



NY VÅLER KIRKE

NEW VAALER CHURCH

DAVID LINDECRAANTZ
MASTER'S THESIS AT CHALMERS ARCHITECTURE 2013.01.14
MPARC MATTER SPACE STRUCTURE

ABSTRACT

This masters thesis pivots around a competition for a new church in the small town of Våler, Norway. It was announced late summer 2011 and was due for submission on november 14th, giving me ample time to dive into the competition design while also giving me time to study the subject of church architecture in some depth in the initial thesis phase.

An overarching theme is an interest in *absolute architecture*, by which I mean a strong emphasis on the basic building blocks of architecture – light, mass, materiality and sequence – and how those can produce sensations without being overtly representative or symbolic. The symbolism and a sense of ritual is instead aimed for with an adherence to a triangular geometry at all working scales, combined with variations in usage of the local wood materials; an architectural fugue, if you will. An end goal with this is the belief that architecture itself can induce a state of wonder and awe about the world and our societies, something which sets it apart from mere engineering and problem-solving. Church architecture seems to be one of the few tasks where such pure architectural values are the *raison d'être* of a building, which indeed is why I wanted to pursue it. Maybe architecture can't change the world, but I'm certain good architecture can change our reverence for it.

Although the end result of the thesis is a design proposal and a competition entry, I've incorporated brief bodies of text in which I discuss my subjective thoughts on what a church should provide, how pure architectural elements can elevate the sacral experience, as well as more detailed studies in how the different spatial characters of the building can serve to enhance the functions and situations of the church.

David Lindecrantz

Gothenburg, 2013.01.14

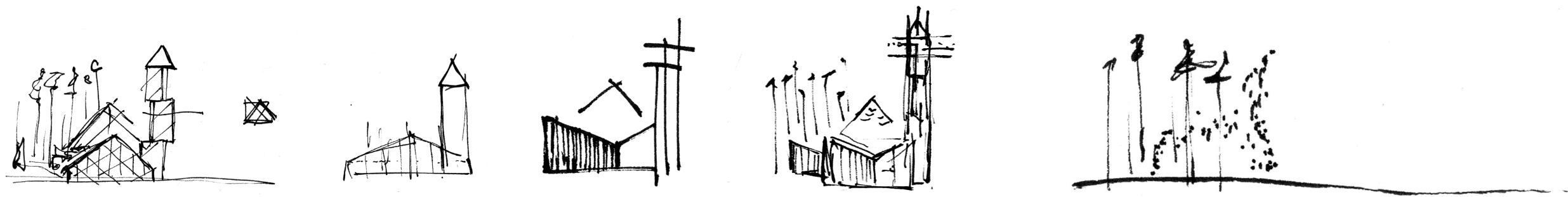


KIRKE/CHURCH/WHAT?

The main function of a sacral space is allowing the visitor to leave the everyday reality – the profane – behind and opening the senses fully.

It is about reaching an edge condition in which the experience of yourself and your relation to larger existential questions is the one thing that matters.

Architecture can play a key part in accomplishing this. By carefully sequencing the experience – from the approach to the site to transistioning through the spaces, filtering the visitors' attention away from the everyday noise into a serene yet tense atmosphere – the spatial choreography, the interplay of materials, acoustics and the sculpting of light enables the visitor to reach that special clarity of mind necessary for a sacral experience. My goal is a building that can evoke such feelings of *elsewhereness*; *to be a third place*.





Enter an elusive space...



...elevate senses through suggestion...

ELSEWHERENESS

I seek to create this feeling of elsewhere-ness by letting the buildings interior be elusive from the exterior. This creates the notion of an unexpected inner world, that is disconnected from the outside. Carefully controlled light (and a “frog’s view” and sense of nature in the case of the atrium) heightens the experience, yet keeping the everyday world left behind.

Adhering to a non-standard geometry for the plan and logic of the building will also help to heighten the senses and put aside the profane reality.



...to prepare for a holy experience.

TREMENDUM & FASCINOSUM

During my readings on sacral spaces I found the notion of “*Tremendum et fascinosum*” inspiring. It refers to the tension between reverential fear (tremendum) and drawing power (fascinosum) that signifies the relation with God for a believer. For a non-believer the notion of *acquired taste* may work as a parallel; it is something you are both drawn to and fearful of.

I seek to accomplish this sensation through a design that shifts between monumentalism and symmetry to more intimate spaces and informal room layouts. A powerful altar and light treatment is also key, as is the difference felt when entering the church hall.



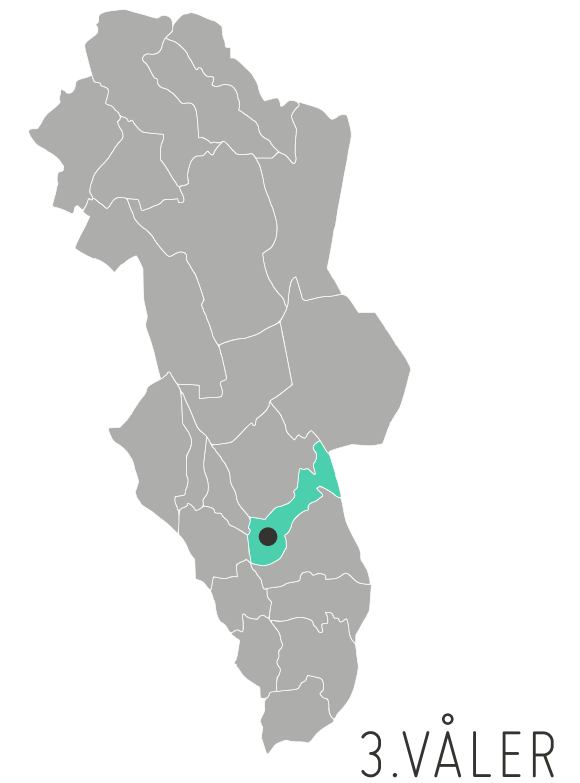
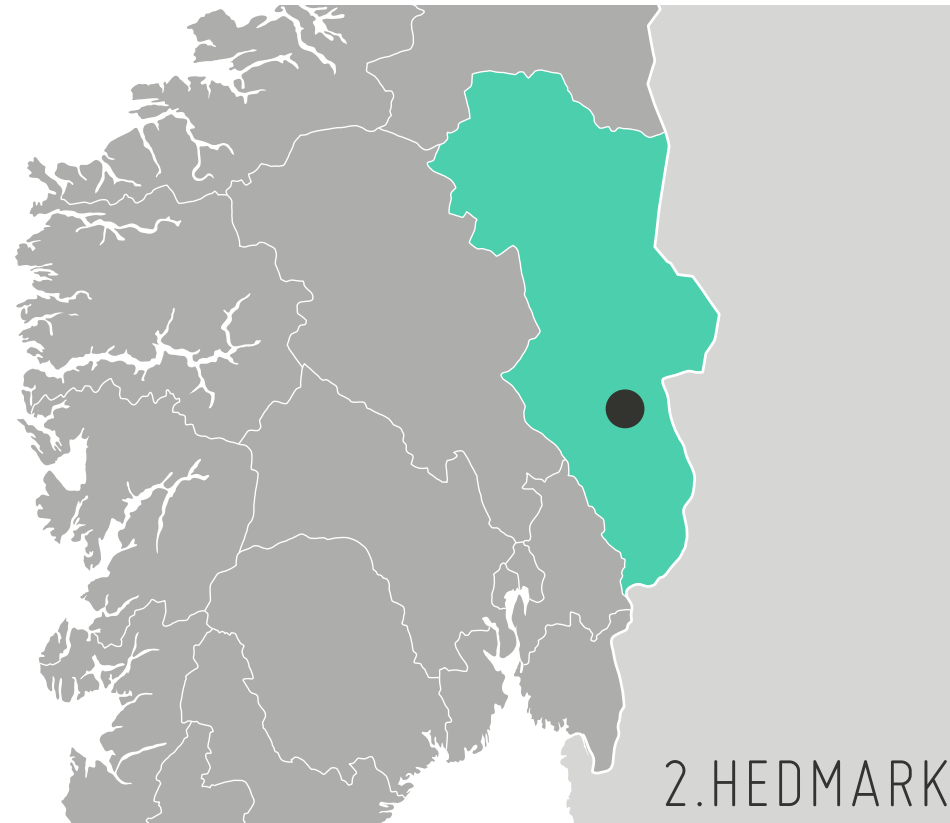
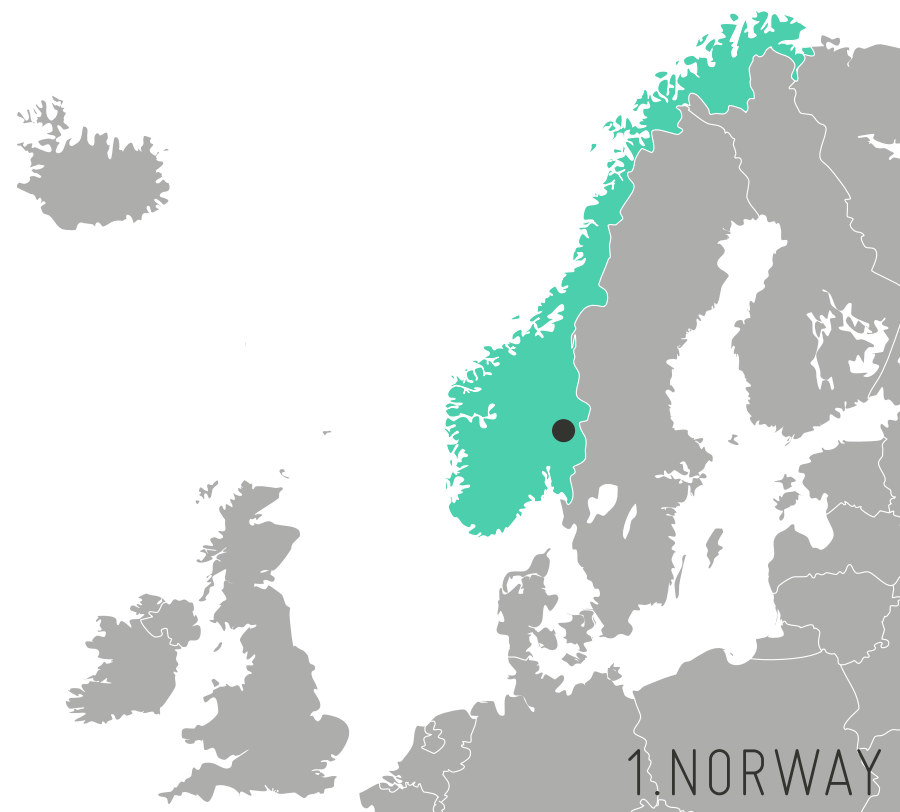
The Seven Sacraments (Rogier van der Weyden, 1445)

