

Downing Community

Sophie Ellison
sophie ellison design



Downing Community

Mission Statement

“Build Community, Cherish Culture, Give Hope”

There is serious affordable housing crisis in Denver. Last year alone, 70,000 refugees entered the USA - 2200 of them arrived in Denver. 25% of these refugees are Bhutanese families coming from rural agrarian societies. Upon arriving to America, many families are forced into marginalized areas with high crime rates. There is little to no access to good schools let alone fresh food.

This crisis creates a vicious cycle of decline, poverty and isolation.

Downing Community is a community of culture and hope for the Bhutanese refugees of our city. The project will give three families a chance to live an affordable, self-sustainable life, with access to great schools. This multi-family community model could open the door for many communities to follow.

The entire design spirals out from the community center at the heart of the house. Vegetable gardens at one's doorstep, as well as 100% natural building materials echo Bhutanese vernacular architecture. Following dreams of the Bhutanese families here in Denver, the design includes play areas for children, ample vegetable gardens, community areas, orchards, flower gardens, chickens, goats, bees and wild foraging space.

After living in desolate refugee camps these Bhutanese families deserve a new beginning. Downing Community aims to cultivate prosperity and healing as these families begin to live a new life together here in Denver.



A Bhutanese Family at a 12-hour prayer celebration for their son. They are seated in the corner of their bedroom, Aurora, Denver.

WHERE?

IRAQ
4,000,000

BURMA
140,000

BHUTAN
107,000

WHY?

CONTINUAL WAR

- 1980: Iran-Iraq war
- 1990: Iraq invades Kuwait
- 1991: Saddam Hussein wins "Operation Desert Fox" (USA vs. Iraq's nuclear, chemical + biological weapons)
- 2003: years of internal conflict following the US invasion of Saddam
- 2006: Sectarian violence
- 2007: Saddam arrested
- 2007-09: Al-Qaeda Suicide Bombings
- 2012-14: Violence intensifies - Sunni Rebels

CIVIL WAR

- 1942: Japanese occupation
- 1948: Independence
- 1962: one-party, military-led state "Burma way to Socialism"
- 1982: Law of "one indigenous citizen" to be barred from public office
- 1987: Anti-government riots + repression - thousands killed
- 1990: Coup d'état
- 1992: Persecution of minority + opposition groups
- 2007: More protests + internal bombing
- 2008: Coup d'état - 134,000 killed
- 2012: Fighting between Muslim Buddhists

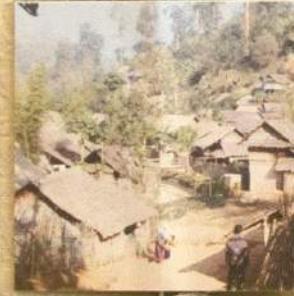
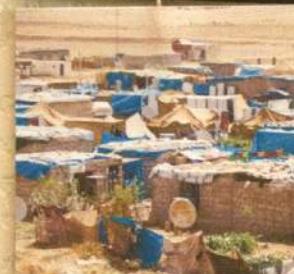
"ONE NATION, ONE POLICY"

- 1986: Ethnic cleansing - those with Nepali origin were forced to leave [over 1% of the country → 100,000]
- 1979: Nepali ceases to be a language in schools
- 2003: Bhutanese + Indian friendly
- 2008: Internal bombing to keep Nepalis out.

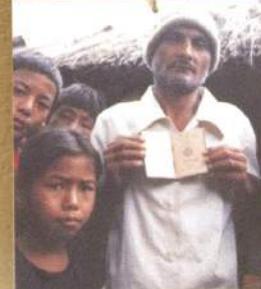
WHO?



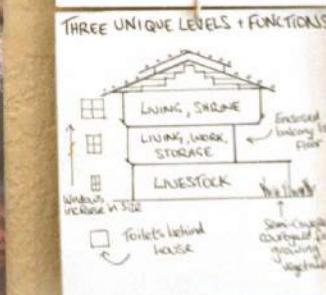
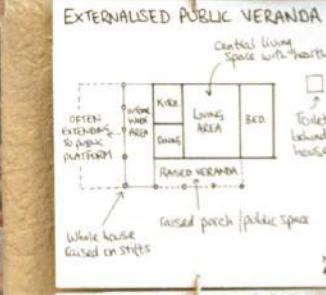
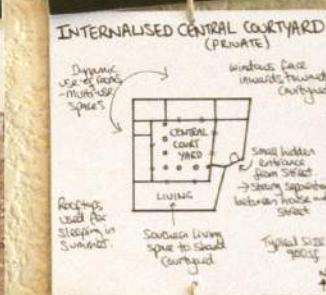
Now?



FAMILY?



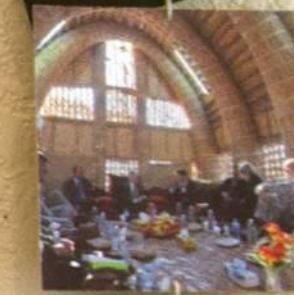
WHAT IS
'HOME'?



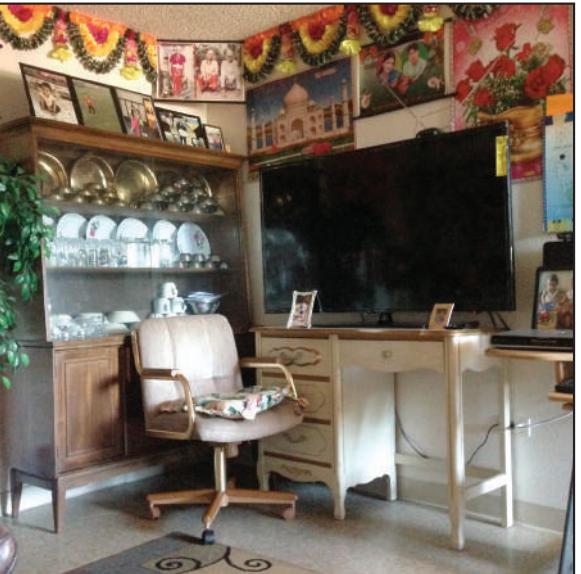
CULTURAL
MATERIAL



CULTURAL
DETAIL



CURRENT Living Arrangements for Refugee Families in Denver



Vlaha is originally from Bhutan and was living in a refugee camp in Nepal for 18 years. She describes the structure of the camps as open and with all the community working together as a team. She misses the culture and wants to see it integrated into her life here in America. She sees much segregation and a lack of community here in the US.



Yeti is originally from Bhutan and was living in a refugee camp in Nepal for 20 years. What he wants in life here is 1) cross-cultural community interaction, 2) an open space where all the children can play, and 3) a growing space for their vegetables. He is relieved to be freed and alive and had a very dark and dangerous experience in the camps.



The current situation of **refugee housing** in Denver is unacceptable. All housing is located in one area; Aurora. There is a high crime rate, no access to good schools or food and very sparse public transportation. They live in dark, 1-bedroom units, often with families of 5-6 in each room.

Three aspects that they HOPE for in their homes:



