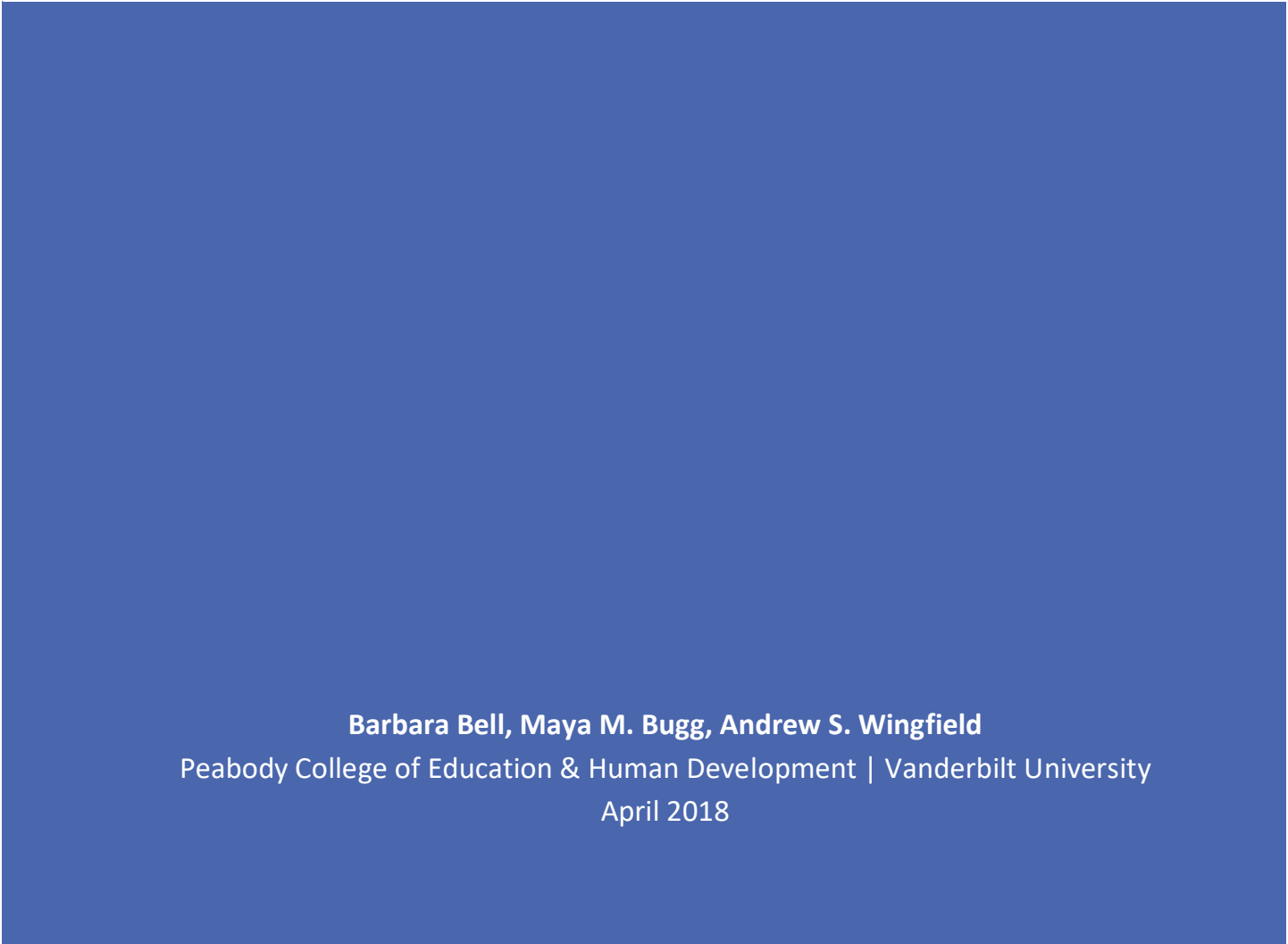




Sterling Ranch, Colorado: Fostering a Culture of Lifelong Learning through Strategic Partnership Development



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Table of Contents

Executive Summary	4
Project Questions	5
Summary of Key Findings and Recommendations	6
Introduction	7
Context & Demographics	8
Project Questions	9
Project Outcomes	9
Project Deliverables	10
Literature Review	10
Introduction	10
Theory of New Urbanism	11
Implementation of New Urbanism	12
Innovation Districts/Urban Redevelopment	14
Conceptual Framework	15
Methods & Data Plan	15
Qualitative Design	16
Quantitative Design	19
Limitations	20
Qualitative & Quantitative Findings	22
Discussion	34
Recommendations	39
Conclusion	42
Sterling Ranch Institute Proposal	43
The Sterling Ranch-Vanderbilt Institute of Innovation, Sustainability & Technology	47

Request for Expression of Interest (RFEI)	56
RFEI Evaluation Rubric	60
References	61
Appendix A: New Urbanist Communities	68
Appendix B: Innovation Districts/Urban Redevelopment	80
Appendix C: Interview Protocol	83
Appendix D: Quantitative Survey	90
Appendix E: Quantitative Analysis Tables	103

Executive Summary

This study explores the most effective approach for designing an educational ecosystem for a fledgling master-planned community that is grounded in an array of industry, community, and higher education partnerships. More specifically, this research provides recommendations to Sterling Ranch, Colorado, a technologically-advanced community that will eventually be home to over 40,000 residents. With an underlying focus on lifelong learning, this study makes recommendations for creating a wide array of educational opportunities through strategic community partnerships. Utilizing a mixed-methods approach, both the qualitative and quantitative components of this research are framed within Emily Talen's *The Social Goals of New Urbanism* (2002), which features three core tenets: community, social equity, and common good. Additionally, the constructs of New Urbanism, innovation districts, and urban redesign inform the framework of this study. The researchers visited six sites across four states and two countries to conduct interviews with area residents, developers, and other community stakeholders to discern best practices in community development, and a survey was distributed to potential Sterling Ranch residents to gain insights into local preferences, priorities, and values.

The research findings reveal several key themes. Specifically, community partnership development is best facilitated independently from the developer, which is just one of many stakeholders in a developing community. Likewise, partnerships must be intentionally created and interdependent, establishing a culture of collaboration and amplified impact. Notably, within this ecosystem there must be at least one founding anchor partner that demonstrates indefinite investment in the community. At the local level, priorities of potential Sterling Ranch residents emphasize a demand for educational opportunities focused on health and wellness and STEM education for both youth and adults. Lastly, potential Sterling Ranch residents indicate that racial diversity within their community is important.

Given the findings of this study, the authors recommend that the Sterling Ranch Development Group should: (1) establish a nonprofit institute to serve as the conduit for partnership development across the community; (2) facilitate an RFEI* process to establish partnerships among industry, higher education, and community entities with an emphasis on identifying one or more anchor partners in the early years; (3) consider applying for a workplace charter school, which would allow the families of Sterling Ranch employers to access educational resources within the community where their parents work. Additionally, as many of these industry and community partners have internal initiatives focused on diversity and inclusion, Sterling Ranch may be able to leverage these efforts in attracting and retaining a more diverse population of residents; (4) conduct an evaluation of the political landscape to determine what policies need to be in place at the state and local level to best facilitate the specific and broader goals of the pending institute and its partners.

*Request for Expression of Interest

This study seeks to address the following questions:

1. What are the priorities of potential Sterling Ranch residents for industry, community, and higher education partnerships to support lifelong learning in the community?
2. What industry, community, and higher education partnership opportunities exist to support lifelong learning and an aligned educational ecosystem for Sterling Ranch residents?
3. What are the best practices and mechanisms for fostering partnerships among diverse stakeholders that maximize outcomes for residents?

Key Findings

1. The **development of partnerships** is critical to a robust and sustainable community.
2. Partners must share in some **exchange of resources or risk** in order to fully embrace collaboration within the community.
3. The opportunity to live in Sterling Ranch is limited by financial means; however, the amenities of Sterling Ranch may be accessed by others through **low cost programs that provide access to educational opportunities** within the community.
4. **Potential Sterling Ranch residents value diversity**. Although socioeconomic diversity may be difficult to achieve, further research is needed to identify how partnerships may be leveraged to attract residents of color.
5. Potential Sterling Ranch residents **value the interests of the community over individual interests**. In other words, the integrity of the community comes first.
6. While potential Sterling Ranch residents identified a high interest in a variety of educational opportunities with **STEM education and health and fitness as top priorities**, the low survey response rate limits the generalizability of these findings.
7. **Multiple and robust industry, community, and higher education partnership opportunities exist to support lifelong learning** within an aligned educational ecosystem.
8. **Best practices** for establishing industry, community, and higher education partnerships include:
 - commit to collaboration
 - start early
 - cultivate key anchor institutions
 - cultivate ongoing feedback
 - intentionally cultivate a community dedicated to diversity
 - provide flexible space for collaboration
 - establish an institute as the primary vehicle for developing the aforementioned best practices.

Key Recommendations

From these findings, we recommend that Sterling Ranch:

- 1) **Establish a nonprofit** institute to serve as the conduit for partnership development across the community.
- 2) Initiate a **Request for Expressions of Interest** (RFEI) process to establish partnerships among industry, higher education, and community entities with an emphasis on identifying one or more anchor partners in the early years.
- 3) Consider applying for a **workplace charter school**, which would allow the families of Sterling Ranch employers to access educational resources within the community where their parents work. Additionally, as many of these industry and community partners have internal initiatives focused on diversity and inclusion, Sterling Ranch may be able to leverage these efforts in **attracting and retaining a more diverse population of residents**.
- 4) Conduct an **evaluation of the political landscape** to determine what policies need to be in place at the state and local level to best facilitate the specific and broader goals of the pending Institute and its partners.

We conclude with a draft model of **The Sterling Ranch-Vanderbilt Institute of Innovation, Sustainability & Technology** and provide a draft RFEI template along with a rubric for evaluation of RFEI responses.

INTRODUCTION

The Sterling Ranch Development project is a continuation of a Vanderbilt collaboration to assist the Sterling Ranch Development Company in designing a life-long educational ecosystem for a master planned 21st century community in Douglas County, Colorado, part of Metropolitan Denver. The collaboration between Sterling Ranch and Vanderbilt is part of a multi-year, Trans-Institutional Program (TIPs) grant program that involves Vanderbilt’s School of Engineering, College of Arts and Science, and Peabody College of Education and Human Development working together in the research, development, design and implementation of technology, data analytics, and educational ecosystem to “enhance sustainability, resilience and quality of life” (Vanderbilt, 2015) for future residents of this new master-planned community.



Photo: Envisioning of Sterling Ranch

CONTEXT & DEMOGRAPHICS

Sterling Ranch is situated within Douglas County, which has the highest median income west of the Mississippi River. In Douglas County, 57.5% of residents hold bachelor’s degrees, and the average household income is \$105,759, the 10th highest in the United States (U.S. Census, 2016; Hende, 2017). Conversely, only 3.4% of residents live below the poverty line. Among the County’s residents, 90.9% are white; 8.5%, 1.4% and 4.6% are Latinx, African American, and Asian, respectively (Census, 2016). Douglas County--and the Greater Denver Area as a whole--are growing rapidly, and unemployment rates in Colorado are among the lowest in the nation. While Douglas County citizens are predominantly wealthy, well-educated, and white, industries in the area are seeking to attract a diverse workforce that will feel at home in the Sterling Ranch community.

Upon completion, the Sterling Ranch community will occupy 3400 acres, contain 12,000 homes, and support a population of 40,000 residents (About Sterling Ranch, 2018). Sterling Ranch’s vision is to create a multi-use and amenity-rich community featuring authentic Colorado architecture in a community dedicated to innovation, advanced technology, and environmental stewardship and sustainability. One-gigabit fiber infrastructure will provide connectivity across the community. Installed in each home will be a state-of-the art STEWARD

system (co-designed by Sterling Ranch and Siemens) to allow residents to track and manage home energy, water usage, and home security through smart technology. In addition, the STEWARD system will allow residents to understand the environmental impact they have in the context of the greater community.

Similar to other master-planned communities, Sterling Ranch will maximize design to facilitate a sense of community, increase access to shared spaces, and encourage a connection to natural resources. Unique to Sterling Ranch is the opportunity to build a life-long educational ecosystem that links K-12 education to higher education and to industry leaders within the Greater Denver Area. With the second largest aerospace economy in the nation (MDEDC, 2018), along with major industries including science, technology, and healthcare in the area, Sterling Ranch seeks to facilitate partnerships with companies such as Lockheed Martin, Siemens, National Renewable Energy Labs, Xcel Energy, and UC Health. Higher education institutions are abundant in the metropolitan area and are becoming increasingly interested in developing partnerships with Sterling Ranch. Specifically, the University of Colorado System, Denver University, Colorado School of Mines, Arapahoe Community College, and Red Rocks Community College currently have expressed interest as potential educational partners within Sterling Ranch. The diversity of potential partners offers a rare opportunity to create a model for

comprehensive and productive, cross-sector partnerships to support the to-be-developed education ecosystem.

PROJECT QUESTIONS

In order to develop partnerships to build an educational ecosystem for Sterling Ranch, this study addresses the following project questions:

1. What are the priorities of potential Sterling Ranch residents for industry, community, and higher education partnerships to support lifelong learning in the community?
2. What industry, community, and higher education partnership opportunities exist to support lifelong learning and an aligned educational ecosystem for Sterling Ranch residents?
3. What are the best practices and mechanisms for fostering partnerships among diverse stakeholders that maximize outcomes for residents?

PROJECT OUTCOMES

Last year's capstone project focused on recommendations for K-12 schooling within the Sterling Ranch community; this project presents an unprecedented opportunity to design and implement a planned, lifelong educational ecosystem within an innovative community focused on environmental sustainability and connectivity. The outcomes of this project are two-fold:

1. To determine and disseminate best practices for establishing industry, community and higher education partnerships within a developing master-planned community. These best practices are used as a framework and for application to future community developments.
2. To design a model for partnership development grounded in the core tenets of New Urbanism that will allow Sterling Ranch to assess the short, mid- and long-term projected outcomes of its educational ecosystem and connections to area industries.
 - Identification of local and regional business and industry leaders whose partnership with Sterling Ranch will influence career-readiness and workforce development while concurrently encouraging lifelong learning among residents of all ages.
 - Proposed model for partnership development with supporting draft Request for Expression of Interest (RFEI) from Sterling Ranch to potential industry, community and higher education partners committed to the aforementioned goals.

PROJECT DELIVERABLES

Building on last year’s capstone (Baese & Rifkin, 2017), which generated recommendations for the development of a K-12 ecosystem responsive to the preferences of future Sterling Ranch residents, this year’s capstone team develops a set of recommendations and deliverables that include:

- Identification of industry, community, and higher education institutions whose partnership with Sterling Ranch will enhance K-12 education, increase college and career readiness, address residents’ desires for lifelong learning, and build upon the unique attributes of an outdoor-oriented and sustainably-built community.

LITERATURE REVIEW

INTRODUCTION

This project provides the opportunity to review current trends in urban development as Sterling Ranch stands at the precipice of the creation of a new community--a new small city--to support a growing workforce and to meet the educational and residential demands in the Denver Metropolitan area. Moreover, this project has national implications as an increasing number of millennials and baby boomers alike are choosing to move to larger cities and closer to urban centers. They are demanding walkable, amenities-rich, live-work-play communities to support their lifestyles. Higher education institutions, industry, and community developers are paying attention as they compete to attract and retain the talent of

the residents who desire to live in these communities (Congress for New Urbanism, 2018).

In order to understand the context of Sterling Ranch's desire to build an educational ecosystem to support community residents, this review of literature focuses on three primary areas: (1) the theory of New Urbanism, which is an urban design movement intended to create neighborhoods that are environmentally friendly and sustainable; (2) implementation of New Urbanism and its challenges; and (3) Innovation Districts which employ many of the new urbanist principles in urban redevelopment. Subsequent to a review of extant literature, a conceptual framework is provided.

THEORY OF NEW URBANISM

Mid-twentieth century urban development is largely attributed to the propagation of urban sprawl, inefficient land use, isolated or haphazardly-placed communities, and segregation by race and socioeconomic status. Planned developments in more recent decades have often embraced the concept of "new urbanism," which seeks to mitigate these effects by emphasizing environmental sustainability, better land use, and stronger community engagement among residents (Garde, 2004). A number of master-planned communities have been constructed with these ideals in mind, with many more slated for development.

The Congress for New Urbanism (CNU), founded by Andrés Duany and Elizabeth Plater-Zyberk, is an organization that has crafted 27 principles contained in the New Urbanism Charter to inform prudent community development (CNU, 2017). The CNU "views disinvestment in central cities, the spread of placeless sprawl, increasing separation by race and income, environmental deterioration, loss of agricultural lands and wilderness, and the erosion of society's built heritage as one interrelated community-building challenge" (2017). The Charter's principles to address the CNU's stated concerns are divided into regional, neighborhood, and block level recommendations and reflect broad ideals related to racial and socioeconomic diversity, sustainability, historic preservation, mixed use and zoning, and the physical health of residents, among others (CNU, 2017). Importantly, the full breadth of these principles is not typically reflected in the stated or achieved objectives of existing master-planned communities, which are often developed exclusively for high-socioeconomic residents and focus on high standards of sustainability and livability for only a select strata of society. This creates an evaluative scenario in which few, if any, case studies reflect attainment of the CNU's broadly-focused principles. New Urbanist communities visited included Aspern, Austria; Lake Nona, FL; Hampstead, AL; and The Villages, FL. Two additional communities, Celebration, FL, and Stapleton, CO, were studied but not visited.

These communities, ranging in size and development status, are more fully described in Appendix A.

IMPLEMENTATION OF NEW URBANISM

Evaluating the attainment of New Urbanism ideals in master-planned communities proves to be difficult as the communities are built over several years or decades, and significant cooperation must exist between designers, developers and local and regional planners, as well as residents. In *New Urbanism as Sustainable Growth: A Supply Side Story and Its Implications for Public Policy*, Garde conducted a quantitative and qualitative analysis in two key areas: *the endorsement of the principles of New Urbanism and the satisfaction with implementation of the principles of new urbanism* among designers, developers, and planners of master planned communities (2004). The research included a survey of individuals involved in the design, development, and approval process of New Urbanist projects along with semi-structured interviews to gain deeper insight into the issues surrounding the principles and implementation of New Urbanism.

In terms of endorsement of the principles, the results showed strong evidence of agreement in ranking of principles, while the level of support varied among designers, developers and planners. Overall, the survey showed considerable agreement across groups regarding the rankings of the selected principles of New

Urbanism. Diversity, defined as the “bringing together of people of diverse ages, races and incomes,” ranked 4th of 10 principles most promoted and accepted by designers, developers, and planners (Garde, 2004, p. 157).

Satisfaction with the implementation of the principles of New Urbanism showed more variation among designers, developers, and planners, perhaps indicating a tension between the ideals of New Urbanism and resultant communities built. Planners and designers differed in views of the implementation of New Urbanist principles while developers appeared to concur more with designers, as compared to planners (Garde, 2004, p.158). However, there appeared to be overall agreement between designers, developers, and planners in their rankings of implementation of New Urbanist principles in development projects. As Garde (2004) surmises, “the principles that focus more on neighborhood design aspects are most frequently implemented, while principles that have regional focus are least implemented” (p.158). In terms of the principles of affordable housing and diversity, these principles fell in the rankings and were among the least adopted. Garde states “these results suggest that the goal of provision of affordable housing has been accomplished in only some New Urbanist communities” (Garde, 2004, p.162). Overall, the survey suggested that while there was variation among groups, there was likewise

considerable agreement in the rankings of implementation of New Urbanist principles.

