



# **Sustainability Tools for Assessing and Rating Communities for the City of Houston**

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## **Executive Summary**

### **The City of Houston's Sustainability Efforts**

The City of Houston (COH) is dedicated to greening the community and pursuing a sustainable future for Houstonians.<sup>1</sup> In January 2014, the Sustainability Tools for Assessing and Rating (STAR) Communities selected Houston as one of twenty U.S. cities, towns, and counties to participate in its inaugural 2014 Leadership STAR Community Program. By gathering and collecting the information required for STAR certification, the City gained a deeper understanding of the community's sustainability strengths, needs, and areas for improvement.

### **The STAR Sustainability Framework**

The STAR framework uses a comprehensive view of sustainability that surpasses traditional ecological and environmental definitions for the following goal areas:

1. Built environment
2. Climate and energy
3. Economy and jobs
4. Education, arts and community
5. Equity and empowerment
6. Health and safety
7. Natural systems
8. Innovation and process credits

Each goal area encompasses up to seven objectives that are evaluated by community level outcomes and local actions; STAR uses completed outcomes, objectives, and goal areas to produce a measurable indicator depicting the city's progress towards sustainability.

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<sup>1</sup> Throughout this paper, the City of Houston (COH) and City (with a capital "C") will refer to the government and the people working for the local government. Houston and city (with a lowercase "c") will refer to the city itself.

To achieve progress towards shared community sustainability across a wide range of objectives, the STAR Rating System encourages strong partnerships between the City of Houston, regional committees, local organizations, and community groups.

## **Key Findings**

As of March 16, 2015, Houston is on track to achieve a 3-STAR Community rating out of 5, with an initial 236.48 verification score out of the total possible 720 points. After the final verification scoring and STAR certification, Houston will be the most populous city to be recognized as a STAR Certified Community. The City received the majority of its points for local actions, such as practice improvements and outreach campaigns. Although sustainability is a relatively new commitment for the City of Houston, these results show that Houston is committed to decisions and investments that will guide them towards a sustainable future.

## **Recommendations for the City of Houston's Future in Sustainability**

After using the STAR feedback and rating system to pinpoint Houston's strengths and areas for improvement, the City of Houston will use the STAR framework to develop the city's sustainability plan and climate action plan. Regularly reviewing the results from Houston and other STAR communities will allow decision makers and residents to observe Houston's progress towards achieving sustainability, create future plans to raise awareness, and increase sustainability in Houston's community.

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## **Introduction**

### **The Green Houston Office of Sustainability and STAR Communities**

The City of Houston (COH) began pursuing environmental initiatives in 2004 under Mayor Bill White and his Office of Environmental Programming. The momentum from their initiatives led Mayor Annise Parker to establish the city's first Green Office of Sustainability in 2010. This office is responsible for coordinating and implementing environmental projects and initiatives – such as alternative and clean transportation, green buildings, and waste minimization – that will improve Houston's communities.

Lisa Lin, Sustainability Manager at COH, first learned about Sustainability Tools for Assessing and Rating (STAR) through the ICLEI-Local Governments for Sustainability and Urban Sustainability Directors Network. In January 2014, STAR Communities selected Houston as one of twenty U.S. cities, towns, and counties to participate in its inaugural 2014 Leadership STAR Community Program. The COH received a grant and gift certificate from STAR which covered \$11,500 of the costs; the remaining \$3,500 came from the Office's budget. This amount paid for a variety of services, including STAR Community Membership, the customized online reporting tool, the Leadership program, and workshops and training sessions held by key staff and local partners.

Ms. Lin oversaw the STAR assessment for the City of Houston. From January 2014 to January 2015, Ms. Lin and her team will collect data and information for the online reporting tool. The Green Houston Office of Sustainability will work with multiple departments within the COH, including the Bureau of Pollution Control and Prevention, Health and Human Services

Department, and Public Works and Engineering Department. Ms. Lin will collaborate with Houston organizations, such as Houston B-Cycle, Houston-Galveston Area Council, and Downtown Houston Management District.

I worked continuously with Ms. Lin on STAR from June 2014 until January 2015 for the initial submission, and from March through April 2015 for edits and the final submission. For every goal area in the STAR Rating System, I read the technical manual, gathered information from different organizations, and entered the data and information in the Online Reporting Tool. I was also in charge of several other interns who worked for shorter periods of time throughout the summer and fall semesters. Around the initial deadline, I worked closely with Ms. Lin to finalize all of the data for the submission. I am currently reviewing the notes that the STAR verification team provided and revising the relevant information for the final submission.

### **The STAR Sustainability System**

The STAR Community Rating System is designed to help governments identify, validate, and support the implementation of best practices for sustainability. To define community-scale sustainability, the system uses a comprehensive vision that covers eight major goal areas:

1. Built environment
2. Climate and energy
3. Economy and jobs
4. Education, arts and community
5. Equity and empowerment
6. Health and safety
7. Natural systems
8. Innovation and process credits

Each goal area includes multiple objectives that are further assessed by community level outcomes and local actions. These outcomes and actions comprise 526 measurable indicators that

are determine whether a community can be certified, as well as what rating (from 3 to 5-STARs) certified communities receive.