1. Community

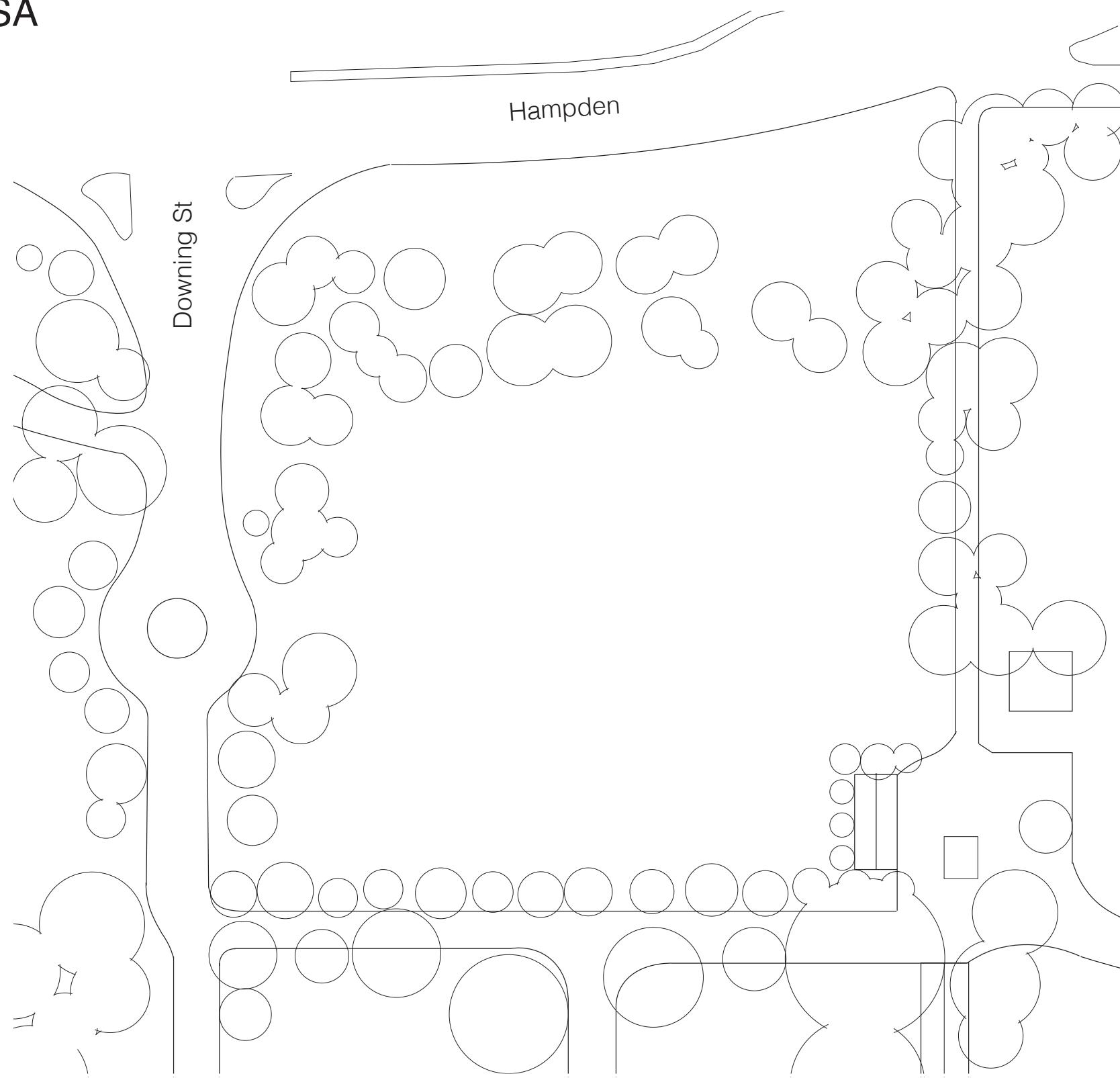


2. Open space for children to play



3. Growing space

Downing Community
Base Map
Englewood, Colorado, USA



1:48 N
↑

Downing Community

Site, Sector and Climate Analysis

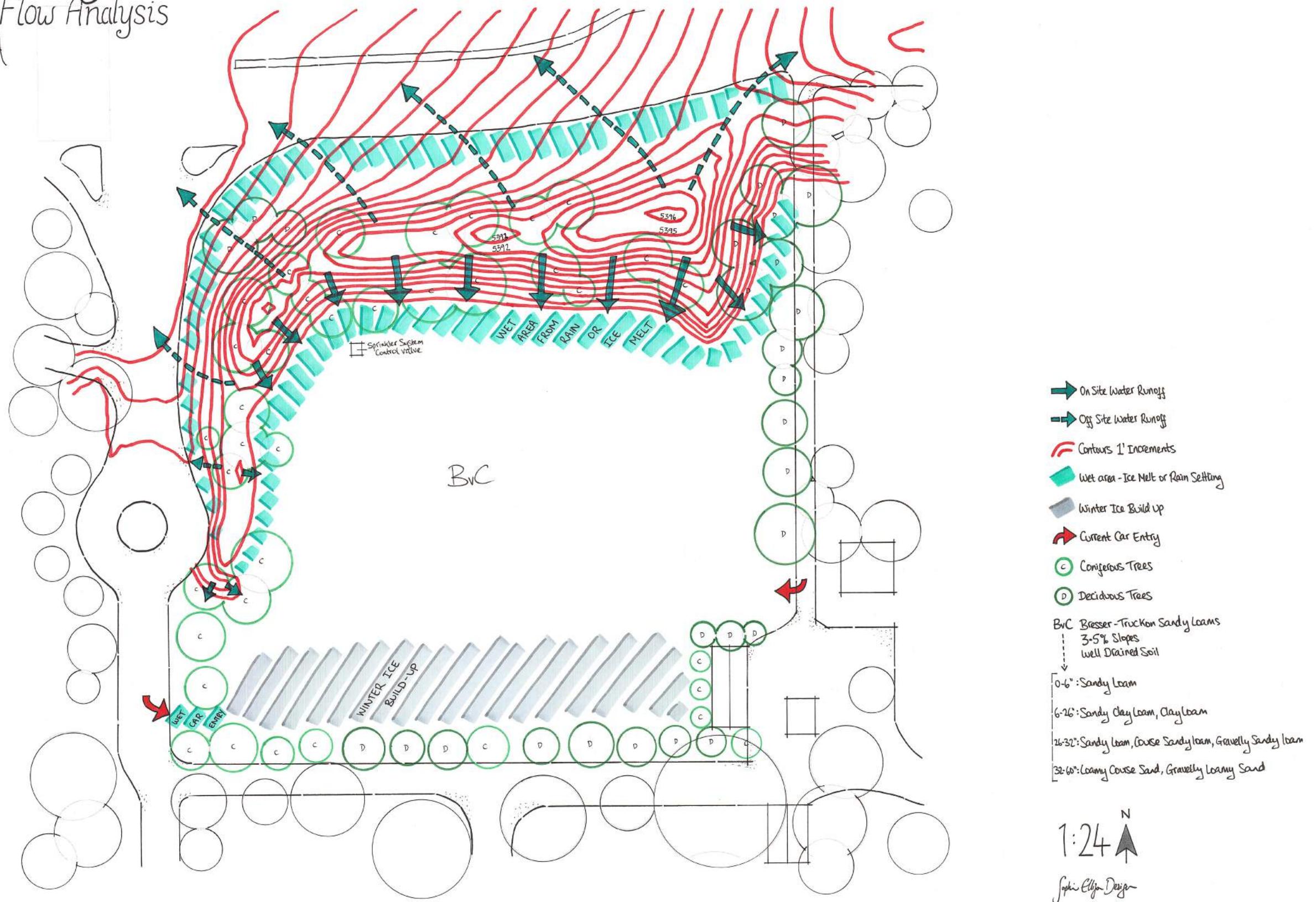
Englewood, Colorado, USA

Heating Dry Bulb : -1.4°
 Cooling Dry Bulb : 93.9°
 Heating Degree Days : 5667
 Cooling Degree Days : 721
 Latitude : 39.75N



Downing Community

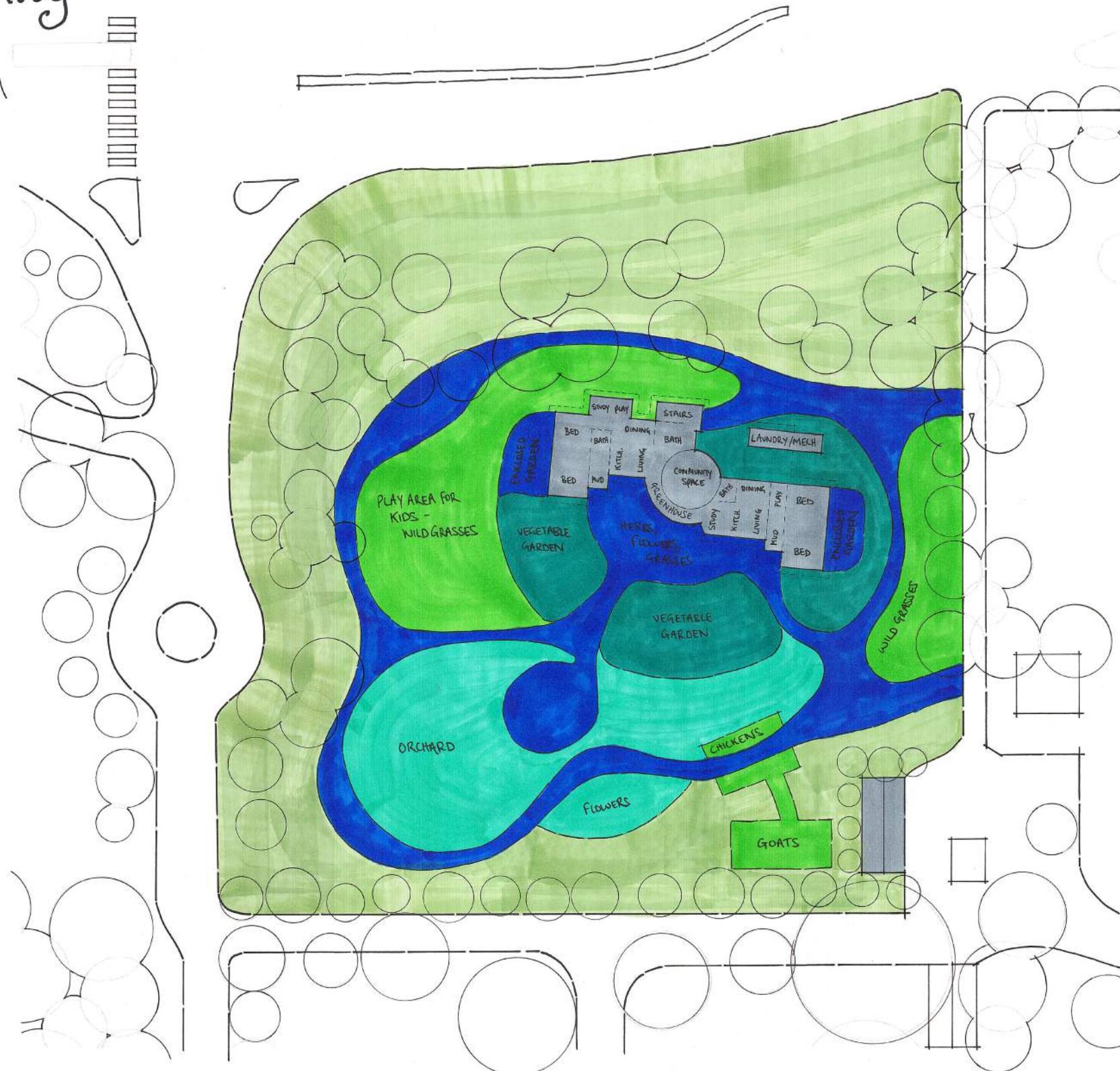
Contour, Soil and Water Flow Analysis
Englewood, Colorado, USA



