



HydroCycle Vertical NFT Lettuce & Herb Systems



112920 Light Kit

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WARNING: Cancer and Reproductive Toxicity - P65Warnings.ca.gov

Revision date: 01.21.22

Important Information

READ THIS DOCUMENT BEFORE YOU BEGIN

Thank you for purchasing the 112920 light kit for the 10' vertical hydroponic system. When properly assembled and maintained, this product will provide years of reliable service. These instructions include helpful hints and important information needed to safely assemble the light kit. Please read and understand these instructions **before** you begin.

SAFETY PRECAUTIONS

- Wear eye protection.
- Wear gloves when handling the conduit.
- Use a portable GFCI (Ground Fault Circuit Interrupter) when working with power tools and cords.

REQUIRED TOOLS

The following list identifies the main tools needed to assemble the light kit. Additional supports and tools common to electrical work may be needed.

- Ratchet with socket set to secure conduit hangers to conduit.
- Socket or driver to attach to power drill for Tek screw installation.
- Marker and tape measure.
- Ladder or means to reach the highest level of the frame.



ASSEMBLY PROCEDURE

Following the instructions as presented will help ensure the proper installation of the light kit. The steps outlining the assembly process are as follows:

1. Verify that all parts are included in the shipment. Notify customer service for questions or concerns.
2. Read these instructions and all additional documentation included with the shipment **before** you begin (if present).
3. Gather the tools and assistants.

UNPACK AND IDENTIFY PARTS

The following steps will ensure that you have all the necessary parts **before** you begin assembly.

1. Unpack the contents of the shipment and place where you can easily inventory the parts. Refer to the Bill of Materials/Spec Sheets.
2. Verify that all parts listed on the Bill of Materials/Spec Sheets are present. If anything is missing or you have questions, consult the Pictorial Parts Guide and all diagrams for clarification, or contact Customer Service.

NOTE: At this time, you do not need to open the plastic bags containing smaller parts such as fasteners or washers (if equipped).



WARNING: CONSULT THE SERVICES OF A QUALIFIED ELECTRICIAN TO ADEQUATELY AND SAFELY WIRE THE LIGHTS TOGETHER AND TO CONNECT TO A POWER SUPPLY.

ALL ELECTRICAL CIRCUITS SHALL BE DESIGNED IN ACCORDANCE WITH LOCAL AND REGIONAL BUILDING CODES AND STANDARDS.

FRAME IS METAL! DISCONNECT THE POWER TO THE LIGHT KIT WHEN HARVESTING PLANTS OR COMPLETING MAINTENANCE.

CUSTOMER SUPPLIED MATERIALS

This light kit does **not include** the wire needed to connect each light fixture to the other. All additional wire, junction boxes, connectors, and miscellaneous items common to the installation of electrical lights and systems are to be supplied by the customer.

All additional electrical components needed to install this kit according to local building codes are supplied by the customer.

Hardware, conduit, and extension frame tubing are included *for the top level lighting*. See diagrams for Top Tier Installation near the back of this guide for details.

For low ceilings where there is no room for the extension framing, top tier lights are attached to the structure. Conduit and hangers to clamp light fixtures are included with this kit. Materials to suspend lights and conduit from the ceiling are supplied by the customer. Measure distance between top tier and ceiling to determine what additional materials are needed.

Examples showing ways to mount lights for top tier are found near the back of this guide.

Important Information

PICTORIAL GUIDE

The following graphics help identify the different light kit parts. (Light fixtures and light bulbs are not shown.)



ATTENTION: There are two different light bulbs included. After attaching light fixtures to the frame, install one type of each bulb in each fixture. **Attach all hangers and straps using the FA4455 Tek screws.**

