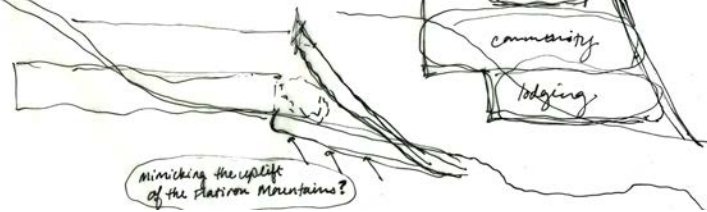
7 words of Christ?



there is this relationship
between:

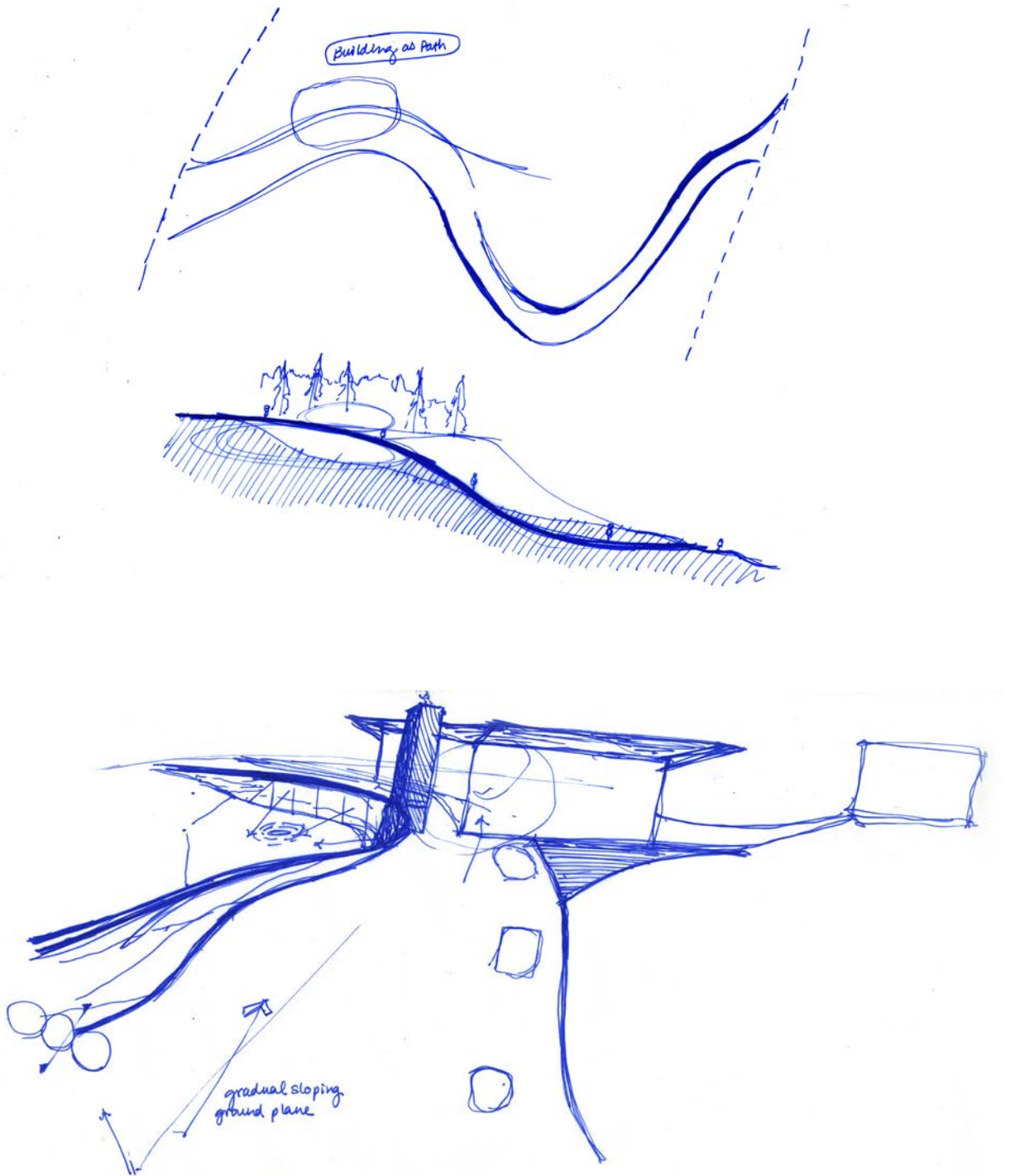


Heavens are grounded to the Earth.
Yearn for more... sky To the Heights.