Downing Community

Zone Map

Englewood, Colorado, USA



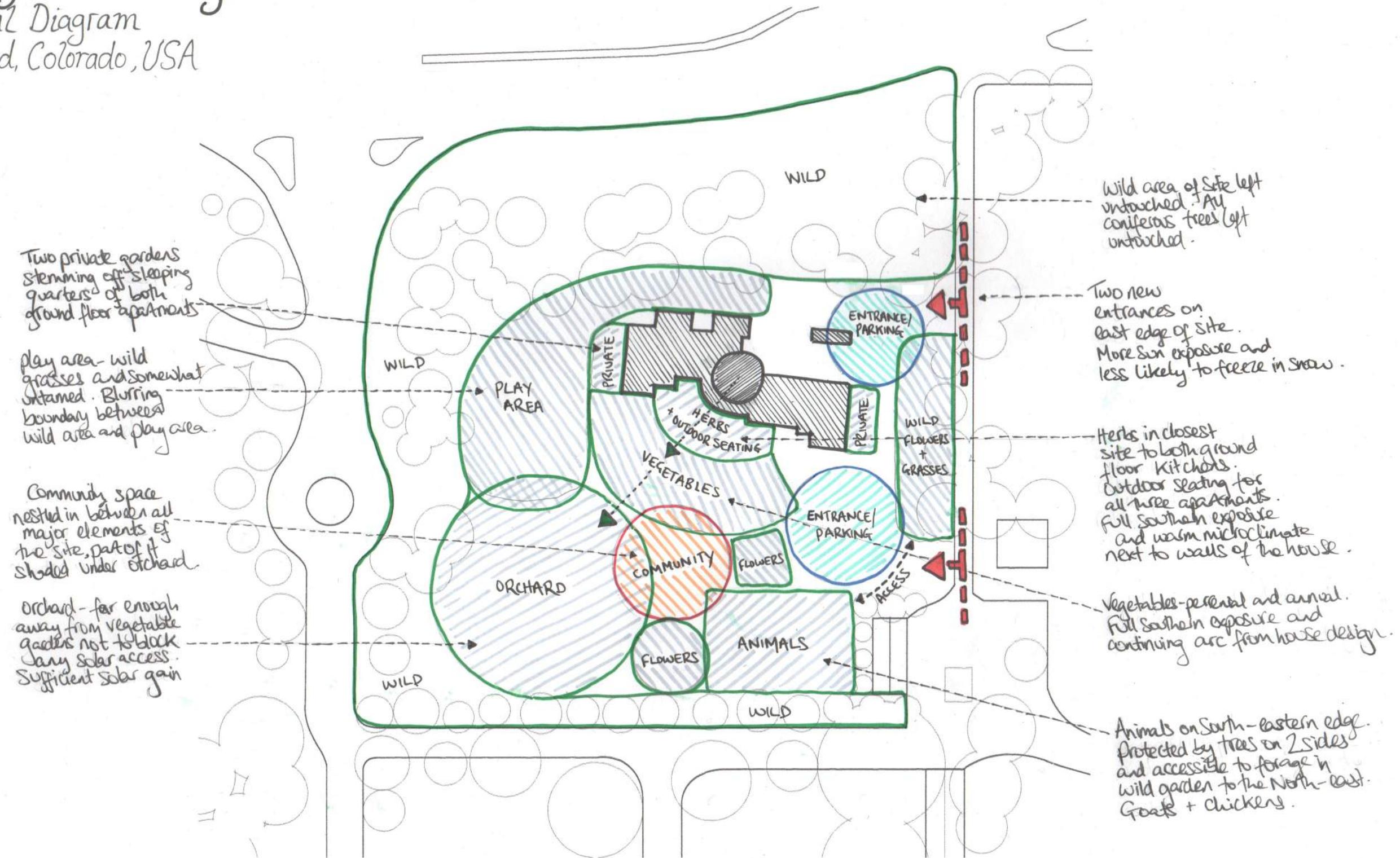
- Zone 0 - House
- Zone 1 - Daily Use
- Zone 2 - Every few Days (seasonal)
- Zone 3 - Weekly
- Zone 4 - Bi-weekly to Monthly
- Zone 5 - Quarterly to Annually

1:24 N

folk design

Downing Community

Conceptual Diagram
Englewood, Colorado, USA



Downing Community

Conceptual Design
Englewood, Colorado, USA



Downing Community

Keynote Descriptions

The **building** is a 3-unit dwelling space, separated by a central community space and surrounding greenhouse. The building is 100% passively heated by the sun - the heat retained by insulative straw bale walls. The building is cooled passively by the wind and regulated by thick earthen thermal mass walls.

Six large, 800sf **vegetable gardens**, two for each apartment. Echoing that of Bhutanese culture, these stem out directly from the house and become an integral part of the building design. Keyhole gardens are designed to maximise space, access and efficiency.

Ornamental **shrub and flower garden**. Providing children with features on the site to learn from, play around and sit within, this breaks up the open space and adds yet another area for pollinated and the attraction of insects, birds, bees and wildlife.

Outdoor community shading

structure, with fire pit in the centre. Creating a straight axis from the house, this echoes the central community centre in the house but this time, is places within the centre of the orchard. 20' in diameter, it has ample space for large groups to gather.

12-tree **orchard** at south-western part of site. All trees getting full or partial sun all year round. Located near to the bees in hope of direct pollination without swarms having to pass through the area of the house. Rock bed drainage water culminating and being spread into orchard.

Paths on the site are mulch paths. These are affordable, easily laid, organic and aesthetically pleasing. They will not spread all over the site and will suppress any unwanted plants or "weeds" along the pathways. They are also safe for kids and will ease a fall, given it's soft material.

Ample **open space** for children surrounding the house. This is a direct desire and concern for the Bhutanese families. Designed to create a running funneling pattern and full circuit access around the house. Wild buffalo prairie grasses will be sown, to ensure low maintenance and minimal water needs.

Large 2000 gallon underground **cistern** capturing 40,000 gallons/

Outdoor **processing and washing station** for the produce, shaded by second storey of the house, and directly accessible through greenhouse.

Shared laundry space for all three apartments. Grey water will be directed to growing space on site. Rooftop of laundry building (shared with mechanical room), is a large flat space where solar exposed drying lines can be utilised during the warmer months.



Bees at the south-western part of the site. In partial sun/shade, they are in close proximity and with direct access to orchard and flower garden. Accessible yet a reasonable distance from house.

Flower & extended herb garden with central shaded seating area. Designed to grow native flowers to Denver, and Bhutan and provide a space of refuge, for those refugees coming from tragic and inhumane conditions at the camps.

Wild zone around perimeter of site kept untouched as a grazing land for the animals. Existing trees are predominately douglas fir, ponderosa pine and colorado blue spruce.

Rock drainage bed to slow, spread and sink water away from the foundation of the house, and to key areas of the garden that need more water.

Two **entrances** re-located to Eastern side of site, where there is more solar access and less likely to freeze over in the winter. Space for 3-4 cars in each parking area, with pathways to each apartment.

Wild grasses and flowers.

Growing of ornamental grasses and mulch for vegetable garden. Insect, bee and wildlife attractors planted. Also a crabapple lined path between both apartment parking - low maintenance, xeric, wildlife attractors, beautiful.

Goat and chicken barn to south-eastern corner of site. Accessible to house yet separated enough for noise etc. Shared building, with separating wall for both animals, and large shared outdoor pen. Gate can be opened to allow animals to graze entire perimeter of property without being able to access orchard or growing areas.

Two **sheltered gardens** on west and eastern side of the house where the bedrooms are. Sheltered by lance leaf osmanthus hedges to give privacy and sweet fragrant flowers. Ground cover will be native buffalo prairie grass with wild bluebells and lily of the valley.