Install 112920 Light Kit

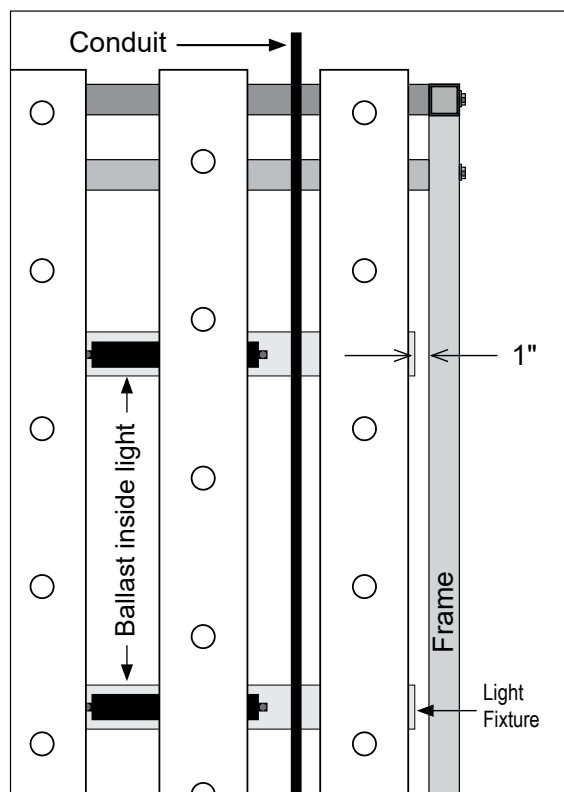
Diagrams in this guide show the recommended positions for conduits and light fixtures. Consult the diagrams for your system for additional details. Follow these guidelines when installing lights for your hydroponic system:

1. Review diagrams for your system: 4" wide channels (6 per level); 6" wide channels (5 per level).
2. Install top tier framing to existing system frame, if applicable.
3. Position conduits as shown and mark locations on frame. Minor adjustments between channels may be needed depending on final assembly of hydroponic system. **Do not secure conduits to frame until Step 5 is completed.**
4. Using conduit positions as a guide, attach two 113564 hangers to a light fixture and hang light from the conduits at one end of frame. Consult Top View diagram for your system for light fixture spacing.
5. Repeat procedure to install a light at the opposite end of the conduit pair to set conduit spacing. Once spacing is set, secure conduits at each end using 113565 straps and FA4455 screws. Use two (2) straps for each conduit. See diagrams in this guide.
6. Repeat steps to install all remaining conduits and light fixtures. **Remove channels from frame if additional room is needed.**
7. Consult the services of an electrical contractor to connect lights to each other and to supply power to light system.
8. Install one bulb type in each light fixture.

CARE AND MAINTENANCE

Proper care and maintenance of your light kit is important. Check the following items frequently and regularly:

- Check all wire connections and fasteners to verify that they remain tight.
- Do not climb or stand on the frame or channels at anytime.
- Verify that there are no leaks in the hydroponic system that could damage the light fixtures or bulbs.
- Do not allow water to drip onto the light fixtures.
- Repair all system leaks immediately.
- If the system is moved, inspect all parts and connections before reassembling and use.
- For replacement or missing parts, call 1.800.245.9881 for assistance.



Top view of upper tier showing the 11291950 system with GT50 channels.

Light fixture position is the same for the 11291970 system with GT70 channels. Conduit position will differ.

