



# A Self-Assessment of Sustainability in Your Community

Advanced Version 2.0: A Closer Look at Community Sustainability



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**MICHIGAN STATE  
UNIVERSITY**

School of Planning, Design  
and Construction



# Acknowledgments

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## Project Team

This tool has been designed by the research team at the Michigan State University School of Planning, Design, and Construction. The project team consisted of Wayne Beyea, J.D., AICP as the principal investigator, accompanied by research assistants Jacob Maurer, Cal Coplai, Elizabeth Masserang, Seungjae (Max) Lee, Joshua Ladd, Michael Scarcelli, Jack McDonough, Nick Tafelsky, Sean Campbell, and Helen Hou.

Additional input and peer review was provided by members of the Sustainable Corridor Design Portfolio Task Force, including Mark Kieselbach and Gail Oranchak (Meridian Charter Township), Claudine Hannold (Eaton County), and Rex LaMore and Wanda Bloomquist (Williamstown Township). Additional input was provided by Dennis Kelly (Village of Webberville), Christopher Khorey and Christopher Doozan (McKenna Associates), Pete Preston (Clinton County), and Bill Rieske (City of Lansing). Technical review was provided by Kuntzsch Business Services, Inc.

# Preface

This self-assessment tool is a compilation of 32 indicators of sustainability, divided into the categories of Livability, Governance, Environment, Community, and Economy (see Figure 6). Each indicator has associated metrics. In total, 71 metrics are included in this tool to provide a holistic, systems-based analysis of a community’s sustainability. The online version of this tool, including additional resources and best practices is available at: <http://www.midmichigansustainability.org/>.

## What is a Sustainable Community?

There are a variety of definitions used to describe sustainability. A key component of a working definition for sustainability is the concept of systems thinking. Systems thinking recognizes that no action occurs in a bubble, that every facet of the biosphere is part of an interconnected structure with limitations (see Figure 1). A sustainable system is one that provides equal consideration to environmental stewardship, social equity, and economic efficiency (Sustainable Communities, *Introduction*, 2012). In the past, it was more common to simply focus on one or more of these categories separately. Sustainable communities acknowledge that environment, society, and economy are all interdependent factors that contribute to community sustainability. Figure 2 depicts several working definitions of sustainability within a community context that assisted with the development of this tool.

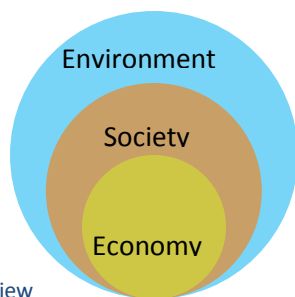


Figure 1: Interdependence View

**Sustainability**

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."  
**Brundtland Definition**

"Sustain - to cause to continue (as in existence or a certain state, or in force or intensity); to keep up, especially without interruption diminution, flagging, etc.; to prolong. "  
**Webster’s Dictionary**

"Sustainable communities are places that have a variety of housing and transportation choices, with destinations close to home. As a result, they tend to have lower transportation costs, reduce air pollution and storm water runoff, decrease infrastructure costs, preserve historic properties and sensitive lands, save people time in traffic, be more economically resilient and meet market demand for different types of housing at different price points." **SustainableCommunities.gov (HUD – DOT – EPA)**

Figure 2: Sustainability Definitions

## Built Environment

This audit tool’s five sustainability categories of Livability, Governance, Environment, Community, and Economy focus predominantly on the built environment. The built environment can be defined as “everything humanly made, arranged, or maintained” (Bartuska, 2007). Since this tool is a self-assessment for communities, metrics with a built environment emphasis were determined to be the most appropriate. The foundation for content within this tool included the Sustainable Communities course developed by Land Grant faculty from the Sustainable Communities Task Force within the North Central Region in cooperation with the extension Land Use Planning Community of Practice. This content identifies, explains, and presents common sustainability topics that communities are facing today. Topics from the Sustainable Communities Course include local food, the built environment, mobility, energy, natural resources, community capacity, and economic development. For the purposes of this tool, the built environment topic was expanded into the five sustainability categories of Livability, Governance, Environment, Community, and Economy (based on the International Council for Local Environmental Initiative’s [ICLEI] STAR Community Index, *Sustainability Goals & Guiding Principles*). Furthermore, indicators were identified within each of the five sustainability categories and specific metrics were developed to determine if an indicator was currently being met.

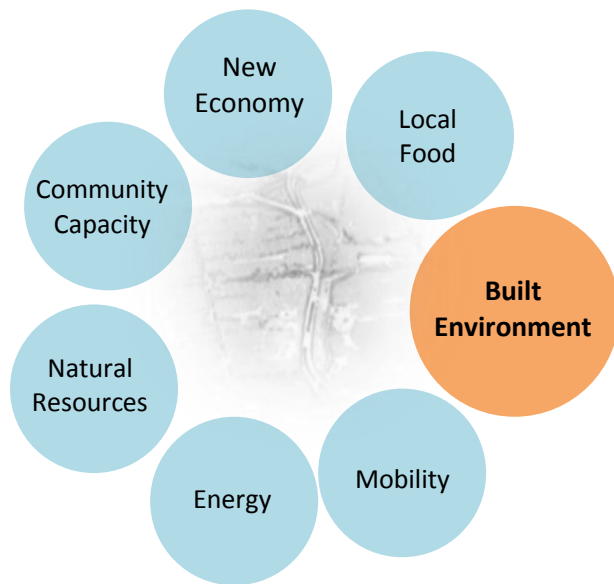


Figure 3: Sustainable Communities Content Areas

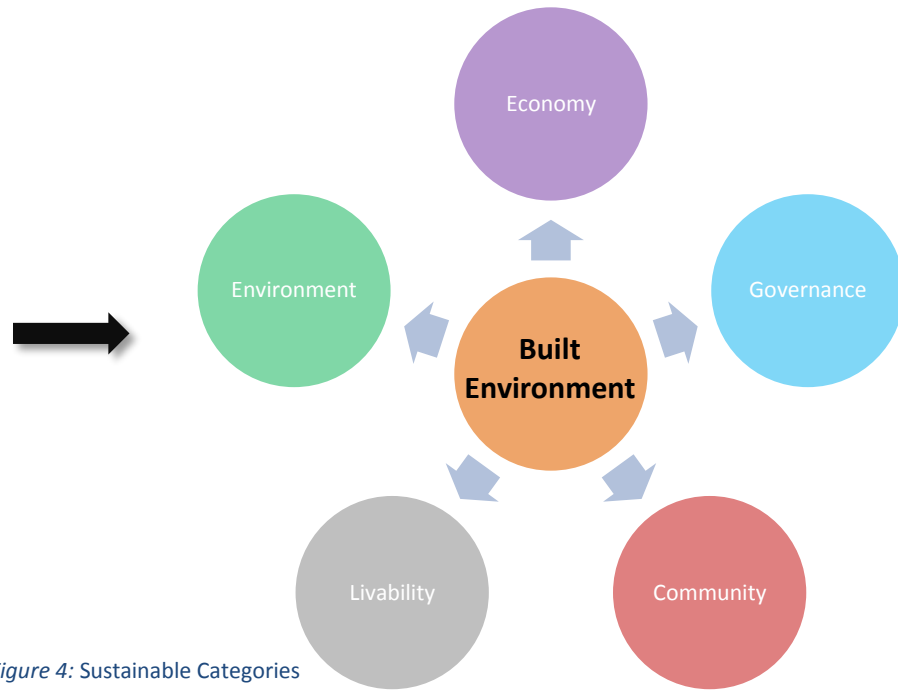


Figure 4: Sustainable Categories

## Process

The indicators and metrics contained in this assessment tool were developed during a thorough research process, which included reviewing existing sustainability tools, research, and best practice documents. Resources have been analyzed from the United States Green Building Council (USGBC), American Planning Association (APA), U.S. Department of Housing and Urban Development (HUD), U.S. Environmental Protection Agency (EPA), U.S. Department of Transportation (DOT), ICLEI and the Michigan State University Land Policy Institute (LPI) and School of Planning, Design, & Construction (SPDC); among others. This tool is a synthesis and adaptation of best practices from these sources.

