

Today's Date:  Design Needed By:



# REQUEST

CULTIVATION ENVIRONMENT DESIGN

Optimized Air System Requirements

## General Information

Company: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Email: \_\_\_\_\_

Address:

Project name and Location:

## Site Information

Crops Grown: \_\_\_\_\_

### Utilities:

Natural gas  Liquid propane  Electric  Other (biomass, waste heat, etc). Describe: \_\_\_\_\_

Electrical service: Voltage: \_\_\_\_\_ Phase \_\_\_\_\_ Hz \_\_\_\_\_

### Control System:

None  Agrowtek  Argus  Hortimax  Link4  Microgrow  Priva  Wadsworth  Other \_\_\_\_\_

### Existing Equipment

Boiler BTUH capacity: \_\_\_\_\_  Chiller Tons: \_\_\_\_\_

## Structure Information

### Phases

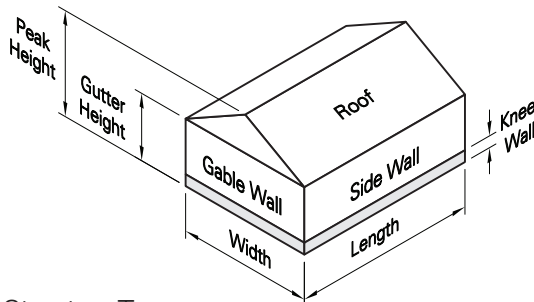
How many phases? \_\_\_\_\_

### Zones

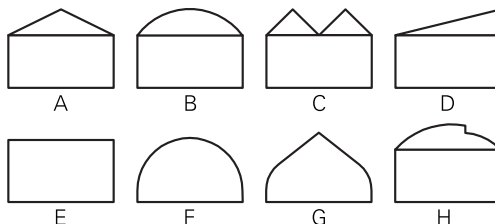
How many zones should we design? \_\_\_\_\_

Using the lists and diagrams below, indicate dimensions and glazings/coverings for your project.

<input type="checkbox"/> New <input type="checkbox"/> Existing							
House	1	2	3	4	5	6	
Number of ranges:							
Bays per range:							
Gutter height (ft):							
Knee wall height (ft):							
Bay width (ft):							
Bay length (ft):							
Peak height (ft):							
Structure type*:							
Glazing/Covering (from list)							
Side wall:							
Gable wall:							
Roof:							
Kneewall:							



### Structure Types:



### Growing surface:

#### Benches:

- Stationary  Gutters  
 Mobile Trays  Troughs  
 Rolling

#### Floor:

- Concrete  
 Gravel/Sand  
 Rafts in ponds

### Glazing/Covering List:

1. Polyethylene Film, Single
2. Polyethylene Film, Double
3. Acrylic Film, Double
4. Polycarbonate Sheet, 16mm
5. Polycarbonate Sheet, 8mm
6. Polycarbonate Sheet, 6mm
7. Polycarbonate Sheet, Triple Wall
8. Polycarbonate Sheet, Corrugated
9. Fiberglass
10. Glass, Sealed
11. Glass, Lap
12. Concrete, 4"
13. Concrete, 8"
14. Concrete, Block
15. Wood
16. Metal
17. Insulated (R-Value)
18. Other: \_\_\_\_\_

## AC/Dehu Systems

AC/Dehumidification Design Conditions

	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
<b>Setpoint</b>						
Crop Type:						
Target VPD:						
Day setpoint temperature (F):						
Day setpoint relative humidity (%):						
Night setpoint temperature (F):						
Night setpoint relative humidity (%):						
<b>Irrigation</b>						
Irrigation water input per bay (gal/day):						
Irrigation drain to waste (%):						
<b>Shade</b>						
Shade curtain energy savings (%):						
<b>Lights</b>						
Lights per room:						
Wattage per light:						

Dehumidification period:  Night  Day  Both

## Air Movement Systems

Optimized Air Flow Fans

Are you interested in fans?  Yes  No

Describe existing fans:  HAF  VAF  Other \_\_\_\_\_

## Plantcentric® Features

CO2

Polyduct & Fans

Root Zone Heating

Structure

Evap. Pad & Bug Screen

No Evap. Pad & Bug Screen

By Others

## Site Sketch Checklist

Please sketch your site, including:

- Structure footprint and dimensions
- Aisles and walkways (locations and sizes)
- Bed or bench dimensions
- Control zones required
- Boiler/Mechanical room desired
- Indication of existing and retrofit items
- North arrow
- Doors
- Utility locations
- Water system (storage and fertigation)

A large grid area for sketching the site plan, consisting of a 30x30 grid of small squares.