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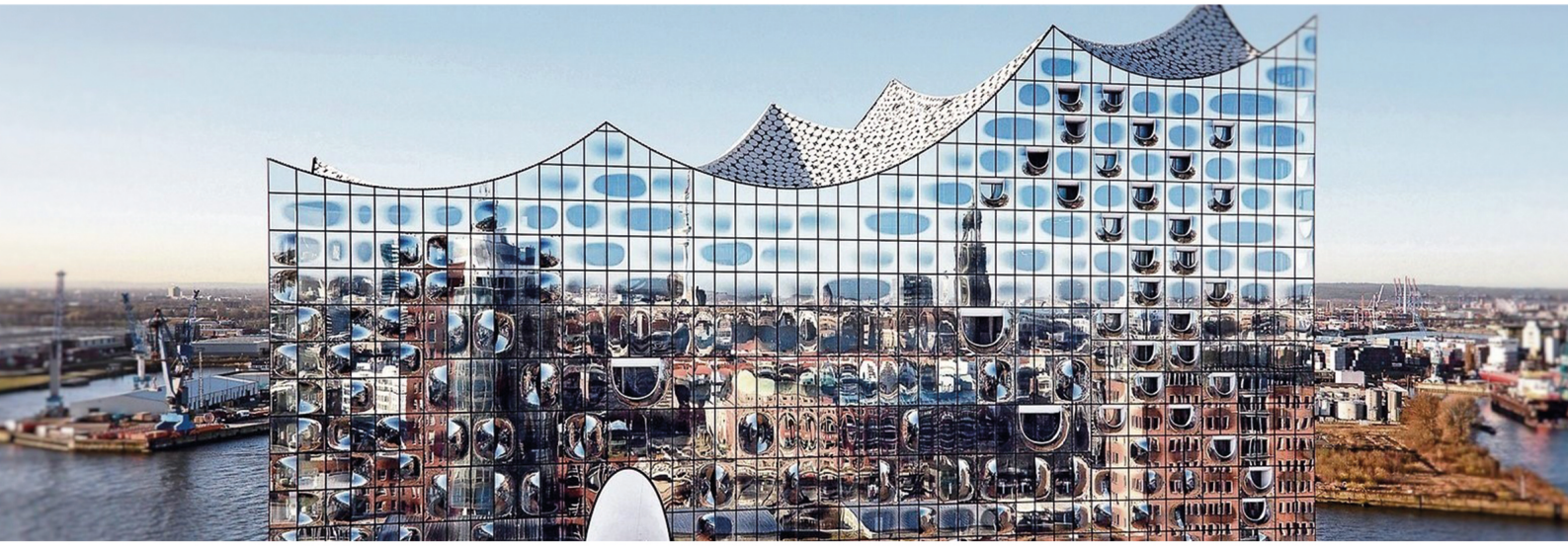

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CONTENT

Funding for home ownership for low-income demographics – the Field of Dreams EcoCommunity in Utah

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Abstract

Habitat for Humanity is an international non-profit housing organization that focuses mainly on the construction of simple, decent and affordable homes for low-income demographics in the United States and 70 countries around the world. This paper explains Habitat for Humanity's home building funding process in general and Salt Lake Valley Habitat for Humanity's funding process for the development and construction of the Field of Dreams EcoCommunity in particular. The Field of Dreams EcoCommunity is a 20-unit, affordable residential micro-neighborhood located in Kearns, Utah, in the Northern Utah Cold Climate Zone. A holistic, collaborative, and interdisciplinary approach to building led to the carefully designed, highly energy-efficient, sustainable, resilient, and cost-effective development that fulfills Habitat's goals on the building scale and with regard to revitalizing the immediate neighborhood. The Habitat model showcases one successful path to fund home ownership among low-income demographics.

Keywords: Affordable Home Ownership Funding, Affordable Housing, High Performance Housing, Collaborative Design Process, High Performance Building

1. Introduction

Habitat for Humanity (Habitat) is an international, non-government and non-profit housing organization that was founded in 1976 as a grassroots effort on a community farm in Americus, Georgia by Millard and Linda Fuller. The organization works in 1,400 local U.S. communities and 70 countries around the world and is involved in home building, home retrofits, neighborhood revitalization, legislative advocacy, disaster relief, and international housing finance. Habitat states that its vision is of a world where everyone has a decent place to live, with the organization working towards such vision by building strength, stability and self-reliance in partnership with people and families in need of a decent and affordable home. The organization sees itself as a movement that engages large numbers of people in addressing poverty in housing [1]. In doing so, Habitat follows a strict nondiscriminatory policy of family and homeowner selection where neither race nor religion is a factor in the organization's choice.

