

A new City Hall for Gresham

Group A2

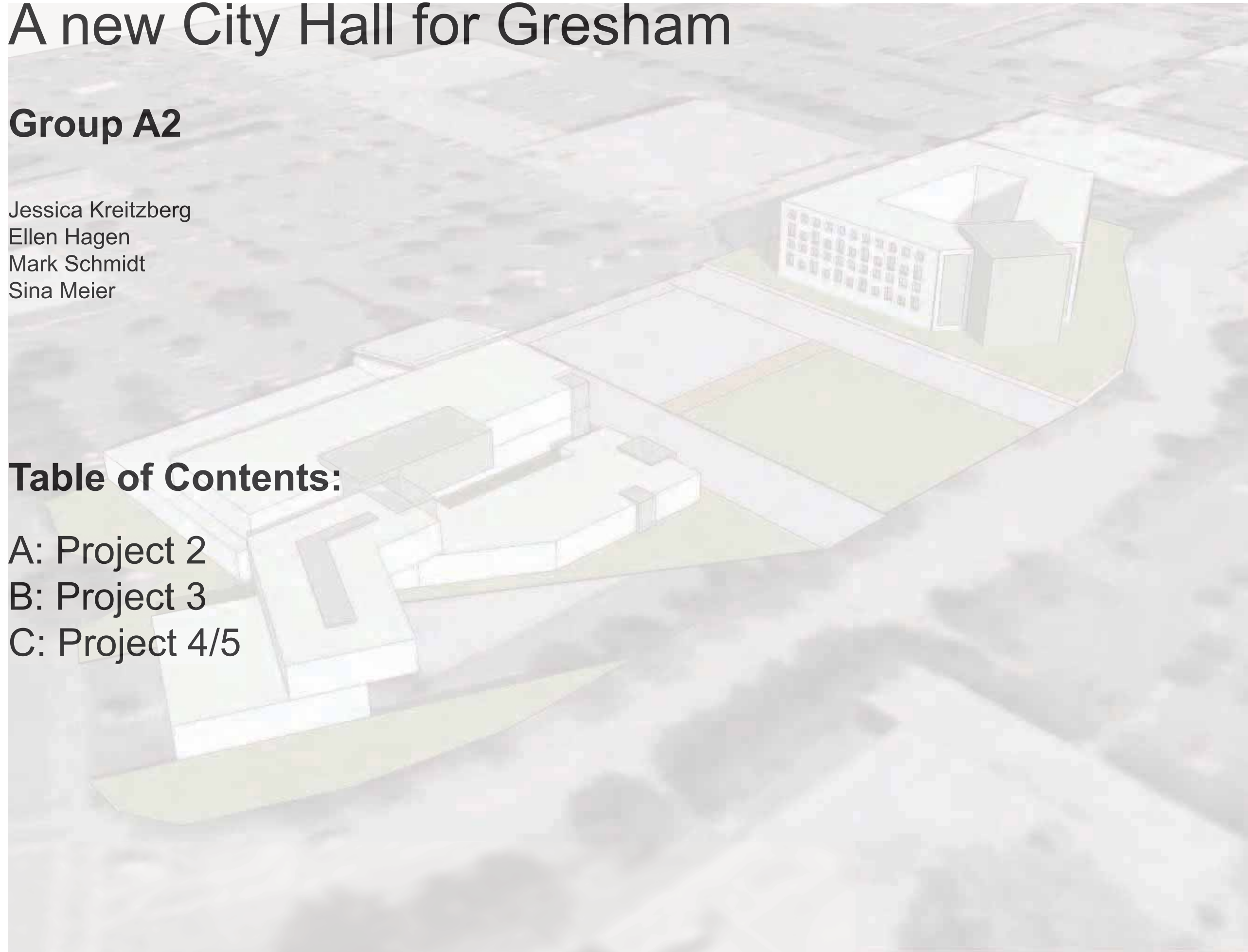
Jessica Kreitzberg
Ellen Hagen
Mark Schmidt
Sina Meier

Table of Contents:

A: Project 2

B: Project 3

C: Project 4/5



Project 2

Group A2

Jessica Kreitzberg

Ellen Hagen

Mark Schmidt

Sina Meier

Table of Contents:

A: City Attorney Adjacency Diagrams

B: City Attorney HECTTEAS Chart

C: City Attorney Precedents

D: City Attorney Opportunities and Constraints

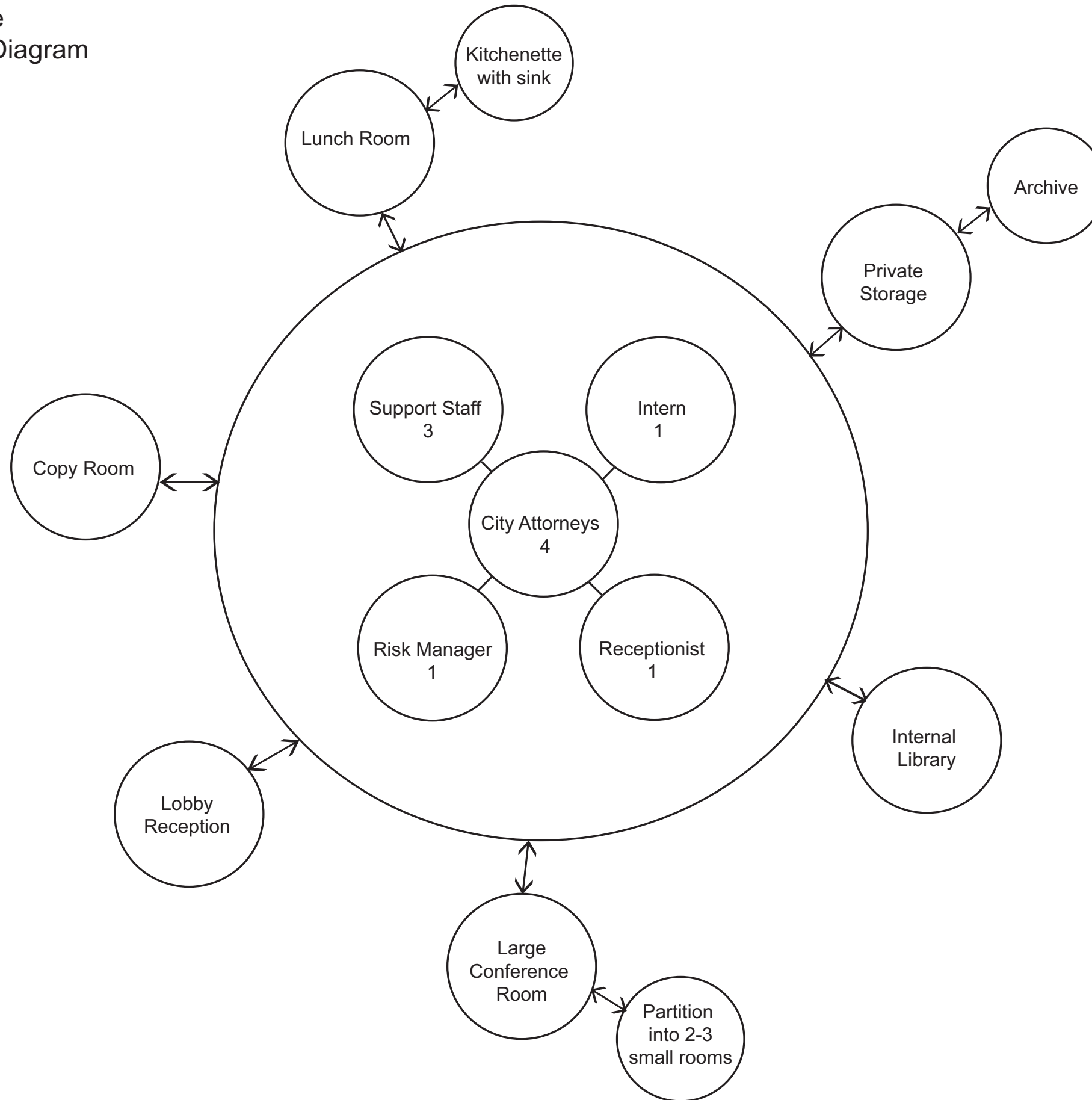
E: Police Department Adjacency Diagrams

F: Police Department HECTTEAS Chart

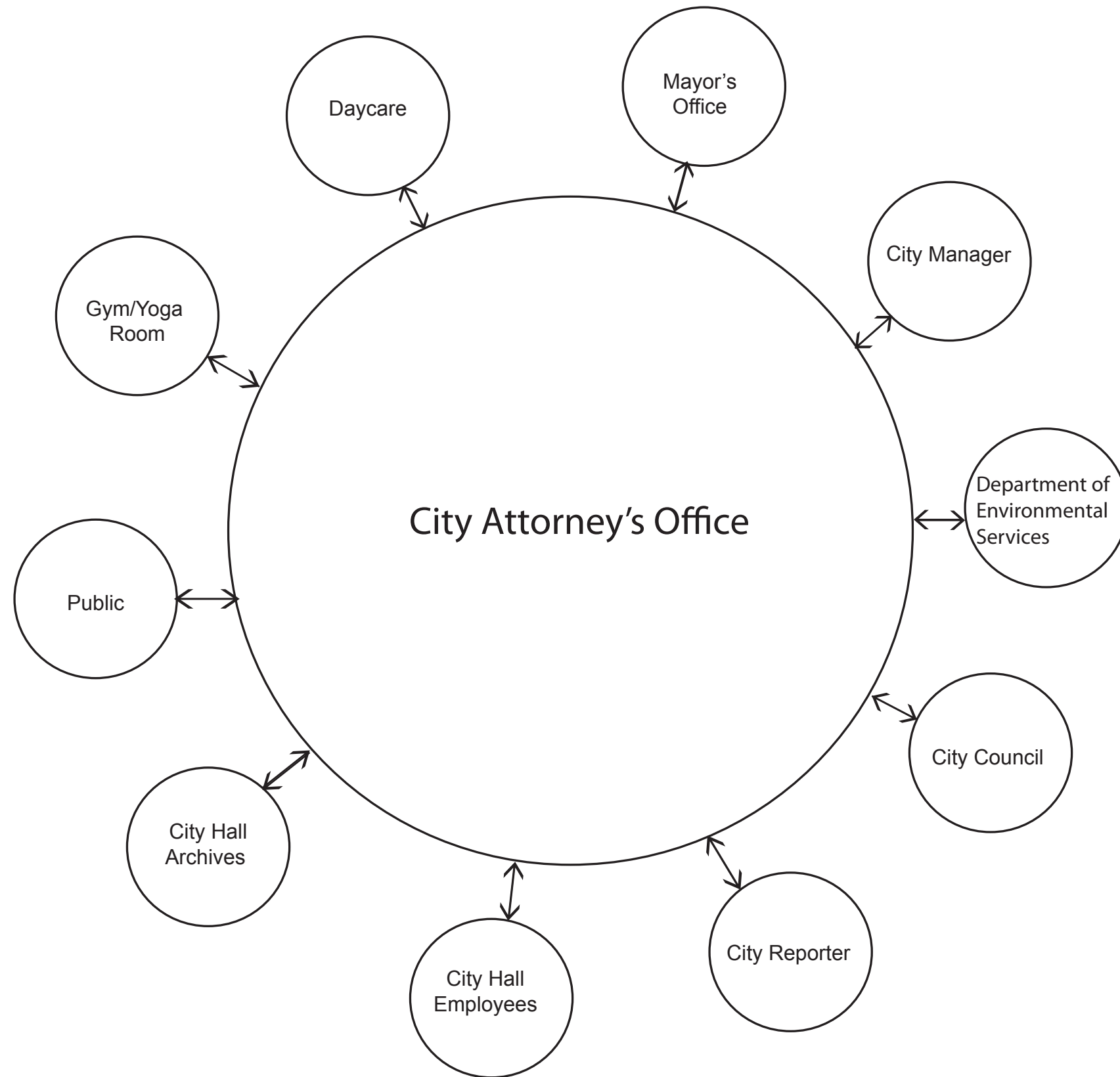
G: Police Department Precedents

H: Police Department Opportunities and Constraints

City Attorneys Office
Internal Adjacency Diagram



City Attorneys Office
External Adjacency Diagram



Gresham City Hall
 City Attorney's Office

Values	Goals	Facts	Needs	Ideas
Human	Accessibility internal and public	Proximity to other departments	Proximity to other departments	located on clear circulation path
	Public presence	Public used City Hall	Main entrance presence near public circulation	inviting main lobby located on clear circulation path
	Good Communication			Close to mayor city manager council etc
Environmental	Access to natural light and air	Health and wellness Comfort	need operable windows need more space for storage	skylights atrium library all open to the office
	Privacy	Deal with confidential documents	Private offices	some private offices
	storage	not enough storage	need more space for storage	Have their own archive space
Cultural	interaction Multi purpose Room	Currently well used space need funding	need more conference rooms	large flexible space with partitions
	on office related interaction	Don't have kitchen or lunch room Eat lunch in office	need sink and fridge	kitchenette within their office Yoga and Gym within City Hall
Technological	Access to personal computers and internet			individual computers
Economic	More efficient spatial layout			
Aesthetic	Clear signage	Confusing signage	larger signage	Clarity in layout
	Good wayfinding	light and long hall ways	wider and shorter hall ways feeling of openness	skylights in hall ways Atrium space
	Permanence/Historic Presence	Currently in temporary office	use of permanent materials	brick and stone
Safety	Confidentiality	hackers	need secure place for files	locked accessed filing room
	security for files and staff	Deal with confidential documents	need security for employees need receptionist	Evening and weekend security Hire an assistant/receptionist

City Attorney's Office Design ideas

Human

- Public Presence
- Entry Procession
- transparency
- eating
- soft Materials



Environmental

- Health and wellness
- Daylighting
- Operable windows
- skylights
- Open Office Plan
- Atrium
- artwork
- Art or