### **Houston's Results and Future in Sustainability**

Houston received a preliminary score of 236.5 out of a maximum possible 720 points, which earned Houston a 3-STAR Certification rating. In the next month, Ms. Lin and I will be submitting supplementary information to address questions from the STAR staff in our initial submission. A follow-up submission may result in increased points for the COH's final submission, although it will not be possible to achieve a 4-STAR Community Rating during this assessment cycle due to the lack of points necessary to reach the next certification level. Therefore, the final approved 3-STAR Community Rating will last for three years.

The COH and the Green Houston Office of Sustainability will be using the rating and STAR framework to review what Houston has already implemented and what actions will be taken in the future. The COH will monitor any ongoing actions to supplement the STAR submission's data; more importantly, the COH will use STAR as a holistic sustainability framework to complete a city sustainability plan in the future.

### **STAR Community Rating System**

The Sustainability Tools for Assessing and Rating (STAR) Community Rating System is the first national assessment and certification program for sustainable communities. Local governments built this system to engage and evaluate their communities.

## Development and Evolution

Developed between 2008 and 2012, the STAR rating system was first released in October 2012.

The Pilot STAR Communities consisted of 30 early adopters who were the first to pursue certification. Tacoma, Washington became the first STAR-Certified Community in November 2013 (STAR Staff, 2015). As seen in [Error! Reference source not found.](#), 23 communities have become certified since then.

Table 1: Officially certified STAR Communities as of March 2015 (STAR Staff, 2015).

5-STAR Communities	4-STAR Communities	3-STAR Communities
Northampton, MA	Austin, TX	Albany, NY
Seattle, WA	Broward County, FL	Atlanta, GA
	Davenport, IA	Birmingham, AL
	Evanston, IL	Chandler, AZ
	Memphis, TN	Cleveland, OH
	Portland, OR	Des Moines, IA
	Tucson, AZ	El Cerrito, CA
	Washington, DC	Fayetteville, AR
		Fort Collins, CO
		Indianapolis, IN
		Lee County, FL
		Woodbridge Township, NJ

## Framework of the Rating System

The STAR framework covers seven goal areas, each with multiple objectives that are further defined by community level outcomes and local actions. These outcomes and local actions comprise 526 measurable indicators in the system, which are then entered into STAR’s customized online reporting tool. The scoring from the indicators then generates the community’s score out of the total possible 720 points to show the community’s progress towards STAR certification. Table 2 shows STAR’s 44 objectives organized by goal area.

Table 2: STAR Goals and Objectives (Technical Guide to the STAR Community Rating System, 2015).

<b>Built Environment</b>	<b>Climate &amp; Energy</b>	<b>Economy &amp; Jobs</b>	<b>Education, Arts &amp; Community</b>	<b>Equity &amp; Empowerment</b>	<b>Health &amp; Safety</b>	<b>Natural Systems</b>
Ambient Noise & Light	Climate Adaptation	Business Retention & Development	Arts & Culture	Civic Engagement	Active Living	Green Infrastructure
Community Water Systems	Greenhouse Gas Mitigation	Green Market Development	Community Cohesion	Civil & Human Rights	Community Health & Health System	Invasive Species
Compact & Complete Communities	Greening the Energy Supply	Local Economy	Educational Opportunity & Attainment	Environmental Justice	Emergency Prevention & Response	Natural Resource Protection
Housing Affordability	Industrial Sector Resource Efficiency	Quality Jobs & Living Wages	Historic Preservation	Equitable Services & Access	Food Access & Nutrition	Outdoor Air Quality
Infill & Redevelopment	Resource Efficient Buildings	Targeted Industry Development	Social & Cultural Diversity	Human Services	Indoor Air Quality	Water in the Environment
Public Spaces	Resource Efficient Public Infrastructure	Workforce Readiness		Poverty Prevention & Alleviation	Natural & Human Hazards	Working Lands
Transportation Choices	Waste Minimization				Safe Communities	

## Verification, Certification, and Recognition

Chosen as one of twenty cities to participate in the 2014 Leadership STAR Community Program, Houston started working towards certification to demonstrate its commitment to sustainability and to receive national recognition for their leadership and achievements in greening Houston.

Starting on January 2014, the City of Houston Green Office of Sustainability had one year to collect data and information to put into the STAR Online Reporting Tool. After they documented their progress, they submitted their application on January 15, 2015. The STAR verification team reviewed the application over a 60 day period; on March 16, 2015, STAR awarded Houston a preliminary 236.5 score out of a maximum possible 720 points, resulting in a 3-STAR Community rating. The number of points received determines the community's recognition or certification level. Table 3 outlines the point ranges for each certification level and recognition level. At this time, Ms. Lin and her team are working to revise and supplement their application. The final application will be submitted on April 15, 2015.

Table 3: Point breakdown for the certification rating levels (Technical Guide to the STAR Community Rating System, 2015).

<b>Certification Rating Level</b>	<b>Point Range</b>
5-STAR Community <i>Recognized as a top tier achiever in national sustainability</i>	600+
4-STAR Community <i>Recognized for sustainability leadership</i>	400-599
3-STAR Community <i>Recognized for sustainability leadership</i>	200-399
Reporting STAR Community <i>Currently pursuing certification</i>	< 200

## **STAR's Objectives**<sup>2</sup>

### **Built Environment**

The goal for Built Environment is to achieve a quality standard of livability, choice, and access for the community. The objectives in this goal area evaluate community development patterns and design characteristics, covering Ambient Noise and Light, Community Water Systems, Compact and Complete Communities, Housing Affordability, Infill and Redevelopment, Public Spaces, and Transportation Choices.

