

gAstronomic Innovation

A New Methodology for
Nutrition Education



Gastronomic:

of or pertaining to food and cookery;
especially the art of good eating...

It is common knowledge that today's society is living an increasingly **fast** and **chaotic** way of life. Because of this, many families and individuals have **come to believe** they do not have the time, energy, or motivation to cook for themselves; they opt for microwaved dinners, fast-food, and **highly processed** foods. This trend has led to increased health-care costs, decreased qualities of life, shorter life spans, and countless other health related issues.



<http://www.lowcaloriefastfoodoptions.com/fast-food-the-dark-side-of-the-all-american-meal/>

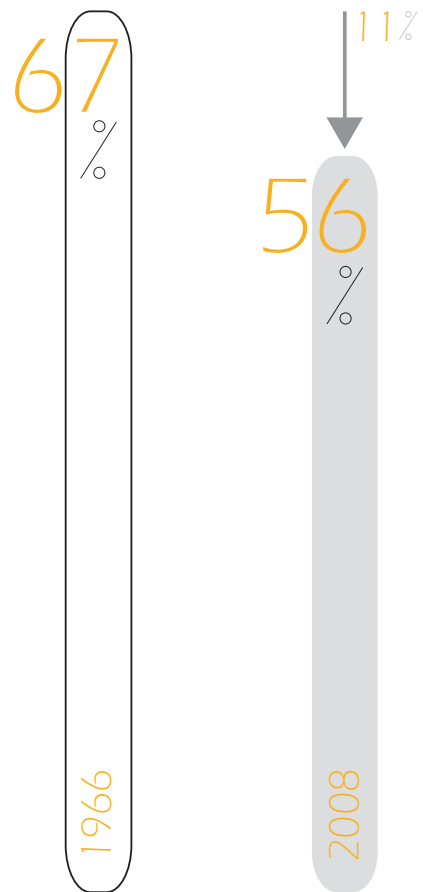
Many young people are accustomed to eating food that is so highly processed the **food lacks any resemblance towards its original form**. Children often do not know what foods are made of, or where they come from. By **reconnecting children with food** origins, young people will gain a greater understanding of the world around them, and provide them with the knowledge to make **informed decisions** on what and how to eat.



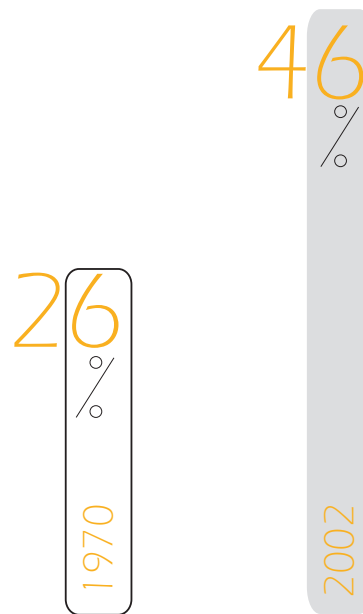
<http://www.tylerbeverages.com/tylers-avs-food-services/food>



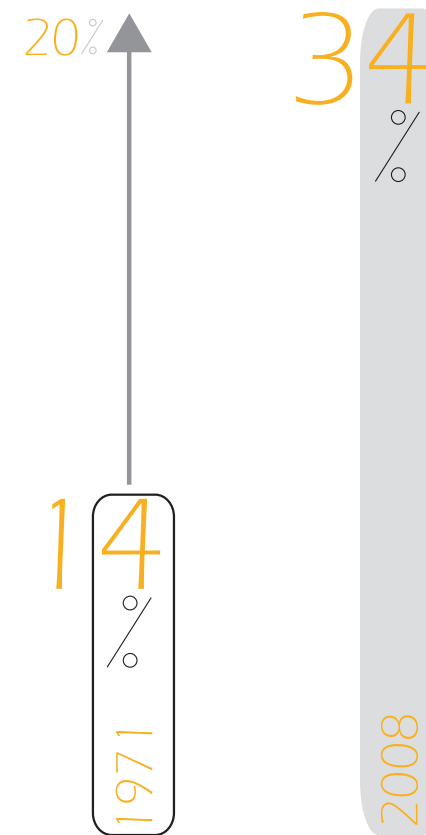
<http://en.wikipedia.org/wiki/File:McDonalds-Chicken-McNuggets.jpg>



percent cooking at home regularly



out-of-home food expenditures



obesity rates in United States

1

Fast and processed foods are not inherently bad.

2

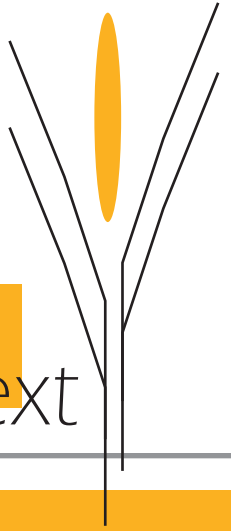
Organic does not mean healthy.

3

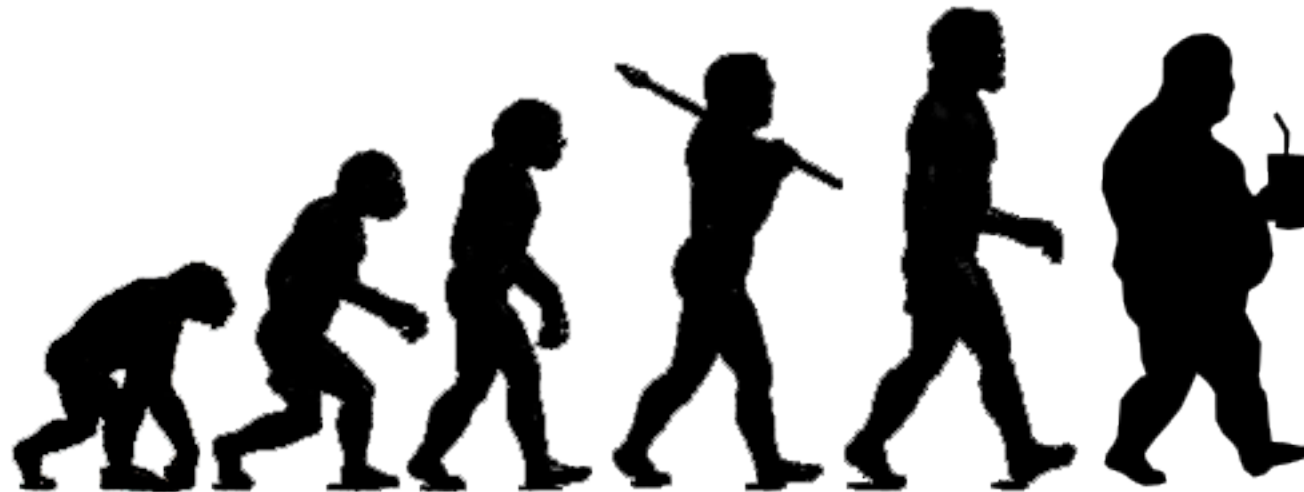
Nutrition is more than a reflection in the mirror...

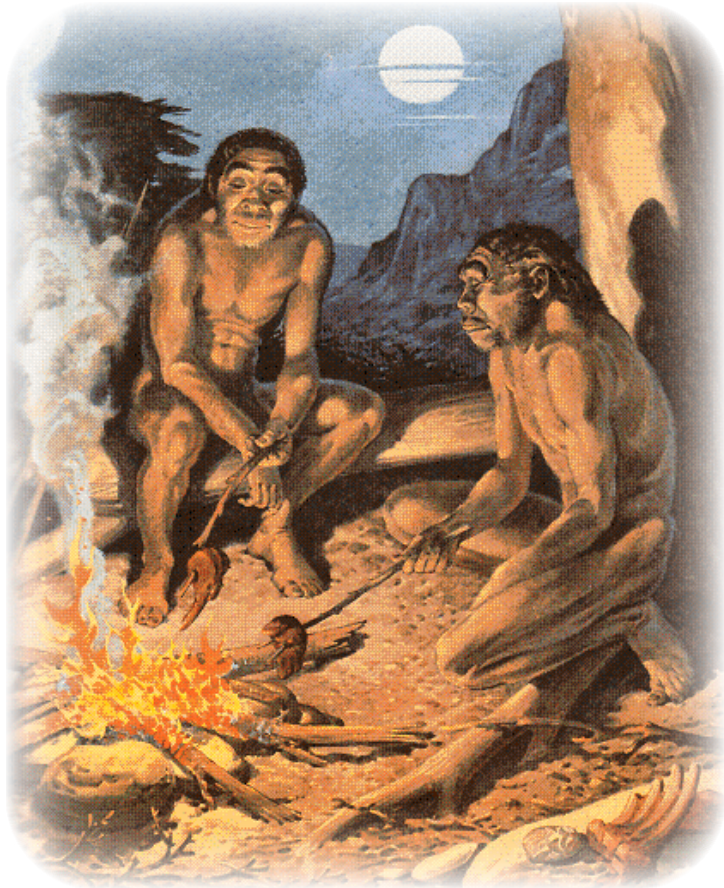
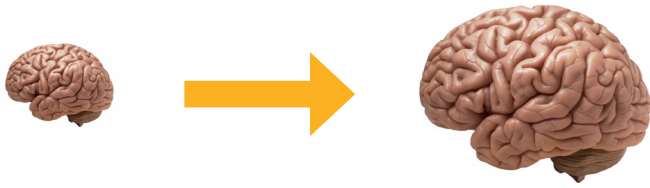
Before we begin...

