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UNITED GROWTH'S REVITALIZING NEIGHBORHOODS GRAND RAPIDS, MICHIGAN:

IDEAL NEIGHBORHOOD INDICATORS

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Introduction

1.1 Background

Grand Rapid's population and housing trends have left the city with a different set of opportunities and challenges than the rest of the state of Michigan. While most of the state has seen the worst unemployment and foreclosure rates in a decade, Grand Rapids has retained a stable population from that can focus reinvestment into the inner city neighborhoods.

United Growth is a "…sustainable, citizen-based organization that unites people and organizations around the promotion of positive land use in Kent County and West Michigan."[1] They requested a Michigan State University (MSU) Practicum group to assist with the Revitalizing Neighborhoods project. For this project, United Growth wants to see the effects of intelligent land use and policy decisions result in a prosperous community and economic health of its inner city neighborhoods by the year 2030. Five characteristics were decided upon that make up a healthy neighborhood. Each of the following characteristics may be measured by multiple indicators.

1. Neighborhoods are vibrant, economically sustainable communities
2. Every neighborhood is a mixed-income neighborhood
3. A full range of transportation modes exist
4. Neighborhoods are green and environmentally sustainable
5. Empowerment, human connectedness, and social justice are prominent features in the neighborhoods

If all of these characteristics are met by 2030, the ideal neighborhood conditions will have been met.

1.2 History of this Project

United Growth is a group that recognizes Grand Rapid's unique situation and, with the community, has developed a vision of what an ideal neighborhood within Grand Rapids would look like in the year 2030. With this vision came the inquiry of how to measure or determine if this vision is being achieved. The United Growth Revitalizing Neighborhoods Committee spent the summer of 2008 deciding on goals, indicators, measures, and methods for this project.

The practicum course began in January of 2009. A group of seven students picked United Growth's Revitalizing Neighborhoods project to work on. The students were asked to

[1] United Growth for Kent County. 12 Mar. 2009 <http://unitedgrowth.org/>.

determine if the given indicators were appropriate, and suggest changes. Further, they were asked to provide baseline 2009 (or most recent) data for two pilot neighborhoods as well as analyze the data, and provide instructions so that the process can be replicated in the future. The Practicum group held meetings with the two neighborhood associations, Practicum professors Dr. Kotval and Dr. LaMore, Mr. Rotondaro, MSU community and economic educators as well as many others in order to choose the best indicators and the best way of measuring them. All group members contributed to gathering baseline data.

1.3 Goals of this Report

The report will explain and critique each indicator in depth, relating its significance and relationship to each goal. Baseline data was gathered to illustrate each indicator. This will allow the reader to see where each neighborhood is in relationship to the goals United Growth has set. The process through which all the data was obtained will be explained fully.

1.4 Nature of Partners

The practicum group consists of seven members, Kent Harding, Prachi Kulkarni, Megan O'Brien, Mark O'Neall, Kerry Hoo, Paris Howard, and Blake Hamilton. The group works in close contact with practicum professor Dr. LaMore and Dr. Kotval. Outside of Michigan State University (MSU), the Practicum Group works with Carol Townsend, Kevin Wisselink and Gustavo Rotondaro. Carol Townsend is the MSU Extension Community and Economic educator and, with Kevin Wisselink, the Business Transportation Coordinator at The Rapid, provides educational programs, information and materials to the practicum group. Gustavo Rotondaro is the Associate Director - GIS Manager at Grand Valley State University Community Research Institute.

1.5 Nature of Practicum

The practicum course in the Urban Planning Program is a capstone course that is required for students to take within their senior year of study as bachelor students, or last spring semester as masters students. This program provides students with hands-on experience within various communities. The purpose of the Planning Practicum course is to give students a chance to apply skills learned over the course of their college careers to a real life situation. Students are given a semester to complete a report that explains the project for involved parties. Students are expected to meet with the clients throughout the semester to complete and fulfill project

requirements. Communities apply for participation in this program by submitting project information to faculty as well as paying a fee.

1.6 How this Report is Organized

The following sections show the results of the study for Belknap Lookout and Eastown Neighborhoods. For each indicator, the measure, method, a discussion, and the results are given, followed by an analysis. The indicators are organized by the 5 goals, and each goal has an introduction. The appendix shows a more detailed methodology for each indicator, so that the process can be replicated.

1.7 Geography

Belknap Lookout extends north to Leonard Street, west to the Grand River, east to College Street, and south to Crescent Street. The United States' census data can be used to measure many of the indicators. For the Census data, we used Census Tract 13 and Tract 14 for Belknap data. This causes all Census data on Belknap to include a small section of north of the neighborhood's boundary: cutting along Plainfield Avenue until Sweet Street.

Census Tract 14, Kent County, Michigan

Source: http://factfinder.census.gov/servlet/CTGeoSearchByListServlet?ds_name=DEC_2000_SF1_U&_lang=en&_ts=253284024796

Census Tract 13, Kent County, Michigan

Source: http://factfinder.census.gov/servlet/CTGeoSearchByListServlet?ds_name=DEC_2000_SF1_U&_lang=en&_ts=253284024796

Belknap Lookout Neighborhood:

Source: http://www.cridata.org/image/hood_GR/hood_GR_belknap-lookout_800px.jpg

Eastown extends north to Fulton Street, west to Fuller Street, south to Franklin Street, and east to Gladstone Street until it reaches Robinson Street where it then extends to Woodward. Eastown includes Aquinas College within its boundaries on the Northeast side. For all the census data regarding Eastown, we used Census Tract 24 and Census Tract 33. This means that our facts will include a section in the south past Franklin Street, extending to Hall Street.

Census Tract 33, Kent County, Michigan

Source: http://factfinder.census.gov/servlet/CTGeoSearchByListServlet?ds_name=DEC_2000_SF1_U&_lang=en&_ts=253284024796

Census Tract 24, Kent County, Michigan

Source: http://factfinder.census.gov/servlet/CTGeoSearchByListServlet?ds_name=DEC_2000_SF1_U&_lang=en&_ts=253284024796

Eastown Neighborhood:

Source: http://www.cridata.org/image/hood_GR/hood_GR_eastown_800px.jpg

1.8 What is an Indicator?

An indicator is a tool used to gauge the change or direction of a certain characteristic, initiative, or market trend. It is often a numerical statistic, but can also be represented in a graphic format. Indicators help to measure all aspects of society, the environment, and the economy. United Growth is interested in the progress of Grand Rapids' neighborhoods in definitive measurements.

1.9 Maclaren Matrix

Sustainable indicators measure change and demonstrate the direction that the community is heading. Virginia Maclaren of the University of Toronto has defined a methodology to report a community's progress towards sustainability.[2] In order to assess each of the indicators presented by United Growth, we have used Maclaren's definitions of sustainable indicators as a standard assessment tool. We use the following seven definitions from Virginia Maclaren's article, "Urban Sustainable Reporting" to assess each indicator:

- **Easy to understand**: Is the indicator simple enough to be interpreted by the general user and the public.
- **Data easily available**: Is the data consistently collected, statistically measurable trend data (data going back for at least five or ten years) for the issues to be examined collected? Who collects the data? Is it available or straightforward?
- **Relevance**: Is the indicator relevant to both local circumstances and opportunities for policy making?
- **Forward-looking**: "A trend indicator describes historical trends and provides indirect information about future sustainability."[3]
- **Congruence**: Do the neighborhood indicators help reach the desired goals and do the indicators have congruency to the main goals under which they reside?
- **Practicality**: Is it possible to implement actions that will improve performance with respect to the indicators?
- **Replicable**: Does the indicator have the ability to be accurately reproduced, or replicated, by others working independently in different neighborhoods?[3]

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[2] Neighborhood Sustainable Indicators Guidebook. Feb. 1999. Crossroad Resource Center. <http://www.crcworks.org/guide.pdf>.

[3] Maclaren, Virginia. "Urban Sustainable Reporting." Journal of the American Planning Association 62 (1996).

Each of the indicators is assessed by these characteristics in order to demonstrate their validity. Based on our assessment, we have made recommendations on whether United Growth should use the indicator in the future. For all of the indicators, there is a 'Maclaren Matrix' chart with each of the characteristics and a rating of 'yes', 'inconclusive', or 'no' based on the success of the indicator as a sustainable indicator. A 'yes' rating means that the indicator does meet that standard. A 'no' rating means that the indicator did not meet that standard. An 'inconclusive' rating means that the indicator has a conflicting coordination with that standard.

GOAL 1

NEIGHBORHOODS ARE VIBRANT, ECONOMICALLY SUSTAINABLE COMMUNITIES

- Indicator 1.1 – Residential and Commercial Properties are fully occupied
- Indicator 1.2 – Quality Neighborhood Schools
- Indicator 1.3 – Density has increased
- Indicator 1.4 – Neighborhood Elementary Schools
- Indicator 1.5 – Neighborhood Businesses are locally owned

Source: http://81.246.16.10/videos/SEP_EMUDE/Diapositive5.jpg

Goal 1: Neighborhoods Are Vibrant, Economically Sustainable Communities

The first goal is defined through four different indicators:

1.1 Residential and commercial properties are fully occupied

1.2 Quality neighborhood school

1.3 Density has increased

1.4 Nearby neighborhood elementary schools

1.5 Neighborhood businesses are locally owned

This goal will measure how space in the neighborhood is occupied and whether quality schools are in close proximity. Residents, businesses, and schools must invest in the neighborhood for it to be vibrant. Quality schools attract families to move into the community. Neighbors create the base of a neighborhood and provide the neighborhood with contributing members to the tax base and a demand for local services, businesses, and jobs. The demand creates a local commercial district, which in turn can attract more residents to the area. This cycle assures that empty lots do not stay vacant, that neighbors are involved in the area, and that there will be a community concern to upkeep property and the community schools.

Goal 1: Neighborhoods Are Vibrant, Economically Sustainable Communities

Indicator 1.1: Residential and commercial properties are fully occupied

Measure: Vacancy Rates

Method/Source: United States Census Data, United States Postal Service

Introduction: Vacant lots demonstrate an inefficient use of space within a neighborhood. For a neighborhood to be vibrant, both residential and commercial sectors need to be active and at full capacity. A vacancy means that there are less people contributing to the tax base, to local businesses, and to the community environment. In the business zone, vacancies are uninviting and are taking space of potential economic revenue and tax contributions. If business property is efficiently used, there would be more services offered for the residents and more reasons for people to walk through the commercial district. Active store fronts provide public safety to the area and attract visitors to spend their money in the neighborhood.

The United States Postal Service (USPS) offers quarterly vacancy data on both residential areas and commercial areas. "The Department of Housing and Urban Development (HUD) has entered into an agreement with the United States Postal Service to receive quarterly aggregate data on addresses identified by the USPS as having been "vacant" or "No-Stat" in the previous quarter".[4] USPS would then publish the data on the HUD website, where one can access the information by downloading the information tables.

[4] U.S. Department of Housing and Urban Development. *United States Postal Services.* 2009. <www.huduser.org/datasets/usps.html>

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand		X	
Data easily available		X	
Relevance	X		
Forward-Looking	X		
Congruence		X	
Practicality	X		
Replicable	X		

- **Easy to understand:** The USPS spreadsheet provides a complex set of data that must be carefully interpreted. U.S. Census data is easy to gather for residential information.
- **Data easily available:** USPS data requires the statistical analysis software SPSS to view the vacancy and housing data. United States Census data does not provide commercial vacancies and therefore one must use two different sites.
- **Relevance:** Vacancy rates provide important information for neighborhoods.
- **Forward-Looking:** As long as USPS and US Census data continue to collect data, this indicator can create a trend of vacancy rates in the future.
- **Congruence:** It is hard to compare commercial vacancies on a larger scale because all information presents data only at a Census Block level. It is difficult to gather data for a county, city, or state.
- **Practicality:** United Growth should determine their goal percentages of vacant lots. If a neighborhood recognizes that they have many vacant lots, then they could work on an initiative to attract residents and businesses.
- **Replicable:** The information is replicable in the future.

Instead of relying on USPS or US Census data in the future, neighborhoods could do a walking survey and count the number of vacancies in the area. This would allow for current data and not rely on the census data which only comes out every ten years.

Data:

Kent County Results: Figure 1.1.1 is vacancy data from the U.S. Census Decennial survey for Kent County in 1990 and 2000. Kent County has had around a 5% vacancy rate in 1990 and 2000. There were not many changes in vacancy rates between the two decades; however there is a slight decrease in rental housing unit vacancies from 2.48% to 1.80%.

Figure 1.1.1 Kent County Vacant Housing Units 1990 - 2000

	1990	% Vacant Houses	2000	% Vacant Houses	% Change (90-00)
Total Vacant	10958	5.69%	11110	4.96%	1.39%
For Rent	4787	2.48%	4036	1.80%	-15.69%
For Sale Only	1523	0.79%	1906	0.85%	25.15%
Rented of Sold, Not Occupied	1205	0.63%	1166	0.52%	-3.24%
For seasonal, recreational, or occasional use	1361	0.71%	1627	0.73%	19.54%
For migrant workers	35	0.02%	67	0.03%	91.43%
Other	2047	1.06%	2308	1.03%	12.75%
Total Units	192698		224000		

Source: http://www.factfinder.census.gov
Census 2000 Summary File 1 (SF 1) 100-Percent Data
1990 Summary Tape File 1 (STF 1) - 100-Percent data
2007 American Community Survey 3-Year Estimates

Belknap Lookout Results: Figure 1.1.2 is U.S. Census data from the U.S. Census Decennial survey in 2000 and 1990 figures. Figure 1.1.2 shows vacancy rates for Belknap Lookout. In 2000, there is a 10.55% vacancy for residential units, which is slightly increased from the 1990 percentage of 8.68%.

Figure 1.1.2 Belknap Lookout Vacant Housing Units 1990 - 2000

	1990	% Vacant Houses	2000	% Vacant houses	% Change 1990 - 2000
Total Vacant	212	8.68%	256	10.55%	21.55%
For Rent	88	3.60%	113	4.66%	29.26%
For Sale Only	18	0.74%	31	1.28%	73.36%
Rented of Sold, Not Occupied	42	1.72%	13	0.54%	-68.84%
For seasonal, recreational, or occasional use	5	0.20%	8	0.33%	61.05%
For migrant workers	0	0.00%	0	0.00%	
Other	59	2.42%	91	3.75%	55.25%
Total Units	2443		2427		-0.65%

Source: http://www.factfinder.census.gov
Census 2000 Summary File 1 (SF 1) 100-Percent Data
1990 Summary Tape File 1 (STF 1) - 100-Percent data

Figure 1.1.3 and Figure 1.1.4 present HUD and USPS vacancy data from December 2008 for Belknap Lookout. Belknap Lookout has a 9.84% residential vacancy rate and 21.76% business vacancy rate.

Figure 1.1.3 USPS December 2008 Quarterly Data for Belknap Lookout Residential

	Residential Total	Residential Vacant	% Vacancy
Belknap Lookout	2674	263	9.84%

Source: "HUD Aggregated USPS Administrative Data On Address Vacancies." 2008. Housing and Urban Development. 20 February 2009 http://www.huduser.org/DATASETS/usps.html

Figure 1.1.4 USPS December 2008 Quarterly Data for Belknap Lookout Business

	Business Total	Business Vacant	% Vacancy
Belknap Lookout	340	74	21.76%

Source "HUD Aggregated USPS Administrative Data on Address Vacancies." 2008. Housing and Urban Development. 20 February 2009 http://www.huduser.org/DATASETS/usps.html

Belknap Lookout has higher vacancy rates in the 1990s and 2000 compared to Kent County. While Kent County has been able to maintain and even minimally shrink its vacant residential lots, Belknap Lookout did the opposite and increased their residential vacancies. Belknap Lookout has 21.76% vacancy rate.

Eastown Results: Figure 1.1.5 is United States Census data from the U.S. Census Decennial survey in 2000 and 1990 figures. Figure 1.1.5 shows vacancy rates for Eastown. There is minimal change between 1990 and 2000, only change from 3.59% to 3.54%. There is a small decrease in 'For Sale Only' vacancies from 1.45% to .72%, however this is also minimal.

Figure 1.1.5 Eastown Vacant Housing Units

	1990	% Vacant Houses	2000	% Vacant Houses	% Change
Total Vacant	79	3.59%	89	3.54%	-1.39%
For Rent	33	1.50%	40	1.59%	6.00%
For Sale Only	32	1.45%	18	0.72%	-50.34%
Rented of Sold, Not Occupied	11	0.50%	10	0.40%	-20.00%
For seasonal, recreational, or occasional use	2	0.09%	5	0.20%	122.22%
For migrant workers	0	0.00%	0	0.00%	
Other	34	1.54%	16	0.64%	-58.44%
Total Units	2203		2512		

Source: http://www.factfinder.census.gov
Census 2000 Summary File 1 (SF 1) 100-Percent Data
1990 Summary Tape File 1 (STF 1) - 100-Percent data

Figure 1.1.6 and Figure 1.1.7 present HUD USPS vacancy data from December 2008 for Eastown. Eastown has a 5.51% residential vacancy rate and a 15.44% business vacancy rate. In the final report, this data will be compared with 2005 data, which is the first year that USPS collected data on vacancy rates.

Figure 1.1.6 USPS December 2008 Quarterly Data for Eastown Residential Units

	Residential Total	Residential Vacant	% Vacancy
Eastown	2378	131	5.51%

Source "HUD Aggregated USPS Administrative Data on Address Vacancies." 2008. Housing and Urban Development. 20 February 2009 http://www.huduser.org/DATASETS/usps.html

Figure 1.1.7 USPS December 2008 Quarterly Data for Eastown Business Units:

	Business Total	Business Vacant	% Vacancy
Eastown	136	21	15.44%

Source "HUD Aggregated USPS Administrative Data on Address Vacancies." 2008. Housing and Urban Development. 20 February 2009 http://www.huduser.org/DATASETS/usps.html

Eastown Neighborhood has slightly lower vacancy rates in the 1990s and 2000 than Kent County. The USPS data from 2008 does show that as of December 2008, Eastown has increased the amount of vacant resident lots; however there is not 2008 data for Kent Country to compare this trend. Eastown has 15.44% vacancy rate, which appears to be high, however without comparing this number to another neighborhood, to Kent County as a whole, or to Michigan, it is very difficult to understand this percentage.

Goal: Neighborhoods Are Vibrant, Economically Sustainable Communities

Indicator 1.2: Quality neighborhood schools

Measure: Test Scores are equal or surpass the state average

Method/Source: Michigan Educational Assessment Program scores online:

http://www.michigan.gov/mde/

Introduction: Families often choose to move to a neighborhood or continue to stay in a neighborhood based on the quality of available public education. For Grand Rapids to continue attracting new residents to their neighborhoods there must be quality schools available within the neighborhood for children to attend. Neighborhood schools allow local students to walk or ride their bikes to school and create opportunities for interaction amongst neighbors.

The State of Michigan has chosen the Michigan Educational Assessment Program (MEAP) as the state-wide test for determining education quality. The MEAP is a standardized test taken by all public schools students in the state of Michigan and "assesses students in grades 3-9 based on Michigan Curriculum Framework".[5] This indicator will use Grade 3 statistics for public schools within each neighborhood. Michigan's Department of Education provides an up-to-date website containing MEAP scores for Grades 3 to Grade 8 with results in four different areas: reading, writing, math and integrated English language Arts (ELA).

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand		X	
Data easily available	X		
Relevance		X	
Forward-Looking		X	
Congruence	X		
Practicality		X	
Replicable	X		

[5] "Michigan Educational Assessment Program." 2008. Michigan Department of Education. 20 Feb. 2009 <http://www.michigan.gov/mde/0,1607,7-140-22709_31168---,00.html>.

- **Easy to understand:** Michigan presents MEAP data through charts assessing four different categories of testing (Reading, Writing, Math, ELA) assessed by levels of proficiency (Level 1, 2, 3, 4). These numbers could be confusing to read.
- **Data easily available:** MEAP data is available to anyone with internet access.
- **Relevance:** Standardized tests are sometimes criticized as a weak method for measuring students' and teachers' capabilities. However, Michigan has chosen it as the standard for measuring students' and schools' abilities. The skepticism and criticism of standardized tests weakens its relevance.
- **Forward-Looking:** As long as Michigan continues the MEAP, there will be comparative data in the future. However, the MEAP could use different measurement standards in the future or Michigan could change the testing process.
- **Congruence:** Neighborhood scores can be compared to other neighborhoods around Michigan, as well as on a larger scale, such as county and state scores.
- **Practicality:** Neighborhoods would need to work with the Department of Education and local school leaders in order to make necessary changes.
- **Replicable:** MEAP data should be available in the future through the Michigan Department of Education.