Garde's work suggests that while New Urbanist principles are more easily implemented in the local neighborhood level, more work must be done to extend the principles outside the neighborhood and into the region (2004). Similarly, while the principles of socioeconomic and racial diversity are highly valued, there is a significant gap between aspiration and implementation.

This implementation gap is also demonstrated within the quantitative study performed by Barbara Brown and Vivian Cropper (2001). Unlike Garde's study of designers, developers and planners, Brown and Cropper focus their work on residents of a New Urbanist suburb (NUS) near Salt Lake City, Utah. This study emphasizes three of the primary design features of New Urbanism (density, mixed use, and pedestrian orientation) as well as the stated behavioral and psychosocial goals associated with each of these features. What is different from other attempts at evaluating the claims of New Urbanist

design (such as Plas & Lewis' 1996 study of Seaside, Florida), is that Brown and Cropper establish a comparison group of a standard suburban subdivision (SSS).

“...while New Urbanist principles are more easily implemented in the local neighborhood level, more work must be done to extend the principles outside the neighborhood and into the region”

Regarding methods and findings, Brown and Cropper solicited survey responses via mail from the NUS and SSS residents, yielding 65% and 67% completion rates, respectively (Brown & Cropper, 2001).

One key limitation here is that they were unable to effectively access residents in apartment buildings; therefore, residents occupying apartments were not included in this study. This is seemingly a major flaw given the New Urbanist focus on mixed-use and varied residential options. Despite this omission, Brown and Cropper find that although NUS residents report more “neighboring behaviors,” there is no significant difference between residents of NUS and SSS regarding their sense of community (Brown & Cropper, 2001).

INNOVATION DISTRICTS/URBAN REDEVELOPMENT

In concert with New Urbanist development, urban redevelopment using similar principles is on the rise in cities across the globe (Katz & Wagner, 2014; Cosgrave, Arbuthnot & Tryfonas, 2013; Katz, 2015). Existing urban environments, particularly older industrial areas, are being redeveloped as “innovation districts” to “spur productive, inclusive, and sustainable economic development” (Katz & Wagner, 2014, p. 2). In these innovation districts, partnerships are essential. Anchor institutions such as research universities partner with public and private sector entities, innovators and incubators, and developers to create the live/work/play environments in demand in today’s knowledge-based economy (Katz & Wagner, 2014). Cosgrave, Arbuthnot and Tryfonas, (2013) argue that creating meaningful linkages, especially the “triple helix”-- the link between universities, government, industry-- are critical and essential (p. 673). Again, new types of partnerships are emerging as a means to development and redevelopment of urban areas in today’s knowledge economy.

Large and medium scale innovations districts have developed across the world. Early examples include Kendall Square in Cambridge, MA, and 22@Barcelona in Barcelona, Spain. The Kendall Square Initiative, started in 2010, is a collaboration between MIT and the surrounding Cambridge community to redevelop or “co-

urbanize” MIT-owned parking lots into a new urban ecosystem. Highly collaborative, the development of the “Kendall Square ecosystem” seeks to “advance the pace of life-changing science by attracting innovative companies and strengthening vital collaborations” (MIT, 2017). In Barcelona, a former industrial center that had fallen into disrepair has been transformed into a compact city and offers a new model for urban redevelopment (Brookings, 2016). As part of the redevelopment plan, green spaces, entertainment, advanced infrastructure, education and medical research, subsidized housing, new transportation networks, and revitalized public spaces were built as part of the three-phased model of integrating the physical, corporate, and personal environments (Brookings, 2016).

Innovation districts are also emerging in Berlin, London, Medellín, Montreal, Seoul, Stockholm, and Toronto as well as nearly every major city in the U.S. (Katz and Wagner, 2014). Traditional exurban science parks, such as the Research Triangle Park in Raleigh-Durham, North Carolina, are being reimagined and redeveloped to meet current demands for “more urbanized, vibrant work and living environments” that are highly desired by millennials (Katz and Wagner, 2014, p. 1). Representing a “radical departure” from traditional development, Katz and Wagner (2014) describe innovation districts as the “ultimate mash up” of local government and community, entrepreneurs, educational and research institutions “connected by

transit, powered by clean energy, wired for digital technology and fueled by caffeine” (p. 2). In these districts the balance among market development, welfare and quality of life are key (Cosgrave, Arbuthnot, Tryfonas, 2013). Examples and short descriptions of two Innovation Districts/Urban Redevelopments—Chattanooga’s Innovation District and Memphis’ Crosstown Concourse—were visited as part of this project and are included in Appendix B.

CONCEPTUAL FRAMEWORK

Godschalk writes that, “Like acrobats without a net, land use planners are working on the frontiers of sustainability and livability practice, without benefit of a profession-wide consensus on standards and methods” (2004). Indeed, a number of factors influence how land is allocated and the manner in which new communities are developed, and the author’s quote demonstrates the need to develop best practices for managing future population growth. Implicit to this discussion are the social effects physical spaces have on individuals and communities, which exposes an underlying tension between social engineering, at one extreme, and utter disregard for the social effects of urban development at the other (Talen, 2002). Talen asserts that, despite this tension, social outcomes of physical developments can be evaluated within three broad categories:

- **Community**, defined as the strength of social networks among residents;
- **Social equity**, defined as the degree to which residents have equal access to community resources across class lines
- **Common good**, defined by the degree to which private rights yield to common concerns (2010).

While the Sterling Ranch development focuses on “connectivity,” these goals have not been clearly defined, making implementation of this objective challenging. With this in mind, we utilized Talen’s framework as the foundation of our qualitative and quantitative research for the Sterling Ranch project. Throughout the project we aligned our research according to the core constructs of community, social equity, and common good with specific focus on connecting the Sterling Ranch educational ecosystem with higher education and industry partners.

METHODS & DATA PLAN

The project questions generated in this study are undergirded by the concepts of New Urbanism, innovation districts, and urban redevelopment while acknowledging the challenges of fully realizing all ideals of New Urbanism. In order to fully address the stated project questions, it was essential that the research team attempt to

gain understanding of the preferences and priorities of potential Sterling Ranch residents regarding lifelong learning opportunities and associated community partnerships. Additionally, although Sterling Ranch represents a unique and distinct development, there are other renowned master-planned communities that deserve attention as we seek to codify best practices that have supported an ecosystem of partnerships and learning opportunities among residents. As such, this research project employs a mixed-method approach, including both qualitative interviews and a quantitative survey.

QUALITATIVE DESIGN

Our qualitative research is designed as a series of semi-structured interviews with stakeholders from carefully selected master-planned and innovation communities across six cities and two countries, including Hampstead, AL; Lake Nona, FL; The Villages, FL; Chattanooga, TN; Memphis, TN and Aspern (Vienna), Austria. Sites were selected based on relevance to New Urbanist principles, development status, recommendations from Sterling Ranch, and relevant incorporation of technology. In conjunction with the semi-structured interviews, the research team also engaged in site observations of community design, public spaces, and resident interactions. Finally, complementary to the primary research conducted via interviews and observations, the team also completed a review of

existing data and documents from each site visit.

Interview subjects & numbers. As the research team sought to analyze the perspectives of a specific, targeted group of interviewees, a purposive sampling method was applied. Also of note, since in most cases the research team was not familiar with the site's array of relevant and diverse stakeholders, a subset of snowball sampling was also utilized as targeted participants made recommendations for other potential interviewees in the area. In all, 17 interviews (1 at Hampstead, 6 at Lake Nona, 4 Villages, 1 Chatt, 2 Memphis, 3 Aspern) were conducted across the six sites. Additional interviews were conducted with Denver Area leaders industry and in K-12 and higher education to provide additional insight into the local context. Categories of participants that participated are as follows:

- **Developers:** Persons responsible for the design and/or structuring of the master-planned community
- **Higher Education leaders:** Representatives of higher education institutions that have demonstrated some commitment to community partnership with the sites of interests
- **K-12 partners:** Public education entities that offer insight into linkages between schools and other community institutions
- **Industry partners:** Companies that have demonstrated interest in or potential for workforce

development partnerships with education entities and communities

- **Institute directors:** Persons leading innovative initiatives or programs aligned with community or industry needs and interests
- **Community Residents:** Those persons who have lived in the designated master-planned communities for at least one year

Setting, method & length.

Interviews were conducted both in person at the various site locations and also via telephone. Interviewees were allowed to opt in or out of being recorded at any point throughout the interview. Each interview spanned one to two hours, depending on the length of responses provided by the participant. Interviewees were not provided the questions in advance, although they were provided a one-page summary of the purpose of the interview and general topics of focus for the interview.

Protocol Probes. The interview protocol is aligned with Talen’s framework. Her three primary tenets of community, social equity, and common good are the grounding constructs for the interview probes. Specifically, each tenet serves as the basis for a series of both closed and open-ended questions designed to provide insight into the interviewees’ perspectives on existing and potential community partnerships and the role they play in facilitating an environment of lifelong

learning for residents within the master-planned community or innovation district. The interview protocol is included in Appendix C.

The protocol probes include customized questions for each construct per stakeholder group; however, these varied questions are aligned across categories of interviewees in order to be able to identify unifying themes or instances of dissonance. While much of the interview was structured, interviewees were also allowed the opportunity to provide responses to open-ended, semi-structured probes in order to maximize information sharing and data-collection.

Data Analysis. The qualitative interviews were primarily conducted in-person during the various site visits. Interviews were one-on-one; the unit of study was the individual participant. The researchers engaged in a comprehensive review of interview audio, observation data, community collateral and online resources in order to engage in analysis of the site and environment. The comprehensive review included identification of themes per interview; extraction of key quotes; and finally, a synthesis of common themes across interviews and identification of moments of dissonance among the interviews. These themes were then identified across categories of interviewees in alignment with the conceptual framework (Patton, 2014).

Site Selection. The following sites were

Figure 1. List of Sites Studied & Visited and Application to Sterling Ranch

Community (visited)	Development Status	Application to Sterling Ranch
Aspern, Austria	early development	New Urbanist (NU), master-planned Smart City
Chattanooga, TN	complete	Innovation District
Hampstead, AL	mid-development	NU, master-planned community with institute
Lake Nona, FL	mature	NU, master-planned Smart City with institute
Memphis, TN	complete	Innovation District; Vertical Urban Village
The Villages, FL	mature	NU, master-planned retirement community
Community (studied)*	Development Status	Application to Sterling Ranch
Celebration, FL	mature	NU, master-planned community
Stapleton, CO	mature	NU, master-planned community

* community was researched but not visited

selected for study as a means for gleaning best practices or innovative initiatives as it pertains to fostering partnerships among diverse stakeholders. Most of these sites represent master-planned communities rooted in the ideals of New Urbanism. They vary by geography and level of development, and in two cases, specific urban renewal initiatives such as Memphis’ Crosstown Concourse and Chattanooga’s Innovation District provided excellent examples of collaborative venues that engage educational, public, and private sectors through strategic partnerships that

better residents’ lives and improve communities. In total, eight sites were studied with six sites being visited by the members of the project team. The two sites not visited, Celebration, Florida and Stapleton, Colorado, were deemed less relevant to the study due to the age of the community and the limited focus on technology. Therefore, they did not warrant a site visit. Each community is listed in the table below and again are fully described in Appendices A and B.

QUANTITATIVE DESIGN

The quantitative portion of our inquiry consists of two primary sources of information: (1) existing demographic data from the US Census, which elucidates the racial and socioeconomic makeup of Douglas County, and (2) an online survey designed in Qualtrics and disseminated to potential Sterling Ranch residents. The Denver-based marketing firm Art + Business One, known as A+B1, manages Sterling Ranch's website and online communications. In addition to providing the public with updates regarding development at Sterling Ranch, A+B1 has likewise amassed a robust database of individuals interested in living in the forming community. We subsequently contracted with A+B1 to disseminate our survey to prospective residents from their database; the firm did so through social media posts and email blasts with periodic reminders. To incentivize survey completion, we offered a chance to win a \$100 gift card to amazon.com to anyone who completed the survey and provided an email address.

Survey Protocol. The survey (see Appendix D) sought to discern two primary areas of information: (1) potential residents' interests, preferences, and priorities for education-related programs and initiatives within the Sterling Ranch community and (2) potential residents' beliefs surrounding community, social equity, and common good, which undergird our conceptual framework (Talen, 2002).

Regarding the former, the survey asked respondents to use Likert scale ratings to indicate their preferences and priorities regarding both youth and adult education in the following areas: science and technology; arts and humanities; health and fitness; and nature and conservation. Regarding the latter, the survey asks respondents to consider their level of agreement with four key community questions aligned with Talen's framework; these questions center on the importance of: (1) developing and maintaining strong community ties within Sterling Ranch; (2) having neighbors from diverse racial and ethnic backgrounds; (3) having neighbors from diverse socio-economic levels; and (4) community decision-making based on the needs of the wider community versus the needs of the individual. Finally, the survey collected demographic data related to age, race, gender, household occupancy info, educational attainment, and household income.

Sampling Procedure, Survey Distribution & Data Collection. Survey dissemination began with a December 19, 2017 soft launch in which A+B1 posted the survey link on social media and invited users to complete the survey as an opportunity to provide input during the community's most formative years. Beginning January 8, 2018, A+B1 began an email campaign to all users in its Sterling Ranch Database, including periodic reminders to respond. In total, 2,163 individuals were contacted, and 151 completed the survey by February 5, 2018.

The sample consisted of individuals who expressed interest in living in Sterling Ranch by adding their email addresses to the Sterling Ranch website, managed by A+B1. Respondents self-selected by responding to either the email or social media invitations. The survey was created in Qualtrics, and only the authors of this study--and not anyone from A+B1--have access to survey response data.

Data Analysis. Much of the quantitative survey yielded descriptive data or straightforward information pertaining to the interests, preferences, or priorities of potential Sterling Ranch residents. These findings are typically presented as the percentage of respondents on the positive side of a given Likert scale (e.g. percentage of those who agree or strongly agree with a given statement, percentage of those citing a communal aspect as important or very important, etc.). To obtain more nuanced data, certain responses were tabulated by age and gender. In these instances, crosstabs were employed to establish degrees of statistical significance for relationships between given variables. These crosstabs can be found in Appendix E.

LIMITATIONS

The most significant limitations of our quantitative findings center on our survey respondents and response rate. Specifically, potential survey respondents were contacted via social media and

existing email lists, meaning that only individuals who already follow Sterling Ranch on social media platforms--or those who have already signed up to receive email updates--were invited to participate in the survey. This indicates that all survey respondents self-selected into participation. Given Douglas County's existing affluence and the high starting price of homes in Sterling Ranch, it stands to reason that individuals with the financial means to afford home ownership there were the primary demographic to sign up for Sterling Ranch updates in the first place and subsequently to participate in the survey. Moreover, our response rate of 181 (with 151 fully completed surveys) out of 2163 registered email users reflects less than a 10% participation rate and is notably limited vis-a-vis a community that will someday host 40,000 residents.

U.S. Census data indicate that Douglas County is 90.9% white (2016), which approximates the racial composition of survey respondents in which only 15 respondents identified as non-white, with an additional six respondents not disclosing their race or ethnicity. Other benchmark comparisons indicate that survey respondents were better educated and earned higher incomes than Douglas County as a whole. Namely, whereas 57.5% of Douglas County residents possess a bachelor's degree or higher with an average household income approaching \$106,000 a year (U.S. Census Bureau, 2016), 83% of respondents have at least a bachelor's degree, and more than 70% report

household incomes above \$100,000 a year. Finally, only 9 respondents reported their age as under 30, and 16 reported their age as over 60. Given the low response rates from these age groups and from non-white respondents, it was not possible to analyze responses by race or by age groups outside of the 30-60 range.

Primary qualitative limitations center on the limited number of interviewees, their positions as community leaders or founders, and the observer effects of the research team. Each community visit or outreach effort resulted in a minimum of one and maximum of six interviews, largely based on response rates of potential interviewees, their availability, and their willingness (or lack thereof) to connect us with other community stakeholders. This limits the breadth of perspective and experience within each community visit. Similarly, a significant number of interviewees were founders and/or leaders within their respective communities, limiting their objectivity and possibly their candor when speaking to non-residents. In one instance, it was discovered that an interviewee eschewed disclosure that the establishment of his community had greatly perpetuated racial and socioeconomic segregation in an adjacent neighborhood. Finally, all qualitative findings are interpreted by the research team conducting the interviews and are subject to the contexts that frame the researchers' perspectives; this study is no different.

A number of steps were taken to mitigate the limitations of these findings and to take them into consideration when making recommendations based on the data; specifically, we were highly intentional to avoid making spurious conclusions based on limited data sources. From an external validity perspective, we had the benefit of a broad perspective based on the literature review of New Urbanism and the perspectives gleaned from visiting a wide array of communities across a broad geographical area, including one international site. This allowed us to consider any outlying interview responses within a broader context. Similarly, given the relatively low response rate of our survey and the existing research conducted within the Sterling Ranch and surrounding community, the quantitative findings described below are considered within this broader body of research when making recommendations. Moreover, extensive research prior to visiting each community provided ample opportunity to identify challenges and unique circumstances within each locale, allowing us to pose tailored follow-up questions with interviewees and to tease out challenging information, such as the example of segregation cited previously. In every instance possible, information provided from qualitative interviews was posed to other stakeholders of the same community to establish internal validity. Finally, to mitigate possible observer effects of the research team, we situated interviews in familiar settings to our research subjects to foster a

comfortable and candid environment; moreover, we triangulated interview responses through peer checking, member debriefing, and connections with extant literature (Patton, 2014).

QUALITATIVE & QUANTITATIVE FINDINGS

The findings of this study are organized into sub-themes under each of the core constructs of the aforementioned Talen framework: community, social equity and common good. These subthemes synthesize the responses of the myriad interview participants, ranging from developers to residents to higher education and industry partners. Additionally, we provide a summary of closing comments from the 17 interviews at the end of this section.

Finally, findings from the quantitative portion of the study are presented using the Talen constructs as the framework for interpretation and evaluation. Specifically, the findings demonstrate the respondents' self-reported alignment or non-alignment with community engagement; diversity among neighbors; and common good over individual needs. Findings also include the interests, preferences, and priorities of potential residents as related to the types of lifelong learning opportunities made available at Sterling Ranch.

QUALITATIVE FINDINGS

COMMUNITY

Within the construct of community, the study examined participants' perceptions of the strength of social and collaborative networks among and/or between residents and community partners. Social and collaborative networks explored themes such as formal and informal collaborations among entities; perceptions of effectiveness of collaborations; and overall impact of these collaborations (or lack thereof) on participating members of the community. With this in mind, the data collected from the interviewees emphasizes the importance of creative and intentional partnerships that are most productive when led by key or anchor institutions. As Sterling Ranch plans to build an ecosystem of community partnerships and opportunities for engagement, this particular strand resonates deeply with their intentions.