safety

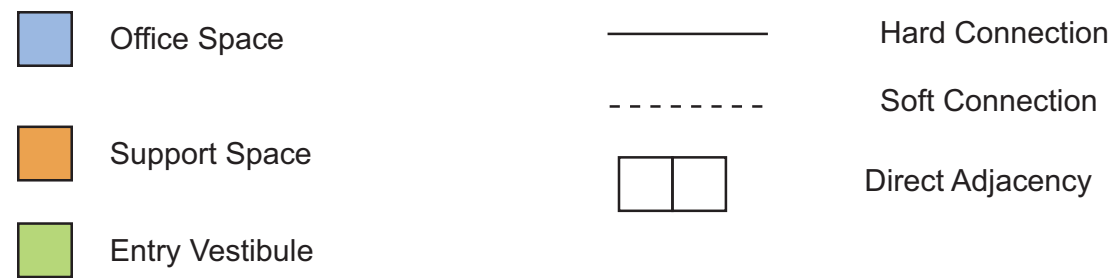
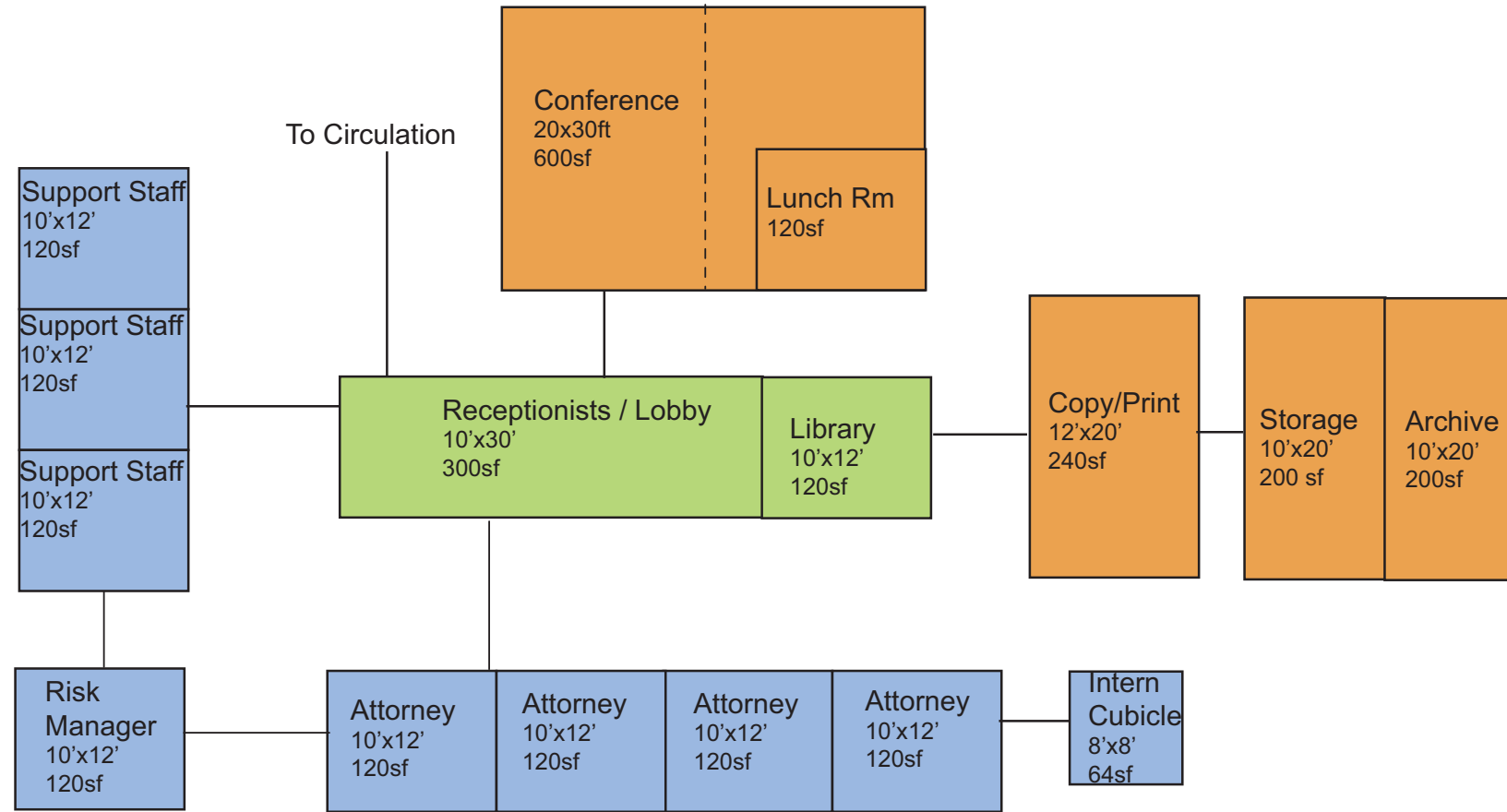
- Confidentiality
- Partitions
- staffed Reception
- Private Offices



City Attorney's Office

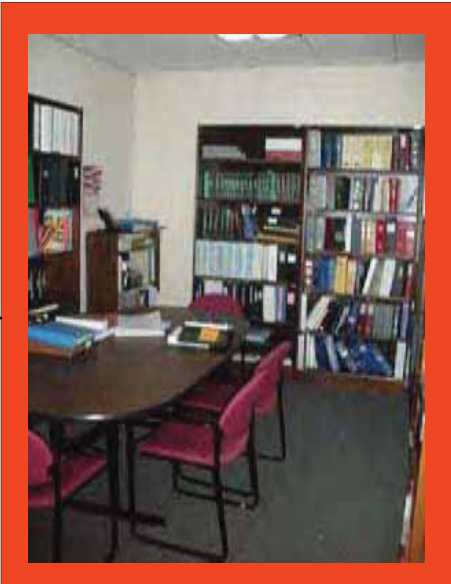
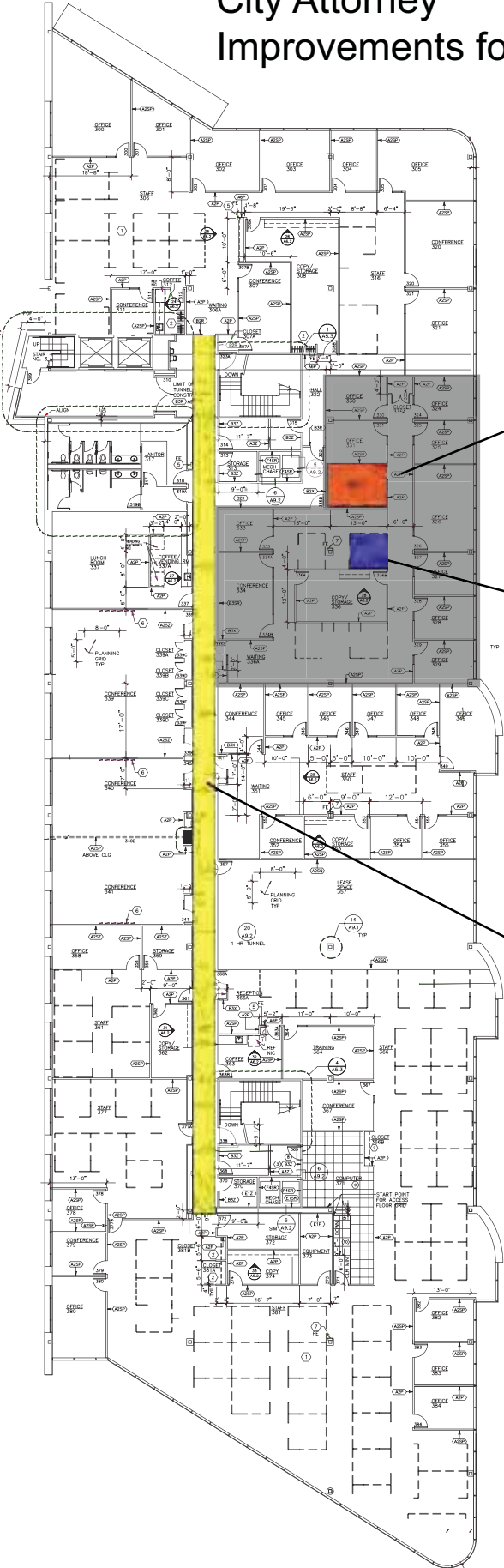
	Existing # of rooms	Future # of rooms	Room Dims Feet	Area SF	Total Exist. SF	Total Future SF	Notes
Common Spaces							
City Attornies Offices	4	4	10x12	120	480	480	
Support Staff Offices	3	3	10x12	120	360	360	
Risk Manager Offices	1	1	10x12	120	120	120	
Reception/Lobby	1	1	10x30	300	300	300	Library could be part of lobby or multipurpose room Lobby needs to be more open w/ circulation around it
Library	1	1	10x12	120	120	120	
Intern Cubicle	1	1	8x8	64	64	64	Temporary
Large Conference Room	1	1	20x30	600	240	600	Large room that can be partitioned into 2-3 smaller spaces
Lunch Rm w/ kitchenette	0	1	10x12	120	0	120	Sink is needed. This space could be a breakroom also.
Storage Rm	0	1	10x20	200	0	200	Currently using empty cubicle(s)
Archive Rm	0	1	10x20	200	0	200	Currently using empty cubicle(s)
Copy/Print Rm	1	1	12x20	240	240	240	
Total					1924	2804	

ATTORNEY'S OFFICE SCALED RELATIONSHIP DIAGRAM



Gresham City Hall Analysis

City Attorney
Improvements for current space



Place library in a more open inviting area



Create a storage room to hold files, books, etc. that are currently being stored in cubicles



Make hallways larger and introduce daylight

City Hall Common Spaces



Create a more utilized public space
Invite public & Gresham community into City Hall

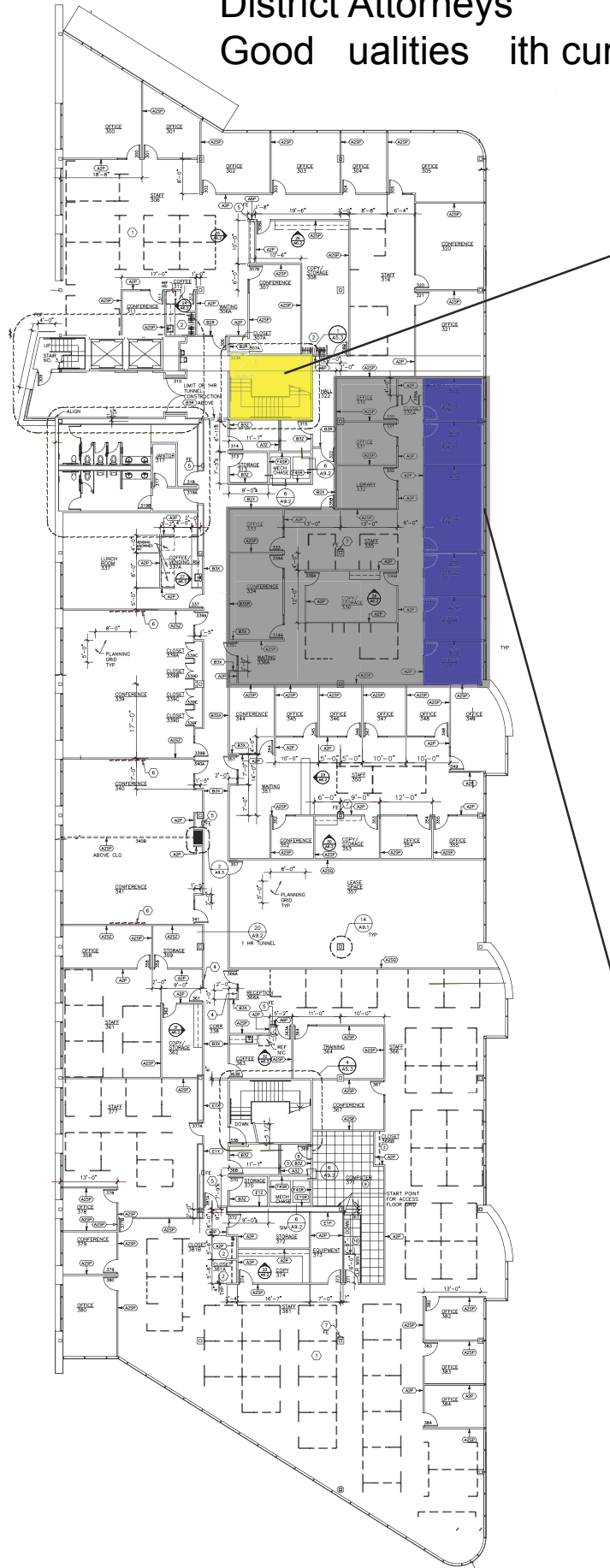


Create easy to access bike storage
Encourage use of public transit, bikes, etc.