Comments: MEAP scores should be complimented by other measurements of education quality in the future. The indicator could be measured by the number of students that transfer in or out of the neighborhood schools or the number of families that chose to send their child to a 'school of choice' instead of a local neighborhood school.

Instead of comparing each school's MEAP scores to the state averages, each school is compared to Kent County because the data is more readily available. State averages are harder to collect and interpret.

Education indicators could be a goal by itself, because there are many measurements of quality education. Future indicators could include the *Michigan Education Yes*! grade, tracking the student-to-teacher ratio, intramural and afterschool activities offered, and per-student spending.

Data: The following data sets provide the assessment data for Grade 3 for all Grand Rapids Public Schools and the public schools in Eastown and Belknap Lookout. The testing scores for

Math, Reading, Writing and English Language Arts (ELA) each have their own set of performance levels:

-Level 1: Advanced

-Level 2: Proficient

-Level 3: Partially Proficient

-Level 4: Not Proficient

The ELA section has only two performance levels: "Met or Exceeded Michigan Standards" or "Did Not Meet Michigan Standards". For Math, Reading, and Writing scores, the Level 1: "Advanced" and Level 2 "Proficient" scores are combined for the category "Met or Exceeded Michigan Standards"

All of the figures in this section provide a percentage as to how many students performed at each performance level. For example, in Grand Rapids Public Schools 25.70% of Grade 3 children had 'Advanced" performance in the Math test. The last row of the table shows the "Number Included", which stands for the number of valid student tests, was included in the percentages. For confidentiality reasons, any scores that represent less than 10 students are not used in any data reports. [6]

Figure 1.2.1 provides data scores for children in Grade 3 in all Grand Rapids public schools for the Fall of 2007. In Grand Rapids Public Schools, 77.20% of Grade 3 children met or exceeded Math standards; 73.40% met or exceeded Reading standards; 43.20% met or exceeded Writing standards and 65.10% met or exceeding ELA standards. There were between 1443 and 1450 students included in these percentages.

[6] "Elementary and Middle School Assessments." About MEAP Scores. 2009. Michigan Department of Education. 20 Feb. 2009 <https://oeaa.state.mi.us/oeaa/help/help.htm>.

Figure 1.2.1 Grand Rapids Public Schools MEAP scores Fall MEAP 2007: Grade 3

	Math	Reading	Writing	ELA
Level 1: Advanced	25.70%	19.20%	0.20%	9.10%
Level 2: Proficient	51.50%	54.20%	43%	56.10%
Level 3: Partially Proficient	22.30%	20.80%	43.40%	28%
Level 4: Not Proficient	0.50%	5.80%	13.40%	6.90%
Met or Exceeded	77.20%	73.40%	43.20%	65.10%
Not Met	22.80%	26.60%	56.80%	34.90%
Number Included	1450	1445	1444	1443
Note: * = Fewer than 10 students included.				
N/A = Not Applicable.				

Source: Grand Rapids Public Schools." Michigan Scores. 2009. Michigan Department of Education. <https://oeaa.state.mi.us/oeaa/directory/meap.asp?dCode=41010&bCode=%2D99&gCode=109&aCode=MEAP>.

Belknap Lookout Results: Belknap Lookout has two public schools in the area: Coits Arts Academy and East Leonard School.

Figure 1.2.2 Coit Arts Academy Fall MEAP 2007: Grade 3

	Math	Reading	Writing	ELA
Level 1: Advanced	36.40%	30.30%	0%	21.20%
Level 2: Proficient	45.50%	51.50%	69.70%	57.60%
Level 3: Partially Proficient	18.20%	15.20%	18.20%	18.20%
Level 4: Not Proficient	0%	3%	12.10%	3%
Met or Exceeded	81.80%	81.80%	69.70%	78.80%
Not Met	18.20%	18.20%	30.30%	21.20%
Number Included	33	33	33	33
Note: * = Fewer than 10 students included.				

Source: "Coit Arts Academy." Michigan Scores. 2009. Michigan Department of Education. <https://oeaa.state.mi.us/oeaa/directory/meap.asp?dCode=%2D99&bCode=09061&gCode=109&aCode=MEAP>.

Figure 1.2.2 presents data for Coit Arts Academy, one of the two public Elementary schools located within Belknap Lookout. At Coit Arts Academy, 81.80% of Grade 3 children met or exceeded Math standards; 81.80% met or exceeded Reading standards; 69.70% met or exceeded Writing standards and 78.80% met or exceeding ELA standards. There were 33 student test results included in calculating these percentages. The percentages for Math, Reading, Writing, and ELA surpass the Grand Rapid's public school averages.

Figure 1.2.3 East Leonard School MEAP Scores (K – 5) Fall MEAP 2007:Grade 3

	Math	Reading	Writing	ELA
Level 1: Advanced	22.20%	16.70%	0%	16.70%
Level 2: Proficient	72.20%	61.10%	27.80%	44.40%
Level 3: Partially Proficient	5.60%	11.10%	61.10%	33.30%
Level 4: Not Proficient	0%	11.10%	11.10%	5.60%
Met or Exceeded	94.40%	77.80%	27.80%	61.10%
Not Met	5.60%	22.20%	72.20%	38.90%
Number Included	18	18	18	18
Note: * = Fewer than 10 students included.				
N/A = Not Applicable.				

Source: "East Leonard." Michigan Scores. 2009. Michigan Department of Education. <https://oeaa.state.mi.us/oeaa/directory/meap.asp?dCode=%2D99&bCode=01026&gCode=109&aCode=MEAP>

Figure 1.2.3 presents data for East Leonard School, the other public grade schools located within Belknap Lookout. At East Leonard School, 94.40% of Grade 3 children met or exceeded Math standards; 77.80% met or exceeded Reading standards; 27.80% met or exceeded Writing standards and 61.10% met or exceeding ELA standards. There were 18 student test results included in calculating these percentages. The percentages for Math and Reading surpasses Grand Rapids' public school averages, however Writing and ELA scores fall beneath the Grand Rapids' public school averages.

Eastown Results: Eastown has three public Elementary schools: Campus Elementary, Southeast Academic Center, and William C. Abney Academy.

Figure 1.2.4 Campus Elementary Fall MEAP 2007: Grade 3

	Math	Reading	Writing	ELA
Level 1: Advanced	19.10%	14.90%	0%	4.30%
Level 2: Proficient	66%	57.40%	42.60%	59.60%
Level 3: Partially Proficient	14.90%	23.40%	46.80%	27.70%
Level 4: Not Proficient	0%	4.30%	10.60%	8.50%
Met or Exceeded	85.10%	72.30%	42.60%	63.80%
Not Met	14.90%	27.70%	57.40%	36.20%
Number Included	47	47	47	47
Note: * = Fewer than 10 students included.				
N/A = Not Applicable.				

Source "Campus Elementary." Michigan Scores. 2009. Michigan Department of Education. <https://oeaa.state.mi.us/oeaa/directory/meap.asp?dCode=%2D99&bCode=09282&gCode=109&aCode=MEAP>.

Figure 1.2.4 presents data for Campus Elementary, one of the three public grade schools located within Eastown. At Campus Elementary, 85.10% of Grade 3 children met or exceeded Math standards; 72.30% met or exceeded Reading standards; 42.60% met or exceeded Writing standards and 63.80% met or exceeding ELA standards. There were 47 students included in these percentages. The percentages for Math exceed the Grand Rapids' public school averages, however the Reading, Writing, and ELA fall beneath the Grand Rapid's public school averages.

Figure 1.2.5 Southeast Academic Center Fall MEAP 2007: Grade 3

	Math	Reading	Writing	ELA
Level 1: Advanced	44.40%	18.50%	0%	3.70%
Level 2: Proficient	29.60%	59.30%	59.30%	70.40%
Level 3: Partially Proficient	22.20%	18.50%	29.60%	22.20%
Level 4: Not Proficient	3.70%	3.70%	11.10%	3.70%
Met or Exceeded	74.10%	77.80%	59.30%	74.10%
Not Met	25.90%	22.20%	40.70%	25.90%
Number Included	27	27	27	27
Note: * = Fewer than 10 students included.				
N/A = Not Applicable.				

Source "Southeast Academy." Michigan Scores. 2009. Michigan Department of Education. <https://oeaa.state.mi.us/oeaa/directory/index.asp?DCode=41010&BCode=06505>.

Figure 1.2.5 presents data for Southeast Academic Center, one of the three public grade schools located within Eastown. At Southeast Academic Center, 74.10% of Grade 3 children met or exceeded Math standards; 77.80% met or exceeded Reading standards; 59.30% met or exceeded Writing standards and 74.10% met or exceeding ELA standards. There were 27 students included in these percentages. The percentages for Reading, Writing, and ELA exceed the Grand Rapids' public school averages and the Math score was just beneath the Grand Rapid's public school average.

Figure 1.2.6 William C. Abney Academy MEAP Scores Fall MEAP 2007: Grade 3

	Math	Reading	Writing	ELA
Level 1: Advanced	21.10%	21.90%	0%	9.60%
Level 2: Proficient	68.40%	63%	59.50%	64.40%
Level 3: Partially Proficient	10.50%	11%	33.80%	23.30%
Level 4: Not Proficient	0%	4.10%	6.80%	2.70%
Met or Exceeded	89.50%	84.90%	59.50%	74%
Not Met	10.50%	15.10%	40.50%	26%
Number Included	76	73	74	73
Note: * = Fewer than 10 students included.				
N/A = Not Applicable.				

Source: "William C. Abney Academy ." Michigan Scores. 2009. Michigan Department of Education. <ttps://oeaa.state.mi.us/oeaa/directory/meap.asp?dCode=%2D99&bCod =08600&gCode=109&aCode=MEAP>.

Figure 1.2.6 presents data for William C. Abney Academy, one of the three public grade schools located within Eastown. At William C. Abney Academy, 89.50% of Grade 3 children met or exceeded Math standards; 84.90% met or exceeded Reading standards; 59.50% met or exceeded Writing standards and 74.0% met or exceeding ELA standards. There were between 73 and 76 students included in these percentages. The percentages for Math, Reading, Writing, and ELA all exceed the Grand Rapids' public school averages.

Both Southeast Academic Center and William C. Abney have a majority of their scores over the Kent County performance scores. The majority of performance scores from Campus Elementary fall below Kent County scores.

Goal 1: Neighborhoods Are Vibrant, Economically Sustainable Communities

Indicator 1.3: Density has increased

Measure: Increased Density and Increased population in the neighborhood

Method/Source: U.S. Census: http://www.factfinder.census.gov

Introduction: In order for Grand Rapids to continue growing, the city must increase the density of business and residential areas. For businesses to thrive, schools to have students and tax money to contribute to city services, a neighborhood needs to have growth or to have already established maximum density usage of the property. While some areas will have population growth as people move into vacant lots, others can only grow through vertical growth: apartment buildings, condominiums, and mixed growth. This indicator measures the density by comparing the amount of people per acre in 1990 and 2000. It also presents the population numbers for 1990 and 2000 in order to determine the trends in the population.

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand		X	
Data easily available		X	
Relevance	X		
Forward-Looking	X		
Congruence	X		
Practicality	X		
Replicable	X		

- **Easy to understand**: Unless density is compared to another city or area, it is hard to interpret the meaning of the density numbers. United Growth needs to establish an ideal density for neighborhoods to be able to work towards.
- **Data easily available**: It is easy to find population and the square meter area figures from the U.S. Census Bureau. However, once the area data is collected, calculations must first convert meters into acres for each neighborhood before dividing the population by the acreage, which demands the use of a computer or calculator conversion. The data is also reliant on the U.S. Decennial data which is only available once every ten years.

- **Relevance**: An increasing density means that there are more people living in a condensed area and sharing public amenities.
- **Forward-looking**: Density calculations can be assessed in the future in order to establish a trend.
- **Congruence**: Housing density is a common indicator in projects across the United States, including the Maryland Smart Growth Indicators project and the Boston Indicators Project. It is an important measurement of growing vertically and efficiently.
- **Practicality**: Neighborhoods can improve density rates by encouraging multilevel housing and mixed use buildings.
- **Replicable**: Density can be reproduced in different neighborhoods and at the city or state level through use of census data and following the same method of calculations.

Data: U.S. Census data provides the population and area in meters for State, County and Census Tract. By converting the area from square meters to acres and calculating the population per acre, one can find the density for each of these areas.

Belknap Lookout Results: Figure 1.3.1 presents area and density calculations for Michigan, Kent County, and Belknap Lookout neighborhood in 1990 and 2000. The density has a slight increase between 1990 and 2000 in Michigan and Kent County, even though the population decreases minimally in Belknap Lookout. Belknap Lookout has a 10.05 person per acre density in 1990 and 9.84 per acre density in 2000.

Figure 1.3.1 Belknap Lookout Population Density

	Area (Acres)	1990 Density (people per acre)	2000 Density (people per acre)
Michigan	36,354,444	0.256	0.273
Kent County, Michigan	547,952	0.914	1.048
Belknap Lookout	611	10.051	9.841

Source www.census.gov

Figure 1.3.2 presents the total population from 1990 to 2000 for Michigan, Kent County, and Belknap Lookout. Michigan and Kent County's population grew within this ten year period; however Belknap Lookout has a decreasing population. The table above shows that there is a 6.92% population growth for Michigan and a 14.72% growth for Kent County. The population in Belknap Lookout decreased between the Years 1990 and 2000 by 2.08% from 6,141 to 6,013.

Figure 1.3.2 Belknap Lookout Total Population and Population change

	Total Population		Percent Change
	1990	2000	1990-2000
Michigan	9,295,297	9,938,444	6.92%
Kent County, Michigan	500,631	574,335	14.72%
Belknap Lookout	6,141	6,013	-2.08%

Source: http://www.census.gov

The population and density decreased in Belknap Lookout between 1990 and 2000. While the population only decreased by 2.08% in Belknap Lookout, both the overall population in Michigan and Kent County are growing. Belknap Lookout's population is going in the opposite direction of the goal for this indicator.

Eastown Results: Figure 1.3.3 presents area and density calculations for Michigan, Kent County, and the Eastown neighborhood in 1990 and 2000. The density increases slightly between 1990 and 2000 Michigan and Kent County, however the population does not change in Eastown. Eastown's density in 1990 and 2000 is 13.64 people per acre.

Figure 1.3.3 Eastown Density

	Area (Acres)	1990 Density (people per acre)	2000 Density (people per acre)
Michigan	36,354,444	0.256	0.273
Kent County, Michigan	547,952	0.914	1.048
Eastown Total	**572**	**13.636**	**13.636**

Source: http://www.census.gov

Figure 1.3.4 presents the total population from 1990 to 2000 for Michigan, Kent County, and Eastown. There is a 6.92% population growth for Michigan and a 14.72% growth for Kent County. For Eastown, there is no growth or decline as the population stays at 7,800 people.

Figure 1.3.4 Eastown Total Population and Population Change

	Total Population		Percent Change
	1990	2000	1990-2000
Michigan	9,295,297	9,938,444	6.92%
Kent County, Michigan	500,631	574,335	14.72%
Eastown	7,800	7,800	0.00%

Source: http://www.census.gov

Between 1990 and 2000 there was no increase in density or population, as the population stayed at 7,800 people. While the population does not decrease in Eastown, the population totals in Kent County and Michigan both do increase within the ten year period.

Goal 1: Neighborhoods are Vibrant, Economically Sustainable Communities

Indicator 1.4: Neighborhood elementary schools

Measure: All neighborhood residences located within 8 blocks of residences

Method/Source: Google Maps, Community Research Institute (CRI) Data

Introduction: Quality neighborhood schools are essential to having vibrant, economically sustainable communities. According to a study from the American Public Health Association regarding neighborhood schools, "shorter distances are the best way to encourage physical active journeys to school. Neighborhood schools increase physical activity and decrease the use of cars and fuel."[7] Having children walk to school will cut down on pollution and encourage the city to invest money in infrastructure such as sidewalks, and street safety. Belknap Lookout has five elementary schools within walking distance of neighborhood borders. Eastown has ten elementary schools within walking distance of neighborhood borders.

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand	X		
Data easily available		X	
Relevance	X		
Forward-looking			X
Congruence	X		
Practicality	X		
Replicable	X		

- **Easy to understand:** This indicator is very easy to understand. Elementary schools are marked on the map with a red dot.
- **Data easily available:** Most of this data was easily available. However some of the schools did not appear on the CRI (Community Research Institute) interactive map but did come into view under the CRI full profile section. The schools that were not present on the CRI interactive map were located by entering the address found on the CRI full

[7] Larsen, Kristian, Jason Gilliland, Paul Hess, and Patricia Tucker. "The Influence of the Physical Environment and Sociodemographic Characteristics on Children's Mode of Travel to and From School." American Journal of Public Health 99 (2008).

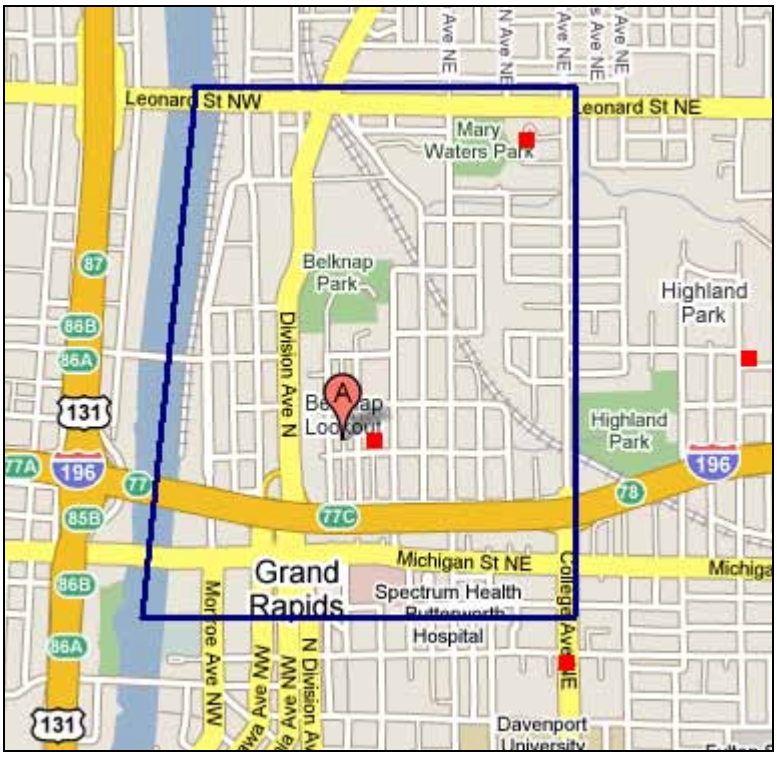
profile into Google. This data was found on the CRI Grand Valley website and Google maps. This process is explained in depth in the appendix section of the report.

- **Relevance:** This indicator is relevant to community issues. With the information presented in this indicator, policies can be implemented.
- **Forward-looking:** A different method of data collection would have to be used to find the information in the future in order to create a trend.
- **Congruence:** This indicator relates to the goal "neighborhoods are vibrant, economically sustainable communities" and coincides with other indicators measured in this report, such as indicator 1.2 "quality neighborhood schools".
- **Practicality:** This indicator is practical and also possible to implement actions based off of the information provided.
- **Replicable:** The indicator can be very easily replicated with the help of CRI data and Google maps.

Data:

Belknap Lookout Results: Figure 1.4.1 is a Google map that shows the Belknap Neighborhood and parts of the surrounding neighborhoods. The surrounding neighborhoods are relevant to the indicator because they are within eight blocks of Belknap Lookout's Borders. The surrounding neighborhoods are Highland Park and Heritage hill. The red squares on the map signify where there is an elementary school. According to the data gathered there are four elementary schools within eight blocks of Belknap's borders. In the Belknap Lookout neighborhood there are two neighborhood public elementary schools, Coit Arts Academy and East Leonard Elementary School. In the Highland Park neighborhood there is Eastern Elementary School, and in the Heritage Hill neighborhood there is Fountain Elementary School.