THE SACRAMENTS

In the Christian belief system, a sacrament is a sacred act instituted by Christ and entrusted to the church. The sacramental rites are actions in which the presence of Christ is uniquely active. In the Lutheran tradition, the sacraments are narrowed from the original seven to include only *baptism*, *eucharist* and (sometimes) *confession*. Still, the acts of *marriage*, *confirmation* and the *anointing of the sick* are still important situations of life which significance can be elevated if carried out in extra-ordinary space.

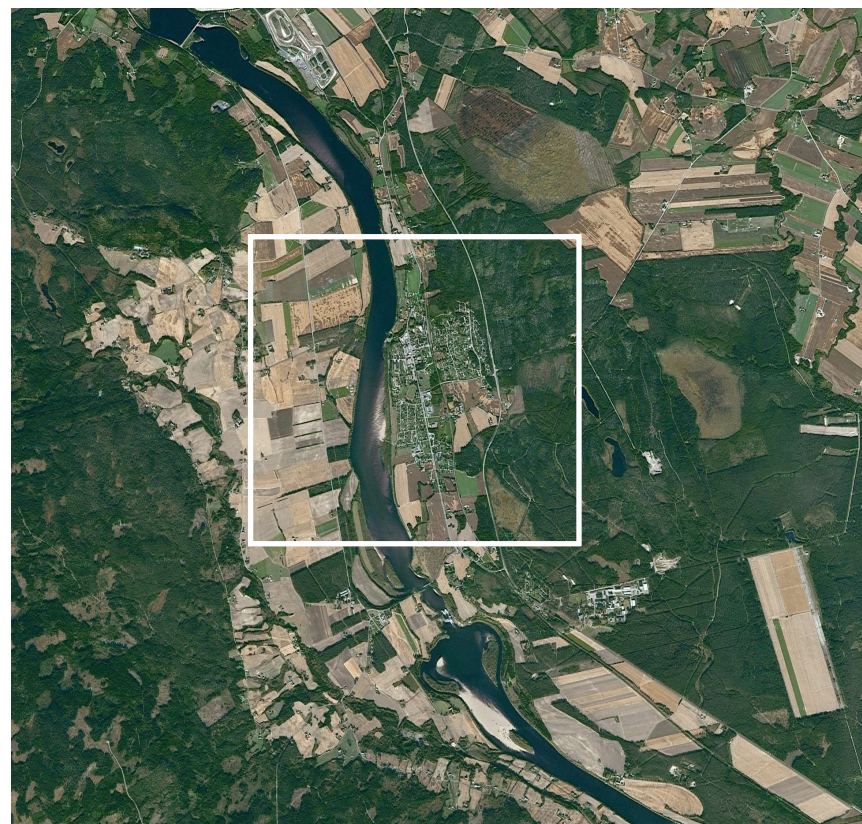
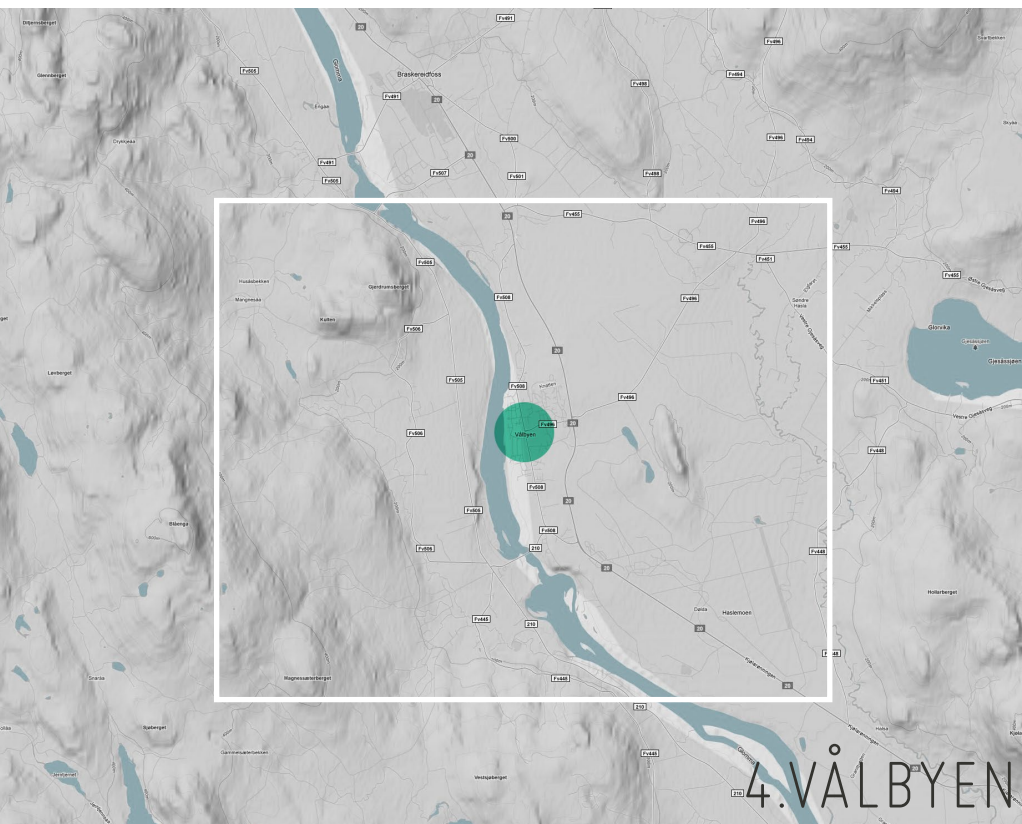
Therefore, I use these situations as a main motivator when designing the spaces of my church, and I have opted to create several different spaces that by enhancing certain elemental characters (light, earth, clarity, etc) aims to prepare the visitors for these situations.

VÅLER / VAAALER / WHERE?



THE AREA

Våler is a small municipality in the county of Hedmark, in the south west of Norway. About 4000 people live in the whole municipality, and the number is on a steady decline as is typical for rural areas in this kind of area in Scandinavia. The landscape consist to an overwhelming degree – over 90% – of pine forest growing on rolling ridges, with a pinch of birch here and there. Along the other main landscape feature, the Glomma river, is where most agriculture areas are found.



THE TOWN

The actual town/village – Vålbyen – sits between the river and the country road no. 20, which like the river and the road is stretched in a north/south direction. The village is about 2 km long and 1 km across with a couple of hundred citizens. There is a school, a municipality house, bank, a gas station and a supermarket. The essentials for a small society to function are indeed covered, but since 2009 with one very important omission – the village lacks a church.

NY/NEW/WHY?



THE FIRE

Våler Church burnt down to the ground on May 29th 2009. During the fall of 2011 an architectural competition is held to gather input for the erection of a new church somewhere on the church grounds where the old one stood.



THE SITE

One main question for the whole competition is to decide on a site for the new church building. The two main choices are a site just north of the current church grounds, and one to the east of the ruins on grounds fairly recently prepared as new cemetery grounds. In the following paragraphs I lay out my arguments for my choice of site, a far from trivial decision.



ON THE RUINS

The choice of site has been a heated topic of debate in Våler since the fire. The loudest side in the discussion are proponents for building a church similar to the old one on the exact same location. Such a knee-jerk reaction is always to be expected from some part of the population, and in this case the sentiment among locals I've spoken to seemed to be that it is a small but loud minority.

To try recreating the old church is to me an appalling proposition for several reasons. The main problem is that such a building would simply be a replica of an old building that would not be perceived as the old church to any of the senses with which we experience architecture. I believe architecture has the obligation to always be a product of its time, in order to feel at place in society, and in order to be a part of the never-to-be-stopped process of evolving society and the individuals part of it. To stop considering every new building project from the specifics of both place and time is to not only give up architecture, but to give up a progressive society. In addition to that strong belief of mine, the committee responsible for the competition program has in fact deemed it impossible to fit a church of the proposed dimensions on the old ruins, if current accessibility and building codes are to be observed. This leaves the sites labeled EAST and NORTH for consideration.