To further reach these goals, Habitat also provides affordable home loans and organizes more than two million volunteers each year to support its national and international building and/or retrofit activities. In its 42 years of existence, Habitat has built affordable homes for more than one million families or nearly seven million people worldwide, as well as repaired and rehabilitated countless homes through its disaster response and recovery efforts, where it works with local communities to address a variety of housing needs after natural disasters. In addition, the organization also provides resources and volunteer support in areas where those are urgently needed. In the area of advocacy activities, Habitat's main legislative priority is on affordable housing, raising awareness, and support to improve local housing markets for low-income families. Due to the size of the overall organization and its involvement in a multitude of activities, Builders' annual Top 100 List ranks Habitat repeatedly among the 20 largest homebuilders in the United States [2]. The organization was also ranked the seventh most valuable nonprofit brand in the Cone Nonprofit Power Brand Top 100 list [3] in 2009. Furthermore, Habitat was named the social services and nonprofit brand of the year in the two consecutive years 2015 and 2016 by the annual Harris Poll EquiTrend study, which measured the brand equity of more than 1,400 organizations across 148 categories [4,5].

Despite some misperception among the general public [6], Habitat is not a charity program - its funding comes from existing house payments, donations, fundraisers, their home improvement stores (ReStore) and

no-interest loans that are provided to the organization by Habitat supporters. New houses are built through volunteer labor or sweat equity as one of the prerequisites to be fulfilled by any future homeowners, as well as donated resources and money. Similar to regular market mechanisms, Habitat homeowners must provide a down payment to their house and make monthly interest-free mortgage payments, usually over a standard 30-year period.

Habitat also organizes and maintains the nonprofit Habitat Restores and donation centers, which is another component of their funding model. Owned and operated by the local Habitat affiliates, these home improvement stores further the ministry of Habitat by providing additional funding to the local Habitat chapters, thus helping them to reach their goals. The stores sell surplus and reusable building materials, home accessories, furniture and appliances to the public at a fraction of the retail price. The first Habitat ReStore opened in early May 1991 in Winnipeg, Manitoba, Canada, as a home improvement store. The first U.S. ReStore opened a year later in Austin, Texas. Today, the proceeds from over 930 ReStores are being put towards affordable homebuilding in local communities. However, the proceeds from the ReStores do not completely fund Habitat's mission and related activities.

Figure 1: Volunteers working on the installation of the Structural Insulated Panel walls on the Field of Dreams

Even though Habitat's main activities are often perceived as localized volunteer construction, the organization addresses regional and national issues too, including its major effort to respond to natural disasters such as Hurricane Katrina in 2005. Five years after the disaster, Habitat had built 2,219 new homes in the Gulf Coast region, repaired 994 houses, and helped clean out an additional 2,500 homes to prepare them for rehabilitation. During the 2007 – 2010 U.S. mortgage foreclosure crisis, and based on the organization's incipient funding relationship with the federal government, Habitat took a major role in carrying out Neighborhood Stabilization Program (NSP) efforts to rehabilitate bank-foreclosed properties [7]. The organization's acceptance and utilization of government funding is another financial support pillar, where Habitat is a mission-focused participant in federal programs to and through local governments, accepting and using direct (financing and grants) and indirect (provision of tax foreclosed and other government properties) subsidies, with the aforementioned NSP being an example of a successful partnership with a government program.