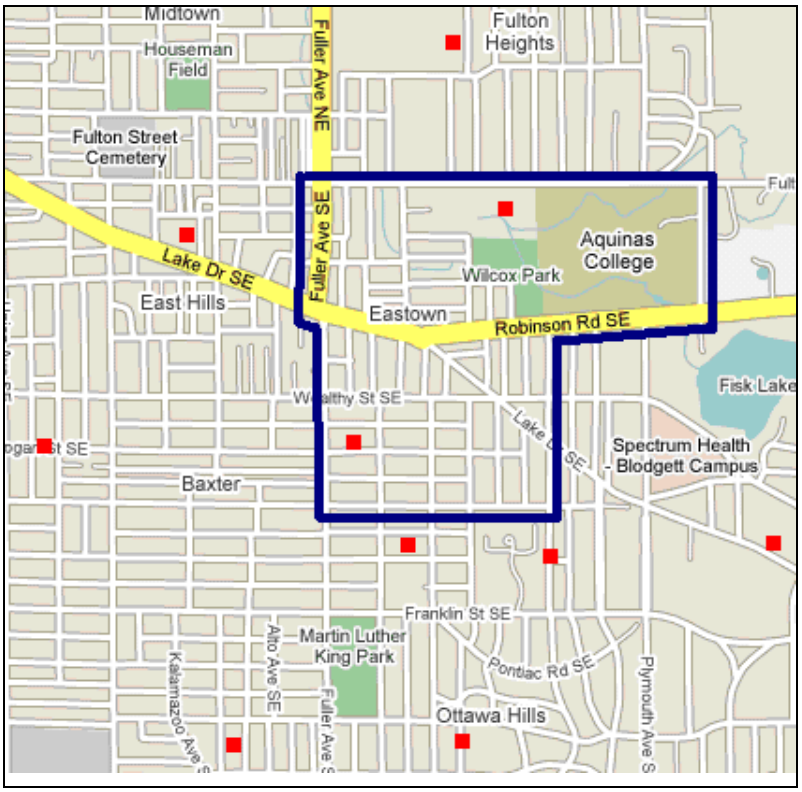
Figure 1.4.1 Belknap Lookout



Source: http://www.google.com/

Eastown Results: This is a Google map that shows the Eastown Neighborhood and parts of the surrounding neighborhoods. The surrounding neighborhoods are relevant because they are within eight blocks of Eastown's Borders. These neighborhoods are Fulton Heights, East Hills, Madison, Oakdale, and Ottawa Hills. The red squares on the map signify where there is an elementary school. According to the data gathered, there are ten elementary schools within eight blocks of Eastown's borders. In Eastown there is Campus Elementary, Campus Early Childhood Center, St Stevens, and St Thomas. In Fulton Heights there is William C. Abney Academy. In the East Hills Neighborhood there is Congress Elementary. In the Madison Neighborhood there is the Martin Luther King Leadership Academy. In the Oakdale neighborhood there is Alexander Elementary, and in the Ottawa Hills neighborhood is the Ottawa Montessori elementary school.

Figure 1.4.2 Eastown



Source: http://www.google.com/

Goal 1: Neighborhoods Are Vibrant, Economically Sustainable Communities

Indicator 1.5: Neighborhood businesses are locally owned

Measure: Number of businesses locally owned

Method/Source: www.localfirst.com, Community Association(s)

Introduction: Keeping money within the neighborhood creates a more economically stable and viable community that can improve socially or structurally. Local businesses help to keep employment within the neighborhood stable and create an identity for the residents.

United Growth's vision for the commercial district is an increase in locally owned businesses. Owners of the local businesses live within the area and help re-circulate money within the local economy, employ and serve locals, and are less dependent on imports.[8]

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand	X		
Data easily available			X
Relevance	X		
Forward-Looking	X		
Congruence	X		
Practicality	X		
Replicable		X	

- **Easy to understand:** The data is presented in a simple chart.
- **Data easily available:** Data that is found online is not area specific to the neighborhood.
- **Relevance:** More local businesses satisfy the goal, yet, not all local businesses are Local First members.
- **Forward-Looking:** Future trends can be made with future assessments.
- **Congruence:** Locally owned businesses can be inventoried in other cities and neighborhoods.

[8] (2009). Retrieved March 23, 2009, from http://www.localfirst.com/why

- **Practicality:** The data is capable of giving an accurate assessment of what is locally owned. It should be noted that the business owner may be not living within the actual neighborhood, but is still a member of the city or region.
- **Replicable:** Until data is easily and readily available, the data cannot be replicated.

Comments: This current measure of local businesses is not very accurate. Relying on the Local First directory can only display businesses that are registered, which requires a fee.

The local neighborhood associations are a good source in obtaining the required information due to the level of intimacy they have with the neighborhood. It would be quicker for long term data gathering if the neighborhood associations annually or yearly inventoried the number and location of both local and non-local businesses. This would allow for accurate and comprehensive results.

The U.S. Economic Census data that can provide a total for the businesses can only go as precise as the zip code, which does help to narrow down the general neighborhoods of interest but does not account for the overlapping of the neighborhoods. The accuracy of the data is not present.

Obtaining the information for the total number of businesses and the total number of locally owned businesses would require a physical inventory of the businesses each time a measure was required. This would yield accurate data.

Data: A locally owned business is a business that contributes to the local community and is owned and operated by a local member of the community, city, county, or region. The business thrives to be less dependent on the need to utilize imported products and goods in order to serve the community. Businesses that are willing to achieve this general criterion are designated as a locally owned and operated business. As time progresses, the percentage of the locally owned businesses will reflect a positive or negative growth on the overall services available in the neighborhood.

Belknap Lookout Results:

Figure 1.5.1 Belknap Lookout Locally Owned Businesses

	Belknap Lookout
Local First Businesses	10
Total Businesses	110
% Locally owned	9%

Source: http://www.localfirst.com

In Belknap Lookout, 9% of locally owned businesses are Local first members. An on-site inventory will be needed for more accurate results.

Eastown Results:

Figure 1.5.2 Eastown Locally Owned Businesses

	Eastown
Local First Businesses	32
Total Businesses	94
% Locally owned	34%

Source: http://www.localfirst.com

In Eastown, 34 percent of locally owned businesses are Local First members. For further information of locally owned businesses an on-site inventory will need to be conducted.

Goal 1 Conclusion

Goal 1: Neighborhoods Are Vibrant, Economically Sustainable Communities

Belknap Lookout Conclusion:

1.1 There is a slight increase in vacancy rates in Belknap. This does not meet the goal, especially since Kent County has decreased their vacancy rates.

1.2 One school surpasses Grand Rapids public school MEAP scores and the other school partially surpasses Grand Rapids schools.

1.3 Density has not decreased or increased, however both Michigan and Kent County has seem some density increase. Population has decreased in Belknap Lookout, which does not meet Goal 1.

1.4 There are four elementary schools within eight blocks of Belknap Lookout borders. This meets goal 1.

1.5 The proportion of locally owned businesses is 9 percent.

Eastown Conclusion:

1.1 Eastown does meet the goal because it maintains its low vacancy rate.

1.2 Two of the three public elementary schools in Eastown exceed the MEAP scores of Kent County. The third school exceeds Kent County in three of the four categories.

1.3 Eastown does not increase density or population; however it does maintain the same rates of density and population between 1990 and 2000.

1.4 There are ten elementary schools within eight blocks of Eastown borders. This meets goal 1.

1.5 The total number of locally owned businesses for the Eastown neighborhood is at a substantial number given the total number of businesses in the area.

GOAL 2

EVERY NEIGHBORHOOD IS A MIXED-INCOME NEIGHBORHOOD

- Indicator 2.1 – One-Third Rental Housing is available
- Indicator 2.2 – Permanently Affordable Housing Units
- Indicator 2.3 – Economic Diversity
- Indicator 2.4 – Housing is Accessible
- Indicator 2.5 – Racial Composition mirrors the City of Grand Rapids

Source:http://2.bp.blogspot.com/_NcZTGCbn73A/SPasxfj0CMI/AAAAAAAAABo/3Rk_EQqjgvU/s200/MixedIncomeNeighborhoodRally.jpg

Goal 2: Every Neighborhood is a Mixed Income Neighborhood

2.1 Rental Housing Is Available

2.2 Permanently Affordable Housing Units

2.3 Economic Diversity

2.4 Housing is Accessible

2.5 Every Neighborhood is Mixed-Income Neighborhood

Mixed income cities are more diverse economically, providing a place to live or work for all people. In a mixed income neighborhood the low-income residents have access to all of the same amenities and services as the upper income residents. This shows social equality, and allows for more social economic mobility. An ideal neighborhood will have many long term residents of all economic classes living within its borders.

Goal 2: Every Neighborhood is a Mixed Income Neighborhood

Indicator 2.1: 1/3 Rental housing is available

Measure: Ratio of rentals to owner occupied

Method/Source: US Census Data

Introduction: This indicator was chosen by United Growth to determine the amount of rental housing located within each neighborhood. This is an important indicator to measure when creating a mixed income environment, because renting is another housing option for people with other needs. The availability of rental properties can lead to a variety of housing options and ideally lead to a mixed income neighborhood.

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand	X		
Data easily available	X		
Relevance	X		
Forward-looking			X
Congruence	X		
Practicality	X		
Replicable	X		

- **Easy to understand:** This data is easy to understand.
- **Data easily available:** This data is easily accessible. It is available on the American FactFinder Census website from the decennial census.
- **Relevance:** This availability of rental housing is relevant to community decisions and policy making.
- **Forward-looking:** This indicator is not forward looking. This study does not make estimates or projections.
- **Congruence:** This indicator relates to goal II "every neighborhood is a mixed income neighborhood" and coincides with other indicators such as indicator 2.4 "housing is accessible".

- **Practicality:** It is possible to implement actions that will improve the availability of rental housing.
- **Replicable:** This indicator can be easily replicated with the help of the American FactFinder Census website.

Comments: The indicator implies that the housing is available, however many of the rental housing units are occupied.

Data:

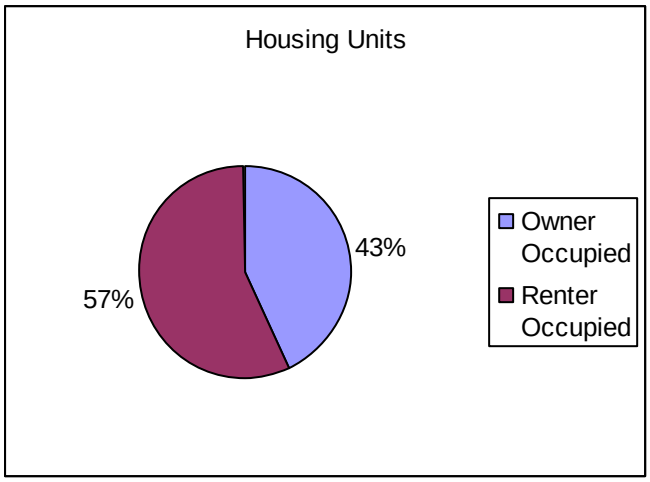
Belknap Lookout Results: The Figure 2.4.1 shows the total number of housing units in the Belknap Lookout neighborhood, and the number of homes that are owner-occupied and renter-occupied. Out of the 2,162 people that live in the Belknap Lookout neighborhood, 937 of them are occupied by their owners and 1,225 of them are occupied by renters. Figure 2.4.2 represents the data from figure 2.4.1 visually. Belknap Lookouts has the desired 1/3rd amount rental properties, and exceeds the 1/3rd amount substantially. Although there are many renters in Belknap, some of these renters have been occupying the same home for twenty years or more. These renters contribute the same amount to the community as owner-occupied residents.

Figure 2.1.1 Owner/Renter Occupied Units (2000)

	Housing Units
Total	2,162
Owner Occupied	937
Renter Occupied	1,225

Source: http://factfinder.census.gov/

Figure 2.1.2 Owner/Renter Occupied Units (2000)



Source: http://factfinder.census.gov/

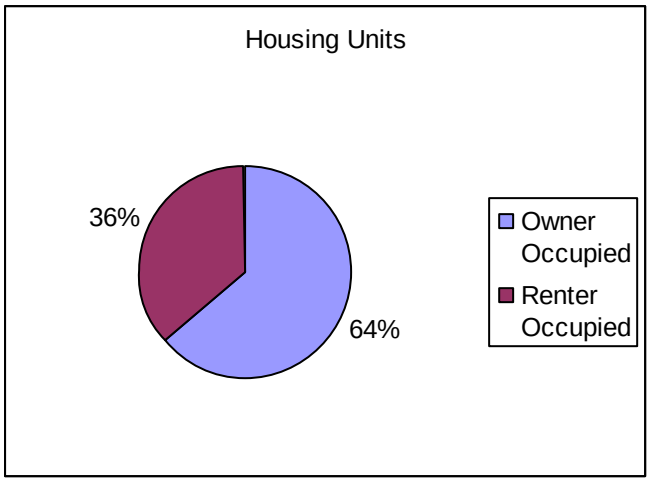
Eastown Results: Figure 2.4.3 shows the total amount of housing units in the Eastown neighborhood as well as the amount of homes that are owner occupied and renter occupied. Out of the 2,423 people that live in the Eastown neighborhood, 1,541 of them are occupied by their owners and 882 of them are occupied by renters. Figure 2.4.4 represents the data from figure 2.4.3 visually. Eastown's strength is its supply of available rental properties. The amount of rental properties in the Eastown Neighborhood fulfills indicator 2.1 requirement "1/3 Rental housing is available".

Figure 2.1.3 Owner/Renter Occupied Units (2000)

	Housing Units
Total	2,423
Owner Occupied	1,541
Renter Occupied	882

Source: http://factfinder.census.gov/

Figure 2.1.4 Owner/Renter Occupied Units (2000)



Source: http://factfinder.census.gov/

Goal 2: Every Neighborhood is a Mixed Income Neighborhood

Indicator 2.2: Permanently affordable housing units

Measure: House Prices

Method/Source: US Census data, www.roderickparker.com, Housing and Urban Development (HUD)

Introduction: The indicator 2.2 "Permanently affordable housing units" was chosen as an indicator by United Growth because affordable housing is vital for creating mixed income neighborhoods. Affordable housing is necessary if United Growth is going to achieve its goal of having every neighborhood a mixed income neighborhood. Housing must be affordable to lower income people in order to achieve a mixed income environment. The data acquired for this indicator was from the Census American Fact Finder website. The house prices for all of the homes in Belknap and Eastown, along with the household income medians were gathered to find if the neighborhoods contained affordable housing. According to HUD, the "generally accepted definition of affordability is for a household to pay no more than 30% of its annual income on housing. Families who pay more than 30% of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation, and medical care."[9]

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand		X	
Data easily available		X	
Relevance	X		
Forward-looking			X
Congruence		X	
Practicality	X		
Replicable	X		

[9] "Affordable Housing - CPD - HUD." Homes and Communities - U.S. Department of Housing and Urban Development (HUD). 15 Apr. 2009 <http://www.hud.gov/offices/cpd/affordablehousing/index.cfm>.

- **Easy to understand:** This indicator is a little difficult to understand because there is no information on permanent affordable housing. Calculation must be done, and mortgage calculators used. See appendix page 128.
- **Data easily available:** No data for permanently affordable housing was available. Household income and house prices were easily available on the American FactFinder Census website.
- **Relevance:** The indicator is relevant to policy making and local circumstances.
- **Forward-looking:** The indicator is not forward looking. It does not show how the affordability may change in the future.
- **Congruence:** The indicator relates to the goal "every neighborhood is a mixed income neighborhood". If lower income residents are to live amongst upper income residents then affordable housing must be available.
- **Practicality:** Is it possible to implement actions that will improve the amount of permanent affordable housing.
- **Replicable:** This indicator is easy to replicate as it is currently done in this report. If it were to be replicated a different way, it may be a bit challenging, because there are no records for permanent affordable housing in the Belknap Lookout and Eastown neighborhoods.

Comments: No housing is permanently affordable, because housing is subject to change over time. Interest rates, especially those of adjustable rate mortgages (ARMs) and mortgage terms can dramatically change a mortgage payment. Property taxes were not included in the mortgage assessment. Many mortgage calculators are different. The one used in this report may give higher or lower figures than others. These are all estimates.

Data:

Belknap Lookout Results: House prices and household income were used to determine the amount of affordable housing in the Belknap Lookout Neighborhood. The first chart is figure 2.2.1 House Prices for Belknap Lookout. Figure 2.2.2 has the identical information. Figure 2.2.3 is Household Income for Belknap Lookout. Figure 2.2.4 has the identical information. The median values were found for household income and house prices. HUD defines affordable housing as being 30% of annual income. Belknap Lookout annual income is $6,734, which was multiplied by .3, then divided by 12 months is $561. According to Rod Parker John Adams

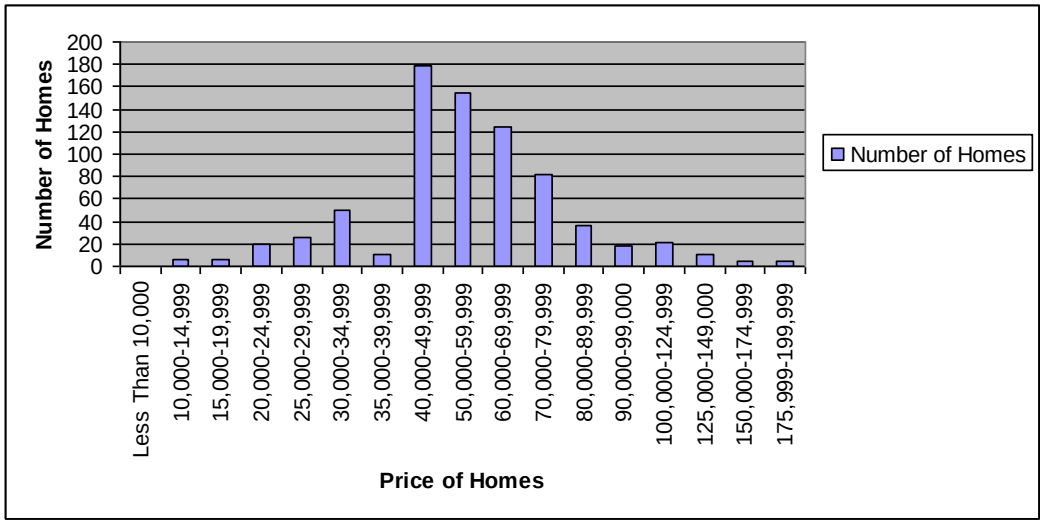
Affordability Calculator, an affordable house, not including property tax, in the Belknap Lookout neighborhood, with a 30-year term, and a 7% interest rate is approximately $84,000. The median house price is 54,999. It can be concluded that Belknap Lookout has a majority supply of affordable housing.