EAST

At a first glance, the **EAST** site seemed like a perfect choice; one can create an impressive axis to a new building from the cemetery entrance through the ruin, the soil is already flat and prepared. However, upon visiting the site some shortcomings became obvious. The ground level is markedly lower than the rest of the cemetery which gives the site an overall feeling of. Also, the north-south direction of the site makes it slightly difficult to fit an eastward heading church. Additionally, the soil is old marshland, making the construction of a large building there less ideal.

NORTH

The **NORTH** site is the one favoured by the program committee. Putting the new church there will have minimal impact on the current cultural values on the church grounds. It will allow the church a tight connection to the old chapel, Sjursenparken, and the municipality building just north of Sjursenparken.

These are all good rational reasons, and indeed one of my main reasons for choosing the north site is a highly pragmatic one; since it was the choice favoured in the program, I would need a very strong pull to another site to let go of the north site which would be considered default. Actually, since the site is rather delicate with the chapel and the old pine grove of Sjursenparken so close, finding the best fit for the new church there was a stimulating challenge. I also felt a strong pull to using the pine grove as a dramatic backdrop for the church, while having a good public connection to the church from west – to the village center, Sjursenparken and the parking space – and also connecting neatly to the eastbound road with staff entrance and parking lots.

PROGRAM > PLAN

COMPETITION PROGRAM

While developing the arrangement of my church I strived to combine the raw specification of the competition program with a holistic aesthetic theme.

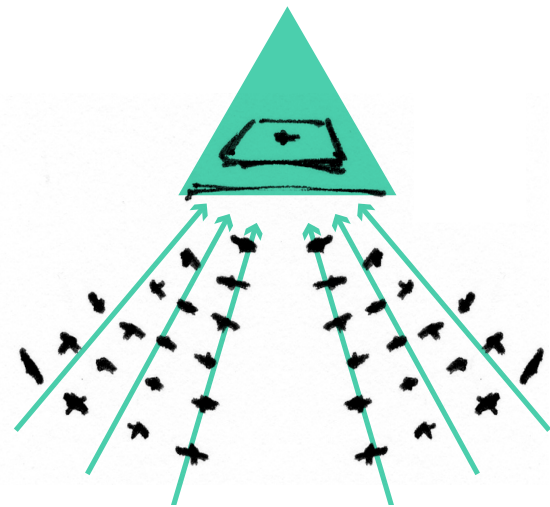
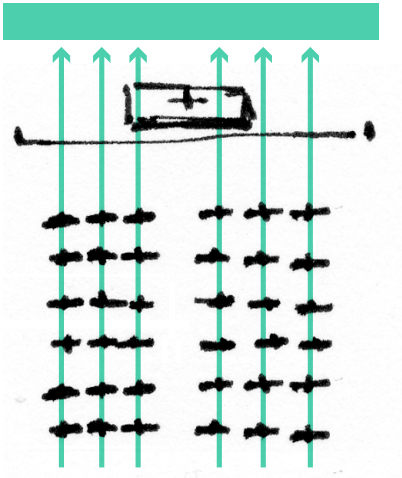
The goal of such a strategy is to tie the spaces and details together, as well as to add a sense of ritual and austerity to the building. This enables the visitor to emerge in the crucial situations of the church.

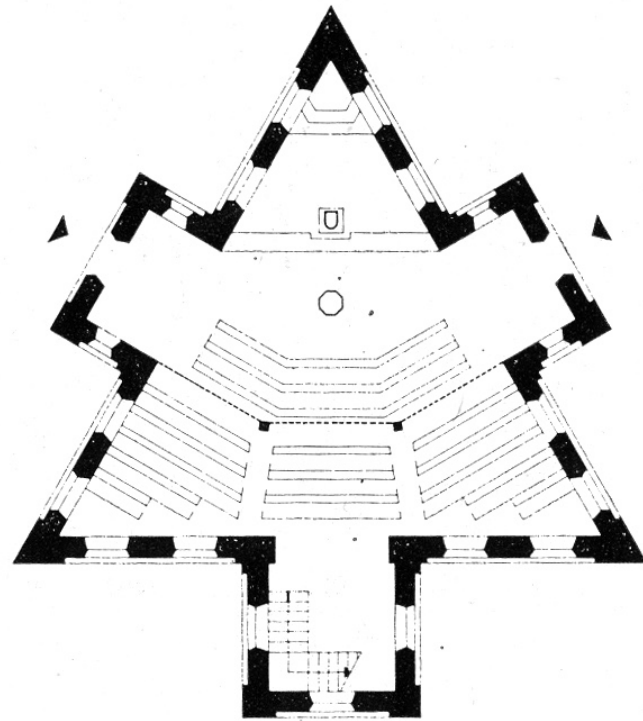
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KIRKEROMMET	1	350 plasser	400
- kirkesalen bakre del			
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- kirkesalen fremre del			
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DÅPSSAKRISTI	1		20
ARBEIDSRUM FOR PREST/SAKRISTI	1		20
LAGER-DRIFTSROM FOR KIRKETJENER	1		15
ORGANIST - LAGER	1		10
STORLAGER	1 el. 2		40
AV-ROM	1		10
INNGANGSPARTI/KIRKETORG/HWC	1		90
GARDEROBE OG WC			40
KISTEHÅNTERING, KJØLEROM OG VISNINGSROM	1	3 katafalktraller	30
AVFALLSRUM, VASKEROM, BØTTEKOTT			20
TEKNISK ROM			35
-ventilasjon			
-varmegjenvinning			
SUM NETTO AREAL			730

THE TRIANGLE

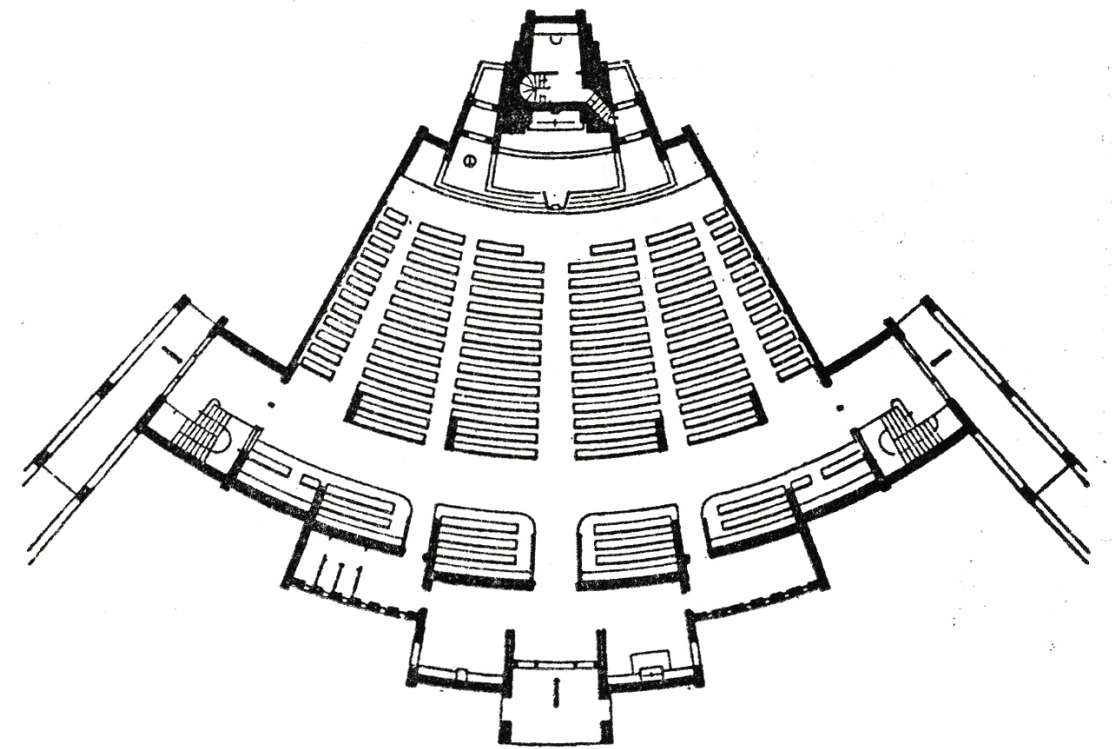
While sketching on the main church hall, I found interest in the development of Christian spaces during early modernism. The longitudinal plan and ortogonal variations had been the norm since the earliest basilicas, but during the first decades of the 20th century there was a movement towards more intimate spaces that left the uniform direction in favour of a plan where the attendants all faced the altar; “a closed ring around the last supper”.

I decided to pursue the triangular plan as a way to both realize a more intimate sense of togetherness while also enabling a more personal relation to incarnation of Christ represented in the altar space.