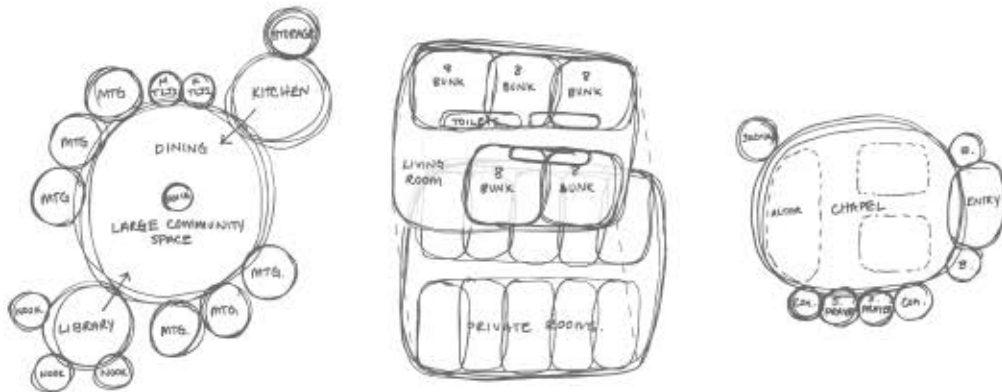


Mimicking the uplift
of the Stratton Mountains?

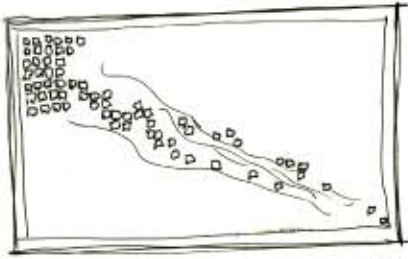
CONCEPT OF BUILDING AS PATH



INITIAL PARTI DIAGRAM DEVELOPMENT



EXPERIMENTAL EXPERIENCES



- metal platelets that could ripple in the wind, activating the wall, making the landscape move.

- kinetic in nature.
- memory piece

- attraction grabbing
- trail off across or either side of the path.



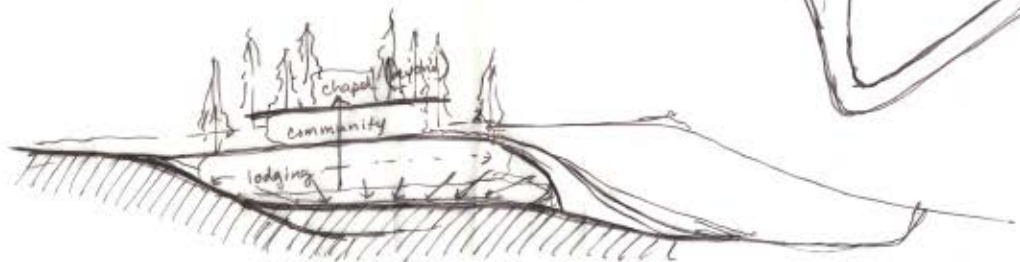
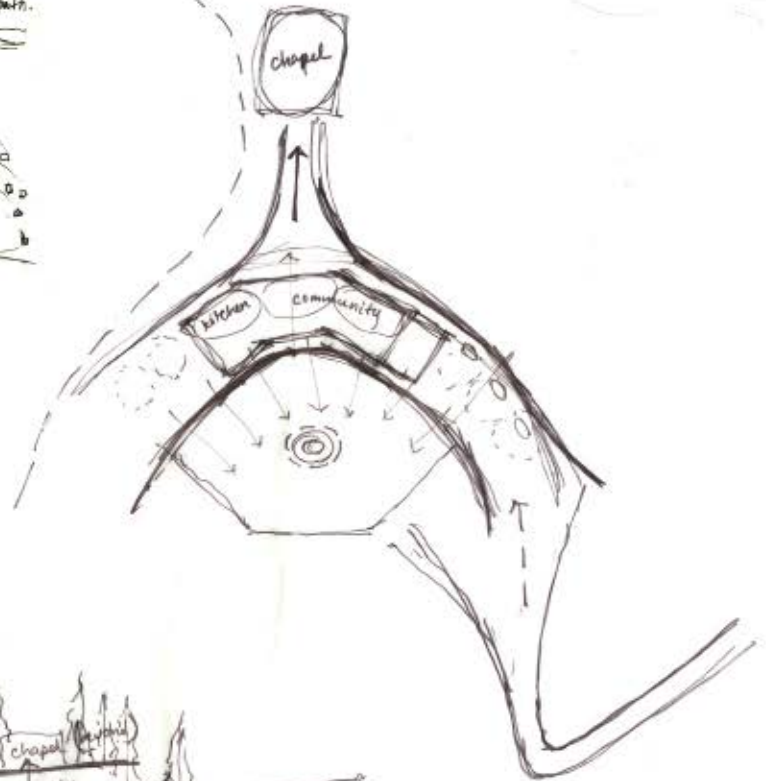
ELEVATION