Figure 2.2.1 Housing Prices Belknap Lookout(2000)

Price of Homes	Number of Homes
Less Than 10,000	0
10,000-14,999	6
15,000-19,999	6
20,000-24,999	19
25,000-29,999	26
30,000-34,999	50
35,000-39,999	11
40,000-49,999	179
50,000-59,999	154
60,000-69,999	125
70,000-79,999	82
80,000-89,999	37
90,000-99,000	18
100,000-124,999	21
125,000-149,000	10
150,000-174,999	4
175,999-199,999	5

Source: http://factfinder.census.gov/

Figure 2.2.2 Housing Chart Belknap Lookout (2000)



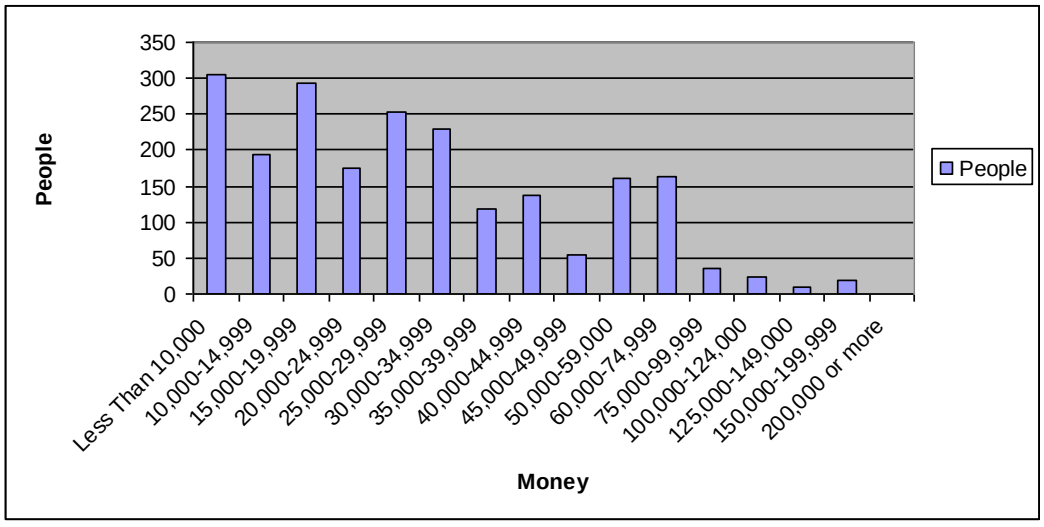
Source: http://factfinder.census.gov/

Figure 2.2.3 Household Income Belknap Lookout (2000)

House Hold Income	People
Less Than 10,000	305
10,000-14,999	195
15,000-19,999	294
20,000-24,999	176
25,000-29,999	253
30,000-34,999	229
35,000-39,999	118
40,000-44,999	136
45,000-49,999	54
50,000-59,000	160
60,000-74,999	164
75,000-99,999	36
100,000-124,000	24
125,000-149,000	10
150,000-199,999	20
200,000 or more	0

Source: http://factfinder.census.gov/

Figure 2.2.4 Household Income Chart Belknap Lookout (2000)



Source: http://factfinder.census.gov/

Median income is 22,449

Median house price is 54,999

Affordable house is $84,000

Eastown Results: House prices and household income were used to determine the amount of affordable housing in the Eastown Neighborhood. The first chart is figure 2.2.5 House Prices Eastown. Figure 2.2.6 has the identical information. The seventh chart is figure 2.2.7 Household Income Eastown. Figure 2.2.8 has the identical information. The median values were found for household income and house prices. HUD defines affordable housing as being 30% of annual income. Eastown annual income is $10,500, which was multiplied by .3, then divided by 12 months is $875. According to Rod Parker John Adams Affordability Calculator, an affordable house, not including property tax, in the Eastown neighborhood, with a 30-year term, and a 7% interest rate is approximately $131,500. The median house price is 107,500. It can be concluded that Eastown has a majority supply of affordable housing

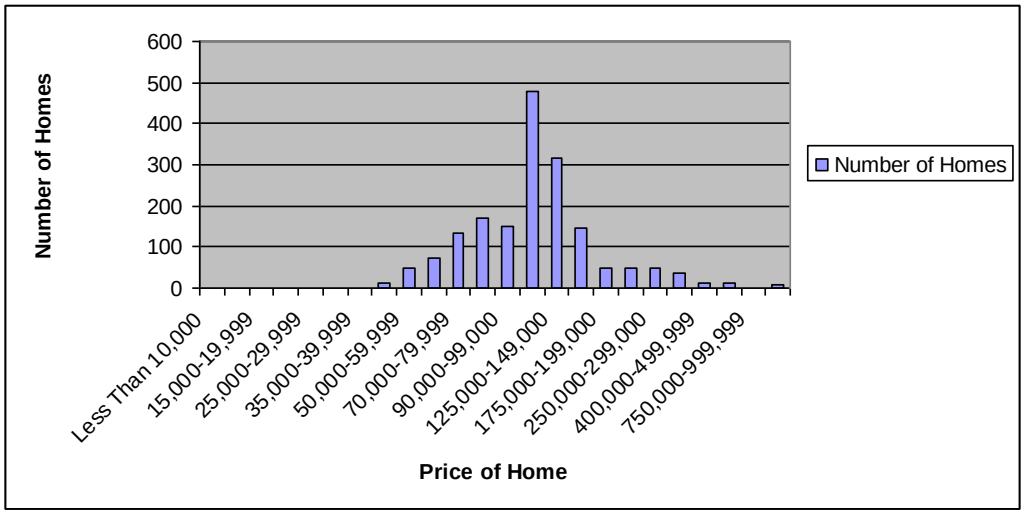
.

Figure 2.2.5 Housing Prices Eastown (2000)

Price of Homes	Number of Homes
Less Than 10,000	0
10,000-14,999	0
15,000-19,999	0
20,000-24,999	0
25,000-29,999	0
30,000-34,999	0
35,000-39,999	0
40,000-49,999	14
50,000-59,999	50
60,000-69,999	73
70,000-79,999	135
80,000-89,999	172
90,000-99,000	150
100,000-124,999	477
125,000-149,000	316
150,000-174,999	145
175,000-199,000	50
200,000-249,000	50
250,000-299,000	48
300,000-399,000	37
400,000-499,999	13
500,000-749,999	13
750,000-999,999	0
1,000,000 +	8

Source: http://factfinder.census.gov/

Figure 2.2.6 Housing Prices Chart Eastown (2000)



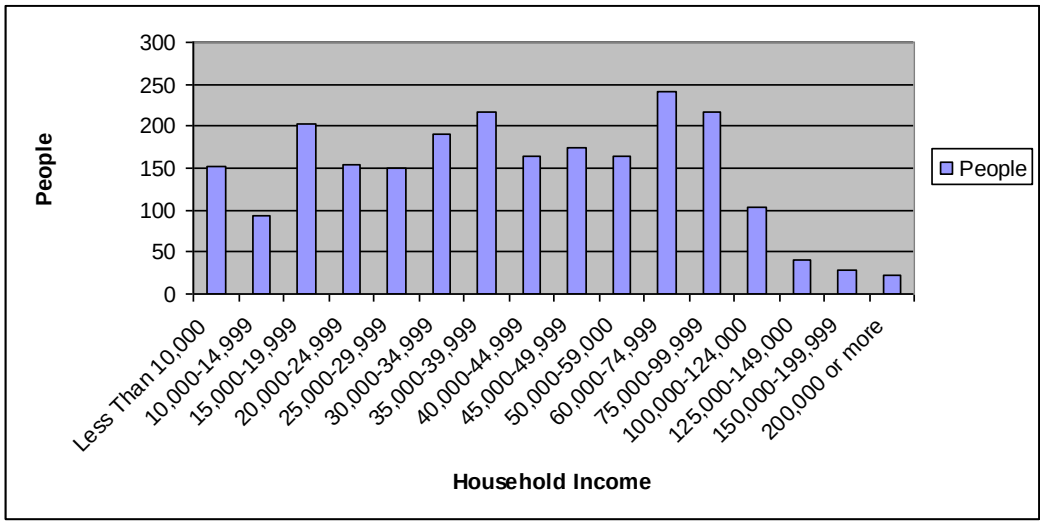
Source: http://factfinder.census.gov/

Figure 2.2.7 Household Income Eastown (2000)

House Hold Income	People
Less Than 10,000	153
10,000-14,999	94
15,000-19,999	202
20,000-24,999	154
25,000-29,999	150
30,000-34,999	191
35,000-39,999	217
40,000-44,999	165
45,000-49,999	174
50,000-59,000	165
60,000-74,999	242
75,000-99,999	216
100,000-124,000	103
125,000-149,000	41
150,000-199,999	29
200,000 or more	23

Source: http://factfinder.census.gov/

Figure 2.2.8 Household Income Eastown (2000)



Source: http://factfinder.census.gov/

Median income is 35,000

Median house price is 107,500

Affordable house price $131,500

Goal 2: Every Neighborhood Is a Mixed-Income Neighborhood

Indicator 2.3: Economic diversity

Measure: Economic Composition Mirrors the County

Method/Source: US Census Data

Introduction: Economic composition illustrates the economic make-up of the neighborhoods, and comparisons can be made to the county and state. This shows how many people are in lower, middle, and upper income brackets.

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand	X		
Data easily available		X	
Relevance	X		
Forward-looking			X
Congruence		X	
Practicality			X
Replicable	X		

- **Easy to understand:** Income numbers are straightforward and relatable.
- **Data easily available:** Current and past data is readily available digitally on the census' website. In the future, the long form questionnaire, where this data comes from, is not going to be used in the 2010 census.
- **Relevance:** This data is relevant; income is an integral part of the neighborhood's economic profile.
- **Forward-looking:** This data is strictly for the year 2000. This study does not make estimates or projections.
- **Congruence:** This data is easily comparable to larger geographical areas, as illustrated with the county and state data.
- **Practicality:** It is not practical to try and change people's incomes, but economic development efforts can be made to attract more affluent families.
- **Replicable:** Income data has been collected by the U.S. Census for decades, but may not be collected at this geography level (census tract) in the future.

Comments: This is a successful indicator that provides understandable and replicable results. However, this indicator measures median household incomes, not economic composition and therefore the title should be changed.

Data: Income data is available from the 2000 Census in 20 different brackets, which have been condensed into four brackets. The percentage of the population with household incomes within these brackets is given below.

Belknap Lookout:

Figure 2.3.1 Economic Composition (2000)

	Michigan	Kent County, Michigan	Grand Rapids, Michigan	Belknap Lookout, Grand Rapids, Michigan
$1-$12,499	28.6%	27.1%	31.8%	36.7%
$12,500-$44,999	47.4%	51.5%	53.3%	56.6%
$45,000-$99,999	20.6%	18.2%	13.3%	5.8%
$100,000 or more	3.5%	3.2%	1.6%	0.9%
Total	100.0%	100.0%	100.0%	100.0%

Source: http://www.census.gov

Belknap Lookout Results:

Belknap Lookout residents have higher proportions of its residents living in the lower income brackets than both the city and the state. Kent County has a similar income distribution as the state of Michigan.

Eastown:

Figure 2.3.2 Economic Composition (2000)

	Michigan	Kent County, Michigan	Grand Rapids, Michigan	Eastown, Grand Rapids, Michigan
$1-$12,499	28.6%	27.1%	31.8%	36.2%
$12,500-$44,999	47.4%	51.5%	53.3%	47.9%
$45,000-$99,999	20.6%	18.2%	13.3%	14.3%
$100,000 or more	3.5%	3.2%	1.6%	1.6%
Total	100.0%	100.0%	100.0%	100.0%

Source: http://www.census.gov

Eastown Results: Eastown residents have a higher proportion of residents than Grand Rapids in the lowest bracket, but a higher proportion in the upper-middle income bracket. Kent County has a similar income distribution as the state of Michigan.

Goal 2: Every Neighborhood Is a Mixed-Income Neighborhood

Indicator 2.4: Housing is accessible

Measure: Number of ZeroStep certificates awarded

Method/Source: Disability Advocates of Kent County (DAKC)

Introduction: An integral part of becoming a diverse and inclusive neighborhood is ensuring accessibility for disabled persons. This can be accomplished by using the principles of Universal Design. "Universal Design is the art of creating environments that are attractive and user friendly for people of all ages and abilities. It is the ONLY design concept that consciously designs to accommodate peoples' differences— not their similarities."[10]

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand		X	
Data easily available		X	
Relevance		X	
Forward-looking		X	
Congruence		X	
Practicality	X		
Replicable	X		

- **Easy to understand:** Universal Design standards are not commonly known, but are simple to understand when explained.
- **Data easily available:** The data was not available online; however, it was available upon request by telephone.
- **Relevance:** This data measures how often people consider ZeroStep's design standards, but others may design with accessibility in mind and not use ZeroStep.
- **Forward-looking:** This data is strictly for the year 2009. It cannot be said if ZeroStep certificates will ever be awarded in a neighborhood.
- **Congruence:** This data is easily comparable to larger geographical areas, if the data is gathered. However, ZeroStep is mostly promoted in the Kent County area.

[10] Welcome to ZeroStep. 10 Mar. 2009 <http://zerostep.org/index2.htm>.

- **Practicality:** Promoting the ZeroStep program and Universal Design principles would directly improve this indicator's results.
- **Replicable:** Presumably this data will continue to be accessible in the future, but only for the Kent County area.
- **Comments:** The ZeroStep certification process is quite new at this point. As baseline data for a young certification program, the following numbers are to be expected. This is a very commendable program, however, and in the future, the progress (approaching 2030 and beyond) will be noteworthy. However, the fact that no buildings in a neighborhood are ZeroStep certified does not mean Universal Design, or accessible design, has not been used in the design or renovation of that neighborhood's buildings, they may simply have not pursued ZeroStep certification.

Data: The ZeroStep program educates people about the reasons for including this in the design of a building. They promote Universal Design principles, and also have a certification program for homes that meet a set of standards. Measuring the number of buildings with ZeroStep certification will indicate how many have taken Universal Design into consideration. The data was obtained by calling ZeroStep by telephone at 616.949.1100.

Belknap Lookout:

Figure 2.4.1 ZeroStep (2009)

	Number of ZeroStep Certificates
Belknap Lookout	0

Source: DAKC

Belknap Lookout Results: Belknap Lookout has no ZeroStep buildings.

Eastown:

Figure 2.4.1 ZeroStep (2009)

	Number of ZeroStep Certificates
Eastown	0

Source: DAKC

Eastown Results: Eastown has no ZeroStep buildings.

Goal 2: Every Neighborhood is Mixed-Income Neighborhood

Indicator 2.5: Racial composition mirrors the City of Grand Rapids

Measure: Racial diversity

Method/Source: US census data, Community Research Institute (CRI)

Goal 2: Every Neighborhood is Mixed-Income Neighborhood

Indicator 2.5: Racial composition mirrors the City of Grand Rapids

Measure: Racial diversity

Method/Source: US census data, Community Research Institute (CRI)

Introduction: Racial composition mirrors the City of Grand Rapids, Michigan. Neighborhoods are meant to be an integrated network of people with a diverse exchange of cultural ideas and backgrounds.

Assessment: This method of measurement can be used in future measurements regardless of whether the US Census is used to gather the population and the various groups within the population. Also, this comparison can be used beyond the City of Grand Rapids and applied to other cities, regions, and states.

While the indicator remains a practical means of determining the quality of an area, it also has the comparison capability to be compared to another neighborhood, district, city, county, or even state.

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand	X		
Data easily available	X		
Relevance		X	
Forward-looking	X		
Congruence	X		
Practicality	X		
Replicable	X		

- **Easy to understand:** The data can easily be observed and assessed.
- **Data easily available:** The data is available through CRI which obtained its data from the US Census.

- **Relevance:** Information displays the local condition of both neighborhoods and the city.
- **Forward-Looking:** A trend based on racial composition can be established with periodical data collection.
- **Congruence:** Population/racial data are observable in other cities and neighborhoods.
- **Practicality:** Can be applied to determine how well a neighborhood has progressed in becoming a racially well integrated neighborhood in comparison to a city or county.
- **Replicable:** The data and comparisons can easily be replicated.

Comments: The leading concern is how often the data is needed to measure the progression of the neighborhoods with their comparative counterpart(s). The U.S. Census measures population once every 10 years, which conflicts with United Growth's need for the data to be updated for measurement every 3 to 5 years. Another alternative to this measurement will be needed for measurement that is less than ten year intervals.

Data: The comparison of the racial composition of a respective neighborhood and that of the City of Grand Rapids is a viable tool for using in grasping whether or not the growth of the City is proportionally reflecting the growth of the neighborhood.

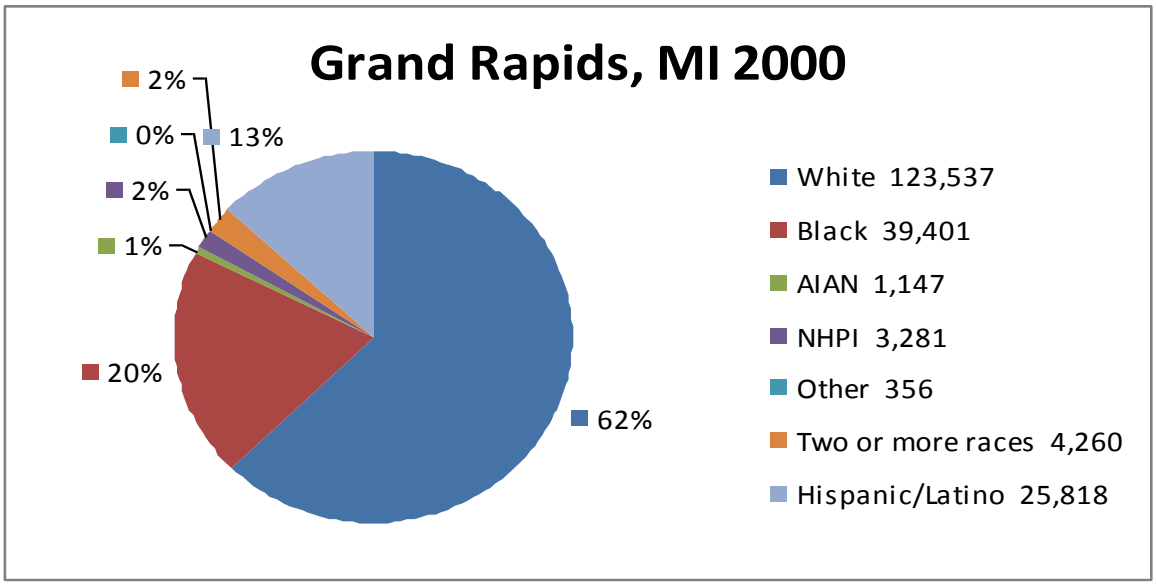
City Of Grand Rapids Results:

Figure 2.5.5 Racial Composition: Grand Rapids (2000)

	Grand Rapids, MI 2000
Total Population	197,800
White	123,537
Black[11]	39,401
AIAN[12]	1,147
NHPI[13]	3,281
Other	356
Two or more races	4,260
Hispanic/Latino	25,818

Source: http://www.cridata.org/default.aspx

Figure 2.5.7 Racial Composition: Grand Rapids (2000)



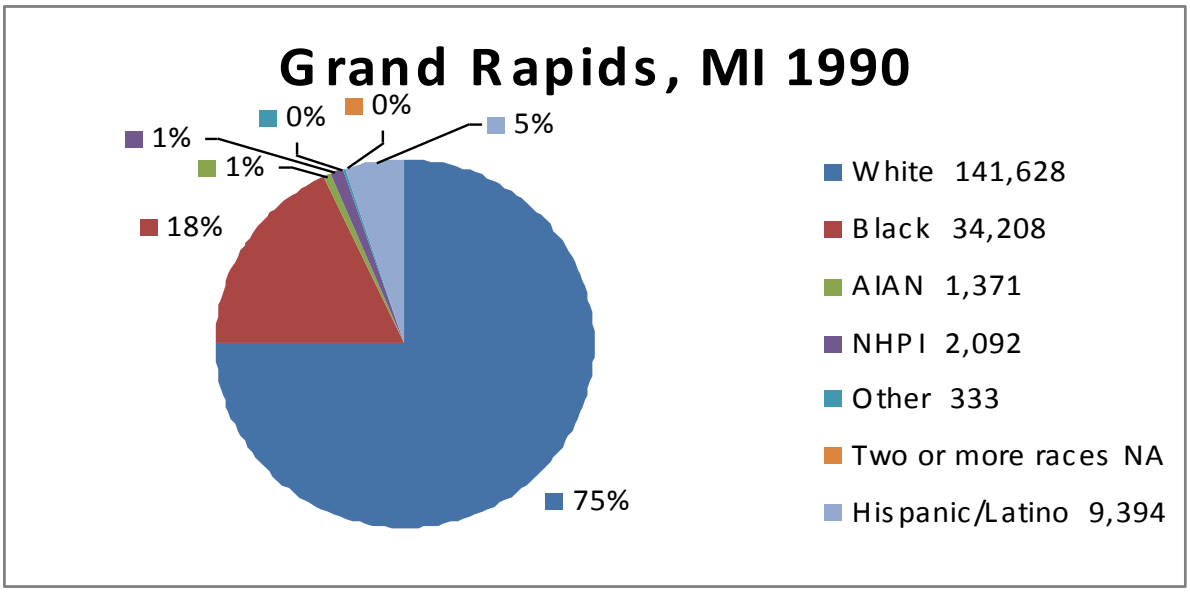
[11] Black – Black or African American
[12] AIAN – American Indian and Alaska Native
[13] NHPI – Native Hawaiian and Other Pacific Islander

Figure 2.5.6 Racial Composition: Grand Rapids (1990)

	Grand Rapids, MI 1990
Total Population	189,126
White	141,628
Black[11]	34,208
AIAN[12]	1,371
NHPI[13]	2,092
Other	333
Two or more races	NA
Hispanic/Latino	9,394

Source: http://www.cridata.org/default.aspx

Figure 2.5.8 Racial Composition: Grand Rapids (1990)



Belknap Lookout Results:

Figure 2.5.1 Racial Composition: Belknap Lookout (2000)

	Belknap Lookout 2000
Total Population	4,234
White	2,241
Black[11]	982
AIAN[12]	56
NHPI[13]	70
Other	12
Two or more races	211
Hispanic/Latino	662

Source: http://www.cridata.org/default.aspx

Figure 2.5.1 Racial Composition: Belknap Lookout (2000)