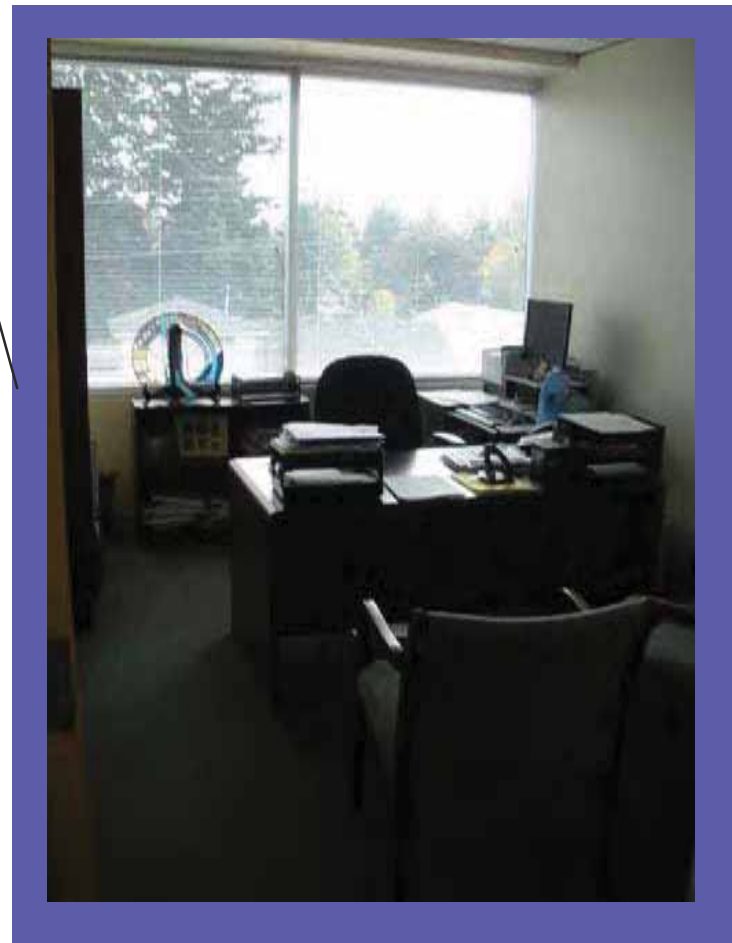
Gresham City Hall Analysis

District Attorneys

Good qualities with current space



lights add daylight in stairwells



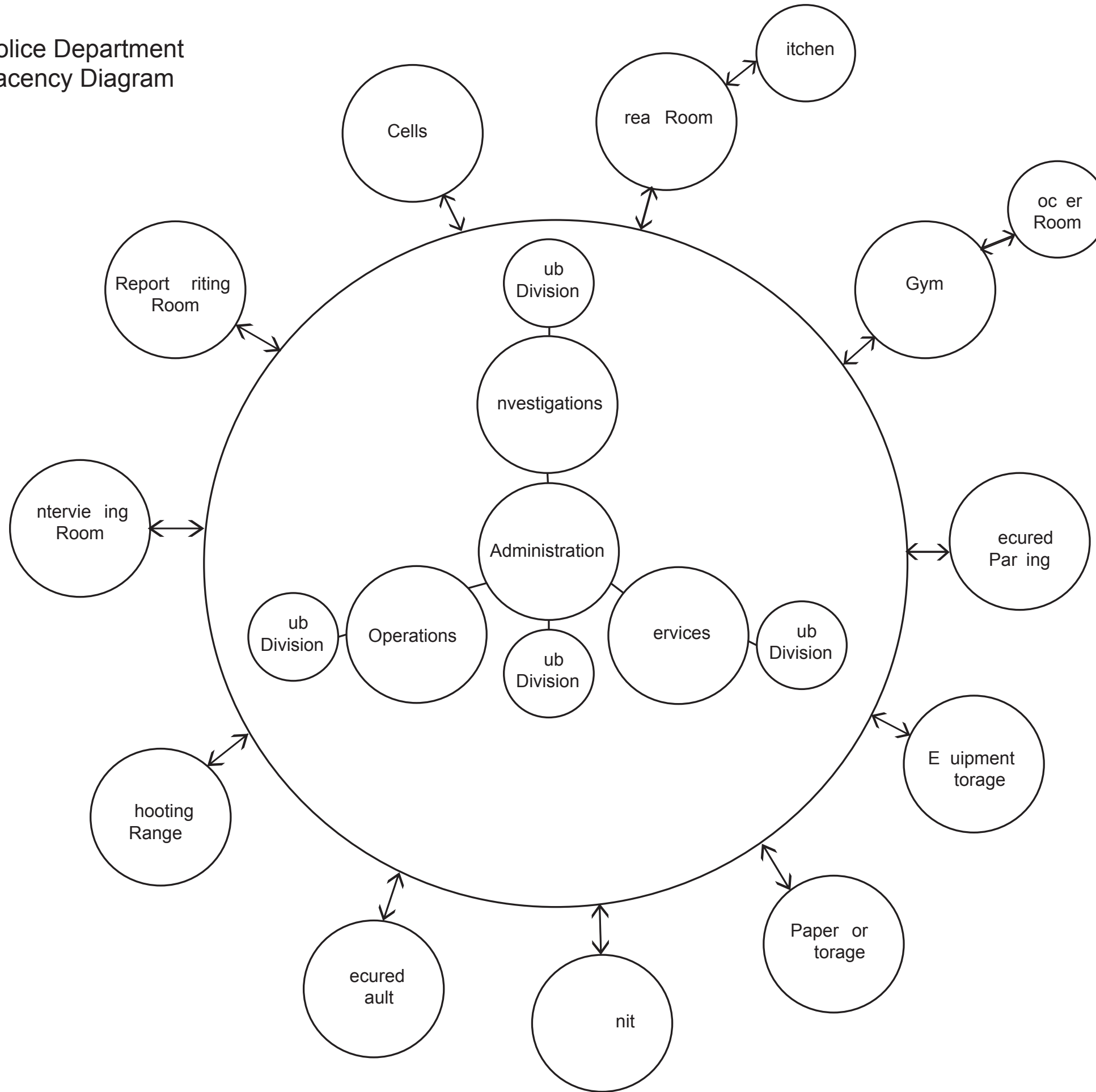
Maintain large windows in offices

City Hall Common spaces

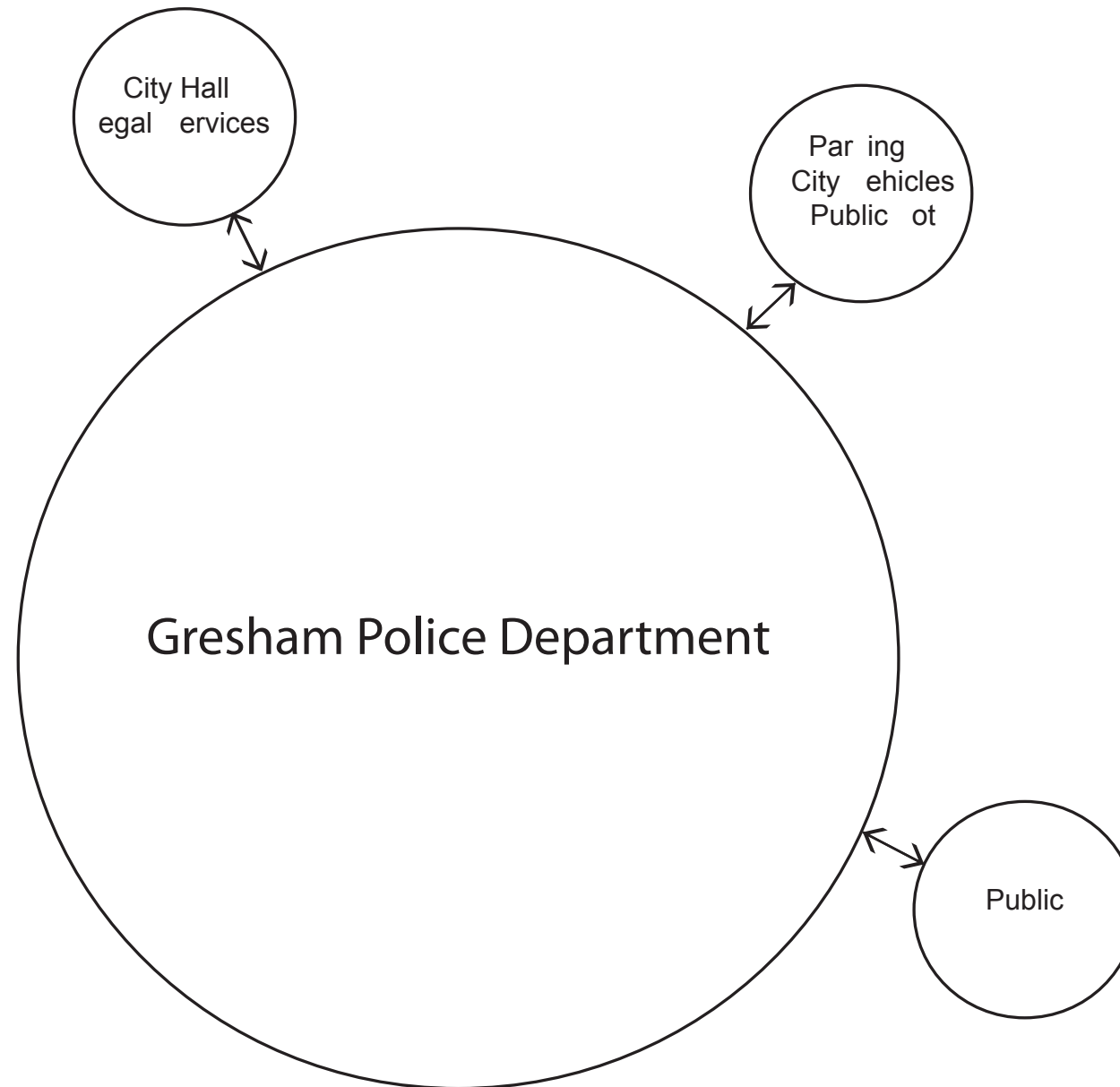


friendly inviting Reception

Gresham Police Department
Internal Adjacency Diagram



Gresham Police Department
External Adjacency Diagram



Gresham City Hall
Police Department

Values	Goals	Facts	Needs	Ideas
Human	Protect and assist public	Are on call 24 hours a day	Need a 24-hour staffed reception desk	Reception desk on first floor Service booth doubles as security for bldg
	Operation of private and public restrooms	Are currently using public restrooms	Need more restrooms within each division	Need more private restrooms
Environmental	Privacy	Investigators need private/confidential offices	Need some private offices	Some private offices
	Paper storage	They do not have enough storage Need more funding	Need archive space Need more space in general	Large shared archive space Local storage within departments
	Fitness	Fitness and good health is required on job	Need workout room	Workout room with adjacent locker rooms
Cultural Work Culture	Interaction non formal	Don't have lunch or break room Don't have enough space for these rooms	Need break and lunch room	Multi purpose room for informal interaction
	Functional building that supports work culture	Have a lot of equipment and gear Don't have enough funding	Need storage for equipment Need locker rooms	Flexible equipment storage
Technological				
Economic				
Aesthetic				
Safety	Confidentiality	Deal with confidential information	Need separate building	Be stand alone Police building
	Security of building files equipment personnel	Undergoing investigations Store weapons on site Hold people overnight Interrogate people	Need private offices Need secured vault for fire arms Need more cells Need secure interview space	Private offices for investigators Vault in basement More cells More interview space
	Separate Police building Short response time	Separate building is more secure Emergency response Have emergency vehicles	Need new separate Police building Need good vehicular access Need secured car lot	Be stand alone Police building Traffic light that trips Secured parking lot for police vehicles

Gresham Police Department Design Ideas

Cultural

- Non-formal Interaction
- Relaxation
- Bonding
- Event Space
- Community Interaction
- Building and Storage
- Support Work Culture



Environmental

- Health and Wellness
- Fitness
- High Ceilings
- Atrium
- Daylighting



Safety

- Confidentiality
- Vehicular Access
- Public/Private Entrance
- Public Interface
- Secured Access
- High Windows
- Privacy



Gresham Police Department		Existing	Future	Room Dims	Area	Current	Future	Notes
		# of rooms	# of rooms	Feet	SF	SF	SF	
services								
records								
	records window	1	2	20x20	400	400	800	
	records office	3	6	10x12	120	360	720	
	records assist desk	1	2	10x15	150	150	300	
	open office records	2	4	15x15	225	450	900	
	records storage	1	2	15x15	225	225	450	
reports								
	reports work	1	2	15x20	300	300	600	
	dui processing	1	2	10x20	200	200	400	
	holding cells	4	8	7x9	63	252	504	
	sally port	1	2	20x20	400	400	800	
investigations								
	lab dark room	1	2	15x20	300	300	600	
	property intake	1	2	9x20	180	180	360	
	property storage	1	2	20x20	400	400	800	
	equipment storage	1	2	12x12	144	144	288	
	office	5	10	9x9	81	405	810	
	office	1	2	9x15	135	135	270	
	office	8	16	10x12	120	960	1920	
	office	1	2	18x18	324	324	648	
	vault secure	1	2	9x15	135	135	324	
	lunch	1	2	9x10	90	90	180	
	open office	4	8	20x20	400	1600	3200	
	interview	2	4	10x12	120	240	480	
admin								
	office	9	18	10x12	120	1080	2160	
	conference	1	2	10x20	200	200	400	
	reception	1	1	10x20	200	200	200	
	open office	1	2	10x20	200	200	400	
	men's lockers	1	2	34x34	1156	1156	2312	
	women's lockers	1	2	15x15	225	225	450	
total						10711	21276	

Gresham City Hall Analysis

Police

Improvements to current space



Introduce more daylight and warmer materials into the spaces



Provide more storage rooms for the large amounts of paperwork that have to be kept on file



Avoid using triangular shapes that create dead corners

Possible Additions to Facility



Provide a gym/work out area



Incorporate a K-9 Unit on site



Provide a shooting Range

Project 3

Group A2

Jessica Kreitzberg

Ellen Hagen

Mark Schmidt

Sina Meier

Table of Contents:

A: Thesis Statement

B: City Hall Adjacency Diagrams

C: City Hall Scaled Adjacency Diagram

D: Police Department Scaled Adjacency Diagram

E: Fire Department Scaled Adjacency Diagrams

F: City Hall Design Precedents

Thesis Statement

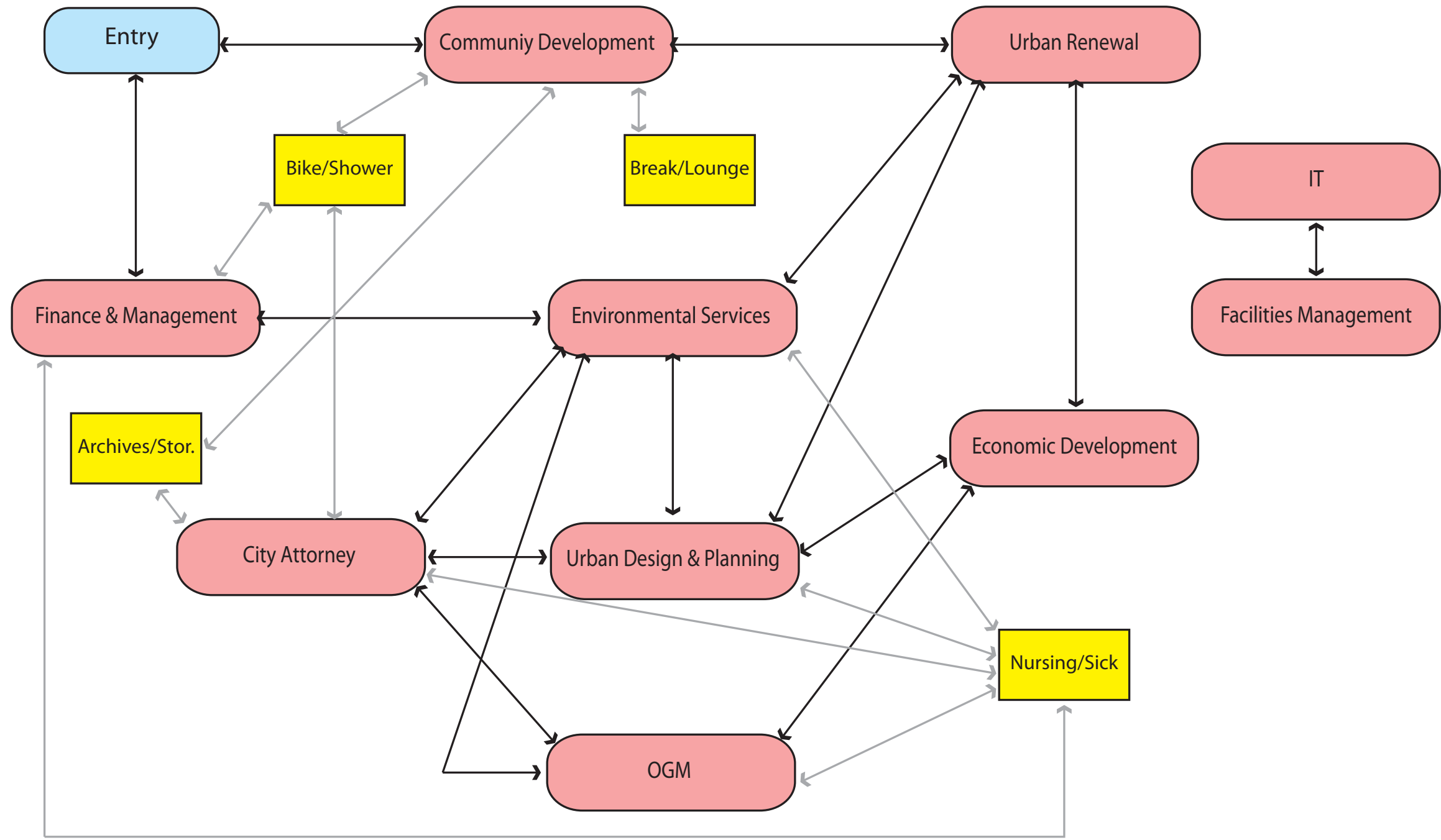
Our proposed Gresham City Hall will be a center for the community and contribute to a vibrant downtown.

Through collaboration with Gresham City Hall employees and staff, the above thesis statement was developed, expressing the needs and goals for a new Gresham City Hall.

Methods of research include:

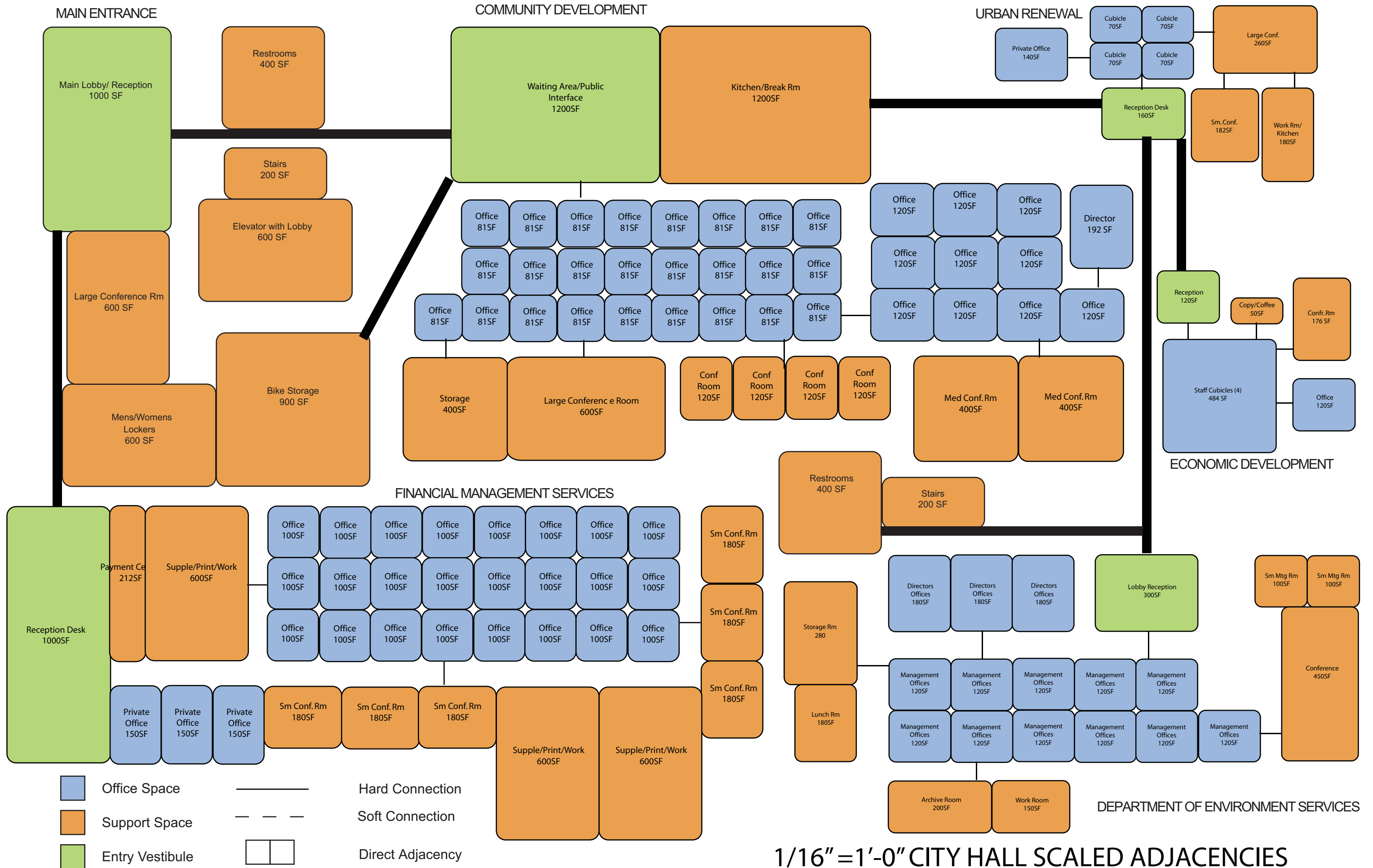
Department Interviews
Facility Walkthroughs
Quantitative Research
Qualitative Research