SECTION



CONCEPT OF MEMORY WALL

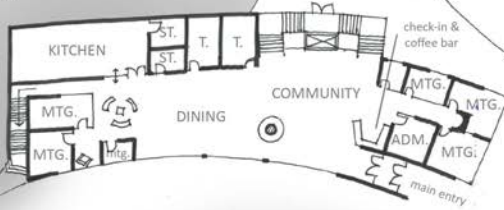


PENULTIMATE PROGRESS

UPPER LEVEL

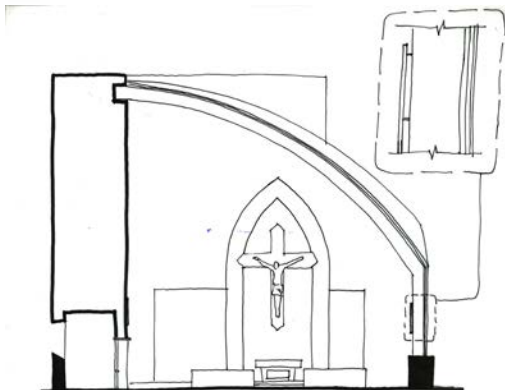
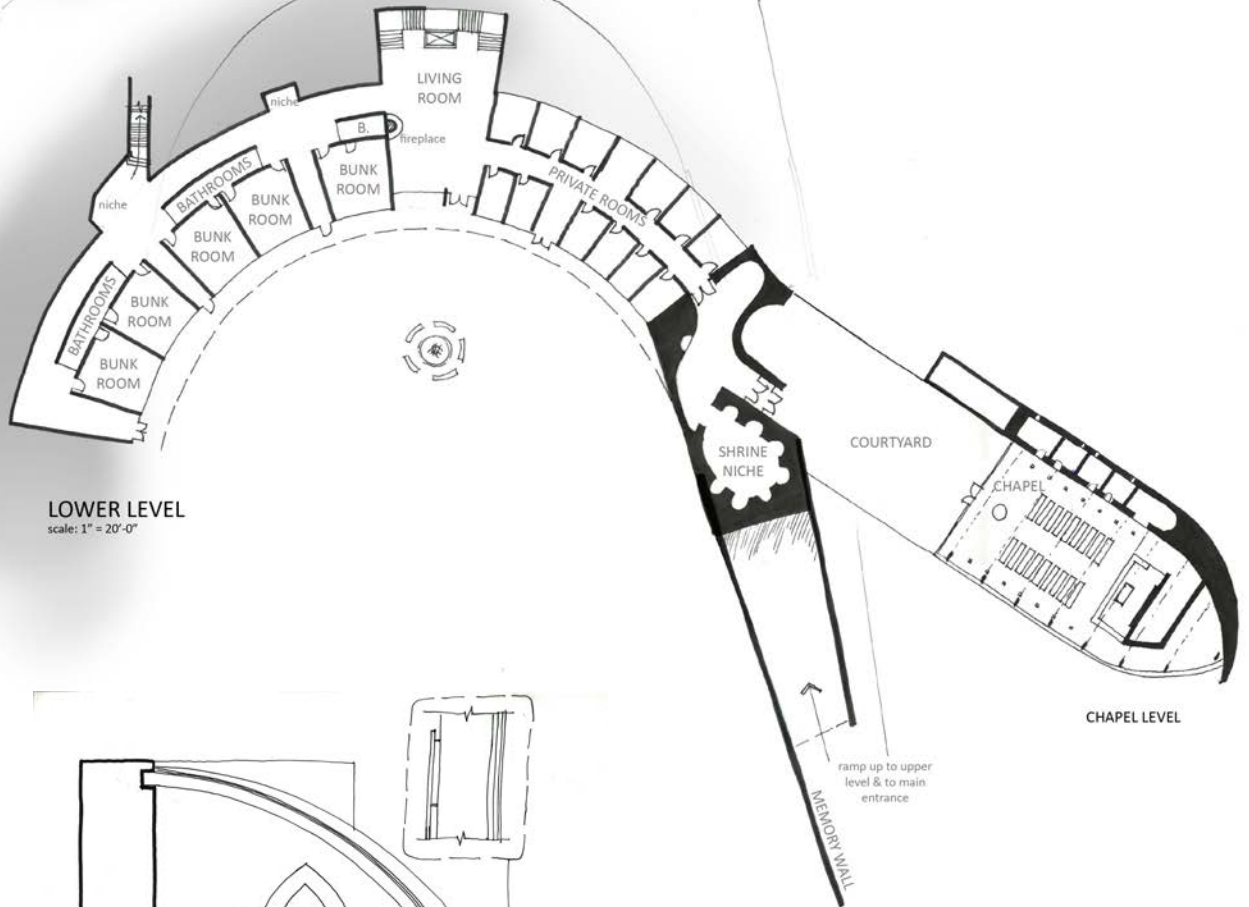
scale: 1" = 20'-0"

