

**HUDSON HOUSE**  
DESIGN FOR DEBORAH SEIDMAN, MAY 2017



# Hudson House

House design for Deborah Seidman in Hyde Park, New York, Speranza Architecture + Urban Design

SPERANZA DOCUMENTS  
PRESENTS INNOVATIVE DESIGN AND  
RESEARCH BY SPERANZA ARCHITECTURE  
FOR DEBORAH SEIDMAN.

SPERANZA ARCHITECTURE + URBAN DESIGN  
2780 CRESTA DE RUTA  
EUGENE, OR 97403  
PHONE: 917-579-1052  
EMAIL: PSPERANZA@SPERANZAARCHITECTURE.COM  
COPYRIGHT: 2017  
SPERANZA ARCHITECTURE  
ALL RIGHTS RESERVED.

FRONT AND BACK COVER IMAGES:  
PHILIP SPERANZA

SPINE IMAGE:  
SPERANZA ARCHITECTURE

#### ACKNOWLEDGMENTS

##### HUDSON HOUSE:

PHILIP SPERANZA, RA LEED AP, PRINCIPAL ARCHITECT  
DANIEL MATALLANA-MEJIA, DESIGNER  
ALDEN CARR, LANDSCAPE ARCHITECTURAL DESIGNER  
DEREK RAYLE, LANDSCAPE ARCHITECTURAL DESIGNER  
GARRETT LEVER, ARCHITECTURAL INTERN

## HUDSON HOUSE

Table of Contents	3
Location Plan + Neighborhood Plan	5
Project Description (Collage of Site Images)	9
Zoning Analysis	8
Objective	11
Strategies	17
Program + Project Cost	21
Design Team	21
Site Plan and Context: Fixed and Phenomena	24
Diagrams, Analysis	24
Architectural Ideas via Precedents	26
Landscape Architectural Ideas via Precedents	26
Initial Schemes	37
Courtyard	40
Vernacular / Performative	44
Shell + Floating Box	48
Smart Crumple	54
Next Steps	37



# Project Description

Hudson River Valley (not just view of river: hills to SW, waterfall, prairie/wetland, autumn)

Time / phenomena site (Natural and Social) existing and desired **experience.**

## OBJECTIVES

### Hudson Valley Phenomena

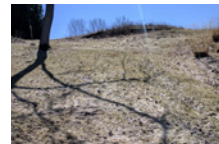
Provide a heightened experience of the seasonal changes in environment including spring New Straatsburg Creek waterfall, autumn leaves color and movement, summer prairie and winter Hudson River view.

### Thermo-Dynamics

Induce comfort for summer **cooling**, winter warming and extending the spring/fall seasons in and around the house.

### Site Topography

Topographic / spatial **access** with interior and exterior relationships.



OBJECTIVES

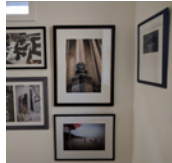
## Hudson Valley Phenomena

Natural and Social Phenomena.

Natural phenomena of the **site landscape** that change seasonally, connecting people and the natural environment



Social phenomena **programming** schedules that differ through the year:  
3-4 and 9 day monthly stays in autumn and fall  
two-week stays in summer



## OBJECTIVES

### Thermo-Dynamics

Induce comfort for summer cooling, winter warming and extending the spring/fall seasons in and around the house.

Summer is hot and muggy.

Induce **thermo-dynamics** (stack effect, air convection), **cross ventilation** and **shading**.

Autumn is stunning.

**Exterior Spaces** to view, sit, eat, read, walk with July, arrive and depart from cycling trips.

Spring has rain and runoff.

**Covered space** from rain and trying to stay dry from soggy ground. Try not to bring mug into the house. Garden work begins.



## OBJECTIVES

### Site Topography

Topographic / spatial access with interior and exterior relationships.

#### Orientation

Use the topography to frame views

#### Access to Spaces

Design the driveway, entry sequence, guest to living, ceramics and other spaces with sectional access

#### Efficient foundations

Exposed rock outcroppings and testimony from the surveyor and structural/civil engineer suggest the rock below the hill. They suggest that the Town inspector will require pinning foundations to that rock.

## Hudson Valley Phenomena

Natural phenomena of the **site landscape** that change seasonally, connecting people and the natural environment  
strategy:

- 1) site as high as possible on hilltop
- 2) orient to view up Hudson
- 3) orient to sun and wind
- 4) window views to site features such as spring waterfall

Social phenomena **programming** schedules that differ through the year  
strategy:

- 1) radiant floor system with Nest remote access and secondary system (windows, stove and possible secondary heating system)
- 2) garage and ceramics areas connected, covered and possibly heated for winter months.
- 3) guest suite and guest / den planned near living area.

STRATEGIES  
OBJECTIVES

## Thermo-Dynamics

Induce comfort for summer cooling, winter warming and extending the spring/fall seasons in and around the house.

Summer is hot and muggy.

1) induce veintillation

orientation to prevailing winds + solar chimney to cool in summer - hot area up high induces cool intake below

2) cross ventilation

3) cool air areas identified shading of house, porch and tree locations - used for intake of convection

4) porch to south and west

Autumn is stunning.

**Exterior Spaces** to view, sit, eat, read, walk with July, arrive and depart from cycling trips.

Spring has rain and runoff.

**Covered space** from rain and trying to stay dry from soggy ground. Try not to bring mug into the house. Garden work begins.

STRATEGIES  
OBJECTIVES

## Site Topography

Topographic / spatial access with interior and exterior relationships.

### Orientation

- 1) nestle spaces into rock hillside
- 2) long views beyond

### Access to Spaces

Minimize the number of floors

### Efficient foundations

Build with the slope:

- 1) minimize cut and gravel fill
- 2) utilize spaces below building
- 3) provide tolerance at excavation to rock.

INTRODUCTION

# Programming and Budget

	area	factor	factored cost	
<b>MAIN LIVING SPACE</b>				
<b>PRIMARY</b>	1700			
Mudroom entry, logs	75	1	75	
Laundry + Pantry	50	1	50	
Living	300	1	300	
Dining	150	1	150	
Kitchen	150	1	150	
Paper studio (+storage)	200	1	200	
Moon room (+guest bed)	150	0.85	127.5	
Den / Guest bed	150	1	150	
Master Bedroom	150	1	150	
Master bath	120	1	120	
Half bath	30	1	30	
storage (closet, etc)	50	1	50	
Exterior storage	55	0.75	41.25	
Stair	50	1	50	
hallway	50	1	50	
<b>Primary subtotal</b>	<b>1730</b>		<b>1693.75</b>	<i>square feet</i>
<b>GUEST</b>	500			
Bedroom	150	1	150	
Living	125	1	125	
Kitchennette, wetbar	30	1	30	
Full bath	50	1	50	
other	25	1	25	
<b>Guest subtotal</b>	<b>380</b>		<b>380</b>	<i>square feet</i>
<b>Main living space subtotal</b>	<b>2110</b>		<b>2073.75</b>	<i>square feet</i>
<b>CERAMIC STUDIO</b>	800			
Wheel and kiln	500	0.85	425	
Glazing and hand building	275	0.85	233.75	
Bathroom	25	1	25	
<b>Ceramics subtotal</b>	<b>800</b>		<b>683.75</b>	<i>square feet</i>

<b>GARAGE</b>				
2 car parking	400	0.8	320	
*alt storage- bikes and yard equi	0	0.8	0	
<b>Garage subtotal</b>	<b>400</b>		<b>320</b>	<i>square feet</i>
<b>TOTAL AREA, 100% FACTORED</b>			<b>3077.5</b>	
<b>COST PER SQUARE FOOT</b>			<b>200</b>	
<b>TOTAL COST, HOUSE</b>			<b>\$ 615,500.00</b>	
<b>SITE</b>				
Drive (excavation, bed, drainage, asphalt)				20000
Bridge improvements				20000
Tree clearing				3000
Drainage				3000
Landscaping_trees				3000
Landscaping_planting				9000
Terraces_excavation				5000
Terraces_walls_rock				10,000
North Straatsburg Creek improvements				7000
misc				20000
<b>Site subtotal</b>				<b>100000</b>
			<b>\$ 100,000.00</b>	
<b>TOTAL HOUSE AND SITE</b>			<b>\$ 715,500.00</b>	
<b>CONTINGENCY</b>	<b>\$ 715,500.00</b>	<b>10.00%</b>	<b>\$ 71,550.00</b>	
<b>TOTAL CONSTRUCTION COST</b>			<b>\$ 787,050.00</b>	

## Schedule

### Schematic Design, 20% May 1 - June 30

Gather information from client:

Goals, site constraints such as covenants, trees, drive.

Project description.

Program /activities diagrams with photos of qualities.

Precedents and why/ what idea behind them.

Site Analysis, Qualitative Studies of Site (views, site planning, topo+ water, program activities, passive design principles)

Conceptual Design options including spatial studies. Strategies toward scaled spatial ideas.

Client approval: siting design direction, conceptual design development goals

### Design Development, 20% July 1- Sept 30

Revise conceptual design

Energy simulation, Goals and lifestyle expectations,

Building Systems:

Site Planning

\*landscape design (with consult from landscape architecture and nursery)

Foundations

Structure

Enclosure: Siding, Windows and Doors, Roofing

Heating and Cooling: Insulation, heating system, fuel source,

Finishes (Floors, walls, ceilings)

Finished Plumbing, Electrical and Mechanical

Millwork / Built-in

Material Studies (Mockups)

Cost Estimating

INTRODUCTION

# Zoning Analysis

<b>TOWN OF HYDE PARK</b>				
Schedule of Bulk Regulations				
			<b>Greenbelt</b>	units
Height	Building		35	feet
	Accessory structure		22	feet
Size	Dwelling unit	Least dimension	16	feet
	Dwelling unit	Minimum floor area	400	square feet
Coverage		Maxium	15.00%	
Yards2 (setbacks)	Front	Minimum	50	feet
	Side	Minimum	25	feet
	Rear	Minimum	50	feet
One Shed (setback)	Front	Minimum	50	feet
	Side	Minimum	5	feet
	Rear	Minimum	5	feet
Scale (gsf)				
Maximum average density				





# II. RESEARCH

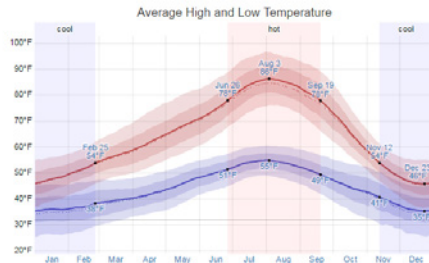
# Thermo-Dynamic Analysis - Regional Comparison Poughkeepsie to Eugene

## Average Weather in Eugene Oregon, United States

In Eugene, the summers are short, warm, dry, and mostly clear and the winters are chilly, wet, and overcast. Over the course of the year, the temperature typically varies from 35°F to 86°F and is rarely below 25°F or above 97°F.

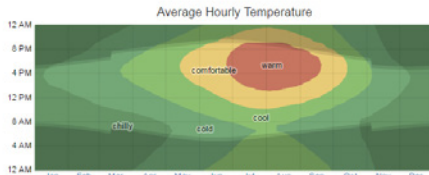
The hot season lasts for 2.8 months, from June 26 to September 19, with an average daily high temperature above 78°F. The hottest day of the year is August 3, with an average high of 86°F and low of 55°F.

The cool season lasts for 3.5 months, from November 12 to February 25, with an average daily high temperature below 54°F. The coldest day of the year is December 23, with an average low of 35°F and high of 46°F.



The daily average high (red line) and low (blue line) temperature, with 25th to 75th and 10th to 90th percentile bands. The thin dotted lines are the corresponding average perceived temperatures.

The figure below shows you a compact characterization of the entire year of hourly average temperatures. The horizontal axis is the day of the year, the vertical axis is the hour of the day, and the color is the average temperature for that hour and day.



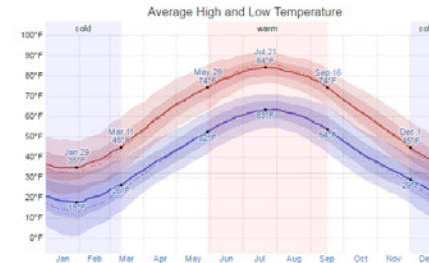
The average hourly temperature, color coded into bands: frigid = 15°F = freezing = 32°F = chilly = 45°F = cold = 55°F = cool = 65°F = comfortable = 75°F = warm = 85°F = hot = 95°F = sweltering. The shaded overlays indicate night and civil twilight.

## Average Weather in Poughkeepsie New York, United States

In Poughkeepsie, the summers are warm and wet, the winters are freezing, and it is partly cloudy year round. Over the course of the year, the temperature typically varies from 18°F to 84°F and is rarely below 1°F or above 92°F.

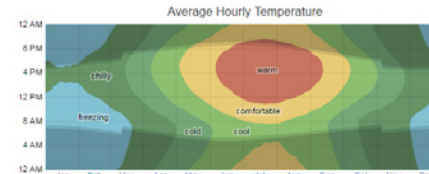
The warm season lasts for 3.6 months, from May 29 to September 16, with an average daily high temperature above 74°F. The hottest day of the year is July 21, with an average high of 84°F and low of 63°F.

The cold season lasts for 3.3 months, from December 1 to March 11, with an average daily high temperature below 45°F. The coldest day of the year is January 29, with an average low of 18°F and high of 36°F.

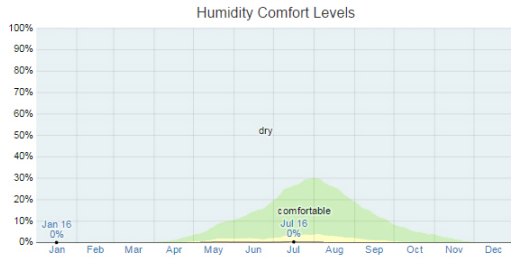


The daily average high (red line) and low (blue line) temperature, with 25th to 75th and 10th to 90th percentile bands. The thin dotted lines are the corresponding average perceived temperatures.

The figure below shows you a compact characterization of the entire year of hourly average temperatures. The horizontal axis is the day of the year, the vertical axis is the hour of the day, and the color is the average temperature for that hour and day.



The average hourly temperature, color coded into bands: frigid = 15°F = freezing = 32°F = chilly = 45°F = cold = 55°F = cool = 65°F = comfortable = 75°F = warm = 85°F = hot = 95°F = sweltering. The shaded overlays indicate night and civil twilight.

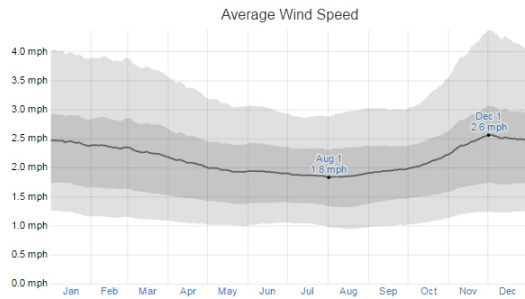


The percentage of time spent at various humidity comfort levels, categorized by dew point: dry < 55°F < comfortable < 60°F < humid < 65°F < muggy < 70°F < oppressive < 75°F < miserable.

## Wind

This section discusses the wide-area hourly average wind vector (speed and direction) at 10 meters above the ground. The wind experienced at any given location is highly dependent on local topography and other factors, and instantaneous wind speed and direction vary more widely than hourly averages.

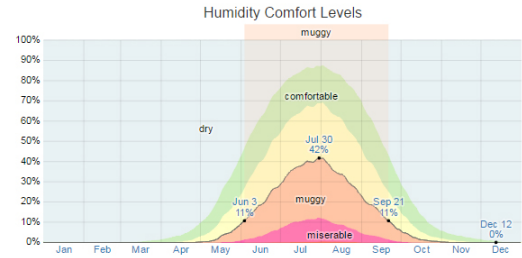
The average hourly wind speed in Eugene does not vary significantly over the course of the year, remaining within 0.4 miles per hour of 2.2 miles per hour throughout.



The average of mean hourly wind speeds (dark gray line), with 25th to 75th and 10th to 90th percentile bands.

The predominant average hourly wind direction in Eugene varies throughout the year.