This tool was developed as a self-audit to be conducted by a professional or community official (e.g., Community Planner, Zoning Administrator, etc.) as it requires familiarity with the community’s master plan, zoning ordinance, and development practices. Additionally, completing the self-audit will require consultation with community officials, schools, and local development organizations (e.g., Downtown Development Authority, Economic Development Corporation).

## Category Evaluation

To respond to each metric, the user must indicate the degree to which his or her community successfully addresses the question. Responses are on a scale of 1- 5, 1 meaning the community does not currently address the question in any way nor does it have plans or policies in place to address the issue, and 5 meaning the community has fully addressed the question and will continue to do so based on existing plans or policy. Examples of how to respond to each metric are provided below.

Because this is a self-evaluation, it is up to the user to interpret each question according to the unique situation of his or her respective community. As such, it is useful to keep notes that support the response to each question so the tool may be used to measure progress toward sustainability.



For example, in response to the Livability metric: *Are density bonuses or other incentives offered to improve residential access to services and amenities?* A community's response may reflect the following relative to the 1-5 scale. Again, this is a self-evaluation and each question is open to interpretation based on community circumstances. **Your response to this metric may not correspond with this example.**

1. No density bonuses or incentives are offered nor have they been seriously considered
2. No density bonuses or incentives are offered, but the planning commission has considered updating the zoning ordinance to incentivize mixed-use development in the central business district
3. The community is in the process of updating the zoning ordinance to provide density bonuses for mixed-use development
4. The community zoning ordinance provides a density bonus for mixed-use development, but the bonus has not been widely used by developers
5. The community zoning ordinance provides a density bonus for mixed-use development, and developers are taking advantage of the bonus frequently

At the end of each of the five categories within this tool, the user will be asked to tally the points for each question. The category score will fall into one of three sustainability classes: High, Medium, or Low. A High sustainability rating means that a community has addressed that topical area of sustainability with excellence. A Medium rating indicates that some sustainability measures have been taken within the community, but there is still significant opportunity to improve. A Low rating shows that the community is not currently addressing the sustainability category effectively. A final score, which tallies all categories, is provided on the final page, using the same High, Medium, or Low classes.

Note: Sustainability key words within the audit are denoted by lower-case roman numerals and defined on page 24.

# Sustainability Categories

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The following sustainability category definitions were developed in order to create categorical context to assist with completion of this tool.

<b>Livability</b>		Livable communities are coordinated, collaborative environments that address their citizens' vision and needs by providing mixed-use neighborhoods and diverse housing options. These communities provide multimodal transportation options.
<b>Governance</b>		Sustainable governance encourages citizen participation with the goal of effectively and efficiently engaging community members and cooperating to solve common problems.
<b>Environment</b>		Preserving and enhancing the natural environment is essential for maintaining community sustainability. Healthy ecosystems balance current economic needs while also assuring there will be adequate resources to meet future needs.
<b>Community</b>		Sustainable communities develop clear visions for future strategies by partnering with different sectors, identifying their resources, and engaging citizens to address common issues and creating mutually beneficial solutions.
<b>Economy</b>		Economically sustainable communities establish local economies that are economically viable, environmentally sound, and socially responsible.

Figure 6: Sustainable Categories Definitions (sources: sustainable.org, HUD.gov)



# SECTION 1: LIVABILITY

Definition: Livable communities are coordinated, collaborative environments that address their citizens’ vision and needs by providing mixed-use neighborhoods and diverse housing options. These communities provide multimodal transportation options.<sup>1</sup>

Sustainable Livability Indicator	Metric	Rating					Comments
		1	2	3	4	5	
Education & Lifelong Learning	Is there a presence of and access to lifelong educational services for the community (e.g., libraries, higher education, and job training programs)? <sup>2</sup>						
	Is there a transparent and active relationship between local government, community organizations, and school systems? <sup>3</sup>						
	Is there a presence of functioning cultural facilities (i.e. libraries, cultural events, museums, etc.)? <sup>4</sup>						
Responsible Buying & Consumption	Is there evidence of recycling and reuse programs throughout the community? <sup>5</sup>						

<sup>1</sup> HUD/DOT/EPA Interagency Partnership

<sup>2</sup> ICLEI 2010, p.18, APA Smart Growth 2012, p.2, HUD-DOT-EPA 2010, p.11

<sup>3</sup> MSU SPDC 2012

<sup>4</sup> STAR 2014, p.74

<sup>5</sup> Duany et al. 2010, p. 13.11

Sustainable Livability Indicator	Metric	Rating					Comments
		1	2	3	4	5	
Encourage Healthy Lifestyles: Health, Nutrition, and Recreation	Is there an active local food system in the community, including farmer's markets and/or organic markets? <sup>6</sup>						
Promotion of Diversity	Are there community activities/events that celebrate cultural diversity? <sup>7</sup>						
Value Existing Communities	Have redevelopment sites been identified and prioritized within the community? <sup>8</sup>						
	Is there evidence in the community of buildings that have been adaptively reused <sup>viii</sup> ? <sup>9</sup>						
	Have steps been taken to create a unique identity or brand for local neighborhoods and/or the wider community? <sup>10</sup>						
	Is volunteerism and grassroots organization evident in the community? <sup>11</sup>						

<sup>6</sup> APA Food Planning 2007, p. 4 & p. 7

<sup>7</sup> Sustainable Communities Online, *Culture, Art, Ethnicity, Heritage and Celebrations*, 2014

<sup>8</sup> RRC 2014, p. 17-18

<sup>9</sup> LEED ND, 2009, p. 94

<sup>10</sup> STAR 2014, p. 74

<sup>11</sup> STAR 2014, p. 76

Sustainable Livability Indicator	Metric	Rating					Comments
		1	2	3	4	5	
Mixed-Use and Transit-Oriented Development – Includes Mix of Uses & Walkable Neighborhoods	Does the master plan (if applicable) encourage mixed-use development in downtown and commercial core areas? <sup>12</sup>						
	Are density bonuses or other incentives offered to improve residential access to services and amenities? <sup>13</sup>						
	Are key places of the community such as urban corridors, downtowns, and neighborhood centers walkable including sidewalks, crosswalks, and pedestrian features (e.g., benches)? <sup>14</sup>						
	Do transportation nodes provide access to multiple modes (e.g., bus stations with access to rail transit and/or bike racks)? <sup>15</sup>						
Provide Safe & Diverse Modes of Transportation	Does the community provide a variety of transportation options (e.g., dial-a-ride, buses, rail, non-motorized paths)? <sup>16</sup>						
	Are important places such as recreation centers, schools, and downtown centers accessible by multiple transportation modes? <sup>17</sup>						

