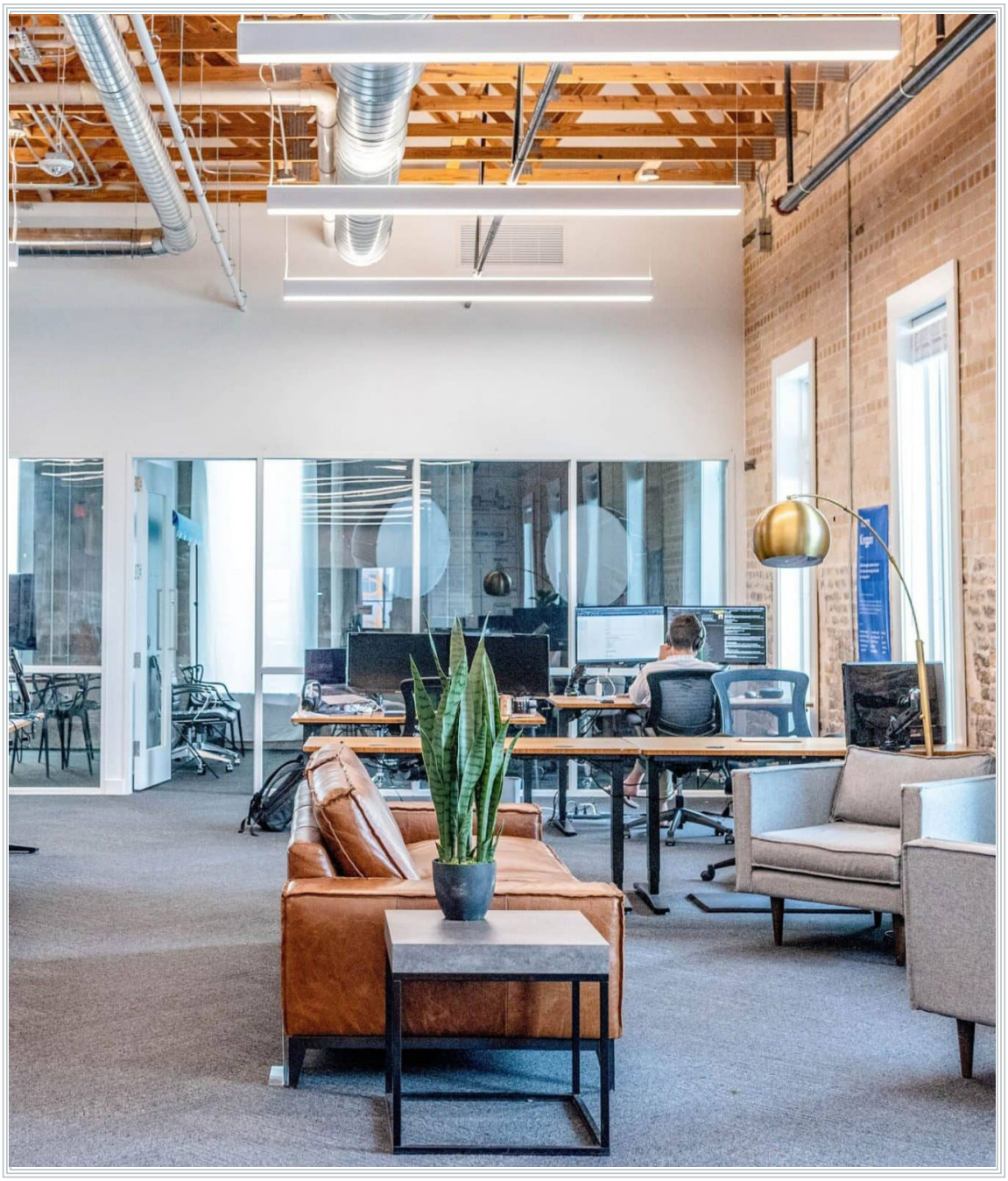

RETROFITTING ARCHITECTURAL ENVIRONMENTS IN RESPONSE TO AN EVOLVING WORKPLACE

Creating environments that allow for optimal productivity in the new form of work place.

RETROFITTING ARCHITECTURAL ENVIRONMENTS

IN RESPONSE TO AN EVOLVING WORKING CLIMATE

A Design Thesis Submitted to the
Department of Architecture and Landscape Architecture
of North Dakota State University

By

Lexi Cheyenne Jordheim

In Partial Fulfillment of the Requirements for the
Degree of Master of Architecture

Cindy Urness
Primary Thesis Instructor

Stephen Wischer
Thesis Committee Chair

May, 2023
Fargo, North Dakota

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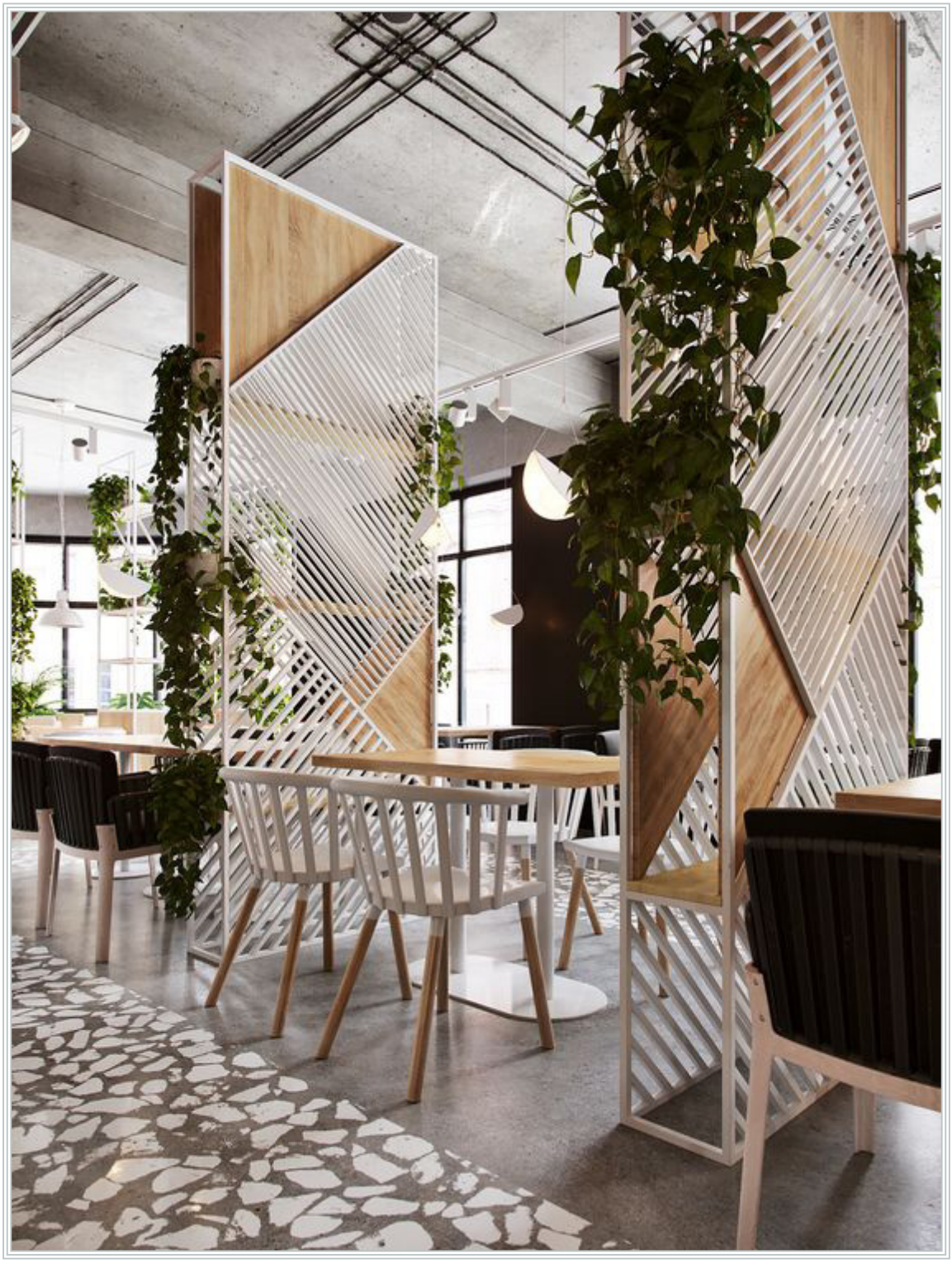


Figure 2

THE PROPOSAL

THESIS ABSTRACT

The typology of this thesis is centered around Architectural Environments within commercial office buildings. The theoretical premise is based on the statement that people are less productive when their work environment is cold, artificially lit, and has limits to pattern and nature. This premise brings up the challenges that the workforce has and will continue to have since the Covid-19 pandemic. How can architects design environments (external, internal, intimate, etc) with the opportunity to positively impact the productivity and marketability of people, investors, and their work places. **Can Architectural Environments have a direct positive impact on productivity? How can we as designers retrofit vacant and under-utilized commercial office buildings into clever, thoughtful, and pattern-driven architectural environments that will not only benefit our economy's new style of remote work, but also provide employees and communities with useful spaces that will set them up for their optimal form of work/life productivity?** To aid in solving these challenges, a book of design patterns that reflect results in productivity and marketability will be produced. The research strategies used in this thesis are historical research, qualitative data research, and other combined strategies.

Figure 3

THE NARRATIVE OF THE THEORETICAL ASPECT OF THE THESIS

CONTEXT

In lieu of the Covid-19 pandemic, all around the world, a new form of the standard work day emerged. The research for this thesis is based on the foundational text by Christopher Alexander, "A Pattern Language" written in 1977. How can a space's interior architectural environment produce a more productive work pattern? The motivation for this project is the disability to preform in an office that is under equipped for humans to spend 8+ hours a day in. An under-equipped environment may be cold, dry, artificially lit, drafty, and with little to no visibility of nature. People all around the world have a new shift in working with working remotely becoming a widely accepted and sometimes preferred solution to location-based work. Large office buildings across the globe are sitting empty, losing profit, and forcing home owners to pay more in taxes. This new shift in the workforce is going to pose many concerns and questions for business owners and employees alike: How can employees be productive in a new form of work? Distractions like dogs, children, television, food, and neighborhood traffic are just some of the uncontrollable in a home environment. Can we design and redesign spaces that unleash potential for both employee and employer?

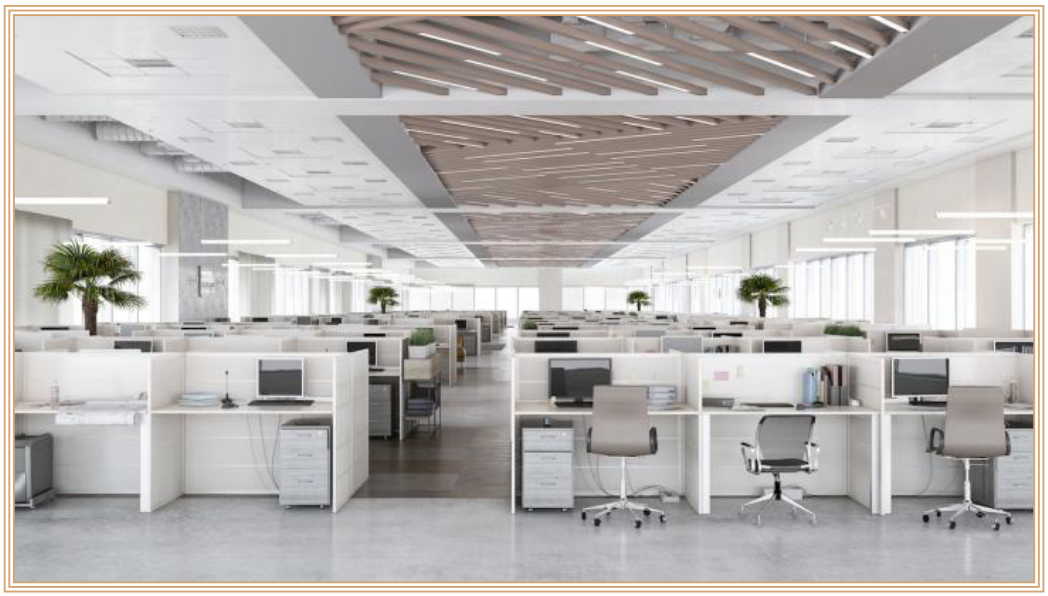


Figure 4

THE NARRATIVE OF THE THEORETICAL ASPECT OF THE THESIS

Controlled environments have been the common work site for over 100 years. A quiet cubicle, an office with little to no windows, hardwood floors and air conditioning that is set on 65 degrees. Can you picture it? In lieu of Covid-19, the modern day work site has changed. Many people around the world during 2020 continued to be employed, but were unable to travel to work due to city/ company restrictions, sickness, or lack of transportation. Fast forward to right now, *where* you do your work is not nearly as important as *how* productive you are. Companies and businesses are prioritizing productivity and de-prioritizing the typical office building setting.

We are late on the realization that users of buildings spend a majority of their time on the inside. Interior Architectural Design is a driving force behind emotional connection and mental stability within every space. Materials that come in contact with the users, acoustical design within a variety spaces, and connection to the environment at a micro and macro scale, are all achieved in spaces by thoughtful and intentional Interior Architectural and Environmental Design.

DESIGN SOLUTION

My proposed design solution is to redesign a prototype property building, where future developers can pull ideas and patterns from, to redesign their own property with emphasis on productivity and marketability. Developing these design solutions will rely heavily on Christopher Alexander "A Pattern Language" and his theory for how humans can achieve optimal spirits through careful design.

PROJECT TYPOLOGY

The traditional practice of work has changed since the Covid-19 world pandemic. Office buildings have seen a tremendous decrease in rent from 2020-2023, and it will only continue to decrease per projections.

Private offices, community gathering spaces, collaborative working environments, cafes, outdoor areas, and living quarters are all going to take part in the redesign of commercial office buildings.

We need to revitalize these office buildings so that they are appealing for people to not only return to work, but for investors and employers to keep their structures in tact. With sustainability and marketability in mind, spaces will be designed to create maximum productivity and marketability.

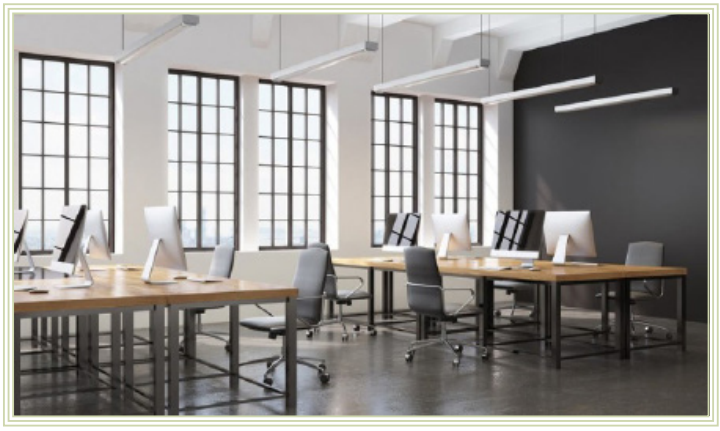


Figure 5

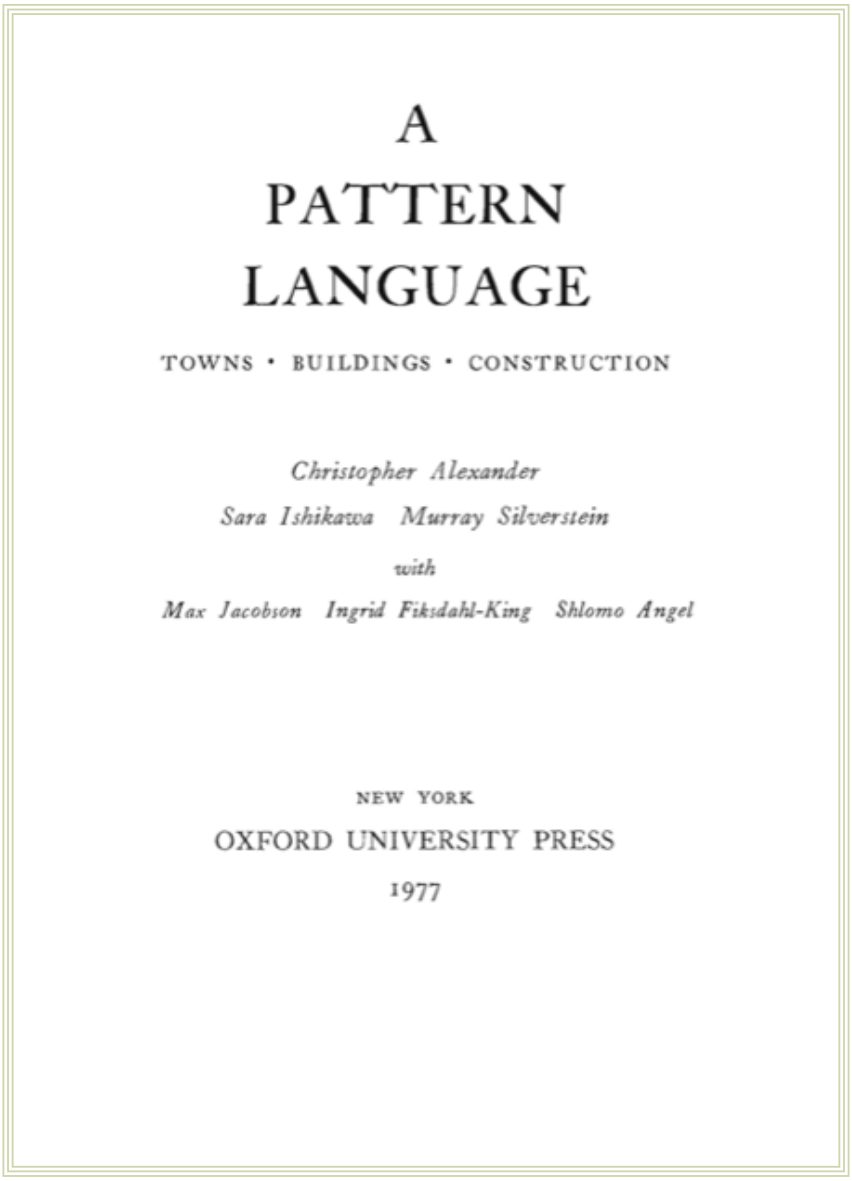
Figure 6

Figure 7

Figure 8

PRECEDENT STUDIES

A Pattern Language Theory



A
PATTERN
LANGUAGE

TOWNS · BUILDINGS · CONSTRUCTION

Christopher Alexander
Sara Ishikawa Murray Silverstein
with
Max Jacobson Ingrid Fiksdahl-King Shlomo Angel

NEW YORK
OXFORD UNIVERSITY PRESS
1977

Figure 9

Author: Christopher Alexander

Year released: 1977

Relation to project: There are 253 patterns that set the foundation for good design.

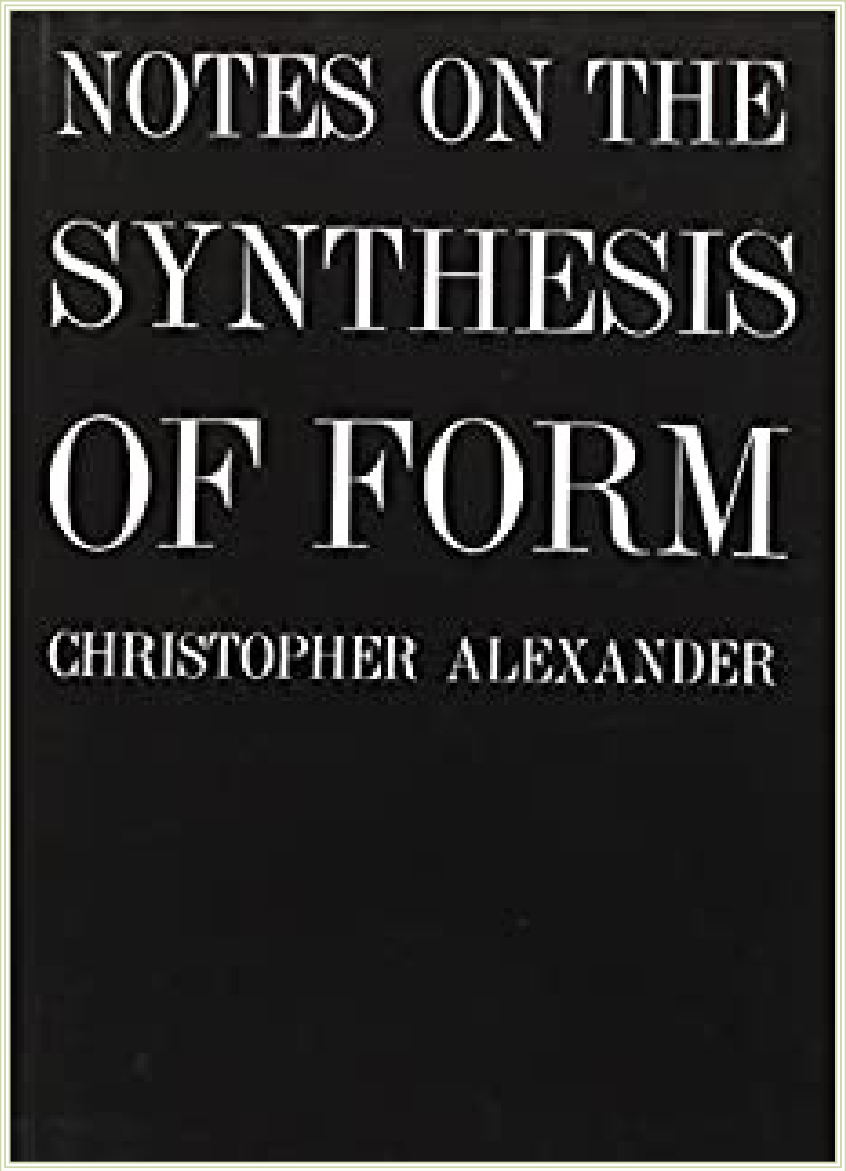


Figure 10

Author: Christopher Alexander

Year released: 1964

Relation to project: Explains synthesis and consistency within design and the importance for form when it comes to function and productivity.

PRECEDENT STUDIES

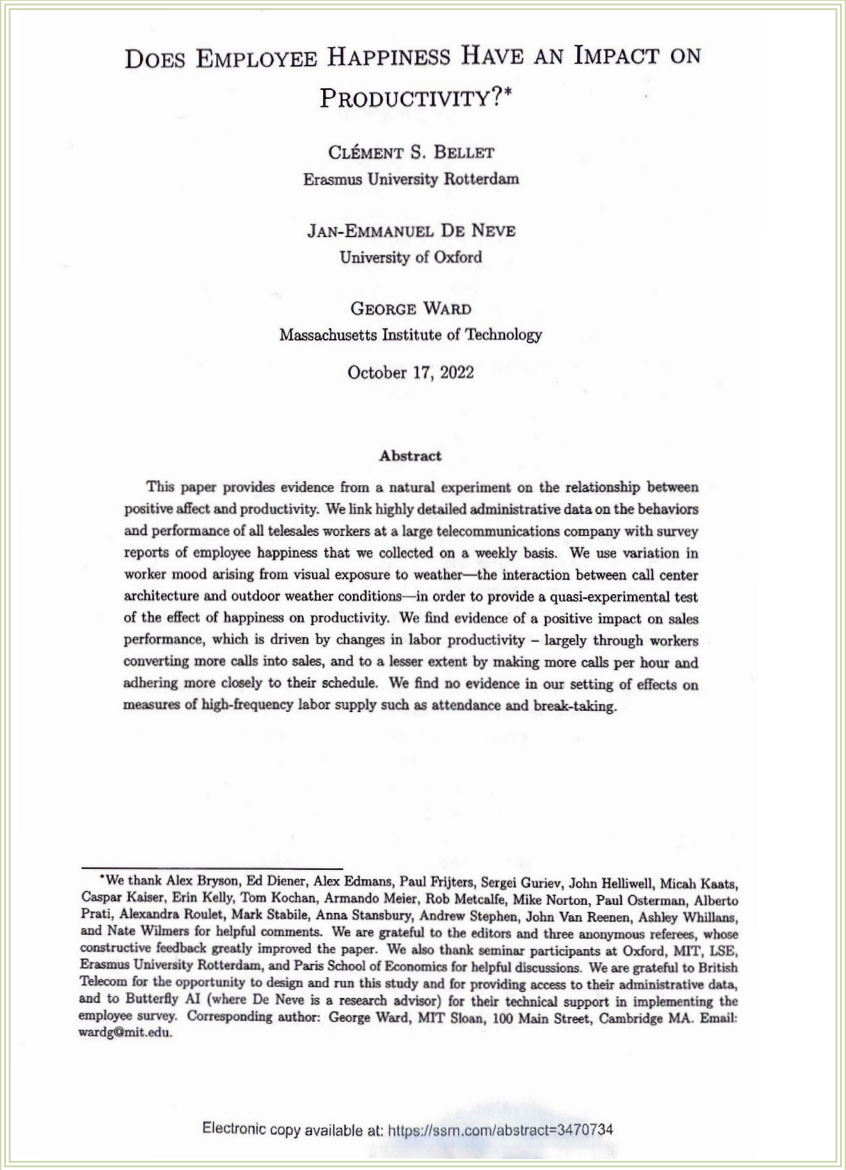
Work from Home & Productivity: Evidence from Personnel & Analytics Data on IT Professionals

Figure 11

Author: Michael Gibbs, Friederike Mengel, & Christoph Siemroth

Year released: 2021

Relation to project: Studies from multiple perspectives on productivity when working from home.



