

## 325 High Tunnel System NJ Implementation Requirements

<b>Producer:</b> _____	<b>Project or Contract:</b> _____
<b>Location:</b> _____	<b>County:</b> _____
<b>Farm Name:</b> _____	<b>Tract Number:</b> _____
<b>Farm Number:</b> _____	<b>Field Number:</b> _____

### Practice Location

The practice location is represented on the Conservation Plan Map or Practice Detail Map. The practice is represented by the following symbol and corresponding name in the map legend:

\_\_\_\_\_

Symbol: \_\_\_\_\_

Name in Legend: \_\_\_\_\_

.....

\_\_\_\_\_ The practice location is represented on the attached design.

### Description of Work:

Install an enclosed polyethylene, polycarbonate, plastic, or fabric covered structure that is used to cover and protect crops from sun, wind, excessive rainfall, or cold, to extend the growing season in an environmentally safe manner.

### Index

- \_\_\_\_\_ Cover Sheet
- \_\_\_\_\_ Specifications
- \_\_\_\_\_ Drawings
- \_\_\_\_\_ N/A Cost Estimate and Bid Form
- \_\_\_\_\_ Operation & Maintenance
- \_\_\_\_\_ Certification Documentation  
*(when practice is implemented)*
- \_\_\_\_\_ Other:



**Utility Safety /  
One-Call  
System  
Information:**

Know what's below.  
Call before you dig.

**The Practice Purpose(s):**

X  Improve plant health and vigor

**Specifications:**

<b>High Tunnel System Requirements</b>
<ul style="list-style-type: none"><li>• Crops must be grown in the natural soil profile. Raised beds may be installed to improve soil condition, fertility, and access. Soil amendments such as compost, manure, etc. must be fully incorporated in the native soil.</li><li>• Raised beds are a maximum of 12 inches in depth. Barriers placed between the base of the raised beds and the natural soil profile are prohibited.</li><li>• The high tunnel system cannot be used to provide shelter or housing for any livestock, or to store supplies or equipment.</li><li>• <b>All components of the high tunnel structure must be planned, designed, and constructed from a manufactured kit in accordance with manufacturers’ recommendations. Modifications to the high tunnel structure design must be verified and approved by the manufacturer prior to construction to ensure that any warranties remain in effect.</b></li><li>• Select the high tunnel covering material of a significant thickness to withstand the temperature change for the period required and shall have a 4-year-minimum lifespan. For polyethylene covers, use a minimum 6-mil greenhouse grade, UV-resistant material. Other specifications such as, but not limited to rafter spacing, pipe gauge, and pipe diameter will be based on the expected environmental conditions (wind speeds, snow loads, etc.) for the location the high tunnel will be installed. It is the responsibility of the producer to discuss these factors with the manufacturer when choosing a high tunnel to install.</li><li>• Construct high tunnel structures on level grade or the naturally occurring slope if the slope does not exceed five percent.</li><li>• Where the intensity or duration of sunlight can shorten the growing season, the appropriate thickness of shade cloth may be used in place of, or in addition to impervious plastic covers. When shade cloth is used alone, end walls are not required.</li><li>• Retain all paperwork from the manufacturer, including assembly instructions and operation and maintenance instructions.</li></ul>
<b>High Tunnel Procedures for Managing Temperature and Sunlight</b>
<ul style="list-style-type: none"><li>• To extend the growing season of cool season crops, shade cloth may be used alone, or in addition to a polyethylene cover.</li><li>• If only shade cloth is used on the high tunnel, end walls are not required.</li><li>• The temperature and humidity in the high tunnel will be regulated by removing or rolling sides up and/or opening end wall access points. The temperature should be regulated for the planned and/or current crops in the high tunnel.</li><li>• Additional heating and/or cooling such as vents, fans, or heaters may be needed when temperatures are much higher or much cooler than what the polyethylene and/or shade cloth can regulate.</li><li>• Installation of vents, fans, or heaters must be included in the manufacturer’s design and recommendations.</li></ul>

Planned Dimensions and Use of the High Tunnel			
Height Height must be at least 6 feet in the center	Length	Width	Planned Growing Season
Supporting Practices			
High tunnels shed a large amount of water and can create drainage and ponding issues where none previously existed. Runoff will be directed away from the high tunnel structure to avoid ponding. Provide a detention basin, storage reservoir, or stable outlet when runoff from tunnel covers empties onto the ground surface with <b>potential</b> to cause erosion. <i>Refer to the corresponding narrative and design in the plan for additional information on the specified supporting practices.</i>			
<b>Supporting Practices Needed to Prevent or Treat Excess Ponding and Runoff:</b> <input type="checkbox"/> Critical Area Planting <input type="checkbox"/> Mulching <input type="checkbox"/> Roof Runoff Structure <input type="checkbox"/> Diversion <input type="checkbox"/> Underground Outlet <input type="checkbox"/> Heavy Use Area Protection <input type="checkbox"/> Waterway <input type="checkbox"/> Other:		<b>Supporting Practices to Further Improve Plant Health and Vigor:</b> <input type="checkbox"/> Conservation Crop Rotation <input type="checkbox"/> Irrigation Water Management <input type="checkbox"/> Salinity Management <input type="checkbox"/> Nutrient Management <input type="checkbox"/> Mulching <input type="checkbox"/> Cover Crop <input type="checkbox"/> Integrated Pest Management <input type="checkbox"/> Other:	

**Operation and Maintenance:**

Managing a tunnel requires intensive and vigilant attention by the producer. All operation and maintenance instructions provided by the high tunnel manufacturer must be followed.

- Periodically inspect the high tunnel and repair, reinstall, or replace, as needed to accomplish the intended purpose.
- Manage the structure in a manner that limits wind and/or snow damage. Close sides and ends before storm events. In areas that receive snow and ice, close the structure prior to winter weather.
- Remove snow and ice from the structure cover and sides promptly to prevent structure failure. When the structure is at serious risk of collapse, consider slashing the plastic cover to relieve pressure and save the framework.
- Perform soil tests regularly to monitor nutrients and to monitor salt build-up. The soils under the immobile high tunnels may require periodic “flushing” to remove salt build-up. This is accomplished by removing the cover for a season to allow natural precipitation to infiltrate, or by artificially flooding the ground under cover.
- Seed all disturbed earth surfaces outside of the high tunnel and maintain the vegetation throughout the structure’s life. Maintain permanent vegetation or other soil cover as needed to control erosion. Inspect runoff control measures after every significant rainfall event. Repair promptly, as needed.
- Plan for proper disposal of the cover at the end of its useful life.
- Operation of equipment near/on the site shall not compromise the high tunnel structure or its cover.