City Hall Adjacency Diagram

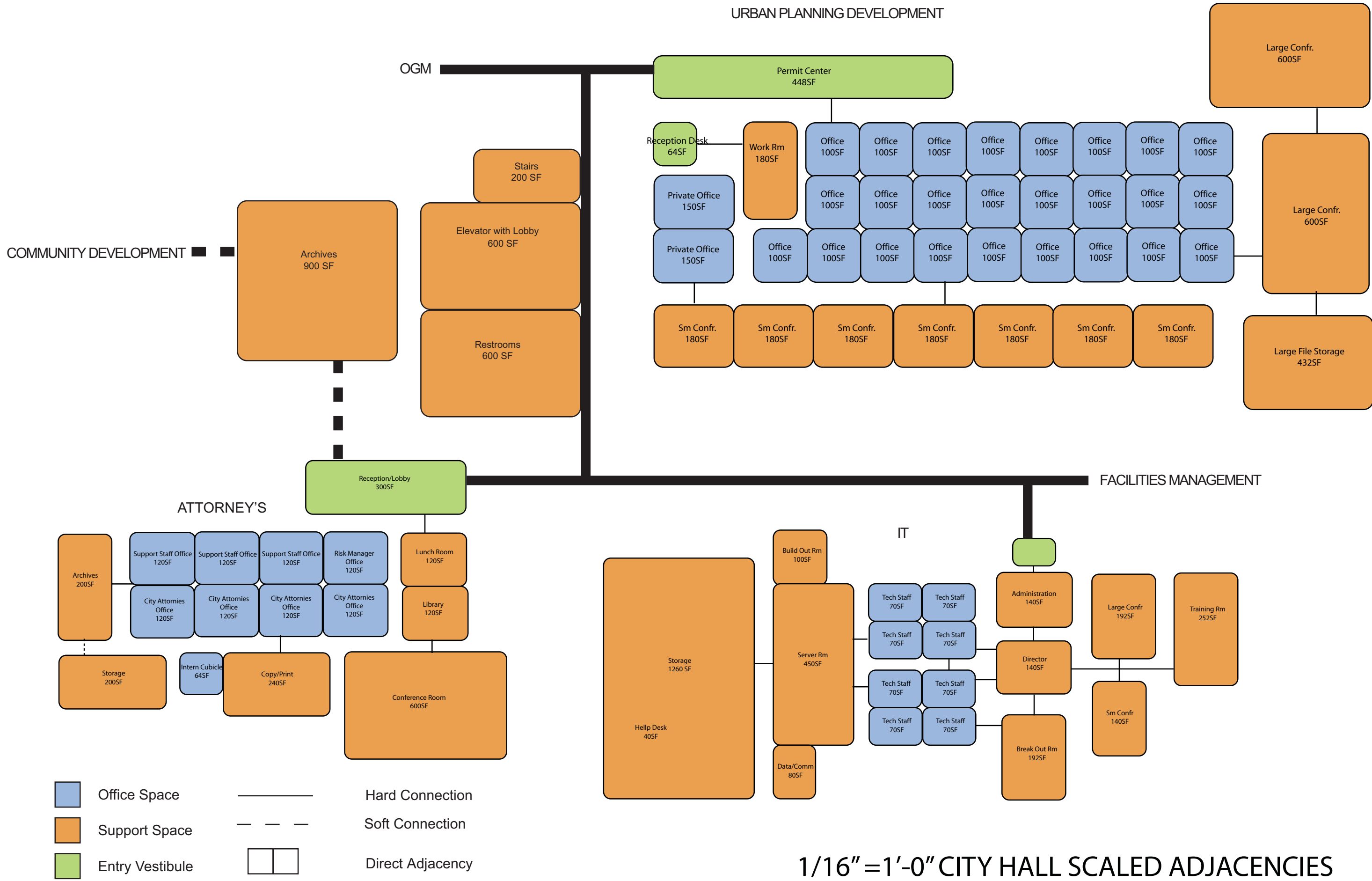


— Community Space Connection

— Department Connection



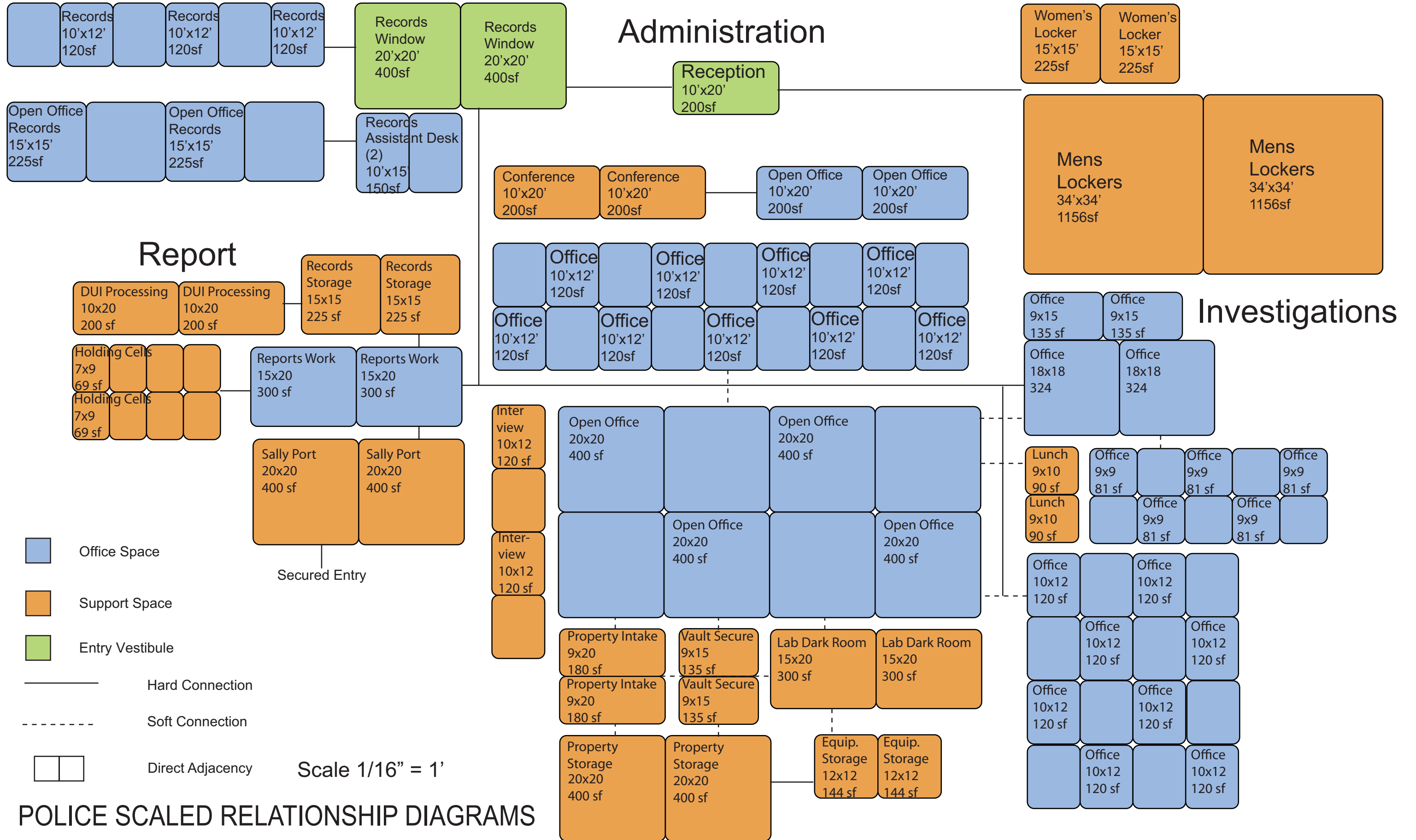
1/16" = 1'-0" CITY HALL SCALED ADJACENCIES



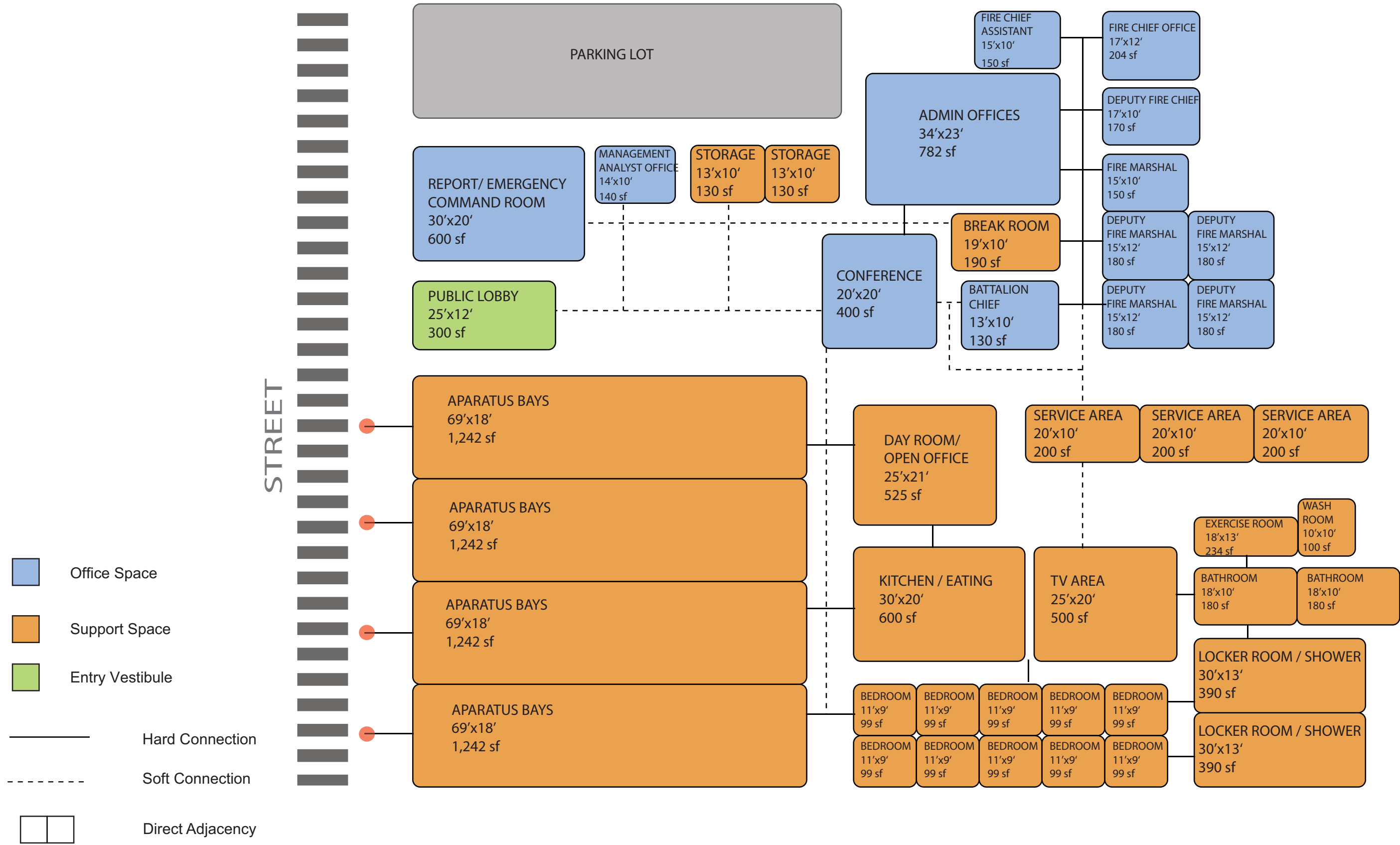
1/16" = 1'-0" CITY HALL SCALED ADJACENCIES

Public Interface

Administration



POLICE SCALED RELATIONSHIP DIAGRAMS



FIRE DEPARTMENT SCALED ROOM DIAGRAM

Scale 1/16" = 1'

Historical City Halls

Ellen Hagen, Sina Meier,
Jessica Kreitzberg, Mark Schmidt



Los Angeles City Hall



San Francisco City Hall



Oakland City Hall



Chicago City Hall

New City Hall Precedents

Ellen Hagen, Sina Meier,
Jessica Kreitzberg, Mark Schmidt

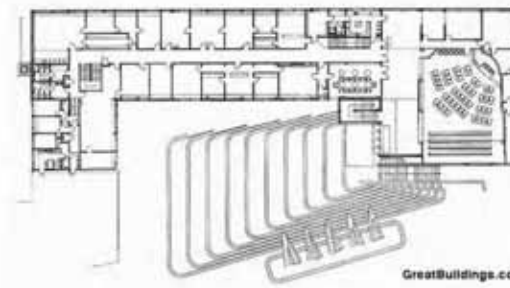
- 1- Greenroof demonstration
- 2- Vertical cistern art display
- 3- Extension of park through connected open spaces
- 4- Rain water used for irrigation
- 5- Below grade system



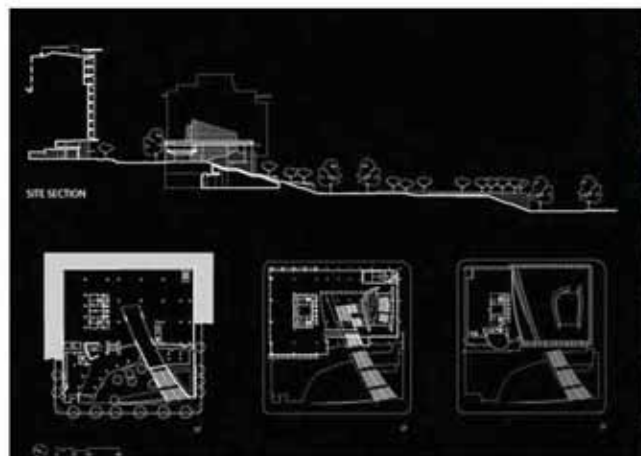
Puyallup, WA City Hall - Mithun Architects



Austin, TX City Hall - Antoine Predock Architects



Seinajoki, Finland City Hall - Alvar Aalto



Seattle, WA City Hall - Bohlin Cywinski Jackson



Redmond, WA City Hall - Mulvanny G2

Project 4/5

Group A2

Jessica Kreitzberg

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Table of Contents:

A: Purpose Statement

B: Site Analysis

C: City Hall, Fire and Police Floorplans

D: Massing Studies

E: Energy Program

Purpose Statement

Our proposed Gresham City Hall will be a center for the community and contribute to a vibrant downtown.

Through collaboration with Gresham City Hall employees and staff, the above thesis statement was developed, expressing the needs and goals for a new Gresham City Hall.