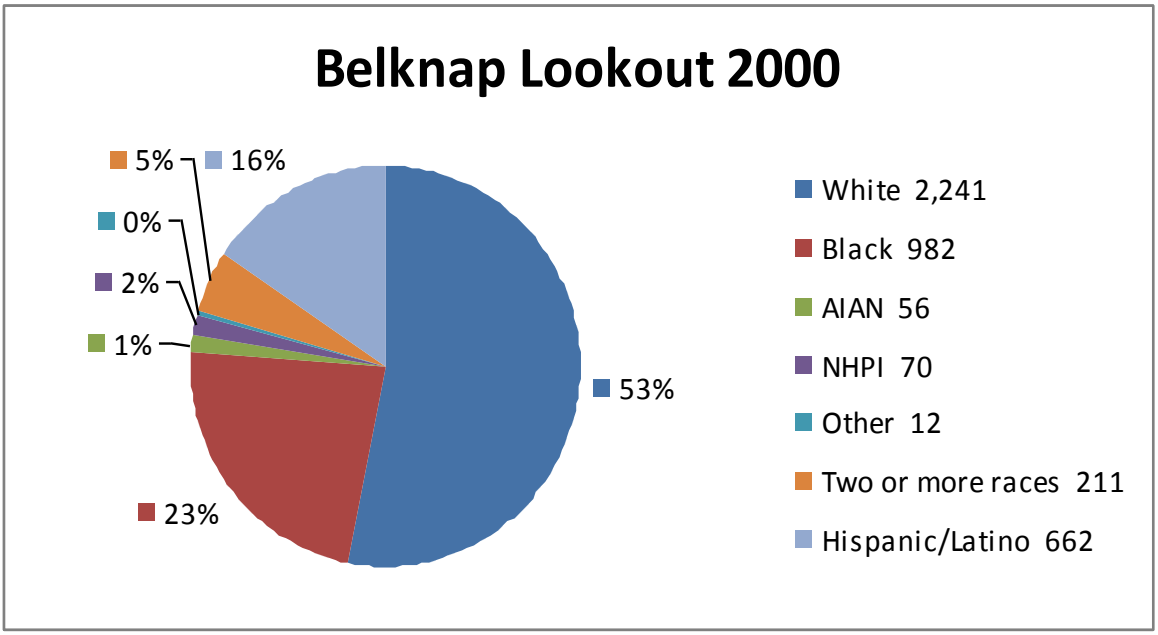
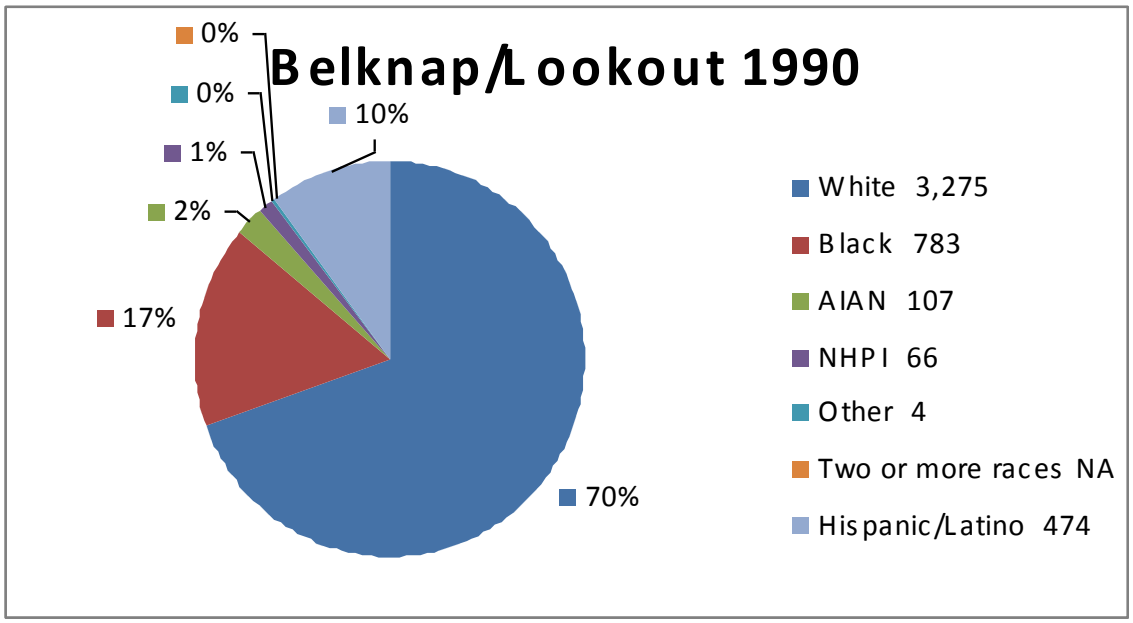


Figure 2.5.2 Racial Composition: Belknap Lookout (1990)

	Belknap Lookout 1990
Total Population	4,509
White	3,275
Black[11]	783
AIAN[12]	107
NHPI[13]	66
Other	4
Two or more races	NA
Hispanic/Latino	474

Source: http://www.cridata.org/default.aspx

Figure 2.5.2 Racial Composition: Belknap Lookout (1990)



Looking at the current Census data, the overall diversity of the neighborhood remains either on par with or reflects the City data. The data of the racial group designated as 'White' is slightly less in the City, while the other racial groups — 'Black', 'Two or more races', and 'Hispanic/Latino' — exceeded the City or remained equal.

Eastown Results:

Figure 2.5.3 Racial Composition: Eastown (2000)

	Eastown 2000
Total Population	5,956
White	4,076
Black[11]	1,529
AIAN[12]	19
NHPI[13]	35
Other	6
Two or more races	118
Hispanic/Latino	173

Source: http://www.cridata.org/default.aspx

Figure 2.5.3 Racial Composition: Eastown (2000)

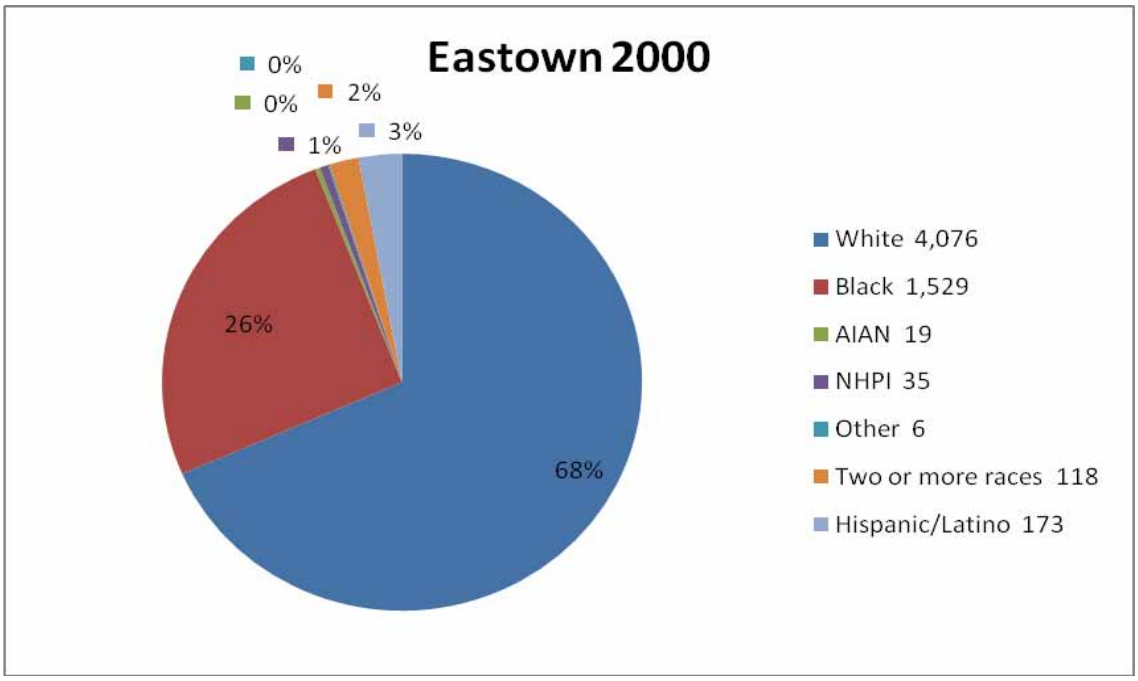
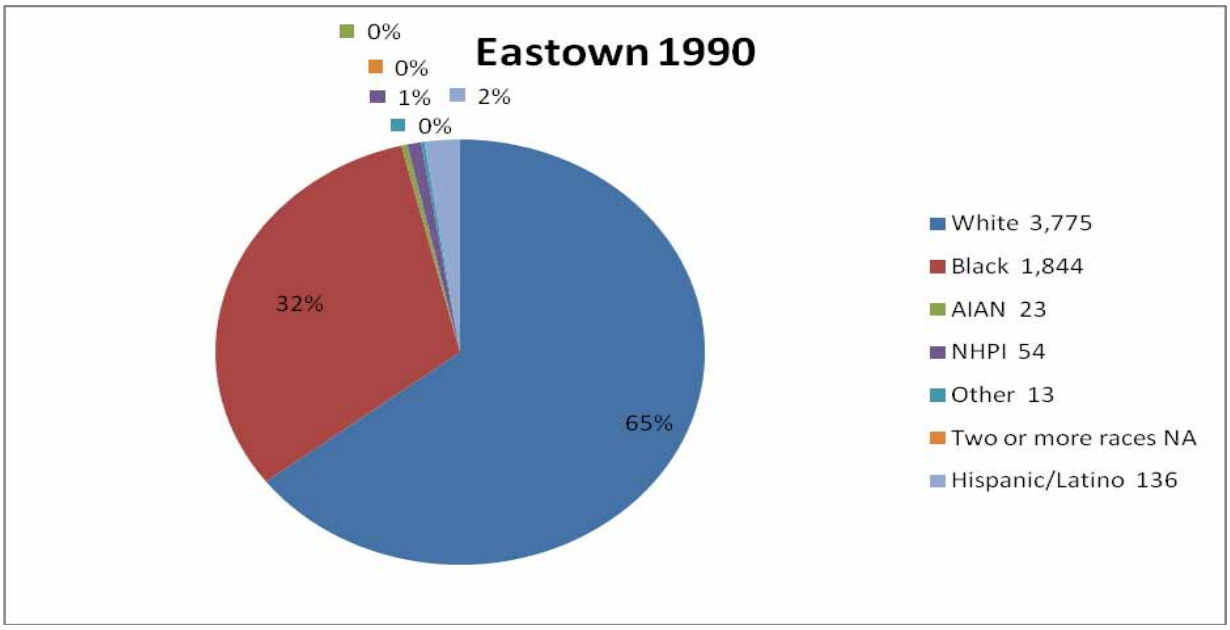


Figure 2.5.4 Racial Composition: Eastown (1990)

	Eastown 1990
Total Population	5,845
White	3,775
Black[11]	1,844
AIAN[12]	23
NHPI[13]	54
Other	13
Two or more races	NA
Hispanic/Latino	136

Source: http://www.cridata.org/default.aspx

Figure 2.5.4 Racial Composition: Eastown (1990)



The data suggests that the overall diversity of the neighborhood is lacking in the composition of the racial groups. The 'White' and 'Black' groups show a higher percentage than the City while the other groups, with the exception of 'Other' and 'Two or more races' that remains equal to the City, show a lower percentage. The neighborhood could stand to gain an increase in the other racial groupings.

Goal 2 Conclusion

Goal 2: Every Neighborhood is Mixed-Income Neighborhood

Belknap Lookout Conclusion:

2.1 57% of the properties in Belknap Lookout are rental properties. This is more than the ideal 1/3. This indicator meets goal 2.

2.2 The median house price in Belknap Lookout costs $54,999 and the price of an affordable home in Belknap Lookout is $74,830. Belknap lookout has affordable housing. This meets goal 2.

2.3 Economic composition is well mixed.

2.4 No ZeroStep certificates equates to bad accessibility.

2.5 The data of the racial group designated as 'White' is slightly less in the City, while the other racial groups — 'Black', 'Two or more races', and 'Hispanic/Latino' — exceeded the City or remained equal. This appears to meet the goal.

Eastown Conclusion:

2.1 36% of the properties in Eastown are rental properties. This is more than the indicator desired 1/3rd amount. This indicator meets goal 2.

2.2 The median house price in Eastown costs $107,500 and the price of an affordable home in Eastown is $116,667. Eastown has affordable housing. This meets goal 2.

2.3 Economic composition is well mixed.

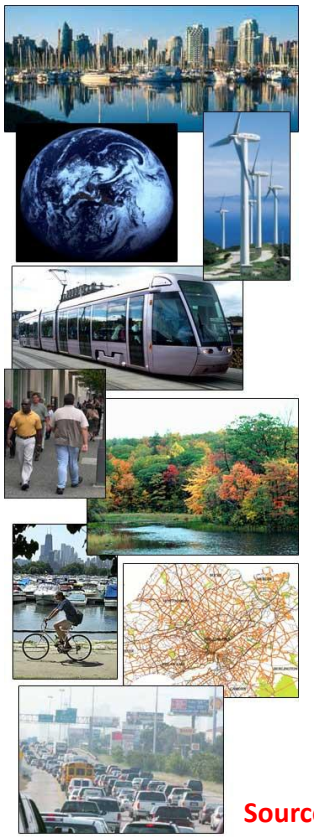
2.4 No ZeroStep certificates doesn't mean bad accessibility

2.5 The majority of the racial groups, with the exception of 'White' and 'Black' groups show a higher percentage than the City, are either near equal or less than the City. The neighborhood could stand to gain an increase in the other racial groupings. The neighborhood does not meet the goal.

GOAL 3

A FULL RANGE OF TRANSPORTATION MODES EXIST

- Indicator 3.1 – Public Transit is Accessible
- Indicator 3.2 – Redevelopment is occurring around Transit Corridors
- Indicator 3.3 – Every Street has a Complete sidewalk on both sides of the Street
- Indicator 3.4 – Bike Lanes are Common
- Indicator 3.5 – Residents have become less car dependent
- Indicator 3.6 – Residents with Disabilities can easily access the entire neighborhood



Source: http://www.trbsustainability.org/logo_01.jpg

Goal 3: A Full Range of Transportation Modes Exist

3.1 Public transit is accessible

3.2 Redevelopment is occurring around transit corridors

3.3 Every street has a complete sidewalk on both sides

3.4 Bike lanes are common

3.5 Residents have become less car dependent

3.6 Residents with disabilities can easily access the entire neighborhood

This goal will measure the amount of transportation options residents have to move about the area. Having a full set of options will help promote business activity, job and school access, and mobility.

Fully developed pedestrian and biking systems promote a healthier lifestyle, as well as provide for more eyes on the street for an informal surveillance, an effective crime deterrent. Car dependency has been linked to health as well. The less dependent on automobiles we become, the less time would be wasted in traffic, which adds to congestion, air and noise pollution.

Effective public transportation can promote social justice by aiding those who cannot afford a car. A well-run public transit system helps many people get to many places, whether for work, shopping, school, or any other activity that can rejuvenate neighborhoods.

Goal 3: A Full Range of Transportation Modes Exist

Indicator 3.1: Public transit is accessible

Measure: Every household is within a ¼ mile of a transit line

Method/Source: Google Earth

Introduction: Having an accessible public transportation system is an important component of a healthy city. This allows all residents to have an effective alternative to driving, walking, or bicycling to their destinations.

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand	X		
Data easily available		X	
Relevance	X		
Forward-looking			X
Congruence	X		
Practicality	X		
Replicable	X		

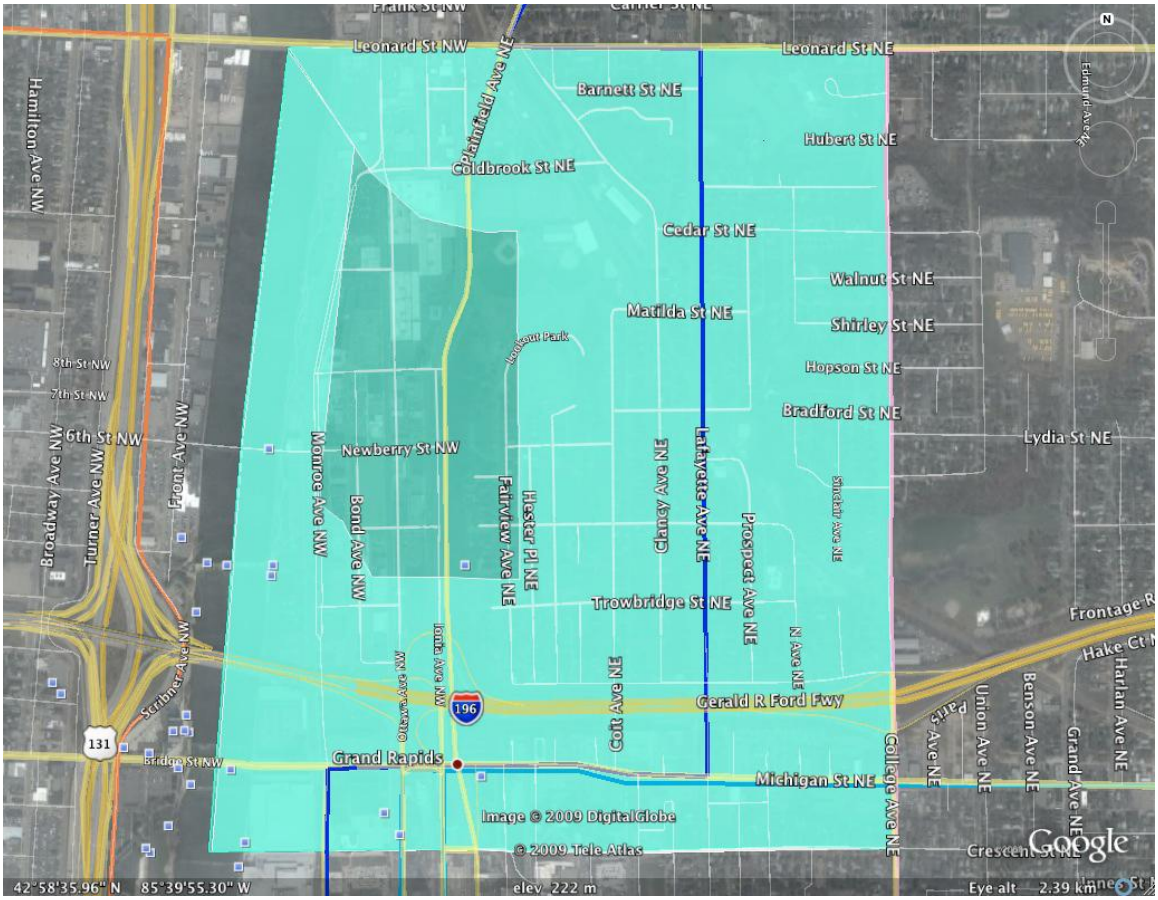
- **Easy to understand:** A visual map easily shows where the transit lines are, and how far the ¼ mile buffer extends.
- **Data easily available:** Ride the Rapid, Grand Rapids' bus system, shows bus routes on their website, but creating a map with buffers using Google Earth can take time.
- **Relevance:** Measuring bus routes, the city's public transit system, helps to measure the city's transportation options.
- **Forward-looking:** Bus routes are not fixed and therefore can be changed in the future.
- **Congruence:** This data is easily comparable to larger geographical areas, if the data is gathered. However, other regions or cities may not have public transportation.
- **Practicality:** Adding bus routes would directly affect how accessible the system is to Grand Rapids' residents.
- **Replicable:** Presumably this data will continue to be accessible in the future, but creating a map still has to be done.

- **Comments:** This indicator is clear, and easily understandable with the map. However, an understanding of Google Earth is required.

Data: The following maps were created using Google Maps, with ¼ mile buffers added.