Downing Community

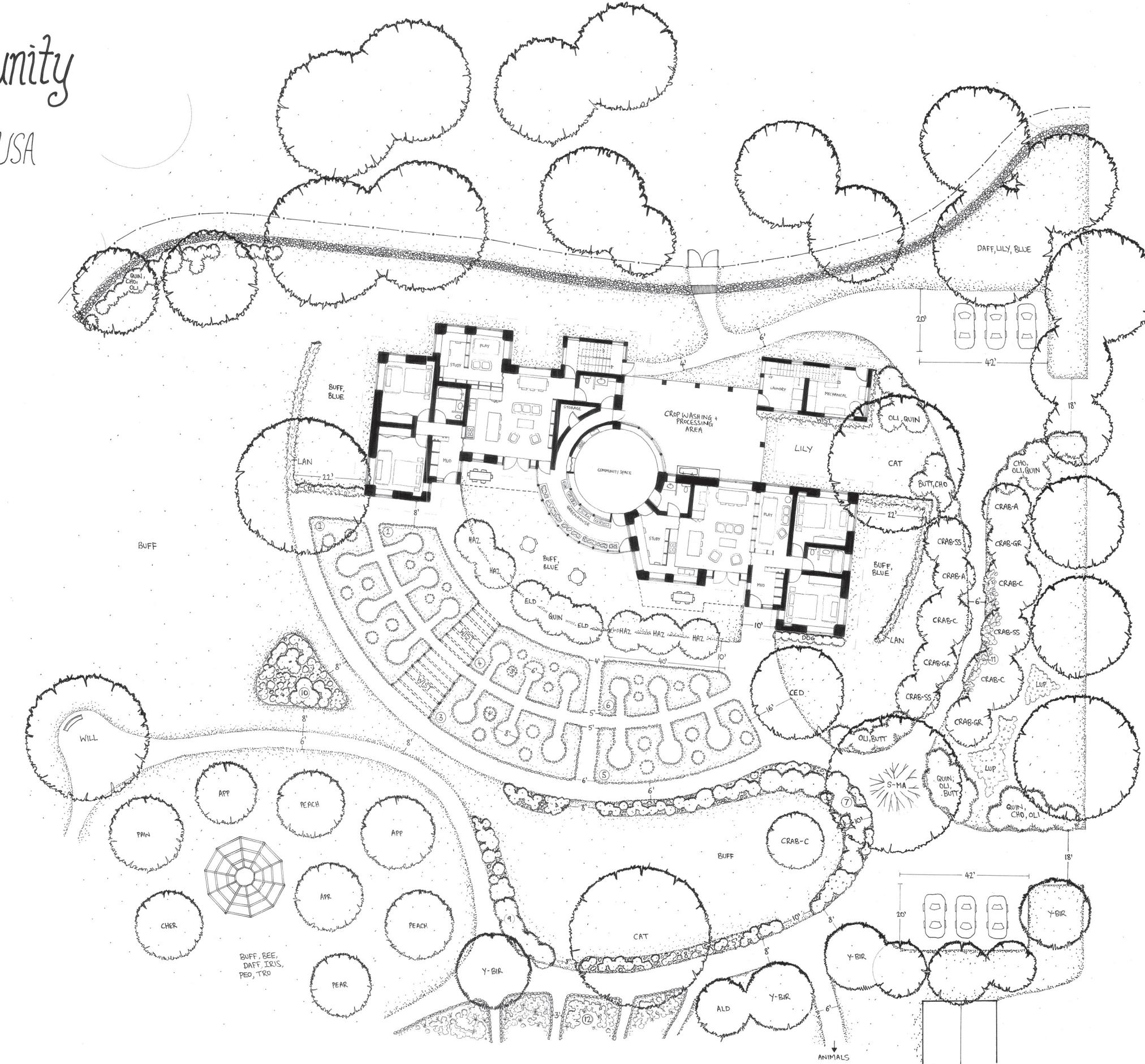
Detailed Design

Englewood, Colorado, USA

Key	Deduccus Tree	Botanic Name	Family	Full Size	Value	Light
ALD	Speckled Alder	<i>Alnus incana</i>	Betulaceae	60' H Nectar, Pollinated by Bees	•	
CAT	Catalpa	<i>Catalpa speciosa</i>	Bignoniaceae	50' H Flowers, Pollinated by Bees & Butterflies	○	
CED	Chinese Cedar	<i>Toona sinensis</i>	Meliaceae	65' H Pollinated by Insects	○	
CRAB-A	Crabapple - Adam	<i>Malus Adams'</i>	Rosaceae	20' H Pollinated by Insects, attracts wildlife	○	
CRAB-C	Crabapple - Cardinal	<i>Malus 'Cardinal'</i>	Rosaceae	16' H Pollinated by Insects, attracts wildlife	○	
CRAB-GR	Crabapple - Golden	<i>Malus 'Schmidtsgold'</i>	Rosaceae	20' H Pollinated by Insects, attracts wildlife	○	
CRAB-SS	Crabapple - Spring	<i>Malus</i>	Rosaceae	15' W Pollinated by Insects, attracts wildlife	○	
HAZ	Witch Hazel	<i>Corylus virginiana</i>	Hamamelidaceae	15'-20' W Edible	○	
P-COT	Plains Cottonwood	<i>Populus deltoides</i>	Salicaceae	50'-60' H Pollinated by wind	○	
S-MA	Silver Maple	<i>Acer saccharinum</i>	Sapindaceae	50'-80' H 35'-50' (years)	○	
WILL	Weeping Willow	<i>Salix babylonica</i>	Salicaceae	40' H Fast	○	
Y-BIR	Yellow Birch	<i>Betula alleghaniensis</i>	Betulaceae	40' H 9' D	○	
Key	Shrub	Botanic Name	Family	Full Size	Value	Light
BUTT	Butterfly Bush	<i>Buddleia davidii</i>	Budaceae	9' H 9' W	Pollinated by bees & butterflies, attracts wildlife	○
CHO	Red Chokeberry	<i>Aronia arbutifolia</i>	Rosaceae	9' H Fast	Pollinated by insects	○
DOG	Dog Rose	<i>Rosa canina</i>	Rosaceae	9' H Fast	Pollinated by bees, flies, butterflies, attracts wildlife	○
ELD	White Elderberry	<i>Sambucus gaudichaudiana</i>	Caprifoliaceae	9' H 9' W	Pollinated by Insects	○
LAN	Lance Leaf Osmarthus	<i>Osmarthus Decurva</i>	Oleaceae	2' H 2' W	Hedge, fragrant flowers	○
LIL	Lilac Daphne	<i>Daphne genkwa</i>	Thymelaeaceae	9' H 9' W	Pollinated by bees, flies & butterflies, attracts wildlife	○
OLI	Autumn Olive	<i>Elaeagnus pungens</i>	Elaeagnaceae	14' H 10' W	Nitrogen Fixer, pollinated by bees, flies & butterflies	○
PYG	Pygmy Peachhub	<i>Caragana pygmaea</i>	Fabaceae	4' H 4' W	Nitrogen Fixer, pollinated by bees, attracts wildlife	○
QUIN	Japanese Quince	<i>Chaenomeles japonica</i>	Rosaceae	10' H 10' W	Pollinated by bees, attracts birds	●
RAIB	Indian Summer Raspberry	<i>Rubus idaeus</i>	Rosaceae	6' H 3' W	Attracts birds, hummingbirds, edible	○
ROSE	French Rose	<i>Rosa gallica</i>	Rosaceae	8' H 3' W	Pollinated by Bees	○
Key	Fruit Tree	Botanic Name	Family	Full Size	Value	Light
APP	Apple	<i>Malus domestica</i>	Rosaceae	25'-30' H 25'-35' W	Dynamic Accumulator, pollinated by insects, attracts birds	○
APR	Apricot	<i>Prunus armeniaca</i>	Rosaceae	20'-30' H 20'-35' W	Pollinated by insects	○
CHER	Wild Cherry	<i>Prunus avium</i>	Rosaceae	60' H 20'-35' H	Pollinated by bees, attracts wildlife	○
PAW	Paw-Paw	<i>Annona triloba</i>	Annonaceae	25'-35' H 25'-35' W	Self-fertile	○
PEA	Peach	<i>Prunus persica</i>	Rosaceae	15'-20' H 15'-20' W	Pollinated by bees	○
PEAR	Pear	<i>Pyrus communis</i>	Rosaceae	16' H 16' W	Pollinated by insects	○
Key	Flower	Botanic Name	Family	Full Size	Value	Light
BELL	Milky Bellflower	<i>Campanula lactiflora</i>	Campanulaceae	2' H 1' W	Self-fertile	○
BIRD	Bird's Foot Trefoil	<i>Lotus corniculatus</i>	Fabaceae	1' H 1' W	Nitrogen Fixer, Pollinated by Bees	○
BLUE	Bluebell	<i>Hyacinthoides non-scripta</i>	Liliaceae	1' H 1' W	Pollinated by flies & butterflies	○
DAFF	Wild Daffodil	<i>Narcissus pseudonarcissus</i>	Amaryllidaceae	1' H 1' W	Pollinated by Bees	○
INDI	Wild Indigo	<i>Baptisia tinctoria</i>	Fabaceae	3' H 1' W	Nitrogen Fixer	○
IRIS	Rocky Mountain Iris	<i>Iris missouriensis</i>	Iridaceae	2' H 2' W	Pollinated by insects, self-fertile	○
ILY	Lily of the Valley	<i>Convallaria majalis</i>	Convallariaceae	8' H 4' W	Pollinated by bees, flies & butterflies	○
LUP	Lupine	<i>Lupinus</i>	Fabaceae	1' H 1' W	Dynamic Accumulator, Nitrogen Fixer, pollinated by Bees	○
PEO	Paeony	<i>Paeonia lactiflora</i>	Paeoniaceae	2' H 1' W	Pollinated by insects	○
TRO	Prairie Trout Lily	<i>Erythronium americanum</i>	Liliaceae	4' H 2' W	Pollinated by insects	○
VET	Sweet Vetch	<i>Hedysarum occidentale</i>	Fabaceae	3' H 1' W	Nitrogen Fixer, Pollinated by insects	○
Key	Grass	Botanic Name	Family	Full Size	Value	Light
BUFF	Buffalo Grass	<i>Bouteloua dactyloides</i>	Poaceae	5'-10' H	Low Maintenance, no need for irrigation	○
Key	Climbers	Botanic Name	Family	Full Size	Value	Light
WIST	Silky Wisteria	<i>Wistaria venusta</i>	Fabaceae	32' H 32' W	Pollinated by Insects, Nitrogen Fixer	○
Key	Herb	Botanic Name	Family	Full Size	Value	Light
SEE	Bee Balm	<i>Melissa officinalis</i>	Lamiaceae	2' H 1' W	Pollinated by bees, attracts wildlife	○

Suggestions for Planting:

- Beans, Peas, Carrots, Radishes, Spinach, Fennel, Marjoram, Strawberries
- Peppers, Onion, Sunflowers, Lettuce, Arugula, Carrots, Coriander
- Tomatoes, Basil, Garlic, Onion, Collards, Parsley, Horseradish, Squash
- Eggplant, Bushbeans, Dill, Marigold, Cosmos, Ginger, Turnips
- Broccoli, Kale, Marigold, Dill, Beets, Peppermint, Calendula, Chamomile
- Potatoes, Flax, Coriander, Basil, Marigold, Sweet Potatoes, Cardamom
- BELL, IRIS, LIL, LUP, OLI, PYG, ROSE, TRO
- BUTT, IND, IRIS, LIL, LUP, OLI, PYG, ROSE, TRO, VET
- IRIS, LIL, PYG, ROSE, TRO
- IRIS, LIL, PYG, ROSE, TRO, VET
- IND, BIRD, IND, IRIS, LIL, LUP, OLI, PYG, ROSE, TRO, VET
- IND, LIL, PYG, ROSE, TRO
- IND, BIRD, IND, IRIS, LIL, LUP, OLI, PYG, ROSE, TRO, VET



1:16 N

Jodie Flynn Design

Downing Community

Tree, Plant & Vegetable Guides

Key	Deciduous Tree	Botanic Name	Family	Full Size	Value	Light
ALD	Speckled Alder	<i>Alnus incana</i>	Betulaceae	60' H 16' W	Pollinated by Wind, Nitrogen Fixer	⊕ ⊖
CAT	Catalpa	<i>Catalpa speciosa</i>	Bignoniaceae	50' H 50' W Fast	Flowers, Pollinated by bees & butterflies	⊕
CED	Chinese Cedar	<i>Toona sinensis</i>	Meliaceae	65' H 26' W	Pollinated by Insects	⊕
CRAB-A	Crabapple - Adams	<i>Malus 'Adams'</i>	Rosaceae	20' H 20' W	Pollinated by Insects, attracts wildlife	⊕ ⊖
CRAB-C	Crabapple - Cardinal	<i>Malus 'Cardinal'</i>	Rosaceae	16' H 22' W	Pollinated by Insects, attracts wildlife	⊕ ⊖
CRAB-GR	Crabapple - Golden Raindrops	<i>Malus 'Schmidtcutleaf'</i>	Rosaceae	20' H 15 W	Pollinated by Insects, attracts wildlife	⊕ ⊖
CRAB-SS	Crabapple - Spring Snow	<i>Malus</i>	Rosaceae	15-25' H 15-20' W	Pollinated by Insects, attracts wildlife	⊕ ⊖
HAZ	Witch Hazel	<i>Hamamelis virginiana</i>	Hamamelidaceae	16' H 16' W	Edible	⊕ ⊖
P-COT	Plains Cottonwood	<i>Populus deltoides</i>	Salicaceae	60-80' H 50-60' W Fast	Pollinated by wind	⊕
S-MA	Silver Maple	<i>Acer saccharinum</i>	Sapindaceae	50-80' H 35-50' W (20 years)	Pollinated by wind	⊕ ⊖
WILL	Weeping Willow	<i>Salix babylonica</i>	Salicaceae	40' H 40' W Fast	Pollinated by bees, provides shade	⊕
Y-BIR	Yellow Birch	<i>Betula alleghaniensis</i>	Betulaceae	40' H 9' W	Pollinated by Wind	⊕ ⊖
Key	Shrubs	Botanic Name	Family	Full Size	Value	Light
BUTT	Butterfly Bush	<i>Buddleia davidii</i>	Buddleiaceae	9' H 9' W Fast	Pollinated by bees & butterflies, attracts wildlife	⊕
CHO	Red Chokeberry	<i>Aronia arbutifolia</i>	Rosaceae	9' H 9' W Fast	Pollinated by insects	⊕ ⊖
DOG	Dog Rose	<i>Rosa canina</i>	Rosaceae	9' H 9' W Fast	Pollinated by bees, flies, beetles & butterflies, attracts wildlife	⊕ ⊖
ELD	White Elderberry	<i>Sambucus gaudichaudiana</i>	Caprifoliaceae	9' H 9' W	Pollinated by Insects	⊕ ⊖
LAN	Lance Leaf Osmanthus	<i>Osmanthus Decorus</i>	Oleaceae	9' H 2' W	Hedge, fragrant flowers	⊕ ⊖
LIL	Lilac Daphne	<i>Daphne genkwa</i>	Thymelaeaceae	5' H 5' W	Pollinated by bees, flies & butterflies	⊕ ⊖
OLI	Autumn Olive	<i>Elaeagnus parvifolia</i>	Elaeagnaceae	14' H 9' W	Nitrogen Fixer, pollinated by bees, attracts wildlife	⊕
PYG	Pygmy Peashrub	<i>Caragana pygmaea</i>	Fabaceae	4' H 4' W Slow	Nitrogen Fixer, pollinated by bees, attracts wildlife	⊕
QUIN	Japanese Quince	<i>Chaenomeles speciosa</i>	Rosaceae	9' H 16' W Medium	Pollinated by bees, attracts wildlife	⊕ ⊖
RASP	Indian Summer Raspberry	<i>Rubus idaeus</i>	Rosaceae	6' H 3' W	Attracts birds, hummingbirds, edible	⊕ ⊖
ROSE	French Rose	<i>Rosa gallica</i>	Rosaceae	6' H 3' W	Pollinated by Bees	⊕ ⊖