<sup>12</sup> Duany et al. 2010, p. 5.1

<sup>13</sup> Duany et al. 2010, p. 5.10

<sup>14</sup> Duany et al. 2010, p. 8.1

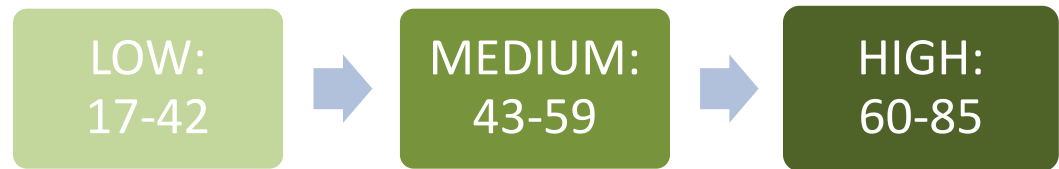
<sup>15</sup> Duany et al. 2010, p.3.2

<sup>16</sup> Duany et al. 2010, p. 3.2

<sup>17</sup> Duany et al. 2010, p. 3.4

Sustainable Livability Indicator	Metric	Rating					Comments
		1	2	3	4	5	
Wide Range of Housing Opportunity	Is affordable housing available in close proximity to critical services, including grocery, pharmacy, and public transportation? <sup>18</sup>						
<b>Total</b>							

**Assessment: Sustainable Livability Metrics**



<sup>18</sup> LPI 2007

# SECTION 2: GOVERNANCE

Definition: Sustainable governance encourages citizen participation with the goal of effectively and efficiently engaging community members and cooperating to solve common problems.<sup>19</sup>

Sustainable Governance Indicator	Metric	Rating					Comments
		1	2	3	4	5	
Policy / Ordinances / Taxes	Is there evidence within the community of cooperation between jurisdictions (e.g., regional transit, natural asset management, public safety)? <sup>20</sup>						
	Does your community actively work to remove ordinance barriers that can hinder smart growth <sup>ii</sup> or add ordinance language that encourages smart growth? <sup>21</sup>						
Regional Collaboration and Feedback	Have public-private partnerships been utilized as a strategy to implement potential projects? <sup>22</sup>						
Enhance Economic Competitiveness	Has the community formed plans and partnerships for the regional coordination of economic growth? <sup>23</sup>						

<sup>19</sup> Sustainable Communities Online, *Government and Sustainability*, 2014

<sup>20</sup> APA Sustaining Places 2011, p. 10

<sup>21</sup> LPI 2007

<sup>22</sup> APA Smart Growth E.7 2011, p. 3

<sup>23</sup> APA Sustaining Places 2011, p. 10

Sustainable Governance Indicator	Metric	Rating					Comments
		1	2	3	4	5	
Transparency and Accountable Implementation	Are timeframes for review, revision, or completion associated with action items in community plans? <sup>24</sup>						
	Do community plans track progress and adjust strategies on an ongoing basis? <sup>25</sup>						
Urban Boundary System	Do goals and strategies in community plans strive for the appropriate development of rural resources? <sup>26</sup>						
	Is there evidence of the community directing development toward areas with existing infrastructure? <sup>27</sup>						
Waste and Toxics Management	Is solid waste management addressed within community plans/ordinances? <sup>28</sup>						
<b>Total</b>							

### Assessment: Sustainable Governance Metrics



<sup>24</sup> APA Sustaining Places 2011, p. 11

<sup>25</sup> APA Sustaining Places 2011, p. 11

<sup>26</sup> Sustainable Communities Online, *Land, Forests, and Ecosystems*, 2014

<sup>27</sup> HUD-DOT-EPA 2010, p. 11

<sup>28</sup> Sustainable Communities Online, *Growing a Sustainable Economy*, 2014

# SECTION 3: ENVIRONMENT

Definition: Preserving and enhancing the natural environment is essential for maintaining community sustainability. Healthy ecosystems balance current economic needs while also assuring there will be adequate resources to meet future needs.<sup>29</sup>

Sustainable Environment Indicator	Metric	Rating					Comments
		1	2	3	4	5	
Energy	Is there evidence of clean and renewable energy <sup>iv</sup> within the community? <sup>30</sup>						
	Do development regulations allow for clean or renewable energy (e.g., solar panels)? <sup>31</sup>						
	Do decisions about residential/commercial development incentivize the use of clean or renewable energy? <sup>32</sup>						
	Is there evidence of public assets being used as examples for clean and renewable energy (e.g., energy efficiency, solar panels, wind turbines, etc.)? <sup>33</sup>						
	Do decisions about transportation systems consider the reduction of Vehicle Miles Traveled (VMT)? <sup>34</sup>						

<sup>29</sup> Sustainable Communities Online, *Energy*, 2014

<sup>30</sup> LEED ND, 2009, p. 102

<sup>31</sup> LEED ND, 2009, p. 102

<sup>32</sup> LEED ND, 2009, p. 1

<sup>33</sup> LEED ND, 2009, p. 102

<sup>34</sup> LEED ND, 2009, p. 30-31

Sustainable Environment Indicator	Metric	Rating					Comments
		1	2	3	4	5	
Air Quality	Does the region take measurements of air quality to compare to baseline levels? <sup>35</sup>						
Water	Is the main source of community drinking water able to support community growth? <sup>36</sup>						
	Has the community implemented “green” stormwater management techniques (e.g., permeable pavement <sup>v</sup> , waterfront buffers, retention ponds, and rain gardens)? <sup>37</sup>						
	Is the community actively planning for storm water management (e.g., adopting a storm water management plan)? <sup>38</sup>						
	Is the community actively planning for wastewater management (e.g., adopting a wastewater management plan)? <sup>39</sup>						
	Are local water bodies safe for recreation? <sup>40</sup>						
Climate Change	Is the community actively planning for short-term extreme climate events (e.g., adapting a Hazard Mitigation Plan or Emergency Preparedness Plan)? <sup>41</sup>						

<sup>35</sup> EPA, *Air Quality Planning and Standards*, 2014

<sup>36</sup> LGAM 2008

<sup>37</sup> STAR 2014, p.78

<sup>38</sup> ICLEI 2010, p. 13

<sup>39</sup> ICLEI 2010, p. 13

<sup>40</sup> EPA, *Water – Recreation*, 2014

<sup>41</sup> NACO, 2014



Sustainable Environment Indicator	Metric	Rating					Comments
		1	2	3	4	5	
	Is the community actively planning for long-term climate change (e.g., adapting a Climate Change Readiness or Adaptation Plan)? <sup>42</sup>						
	Are critical community facilities and assets located appropriately relative to the 100-year flood plain (e.g., police stations, fire stations, hospitals, communication centers, significant roadways, sewage treatment plants, etc.)? <sup>43</sup>						
	Are local businesses in the community encouraged and/or incentivized to reduce greenhouse gas emissions? <sup>44</sup>						
Preserve Natural Resources	Does the community have a natural resource management plan that addresses the preservation of natural resources? <sup>45</sup>						
	Does your community utilize best practices when addressing natural resource management? These may include, visioning and goal setting, plan making, standards, policies, incentives, development work, public investment, conservation easements, and soil-based zoning. <sup>46</sup>						
Open Space Preservation	Are brownfield sites <sup>vi</sup> in the community identified, inventoried, and prioritized for rehabilitation? <sup>47</sup>						