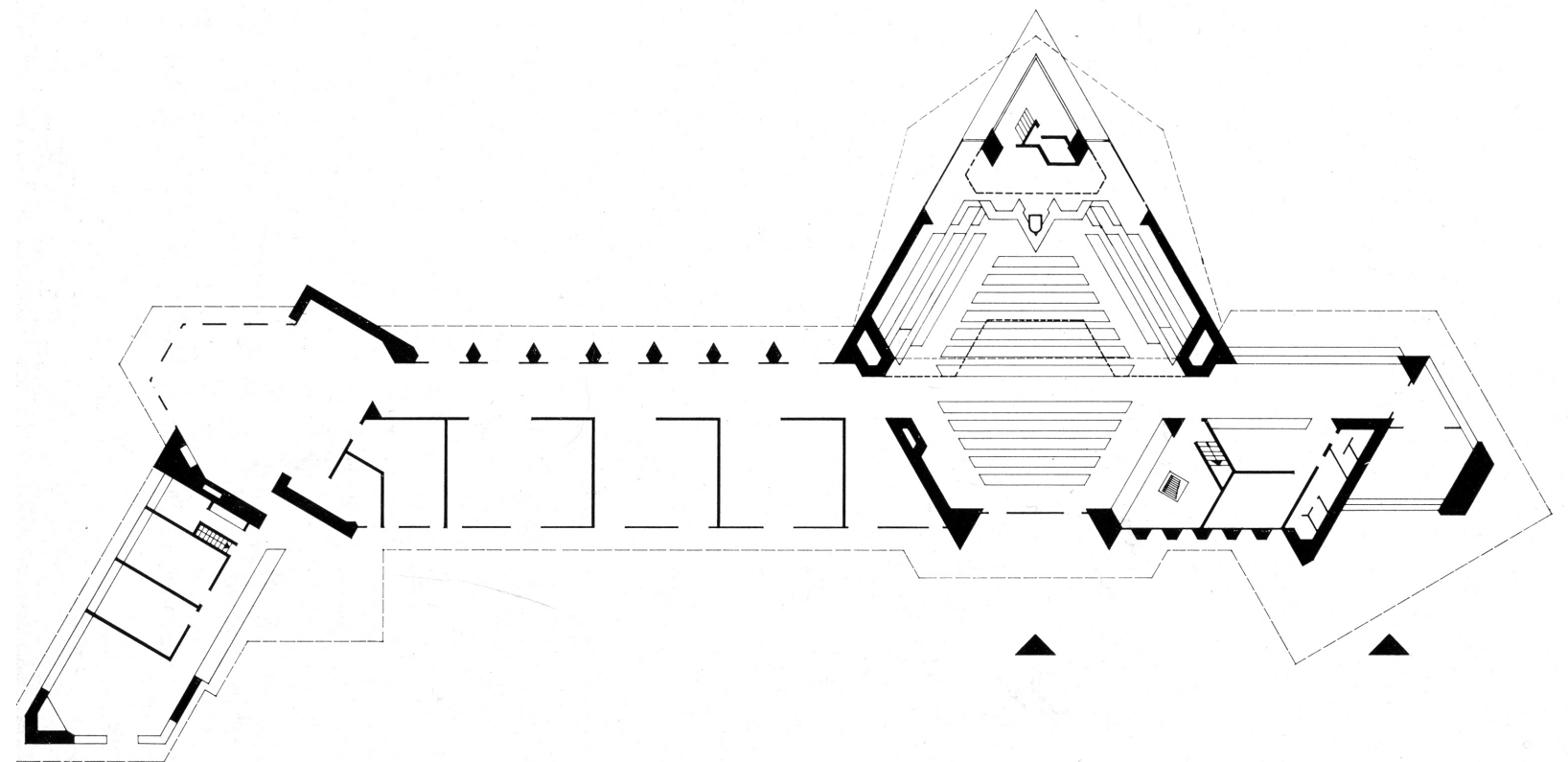




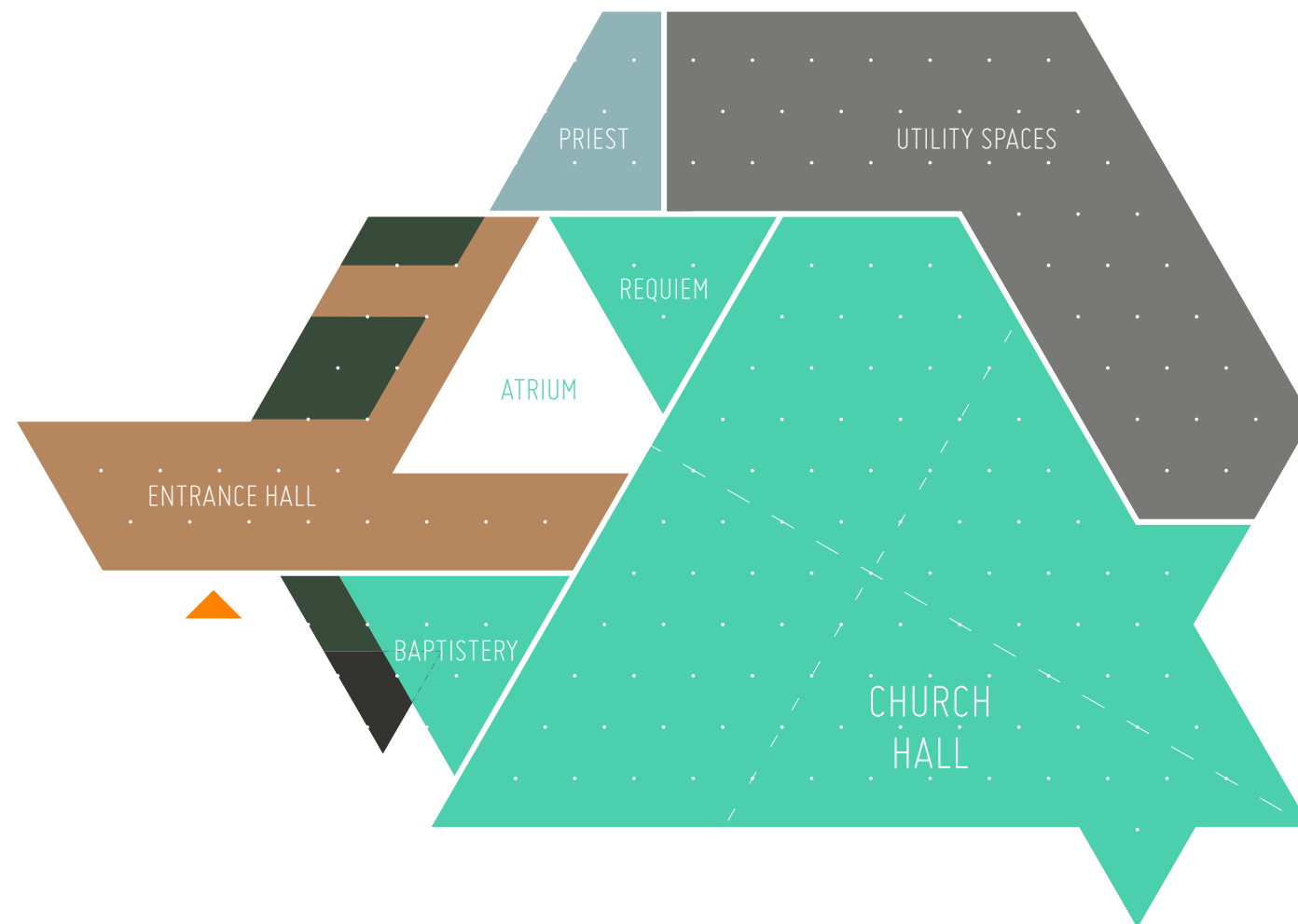
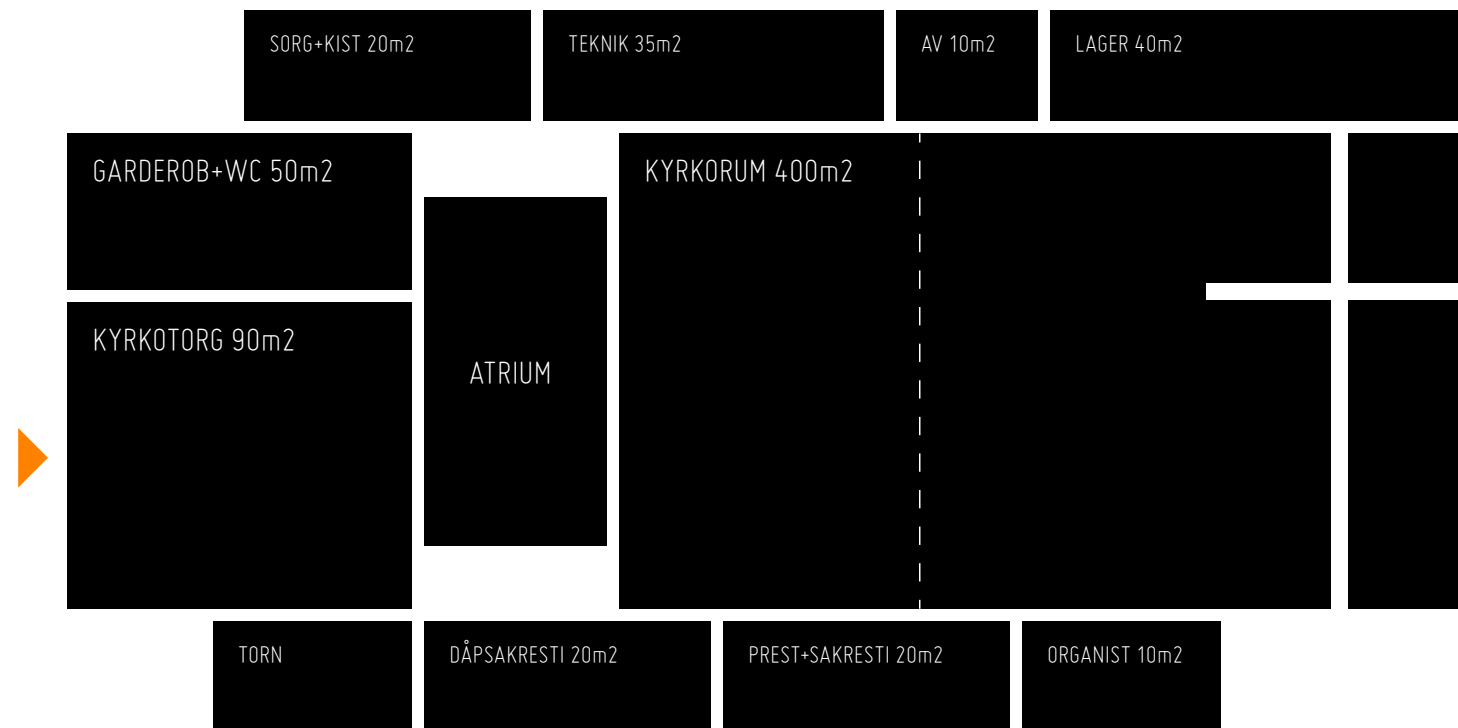
IDEALKIRCHEN
LEONHARD STURM, 1711