Historical Context



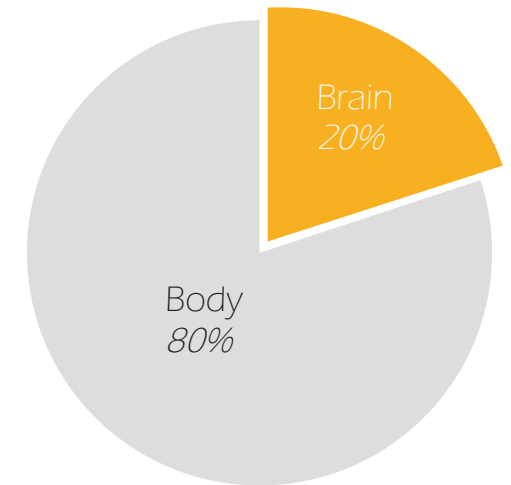
What makes us human?





<http://reviews.wikinut.com/Food-Evolution/36wovy0p/>

Just 500,000 years later, a radically more advanced species — *Homo erectus* — emerged. Its brain was up to *twice the size* of its predecessor's, its teeth were much smaller, and its body was quite similar to ours. *Cooking food* allowed for easier chewing and digestion, making extra calories available to fuel energy-hungry brains. (Miller, 2013)



Resting Metabolic Rate
Percent Energy Consumption



The lure of the processed foods industry took off in the aftermath of WWII when American households were thriving and began purchasing televisions. The packaged foods were brought to households around the country, and families began to view the convenience as being the epitome of American success. Since then, an epidemic has swept the world resulting in people no longer cooking wholesome meals for themselves, but opting to purchase premade, highly processed foods with no regards to what the food actually consists of. All connections with our food were severed. This has undoubtedly led to increased nutrition related issues resulting in elevated health care costs and decreased well-being.



/// The packaged foods industry did more than just create a sense of inadequacy among home cooks. In research we conducted we found that people's uncertainty didn't just stem from the fact that home cooking seemed too difficult and inconvenient but from a lack of trust...People no longer believe in themselves. (Shapiro, 2010)

How to catch the early, early show with an easy, easy dinner

Swanson TV Brand Dinners, the oven-quick meals that taste home-cooked

Now Mom's in on the TV fun at the start, and thanks to Swanson she's ready to serve an extra-special chicken dinner: Genuine Swanson TV Brand, the frozen dinner that gives you more for your money than any other kind.

Who else but Swanson always gives you three such choice, luscious pieces of chicken? (A rich portion of breast, meaty wing, and a plump thigh or drumstick.) Who else makes fluffy mashed potatoes like this, with milk and creamery butter? Who else gives you buttered, garden-good mixed vegetables like these, with the crispness and tenderness a good cook prizes? (And how that skillful, careful Swanson cookery will remind you of your own!)

Try Swanson TV Brand Dinners. Compare the difference in those generous servings, cooked and seasoned as only Swanson knows how: Four delicious varieties: chicken, turkey, beef, fillet of haddock. Ready in 25 minutes or less--no work, no dishes. Remember, insist on genuine Swanson TV Dinners, and always keep a supply handy in your freezer.

SWANSON
TV Dinners
MADE ONLY BY Campbell Soup Company

TV and TV DINNER ARE REGISTERED TRADEMARKS

...shopping can be...



<http://www.fiterature.com/tag/grocery-shopping-confusion/>

...a little **overwhelming**...

\$3 x 3 = \$10



\$10 x 7 = \$70



\$70 x 4 = \$280

Fast Food \$280

\$

Home Cooking \$200

\$

// In general, there is *not a strong relationship* between nutrient intake and income level. (Senauer, 1986).

So, when considering the true cost of cooking at home, one must remember that recipes rarely use up the entire portion of purchased food – there will be leftovers that can be prepared into different meals. This significantly reduces the cost per meal when cooking at home.

How can **architecture** be used as a tool to ultimately **improve** society's overall **health and well-being**?



<http://www.childrens-learningadventure.com>

Knowledge alone has proven ineffective in altering eating behavior, but the offering of hands-on cooking and tasting demonstrations appears to be far more encouraging.
(Horodynski, Hoerr, & Coleman, 2004).

TYOLOGY

youth oriented culinary education center

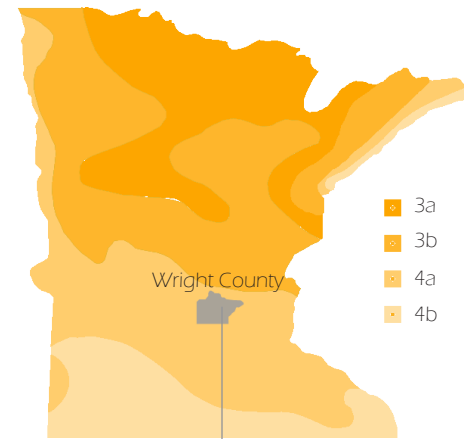
UNIFYING IDEA

A youth oriented culinary education center can contribute to improving the health of future generations by empowering youth to make informed Gastronomic decisions before they become trapped in the cycle of “fast” and processed foods that has been branded into them by today's society.

How does it fit into the existing public school education system?

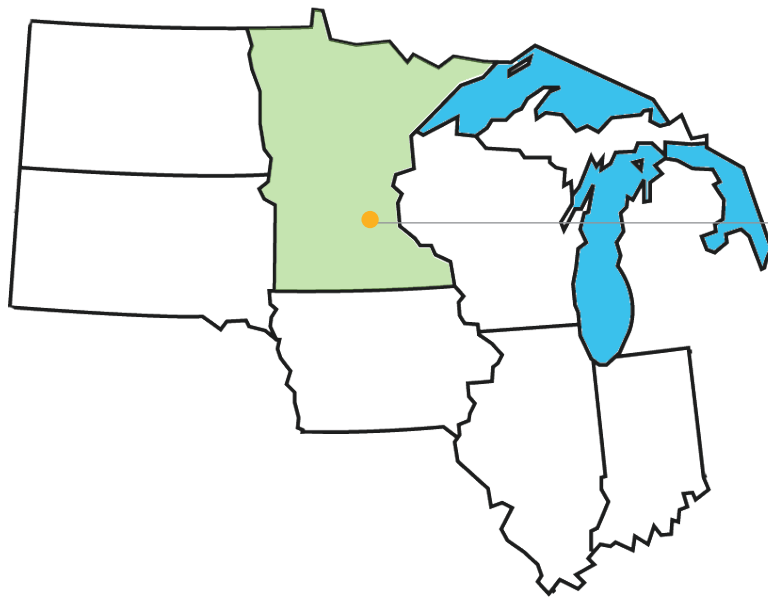


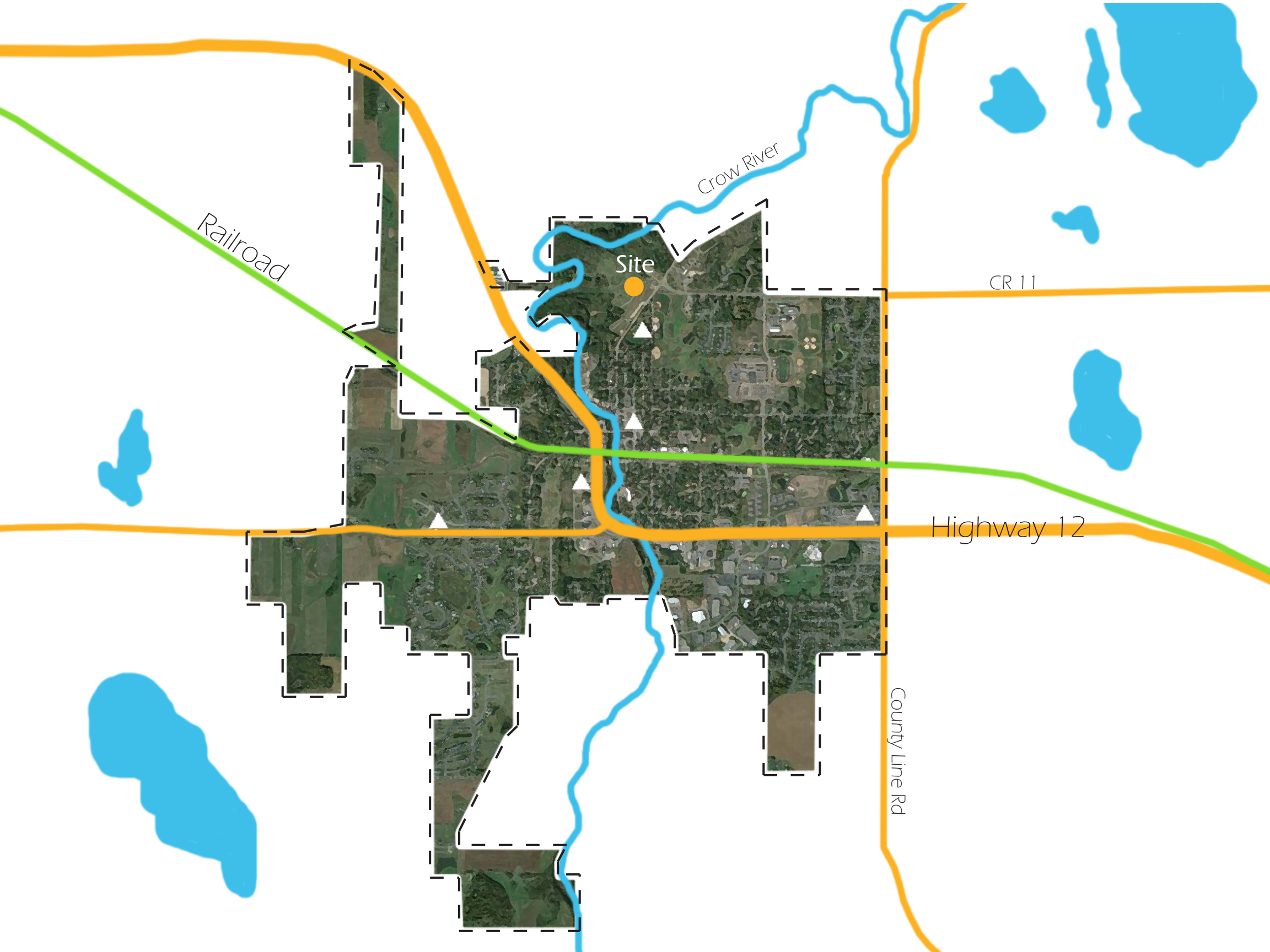
Plant Hardiness Zones



Delano lies directly on Highway 12 which is a main transportation route into Minneapolis. Because of this, there are literally hundreds of thousands of people within 30 minutes of Delano who could benefit from the facility.