The wind is most often from the west for 1.8 months, from April 13 to June 7, with a peak percentage of 42% on May 28. The wind is most often from the north for 4.1 months, from June 7 to October 10, with a peak percentage of 61% on July 22. The wind is most often from the south for 6.1 months, from October 10 to April 13, with a peak percentage of 56% on November 18.



The percentage of time spent at various humidity comfort levels, categorized by dew point: dry < 55°F < comfortable < 60°F < humid < 65°F < muggy < 70°F < oppressive < 75°F < miserable.

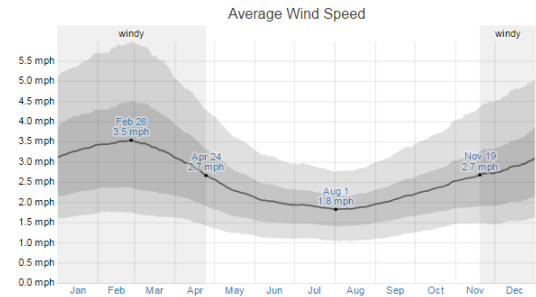
## Wind

This section discusses the wide-area hourly average wind vector (speed and direction) at 10 meters above the ground. The wind experienced at any given location is highly dependent on local topography and other factors, and instantaneous wind speed and direction vary more widely than hourly averages.

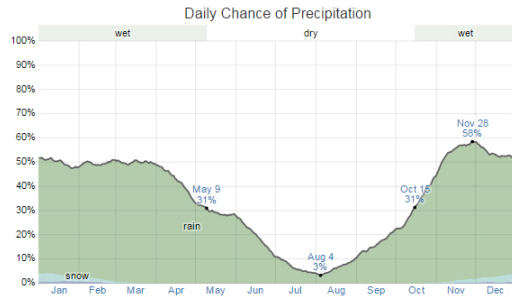
The average hourly wind speed in Poughkeepsie experiences mild seasonal variation over the course of the year.

The windier part of the year lasts for 5.2 months, from November 19 to April 24, with average wind speeds of more than 2.7 miles per hour. The windiest day of the year is February 26, with an average hourly wind speed of 3.5 miles per hour.

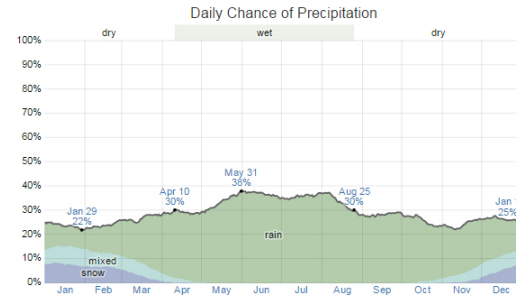
The calmer time of year lasts for 6.8 months, from April 24 to November 19. The calmest day of the year is August 1, with an average hourly wind speed of 1.8 miles per hour.



The average of mean hourly wind speeds (dark gray line), with 25th to 75th and 10th to 90th percentile bands.



The percentage of days in which various types of precipitation are observed, excluding trace quantities: rain alone, snow alone, and mixed (both rain and snow fell in the same day).



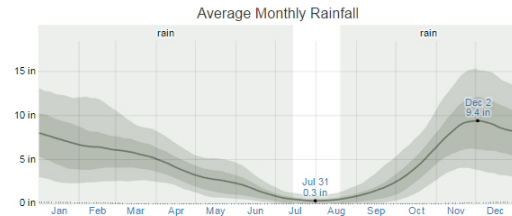
The percentage of days in which various types of precipitation are observed, excluding trace quantities: rain alone, snow alone, and mixed (both rain and snow fell in the same day).

## Rainfall

To show variation within the months and not just the monthly totals, we show the rainfall accumulated over a sliding 31-day period centered around each day of the year. Eugene experiences very significant seasonal variation in monthly rainfall.

The rainy period of the year lasts for 11 months, from August 19 to July 14, with a sliding 31-day rainfall of at least 0.5 inches. The most rain falls during the 31 days centered around December 2, with an average total accumulation of 9.4 inches.

The rainless period of the year lasts for 1.2 months, from July 14 to August 19. The least rain falls around July 31, with an average total accumulation of 0.3 inches.



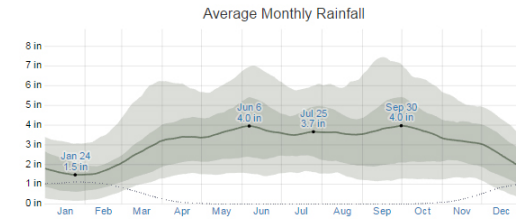
The average rainfall (solid line) accumulated over the course of a sliding 31-day period centered on the day in question, with 25th to 75th and 10th to 90th percentile bands. The thin dotted line is the corresponding average liquid-equivalent snowfall.

## Rainfall

To show variation within the months and not just the monthly totals, we show the rainfall accumulated over a sliding 31-day period centered around each day of the year. Poughkeepsie experiences significant seasonal variation in monthly rainfall.

Rain falls throughout the year in Poughkeepsie. The most rain falls during the 31 days centered around September 30, with an average total accumulation of 4.0 inches.

The least rain falls around January 24, with an average total accumulation of 1.5 inches.



The average rainfall (solid line) accumulated over the course of a sliding 31-day period centered on the day in question, with 25th to 75th and 10th to 90th percentile bands. The thin dotted line is the corresponding average liquid-equivalent snowfall.

Climate data for Eugene, Oregon (Eugene Airport), 1981–2010 normals													[hide]
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °F (°C)	69 (21)	76 (26)	80 (27)	89 (32)	95 (35)	102 (39)	105 (41)	108 (42)	103 (39)	94 (34)	76 (24)	68 (20)	108 (42)
Average high °F (°C)	47.2 (8.4)	51.1 (10.6)	56.2 (13.4)	60.8 (16)	67.0 (19.4)	73.2 (22.9)	82.2 (27.9)	82.8 (28.2)	76.9 (24.9)	64.2 (17.9)	52.2 (11.2)	45.6 (7.6)	63.3 (17.4)
Average low °F (°C)	34.5 (1.4)	35.1 (1.7)	37.4 (3)	39.8 (4.3)	43.8 (6.6)	47.9 (8.8)	51.7 (10.9)	51.4 (10.8)	47.3 (8.5)	41.5 (5.3)	37.9 (3.3)	34.1 (1.2)	41.9 (5.5)
Record low °F (°C)	-4 (-20)	-3 (-19)	18 (-8)	25 (-4)	28 (-2)	32 (0)	39 (4)	35 (2)	30 (-1)	17 (-8)	12 (-11)	-12 (-24)	-12 (-24)
Average precipitation inches (mm)	6.89 (175)	5.43 (137.9)	4.99 (126.7)	3.33 (84.6)	2.73 (69.3)	1.50 (38.1)	0.55 (14)	0.61 (15.5)	1.29 (32.8)	3.25 (82.6)	7.72 (196.1)	7.83 (198.9)	46.12 (1,171.4)
Average snowfall inches (cm)	0.5 (1.3)	1.4 (3.6)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0.1 (0.3)	0.8 (2)	2.8 (7.1)
Average precipitation days (≥ 0.01 in)	17.8	14.9	17.7	14.5	11.7	7.9	3.1	3.2	5.4	11.4	17.9	17.9	143.4
Average snowy days (≥ 0.1 in)	0.4	0.7	0	0	0	0	0	0	0	0	0.1	0.5	1.7

Source: NOAA<sup>[38]</sup> Weather.com (extremes)<sup>[43]</sup>

Climate data for Poughkeepsie, New York													[hide]
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °F (°C)	70 (21)	75 (24)	86 (30)	94 (34)	96 (36)	99 (37)	103 (39)	100 (38)	101 (38)	88 (31)	82 (28)	72 (22)	103 (39)
Average high °F (°C)	35 (2)	40 (4)	48 (9)	61 (16)	71 (22)	80 (27)	85 (29)	83 (28)	75 (24)	63 (17)	52 (11)	40 (4)	61.1 (16.1)
Average low °F (°C)	16 (-9)	18 (-8)	26 (-3)	37 (3)	46 (8)	56 (13)	61 (16)	60 (16)	51 (11)	39 (4)	31 (-1)	22 (-6)	38.6 (3.7)
Record low °F (°C)	-30 (-34)	-23 (-31)	-13 (-25)	13 (-11)	27 (-3)	35 (2)	43 (6)	38 (3)	26 (-3)	18 (-8)	3 (-16)	-23 (-31)	-30 (-34)
Average precipitation inches (mm)	3.19 (81)	2.53 (64.3)	3.69 (91.2)	3.79 (96.3)	4.73 (120.1)	3.73 (94.7)	4.72 (119.9)	3.83 (97.3)	3.69 (93.7)	3.66 (90.4)	3.53 (89.7)	3.23 (82)	44.12 (1,120.6)
Average snowfall inches (cm)	11.1 (28.2)	13.0 (33)	8.1 (20.6)	.9 (2.3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1.7 (4.3)	8.5 (21.6)	43.3 (110)

Source #1: Weather Channel<sup>[9]</sup>

Source #2: Weatherbase (snowfall)<sup>[10]</sup> \*

## Preliminary Solar and Wind Analysis, Thermo-dynamic

(comparisons to Eugene, Oregon)

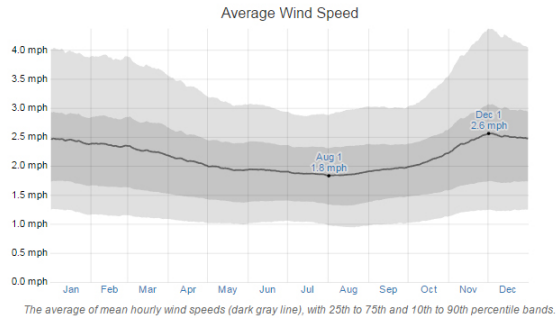
Prevailing winds: **much 25% dependable for passive cooling than Eugene (consistence with comments from Hyde Park Building Department)**; Higher summer high/low diff; Same winter. \*We may want to induce cooling: solar chimney, overhangs/porch, evaporative cooling - while considering impact on Winter use.

**Winter**, Dec 1, Calm wind 33% of the time (vs 8%); from North and some West (vs. South); Average high/low temperature 40/20 F (vs 46/34)  
**Summer**, June 1, Calm wind 33% on the time (vs 9%); from Southwest (vs. North); Average high/low temperature 80/56 (vs. 73/48)

## Wind

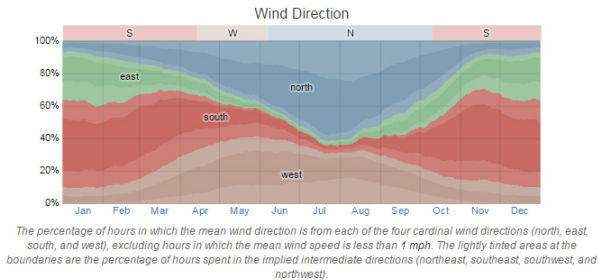
This section discusses the wide-area hourly average wind vector (speed and direction) at 10 meters above the ground. The wind experienced at any given location is highly dependent on local topography and other factors, and instantaneous wind speed and direction vary more widely than hourly averages.

The average hourly wind speed in Eugene does not vary significantly over the course of the year, remaining within 0.4 miles per hour of 2.2 miles per hour throughout.



The predominant average hourly wind direction in Eugene varies throughout the year.

The wind is most often from the west for 1.8 months, from April 13 to June 7, with a peak percentage of 42% on May 28. The wind is most often from the north for 4.1 months, from June 7 to October 10, with a peak percentage of 61% on July 22. The wind is most often from the south for 6.1 months, from October 10 to April 13, with a peak percentage of 56% on November 18.



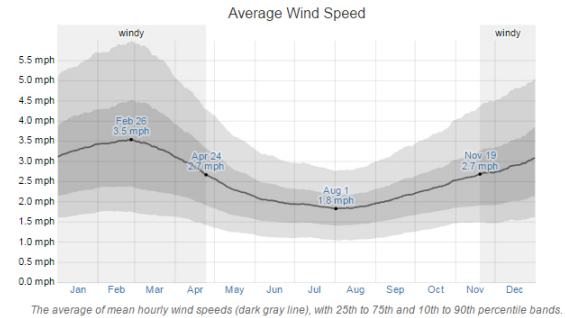
## Wind

This section discusses the wide-area hourly average wind vector (speed and direction) at 10 meters above the ground. The wind experienced at any given location is highly dependent on local topography and other factors, and instantaneous wind speed and direction vary more widely than hourly averages.

The average hourly wind speed in Poughkeepsie experiences mild seasonal variation over the course of the year.

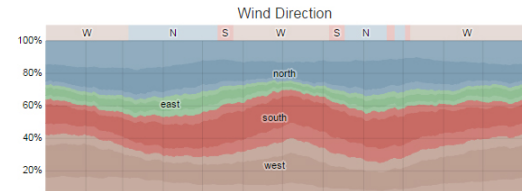
The windier part of the year lasts for 5.2 months, from November 19 to April 24, with average wind speeds of more than 2.7 miles per hour. The windiest day of the year is February 26, with an average hourly wind speed of 3.5 miles per hour.

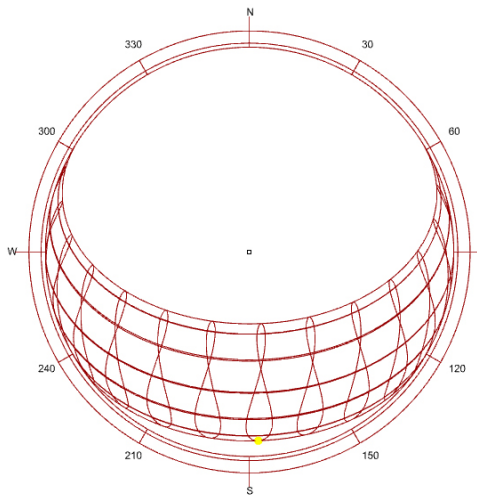
The calmer time of year lasts for 6.8 months, from April 24 to November 19. The calmest day of the year is August 1, with an average hourly wind speed of 1.8 miles per hour.



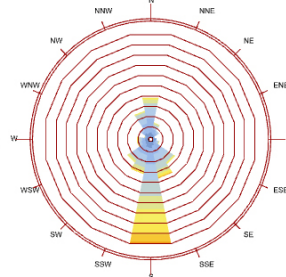
The predominant average hourly wind direction in Poughkeepsie varies throughout the year.

The wind is most often from the north for 2.2 months, from March 5 to May 12, for 1.0 months, from August 17 to September 18; and for 1.1 weeks, from September 24 to October 2, with a peak percentage of 36% on March 11. The wind is most often from the south for 1.7 weeks, from May 12 to May 24; for 1.7 weeks, from August 5 to August 17; for 6.0 days, from September 18 to September 24; and for 4.0 days, from October 2 to October 6, with a peak percentage of 32% on June 30. The wind is most often from the west for 2.4 months, from May 24 to August 5 and for 5.0 months, from October 6 to March 5, with a peak percentage of 43% on January 14.

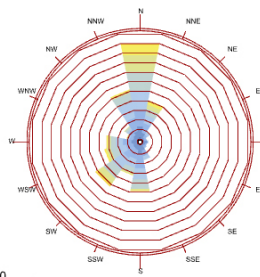
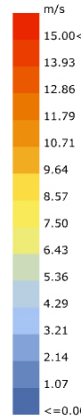




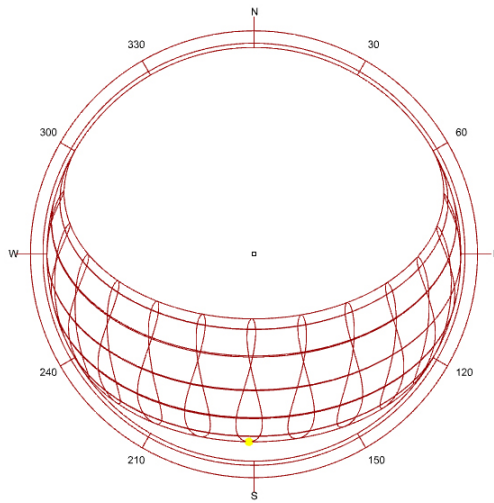
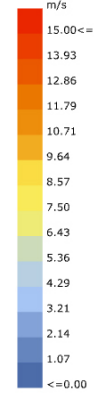
Sun-Path Diagram - Latitude: 44.05  
21 DEC 12:00, ALT = 22.47, AZM = 177.33



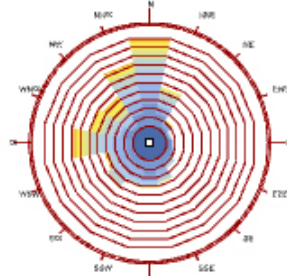
Wind-Rose  
Eugene Mahlon Sweet Arpt Uo\_OR\_USA  
1 DEC 1:00 - 28 FEB 24:00  
Hourly Data: Wind Speed (m/s)  
Calm for 8.15% of the time = 176 hours.  
Each closed polyline shows frequency of 2.6%. = 55 hours.