DOES EMPLOYEE HAPPINESS HAVE AN IMPACT ON PRODUCTIVITY?*

CLÉMENT S. BELLET
Erasmus University Rotterdam

JAN-EMMANUEL DE NEVE
University of Oxford

GEORGE WARD
Massachusetts Institute of Technology

October 17, 2022

Abstract

This paper provides evidence from a natural experiment on the relationship between positive affect and productivity. We link highly detailed administrative data on the behaviors and performance of all telesales workers at a large telecommunications company with survey reports of employee happiness that we collected on a weekly basis. We use variation in worker mood arising from visual exposure to weather—the interaction between call center architecture and outdoor weather conditions—in order to provide a quasi-experimental test of the effect of happiness on productivity. We find evidence of a positive impact on sales performance, which is driven by changes in labor productivity – largely through workers converting more calls into sales, and to a lesser extent by making more calls per hour and adhering more closely to their schedule. We find no evidence in our setting of effects on measures of high-frequency labor supply such as attendance and break-taking.

*We thank Alex Bryson, Ed Diener, Alex Edmans, Paul Frijters, Sergei Guriev, John Helliwell, Micah Kaats, Caspar Kaiser, Erin Kelly, Tom Kochan, Armando Meier, Rob Metcalfe, Mike Norton, Paul Osterman, Alberto Prati, Alexandra Roulet, Mark Stabile, Anna Stansbury, Andrew Stephen, John Van Reenen, Ashley Whillans, and Nate Wilmers for helpful comments. We are grateful to the editors and three anonymous referees, whose constructive feedback greatly improved the paper. We also thank seminar participants at Oxford, MIT, LSE, Erasmus University Rotterdam, and Paris School of Economics for helpful discussions. We are grateful to British Telecom for the opportunity to design and run this study and for providing access to their administrative data, and to Butterfly AI (where De Neve is a research advisor) for their technical support in implementing the employee survey. Corresponding author: George Ward, MIT Sloan, 100 Main Street, Cambridge MA. Email: wardg@mit.edu.

Electronic copy available at: https://ssrn.com/abstract=3470734

Figure 12

Author: Clement S. Bellet, Jan-Emmenuel De Neve, George Ward

Year released: 2022

Relation to project: Explains the relationship between happy people and their work environment in graphical and mathematical detail. Several human studies and evaluations were done in this research paper.

TYPOLOGY PRECEDENTS

Eishin campus, Higashino Japan

Figure 13: Patterns within Eishin Campus

Figure 14: Eishin Campus with people

Architect: Christopher Alexander

Year built: 1985

Relation to project: Uses Christopher Alexander knowledge to design a productive campus for students in Japan. This campus is an example of a design trial, and how it can have an impact on the emotions of people in culture.

PROJECT JUSTIFICATION

This project is important to me because I know multiple professionals (including myself) who desire flexibility in their schedule and to be able to work from different environments and locations in future career paths.

This project is important to society because the work force is making a shift to untraditional methods for employed individuals. Working remotely also provides a larger range of jobs to be acquired by professionals due to unnecessary relocation.

This project will be applicable to my final design by showcasing my research and knowledge of materials and fundamental design patterns, and applying them to create knowledge on how materials and pattern sequence affects mood and productivity. I will also be able to showcase my critical thinking and problem solving skills through thoughtful and intentional design. I will be able to design interior spaces for functionality, and show how functional, multi-purpose-designed spaces can help conserve square footage and promote productivity of working professionals.

Figure 15: Site Plaza in 2023
in Dickinson, ND

Figure 16: Site Plaza in 2008
in Dickinson, ND

PROJECT EMPHASIS

SUSTAINABILITY

My goal is to achieve a LEED certified building while reusing all of the structure, and reducing waste by utilizing materials that are already in the buildings. I will strive to create a collection of daylighting that warms the building in the winter, and brings sunshine to occupants, all while respecting and following Christopher Alexanders patterns in "A Pattern Language".

COMMUNITY

By focusing on reducing isolation within spaces, we can bring a strong sense of community and attachment back to people who have worked remotely due to lack of facilities during the Covid-19 pandemic. By allowing for spaces like collaborative work desks, cafes that offers different cultural foods, and breakaway spaces that intrigue conversation, through design we can allow people to feel more connected to their community.

PRODUCTIVITY

My design will focus mostly on what materials and patterns affect productivity in a positive way. Through research and studies done, I will be able to guide design to what information has been gathered for optimum productivity.

Figure 17

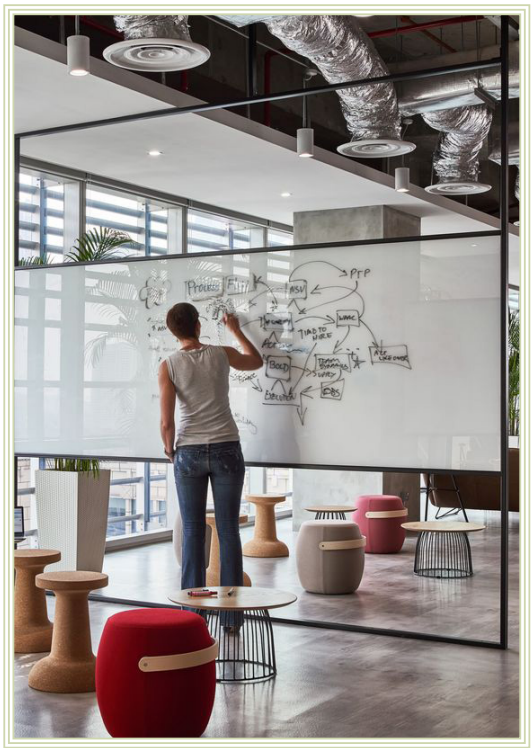


Figure 18

MAJOR PROJECT ELEMENTS

Building Program

Private Office

For individuals working on private tasks, will have permanently rented and floating options.

Collaborative Offices

For groups of people who are working together, or who are alone but do not require privacy to do their work.

Presentation Spaces

Multiple sized spaces for presentations ranging from 20-60 people

Cafe

To be able to hold capacity of people and offer healthy meal and snack options in a space that captures nature and allows for mental stimulation to soften.

Outdoor Areas

Connected to nature, several outdoor area opportunities will offer a break from work and option to work from outside. Wifi compatibility will also support this effort.

Event Space

Event space that fits up to 75 people

Conference Room

Multiple sizes of conference room are available for groups of people ranging from 5-20 occupants.

Lounge

Lounges will support connection amongst individuals and have a strong sense of community.

Zoom/Podcast Room

Occupants will be able to film and record high quality audios in rooms with ample sound protection and detection.

Storage Room

Storage rooms will house renting occupants equipment and building equipment.

USER + CLIENT

THE CLIENT

The client of this project entail investors and business owners who are wanting to invest in a commercial rental property, and people who will be working remotely. My client will want a vision of a happy and healthy working life style, and support often changes to keep their building fresh and top tier. My client will have built connections with large corporations but also have an entrepreneurial drive to keep businesses wanting to lease their space.

THE USERS

The users that will occupy this facility are working professionals. Working professionals do a wide range of activities including but not limited to: graphic designers, freelance artists, architects, computer designers, software engineers, social media managers, website designers, etc.

Figure 19: Airbnb Singapore Office

USER DESCRIPTION

GRAPHIC DESIGNERS

Graphic Designers can often work remote while most designing is done on their computer. They can also meet with clients here in private meeting rooms as well as our larger conference room spaces.

FREELANCE ARTISTS

People who rely on technology to produce crafts such as animation, podcast/radio fanatics, and small scale artistic mediums are welcome to use collaborative and private spaces.

ARCHITECTS

Designers such as Architects, Landscape Architects, and Interior Designers, may benefit from both collaborative and private work rooms.

PHOTOGRAPHERS/VIDEOGRAPHERS

Photographers and videographers will find all spaces fit their needs. From a relaxing outdoor working area, to inside the cafe, editing of photos and video clips will become second nature when exposed to proper work environments and communities.

SOFTWARE ENGINEERS

Anyone who finds using technology as their main source of workflow, will find both reclusive time and community engagement in our building.

DAILY USER USAGE

Building Staff	5-12	occupants
Freelance Working Professionals	20-50	occupants
Regular Rental Professionals	100-150	occupants

SITE CONTEXT

Dickinson, ND

THE SITE: MACRO

- Midwest
- Dickinson, ND
    - Downtown
    - Main Street
    - Historic District
- Commercial office design
    - Suburban office buildings
- Mixed-use buildings
- Outdoor space

THE SITE: MICRO

- Concentration on office space & work stations
- Environment that hosts communities, individuals alike & different
- Suburban office buildings

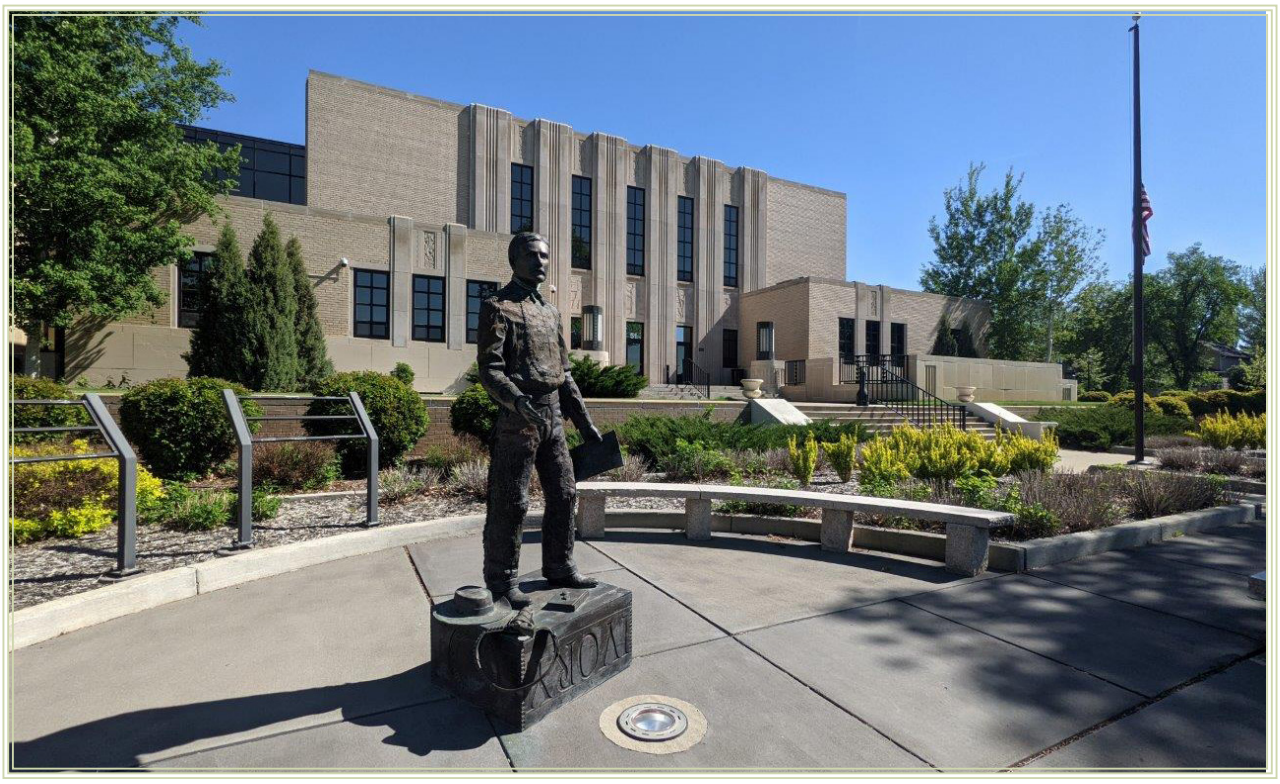


Figure 20

Figure 21

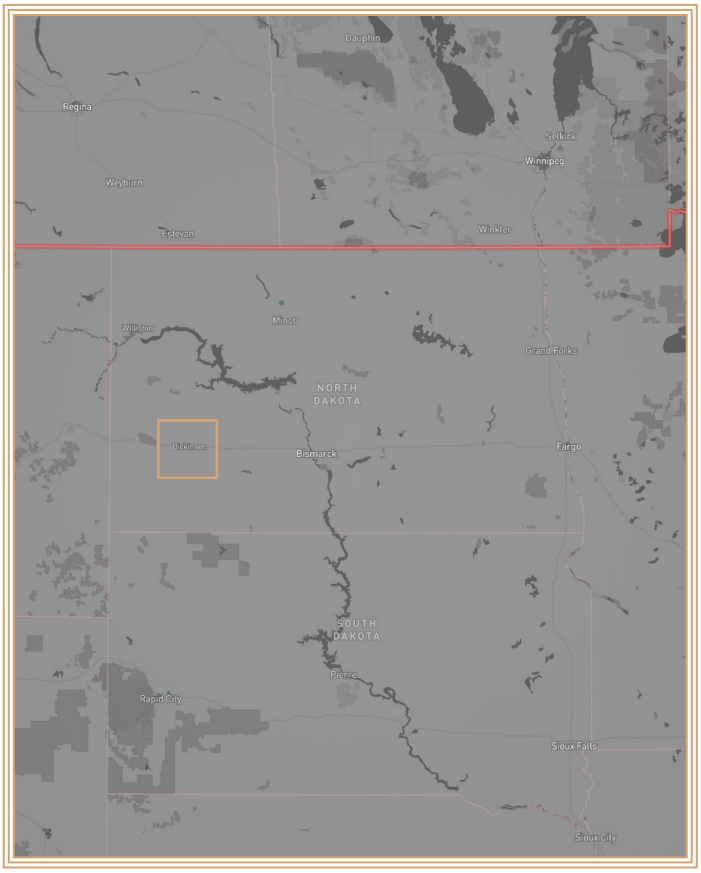


Figure 22

Figure 23

Figure 24

PROJECT GOALS

ACADEMIC

1) Research some of the best up-to-date information and timeless books to apply to project goal
2) Create and convey an easy-to-follow design
3) Practice construction detail information learned over my internship
4) Apply LEED standards

PROFESSIONAL

1) Create the best work in my portfolio
2) Showcase 1-2 different research methods/computer programs
3) Use my previous experience in Interior Design and material research to create interior spaces that work towards my goal

PERSONAL

1) Put forth the Adobe Photoshop skills I learned over my internship
2) Go to the gym 3x per week
3) Walk dogs daily

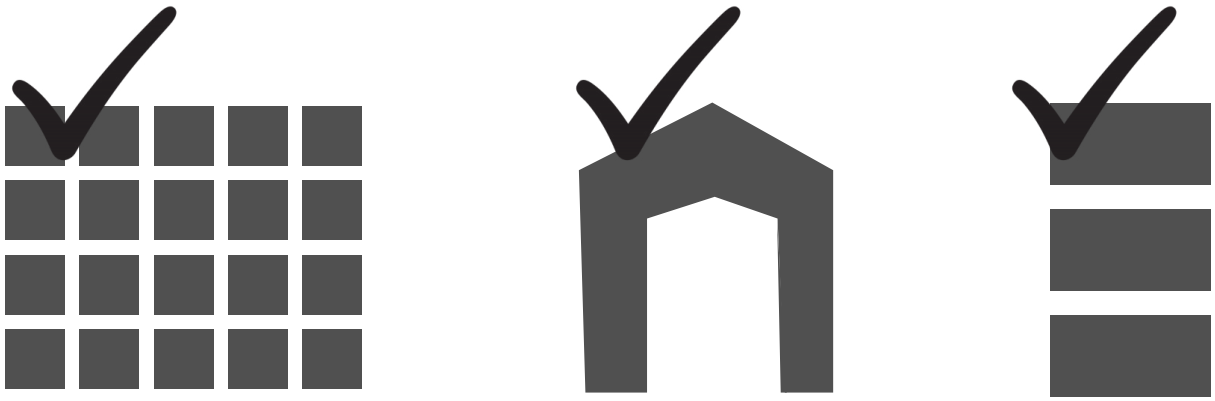


Figure 25

PLANS FOR PROCEEDING
Research Direction

FOUNDATIONAL RESEARCH
In order to research the foundational knowledge that the theoretical premise and unifying idea are built upon, deep knowledge and research on the book "A Pattern Language" by Christopher Alexander is required. This book provides timeless strategies based on multiple case studies related to architecture and design and how patterns affect the human mind.

PROJECT TYPOLOGY
My research starts with the knowledge and research of the world pandemic, Covid-19, and how it impacted working professionals. This typology includes commercially leased or owned office space, and multi-use buildings.

HISTORICAL CONTEXT
In order to research historical context, the case study of Eishin Campus is rather important to look at. This study was crucial in Christopher Alexander's study during his career as an author and architect. This historic development/campus covers the relations between A Pattern Language and it's affect on humans. Another source of study will be the history of th Covid-19 pandemic and how it affected employer/ employee productivity. This will be found through research studies (often done by graduate students and professional psychologists).

SITE ANALYSIS
The site is an abandoned boutique hotel and multi use building in Dickinson, ND. Currently sitting empty, there is large potential for event spaces, residential rentals, and multi purpose work spaces within the design.

PROGRAMMATIC REQUIREMENTS
The programmatic requirements for this thesis are based off of the research and knowledge explained by Christopher Alexander for what is required in the fundamental patterns in design. This timeless writing lays out 253 fundamental design patterns, and my design will highlight the following: (30, 124) activity nodes + pockets, (127) intimacy gradient, (129) common areas at the heart, (131) the flow through rooms, (132) short passages, (142) sequence of sitting spaces, (159) light on two sides of every room, and (171) tree places. These patterns will be the foundation for programmatic requirements for this thesis.

PLANS FOR PROCEEDING
Research Direction

DESIGN METHODOLOGY

The historical research strategy is the strategy most used during this thesis. The context of the books written by Christopher Alexander serves as the foundation of knowledge for research.

Qualitative research is the second basis for design in this thesis. Since this is such a current topic of discussion in our economy and environment, most research will be studies and papers that have been done and written by accredited professionals in marketing, real estate, architecture, and interior design.

Quantitative research will be the scientific foundation of what keeps people happy, calm, and productive at work. This data will be retrieved through a several studies and articles published by qualified individuals.

Figure 26

PLANS FOR PROCEEDING
Documenting Design Process

Through a variety of written sources such as books, journals, and publications, data will be documented and saved for future use. Design and Research process will be documented through computer led programs, as well as ongoing conversation with professors and faculty.

Software for Schematic Design Documentation

- Lumion
- Enscape
- Revit
- AutoCAD

Software for Design Documentation

- Revit
- Lumion
- Enscape

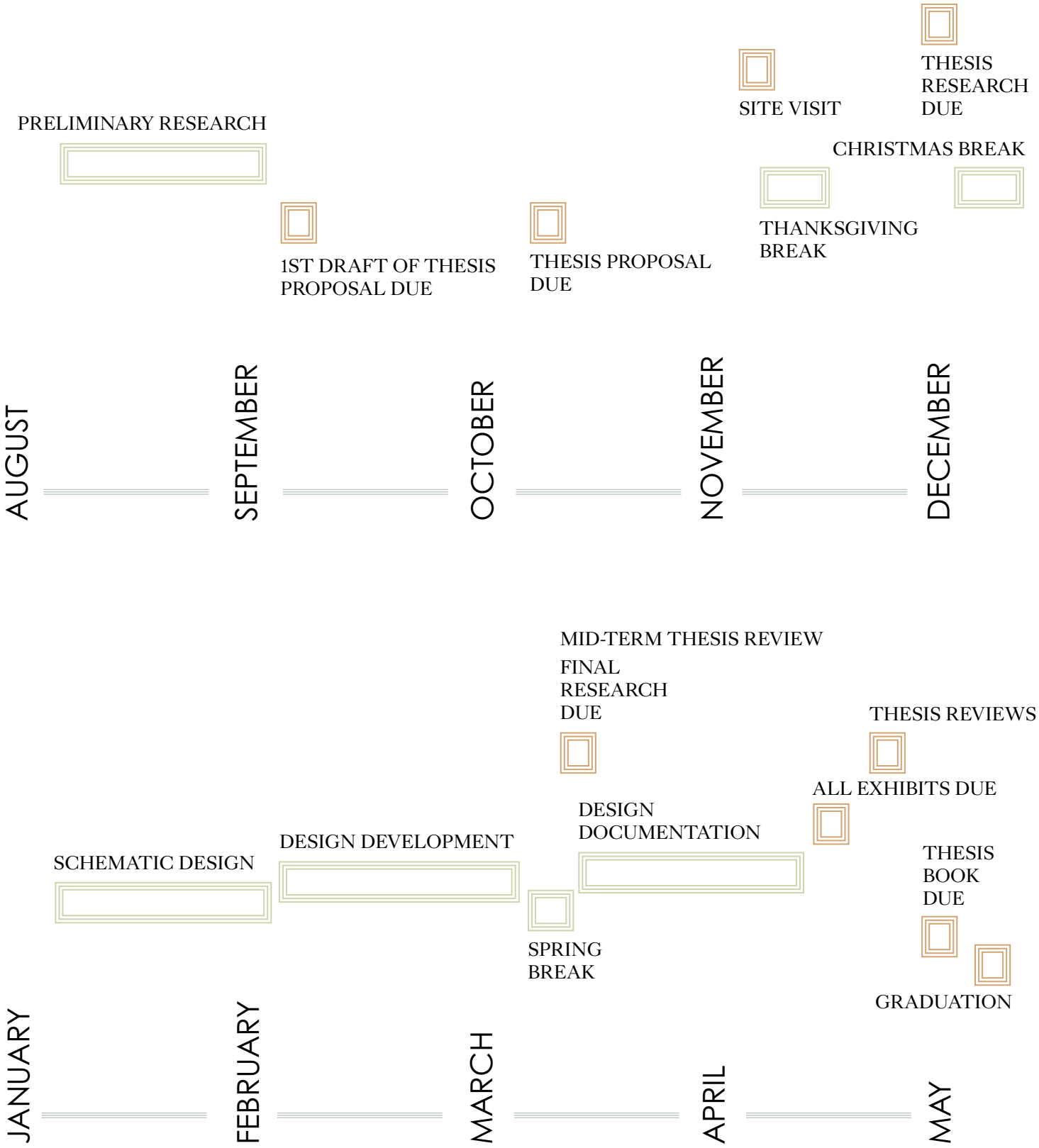
Software for Final Design Documentation

- Adobe Photoshop
- Adobe Illustrator
- Adobe InDesign
- Adobe Premiere Pro

Final Documentation

- Presentation Board
- Presentation Video
- Presentation Slideshow
- Presentation Book
- Presentation Hard Cover Book
- Presentation Material Board with Individual Card Information

SCHEDULE OF PROJECT



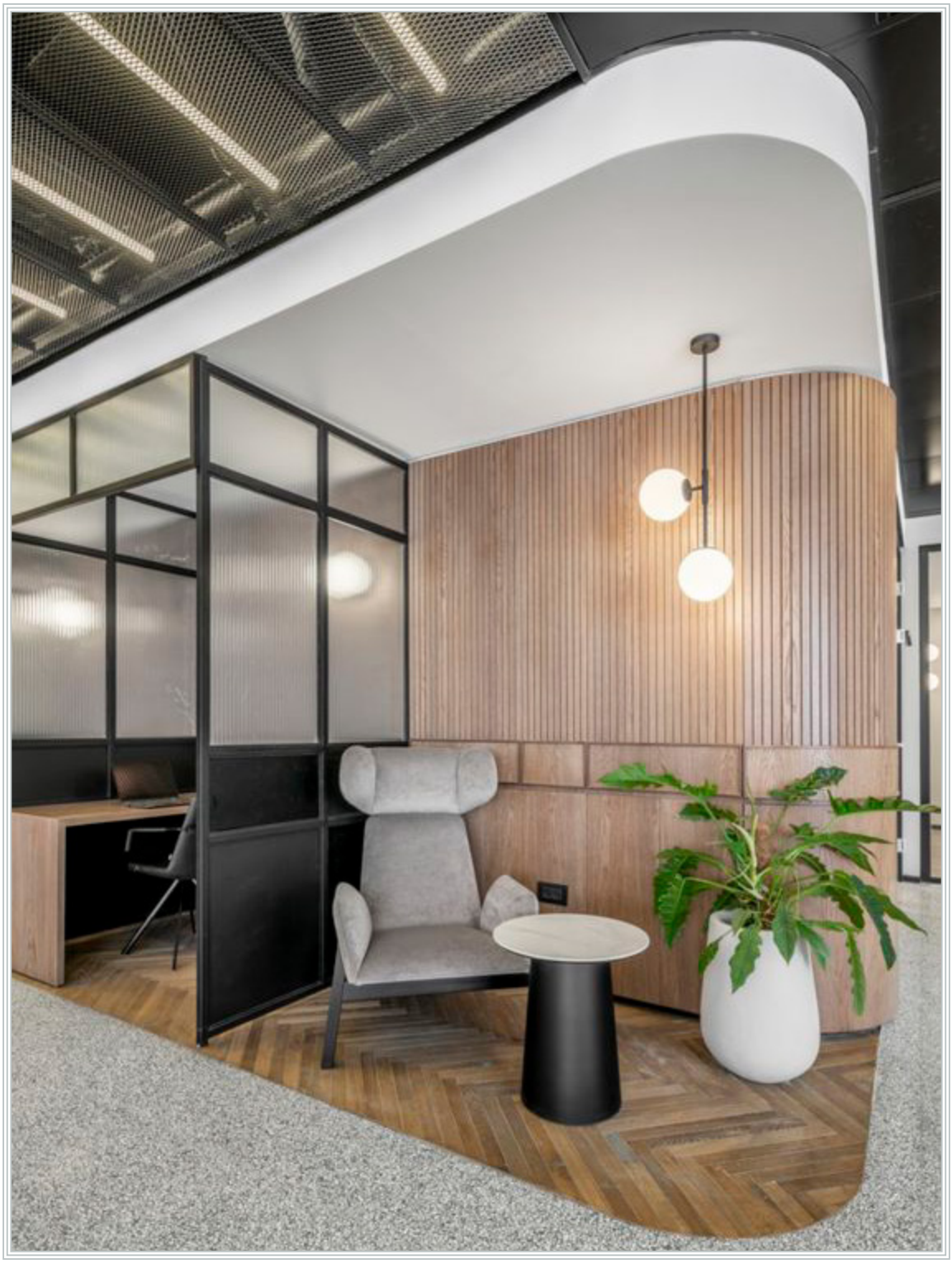


Figure 27

THESIS RESEARCH

THEORETICAL PREMISE

PREMISE FOR INVESTIGATION

The start of this investigation begins with prior to the Covid-19 pandemic. Americans were in a tight quarrel with work, obsessed and intertwined with their careers. We surveyed employees and asked if they have resources at home that equipped them to learn and produce at the same rate as they did in the office, and they gave the same honest answer: *no*. Many people would describe a work/learning environment as controlled, while the home is often uncontrollable. Noise is not as controlled in a home as it is in a building designed for concentration. Work equipment and space is often not nearly as functional to what is provided in a standard working building (I know many who have even had to work from a kitchen table). My premise for investigation is finding the details at which people are distracted by, the equipment and space people are lacking, and the productivity level they wish to achieve, and use pattern languages to enhance empty or under-used spaces to reach optimal productivity and marketability.

