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PLACES2040 PLANNING PROJECT AWARDS

LANCASTER URBAN FARMING INITIATIVE VERTICAL GREENHOUSE

TONO GROUP



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APPLICANT INFORMATION SHEET

Project Name: Lancaster Urban Farming Initiative Vertical Greenhouse

Award Category: Taking Care of What We Have

Project Participants: TONO Group
TONO Architects, LLC, Designer
Lancaster Urban Farming Initiative, Developer
Vertical Harvest of Jackson Hole, Project Partner
Lancaster Parking Authority, Project Partner

Web Links: [Lancaster Parking Authority Project Overview](#)

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PROJECT DESCRIPTION

The nonprofit Lancaster Urban Farming Initiative is working with local and national partners to produce 10-20 acres of fresh vegetables atop Prince Street Garage. Idealized as a vertical greenhouse in the heart of downtown Lancaster, the expansive glass and steel structure will demonstrate new initiatives in urban farming while exploiting otherwise underutilized public space. A public/private venture, it will produce year-round harvests of produce, herbs and flowering plants for local food distributors and institutions including LGH/Penn Medicine. The \$17 million project has been conceptualized by TONO Group and endorsed by the Mayor's office and Lancaster Parking Authority.

PROJECT NARRATIVE

Inspired by Vertical Harvest of Jackson Hole, Wyoming, the first ever vertical greenhouse of its kind in the United States, Lancaster City's vertical greenhouse project will establish large-scale urban farming in Lancaster County.

The project has been spearheaded by the Lancaster Urban Farming Initiative (LUFU). LUFU is a nonprofit founded by a group of entrepreneurs aiming to redevelop underutilized urban infrastructure to support farming initiatives and enhance the local community. When completed, Lancaster's Vertical Greenhouse will provide jobs to disabled and disadvantaged people, increase the availability of fresh produce to city residents, and beautify the downtown area.

Working with Vertical Harvest of Jackson Hole, the Lancaster City Mayor's office, and the Lancaster Parking Authority, LUFU has chosen Prince Street Garage, along West Orange Street, as the location for the project. Corey Fogarty, LUFU Board President, contracted with TONO Group to produce the conceptual design of the multi-story hydroponic greenhouse. The concept is a glass and steel structure. Expansive glass walls will absorb ample sunlight, as the greenhouse's upper levels will utilize vertical growing carousels, hydroponic and LED systems, and sustainable energy sources to produce up to 20 acres of vegetables.

Plans for this project will improve community infrastructure, utilize underperforming street space, promote locally grown crops, and demonstrate Lancaster County's commitment to world-class farming practices and technological advancement. It may generate national attention and act as a catalyst for further sustainable development in cities across Pennsylvania and the entire country.

PROJECT INSPIRATION

LUFU's Vertical Greenhouse concept was inspired by Vertical Harvest of Jackson Hole, Wyoming. The following images, provided by Vertical Harvest, illustrate the original greenhouse concept and successful construction along a parking garage in Jackson Hole.