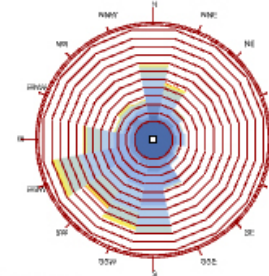
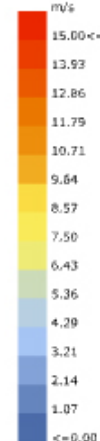
Wind-Rose  
Eugene Mahlon Sweet Arpt Uo\_OR\_USA  
1 JUN 1:00 - 31 AUG 24:00  
Hourly Data: Wind Speed (m/s)  
Calm for 8.83% of the time = 195 hours.  
Each closed polyline shows frequency of 1.9%. = 41 hours.



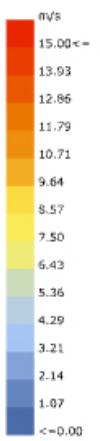
Sun-Path Diagram - Latitude: 41.63  
21 DEC 12:00, ALT = 24.92, AZM = 181.53



Wind-Rose  
Poughkeepsie Dutchess Co Ap\_NY\_USA  
1 DEC 1:00 - 28 FEB 24:00  
Hourly Data: Wind Speed (m/s)  
Calm for 33.01% of the time = 713 hours.  
Each closed polyline shows frequency of 1.1%. = 23 hours.



Wind-Rose  
Poughkeepsie Dutchess Co Ap\_NY\_USA  
1 JUN 1:00 - 31 AUG 24:00  
Hourly Data: Wind Speed (m/s)  
Calm for 33.20% of the time = 733 hours.  
Each closed polyline shows frequency of 0.9%. = 20 hours.

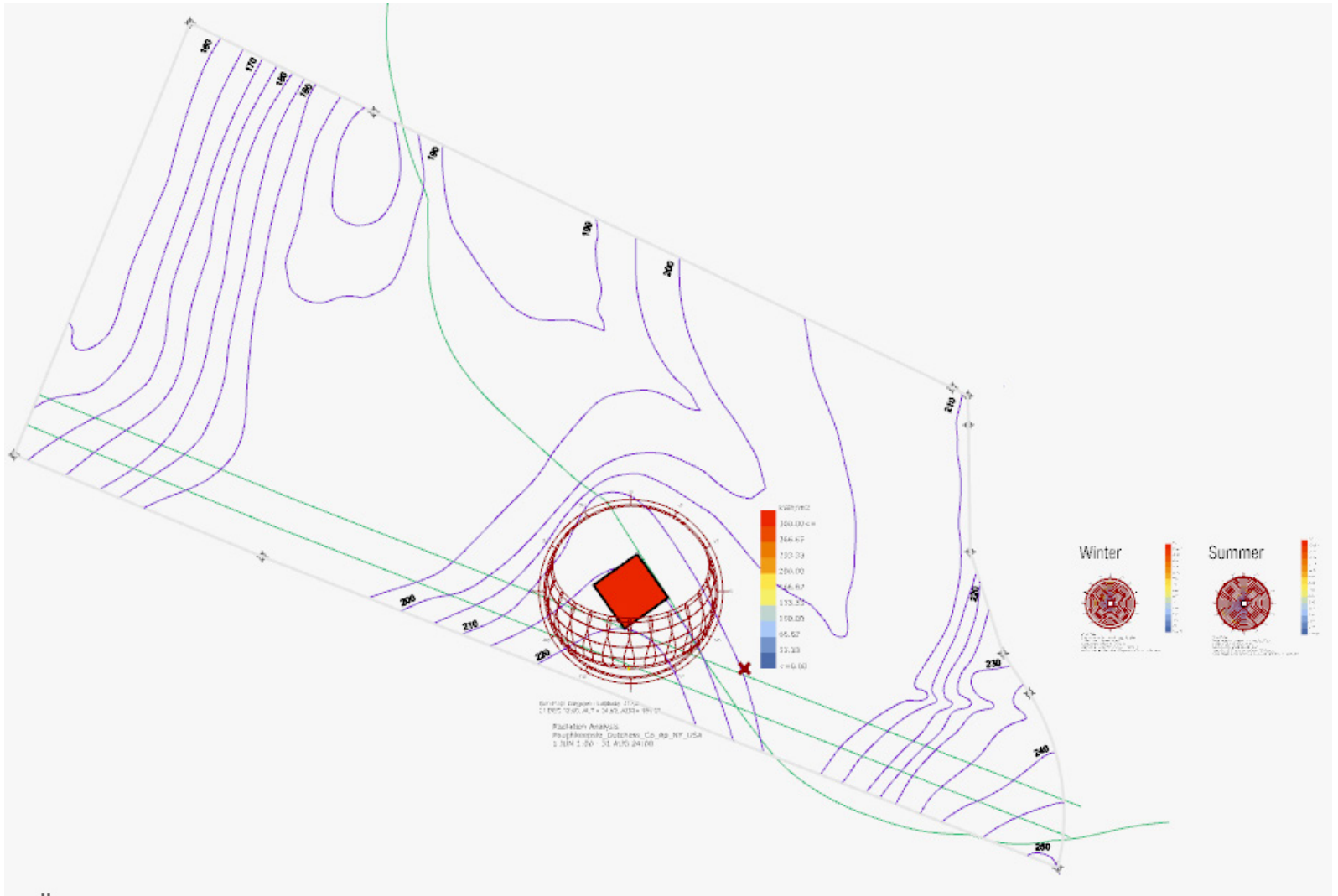






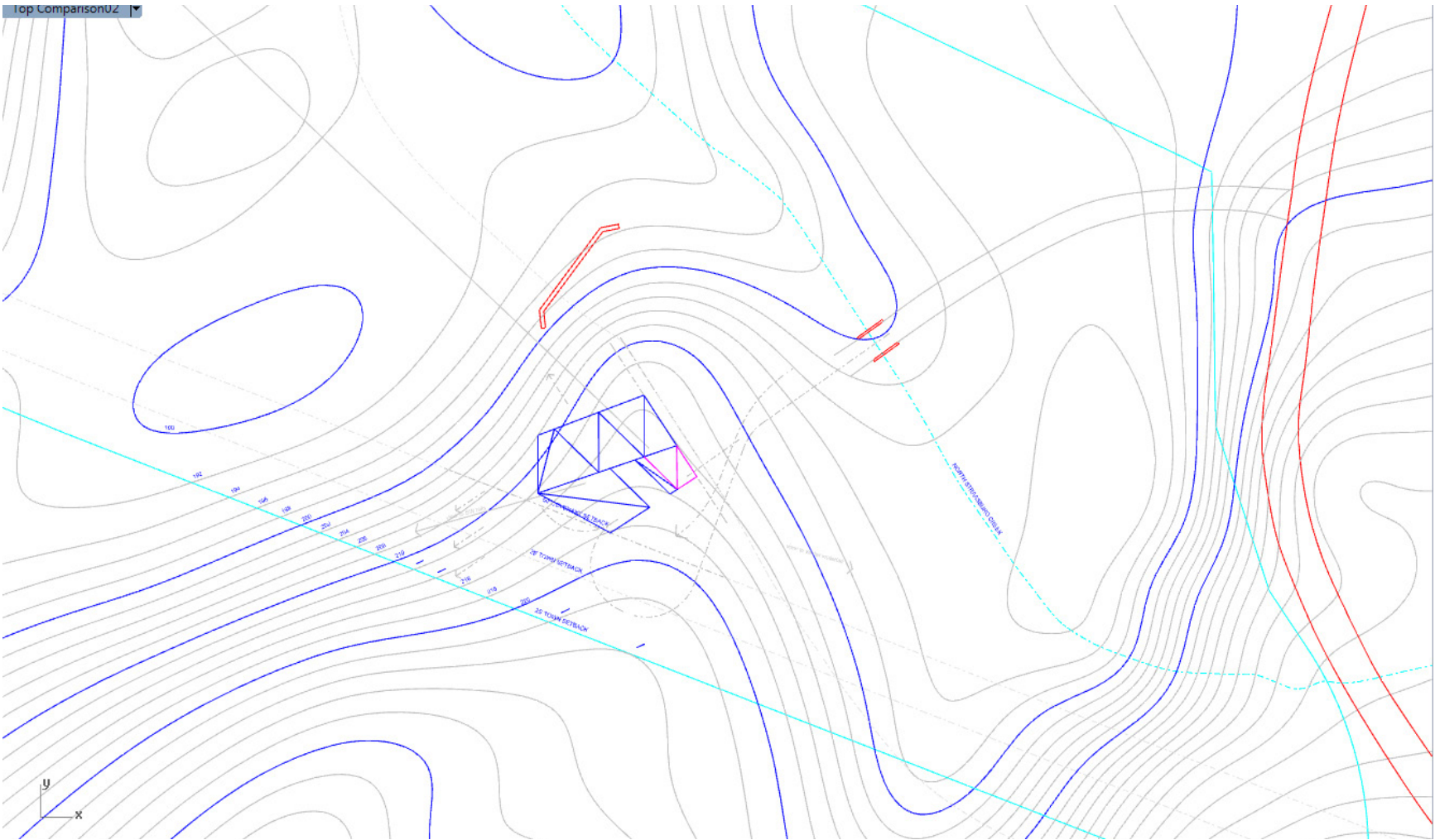
## Thermo-Dynamic Analysis - Site Topography

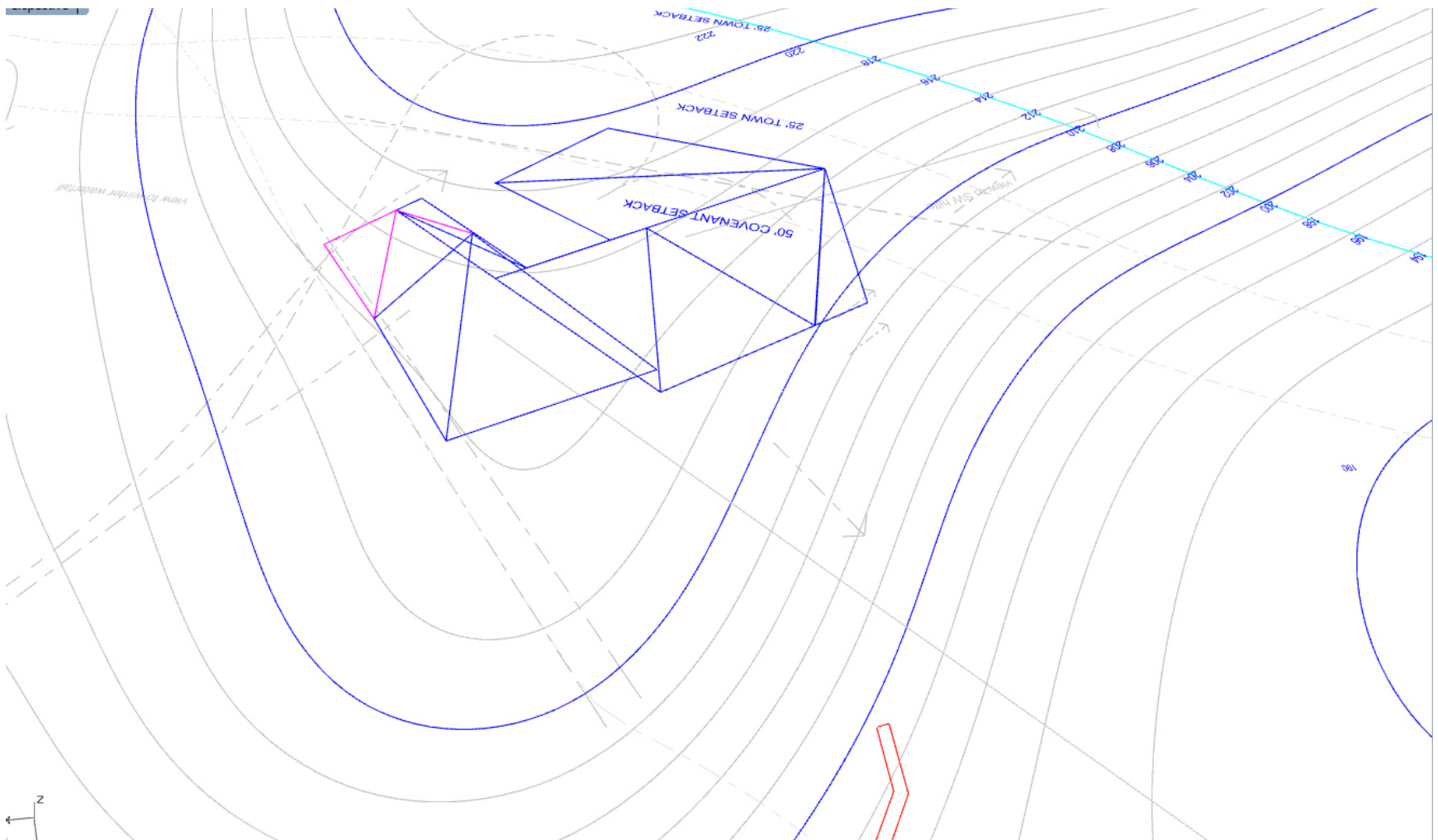


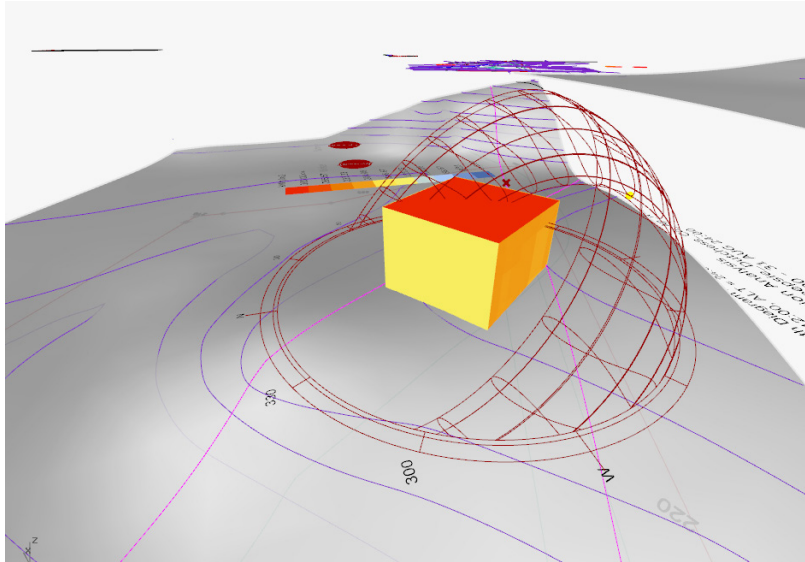


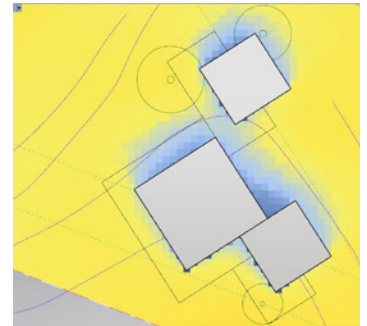
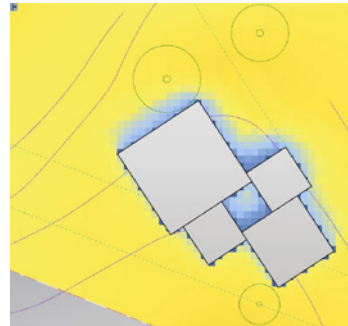
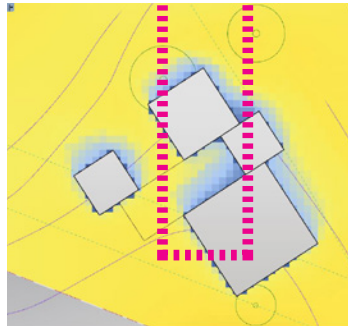
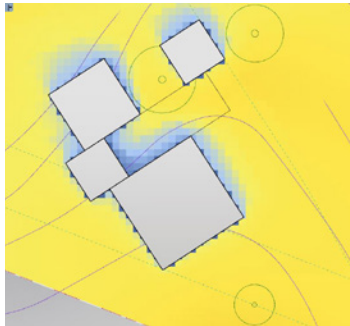
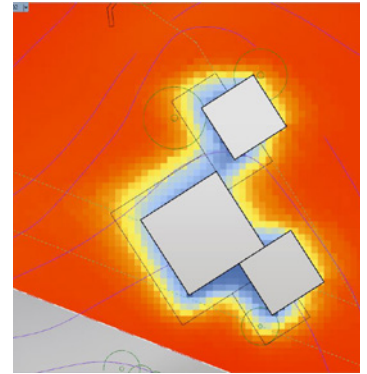
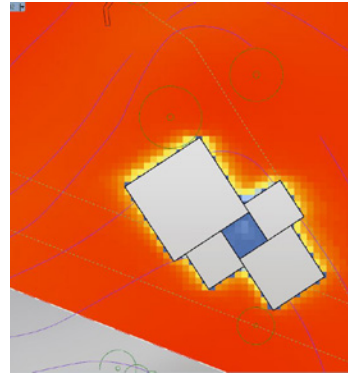
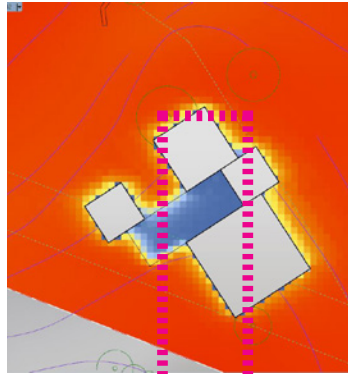
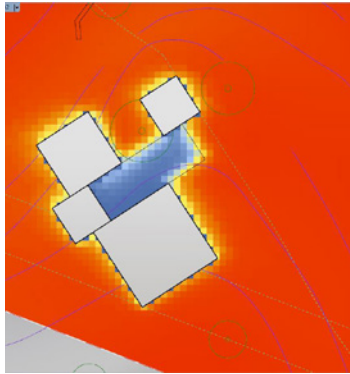