Figure 28

THESIS TOPIC RESEARCH RESULTS

RESULTS FROM RESEARCH

The results of my research answers my question: Have large office buildings lost use since the Covid-19 pandemic? Large office buildings are sitting empty, rentless more now than ever before. The work force has *changed*. What can we do about this? How can we transform so many magnificent structures into places that people, communities, and cities want and need?

The link between my theoretical investigation and the impact of this project is key. How can we redesign structures for a use they were not necessarily originally designed for? Can we spare the structures that were meant to stand for 100+ years and turn them into new and needed, rejuvenated spaces like community work areas, small rental flex spaces, and residential rentals?

The direction of this thesis boasts to complete two design/re-design commercial office projects into spaces that are both needed by the employer ad wanted by the employee. I will work to design materials and patterns within the spaces that make rent-ability and marketability easer for the owners.

Christopher Alexander's work in "A Patten Language" is a timeless classic that the fundamentals of Architecture, Interior Design,, and Site Design are built upon. I will connect his work to the "here and now", referencing to the change in working environments since Covid-19.

CHRISTOPHER ALEXANDER:
"A PATTERN LANGUAGE"

HERE & NOW

Figure 29

PRECEDENT STUDIES

"A Pattern Language"

PROJECT INFORMATION

Released: 1977
Author: Christopher Alexander

DESCRIPTION

There are 253 patterns that make up methods for designing and constructing practical, inviting, and safe designs in any topography and at any scale or region. This book covers patterns in materials, concrete, technology, and experiences. The patterns apply to Interior Design, Architecture, and Landscape Architecture, as well as common design. This book is 1171 pages and was published by Oxford University Press in 1977. This book provides a "base map" or "set of rules" for how design should be started and followed through.

STUDY

This precedent study was done by reading the entire book and highlighting patterns and theories that after choosing my site, I thought would be relevant to my goal. The patterns were hand selected for each aspect of the project, and serve as a base point for the projection of design. The patterns are not only individual, but they apply to one another as well. Through this "web" of pattern design, my design followed closely to the recommendations and theories that best suited a retrofit for a commercial office building necessities.

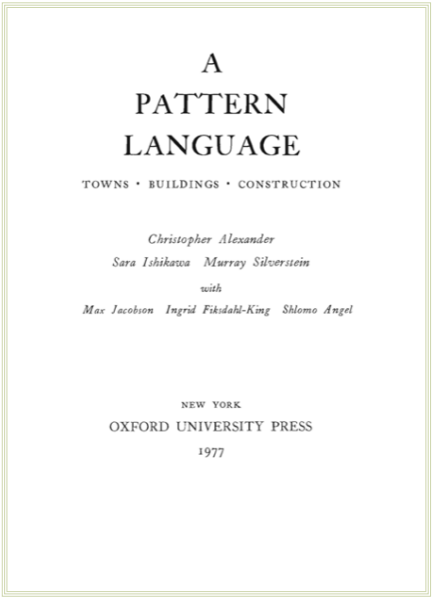
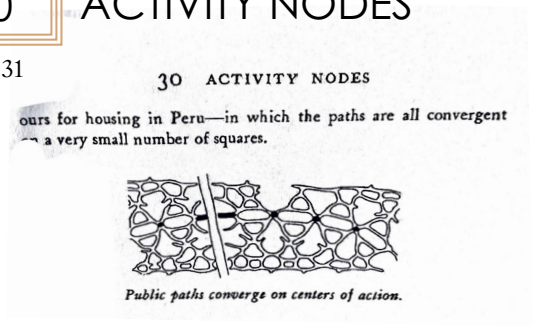

A
PATTERN
LANGUAGE
TOWNS · BUILDINGS · CONSTRUCTION
Christopher Alexander
Sara Ishikawa Murray Silverstein
with
Max Jacobson Ingrid Fiksdahl-King Shlomo Angel
NEW YORK
OXFORD UNIVERSITY PRESS
1977

Figure 30

> At the core […] is the idea people should design their homes, streets, and communities. This idea […] comes from the observation most of the wonderful places of the world were not made by architects, but by the people.
> —Christopher Alexander et al., A Pattern Language, front bookflap

30 ACTIVITY NODES

Figure 31


30 ACTIVITY NODES

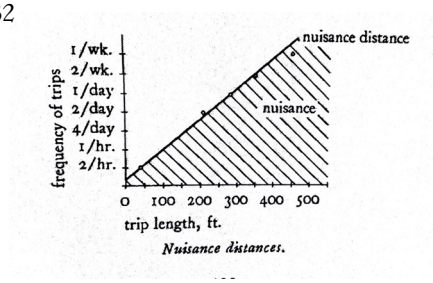
ours for housing in Peru—in which the paths are all convergent ... a very small number of squares.

Public paths converge on centers of action.

Pattern #(30) the Activity nodes are used to create intensity of action, Alexander says that they must attract the same kind of person, at the same time of day and that these should be distributed rather evenly.

82 OFFICE CONNECTIONS

Figure 32

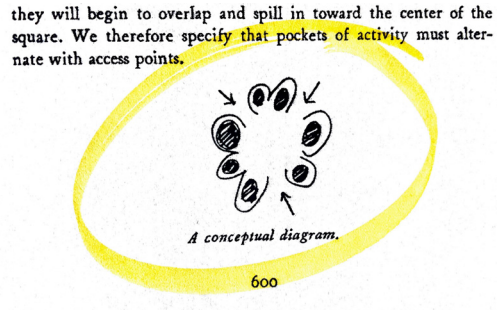


Nuisance distances.

In Pattern #(82), Office Connections, Christopher Alexander says that "current architectural methods often include a proximity matrix, which shows the amount of movement, between different people, and functions in an office. These methods always make that tacit assumption that the functions which have the most movement between them should be closest together. However, as usually stated, this concept is completely invalid. The concept has been created by a kind of Taylorian quest for efficiency, in which it is assumed that the less people walk about, the less of their salary is spent on "wasteful walking". The logical conclusion of this kind of analysis is that, if it were only possible, people should not have to walk at all, and should spend the day vegetating in their armchairs.

124 ACTIVITY POCKETS

Figure 33


they will begin to overlap and spill in toward the center of the square. We therefore specify that pockets of activity must alternate with access points.

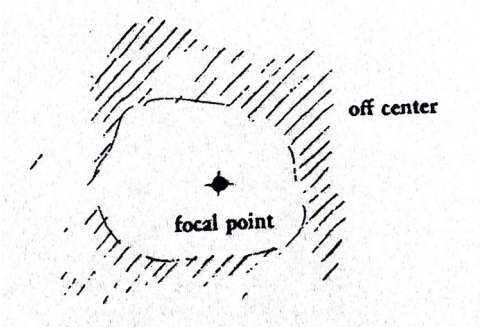
A conceptual diagram.

600

Pattern #(124) Activity pockets, call attention to the relationship between the number of people in a pedestrian area, the size of the area, and a subjective estimate of the extent to which the area is alive. In this case, the waiting area in front of the restaurant was calculated.

126 SOMETHING ROUGHLY IN THE MIDDLE

Figure 34



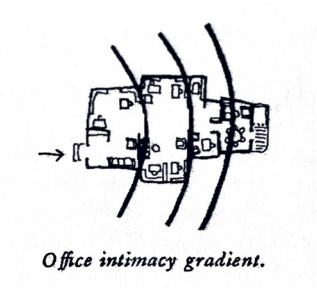
Pattern #(126) Something Roughly In The Middle, states that by making something which gives a strong and steady pulse to the environment,, it draws people toward the center. In this case, rentable and flexible kiosk stations are used as a fun and lively way to invite people towards the center of the space.

PRECEDENT STUDIES

"A Pattern Language"

127 INTIMACY GRADIENT

Figure 35

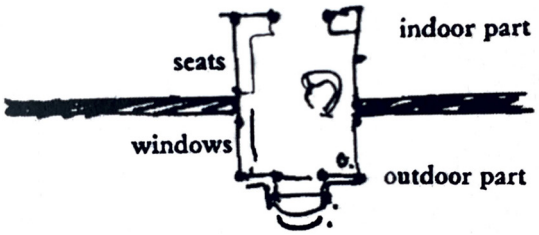


Office intimacy gradient.

Pattern #(127) the Intimacy Gradient, emphasizes that people need a gradient of settings, which have different degrees of intimacy. A homogeneous space, where every room has a similar degree of intimacy, rubs out all possibilities of genuine and unique social interaction within the building.

130 ENTRANCE ROOM

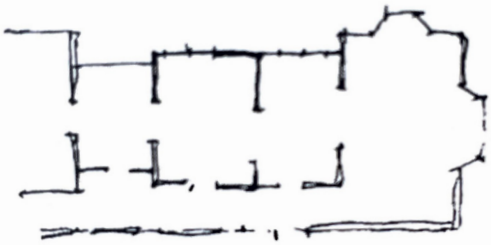
Figure 36



Pattern #(130) the Entrance Room, says to make a light-filled room at the main entrance of the building to mark the entry AND to straddle the boundary between indoors and outdoors.

131 THE FLOW THROUGH ROOMS

Figure 37

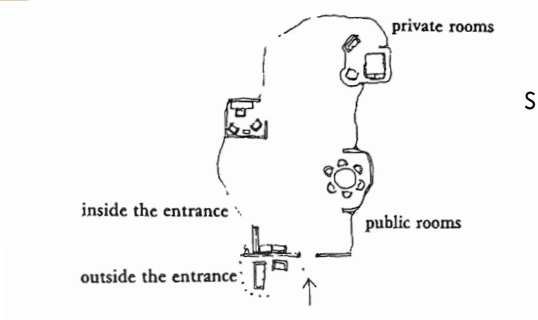


Passage in parallel forms the loop.

Pattern #(131) the Flow Through Rooms, says that the movement between rooms is as important as the rooms themselves, and its arrangement has as much effect on social interaction in the rooms, as the outside of the rooms. In a complex social fabric, human relations are inevitably subtle. It is essential that each person feels free to make connections or not, to move or not, to talk or not, and to change the citation or not, according to his or her judgment. In this case, the shared kitchen between the coffee cafe and the restaurant is an example.

142 SEQUENCE OF SITTING SPACES

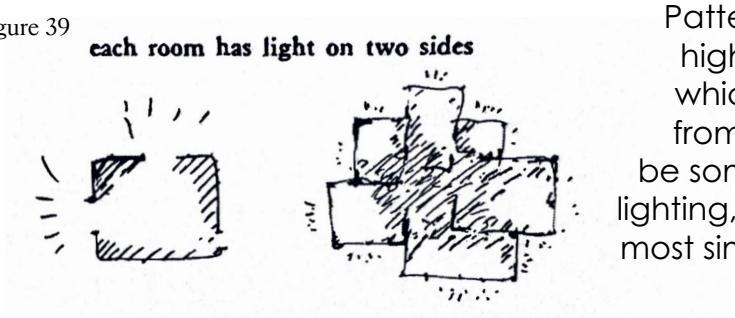
Figure 38



Pattern #142 sequence of Sitting Spaces states: every corner of a building is a potential sitting space. But each sitting space has different needs for comfort and enclosure according to its position in the intimacy gradient.

159 LIGHT ON TWO SIDES OF EVERY ROOM

Figure 39



Pattern #(159) Light on Two Sides of Every Room, highlights that in rooms lit on one side, the glare which surrounds peoples faces prevents people from understanding one another. This glare may be somewhat reduced by supplementary artificial lighting, and well-designed window reveals, but the most simple way to overcome glare is to give every room two sides of windows.

In summary, this study provides a "base map" or "set of rules" for how design should be started. This will guide my re-design of old spaces and provide knowledge for the proper "kit of parts". "A Pattern Language" is a book written by architect Christopher Alexander that proposes a comprehensive set of design patterns for buildings and communities. Of the 253 patterns, each pattern describes a problem and provides a solution that can be applied in various contexts.
The patterns are designed to create spaces that are comfortable, functional, and aesthetically pleasing. The book emphasizes the importance of the relationship between human needs and the built environment, and how design can influence behavior and well-being.

PRECEDENT STUDIES

Eishin campus, Higashino Japan

PROJECT INFORMATION

Location: Higashino-shi, Japan
Completed: 1989
Architect: Christopher Alexander
Lot Size/Acreage: 9 hectares

DESCRIPTION

This design was formed by faculty, staff, and students taking part in the process. The school principle rebuilt in hopes of rebuilding a "new culture". With these hopes in mind, architect Christopher Alexander came to mend together the physical layout and spiritual cooperation between the members of the school.

STUDY

The reason this campus was studied so closely is to see if Christopher Alexander's patterns worked, and if majority of people liked them. This is one of the only things designed by Christopher Alexander in his lifetime, and although he understood the psychological impact of architecture, this study goes to prove if he understood that practical impact of architecture.

CURRENT USAGE

The current use of the Eishin Campus in Japan today serves as a tourist attraction of Christopher Alexandre life work.

Figure 40: Patterns within Eishin Campus

Figure 41: Eishin Campus with people

PRECEDENT STUDIES

Eishin campus, Higashino Japan

Figure 42

Figure 43

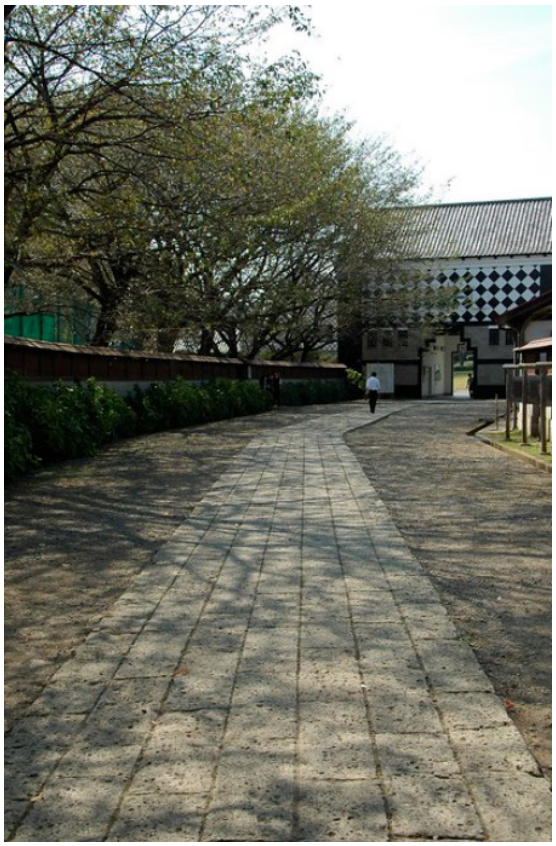


Figure 44

Figure 45

Figure 46

PRECEDENT STUDIES
Interview With Owners of Dickinson, ND Property

PROJECT INFORMATION

Location: Dickinson, ND
Completed: 1951, renovation in 1997
Architect: Tom Slawson
Square Footage: 44,827 sq ft
Lot Size: 23,100 sq ft

INTERVIEW DATE: 10/23/2022

When you purchased the building, what was it's condition?
It had hotel rooms that were ready to go - beds made, pillows, everything was there.

What is the current usage on this property?
This building has been sitting empty since 2018.

Why did you decide to originally sell in 2012?
We decided to sell for personal reasons, we took another business endeavor and our attention was with that.

Do you think the community would support a building like my projected design?
Our community does not have a staple building that people go to for shopping, working, a nice restaurant, or a daycare like that! I think with the community growing because of the oil, we need a building that supports our ongoing needs.

Figure 47

PRECEDENT STUDIES
Interview With Owners of Dickinson, ND Property

What was your goal when buying the property?
Our goal was to turn it into a fitness center, we taught Taekwondo in a studio on the third floor for 3o years.

Anything else I should know?
There are two towers on the building that serve as an income for us. There is two towers attached to the building by AT&T, and one free standing tower on the property used by Verizon. Since it is the tallest building in town, these carriers took advantage of this.

In what year did you dedicate the main floor to commercial rental space and why?
We knew it would be a great location for small businesses to curate their livelihoods. We had some people in the community ask about it and that is when it sparked our idea - "Hey, yeah we should really do this!".

Do you see this building having the potential to be renovated and turned into something that town and community would benefit from?
Oh my gosh - yes! We have said so many times, for the right person, yes this is a project, but the outcome could be absolutely amazing for both the community and the buyer. This building holds so much history in the town on Dickinson, I still

Figure 48

HISTORICAL, CULTURAL, AND SOCIAL CONTEXT

HISTORICAL CONTEXT

NORTH DAKOTA

The Dickinson, North Dakota property was built in 1952, as the Ray Hotel. This hotel was located right across the street from the train depot and was the "hub" of the 50s, 60s, and 70s with 2 restaurants and a bar accompanying the 80 hotel rooms. In 1995, it was purchased by a couple with hopes in turning it into a fitness center and commercial rentals. The building currently offers 7 rental spaces, most with their own entrance/exit, and a 175 person event space on the 3rd floor. It has been sitting vacant since 2015.

AMERICAN WORKFORCE

The 40-hour work week was established in 1926 by Henry Ford as a part of his business at Ford Car Dealers. Since then, the standard work day has been 8am-5pm in American, with a typical 30 minute lunch.

CULTURAL CONTEXT

The cultural context around the working environment has always been thought of as the more labor you do, the less educated and successful you are. This stigma continues today. Often people look at those who sit in private offices as "big-wigs" and those who sit at cubicles as unhappy. Are we wrong in assuming this? Since technology emerged, many people have worked from their couch or a coffee shop while running multi-million dollar companies. The culture of community in the work place has been overlooked, as most spend 8+ hours per day in the office while on average only spending 4+ with their loved ones at home.

SOCIAL CONTEXT

The social context of work, has never really been thought of as "social" in America. Most Americans think of sitting at a cubicle, answering phones, and working on a computer all day when they think of work. Rarely is a work space thought of as cozy, inviting, and energetic. Why is that? The answer is the Architecture and Interior Design have not supported a social culture and community in the work place.

SITE ANALYSIS
Site Summary

NORTH DAKOTA

The North Dakota site was choose because it has been a vacant building for a very long time. This building is not only the tallest building in Dickinson, ND at 6-stories, but is also one of the most historic. Designing around history is a challenge that intrigues many designers like myself. Located of the Main Street of this small, 17,000 person town, many locals are emotionally invested in this property and ready to see it profit the community.

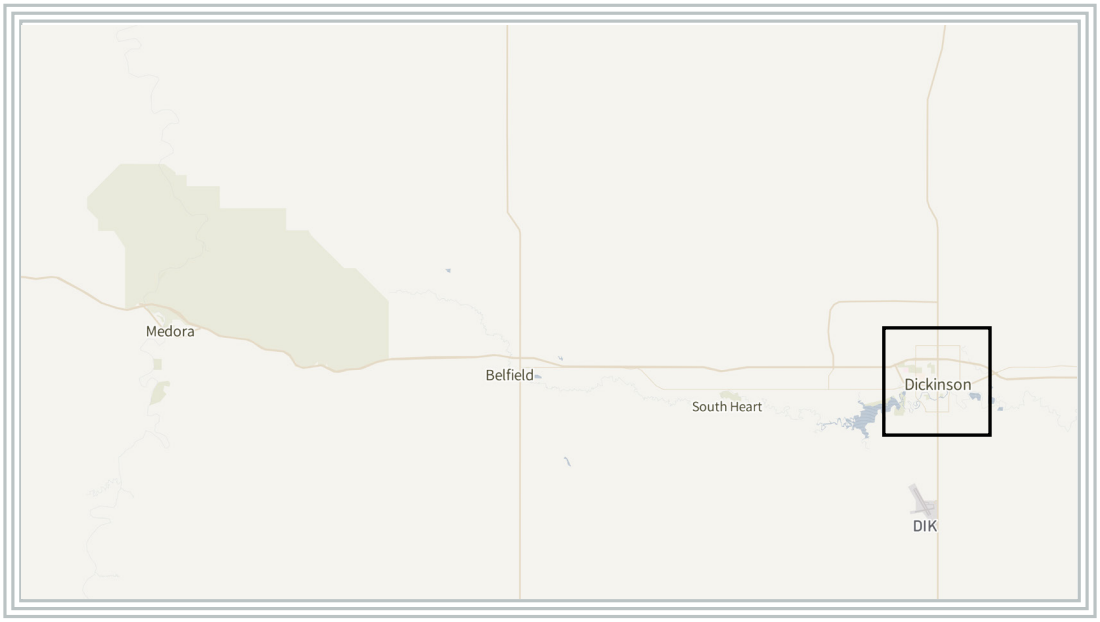


Figure 49

SITE ANALYSIS
Dickinson, North Dakota

Figure 50

DICKINSON, NORTH DAKOTA

Address: 31 E Villard St,
Dickinson, ND 58601

Figure 51

Figure 52

Figure 53

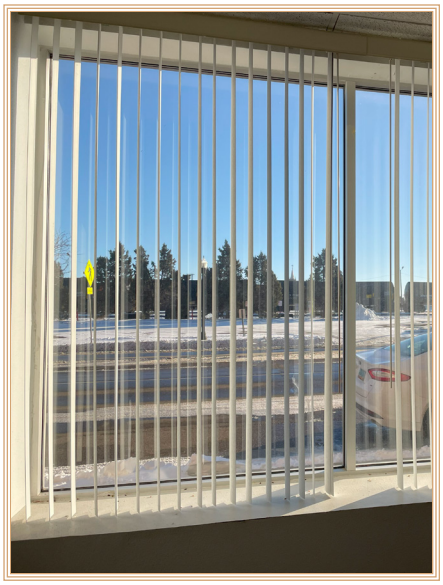


Figure 54

SITE ANALYSIS
Sun Patterns + Weather Patterns

SUN PATTERNS
NORTH DAKOTA

In the summer months (June-August), Dickinson experiences long days with extended periods of daylight. During the summer, the sun rises early, at around 5:30am, and sets late, at around 9:30pm, providing up to 16 hours of daylight.
In the winter months (December-February), Dickinson experiences shorter days with fewer hours of daylight. During the winter, the sun rises later, at around 8:30am, and sets earlier, at around 4:30pm, providing only around 8 hours of daylight. This shorter daylight period is due to the tilt of the Earth's axis, which is oriented away from the sun during this time of year in the Northern Hemisphere.

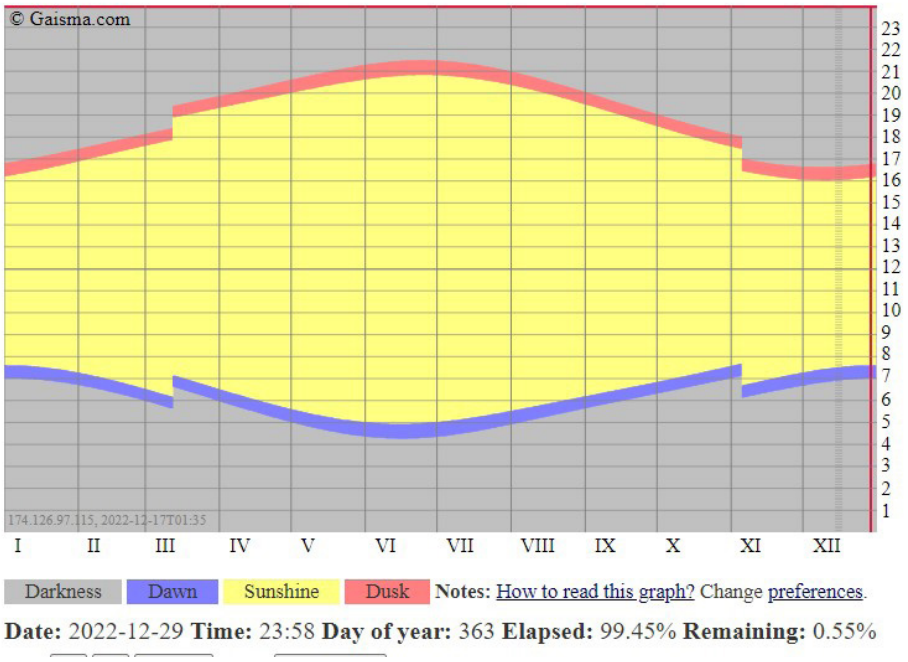


Figure 55

CLOUD COVERAGE
NORTH DAKOTA

Western North Dakota experiences relatively clear skies throughout much of the year, which allows for optimal sun exposure.