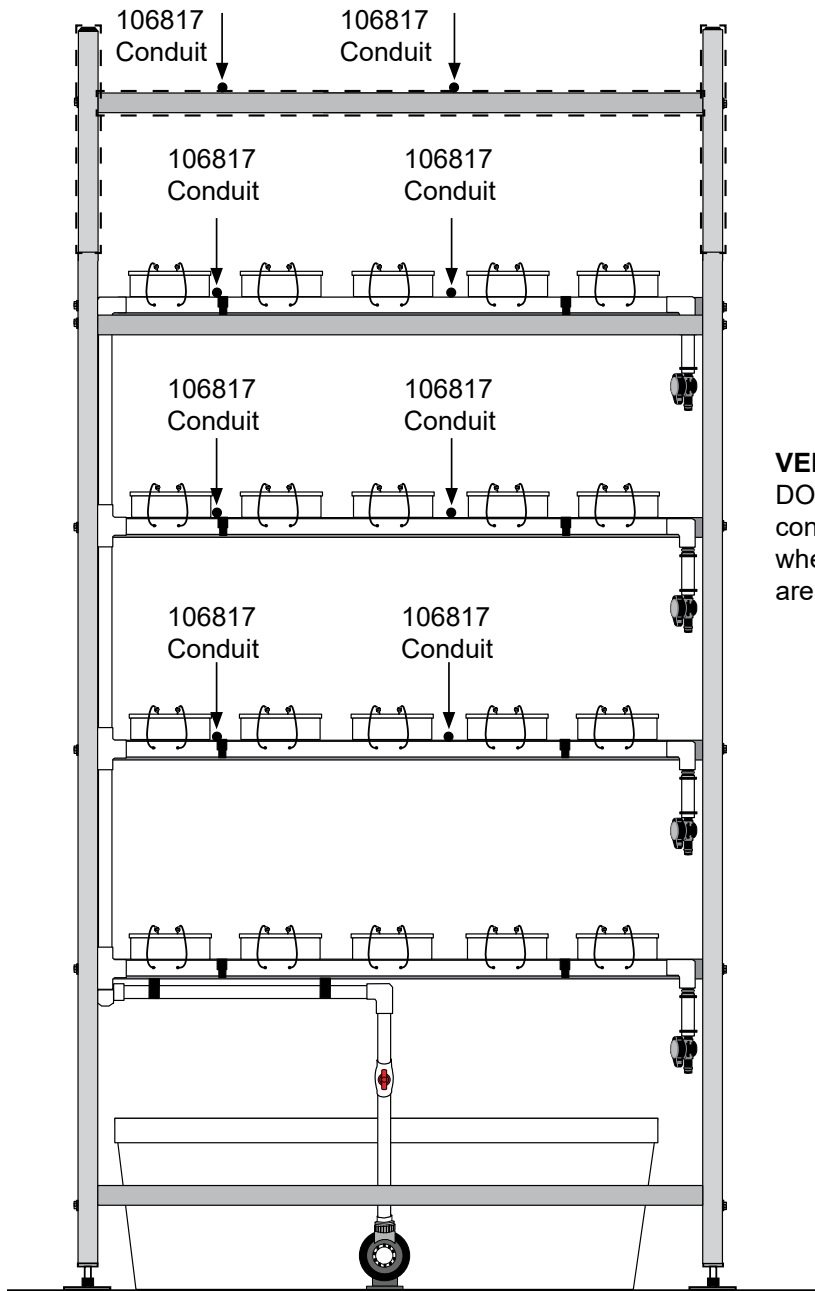
During installation, position and align all ballasts on the same side of the frame.

See diagrams on the following pages for details.

WARNING: DO NOT install conduit above where the ballasts are located!

Installation—GT70 Channels (#11291970 System)

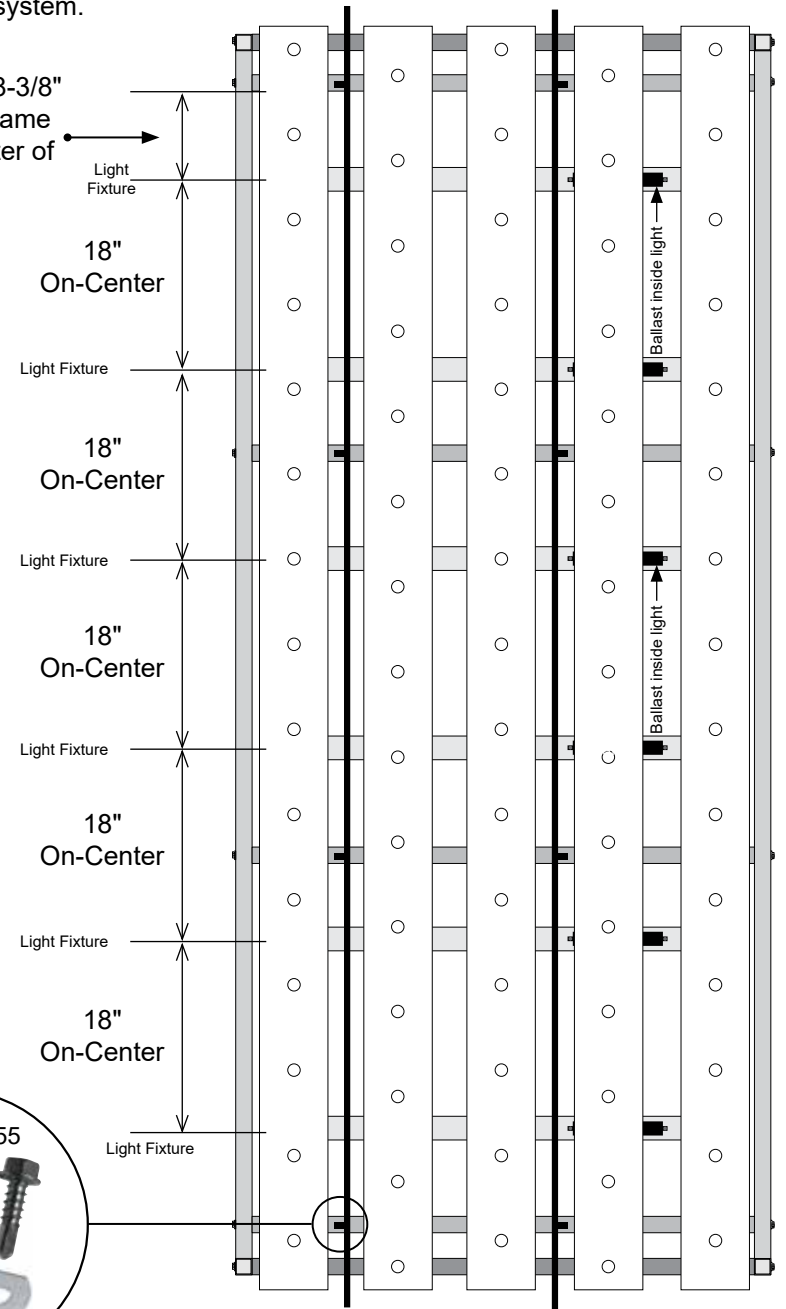
Use these diagrams to install the 112920 light kit for your 11291970 (GT70) hydroponic system.