<sup>42</sup> APA PAS 558 2010

<sup>43</sup> APA PAS 558 2010

<sup>44</sup> ICLEI 2010, p.15

<sup>45</sup> APA PAS 558 2010, p. 133

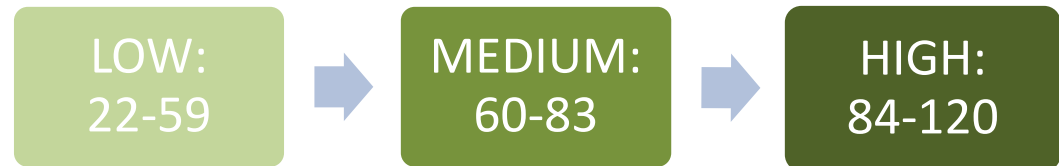
<sup>46</sup> APA PAS 558 2010, p. 133

<sup>47</sup> RRC 2014, p. 17-18

Sustainable Environment Indicator	Metric	Rating					Comments
		1	2	3	4	5	
	Have local groups, committees, or programs been established to preserve open space, farmland, and/or critical environmental areas? <sup>48</sup>						
	Are controlled density standards addressed in the zoning ordinance (e.g., density bonuses, lot size, flexible parking or setback requirements, etc.)? <sup>49</sup>						
	Has a build-out analysis <sup>vii</sup> been performed to ensure the zoning ordinance directs density to areas with necessary infrastructure? <sup>50</sup>						
	Are site plans reviewed prior to development for the ramifications such development will have on the natural environment? <sup>51</sup>						
Maintain Biodiversity	Are policies in place to control introduction of invasive species into the community? <sup>52</sup>						
	Does the community take an active approach toward the preservation of wildlife species and habitats? <sup>53</sup>						
<b>Total</b>							

**Assessment: Sustainable Environment Metrics**

<sup>48</sup> Duany et al. 2010, p. 1.3  
<sup>49</sup> MITOD 2014  
<sup>50</sup> Smart Growth Online, 2014  
<sup>51</sup> RRC 2014, p. 11  
<sup>52</sup> ICLEI 2010, p. 13  
<sup>53</sup> Sustainable Communities Online, *Land, Forests, and Ecosystems*, 2014



# SECTION 4: COMMUNITY

Definition: Sustainable communities develop clear visions for future strategies by partnering with different sectors, identifying their resources, and engaging citizens to address common issues and creating mutually beneficial solutions.<sup>54</sup>

Sustainable Community Indicator	Metric	Rating					Comments
		1	2	3	4	5	
Civic Engagement	Are a variety of engagement strategies utilized (e.g., online discussion, public meetings, targeted group sessions, charrettes <sup>iii</sup> , etc.)? <sup>55</sup>						
	Are the voices of all populations sought, considered, and incorporated into community plans? <sup>56</sup>						
Conflict Resolution & Mediation	Are multiple methods for public comment provided when addressing community issues/disputes (e.g., public meetings, informal discussion, mediation, rules of conduct, online comment)? <sup>57</sup>						

<sup>54</sup> Sustainable Communities Online, *Building Sustainable Communities – LISC, 2014*

<sup>55</sup> RRC 2014, p.7

<sup>56</sup> RRC 2014, p.7

<sup>57</sup> STAR 2014, p.78

Sustainable Community Indicator	Metric	Rating					Comments
		1	2	3	4	5	
Fostering Relationships & Shared Interests	Does the comprehensive plan address the values of social equity <sup>iii</sup> ? <sup>58</sup>						
Community Visioning	Are under-represented / marginalized members of the community (e.g., minority groups, disabled persons, low-moderate income, etc.) given opportunities to be engaged in the community?						
	Is the comprehensive plan, if applicable, regularly reviewed and updated at least every five years? <sup>59</sup>						
Culture, Art, Ethnicity, Heritage, and Celebration	Are public spaces proactively being retrofitted so that they are accessible for all persons (e.g., physically disabled persons)? <sup>60</sup>						
	Does the community incorporate art into public spaces/events? <sup>61</sup>						
	Are historic assets within the community identified and preserved? <sup>62</sup>						
	Does public education actively engage students in the arts (e.g., music, painting, theatre)? <sup>63</sup>						

<sup>58</sup> LPI 2007

<sup>59</sup> LPI 2012

<sup>60</sup> ICLEI 2010, p.14

<sup>61</sup> Sustainable Communities Online, *Creative Placemaking*, 2014

<sup>62</sup> Synthesis of (LPI 2007)& (ICLEI 2010, p.14)

<sup>63</sup> Sustainable Communities Online, *Power of Art in Schools*, 2014

Sustainable Community Indicator	Metric	Rating					Comments
		1	2	3	4	5	
Justice & Equity	Are adequate housing options provided for all income levels (e.g., single-family, two-family, multiple-family, subsidized housing, senior housing)? <sup>64</sup>						
Wide Range of Housing Opportunity	Does zoning incentivize affordable housing within market rate developments? <sup>65</sup>						
<b>Total</b>							

### Assessment: Sustainable Community Metrics



<sup>64</sup> LPI 2007

<sup>65</sup> STAR 2014, p.74

# SECTION 5: ECONOMY

Definition: Economically sustainable communities establish local economies that are economically viable, environmentally sound, and socially responsible.<sup>66</sup>

Sustainable Economy Indicator	Metric	Rating					Comments
		1	2	3	4	5	
Coordinate and Leverage Federal Policies and Investment	Does the community actively stay aware of and pursue federal and state funding that supports city/community/regional goals? <sup>67</sup>						
Protect Local Staple Industries	Are there local economic assets specific/special to the community and region that have been capitalized on (e.g., tourism, unique agriculture)? <sup>68</sup>						
	Are there policies/programs in place to protect and enhance the community's unique local economic assets? <sup>69</sup>						
	Is the local economy diversified between many industries and companies (compared to being dependent on a single industry)? <sup>70</sup>						

<sup>66</sup> Sustainable Communities Online, *Capacity Building for Sustainable Communities Funding*, 2014

<sup>67</sup> Sustainable Communities Online, *Growing a Sustainable Economy*, 2014

<sup>68</sup> Sustainable Communities Online, *Economics and Finance*, 2014

<sup>69</sup> RUPRI 2012, p. 28

<sup>70</sup> RUPRI 2012, p. 4

Sustainable Economy Indicator	Metric	Rating					Comments
		1	2	3	4	5	
Maintain Healthy, Local Business	Is there evidence of a strong and welcoming local business community? <sup>71</sup>						
	Are incentives available that support small local businesses? <sup>72</sup>						
	Has a committee or workgroup been formed to promote partnerships between government and local and regional businesses? <sup>73</sup>						
Technology	Is data collected and analyzed over time within the community to understand challenges and opportunities within the local economy? <sup>74</sup>						
	Has action been taken to incorporate communication infrastructure into the community's economic development strategies? <sup>75</sup>						
<b>Total</b>							