2. The Field of Dreams Eco-Community in Kearns, Utah

There are no places in the U.S. where a full-time federal minimum wage job that pays $7.25 per hour will pay for a median one-bedroom apartment; there are about 30 states in the U.S. where even two federal minimum wage jobs will not cover those costs. As a result, low-income households most likely live in older buildings with inadequate performance measures, including a lack of adequate insulation and low-performance

windows, in combination with high air infiltration rates. In addition, HVAC systems are outdated, which can contribute to serious health issues due to mold or asbestos being used to insulate old duct systems. Safety problems can include life-threatening issues such as carbon monoxide poisoning or fire hazards. Lead-based paint that chips off walls and ceilings presents another serious challenge, especially for young children. Average U.S. households spend about 4% of their income on household energy, whereas low-income families spend anything from 17% to more than 50% of their income on the household energy component [8]. This creates a paradox in which those families who would benefit the most from efficient buildings are often the least able to make any upgrades – this lack of funding, in addition to rental dependencies that are frequently found among such demographics, often prohibits energy-efficient housing measures from reaching those low-income populations. Furthermore, the 'invisibility' of specifically passive energy efficiency measures in buildings alters particularly the U.S. public's perception towards diminishing, if not entirely ignoring, energy efficiency's importance. The 'insignificant' impact that a single standard or below-standard residential building might have on the energy consumption of an entire country makes people ignore the fact that the U.S. residential energy use represents 22% of the total energy consumption of the country and that Americans spend $230 billion annually on residential energy [9].

Figure 2: An aerial overview of the Field of Dreams Eco-Development in the township of Kearns, Utah, USA

With the Field of Dreams Eco-Community (FoD) development in Kearns, Utah, the development team around Salt Lake Valley Habitat for Humanity (SLVHFH) recognizes the importance of integrating passive energy design and energy-efficiency into the project to ensure that their clientele can live in healthy environments that will stay affordable into the future. With an average U.S. residential energy price increase of 2.72% per year since the year 2000 [10], building to a 70% higher energy-efficiency and durable standard will considerably protect families from future rising energy costs, which helps low-income families with an opportunity to build wealth through their cost savings. According to SLVHFH, 60% of its clientele are single women with an average of two children, with the mothers working full-time to ensure the family's survival. Every dollar saved by such families can go towards educational support for their children, to provide them with better future opportunities in their lives.

SLVHFH has also recognized that energy efficiency offers many societal benefits, including non-energy benefits such as improved health and safety, indoor air quality, pollution and noise mitigation, community revitalization, and enhanced energy reliability through reduced stress on fossil fuel dependency. Another co-benefit is economic growth. Energy efficient buildings can lead to higher property valuation and tax revenues and potentially lower government outlays on programs such as the Low-Income Energy Heating Assistance Program or utility energy subsidies [8].

FoD is spearheaded by SLVH4H's executive director Edward Blake, the project client and developer, Atelier Jörg Rügemer (AJR), the project architect and energy consultant, and most recently the University of Utah's School of Architecture, which utilizes the project development as a living laboratory and learning campus for

its newly developed Design+Build Salt Lake City program. As a result, the project turned into a collaborative and interdisciplinary community research project, where research questions about efficiency, performance, materials and components, resilience, and Post Occupancy monitoring are covered within the academic setting of the University of Utah [11].

To make the Field of Dreams EcoCommunity a successful case study development, the project team defined the project's goals ambitiously:

- Development of a resilient, sustainable and affordable micro-neighborhood.
- Each unit to be designed to a three bedroom, 1½ bathroom, **1,500 sq.ft. (**139 m^2) house.
- Maximum hard cost to not exceed **$150,000** including cost of land for the future homeowner.
- Daily energy consumption to heat and cool the house and to provide domestic hot water (DHW) must be equal or less than **$1.50** (this does not include metering and general utility fees).
- Design and construct the buildings to the U.S. Office of Energy Efficiency & Renewable Energy Solar Ready standard, which requires a building to be designed and built with integrated electrical and mechanical features that will streamline a future integration of photovoltaic panels [12].
- Use of robust and durable construction and construction materials, to protect low-income homeowners from increased maintenance cost during the lifetime of the building.
- The process of building the homes would be suitable for integrating volunteers from the community.
- Innovative design to be reproducible to serve other Habitat chapters, low-income families, and to help the local residential construction market move towards better-performing, more affordable homes.