Region: Upper Midwest





Railroad

Crow River

Site

CR 11

Highway 12

County Line Rd

Site Characteristics

1. Close to Delano City Park
2. Easily Accessible and Visible
3. Many potential visitors
4. Close to Delano Public Schools
5. Large, open, and flat

-  Pedestrian Foot Traffic
-  Vehicle Traffic
-  Utility Traffic

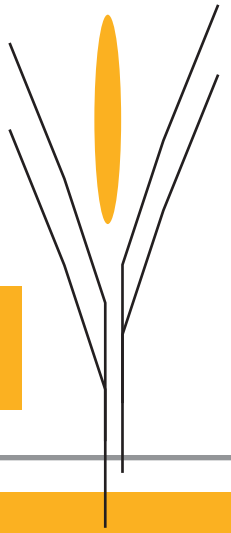




Crop Productivity Index	
106D2: Lester Loam - 12 to 18 percent slopes	67
603: Hanlon Fine Sandy Loam - 0 to 2 percent slopes	82
1030: Pits - gravel Udipsamments complex	0
1163: Suckercreek Loam - 0 to 2 percent slopes	20
1197: Suckercreek Fine Sandy Loam - 0 to 2 percent slopes	64

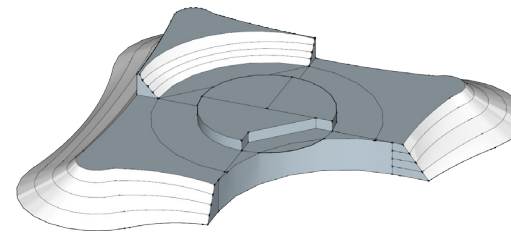
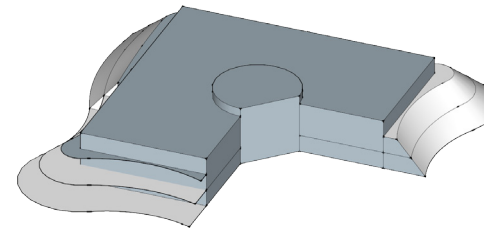
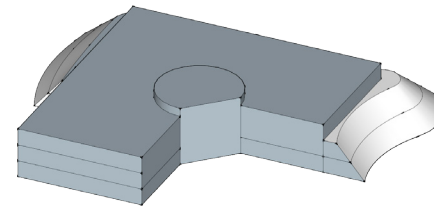
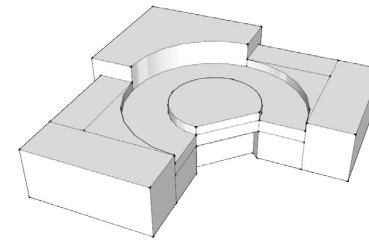
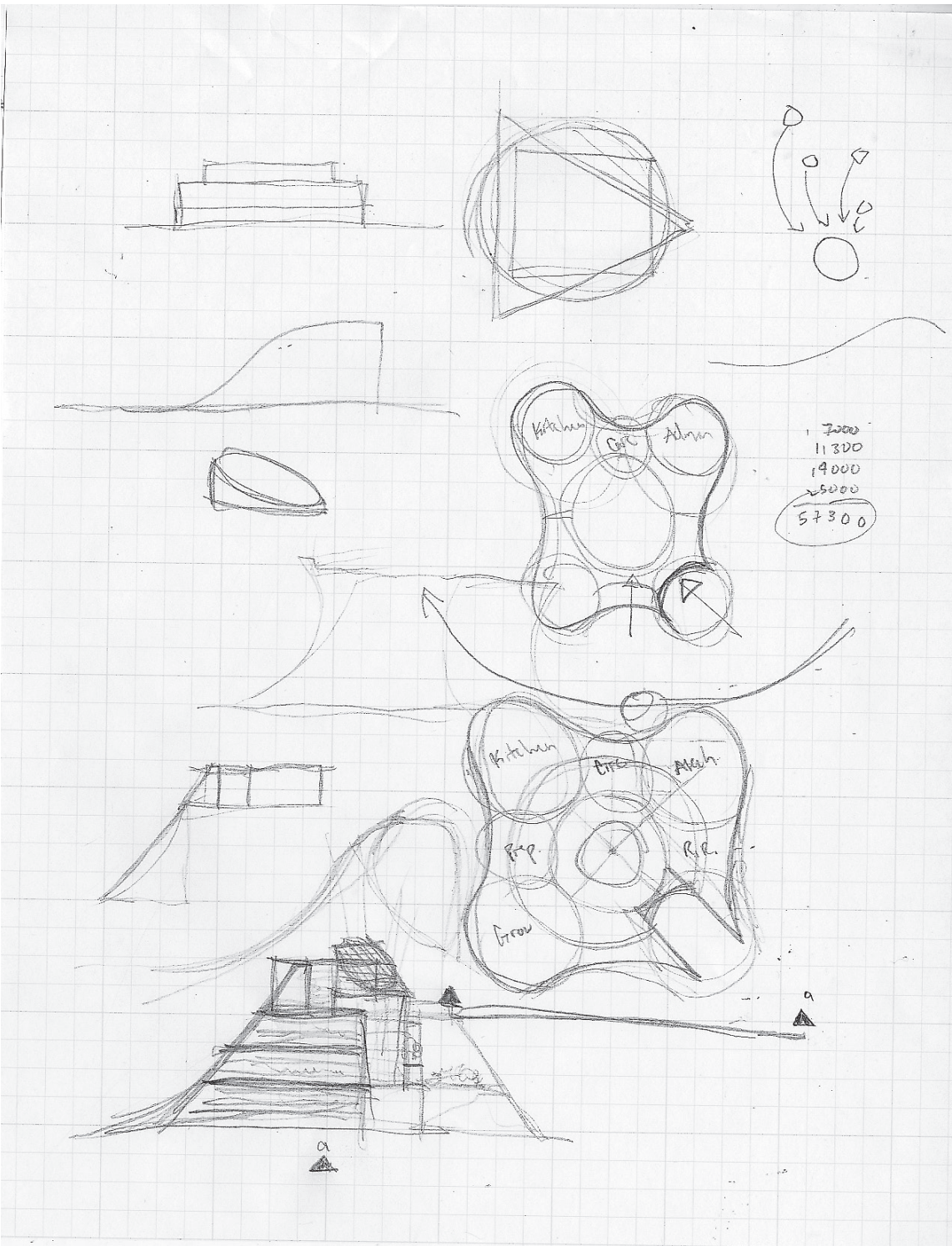