Better Together. The power of partnership was a theme that permeated the interviews across each site. From intra-community collaborations to event partnerships with long-distance external entities, each site boasted a portfolio of non-profit, for-profit, industry, and/or higher education partners. While the depth and range of partnerships varied, the unifying factor throughout the interviews

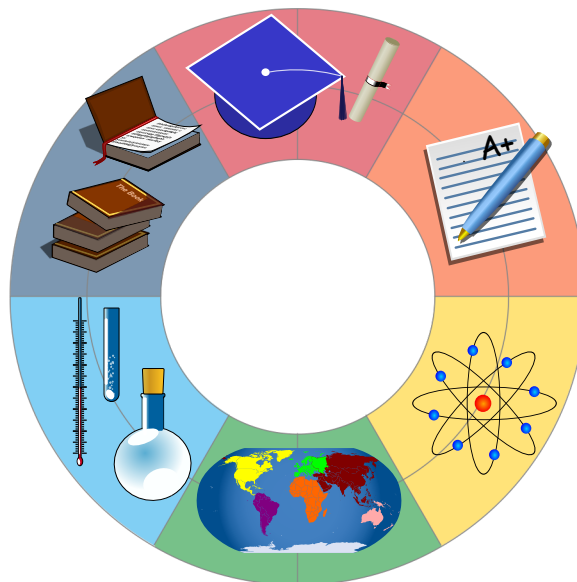
was that work is accomplished best when done together. An executive at the Lake Nona site insisted, “Partnerships are never easy, but are always better... partnerships are the DNA of the community.”

With this theory of action, sites such as Lake Nona, Crosstown Concourse in Memphis and the Innovation District in Chattanooga have invested heavily in not simply partnering for the sake of partnering, but instead partnering with true intentionality. One interviewee described this as moving forward with “didactic intent” in order to truly create a catalyst for innovation among and between partners and the communities they serve. For example, Crosstown Concourse in Memphis is a one million square foot, “urban vertical village” housed in the old Sears Roebuck building in Midtown. Essentially, it is a small city stacked on a massive lot in the middle of town. From healthcare to residential units, to a state-of-the-art high school, an arts residency, retail and more--Crosstown could have simply been a property for ad hoc occupants to lease space. Instead, for Crosstown Concourse, the focus is on identifying and leveraging the interdependency of organizations. One director at Crosstown shared, “Most of the tenants have been invited to come; they chose to come

because they felt their work would be enhanced by being closer to the other organizations... And their impact will be greater in *coordination* with the other orgs.”

With this in mind, Crosstown established a building-wide sense of purpose, focused on wellness of the “body, mind and spirit as supported by lifelong learning.” Most importantly, Crosstown built this ecosystem of partnerships around an anchor institution, Church Health. This is the same approach employed by many of the other sites including Aspern, Chattanooga, Hampstead, and Lake Nona. The anchor institution serves a lead partner, around which the other partnerships are centered. In Lake Nona, the University of Central Florida (UCF) is the anchor institution; in fact,

they have trademarked the moniker “America’s partnership university.” This university takes pride in its ability to partner with other institutions that otherwise would be considered competition, but instead, UCF has been able to fully leverage the synergies among partners to enhance their combined impact. Also of note, the stakeholders revealed that the anchor institution was essential in their ability to help attract subsequent partners. These



subsequent partners were selected and accepted with the utmost intentionality; the key consideration was how these partners would complement and enhance the impact of the anchor institution and future partners to come.

One of the key leaders of the Innovation District in Chattanooga, TN knew that it was not enough to simply curate a collection of complementary partners. He identified his job as facilitating opportunities for “colliding energies.” Specifically, he boasted that the “Center is a place that facilitates collisions. Collision of people, ideas. It’s energy meeting energy... that is important for innovation...” The approach was similar in Memphis’ Crosstown Concourse, where they built a Better Together advisory council among its partners. “It’s a hand-picked group that are enthusiastic about building partnerships across the building... lots of collaboration happening throughout the building with little to no prompting...” Regardless, the unifying factor among the sites is that each had a hub that was able to facilitate these intentional partnerships, spark collision and ground them in a broader mission and objectives of the site. For the most part, these hubs took the form of some version of an institute or innovation center.

One interviewee advised, “Start organizing teams early, have vision, be willing to partner, collaborate instead of compete.” This recommendation is critical

for Sterling Ranch as it works to build out an educational ecosystem, one in which partnerships, innovation and responsiveness are the undergirding constructs.

Skin in the Game. While partnerships proved to be the overwhelmingly popular theme, it was still quite evident that again, there must not be partnerships for the sake of partnerships. In effort to ensure genuine and advantageous partnerships, many of the interviewees expressed the need for each partner, including the developer, to have some explicit investment and risk that they are willing to take on behalf of the partnership. In short, every participant needs to have something to lose.

In Lake Nona, the anchor institution was most enticed by the land exchange in which the developer provided the University land on site so as to encourage the University to take the risk of locating within the development in order to lead the way for the creation of “Medical City.” In The Villages, FL, the developer worked to establish a system of public, workplace charter schools to which only employees of

“...a hub that was able to facilitate these intentional partnerships, spark collision and ground them in a broader mission...”

business partners situated on Villages land would have access. As the lead of the charter schools shared in reference to access to the workplace charters, “Our [The Villages] partners and businesses have access to this amazing resource. It shows The Villages’ commitment to supporting its partners but also serves as a pretty darn good partner recruitment tool!” Both examples emphasize the need for partnerships that are mutually beneficial yet demonstrate a risk on the part of all parties involved. This is important for Sterling Ranch as they consider what risks and concessions they will be willing to make on behalf of the greater good of the partnership ecosystem they seek to create.

Feedback is Key. Once intentional partnerships have been established and each participant has demonstrated potential for substantial risk, the next important component of the endeavor is to garner meaningful feedback. For The Villages, FL, feedback is a critical element of the partnership and education ecosystem. This is evident in both the city-wide lifelong learning Enrichment Academy as well as The Villages charter school that serves the children of those business partners that service The Villages residents. For the Enrichment Academy the key stakeholders are the residents. They are surveyed frequently to determine their preferences and interests regarding lifelong learning opportunities. At the Villages Charter School, they have launched advisory councils composed of various industry partners who then provide input and

guidance on the school’s workforce development curricula. For Lake Nona, advisory councils also are key to ensuring the initiatives are relevant and responsive to the needs of the ecosystem. Specifically, early in the establishment of the Lake Nona Institute, the director organized advisory councils focused on technology, communications, education, and operations with leaders across the community. In Memphis, Crosstown seeks frequent feedback from its constituents and partners. Their Director of Partnerships believes the Crosstown effort has been a success thus far primarily “because there was an intentional effort to listen to the community about what could work and what they needed”. Taking lessons learned from these existing sites, Sterling Ranch has the opportunity to intentionally build in systems of feedback in order to garner stakeholder buy-in, establish ongoing engagement, and motivate deep investment from myriad parties involved.

The Power of the Gig. As is the case with Sterling Ranch, some of the stakeholders also emphasize the use of enhanced internet speed and other technological advances. Although places such as the Hampstead development utilizes these technologies for the convenience of their residents and on-site partners, the Innovation Zone in Chattanooga employs their access to “the fastest internet speeds available in the United States” in order expand their access to potential partners. As such, the Chattanooga Innovation Zone works with

the University of Southern California (USC) as its anchor institution. USC provides access to research, experts, technical assistance and other innovations to benefit the work in Chattanooga. This partnership provides an example for Sterling Ranch as to how it might, for example, continue its work with Vanderbilt University as they endeavor together to further establish the education and industry ecosystem of Sterling Ranch.

SOCIAL EQUITY

Within the construct of social equity, the study examined the participant's perceptions of the degree to which residents have equal access to community resources across class lines. Interview questions were asked along the lines of how well the community attends to the educational development and lifelong learning of all residents, the general level of educational attainment in the community, perceived difference in terms of which groups are accessing the programs and whether the community fosters socio-economic and racial diversity. The data collected identified that the communities surveyed provide a wide range of educational programming to residents; residents are well educated; differences do exist in who can access community resources and while these communities may have some racial diversity, access tends to be limited by socio-economic status.

Priced Out. These amenity rich live-work-play communities are costly to build, and the costs are passed on to community residents. What emerges is the reality that many of these communities are beyond the reach of potential residents in lower socioeconomic income brackets. While these communities are highly innovative, the reality is that innovation is not accessible for all. In Lake Nona for example, the veterans who access the VA hospital in Medical City cannot afford to live there. They either provide their own transportation or ride shuttle services to access healthcare at the hospital. In Hampstead, the additional cost of the development means buying a home in Hampstead comes at a premium price relative to other housing solutions available outside the gates of the community. In Chattanooga, as well as in Crosstown Concourse, the surrounding property values are rising—placing increased pressure on lower income residents. In Crosstown Concourse, the low-income community members who access the community health center cannot afford the upscale restaurants in the same building. The challenge one developer shared “is making everything accessible for all people.”

However, in Aspern, Austria residents are from a mix of socio-economic backgrounds. This is due in large part to the intentionality of governmental investment in the community and providing a range of residential options. What is markedly different in Austria is that residents receive significant housing subsidies provided by

the government, making the range of residential options accessible to more residents. In addition, public transportation via a new metro line built early in the establishment of Aspern allows community members easy access to Vienna and, conversely, makes Aspern's lake easily accessible by residents of Vienna. In The Villages, the community provides a range of housing options and prices. One way the community ensures amenities are accessible by all is to have the same cost for services for all residents. Taking lessons learned from these other communities, Sterling Ranch has the opportunity to set an example for other communities by providing lower cost housing options or partially subsidized housing options so that the community is accessible to a wider range of residents from lower socio-economic backgrounds.

Talent pipeline is the new incentive.

These communities recognize that developing a talent or workforce pipeline is critical to economic development of the greater community. As one interviewee shared, "The widening achievement gap is leading to a widening wage gap. Both have become a challenge to our competitive advantage." In other words, communities must be engaged outside the borders of the community in the development of an educated workforce that is critical to the overall economic health of both the communities and greater region. In Lake Nona, educating kids within and outside the community as well as creating talent pipelines for technical jobs serves the entire

economic region. In The Villages, workplace schools have been built in the community to serve the educational needs of the workers' children. As Sterling Ranch builds its educational ecosystem it is imperative that they provide opportunity for development of the workforce that serves the community as well as the workforce that resides within the community.

COMMON GOOD

Within the construct of common good, defined as the degree to which private rights yield to common concerns, the study examined participants' perceptions of the overarching benefits to living in the community and asked whether some populations lack access to the full benefits of the community. The data collected identified the following theme.

Going beyond our boundaries. The theme of reaching out beyond the boundaries of the communities emerged as a way in which community residents engage in the greater good of the region. Some communities provide low-cost incentives to come into their community to access the amenities. Others brought the amenities of the community to others beyond the borders.

For example, in Hampstead as in Crosstown Concourse, the community YMCA serves both residents and non-residents. In Hampstead, the low-cost *Tippling Point* restaurant is a kid friendly,

indoor/outdoor space that brings Montgomery residents into the community week after week. The restaurant, built on a low-cost movable/portable base for flexible relocation, has become one the most popular family restaurants in Montgomery and provides opportunity, as the developer described, to “soft sell” potential residents on the Hampstead community.

The Hampstead Institute which runs the Hampstead Farm on site assisted in the development of a community farm/food bank in downtown Montgomery, again demonstrating a commitment to the community beyond its borders. At Crosstown Concourse, they have dedicated a significant number of the residential units to preservice teachers participating in The Memphis Teacher Residency, a nonprofit teacher preparation program that grooms high quality teachers to serve in low quality schools. Also of note, Crosstown reserves temporary residential units for families across the country whose children are receiving treatment at the nearby and renowned St. Jude’s Hospital. In Lake Nona’s Medical City, the University of Central Florida provides employees up to 25% of dedicated work time to join with economic development programs for the greater Orlando area. The community efforts to provide for the common good have been intentional and the result of hard work. As one interviewee discussed, “Inclusion does not come naturally, it will take hard work.” Sterling Ranch has the opportunity to serve the common good of the greater community either by providing

opportunity for low-cost access to Sterling Ranch or by taking the amenities of the community out beyond its borders.

OPEN-ENDED RESPONSES

In closing qualitative interviews, interviewees were asked to provide any additional comments, advice, or commentary on missed opportunities that might be helpful to the Sterling Ranch community. Three themes emerged from these responses:

Didactic Intent. A strong sub-theme of didactic intent highlighted the importance of establishing a robust educational ecosystem that meets not only residents’ need but also the needs of workers who serve the community and the needs of industry in the region. A strong viable community is undergirded by a strong educational foundation. As the former director of the Lake Nona Institute cautioned, “if you do not pay attention to education in the community in the beginning, you miss the mark.” Sterling Ranch is committed to the development of the educational ecosystem and must remember to serve the educational needs of those who work in their community.

Flexible Space = Flexible Ideas. As Sterling Ranch provides space for on-site education and life-long learning, the recommendation from other communities is to have flexible, reconfigurable spaces. Communities found that flexible space led

to flexible ideas, and the ability of the community to adjust to and to evolve with the changing needs of the community. One community deeply lamented the building of non-reconfigurable space as it seems be stuck with “Old Economy” buildings versus “New Economy” highly flexible spaces. Non-reconfigurable space becomes a financial burden on the community. Sterling Ranch has the opportunity to provide for flexible, reconfigurable space to respond to the ever-changing demands of the new economy.

Institute as Broker. Overall, the interviewees provided critical insight into the best practices of their communities and offered key suggestions for implementing and advancing an educational ecosystem. The developer alone could not serve as the broker for implementation. Three different communities, Lake Nona, Hampstead, and Chattanooga’s Innovation District suggested creation of a 501 (c) 3 non-profit institute or center whose mission is to move the goals of the community forward. For example, in Chattanooga the non-profit Enterprise Center manages the Innovation District and in Hampstead the Hampstead Institute promotes community educational development and manages the Hampstead Farm. In Lake Nona, the community most similar to Sterling Ranch, the Lake Nona Institute serves as the vehicle for partnership development. Their mantra of “Research. Innovate. Activate.” underscores their commitment as a “community focused organization inspiring healthy, sustainable communities of the future” (Lake Nona

Institute, 2018). As the former Lake Nona Institute director explained, “the institute was critical to partnership development and allowed [the developer] to step out as developer only.” As Sterling Ranch Development Company commits to moving forward with the development of their education ecosystem, they may consider capitalizing on the institute model that has served these other New Urbanist communities so well.

QUANTITATIVE FINDINGS

Survey results yielded a number of interesting findings, presented below. The first section examines the degree to which survey respondents identified with Talen’s framework for new urbanist communities, namely: community, social equity and common good. The second section presents additional survey findings regarding residents’ interests, preferences, and priorities for educational opportunities within Sterling Ranch. Cross-tabs that derive p-values for statistical significance are included in Appendix E.

ATTITUDES TOWARD COMMUNITY, SOCIAL EQUITY AND COMMON GOOD

To assess the degree to which potential Sterling Ranch residents identify with Talen’s ideals of community, social equity, and common good, the survey asked four brief questions on a Likert scale ranging from “strongly disagree” to “strongly agree.” Residents were asked to

indicate their level of agreement with the following statements:

- It is important to develop and maintain strong social connections within your community (community construct).
- It is important to have neighbors from diverse racial/ethnic backgrounds (social equity construct).
- It is important to have neighbors with diverse levels of income (social equity construct).
- It is important to make community decisions based on the broader needs of the majority of residents versus the needs of individuals (common good construct).

Figure 2 shows the mean responses to these questions where five (5) indicates strong agreement and one (1) indicates strong disagreement. Based on responses to these questions, a brief analysis of each construct follows.

Community & Common Good. Central to New Urbanist ideals is the intentional development of tight-knit communities built on frequent interaction with neighbors. These tenets are reflected in the survey responses collected from potential Sterling Ranch residents, of which 93% stated they are likely or very likely to

participate in educational programming that occurs within the Sterling Ranch community. Moreover, 87% of respondents agree or strongly agree that developing and maintaining strong social connections at Sterling Ranch is important (M=4.30). Similarly, 81% agree or strongly agree that it is important to make community decisions based on collective, rather than individual, needs (M=4.09). Taken together, these findings corroborate tenets of New Urbanism that emphasis community building, frequent interactions among neighbors, and decision-making that benefits the majority.

Figure 2: Community, Social Equity & Common Good: Mean Likert Response Scores

Indicate your level of agreement with the following questions. It is important to:

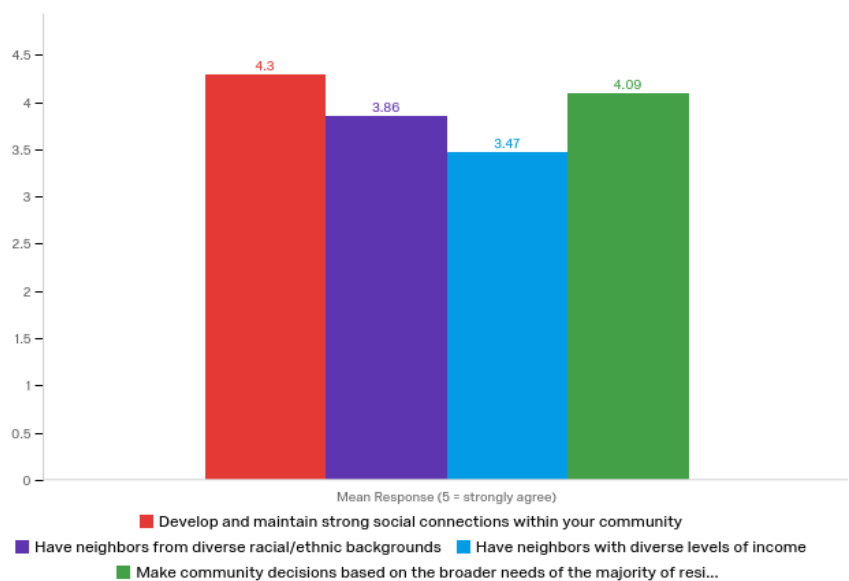


Figure 3: Importance of Racial/Ethnic Diversity by Gender & Age

Racial/ethnic diversity is important			
	n	(strongly) disagree %	(strongly) agree %
all respondents (M=3.86)	144	11.81%	70.14%
gender (p < .001)	n	(strongly) disagree %	(strongly) agree %
male	49	24.49%	48.98%
female	95	5.26%	81.05%
age range (p < .08)	n	(strongly) disagree %	(strongly) agree %
31-40	49	10.20%	71.43%
41-50	43	6.98%	76.74%
51-60	28	17.86%	60.71%

Social Equity. The construct of social equity appears to receive less support among potential residents. On the one hand, two-thirds of respondents find it important or very important to have neighbors from diverse racial or ethnic backgrounds (see Figure 3, above). On the other, fewer than half find it important or very important to have neighbors from diverse income levels. Statistically significant variance in viewpoints were found by gender and by age. Specifically, 81% of women and 49% of men agree or strongly agree that racial and ethnic diversity is important (p < .001), and 71% of 31-40 year-olds, 77% of 41-50 year-olds, and 61% of 51-60 year-olds ranked this aspect of community as important or very important (p < .08). Regarding income diversity within the community (see Figure 3), only 49% of respondents agree or

strongly agree that this is important, with women being more than twice as likely to view income diversity as important (62% vs. 29%, p < .01). There were no statistically significant variations in preferences by age range.