GUSTAF ADOLFKIRCHE, BERLIN
OTTO BARTNING, 1934



UNITARIAN CHURCH, MADISON
FRANK LLOYD WRIGHT, 1950



THE TRIANGLE

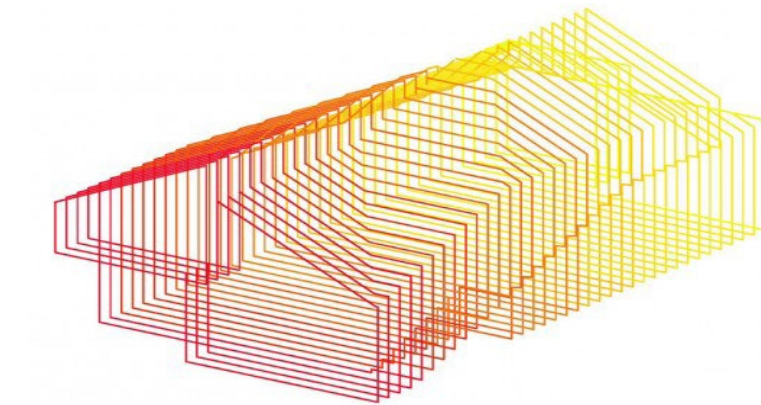
The resulting diagram of the plan should be understood as a church where the main axis running from an open air atrium up to the altar, and a secondary axis with smaller side chapels of different characters; the baptistery, the “requiem”, the tower and also the aforementioned atrium. The triangular theme ties the plan together, and the supporting spaces are arranged in a semicircle around the main spaces. The priest’s space is connected to all main parts of the church.

SPATIAL PSYCHOLOGY

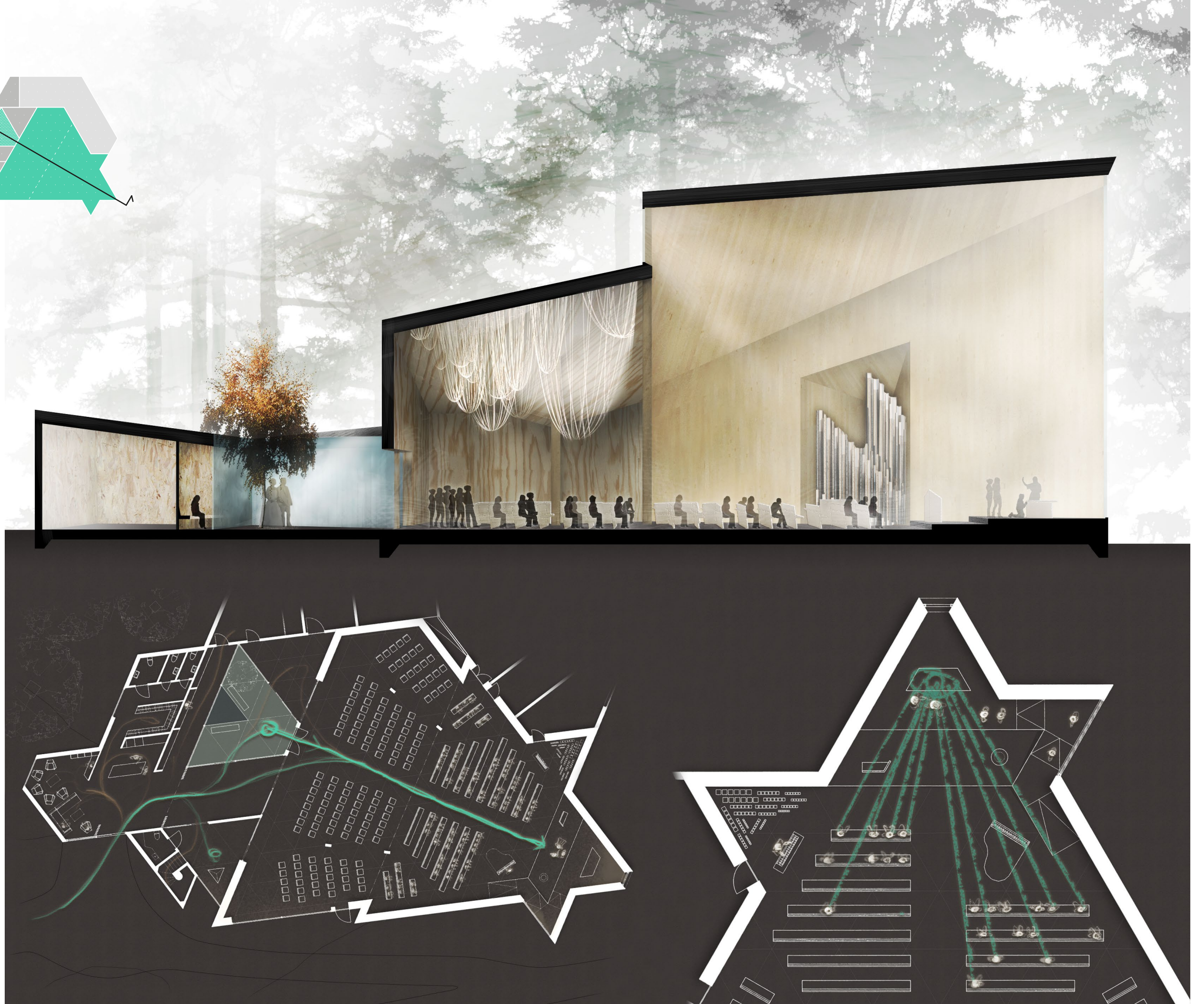
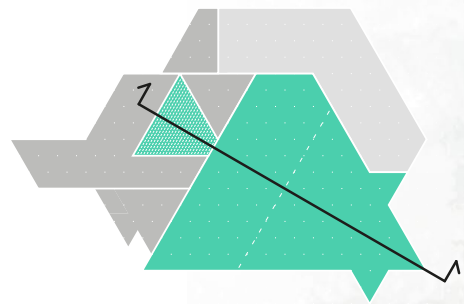
In the project I utilize each phase in the sequence of spaces to emphasize certain basic atmospheres. Each space sets a particular mood, suiting the different life events the church accommodates or the current need of a particular visitor or group of visitors. The spaces draw on the raw building blocks of existence and subtract what is not necessary to help the visitor reach that special clarity of mind that signifies a sacral building. The raw sensations can open the visitor to his or her senses and prepare for a holy experience.

The project includes several smaller spaces for contemplation, prayer, discussion and small ceremonies. They provoke these raw sensations through raw means; the solidity and permanence of earth, the life and flow of water, the energy and spirit of air and the heavens. When entering the main church space these tangible earthly sensations are left behind in favor of an all-encompassing light, and the visitor can concentrate fully on worship, the contents of the mass, and the presence of Christ.

The pages that follow is a description of the building, consisting of plans, elevations, perspective views, et cetera coupled with with brief explanations of the situations, materials and other details of significance.

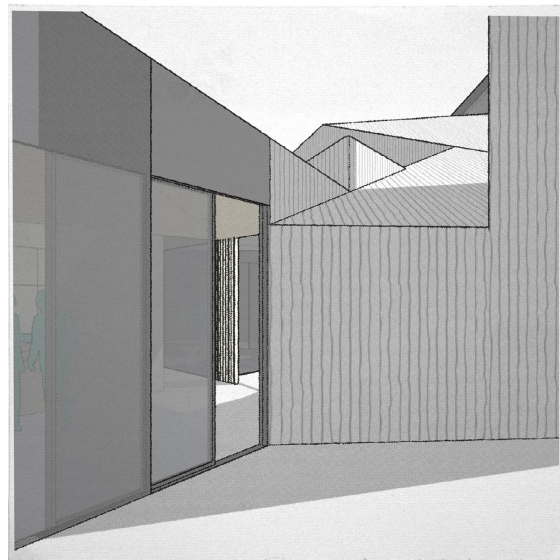


A progression from constructed to ethereal



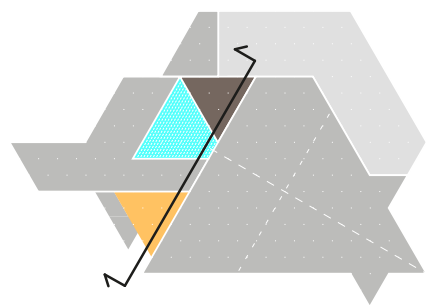
MARRIAGE

The church allows both for a large traditional marriage ceremony by the altar, as well as small more private ceremonies in the atrium and the baptistery. The axis from the atrium to the altar also allows for the couple to initialize the rite in private under the open sky, then proceeding through the church hall up to the altar.