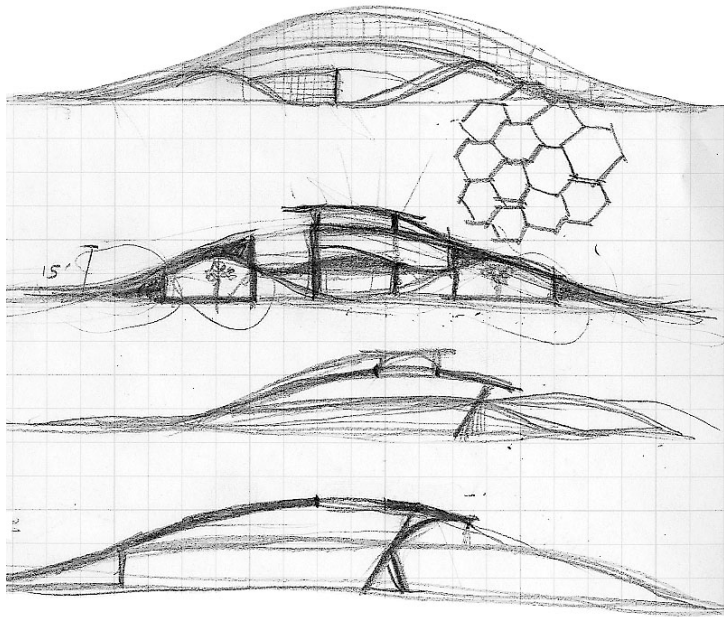
Process



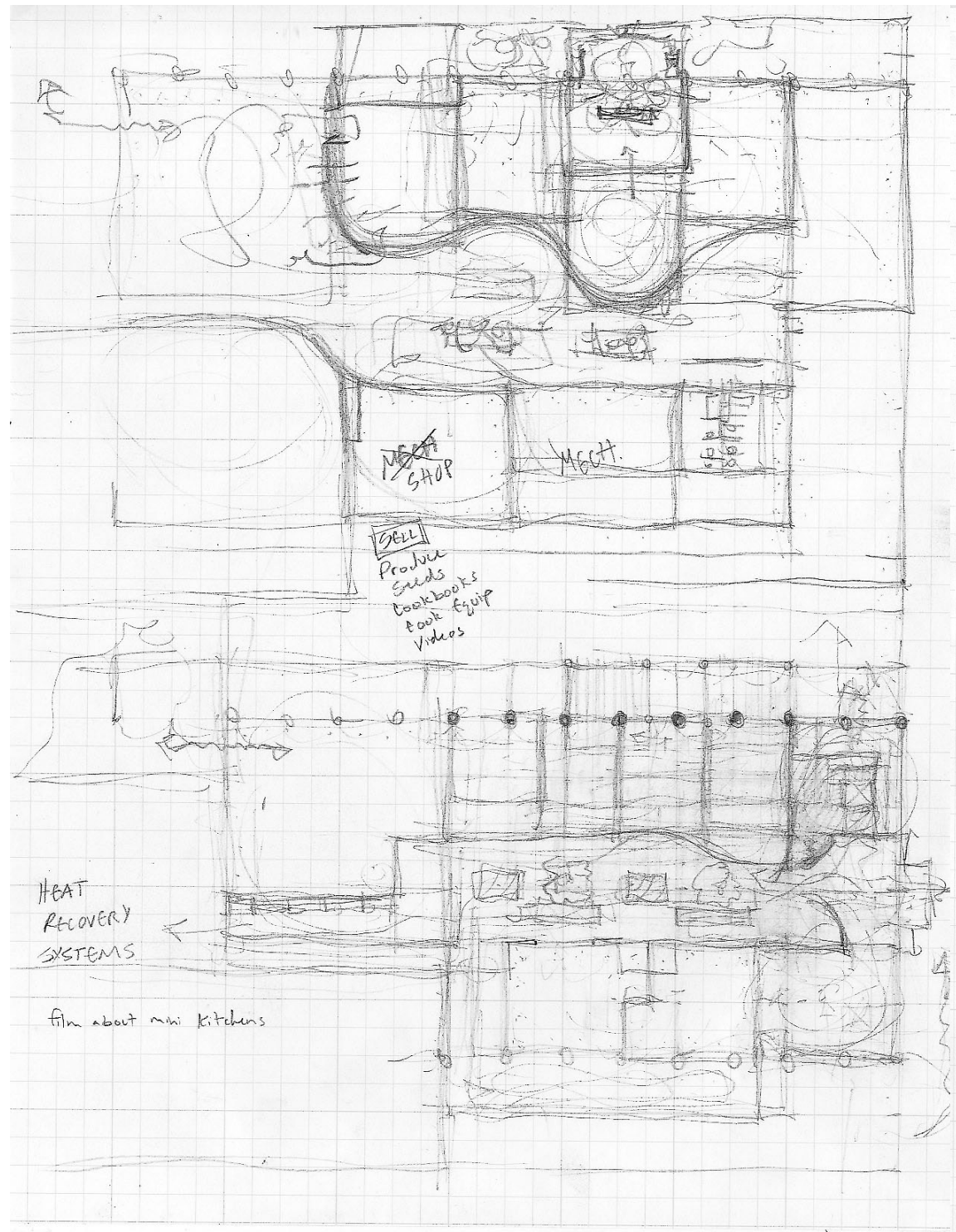
Problems with initial design...

1. Too tall and intimidating
2. Too centralized; not addressing potential views
3. Not addressing the site

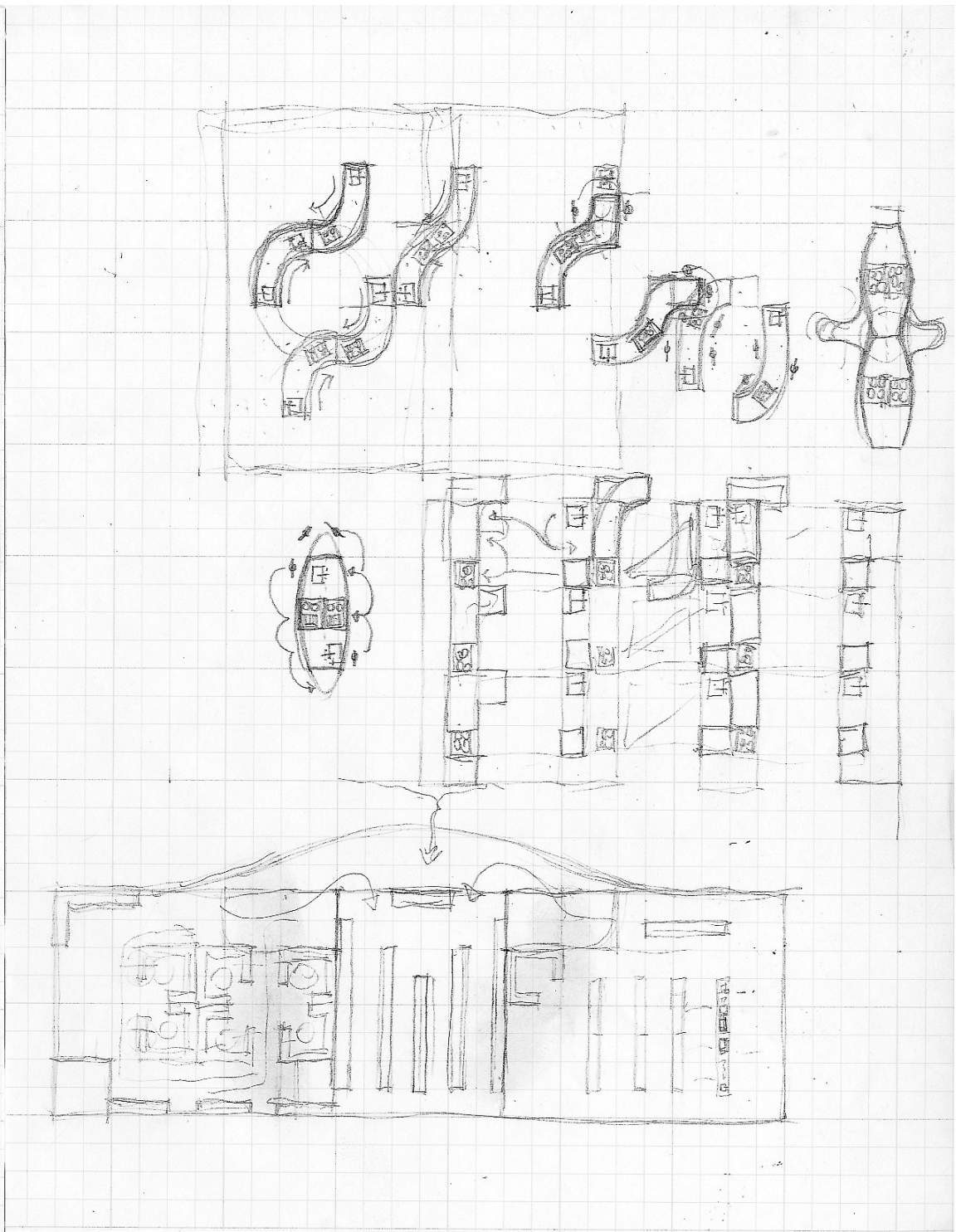




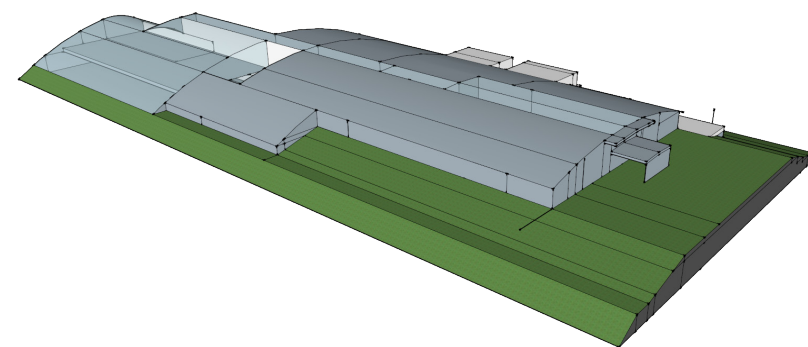
...lowering the profile...



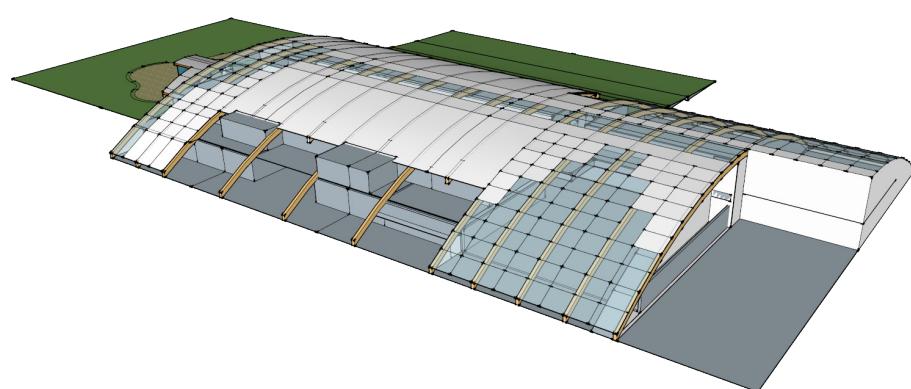
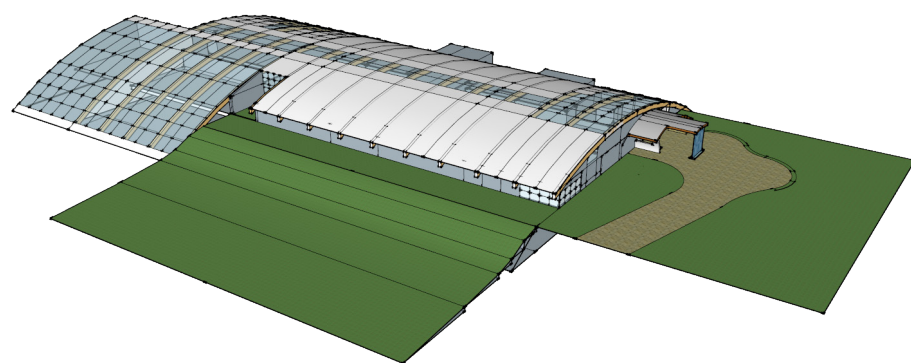
creating views...



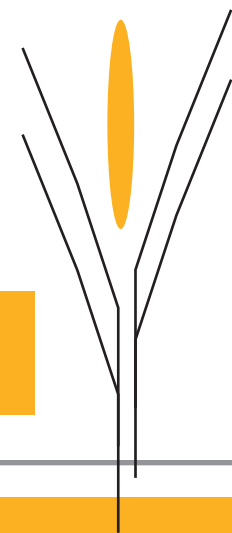
...laying out spaces...



Initial problems addressed...