PRECIPITATION
NORTH DAKOTA

This is due to the area's relatively dry climate, which is influenced by its location in the rain shadow of the Rocky Mountains to the west.

Variable	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Insolation, kWh/m²/day	1.36	2.19	3.25	4.56	5.56	6.00	6.33	5.34	3.85	2.54	1.55	1.14
Clearness, 0 - 1	0.46	0.49	0.49	0.51	0.52	0.52	0.57	0.55	0.51	0.48	0.45	0.45
Temperature, °C	-12.61	-9.77	-4.16	4.69	12.65	17.32	19.97	18.86	12.74	5.01	-4.47	-10.59
Wind speed, m/s	7.14	6.84	6.95	7.09	6.95	6.38	5.88	5.94	6.48	6.81	6.45	6.77
Precipitation, mm	10	10	17	42	61	92	55	45	38	25	13	9
Wet days, d	8.1	7.0	8.1	8.6	10.3	11.0	8.9	7.5	7.3	5.5	6.2	8.4

These data were obtained from the NASA Langley Research Center Atmospheric Science Data Center; New et al. 2002
Notes: Help. Change preferences.

Figure 56

SITE ANALYSIS
Site Characteristics

ROADWAYS AND VEGETATION
NORTH DAKOTA

The main roads in Dickinson include Interstate 94, which runs east-west through the city and is a major transportation route for both commercial and personal vehicles. Other major roads in the area include Highways 22 and 10, which provide access to neighboring towns and cities. My site is located along main street, names East Villard Street.

As for vegetation, the region around Dickinson is predominantly grassland with scattered shrubs and trees. The grasslands are home to a variety of native prairie grasses. In addition to grasses, wildflowers such as sunflowers, asters, and goldenrod can be found throughout the area.

In recent years, efforts have been made to incorporate more vegetation into the roadway system in Dickinson. This includes planting trees and shrubs along roadsides, as well as incorporating green spaces into roadway design. These efforts not only improve the visual appeal of the area, but also provide important ecological benefits, such as improved air quality and stormwater management. These features have been impimented across the street from my site, and in hopes will be encorporated into my final site design with the addition of the park to the west of my site.

Figure 57

PERFORMANCE CRITERIA

SPACE ALLOCATION

Space Allocation within both my designs will include dedication to working spaces and large tables, breakout spaces and reflection rooms, as well as spaces with strong dedication to nature and the surrounding community. Placing these spaces within the building will not only include the best use and practice of using structure that is already there, but also relying heavily on Christopher Alexander's principles in A Pattern Language Theory. Also included in design will be cafe/restaurants, recording studios with proper acoustics, and branding/content rooms with ample lighting.

MATERIAL PERFORMANCE

My focus on materials will play a large role in the impact of users psychology and focus in the design. Through materials, proper mood, energy, and emotion will be set, which is fundamental to level of productivity.

CODE COMPLIANCE

The Dickinson, ND site is located in a historic district and has not had structural updates since 1952. Research into this Renaissance Zone is what will achieve our code compliance goal.

COST

The cost of these designs will reach for afford-ability and look towards donations and tax dollars for funds. The timeless design on interior materials and environments will have a goal to last 75+ years.

BEHAVIORAL PERFORMANCE

This business design template will plan to be open 24 hours a day. With key-card access only, and pre-approved background checks, my design will host occupants 24/7.

PSYCHOLOGICAL IMPACT

The psychological impact we plan to have on occupants is a driving factor behind my design. We want to change peoples perspective on the typical work day and design intentionally to impact occupant productivity.

PERFORMANCE CRITERIA

Interaction Network

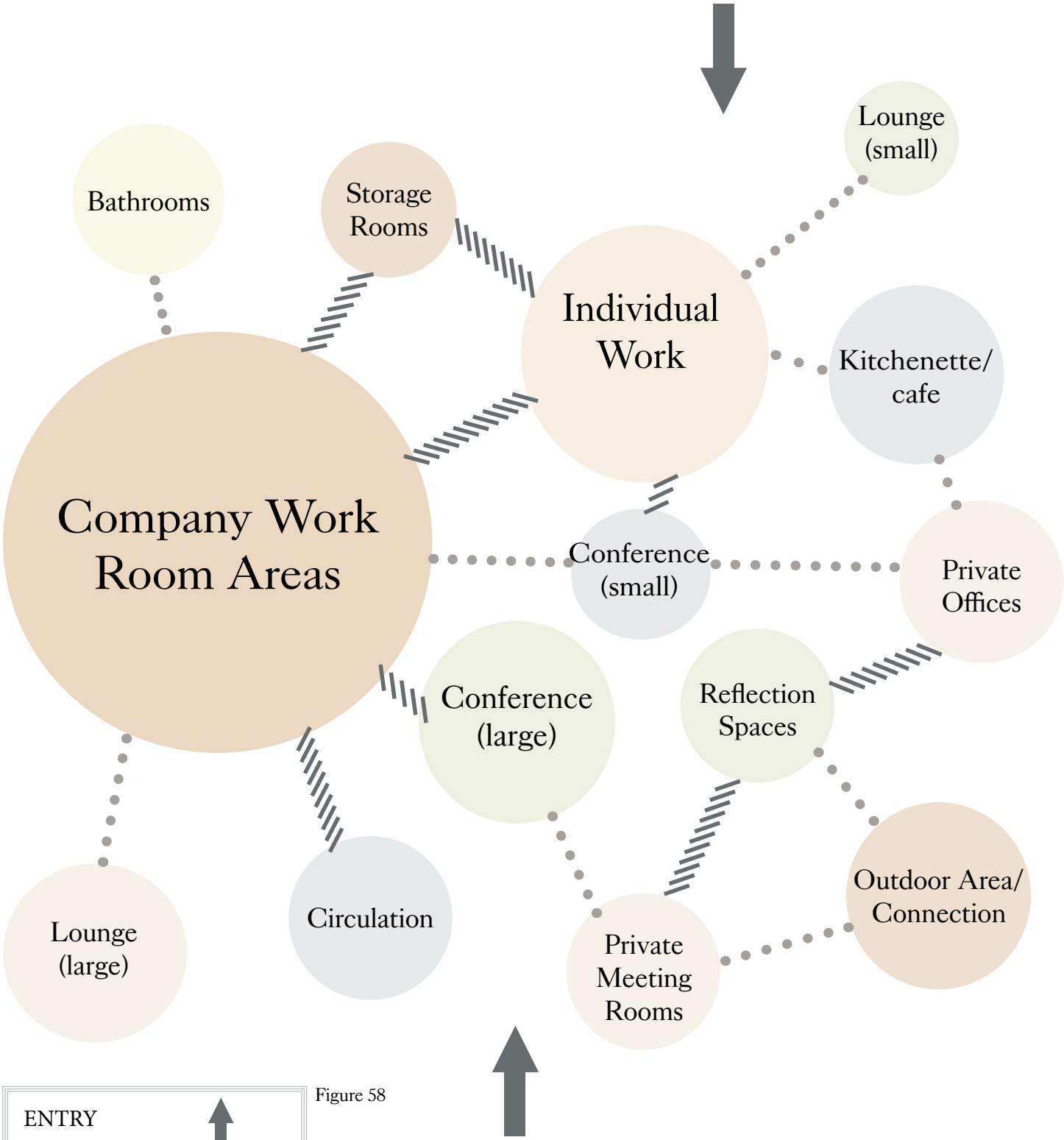


Figure 58

PERFORMANCE CRITERIA
Interaction Matrix

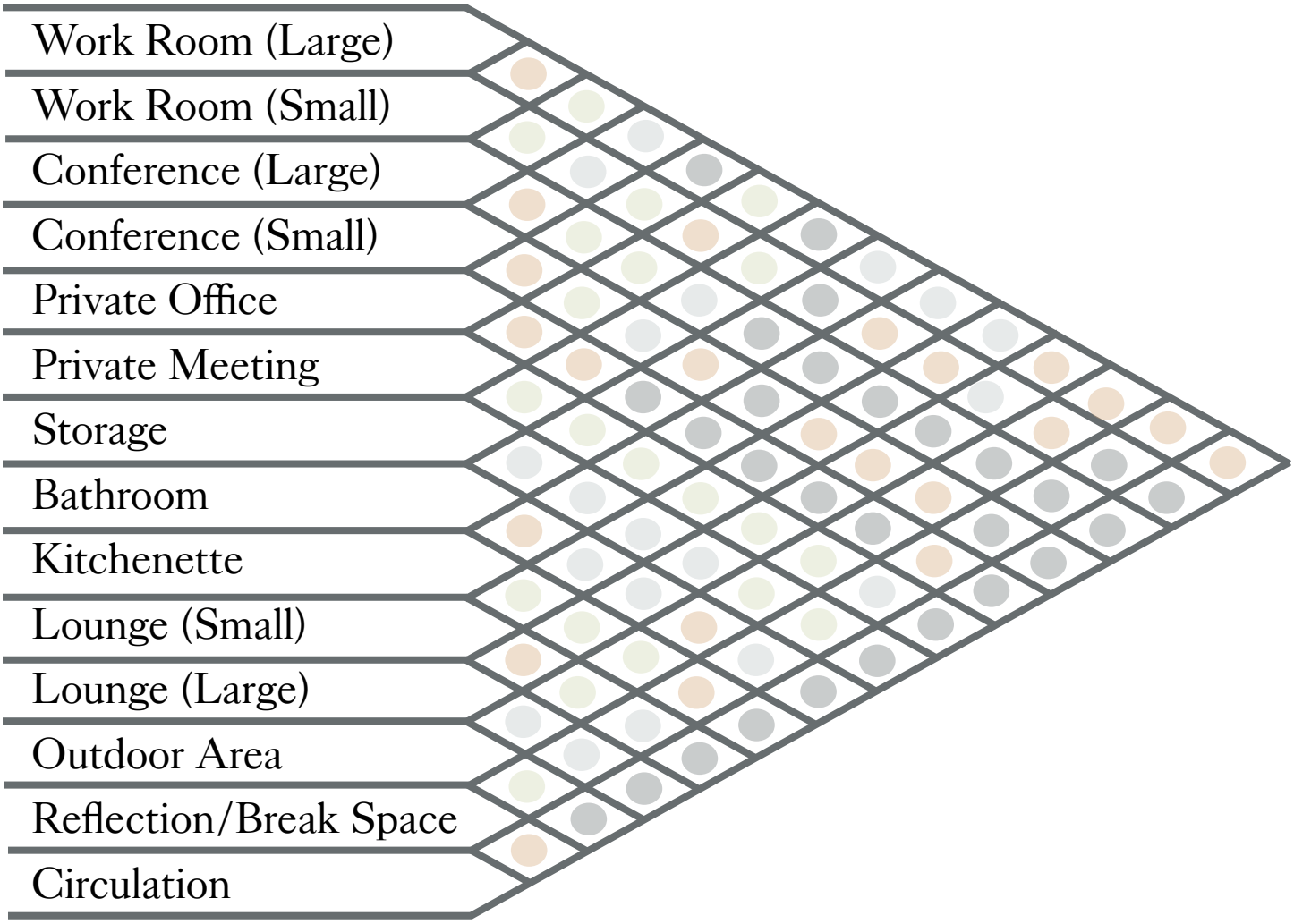
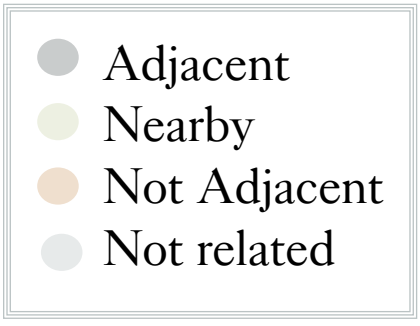


Figure 59



PERFORMANCE CRITERIA

Space Allocation Table

SPACIAL PROGRAM	SPACIAL PROGRAM	SPACIAL PROGRAM %
Work Room	>40,000	76%
Work Room	<10,000	19%
Conference Room	500	1%
Conference Room	200	.004%
Private Office	<50	.001%
Private Meeting	<50	.001%
Storage Room	<200	.004%
Bathrooms	200	.004%
Kitchenette	100	.002%
Lounge	100	.002%
Lounge	50	.001%
Outdoor Area/Connection to Nature	100	.002%
Reflection Spaces	250	.5%
Individual Work Room	250	.5%
Circulation	500	1%
TOTAL	52,550	100%

Figure 60

PERFORMANCE MEASURE

I will be measuring behavioral performance (usage patterns), psychological impact (aesthetics, materials, sensory experiences), productivity, materials, and patterns and how they affect productivity.

PERFORMANCE MEASURE SOURCE

My source of inspiration comes from Christopher Alexander's A Pattern Language and how well it can relate to building/retrofit for commercial offices in a multi-use building. Marketability and sale of leased space within the projects will also be a performance measurement.

PERFORMANCE ANALYSIS

An analysis of the commercial office building market in retrospect to locations nearby, computer simulations or surveys will be used to obtain performance criteria of productivity within workers/employers

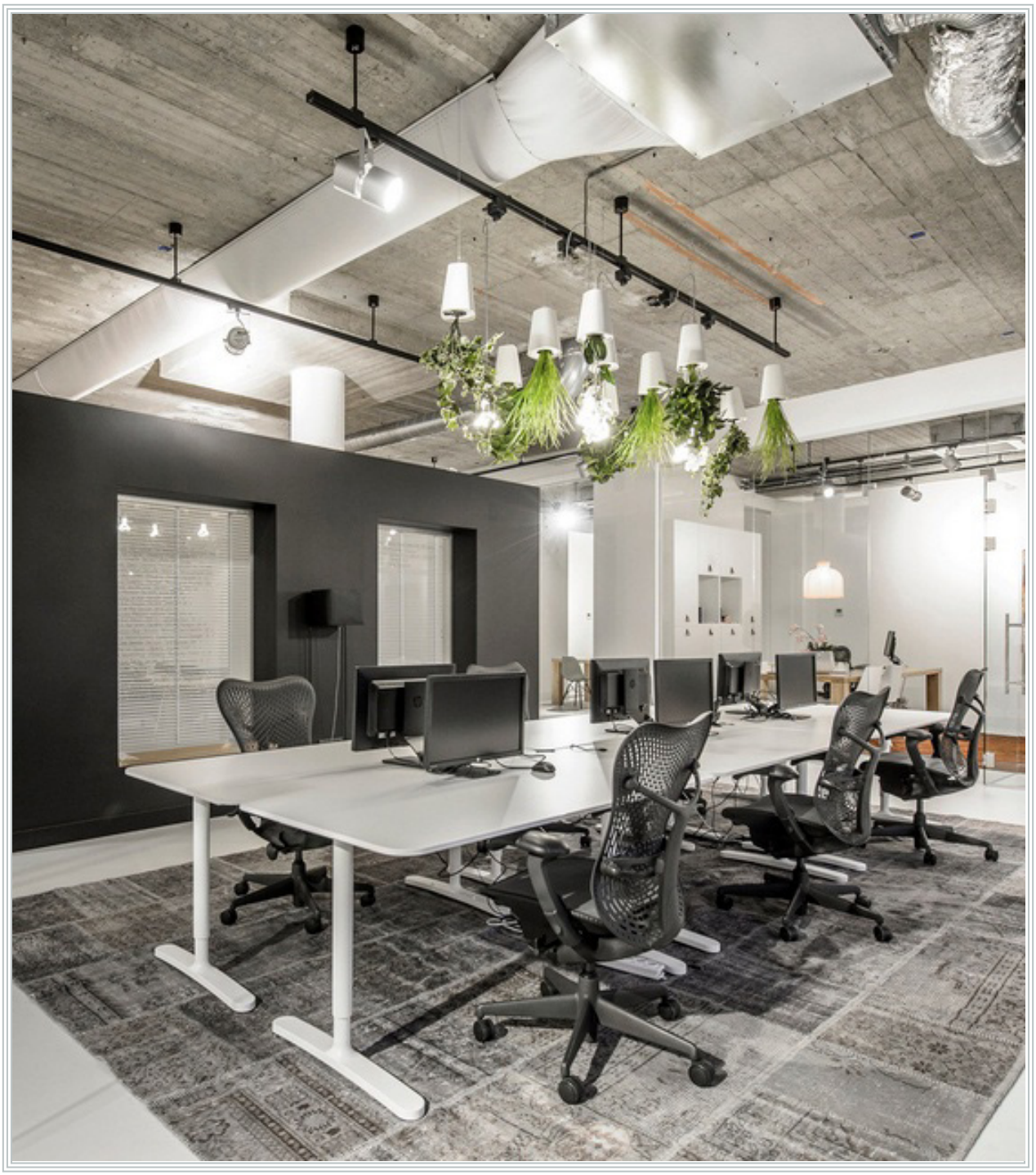


Figure 61

DESIGN SOLUTION

PROCESS DOCUMENTATION
Existing Conditions

Figure 62

Figure 63

Figure 64

This property is in excellent structural condition and is ready for a new purpose. It has served as a cornerstone of downtown Dickinson and the surrounding area for a significant period of time. However, the first three floors require a complete ground-up remodel, while the fourth to sixth floors require significant cosmetic updates. The entire building will also be updated with modern building systems such as HVAC and fire sprinkler systems, as well as new office and hotel door entry processes. Additionally, there is a delightful pocket park adjacent to the building's west, which offers a fantastic opportunity to integrate some of Christopher Alexander's "A Pattern Language" principles into the site design. Project scope is redesigning approximately 19,000 square feet of floors 1-3, while also conducting cosmetic upgrades to floors 4-6 for rental purposes. The redesign includes relocating the current elevator and widening the stairs to meet the International Building Code standards. Circulation will also be added to the west side of the building in order to to bring the corridors up to current fire code. In addition, the exterior of the building requires an update, including new windows on the boulevard front, sustainable facade materials, and added safety lights.

Figure 65

Figure 66

Figure 67

Figure 68

PROCESS DOCUMENTATION
Existing Conditions

Figure 69

Figure 70

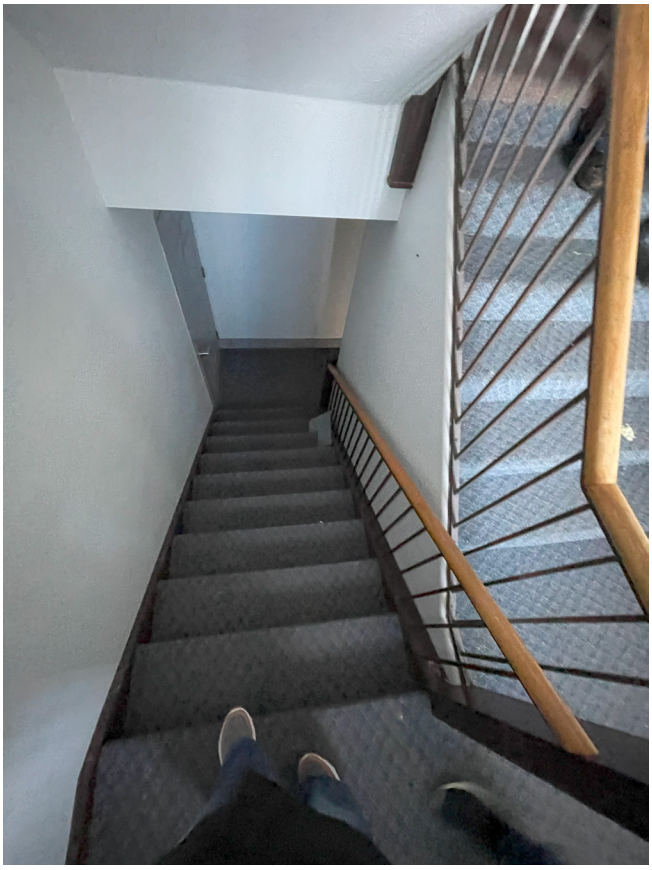


Figure 71

Figure 72

Figure 73

Figure 74

Figure 75

Figure 76

PROCESS DOCUMENTATION

Existing Conditions Professional Evaluation (per owners)

PDF+PIN: **002+0010-0400-0700** Wed, 12/12/2012, 11:18 AM Page 14

Bldg / Addn		Description	Units	Year
Addtn 5	Adtn	O 705—Hotel / Motel Common Facilities		
	Pre	P 705—Hotel / Motel Common Facilities	72	
	V	Ftr & Fdtn		
		Reinforced Concrete - 8"		
	V	Exterior Wall		
		Brick on Block - 12" - 10	10	
	V	Interior Wall		
		Drywall or Equiv. - 0		
	V	Windows		
		Incl. w / Base - 0		
	V	Fronts/Doors		
		Incl. w / Base - Average		
	H	Roof		
		4-Ply Compo/Stl Bar Joist - Average	72	
	H	Ceiling		
		Suspended Blk-Fiber - Average	72	
	H	Struct. Floor		
		R'Concrete - Average	72	
	H	Floor Cover		
		Carpet - Average	72	
	H	Framing		
		Steel - Average - Average	72	
	H	HVAC		
		Combination FHA - AC - Average	72	
	H	Lighting		
		Incl. w / Base - Average	72	

Figure 77

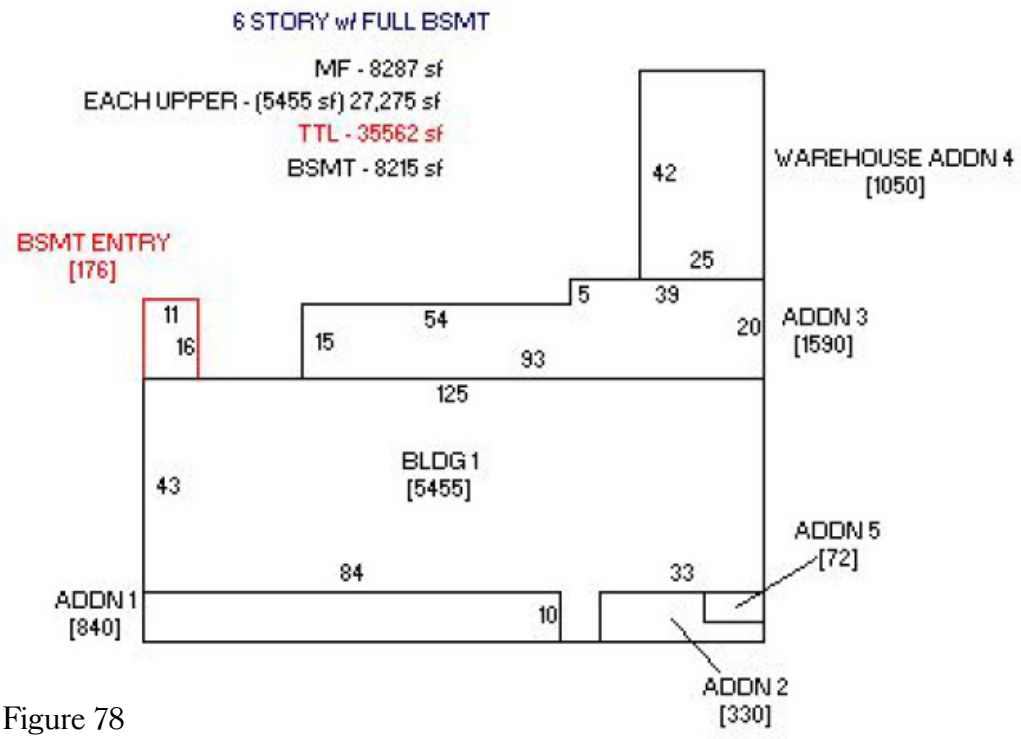


Figure 78

The building was modeled from existing documentation from professional reports that the current owners have had done. A structural integrity report was done in 2012, where the entire structure was looked at from an engineering standpoint and valued on a scale of repair.

Existing floor plans and documents were looked at in order to build the model.

CITY OF DICKINSON NORTH DAKOTA
RENAISSANCE ZONE DEVELOPMENT PLAN FIVE YEAR RENEWAL
MAY 7, 2019

I. RENAISSANCE ZONE DEVELOPMENT PLAN

The Renaissance Zone Program was created by the State of North Dakota as a tool to encourage redevelopment and economic investment in central cities. Created in 1999, the Renaissance Zone Program encourages investment through the use of property, income and financial institution tax incentives.

The Dickinson City Commission approved the original Renaissance Zone Development Plan in January 2004. The City's stated mission of the zone is to create opportunity, encouragement and support to property owners and lessees of properties within the renaissance zone with the anticipation that the business climate and attractiveness of zone buildings is greatly improved. The City's stated vision of the Renaissance Zone is as follows:

- To enhance the quality of place;
- Help Dickinson grow in economic vitality; and
- Achieve the vision by stimulating new growth and redevelopment.