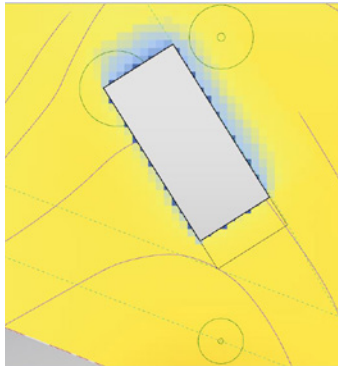
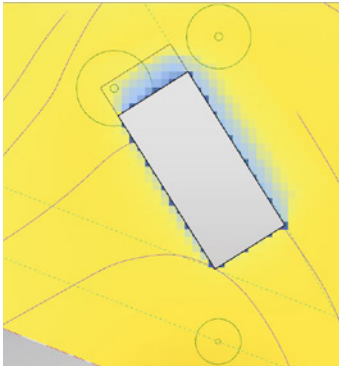
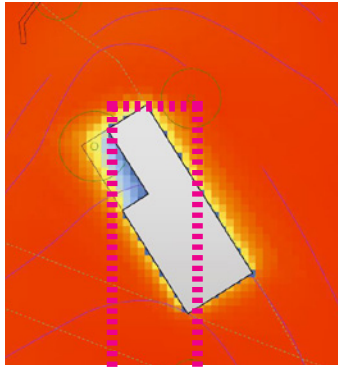
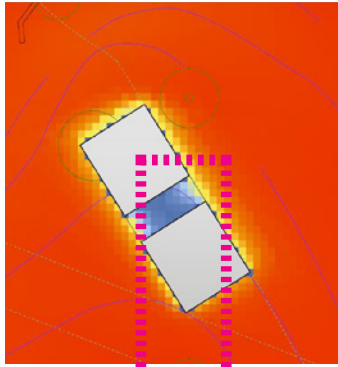
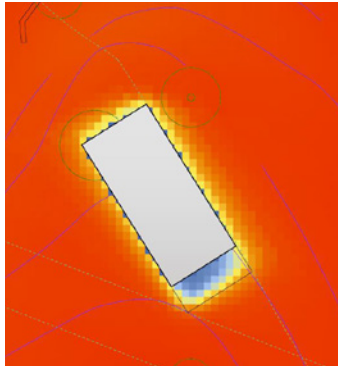
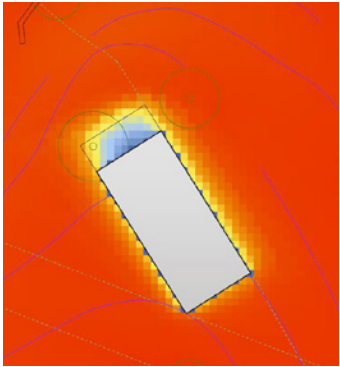
<p><b>HUDSON HOUSE</b></p>	<p>Philip Speranza, Architect  t. 917.579.0152  philip@speranzaarchitecture.com</p>	<p>Issue:  <b>Schematic Design</b></p>	<p>Date:  <b>05/11/17</b></p>	<p>Scale:  <b>1" = 60'-0"</b></p>	<p>Drawing Title:  <b>SITEPLAN</b></p>	<p><b>A1.01</b></p>
----------------------------	---	--	-----------------------------------	---------------------------------------	--	---------------------



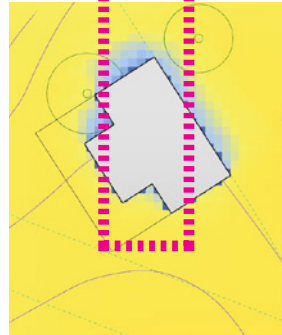
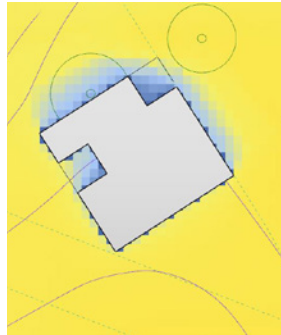
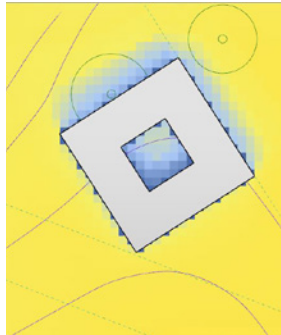
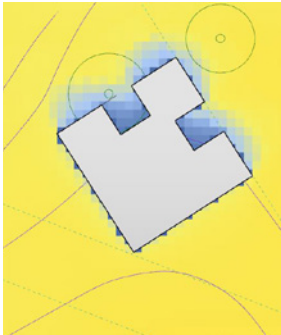
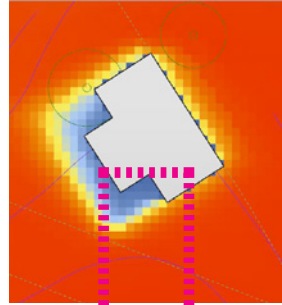
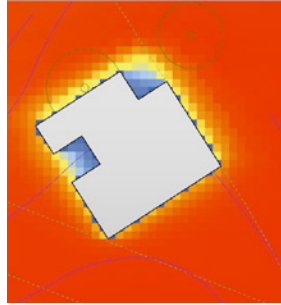
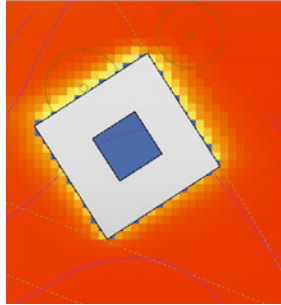
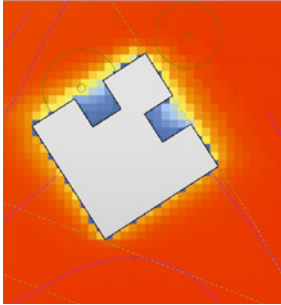














# IDEAS AND PRECEDENTS

## Porch



**porch, polycarbonate balcony**

Lacaton Vassal



**porch, polycarbonate gap**

Lacaton Vassal

Precedents

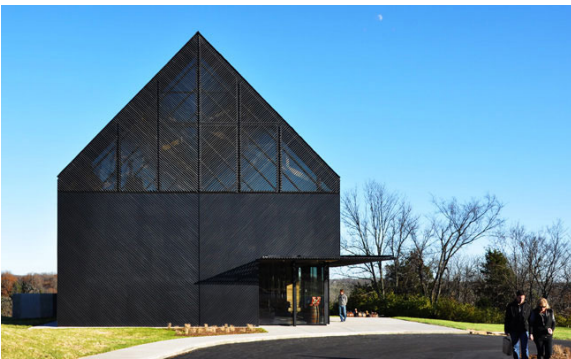


## Porch



### porch, wood timber

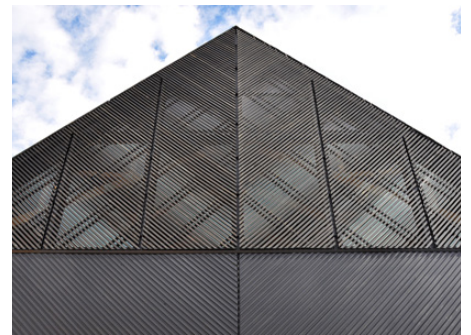
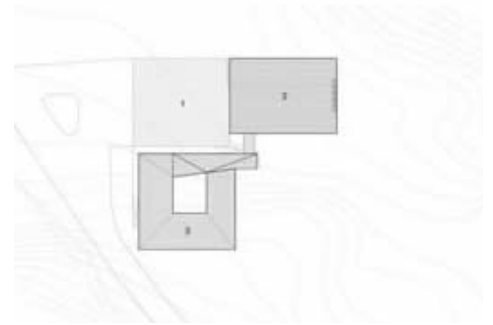
Monastery, New York State, Hanrahan and Meyers



### porch, skin of facade

Wild Turkey Distillery, Kentucky

Precedents



## Slope



### slopes

Atelier Oehlen, Switzerland, Abalos + Sentkiewicz

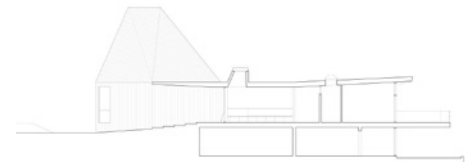
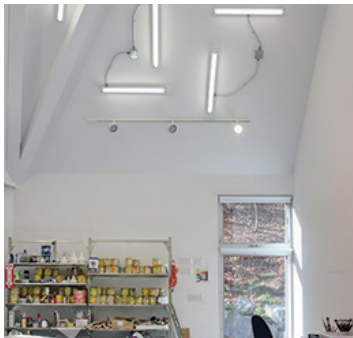
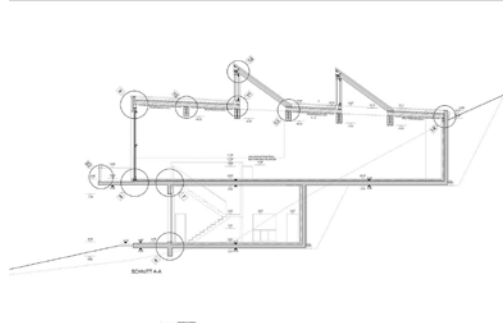


### studio vertical space

M&M House, Stan Allen Architects



Precedents



## Solar Chimney (thermal chimney)



### solar chimney

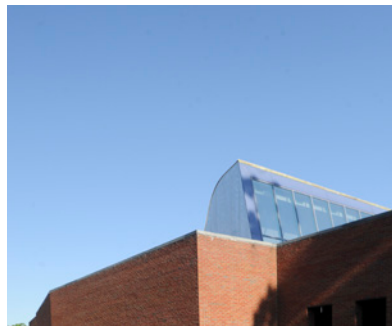
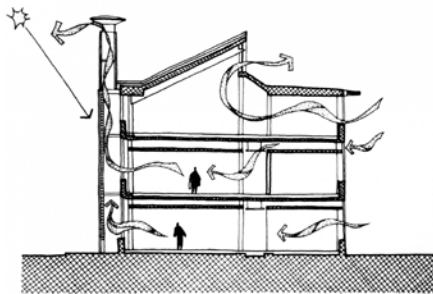
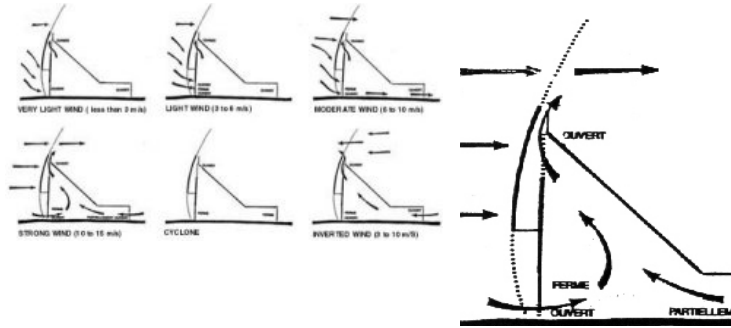
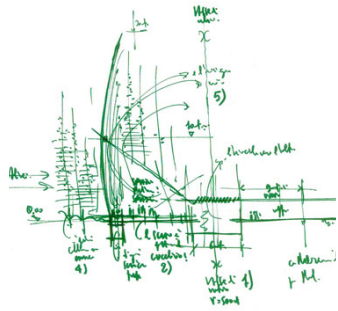
Tjibaou Cultural Center, Renzo Piano Workshop