CREATING MEANINGFUL PLACES

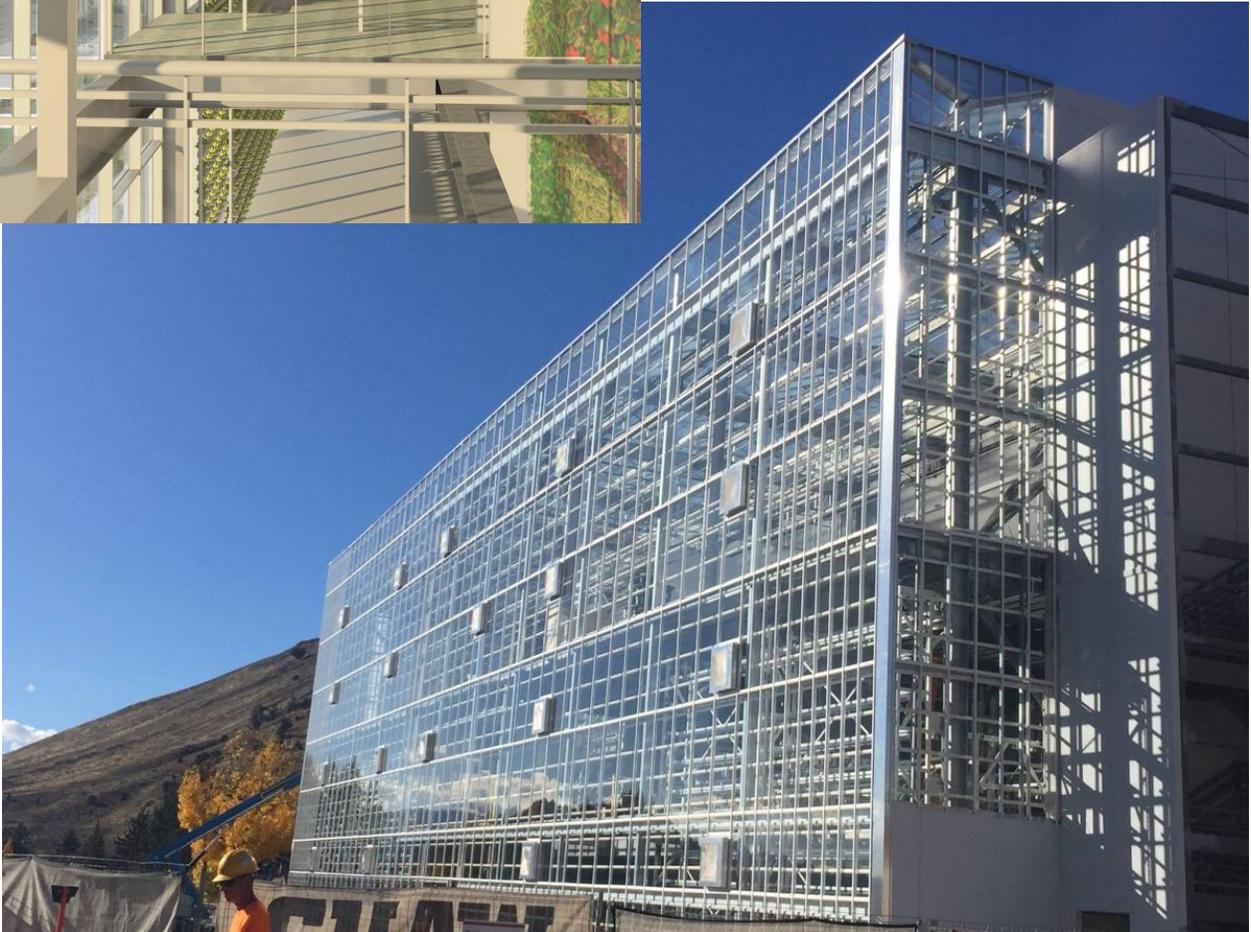
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RETRO
DEVELOPMENT