Economic incentives offered by the City to encourage development within the Zone are as follows:

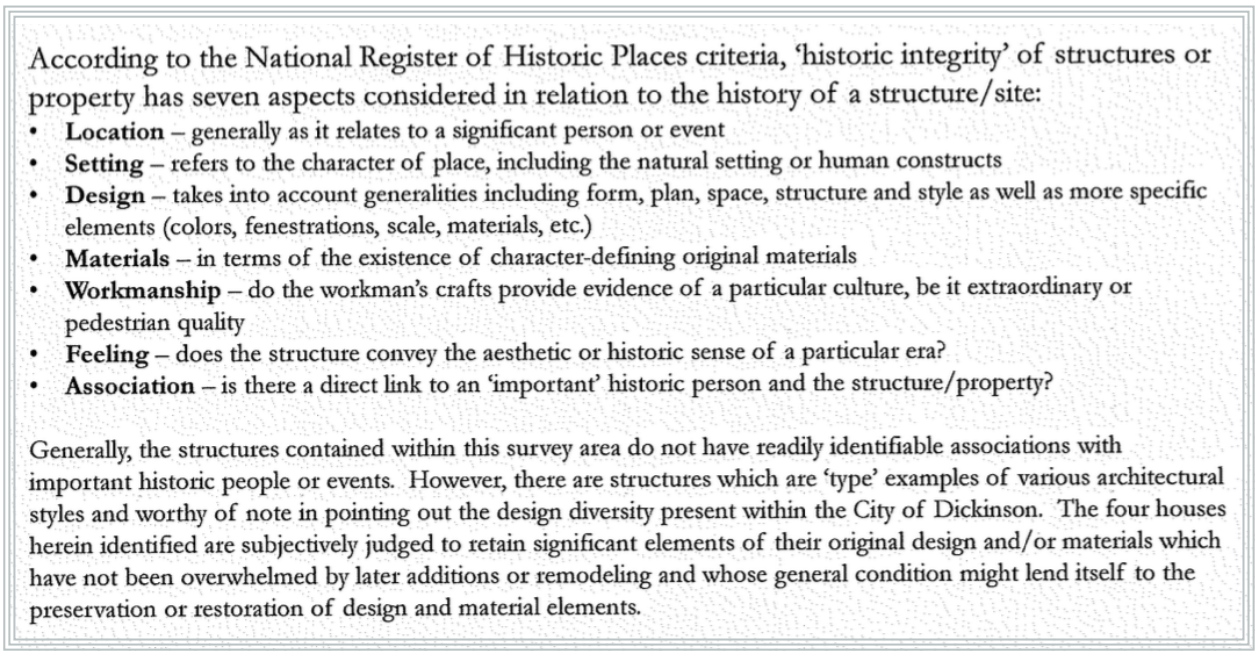
- *Single-family residential properties*-the City may grant a partial or complete exemption from ad valorem taxation on single-family residential property, exclusive of the land on which it is situated, if the property was purchased or rehabilitated by an individual for the individual's primary place of residence as an approved zone project. An exemption granted under this provision may not extend beyond five taxable years following the date of acquisition or rehabilitation; and
- *Business/investment properties*-the City may grant a partial or complete exemption from ad valorem taxation on buildings, structures, fixtures and improvements purchased or rehabilitated as an approved zone project for any business or investment purpose. An exemption granted under this provision may not extend beyond five taxable years following the date of purchase or rehabilitation

Economic incentives offered by the State of North Dakota to encourage development within the Zone are as follows:

- *Individual income tax exemption*-an individual taxpayer who purchases or rehabilitates a single-family residential property for the individual's primary place of residence as an approved zone project is exempt from up to $10,000 of personal income tax liability for five taxable years beginning with the month the rehabilitation is complete. The rehabilitation cost must equal or exceed 20 percent of the residence's value for tax purposes; and
- *Business/investment income tax exemption*-any taxpayer that purchases, leases or rehabilitates residential or commercial property for any business or investment purpose as an approved zone project is exempt from any tax on income derived from the business or investment locations within the zone for five taxable years, beginning with the month of

Figure 79

PROCESS DOCUMENTATION
Renaissance District Code - Dickinson, ND



According to the National Register of Historic Places criteria, 'historic integrity' of structures or property has seven aspects considered in relation to the history of a structure/site:

- **Location** – generally as it relates to a significant person or event
- **Setting** – refers to the character of place, including the natural setting or human constructs
- **Design** – takes into account generalities including form, plan, space, structure and style as well as more specific elements (colors, fenestrations, scale, materials, etc.)
- **Materials** – in terms of the existence of character-defining original materials
- **Workmanship** – do the workman's crafts provide evidence of a particular culture, be it extraordinary or pedestrian quality
- **Feeling** – does the structure convey the aesthetic or historic sense of a particular era?
- **Association** – is there a direct link to an 'important' historic person and the structure/property?

Generally, the structures contained within this survey area do not have readily identifiable associations with important historic people or events. However, there are structures which are 'type' examples of various architectural styles and worthy of note in pointing out the design diversity present within the City of Dickinson. The four houses herein identified are subjectively judged to retain significant elements of their original design and/or materials which have not been overwhelmed by later additions or remodeling and whose general condition might lend itself to the preservation or restoration of design and material elements.

Figure 80

The Renaissance Zone is a development plan in Dickinson, ND. It aims to encourage growth and development by offering tax incentives to businesses and property owners who invest in the designated zone. The plan includes a mix of commercial and residential areas, with a focus on revitalizing the downtown area. The goal is to attract new businesses and residents while retaining the historic character of the area. The plan also includes improvements to infrastructure, such as streets, sidewalks, and utilities, to support the growth and development of the area.

There is a new 5-year revival plan that started May 7th, 2022 that plans to redevelop much of the downtown of Dickinson.

My site has not been evaluated by the city as an interest to redevelop or as an investment opportunity with the Theodore Roosevelt National Library coming to Medora, ND in 5 years. My goal was to gather as much information as possible about the relationship between Medora and Dickinson and see how this project and site could serve the people that will be traveling to Medora, ND for work and pleasure.

Figure 81

Figure 82

PROCESS DOCUMENTATION
Mid Crit Process

Figure 83

Figure 84

Figure 85

PROCESS DOCUMENTATION
Mid Crit Process

Figure 86

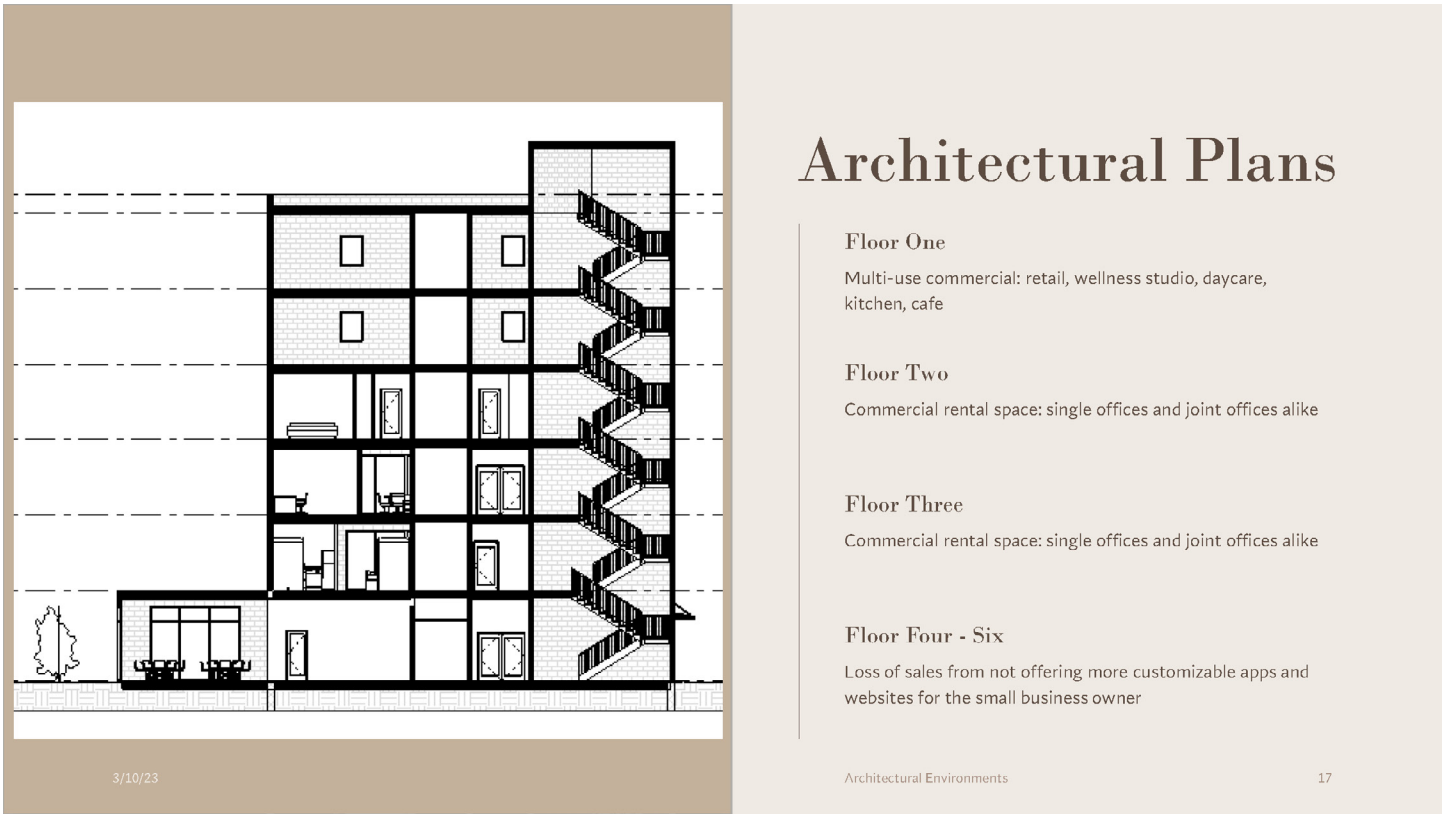


Figure 87

DESIGN SOLUTION DOCUMENTATION

Final Products

Figure 88

DESIGN SOLUTION DOCUMENTATION

Final Products

Figure 89

As part of the project, a comprehensive assessment was conducted on the exterior and interior materials to be used. The selection of materials was based on several factors, including their location, durability, connection to the local surroundings, sustainability qualities, and certifications such as LEED, SCS Indoor Advantage, and Greenguard.

DESIGN SOLUTION DOCUMENTATION
Final Products

1

HBF Textiles
Upholstery

DETAILS:
pattern: Afghan 895
content: 44% acrylic, 23% wool, 17% cotton, 13% nylon, 3% polyester

SUSTAINABILITY:
- 40% Rapidly renewable content
- SCS Indoor Advantage™ Gold
- Meets HCWH Healthy Interiors Criteria

PROJECT IMPLEMENTATION:
used in multiple locations:
- sofa upholstery
- accent chairs upholstery
- ottoman upholstery

2

Interface
Luxury Vinyl Tile

DETAILS:
pattern: Criterion Classic Stones, C00202 Polished Cement
content: 3mm thick, 22 mm wear layer

SUSTAINABILITY:
- Greengaurd Gold FloorScore
- CDPH 01350 Compliant
- NSF/ANSI 332 Silver
- Carbon Neutral Floors™
- Fully Recyclable LVT to Carpet Tile Backing

PROJECT IMPLEMENTATION:
used in all hard-surface flooring locations

3

BEHR Dynasty
Paint

DETAILS:
pattern: Downtown Grey, Pumice, Jungle Camouflage, Glazed Pot, Riveria Beach, & Sustainable (from bottom to top)
content: stain repellent, fast drying, one-coat hide guarantee

SUSTAINABILITY:
- Greengaurd Gold Certified for low Volatile Organic Compounds (VOC)
- MPI Green Performance Standard
- 100% Recyclable plastic container

PROJECT IMPLEMENTATION:
used in all wall and ceiling locations where acoustical ceiling tile is not applicable

4

Brainerd
Hardware

DETAILS:
pattern: Chunky Modern in satin finish
content: 100% solid steel

PROJECT IMPLEMENTATION:
used in multiple locations:
- office cabinetry
- commercial kitchen cabinetry
- cafe cabinetry
- retail cabinetry/storage
- daycare cabinetry/storage
- restroom vanities

DESIGN SOLUTION DOCUMENTATION
Final Products

5 *kate-lo tile & stone*
Tile

DETAILS:
pattern: PN.MT.FAR.0303, Metropolitan Fair
content: glazed porcelain

SUSTAINABILITY:
- 100% Reuse of Unfired Tiles
- 100% Water Recycling
- Panaria Packing Material is 100% Recyclable
- Safety Requirements: DCOF ≥ 0.42
- Greengaurd Certified

PROJECT IMPLEMENTATION:
used in multiple locations:
- backsplash for commercial kitchen/cafe
- front desk accent and entry wall tile

6 *StonePeak Ceramics*
Porcelain Surface

DETAILS:
pattern: Saint Laurent Dark, polished
content: 6mm, 100% Natural Stone

SUSTAINABILITY:
- 100% Regionally Sourced, Raw and Natural Materials
- 40% Recycled Content
- Greengaurd Certified
- Green Squared Certified
- Mindful Materials Certified
- LEED Certified

PROJECT IMPLEMENTATION:
used in multiple locations:
- retail cash wraps
- commercial kitchen countertops

7 *Wilsonart*
Premium Laminate

DETAILS:
pattern: Loft Oak, AEON™, Directional Pattern
content: Compact Laminate, 34% Post Consumer Recycled Wood Fiber

SUSTAINABILITY:
- Mindful Materials Certified
- Greengaurd Gold
- LEED Certified
- SCS Recycled Content Certified
- SCS Indoor Advantage Gold

PROJECT IMPLEMENTATION:
used in multiple locations:
- sofa upholstery
- accent chairs upholstery
- ottoman upholstery

8 *BuzziSpace*
Felt + Fabric

DETAILS:
pattern: CAT A - Army, Mint, Bottle, Beige, Autumn (from bottom to top)
content: felt: 100% upcycled plastic bottle waste - fabric: 70% recycled wool, 25% recycled polyacryl, 5% recycled other fabrics

SUSTAINABILITY:
- Greengaurd Certified
- SCS Indoor Advantage™ Gold

PROJECT IMPLEMENTATION:
used in all BuzziSpace products such as the BuzziPod, BuzziNest, BuzziProp (acoustic light), & BuzziMoon (acoustic light)

DESIGN DOCUMENTATION
Final Products

9 *NICHIHA*
fiber & cement

DETAILS:
pattern: TuffBlock - Steel, modern series
content: portland cement, fly ash, silica, recycled rejects, and wood fiber bundles

SUSTAINABILITY:
- Built-in rain-screen
- MAS Certified Green
- LEED Certified

PROJECT IMPLEMENTATION:
used in all exterior locations that are not existing or replaced brick
- exterior facade of the core circulation "towers"

10 *NICHIHA*
fiber & cement

DETAILS:
pattern: RiftSawn - Pecan, wood series
content: portland cement, fly ash, silica, recycled rejects, and wood fiber bundles

SUSTAINABILITY:
- Built-in rain-screen
- MAS Certified Green
- LEED Certified

PROJECT IMPLEMENTATION:
used in all exterior locations that are not existing or replaced brick
- wood-like window insets and entryway facade feature

11 *Hebron Brick Company*

DETAILS:
pattern: Bourbon Street (brick match)
content: 44% acrylic, 23% wool, 17% cotton, 13% nylon, 3% polyester

SUSTAINABILITY:
- Locally sourced
- NSF Certified Environmental Product Declaration

PROJECT IMPLEMENTATION:
used in replacement and repair of existing brick exterior facade

The emotional connection of materials to the local surroundings was yet another consideration. This involved selecting materials that reflected the local history and culture, and creating a design that blends seamlessly into the local environment. Sustainability was also a key factor in the material selection process. Materials were chosen based on their VOC emissions and recycled material composition, ensuring that they were environmentally friendly and sustainable. The LEED, SCS Indoor Advantage, and Greenguard certifications were also taken into consideration to ensure that the materials used met the highest standards of sustainability and indoor air quality.

PERFORMANCE ANALYSIS

Response to the Typological Research

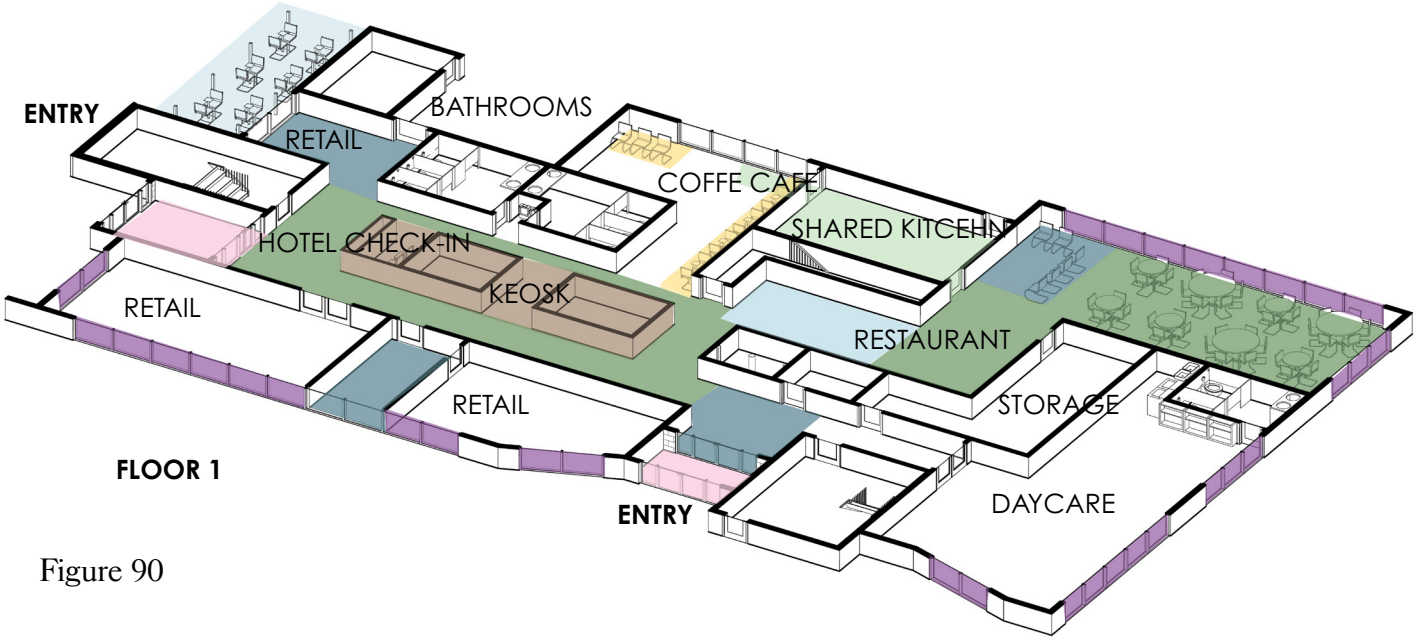


Figure 90

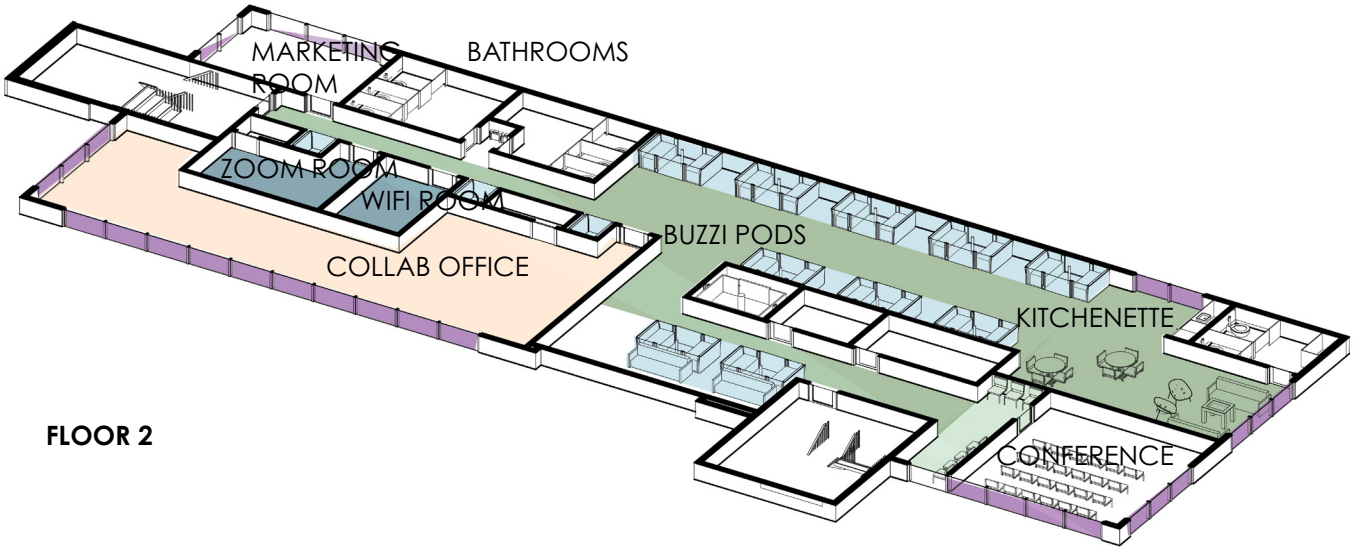
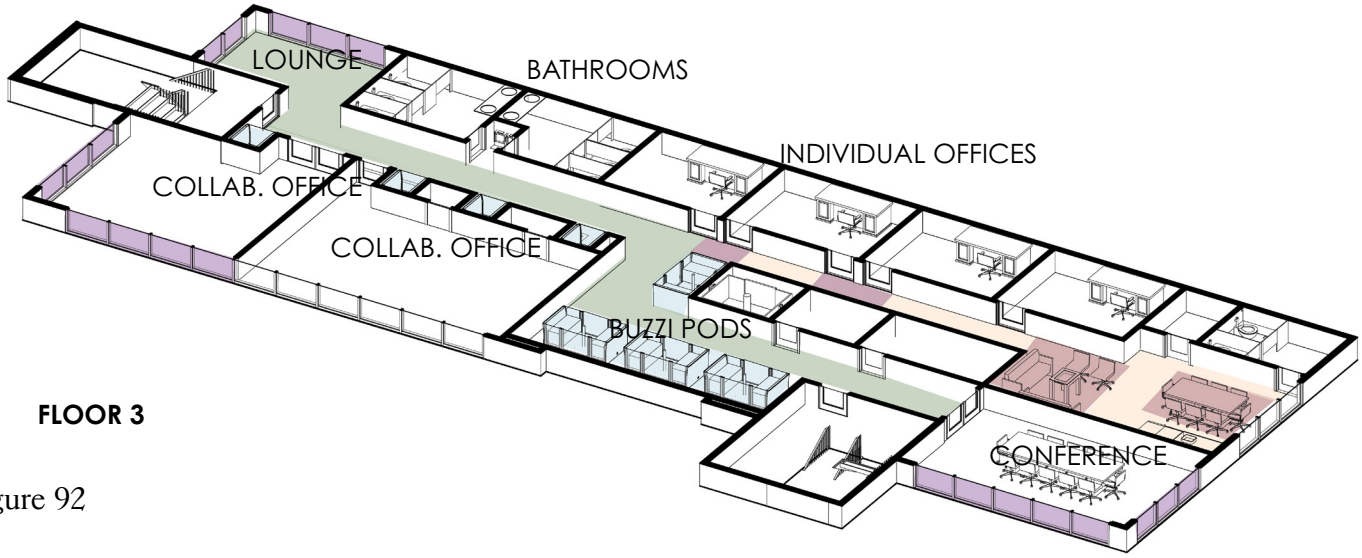


Figure 91

CHRISTOPHER ALEXANDER'S
TIMELESS DESIGN USING
"A PATTERN LANGUAGE" THEORY

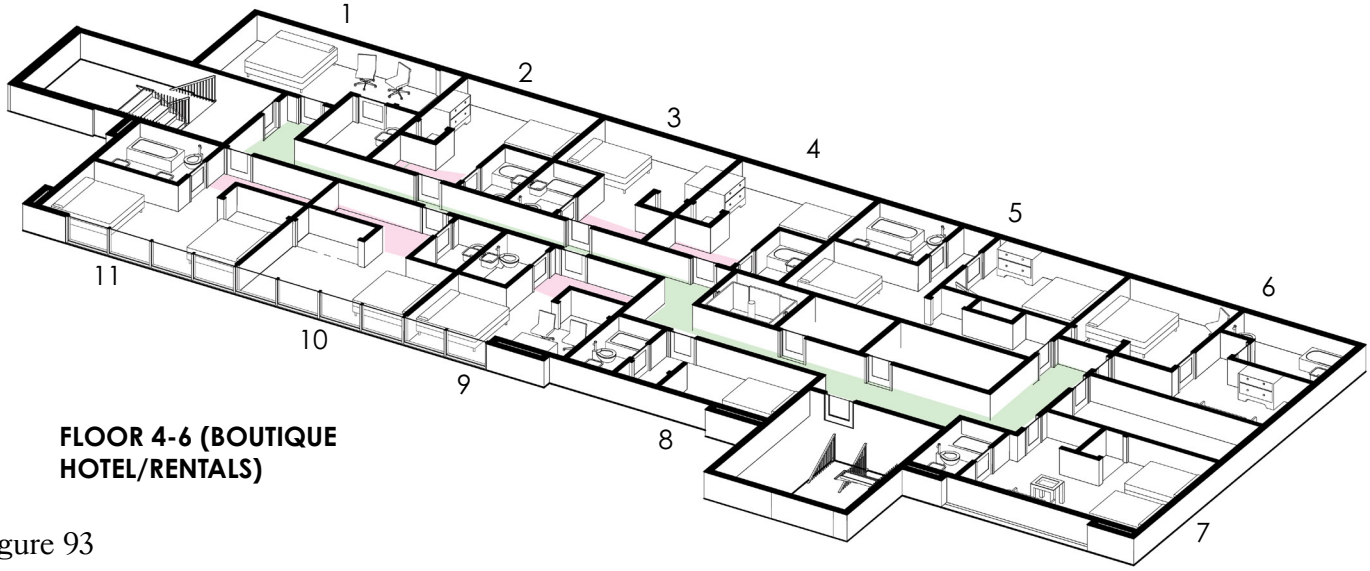
- *(30) Activity Nodes*
- *(82) Office Connections*
- *(124) Activity Pockets*
- *(126) Something Roughly In The Middle*
- *(127) Intimacy Gradient*
- *(130) Entrance Room*
- *(131) The Flow Through Rooms*
- *(132) Short Passages*
- *(142) Sequence of Sitting Spaces*
- *(159) Light on Two Sides of Every Room*

The first level floor plan is designed by recognizing what the community needed and what this building could benefit from. Between retail spaces, a daycare, and a health and wellness studio, remote workers can use these amenities as a part of their every day lives. The second floor plan is the start of office rentals for collaborative studios. There are flexible individual work spaces throughout (BuzziPods).