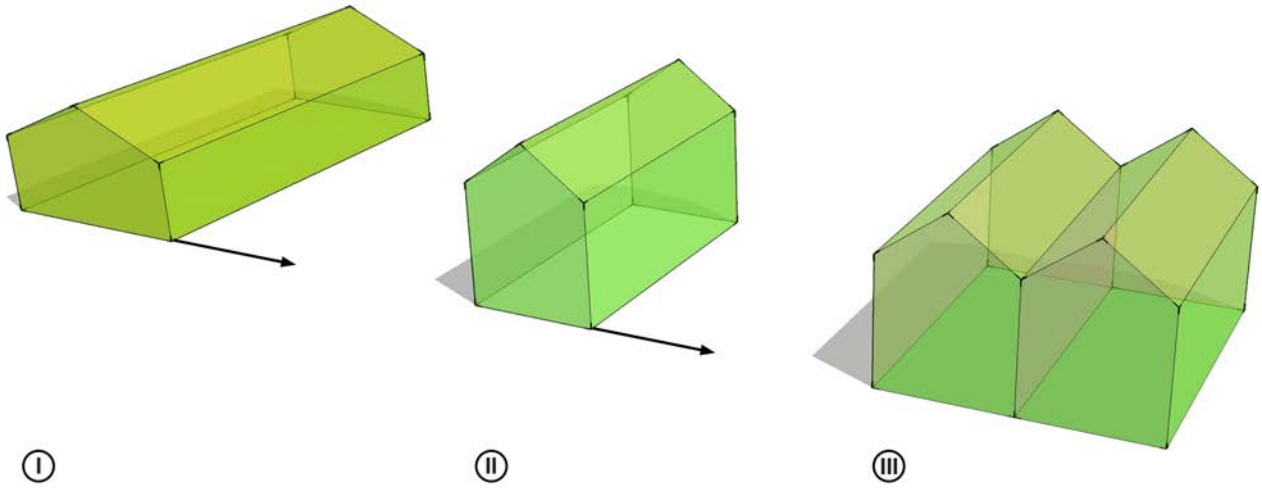

Figure 3: AJR's conceptual approach for building densification

The project was planned on the former *Kearns American League Western Boys Baseball field*, which is located in the township of Kearns, about 11 miles (18 km) south of downtown Salt Lake City. It was a Kearns community epicenter before falling into blight until 2014, when it was purchased by SLVHFH for $190,000. The parcel is surrounded by typical, semi-suburban, 1.5 story tall, single family residential buildings. The neighborhood consists of a mixed White (60.2%) and Hispanic or Latino (31.7%) population, with an average age of 29.5 years [13] – it therefore represents an ideal community for simple, affordable starter homes and typically attracts first-time home buyers, even though the target group for the typical Habitat house differs from that described above. The parcel is about 87,000 sq.ft. or roughly 2 acres (8,100 m^2 or 0.81 hectare) in size. Originally zoned to R-1-6000, it allowed for a maximum density of 10 single family detached residences, which would have provided an acceptable setting for the typical single-story SLVHFH homes. However, to get closer to the cost goal of a maximum hard cost of $150,000 per home for the project alone, the 'business-as-usual' strategy would have cut $81,200 out of an already very tight budget for land and land development costs, leaving a cost of $68,800 for the actual building itself.

By proposing a 100% higher density in two-story buildings that are organized in twin homes, property-related cost could be cut by 50%, leaving roughly a $110,000 hard cost for each unit, an amount that is much more realistic to reach the project goals. In working closely with Salt Lake County Development Services, which is the legal jurisdiction that manages zoning changes and is responsible for zoning and building permits in Kearns, as well as the civil engineers, the team was able to rezone the land to an R-1-3000, which now allows 20 units on 3,000 sq.ft. (280 m^2) individual parcels. With Utah anticipating the fastest population growth of all states in the U.S., the Salt Lake metropolitan area along the Wasatch Front is under enormous pressure to provide more affordable housing over the next decades. By providing homes for twice as many families, the FoD strategy will make a small contribution to reducing stress on the market, and, more importantly, will provide a research-based case study project that documents the rather difficult and time consuming process of rezoning and urban densification for affordable housing.

Figure 4: Official project groundbreaking in September 2016

The FoD development includes a large central green space that is situated between the north and south row of the twin homes. It is designed to attract children to the playground and adults for a stroll and community engagement activities around the grounds. The space under construction will provide a 12,000 sq.ft. (1,100 m^2) open play field for sports, recreation and community activities, two boccé courts, a picnic area with a pavilion, and two playgrounds for toddlers and children. The central green area will be open to people beyond the FoD community, thus providing a neighborhood recreational space to people in the immediate surroundings of the site, which, in combination with FoD's long-term ownership model, will stabilize the neighborhood. The community design will also teach water conservation through a partnership with the Jordan Valley Water Conservancy District. Finally, the inclusion of personal and common drip irrigated planter boxes will encourage home food production, saving active families about $30 per month during Salt Lake's growing season from May to October.