note: spaces
submersed into the
earth to have
skylights to light
spaces from above



LOWER LEVEL

scale: 1" = 20'-0"



CHAPEL LEVEL

APPENDIX D: FINAL PRESENTATION



Final Defense | Figure 80.1



Final Exhibition Space | Figure 80.2

JURY

JURY PANEL

MeganFeenstraWall

architect

SarahRowse

architect

MickMcCulloch

PhD, architect, urban designer

ErikaLindsay

architect

CaseyVliet

professor

PaulLong

architect, professor



Topographical model of site | Figure 81.1

FINALBOARDS



The importance of faith within the membership of society in the United States has been diminishing slowly over the last one hundred years. Although there are pockets of revitalized communities of faithful, more and more Americans now claim no religious affiliation. The Catholic Church experiences this decline specifically in the youth and young adult populations.

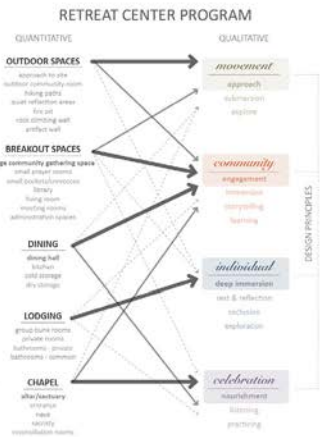
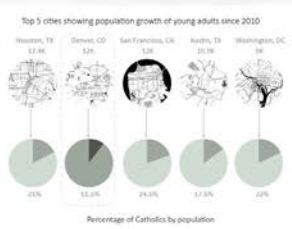
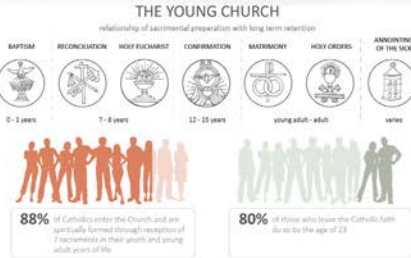
While Catholics still make up the largest religious group in the United States, many are not faithfully practicing or sufficiently taught the doctrines of the faith in their youth. Furthermore 88% of Catholics enter the Church and develop through the reception of its seven sacraments throughout their youth and young adult years of life. Yet 80% leave the Catholic faith before the age of 23. If the Church is to grow in the 21st century, a new approach to evangelization needs to reach all peoples and new generations, will need to better equip themselves to be evangelists for the gospel.

The Catholic Church invests significant resources in its efforts and it has begun initiatives to expand the catechesis and sacramental preparation for youth and young adults. A specific teaching method called around the world includes immersive retreats. These offer a place to rejuvenate and strengthen communities and can be powerful teaching tools.