Location: NW Eastman Parkway and NW 3rd Street

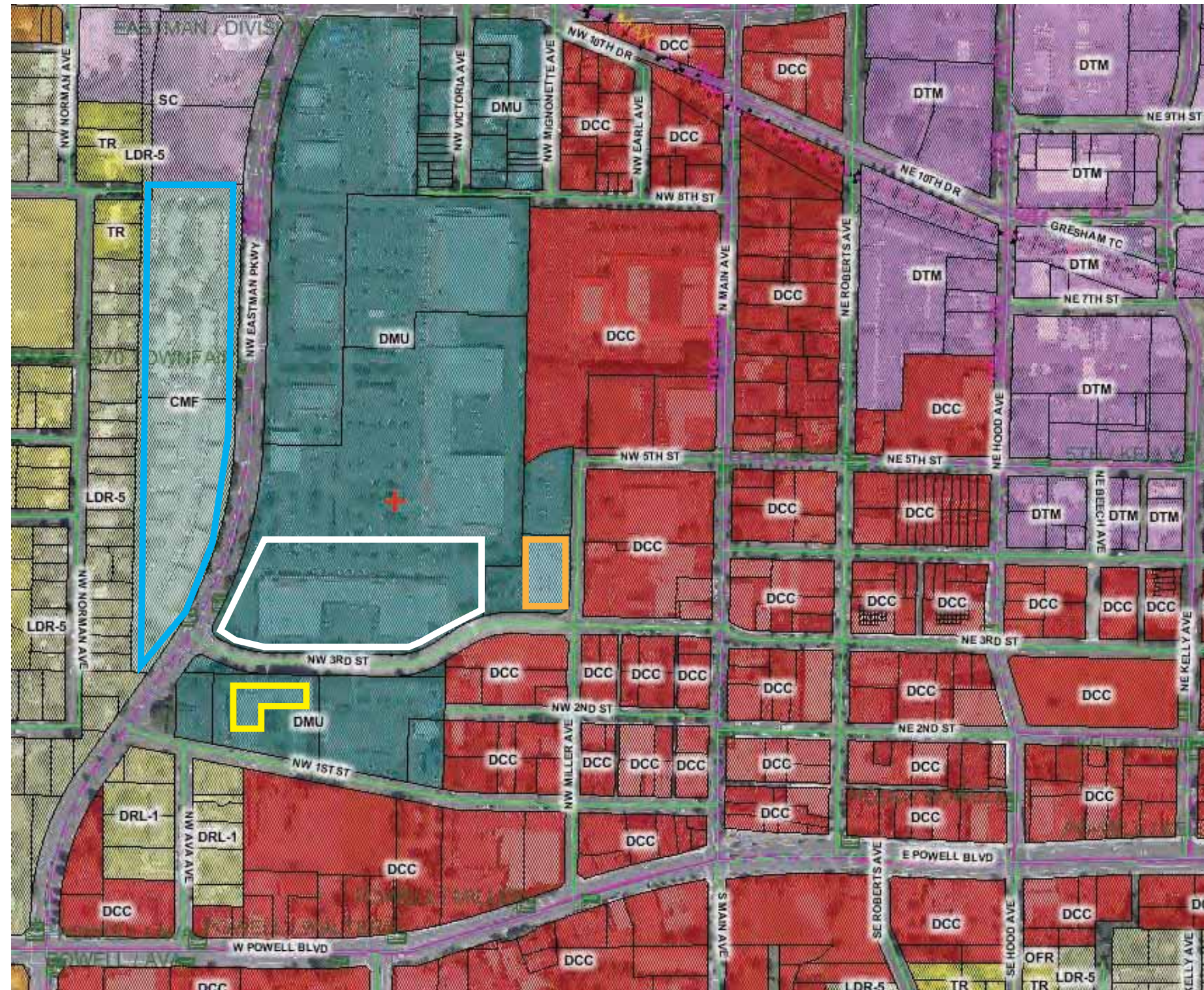
Program: City Hall, Police and Fire

Vision:

- Center for the community
- Safe and attractive environment
- Strong presence



Design Considerations for Site



 Proposed Site


Important Buildings

 Library

 Church

 Apartments


Zoning Districts

 Downtown Commercial Core

 Downtown Mixed Use

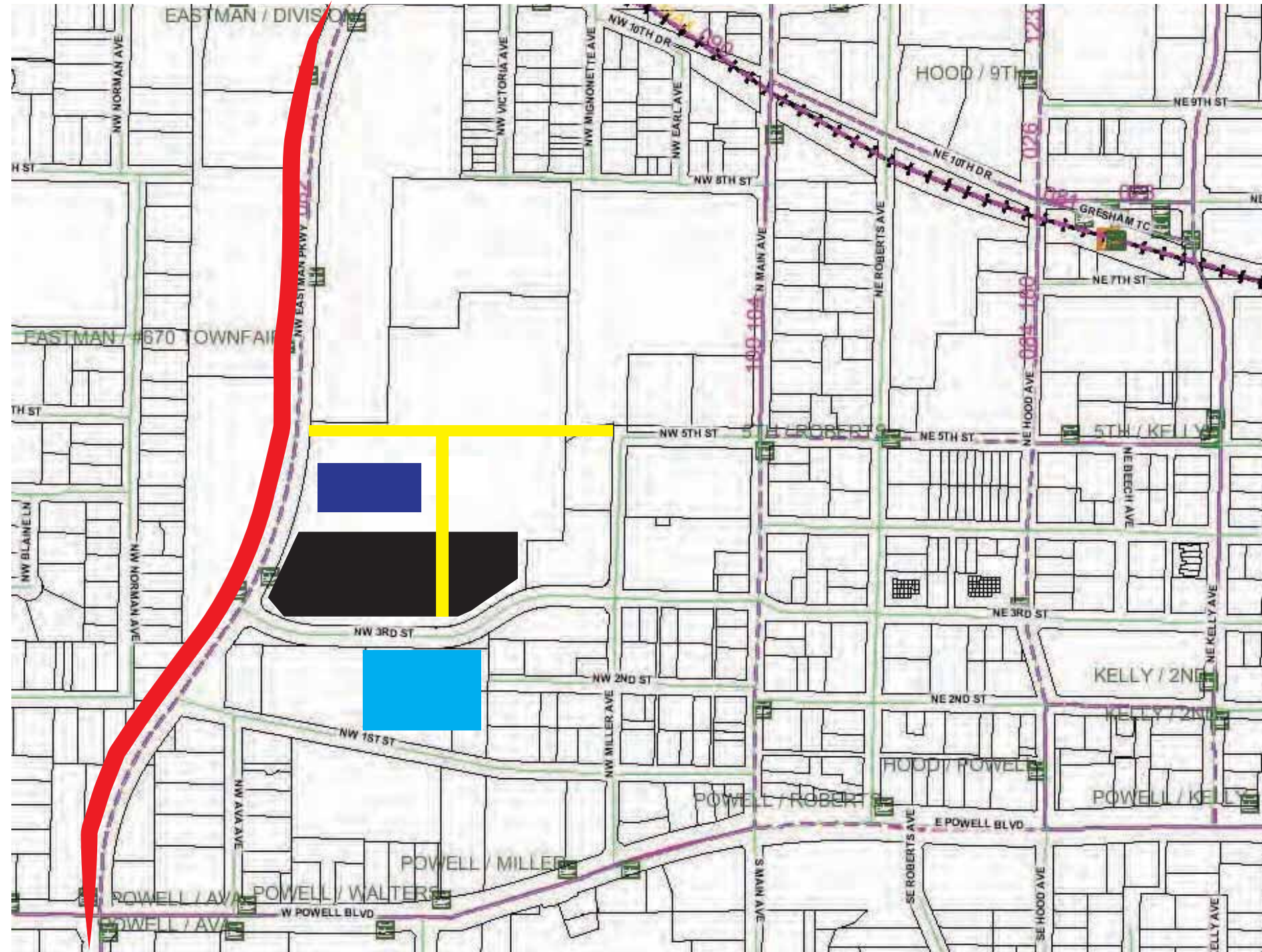
 Corridor Multi-Family

 Downtown Transit Mid-Rise

 Downtown Residential Low-Rise



Design Considerations for Site



- Proposed Site
- Bus Routes
- Max Blue Line
- Roads
- Proposed Roads (Downtown Plan)
- Proposed Parking (Downtown Plan)
- Existing Parking
- NW Eastman Parkway (Major Access Rd)



Existing Conditions



Existing Building and Parking Lot



NW Eastman Parkway



NW 3rd Street



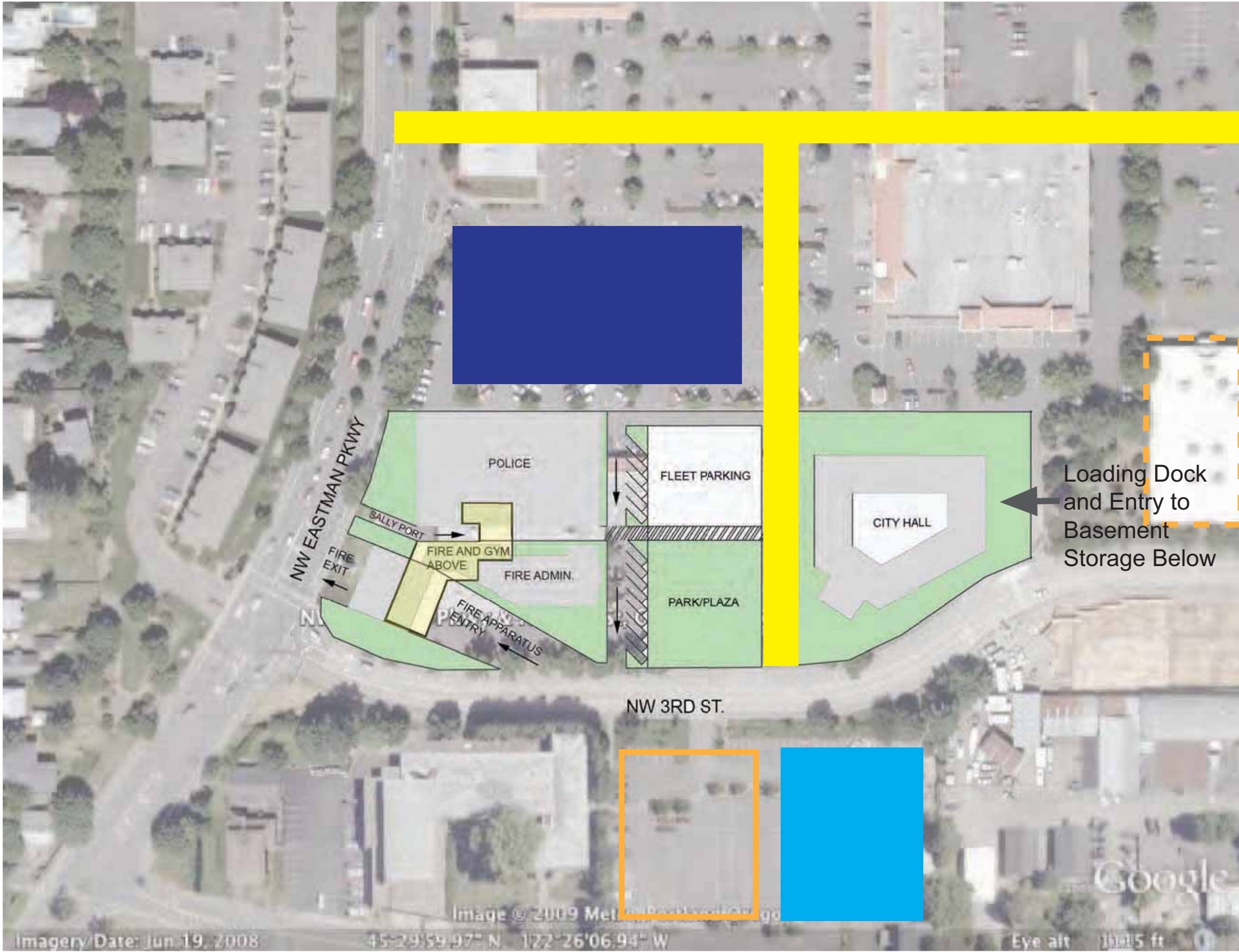
Apartment Buildings West of Site



Housing South of Site



Site Plan



Proposed Roads
(Downtown Plan)

Existing Parking

Proposed Parking
(Downtown Plan)