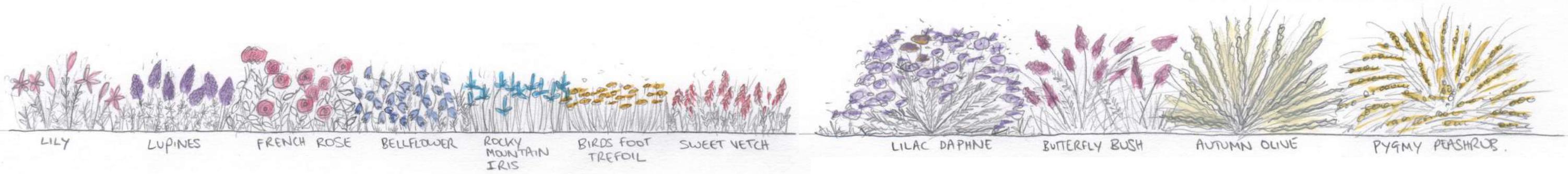
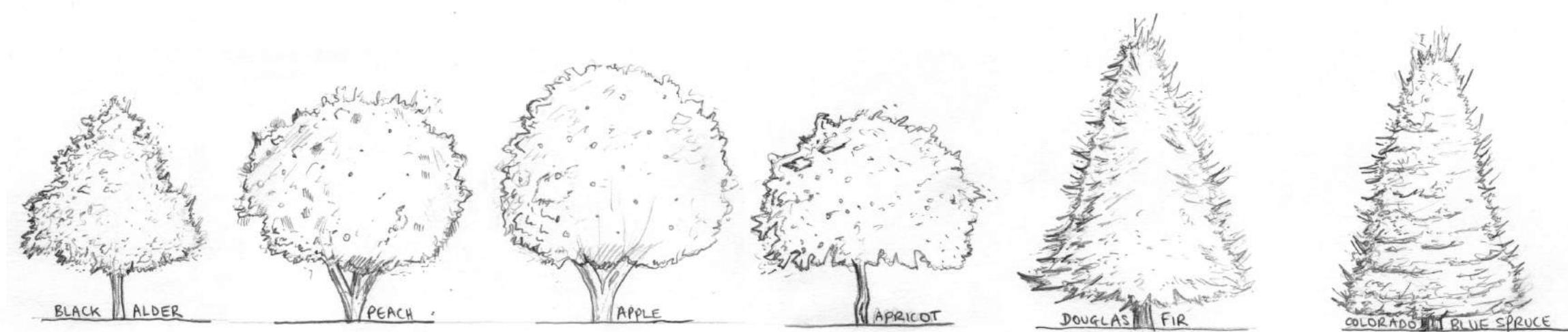
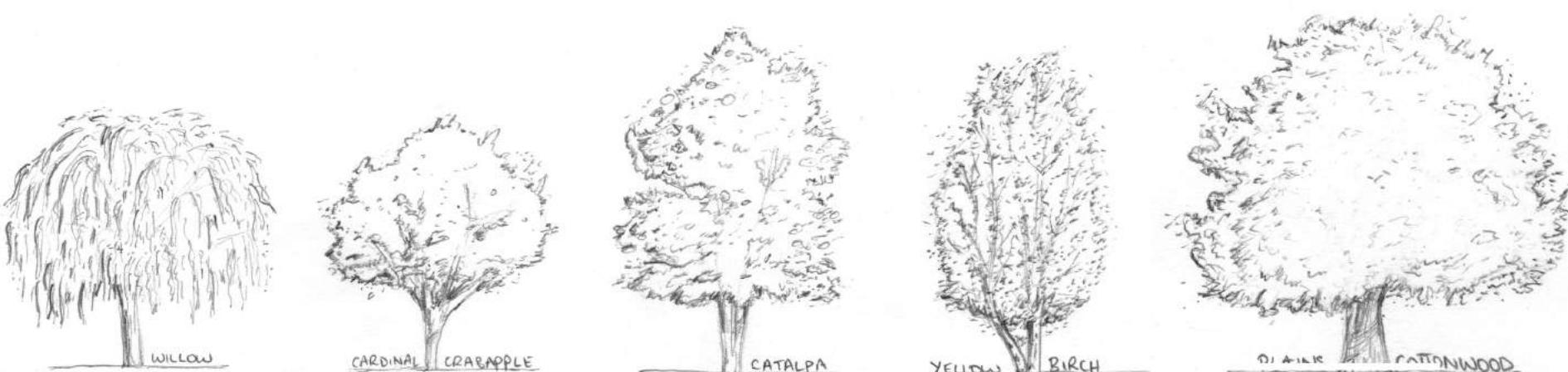
Key	Fruit Trees	Botanic Name	Family	Full Size	Value	Light
APP	Apple	<i>Malus domestica</i>	Rosaceae	25-35' H 25-35' W	Dynamic Accumulator, pollinated by insects, attracts wildlife	⊕ ⊖
APR	Apricot	<i>Prunus armeniaca</i>	Rosaceae	20-30' H 20-30' W	Pollinated by insects	⊕ ⊖
CHER	Wild Cherry	<i>Prunus avium</i>	Rosaceae	60' H 20' W	Pollinated by bees, attracts wildlife	⊕ ⊖
PAW	Paw-Paw	<i>Asimina triloba</i>	Annonaceae	25-35' H 25-35' W	Self-fertile	⊕ ⊖
PEA	Peach	<i>Prunus persica</i>	Rosaceae	15-20' H 15-20' W	Pollinated by bees	⊕
PEAR	Pear	<i>Pyrus communis sativa</i>	Rosaceae	16' H 16' W	Pollinated by insects	⊕ ⊖
Key	Flowers	Botanic Name	Family	Full Size	Value	Light
BELL	Milky Bellflower	<i>Campanula lactiflora</i>	Campanulaceae	3'3" H 2'7" W	Self-fertile	⊕ ⊖
BIRD	Bird's Foot Trefoil	<i>Lotus corniculatus</i>	Fabaceae	1' H 18" W	Nitrogen Fixer, Pollinated by Bees, attracts wildlife	⊕
BLUE	Bluebell	<i>Hyacinthoides nonscripta</i>	Liliaceae	1' H 8" W	Pollinated by flies & beetles	⊕ ⊖
DAFF	Wild Daffodil	<i>Narcissus pseudonarcissus</i>	Amaryllidaceae	1'8" H 4" W	Pollinated by Bees	⊕ ⊖
INDI	Wild Indigo	<i>Baptisia tinctoria</i>	Fabaceae	3' H 18" W	Nitrogen Fixer	⊕
IRIS	Rocky Mountain Iris	<i>Iris missouriensis</i>	Iridaceae	2'7" H 3'3" W	Pollinated by insects, self-fertile	⊕ ⊖
LILY	Lily of the Valley	<i>Convallaria majalis</i>	Convallariaceae	8" H 1' W	Pollinated by bees, flies & self, attracts wildlife	⊕ ⊖
LUP	Lupines	<i>Lupinus</i>	Fabaceae	1-5' H	Dynamic Accumulator, Nitrogen Fixer, Pollinated by Bees	⊕
PEO	Peony	<i>Paeonia lactiflora</i>	Paeoniaceae	2' 7" H 18" W	Pollinated by Insects	⊕ ⊖
TRO	Prairie Trout Lily	<i>Erythronium albidum mesochoreum</i>	Liliaceae	4" H 4" W	Pollinated by insects	⊕
VET	Sweet Vetch	<i>Hedysarum boreale</i>	Fabaceae	3" H 18" W	Nitrogen Fixer, Pollinated by Insects	⊕
Key	Grass	Botanic Name	Family	Full Size	Value	Light
BUFF	Buffalo Grass	<i>Bouteloua dactyloides</i>	Poaceae	5-10" H	Low Maintenance, no need for irrigation	⊕ ⊖
Key	Climbers	Botanic Name	Family	Full Size	Value	Light
WIST	Silky Wisteria	<i>Wisteria venusta</i>	Fabaceae	32' H 32' W	Pollinated by Insects, Nitrogen Fixer	⊕
Key	Herbs	Botanic Name	Family	Full Size	Value	Light
BEE	Bee Balm	<i>Melissa officinalis</i>	Lamiaceae	2' 4" H 1'4" W	Pollinated by bees, attracts wildlife	⊕ ⊖