The specific retreat center is a place where groups of young teens can be led on retreat in preparation for the sacrament of confirmation and to build community. It is a place where engaged retreats could be led in a marriage prep retreat. It also could be a place of intimate personal retreat or where one could come to discern a religious or vocation. The center's focus is to be an environment that fosters someone's ability to learn, prepare, and engage with the sacraments of the Church, with themselves, and with God. Furthermore, it recognizes communal growth leading others to a deeper understanding of their faith and inspires them to pass it on. Most importantly, this is a place not solely focused on Catholics but promotes inclusion of the unsuspecting passerby.

In Colorado, Boulder and Denver are attracting the younger millennial generation with their vast natural resources, vibrant cities, and environmentally sensitive culture. Yet their percentages of Catholics by population are low compared to other US cities. The existing Boulder and Denver young adult communities are small but vibrant, and they work hard towards connecting with existing high school and university student groups. With adequate resources and ways to connect, these communities would grow.

This thesis engages how the design of a retreat center can foster a faith strengthening experience and an increasingly secular world. It explores the ways sacred space and a place for retreat can employ material and natural qualities to develop a connected sense of community and belonging and enhance one's connection with the environment. Through the principles of approach, engagement, immersion, and establishment, this retreat center seeks to provide a fresh and authentic response to the responsibility of evangelizing in the 21st century.



WHO IT SERVES

HISTORY OF CHRISTIAN SACRED SPACES

EARLY CHURCH 1800 - 2300	ROMANESQUE 1000 - 1100	GOthic 1200 - 1600	RENAISSANCE 1400 - 1600	BAROQUE 1600 - 1750	REVIVALS 1700 - 1900	20TH CENTURY 1900 - 2000
processional architecture	dawn of the pilgrimage	divine luminosity & the story of stained glass	importance of threshold	re-emphasis on approach	old forms new places	birth of modernism

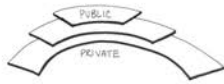


experiential site section along Bluebell Road
The approach will provide a sense of anticipation by creating views, paths, and outdoor spaces. It will communicate a sense of arrival and a respectful view journey.



FINALBOARDS

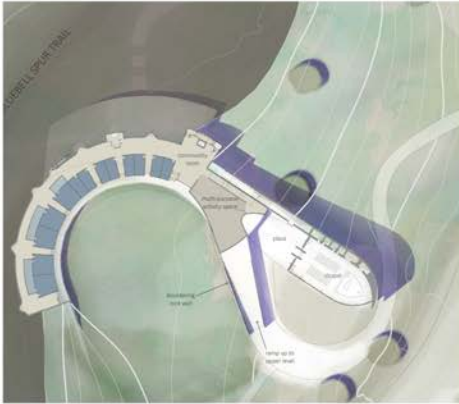
To optimize the topography of the site, the program was then layered in three tiers: private, semi-private, & public. A central core of community space links the three of these layers together.



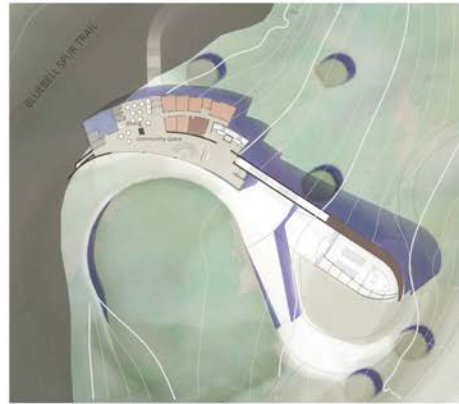
The building is then nestled into the landscape creating views back to the city & to the mountains. Furthermore, the earth begins to ramp up & into the building, allowing the retreat center to become one with the path.



The heavy removed earth wall signifies the rich foundation of tradition in the Church and the embodied experience we can have with its history.