Proposed Library

Existing Library



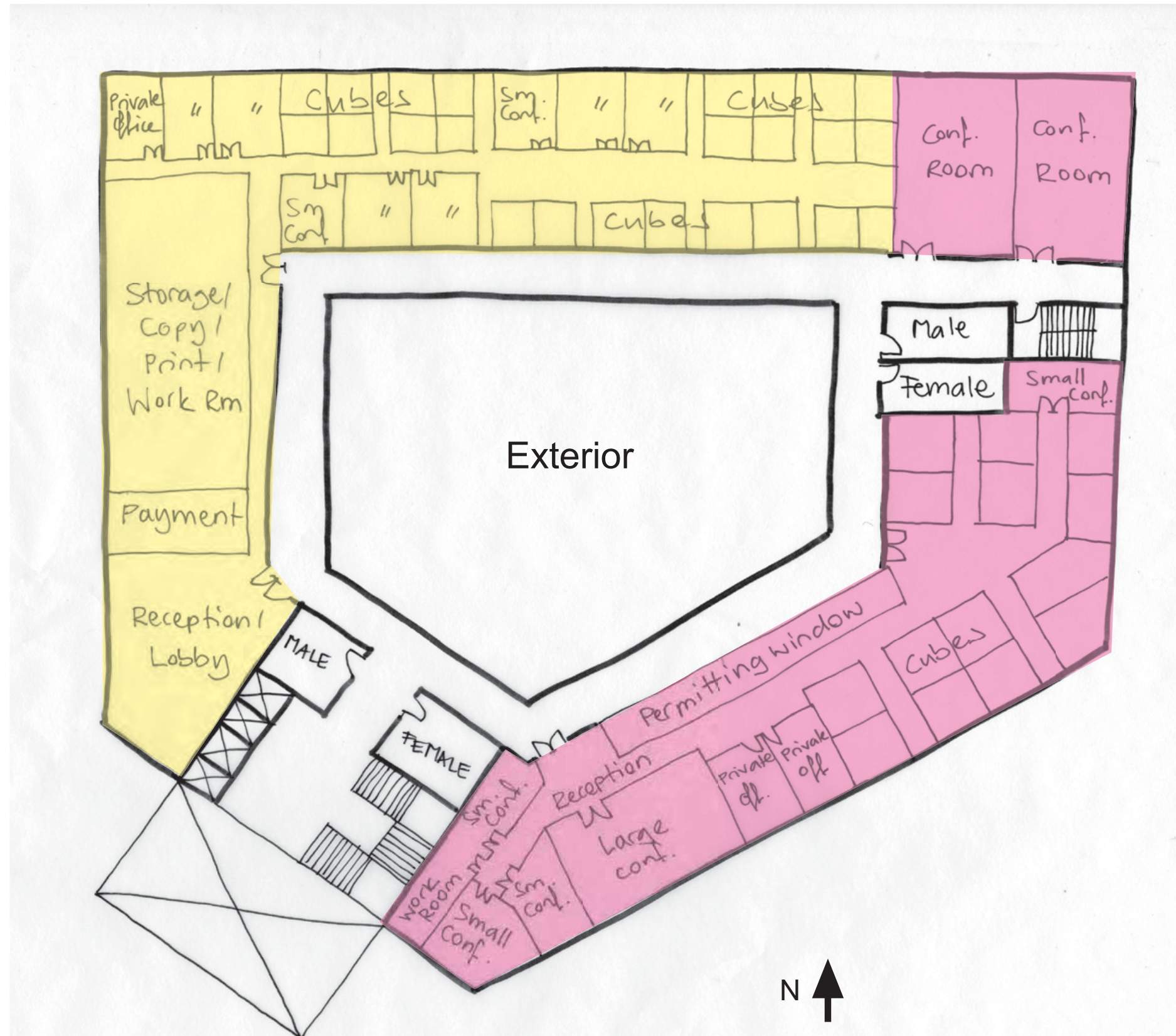
Floor Plans : 1st Floor



- Community Development
- City Attorney
- Ground Floor Retail/Cafe





Floor Plans : 2nd Floor



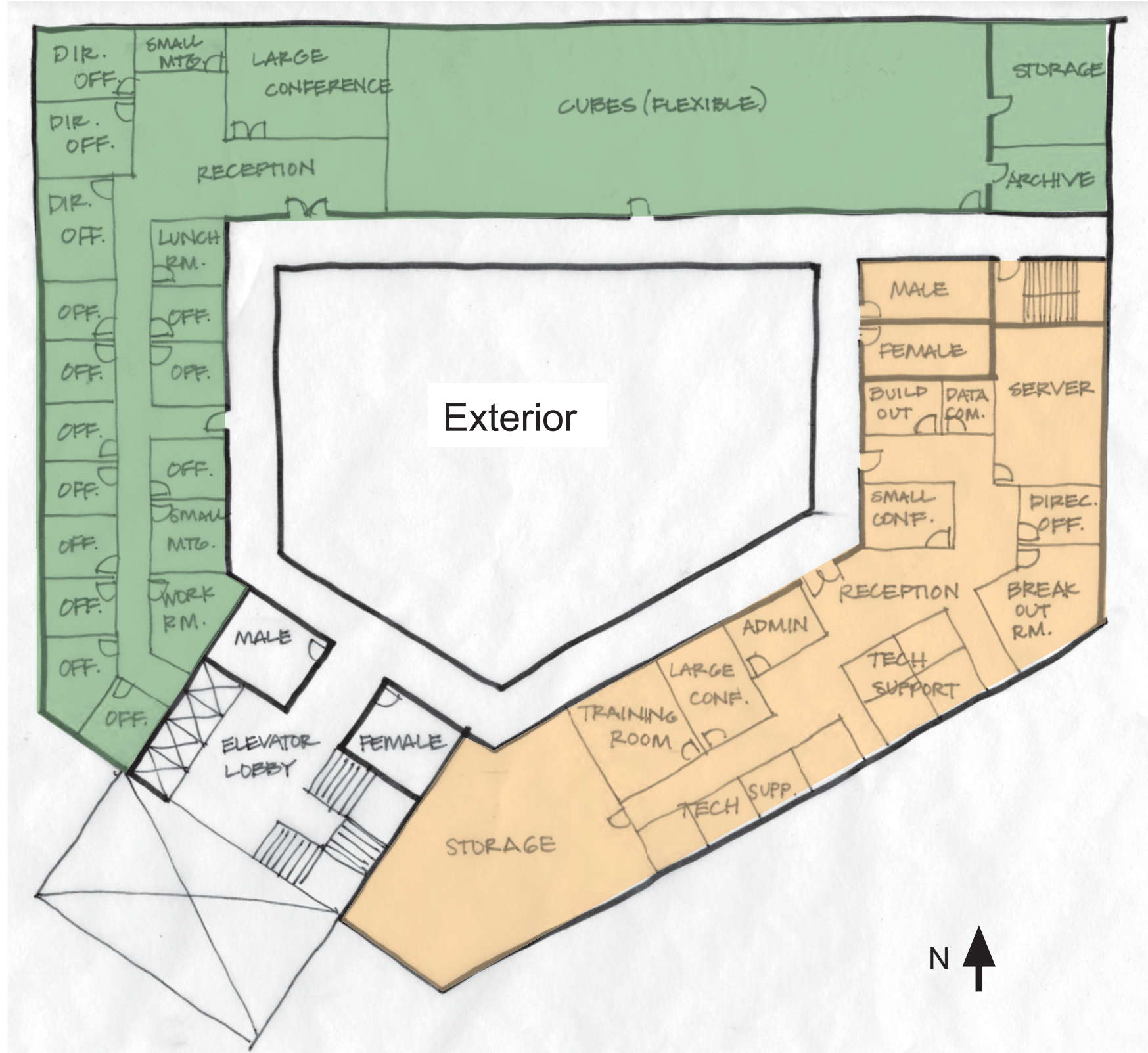
- Finance and Management
- Urban Planning

Floor Plans : 3rd Floor



-  Economic Development
-  Office of Governance and Management

Floor Plans : 4th Floor



- Environmental Services
- Information Technology

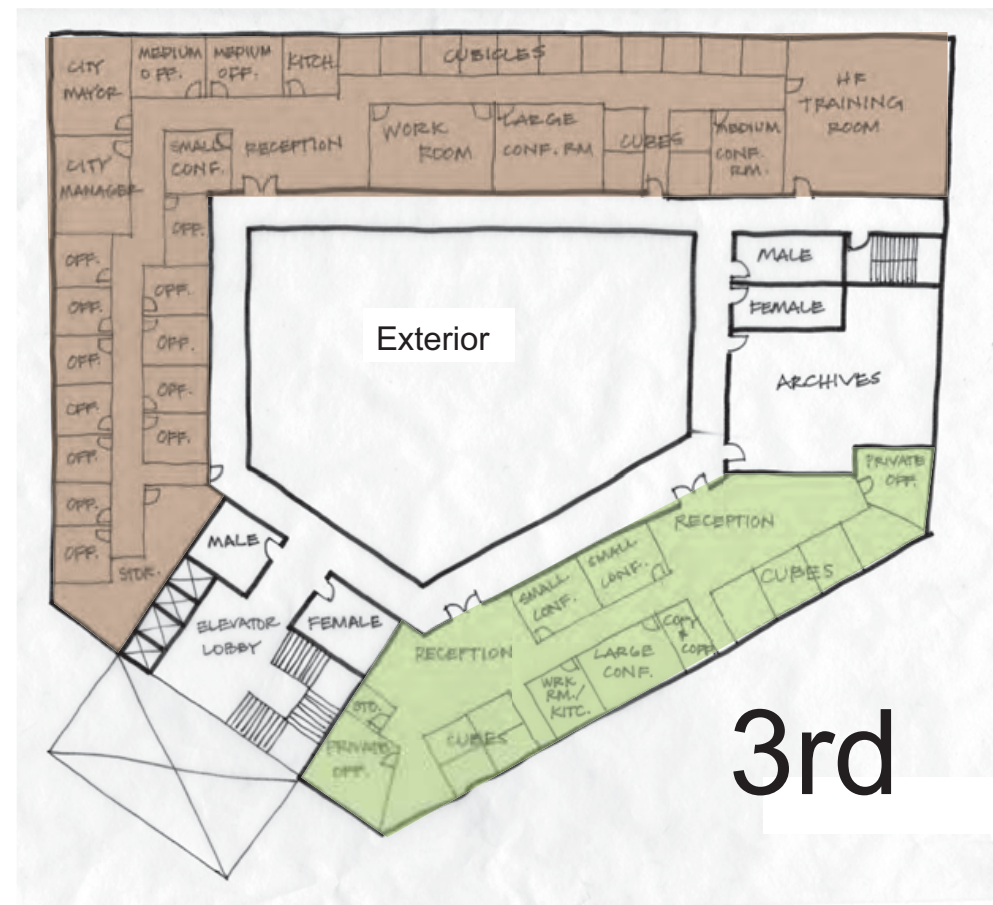
Floor Plans



1st



2nd



3rd



4th

- CD
- Attorney
- Retail/Cafe
- F&MGNT
- Planning
- ED
- OGM
- DES
- IT



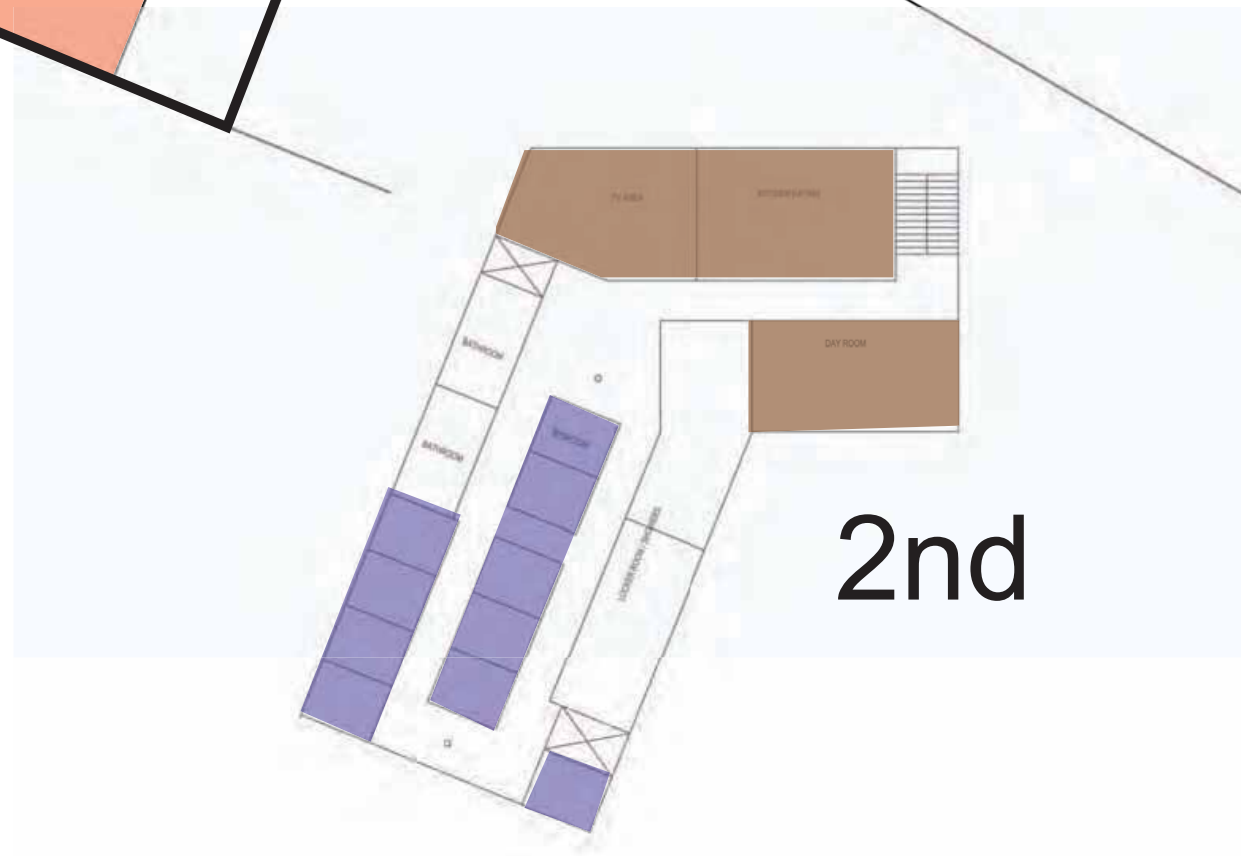
Floor Plans : Fire Department

- Apparatus Bay
- Administration
- Living
- Sleeping

1st



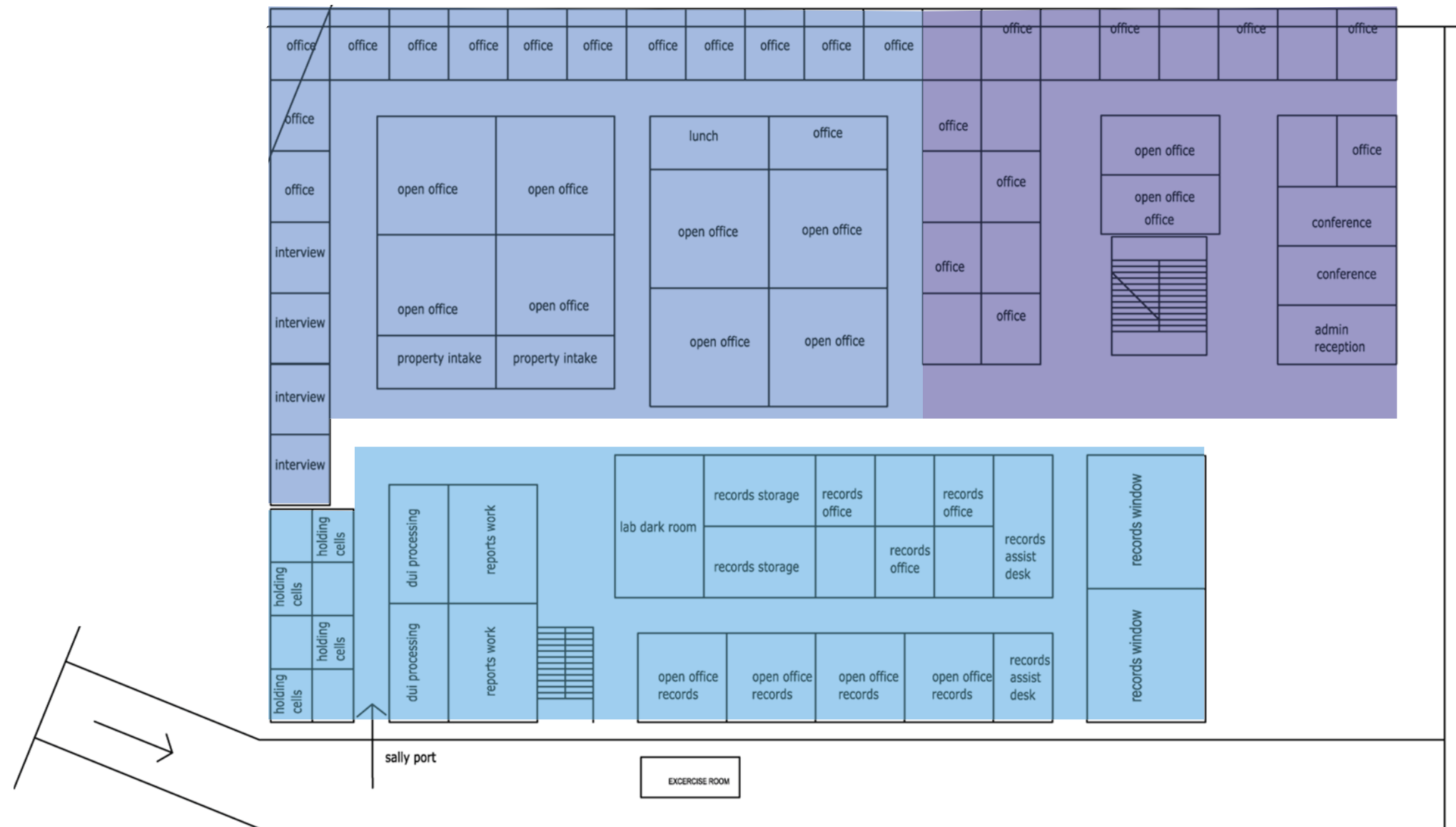
2nd



Floor Plans : Police

1st

- Investigations
- Administration
- Operations



Floor Plans : Police

2nd



Investigations



Massing Model



Massing Model



Energy Program

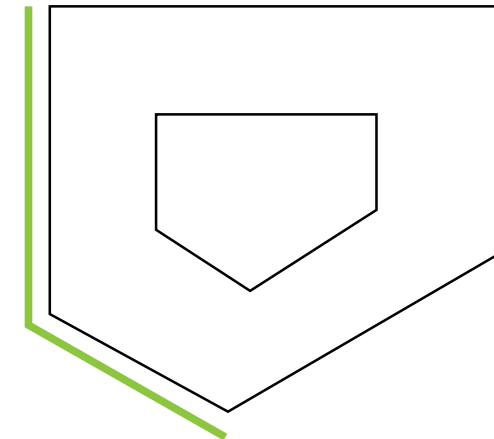
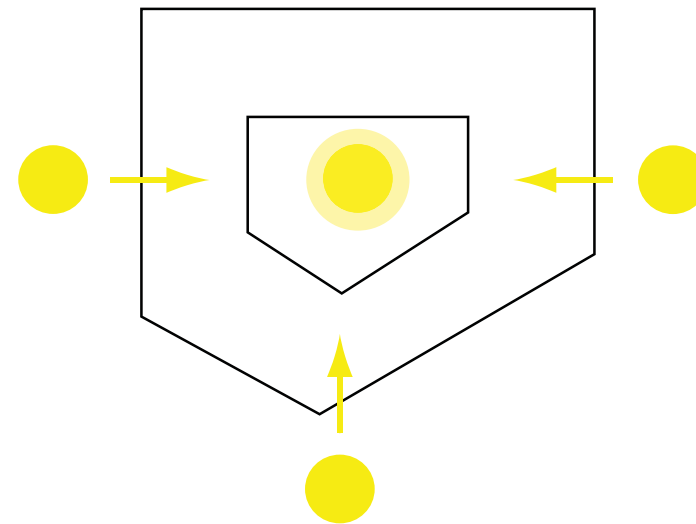
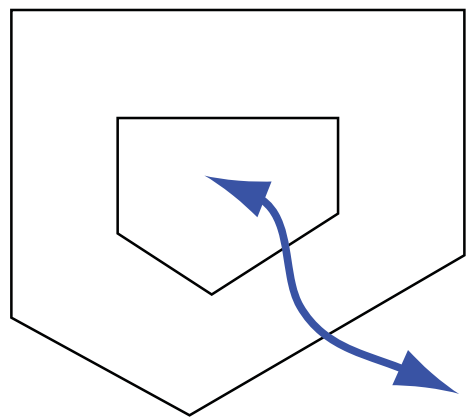
The new Gresham City Hall will be an architectural representation of the emerging sustainable city in Oregon. Gresham has been an example of a city trying to turn itself around and create a livable, sustainable city that Oregon would be proud of. The City Hall should represent Gresham and all that it stands for, which means excellence in sustainability and civic pride. Providing the city employees with a work environment they are comfortable in, enjoy working in, and have pride in is important.