Suggestions for Planting:						
1	Beans, Peas, Carrots, Radishes, Spinach, Fennel, Marjoram, Strawberries					
2	Peppers, Onions, Sunchokes, Lettuce, Aramanth, Carrots, Coriander					
3	Tomatoes, Basil, Garlic, Onions, Collards, Parsley, Horehound, Squash					
4	Eggplant, Bushbeans, Dill, Marigold, Cosmos, Ginger, Tumeric					
5	Broccoli, Kale, Marigold, Dill, Beets, Peppermint, Calendula, Chamomile					
6	Potatoes, Flax, Coriander, Basil, Marigold, Sweet Potatoes, Cardamon					
7	BUTT, IRIS, LIL, LUP, OLI, PYG, ROSE, TRO					
8	BIRD, INDI, IRIS, LUP, TRO, VET					
9	IRIS, LIL, PYG, ROSE, TRO					
10	BELL, BIRD, INDI, IRIS, LILY, LUP, PEO, ROSE, TRO, VET					
11	INDI, LILY, PEO					
12	BELL, BIRD, INDI, IRIS, LILY, LUP, PEO, ROSE, TRO, VET					

Downing Community

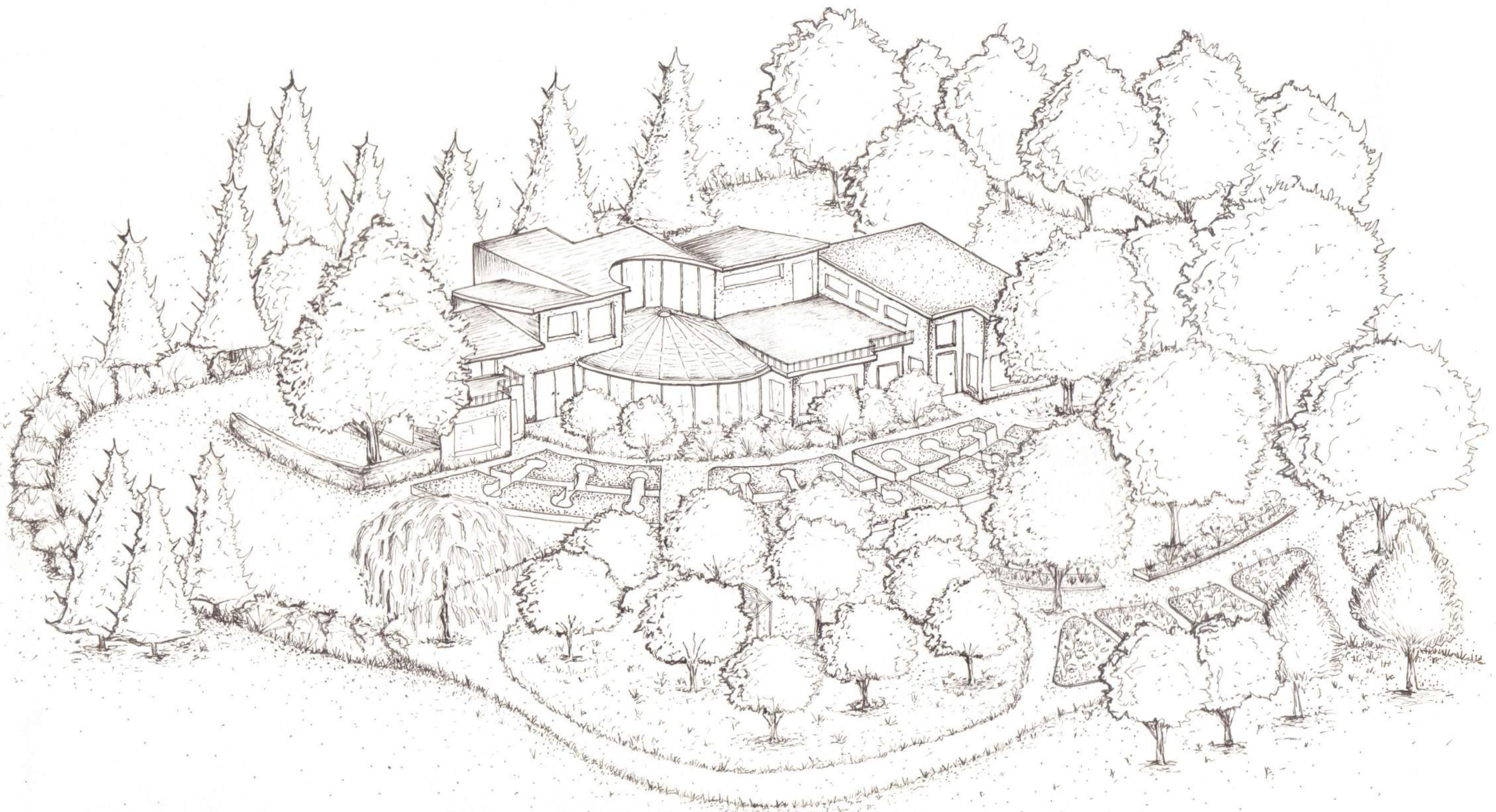
Tree, Shrub and Flower Palette

Englewood, Colorado, USA



Downing Community

Perspective Ink Drawing

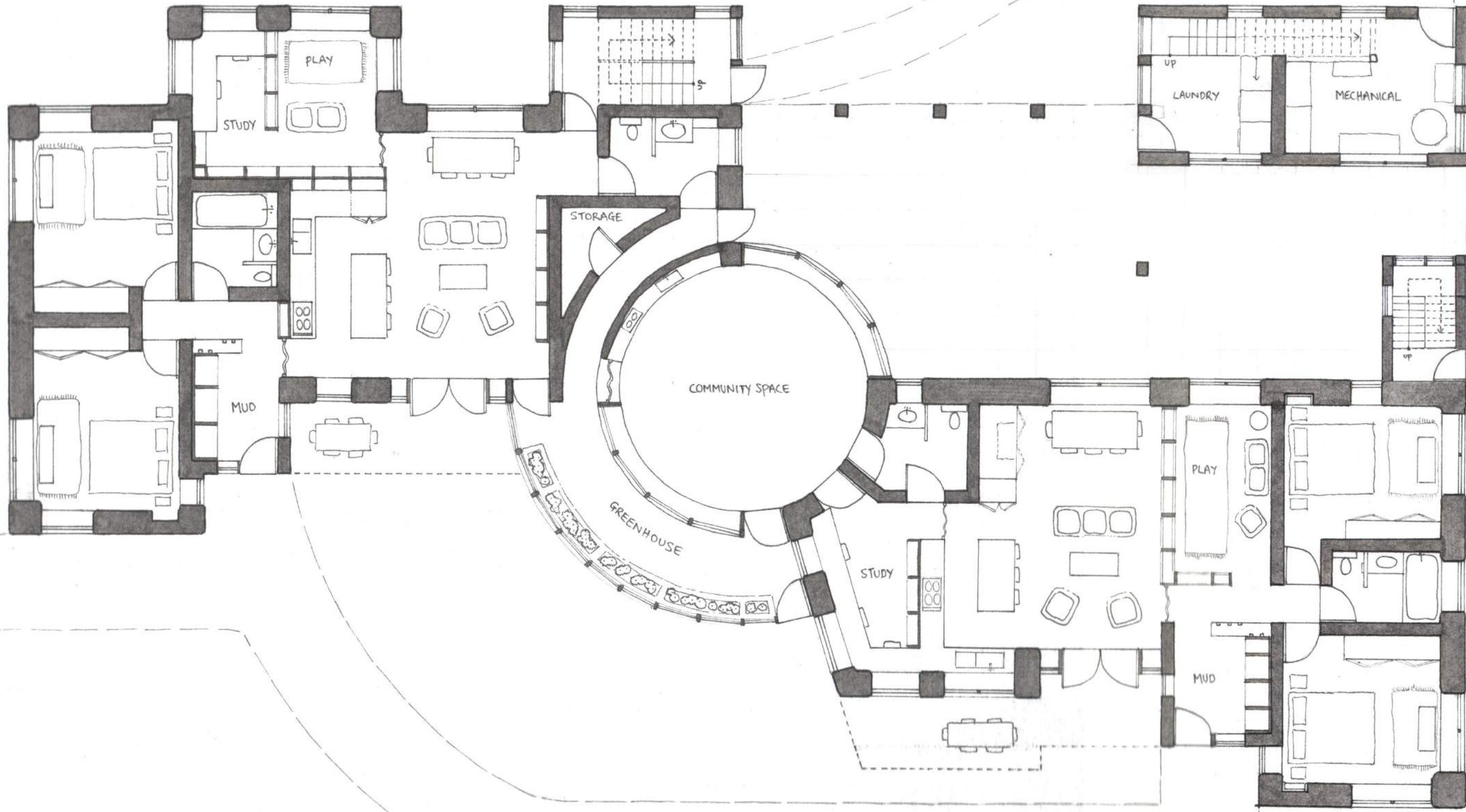


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Perspective Watercolour

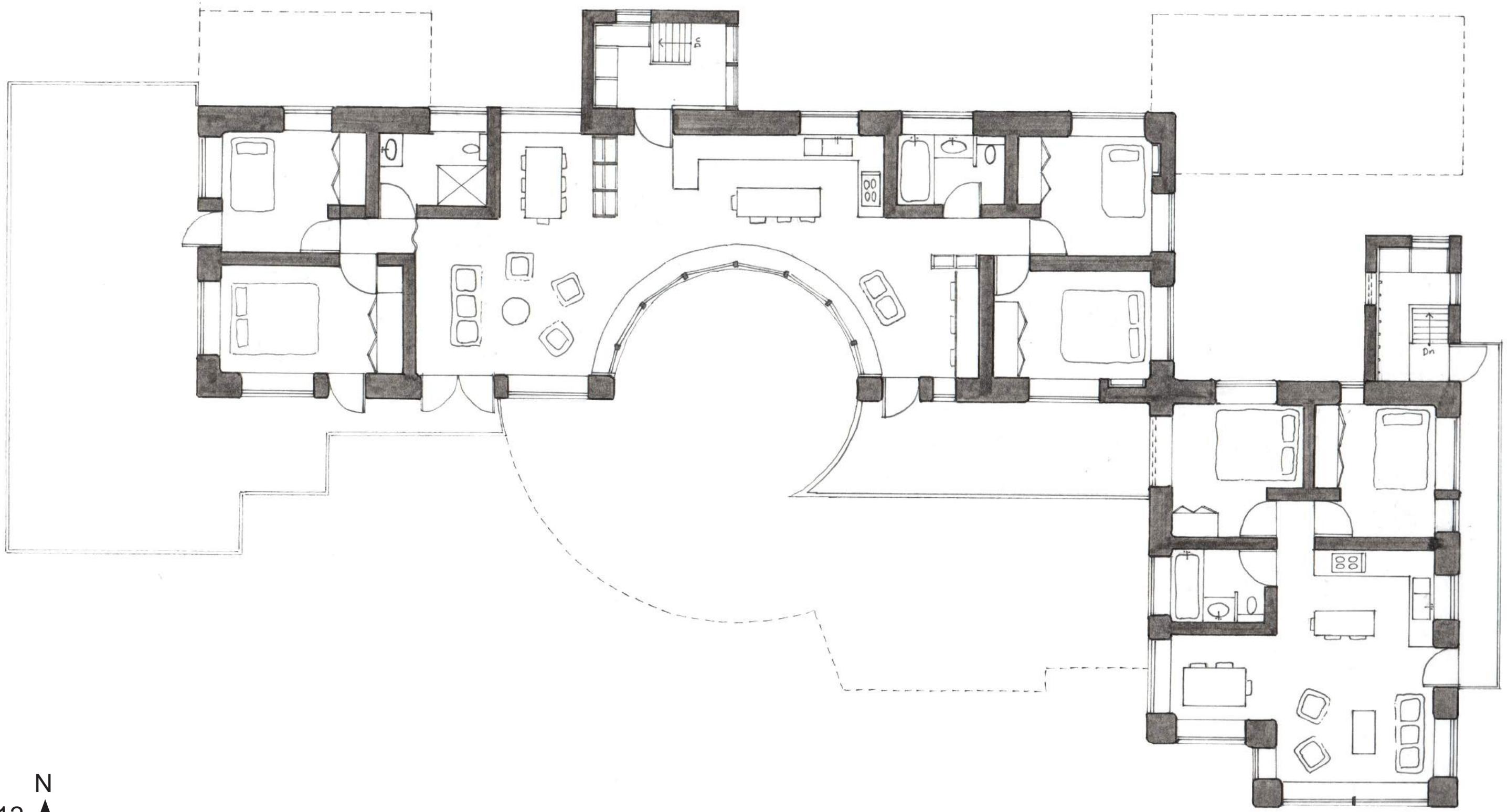


Downing Community
First Floor Plan
Englewood, Colorado, USA



N
1:12

Downing Community
Second Floor Plan
Englewood, Colorado USA



N
1:12 ↑

Downing Community

Budget for Landscape



Retaining Flagstone wall for Vegetable Garden



Mulch & Gravel Garden Paths

DESIGN	COST
Site Analysis & Interview	\$800
Conceptual Design	\$800
Detail Design	\$800
TOTAL	\$2,400
<hr/>	
LABOUR	
Building Paths & Car Parking Ground	\$1,200
Building Vegetable Beds & Mulching	\$1,600
Building Flower Garden	\$600
Building Animal Pen	\$900
Planting Trees & Shrubs	\$600
Building Shade Structure	\$600
Delivery of Mulch	\$75
Delivery of Compost	\$100
TOTAL	\$5,675
<hr/>	
MATERIALS	
Mulch & Gravel for Paths	\$420
Timber for Shade Structure	\$400
Mulch for Vegetable Garden	\$600
Retaining Flagstone for Vegetable Garden	\$1,000
Rocks for Drainage Bed	\$150
2x Benches	\$240
Straw Bales	\$200
Animal Pen Materials	\$1,000
TOTAL	\$4,010
<hr/>	
PLANTS & TREES	
Seeds	\$150
Trees & Shrubs	\$2,900
TOTAL	\$3,050
<hr/>	
TOTAL COST	\$15,135
TOTAL COST +15%	\$17,405