With close to three-quarters of respondents citing racial diversity as important or very important, the survey results partially corroborate ideals of New Urbanism, which seek to eliminate the widespread racial segregation that occurred in twentieth century community development. However, with only half of respondents citing income diversity as important, it appears that Sterling Ranch--a community designed for upper-middle class residents in the first place--is unlikely to become a hub for people from diverse socioeconomic statuses, indicating the

difficulty of developing a community that achieves a majority of New Urbanist ideals. Finally, the significant differences in attitudes between men and women is a phenomenon that warrants further investigation.

Figure 4: Importance of Income Diversity by Gender & Age

Income diversity is important			
	n	(strongly) disagree %	(strongly) agree %
all respondents (M=3.47)	144	16.67%	50.69%
gender (p < .01)	n	(strongly) disagree %	(strongly) agree %
male	49	26.53%	28.57%
female	95	11.58%	62.11%
age range (p < .13)	n	(strongly) disagree %	(strongly) agree %
31-40	49	16.33%	53.06%
41-50	43	11.63%	51.16%
51-60	28	17.86%	42.86%

INTERESTS, PREFERENCES, AND PRIORITIES FOR EDUCATIONAL OPPORTUNITIES

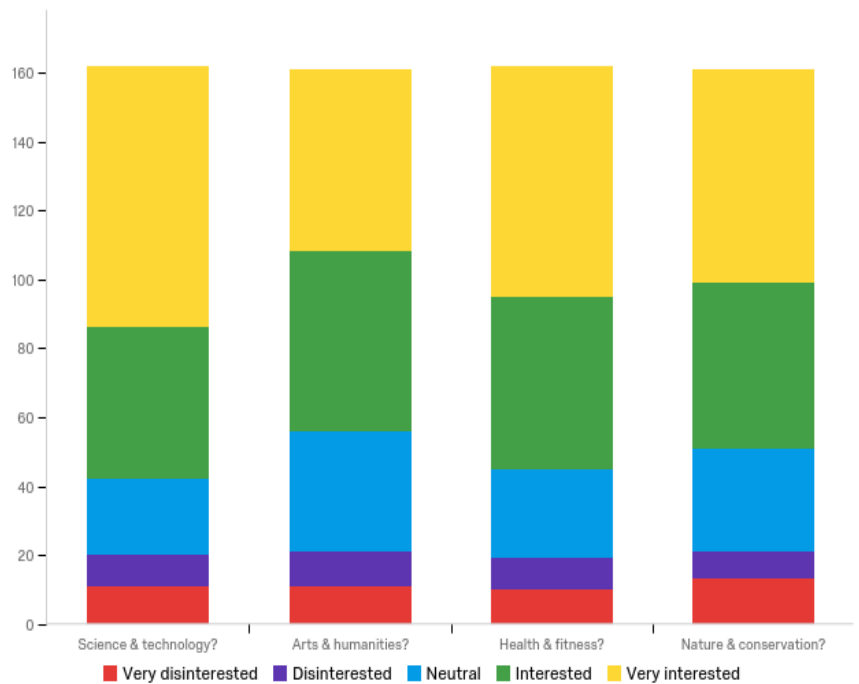
Survey respondents were asked to indicate their level of *interest* in several different categories of learning opportunities, including: science and technology; arts and humanities; health and fitness; and nature and conservation. These categories were selected based on both common delineations within education (e.g. science and technology, arts and humanities) and existing values of the Greater Denver Area (e.g. health and fitness, nature and conservation). Within each category of learning opportunity, respondents were asked to separately indicate their level of interest for adults and for youth (defined as under 20 years-old). Following are the findings from the survey.

Interest is high for a variety of educational opportunities, with health and fitness, STEM topping, and recreation topping the list. Each category received a minimum of 62% of respondents citing they were interested or very interested in that particular category. The greatest interest among respondents was for adult health and fitness programming, with 83% indicating they were interested or very interested.

Top interests for other types of educational opportunities included: youth STEM (74%), youth health and fitness (72%), and adult

Figure 5: Interests in Adult Educational Opportunities by Category

How interested are you in Sterling Ranch community partnerships that include opportunities for youth education and learning focused on:



STEM (68%). Figures 5 and 6 illustrate the distribution of interests for each category for both adults and youth.

In a separate question, potential residents were asked to indicate the level of importance they gave to a variety of categories of educational opportunities. 79% of respondents indicated agreement or strong agreement that adult health and fitness is important; youth health and fitness opportunities were cited by 74% of respondents as important or very

important.

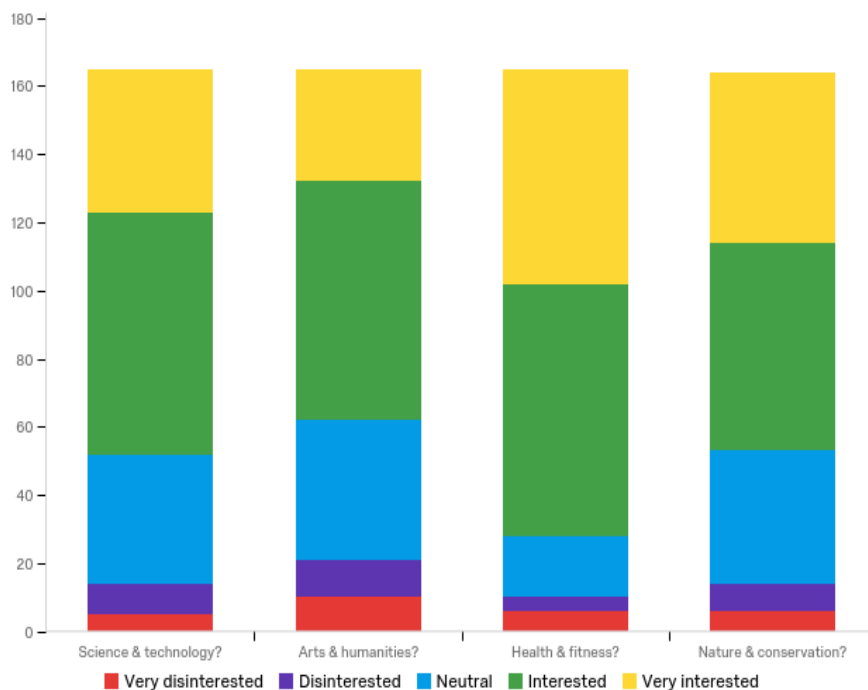
Youth educational opportunities are a higher priority than adult learning opportunities; these priorities vary by age and gender. Adult continuing education was the lowest ranked priority, with only 44% of respondents citing this as important or very important. Conversely, all categories for youth learning received the support of at least 67% of respondents. Younger respondents are more likely to prioritize learning opportunities delivered by local industry than their older counterparts ($p < .08$). Likewise, women were more likely than men to prioritize the following: workforce readiness among youth ($p < .03$),

recreational opportunities for youth ($p < .001$), and educational opportunities delivered by government agencies, parks, or the non-profit sector ($p < .05$). Considering delivery of educational programs, respondents cited opportunities provided by local colleges and universities as the highest priority, with 68% ranking this as important or very important. Conversely, educational opportunities delivered by local industry received only 55% of respondents citing this as important or very important. Although more nuanced research questions are needed to understand differentiated responses by gender and age, it can be inferred that a mid-career individual would be more interested in industry-facilitated

continuing education than an executive, which may explain the difference in preferences by age; similarly, a person raising children or planning to do so would likely be more interested in opportunities for youth education, which may explain the difference in preferences by gender.

Figure 6: Interests in Youth Educational Opportunities by Category

How interested are you in Sterling Ranch community partnerships that include opportunities for adult learning and continued education focused on:



DISCUSSION

The findings of our study yield a number of important applications to the Sterling Ranch community. Of note, we refer back to the Talen framework and the specific constructs of community, social equity, and common good in our

presentation of these points of discussion. Additionally, we discuss our findings vis-a-vis our research questions.

COMMUNITY

In terms of community, or the strength of social networks among residents, our research identified the criticality of developing partnerships for a robust and sustainable community. The partnerships developed within the communities targeted for our research demonstrate the value of collaboration as a means for fostering positive economic impact, both within the master-planned community and its larger metropolitan area as a whole. Sterling Ranch has the opportunity to cultivate fruitful and long-lasting partnerships, though the selection process must ensure that collaborators are invested in the wellbeing of the community as a whole and not just their own bottom line. Partners should be selected based on how each can contribute to the greater good of the whole community as well as how their work can be strengthened by collaboration with the broader partner base. Partnerships solely for the sake of partnerships will not suffice. Partners must share in some exchange of resources or risk in order to fully embrace collaboration within the community. Sterling Ranch, industry, and higher education partners must be willing to put some “skin in the game” to realize the full potential of their partnerships. Sterling Ranch residents must be part of the partnership development process, and feedback from community

members must be continuous. Given the community’s integrated, gigabit connectivity, it is important to recognize that partnerships may be virtually linked and not require an on-site presence at Sterling Ranch.

SOCIAL EQUITY

In terms of social equity or the degree to which residents have equal access to community resources across class lines, the results of our research show that the opportunity to live in the Sterling Ranch community is limited by financial means. Many potential residents are priced out of the community; however, this does not mean that the amenities and resources of the community cannot be accessed by residents outside of Sterling Ranch. Potential residents articulated a desire for diversity in the community. Although socioeconomic diversity may be difficult to achieve, Sterling Ranch has the opportunity to bring others into the community via low-cost programs that provide access to educational opportunities being developed within the community. Additionally, we recommend further research to identify how industry, community, and higher education partnerships may be leveraged to attract residents of color. For example, many companies expend significant financial resources on recruitment efforts to diversify their workforce. It is worth discussion as to how Sterling Ranch might leverage these existing diversity efforts of potential industry partners, such as offering

incentives for employees of partners to live within the Sterling Ranch community.

COMMON GOOD

In terms of common good or the degree to which private rights yield to common concerns, the results of our research indicate that potential Sterling Ranch residents recognize the importance of making decisions based on the common good, unpacked here to mean that residents value the interests of the community over individual interests. In other words, the integrity of the community comes first. Important for Sterling Ranch to consider are ways in which the community might reach beyond its borders and apply the concept of common good to the Greater Denver Area.

PROJECT QUESTIONS

In terms of addressing our initial project questions we found the following:

Project Question 1. What are the priorities of potential Sterling Ranch residents for industry, community, and higher education partnerships to support lifelong learning in the community?

While potential Sterling Ranch residents identified a high interest in a variety of educational opportunities with STEM education, and health and fitness as top priorities, we recognize that the low response rate of our survey makes it

difficult to broadly generalize the true priorities that are representative of the community. We recommend that as Sterling Ranch further develops its educational ecosystem, it will be to their benefit to continue to survey both residents and potential residents to stay abreast of residents' desires and perhaps changing priorities for life-long learning within the community. Furthermore, additional discussion is required as to how the preferences and priorities of potential residents of color do or do not align with the other respondents, as residents of color were not well represented in the survey data. This is also true for residents under 30 and over 60.

Project Question 2: What industry, community, and higher education partnership opportunities exist to support lifelong learning and an aligned educational ecosystem for Sterling Ranch residents?

Our research distinguished multiple opportunities for partnership development for the Sterling Ranch community. Based on extensive conversations with Sterling Ranch, our research findings, and evaluation of industry needs in the area, we have identified the following potential partners for Sterling Ranch. Initial screening of potential corporate partners was based on the criteria of corporate responsibility, current community engagement, diversity efforts and current relationship to Sterling Ranch. Screening of potential community and higher education partners was based on current educational programming,

community engagement, and current relationship with Sterling Ranch and other corporate or educational partners. Potential partners that met the initial screening criteria were then assessed in terms of the contributions they might make in the strategic focus areas of sustainability, technology and innovation, health and wellness, and lifelong learning.

Lockheed Martin, the top aerospace company in the area, has demonstrated significant interest in both partnership development and educational programming in Sterling Ranch as it intends to relocate over 300 families to the Waterton Campus adjacent to the community. Siemens, currently partnering with Sterling Ranch, has also indicated their desire to continue in partnership development and educational programming, especially for workforce development. UC Health is currently building clinic space in Sterling Ranch. In addition, they have demonstrated commitment to adult health education and outreach programs as well as childhood development and youth programs in other communities with plans to bring similar programming to Sterling Ranch.

Colorado School of Mines has expressed potential interest in a physical presence in the Sterling Ranch area to include creation of classroom and living laboratory space along with the possibility of a Mines-owned demonstrator home for smart, adaptive living. Red Rocks Community College, a feeder school to Colorado School of Mines is a natural

additional partner in a Mines partnership with Sterling Ranch. CU Boulder, with the top aerospace program in Colorado, has an educational interest in expanding programming to the growing aerospace workforce near Sterling Ranch. CU South Denver, representing the consortium of CU Boulder, Colorado Springs, Denver and Anschutz Medical, currently provides programming in the South Denver area with an eye on expansion into the Sterling Ranch community. Arapahoe Community College has purchased property near Sterling Ranch and has announced plans to build new campus extension. Denver Botanical Gardens currently has a partnership with Sterling Ranch and has demonstrated future commitment to educational programming. The Bird Conservancy of the Rockies currently partners with more than 250 public, private and non-profit institutions and with its commitment to conservation and education is an additional potential partner for Sterling Ranch.

As potential partners were identified based on initial screening criteria, they were then assessed in terms of the potential contributions in the strategic focus areas of sustainability, technology and innovation, health and wellness, and lifelong learning.

Figure 7. Assessment of Strategic Alignment of Potential Sterling Ranch Partners

Potential Partners	Sustainability	Technology, Innovation & Research	Health & Wellness	Lifelong Learning
Lockheed Martin		X		X
Siemens	X	X		X
UC Health	X		X	X
Colorado School of Mines	X	X		X
CU Boulder	X	X		X
CU South Denver	X	X		X
Arapahoe Community College	X	X		X
Red Rocks Community College	X	X		X
Denver Botanical Gardens	X	X	X	X
Bird Conservancy of the Rockies	X	X		X

Criteria for inclusion in each strategic focus area were based on current educational programming or demonstrated commitment to future programming.

Further discussion is necessary regarding the economic impact (including tax revenue, generation of jobs, creation of a highly-skilled workforce, etc.) of the potential collaboration of the previously mentioned strategic partners. Specifically, should the institute progress and establish the ecosystem that Sterling Ranch so desires, the projected revenue streams that will benefit not just the immediate community, but the state more broadly

need to be identified. There are opportunities to further this particular discussion with entities such as the local Chambers of Commerce (including Highlands Ranch and Castle Rock), Arapahoe/Douglas Works! and the Metro Denver Economic Development Corporation (MDEDC). The Chambers and Metro Denver Economic Development Corporation are dedicated to representing the interests of business and industry whereas Arapahoe/Douglas Works! is dedicated to investment in human capital development. MDEDC may be a particularly important partner, as they provide access to market research, data and site selection analysis.

Each of these networks present an opportunity for Sterling Ranch to align its education and partnership ecosystem with established leaders in the community who are also committed to supporting industry needs.

Project Question 3. What are the best practices and mechanisms for fostering partnerships among diverse stakeholders that maximize outcomes for residents?

Based on our research at Sterling Ranch and the New Urbanist communities and Innovation District/Urban redevelopment sites visited, we identified the following best practices for establishing industry, community, and higher education partnerships: 1) commit to collaboration, cultivating a mindset that educational partnerships are essential to a robust and thriving community, 2) start early with the recognition that initial conversations might begin with little structure but need to evolve into more formalized advisory councils, each with a specific focus, 3) cultivate key anchor institutions this one is familiar with explicit investment by both the community and the anchor to “get some skin in the game,” 4) cultivate ongoing feedback from residents and from community, industry, and higher education leaders to capture changing trends in both workforce development demands and residents’ desires for lifelong learning, 5) intentionally cultivate a community dedicated to diversity by recognizing that the educational ecosystem must be open to citizens outside the borders of the

community and accessible by a workforce that serves the community, 6) provide flexible space for the cultivation of adaptable and innovative ideas of the new economy, and 7) establish an institute as the primary vehicle for developing the aforementioned best practices, which allows the developer to step away from the direct brokering of partnerships and provides for “arms’ length” transactions for all partners. These seven findings will serve as the guiding principles for a model of productive creation of complex partnerships within a master-planned community.

RECOMMENDATIONS

The results of this study provide important insights into effective practices for establishing industry, community, and higher education partnerships within a developing master-planned community. More importantly, this study provides the theoretical framework and practical concepts that undergird the development of a potentially transferable model for building a symbiotic ecosystem of cross-disciplinary partners grounded in the core tenets of New Urbanism. As noted previously, there are seven key levers essential to this model; the recommendations for next steps reference these levers accordingly.

Specific to the context of Sterling Ranch, the study offers tangible

recommendations for bringing to fruition the idea of a complex network of partners supporting shared objectives to move forward an education ecosystem. Per the findings of our qualitative and quantitative research, review of existing and extant literature, and key site-based observations, we offer the following recommendations:

Establishment of an Innovation Institute. The diversity of needs and interests among not just the stakeholders of Sterling Ranch, but also the surrounding industries and institutions of higher education provide an environment ripe for collaboration. In the same respect, the varied (and at times competing) interests and needs could also complicate progress for the community. With this in mind, there is a need for a mediating vehicle that is able to facilitate effective and efficient collaboration, one that is capable of assisting in connecting the sometimes disparate pieces of the puzzle and providing clarity on common needs and opportunities for symbiosis. This will be best accomplished by the establishment of an independent, 501(c)(3) nonprofit institute housed in the Sterling Ranch community and governed by a community board comprised of residents, subject area experts, and anchor partners.

The mission of the Institute is to serve as a point of convening and collaboration for myriad partners in order to catalyze innovations for Sterling Ranch, Douglas County, and surrounding areas. The Institute will be a national model for

effective collaborations and offer symbiosis across sectors with a focus on sustainability of resources, technological innovations and research, health and wellness, and lifelong learning. In short, the Institute will support a simple goal: “Explore. Engage. Innovate. Learn.” Additional details concerning the structure, governance, strategic areas of focus and implementation approach can be found in the full Institute Proposal that follows this research report.

Initiate a Request for Expressions of Interest. As emphasized throughout much of our qualitative study, partnerships have to be intentional in order to be productive with long-term impact. Not all partners are created equal. Additionally, not all partners will have the capacity to engage at the same level; criteria will need to be established to help discern how the variety of potential partners can be vetted for alignment with the overall mission and vision of the ecosystem within Sterling Ranch. Most importantly, Sterling Ranch via the proposed institute will need to identify those partners that are poised to serve as anchor institutions. Anchor institutions are those partners who provide strategic, long term visioning, planning, and advising to the Institute; these partners’ efforts are interdependent and are enhanced by collaborative efforts facilitated by the Institute. Additionally, this level of partner will plan jointly with Sterling Ranch to pursue long term efforts with not just local, but also national and global impact. As such, Sterling Ranch should issue a Request for Expressions of Interest (RFEI) to assist in

selection of those partners that have the greatest potential to serve as anchor partners. Within the RFEIs, applicants would need to make clear the level of engagement they seek within this partnership, express how the work of their organization or company may be enhanced by intentional collaboration with the other partners, and indicate the level of investment (including financial, human capital, in-kind and/or land-based) the organization is willing to make to demonstrate commitment to this endeavor. Importantly, the interest of a single organization--regardless of the level of investment the organization is willing to make-- must not supersede the objectives of a collaborative and multidimensional institute.

