

"LIVING BUILDING" AIRPORT IN SAN JACINTO

San Jacinto's "Living Building" Airport "15 Minute Community"

A development team composed of Robert Betancourt, Lindblad Architects Office, and consulting engineers, are forming a non-profit public interest association, the Center for Living Building 15 Minute Communities - San Jacinto, that is a consortium partner of demonstration grant-funded community investors, to deliver a successful development, construction, occupancy and operation of the first-ever realization of "Living Building" concepts, applied to an Airport, or, in our implementation, Electric Aircraft Field, (EAF) and a low density "15 Minute Community" that encircles the EAF, where daily needs are within a short walk, bicycle or transit trips, centered on the EAF, located [two miles] from San Jacinto's central business district.

Our EAF and "15 Minute Community" are based on a "Living Building" concept in which ecological resilience and sustainability are regenerated on the EAF site and in the surrounding "15 Minute Community," to address habitability challenges of extreme climate disruption.

The airport hangar, operations, amenity, ancillary space are subterranean, to allow airport activities to function economically, with drought and atmospheric river extreme weather, with ever rising, fatal temperatures on the surface.

The EAF is located on [nine acres between North Sanderson Avenue and Ramona Expressway].

Our proposed airport has a grass runway with the hangar subterranean, highlighting a control tower with rammed earth splayed walls, as the only building above grade.

As a consortium partner, the Soboba Band of Luisenô Indians will own, administrate, operate and manage the EAF and pilot training base, with assistance from Hemet's 59th Squadron of California Wing Group 3, Civil Air Patrol, to ensure addressing and solving the current shortage of military and commercial pilots to fly aircraft, now, approaching 100,000, by the introduction of electric aircraft such as the Pipistrel Alpha Electro, designed for pilot training.

Pick up revision updates here:

The EAF, featuring a field of native grasses, with light-weight electric aircraft, mitigates noise, while recharging the groundwater aquifer.

Just three aircraft accommodate eight to nine training flights per day, with a small solar photovoltaic array and high capacity chargers.

We selected the electric Pipistrel for our motorized glider pilot training, in compliance with Federal Air Regulations part 20. [See footnote 1]

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Our EAF provides the Civil Air Patrol program for youngsters, aged twelve to fourteen, enrolled in the motorized glider flight program, to attain private pilot status by age sixteen. [See footnote 2]

The electric aircraft are lowered to the subterranean hangar and hoisted to the surface runway by two separate circular elevator platforms, one for arriving aircraft, and one for departing aircraft. Both platforms are situated adjacent to the control tower, which is of rammed earth construction. Cable guided electric tow motors process aircraft to chargers, hangar storage, and flight departure.

Charging the Pipistrel training aircraft can be completed in one hour with a 20 kilowatt charger. The six passenger Aspire Tailwind commuter aircraft, equipped with a faster charger, provides quicker turnaround for shuttling passengers between San Jacinto and nearby regional airports such as LAX and John Wayne.

Our EAF is also envisioned for the advent of electric flying cars, such as the Xpeng X2, that flies for 35 minutes on a three hour charge and Electra's hybrid-electric short-takeoff-and-landing aircraft, promising far lower operating economics than electrical vertical aircraft.

Electra expects the nine-seater to operate from downtown spaces as short as just over 300 feet, opening up new urban and regional air services such as #airtaxi that aren't viable today. [See footnote 3]

Our EAF's #vertiports infrastructure embraces Boeing and Wisk's self-flying, #eVTOL (electric vertical takeoff and landing) air taxi, enabling passengers to skip traffic, getting to their destination affordably, safely yet faster, fulfilling urban air mobility, UAM principles. [See footnote 4]

Our formation of a non-profit public interest association will contract and finalize preliminary design development building and site plans to secure grant applications approvals.

An immediate financial return is realized from a revenue stream by finding buyers for site-recovered sandstone, comprising an estimated 71 one-mile-long trains of gondola rail cars filled with site sandstone, to underwrite project costs.

A geotechnical investigation of the nine acre building site will determine the allowed depth of the 22 foot high subterranean round shape, the dynamic structural load capacities, for subterranean hangar, groundwater aquifer, above grade rammed earth control tower, for our 140,000 square foot, EAF hangar, housing approximately 51 aircraft.

Whether borehole tunneling, or other methods of subterranean sandstone excavation are suitable to meet our site condition requirements, is also to be determined by the soils and geology investigation.

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An estimated 327,000 cubic yards of subterranean sandstone are to be excavated, to create the hangar, with a diameter of 580 feet.

The above-grade landing and take-off field is irrigated by an subsurface drip irrigation system of gray water supplied by adjacent housing.

The field of native grasses can be cut and harvested for animal food supplement, adhering to our "living building" concept, with local economic and ecological benefits, by training new pilots, skilled in flying decarbonized, zero emission and quiet aircraft.

Funding sources for San Jacinto's "Living Building" EAF and "15 Minute Community"

Infrastructure funding for the "Living Building" originates from the Inflation Reduction Act of 2022, US Department of Transportation, the Federal Aviation Agency's (FAA) Airport Improvement Program, along with other federal and state agency appropriations.

Consortium partners, including the Soboba Band of Luisenô Indians, Center for Living Building 15 Minute Communities - San Jacinto, Hemet's 59th Squadron of California Wing Group 3, Civil Air Patrol and the Green Coalition of San Jacinto, are seeking demonstration public and private grants from government and non-government organizations (NGOs).

Footnotes:

1. The Civil Air Patrol has been an auxiliary of the Air Force since 1947. In the new system:
 - At six flight hours, a glider license is obtained.
 - At twelve flight hours, a commercial glider license is obtained.
 - During the next flight hours, the "right of passage," or solo flight is completed.
 - At 20 hours, a check ride in a powered flight is completed for the PRIVATE PILOT Certificate.

Training pilots for electric motorized gliders would cost the AIR FORCE, which finances the aircraft, maintenance, training, Fifteen Thousand Dollars, versus gas-powered at Eighty Thousand Dollars, alleviating the need that twenty-four Squadrons compete for six planes.

2. For youngsters aged twelve to fourteen, enrolled in the Civil Air Patrol, at the same field, where Federal Air Regulation Part 20 training is completed, compliance with Federal Air Regulation Part 107 "DRONE License" is provided, with a small training area with obstacles, which meets the required "Ground School, " for achieving PRIVATE PILOT

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status, fulfilling the "Search & Rescue" part of the original and ongoing mission of the Civil Air Patrol, to locate and rescue missing persons and to assist FEMA in damage estimates of local disasters.

3. <https://www.ainonline.com/aviation-news/video/estol-aircraft-advocate-says-hybrid-power-and-blown-lift-beat-vertical-powered-lift>

<https://youtu.be/PjdmNp-xL3U>

4. <https://wisk.aero/news/press-release/uam-conops/>

<https://youtu.be/yrEeCp5xJj8>

- New footnote:
100,000 Pilots
10,000 Mechanics
1000 ATC
- Maybe Content: keep the squash, mulberries, forming a biophilic EAF perimeter fence, that's a linear food forest.
- Have grazing sheep, shaded by a cross hatch of solar photovoltaic collectors.