### **Climate and Energy**

The goal for Climate and Energy is to reduce climate impacts through adaptation and mitigation efforts, as well as increasing resource efficiency. Reducing harmful climate impacts by promoting economic savings and decreasing resource use is the key to a healthier and more sustainable community. The seven objectives cover Climate Adaptation, Greenhouse Gas Mitigation, Greening the Energy Supply, Industrial Sector Resource Efficiency, Resource Efficient Buildings, Resource Efficient Public Infrastructure, and Waste Minimization.

### **Economy and Jobs**

The goal for Economy and Jobs is to create equal shared prosperity and access to quality jobs. A robust local economy will attract new businesses and quality jobs, thus securing its economic sustainability. The goal area seeks to fortify existing industry clusters in Houston (retail trade, health care and social assistance, professional scientific and technical services) and promote

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<sup>2</sup> Tables that show the full available and Houston's point breakdowns for each goal area are located in the appendices. Refer to the Technical Report for a detailed look at Houston's point breakdowns.

emerging green industries to diversify the local economy. The six objectives in Economy and Jobs are Business Retention and Development, Green Market Development, Local Economy, Quality Jobs and Living Wages, Targeted Industry Development, and Workforce Readiness.

### **Education, Arts and Community**

The goal for Education, Arts, and Community is investing in an educated, connected, and diverse community to encourage positive interactions between community members. A socially and culturally diverse community enhances local history and allows different groups to educate each other in their respective perspectives. The five objectives in this goal area are Arts and Culture, Community Cohesion, Educational Opportunity and Attainment, Historic Preservation, and Social and Cultural Diversity.

### **Equity and Empowerment**

The goal for Equity and Empowerment is to ensure justice, inclusion, and access to opportunities for all residents. This goal area observes citizen participation in civic affairs, distribution of benefits and burdens of development, enjoyment of civil and human rights, and programs that seek to decrease poverty and increase self-sufficiency. The six objectives in Equity and Empowerment are Civic Engagement, Civil and Human Rights, Environmental Justice, Equitable Services and Access, Human Services, and Poverty Prevention and Alleviation.

### **Health and Safety**

The goal for Health and Safety is to strengthen communities by fortifying protection and reducing risk. This goal area requires the City to proactively prevent disease, injury, and

premature death. The objectives largely promote efforts to maintain active lifestyles, develop and sustain high quality local health systems, minimize emergency impacts, and reduce vulnerability to hazards. The seven objectives in the Health and Safety goal area are Active Living, Community Health and Health System, Emergency Prevention and Response, Food Access and Nutrition, Indoor Air Quality, Natural and Human Hazards, and Safe Communities.

### **Natural Systems**

The goal for Natural Systems is to protect and restore the natural resources in the community. The community receives a wide range of benefits and environmental services such as food, water purification, and climate and flood regulation, all of which also provide aesthetic and recreational value for the community. The six objectives in the Natural Systems goal area are Green Infrastructure, Invasive Species, Natural Resource Protection, Outdoor Air Quality, Water in the Environment, and Working Lands.

### **Innovation and Process Credits**

Due to geographical, historical, economic, or political factors, not all communities have the same access to sustainability outcomes and actions as detailed by the STAR framework, Innovation and Process Credits is a special category for communities to detail their emerging discoveries and cutting edge practices in sustainability. The four sections available for extra credit and points are Best Practices and Processes, Exemplary Performance, Local Innovation, and Regional Priorities.

## **Sustainability for Houston**

### **Key Findings**

The City of Houston will receive a 3-STAR Community rating after the final submission on April 15, 2015. The City received most of its points through local actions; the Green Houston Office of Sustainability, in conjunction with departments throughout the COH, has been able to implement programs, services, and codes to guide Houston towards sustainability. Because the majority of the actions have been implemented recently, there is not enough data available for long-term trends to input into the STAR Online Reporting Tool. Fortunately, STAR recognizes that not all cities have been working towards sustainability for the same time period, so the system provides action points that COH used to show its commitment to sustainability investments. The positive trends from Houston's action implementations will be evident in the coming years.

The COH has been able to observe short-term trends through the Kinder Institute for Urban Research's Houston Area Survey (Klineberg, 2014). In the past five years, Houston communities have become more aware of sustainability and quality of life issues. Surveyed Houstonians have shown a higher preference for transit-oriented development rather than car-centered development. There is an increase in the desire for mixed-use development, smaller urbanized residences within walking distance of workplaces and commerce centers, and more spending on public and alternative transportation improvements. From 1982 to 2012, an increasing number of Houstonians believe that national programs are spending too little money on improving and protecting the environment (Rice University Kinder Institute for Urban Research, 2012). While STAR may not fully capture these changing attitudes and social perceptions of sustainability in

its rating system framework, it is clear that Houston and its citizens are becoming more conscious of sustainability and its place in Houston's future.

## **Houston Highlights**

Rather than implementing multiple small projects to address minor aspects of sustainability one at a time, the COH implements projects and services that approach Houston as a holistic system. This approach allowed COH to input outcomes and actions that cross over multiple objectives during the STAR Communities process.