### solar chimney

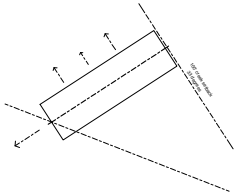
various

Precedents

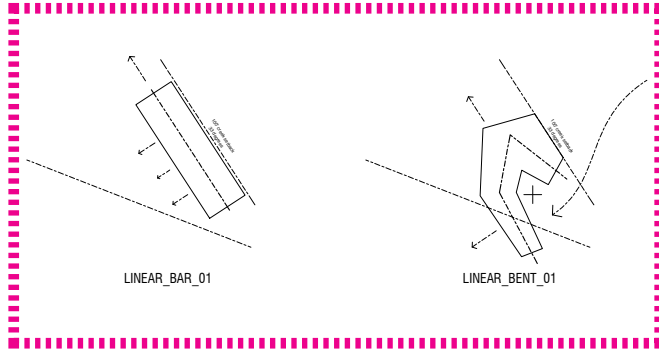




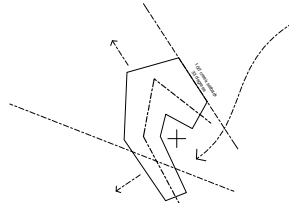
# DESIGN STUDIES



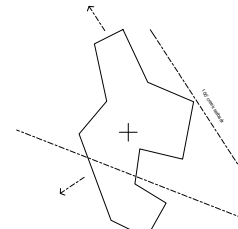
LINEAR\_BAR\_02



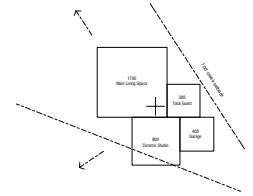
LINEAR\_BAR\_01



LINEAR\_BENT\_01



CENTRAL\_SCRAMBLED EGG\_01



ASSEMBLY\_01

# Program

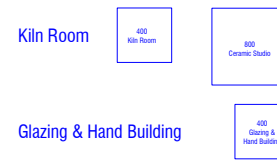
## Main Living Space



## Guest



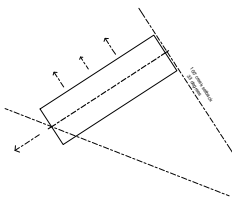
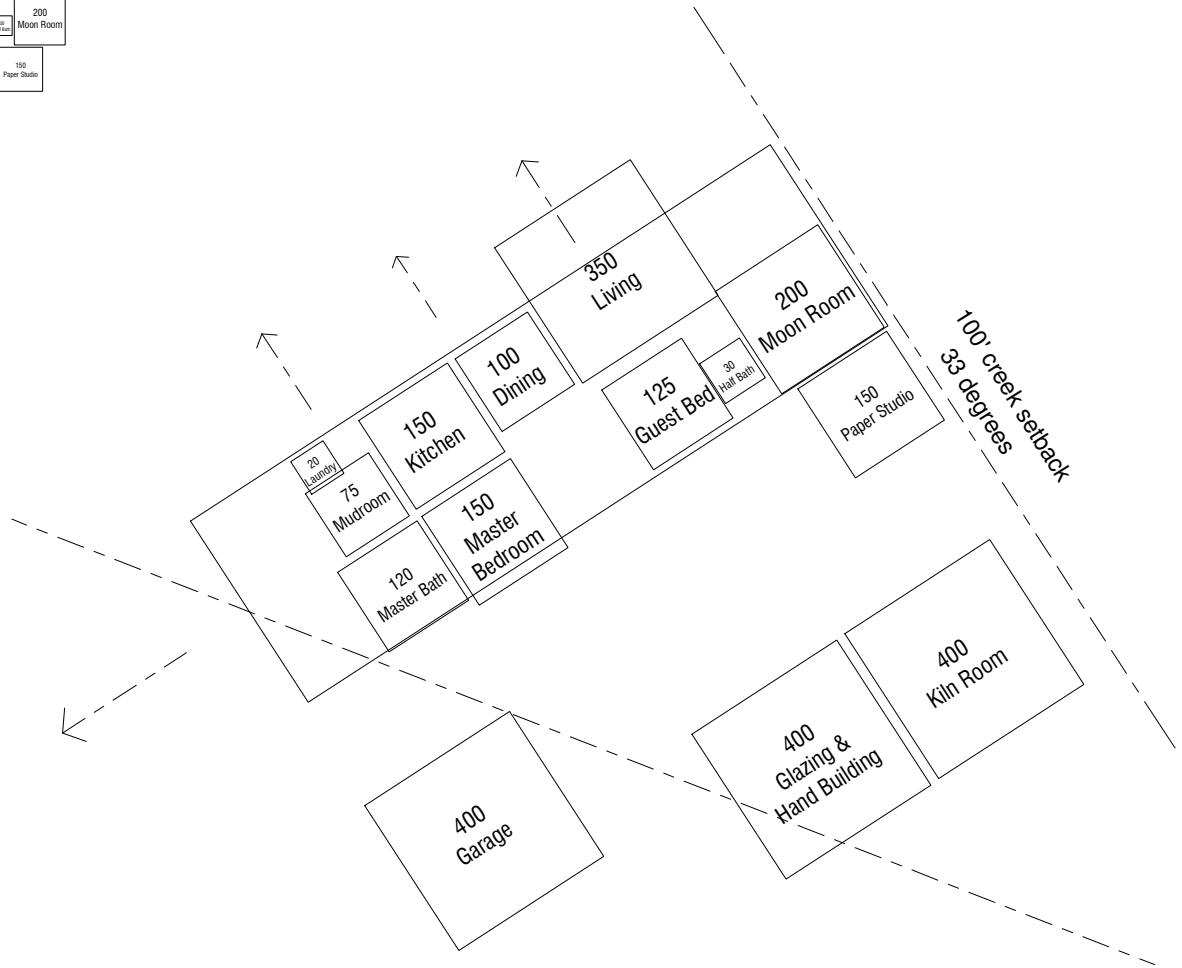
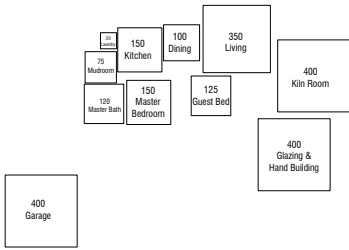
## Ceramic Studio



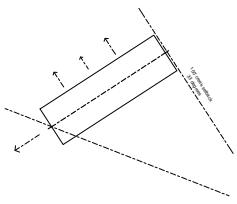
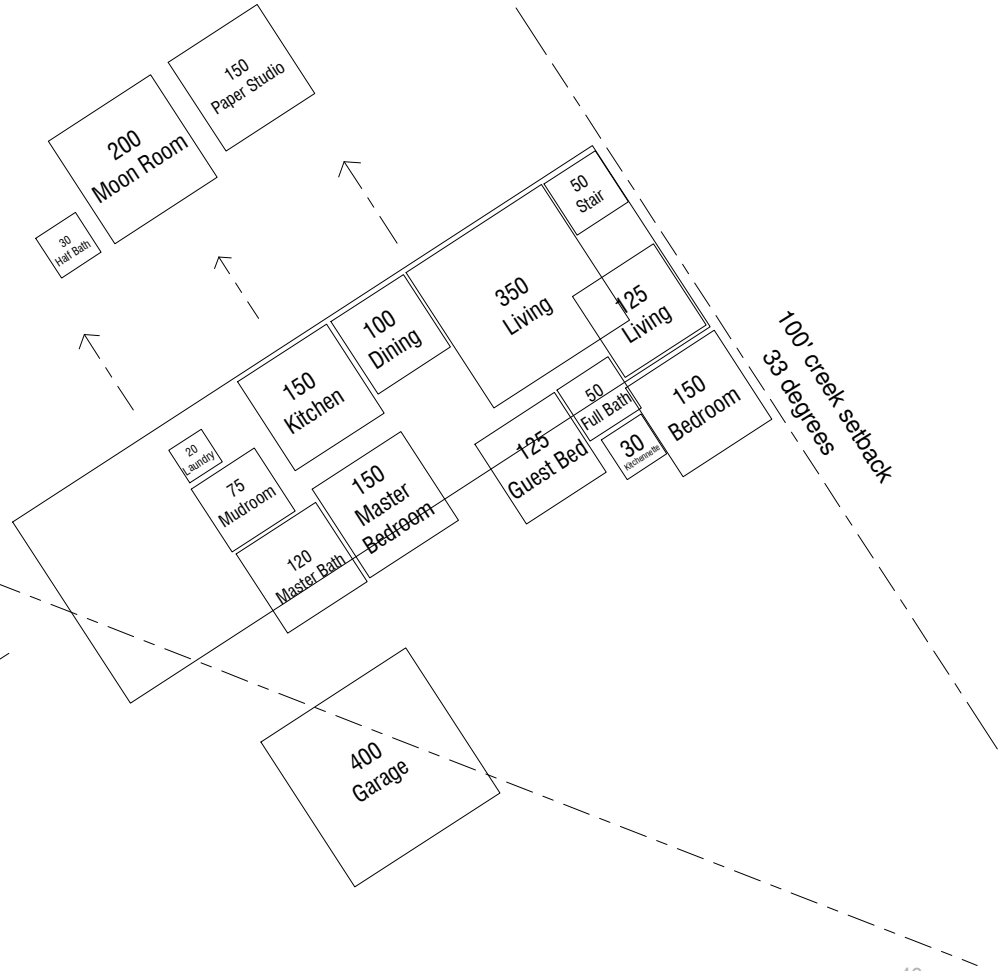
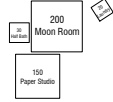
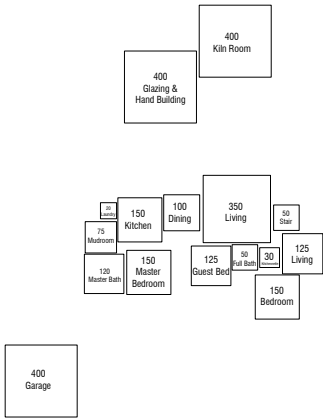
## Garage

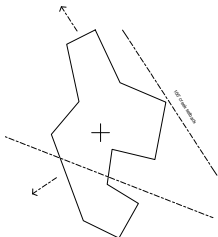
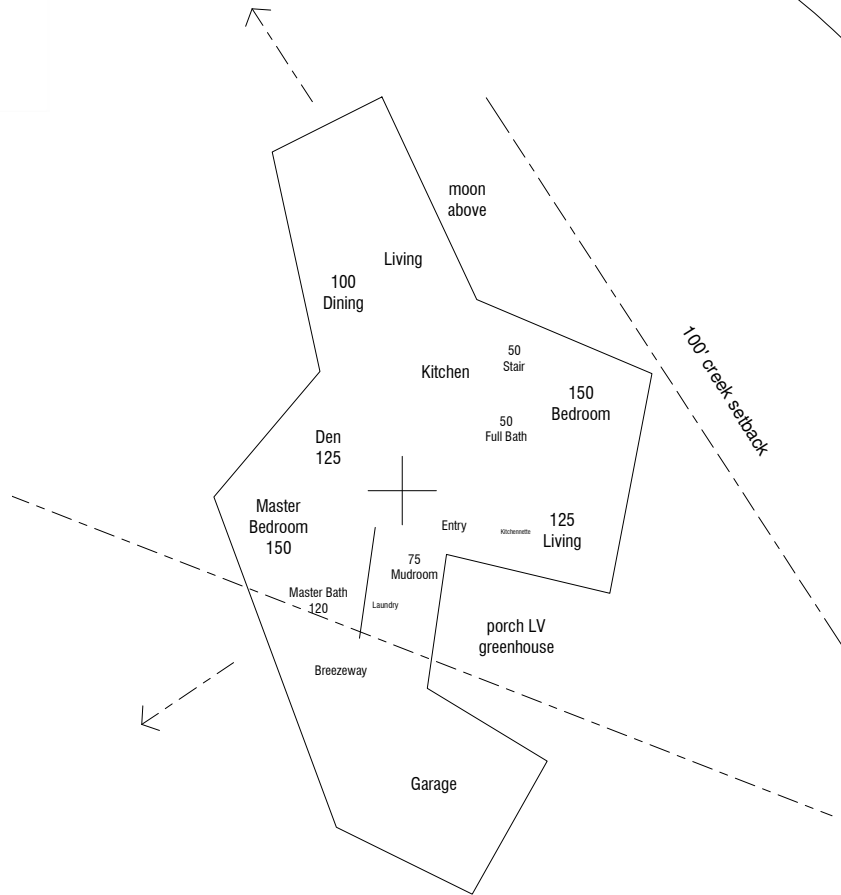




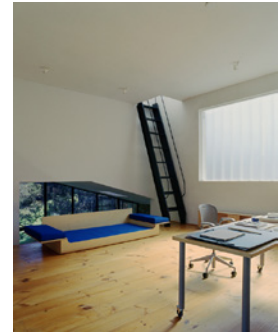
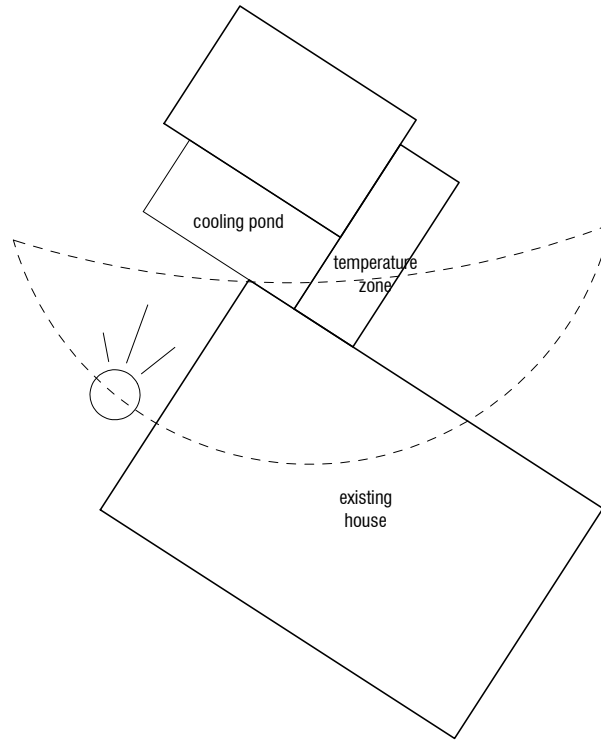
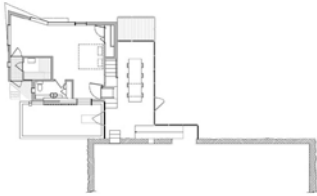
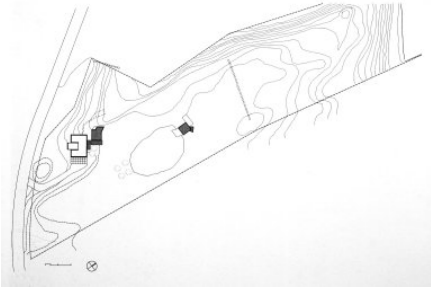