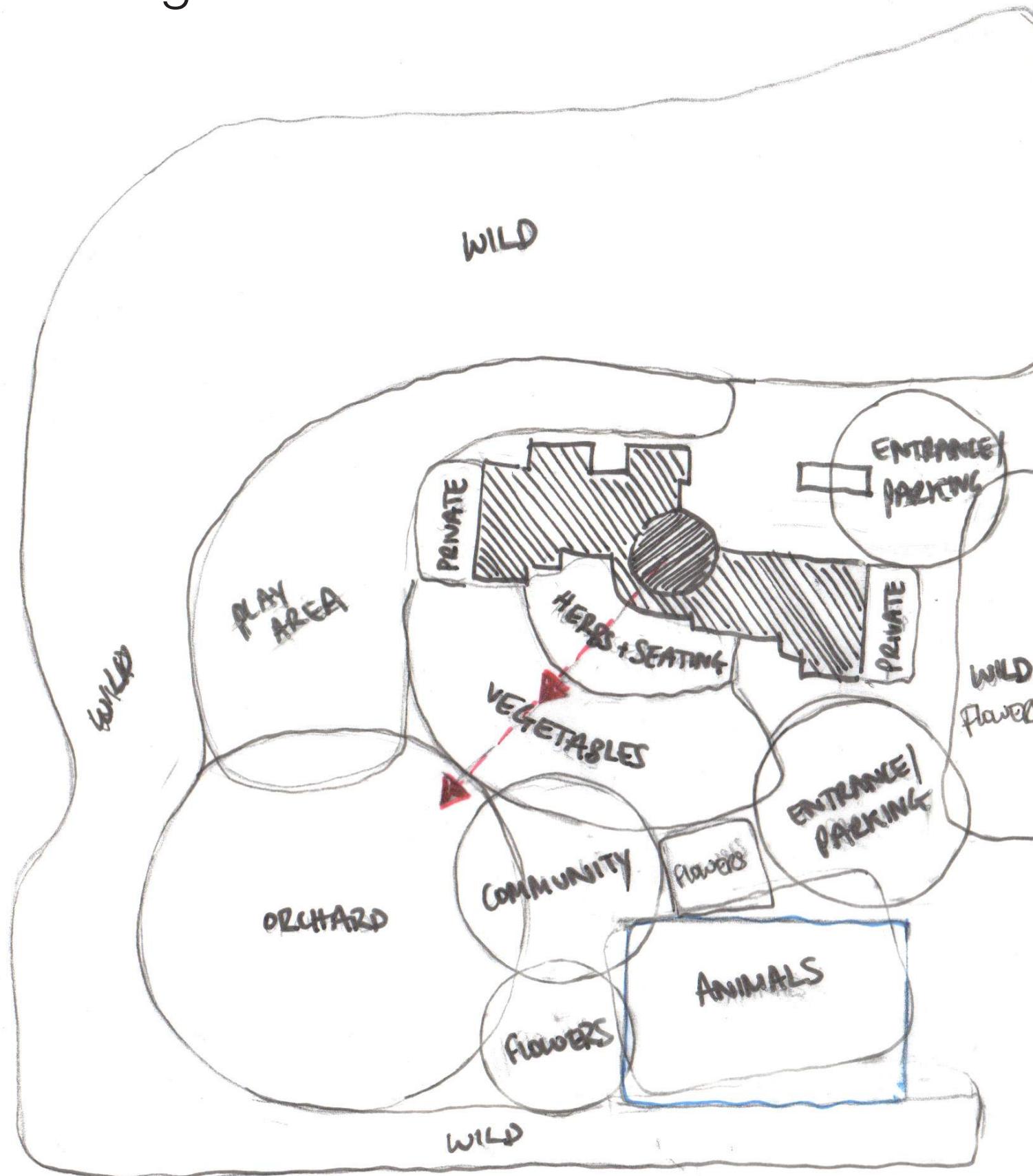
Road lined with Crabapple Trees



Drainage Rock Bed

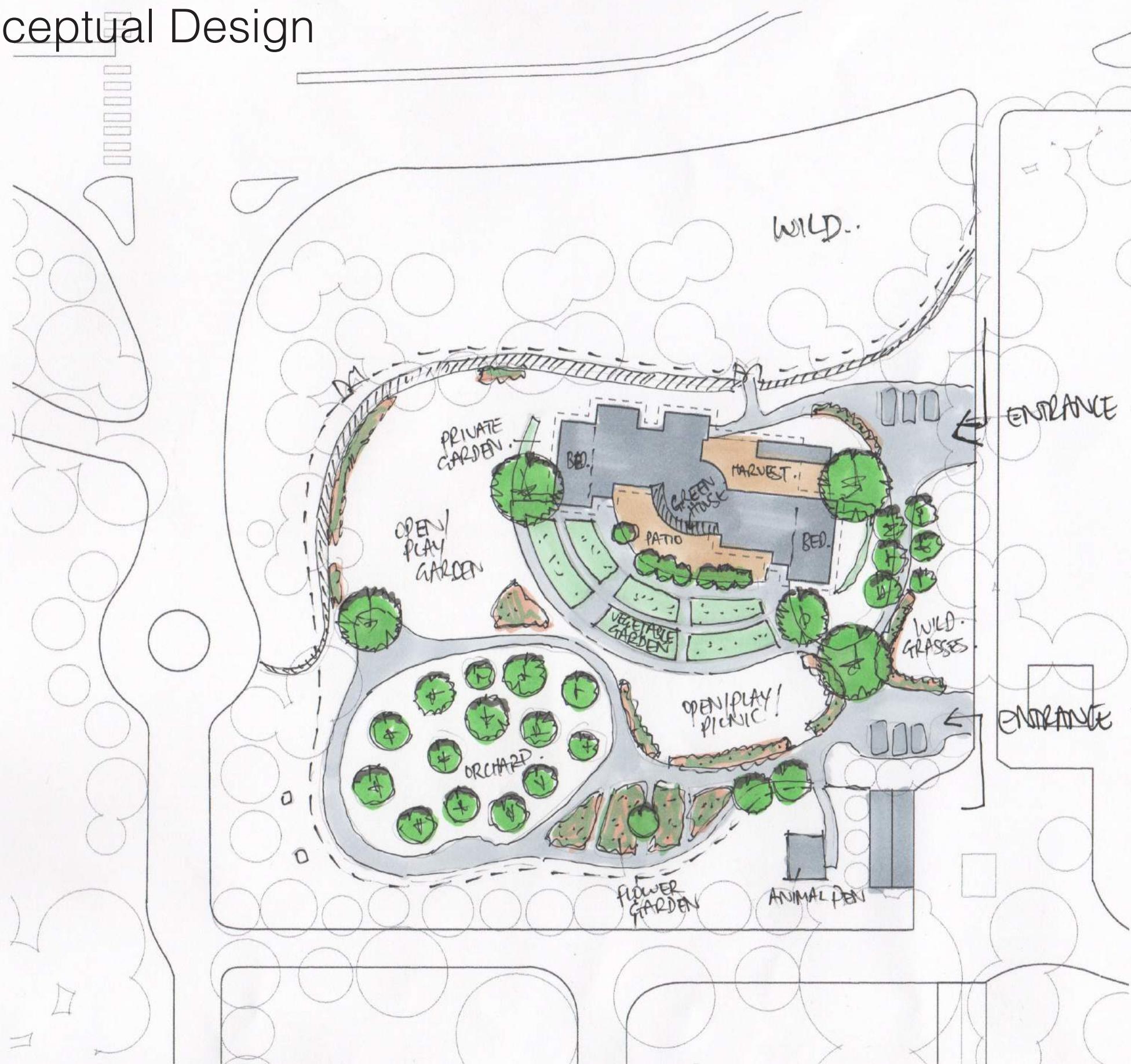
Downing Community

Sketches_Conceptual Design



Downing Community

Sketches_Conceptual Design



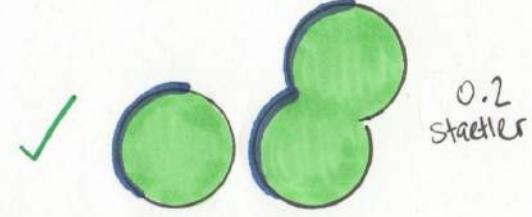
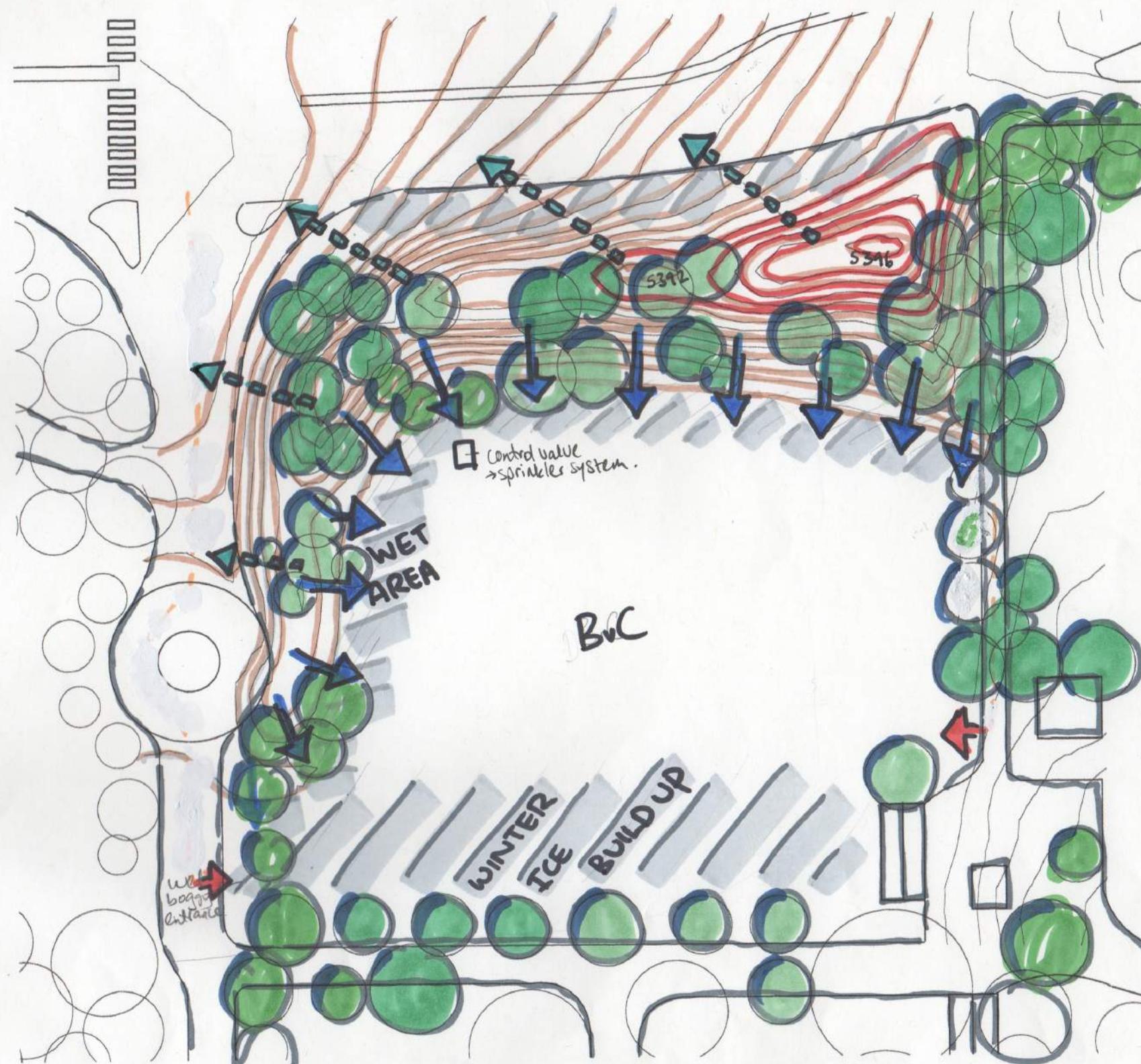
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Sketches_Conceptual Design



Downing Community

Sketches_Contour, Soil & Water Flow Analysis



Do Contours RED.



- : Cavity
- : Contours $\frac{1}{10}$ FT increments.
- : Winter ice buildup ↑ less shadow
- : Wet area
- OFF SITE DRAINS surface runoff