TONO
ARCHITECTS

PROTO
CONSTRUCTION

INTERIORS BY
deco



CONCEPTUAL RENDERINGS

LANCASTER
URBAN FARMING INITIATIVE

VERTICAL GREENHOUSE



LANCASTER
URBAN FARMING INITIATIVE

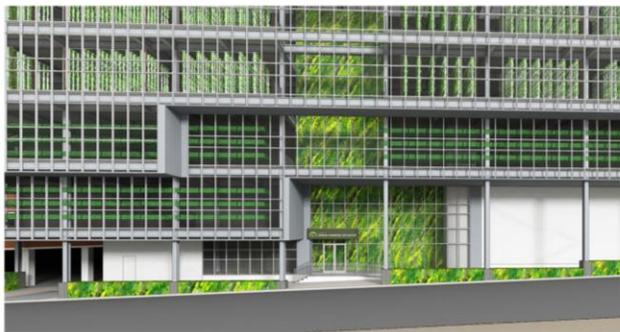
VERTICAL GREENHOUSE BEFORE & AFTER



BEFORE



AFTER



MAIN ENTRANCE



LIVING WALL ATRIUM



STREET VIEW

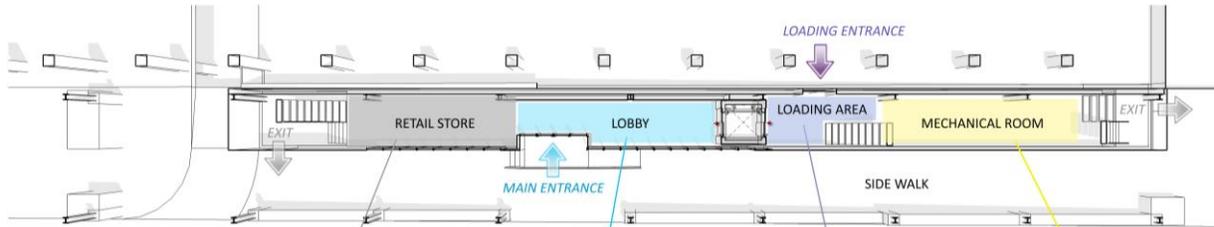


RAINWATER HARVESTING ROOF

PROPOSED PLANS

LANCASTER
URBAN FARMING INITIATIVE

VERTICAL GREENHOUSE 1ST FLOOR



YEAR-ROUND
COMMUNITY MARKETPLACE



LIVING WALL
IN LOBBY



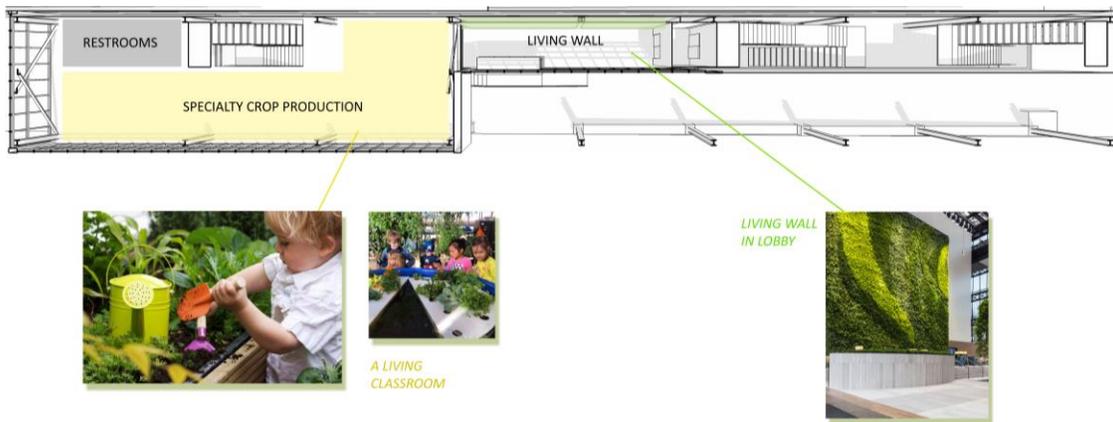
LOADING AREA



EXPOSED
MECHANICAL
SYSTEMS

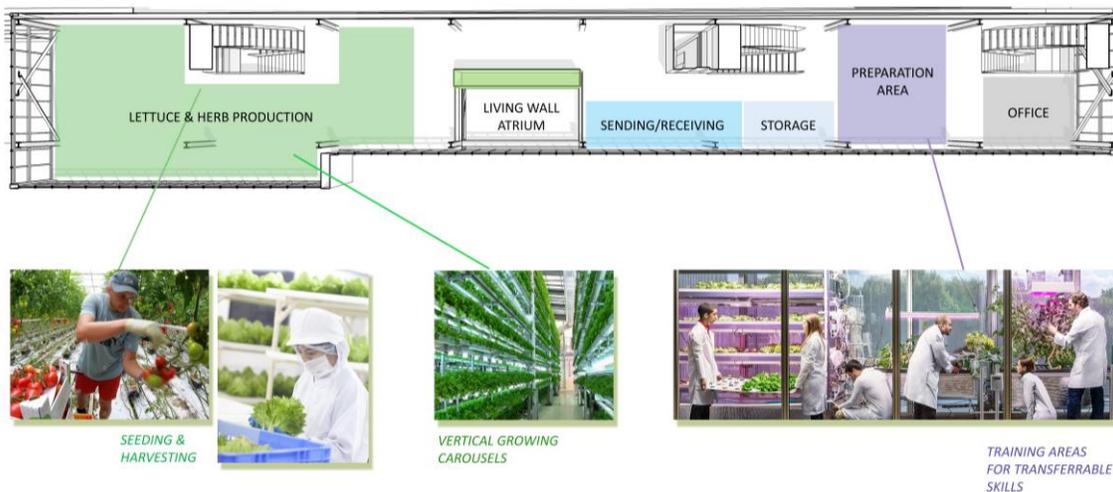
LANCASTER
URBAN FARMING INITIATIVE

VERTICAL GREENHOUSE 2ND FLOOR



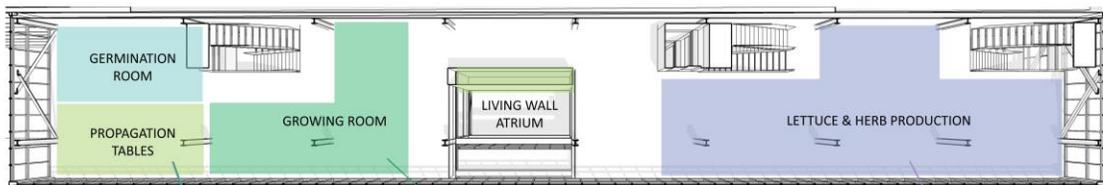
LANCASTER
URBAN FARMING INITIATIVE

VERTICAL GREENHOUSE 3RD FLOOR



LANCASTER
URBAN FARMING INITIATIVE

VERTICAL GREENHOUSE 4TH FLOOR



PROPAGATION
TABLES



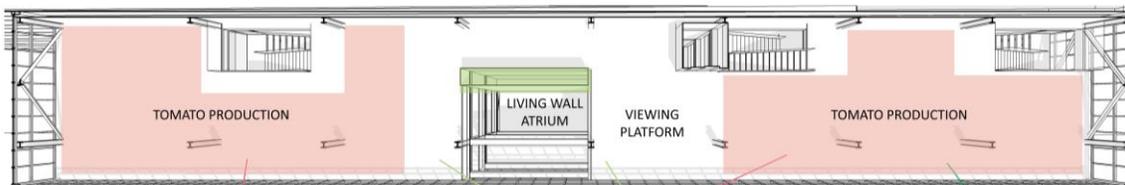
HIGH VOLUME
MICROGREEN PRODUCTION



VERTICAL GROWING
CAROUSELS

LANCASTER
URBAN FARMING INITIATIVE

VERTICAL GREENHOUSE 5TH FLOOR



YEAR-ROUND
COMMERCIAL
TOMATO PRODUCTION



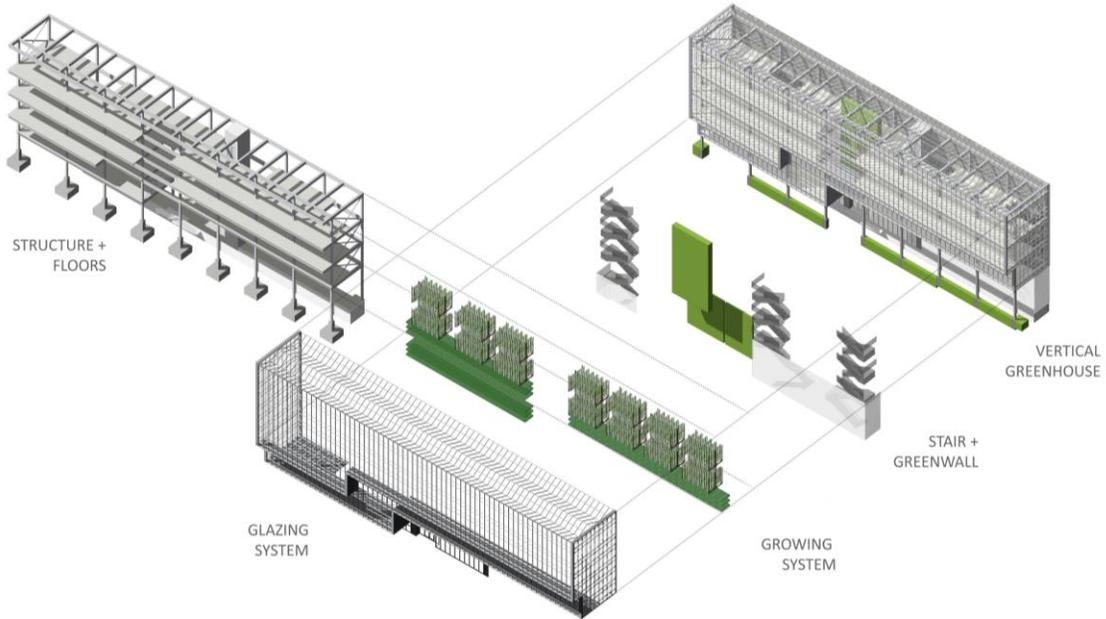
VISITOR
VIEWING PLATFORMS



ROTATING
LIVING WALL

LANCASTER
URBAN FARMING INITIATIVE