**Assessment: Sustainable Economy Metrics**



<sup>71</sup> Sustainable Communities Online, *Small Business*, 2014

<sup>72</sup> Sustainable Communities Online, *Economics and Finance*, 2014

<sup>73</sup> NACO 2014, p. 24

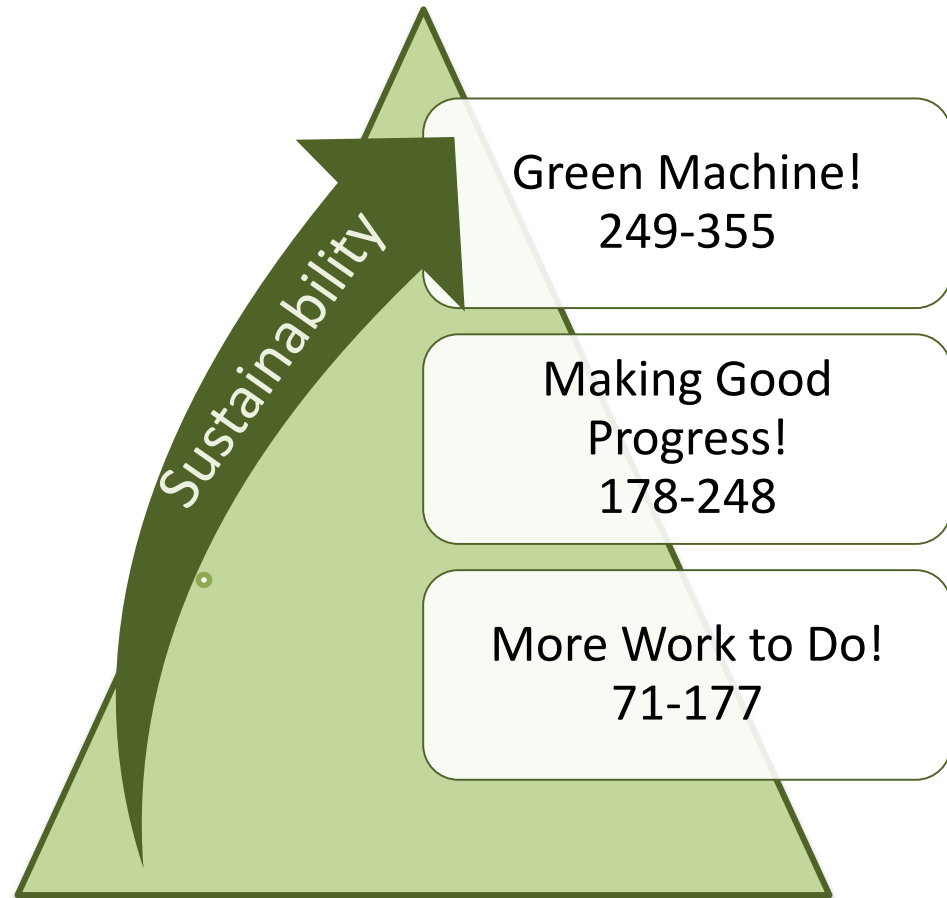
<sup>74</sup> STAR 2014, p. 74

<sup>75</sup> Sustainable Communities Online, *How Tech will be Critical to Corporate Sustainability in 2011*, 2014

# Sustainability Assessment – Scoring Sheet

For an overall assessment of community sustainability, tally your overall score and see where the community falls on the sustainability pyramid.

Sustainability Category	Points	Out of
Livability		85
Governance		45
Environment		120
Community		60
Economy		45
<b>TOTAL</b>		<b>355</b>





# Sustainability Keywords

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<sup>i</sup> Natural Asset Management: The combination of management, financial, economic, engineering, and other practices applied to physical assets with the objective of providing the required level of service in a cost effective manner.<sup>76</sup>

<sup>ii</sup> Smart Growth: An approach to development that utilizes a mix of land uses, compact building design, a range of housing choices, walkable neighborhoods, a sense of place, preservation of open space, variety of transportation options, and community engagement.<sup>77</sup>

<sup>iii</sup> Charrette: A collaborative planning process that harnesses the talents of all interested participants to create and support a plan through short feedback loops, cross-functional design, collaborative work, multiple-day meetings, and creation of holistic solutions.<sup>78</sup>

<sup>iv</sup> Clean and Renewable Energy: Any naturally occurring, theoretically inexhaustible source of energy, such as biomass, solar, wind, tidal, wave, and hydroelectric power, that is not derived from fossil or nuclear fuel.<sup>79</sup>

<sup>v</sup> Permeable Pavement: An alternative to conventional concrete and asphalt materials that allows rapid infiltration of stormwater. Stormwater infiltrates into a porous paving material that provides temporary storage until the water infiltrates into underlying soils or through an underground drain system.<sup>80</sup>

<sup>vi</sup> Brownfield: Real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of hazardous substance, pollutant, or contaminant.<sup>81</sup>

<sup>vii</sup> Build-out Analysis: A projection of how much development would occur in a community if it were to build on every allowable acre of land under different development scenarios.<sup>82</sup>

<sup>viii</sup> Adaptive Reuse: A process that adapts buildings for new uses while retaining their historic features by retaining all or most of the structural system (e.g., cladding, glass, interior partitions, etc.).<sup>83</sup>

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<sup>76</sup> "Asset Management", The Local Government & Municipal Knowledge Base 2008

<sup>77</sup> "About Smart Growth", United States Environmental Protection Agency, October 2013

<sup>78</sup> "FAQ", National Charrette Institute 2014

<sup>79</sup> Dictionary.com 2014

<sup>80</sup> "Permeable Pavement", NCAGR July 2012

<sup>81</sup> "Brownfields Definition", United States Environmental Protection Agency, October 2011

<sup>82</sup> "About Buildouts", Nonpoint Education for Municipal Officials, University of Connecticut, 2008

<sup>83</sup> "Adaptive Reuse", MIT 2014

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# Appendix

This table cross-references the questions from the Audit Tool with the Corridor Design Portfolio guidebook completed by the MSU Land Policy Institute, a Resource List that corresponds with the guidebook and outside additional resources. The Corridor Design Portfolio can be found at: <http://www.landpolicy.msu.edu/>

Category	Indicator	Metric	Corridor Design Portfolio (Chapters)	Additional Resources
A. Livability	1. Education & Lifelong Learning	1. Is there a presence of and access to lifelong educational services for the community? (e.g., libraries, higher education, and job training programs)	<b>Chapter 1</b> <i>'Main Street Program'</i> (139-141) <i>'Libraries'</i> (147-158) <i>'Arts and Culture'</i> (153-168)	-
A. Livability	1. Education & Lifelong Learning	2. Is there a transparent and active relationship between local government, community organizations, and school systems?	<b>Chapter 1</b> <i>'Shared Use of School Facilities'</i> (201-202)	-
A. Livability	1. Education & Lifelong Learning	3. Is there a presence of functioning cultural facilities (i.e. libraries, cultural events, museums, etc.)?	<b>Chapter 1</b> <i>'Main Street Program'</i> (139-141) <i>'Libraries'</i> (147-158) <i>'Arts and Culture'</i> (153-168)	-
A. Livability	2. Responsible Buying & Consumption	4. Is there evidence of recycling and reuse programs throughout the community?	-	<i>'Environmental Protection Agency'</i> <a href="http://www.epa.gov/osw/conservation/materials/paper/setting/details.htm">http://www.epa.gov/osw/conservation/materials/paper/setting/details.htm</a>