LOWER LEVEL PLAN
SCALE: 1" = 30'



UPPER LEVEL PLAN
SCALE: 1" = 30'

LEGEND

- circulation & community space
- lodging - group rooms & private rooms
- private bathrooms
- kitchen
- meeting rooms
- administration



SECTION
1/8" = 1'-0"

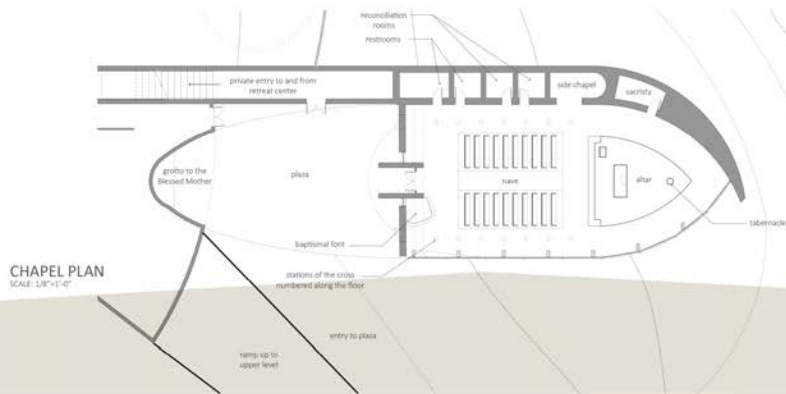


Fireplace & Library



Bouldering Wall





BIBLIOGRAPHY

- Adult Catechesis in the Christian Community: Some Principles and Guidelines ; with Discussion Guide.* Washington, D.C.: United States Catholic Conference, 1992. Print.
- Bergmann, Sigurd. *Theology in Built Environments: Exploring Religion, Architecture, and Design.* New Brunswick (U.S.A.): Transaction, 2009. Print.
- Britton, Karla. *Constructing the Ineffable: Contemporary Sacred Architecture.* New Haven, CT: Yale School of Architecture, 2010. Print.
- Cheney, David M. "Archdiocese of Denver." *Denver (Archdiocese) [Catholic-Hierarchy]*. CatholicHierarchy, 14 July 2015. Web. Jan. 2016.
- Chiat, Marilyn Joyce Segal, and Eric Peterson. *North American Churches: From Chapels to Cathedrals.* Lincolnwood, IL: Publications International, 2004. Print.
- Cihak, Monsignor John R. "Love Alone Is Believable: Hans Urs Von Balthasar's Apologetics | Monsignor John R. Cihak | Ignatius Insight." *Ignatius Insight*. N.p., n.d. Web. Mar. 2016.
- Eberhard, John P. "Applying Neuroscience to Architecture." *Neuron* 62.6 (2009): 753-56. Web. Feb. 2016.
- Eberhard, John P. "Architecture and Neuroscience: a double helix." *Mind in Architecture: Neuroscience, Embodiment, and the Future of Design.* Sarah Robinson. Cambridge, MA: MIT, 2015. Print.
- Eberhard, John P. *Architecture and the Brain: A New Knowledge Base from Neuroscience.* Atlanta, GA: Greenway Communications, 2007. Print.
- Eberhard, John P. *Brain Landscape: The Coexistence of Neuroscience and Architecture*. Oxford: Oxford UP, 2009. Print.
- Eberhard, John P., FAIA. "AI Architect, January 27, 2006 - You Need to Know What You Don't Know." *AI Architect, January 27, 2006 - You Need to Know What You Don't Know.* American Institute of Architects, Jan. 2006. Web. Mar. 2016.
- Filby, Julie. "Mudslide Buries Plans to Rebuild Mountain Retreat Center - Denver Catholic." *Denver Catholic*. N.p., 04 Nov. 2014. Web. Jan. 2016.
- "FOCUS - Our Story." *FOCUS*. N.p., n.d. Web. Apr. 2016.
- Freddoso, Alfred J. "The Church in the 21st Century." *The Church in the 21st Century.* University of Notre Dame, Nov.-Dec. 1998. Web. Jan. 2016.
- General Directory for Catechesis.* Washington, D.C.: United States Catholic Conference, 1998. Print.
- Gray, Mark M., and Paul M. Perl. "Sacraments Today: Belief and Practice among U.S. Catholics." *Sacraments Today: Belief and Practice among U.S. Catholics.* Center for Applied Research in the Apostolate, Apr. 2008. Web. Jan. 2016.
- Groh, Jennifer M. *Making Space: How the Brain Knows Where Things Are.* Print.
- Grünberg, Wolfgang, and Anna Körs. "'Symbolkirchen' as Bridges or Boundary Stones in a Merging Europe?" *Theology in Built Environments.* Ed. Sigurd Bergmann. New Brunswick: Transaction, 2009. 69-107. Print.
- Heidegger, Martin, and David Farrell Krell. *Basic Writings: From Being and Time (1927) to The Task of Thinking (1964).* San Francisco, CA: HarperSanFrancisco, 1993. Print.