Final Design



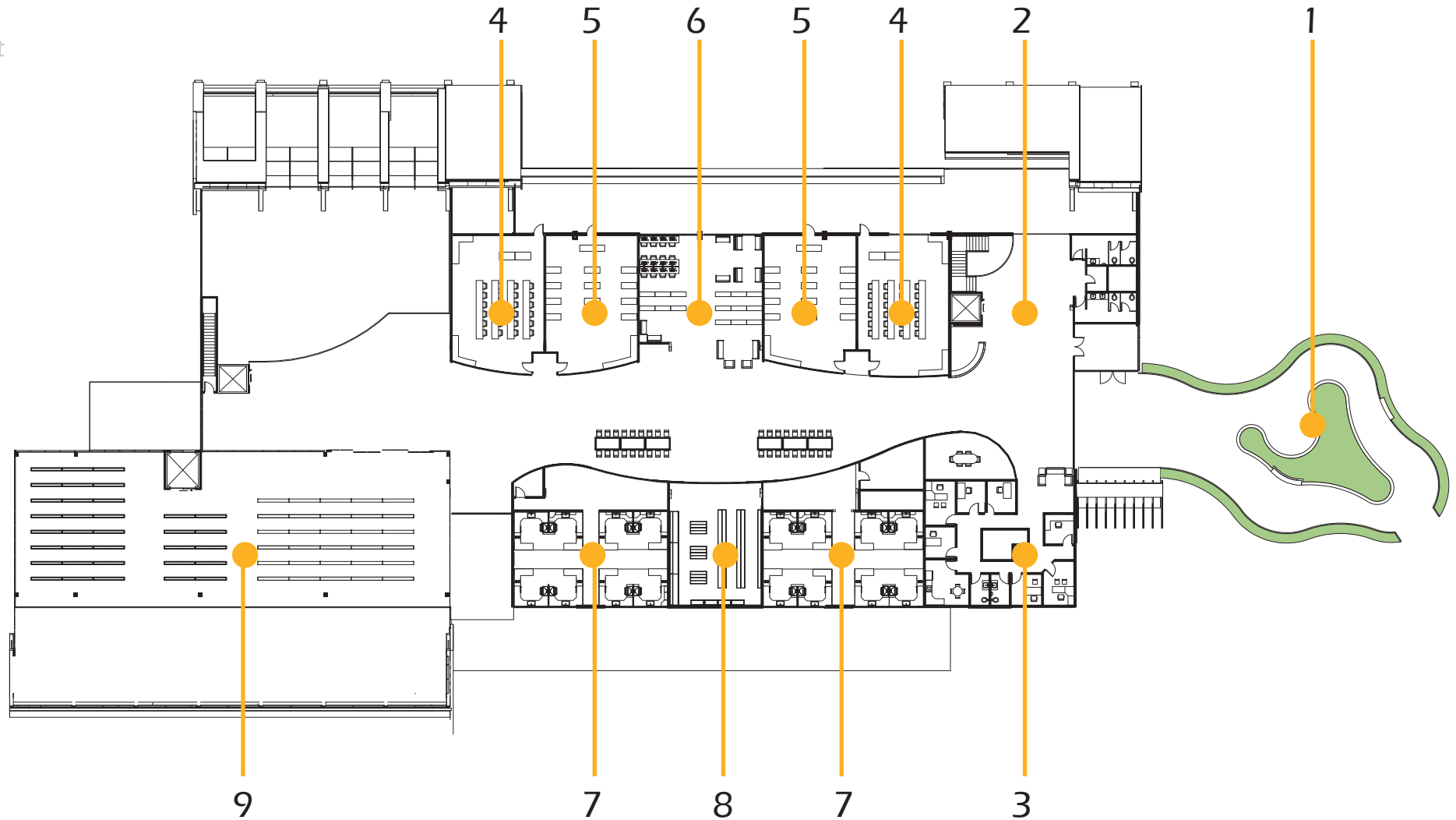


Building Axon

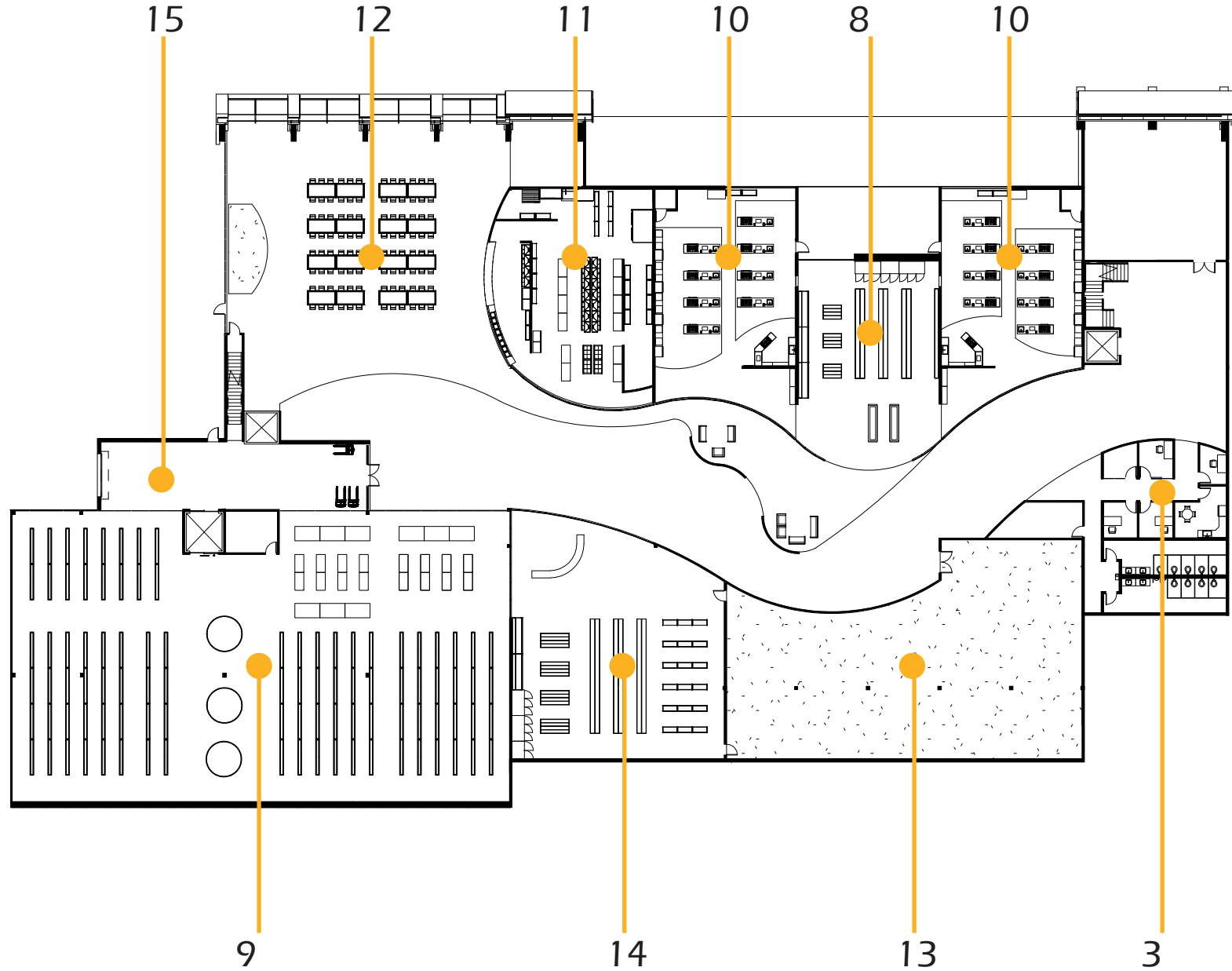


Entry Plaza

- 1 Entry Plaza
- 2 Reception
- 3 Offices
- 4 Lecture Classroom
- 5 Laboratory Classroom
- 6 Media Center
- 7 Novice Kitchen
- 8 Mock Supermarket
- 9 Greenhouse



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- 2 Reception
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- 7 Novice Kitchen
- 8 Mock Supermarket
- 9 Greenhouse
- 10 Advanced Kitchen
- 11 Performance Kitchen
- 12 Multipurpose Space
- 13 Mechanical
- 14 Market
- 15 Loading

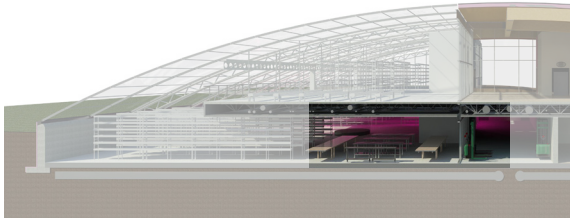




Hallway



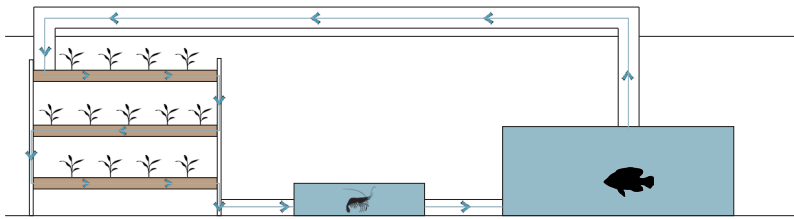
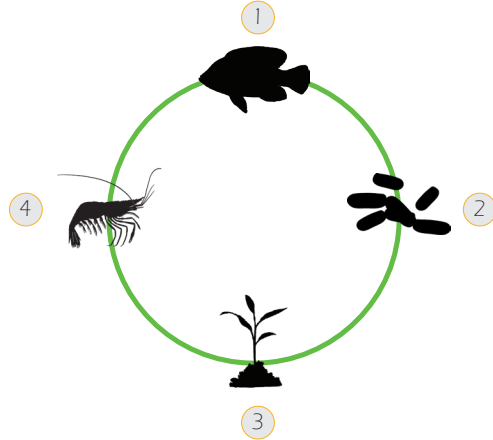
Outdoor Grow Space