FLOOR 3

Figure 92



FLOOR 4-6 (BOUTIQUE HOTEL/RENTALS)

Figure 93

CHRISTOPHER ALEXANDER'S
TIMELESS DESIGN USING
"A PATTERN LANGUAGE" THEORY

- *(30) Activity Nodes*
- *(82) Office Connections*
- *(124) Activity Pockets*
- *(126) Something Roughly In The Middle*
- *(127) Intimacy Gradient*
- *(130) Entrance Room*
- *(131) The Flow Through Rooms*
- *(132) Short Passages*
- *(142) Sequence of Sitting Spaces*
- *(159) Light on Two Sides of Every Room*

The third level floor plan offers individual offices connected by various Christopher Alexander patterns. These offices (both individual and collaborative can be rented monthly or yearly. Levels four - six floor plans are a reflection of existing hotel room layout with moved furniture and added accessibility routes. Each floor offers 11 hotel rooms, and the subtraction/rework of the hotel rooms on the west side of the building had to be redone due to the addition of the circulation tower.

PERFORMANCE ANALYSIS

Response to the Typological Research

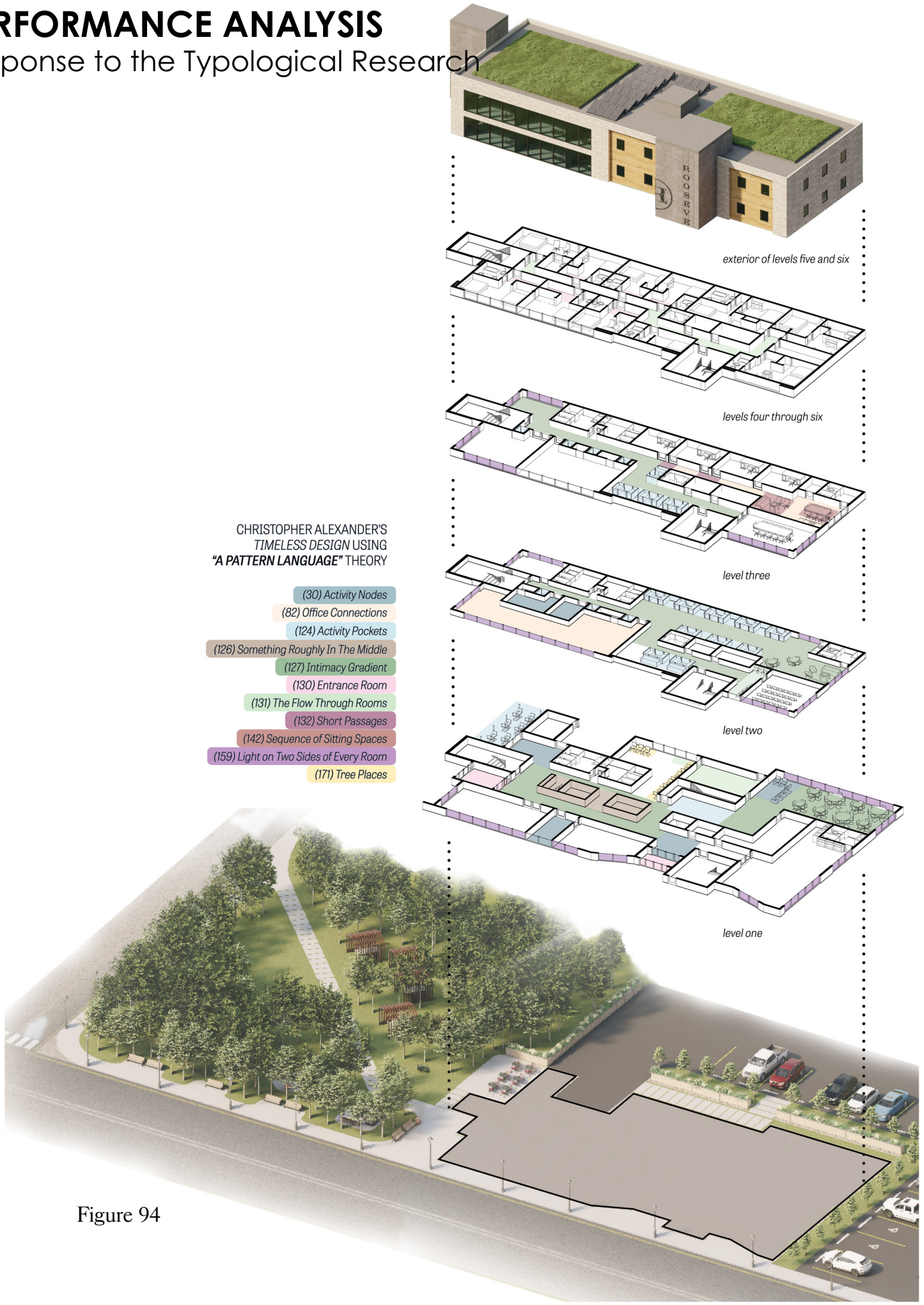


Figure 94

PERFORMANCE ANALYSIS

Response to the Typological Research via Site Design

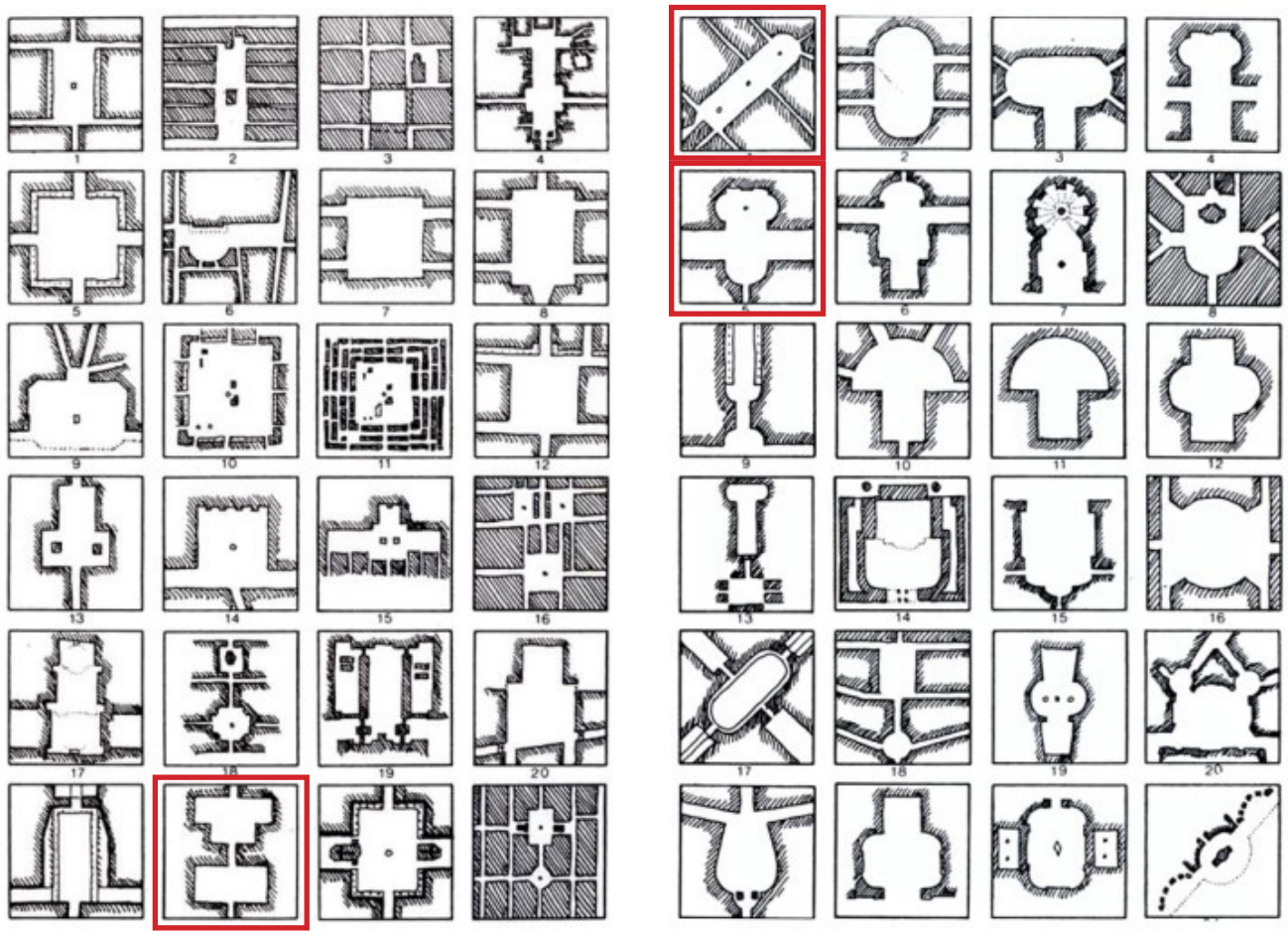


Figure 95

Figure 96

The site design inspiration was taken from several drawings of Christopher Alexander's from "A Pattern Language". This took into considerations similar pattern concepts that went into the interior redesign such as: (#30) Activity Nodes, (#124) Activity Pockets, (#126) Something Roughly In The Middle, (#127) The Intimacy Gradient, (#142) Sequence of Sitting Spaces and (#171) Tree Places.

PERFORMANCE ANALYSIS

Response to Site and Context

This building is located on a prominent corner of downtown Dickinson, ND. The surrounding site does not offer much if any of external views, as there is a railroad to the south, a run-down park to the west, an alley to the north, and a building directly to the east. The site response was to turn the focus inward at the building and new park. By incorporating natural materials such as wood and brick, and a eye-catching mural painted by local artists, the project itself becomes the context of the site. The response was also to use the park as a new entry point instead of the boulevard facing entrance. This way, people will already feel a part of the building before they step into it.

Figure 97 - Existing view to the south facing the railroad tracks

Figure 98 - New west side of the building with a mural of Theodore Roosevelt commissioned by local artists

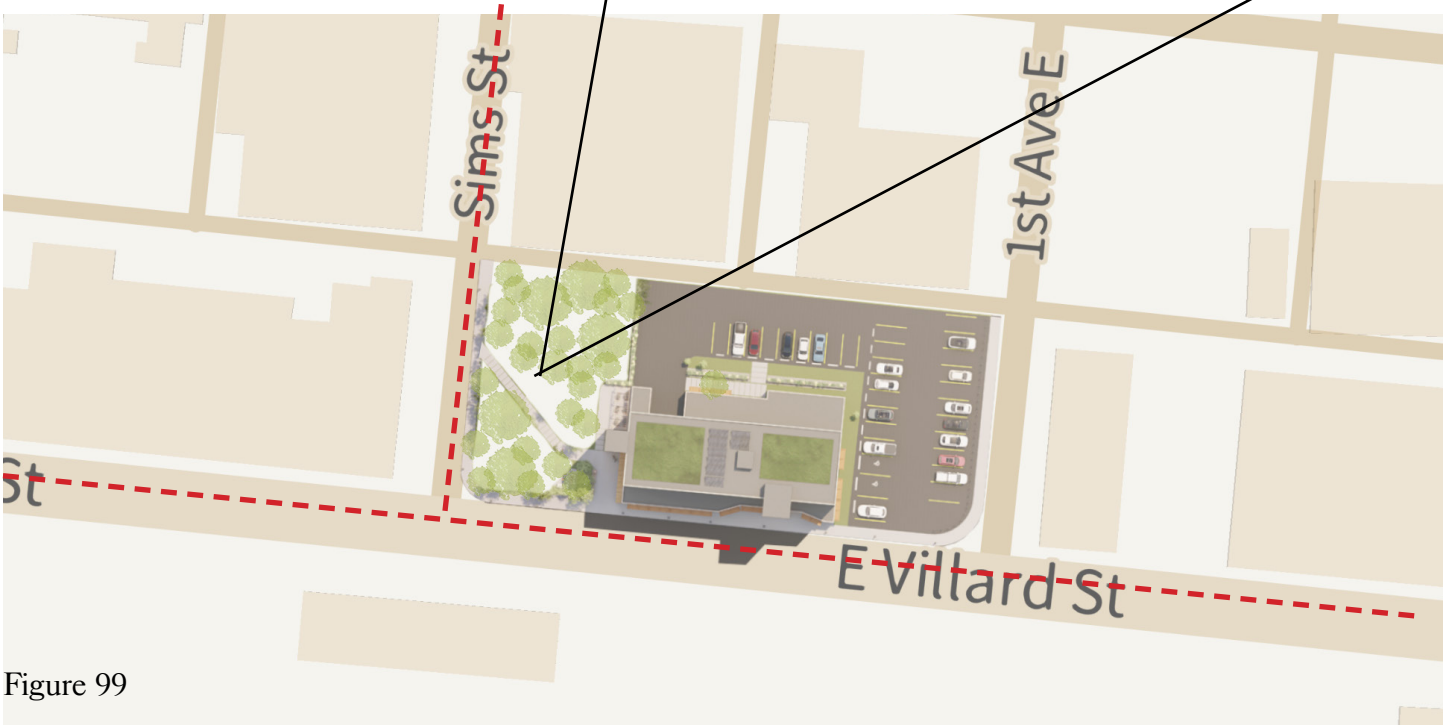


Figure 99

RPERFORMANCE ANALYSIS

Response to Goals and Project Emphasis

The three aspects emphasized throughout the design process are crucial for the success of the redesign of a multi-use building.

The first aspect is the **redesign** with the utilization of Christopher Alexander's design principles as a foundation for the design. The principles serve as a driving factor behind the subtle interventions in the historic building, emphasizing or elevating existing patterns with added interventions. This approach ensures that any budget can accommodate future projects while maintaining afford-ability. This was achieved by researching the best ways to utilize the space given and being cautious of what demolition is done during construction.

The second aspect of the design focuses on **materiality**. The chosen materials aim to achieve a productivity-inducing aesthetic and subconscious pleasure. The research conducted focuses on acoustical products, textile sustainability, and Volatile Organic Compound emissions (VOCs) to limit their short-term and long-term effects on individuals. The proper selection of materials ensures the creation of a healthy and sustainable indoor environment.

The third aspect of the design process focuses on **marketability**. The building must be integrated into the community to withstand future crises like the Covid-19 pandemic. The design aims to create a place that people love to be in, which is the ultimate form of sustainability. The integration of the building into the community ensures that it remains relevant and useful for future generations, maintaining its marketability. This was achieved by focusing on usable square footage, and offering a lively workplace that people want to come to. By integrating community aspects, like the service hotel and rental spaces, this building will be utilized for the upcoming growth in the community due to the Bakken increase, and the Theodore Roosevelt Presidential Library construction.

In summary, the success of the multi-use building retrofit project depends on the careful consideration of Christopher Alexander's design principles, the selection of appropriate materials, and the integration of the building into the community. The design aims to create a healthy, sustainable, and marketable building that can and will withstand future challenges.

I think in order to achieve our ultimate goal of redesigning for the future, the answer is simple: ***we need to design a place that people love to be in, as that is the ultimate form of sustainability.***

CRITIQUE OF APPLIED RESEARCH METHODS

Used in Thesis Project

Historical research methods combined with evaluation of documentation studies is an effective approach to studying the past. Historical research methods include studying primary sources such as official documents, photographs, diaries, and newspapers, as well as secondary sources such as scholarly articles, books, and documentaries. The evaluation of documentation studies involves the critical examination and interpretation of historical materials and studies done by knowledgeable scholars.

The combination of these two methods is particularly useful because it allowed me to gain a comprehensive understanding of the past and how COVID-19 affected our society. By studying primary sources, I learned about events, people, and places from several different time periods. I was commended by several faculty for choosing a topic that was so current, as not many case studies have been done for projects like this... yet.

After this thesis project concluded, there are a few more areas I wish I would have elaborated on.

> *1) Increased research into redesign and sustainability - what kind of sustainable practices can be put into play AFTER the design of a building's systems (plumbing, electrical, site coverage)*
>
> *2) Interview of people who only work fully remotely and what they wish they had in a work setting, or what they would find useful. This insight could have been extremely helpful in the polished edges of my design defense.*

When combined, the methods I used helped me to reconstruct the past, uncover new information, and gain a deeper understanding of historical events that happened during COVID-19 and the projection of events that are a repercussion of it. This approach ensured that the historical/data research is based on solid evidence and can be verified by other scholars.

RETROFITTING ARCHITECTURAL ENVIRONMENTS IN RESPONSE TO AN EVOLVING WORKPLACE

PHOTO

HI!
I'm Lexi!

- Western North Dakota native
- Community enthusiast
- History marvel
- Covid-19 education conqueror

HOW CAN OUR ARCHITECTURAL ENVIRONMENTS AFFECT OUR PRODUCTIVITY?

HOW CAN WE, AS DESIGNERS, RESPOND TO THE DEMAND OF THE SHIFTING WORKPLACE?

Why Office Buildings Are Still in Trouble

Hybrid work, layoffs and higher interest rates are leaving lots of office space vacant and hurting the commercial real estate business.

Don't Fret About Empty Office Space—Repurpose It

Tech Layoffs Mean Even More Empty Offices in NYC, San Francisco

A pullback by tech tenants means trouble for landlords already struggling with empty buildings.

There's no easy fix for Midtown's post-COVID half-empty offices

By Nicole Gelinas February 27, 2023 | 7:56pm | Updated

SOCIETY

What Should We Do With All the Empty Offices?

January 3, 2023

What's Going to Happen to All Those Empty Office Buildings?

Getting Creative With Vacant Office Space: Storage, Gym, Film Set

Some landlords are skipping residential conversion and instead seeking alternatives that are cheaper and easier to manage.

COMMERCIAL · Published April 13, 2023 6:18am EDT

Commercial real estate industry on edge as downtown empty office space goes unused

INITIAL QUESTIONS

for vacant office buildings post Covid-19 pandemic

- What are these vacant office buildings doing now?
- What new amenities is the workplace demanding?
- How can we best repurpose buildings?
- Are there any design principles we should be abiding by?
- Who are these building destined to serve?
- How can we redesign and repurpose + still respect community history?

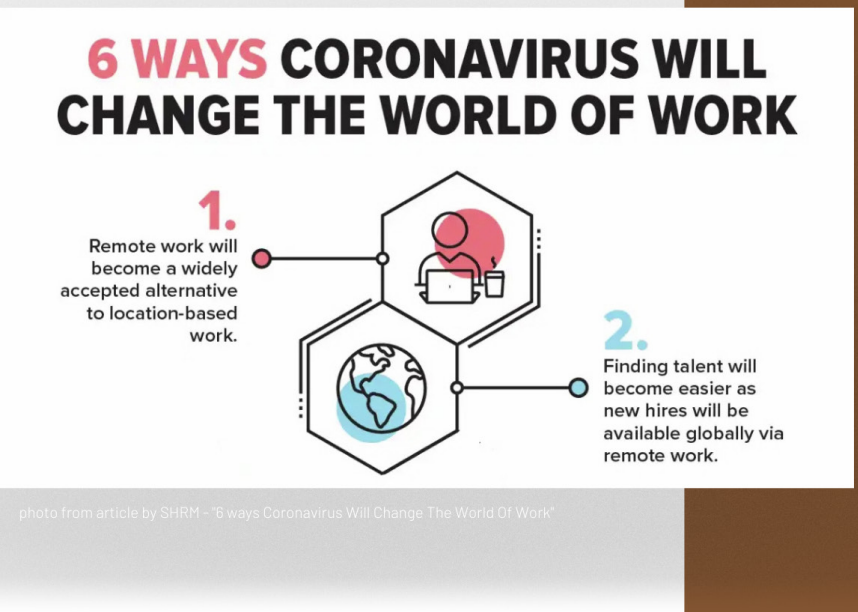
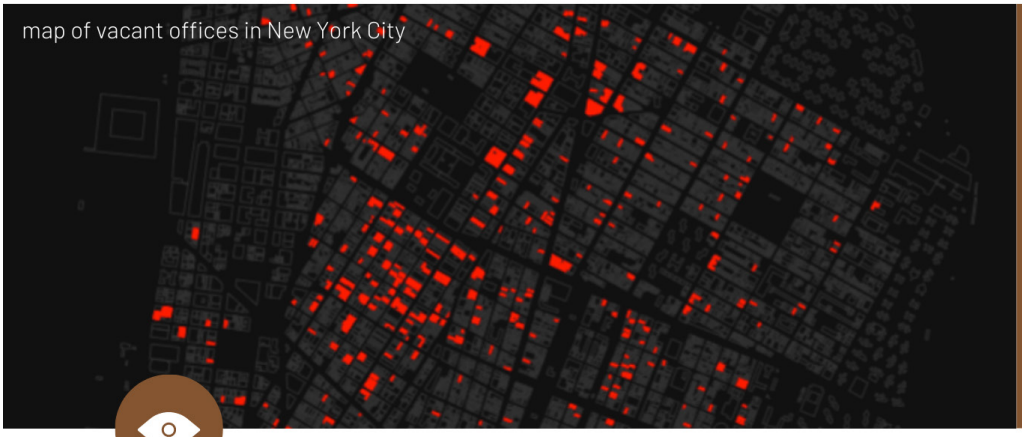


photo from article by SHRM - "6 ways Coronavirus Will Change The World Of Work"

Work is changing... and our environments need to be a reflection of that.



Patterns to inform redesign...

Prototype Project

This project uses universal tendencies and design patterns to sculpt a series of design principles that are desired in our new workplace.