Launch of a Workplace Charter School. The unique nature of starting an education ecosystem that emphasizes collaboration with area partners allows for an innovative approach to incentivizing the ongoing work of that partnership. In the case of Sterling Ranch, there is an opportunity to extend access to their pending state-of-the-art pre-kindergarten through twelfth grade school system (as recommended by Baese & Rifkin (2017)) to partners working in collaboration with the community. Additionally, this benefit could be extended to employees of any business that leases space within the borders of Sterling Ranch. This would allow employees of both businesses on Sterling Ranch property as well as those who are in partnership with Sterling Ranch to attend

the community schools alongside residents. Presumably, this approach could build further investment into the Sterling Ranch community by the various partners, serve as a recruitment and retention tool for the industry and area businesses, and potentially contribute to racial and/or income diversity within the education system.

Evaluation of the Political Landscape. Although our recommendations are informed by various master-planned communities, the opportunity for Sterling Ranch to establish this educational ecosystem is unique and poised to serve as a global model. As such, Sterling Ranch will need to consider the other factors that will have implications on its ability to be successful in this endeavor.

It is our recommendation that Sterling Ranch work with consultants, researchers from Vanderbilt University, or specific organizations such as the local Chambers of Commerce, the Metro Denver Economic Development Corp and the Arapahoe/Douglas Works! to assess the current social, economic and political landscape to determine what policies exist that will either support or complicate the ability for the short, mid-, and long-term objectives of the institute to move forward. For example, what policies are in place to encourage students to participate in dual-enrollment or certificate programs? What portion, if any, does the state pay for these initiatives? What are the current laws around charter school authorization

generally or workplace charters specifically? What tax incentives are in place for companies that partner with or share physical space with nonprofit entities? A proactive plan around cultivating a policy landscape that is not just amenable to but also encourages the efforts of the institute will be critical to success.

CONCLUSION

As previously noted, Sterling Ranch has the potential to serve as a model for building an ecosystem of partnership grounded in the lifelong education of community residents and that is responsive to industry workforce needs and supportive of research interests of the various higher education institutions. While the Lake Nona Institute serves as a guiding example, the Sterling Ranch Institute is unique in that

it will be the first within this area of the country to establish a complex network of cross-disciplinary partners dedicated to generating innovation and progress in the areas of aerospace, sustainability, energy, education, and workforce development. With this in mind, the implications to practice have the potential to be exceptional. The outcomes achieved by the Sterling Ranch Institute have the potential to inform similar master-planned communities across the country and even abroad. Our expectation is that this effort will serve as a global model and potentially change the way master-planned community developers seek to incorporate tenets of New Urbanism as aligned with intentional community partnerships and industry collaborations within the construct of a lifelong learning educational ecosystem.



THE INSTITUTE:

A Proposal for the

**STERLING RANCH-VANDERBILT
INSTITUTE OF INNOVATION,
SUSTAINABILITY &
TECHNOLOGY**



INTRODUCTION

In response to the recommendations of this project, following is a proposed model for the creation of the Sterling Ranch-Vanderbilt Institute, including an overview of community context and an assessment of needs and assets. Following the institute proposal is a draft Request for Expression of Interest (RFEI) that Sterling Ranch may use to attract and evaluate specific partners for the Institute.

Community Context and Assets

Located in the Rocky Mountain Foothills on the Southwest side of Denver, Sterling Ranch founders describe a developing community. . .

. . .sweeping across thousands of acres of natural, preserved environment [whose] nine unique villages will radiate outward from an amenity-rich town center and grand civic gathering place. Pedestrian friendly planning and design focused on connectivity will offer 30 miles of trails, prolific open space, and access to two state parks and three regional parks. (About Sterling Ranch, n.d.)

With housing development barely a year underway, decades remain until Sterling Ranch will be fully realized as a community of 40,000 residents inhabiting 12,000 homes. Coupled with staggering population growth and housing inventory deficits

across the Front Range¹, Sterling Ranch is positioned for substantial and sustained growth.

Sustainability, outdoor recreation, and advanced technology are core principles of this master-planned community. With nearly 300 days of sunshine per year in a region that treasures an outdoor lifestyle, residents will have easy access to the Rocky Mountains, Chatfield State Park, and an extensive network of biking and pedestrian trails. With a technological infrastructure developed by Siemens, the entire community is plugged into gigabit internet speeds, and homes are equipped with technology to monitor and control household resource consumption. Moreover, Sterling Ranch will be the first community in Colorado to utilize rainwater harvesting to put water back into the community, and their partnership with the Denver Botanic Gardens ensures that

¹Colorado's most densely-populated region, roughly defined as the I-25 corridor beginning

with Colorado Springs to the South and ending with Fort Collins to the North.

outdoor landscapes feature flora endemic to the region, minimizing the need for irrigation. Solar energy will also be harvested to power the community. The sum of these efforts positions Sterling Ranch households to utilize significantly less energy and water than homes located in peer communities without these features.

As a state, Colorado is experiencing significant growth in population and educational demand. By 2020, Georgetown Public Policy Institute projects that 65% of all jobs will require some postsecondary education and in Colorado, the projection is even higher. Ranking third highest in the nation, Colorado projects a need for 74% of all jobs to require some level of higher education (Carnevale, 2013). Coupled with rapidly retiring industry leadership and a skills gap within the existing talent pipeline, the need for fostering meaningful linkages between K-12 education, higher education, and industry within Sterling Ranch is of critical importance to the region's overall economic well-being.

The Greater Denver Area is experiencing unprecedented growth, attracting an educated populace drawn to its enviable climate, outdoor culture, and burgeoning high-tech economy. For example, Google maintains a campus in nearby Boulder, and Lockheed Martin's Waterton Canyon satellite production facility sits within minutes of Sterling Ranch's borders. Denver International Airport (DIA) is among the largest and busiest in the United States. Front Range

Airport, adjacent to DIA, is positioned to become "Spaceport Colorado", the first designated commercial spaceport in Colorado and will serve as a potential hub for future commercial space transportation (Aguilar, March 8, 2018). As of spring 2018, the City is a finalist for Amazon's second headquarters. Taken together, these examples demonstrate the economic prowess and potential of a rising American city.

Finally, Colorado ranks consistently as one of the nation's healthiest states, and the Ford Foundation recently named Douglas County--where Sterling Ranch is located--as the healthiest county in Colorado for the third year in a row (County Health Rankings, 2018). Moreover, 57.5% of Douglas County residents hold bachelor's degrees, and the average household income is \$105,759, among the 10th highest in the United States (Census.gov, 2016; Hendee, 2017) The sum of these elements provide Sterling Ranch an unprecedented opportunity to develop a master-planned community that supports a healthy, highly educated, and growing populace within one the nation's fastest-growing metropolitan areas.

Community Interests and Needs

As indicated in survey responses, community interest are broad and include a range of activities that facilitate recreation, promote health and wellness, and embrace a breadth of educational opportunities. Among categories of learning opportunities, potential residents cited STEM education among their highest interests, although no learning category received less than 62% respondents indicating high or very high interest. Notably, previous inquiry of potential Sterling Ranch residents found at least some concern among interviewees regarding STEM education. Baese and Rifkin note that “some interviewees for this project cautioned against what they perceive to be a narrow approach that exists in tailored STEM schools or programs, making a strong call for more arts integration, an emphasis on social-emotional learning, and greater access to internships and job-based technical skills” (2017). Taking the two findings together, it is plausible that Sterling Ranch residents seek holistic educational opportunities that develop STEM expertise without sacrificing other areas of development and learning.

Workforce development is a critical need as local industry seeks to recruit and retain a well-educated workforce while also providing educational and employment

opportunities for the spouses or partners (identified as “plus ones”) who relocate to the region for career opportunities. In conversations with local industry representatives, including Siemens and Lockheed Martin, a strong sense of urgency was conveyed regarding the quickly-aging workforce of these firms’ executive ranks and the gap in talent and industry preparation that makes these positions difficult to fill after someone retires. Strategic initiatives that cultivate the next generation of industry leaders and retain them in the region are critical to sustained economic vitality.

Increased diversity is a largely unmet need in the region, especially in Douglas County, which is overwhelmingly white. As local industry enhances diversity recruitment and retention strategies, intentional community engagement initiatives present a compelling opportunity for firms to foster strong and welcoming communities for people of color. Lockheed Martin, with a strong corporate commitment to diversity and inclusion, is building a new \$350M satellite production facility within miles of Sterling Ranch and is projecting to relocate over 300 families from their Sunnyvale, CA facility to the Waterton campus increasing demand for residential housing for a diverse workforce.

PROPOSAL: THE STERLING RANCH-VANDERBILT INSTITUTE OF INNOVATION,
SUSTAINABILITY & TECHNOLOGY



Explore. Engage. Innovate. Learn.

Introduction:

Sterling Ranch is committed to building a foundation for innovation and sustainability by establishing robust and intentional partnerships throughout the community. As Sterling Ranch matures into a community of 40,000 or more residents, its founders must identify a vehicle for the sustained and intentional development of community partnerships. To achieve this goal, Sterling Ranch, along with its launch partner, Vanderbilt University, will establish a nonprofit institute poised to facilitate deep, interconnected collaborations among community, industry, K-12, and higher education partners.

Vision:

The Institute of Innovation, Sustainability, and Technology envisions a community grounded in the nature of accessible and sustainable resources, continuous innovations motivated by flourishing advances in technology, and ongoing opportunities for learning and discovery.

Mission:

The mission of the Institute is to serve as a point of convening and collaboration for myriad partners to catalyze innovations for Sterling Ranch, Douglas County, and the Greater Denver Area. The Institute will be a national model for effective collaborations, demonstrating a symbiosis across sectors with a focus on sustainability of resources, technological innovations, wellness, lifelong learning, and research. In short, the Institute will support a simple goal: “Explore. Engage. Innovate. Learn.”

Explore -

- Residents will explore the nature of the outdoors and access resources to support the sustainability of the world around them.

Engage -

- Residents will experience the nature of community, developing a spirit of connectedness and engagement with neighbors.

Innovate -

- Partners will examine the nature of possibilities through innovative research and design, especially as related to technology, engineering and aerospace.

Learn -

- Partners and residents will discover the nature of exploration and growth through continuous learning and access to opportunities for professional and personal development.

Strategic Areas of Focus (and sample programs):

The Institute will facilitate research and programming in four primary areas of focus aligned with the current and future needs of Sterling Ranch residents, local and national institutions of higher education, and area industry partners.

Strand 1: Sustainability

Focuses on the sustainability of natural resources, using the Colorado landscape and the Sterling Ranch environment as opportunities to pilot innovative processes, architecture, and technologies to preserve our precious natural resources, with a focus on energy and water.

Sample Programs:

- **Water-Wise at Sterling Ranch**
 - **Objective:** To provide interactive and informative education on the efficient use and re-use of water vis-a-vis a multitude of water saving innovations throughout Sterling Ranch.
 - **Target audience:** Residents of all ages; anyone interested in water conservation
 - **Potential partners:** Denver Botanic Gardens, Vanderbilt University, WISE Partnership

- **Overview of Program:** This program will raise awareness of water use and conservation efforts integrated into Sterling Ranch, including rainwater harvesting techniques that irrigate common green spaces. Denver Botanic Gardens (DBG) will educate children and families on intentional endemic foliage choices that minimize irrigation needs. DBG will likewise illustrate life cycles of plants and how butterflies and bees impact flora. Vanderbilt University will present water collection data to illustrate the impact of rain harvesting. Technology integrated into houses and communal spaces will highlight how Sterling Ranch maximizes efficient water use throughout the community. Finally, the WISE Partnership will illustrate how the convergence of water sharing infrastructure and advanced technology conserve considerable amounts of water use per household.
- **Energy-Wise at Sterling Ranch**
 - **Objective:** To provide interactive and informative education on harnessing renewable energy sources and implementing efficient energy use infrastructure.
 - **Target audience:** Residents of all ages; anyone interested in energy conservation
 - **Potential Partners:** Xcel Energy, Siemens, Colorado School of Mines, Vanderbilt University
 - **Cross-disciplinary Strand Opportunities:** Strand 2. Program may be folded into the Mines-Partners Collaborative as identified in Strand 2 below.
 - **Overview of Program:** Raise awareness of energy use within Sterling Ranch, including a focus on both renewable and nonrenewable energy sources that power the community and how the integrated technology Siemens provides contributes to conservation. Leverage data collection efforts from Vanderbilt to highlight impact of conservation efforts.

Strand 2: Technology, Innovation & Research

Focuses on opportunities to develop global innovations in those industry fields of importance to Sterling Ranch partners in specific but also to Colorado in general. Leading institutes of higher education will facilitate key research initiatives that catalyze innovations in the field and demonstrate the effectiveness of interdisciplinary collaboration.

Sample Programs:

- **The Mines-Partners Collaborative for Smart Living Technology**
 - **Objective:** Leverage partners' resources and capabilities to develop and provide the target audience with access to advanced technology to enable smart, sustainable living and wellness.
 - **Target Audience:** Sterling Ranch residents, other homeowners, Homeowners Associations (HOA)s, and businesses in Sterling Ranch
 - **Example Partners:** Colorado School of Mines, Vanderbilt, Siemens, Lockheed Martin, Sterling Ranch Development Corp.
 - **Cross-disciplinary Strand Opportunities:** Strand 1 & 2. Program may be coupled with the Energy-Wise at Sterling Ranch program identified in Strand 1 above and the Enrolled dual enrollment and industry certification programs identified in Strand 4 below.
 - **Overview of Program:** Through the collaborative, Mines (and other partner institutions) students and faculty, together with professionals from the partner companies will carry out a variety of technology development tasks related to smart, sustainable living and wellness. The collaborative will also engage in outreach and education aimed at encouraging the adoption of best practices and technology for smart living in Sterling Ranch and surrounding communities. Activities will include research and development, student design projects, and demonstrations in a unique living, learning laboratory.

- **Launch to the Future - Aerospace Design and Launch Lab**
 - **Objective:** Leverage partners' resources and capabilities to develop interest among K-12 for future career opportunities in Colorado's aerospace sector, which is the nation's second largest aerospace economy.
 - **Target Audience:** K-12 STEM focused students at Sterling Ranch and surrounding Douglas and Arapahoe counties.
 - **Example Partners:** Lockheed Martin, United Launch Alliance (ULA), SpaceX, CU Boulder, Colorado School of Mines, Red Rocks Community College, Arapahoe Community College, Douglas County School Board.
 - **Overview of Program:** In this flexible design lab, the partners will support students through project-based learning during in school time as well as after school STEM enrichment programs. Students will be introduced to

rocket design, reuse, and launch technologies. Activities will include building, launching, flying of rockets and drones. Intent is to develop interest and skills for the future aerospace workforce to include workforce development for “Spaceport Colorado” -- the soon to be designated commercial spaceport at Front Range Airport near Denver International Airport.

Strand 3: Health & Wellness

Focuses on the health and wellness of individuals and families within the Sterling Ranch community; this strand will support the recreational component of the lifelong learner focus.

Sample Programs:

- **The Nature of Fit: Community fitness classes & activities**
 - **Objective:** Provide Sterling Ranch residents and partner affiliates access to resources and physical space to support their personal health and wellness goals with the support of their community.
 - **Target Audience:** Sterling Ranch residents; partner employees/ affiliates
 - **Example partners:** CU Health
 - **Overview of Program:** Participants will be able to participate in a range of fitness options that promote a healthy lifestyle and overall wellbeing. From community fitness classes to recreational sports for youth/adults and even group hiking, The Nature of Fit program will work to bring community members together towards a quest to become the healthiest city in the United States.

- **Kid Fit: Healthy Schools, Healthy Kids**
 - **Objective:** Provide students access to activities, nutrition and curricula that promotes health and wellness.
 - **Target Audience:** K-12 students in Sterling Ranch and Douglas County
 - **Example Partners:** CU Health
 - **Cross-disciplinary Strand Opportunities:** Strands 2 & 4
 - **Overview of Program:** Partners such as CU Health will work with partner K-12 schools to provide students early access to resources that will allow them to begin building healthy lifestyles as youths. Components of this program include after-school fitness activities, clean food in the cafeteria, and targeted health/ wellness classes.

Strand 4: Lifelong Learning

Focuses on opportunities for community members to engage in development and growth at various points of entry.

Sample Programs:

- **EnrollEd:** Dual-enrollment & industry certificate programs
 - **Objective:** Provide local high school students access to college-level STEM courses and industry certifications while simultaneously completing their high school diploma requirements.
 - **Target Audience:** Sterling Ranch and area high schoolers (including children of Sterling Ranch partner organizations)
 - **Example Partners:** CU Boulder; Colorado School of Mines; Vanderbilt (online-courses); Douglas County Schools; Siemens
 - **Cross-disciplinary Strand Opportunities:** Strand 2
 - **Overview of Program:** The Dual-Enrollment program will allow colleges to engage students in STEM-related fields prior to graduation from high school in hopes to encourage their interest in future STEM careers. Students will be eligible to earn a college credits (up to an Associate’s degree) or industry certifications in STEM fields that are supportive of the current and future economic needs of Douglas county as well as the broader community’s needs.

- **The Academies:** Micro-courses and micro-credentials for Sterling Ranch residents and partner affiliates to explore various topics of interest
 - **Objective:** Provide adults of various ages access to opportunities to either support a transition to new fields of work or simply expand their knowledge on interdisciplinary subjects ranging from STEM to the arts and more.
 - **Target Audience:** Sterling Ranch residents and partner affiliates; Douglas County residents
 - **Example Partners:** CU Boulder; Colorado School of Mines; Red Rocks Community College; Vanderbilt (online-courses)
 - **Cross-disciplinary Strand Opportunities:** Strands 2, 3 & 4
 - **Overview of Program:** The Academies will offer individuals access to a variety of professional and personal development opportunities via “micro” courses and credentials. These micro courses and credentials will cover a variety of topics such as construction; aerospace;

internet/information technology; painting and photography; foreign languages; and sustainable living. The options will be guided by both the local industry demands as well as the interests of area residents and partners. Participants will be able to opt into earning micro-credentials that can be used towards advancing their entrance into key industries or simply engage in leisure-learning for personal enjoyment. Additionally, as a means to further engage the community members, those with relevant expertise will have the opportunity to support the Academies' work in the capacity of instructors.