Once completed, the state-of-the-art efficient home development will house approximately 60 people, two thirds of which will be children. With its community approach, the project is also a neighbourhood revitalization initiative that will mitigate the blight of the neighborhood and makes an investment in the adjacent homes to provide critical repairs for low-income families within the Habitat model. Furthermore, with SLVHFH being a central player in Salt Lake County's 'The Future We Choose' initiative in the Kearns Township, FoD becomes a key component in the endeavour to make Kearns a vibrant future community. 'The Future We Choose' goals include enhancing Salt Lake County's quality of life, facilitating collaborative partnerships to realize regional opportunities, and delivering excellent customer satisfaction through personalized service [14].

With two units near completion and two more under construction as of summer 2018, the FoD development

is well on its way to becoming a successful case study model for affordable, energy-efficient, and resilient housing. Subsequent outreach activities will be pursued to present the project results and its Post-Occupancy performance findings to the professional as well as academic community, the building industry, building professionals, other Habitat chapters, and consumers to help move the residential market in the Intermountain West and beyond towards high performing, affordable, and therefore resilient homes.

3. FoD Funding Model

Salt Lake Valley Habitat for Humanity's main focus is to provide affordable home ownership opportunities for families making 30-60% of the area's area median income (AMI). According to the Federal Income Limits FY2016 and the United States Census Bureau, Salt Lake County's Median Household Income in 2016 was at $50,353 [15]. This means four-person families were eligible for the program when making between $22,150 to $44,250 per year.

SLVHFH is also active in other areas of the Habitat general model. This includes operating its own ReStore in a large warehouse on the west side of Salt Lake City, the repair and rehabilitation of existing homes, neighborhood revitalization, advocacy for legislation, and most recently the focus on high-performance houses that perform 70% or better compared to the code standard building, simply through means of site-related passive to active design (Passive House driven design coupled with optimized HVAC technology).

Figure 5: SLVH4H annual gala fundraiser, during which participants can sponsor entire building components

Based on their need for decent housing, future Habitat homeowners are selected by the local, Habitat-affiliated organization through the Family Service Committee, comprised of members of the community. Applicants are selected into the Habitat Homeownership based on three main qualification criteria:

- *Income* (30-60% AMI, based on family size)
- *Need* (home interview process)
- *Willingness to partner* ('sweat equity')

Once accepted into the program, Partner Families begin working on their required sweat equity hours, which are 225 per person or 450 per couple. Hours are completed in various ways, such as on the construction site, building alongside volunteers and community members; in the ReStore; in special events; and others. Future home owners also have to participate in required Financial Literacy and Homeownership Workshop courses to prepare for homeownership, where they learn how to manage and maintain their home, how to manage home mortgages and finances, and, in FoD's specific case, how to utilize a high-performance passive home and its systems to their best advantage. A Habitat house is then purchased through an

interest-free, 30-year Habitat for Humanity loan [16]. This enables families to disengage from rental dependencies (with moving frequencies as high as twice a year due to rent increases) and to advance into home ownership. Monthly mortgage rates are often considerably lower than the previously paid monthly rental fees, and the families can now take pride, ownership, and responsibility over their very own building and community, which stabilizes the lives of the entire family and especially those of the children. Since the Habitat house was built from funds that were either fundraised, donated, came from existing mortgage payments, or were proceeds from the local ReStore, the monthly house payments now help building homes for future homeowners, pay for repair and rehab of existing homes, and help to revitalize neighbourhoods.

Figure 6: Field of Dreams EcoCommunity on Display as part of the exhibit "Where Children Sleep" at The Leonardo Museum, Salt Lake City

SLVHFH homeowners have very similar mortgage responsibilities to any homeowner who purchased a home on the regular market. This includes making mortgage payments on time, with continued delinquency not being accepted. It includes maintaining active homeowner insurance on the Habitat house, performing maintenance and repairs to keep the house in good condition, and to keep the building as their primary residence. In addition, homeowners of the Field of Dreams Units are expected to help build a strong micro-community and neighbourhood, with items such as home, yard, and access road appearance, and other communal responsibilities defined in a Field of Dreams specific Home Owner Association (HOA), which will become part of each contract for each unit.