VERTICAL GREENHOUSE EXPLODED AXON



LANCASTER
URBAN FARMING INITIATIVE

VERTICAL GREENHOUSE SECTIONS



NEWS MENTIONS

The following are a sampling of news articles written in anticipation of LUF1's Vertical Greenhouse development.

[WGAL](#)

Lancaster parking garage could add vertical hydroponic greenhouse

Fresh produce, grown in a unique way, is a step closer to reality in the heart of downtown Lancaster.

[ABC27](#)

Vertical greenhouse plans move forward

[Central Penn Business Journal](#)

Downtown Lancaster one step closer to housing \$17M vertical greenhouse

[LNP](#)

Plans advancing for \$16M-\$17M high-tech greenhouse along Prince Street Garage



[HortiDaily](#)

Vertical Harvest to partner in Pennsylvania project:

US(PA): 60,000 sq.ft. vertical greenhouse to bolster Lancaster's less fortunate

Inspired by Vertical Harvest in Jackson Hole, a group of Pennsylvania entrepreneurs has announced an ambitious plan to realize a similar community-supporting vertical glasshouse downtown Lancaster. By partnering with their industry peers in Wyoming, the group soon hopes to break ground for the construction of the 60,000 square feet project on the side of an existing parking garage.

[Project Green Lancaster](#)

Bringing Lancaster County's Farming Heritage Back to the City