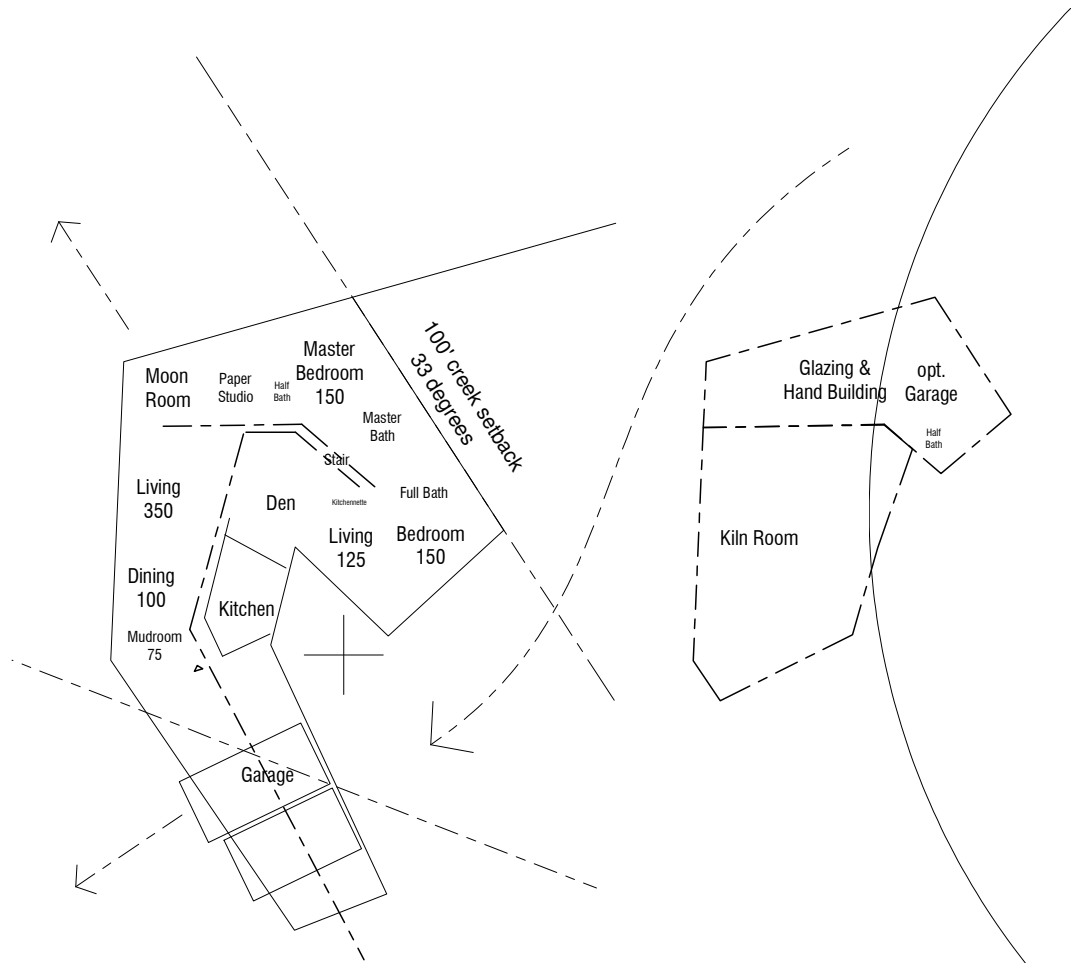


CENTRAL\_SCRAMBLED EGG\_01



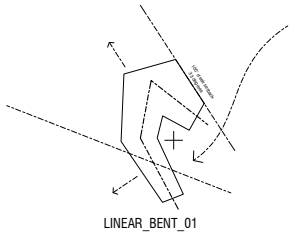
# CENTRAL\_LV COURTYARD

## sha\_little tesseract



# LINEAR\_BENT\_01

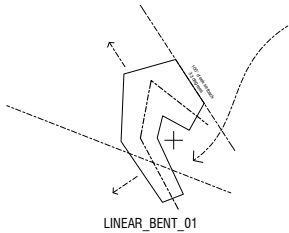
## split north bar

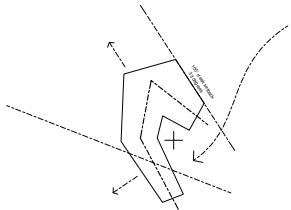




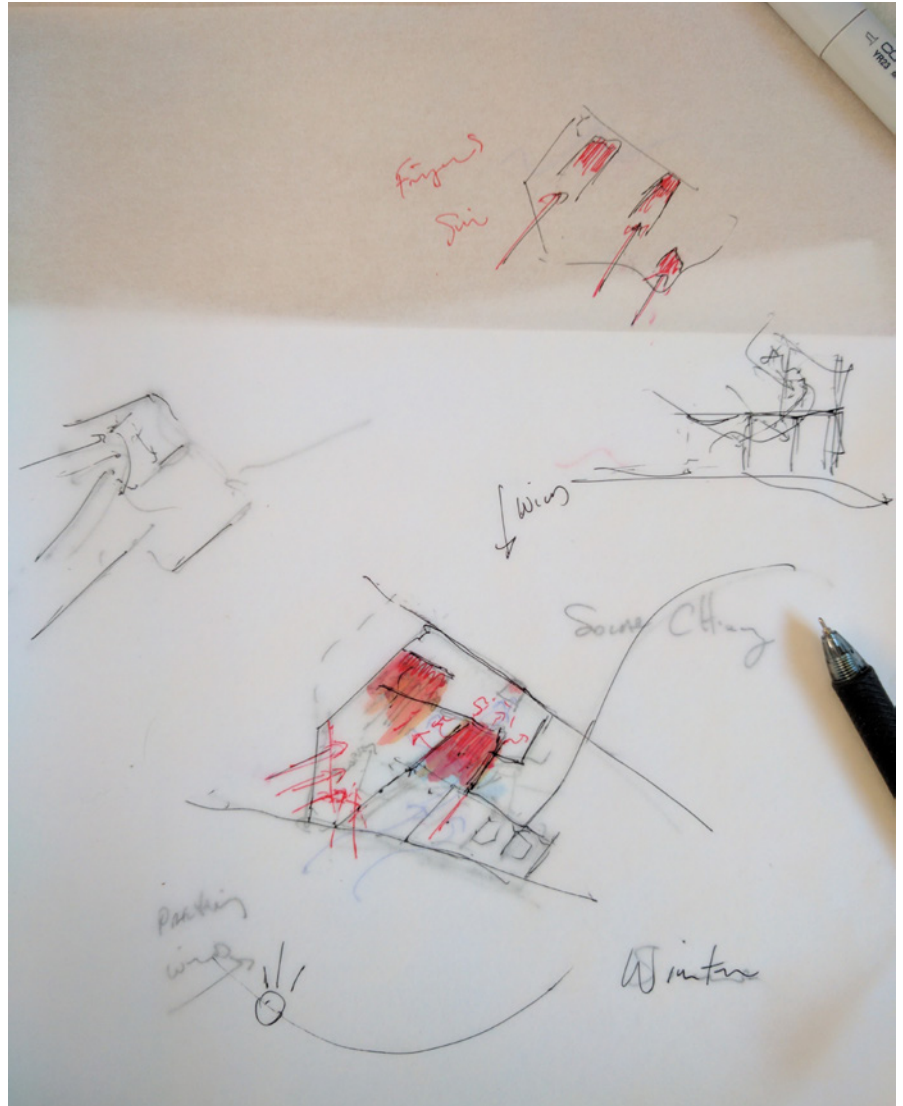
# LINEAR\_BENT\_02

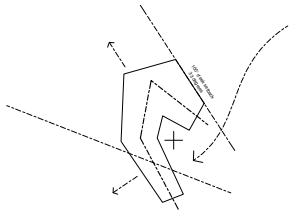
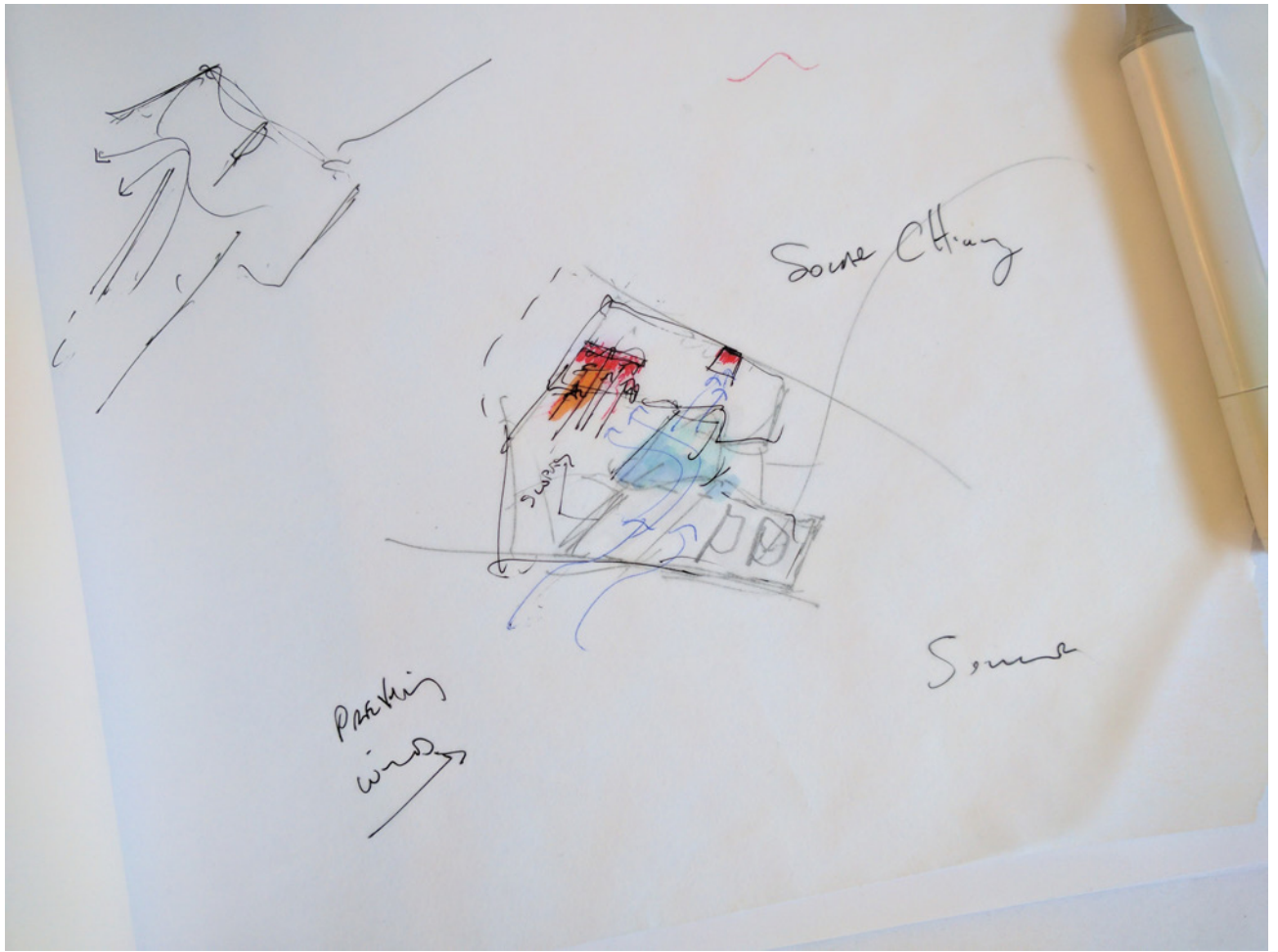
## living north



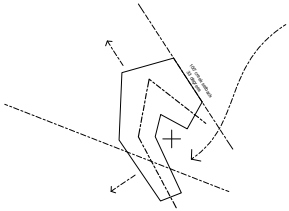
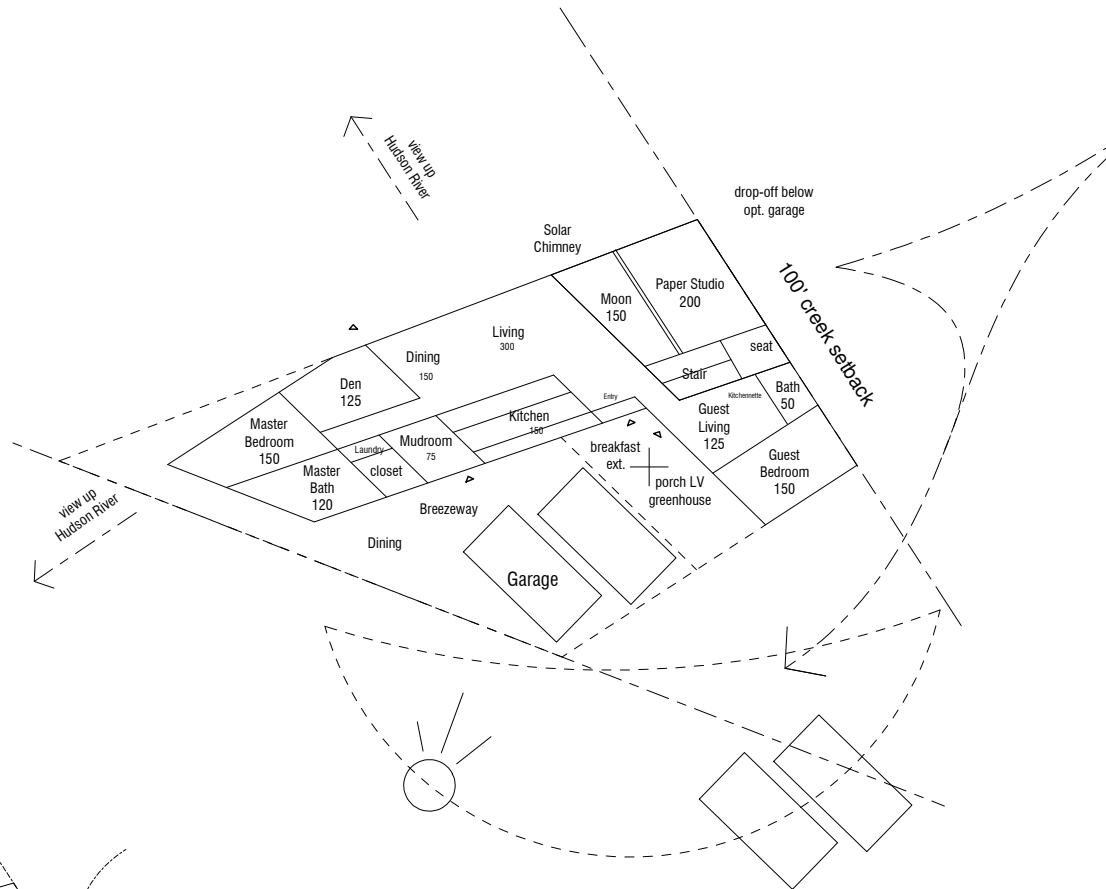