Magenta LED Lighting

- Optimum frequency for maximum plant growth.
- Supplements natural daylight

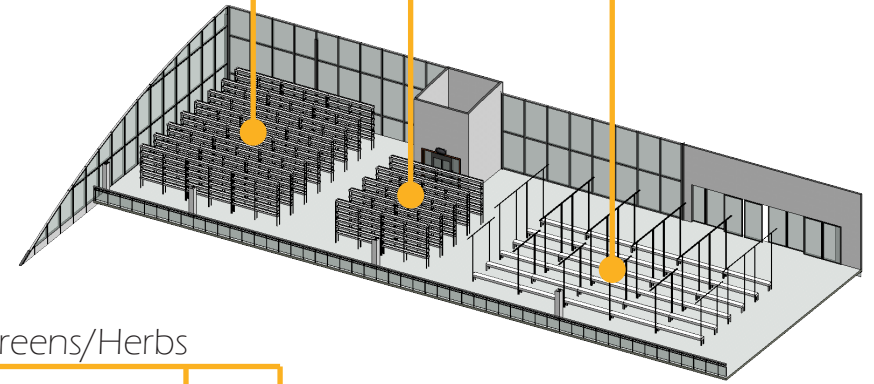
- 1 Fish produce ammonia rich waste
- 2 Microbes convert ammonia into nutrients for the plants
- 3 Plants use nutrients and filter the water
- 4 Prawns aerate the water - bringing in oxygen for the fish



Berries

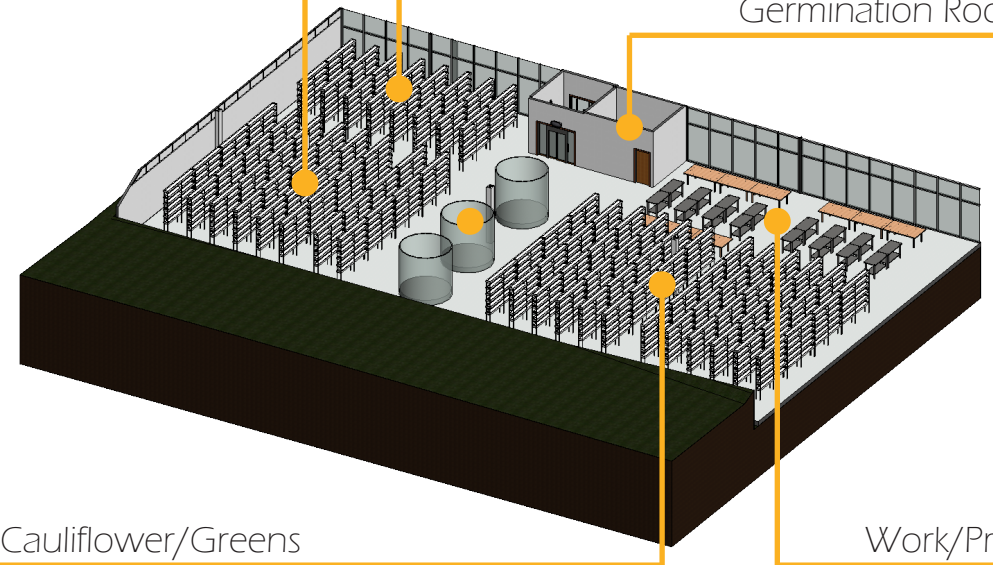
Beans/Peas

Tomatoes



Leafy Greens/Herbs

Germination Room



Cauliflower/Greens

Work/Prep



Novice Kitchen

Novice Kitchens

Used by students to expand upon the previous information given to them. The culinary experience will teach students how to actually use the nutrition information in their everyday lives.

1 Familiar Environment

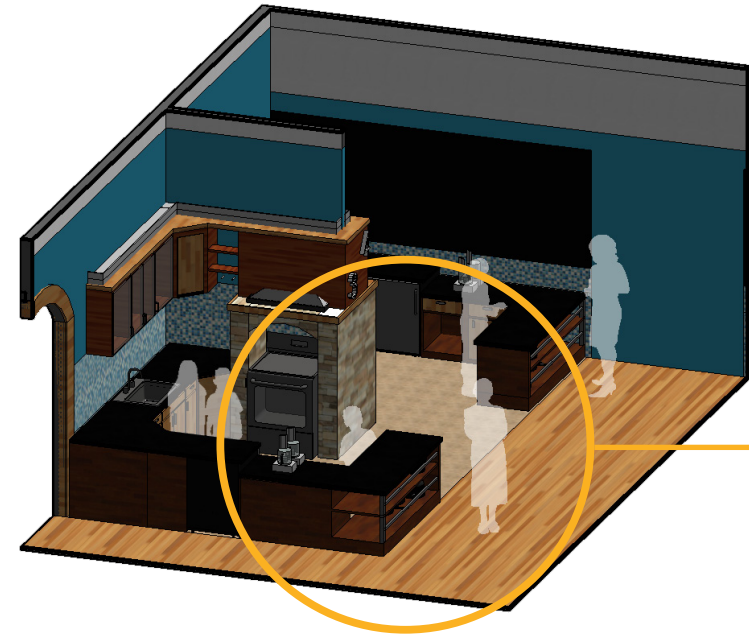
Kitchen stations designed to resemble “home” kitchen. This will help create a familiar environment for the students to help alleviate possible anxieties.

2 Lowered Countertops

Decreases the need for stools to stand on.

3 Aisle Location

Instructors can maintain a constant view on the students as they prepare their food.



...designing for the user...



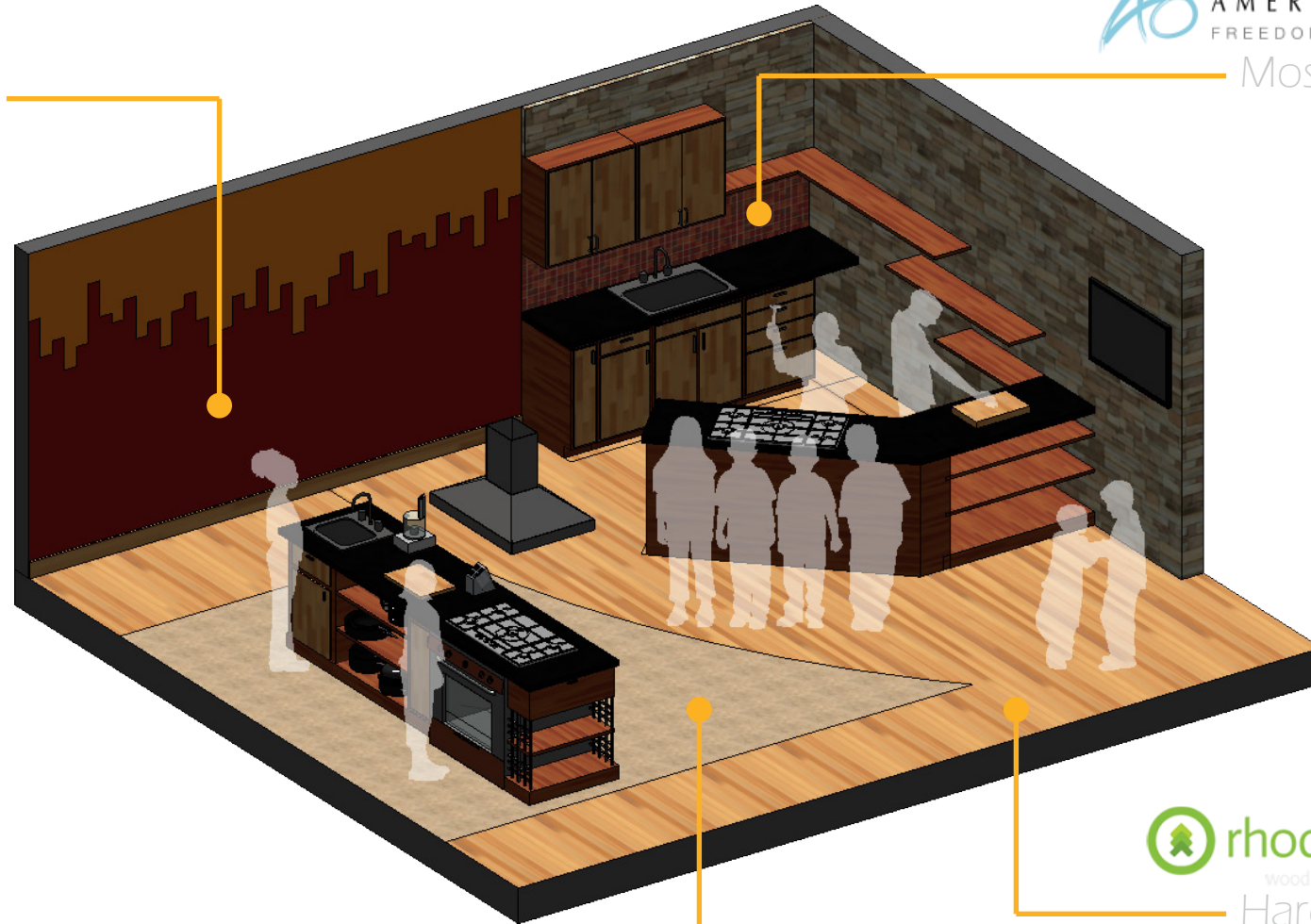
Advanced Kitchen

Advanced Kitchens

These are found on the bottom floor and will offer students practice in more difficult culinary techniques. The Advanced Kitchens are designed to teach students to cook efficiently in limited space.