End View—Supply Manifold (GT70)

Approximately 8-3/8" from inside of frame member to center of first light fixture.

VERY IMPORTANT:
DO NOT install conduit above where the ballasts are located!



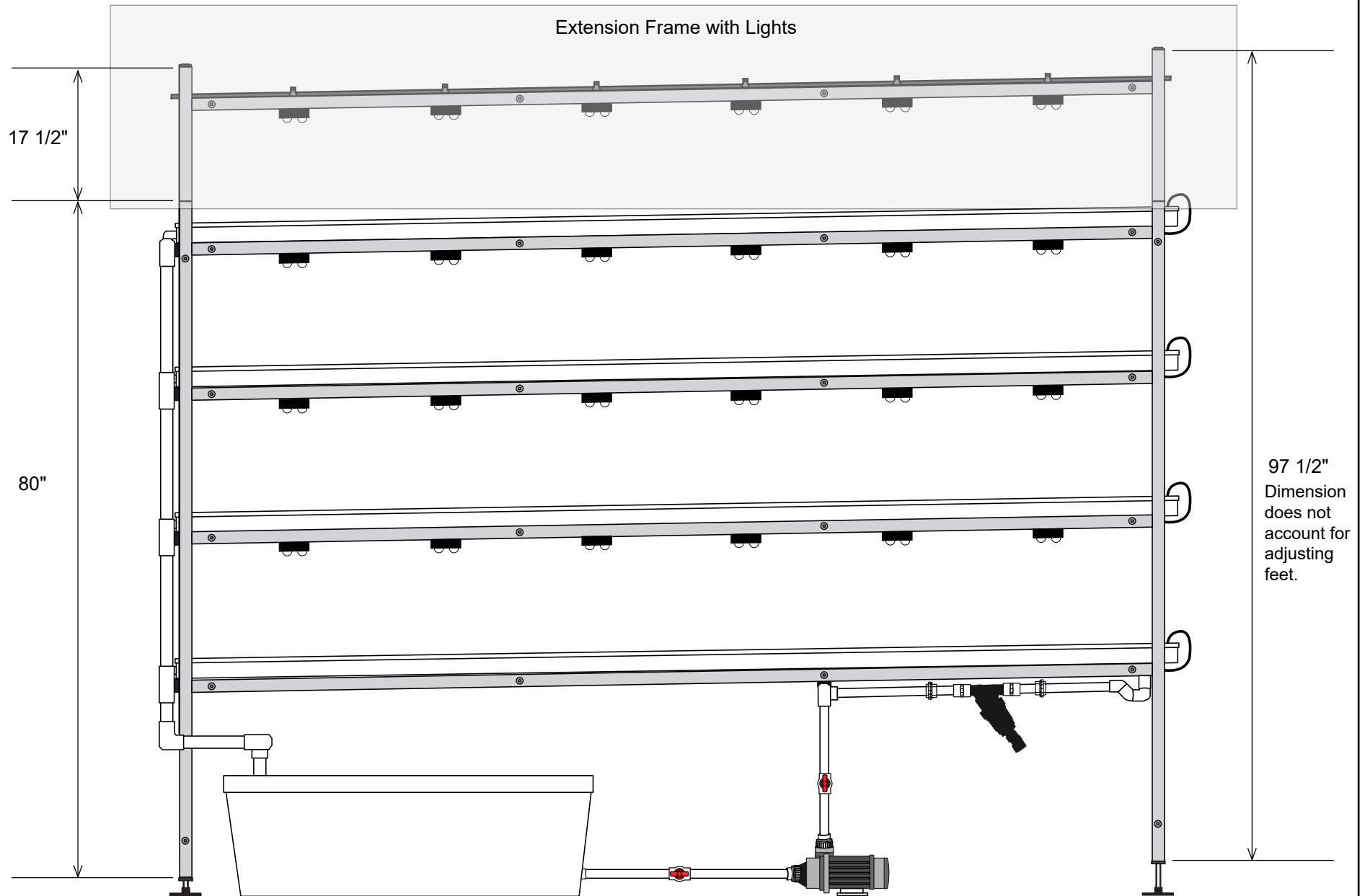
Top View of Upper Tier — Supply Manifold End