LINEAR\_BENT\_01





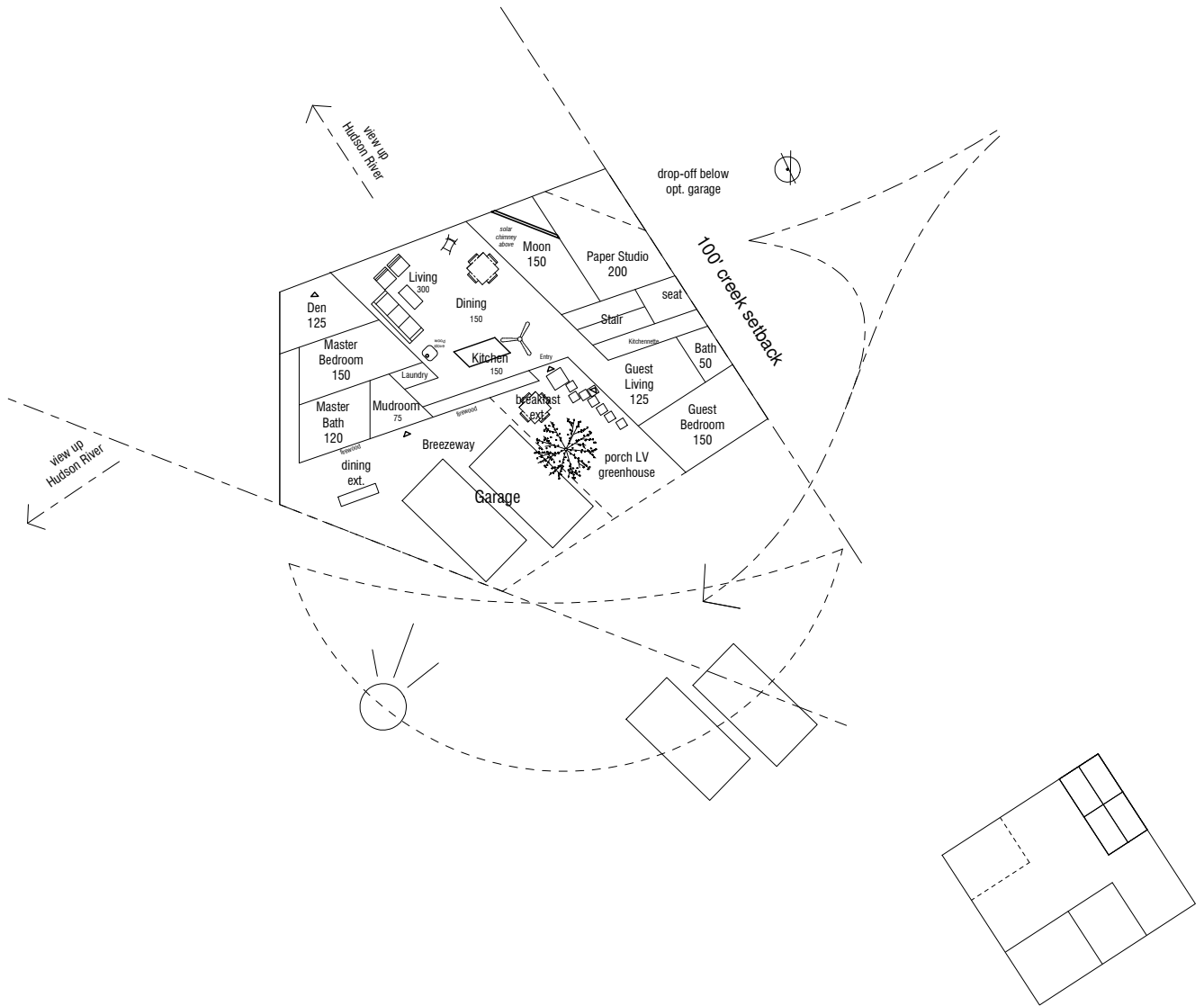
LINEAR\_BENT\_01



LINEAR\_BENT\_01





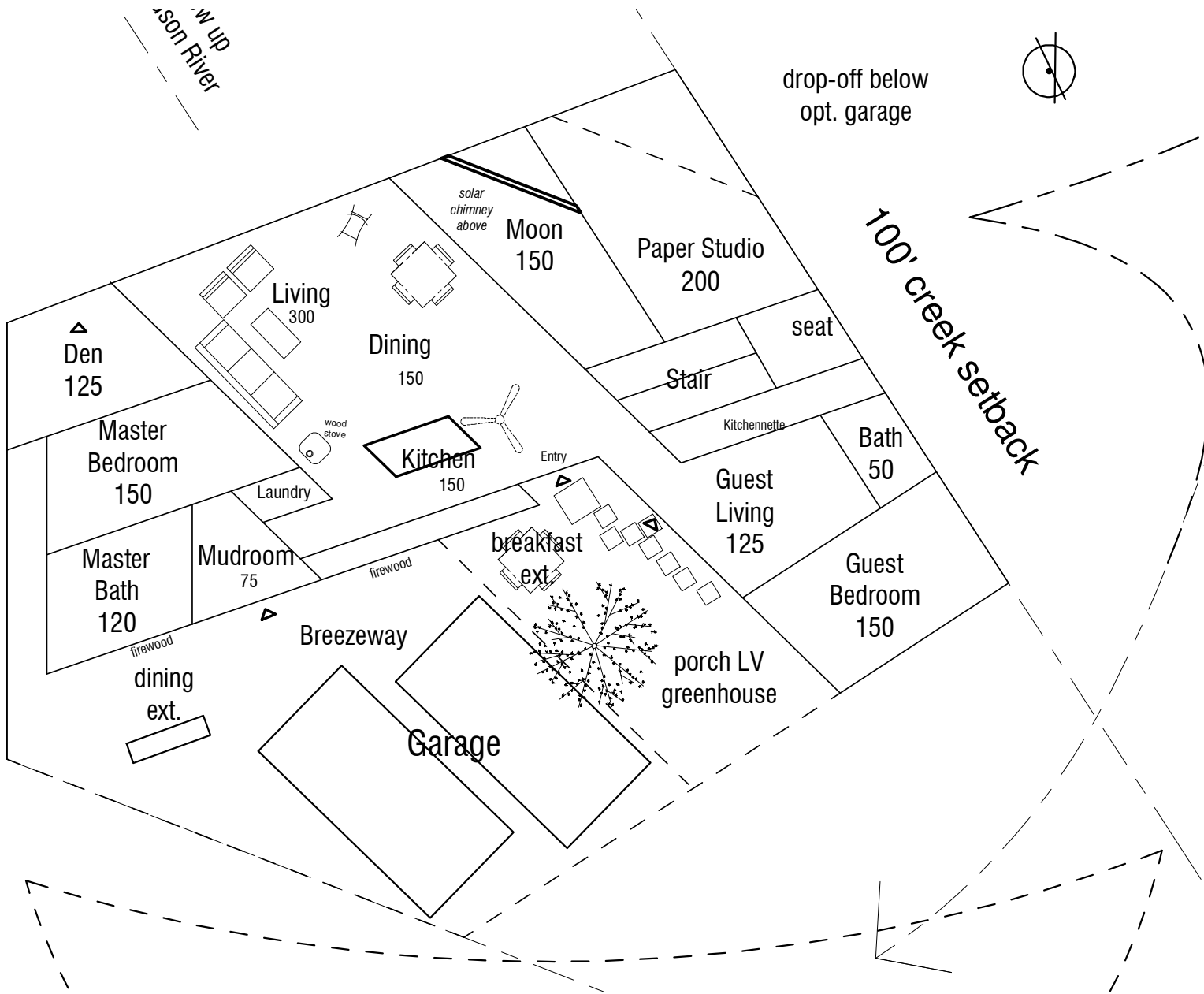


W up  
son River



drop-off below  
opt. garage

100' creek setback

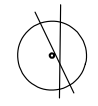




View up Hudson River

Moon Room above 150

drop-off below opt. garage



100' creek setback

dining ext.

Master Bedroom 13 x 15

20 x 30

Bath 6 x 11

Kitchen

Guest Living 10 x 15

Master Bath 8 x 13

Mudroom 7 x 7

porch LV greenhouse

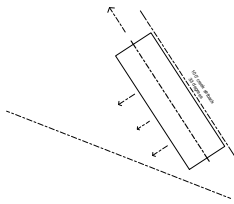
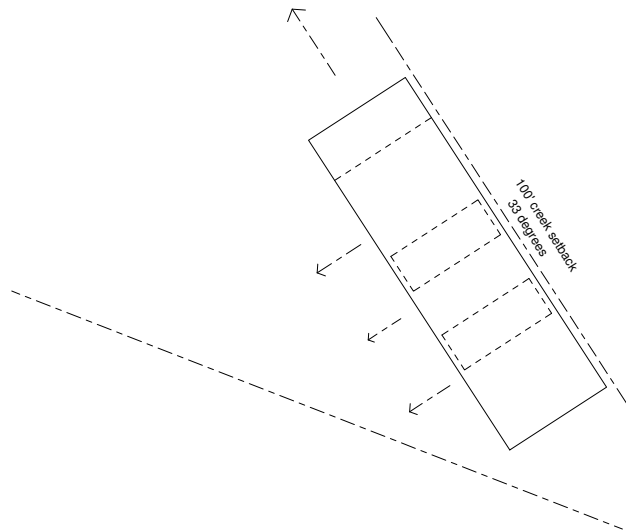
Guest Bedroom 10 x 15

Garage

Breezeway



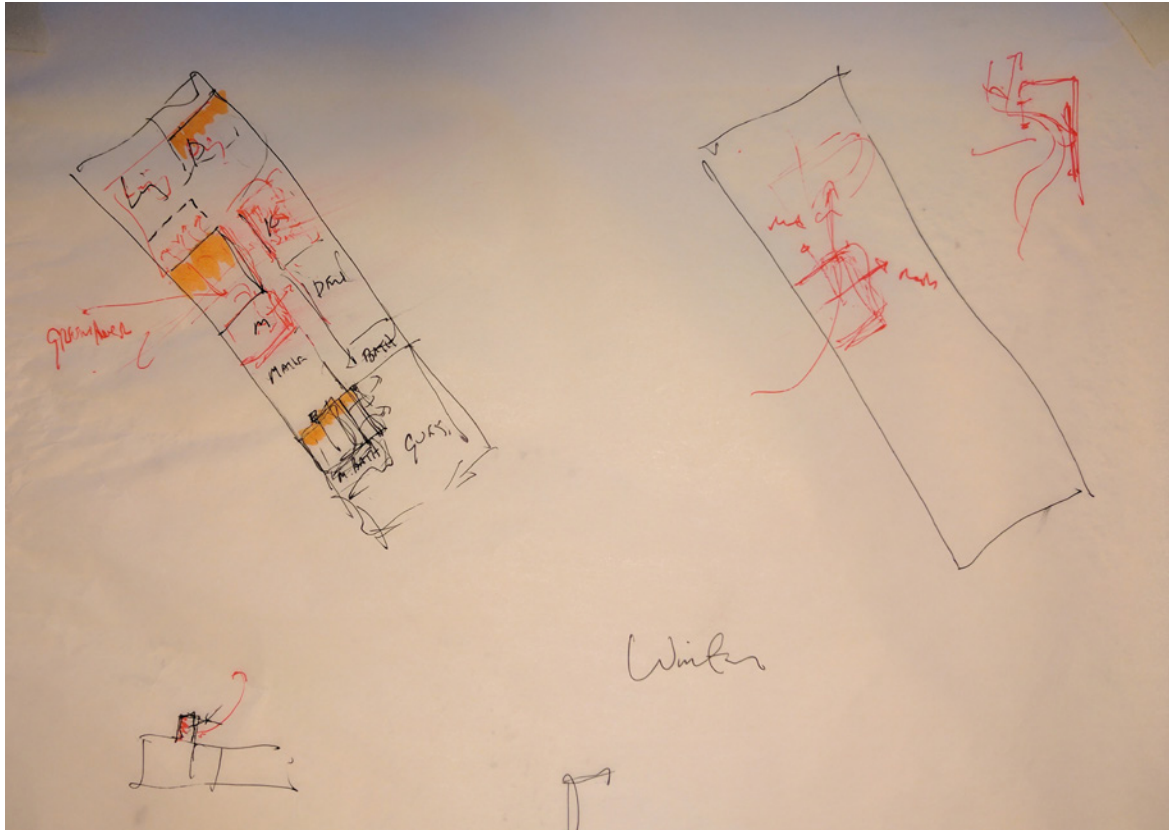




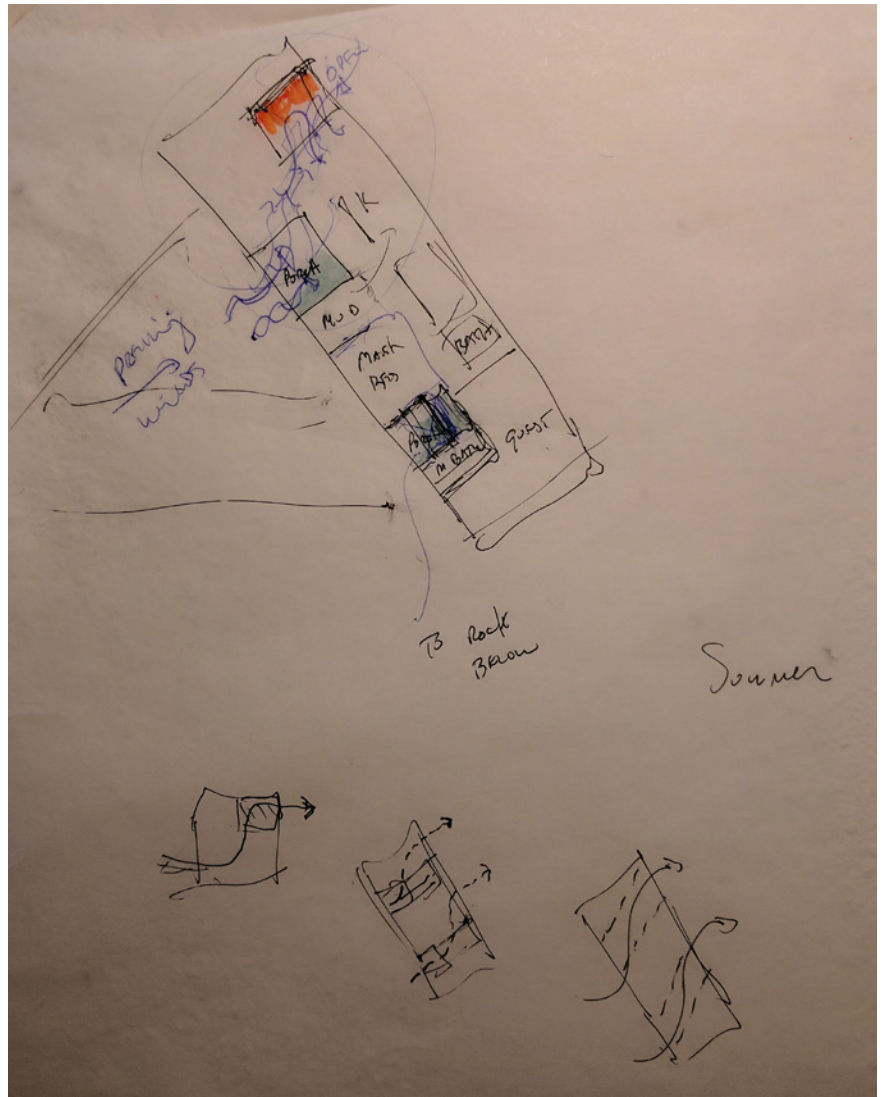
LINEAR\_BAR\_01

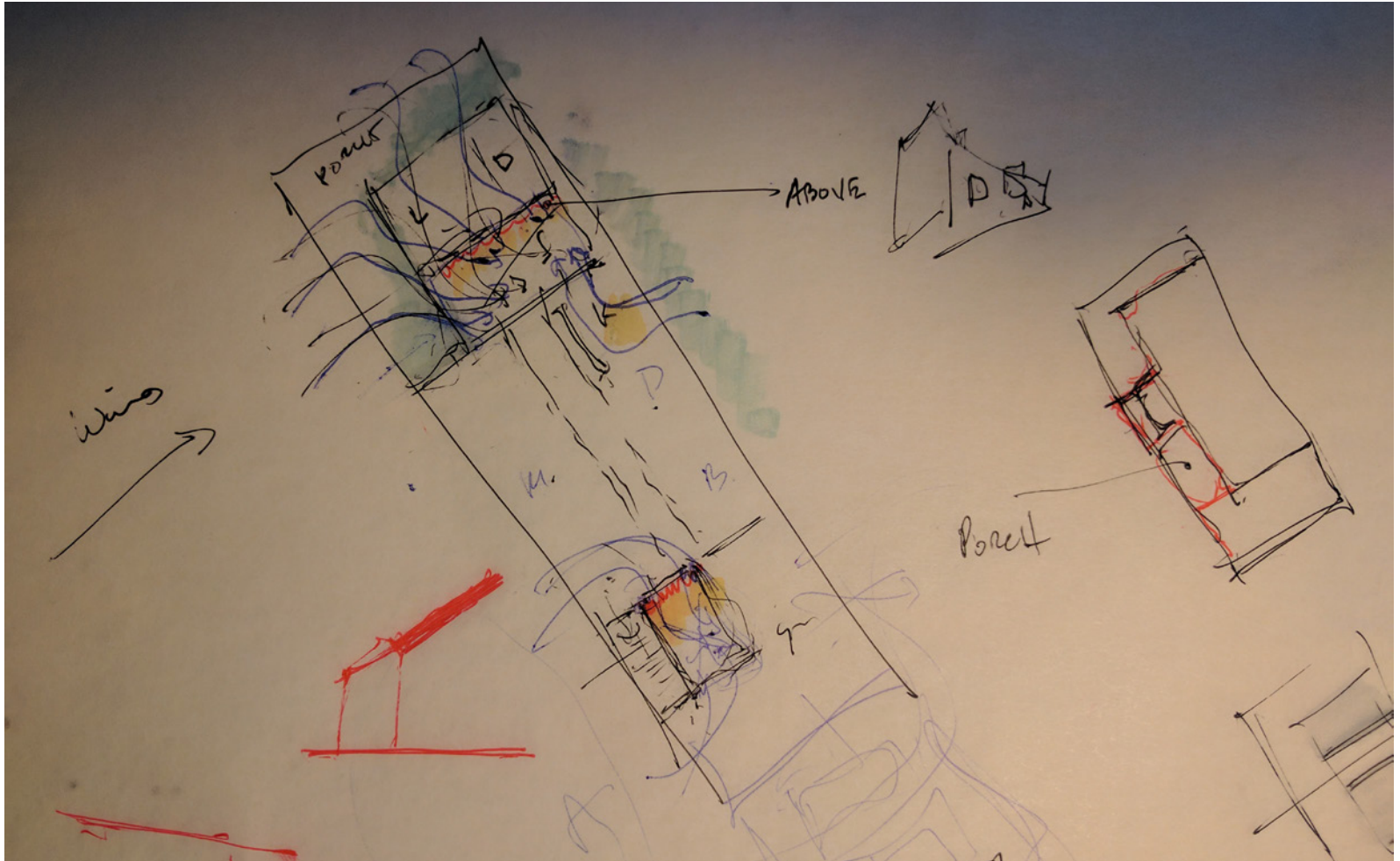
# LINEAR\_BAR\_01

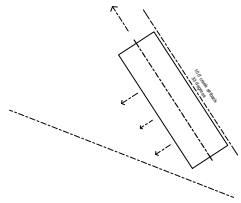
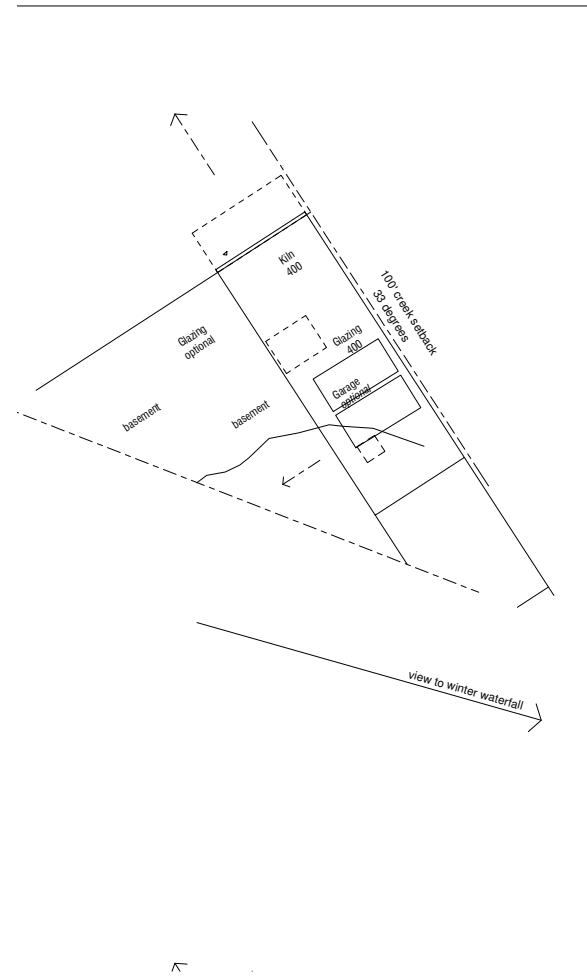
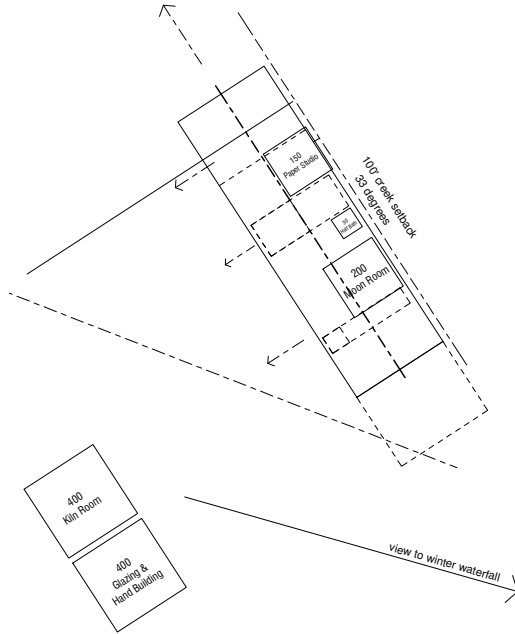
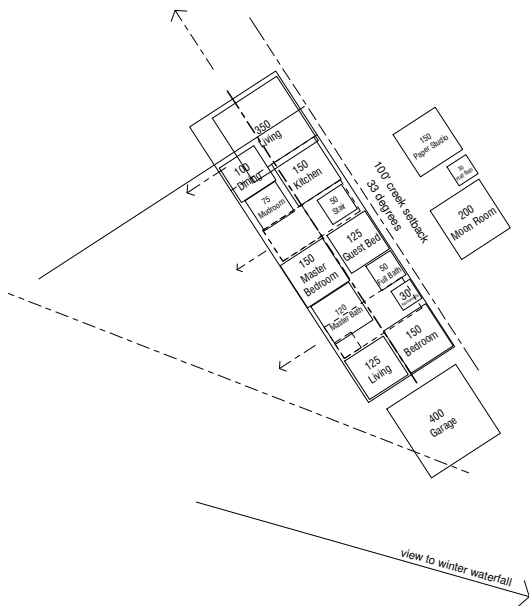
## A+S