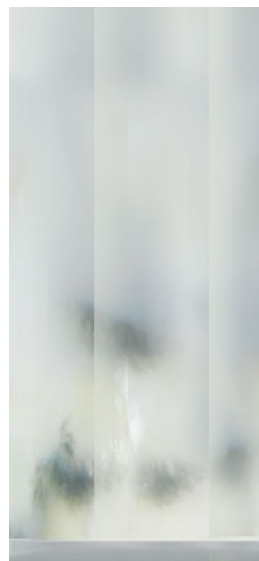
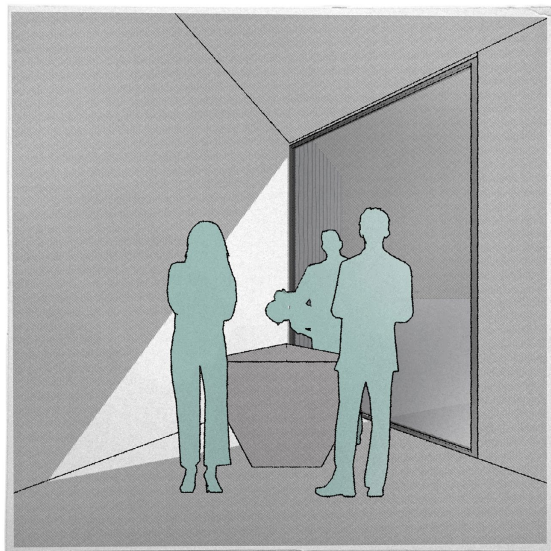
EUCCHARIST

The eucharist is the most symbolic sacrament, the one where the presence of Christ and God is most present. Main focus towards the altar is key; enhanced by the triangular plan, the rays of light from the main window and the progression from “built” towards “ethereal” through the building.



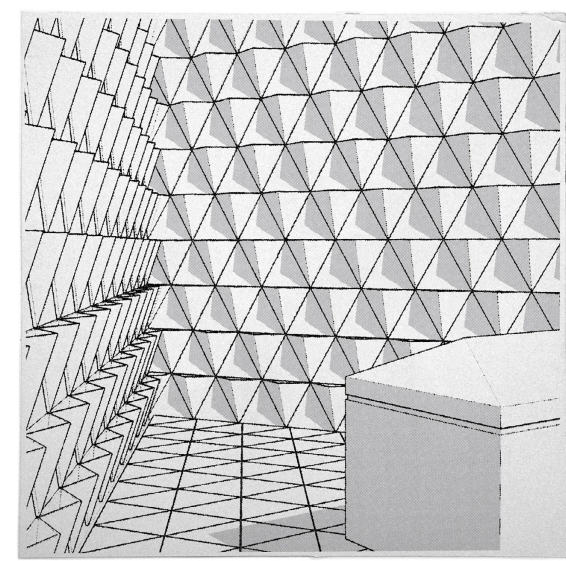
BAPTISM

Like the situations accommodated for marriage, a large baptism ceremony can be held in the main church hall. But the more private, all white, baptistery chapel is the main space dedicated to new life.



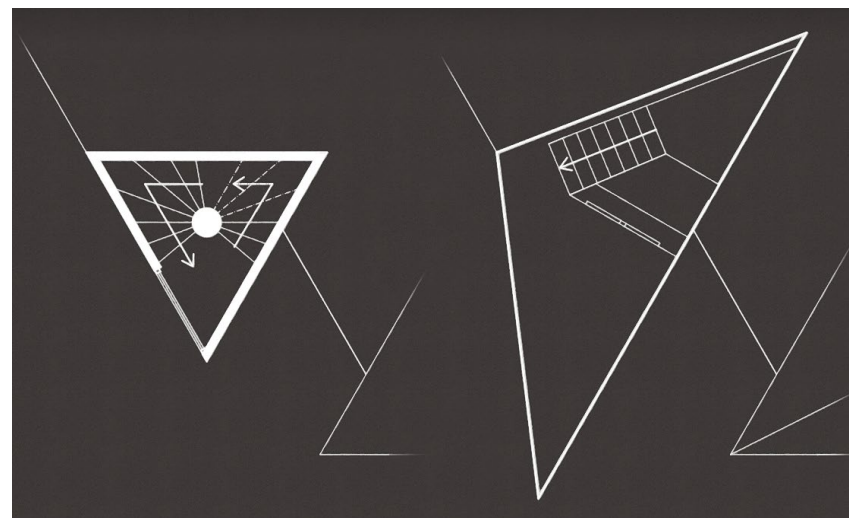
REQUIEM

Located in the most private corner of the sacral spaces is the chapel dedicated to the remembrance of the dead. It's where the coffin will be placed before burial ceremony, and where relatives can bid their final farewells.

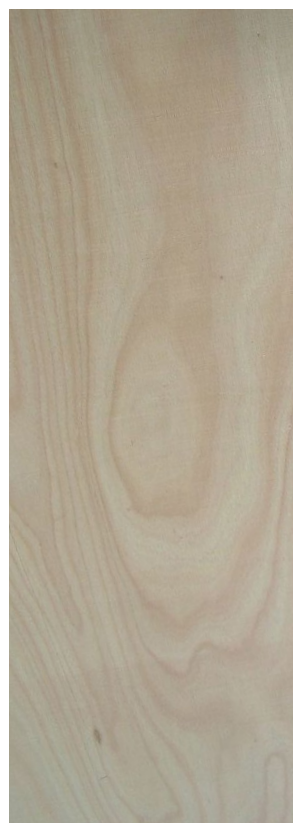
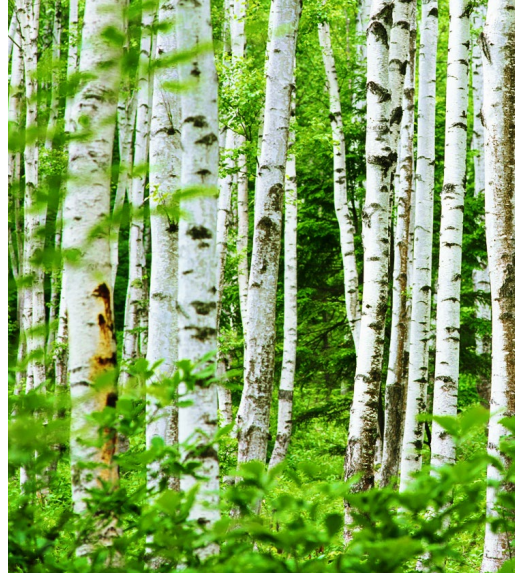


REFLECTION

The tower is a chapel for contemplation on top of the world. During the climb you get glimpses in each of the three directions, and on the top platform you've reached over the tree tops and see the fell landscape all around.





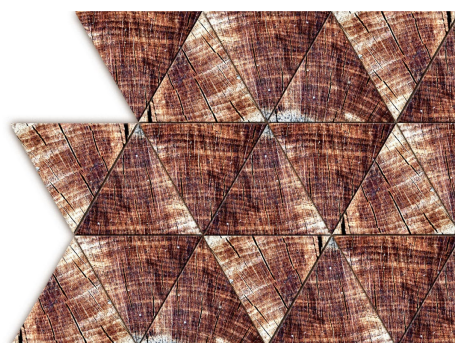


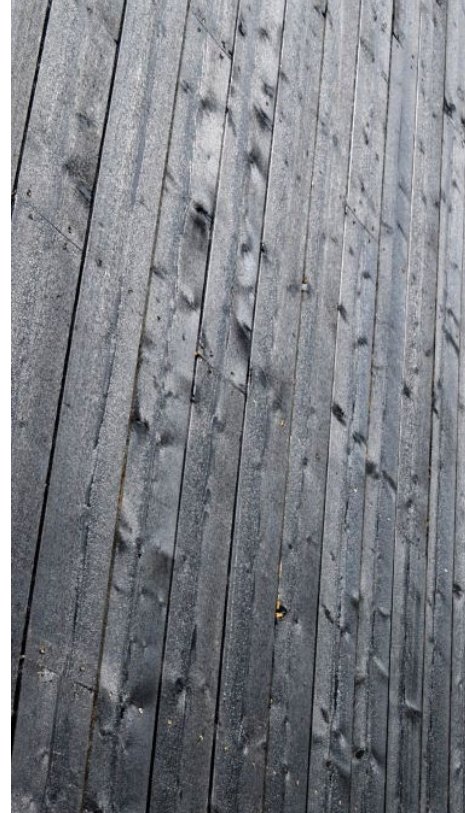
MATERIAL

The material palette is to a large extent based on local pine and birch. By using varying degrees of finish – from rough sawed timber and OSB board to fine birch veneer – I try to provoke a broad range of experiences while adhering to a sensible theme.

The wood theme is counterpointed by the treatments of the atrium and the baptistery. White corian is used in the baptistery, that together with the semi translucent window creates an all encompassing light of innocence. The requiem space, on the other hand, uses reclaimed vintage construction timber and remaining wood from the burnt to church, to give a hint of time passed and lives well lived.

Slate stone is used for flooring in the church space, to give a counterpoint to the wooden envelope and give a sense of stability and robustness.