Belknap Lookout:

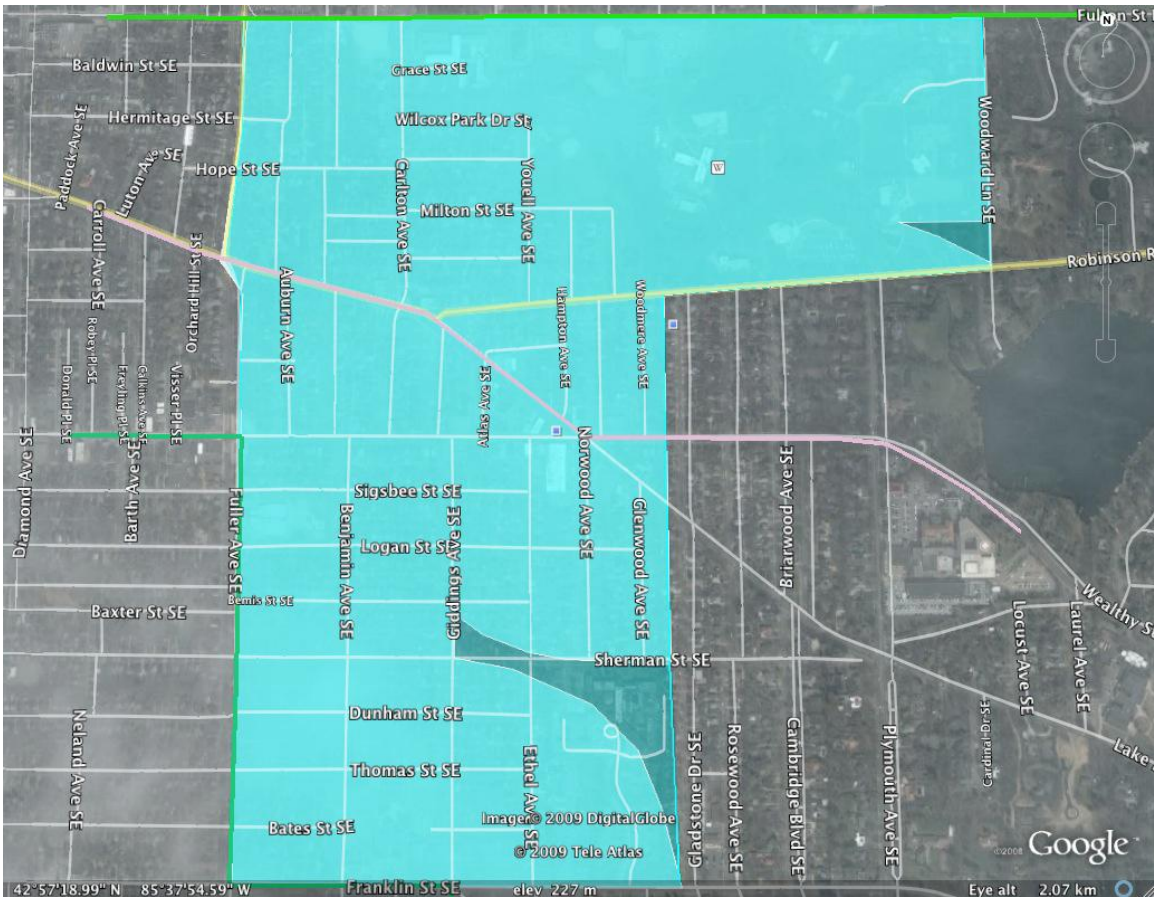
Figure 3.1.1 - Bus Routes of Belknap Lookout



Belknap Lookout Results: The darker area in the northwest quadrant of the neighborhood is not within a ¼ mile radius of a bus line, which is shown as emboldened lines.

Eastown:

Figure 3.1.2 – Bus Routes of Eastown



Eastown Results: The darker area is the land not covered by a ¼ mile buffer. The bus lines are drawn with the emboldened lines. Most of Eastown is covered by the ¼ mile buffer, with the rest of the residents living only a little farther from the bus lines.

Goal 3: A Full Range of Transportation Modes Exist

Indicator 3.2: Redevelopment is occurring around transit corridors

Measure: Number of new/improved building units every month

Method/Source: Count Number of building permits issued by City within ¼ mile of Transit Corridor and the amount of money involved

Introduction: By introducing this indicator of determining if redevelopment is occurring around Transit Corridors, it would allow a neighborhood or a city to determine that buildings are being newly-built or redeveloped in places that are near major transportation routes, which would then provide the people who are going to access to these building the option of traveling by mass transportation instead of the automobile.

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand	X		
Data easily available		X	
Relevance	X		
Forward-Looking	X		
Congruence	X		
Practicality	X		
Replicable		X	

- **Easy to understand**: The indicator is easy enough to be understood by the general public, because the data that is used to measure the indicator is a list of buildings that have building permits approved in order to redevelop or carry out new constructions.
- **Data easily available**: This data is available through the City of Grand Rapids website. However, the information of knowing how much money was involved in each building project approved is not readily available through the website. Neighborhood Associations will have to contact the City's Neighborhood Improvement Department for this information.
- **Relevance**: By having more redevelopments and new buildings around Transit Corridors in the future, it would allow for people accessing to these buildings to have the option of

taking mass transportation instead of relying on the car. It is relevant to look whether development is occurring on transit lines.

- **Forward-looking:** Transit routes are subject to shifting. Areas served by the present transit will be served in the future.
- **Congruence:** This indicator is congruent with the goal that United Growth has established which is targeting the existence of a full range of transportation modes.
- **Practicality:** Yes, it is possible to implement actions that would improve the indicator by encouraging more redevelopments and new buildings to be constructed near Transit Corridors in the future.
- **Replicable:** This indicator could be easily replicated in another neighborhood or city, but it depends on whether the necessary information is available to the public.

Belknap Lookout Results:

Figure 3.2.1: Building Permits approved for Belknap Lookout, Dec 2008

Number	Type of Redevelopment	Project Name	Address of Place	Distance to nearest Transit Corridor (Miles)
1	Commercial/Interior	Southwest Business Center	648 Monroe Ave NW	0.235
2	Commercial/Building New	MSD Parking Structure Area B	5 Michigan St NE	0
3	Commercial/Interior	Spectrum TIS Room	426 Michigan St NE	0
4	Commercial/Interior	Stereotaxis	100 Michigan St NE	0.093

Figure 3.2.2: Building Permits approved for Belknap Lookout, Jan 2009

Number	Type of Redevelopment	Project Name	Address of Place	Distance to nearest Transit Corridor (Miles)
0	No Redevelopment approved and found within 1/4 mile of Transit Corridor for this neighborhood			

Figure 3.2.3: Building Permits approved for Belknap Lookout, Feb 2009

Number	Type of Redevelopment	Project Name	Address of Place	Distance to nearest Transit Corridor (Miles)
1	Public/Land Use Development Service	Crescent Park Renovation	301 Bostwick Ave NE	0.089
2	Commercial/Interior	Nuclear Level A	100 Michigan St NE	0.093
3	Commercial/Interior	3T MRI Number 2	100 Michigan St NE	0.093
4	Public/Combo	Crescent Park Retail Mall	301 Bostwick Ave NE	0.089

Figure 3.2.4: Building Permits approved for Belknap Lookout, Mar 2009

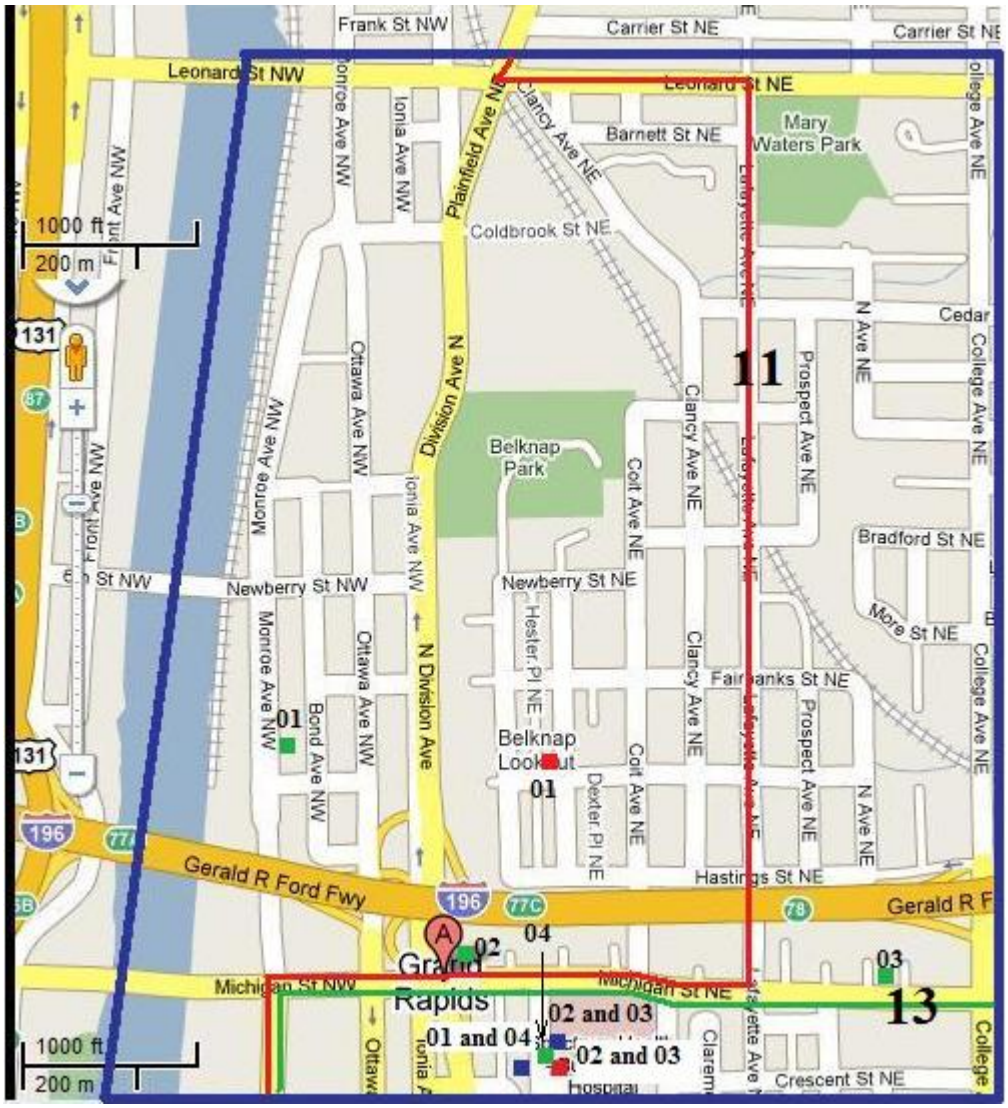
Number	Type of Redevelopment	Project Name	Address of Place	Distance to nearest Transit Corridor (Miles)
1	Residential/Interior	605 Livingston NE	605 Livingston Ave NE	0.211
2	Commercial/Interior	BWH Patient Access	100 Michigan St NE	0.093
3	Commercial/Interior	Level A CT Scanner	100 Michigan St NE	0.093

Source: http://www.ci.grand-rapids.mi.us/index.pl?page_id=9022

For Figures 3.2.1, 3.2.2, 3.2.3 and 3.2.4: The tables that were shown in the previous two pages show the list of buildings that have building permits approved within the stated month in order to carry out redevelopments. All of these buildings were within ¼ mile of the nearest Transit Corridor, which in this case would be the bus route of the Grand Rapids public bus system, "The Rapid." Most of the redevelopments that required the approval of a building permit were related to the interior of the building; only one building permit was involving the construction of a new building structure, and that is the MSD Parking Structure Area B.

The numbers that represent each building would correspond to the location of the building on the map which would be shown in the next page on Figure 3.2.5. Each colored square would represent the different month in which the building gained approval to redevelop or build from the city. For more information about what each color represents, please refer to the legend that is shown at the bottom of Figure 3.2.5.

Figure 3.2.5: Locations of Buildings with Building Permit Approvals in Belknap Lookout



Legend

- Building Permits Approved in Dec 2008
- Building Permits Approved in Jan 2009
- Building Permits Approved in Feb 2009
- Building Permits Approved in Mar 2009
- 13 Bus Route Number and Bus Line

Source: http://www.googlemap.com

For Figure 3.2.5: The different colored lines that run through the roads in the map represents the public bus routes which Ride the Rapid has designated for its bus services. For the purpose of this indicator, we will use the public bus routes as the Transit Corridors to see if redevelopments are occurring around them. The map in Figure 3.2.5 also has a few colored squares that were plotted, and these squares signify the location of the buildings that received approval from the City of Grand Rapids government in redeveloping or constructing. Each color would represent a different month, for instance, a green colored square would mean that the building received a Building Permit in the month of December 2008. The number that is located beside the colored square would correspond to the name of the project and other important details, which could be found in the tables from Figures 3.2.1 to 3.2.4.

Eastown Results:

Figure 3.2.6: Building Permits approved for Eastown, Dec 2008

Number	Type of Redevelopment	Project Name	Address of Place	Days to Approve	Distance to nearest Transit Corridor (Miles)
1	Commercial/Building New	Phoenix Building	1500 Wealthy St SE	19	0

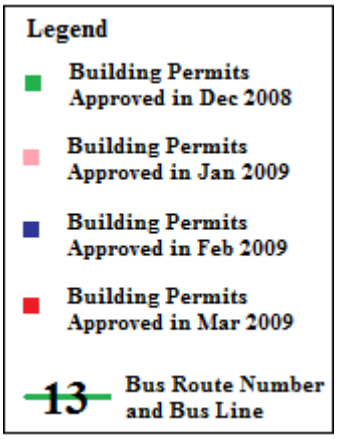
Figure 3.2.7: Building Permits approved for Eastown, Jan-Mar 2009

Number	Type of Redevelopment	Project Name	Address of Place	Days to Approve	Distance to nearest Transit Corridor (Miles)
0	No Redevelopments approved and found within 1/4 mile of Transit Corridor for this neighborhood				

Source: http://www.ci.grand-rapids.mi.us/index.pl?page_id=9022

For Figures 3.2.6 and 3.2.7: As shown above, the tables that were represented as Figure 3.2.6 and 3.2.7 show the number of buildings that received building permits in order to redevelop or newly construct. In the neighborhood of Eastown, there is only one building permit being approved and is within a ¼ mile of a Transit Corridor, namely Phoenix Building.

Figure 3.2.8: Locations of Buildings with Building Permit Approvals in Eastown



Source: http://www.googlemap.com

For Figure 3.2.8: Similar to the map that is shown in Figure 3.2.5, the colored squares which have been plotted refers to the location of the buildings that have received building permits and are approved to redevelop or newly construct. The colored lines that run through the center of the roads in the map would refer to the Bus routes of Grand Rapids' public bus system, Ride the Rapid. As one would be able to see from Figure 3.2.8, Eastown has only one building that is being newly constructed or redeveloped and is within a ¼ mile of a Transit Corridor, and that is Phoenix Building at the intersection of Wealthy Street South-East and Lake Drive South-East.

Goal 3: A Full Range of Transportation Modes Exist

Indicator 3.3: Every Street has a complete sidewalk on both sides of the street

Measure: Increasing number of streets with complete sidewalks on both sides of street

Method/Source: Count number of streets with complete sidewalks on both sides of the street and the total mileage of these streets

Introduction: Having complete sidewalks on both sides of the street would allow easy access for pedestrians to travel by foot and not rely heavily on the personal automobile for transportation. Walkability has also become a growing concern in many American cities.

In this age when oil is being labeled a rare commodity, it is little wonder that transportation experts and environmentalists are strongly encouraging Americans to rely on other forms of sustainable transportation as opposed to the fuel-consuming automobile[14]. By making sure that every street has a complete sidewalk on both sides, it would allow residents who live and work in buildings on both sides of the street to have equal and easy access to a sidewalk, without having the need to cross the road in order to get to a sidewalk if it is only available on one side of the street. It also allows the elderly or the disabled in wheelchairs to be able to travel safely as these sidewalks are built away from the bike lanes. Therefore, by choosing this indicator, the neighborhood is offering residents the opportunity to walk safely to their destinations.

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand	X		
Data easily available	X		
Relevance		X	
Forward-Looking		X	
Congruence	X		
Practicality	X		
Replicable		X	

[14] Somers, Benjamin. Transportation Experts Call for Renewed Investment in Highway and Mass Transit Infrastructure. Nov 3, 2008. Retrieved on Mar 9, 2009. <http://www.aaas.org/news/releases/2008/1103challenges_2_transit.shtml>

- **Easy to understand:** The indicator is easy enough to be understood by the general public, because the data that is used to measure the indicator is a list of streets that have complete sidewalks on both sides and their mileage.
- **Data easily available:** This data is easily available through Google Maps and her Street View profile. However, it also relies on how often Google updates its maps and Street Views in order to gather the latest information.
- **Relevance:** By having more complete sidewalks on both sides of the street, it would allow for greater pedestrian mobility access within the neighborhood. However, even though there may be greater pedestrian mobility access, whether people start walking rather than driving would have to depend on other factors such as the price of fuel for automobile.
- **Forward-looking:** A trend could be established with similar studies in the future; however, historical data is not available to assess trends.
- **Congruence:** This indicator is congruent with the goal that United Growth has come up with, which is targeting the existence of a full range of transportation modes.
- **Practicality:** Yes, it is possible to implement actions that would improve the indicators by building more sidewalks along both sides of the street in the future in those streets that currently do not fulfill the criteria.
- **Replicable**: This indicator could be easily replicated in another neighborhood, but the method of getting the information is tedious.

Data:

Belknap Lookout Results:

Figure 3.3.1: Names of Streets with Complete Sidewalks on both sides and their mileage in Belknap Lookout neighborhood

Number	Name of Street	Mileage
1	Monroe Ave NW	1.117
2	Ottawa Ave NW	0.938
3	Bond Ave NW	0.487
4	Newberry St NW	0.217
5	Coldbrook St NE	0.304
6	Ionia Ave NW	0.171
7	Taylor Ave N	0.172
8	Plainfield Ave NE	0.181
10[15]	Clancy Ave NE	0.748
11	Mason St NW	0.115
12	Barnett St NE	0.2
13	Matilda St NE	0.185
14	Coit Ave NE	0.619
15	Newberry St NE	0.141
16	Fairview Ave NE	0.373
17	Fairbanks St NE	0.38
18	Livingston Ave NE	0.322
19	Layfatte Ave NE	1.086
20	Prospect Ave NE	0.634
21	North Ave NE	0.103
22	College Ave NE	1.086
23	Cedar St NE	0.315
24	Walnut St NE	0.122
25	Coldbrook St NE	0.235
26	Shirley St NE	0.13
27	Bradford St NE	0.189
28	Bradford St NE	0.13
29	North Ave NE	0.074
30	More St NE	0.08
31	Sinclair Ave NE	0.189
32	Trowbridge ST NE	0.334
33	Prospect Ave NE	0.213

[15] Note: Route 9 has been taken off due to recent constructions along the road

34	North Ave NE	0.109
35	Gill Ave NE	0.057
36	Crescent St NE	0.345
37	Barclay Ave NE	0.104
38	Michigan St NE	0.854
39	Prospect Ave NE	0.1
40	Leonard St NE	0.734
	Total	**13.893**
	Total Mileage of all roads in neighborhood	**17.71**
	Ratio of Streets with complete sidewalks against total mileage of all roads (Coverage Percentage)	**78.45%**

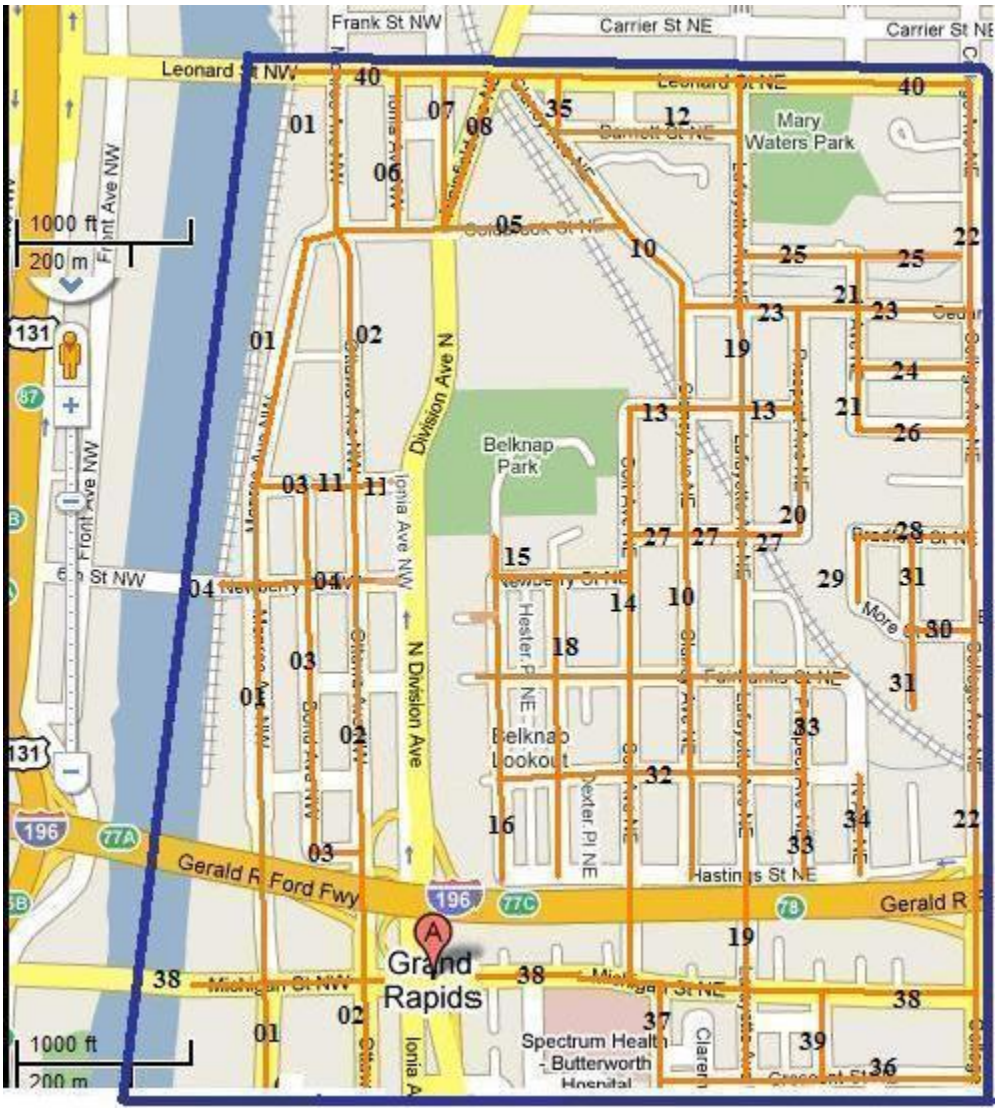
Source: http://www.daftlogic.com/projects-google-maps-distance-calculator.htm

For Figure 3.3.1: Figure 3.3.1 shows all the names and the mileage of the streets that have complete sidewalks on both sides. There are some repetitions resulting in the same streets appearing again in the data and the reason why this has occurred is because in the neighborhood of Belknap Lookout, there are different roads that are not linked together but have the same names. For instance, Newberry Street NW appears as Street Number 4 in Figure 3.3.2, but again appears as Street Number 15 as an entirely different street due to the lack of continuity between the two streets. Newberry Street NW could have been linked from Number 4 to Number 15 in the past but had to undergo demolitions later on in order to make way for developments.