Design Considerations

Natural Ventilation: Open Atrium, Operable Windows for Cross-Ventilation, Shallow Building Widths

Daylighting: Open Atrium, Shallow Building Widths with Windows on both Sides, Light Shelves, Reflective Interior Surfaces

Orientation: Shading Devices on South and West Facades



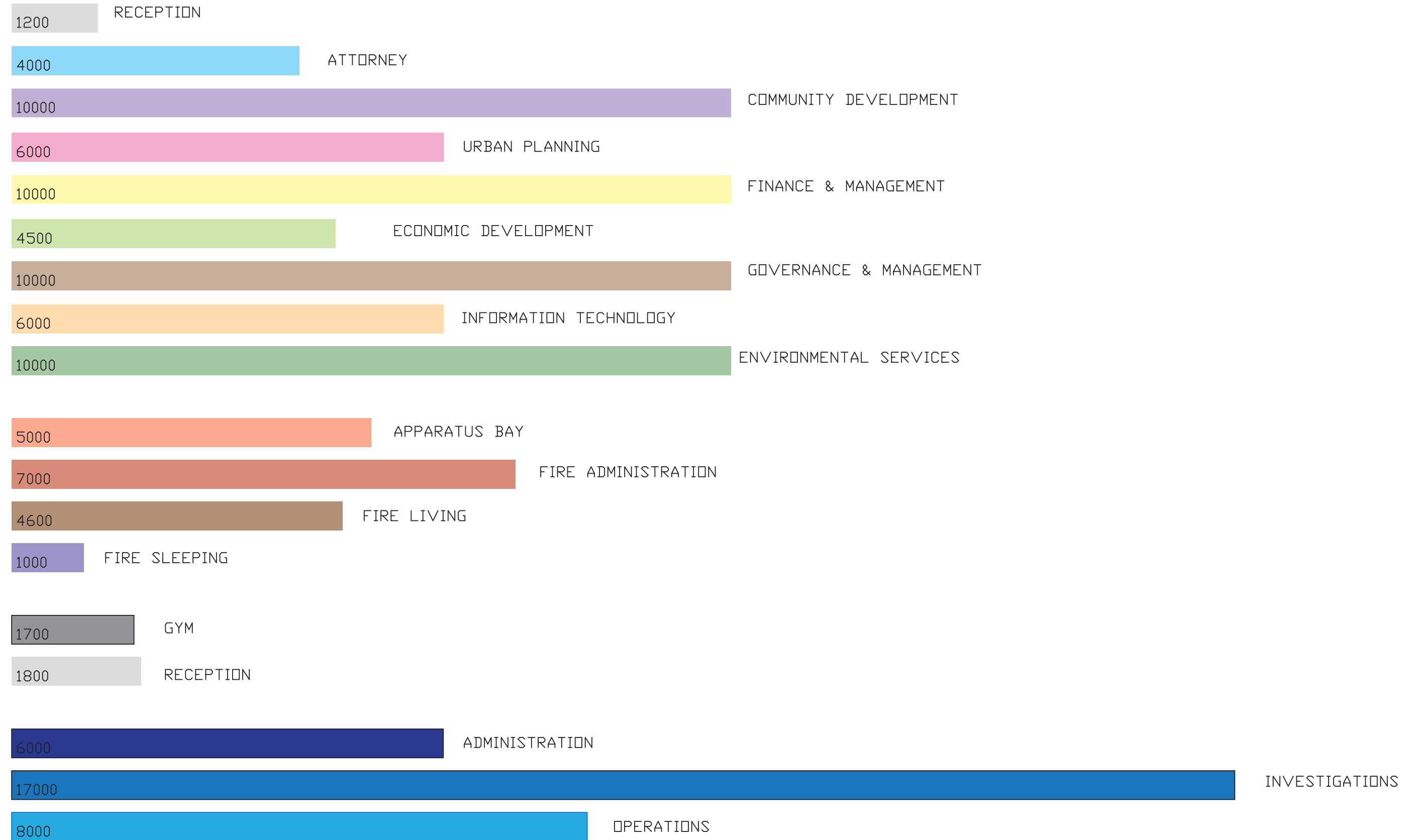
Further Opportunities

Green Roof, Solar Panels, Natural Landscaping for Shading, Water Retention Systems, Bioswales on Site, High Energy Efficiency Products

Energy Program : Spatial Needs

Building	Department or Area	Activities	Occupants	Area (SF)	Height	Lighting Req.	Schedule	Temp. (f)
Gresham City Hall	Reception	Walking, Sitting	2	1,200	48'	Ambient	8-5, M-F	68
Gresham City Hall	Urban Planning	Office Work	16	6,000	8'	Task	8-5, M-F	68
Gresham City Hall	Finance and Management	Office Work	31	10,000	8'	Task	8-5, M-F	68
Gresham City Hall	Economic Development	Office Work	9	4,500	8'	Task	8-5, M-F	68
Gresham City Hall	Office of Gov. & Mngmt	Office Work	31	10,000	8'	Task	8-5, M-F	68
Gresham City Hall	Information Technology	Office Work	10	6,000	8'	Task	8-5, M-F	68
Gresham City Hall	Environmental Services	Office Work	17	10,000	8'	Task	8-5, M-F	68
Gresham City Hall	Attorney	Office Work	10	4,000	8'	Task	8-5, M-F	68
Gresham City Hall	Community Development	Office Work	33	10,000	8'	Task	8-5, M-F	68
Fire Station	Aparatus Bay	Walking, Running	NA	5,000	24'	Ware House	24 hrs, 7 days	NA
Fire Station	Administration	Office Work	15	7,000	8'	Task	8-5, M-F	68
Fire Station	Living	Walking, Sitting	10	4,600	8'	Ambient	24 hrs, 7 days	68
Fire Station	Sleeping	Sleeping	10	1000	8'	Incandescent	24 hrs, 7 days	68
Police/Fire	Gym	Working Out	10	1700	14'	Ambient	24 hrs, 7 days	68
Police/Fire	Reception	Walking, Sitting	2	1,800	24'	Ambient	8-5, M-F	68
Police Station	Administration	Office Work	21	6,000	8'	Task	8-5, M-F	68
Police Station	Investigations	Office Work	22	17,000	8'	Task	8-5, M-F	68
Police Station	Operations	Office Work	14	8,000	8'	Task	8-5, M-F	68

Energy Program : Spatial Needs



Energy Program : MIT Design Advisor

The image displays three side-by-side screenshots of the MIT Design Advisor software interface, each showing the 'Setup: Describe the Building You Wish to Simulate' screen. The interface is divided into several sections: 'Getting Started', 'Building Properties', 'Typical Room Properties', and 'Window Description'. Each screenshot represents a different efficiency scenario: High Efficiency (left), Medium Efficiency (middle), and Current Conditions (right).

High Efficiency Scenario (Left):

- Building Properties:** Region: USA, City: OR - Portland, Office Building.
- Ventilation System:** Joint Natural Ventilation, Cooling and Mechanical Heating.
- Roof Description:** Commercial (High Insulation), R-Value: 5 (m²·°C)/W.
- Window Description:** Window Area: 50% of exterior wall area, Glass Type: low-e.
- Wall Description:** Commercial (High Insulation), Wall R-Value: 5 (m²·°C)/W.

Medium Efficiency Scenario (Middle):

- Building Properties:** Region: USA, City: OR - Portland, Office Building.
- Ventilation System:** Natural Ventilation, Cooling, Mechanical Heating.
- Roof Description:** Commercial (Medium Insulation), R-Value: 2 (m²·°C)/W.
- Window Description:** Window Area: 50% of exterior wall area, Glass Type: high performance.
- Wall Description:** Commercial (Medium Insulation), Wall R-Value: 2 (m²·°C)/W.

Current Conditions Scenario (Right):

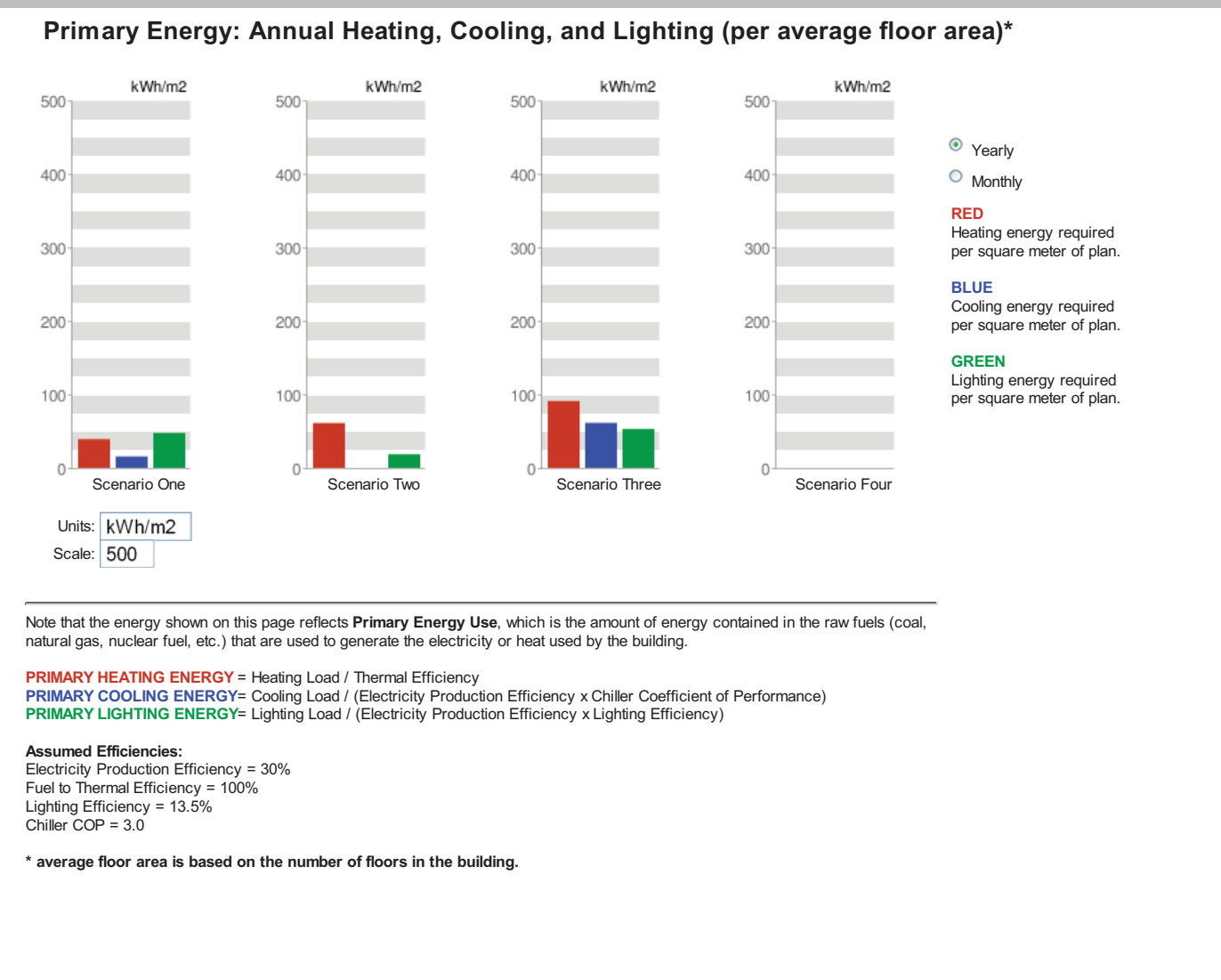
- Building Properties:** Region: USA, City: OR - Portland, Office Building.
- Ventilation System:** Mechanical Cooling & Heating.
- Roof Description:** Commercial (Low Insulation), R-Value: 1 (m²·°C)/W.
- Window Description:** Window Area: 50% of exterior wall area, Glass Type: low-e.
- Wall Description:** Commercial (Low Insulation), Wall R-Value: 1 (m²·°C)/W.