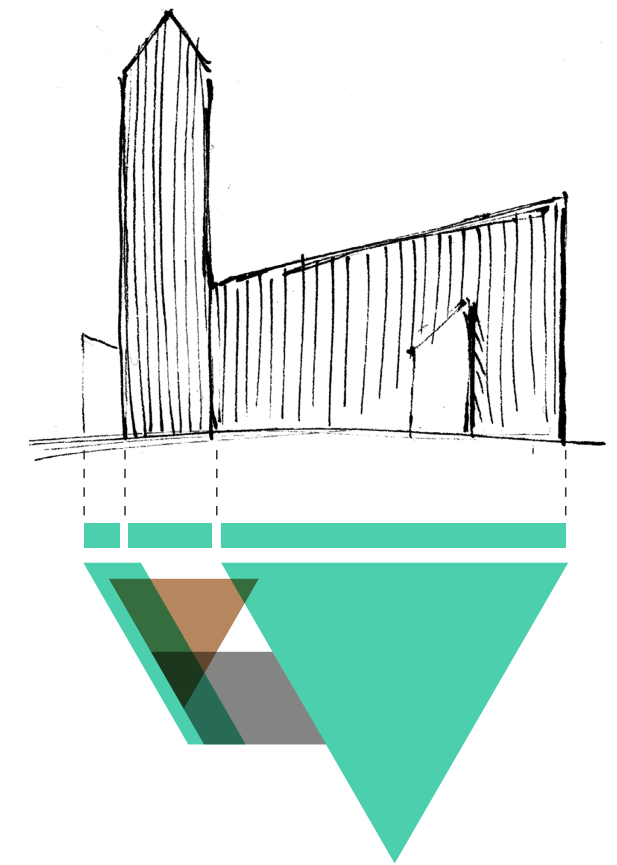


EXTERIOR

The main theme for the exterior was to create a homogenous wooden structure that bears the signature of a church, while not revealing the complete logic of the building when observed from the outside.

I want to suggest a sense of otherworldly perfection with a continuous wooden envelope folded in stark straight lines, while connecting it to the place in its use of natural, locally sourced materials. Acetylated pine wood creates the outer shell, with window panes connect to the roof line.

The triangular theme is carried over from the plan into the three-dimensionality of the building, which suggests an animated unfolding of the building as you approach it from the village.



SILHOUETTE

In addition to pragmatically solving the program into a sensible plan and having an understanding of creating sacral spaces, the competition program wished for the building to be unambiguously recognized as a church; “with recognizable traits of traditional character and a tall church tower”.

I seek to combine this wish with my goals of designing a building with a secretive, discoverable, interior and a triangular plan by making the elevation towards the cemetery suggest the silhouette similar to a traditional church. This move also enables me to create a higher potential for surprises when the visitor enters the church.