The overall coverage percentage of streets with complete sidewalks on both sides in Belknap Lookout is 78.45%[16]. This statistic means that 78.45% of the streets in Belknap Lookout neighborhood have complete sidewalks on both sides of the street. There is a potential for increase by 2030.

[16] For the full calculations on how to get the value, please refer to the methodology found in the Appendix.

Figure 3.3.2: Streets with complete sidewalks on both sides in Belknap Lookout



Source: http://www.googlemap.com

For Figure 3.3.2: The orange colored lines that run through the middle of each road indicate the roads that have complete sidewalks on both sides of the street. Each orange colored line is labeled with a number, which corresponds to the table that is shown previously in Figure 3.3.1.

Each number represents the name of the road that the orange colored line passes through, and the mileage of the road is also shown on the table.

Belknap Lookout neighborhood has complete sidewalks on most of the streets, especially on major roads that surround and run through the neighborhood. However, despite the overwhelming coverage, there are some smaller streets within the neighborhood that do not have sidewalks, or may just have sidewalks on only one side of the street. From a closer inspection of these smaller streets by using the Google Street View to view at the street level, one would then be able to see that these roads are actually back alleyways or private driveways that may be blockaded from the public or would not have many cars passing through.

Eastown Results:

Figure 3.3.3: Names of Streets with Complete Sidewalks on both sides and their mileage in Eastown neighborhood

Number	Name of Street	Mileage
1	Fulton St E	0.749
2	Robinson Rd SE	0.29
3	Fuller Ave SE	0.292
4	Lake Dr SE	0.634
5	Gladstone Dr SE	0.669
6	Franklin St SE	0.517
7	Fuller Ave SE	0.7
8	Auburn Ave SE	0.518
9	Hope St SE	0.406
10	Benjamin Ave SE	1.022
11	Carlton Ave SE	0.499
12	Grace St SE	0.039
13	Wilcox Park Dr SE	0.15
14	Youell Ave SE	0.217
15	Milton St SE	0.241
16	Bryon St SE	0.145
17	Hampton Ave SE	0.258
18	Norwood Ave SE	0.415
19	Genessee St SE	0.103
20	Wealthy St SE	0.519
21	Richard Terrace SE	0.13
22	Atlas Ave SE	0.094
23	Woodmere Ave SE	0.167
24	Sigsbee St SE	0.334
25	Logan St SE	0.463
26	Bemis St SE	0.339
27	Sherman St SE	0.519
28	Dunham St SE	0.339
29	Thomas St SE	0.335
30	Bates St SE	0.224
31	Giddings Ave SE	0.504
32	Ethel Ave SE	0.502
33	Glenwood Ave SE	0.2
	Total	**12.533**
	Total Mileage of all roads in neighborhood	**14.139**
	Ratio of Streets with complete sidewalks against total mileage of all roads (Coverage Percentage)	**88.64%**

Source: http://www.daftlogic.com/projects-google-maps-distance-calculator.htm

For Figure 3.3.3: After calculating out the coverage percentage of streets with complete sidewalks on both sides in Eastown neighborhood, the percentage that was come up with is 88.64%. This percentage could be calculated by using the formula that is stated in the methodology section of this report, which is towards the end in Appendix A on page 136..

Despite the fact that a few of the major roads that are encircling the Aquinas College campus area do not fall into the category of providing complete sidewalks on both sides, the main neighborhood areas of the commercial and residential districts are all fully equipped and provide residents and business owners with greater access to complete sidewalks to commute and walk on. For Eastown neighborhood, the percentage of 88.64% would prove to be valuable to the United Growth Committee come year 2030 when they would measure again the coverage of streets with complete sidewalks on both sides within the neighborhood.

Figure 3.3.4: Streets with Complete Sidewalks on Both Sides in Eastown

Source: http://www.googlemap.com

For Figure 3.3.4: The orange colored lines that run through the middle of each road are the roads that have complete sidewalks on both sides of the street. Each orange colored line is labeled with a number, which corresponds to the table that is shown later on. Each number represents the name of the road that the orange colored line passes through, and the mileage of the road would also be shown on the table.

In taking a look at the map that shows all the streets that have complete sidewalks on both sides of the street for Eastown neighborhood, one would be able to notice instantly that the neighborhood is very well covered with streets that have complete sidewalks on both sides. However, despite the overwhelming coverage, there happened to be some major roads most notably at the North East side of the neighborhood along the perimeters of Aquinas College that do not have sidewalks, or may just have sidewalks on only one side of the street. From a closer inspection of these roads by using the Google Street View to view at a street level, one would then be able to see that these roads are actually located in rather deserted areas.

Goal 3: A Full Range of Transportation Modes Exist

Indicator 3.4: Bike lanes are common

Measure: Increasing number of streets with bike lanes

Method/Source: Count number of streets with bike lanes and the total mileage of these streets

Introduction: By having streets that have bike lanes running alongside them, it would encourage residents who are staying within the neighborhood to bicycle to their destinations rather than use their own automobile. Bicycling is a form of sustainable transportation that is non-polluting and does not require the use of fuels. Through the allocation of bike lanes along roads, cyclists would be allowed to have their own designated pathway to bicycle on. This reduces the probability of cyclists encountering safety issues that may occur when riding along the roads without a proper bike lane or sidewalks.

In measuring the increase of bike lanes in the future, neighborhood associations and the local municipality would be able to determine whether neighborhoods are well equipped with bike lanes. With the prevalence of more bike lanes in the future, officials would also be able to encourage residents to bicycle to their respective destinations. This indicator was also introduced in the Green Grand Rapids Project; more details of it could be seen in the Appendix.

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand	X		
Data easily available	X		
Relevance		X	
Forward-Looking		X	
Congruence	X		
Practicality	X		
Replicable	X		

- **Easy to understand**: The indicator is easy enough to be understood by the general public because the data that is used to measure the indicator is just a list of streets that have bike lanes running along them and their mileage.
- **Data easily available**: This data is easily available through the Grand Rapids City Website. However, the regularity of how often the data is being updated would have to be dependent upon the city government of Grand Rapids.

- **Relevance**: By having more bike lanes within the neighborhood, it would allow for greater biking access for the people who wish to bicycle as a mode of transportation. However, even though there may be greater biking accessibility, whether people start walking rather than driving may have to depend on other factors such as the price of automobile fuel.
- **Forward-Looking**: There are no previous studies regard bike lanes, however future studies could establish a trend.
- **Congruence**: This indicator has congruency towards the goal that United Growth has come up with; the goal is targets a full range of transportation modes.
- **Practicality**: Yes, it is possible to implement actions that would improve the indicators allocating more bike lanes in the future along streets that currently do not have them.
- **Replicable**: This indicator could be easily replicated in another neighborhood and the method to replicate and collect the data is easy as long as one is able to find a map that shows all the biking routes within the neighborhood.

Comment: Currently, there is no designated bike lanes present in the City of Grand Rapids, just bike routes.

Belknap Lookout Results:

Figure 3.4.1: Names of Streets with Bike Lanes in Belknap Lookout and their Mileage

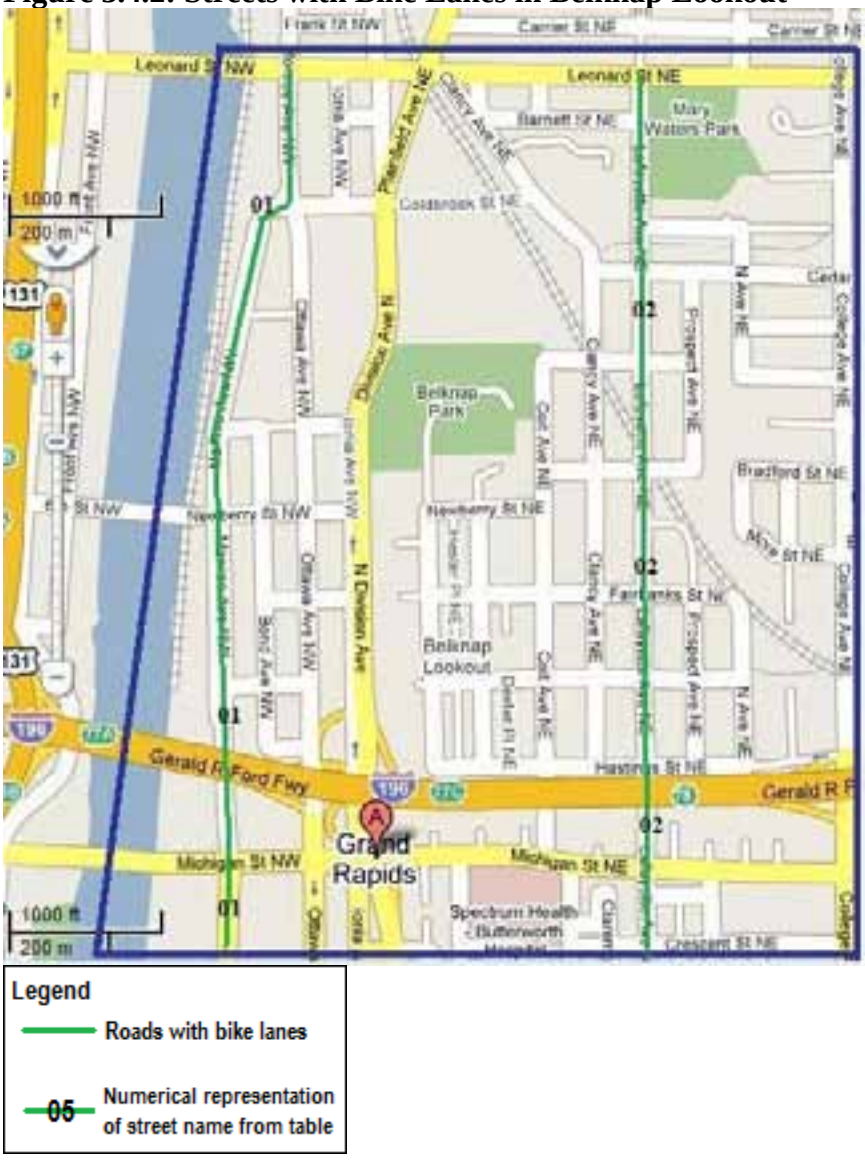
Number	Street Name	Mileage
1	Monroe Avenue NW	1.01
2	Layfette Ave NE	0.982
	Total Mileage of all roads with bike lanes	**1.992**
	Total Mileage of all roads in neighborhood	**17.71**
	Ratio of Streets with bike lanes against total mileage of all roads (Coverage Percentage)	**11.24%**

Sources:
http://www.grand-rapids.mi.us/download_upload/binary_object_cache/planning_Bike%20GR%20v4.pdf

http://www.daftlogic.com/projects-google-maps-distance-calculator.htm

For Figure 3.4.1: In taking a look at the coverage percentage for bike lanes, one would be able to see that the neighborhood's coverage stands at a very low rate of 11.24%[17]. Neighborhood Associations and other interested parties would be able to make use of this coverage percentage in the future to determine if the number of bike lanes has increased and the total mileage of the roads that have bike paths on.

Figure 3.4.2: Streets with Bike Lanes in Belknap Lookout



Source: http://www.googlemap.com

[17] For the full calculations on how to get the value, please refer to the methodology found in the Appendix.

For Figure 3.4.2: The green colored lines that run through the middle of each road indicate the roads that have bike lanes. Each green colored line is labeled with a number, which corresponds to the table that is shown later on. Each number would represent the name of the road that the green colored line passes through, and the mileage of the road would also be shown on the table.

When one has taken a look at the map of Belknap Lookout neighborhood and the coverage of roads that have bike lanes running alongside them, one would be able to see that the neighborhood is not very well equipped in terms of providing safe and convenient bike paths for the residents.

Eastown Data Results:

Figure 3.4.3: Names of Streets with Bike Lanes in Eastown

Number	Street Name	Mileage
1	Fulton St E	0.876
2	Fuller Ave SE	0.5
3	Franklin St SE	0.519
4	Woodward Ln SE	0.302
5	Robinson Rd SE	0.659
6	Wealthy St SE	0.35
7	Lake Dr SE	0.905
	Total	**4.111**
	Total Mileage of all roads in neighborhood	**14.139**
	Ratio of Streets with bike lanes against total mileage of all roads (Coverage Percentage)	**29.08%**

Sources:
http://www.grand-rapids.mi.us/download_upload/binary_object_cache/planning_Bike%20GR%20v4.pdf

http://www.daftlogic.com/projects-google-maps-distance-calculator.htm

For Figure 3.4.3: The coverage percentage for Eastown is higher than that of Belknap Lookout, standing at 29.08%[18], which is almost close to 30%. However, despite the higher coverage than Belknap Lookout, the neighborhood of Eastown certainly has more potential to increase the coverage of bike lanes in the future due to the advantage of being located in a flat terrain. With more bike lanes in the future, it can be said that the people traveling around the neighborhood,

[18] For the full calculations on how to get the value, please refer to the methodology found in the Appendix.

especially to the commercial district, would depend more on the bicycle rather than the automobile.

Figure 3.4.4: Streets with Bike Lanes in Eastown

Source: http://www.googlemap.com

For Figure 3.4.4: The green colored lines that run through the middle of each road indicate the roads that have bike lanes. Each green colored line is labeled with a number, which corresponds

to the table that is shown later. Each number would represent the name of the road that the green colored line passes through, and the mileage of the road would also be shown on the table.

One of the advantages that Eastown has is that the neighborhood is located on a flatter surface than Belknap Lookout is, and therefore would allow for cycling to be less strenuous. Also, the Aquinas College is located within the boundaries of the neighborhood, which would therefore lead to having more bike lanes being built to cater to the traveling needs of the student population. From the map, Aquinas College is surrounded by three major roads: Fulton Street SE, Woodward Lane SE and Robinson Road SE. All of these three roads have biking lanes which would allow students to use them and bicycle.

Goal 3: A full range of transportation modes exist

Indicator 3.5: Residents have become less car dependant

Measure: Number of cars per household.

Method/Source: City-data; Website link: http://www.city-data.com

Introduction: This indicator shows if residents own a car and how many cars they own. United Growth's goal is for residents to become fewer cars dependent and by tracking car ownership. We can see if residents own more or less cars in the future. By owning fewer cars, United Growth hopes that people are using other modes of transportation.

The data is based on population statistics for each neighborhood and car ownership per household. The indicator shows that the Belknap Lookout area has a population of 4,169 families and the Eastown area has a population of 6,204 families.[19]

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand	X		
Data easily available			X
Relevance	X		
Forward-looking	X		
Congruence	X		
Practicality			X
Replicable		X	

- **Easy to understand:** The City-data is presented in a simple chart.
- **Data easily available:** Data that is found online is area specific to neighborhoods; however it is difficult to find data in other areas to compare.
- **Relevance:** This indicator is relevant to the goal.
- **Forward-Looking:** Trends can be established after data is collected in the future.
- **Congruence:** Number of cars per households in other cities and neighborhoods can be determined using the method/source to achieve this goal.

[19] "Grand Rapids, Michigan (MI) Detailed." Stats about all US cities. 15 Apr. 2009 <http://www.city-data.com/city/Grand-Rapids-Michigan.html>.

- **Practicality:** It is not practical because neighborhoods cannot control the number of cars that residents own.
- **Replicable:** Until data is easily and readily available for all the neighborhoods, the data cannot be replicated.

This current measure of ownership of cars per household is not effective, just because residents own more cars does not demonstrate if they are using other modes of transit.

Data: The City-data website provides the necessary data (Appendix Indicator 3.5). This website is very useful, accurate, and provides the relevant information which is not be conveniently found in the U.S. census website. In the future, neighborhoods can look at ownership trends.

Belknap Lookout Results: The area of Belknap Lookout neighborhood is 1.4 square miles and the average size of each household is 2.6 people. This indicator will gauge if the average number of vehicles per household has increased or decreased from the year 2000 and the year 2007.

Since this data is limited to just two years for comparison, the trend would not be able to be used for analyzing in a longer period of time. Measuring the number of licenses proved to be a difficult method for this indicator since this data was not easily available from the Secretary of State or any other websites. Since the number of licenses method was not used in measuring this indicator, the results can be said to have lacked accuracy.

Figure 3.5.1 Belknap Lookout Vehicles per household

	Average Number of vehicles per household (2000)	Average Number of vehicles per household (2007)
Belknap Lookout	1.1	1.6
Grand Rapids	1.2	1.8

Source: http://.www.city-data.com

The data specified in Figure 3.5.1 can be analyzed and it can be concluded that there has been an increase in the number of cars owned by households in this neighborhood.

The data obtained from the city data website for the Lookout Belknap neighborhood specifies that in the year 2000 the average number of vehicles in this neighborhood was 1.1 cars per household as compared to the city of Grand Rapids which was 1.2 cars per household. In the year of 2007 the number of vehicles per household increased in this neighborhood from 1.1 to

1.6 as compared to the city which increased from 1.2 to 1.8. In Belknap lookout and Grand Rapids, there is an increase in the number of vehicles owned by every household.

The increase in the number of cars or vehicles owned by households is not just limited to the Belknap Lookout neighborhood but there has also been an increase in the number of vehicles owned by households in the entire region of Grand Rapids.

Eastown Results: The area of this neighborhood is 0.807 square miles and the average size of each household is 2.6 people. This indicator will gauge if the average number of vehicles per household has increased or decreased from the year 2000 and the year 2007. The importance of this measure is that it will determine if a full range of transportation modes exits in this neighborhood, if it does not if the usage of personal vehicles has increased per household.

Figure 3.5.2 Eastown Vehicles per household

	Average Number of vehicles per household (2000)	Average Number of vehicles per household (2007)
Eastown	1.6	1.8
Grand Rapids	1.2	1.8

Source: http://.www.city-data.com

The data obtained from the city data website for the Eastown neighborhood specifies that in the year 2000 the average number of vehicles in this neighborhood was 1.6 cars per household compared to the city of Grand Rapids which was 1.2 cars per household. In the year of 2007 the number of vehicles per household increased in this neighborhood from 1.6 to 1.8 compared to the city which increased but was same as the neighborhoods count to 1.8. The increase in the number of vehicles owned by every household is significant in the year 2007.

The Eastown neighborhood and Grand Rapids increased the number of vehicles owned by household between 2000 and 2007. In 2007, the average number of cars owned by each household was same in Grand Rapids and in the Eastown neighborhood. In between 2000 and 2007, a trend shows an increase in the number of cars owned per household in the Eastown neighborhood. In 2000, the average numbers of vehicles per household were less than the number of vehicles in the Eastown neighborhood. The data specified in Figure 3.5.2 can be analyzed and it can be concluded that there has been an increase the number of vehicles owned by households in this neighborhood.

Goal 3: A Full-range of Transportation Modes Exist

Indicator 3.6: Residents with disabilities can easily access the entire neighborhood

Measure: Americans with Disabilities Act (ADA) Standards are implemented

Method/Source: Disability Advocates of Kent County (DAKC) documents accessibility, City Clerk, Engineering Department

Introduction: Not all buildings or publically accessible corridors within a neighborhood meet the ADA Standards. It was not until 1992 that all newly constructed buildings were required to follow the ADA Standards.