Partner Engagement:

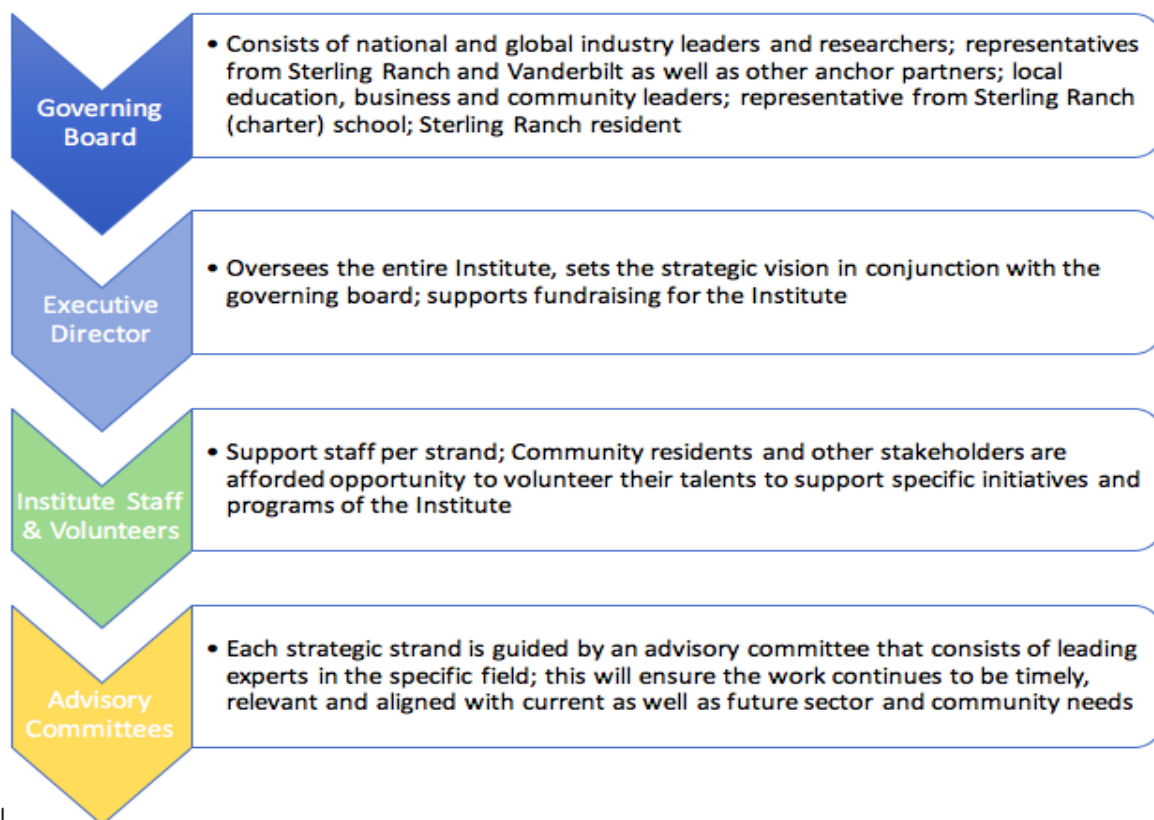
- **Short Term Champions** - Includes partners who are able to partner with the Institute on project-based or short-term events, products or efforts. Typically does not require a financial investment but does support in-kind investment or contribution of time or other resource on the part of the Champion.
 - **Example 1:** Siemens elects to contribute state of the art smart boards to the new Sterling Ranch charter school
 - **Example 2:** Vanderbilt Engineering works to create specialized energy meters for each Sterling Ranch home to measure energy efficiency

- **Strategic Alliances** - Includes partners with whom Sterling Ranch has multiple areas of strategic alignment; requires a more substantial investment of financial and other resources than those partners in the Champion tier.
 - **Example 1:** Colorado School of Mines collaborates with the Institute to provide a complex STEM pipeline of pre-college students via a dual-credit enrollment programs and lifelong learning opportunities for second-career individuals
 - **Example 2:** CU Health works with the Institute partners within the Lifelong Learning strand to provide access to after-school or community health initiatives

- **Founding (Anchor) Partners** - Include those partners who provide strategic, long term visioning, planning and advising to the Institute; these partners' efforts are interdependent and are enhanced by collaborative efforts as facilitated by the Institute. Additionally, this tier of partner plans jointly with Sterling Ranch and Vanderbilt University to pursue long term efforts with not just local, but also national and global impact. Substantial financial investment is required, typically with a minimum threshold as established by the Institute.

- **Example 1:** Lockheed Martin collaborates with the Institute to transform how a new local workforce is prepared for current and future positions in the aerospace industry
- **Example 2:** Vanderbilt University collaborates with Sterling Ranch, its technology providers and the surrounding community to facilitate cutting-edge research, design and implementation of environmentally sustainable systems. (refer to: <https://www.vanderbilt.edu/sterlingranch/what-is-vanderbilts-role/>)
- **Advisory Councils** - Each area of focus will support an Advisory Council with experts from that particular field. The Advisory Councils will ensure that the Institute remains current and connected to practice, the latest trends, workforce needs and opportunities for innovation in the field.

Governance Structure:



Fiscal Impact, Sustainability, and Revenue Streams

Founding and sustaining an Institute will require significant investment among anchor partners and future collaborators; however, prospects for return on investment are high for all involved entities. In addition to providing a centralized space for private and public sector organizations alike to engage with residents, the Institute promises to cement permanent collaborations across sectors to the benefit of each entity's mission or bottom line, all while maximizing quality of life for residents. Cross-sector collaboration stands to generate even greater demand for one of Denver's most enviable communities, which will lead to significant economic impact on both Sterling Ranch and the region as a whole; benchmarking and measuring this impact is therefore of crucial importance.

Project Phasing:

The Institute will be established in two phases. While ultimately the Institute may occupy its own physical space; however, in keeping with the intent of remaining flexible and agile it will start with virtual connections in Phase I (first 12 months). Then, the Institute will move towards a more definitive structure and space in Phase II (years 2-3).

- **Phase I.** Initially, the Institute will be led and managed by project consultants, capitalizing upon the 2-plus year relationship with Vanderbilt University and the expertise provided through the TIPs grant and Capstone projects. Primary planning will begin with the following:
 - Establishing steering committee to codify the Institute's vision and mission for the development of partnerships.
 - Establishing advisory boards for each Strategic Area of Focus (Strands 1-4) and further identifying example programs for the Institute.
 - Finalizing and distribute RFEIs for potential partnerships within first 6 months
 - Evaluating partnership RFEIs against the evaluation rubric (months 6-12)
 - Establishing MOUs with selected partners prior to end of first year.
 - Working with chambers and development councils to determine economic impact of the Institute and proposed programs.
 - Identifying physical/flexible space requirements for the Institute.
 - Planning/preparing job description for hiring of Institute director and staff.
- **Phase II.** In the second phase, the Institute will be led by a full or part-time Institute executive director. Year two planning will be directed towards:
 - Hiring of Institute executive director and staff.
 - Filing for 501 (c)(3) status.
 - Establishing executive board.
 - Initiating second round of RFEIs for additional partners.



Explore. Engage. Innovate. Learn.

The Sterling Ranch- Vanderbilt Institute of Innovation, Sustainability & Technology Request for Expression of Interest

Introduction and Context

Sterling Ranch, Colorado is a fledgling yet cutting edge master-planned community founded on principles of sustainability, outdoor recreation, and advanced technology. Located in the Greater Denver Area, Sterling Ranch will eventually be home to 40,000 residents living in 12,000 highly-efficient and technologically-advanced households nestled in the foothills of the Rocky Mountains. Coupled with unprecedented economic and population growth in the region, this community is poised to set a national standard for sustainable mixed-use development that maximizes residents' quality of life.

To realize Sterling Ranch's full potential, the community seeks intentional partnership development across sectors that sustains the natural environment, contributes to economic development, and yields a community engaged in lifelong learning. Early partnership with Vanderbilt University's School of Engineering, College of Arts and Sciences, and Peabody College of Education and Human Development has already yielded advances in both the technology Sterling Ranch will harness and the K-12 educational ecosystem best suited for the community; the next step in the Vanderbilt partnership is fostering linkages between local K-12 schools, higher education institutions, industry, government agencies, and nonprofit organizations. To best execute this ambitious endeavor, Sterling Ranch is following the example of more mature master-planned communities, such as Lake Nona, FL, by establishing a non-profit Institute for Innovation, Sustainability, and Technology. The following RFEI outlines the scope and objectives of the Institute and seeks expressions of interest across sectors for collaboration and partnership.

Overview: The Sterling Ranch-Vanderbilt Institute of Innovation, Sustainability & Technology

Vision:

The Institute of Innovation, Sustainability, and Technology envisions a community grounded in the nature of accessible and sustainable resources, continuous innovations motivated by flourishing advances in technology, and ongoing opportunities for learning and discovery.

Mission:

The mission of the Institute is to serve as a point of convening and collaboration for myriad partners to catalyze innovations for Sterling Ranch, Douglas County, and the Greater Denver Area. The Institute will be a national model for effective collaborations, demonstrating a symbiosis across sectors with a focus on sustainability of resources, technological innovations, wellness, lifelong learning, and research. In short, the Institute will support a simple goal: “Explore. Engage. Innovate. Learn.”

Explore -

- Residents will explore the nature of the outdoors and access resources to support the sustainability of the world around them.

Engage -

- Residents will experience the nature of community, developing a spirit of connectedness and engagement with neighbors.

Innovate -

- Partners will examine the nature of possibilities through innovative research and design, especially as related to technology, engineering, and aerospace.

Learn -

- Partners and residents will discover the nature of exploration and growth through continuous learning and access to opportunities to professional and personal development.

Strategic Areas of Focus:

The Institute will facilitate research and programming in four primary areas of focus as aligned with the current and future needs of Sterling Ranch residents, local and national institutes of higher education, and area industry partners.

- **Strand 1: Sustainability**
 - Focuses on the sustainability of natural resources, using the Colorado landscape and the Sterling Ranch environment as opportunities to pilot innovative

processes, architecture, and technologies to preserve our precious natural resources, with a focus on energy and water.

- **Strand 2: Technology, Innovation & Research**
 - Focuses on opportunities to develop global innovations in fields of importance to both Sterling Ranch partners and to Colorado in general. Leading institutions of higher education will facilitate key research initiatives that catalyze innovations and demonstrate the effectiveness of interdisciplinary collaboration.
- **Strand 3: Health & Wellness**
 - Focuses on the health and wellness of individuals and families within the Sterling Ranch community; this strand will also support the recreational component of the lifelong learning within the community.
- **Strand 4: Lifelong Learning**
 - Focuses on opportunities for community members to engage in development and growth at various points of entry.

Partnership Tiers:

- **Short Term Champions** - Includes entities that are able to partner with the Institute on project-based or short-term events, products, or efforts. Typically does not require a financial investment but does support in-kind investment or contribution of time or other resource on the part of the Champion.
- **Strategic Alliances** - Includes partners with whom Sterling Ranch has multiple areas of strategic alignment; requires a more substantial investment of financial and other resources than those partners in the Champion tier.
- **Founding (Anchor) Partners** - Include partners who provide strategic, long term visioning, planning, and advising to the Institute; these partners' efforts are interdependent and are enhanced by collaborative efforts facilitated by the Institute. Additionally, this tier of partner plans jointly with Sterling Ranch & Vanderbilt University to pursue long term efforts local, national, and global impact. Substantial financial investment is required, typically with a minimum threshold established by the Institute.
- **Advisory Councils** - Each area of focus will support an Advisory Council with experts from that particular field. The Advisory Councils will ensure that the Institute remains current and connected to practice, the latest trends, workforce needs, and opportunities for innovation in the field.

Submission Request Expressions of interest for potential partnerships with the Sterling Ranch Institute of Innovation, Sustainability & Technology shall include the following:

- A cover letter expressing interest
- A brief summary (5 page limit) describing:
 - Overview of current or past efforts that demonstrate a commitment to innovation and/or collaboration with external partners.
 - Intended level of partnership engagement (e.g. Short-term champion, Strategic Alliance, Founding (Anchor) partner, Advisory Council participation).

- Strategic area(s) of focus (identification of strands 1-4) with proposed programming.
- Clear identification of how the work of the institution, organization, or company will be enhanced by intentional collaboration with other partners (identification of specific opportunities for collaboration with other partners is highly encouraged).
- Clear identification of how the contributions of the institution, organization or company will enhance the vision and/or sustainability of the Institute.
- Identification of key internal staff that will be responsible for managing the potential partnership with the Institute; include their current role and rationale for their appointment over this initiative.

RFEIs will be evaluated based on the criteria outlined on the attached rubric.

RFEI EVALUATION RUBRIC

	Insufficient Info	Champion	Strategic Alliance	Anchor
Partnership Capacity	Entity is unclear how the entity will enhance the work of the Institute; does not provide a convincing narrative regarding their capacity to manage a partnership w/ the Institute	Entity demonstrates clear narrative of their ability to enhance specific initiatives; identifies at least 1 staff that will have capacity to manage the SR relationship as a component of their work responsibilities	Entity demonstrates clear narrative of their ability to enhance the overall work of the Institute; identifies at least 2 staff that will have capacity to manage the SR relationships as a component of their work responsibilities	Entity demonstrates compelling narrative of their ability to enhance the overall work of the Institute; persuasive outline of internal capacity to drive successful collaboration, initiate innovation and manage a long-term strategic relationship
Strategic Alignment	Entity provides little to no explanation of strategic alignment with the Institute's areas of focus; strands are not identified	Entity provides clear explanation of strategic alignment with at least 1 strand, although the alignment may be narrow or limited in scope and reach	Entity provides clear explanation of strategic alignment with 2 or more of the Institute's areas of focus; success of the SR partnership is tied to the success of areas of importance for the organization/ company	Entity provides a cogent, detailed explanation of strategic alignment with 2 or more of the Institute's areas of focus; overwhelmingly compelling commitment to innovation, sustainability, lifelong learning &/or wellness; success of the SR partnership is

				tied to the success of areas of importance for the organization/ company
Articulation of Interconnectivity	Entity does not provide clear nor compelling vision of collaboration w/ external partners; does not demonstrate value of interconnectivity among partners	Entity provides a vision for collaboration w/ partners, although may be limited in scope and/or focused on more short-term endeavors	Entity provides clear vision for collaboration w/ partners; gives some explanation as to the impact of collaborative work and its ability to strengthen outcomes	Entity provides a compelling vision for collaboration w/ specific partners; clearly articulates how collaborative work may strengthen the impact of their organization/ company
Access to Resources	Entity has limited resources including access to influencers & experts in the field and/or limited ability to provide in-kind or financial support for the institution	Entity has access to limited but useful and needed resources to support specific initiatives within the Institute's strands; may have more capacity to provide in-kind versus direct financial support or expertise	Entity has access to resources that can be leveraged to enhance the work and efforts of the Institute, including a particular expertise and financial capacity	Entity has access to a robust set of resources including but not limited to expertise as aligned to the strategic areas of focus for the institute; access to influencers and/or researchers in the field; financial resources; human capital; etc.
Current Commitment to Innovation	Entity does not demonstrate compelling evidence of current or previous commitment to accelerating innovative initiatives or partnerships	Entity demonstrates evidence of participating in specific, one-time innovative events or projects over a series of time; interests lie in helping to solve problems within specific components of a singular strand	Entity demonstrates evidence of facilitating innovative initiatives, research or projects that are limited in scope and/or impact; interests lie in solving existing problems with known/ semi-known solutions potentially across strands	Entity demonstrates compelling evidence of successfully facilitating innovative initiatives, research or projects that are wide-reaching with broad implications; clear interests shown in identifying solutions to complex interdisciplinary problems (known & unknown)
Current Relationship w/ SR	Entity does not provide clear information about existing relationship with SR	Entity has somewhat of a relationship with SR; relationship is centered on a one-time initiative or event	Entity has a relationship with SR; relationship is centered on a particular short/mid-term project	Entity has extensive relationship with SR and has served as a partner in some capacity during the launch phase of the community

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APPENDIX A: NEW URBANIST COMMUNITIES

Aspern-- Vienna, Austria

Founded on the site of the former Vienna airport, Aspern is among the newest master-planned communities grounded in the concepts of New Urbanism and was founded as a testing ground for new technologies that maximize efficiency and minimize consumption. At 6000 residents, Aspern is in its fledgling years but is anticipated to house more than 20,000 people once development is complete. Vienna is experiencing significant population growth and has repeatedly been named among the most livable cities worldwide. Careful planning of Aspern's development led to the extension of Vienna's subway system to the site during the worldwide economic crisis, and the line now transports residents between downtown Vienna and Aspern in 22 minutes. New motorway expansions are expected in coming years to maximize Aspern's connections to Vienna, the airport, and neighboring Bratislava, Slovakia, which is slowly melting into the Greater Vienna area.

Unlike its American master-planned counterparts, Aspern has no single-family homes; only apartments of differing sizes and configurations are available to residents in an effort to maximize density in an area anticipated to undergo significant growth in the coming decades. Similarly, only enough parking for 0.7 cars per adult resident will be constructed, requiring alternative means of transport for the

majority of residents. Aspern is being developed under the premise that all major attractions--transport, retail, and housing--will be within 300 steps of any point within the community. An intentional lack of fences coupled with ample communal space for community building and recreation seek to ensure Aspern residents are perpetually intermingling with neighbors.

Unique features of Aspern include a central, naturally-sourced lake with water so pure a city leader recently drank a full glass of it during a publicity stunt. The lake is the future home of mixed-retail and dining space and will serve as a prominent swimming hole for residents of both Aspern and of Greater Vienna. Near the lake is an ecumenical faith center whose groundbreaking was marked by a prayer service led by leaders from a multitude of religious traditions. Apartment complexes within Aspern are governed by the concept of Aspern+ in which each individual housing entity within the community features a unique amenity to accommodate a diversity of needs and wants; amenities include swimming pools, playgrounds, wheelchair access, communal gardens, etc.

Demographic markers must be considered within an Austrian context where the country's residents are 90% Austrian by ethnicity (CIA Factbook, 2017). However, despite this relative homogeneity of race and ethnicity,

Austria as a whole--and Aspern as a community--are committed to socio-economic diversity. During an interview with Marvin Mitterwallner of Aspern Smart City Research, we learned that families earning up to 4000 euros per month are eligible for a housing subsidy.

Moreover, he conveyed that approximately 70% of residents receive some sort of housing subsidy, with the remaining 30% owning their units outright, without subsidy. New residents of Aspern include North African and Middle Eastern immigrants from the ongoing refugee crisis affecting that region.

Dense housing units in Aspern, Austria are marked by ample communal green spaces and gardens.



Hampstead -- Montgomery, Alabama

Founded in 2008 in east Montgomery, Alabama, Hampstead is the first traditional neighborhood developed under Montgomery's SmartCode, a new growth model for the city. SmartCode, highly influenced by New Urbanist design, is a unified code for both new and in-fill development divided by region, community, and block. The code calls for neighborhoods and regional centers that are "compact, pedestrian-oriented, and mixed use" with less reliance on automobiles (SmartCode, 2014, p.1). Hampstead is designed by the team of Duany Plater- Zyberk & Company (DPZ), leaders in New Urbanism and Traditional Neighborhood Design and co-founders of the Congress for New Urbanism (CNU). Their philosophy of designing "economically and environmentally resilient communities that foster physical and social well-being" (DPZ, 2017) is reflected in the design of Hampstead.

Hampstead is a 416-acre village-style development centered on a vibrant town square with a surrounding man-made lake. The village includes mixed-use zoning, a variety of housing types, an active town center, restaurants, a walkable design, and a local farm community. Homes are organized in three distinct neighborhoods and include single-family detached houses, cottages, and townhomes. Hampstead focuses on community, connection, sustainability, technology, and quality of life within the context of New Urbanist design (Hampstead Living, 2017). Because of the

relative newness of the community, household income and diversity numbers are difficult to ascertain while development continues.