- "History." *The Augustine Institute*. N.p., 2015. Web. Apr. 2016.
- Humphrey, Caroline, and Piers Vitebsky. *Sacred Architecture*. London: Duncan Baird, 2003. Print.
- Karandinou, Anastasia. *No Matter: Theories and Practices of the Ephemeral in Architecture*. Surrey, England: Ashgate Limited, 2013. Print.
- Kieckhefer, Richard. *Theology in Stone: Church Architecture from Byzantium to Berkeley*. New York: Oxford UP, 2004. Print.
- Kilde, Jeanne Halgren. *Sacred Power, Sacred Space: An Introduction to Christian Architecture and Worship*. Oxford: Oxford UP, 2008. Print.
- McDannell, Colleen. *Material Christianity: Religion and Popular Culture in America*. New Haven: Yale UP, 1995. Print.
- McNamara, Denis R., and James Morris. *Heavenly City: The Architectural Tradition of Catholic Chicago*. Chicago: Liturgy Training Publications, 2005. Print.
- McNamara, Denis R. *Catholic Church Architecture and the Spirit of the Liturgy*. Chicago: Hillenbrand, 2009. Print.
- Mohebbi, Mehri. "The Journey of Sacred through a Mosque." Personal interview. 28 Oct. 2015.
- National Directory for Catechesis*. Washington, D.C.: United States Conference of Catholic Bishops, 2005. Print.
- Nelson, Louis P. *American Sanctuary: Understanding Sacred Spaces*. Bloomington: Indiana UP, 2006. Print.
- Pontifical Council for the Promotion of the New Evangelization, comp. *Compendium on the New Evangelization: Texts of the Pontifical and Conciliar Magisterium, 1939-2012*. Washington D.C.: Libreria Editrice Vaticana, 2015. Print.
- Robinson, Sarah, and Juhani Pallasmaa, eds. *Mind in Architecture: Neuroscience, Embodiment, and the Future of Design*. Cambridge, MA: MIT, 2015. Print.
- Smith, Christian, Kyle Longest, Jonathan Hill, and Kari Christofferson. *Young Catholic America: Emerging Adults In, out Of, and Gone from the Church*. New York: Oxford UP, 2014. Print.
- Stewart, Olivia. "Top Large Metros for Millennials Are Austin-TX, Salt Lake City-UT, San Diego-CA; Bottom Are Cleveland-OH, Detroit-MI, Tucson-AZ." *Headlight Data*. N.p., 17 Dec. 2015. Web. Jan. 2016.
- Stokstad, Marilyn, David Cateforis, and Stephen Addiss. *Art History*. Revised Second Edition ed. Vol. 1. Upper Saddle River, NJ: Pearson/Prentice Hall, 2005. Print.
- Stokstad, Marilyn, David Cateforis, and Stephen Addiss. *Art History*. Revised Second Edition ed. Vol. 2. Upper Saddle River, NJ: Pearson/Prentice Hall, 2005. Print.
- Stroik, Duncan. *The Church Building as a Sacred Place: Beauty, Transcendence, and the Eternal*. Chicago: Hillenbrand, 2012. Print.
- Sullivan, William. "In Search of a Clear Head." *Fostering Reasonableness: Supportive Environments for Bringing Out Our Best*. Rachel Kaplan and Avik Basu. Michigan: Maize Books, 2015. Print.