Category	Indicator	Metric	Corridor Design Portfolio (Chapters)	Additional Resources
A. Livability	3. Encourage Healthy Lifestyles: Health, Nutrition, and Recreation	5. Is there an active local food system in the community, including farmer's markets and/or organic markets?	<b>Chapter 1</b> 'Food and Food Systems' (169-184)	-
A. Livability	4. Promotion of Diversity	6. Are there community activities / events that celebrate cultural diversity?	<b>Chapter 1</b> 'Placemaking' (2-14)	'Sustainable Communities Online' <a href="http://www.sustainable.org/creating-community/culture-art-ethnicity-heritage-a-celebrations">http://www.sustainable.org/creating-community/culture-art-ethnicity-heritage-a-celebrations</a>
A. Livability	5. Value Existing Communities	7. Have redevelopment sites been identified and prioritized within the community?	<b>Chapter 1</b> 'Infill and Redevelopment' (25-26)	'Redevelopment Ready Communities. Michigan Economic Development Corporation. July 2014.' <a href="http://www.michiganbusiness.org/cm/Files/Redevelopment_Ready_Communities/RRC-Best-Practices.pdf">http://www.michiganbusiness.org/cm/Files/Redevelopment_Ready_Communities/RRC-Best-Practices.pdf</a>
A. Livability	5. Value Existing Communities	8. Is there evidence in the community of buildings that have been adaptively reused?	<b>Chapter 1</b> 'Infill and Redevelopment' (25-26) 'Schools' (145 – School Building Adaptive Reuse Ordinance)	-
A. Livability	5. Value Existing Communities	9. Have steps been taken to create a unique identity or brand for local neighborhoods and/or the wider community?	<b>Chapter 1</b> 'Standard Placemaking Activities' (7-8, 11-14)	-
A. Livability	5. Value Existing Communities	10. Is volunteerism and grassroots organization evident in the community?	<b>Chapter 1</b> 'Standard Placemaking Activities' (7) 'Food and Food Systems' (169-178)	-

Category	Indicator	Metric	Corridor Design Portfolio (Chapters)	Additional Resources
A. Livability	6. Mixed-Use and Transit-Oriented Development – Includes Mix of Uses & Walkable Neighborhoods	11. Does the master plan (if applicable) encourage mixed-use development in downtown and commercial core areas?	<b>Chapter 1</b> <i>'Expanding the Range of Choice'</i> (19-20, 23-24, 27-28)	-
A. Livability	6. Mixed-Use and Transit-Oriented Development – Includes Mix of Uses & Walkable Neighborhoods	12. Are density bonuses or other incentives offered to improve residential access to services and amenities?	<b>Chapter 1</b> <i>'Clustering Buildings'</i> (75-76)	-
A. Livability	6. Mixed-Use and Transit-Oriented Development – Includes Mix of Uses & Walkable Neighborhoods	13. Are key places of the community such as urban corridors, downtowns, and neighborhood centers walkable including sidewalks, crosswalks, and pedestrian features (e.g., benches)?	<b>Chapter 1</b> <i>'Transportation'</i> (89-101))	-
A. Livability	6. Mixed-Use and Transit-Oriented Development – Includes Mix of Uses & Walkable Neighborhoods	14. Do transportation nodes include multiple modes (e.g., bus stations with access to rail transit and/or bike racks)?	<b>Chapter 1</b> <i>'Bike Garages and Bike Parking'</i> (103-104)	-

Category	Indicator	Metric	Corridor Design Portfolio (Chapters)	Additional Resources
A. Livability	7. Provide Safe & Diverse Modes of Transportation	15. Does the community provide a variety of transportation options (e.g., dial-a-ride, buses, rail, non-motorized paths)?	<b>Chapter 1</b> <i>'Transportation'</i> (105-126)	-
A. Livability	7. Provide Safe & Diverse Modes of Transportation	16. Are important places such as recreation centers, schools, and downtown centers accessible by multiple transportation options?	<b>Chapter 1</b> <i>'Transit-Oriented Development'</i> (115-116)	-
A. Livability	8. Wide Range of Housing Opportunity	17. Is affordable housing available in close proximity to critical services, including grocery, pharmacy, and public transportation?	<b>Chapter 1</b> <i>'Expanding the Range of Choice'</i> (19-24) <b>Chapter 2</b> <i>'Form-Based Code'</i> (31-32) <b>Chapter 4</b> <i>'Regulatory and Programmatic Changes'</i> (41-42)	-
B. Governance	1. Policy / Ordinances / Taxes	18. Is there evidence within the community of cooperation between jurisdictions (e.g., regional transit, natural asset management, public safety)?	<b>Chapter 2</b> <i>'Regional Plans'</i> (13-14) <i>'Cross-Jurisdictional Planning and Implementation'</i> (43-44)	-



Category	Indicator	Metric	Corridor Design Portfolio (Chapters)	Additional Resources
B. Governance	1. Policy / Ordinances / Taxes	19. Does your community actively work to remove ordinance barriers that can hinder smart growth or add ordinance language that encourages smart growth?	<b>Chapter 2</b> <i>'Growth and Service Boundaries'</i> (45-46)	<i>'Environmental Protection Agency'</i> . Essential Smart Growth Fixes for Urban and Suburban Zoning Codes. November 2009. <a href="http://www.epa.gov/dced/pdf/2009_essential_fixes.pdf">http://www.epa.gov/dced/pdf/2009_essential_fixes.pdf</a>
B. Governance	2. Regional Collaboration and Feedback	20. Have public-private partnerships been utilized as a strategy to implement potential projects?	-	<i>'Sustainable Communities Online'</i> <a href="http://www.sustainable.org/governance/publicprivate-partnerships">http://www.sustainable.org/governance/publicprivate-partnerships</a>
B. Governance	3. Enhance Economic Competitiveness	21. Has the community formed plans and partnerships for the regional coordination of economic growth?	<b>Chapter 5</b> <i>'Regional Economic Development Plans'</i> (5-6)	-
B. Governance	4. Transparency and Accountable Implementation	22. Are timeframes for review, revision, or completion associated with action items in community plans?	<b>Chapter 2</b> <i>'Streamlined Processes'</i> (29-30)	-
B. Governance	4. Transparency and Accountable Implementation	23. Do community plans track progress and adjust strategies on an ongoing basis?	<b>Chapter 2</b> <i>'Streamlined Processes'</i> (29-30)	-
B. Governance	5. Urban Boundary System	24. Do goals and strategies in community plans strive for the appropriate development of rural resources?	<b>Chapter 1</b> <i>'Land Use and Functions'</i> (41-52) <b>Chapter 2</b> <i>'Rural Areas'</i> (23-24)	-