- Retain on site runoff.

BvC - Bresser-Truckon Sandy loam

- 3-5% slopes
- well drained soil

80 Direct wedge tillage
(=fertile soil of clay + sand)

0-6in : Sandy loam

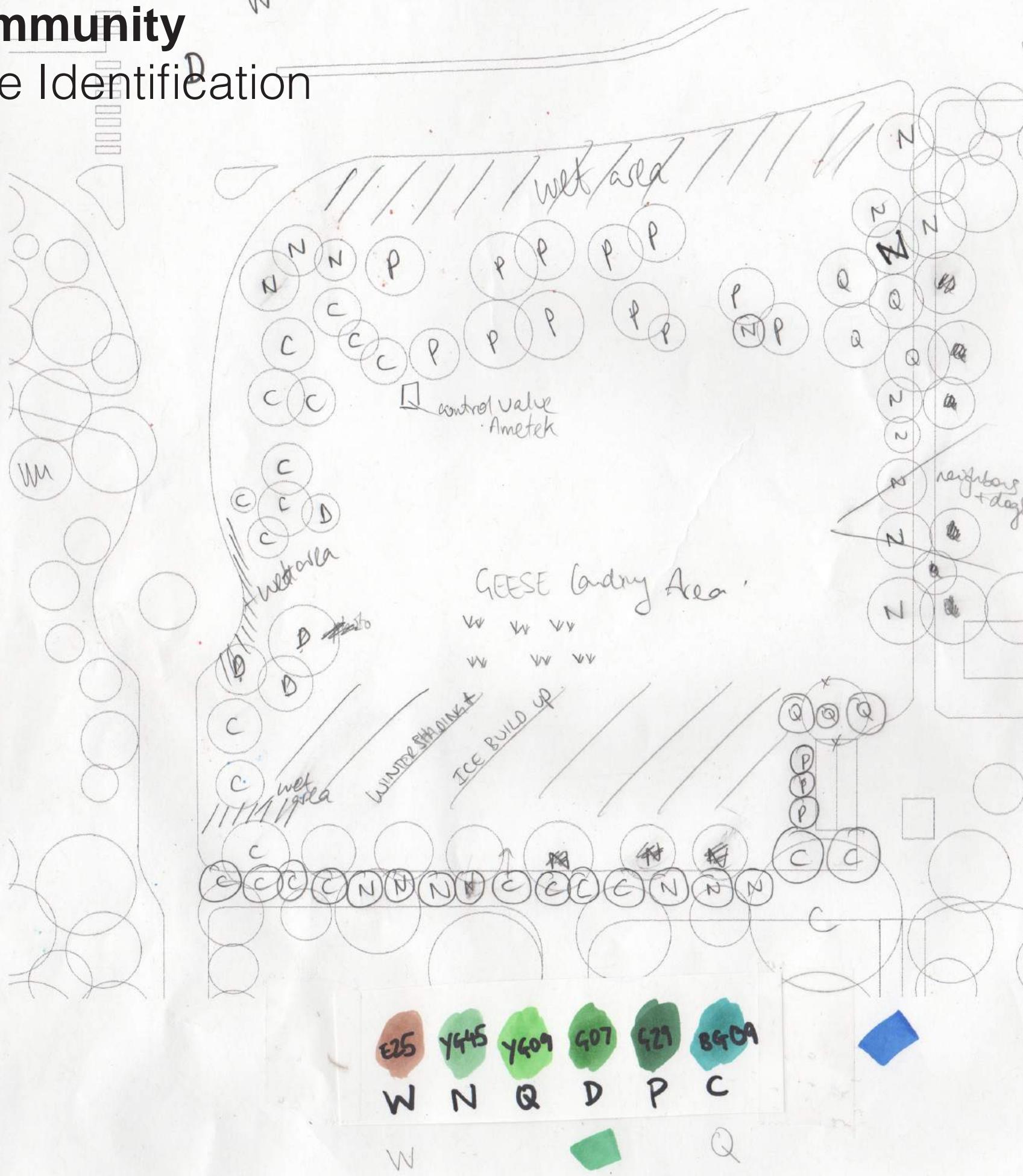
6-26in : Sandy clay loam, clay loam

26-32in : Sandy loam, coarse Sandy loam,
gravelly Sandy loam

32-60in : Loamy coarse Sand, gravelly
Loamy Sand

Downing Community

Sketches_Tree Identification



MOR: P
C
N

east: W
Q
D

WINTER

- C Colorado Blue spruce (blue needles)
- P ponderosa pine (green needles)
- D Douglas fir
- N Narrowleaf Cottonwood
- Q Quaking Aspen
- ~~W plane Cottonwood~~