According to the U.S. Census Bureau, the City of Montgomery is 37.2% white and 58.1% African American, and the median household income is \$45,358 (2016). Although demographic info is largely unavailable for Hampstead beyond anecdotal evidence, the community is disproportionately white and affluent compared to Montgomery as a whole. In an interview with Anna Lowder, one of Hampstead's principal developers, Lowder observes that Hampstead's home prices and rents detract from socio-economic diversity within the community, which is comprised of mostly white, college-educated professionals. The most conspicuous non-white racial group in Hampstead is a growing Korean population, largely driven by Korean car factories in the Montgomery area; Lowder notes that Koreans comprise 8-10% of homeowners. Finally, she laments the lack of diversity regarding age, with few retirees and few young people choosing Hampstead.

One Montessori school exists within Hampstead; otherwise, the community relies on newly built schools adjacent to the community. Notable in Hampstead is the incorporation of Hampstead Farms, which provides local produce for residents and restaurants. The Hampstead Institute, a 501(c) 3 created in 2011, oversees the farm, organizes educational community events



surrounding healthy eating and well-being, and extends Hampstead's educational and social outreach into the larger community. Actively involved in Montgomery's health and wellness initiatives, such as the anti-obesity campaign, the institute opened Hampstead Downtown Farm in 2011 in downtown Montgomery (Briddell, 2014), demonstrating a greater social commitment to community beyond the confines of Hampstead.

Caption: The Tipping Point, a family-friendly, indoor-outdoor bar and restaurant located in the heart of Hampstead, is a community focal point and one of the most popular of such establishments in the Montgomery area.

Lake Nona, FL – A Culture of Collaboration

Build it and they will come. Or so it seems in the master planned community of Lake Nona Florida. Located southeast of Orlando and adjacent to the Orlando Airport, the community is thriving. “Live Forward,” the current tagline of the Lake Nona, describes this community as being “of and for the future” (Lakenona.com, 2018). Developed by the Tavistock Group, this 7000-acre residential and research community is over two decades into development. In 1996, Tavistock acquired the partially developed property. With its new acquisition Tavistock began a new vision to develop a community dedicated to the health and wellness of its residents and filled the community with over 44 miles of walking/biking trails, parks on every corner, and pools in every neighborhood. In “How to build a great American City” (Reingold, June 12, 2014) Fortune Magazine calls Lake Nona the “future of cities.”

Key to Lake Nona’s success has been early engagement with anchor institutions committed to health and wellness. The first tenant Lake Nona sought was the University of Central Florida. By donating 50 acres along with providing a 12.5M challenge grant, Lake Nona enticed the University of Central Florida to build its new medical school in Lake Nona. That was the first step in acquiring a first tenant and led to the development what is now called Medical City– a 650-acre, six anchor institution, health and life sciences center. Presently, Medical City is home to Nemours Children's’

hospital, Sanford Burnham Prebys Medical Discovery Institute, UCF Health Sciences campus, UF Research and Academic center, and the new Orlando VA Medical Center. In order to manage the growth, the Lake Nona Institute was established for the promotion of partnerships for health and learning. Through the Institute, the former president of the institute Thad Seymour (personal communication, October 2017) established five councils to develop the community collaboration needed to move Lake Nona forward. Councils focus on IT, leadership, operations, communications, and education. Through these councils, the Lake Nona Institute developed a culture of collaboration that continues to exist today.

The Villages, Florida - America's Friendliest Hometown

Self-appointed as the “friendliest hometown” in Florida, The Villages community is one of the most popular master-planned developments in the United States. Over thirty years ago, the



Villages residents dance in one of the Town Squares designed to encourage community engagement and relationships.

Morse family had a vision to create a premier retirement community for residents ages 55 and up. Now, with over 123,000 residents, The Villages has been identified as the fastest growing metropolitan area in the United States; it has received this distinction four years in a row. Despite these accolades and the general awe afforded this massive community, The Villages began from extremely humble beginnings. In 1972 Harold Schwartz purchased a few thousand acres in both Sumter and Lake counties,

about an hour northeast of Orlando. He established a mobile home community called Orange Blossom Gardens. By 1983, Schwartz's son and Villages developer, Gary Morse began replacing the mobile homes with brick and mortar houses. Morse worked to entice senior citizens to the community by offering a variety of

amenities and establishing neighborhoods anchored by town squares for dancing and fraternizing. This strategy provided the foundation for what would be later referred to as the “Adult Disney World”.

In terms of demographics, The Villages is comprised of over 65% residents age 65 or older. Nearly all (96.2%) of residents

have at least a high school diploma, with 40% of the residents having earned a bachelor's degree or higher (Census, 2016). In general, the median household income is \$59,318 and the poverty rate is just slightly above 5%. In comparison, the surrounding counties of Sumter and Marion have 43% and 25% respectively, residents over the age of 65 and just 29% and 18% respectively residents with a bachelor's degree or higher (Census, 2016). The poverty rates in Sumter and Marion are double and more than triple the rates of The Villages,

although the median household incomes are \$7000-\$19,000 less than that of The Villages residents. Regarding racial demographics, while Sumter has 7.6% African Americans and Marion has over 13%, The Villages has a mere .4% (Census, 2016). The population of Latino residents for The Villages, Sumter and Marion are 1.9%, 5.5%, and 12.5% respectively (Census, 2016). In general, The Villages is a majority white, non-Latino and Republican community and like its other master-planned community peers, it has struggled to create a racially and economically diverse environment.

Although The Villages has not necessarily prioritized racial diversity, the community has made it a priority to create diversity of experience via a massive recreational and country club system; establishment of over 2500 individual clubs and affinity groups; access to free golf for life; and a variety of community gathering spaces and town squares. Residents are able to take lifelong learning courses at the Enrichment Academy, all of which are taught by residents of The Villages. Overall, The Villages offer much to learn about attainment of the ultimate master-planned community goal of manufacturing opportunities for resident engagement and interaction.

Stapleton -- Denver, Colorado

The 1990s saw the relocation of Denver's primary airport from its historic Stapleton location, located just to the east of downtown Denver. This left the City with an unprecedented opportunity to repurpose the former airport location into a centrally-located, master-planned community near the heart of the city with sustainability and high quality of life for residents at the core of its design. Though less-known than Celebration or Hampstead, as part of the Denver Metropolitan Area, Stapleton provides regional context for Sterling Ranch, which will be built south of the city in the coming years.

In March of 1995, the Stapleton Development Plan was released, which outlined a plan for developing eight interconnected neighborhoods over the course of three to four decades. The plan states that "Stapleton will be a unique mixed-use community capable of supporting more than 30,000 jobs and 25,000 residents. More than one third of the property will be managed for parks, recreation, and open space purposes" (Stapleton Development Plan, p. I-4). Additional aspects of the Stapleton community focus on mixed land use to support walkable neighborhoods, job growth, strong ties to public and regional transportation access, and revitalization of wildlife habitat spaces. Economic growth for both Stapleton and its surrounding neighborhoods is likewise a stated objective, and the Development Plan cites

"a range of housing types and densities that support diversity" (p. I-5).

More than 20 years since the publication of the Stapleton Development Plan, much of the former airport land has been developed, and construction continues at a rapid pace in what few tracts of land remain. Driving a car or riding a bicycle through Stapleton neighborhoods reflects a prosperous, upper-middle class community full of single family homes built closely together and connected by miles of bike trails, greenways, outdoor community spaces, and occasional commercial hubs, which include some apartment buildings. Public schools are well-regarded, and the community appears to have achieved many of its stated goals regarding shared outdoor space, economic growth, and easy access to the rest of the Denver area. However, socioeconomic diversity is not an obvious achievement, as the average household income is over \$137,000, with only 3.46% of persons living in poverty (Shift Research Lab, 2015). On the other hand, Stapleton has achieved greater racial diversity than other master-planned communities highlighted; the community's population of 17,626 residents is 82% white, 12% Latinx, 8% black, and 4% Asian, although a disproportionate number of persons of color live below the poverty line than their white counterparts (Shift Research Lab, 2015). These population outcomes raise important questions for future master-planned communities, such as Sterling Ranch. This is especially relevant in consideration of which populations of

Denver residents can and cannot access housing and the associated amenities that impact the quality of life the community offers its residents.



Stapleton, part of Metro Denver, is the redeveloped site of Denver's former airport.



Celebration, Florida sits on over 11,000 acres of land and was designed to encourage community engagement.

Celebration--Orlando, Florida

As its name suggests, Celebration, Florida ambitiously set out to recreate a nostalgic commemoration of a time “...where children chased fireflies. And porch swings provided easy refuge from the cares of the day” (Pilkington, 2010). Founded in 1994 by the Disney Corporation, Celebration is a census-designated, unincorporated community that is “corporate planned and governed without a municipal government” (Bartling, 2017). It sits on 11,000 acres of what used to be swamp land and leverages mixed use development, combining retail and

residential spaces within its downtown area. It is considered among the most well-known of the various New Urbanist developments.

Similar to its counterparts throughout the United States, Celebration was designed to encourage civic engagement among its residents while also promoting community interaction. In fact, Bartling posits that “the most prevalent word one hears when talking with residents and Celebration Company employees...is ‘community’” (2002, p.55). This is firmly aligned with the general “...New Urbanist claim that changes in the way urban spaces

are designed will have a positive impact on community building” (Bartling, 2002, p.46). With this in mind, the Disney Corporation partnered with renowned architects, A.M. Stern and Jaquelin Robertson, to design a diverse community anchored by a bustling town square and ample common spaces.

Although the designers intended to create a diverse community by including black and Latino families in their marketing targets (Blair, 2001), the demographics of Celebration reveal a failed attempt of this endeavor. Celebration consists of 91% white residents, and 1.5%, 3.2% and 4.3% are African American, Asian, and “other races,” respectively, while 11.2% of the population identifies as Latino of any race (Celebration Info, 2017). The median household income is over \$120,000 with only 4.1% of the population of 7,427 falling below the poverty line.

Regardless, the want of “diversity” was not the driving factor that lured residents to Celebration. In a survey administered by Bartling, residents ranked “education” as their third most motivating factor for moving to Celebration, with “community” and affiliation with the Disney Corporation ranking first and second, respectively (2002). The Celebration School is described as an innovative model that dismisses traditional grade configurations in place of “neighborhoods” that are comprised of students aged five through eleven. It must also be noted that while the Celebration School lies within the geographic parameters of the town, the

school is under the jurisdiction of the Osceola County School Board. This lack of corporate control has caused some contention, as the Celebration residents lament their lack of autonomy over the school, which is shared with non-Celebration residents (Bartling, 2002). Despite some measurable dissatisfaction with the Celebration School and residents’ purported sense of community, general evaluation of the development’s achievement of stated goals remains difficult to measure.

APPENDIX B: INNOVATION DISTRICTS/URBAN REDEVELOPMENT

Chattanooga, TN - An Innovation District revitalizes a mid-size city

After years of urban decline, Chattanooga, Tennessee is now reimagined as a technology hub and center for innovation. Named “Gig City”, this mid-sized city boasts a “bustling tech scene” thanks in great part to the city-wide gigabit fiber network that was installed in by the Electric Power Board in 2010 (Fortune, 2017). The result of visionary leadership by the mayor, civic public and private leaders alike, the 140-acre Chattanooga Innovation District hosts startups, accelerators, non-profits, and government entities all within a walkable, dense Downton district. Consistent with the principles of New Urbanism, Innovation districts are not new as they have emerged in multiple large cities across the world (22@ Barcelona, Boston’s Kendall square are early examples). However, Chattanooga is the first mid-size city to capitalize on the revitalization and economic boost that comes with innovative urban redevelopment (Katz, 2015). Designed as a “metropolitan collaborative enterprise” (Katz, 2015) the city recently rolled out an 10-gigabit network that is grabbing the attention of venture capitalists and tech innovators alike.

Through smart tax incentives, a ten gigabit-per-second fiber Internet service installed in the district and advanced power grid monitoring, Chattanooga’s urban core has been revitalized (Katz, 2015). Key to Chattanooga’s success is their commitment to quality placemaking, engagement with unusual anchor institutions (the Electric Power Board for example), and dedication to a “highly innovation ecosystem” (Katz 2015). The 90,000 square feet Edney Innovation Center now houses a tech accelerator, several start-ups and networking space for companies in the community.

Chattanooga (population 174,483) is a racially diverse city. According to the most recent census, Chattanooga is 58 % white, 34% black, 2 % Asian, and 5.5% Hispanic (Census.gov, 2016). Median household income is \$41,278 with 21.1% of household living in poverty (Census.gov, 2016). In terms of education, 85.5% of residents are high school graduates with only 27.8% of residents holding a bachelor degree or higher (Census.gov, 2016). The needs of lower income residents are recognized by the community and Chattanooga is working to ensure low income residents are not excluded from the benefits of innovation in the community. For example, NetBridge, the municipal high-speed internet service program, provides high speed-internet service at extremely minimal to low income residents in an effort to bridge the digital divide (Katz, 2015; Connected Fiber, 2016). Results are mixed, as Chattanooga continues to struggle to attract lower income and residents of color into the district (Flessner, August 8, 2017). However, a new generation of tech professionals, innovators, and entrepreneurs lured by the ultra-fast broadband internet are coming to Chattanooga.



Chattanooga Innovation District

A 140-acre innovation district has been established downtown. The business accelerator Co.Lab will anchor the district, which encompasses a dozen key businesses and organizations.

- | | |
|-----------------------|-----------------------------------|
| 1. Society of Work | 7. Causeway |
| 2. Lamp Post Group | 8. Public Education Foundation |
| 3. EPB | 9. Lamp Post/Cornerstone Bank |
| 4. Public Library | 10. James A. Mapp Building |
| 5. Coyote Logistics | 11. Edney Building – headquarters |
| 6. Swifiting Ventures | 12. AT&T |

Source: The Enterprise Center
STAFF GRAPHIC BY LAURA W. MCNUTT

Crosstown Concourse, Memphis TN - The Vertical Urban Village



The Crosstown Concourse building existed generations ago in the 1920s as a Sears Roebuck & Co. department store and catalog fulfillment center in the heart of midtown Memphis, TN. By 1993, the entire building closed its doors, leaving the over one million square feet (it has as much space as the Empire State building) of real estate vacant and vulnerable to vandalism. After 17 years of blight and nonuse, Southeast Asset Management and CIO and Staley Cates of the Poplar Foundation purchased the building. The new owners called upon the creative minds of art history professor, Dr. Todd Richardson and local artist Chris Miner to help set a vision as to the next iteration of this mammoth structure.

Dr. Richardson and Miner's vision for the Crosstown space represented a

unique approach. In an interview with Style Blueprint, Dr. Richardson provides the following explanation: "The original vision was really about: What is the highest and best use of the Crosstown building to make the biggest impact on the Crosstown neighborhood? That's what led us away from the typical development approach. We didn't want to look at the building as space to be filled, but an opportunity to create a new neighborhood." (Brown, nd).

With that as the foundation of their work, Crosstown Concourse is referred to as a "vertical urban village".

The undergirding concepts of focus include health, arts, and education. Within this village, partnership is key, as evidenced by the development's very visible motto: "Better together". The building includes retail, office, residential units (for office tenants; families accessing services at St. Jude's medical center; teachers of the Memphis Teacher Residency; as well as general community members not directly connected to the Concourse), a new high school and other mixed-used options. Investors, tenants, and the community believe the early success of this project is based on the strategy used to identify occupants of the building: "The planning team's goal was to go beyond mixed use — to put people and partners not just near each other, but in connection with each other" (Brown, n.d.).

Key anchor institutions such as Church Health and the YMCA were among the first residents. Currently, there are at least 200 residents within the Concourse apartments and over 41 office and retail occupants (which represents over 700 employees). Once the building is at full occupancy, there will be over 3000 people accessing Crosstown Concourse on a daily basis (Brown, n.d.). And with this one million square foot vertical urban village being at 98% occupancy at only two months after opening, it is projected to reach this 3000+ foot traffic fairly soon.

Even still, Crosstown Concourse has much to figure out regarding how to make their new space accessible to the community it which it is situated. Memphis is majority African American with median

income of \$36,975 and a poverty rate of almost 28% (Census, 2016). The median home value of owner-occupied housing units is just \$93,700. In comparison, the apartments available at Crosstown known as Parcel, are over \$1000 per month and require a potential applicant's income be at least three times the rent of the apartment. This issue of access will be one of great concern as Concourse continues to grow and extends its impact on housing values, businesses and other neighborhood amenities surrounding the new development.

APPENDIX C: INTERVIEW PROTOCOL

The interview protocol for our research is organized by topic/concept area and includes a direct trace between questions for developers, community/government agency partners, Innovation Districts/Urban Redevelopment/Higher Education partners and Industry partners. Questions are grouped based on Talen’s (2002) framework for assessment of New Urbanist Communities.

Interview Protocol by Interviewee Group:

Existing Communities - Developers	Community/ Government Agencies	Innovation Districts/ Urban Redevelopment/ HE Partners	Industry Partners
COMMUNITY - the strength of social networks among residents			
ICEBREAKER			
<p>What is your organization? And, what is your position in the organization?</p> <p>What is your organization’s relationship to your larger community?</p> <p>How long has your community been in</p>	<p>What is your organization or agency? And, what is your position in the organization?</p> <p>What is your organization’s relationship to your larger community?</p> <p>How long has your initiative been in</p>	<p>What is your organization? And, what is your position in the organization?</p> <p>What is your organization’s relationship to your larger community?</p> <p>How long has your initiative been in</p>	<p>What is your company? And, what is your position in the organization?</p> <p>What is your company’s relationship to your larger community?</p>

development? Is it completed?

How long have you been a community partner?

What are your big-picture goals as the developer of this community? What motivated you to partner with this other organizations in the place?

development? Is it completed?

What are your big picture goals for partnership with this community? What motivated your organization to partner with this community in the first place?

development? Is it completed?

What are your big picture goals for partnership with this community? What motivated your organization to partner with this community in the first place?

How long has your initiative been in development? Is it completed?

What are your big picture goals for partnership with this community? What motivated your company to partner with this community in the first place?

QUESTIONS

What types of partnerships have you created in your community? Are they codified in formal or informal Memoranda of Agreement?

Please name some specific examples of events, initiatives, or programs your community implements or participates in.

How is your partnership codified with this community? Please name some specific examples of events, initiatives, or programs your org/agency implements or participates in. How often do you meet with your community partners? In what forums?