Category	Indicator	Metric	Corridor Design Portfolio (Chapters)	Additional Resources
B. Governance	5. Urban Boundary System	25. Is there evidence of the community directing development toward areas with existing infrastructure as a priority?	<b>Chapter 1</b> <i>'Infill and Redevelopment'</i> (25-26) <b>Chapter 2</b> <i>'Zoning'</i> (17-20, 25-26)	-
B. Governance	6. Waste and Toxics Management	26. Is solid waste management addressed within community plans/ordinances?	-	<i>'Environmental Protection Agency'</i> <a href="http://www.epa.gov/dced/publications.htm#frc">http://www.epa.gov/dced/publications.htm#frc</a> (look under 'technical reports')
C. Environment	1. Energy	27. Is there evidence of clean and renewable energy within the community?	<b>Chapter 3</b> <i>'Energy and Air Quality'</i> (13-16, 25-28)	-
C. Environment	1. Energy	28. Do development regulations allow for clean or renewable energy (e.g., solar panels)?	<b>Chapter 3</b> <i>'Enabling Zoning and Codes'</i> (23-24)	-
C. Environment	1. Energy	29. Do decisions about residential/commercial development incentivize the use of clean or renewable energy?	<b>Chapter 3</b> <i>'Enabling Zoning and Codes'</i> (23-24)	-
C. Environment	1. Energy	30. Is there evidence of public assets being used as examples for clean and renewable energy (e.g., energy efficiency, solar panels, wind turbines, etc.)?	<b>Chapter 3</b> <i>'LEED and Green Buildings'</i> (13-14) <i>'Net Zero Buildings'</i> (15-16)	-

Category	Indicator	Metric	Corridor Design Portfolio (Chapters)	Additional Resources
C. Environment	1. Energy	31. Do decisions about transportation systems consider the reduction of Vehicle Miles Traveled (VMT)?	<b>Chapter 1</b> <i>'Vehicle Miles Traveled'</i> (85-86) <b>Chapter 3</b> <i>'Environment'</i> (2) <i>'Green Fleets'</i> (33-34)	-
C. Environment	2. Air Quality	32. Does the region take measurements of air quality to compare to baseline levels?	-	<i>'Environmental Protection Agency'</i> <a href="http://www.epa.gov/region9/air/">http://www.epa.gov/region9/air/</a>
C. Environment	3. Water	33. Is the main source of community drinking water able to support community growth?	-	<i>'Environmental Protection Agency'</i> <a href="http://www.epa.gov/dced/pdf/2009_1208_wq_scorecard.pdf">http://www.epa.gov/dced/pdf/2009_1208_wq_scorecard.pdf</a>
C. Environment	3. Water	34. Has the community implemented "green" stormwater management techniques (e.g., permeable pavement, waterfront buffers, retention ponds, and rain gardens)?	<b>Chapter 3</b> <i>'Planning and Design for Stormwater Management'</i> (37-49)	-
C. Environment	3. Water	35. Is the community actively planning for stormwater management (e.g., adopting a stormwater management plan)?	<b>Chapter 3</b> <i>'Planning and Design for Stormwater Management'</i> (37-38)	-

Category	Indicator	Metric	Corridor Design Portfolio (Chapters)	Additional Resources
C. Environment	3. Water	36. Is the community actively planning for wastewater management (e.g., adopting a wastewater management plan)?	-	'Environmental Protection Agency' <a href="http://www.epa.gov/dced/publications.htm#frc">http://www.epa.gov/dced/publications.htm#frc</a> (look under 'water')
C. Environment	3. Water	37. Are local water bodies safe for recreation?	<b>Chapter 3</b> 'Water Quality' (35)	-
C. Environment	4. Climate Change	38. Is the community actively planning for short-term extreme climate events (e.g., adapting a Hazard Mitigation Plan or Emergency Preparedness Plan)?	-	'Federal Emergency Management Agency' <a href="https://www.fema.gov/hazard-mitigation-planning-overview">https://www.fema.gov/hazard-mitigation-planning-overview</a>
C. Environment	4. Climate Change	39. Is the community actively planning for long-term climate change, (e.g., adapting a Climate Change Readiness or Adaptation Plan)?	-	'Chicago Metropolitan Agency for Planning'. A Self-Assessment to Address Climate Change Readiness in Your Community. <a href="http://www.cmap.illinois.gov/documents/10180/14193/Appendix+B---Self-Assessment+to+Address+Climate+Change+Readiness+in+Your+Community.pdf/11377862-ee6c-4d8e-84a5-b3a138c486d4">http://www.cmap.illinois.gov/documents/10180/14193/Appendix+B---Self-Assessment+to+Address+Climate+Change+Readiness+in+Your+Community.pdf/11377862-ee6c-4d8e-84a5-b3a138c486d4</a>

Category	Indicator	Metric	Corridor Design Portfolio (Chapters)	Additional Resources
C. Environment	4. Climate Change	40. Are critical community facilities and assets located appropriately relative to the 100-year flood plain (e.g., police stations, fire stations, hospitals, communication centers, significant roadways, sewage treatment plants, etc.)	-	'Environmental Protection Agency'. Smart Growth Program. <a href="http://www.epa.gov/dced/index.htm">http://www.epa.gov/dced/index.htm</a> (There is a webinar and flood resilience checklist.)
C. Environment	4. Climate Change	41. Are local businesses in the community encouraged and/or incentivized to reduce greenhouse gas emissions?	<b>Chapter 3</b> 'Reducing Greenhouse Gas Emissions' (9-10)	-
C. Environment	5. Preserve Natural Resources	42. Does the community have a natural resource management plan that addresses the preservation of natural resources?	-	'DENIX' <a href="http://www.denix.osd.mil/nr/IntegratedNaturalResourceManagementPlan.cfm">http://www.denix.osd.mil/nr/IntegratedNaturalResourceManagementPlan.cfm</a>
C. Environment	5. Preserve Natural Resources	43. Does your community utilize best practices when addressing natural resource management? These may include, visioning and goal setting, plan making, standards, policies, incentives, development work, public investment, conservation easements, and soil-based zoning?	-	'Michigan Model Conservation Easement' <a href="http://landtrust.org/LTC/MichModelEasementHome.htm">http://landtrust.org/LTC/MichModelEasementHome.htm</a> 'Planning and Zoning for Farmland Protection: A Community-Based Approach' <a href="http://www.farmlandinfo.org/sites/default/files/PLANNING_AND_ZONING_FOR_FARMLAND_PROTECTION_1.pdf">http://www.farmlandinfo.org/sites/default/files/PLANNING_AND_ZONING_FOR_FARMLAND_PROTECTION_1.pdf</a>

Category	Indicator	Metric	Corridor Design Portfolio (Chapters)	Additional Resources
C. Environment	6. Open Space Preservation	44. Are brownfield sites in the community identified, inventoried, and prioritized for rehabilitation?	<b>Chapter 3</b> <i>'Brownfield Redevelopment'</i> (53-54)	-
C. Environment	6. Open Space Preservation	45. Have local groups, committees, or programs been established to preserve open space, farmland, and/or critical environmental areas?	<b>Chapter 4</b> <i>'Coalition Building'</i> (35-36)	
C. Environment	6. Open Space Preservation	46. Are controlled density standards addressed in the zoning ordinance (e.g., density bonuses, lot size, flexible parking or setback requirements, etc.)?	<b>Chapter 1</b> <i>'Form'</i> (57-60) <b>Chapter 2</b> <i>'Growth and Service Boundaries'</i> (45-46)	-
C. Environment	6. Open Space Preservation	47. Has a build-out analysis been performed to ensure the zoning ordinance directs density to areas with necessary infrastructure?	-	<i>'Environmental Protection Agency'</i> <a href="http://www.epa.gov/greenkit/build_out.htm">http://www.epa.gov/greenkit/build_out.htm</a>
C. Environment	6. Open Space Preservation	48. Are site plans reviewed prior to development for the ramifications such development will have on the natural environment?	-	<i>'Michigan Planning Association'</i> <a href="http://www.planningmi.org/downloads/site_plans.pdf">http://www.planningmi.org/downloads/site_plans.pdf</a>
C. Environment	7. Maintain Biodiversity	49. Are policies in place to control introduction of invasive species into the community?	-	<i>'National Wildlife Federation'</i> <a href="http://www.nwf.org/what-we-do/protect-wildlife/invasive-species.aspx">http://www.nwf.org/what-we-do/protect-wildlife/invasive-species.aspx</a>