### *Water Systems*

The City of Houston works extensively to manage its community water systems and natural water bodies. The COH and Department of Public Works and Engineering release publicly-accessible annual drinking water quality reports for federally regulated and monitored contaminants in drinking water sources.

The COH and PWE are also responsible for releasing the City of Houston Water Conservation Plan, which highlights Houston's continuous progress in preserving long-term water supplies for the city and the greater Houston region. The Water Conservation Plan details many of Houston's water programs and services, such as the Consumption Awareness Program, Internal Water Loss Program, Mainline Leak Detection Program, and revisions and updates of municipal plumbing codes and building standards (COH and PWE, 2014).

The COH, PWE, and Regional Water Planning Group collaborate to develop a City of Houston Drought Contingency Plan, which covers: plans and procedures to be implemented in the case of water shortages (COH and PWE, 2014); different stages or conditions; the triggers for each stage; and the requirements and target reductions that need to be met to end the emergency conditions.

### *Climate and Energy*

The COH has also excelled in local actions for their extensive work on climate and energy goals for Houston. Houston is part of multiple collaborations within the climate field and partnerships within the city including: President Obama's Task Force for Climate Preparedness and Resilience, Green Building Resource Center Advisory Committee, C40, Department of Energy Better Buildings Challenge, and Solid Waste Management Committee.

The COH and Institute of Real Estate Management (IREM) have collaborated to create the Houston Green Office Challenge and IREM Sustainable Property Challenge to improve whole-building sustainability. This challenge involves completing activities in education and outreach, energy, water conservation, materials and waste, interior and exterior purchasing, transportation, and stakeholder engagement (Lin, 2010). The objectives in the challenge align closely with STAR, showing how COH is developing holistic systems that approach sustainability on both individual building and community scales.

For instance, LightsOut Houston is an initiative to turn off unnecessary lights in commercial buildings for three days after Earth Day; in 2014 alone, about 134,000,000 square feet of office space in Downtown Houston participated in the program, resulting in an estimated \$5 million in

annual cost savings (Mulvaney, 2014). In another example of the COH's programs dedicated to climate and energy, the municipal electric vehicle (EV) project was the largest deployment of EVs and charging infrastructure in history; the City now owns fifty municipal fleet vehicles and has installed over 200 charging stations over the past three years.

### ***Health and Safety***

Houston excelled in active living, health care, and emergency management for the health and safety goal area.

Recognized as a Bicycle-Friendly Community in 2013, Houston constantly works to incentivize bicycle and pedestrian amenities throughout Houston. Article IV Transit Corridor Development (2013) in the Houston Code of Ordinances requires that any new development must contain pedestrian and bicycle amenities, including clear pedestrian spaces, hardscape, street lights, and bicycle racks. The COH also works with BikeHouston to promote and increase the benefits of bicycling around Houston; together, they have helped install bike racks on buses, created a bike sharing program with B-Cycle, and improved sidewalk and road conditions for pedestrians and bicyclists.

Houston's local public health department was accredited by the Public Health Accreditation Board in 2014, which shows Houston's commitment to public health issues, prevention, and wellness. Houston's public health work includes community health improvement plans, performance management systems, and comprehensive analyses of public health conditions,

trends, and problems affecting the community; together, these efforts serve to strengthen the delivery of health services and improve community health.

Another department that has excelled in Houston's health and safety goals is the Office of Emergency Management, which has been exceedingly successful in reducing harm to humans and property in emergency incidents. The Houston-Galveston Area Council and regional mayors and county judges collaborated to create the Multi-Agency Coordination Center, which coordinates emergency management resources during a disaster event. The Center works with the Regional Catastrophic Planning Team to review and update plans annually based on other regional planning efforts and best practice exercises.

The City of Houston Emergency Management Plan and Downtown Emergency Response Plan both cover various emergencies and priorities to be completed in consecutive phases from before the event to the resumption of business after the event. Both plans thoroughly list emergency response procedures and protocols, as well as major contacts for particular departments and disasters, such as hotels, transportation officials, and the police and fire department (City of Houston Mayor's Office of Emergency Management, 2014; Houston Downtown Management District, 2014).

### *Natural Systems*

While Houston didn't achieve many points for the Natural Systems goal area, the Bayou Greenways 2020 Program is a highlight for the City of Houston. Developed by industry experts, city officials, the Houston Parks Board, and other stakeholders, this program aims to transform

the major bayous of Houston into greenways of natural beauty, connectivity, recreation, preservation, and increased functionality. This program will add approximately 1,500 additional acres of greenspace and create 150 miles of continuous off-street trails, ensuring that 6 out of 10 Houston residents will live within 1.5 miles of one of the bayou trails. Additionally, the increased equitable distribution of greenspaces for Houston offers substantial economic value. In November 2012, Houston residents voted to approve a proposition allocating \$100 million to support the program (Crompton, 2011).

### **Areas for Improvement**

The COH needs to observe the STAR Rating System's results and create plans to address areas where Houston lacks sustainability initiatives. The most notable gaps are the Built Environment, Economy and Jobs, Equity and Empowerment, and the Natural Systems goal areas.