Top Tier Installation — Side View (for ceilings >9' high)

For buildings with ceilings higher than 9', light kit includes extension framing for tiered NFT frame. Review information on the next two pages to install extension frame to support lights for the top tier of NFT channels. If ceiling is too low for extension frame, consult the information for that option on page 8.

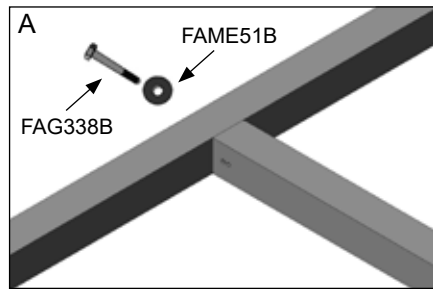
ATTENTION: Height dimension shown below **does not** consider room for adjustable feet.



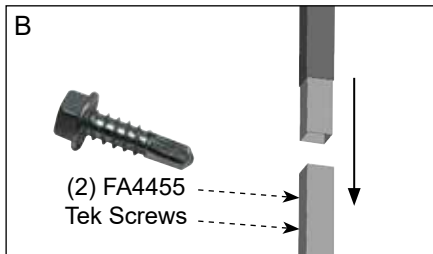
Installation—Upper Tier Framing (if applicable)

Assembly Steps:

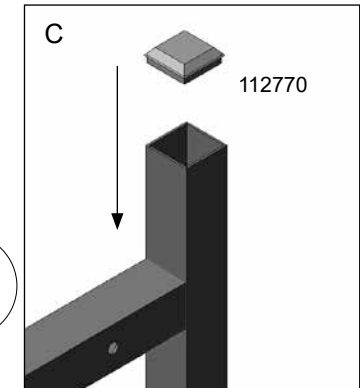
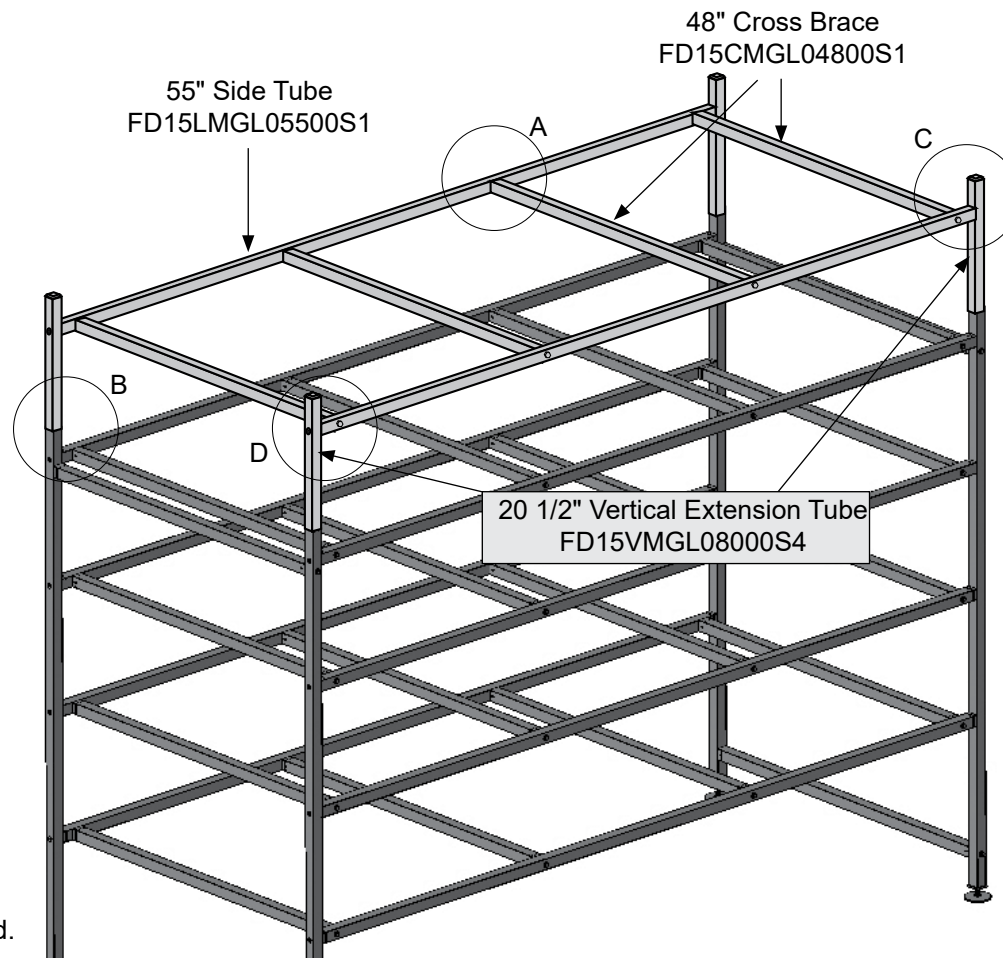
1. Measure height of ceiling to verify enough room exists for upper tier extension frame. See dimensions shown on diagram on previous page. **See next page for low ceiling installation options.**
2. Carefully remove finishing caps from tops of corner tubes on *original NFT frame*.
3. Assemble extension frame (included with light kit) as shown below and carefully set in place on top of original NFT frame; or, assemble in sections on the original frame. **Assistance is required for either procedure.**
4. Install finishing caps in tops of extension frame corner tubes.
5. Continue by installing lights as describe earlier in this guide for either the 11291950 or 11291970 NFT system.



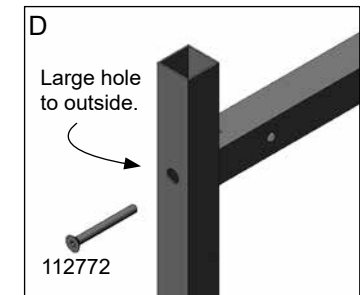
Use this hex bolt and washer combination for all cross brace connections.



ATTENTION: The vertical extension tubes include holes of two different diameters. Install larger hole to the outside to allow flat head bolt to sit flush with tube surface when installed.