IMAGESOURCES

- Figure15.1 | ExampleofaHouseChurch** Kilde 2008, 18
- Figure 15.2 | Basilica of Macentius** Constantine Basilica. Digital image. Web. Apr. 2016. http://ssmith.people.ysu.edu/ecbyzwebpage/constantine_basilica.jpg.
- Figure17.1 | DurhamCathedral** DurhamCathedral.Digitalimage.Web.Apr.2016.<http://instructional1.calstatela.edu/bevans/Art101/Art101B-8-Romanesque/WebPage-ImageF.00030.jpeg>.
- Figure17.2 | AmiensCathedral** Fletcher, Banister. Amiens Cathedral: Section. Digital image. 4 June 2007. Web. Apr. 2016. <https://www.flickr.com/photos/psulibscollections/5835822595/in/photostream/>.
- Figure19.1 | ChurchofSanAndrea** Stokstad2005,619.
- Figure19.2 | St.Peter’sBasilicasquare** St. Peter’s Basilica Plan. Digital image. Web. Apr. 2016. <https://www.pinterest.com/pin/353884483197086782/>.
- Figure21.1 | St.Joseph’sChurch,Detroit** St. Joseph’s Church in Detroit. Digital image. Te Deum Laudamus!Web.Apr.2016.http://te-deum.blogspot.com/2014/03/st-josephs-church-in-detroit_-going-all.html.
- Figure21.2 | NotreDameduHautChapel** Notre Dame Du Haut. Digital image. Dezeen. Web. Apr. 2016. <http://www.dezeen.com/2014/01/22/le-corbusier-notre-dame-du-haut-chapel-at-ronchamp-vandalised/>.
- Figure22.1 | QiblawallinVakilShirazMosque** Vakil, Masdjed-e. Vakil Mosque Shabestan. Digital image.Wikipedia.Apr.2009.Web.Apr.2016.https://en.wikipedia.org/wiki/File:Vakil_Mosque_Shabestan.jpg.
- Figure23.1 | St.Laud** –A.Schnitzenbaumer2012
St. Ignatius –A.Schnitzenbaumer2015,
LaGrave–A.Schnitzenbaumer2016,
VakilShiraz- Firouzeh Mirrazavi. Vakil Mosque. Digital image. Iran Review. 8 June 2011. Web. Apr. 2016.http://www.iranreview.org/content/Documents/Vakil_Mosque_2.htm.
OrchardSt . – Ottenstein, David. Orchard Street Shul. Digital image. Yale Alumni Magazine. Yale, May-June 2014. Web. Apr. 2016. <https://yalealumnimagazine.com/articles/3872/new-life-for-an-old-synagogue>.
- Figure26.1 | Universitystudents...** StudentsatbaseofChautauquatrailhead.Digitalimage.Web. Apr.2016.<http://thomascenter.org/>.
- Figure 27.1 | Organization logos** <http://christinthecity.co/>,<http://thomascenter.org/>,<http://www.colorado.edu/brand/brand-visual-identity>,<http://archden.org/>,<http://www.focus.org/>,<https://www.augustineinstitute.org/>
- Figure66.1 | Nk’ mipDesertCulturalCenter** Lehoux, Nic. Nk’Mip Desert Cultural Centre. Digital image. ArchDaily. 23 May 2014. Web. Apr. 2016. <http://www.archdaily.com/508294/nk-mip-desert-cultural-centre-dialog>.

- Figure 67.1 | Casa de Retiro Espiritual** Casa De Retiro Espiritual. Digital image. In-Depth: TheHouseofSpiritualRetreatbyEmilioAmbasz. Web. Apr. 2016. <http://casaderetiroespiritual.com/>.
- Figure 68.1 | Chapel of the Holy Cross** Toussaint, Dave. Chapel of the Holy Cross. Digital image. Flickr. 11 Aug. 2011. Web. Apr. 2016. <https://www.flickr.com/photos/davetoussaint/4939815220/>.
- Figure 69.1 | Wayfarer's Chapel** Pixelbug. Glass Church. Digital image. Panoramio. 2 July 2008. Web. <http://www.panoramio.com/photo/11735784>.
- Figure 69.2 | Wayfarer's Chapel** Esguerra, Mark. Wayfarer's Chapel. Digital image. Warmth of Wayfarer's Chapel. The Maker's World, 23 Apr. 2014. Web. Apr. 2016. <http://www.themarkeworld.com/rancho-palos-verdes/warmth-wayfarers-chapel/>.
- Figure 70.1 | Dom Bosco Cathedral Brasilia** Santuario Dom Bosco. Digital image. Blue Lapis Road. 2015. Web. <https://bluelapisroad.wordpress.com/2013/10/25/day-15-1-of-3-santuario-dom-bosco-brasilia-brazil/>.
- Figure 80.1 | Final Defense** Doornbos, Micah. 2 May, 2016.
- Figure 80.2 | Final Defense** Gubancsik, Matt. 4 May, 2016. KCAD.
- Figure 81.1 | Final Defense** Schnitzenbaumer, Anne. 30 June, 2016.