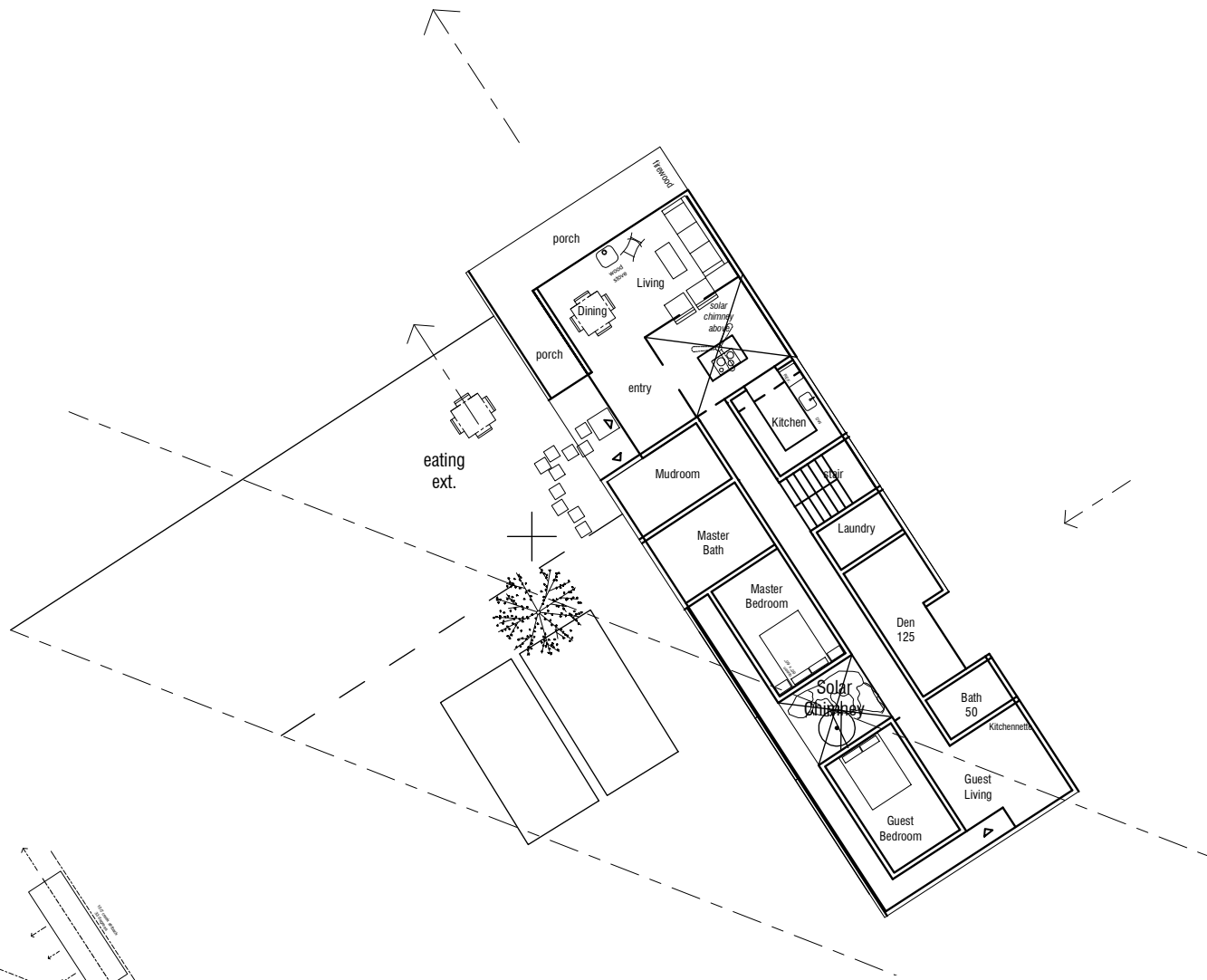




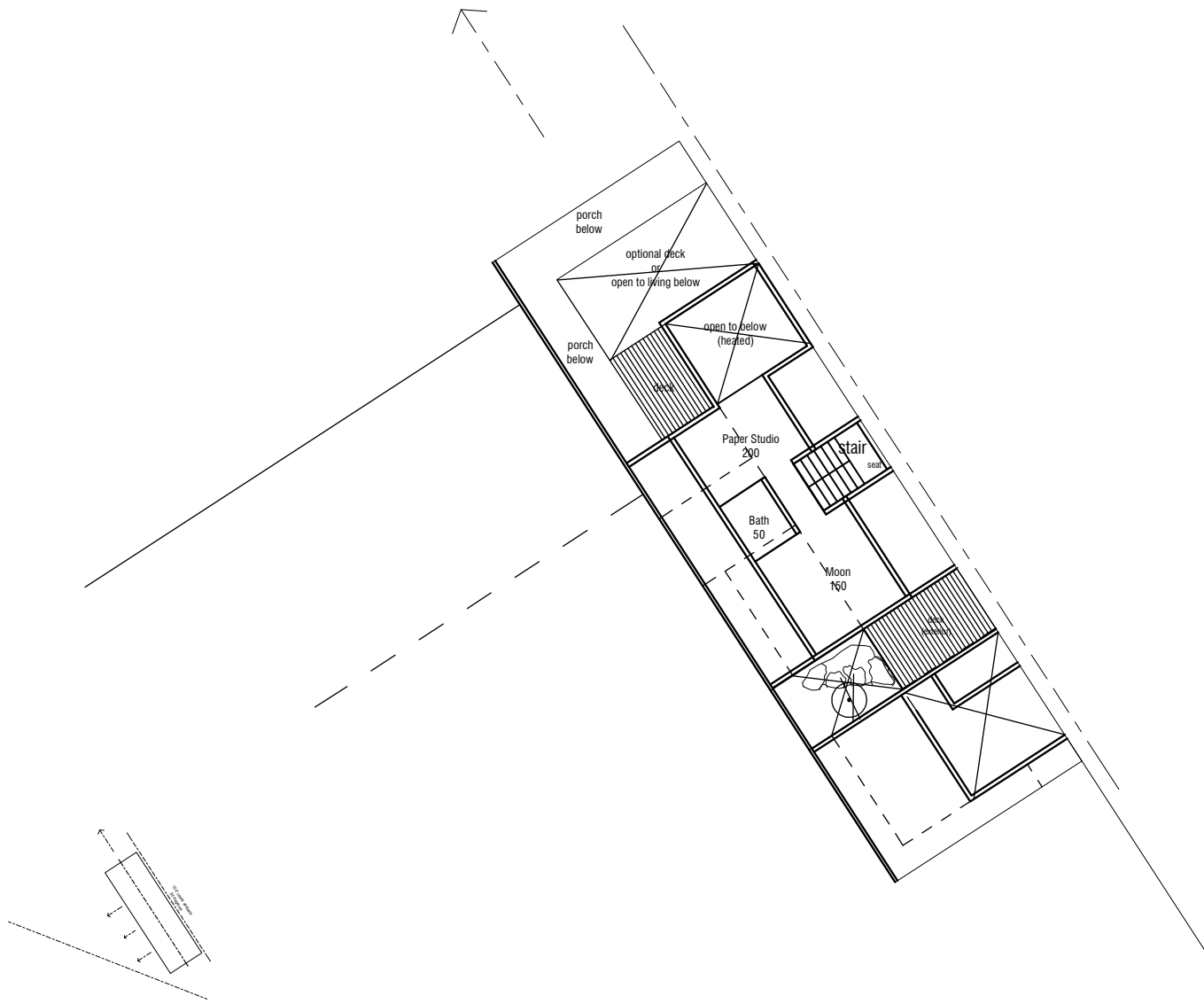




LINEAR\_BAR\_01



LINEAR\_BAR\_01



LINEAR\_BAR\_01





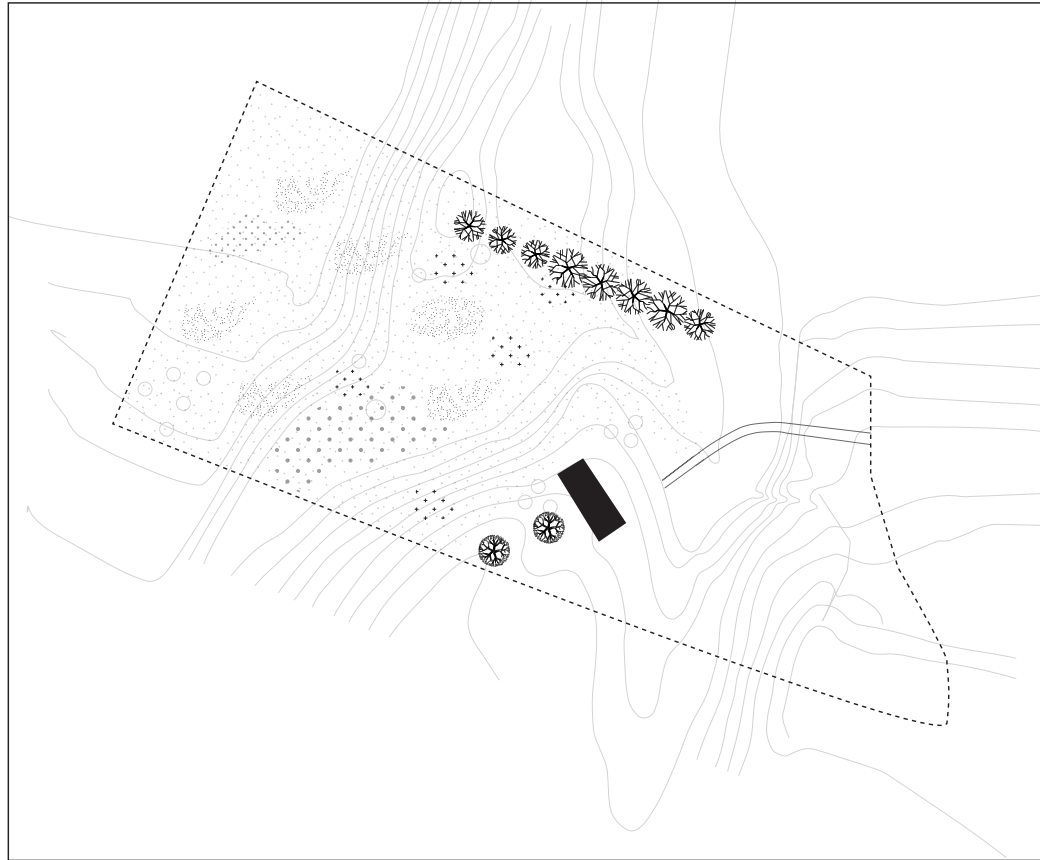









# LANDSCAPE ARCHITECTURE





 Amsonia hubrichtii 1 per spot


 Artemisia ludoviciana


 Baptisia leucantha 1 per spot


 Echinacea purpurea 'Rubinstern' 'Fatal Attraction'


 Molinia 'Moorhexe' Eragrosti spectabilis 50%, 50"


 Anaphalis margaritacea

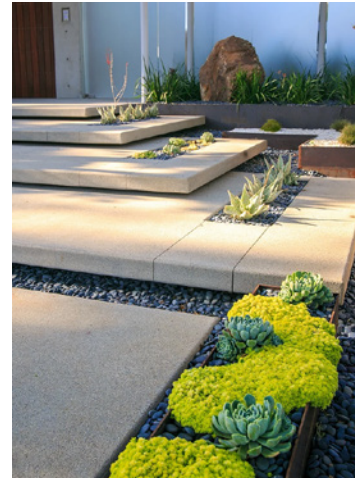

 Betula pendula


 Acer palmatum

# Hudson River Home

USDA Plant Zone 5A-5B

## Entrances



Between Spaces: Walks & Thresholds



# Borders, Edges, Textures



Low plant borders frame distant views along the horizon



Grasses offer a diversity of colors and textures throughout the year



## Flowering trees throughout the year



Crape Myrtle  
*Laegerstroemia Indica*



Flowering Crab Apples  
*Malus sp.*



Eastern Redbud  
*Cornus canadensis*



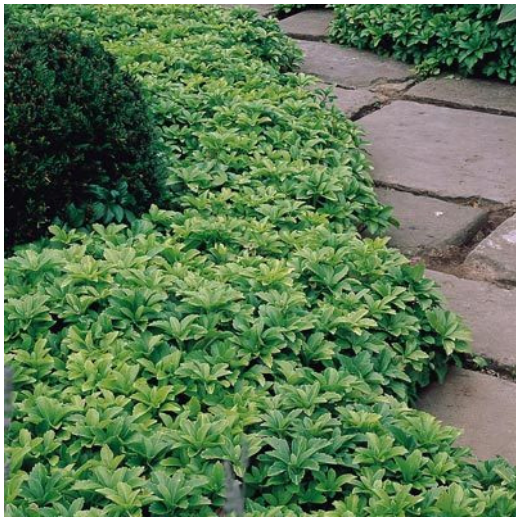
Kousa Dogwood  
*Cornus kousa*



Elegant ground-covers



Kinnickinick



Japanese Patchysandra  
*Patchysandra terminalis*



Sedum  
Sedum sp.

## Shrubs and borders



Hosta  
Hosta sp.



Strawberry Madrone  
Arbutus unedo



Fragrant Sarcococca  
Sarcococca hookeriana



Boxwood  
Buxus microphylla

## Formal Tree's



Tulip Tree  
*Liriodendron tulipifera*



European Hornbeam  
*Carpinus betulus 'pyramidal'*



Golden Panicked Raintree  
*Koelreuteria paniculata*



Black Tupelo  
*Nyssa sylvatica*

# Stunning Fall Colors & Textures



Sourwood Tree  
*Oxydendrum aroreum*



Silver Maple  
*Acer saccharinum*

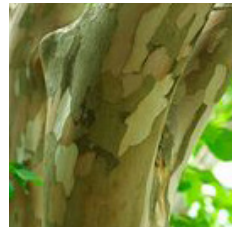


Sugar Maple  
*Acer rubrum*



Birch Grove  
*Betula sp.*

Sculptural Tree's that stand alone while defining spaces



Japanese Maple  
Acer japonicum



Korean Stewartia  
Stewartia koreana



Paperbark Maple  
Acer Griseum