#### ***Improvements for Built Environment***

Within the Built Environment goal area, there were few programs dedicated to Ambient Noise and Light, Infill and Redevelopment, and Public Spaces. Due to Houston's urban sprawl, there were inadequate policy commitments to limit expansion of jurisdiction boundaries and urban services. Although there were informal or independent initiatives throughout the city that fit the STAR criteria, the City did not have formalized programs to match STAR's requirements. For example, there was no formalized community program that supported temporary creative neighborhood uses for vacant properties and greyfields. However, local groups had collaborated to reform an old Museum District property into a church community garden.

### ***Improvements for Economy and Jobs***

Within Economy and Jobs, Houston received minimal points for local actions and programs in the Local Economy, Quality Jobs and Living Wages, and Workforce Readiness objectives. The City did not show improvements in any of the outcomes for the three objectives, such as improvements in workforce training outcomes, increased post-secondary educational attainment, or increased total funds in local institutions. Outreach campaigns were not as informative, available, and developed as STAR required; Houston also had very few organizations dedicated to living wages or workforce readiness.

### ***Improvements for Equity and Empowerment***

The City of Houston needs to implement many changes to increase its Equity and Empowerment score. Most cities working towards sustainability have struggled with this goal area. While many cities have fulfilled the requirements for voting and poverty prevention, the most complicated objective to understand and achieve is the Environmental Justice objective. Houston received many points for this objective by having partnerships, assessments and inventories, policy adjustments, practice improvements, enforcement, and infrastructure at the ten environmental justice sites required by STAR. However, the COH team does not believe that a community's environmental justice can be characterized by the monitoring of ten sites. Instead, they believe that even though the Bureau of Pollution Control and Prevention has air and water quality monitoring throughout Houston, the monitoring stations are not focused on low-income environmental protection, which detracts from the city's environmental justice goals.

Some areas in which the City struggled to achieve points are Civil and Human Rights, Equitable Services and Access, and Human Services. While these services are not necessarily lacking throughout Houston relevant groups are scattered throughout Houston, and the scarcity of available aggregate information and contacts meant there was no way to collect the appropriate data for STAR. Having contacts and liaisons within the City who can compile the materials needed will improve this issue.

### *Improvements for Natural Systems*

Other than Outdoor Air Quality and Water in the Environment, the Natural Systems goal area also lacked conclusive information. There was little to no information on the trends for outcomes in the STAR requirements. While it is possible that Houston does fulfill the outcomes for Green Infrastructure, Invasive Species, Natural Resource Protection, and Working Lands, there was no time to process the data that was available, and the team moved onto other more time-efficient objectives. Given extra time, it is likely that the City would be able to process the data and earn more points in this area.

## **Conclusion**

In January 2014, Houston began the Leadership STAR Community Program. Lisa Lin, the Sustainability Manager in the Green Houston Office of Sustainability, and her team worked on collecting data and information on Houston's sustainability initiatives to fill in the STAR Online Reporting Tool. Houston received an initial score of 236.5 out of 720 points and achieved a 3-STAR Community Rating.

Because the COH has only recently begun implementing sustainability efforts for the community, there were few long-term trends that were able to fit STAR's criteria and count for points in the rating system. The City therefore received most of its points from the local actions, which shows that the City is committed to implementing sustainability initiatives through programs and services.

According to STAR, Houston excelled at climate change, energy, water, and health initiatives. On the other hand, Houston severely lacked projects that could further sustainability in green infrastructure, equity and empowerment, natural resource protection, equity, and economy. To pursue community sustainability, the City should focus on creating plans and actions to address in these gaps.

The City of Houston will be using the STAR Rating System as a starting point for its future as a sustainable community. The STAR rating system and feedback from the staff have helped Houston pinpoint its strengths and areas for improvement, and the STAR framework will help develop the city's future sustainability plans and climate action plans. By aligning closely with the STAR program, the COH is on track to raise awareness and increase sustainability in Houston's community.

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## Appendices

Built Environment	Climate & Energy	Economy & Jobs	Education, Arts & Community	Equity & Empowerment	Health & Safety	Natural Systems
Ambient Noise & Light	Climate Adaptation	Business Retention & Development	Arts & Culture	Civic Engagement	Active Living	Green Infrastructure
Community Water Systems	Greenhouse Gas Mitigation	Green Market Development	Community Cohesion	Civil & Human Rights	Community Health & Health System	Invasive Species
Compact & Complete Communities	Greening the Energy Supply	Local Economy	Educational Opportunity & Attainment	Environmental Justice	Emergency Prevention & Response	Natural Resource Protection
Housing Affordability	Industrial Sector Resource Efficiency	Quality Jobs & Living Wages	Historic Preservation	Equitable Services & Access	Food Access & Nutrition	Outdoor Air Quality
Infill & Redevelopment	Resource Efficient Buildings	Targeted Industry Development	Social & Cultural Diversity	Human Services	Indoor Air Quality	Water in the Environment
Public Spaces	Resource Efficient Public Infrastructure	Workforce Readiness		Poverty Prevention & Alleviation	Natural & Human Hazards	Working Lands
Transportation Choices	Waste Minimization				Safe Communities	

Figure 1: STAR Goals and Objectives (Technical Guide to the STAR Community Rating System, 2015).