112770 Finishing Caps (removed from top of existing framing and added to upper tier extension)



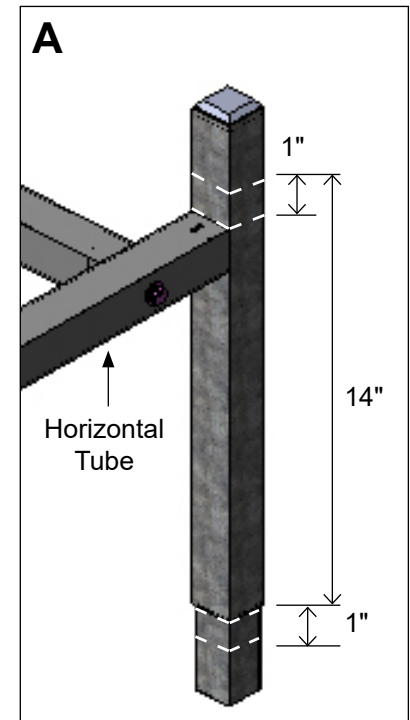
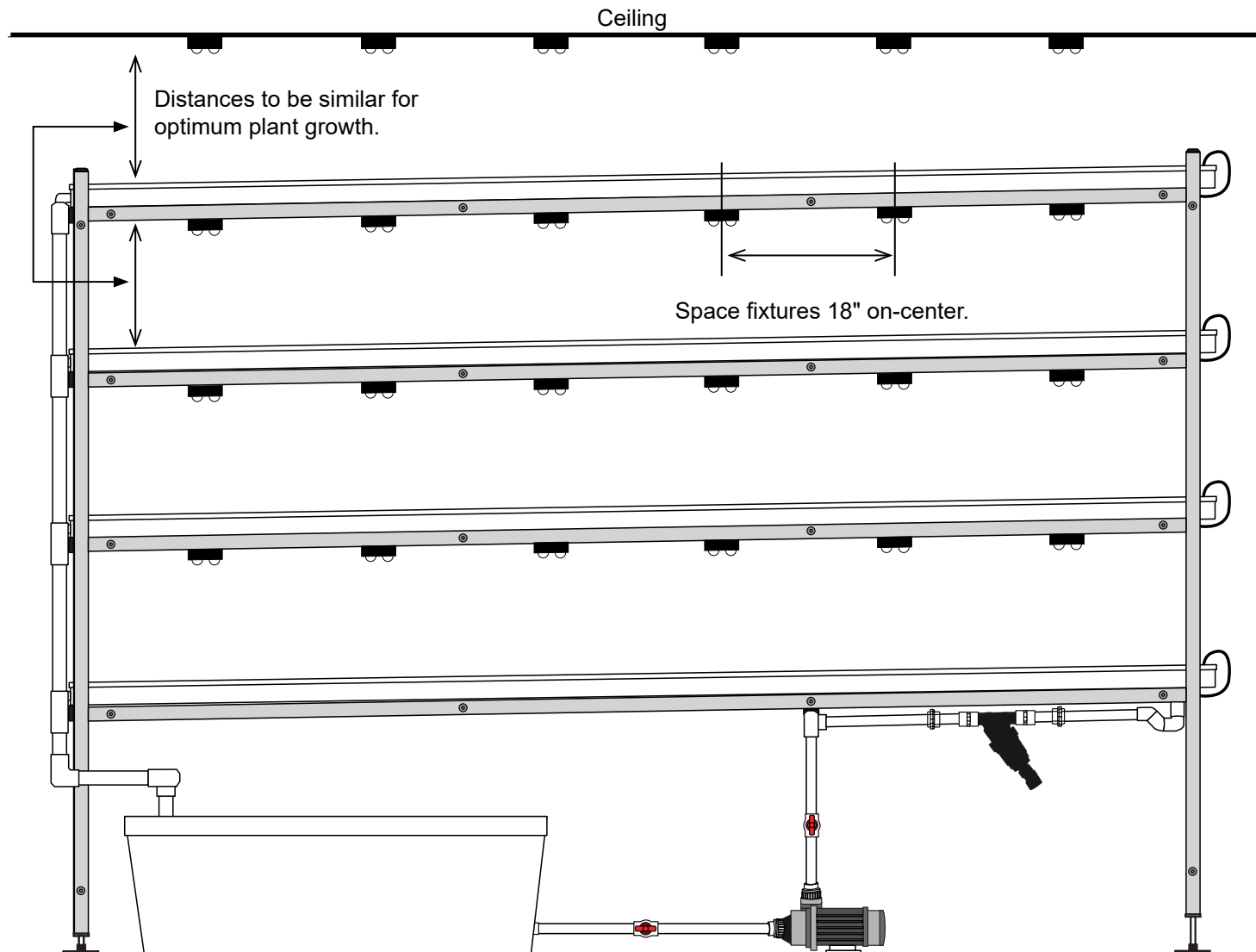
Use this flat head bolt for all side tube connections.