How is your partnership codified with this community? Please name some specific examples of events, initiatives, or programs your org/agency implements or participates in. How does your initiative support the education of children? young

How is your partnership codified with this community? Please name some specific examples of events, initiatives, or programs your company implements or participates in. Do you partner with other agencies, organizations, or industry partners

<p>How often do you meet with your community partners? In what forums?</p> <p>Do you share physical space with your partners?</p> <p>Do you share financial resources/investments?</p> <p>What is working? What needs improvement?</p> <p>Are these partnerships successful? Why or why not?</p> <p>What are the most significant challenges you face?</p>	<p>Do you share physical space with your partners?</p> <p>Do you share financial resources/investments?</p> <p>What is working? What needs improvement? Are these partnerships successful? Why or why not?</p> <p>Do you partner with other agencies, organizations, or industry partners to carry out your work in this community? What are the most significant challenges you face?</p>	<p>adults? Older adults?</p> <p>How often do you meet with your community partners? In what forums?</p> <p>Do you share physical space with your partners?</p> <p>Do you share financial resources/investments?</p> <p>What is working? What needs improvement? Are these partnerships successful? Why or why not?</p> <p>Do you partner with other agencies, organizations, or industry partners to carry out your work in this community? What are the most significant challenges you face?</p>	<p>for workforce development/career readiness in this community? If so, please describe. What resources do you share? (ex. financial, space, human capital) Name any current successes around your involvement with this community, especially as it pertains to workforce development? What elements have contributed to the greatest amount of success? How do you measure success? What are the most significant challenges you face?</p>
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SOCIAL EQUITY - the degree to which residents have equal access to community resources across class lines

QUESTIONS

<p>How does your community attend to the educational development of its residents?</p> <p>PK-12? HE? CTE (Career and Technical Education)/ workforce development? LL- lifelong learning?</p> <p style="text-align: center;">Tell me more...</p> <p>In general, what is the socio-economic diversity of your community?</p> <p>What is the racial diversity?</p> <p>What is the general level of educational attainment of your community?</p> <p>Have you noticed a difference in terms of which groups are accessing the programs?</p>	<p>Does your organization support the education of residents? If so, at which level(s) or phase(s) of life?</p> <p>Does your organization or agency target particular populations? Which ones, and why?</p> <p>Have you noticed a difference in terms of which groups are accessing the programs?</p> <p>Do you perceive social equity has been attained in this community? Why or why not?</p>	<p>How does your initiative support the education of residents? At which level(s) or phase(s) of life?</p> <p>Does your organization or agency target particular populations? Which ones, and why?</p> <p>Have you noticed a difference in terms of which groups are accessing the programs?</p> <p>Do you perceive social equity has been attained in this community? Why or why not?</p>	<p>What benefit(s) do you perceive residents receive through your company's partnership?</p> <p>How does your company support education, workforce development and/or career readiness for residents? At which level(s) or phase(s) of life?</p> <p>Does your company target particular populations? Which ones, and why?</p> <p>Have you noticed a difference in terms of which groups are accessing the programs?</p> <p>Do you perceive social equity has been attained in this community?</p>
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			Why or why not?
COMMON GOOD - defined by the degree to which private rights yield to common concerns			
QUESTIONS			
<p>What are the overarching benefits you see to living in this community? Who does and does not have access to these benefits?</p> <p>If you observe that some populations lack access to the full benefits of this community, what causes do you believe contribute to this?</p> <p>Do you observe tensions between private rights and common good within this community? Where?</p>	<p>What are the overarching benefits you see to living in this community? Who does and does not have access to these benefits?</p> <p>If you observe that some populations lack access to the full benefits of this community, what causes do you believe contribute to this?</p> <p>Do you observe tensions between private rights and common good within this community? Where?</p>	<p>What are the overarching benefits you see to living in this community? Who does and does not have access to these benefits?</p> <p>If you observe that some populations lack access to the full benefits of this community, what causes do you believe contribute to this?</p> <p>Do you observe tensions between private rights and common good within this community? Where?</p>	<p>What are the overarching benefits you see to living in this community? Who does and does not have access to these benefits?</p> <p>If you observe that some populations lack access to the full benefits of this community, what causes do you believe contribute to this?</p> <p>Do you observe tensions between private rights and common good within this</p>

			community? Where?
CLOSING			
<p>What advice would you give to other communities trying to build educational/industry / community partnerships?</p> <p>What opportunities have you missed?</p> <p>Is there anything else you want to share/ a question that I did not ask?</p>	<p>What advice would you give similar orgs/agencies to yours seeking partnership with master-planned communities in the future?</p> <p>Are there any particular features unique to the context of your community that have either bolstered or hindered your work?</p> <p>Do you perceive you've missed any opportunities?</p> <p>Is there anything else you want to share/ a question that I did not ask?</p>	<p>What advice would you give similar orgs/agencies to yours seeking partnership with master-planned communities in the future?</p> <p>Are there any particular features unique to the context of your community that have either bolstered or hindered your work?</p> <p>Do you perceive you've missed any opportunities?</p> <p>Is there anything else you want to share/ a question that I did not ask?</p>	<p>What advice would you give similar orgs/agencies to yours seeking partnership with master-planned communities in the future?</p> <p>Are there any particular features unique to the context of your community that have either bolstered or hindered your work?</p> <p>Do you perceive you've missed any opportunities?</p> <p>Is there anything else you want to share/ a question that I did not ask?</p>

Additional Evidence to be Captured:

Documents:

Observations:

APPENDIX D: QUANTITATIVE SURVEY

Survey Response Data

gender	% (n)	Race	% (n)
male	34% (50)	Caucasian/White	86% (130)
female	64% (95)	Latinx	4% (6)
Age Range	% (n)	Asian	3% (5)
21-30 years old	6% (9)	Other	3% (4)
31-40	33% (49)	Educational Attainment	% (n)
41-50	29% (43)	High school/GED	3% (4)
51-60	19% (28)	Associate's degree	9% (14)
60+	11% (16)	Bachelor's degree or higher	45% (83)
		Graduate or professional degree	38% (57)
Total response count	151	Other	3% (4)

Sterling Ranch Potential Resident Survey: Community Learning & Professional Development

Q1.1

Thank you for taking a few minutes to provide input on the educational and workforce development initiatives at Sterling Ranch.

Your individual responses will remain anonymous, and only aggregate data will be shared with Sterling Ranch developers and community stakeholders. Only the three members of the research team, listed below, will have access to your responses. Moreover, your email address will not be shared, sold, or utilized in any form, except to notify the winner of the Amazon gift card raffle and to provide relevant updates from Sterling Ranch that you can cancel at any time. Please do not hesitate to contact us with questions regarding our work.

Kind regards,

Barbara Bell (barbara.a.bell@vanderbilt.edu)

Maya Bugg (maya.bugg@vanderbilt.edu)

Andrew Wingfield (andrew.s.wingfield@vanderbilt.edu),

Doctor of Education Degree Candidates, Vanderbilt University's Peabody College of Education & Human Development

Q2.1 For this question, an adult is defined as anyone over 20 years of age.

Considering adult learning and continuing education, how interested are you in Sterling Ranch community partnerships that include opportunities for:

	Very disinterested	Disinterested	Neutral	Interested	Very interested
adult learning & continued education focused on science & technology?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
adult learning & continued education focused on arts & humanities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
adult learning & continued education focused on health & fitness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
adult learning & continued education focused on nature & conservation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q2.2 For this question, "youth" is defined as children or adolescents up to 20 years old.

Considering youth education and learning, how interested are you in Sterling Ranch community partnerships that include opportunities for:

	Very disinterested	Disinterested	Neutral	Interested	Very interested
youth education and learning focused on science & technology?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
youth education and learning focused on arts & humanities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
youth education and learning focused on health & fitness?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
youth education and learning focused on nature & conservation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q3.1 For this question, an adult is defined as anyone 20 years of age or older; youth is anyone under 20 years old.

Considering your preferences for educational and learning opportunities found at Sterling Ranch, please indicate your level of agreement with each of the following statements.

It is important for:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
adults of all ages to have access to continued learning for fun and recreation .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
adults of all ages to have access to continued learning for professional development .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
youth to have access to extracurricular programs that enhance college readiness .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
youth to have access to extracurricular programs that enhance workforce/career readiness .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
youth to have opportunities for extracurricular programs that encourage fun and expand interests .	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4.1 How would you prioritize the following educational opportunities?

Lowest Priority

Lower priority

Medium priority

Higher priority

Highest priority

Adult learning and continued education.

Adult recreation.

Extracurricular programs that enhance **college readiness** for youth.

Extracurricular programs that enhance **workforce readiness** for youth.

Recreational programs that encourage fun and **expand interests** for youth.

Educational opportunities provided by area colleges and universities for **all residents**.

Educational opportunities provided by **area industry partners** for **all residents**.

Education opportunities provided by **area government agencies, parks, and non-profits** for **all residents**.

Q4.2 I/my family would participate in Sterling Ranch community programs, classes, and learning resources if they:

	Very unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Very likely
took place on-site at Sterling Ranch (versus outside of the community).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
were already included in Sterling Ranch residents' property taxes, additional community fees, or as part of your home's purchase price.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
were offered for an a la carte, at-cost fee.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q5.1 Thinking about your potential neighbors at Sterling Ranch, please indicate your level of agreement with the following questions.

Do you agree or disagree:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
that it is important to develop and maintain strong social connections within your community?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
that it is important to have neighbors from diverse racial/ethnic backgrounds?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
that it is important to have neighbors with diverse levels of income?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
that it is more important to make community decisions based on the broader needs of the majority of residents versus the needs of individuals?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q6.1 Demographic Info

How do you identify?

- Male
 - Female
 - Transgender
 - Other
 - Prefer not to answer
-

Q6.2 How do you identify? Check all that apply.

- African American/Black
 - Caucasian/White
 - Black-Latino/a
 - White-Latino/a
 - Asian
 - Middle Eastern
 - Native American
 - Other
 - Prefer not to answer
-

Q6.3 What is your age range?

- Under 21
 - 21-30 years old
 - 31-40 years old
 - 41-50 years old
 - 51-60 years old
 - Over 60 years old
 - Prefer not to answer
-

Q6.4 What is your highest level of education completed?

- High school/GED
 - Associate's degree or certificate
 - Bachelor's degree
 - Graduate or professional degree
 - Other
 - Prefer not to answer
-

Q6.5 Who else would live in your Sterling Ranch household? Check all that apply.

- No one else--just me
 - Spouse/partner
 - Child/children up to 20 years old
 - Other adult(s), 21-60
 - Other adult(s) over 60
 - Prefer not to answer / unsure
-

Q6.6 Are you retired?

- Yes
 - No
 - Partially
 - Prefer not to answer
-

Q6.7 What is your annual household income?

- Under \$75,000
- \$75,001-100,000
- \$100,001-150,000
- \$151,000-200,000
- Over \$200,000
- Prefer not to answer

Q7.1 (Optional) Please provide additional comments about educational or personal development opportunities you would like to see at Sterling Ranch.

Q7.2 What is your email address? This will only be used to contact the winner of the Amazon gift card raffle (required for raffle entry).

Appendix E: Quantitative Analysis

Talen Framework Measures by Demographic Marker

Gender		Thinking about your potential neighbors at Sterling Ranch, please indicate your level of agreemen... - that it is important to develop and maintain strong social connections within your community?	Thinking about your potential neighbors at Sterling Ranch, please indicate your level of agreemen... - that it is important to have neighbors with diverse levels of income?	Thinking about your potential neighbors at Sterling Ranch, please indicate your level of agreemen... - that it is important to have neighbors from diverse racial/ethnic backgrounds?	Thinking about your potential neighbors at Sterling Ranch, please indicate your level of agreemen... - that it is more important to make community decisions based on the broader needs of the majority of residents versus the needs of individuals?
Demographic Info How do you identify?	Chi Square	43.61*	32.61*	42.44*	42.44*
	Degrees of Freedom	16	16	16	16
	p-value	0.00	0.01	0.00	0.00

*Note: The Chi-Square approximation may be inaccurate - expected frequency less than 5.

Race/Ethnicity		Thinking about your potential neighbors at Sterling Ranch, please indicate your level of agreemen... - that it is important to develop and maintain strong social connections within your community?	Thinking about your potential neighbors at Sterling Ranch, please indicate your level of agreemen... - that it is important to have neighbors with diverse levels of income?	Thinking about your potential neighbors at Sterling Ranch, please indicate your level of agreemen... - that it is important to have neighbors from diverse racial/ethnic backgrounds?	Thinking about your potential neighbors at Sterling Ranch, please indicate your level of agreemen... - that it is more important to make community decisions based on the broader needs of the majority of residents versus the needs of individuals?
How do you identify? Check all that apply.	Chi Square	36.81*	33.03*	42.91*	54.72*
	Degrees of Freedom	32	32	32	32
	p-value	0.26	0.42	0.09	0.01

*Note: The Chi-Square approximation may be inaccurate - expected frequency less than 5.

Age		Thinking about your potential neighbors at Sterling Ranch, please indicate your level of agreemen... - that it is important to develop and maintain strong social connections within your community?	Thinking about your potential neighbors at Sterling Ranch, please indicate your level of agreemen... - that it is important to have neighbors with diverse levels of income?	Thinking about your potential neighbors at Sterling Ranch, please indicate your level of agreemen... - that it is important to have neighbors from diverse racial/ethnic backgrounds?	Thinking about your potential neighbors at Sterling Ranch, please indicate your level of agreemen... - that it is more important to make community decisions based on the broader needs of the majority of residents versus the needs of individuals?
What is your age range?	Chi Square	21.59*	31.69*	34.52*	30.71*
	Degrees of Freedom	24	24	24	24
	p-value	0.60	0.13	0.08	0.16

*Note: The Chi-Square approximation may be inaccurate - expected frequency less than 5.

Priorities by Age

	What is your age range?	How would you prioritize the following educational opportunities? - Adult learning and continued education.					Total	How would you prioritize the following educational opportunities? - Adult recreation.					Total	How would you prioritize the following educational opportunities? - Extracurricular programs that enhance college readiness for youth.					Total	How would you prioritize the following educational opportunities? - Extracurricular programs that enhance workforce readiness for youth.					Total	How would you prioritize the following educational opportunities? - Recreational programs that encourage fun and expand interests for youth.					Total	How would you prioritize the following educational opportunities? - Educational opportunities provided by area colleges and universities for all residents.					Total	How would you prioritize the following educational opportunities? - Educational opportunities provided by area industry partners for all residents.					Total	How would you prioritize the following educational opportunities? - Education opportunities provided by area government agencies, parks, and non-profits for all residents.					Total
		Lowest Priority	Lower priority	Medium priority	Higher priority	Highest priority		Lowest Priority	Lower priority	Medium priority	Higher priority	Highest priority		Lowest Priority	Lower priority	Medium priority	Higher priority	Highest priority		Lowest Priority	Lower priority	Medium priority	Higher priority	Highest priority		Lowest Priority	Lower priority	Medium priority	Higher priority	Highest priority		Lowest Priority	Lower priority	Medium priority	Higher priority	Highest priority		Lowest Priority	Lower priority	Medium priority	Higher priority	Highest priority							
	Under 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	21-30 years old	0	0	1	5	2	8	0	1	2	3	8	0	0	2	5	8	0	0	2	5	8	0	0	3	4	8	0	0	2	2	8	0	1	0	5	8	0	1	3	2	8	0	1	3	2			
	31-40 years old	2	8	28	6	5	49	0	1	7	29	49	0	4	9	16	49	0	4	9	16	49	0	1	8	18	49	0	2	19	15	47	0	8	16	16	49	2	2	16	16	49	2	2	16	16			
	41-50 years old	1	4	13	18	6	42	0	1	10	22	43	1	2	11	13	43	1	3	11	13	43	0	1	8	16	43	1	3	6	17	43	1	3	16	12	43	1	2	11	17	43	1	2	11	17			
	51-60 years old	2	3	11	8	4	28	1	0	6	14	28	2	5	6	8	28	1	2	9	8	27	1	3	6	14	28	2	0	8	11	28	1	1	14	8	28	3	0	9	11	28	3	0	9	11			
	Over 60 years old	0	1	5	6	4	16	0	1	1	9	15	1	2	3	4	16	0	2	2	4	16	0	3	2	4	15	0	1	1	7	16	0	0	3	12	16	0	1	1	11	16	0	1	1	11			
	Prefer not to answer	0	0	2	1	1	4	0	0	1	0	4	0	0	1	2	4	0	0	1	1	4	0	0	1	1	4	0	0	1	2	4	0	0	1	0	4	0	0	1	0	4	0	0	2	0			
	Total	5	16	60	44	22	147	1	4	27	77	147	4	13	32	48	148	2	11	36	46	147	1	8	28	58	147	3	6	37	52	146	2	13	50	53	148	6	6	42	57								

What is your age range?	Chi Square	24.86*	18.42*	15.66*	11.70*	24.60*	24.56*	34.57*	19.86*
	Degrees of Freedom	24	24	24	24	24	24	24	24
	p-value	0.41	0.78	0.90	0.98	0.43	0.43	0.08	0.70

*Note: The Chi-Square approximation may be inaccurate - expected frequency less than 5.

Priorities by Gender

		How would you prioritize the following educational opportunities? - Adult learning and continued education.					Total	How would you prioritize the following educational opportunities? - Adult recreation.					Total	How would you prioritize the following educational opportunities? - Extracurricular programs that enhance college readiness for youth.					Total	How would you prioritize the following educational opportunities? - Extracurricular programs that enhance workforce readiness for youth.					Total	How would you prioritize the following educational opportunities? - Recreational programs that encourage fun and expand interests for youth.					Total	How would you prioritize the following educational opportunities? - Educational opportunities provided by area colleges and universities for all residents.					Total	How would you prioritize the following educational opportunities? - Educational opportunities provided by area industry partners for all residents.					Total	How would you prioritize the following educational opportunities? - Education opportunities provided by area government agencies, parks, and non-profits for all residents.					Total
		Lowest Priority	Lower priority	Medium priority	Higher priority	Highest priority		Lowest Priority	Lower priority	Medium priority	Higher priority	Highest priority		Lowest Priority	Lower priority	Medium priority	Higher priority	Highest priority		Lowest Priority	Lower priority	Medium priority	Higher priority	Highest priority		Lowest Priority	Lower priority	Medium priority	Higher priority	Highest priority		Lowest Priority	Lower priority	Medium priority	Higher priority	Highest priority		Lowest Priority	Lower priority	Medium priority	Higher priority	Highest priority							
Demographic Info: How do you identify?	Male	1	6	23	13	6	49	1	0	9	28	11	49	1	7	7	15	19	49	0	7	10	19	13	49	0	6	10	17	16	49	0	3	19	16	10	48	0	5	19	20	5	49	2	2	20	24	1	49
	Female	4	10	35	30	15	94	0	4	17	47	26	94	2	5	24	32	32	95	1	3	25	29	36	94	0	2	17	39	36	94	1	8	30	32	24	95	3	4	21	32	35	95						
	Transgender	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
	Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
	Prefer not to answer	0	0	2	1	1	4	0	0	1	2	1	4	1	1	1	1	0	4	1	1	1	0	1	4	1	0	1	1	1	4	1	0	1	1	1	4												
	Total	5	16	60	44	22	147	1	4	27	77	38	147	4	13	32	48	51	148	2	11	36	48	50	147	1	8	28	58	52	147	3	6	37	52	48	146	2	13	50	53	30	148	6	6	42	57	37	148

Demographic Info: How do you identify?	Chi Square	2.88*	5.01*	15.44*	28.02*	44.44*	21.59*	22.60*	26.51*
Degrees of Freedom	16	16	16	16	16	16	16	16	16
p-value	1.00	1.00	0.49	0.03	0.00	0.16	0.12	0.05	

*Note: The Chi-Square approximation may be inaccurate - expected frequency less than 5.