Objective Number	Objective Title and Purpose	Available Points
BE-1	<b>Ambient Noise &amp; Light:</b> <i>Minimize and manage ambient noise and light levels to protect public health and integrity of ecological systems</i>	5
BE-2	<b>Community Water Systems:</b> <i>Provide a clean and secure water supply for all local users through the management of potable water, wastewater, stormwater, and other piped infrastructure</i>	15
BE-3	<b>Compact &amp; Complete Communities:</b> <i>Concentrate development in compact, human-scaled, walkable centers and neighborhoods that connect to transit, offer diverse uses and services, and provide housing options for families of all income levels</i>	20
BE-4	<b>Housing Affordability:</b> <i>Construct, preserve, and maintain an adequate and diverse supply of location-efficient and affordable housing options for all residents</i>	15
BE-5	<b>Infill &amp; Redevelopment:</b> <i>Focus new growth in infill areas and on redevelopment that does not require the extension of water, sewer, and road infrastructure or facilitate sprawl</i>	10
BE-6	<b>Public Spaces:</b> <i>Create a network of well-used and enjoyable parks and public spaces that feature equitable, convenient access for residents throughout the community</i>	15
BE-7	<b>Transportation Choices:</b> <i>Promote diverse transportation modes, including walking, bicycling, and transit, that are safe, low-cost, and reduce vehicle miles traveled</i>	20
<b>Total Credit, Goal Area</b>		<b>100</b>

Figure 2: Point breakdown for the Built Environmental Goal Area (Technical Guide to the STAR Community Rating System, 2015).

<b>Objective Number</b>	<b>Objective Title and Purpose</b>	<b>Available Points</b>
<b>CE-1</b>	<b>Climate Adaptation:</b> <i>Strengthen the resilience of communities to climate change impacts on built, natural, economic, and social systems</i>	15
<b>CE-2</b>	<b>Greenhouse Gas Mitigation:</b> <i>Achieve greenhouse gas emissions reductions throughout the community</i>	20
<b>CE-3</b>	<b>Greening the Energy Supply:</b> <i>Transition the local energy supply for both transportation and non-mobile sources toward the use of renewable, less carbon-intensive, and less toxic alternatives</i>	15
<b>CE-4</b>	<b>Industrial Sector Resource Efficiency:</b> <i>Minimize resource use and demand in the industrial sector as a means to mitigate greenhouse gas emissions and conserve water</i>	10
<b>CE-5</b>	<b>Resource Efficient Buildings:</b> <i>Improve the energy and water efficiency of the community's residential, commercial, and institutional building stock</i>	15
<b>CE-6</b>	<b>Resource Efficient Public Infrastructure:</b> <i>Minimize resource use and demand in local public infrastructure as a means to mitigate greenhouse gas emissions and conserve water</i>	10
<b>CE-7</b>	<b>Waste Minimization:</b> <i>Reduce and reuse material waste produced in the community</i>	15
<b>Total Credit, Goal Area</b>		<b>100</b>

Figure 3: Point breakdown for the Climate and Energy Goal Area (Technical Guide to the STAR Community Rating System, 2015).

<b>Objective Number</b>	<b>Objective Title and Purpose</b>	<b>Available Points</b>
<b>EJ-1</b>	<b>Business Retention &amp; Development:</b> <i>Foster economic prosperity and stability by retaining and expanding businesses with support from the business community</i>	20
<b>EJ-2</b>	<b>Green Market Development:</b> <i>Increase overall market demand for products and services that protect the environment</i>	15
<b>EJ-3</b>	<b>Local Economy:</b> <i>Create an increasingly self-reliant community through a robust local economy with benefits shared by all</i>	15
<b>EJ-4</b>	<b>Quality Jobs &amp; Living Wages:</b> <i>Expand job opportunities that support upward economic mobility and provide sufficient wages so that working people and their families can afford a decent standard of living</i>	20
<b>EJ-5</b>	<b>Targeted Industry Development:</b> <i>Increase local competitiveness by strengthening networks of businesses, suppliers, and associated institutions</i>	15
<b>EJ-6</b>	<b>Workforce Readiness:</b> <i>Prepare the workforce for successful employment through increasing attainment of post-secondary education and improving outcomes of workforce development programs</i>	15
<b>Total Credit, Goal Area</b>		<b>100</b>

Figure 4: Point breakdown for the Economy and Jobs Goal Area (Technical Guide to the STAR Community Rating System, 2015).

<b>Objective Number</b>	<b>Objective Title and Purpose</b>	<b>Available Points</b>
<b>EAC-1</b>	<b>Arts &amp; Culture:</b> <i>Provide a broad range of arts and cultural resources and activities that encourage participation and creative self-expression</i>	15
<b>EAC-2</b>	<b>Community Cohesion:</b> <i>Ensure a cohesive, connected community through adequate venues for community interaction, community building activities and events, and the sharing of information about community issues and services</i>	15
<b>EAC-3</b>	<b>Educational Opportunity &amp; Attainment:</b> <i>Achieve equitable attainment of a quality education for individuals from birth to adulthood</i>	20
<b>EAC-4</b>	<b>Historic Preservation:</b> <i>Preserve and reuse historic structures and sites to retain local, regional, and national history and heritage, reinforce community character, and conserve resources</i>	10
<b>EAC-5</b>	<b>Social &amp; Cultural Diversity:</b> <i>Celebrate and respect diversity and represent diverse perspectives in community decision-making</i>	10
<b>Total Credit, Goal Area</b>		<b>70</b>

Figure 5: Point breakdown for the Education, Arts and Community Goal Area (Technical Guide to the STAR Community Rating System, 2015).