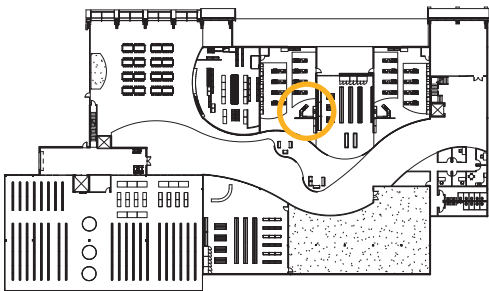
AO AMERICAN OLEAN®
FREEDOM OF EXPRESSION™
Mosaic Glass

Painted CMU Wall



rhodeshardwood
wood floor installation + restoration
Hardwood Flooring

Armstrong
Vinyl Floor Tile

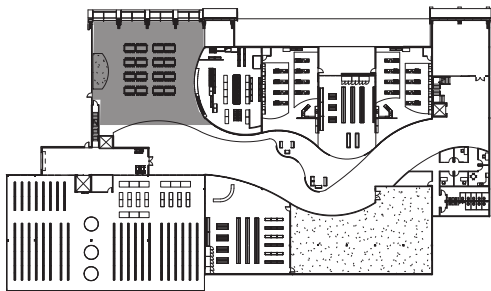
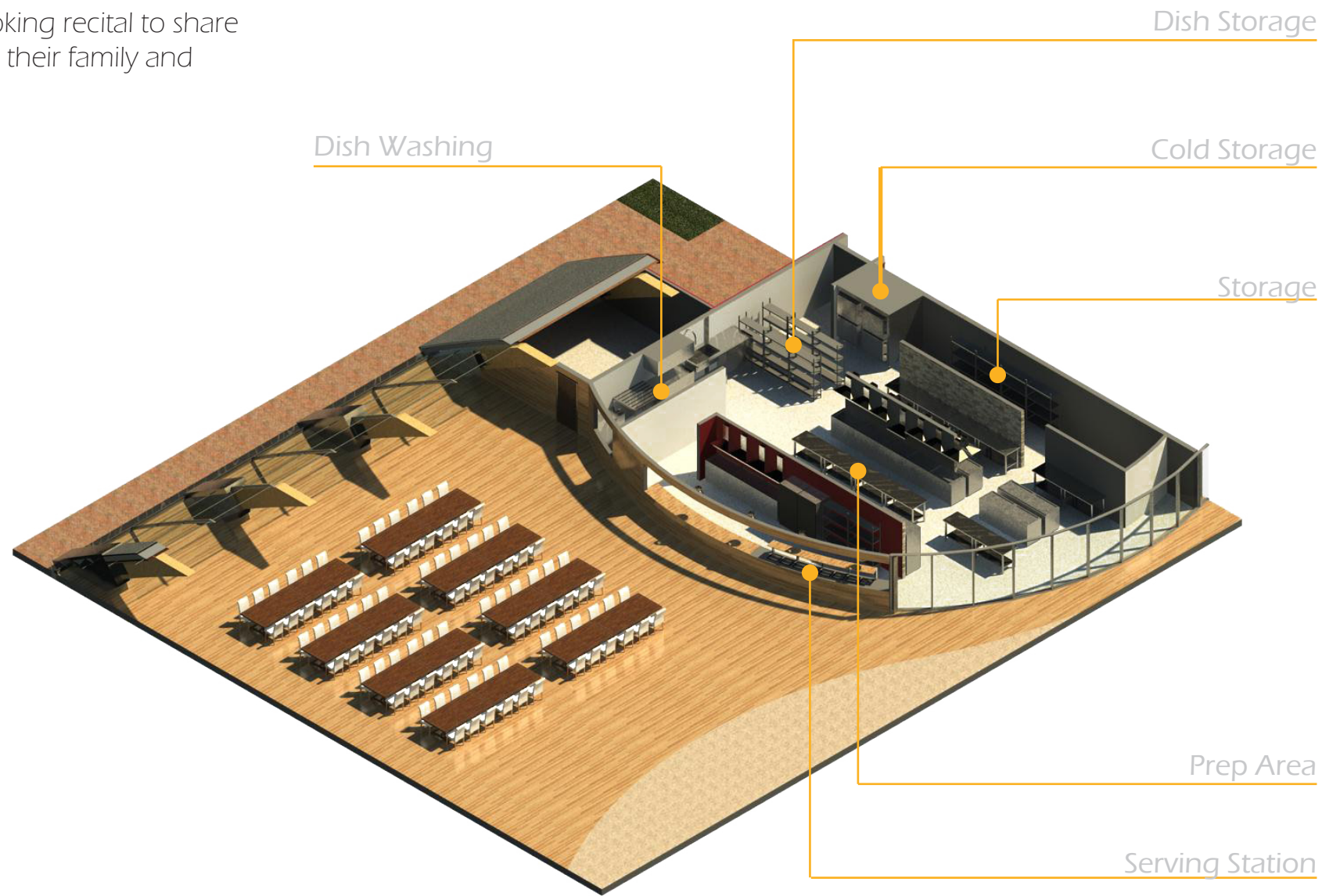




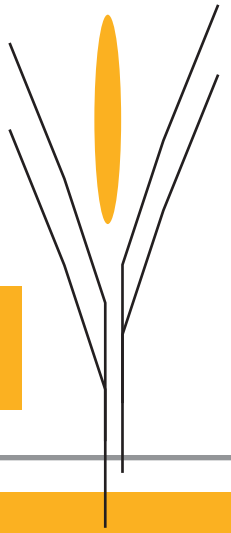
Multipurpose Space

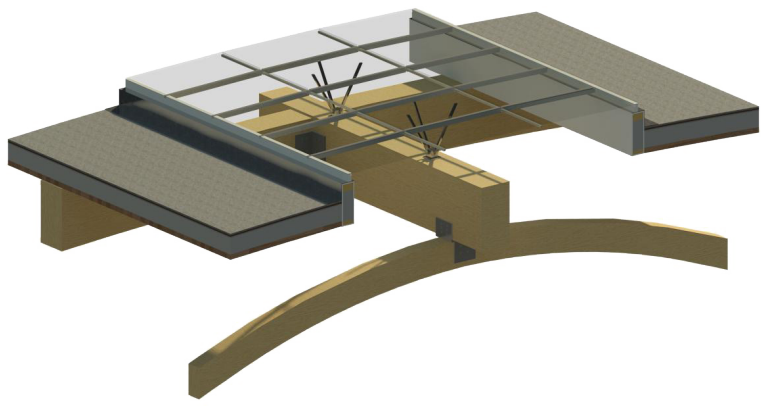
Performance Kitchen

The culinary program culminates with the students putting on a cooking recital to share their newfound skills with their family and friends.

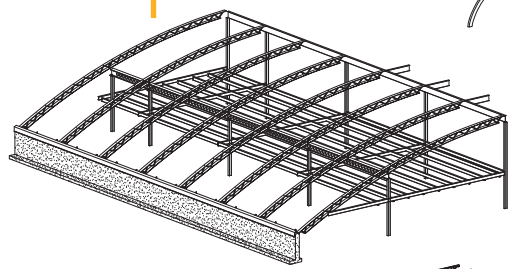


Systems

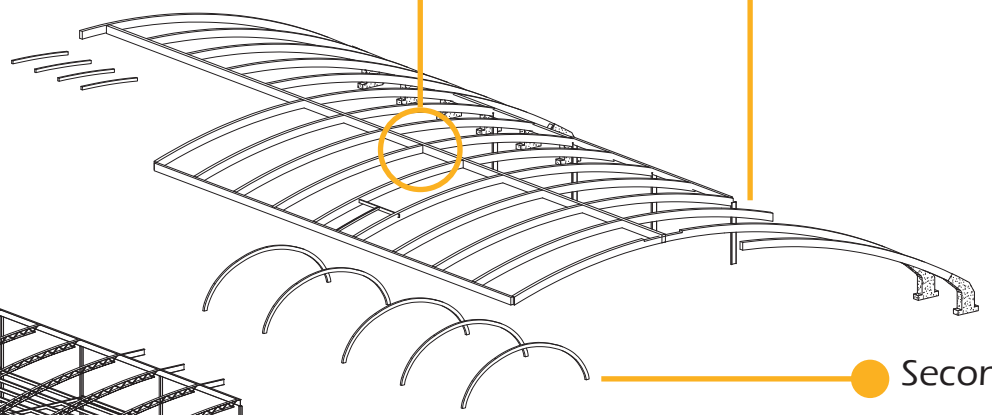
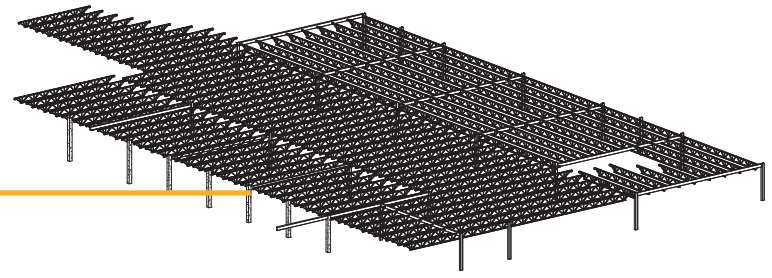