Top Tier Installation – Low Ceiling Option (Side View)

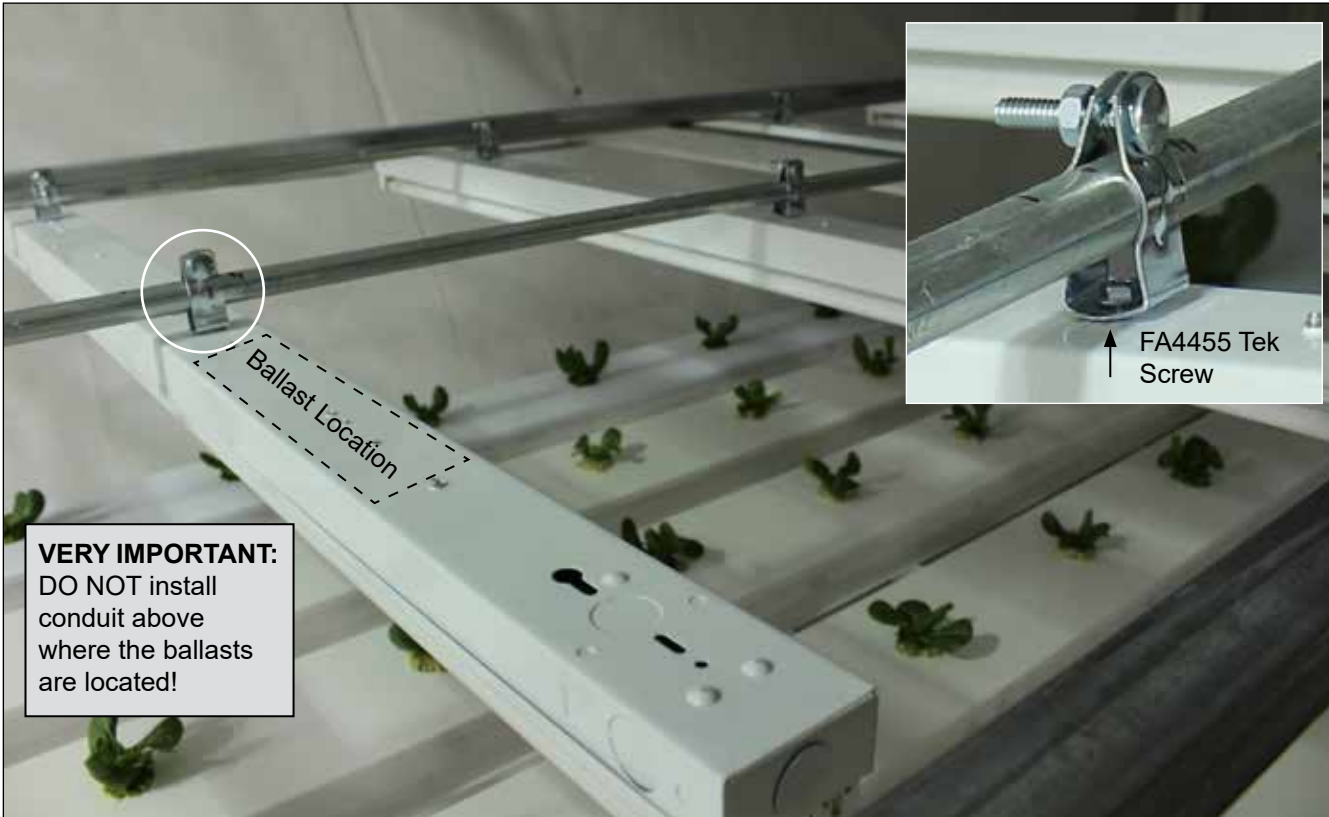
For buildings with low ceilings, attach upper light fixtures directly to ceiling when possible. For best results, distance between upper level plants and lights for that level should be similar to distance common to lower levels. Depending on plants, minor differences should not affect growth. Some kit parts will not be used when installing upper lights as shown below.

ATTENTION: When ceiling height is a few inches too low for extension frame, corner tubes can be cut to fit. Leave at least 1" extending above horizontal tubes to install finishing caps and at least 1" to 1-1/2" of the swaged/tapered end to fit into original frame. See diagram A below.



NOTE: Removing material from swaged/tapered end does not decrease installed length of tube, but it will help to install in places where ceiling is just a couple inches too low.

Additional Photos Showing Installed Light Kit



Additional Photos Showing Installed Light Kit