<b>Objective Number</b>	<b>Objective Title and Purpose</b>	<b>Available Points</b>
<b>EE-1</b>	<b>Civic Engagement:</b> <i>Improve community well-being through participation in local decision-making and volunteering with community organizations</i>	15
<b>EE-2</b>	<b>Civil &amp; Human Rights:</b> <i>Promote the full enjoyment of civil and human rights for all residents in the community</i>	10
<b>EE-3</b>	<b>Environmental Justice:</b> <i>Reduce polluted and toxic environments with an emphasis on alleviating disproportionate health hazards in areas where low-income residents and persons of color live</i>	15
<b>EE-4</b>	<b>Equitable Services &amp; Access:</b> <i>Ensure equitable access to foundational community assets within and between neighborhoods and populations</i>	20
<b>EE-5</b>	<b>Human Services:</b> <i>Ensure high quality human services programs are available and utilized to guarantee basic human needs so that all residents lead lives of dignity</i>	20
<b>EE-6</b>	<b>Poverty Prevention &amp; Alleviation:</b> <i>Prevent people from falling into poverty and proactively enable those who are living in poverty to obtain greater, lasting economic stability and security</i>	20
<b>Total Credit, Goal Area</b>		<b>100</b>

Figure 6: Point breakdown for the Equity and Empowerment Goal Area (Technical Guide to the STAR Community Rating System, 2015).

<b>Objective Number</b>	<b>Objective Title and Purpose</b>	<b>Available Points</b>
<b>HS-1</b>	<b>Active Living:</b> <i>Enable adults and kids to maintain healthy, active lifestyles by integrating physical activity into their daily routines</i>	15
<b>HS-2</b>	<b>Community Health &amp; Health System:</b> <i>Achieve positive health outcomes and minimize health risk factors through a high quality local health system that is accessible and responsive to community needs</i>	20
<b>HS-3</b>	<b>Emergency Prevention &amp; Response:</b> <i>Reduce harm to humans and property by utilizing long-term preventative and collaborative approaches to avoid emergency incidents and minimize their impacts</i>	15
<b>HS-4</b>	<b>Food Access &amp; Nutrition:</b> <i>Ensure that adults and children of all income levels have opportunities to learn about nutritious eating and have physical and economic access to fresh, healthful food</i>	15
<b>HS-5</b>	<b>Indoor Air Quality:</b> <i>Ensure that indoor air quality is healthy for all people</i>	5
<b>HS-6</b>	<b>Natural &amp; Human Hazards:</b> <i>Reduce vulnerability to all hazards, secure critical infrastructure, and ensure that communities are prepared to effectively respond to and recover from crisis</i>	15
<b>HS-7</b>	<b>Safe Communities:</b> <i>Prevent and reduce violent crime and increase perceptions of safety through interagency collaboration and with residents as empowered partners</i>	15
<b>Total Credit, Goal Area</b>		<b>100</b>

Figure 7: Point breakdown for the Health and Safety Goal Area (Technical Guide to the STAR Community Rating System, 2015).

<b>Objective Number</b>	<b>Objective Title and Purpose</b>	<b>Available Points</b>
<b>NS-1</b>	<b>Green Infrastructure:</b> <i>Design and maintain a network of green infrastructure features that integrate with the built environment to conserve ecosystem functions and provide associated benefits to human populations</i>	20
<b>NS-2</b>	<b>Invasive Species:</b> <i>Prevent and manage invasive species in order to restore and protect natural ecosystems and the benefits they provide</i>	10
<b>NS-3</b>	<b>Natural Resource Protection:</b> <i>Protect, enhance and restore natural ecosystems and cultural landscapes to confer resilience and support clean water and air, food supply, and public safety</i>	20
<b>NS-4</b>	<b>Outdoor Air Quality:</b> <i>Ensure that outdoor air quality is healthy for all people and protects the welfare of the community</i>	15
<b>NS-5</b>	<b>Water in the Environment:</b> <i>Protect and restore the biological, chemical, and hydrological integrity of water in the natural environment</i>	20
<b>NS-6</b>	<b>Working Lands:</b> <i>Conserve and maintain lands that provide raw materials in ways that allow for sustained harvests and preserves ecosystem integrity</i>	15
<b>Total Credit, Goal Area</b>		<b>100</b>

Figure 8: Point breakdown of the Natural Systems Goal Area (Technical Guide to the STAR Community Rating System, 2015).

Section	Title and Purpose	Available Points
IP-1	<b>Best Practices &amp; Processes:</b> Recognize important local government practices and processes that underpin the implementation of sustainability measures and accelerate community-scale achievement across STAR Goal Areas	10
IP-2	<b>Exemplary Performance:</b> To reward performance in Community Level Outcome measures that significantly exceeds the evaluation criteria established by the existing STAR Community Rating System	10
IP-3	<b>Local Innovation:</b> To encourage and reward creative, effective approaches to enhancing a community's environmental, social and/or economic sustainability not reflected in existing STAR Objectives or evaluation measures	25
IP-4	<b>Regional Priorities:</b> To encourage coordinated regional action on the sustainability issues of greatest importance to the region in which the jurisdiction resides	5
<b>Total Points Available</b>		<b>50</b>

Figure 9: Point breakdown of the Innovation and Processes Goal Area (Technical Guide to the STAR Community Rating System, 2015).