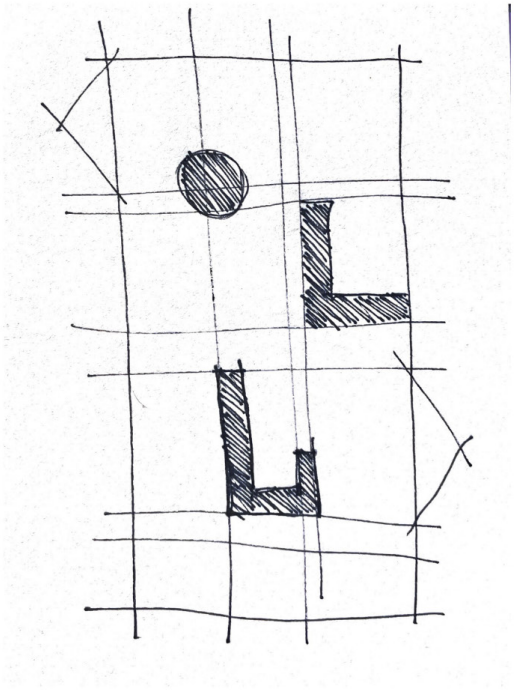
Intentional Interventions

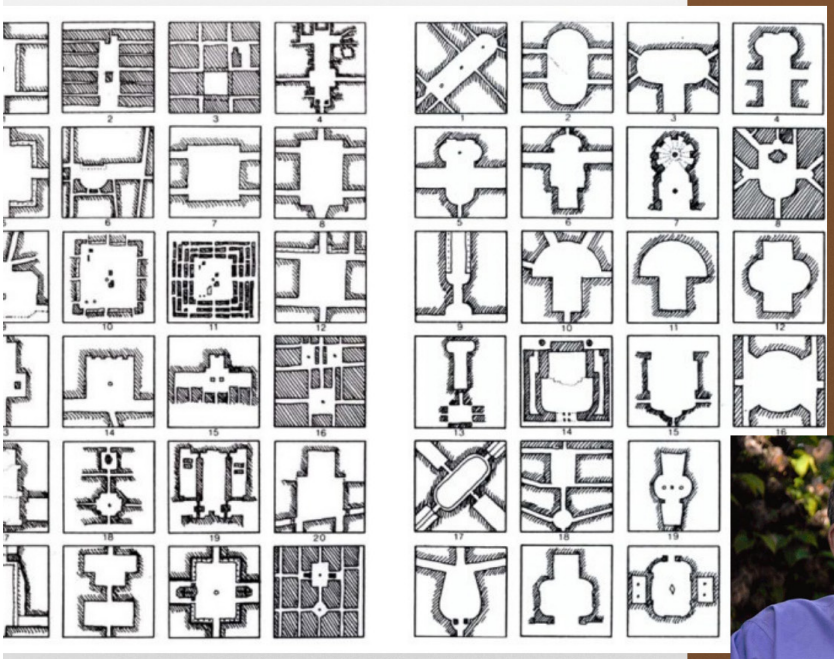
Affordable

- competitive to lease
- maximizing the square foot
- product selection

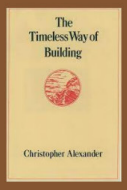
Accessible

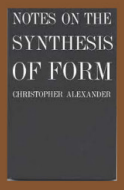
- big city vs small town
- all remote working people & investors

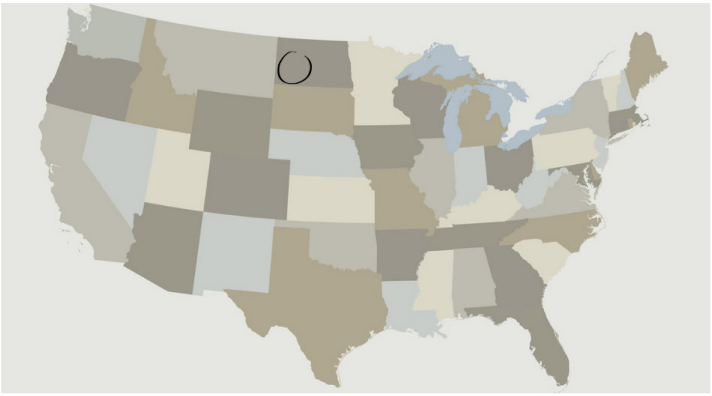


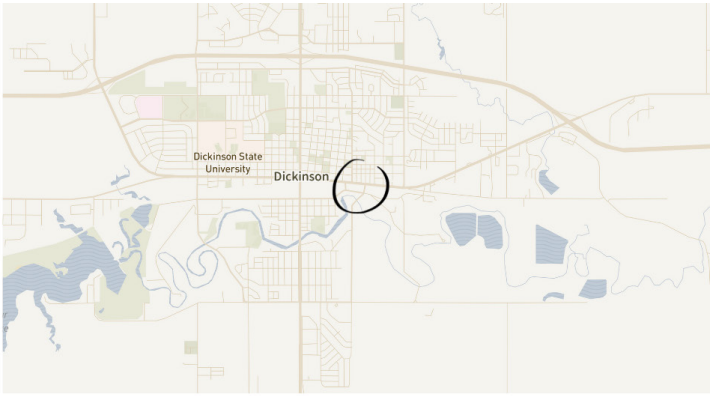


What makes an environment feel comfortable?







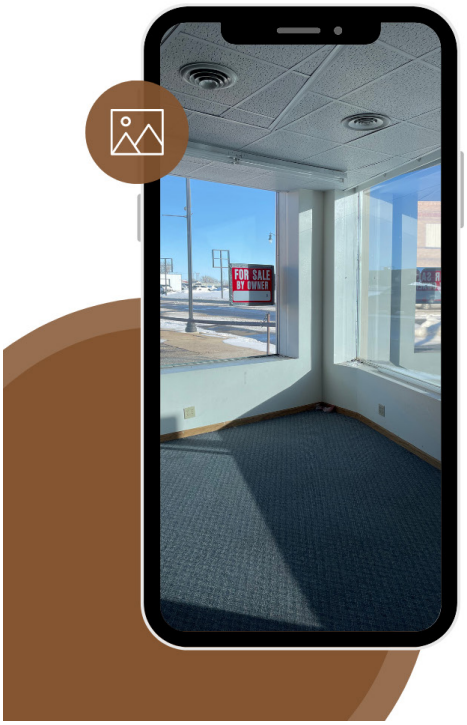


Site + Building Selection

41 East Villard St.

a landmark in hopes of a new life

- Fire burnt the building to ground in 1950
- Ray Hotel functioned from 1952-1970
- Ivanhoe Inn functioned from 1971-1987
  - home to many travelers (being adjacent from railroad station)
- Plaza took modern day ownership approach in 1995



Project Emphasis

"...to design a place that people love to be in,

that is the ultimate form of sustainability."

Retrofit

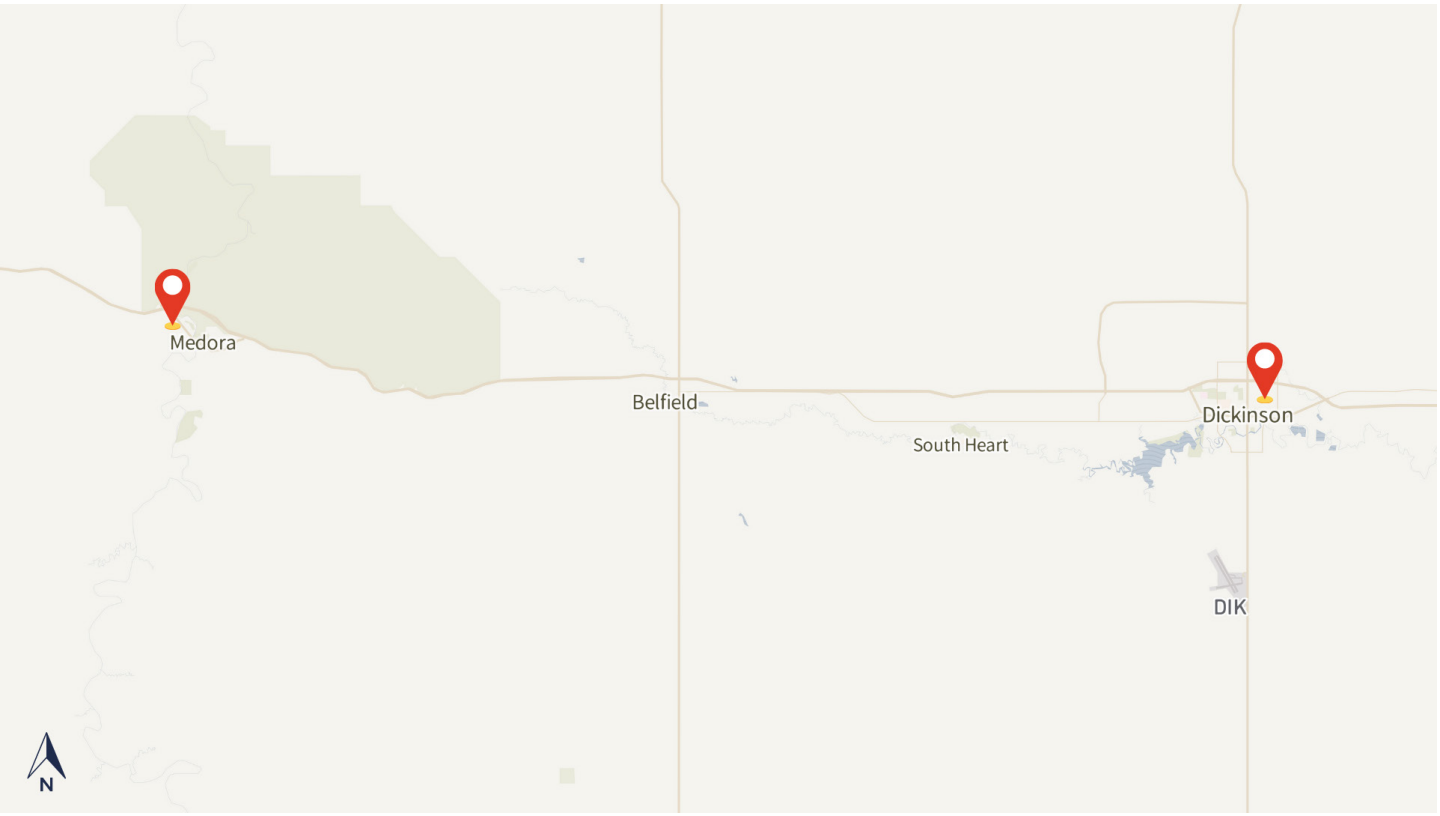
Designing subtle interventions that use Christopher Alexanders timeless design principles as a pathway

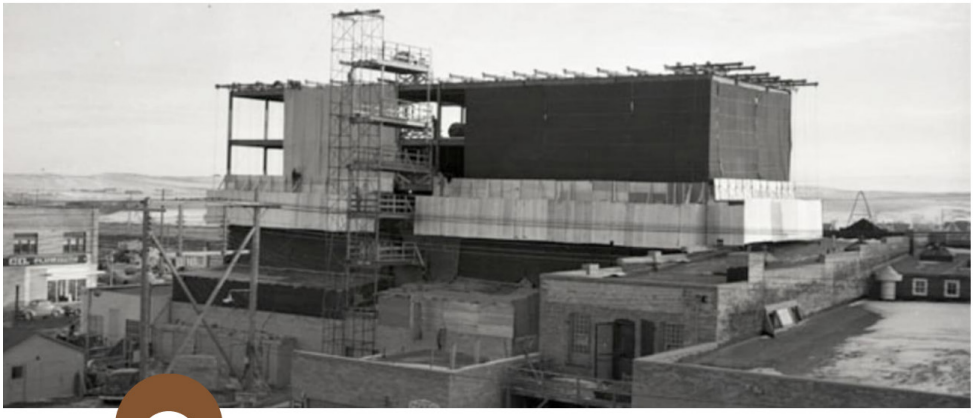
Materiality

Choosing products that are affordable, accessible, and sustainable for the environment they came from, and the environment they will go to (VOC conscious).

Marketability

How can we design sustainable buildings that will withstand "crisis" in the future?





Existing Conditions

41 East Villard Street, Dickinson, ND 58601

Existing Conditions

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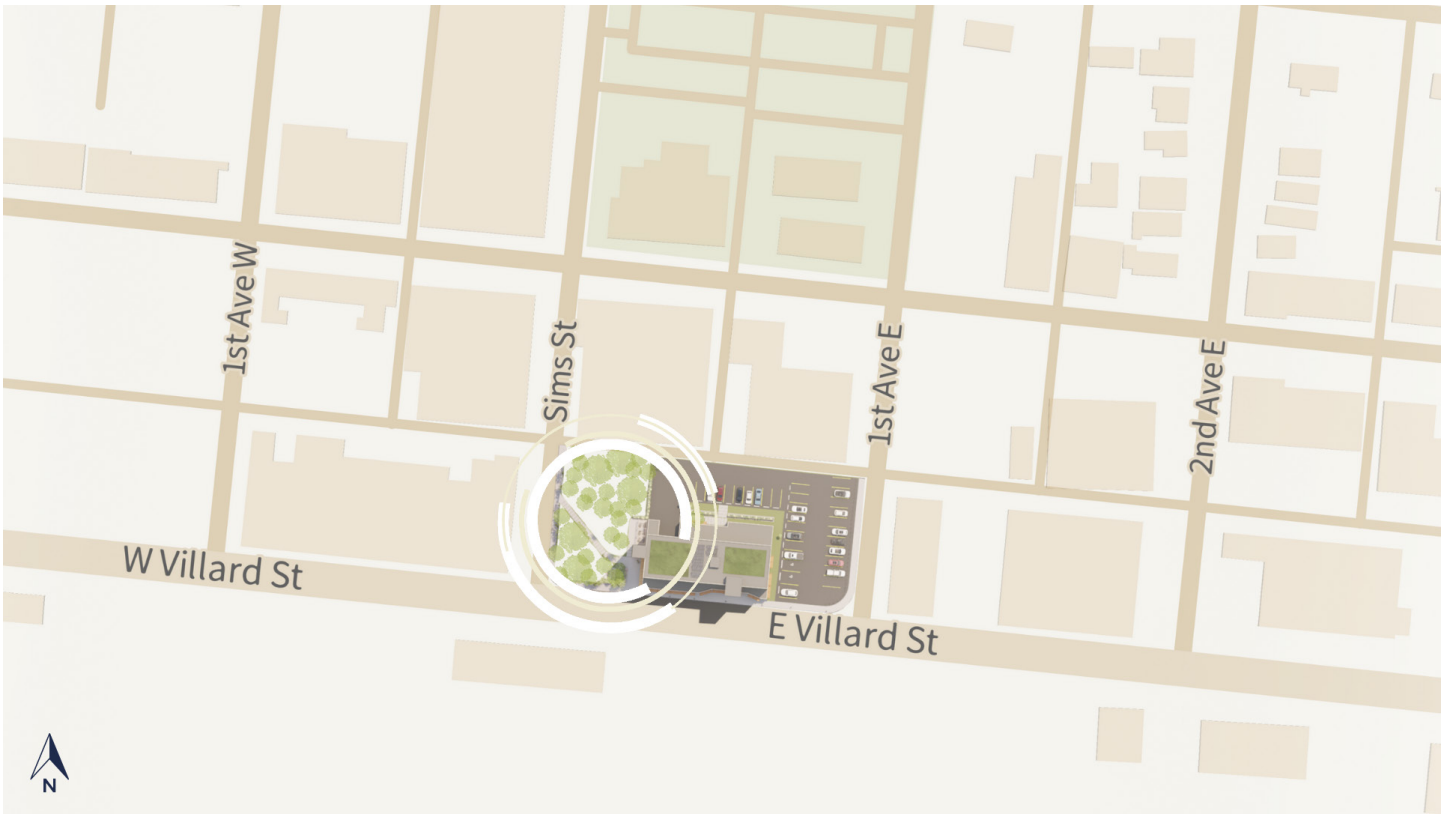


PRESENT DAY

PROPOSED

PRESENT DAY

PROPOSED

Challenges turn into opportunities

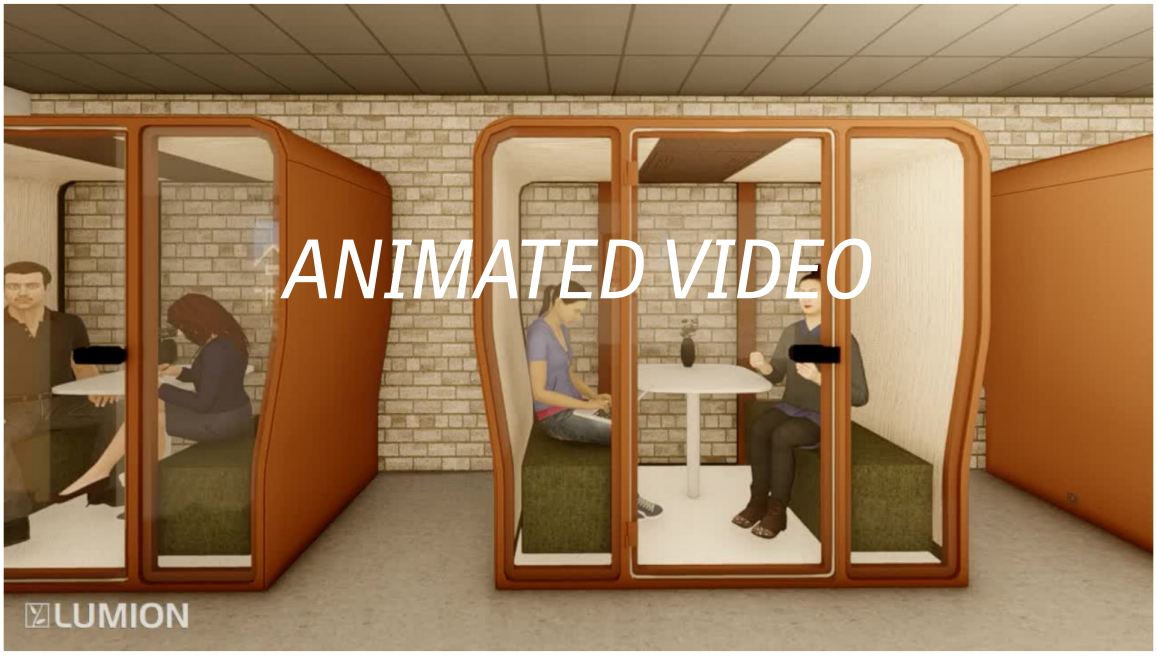
Finding the proper resources, products, and making the right design decisions.

Employees and business owners face new challenges in the workforce since the covid-19 pandemic and will continue to do so.

ANIMATED VIDEO
LUMION

ANIMATED VIDEO
LUMION

ANIMATED VIDEO
LUMION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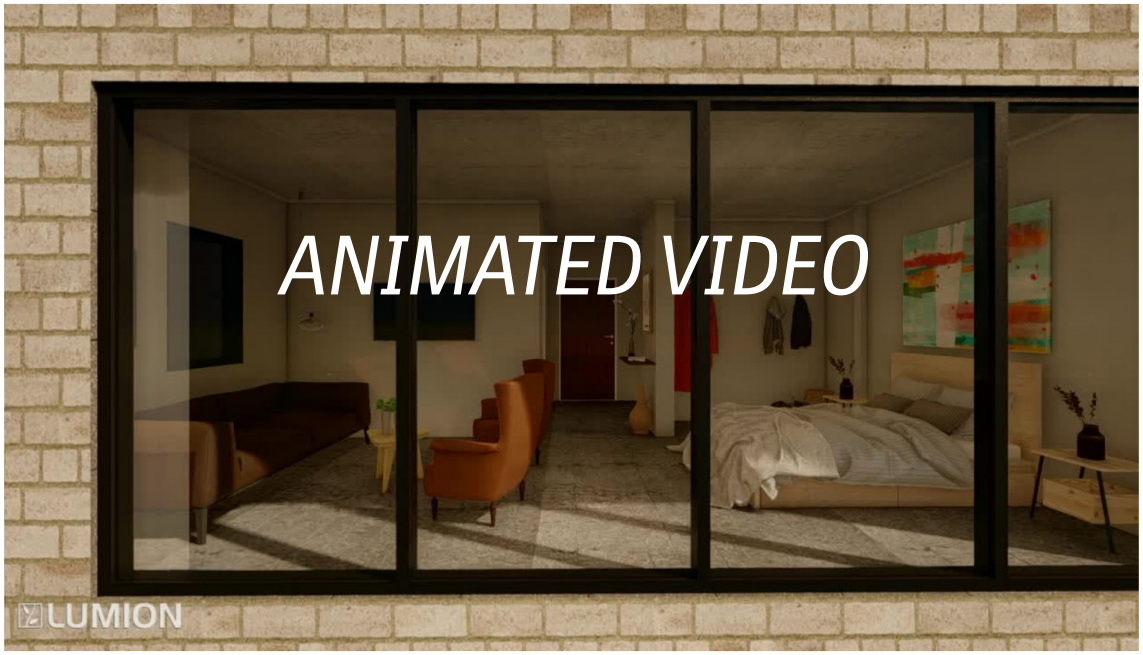
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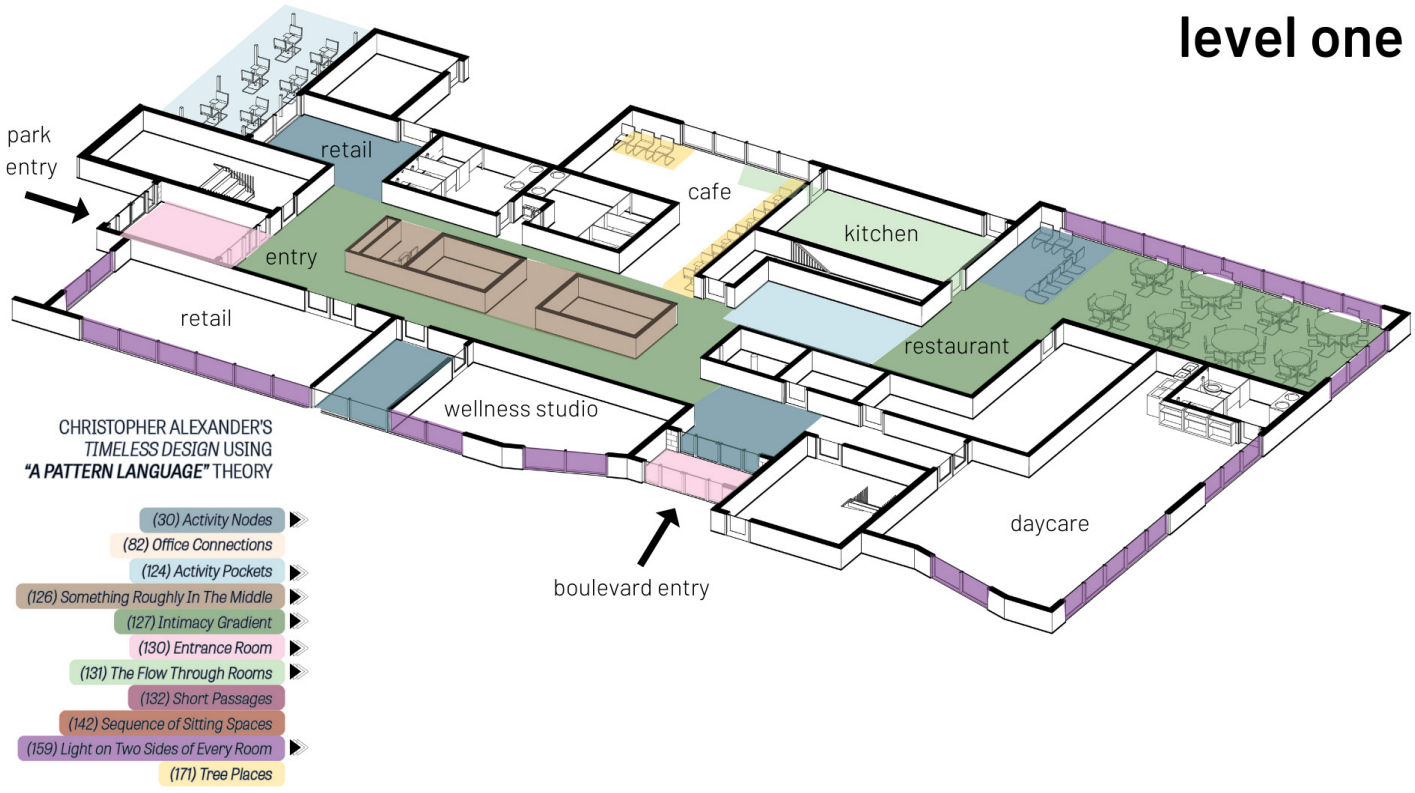
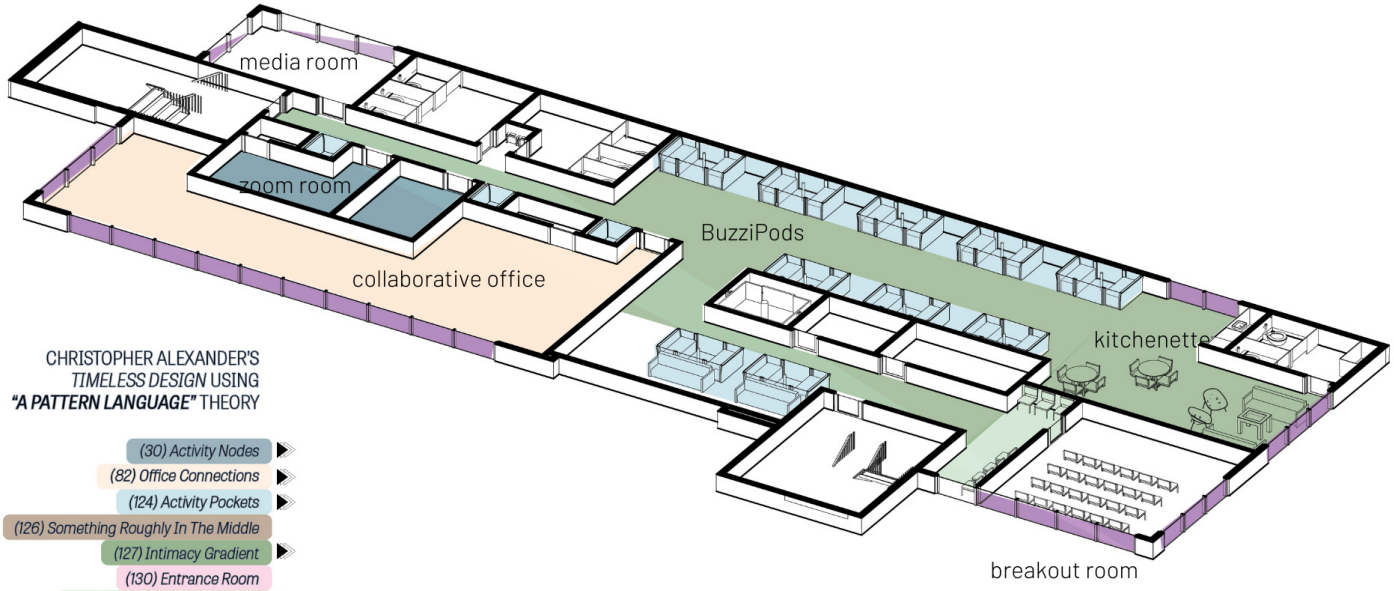
Material Selections