New Habitat homeowners will experience immediate positive equity due to the fact the home is dedicated to them at a sales price that is typically below market rate. However, homeowners must reside in the home for a minimum of 5 years before they are eligible to own a portion of it. The equity is provided on a sliding scale defined in a recapture agreement. The longer the homeowner stays in the home, the more equity they have when housing market sales prices increase. All equity belongs to the homeowner when the mortgage is satisfied. Since the loan is interest-free, each payment, which is a principle payment, belongs to the homeowner.

SLVHFH is currently transitioning into an additional requirement for homeowners that incorporates a deed restriction when the home is sold. Affordable housing is scarce in Utah, thus creating a considerable affordable housing crisis in Salt Lake County and along the Wasatch Front. The need to supply future affordable housing options has created an opportunity to build more Habitat for Humanity homes by partnering with local municipalities if it will be required that such developments remain affordable regardless

of the owner(s). Future contract documents will therefore include language that requires the home to be sold only to buyers making an annual income of 80% of the AMI or less. Public funding for affordable housing has often benefitted developers, with the affordable aspect of this housing typology often lost in the next transfer of owner and title. In more affluent areas, affordable homes are often leased by a landlord at high rental rates. With a deed restriction, those homes remain in the affordable housing stock, with the owner enjoying equity if the AMI increases.

To realize the 20-unit FoD project, the funding model includes the following line items and dollar amounts that have been or will be raised:

Land purchase	$190,000 (raised)
Design, permits, engineering	$60,000 (raised)
Infrastructure • (roads, utilities, sewer, water, sidewalks)	$365,000 (raised)
Connections • ($5,000 per unit)	$100,000 (secured through Federal Home Funds)
Landscaping (preliminary and final) • Gift in kind estimated $65,000 • Jordan Valley Water Conservancy oversight • A 'water wise' demonstration project [17]	$97,000 (partially raised)
Sum cost for land and development for 10 units (original zoning)	$812,000 / 10 = 81,200
Sum cost for land and development for 20 units	**$812,000 / 20 = 40,600**
Home construction hard cost • 20 homes at $120,000 each • Full home sponsorship: $85,000 • Smaller contributions make up remaining $35,000	$2,400,000 (partially raised)
Maintenance • (4 years until complete HOA funding)	$48,000 (future expense, to be raised)
Area Neighbourhood Revitalization • Restricted annual funding • 6 years at $150,000 per year • Salt Lake Country Green and Healthy Homes (GHHI) Program [18] • Wells Fargo Foundation • University of Utah Hospital	$900,000 (partially raised)
Sum	**$4,160,000**
19,000 volunteer hours, estimated value:	$285,000

About 35% of the overall sum ($1,484,254) in hard cost has already been secured though different supporters along the Wasatch Front. An additional $335,000 has been received as in-kind donations. All other monies will be continuously raised through additional sponsorships and fundraisers (including SLVHFH's annual Fundraising Gala), as well as the continuous flow of income through the aforementioned Habitat model. With Habitat often being supported by the building industry, the team expects a possible donation for solar PV panels in the future, which will turn the passive high performance housing design into active site-net-zero buildings.

Figure 7: University of Utah School of Architecture students at the site

4. Conclusion

The Field of Dreams Eco-Community is well on its way to becoming a successful showcase model for funding, developing, designing and building a small community of 20 affordable, state-of-the-art, high performance houses for low-income demographics. Exceeding the standard approach of just providing simple shelter, the development considers its place within the community and offers opportunities that reach far beyond any standard community development. The most powerful tool to reach the project goals is its collaborative and integrated design and development process, which, in tandem with energy modeling and a close collaboration between all stakeholders, delivers context-based and regionally-rooted architecture that opens up and invites a community in, rather than being exclusive and enclosed.

Figure 8: Abandoned Kearns American League Western Boys Baseball field with Kearns American Sign in 2014, before construction of the Field of Dreams EcoCommunity started

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