High Efficiency

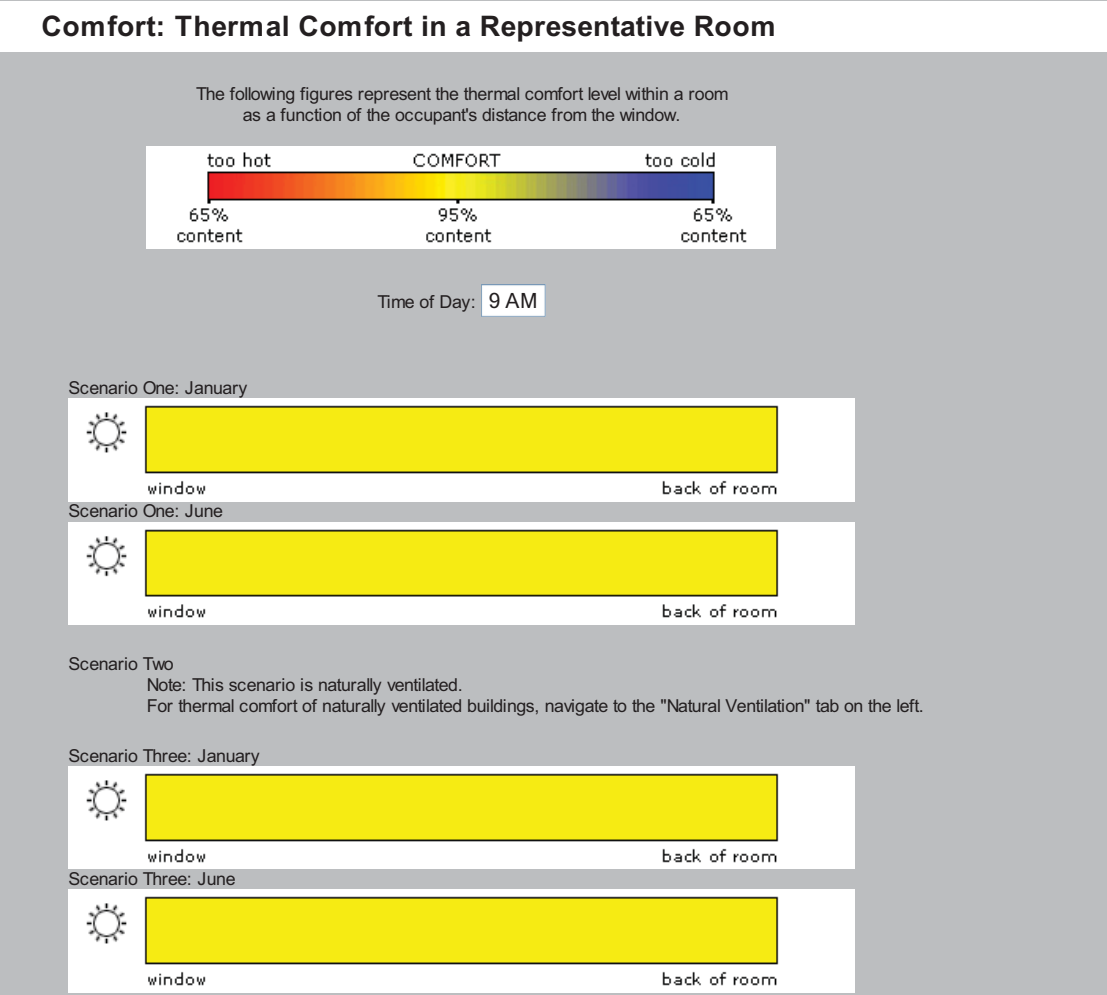
Medium Efficiency

Current Conditions

Energy Program : MIT Design Advisor



Annual Energy Use

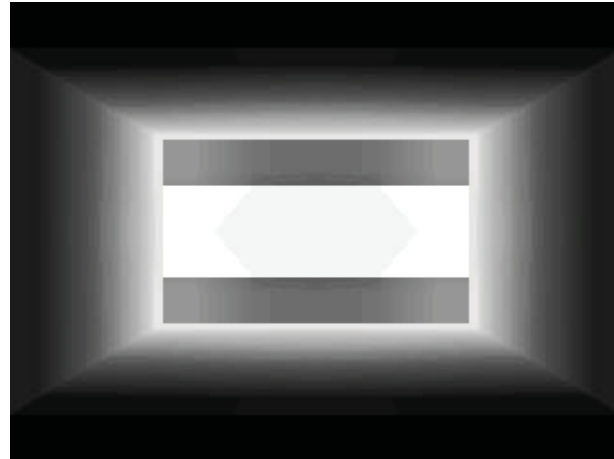


Thermal Comfort

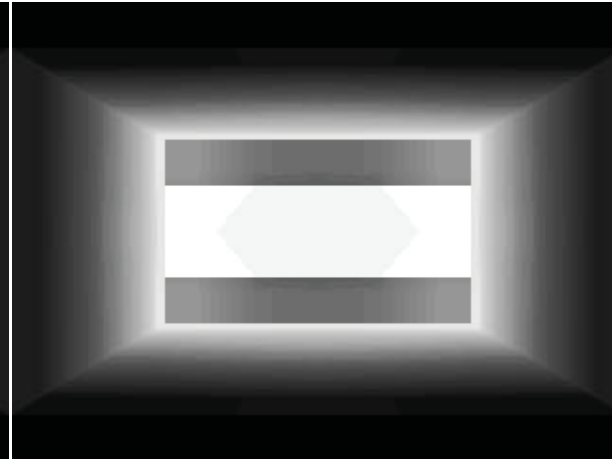
Energy Program : MIT Design Advisor

Daylighting: 3D Representation of a Typical Room

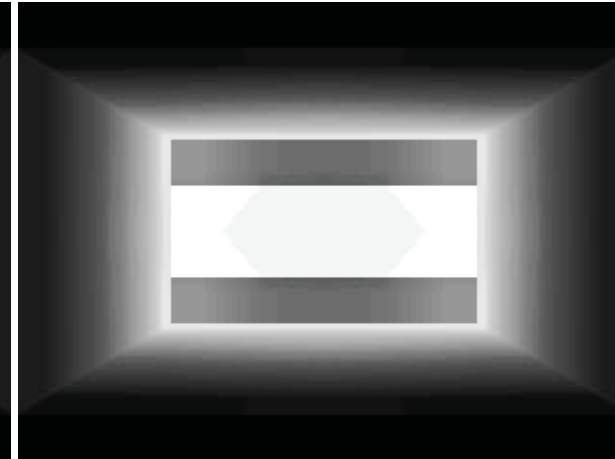
Scenario One



Scenario Two



Scenario Three



Season:

Time of Day:

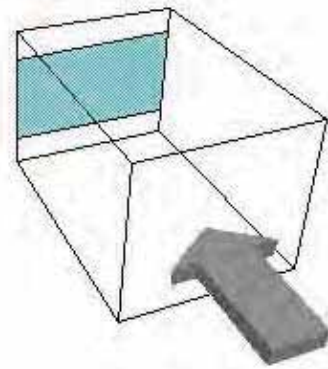
Blind Angle:

Season:

Time of Day:

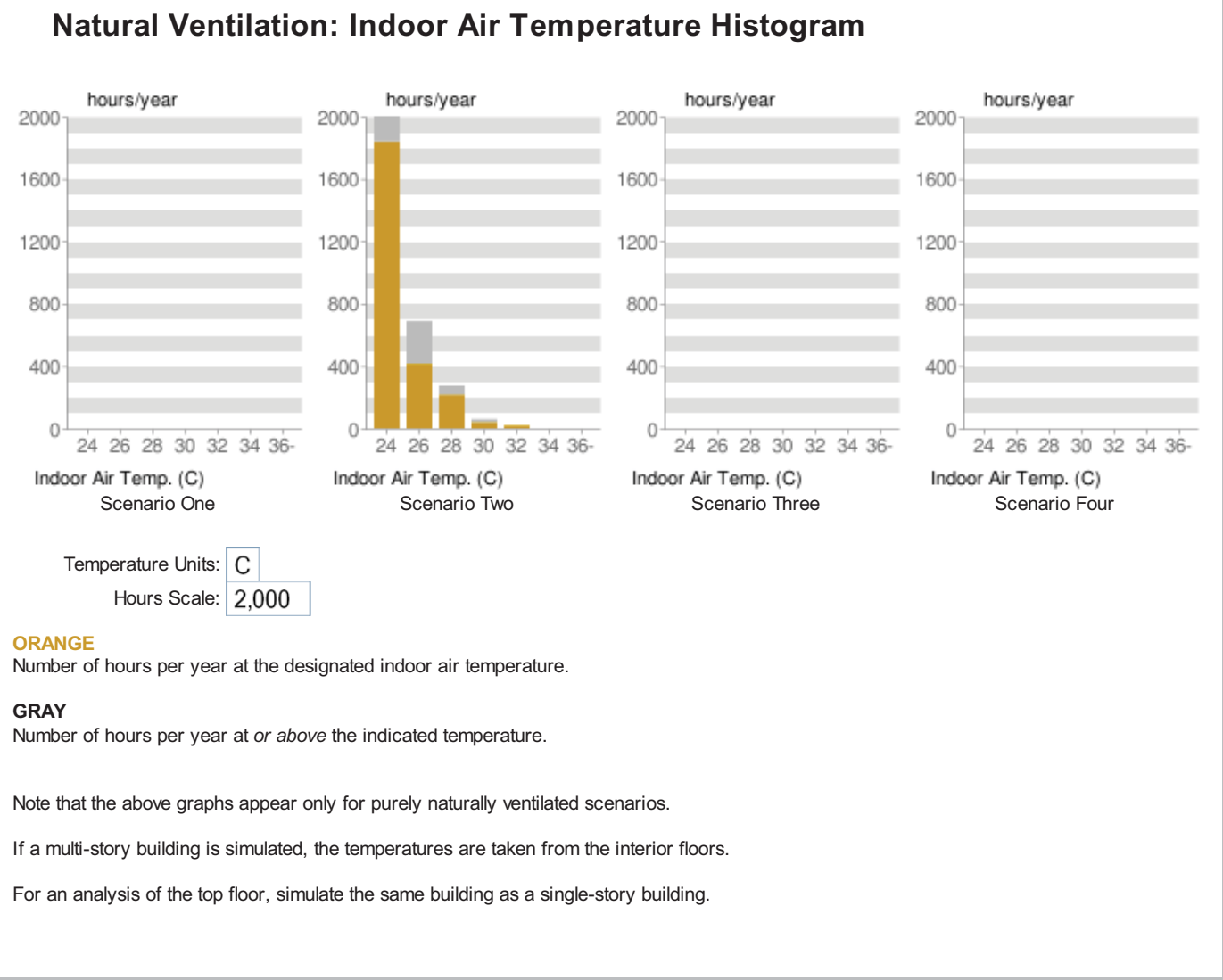
Blind Angle:

Viewpoint

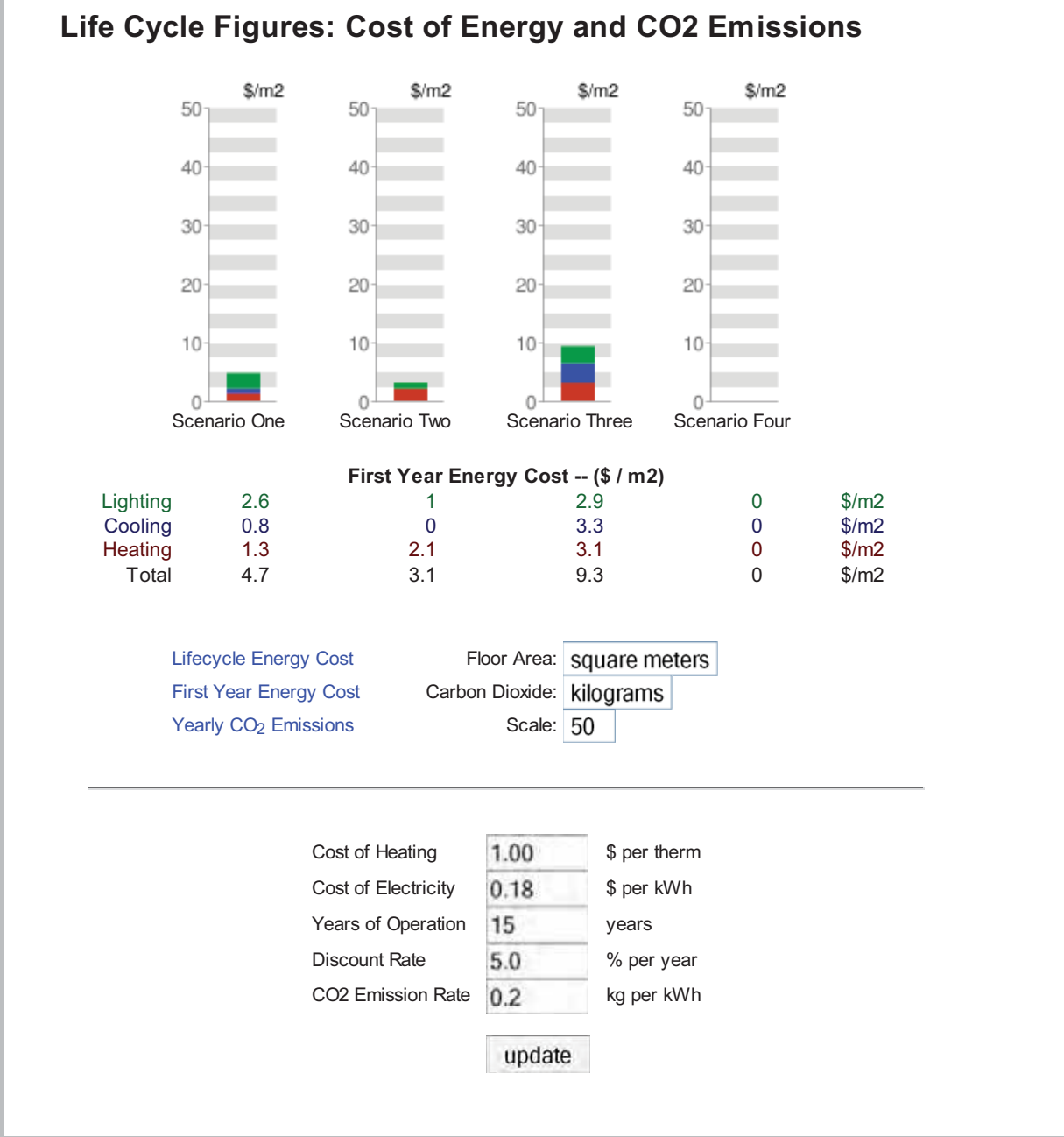


Daylighting

Energy Program : MIT Design Advisor



Indoor Air Temperature



Cost of CO2 Emissions

Energy Program : IES Analysis

lalala.mit
10/Dec/2009

Contents: **Energy & Carbon results** **Architecture 2030 Challenge** **Climate Energy Index**

Energy and Carbon Results

Proposed building energy use	5,627.66MBtu/yr
Proposed building carbon emissions	591.7tons CO ₂ /yr

Energy breakdown:

Heating	39%
Cooling	0%
Lights	25%
Equipment	37%

The Energy & Carbon results are generated by the IES VE ApacheSim module. ApacheSim is a rigorous building thermal simulation approach that conforms to ANSI / ASHRAE Standard 140.

To find out more go to:
www.iesve.com/apachesim

AIA 2030 Challenge - summary

Current design meets 2030 Challenge Target for:

Design Building Energy Use Intensity:
(Design EUI = Energy / Building Area) **52 kBTU/ft²**

Average Building Energy Use Intensity:
(Used to generate 2030 Challenge Targets) **97 kBTU/ft²**

Building Type: Administrative/ Professional and Government Office

Analysis Details:
Location:Portland, Oregon (45.50N, 122.43W)
Climate File:PortlandTM2.fwt
Calculated:10/Dec/2009 at 12:51
Calculation period:01/Jan - 31/Dec

The AIA 2030 Challenge provides a roadmap of targets for US building projects culminating in being carbon neutral by 2030

Implementation of the Challenge requires the use of targets by building type derived from current building stock benchmarks

Challenge targets for selected building type:

Year	% reduction	kBTU/ft ²
Current	50	49
2010	60	41
2015	70	34
2020	80	29
2025	90	29
2030	100	0

For certain building types targets are calculated using Energy Star methodology where energy consumption is not direct % reduction against average

Climate Energy Metric

Climate Energy Metric	24 hour use	2,996.1Btu/yr
	Proposed hours of use Using the local fuel mix	1,004.7Btu/yr 0.1 lbCO ₂ /yr

The Climate Energy Index is simple global unitary measure

Due to a very schematic Sketch-up model the data generated from this software might not be accurate. Eventhough not reflected in the above analysis, we are confident that our design will meet the 2030 Design Challenge.

Energy Program : Energy Star Analysis

According to the Energy Star Analysis Program, the current Gresham City Hall would have to reduce their energy consumption by 70% in order to meet the 2030 Challenge.

Target Energy Performance Results (estimated)			
Energy	Design	Target	Average Building
Energy Performance Rating (1-100)	N/A	100	50
Energy Reduction (%)	N/A	70	0
Source Energy Use Intensity (kBtu/Sq. Ft./yr)	N/A	65	217
Site Energy Use Intensity (kBtu/Sq. Ft./yr)	N/A	24	82
Total Annual Source Energy (kBtu)	N/A	3,237,922	10,868,591
Total Annual Site Energy (kBtu)	N/A	1,218,782	4,091,033
Total Annual Energy Cost (\$)	N/A	\$ 23,143	\$ 77,685
Pollution Emissions			
CO2-eq Emissions (metric tons/year)	N/A	122	411
CO2-eq Emissions Reduction (%)	N/A	70%	0%

Facility Information Edit																											
Gresham City Hall Gresham, OR 97030 United States																											
<table border="1"> <thead> <tr> <th colspan="2">Facility Characteristics Edit</th> </tr> <tr> <th>Space Type</th> <th>Gross Floor Area (Sq. Ft.)</th> </tr> </thead> <tbody> <tr> <td>Office</td> <td>50,000</td> </tr> <tr> <td>Total Gross Floor Area</td> <td>50,000</td> </tr> </tbody> </table>		Facility Characteristics Edit		Space Type	Gross Floor Area (Sq. Ft.)	Office	50,000	Total Gross Floor Area	50,000	<table border="1"> <thead> <tr> <th colspan="4">Estimated Design Energy Edit</th> </tr> <tr> <th>Energy Source</th> <th>Units</th> <th>Estimated Total Annual Energy Use</th> <th>Energy Rate (\$/Unit)</th> </tr> </thead> <tbody> <tr> <td>Electricity - Grid Purchase</td> <td>kBtu</td> <td>N/A</td> <td>\$ 0.022/kBtu</td> </tr> <tr> <td>Natural Gas</td> <td>kBtu</td> <td>N/A</td> <td>\$ 0.011/kBtu</td> </tr> </tbody> </table>		Estimated Design Energy Edit				Energy Source	Units	Estimated Total Annual Energy Use	Energy Rate (\$/Unit)	Electricity - Grid Purchase	kBtu	N/A	\$ 0.022/kBtu	Natural Gas	kBtu	N/A	\$ 0.011/kBtu
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* The Average Building is equivalent to an EPA Energy Performance Rating of 50.																											
Source: Data adapted from DOE-EIA. See EPA Technical Description .																											

A new City Hall for Gresham

Group A2

Jessica Kreitzberg
Ellen Hagen
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Sina Meier