level one



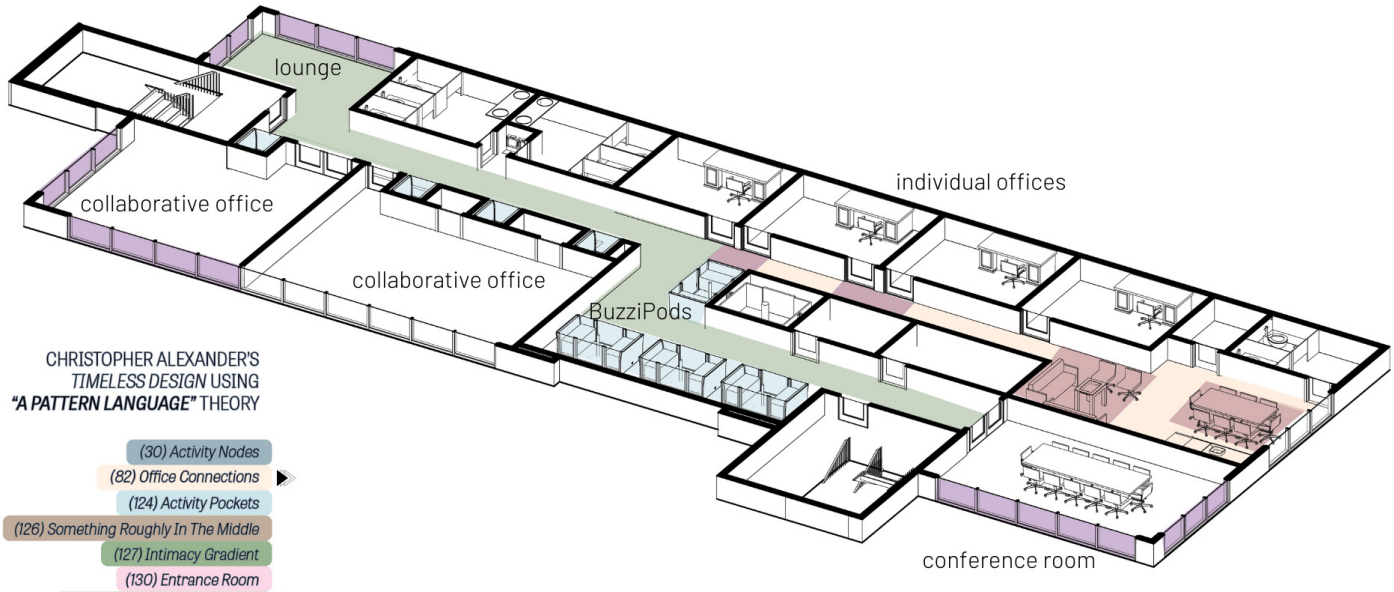
level two



CHRISTOPHER ALEXANDER'S
TIMELESS DESIGN USING
"A PATTERN LANGUAGE" THEORY

- *(30) Activity Nodes*
- *(82) Office Connections*
- *(124) Activity Pockets*
- *(126) Something Roughly In The Middle*
- *(127) Intimacy Gradient*
- *(130) Entrance Room*
- *(131) The Flow Through Rooms*
- *(132) Short Passages*
- *(142) Sequence of Sitting Spaces*
- *(159) Light on Two Sides of Every Room*
- *(171) Tree Places*

level three



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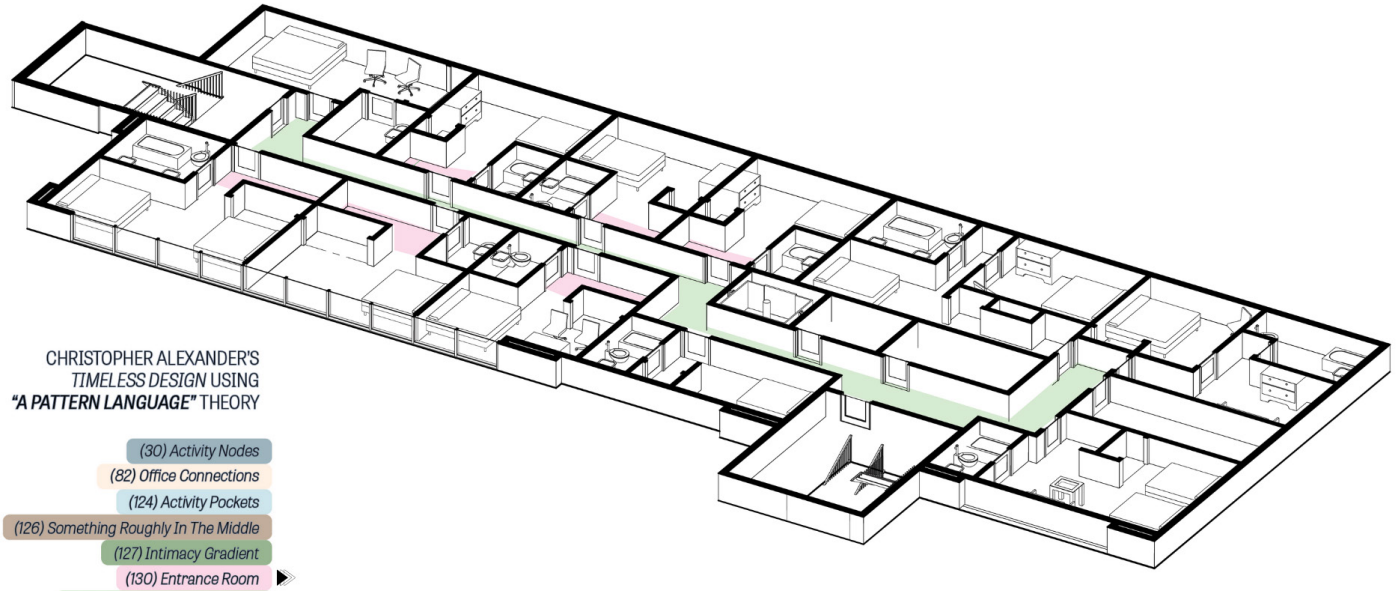
- *(159) Light on Two Sides of Every Room*
- *(171) Tree Places*

levels four-six



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- *(131) The Flow Through Rooms*
- *(132) Short Passages*
- *(142) Sequence of Sitting Spaces*
- *(159) Light on Two Sides of Every Room*
- *(171) Tree Places*

Important Spatial Adjacencies

- BuzziPods
- Conference Rooms
- Collaborative Work Areas
- Cafe
- Restaurant
- Daycare

My project answers the question...

Can we, as designers, retrofit vacant and under-utilized commercial office buildings into clever, thoughtful, and pattern-driven architectural environments that will not only benefit our economy's new style of remote work, but also provide employees and communities with useful spaces that will set them up for their optimal form of work/lifeproductivity?

THANK YOU

Lexi Jordheim

Ultimately, the key to creating useful and profitable architecture in a post-pandemic world is to focus on designing spaces that are adaptable, flexible, and responsive to changing needs. By embracing new technologies and incorporating sustainable design principles, architects can create buildings that not only meet the needs of their occupants and property owners but also contribute to a more sustainable and resilient future.

RETROFITTING ARCHITECTURAL ENVIRONMENTS

IN RESPONSE TO AN EVOLVING WORKPLACE

https://youtu.be/EOOgXc_CMqQ

VERBAL PRESENTATION
Presentation Script

THANK YOU ALL FOR BEING HERE!

I think it's safe to say that everyone sitting here has worked remotely before, whether it be for a day, a month, a year, or an entire job. I also think that it's safe to say that most of us enjoyed that freedom of working remotely (or from home) - you know what I'm talking about, a break from the rigid workplace. Standing up to stretch, giving your dog or cat a hug, or even my personal favorite, going for a 5-10 minute walk to get your creative juices flowing again.

Though all of this "working remotely" was thrown on us rather unexpectedly as a society, we took things head on. We learned, we grew, and I believe we changed the workplace, forever.

NEW

So hi I'm lexi

I grew up in western North Dakota, where I learned a greater appreciation for the landscape and the environment.

I'm a community enthusiast, supporting local businesses wherever and whenever I can whether it be through event participation, volunteering for different shows and productions, or helping small businesses manage their social media and marketing. I grew up in a small business family, and I just love to help.

I'm also a history marvel - especially when it comes to architecture - the original purpose for many buildings is not what they're being occupied for today, (just like the one we are in now) and I find that fascinating. I love to design with history in mind, and make subtle connections and interventions for the future proposed programs. I think it really is the backbone of every design - understanding who came before us, and why.

and lastly - I'm a Covid-19 pandemic education conqueror - as many of us are…….. it was hard to navigate the collaborative student/working world during Covid. Group projects became late night zoom meetings, became black screens, became silent microphones. (As many professors/educators in the audience know)!

It was hard to be isolated and productive.

NEW

My question to you is how can our architectural environments affect our productivity? And how can we, as designers, respond to the demand of the shifting workplace?

NEW

Start off with a quote from the Washington post:

“It’s clear that there are no longer fears of the corona virus holding workers back from returning. The nation is in the midst of one of the biggest workforce shifts in generations: Many now have experienced what it is like to work from home and have discovered they prefer it. At a minimum, they want a “hybrid” situation of working two or three days [a week] remotely. Cities must adapt to this new reality or risk a downward spiral of falling commercial property values, lowering taxes on those buildings and ghost downtowns that could lead to increased crime and homelessness.”

…
So with that Two solutions are obvious: Get more workers back in the office and convert commercial offices to apartments and multi-use or entertainment venues. BUT achieving this — especially in an era of higher mortgage rates — requires strong leadership and a great deal of creativity. This is a once-in-a-lifetime opportunity to reshape the workplace for the future.

As of February 1st, 2023 sources say that the economic office vacancy rate is over 15% in cities such as Houston, Dallas, San Francisco, Washington DC, and Chicago. Commercial office physical vacancy rate has risen drastically since the start of covid-19, and is projected to have an overall increase of 55% just by the end of the decade. (per Forbes)

The economic vacancy rate (which is what investors and property owners sign their leased buildings for) is different from the physical vacancy rate. Many statistics show the economic vacancy rate, but in truth, the numbers for physical vacancy rate are jaw-droopingly low in some of the most vibrant cities across the country. On an average day in Manhattan, less than 50% of workers are in office, and only about 10% are in office all 5 days of the week. (per Forbes)

so With remote work and hybrid opportunities on the rise, will the workplace ever be what it once was? If not, what are these large commercial office buildings destined to do now? Who are they destined to serve? How can we, as designers, turn these corporate quonset into buildings breathing with life, full of opportunity for their occupants and their property owners alike?

NEW

Some initial questions that informed my project direction early in the design phases were:

WHAT ARE THESE VACANT OFFICE BUILDINGS DOING right NOW?

HOW CAN WE BEST RE PURPOSE THESE BUILDINGS?

WHO ARE THESE BUILDINGS DESTINED TO SERVE?

WHAT NEW AMENITIES IS THE WORKPLACE DEMANDING IN THIS NEW CULTURAL SHIFT?

ARE THERE ANY DESIGN PRINCIPLES WE SHOULD BE ABIDING BY?

HOW CAN WE REDESIGN AND RE PURPOSE THESE SPACES, AND STILL RESPECT THEIR LOCAL HISTORY?

NEW

As a society, our work is changing. And our environments need to be a reflection of that. Will we ever return to a society that consumes and dedicates our lives to work? the Covid-19 pandemic rather forced everyone to take a step back, look at their life, and gave people the time to think about what they want in their future. Will the workplace ever be what it once was? And if not… HOW do we deal with the architecture that was created to house tens, hundreds, thousands of employees for 8-10 hours a day?

Remote work has become a widely accepted alternative to location-based work. Now this has not only benefited many people as employees, but has also widely benefited employers. Employers are no longer limited to searching locally for new hires and resounding talent, we now have a global pool of talented individuals, right at the tips of our fingers thanks to remote work.

The opportunity for remote work is at an all time high, as 26% of U.S. employees work remotely, as of 2022. There are expected to be 36.2 million American employees working remotely just by 2025.

And did you know that 16% of U.S. companies are already fully remote?

NEW

My project is a combination/reflection of a prototype project. By using a series of design patterns that are understood around the world to inform the redesign, and products that are affordable and accessible, — commercial office buildings across the country and across the globe, can be transformed.

NEW

Now, I wanted all of my design interventions in this redesign to be intentional.

So I looked at questions like: How can we be sure that our properties are competitive to lease in our region? —- I'm here to not only design for employees and employers, but also for the investors that own these buildings and projects. Without their incredible risks and resources, projects like this would never be possible, and I want to make sure that they are rewarded and secure in their business decisions.

In order to do this - we also need to focus on maximizing the Square Footage, and selecting products and finishes that are affordable and accessible across the globe.

—

As for accessibility,

I asked myself - How can this project be successful in both the big city lease spaces and small town lease spaces? How can a project like this be accessible to all remote working

people, and investors alike?

NEW

These questions led me to wonder >>> What makes an environment feel comfortable?

Christopher Alexander, an Austrian-born British-American architect, design theorist, and professor, demanded a foundation for good design through his writings "A Pattern Language", "The Nature of Order", "Notes on the Synthesis of Form" and "The Timeless Way of Building". Through these theories, he spent his life exercising what the subconscious human connection is to design…. how people behave and react to their surroundings, and what patterns are pleasing… —> a kind of exploration of psychology in design, if you will.

NEW

My site and existing building is in Dickinson, North Dakota. Dickinson, is located in western, ND in the heart of "the Bakken" an oil field sector home to a working class lifestyle,,, where the population is just over 25 thousand.

NEW

My project building is a western North Dakota landmark, the tallest building in the region (towering at 6-stories), one of the most historic in the downtown renaissance district, and an overall city staple that deserves a new life.

My site in downtown Dickinson, is located just across the street from the old railroad station. In 1950, the St. Charles Hotel occupied this location, but was burnt to the ground because of arson.

After the rebuild was finished in 1952, this building has always been used as a multi-use building, in the 1950s, 60s, and 70s it was home to The Ray Hotel, featuring 5 floors of hotel rooms and a spacious restaurant and bar on the ground level. In the late 70s and into the early 1980s, it was branded the Ivanhoe Inn, where many current living residents of Dickinson had their first job.

In 1995 it was turned into a modern multi-use building, with retail space on the ground level and a commercial fitness center on floors 1-3. Hotel rooms still occupied level 4-6 at this time, but went unutilized.

The building currently offers 7 rental spaces on floors 1-2,,,, a 175-person event space on the 3rd floor, and 41 hotel rooms on floors 4-6… but the entire building has been sitting vacant since 2018.

NEW

I will emphasize 3 aspects throughout the design, FIRST, the retrofit of the multi-use building - I wanted to use Chirstpher Alexander's timeless design principles as a foundation for design, a driving factor behind the subtle interventions in the historic building. Part of the affordability that comes with this is choosing patterns that may already exist in the building or (ones that are relatively easy and accessible to add), and emphasizing or elevating them with added

interventions, this way, any budget can be accommodated for future projects.

Second is the materiality that I choose to research in order to achieve a productivity-inducing aesthetic and subconscious pleasure that comes with: acoustical products, textile sustainability, and Volatile Organic Compound emissions (or VOCs) and how we can limit the short-term and long term effects these have on us, by thoroughly selecting the proper materials.

, and lastly, the marketability of not only this project, but projects alike across the country, with respect to their property owners and future investors. How can we design a building that is so integrated in the community that it will be able to withstand more/ or another "Crisis" (like Covid-19 pandemic)?

I think in order to do this I think the answer is simple. we need to:::: design a place that people love to be in, as that is the ultimate form of sustainability.

NEW

I know some people may ask - why Dickinson, North Dakota for the prototype subject for a project like this? Well… Not only does this building demonstrate a great / small to mid-size project range with a hopeful surrounding community population, but this city has great potential. In 2021, over 21 million people visited North Dakota……..seems like a big number… but would you believe that it is about to significantly increase with the addition of the Theodore Roosevelt Presidential Library — which happens to be just 32 minutes from my exact project location.

NEW EXISTING CONDITIONS

The existing condition of this property is,, ready for new use. Structurally the property is outstanding!

This building was built for longevity, and to be a staple of downtown Dickinson and the surrounding community for a really long time!

NEW

But floors 1-3 are ready for a ground-up remodel, and floors 4-6 are in original condition and ready for cosmetic updates. Updated building systems such as HVAC, fire sprinkler systems, and new office/hotel door entry processes will also be added to the entire building.

NEW

There also happens to be a really great pocket park that borders the west of the building – which presents a wonderful opportunity to implement some of Christopher Alexander's patterns from "A Pattern Language' into the site design.

This park in hopes will not only bring nature components to the community of Dickinson, but

also will provide an oasis for working people to step to, to go on their 5-10 minute walk to regain their creative rhythm, or to simply enjoy fresh air during lunchtime.

NEW

This pocket park used to be where the city lit the community Christmas tree… it houses a large water fountain ((which for some reason is never actually turned on)) and the city has replaced the grass in which the trees are supposed to grow in - with gravel. This was a really exciting addition to the project, and one which I truly believe adds so much value to the building.

NEW

The scope of work that is included in my project is to redesign floors 1-3 which covers approx 19,000 sf and to conduct significant cosmetic enhancements to floors 4-6 in order to bring the existing hotel rooms back to life.

My design features the replacement and new location of the current elevator, and brings the stairs up to code by widening them to meet the International Building Code standards. You can see this change happen in the existing circulation tower as it transforms in size from the photo on the left side of the photo to the right side of the screen.

Because this building was built in 1952, circulation was also added to the west side of the building to bring the corridors up to fire code. AND the building is in need of an exterior facelift, which includes elements like new windows on the BLVD front, new and sustainable exterior facade materials, and updated safety lights.

NEW

Employees and business owners face new challenges in the workplace since the covid-19 pandemic and will continue to do so.

SO - How can we, as designers, take this challenge as an opportunity to reflect what the new shift in the workplace is demanding from working centers? In my project, I include resources, products, and design decisions that reflect this: such as:

individual offices made for 1-3 people

FASTISH : collaborative offices for 5+ people, with a variety of seating arrangements and desk options for various company workflows,,,, these spaces are also adjacent to sound proof podcast or zoom rooms ((which focus on acoustical balance and mood)) and social media and marketing content rooms - with endless supplies and good lighting for independent marketing agencies

flexible breakout spaces that can serve as presentation rooms, conference rooms, or collaborative work rooms.

thoughtful pausing connections for all of the in-between moments that come with any given day: a place to relax and talk to new people, a place to take a work call, a table or couch to submit your next task, or a quiet place to eat your lunch.

FASTISH :Integrated throughout the building is a great product from the company BuzziSpace called that BuzziPod - *NEW* these pods can be bought directly through their website and shipped right to your project location, making the accessibility quite easy for future projects. The BuzziPods focus on acoustical balance, material sustainability, and ergonomics. They come in a variety of different seating arrangements, colors, and sizes. This product made a large impact throughout my design due to its affordability and flexibility for different area needs.

And of course, the new and updated boutique hotel that features 33 hotel rooms that boast the history, culture, and nature of western north dakota.

*NEXT**:

I've also included AMENITIES SUCH AS:
A restaurant with local cuisine and familiar faces, open to the public and the people who work at the plaza

a coffee cafe shop that is also accessible to both workers, renters, and the community

daycare and wellness studio - so working parents have a safe place for their children to go while they dedicate attention to their careers.

An awesome outdoor space that serves the community kids, local shoppers, and remote workers… who choose to work from the outdoors!!

FASTISH :AND LASTLY,,, I think that it's really important for prototype projects like this, to inter-twine the roots of the community into the design. *NEW* In this case, Theodore Roosevelt, the 26th president of the United States, fell in love with the environment and freedom of western north dakota. He put North Dakota on the map, and described its people as a tight knit community of hard-working citizens. Local artists were commissioned to paint a mural of Teddy Roosevelt onto the side of the community-driven building.

NEW

A thorough evaluation of exterior and interior materials was done as a part of my project, and a physical material board with description cards stands aside my hanging boards on the 5th floor.

Materials were selected based on derived location, durability, parti and emotional connec-tion to local surroundings, sustainability qualities such as VOC emissions and % of recycled material composition,

as well as LEED rating, SCS Indoor Advantage rating, and Greengaurd certification.

NEW

On the ground level, a variety of Chritopher Alexander's patterns for timeless design are used.

In DARK BLUE, pattern #(30) the Activity nodes are used to create intensity of action, Alexander says that they must attract the same kind of person, at the same time of day and that these should be distributed rather evenly.

In LIGHT BLUE, pattern #(124) Activity pockets, call attention to the relationship between the number of people in a pedestrian area, the size of the area, and a subjective estimate of the extent to which the area is alive. In this case, the waiting area in front of the restaurant was calculated.

In BROWN, pattern #(126) Something Roughly In The Middle, states that by making something which gives a strong and steady pulse to the environment,, it draws people toward the center. In this case, rentable and flexible kiosk stations are used as a fun and lively way to invite people towards the center of the space.

In DARK GREEN, pattern #(127) the Intimacy Gradient, emphasizes that people need a gradient of settings, which have different degrees of intimacy. A homogeneous space, where every room has a similar degree of intimacy, rubs out all possibilities of genuine and unique social interaction within the building.

In LIGHT PINK, pattern #(130) the Entrance Room, says to make a light-filled room at the main entrance of the building to mark the entry AND to straddle the boundary between indoors and outdoors.

In LIGHT GREEN, pattern #(131) the Flow Through Rooms, says that the movement between rooms is as important as the rooms themselves, and its arrangement has as much effect on social interaction in the rooms, as the outside of the rooms. In a complex social fabric, human relations are inevitably subtle. It is essential that each person feels free to make connections or not, to move or not, to talk or not, and to change the citation or not, according to his or her judgment. In this case, the shared kitchen between the coffee cafe and the restaurant is an example.

In PURPLE, pattern #(159) Light on Two Sides of Every Room, highlights that in rooms lit on one side, the glare which surrounds peoples faces prevents people from understanding one another. This glare may be somewhat reduced by supplementary artificial lighting, and well-designed window reveals, but the most simple way to overcome glare is to give every room two sides of windows.

NEW

On level TWO, in light tan, pattern #82 OFFICE CONNECTIONS comes into play.

Now - this is one of the most interesting patterns to uncover. Christopher Alexander says that "current architectural methods often include a proximity matrix, which shows the amount of movement, between different people, and functions in an office. These methods always make that tacit (TASIT) assumption that the functions which have the most movement

between them should be closest together.

However, as usually stated, this concept is completely invalid. The concept has been created by a kind of Taylorian quest for efficiency, in which it is assumed that the less people walk about, the less of their salary is spent on "wasteful walking". The logical conclusion of this kind of analysis is that, if it were only possible, people should not have to walk at all, and should spend the day vegetating in their armchairs."

ME: If two parts of an office are too far apart, people will not move between them as often as they need to; and if they are more than one floor apart there will be almost no communication between the two.

BUT - The fact is that people work best only when they are healthy in mind and body. A person who is forced to sit all day long, without ever stretching their legs, will become restless and unable to work, and unefficient in this way.

These collaborative offices were designed for businesses that thrive under synergetic communication and collaboration.

NEW

On level THREE, in RED, pattern #142 sequence of Sitting Spaces emerges.

It states: every corner of a building is a potential sitting space. But each sitting space has different needs for comfort and enclosure according to its position in the intimacy gradient.

NEW

On the boutique hotel levels, 4-6, the patterns #130, Entrance Room, and #131 The Flow Through Rooms become important. These are patterns that were already established within the floorplans but emphasized with the right furniture, fixtures, and lighting.

NEW

I looked at the connections and spatial adjacencies from all the areas that are serving the people of this plaza. Connection is something that was very important in Christpoher Alexander's foundation for timeless design.

So i asked myself ::
…How can I best arrange the infamous BuzziPods with the presentation/conference rooms so that it is easy to hop off a personal phone call and right into a meeting without disturbing other workers?

How can larger company work areas (studio-like offices that fit 5-25 people) and larger conference rooms be arranged according to their need for one another? How do amenities such as the cafe, restaurant, and daycare play a role in this as well?

These connections have to be thoroughly thought out when they are a part of such a unique work environment. How can I best design so that everyone gets to make the most out of their

time spent here?

These are ideas for change that meet the needs for the new heart and spirit that's developed in the workplace.

NEW

By using Christophper Alexander's theories from "A Pattern Language", "The Nature of Order", "Notes on the Synthesis of Form" and "The Timeless Way of Building", architects and designers can create architectural environments that people want to be in. By doing this, we will begin to see an influx of people regain their interaction in the community and the workplace.

My project answers the question: Can we, as designers, retrofit vacant and under-utilized commercial office buildings into clever, thoughtful, and pattern-driven architectural environments that will not only benefit our economy's new style of remote work, but also provide employees and communities with useful spaces that will set them up for their optimal form of WORK/LIFE productivity?

I believe that yes, we can.

NEW

Ultimately, the key to creating useful and profitable architecture in a post-pandemic world is to focus on designing spaces that are adaptable, flexible, and responsive to changing needs.

By embracing new technologies and incorporating sustainable design principles, architects can create buildings that not only meet the needs of their occupants and property owners but also contribute to a more sustainable and resilient future.

Thank you!

THANK YOU

LEXI JORDHEIM

THESIS APPENDIX

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PREVIOUS DESIGN STUDIO EXPERIENCE:

2nd year	fall: 2019, Charlott Greub Land Artist, Residential	spring: 2020, Ronald Ramsey Marfa, Residential/Site Planning
3rd year	fall: 2020, Bakr Aly Ahmed Hotel China, Mixed-use	spring: 2021, Emily Guo Red River Park, Community Pavilion
4th year	fall: 2021, Amar Hussein Capstone, Mixed-use	spring: 2022, Kristi Hanson Medora, Residential/Site Planning
5th year	fall: 2022, Cindy Urness Thesis, Research	spring: 2023, Cindy Urness Thesis, Commercial