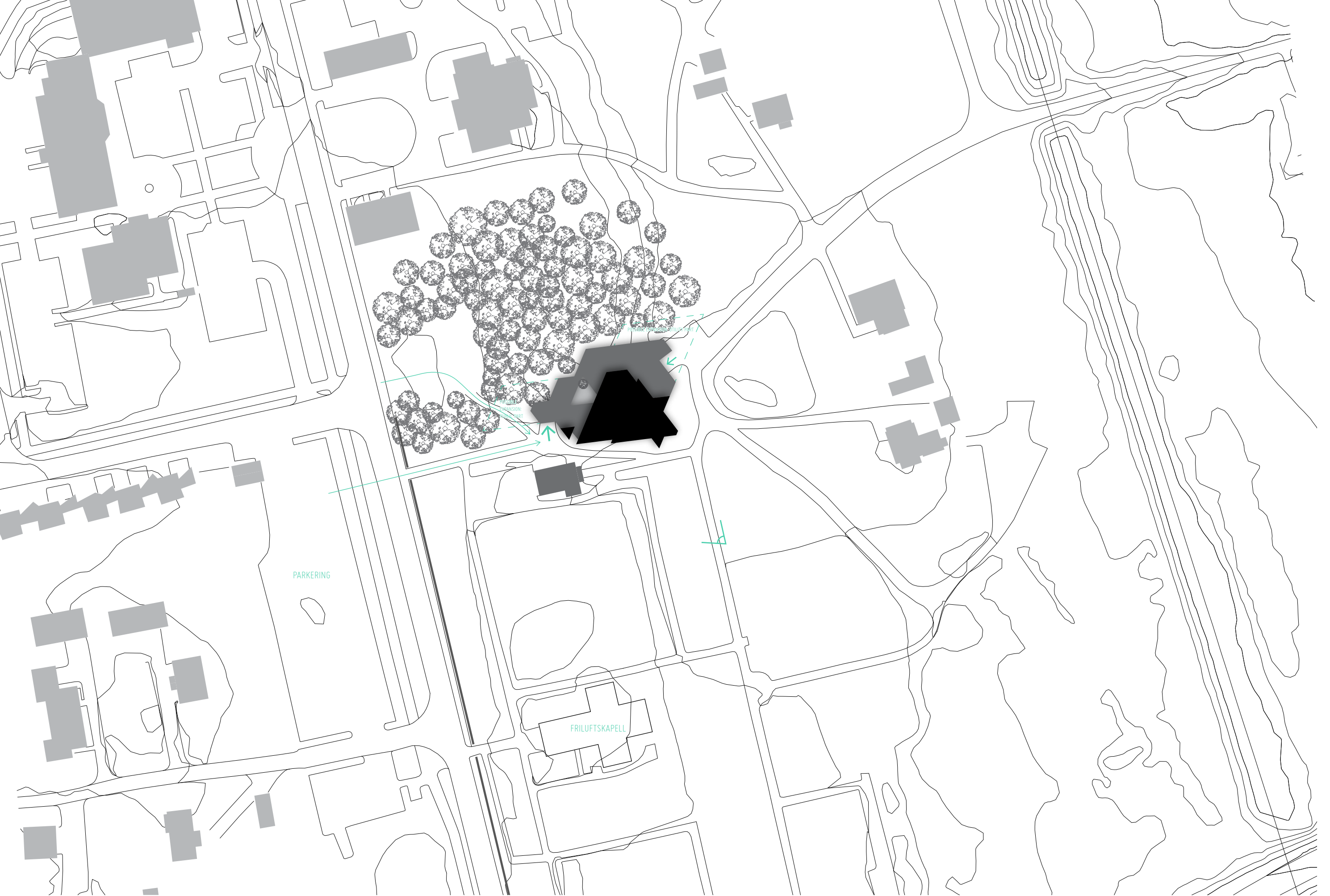
ELEVATION SOUTH 1:200



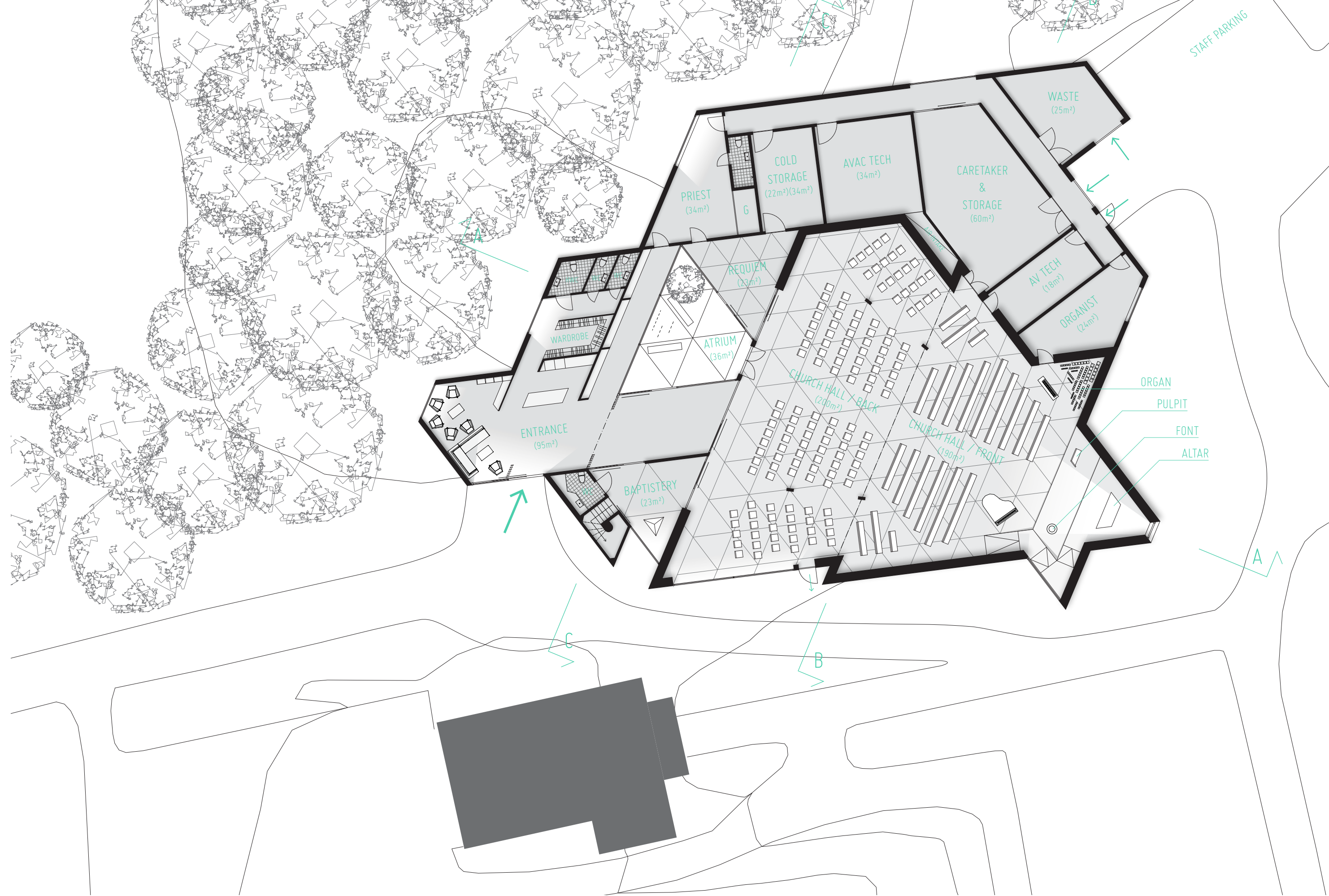
ELEVATION WEST 1:200



ELEVATION EAST 1:200



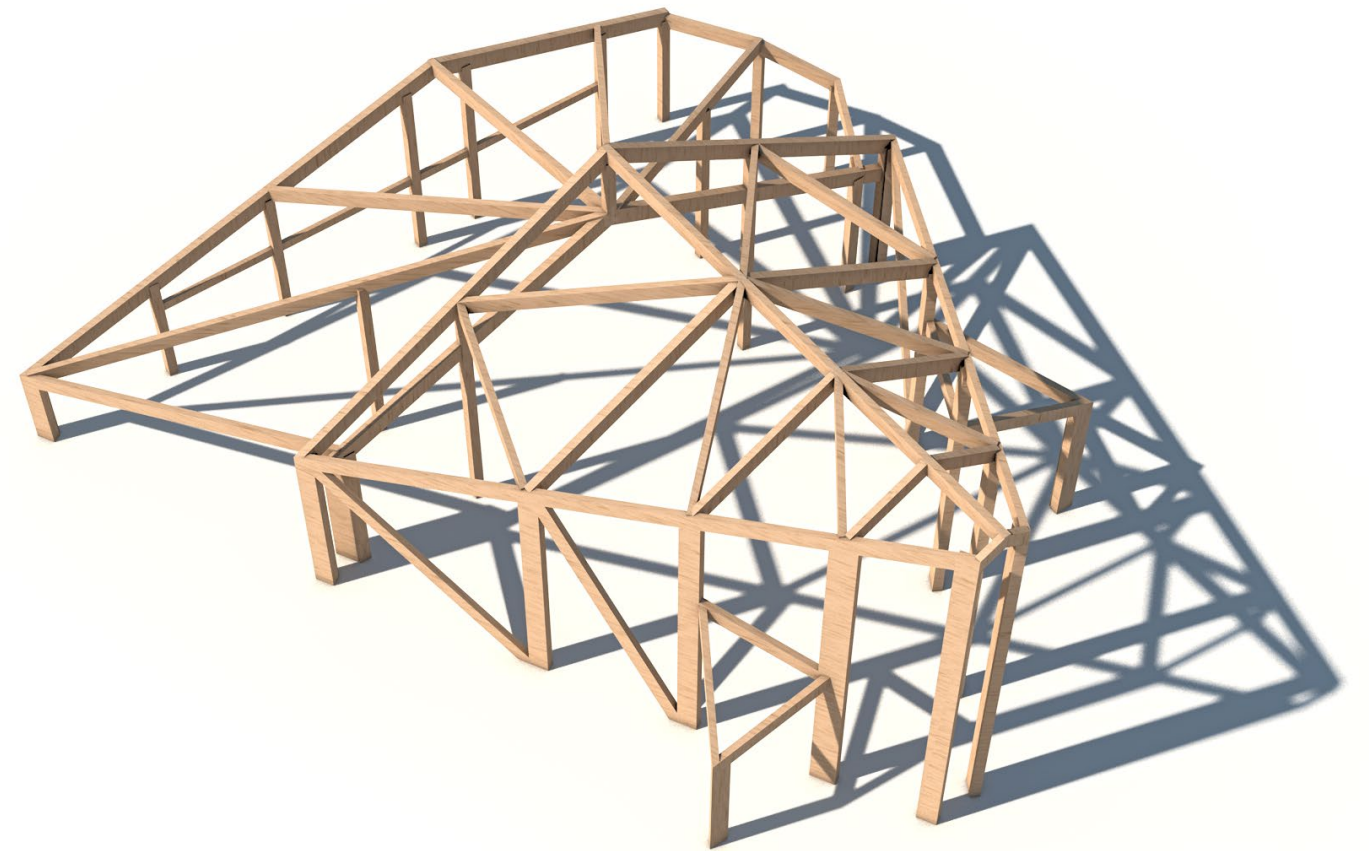
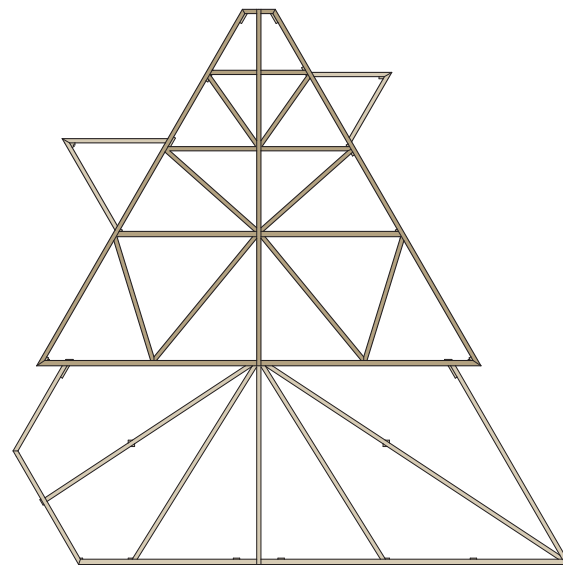
SITE PLAN 1:1000



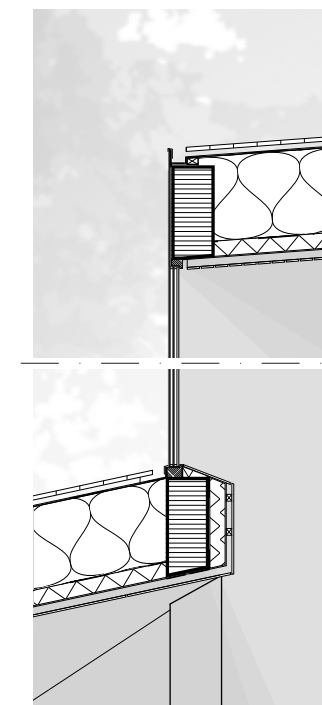
FLOOR PLAN 1:200

CONSTRUCTION

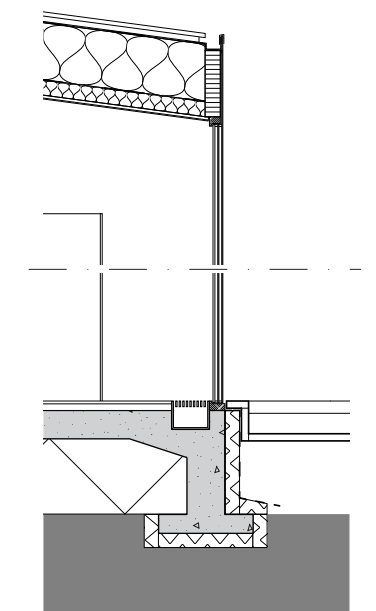
The church hall is the main concern for the construction of the building, and after some debating between a massive timber construction and a lighter beam construction, I decided on the latter. The triangular grid of laminated wood beams, as illustrated to the right, seemed the most sensible choice; it maximizes stability while keeping material usage to a minimum.



SECTION BB 1:400



DETAIL X 1:40



DETAIL Y 1:40

ROOF

22x120 Acetylated pine planks, 3mm gaps
30x50 Softwood battens stained black / ventilated cavity
5 two-layer sheeting
300 Foam insulation between 300x100 laminated wood beams
Vapour barrier
80 Service layer: wood fibre insulation between 80x60 softwood posts
18 OSB boarding

WALL

22x120 Acetylated pine planks, 3mm gaps
20x50 Softwood battens stained black / ventilated cavity
Black windproof paper
170 Foam insulation between 170x60 softwood posts
Vapour barrier
80 Service layer: wood fibre insulation between 80x60 softwood posts
18 OSB boarding

WALL, CHURCH HALL

22x120 Acetylated pine planks, 3mm gaps
30x50 Softwood battens stained black / ventilated cavity
5 two-layer sheeting
300 Foam insulation between 600-300x140 laminated wood beams, finger-jointed three-part frame
Vapour barrier
80 Service layer: acoustic foam insulation, between 80x60 softwood battens
10 Acoustic felt
45 Cavity, 45x45 softwood battens
10 Plywood boarding

ROOF, CHURCH HALL

Primary bearing structure: Triangle grid of 50x550 laminated wood beams
Secondary structure: 25x450 laminated wood beams

22x120 Acetylated pine planks, 3mm gaps
30x50 Softwood battens stained black / ventilated cavity
5 two-layer sheeting
450 Foam insulation between structural beams
Vapour barrier
80 Service layer: acoustic foam insulation, between 80x60 softwood battens
10 Acoustic felt
45 Cavity, 45x45 softwood battens
10x70 Birch planks, 3mm gaps (surface treatment & gap subject to wanted acoustic properties)

DETAIL X

DETAIL Y

DETAIL SECTION 1:100