24" Open Web Steel Joist
Necessary due to extreme
conditions within greenhouse

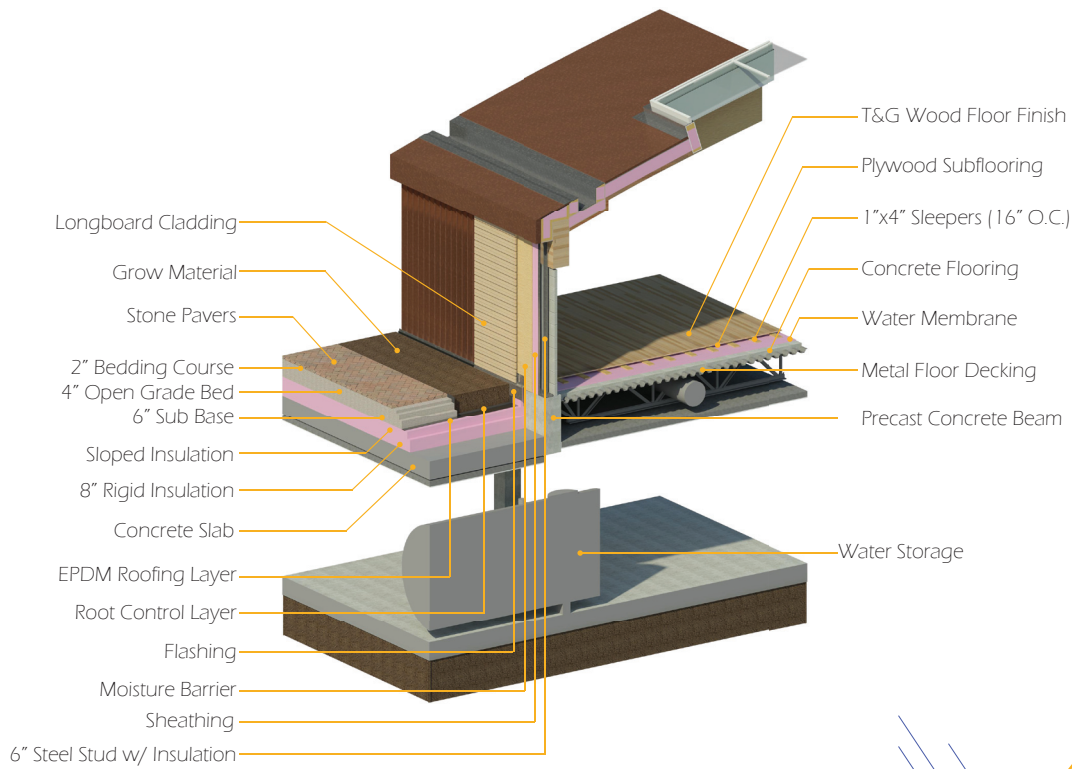


Steel Beam System



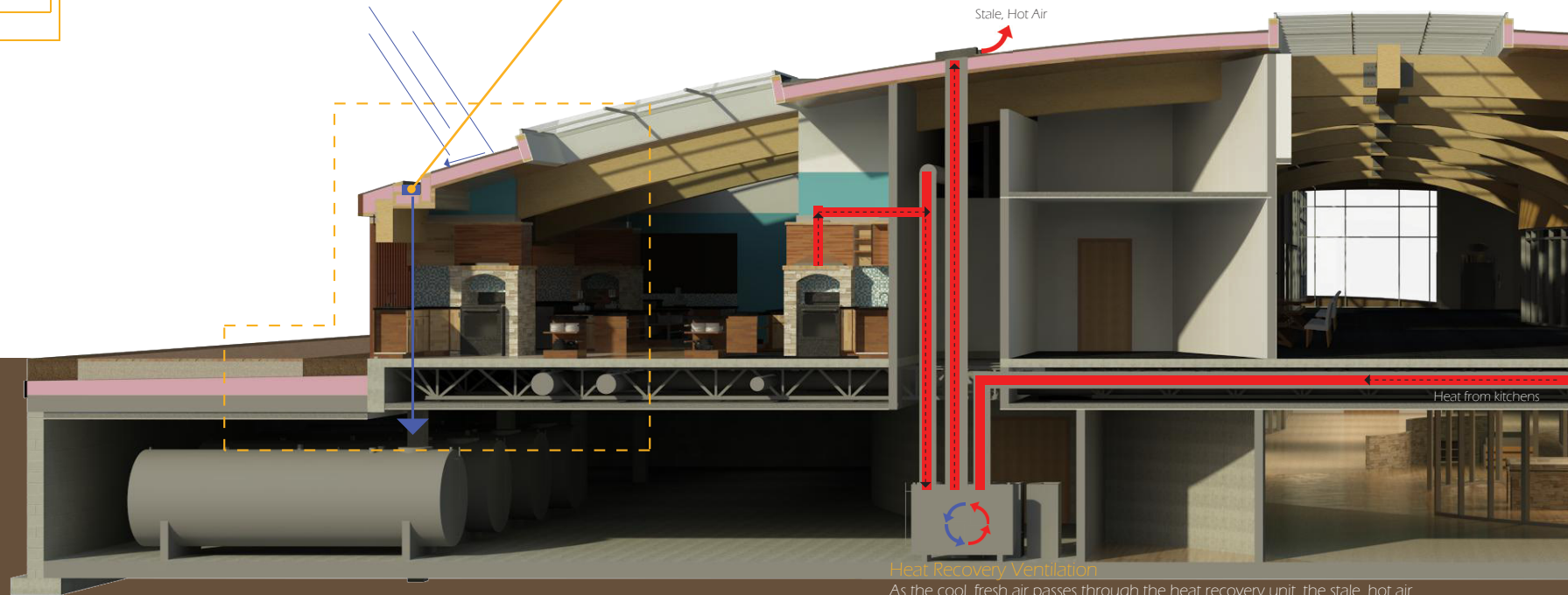
30" x 16" Glulam Beam
(20' O.C.)

Secondary Cycloidal Arch



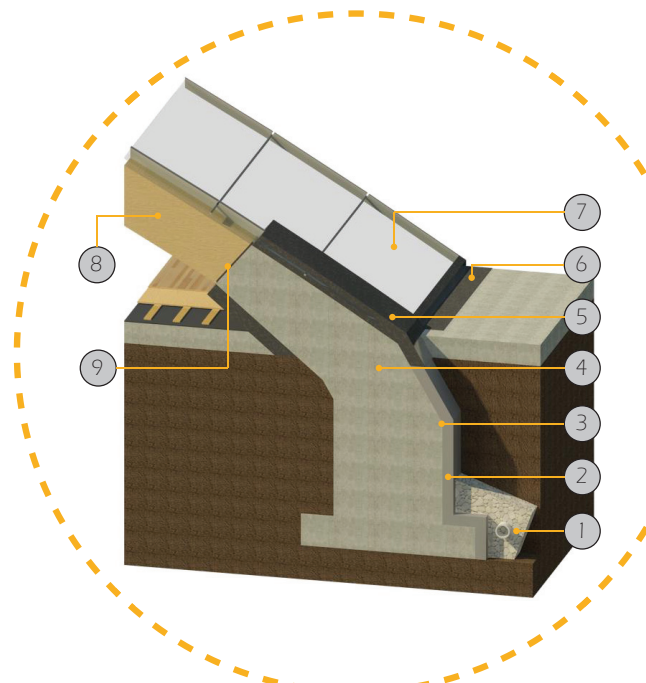
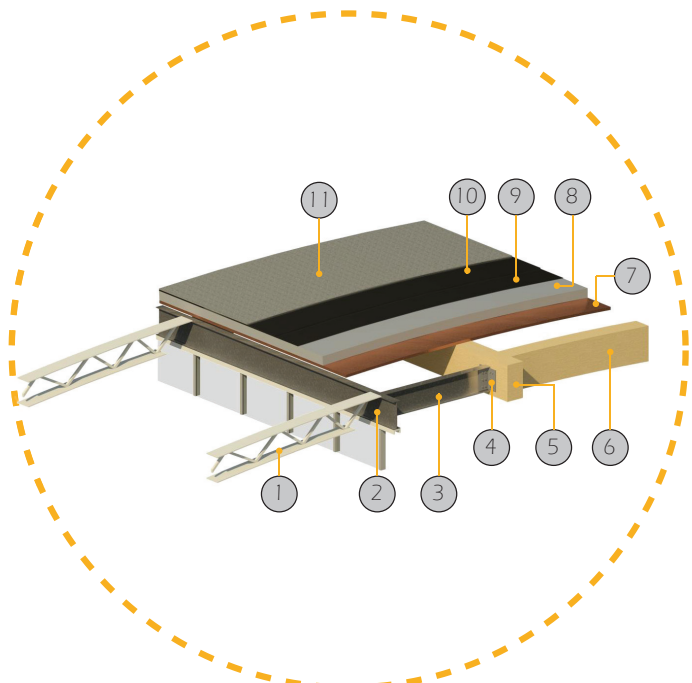
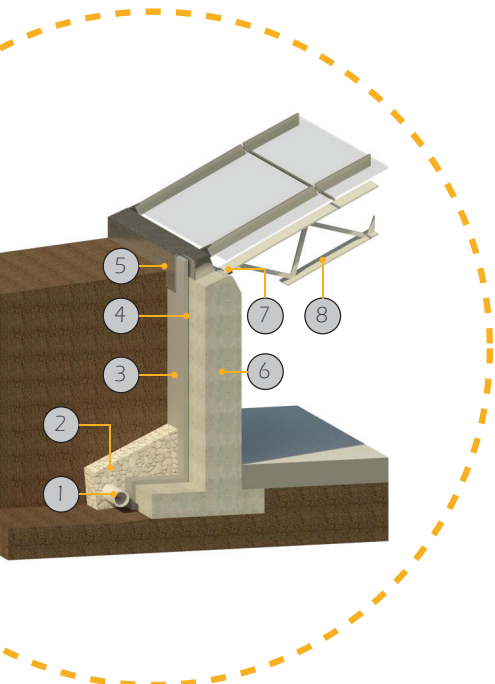
Rain Collection

Gutters located at every structural column direct water to the collection tanks in the mechanical space.



Heat Recovery Ventilation

As the cool, fresh air passes through the heat recovery unit, the stale, hot air from the cooking spaces will heat it. This will provide fresh, warm air to the building while getting rid of kitchen exhaust. Because of the amount of heat produced by the cooking spaces, little outside energy will be required to heat the building.



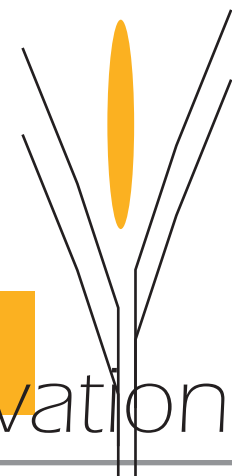
Greenhouse Supply

Facility Supply

It is my desire that this thesis project not only educates readers on its content, but stimulates interest producing supplementary exploration. There is a profound skill which is being lost in our lack of cooking – one which I believe should be a second language to us.

Cooking is what makes us human.





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Nutrition Education



Questions?