Table 4: Initial Verification Scorecard as provided by the STAR Verification Team.

Initial Verification Scorecard

COMMUNITY: Houston, TX

Date of Scoring: 3/16/2015



Summary Points by Goal

Goal	Preliminary Score	Approved Score	Difference	Total Points Possible	% Earned
Built Environment	47.44	33.83	-13.61	100	33.83
Climate & Energy	53.91	47.41	-6.5	100	47.41
Economy & Jobs	54.94	34.87	-20.07	100	34.87
Education, Arts & Community	46.22	33	-13.22	70	47.14
Equity & Empowerment	37.68	20.62	-17.06	100	20.62
Health & Safety	55.82	45.9	-9.92	100	45.90
Natural Systems	41.33	20.85	-20.48	100	20.85
Innovation & Process	10	0	-10	50	0.00
<b>TOTALS --&gt;</b>	<b>347.34</b>	<b>236.48</b>	<b>-110.86</b>	<b>720</b>	<b>32.84</b>

Table 5: Summary Points by Objective as provided by the STAR Verification Team.

**Summary Points by Objective**

Goal	Objective	Approved Score	Total Points Possible	% Earned
Built Environment	BE-1: Ambient Noise & Light	0.3	5	6
Built Environment	BE-2: Community Water Systems	10.83	15	72.2
Built Environment	BE-3: Compact & Complete Communities	6.22	20	31.1
Built Environment	BE-4: Housing Affordability	4.42	15	29.46667
Built Environment	BE-5: Infill & Redevelopment	0.23	10	2.3
Built Environment	BE-6: Public Spaces	3.5	15	23.33333
Built Environment	BE-7: Transportation Choices	8.33	20	41.65
Climate & Energy	CE-1: Climate Adaptation	8.67	15	57.8
Climate & Energy	CE-2: Greenhouse Gas Mitigation	8.27	20	41.35
Climate & Energy	CE-3: Greening the Energy Supply	7.79	15	51.93333
Climate & Energy	CE-4: Industrial Sector Resource Efficiency	4.96	10	49.6
Climate & Energy	CE-5: Resource Efficient Buildings	12.29	15	81.93333
Climate & Energy	CE-6: Resource Efficient Public Infrastructure	0	10	0
Climate & Energy	CE-7: Waste Minimization	5.43	15	36.2
Economy & Jobs	EJ-1: Business Retention & Development	6.67	20	33.35
Economy & Jobs	EJ-2: Green Market Development	12.27	15	81.8
Economy & Jobs	EJ-3: Local Economy	2.39	15	15.93333
Economy & Jobs	EJ-4: Quality Jobs & Living Wages	1.83	20	9.15
Economy & Jobs	EJ-5: Targeted Industry Development	11.29	15	75.26667
Economy & Jobs	EJ-6: Workforce Readiness	0.42	15	2.8
Education, Arts & Community	EAC-1: Arts & Culture	3.77	15	25.13333
Education, Arts & Community	EAC-2: Community Cohesion	6.13	15	40.86667
Education, Arts & Community	EAC-3: Educational Opportunity & Attainment	8.04	20	40.2
Education, Arts & Community	EAC-4: Historic Preservation	8.96	10	89.6
Education, Arts & Community	EAC-5: Social & Cultural Diversity	6.1	10	61
Equity & Empowerment	EE-1: Civic Engagement	5.25	15	35
Equity & Empowerment	EE-2: Civil & Human Rights	0	10	0
Equity & Empowerment	EE-3: Environmental Justice	12.57	15	83.8
Equity & Empowerment	EE-4: Equitable Services & Access	0	20	0
Equity & Empowerment	EE-5: Human Services	0	20	0
Equity & Empowerment	EE-6: Poverty Prevention & Alleviation	2.8	20	14
Health & Safety	HS-1: Active Living	9.26	15	61.73333
Health & Safety	HS-2: Community Health & Health Systems	18.42	20	92.1
Health & Safety	HS-3: Emergency Prevention & Response	10.24	15	68.26667
Health & Safety	HS-4: Food Access & Nutrition	3.82	15	25.46667
Health & Safety	HS-5: Indoor Air Quality	1.88	5	37.6
Health & Safety	HS-6: Natural & Human Hazards	0.72	15	4.8
Health & Safety	HS-7: Safe Communities	1.56	15	10.4
Natural Systems	NS-1: Green Infrastructure	1.24	20	6.2
Natural Systems	NS-2: Invasive Species	1.68	10	16.8
Natural Systems	NS-3: Natural Resource Protection	2.55	20	12.75
Natural Systems	NS-4: Outdoor Air Quality	6.89	15	45.93333
Natural Systems	NS-5: Water in the Environment	6.16	20	30.8
Natural Systems	NS-6: Working Lands	2.33	15	15.53333
Innovation & Process Cred	Best Practices & Processes	0	10	0
Innovation & Process Cred	Exemplary Performance	0	10	0
Innovation & Process Cred	Local Innovation	0	25	0
Innovation & Process Cred	Regional Priorities	0	5	0
<b>TOTALS --&gt;</b>		<b>236.48</b>	<b>720</b>	<b>32.84444</b>