Category	Indicator	Metric	Corridor Design Portfolio (Chapters)	Additional Resources
C. Environment	7. Maintain Biodiversity	50. Does the community take an active approach toward the preservation of wildlife species and habitats?	-	'Sustainable Communities Online' <a href="http://www.sustainable.org/environment/biodiversity">http://www.sustainable.org/environment/biodiversity</a> 'New York State Department of Environmental Conservation' <a href="http://www.dec.ny.gov/docs/remediation_hudson_pdf/hrebch5.pdf">http://www.dec.ny.gov/docs/remediation_hudson_pdf/hrebch5.pdf</a>
D. Community	1. Civic Engagement	51. Are a variety of engagement strategies utilized (e.g., online discussion, public meetings, targeted group sessions, charrettes, etc.)?	<b>Chapter 4</b> 'Civic Engagement' (5-32)	-
D. Community	1. Civic Engagement	52. Are the voices of all populations sought, considered, and incorporated into community plans?	<b>Chapter 4</b> 'Leveling the Planning Field' (39-40)	-
D. Community	2. Conflict Resolution & Mediation	53. Are multiple methods for public comment provided when addressing community issues/disputes (e.g., public meetings, informal discussion, mediation, rules of conduct, online comment)?	<b>Chapter 4</b> 'Civic Engagement' (5-32)	-
D. Community	3. Fostering Relationships & Shared Interests	54. Does the comprehensive plan address the values of social equity?	<b>Chapter 2</b> 'Planning' (3)	-

Category	Indicator	Metric	Corridor Design Portfolio (Chapters)	Additional Resources
D. Community	4. Community Visioning	55. Are under-represented / marginalized members of the community (e.g., minority groups, disabled persons, low-moderate income, etc.) given opportunities to be engaged in the community?	<b>Chapter 4</b> 'Civic Engagement' (5-32)	-
D. Community	4. Community Visioning	56. Is the comprehensive plan, if applicable, regularly reviewed and updated at least every five years?	<b>Chapter 2</b> 'Planning' (3)	'City of Flint. Imagine Flint Master Plan for a Sustainable Flint. 2013. P.52.' <a href="http://www.imagineflint.com/">http://www.imagineflint.com/</a>
D. Community	5. Culture, Art, Ethnicity, Heritage, and Celebration	57. Are public spaces proactively being retrofitted so that they are accessible for all persons (e.g., physically disabled)?	<b>Chapter 4</b> 'Leveling the Planning Field' (39-40)	-
D. Community	5. Culture, Art, Ethnicity, Heritage, and Celebration	58. Does the community incorporate art into public spaces / events?	<b>Chapter 1</b> 'Civic Buildings and Spaces (151-152, 155-156) <b>Chapter 4</b> 'Arts-Based Civic Engagement' (31-32)	-
D. Community	5. Culture, Art, Ethnicity, Heritage, and Celebration	59. Are historic assets within the community identified and preserved?	<b>Chapter 1</b> 'Historic Preservation' (133-142)	-



Category	Indicator	Metric	Corridor Design Portfolio (Chapters)	Additional Resources
D. Community	5. Culture, Art, Ethnicity, Heritage, and Celebration	60. Does public education actively engage students in the arts (e.g., music, painting, theatre)?	<b>Chapter 1</b> <i>'Art Education'</i> (157-158)	-
D. Community	6. Justice & Equity	61. Are adequate housing options provided for all income levels (e.g., single-family, two-family, multiple-family, mobile home, senior housing)?	<b>Chapter 1</b> <i>'Expanding the Range of Choice'</i> (19-24) <b>Chapter 2</b> <i>'Form-Based Code'</i> (31-32) <b>Chapter 4</b> <i>'Regulatory and Programmatic Changes'</i> (41-42)	-
D. Community	7. Wide Range of Housing Opportunity	62. Does zoning incentivize affordable housing within market rate developments?	<b>Chapter 1</b> <i>'Affordable Housing'</i> (21-22) <b>Chapter 2</b> <i>'Form-Based Code'</i> (31-32) <b>Chapter 4</b> <i>'Regulatory and Programmatic Changes'</i> (41-42)	-
E. Economy	1. Coordinate and Leverage Federal Policies and Investment	63. Does the community actively stay aware of and pursue federal and state funding that supports city/community/regional goals?	-	<i>'Michigan Economic Development Corporation'</i> <a href="http://www.michiganbusiness.org/grow/incentives-taxes/#incentives">http://www.michiganbusiness.org/grow/incentives-taxes/#incentives</a>
E. Economy	2. Protect Local Staple Industries	64. Are there local economic assets specific/special to the community & region that have been capitalized on (e.g., tourism, unique agriculture)?	<b>Chapter 5</b> <i>'Analyzing Strengths and Opportunities'</i> (9-10) <i>'Identification of Economic Assets'</i> (11-12)	-

Category	Indicator	Metric	Corridor Design Portfolio (Chapters)	Additional Resources
E. Economy	2. Protect Local Staple Industries	65. Are there policies/programs in place to protect and enhance the community's unique local economic assets?	<b>Chapter 5</b> <i>'Identification of Economic Assets'</i> (11-12)	-
E. Economy	2. Protect Local Staple Industries	66. Is the local economy diversified between many industries and companies (compared to being dependent on a single industry)?	<b>Chapter 5</b> <i>'Identification of Economic Assets'</i> (11-12)	-
E. Economy	3. Maintain Healthy, Local Business	67. Is there evidence of a strong or welcoming local business community?	<b>Chapter 5</b> <i>'Linking Major Employers to Economic Opportunities'</i> (13-14) <i>'Business Improvement Districts'</i> (15-16)	-
E. Economy	3. Maintain Healthy, Local Business	68. Are incentives available that support small local businesses?		<i>'Michigan Economic Development Corporation'</i> <a href="http://www.michiganbusiness.org/grow/incentives-taxes/#incentives">http://www.michiganbusiness.org/grow/incentives-taxes/#incentives</a>
E. Economy	3. Maintain Healthy, Local Business	69. Has a committee or workgroup been formed to promote partnerships between government and local and regional businesses?	<b>Chapter 5</b> <i>'Regional Economic Development Plans'</i> (5-6)	-

Category	Indicator	Metric	Corridor Design Portfolio (Chapters)	Additional Resources
E. Economy	4. Technology	70. Is data collected and analyzed over time within the community to understand challenges and opportunities within the local economy?	<b>Chapter 5</b> <i>'Target Market Analysis'</i> (7-8)	-
E. Economy	4. Technology	71. Has action been taken to incorporate communication infrastructure into the community's economic development strategies?	<b>Chapter 5</b> <i>'Linking Major Employers to Economic Opportunities'</i> (13-14)	-