This indicator has been developed to determine the level of accessibility of corridors and establishments' passages within the neighborhood.

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand		X	
Data easily available	X		
Relevance	X		
Forward-looking			X
Congruence		X	
Practicality			X
Replicable		X	

- **Easy to understand:** Current data is not available.
- **Data easily available:** The local municipality has the data that is required.
- **Relevance:** Incorporates regulations and standards that better assist the disabled.
- **Forward-Looking:** This study cannot make estimates or projections.
- **Congruence:** Disability oriented improvements and standards are apparent in other cities and neighborhoods.
- **Practicality:** There is a lack of understanding what the aspect of accessibility is meant to be measured.
- **Replicable:** No obtainable data has been observed that would indicate whether there is a replicable process.

Comments: There are several means of determining whether or not a neighborhood is accessible by the disabled. Each of the different means of accessibility can qualify as their own category of measurement and should not be grouped together as a single indicator. The methods of obtaining information for access to the neighborhoods for the disabled are separate.

Areas of interest suggested by United Growth:

1. Curb cuts at intersections
2. Sidewalks and their condition
3. Crosswalks that are marked and in good condition
4. Pedestrian level or oriented signage
5. New or rehabbed buildings required to add an elevator

It has been suggested that DAKC survey and teach any and all interested organizations how to conduct a survey for disability orientation of an area for a monetary sum.

Data: The resulting data for the indicator has yet to be gathered.

Belknap Lookout Results: Current data is not available.

Eastown Results: Current data is not available.

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Goal 3 Conclusion

Goal 3: A Full Range of Transportation Modes Exist

Belknap Lookout Conclusion:

3.1 Belknap Lookout has adequate access to public transportation, as most residents live within a 1/4 mile of a bus line.

3.2 Most of the building permits that were obtained in Belknap Lookout neighborhood are Commercial interior redevelopments, and they are located at the Medical Mile area of the neighborhood.

3.3 The complete sidewalks coverage percentage of Belknap Lookout is very high. The streets that do not have complete sidewalks on both sides of the street are either private lanes or roads that are currently under construction.

3.4 Belknap Lookout only has 2 roads that are fully equipped with bike lanes; hence a lot of work could be done in the future to increase the coverage of bike lanes within the neighborhood.

3.5 The average number of cars per household in Belknap Lookout and Grand Rapids increased from the year 2000 to 2007.

3.6 Data is inconclusive.

Eastown Conclusion:

3.1 Eastown has adequate access to public transportation, as most residents live within 1/4 miles of a bus line.

3.2 Eastown does not have much redevelopment or new constructions going on, with only 1 building gaining approval and building permit to build next to a transit corridor.

3.3 The overall complete sidewalks coverage percentage for Eastown is also very high; however, there are some major roads that do not have complete sidewalks on both sides of the street and these roads are located at the perimeter of Aquinas College, which is more deserted. Despite that, the more populated areas of Eastown are well equipped with complete sidewalks on both sides of the street.

3.4 Eastown has a few of its major roads being equipped with bike lanes, especially on the roads that surround and lead to Aquinas College. This would provide students and residents alike with more opportunities of bicycling around the neighborhood and to

the college.

3.5 The average number of cars per household in Belknap Lookout and Grand Rapids increased from the year 2000 to 2007.

3.6 Data is inconclusive.

GOAL 4

NEIGHBORHOODS ARE GREEN AND ENVIRONMENTALLY SUSTAINABLE

- Indicator 4.1 – Residents support Locally Grown Food
- Indicator 4.2 – Green Space is Accessible
- Indicator 4.3 – Street Canopy reduces Greenhouse Gases

Source:
http://greendevelopmentplaybook.net/database/images/display/sb4720d928d50d3.jpg

Goal 4: Neighborhoods are Green and Environmentally Sustainable

This goal is measured by the following indicators:

4.1 Residents support locally grown food

4.2 Green space is accessible

4.3 Street canopy reduces greenhouse gases

This goal is to create a sustainable and independent community and to build a healthier future. Grand Rapids is working on greening and making the community an environmentally sustainable place. The city has an ongoing project called Green Grand Rapids (GGR) which is for the same purpose.

Healthy, sustainable communities begin with healthier lifestyles and resources which are available naturally and which honor the environment. Today this mission is more critical than ever as we address issues of environmental protection along with tackling the social and equity issues in a community as a planner. This goal will help foster a healthier lifestyle, a cleaner and vibrant, sustainable community for the future. Many communities are drafting long-term sustainability plans or environmental purchasing standards, and seeking more sustainable solutions. There are places which are making the transitions to "greener" parks, adopting locally available food stocks, or adopting solutions which will lessen pollution of the environment. For nearly a decade, we have been observing environmental-friendly manufacturing processes and business practices.

For example, the GGR project adopted a survey called the “green pursuits” which came up with the idea for the number of bike lanes that the citizens want in the areas, GGR also counted the number of parks and green spaces that are close to the households. These results were then included for to achieve this goal and the indicators were drafted. GGR Project (www.grand-rapids.mi.us)

For this practicum project we will use the indicators provided by the client and measure these indicators to achieve this goal in these two neighborhoods of Belknap and Eastown which fall in the Kent County of the city of Grand Rapids in the state of Michigan.

Goal 4: Neighborhoods are green and environmentally sustainable.

Indicator 4.1: Residents support locally grown food

Measure: Percentage living within 1mile of market

Method/Source: Count or map how many farmers market etc. there are

Introduction: For the purpose of measuring this indicator a Google map of the neighborhoods is used to locate and count the number of farmers market.

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand	X		
Data easily available	X		
Relevance	X		
Forward-looking		X	
Congruence	X		
Practicality	X		
Replicable	X		

- **Easy to understand**: This indicator is simple and can be interpreted by the general user and the public.
- **Data easily available**: The data for this indicator is collected using the Google map locator. It is straightforward and a simple task to collect the available data.
- **Relevance**: The indicator is relevant to the local and also at the county level to determine the sustainability.
- **Forward-Looking**: This indicator determines the available farmers' market in the neighborhood and there are no trends which can be used or which will help analyze the location of these farmers market.
- **Congruence**: This indicator does have congruency in determining the goal that the neighborhoods are green and environmentally sustainable.
- **Practicality**: This method and source to measure the indicator can be used.
- **Replicable**: This indicator has the ability to be accurately reproduced by planners working independently in different neighborhoods.

Data: This data will help determine the number of local farmer's market in different neighborhoods. This data concludes if there are more or less local markets accessible to the residents in these neighborhoods.

Belknap Lookout Results:

Figure 4.1.1 Belknap Lookout Local Farmers Market

	Belknap Lookout
Number of Local Farmers Market	1
Distance from neighborhood	2.2 miles

Source: http://www.googlemap.com

Eastown Results:

Figure 4.1.2 Eastown Local Farmers Market

	Eastown
Number of Local Farmers Market	1
Distance from neighborhood	0.6 miles

Source: http://www.googlemap.com

One farmers market that is located in both of these neighborhoods is the Fulton Street Farmer's Market. The distance is calculated using the method explained in the appendix of Indicator 4.1 and is measured to be 2.2 miles from Belknap lookout Neighborhood. According to Google Maps data, in the Eastown neighborhood the distance from the Fulton Street Farmer's Market is 0.6 miles.

From the above data we can conclude that there is one farmers' market which is located in an accessible distance from the Belknap lookout and Eastown neighborhoods. The Fulton Street Famer's Market offers locally-grown fruits and vegetables, plants to the residents of Grand Rapids. This market does provide the residents an opportunity to support locally grown food.

Goal 4: Neighborhoods Are Green And Environmentally Sustainable.

Indicator 4.2: Green space is accessible

Measure: All households are within a quarter mile of a park or natural area

Method/Source: Count and map green spaces and measure distance to all households.

Introduction: This indicator shows if citizens have unobstructed and easy access to green spaces, such as parks and natural areas. The locations of these green spaces ideally should be within quarter of a mile distance from the households of the neighborhood. This indicator will help to locate the easily accessible green spaces within $1/4^{th}$ mile of the households.

The mapping method specified for this indicator could not be completed due to lack of sufficient data availability; as a result the alternative method specified of counting the green spaces using Google maps was adopted.

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand	X		
Data easily available		X	
Relevance	X		
Forward-looking		X	
Congruence	X		
Practicality	X		
Replicable	X		

Easy to understand: The indicator is easy to comprehend and the collect data for the locations is understandable.

Data easily available: Data is found on the Google maps website. However, the data needed for the mapping method suggested is not available through GIS.

Relevance: This indicator is relevant to the goal.

Forward-Looking: This study does not make estimates or projections, because the data is from Google Maps.

Congruence: Information and data collection on number of green spaces within quarter mile distance of households can be determined using the specified method/source.

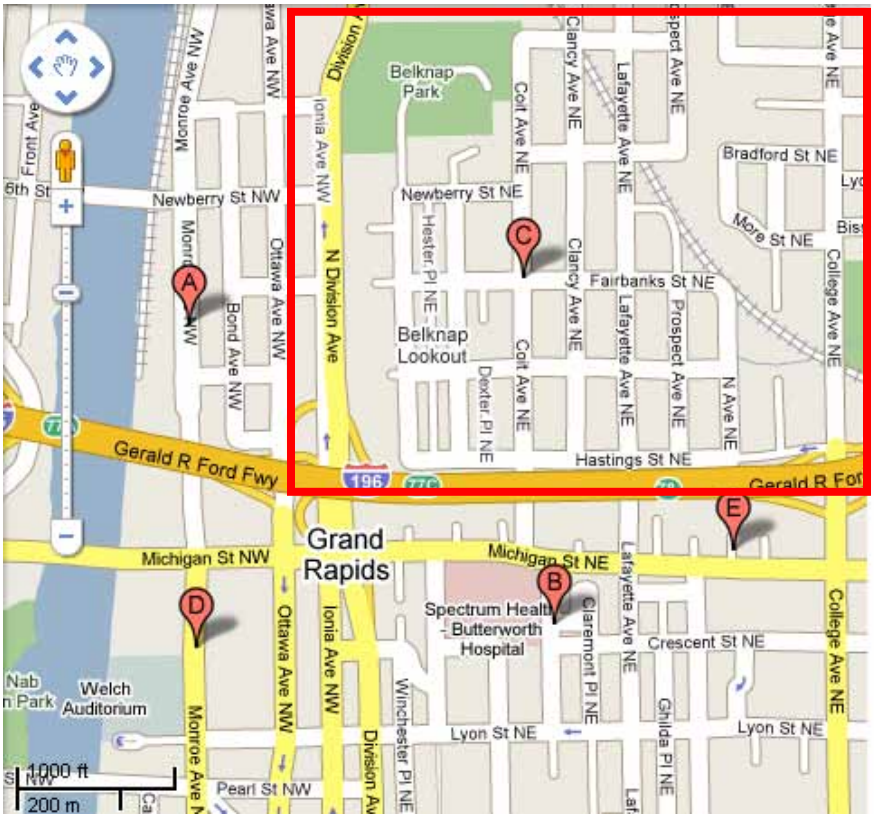
Practicality: This indicator is practical because measureable change can be made by the city to acquire more green space.

Replicable: Using the Google maps method, the data is easily replicable and is readily available for any neighborhood or city.

Data:

Belknap Lookout Results:

Figure 4.2.1 Belknap Lookout Green Spaces within a Quarter Mile Buffer from Households

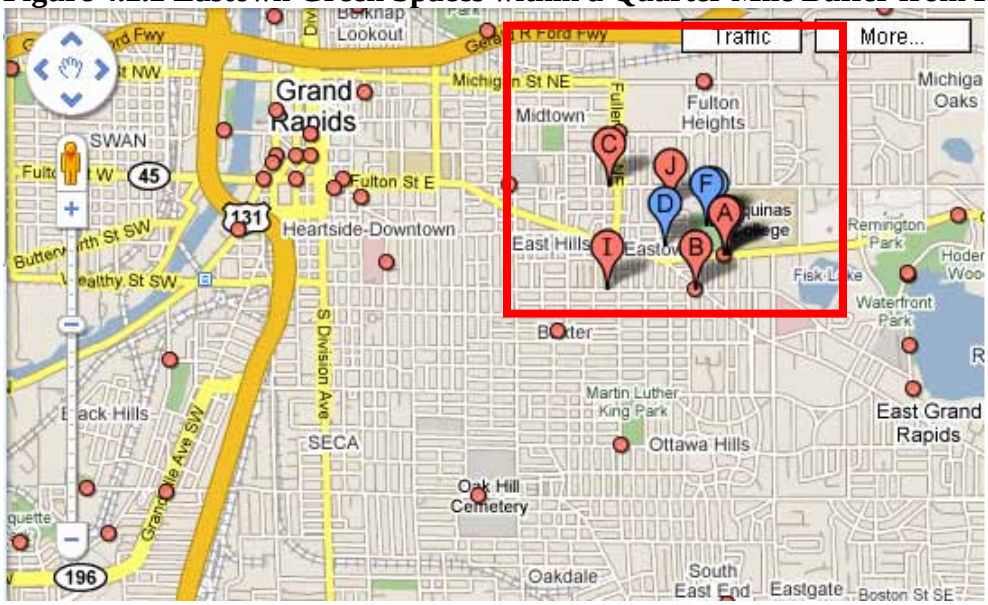


Source: http://maps.google.com/

The above map indicates the Belknap lookout neighborhood and all the green spaces and parks in these areas are shown on the map. The Belknap Park and the Coit Park are the two locations within the 1/4th mile distance to the Belknap lookout neighborhood.

Eastown Results:

Figure 4.2.2 Eastown Green Spaces within a Quarter Mile Buffer from Households



Source: http://maps.google.com/

The above map indicates the Eastown neighborhood and all the green spaces and parks in these areas are shown on the map. Wilcox Park and another park are the two locations within the 1/4th mile distance to the Eastown neighborhood.

From the above data we can conclude that the indicator can be measured in the two neighborhoods and results can be achieved but the measurement method can prove to be less feasible if the areas are not regularly updated on the Google website.

Two maps prepared by the Green Grand Rapids research team, are referred for the park location process adopted by the practicum team the maps are included in the literature review.

Goal 4: Neighborhoods are green and environmentally sustainable

Indicator 4.3: Street canopy reduces greenhouse gases

Measure: 40% of neighborhood has tree coverage

Method/Source: Annis Resource Institute

Introduction: This indicator is used to show if a neighborhood meets the recommended, standard tree coverage. By measuring this, the goal of environmental sustainability will be considered. The measurements from this indicator will show a community how much coverage they have in order to meet set standards, and from there on a community would then be able to decide if and how many more trees to plant in given years.

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand	X		
Data easily available			X
Relevance	X		
Forward-looking		X	
Congruence		X	
Practicality			X
Replicable			X

- **Easy to understand**: This indicator can be complex. In order to gather this information it would require background knowledge on cartography as well as tree canopy. Background research and information are necessary for understanding what exactly tree coverage means to a given area.
- **Data easily available**: This data is not consistently collected. The study from which this data was collected is not done very often. There is not much past data available and there is a chance that there would not be future data available either; all of these occur because of the high cost of collecting the data. Someone with mapping experience would be needed to collect this data.

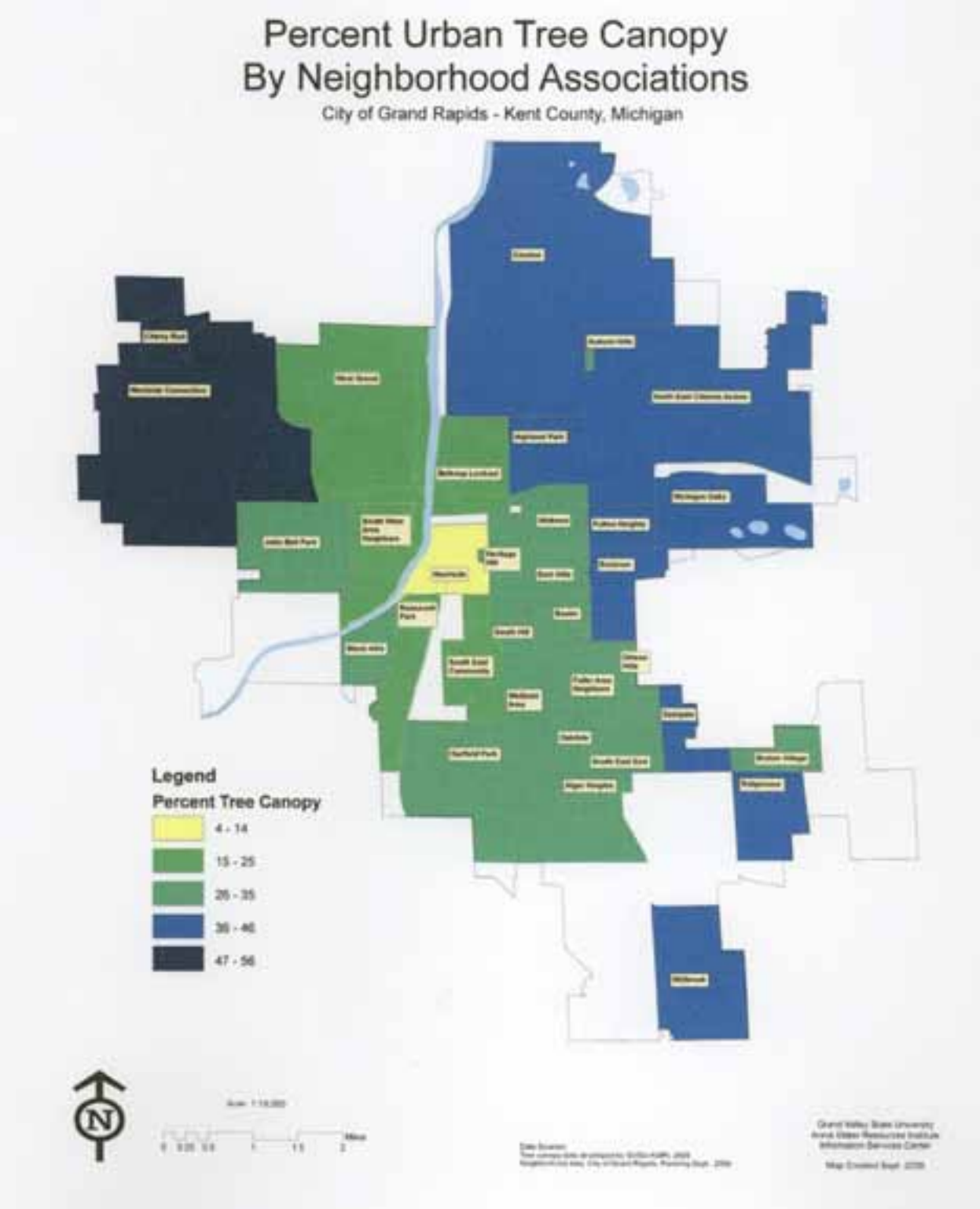
- **Relevance**: This indicator is relevant and it shows how green and sustainable a neighborhood is. The more tree coverage an area has the greater the opportunity for greenhouse gases such as carbon dioxide, can be absorbed by the leaves of the trees.
- **Forward-looking**: There is no past data on this and future data may or may not be collected by the Annis Resource Institute.
- **Congruence**: This information can be congruent where available. If another city, county, or state has this information available to them then it is possible to use the information for comparison.
- **Practicality**: This indicator is practical. A tree-planting program would produce measurable results. If both neighborhoods planted more trees they would improver their coverage percentages and thus reduce greenhouse gases.
- **Replicable**: This indicator is only replicable by professionals or those with cartographic skills. Due to the way that this data is being collected, it is not easily replicable by the general public. This information is very expensive to obtain and gather as well. The data would also be collected only when someone does a study and collects the data. Another type of measure or indicator needs to be done to collect this data. Such as one of the indicators and measures done in the Boston indicators project under their environment and energy goal.

Belknap Lookout Results:

Belknap Lookout has a total of 602 acres, with 134 acres of urban tree canopy coverage. This comes down to 22% tree canopy coverage for the neighborhood, and has been calculated to be 1.3% of the total tree coverage in the city of Grand Rapids.

Eastown Results:

Eastown has a total area of 391 acres, with 139 acres of the neighborhood urban tree canopy. This comes down to 36% tree canopy coverage for the neighborhood, and has been calculated to be 1.4% of the total tree coverage in the city of Grand Rapids.



Source: GVSU-AWRI 2008. Neighborhood Stats: City of Grand Rapids, Planning Department: (2008).

Goal 4 Conclusion

Goal: Neighborhoods are green and environmentally sustainable.

Belknap Lookout Conclusion:

4.1 There is no change in the number of local farmers' market providing local food. There is one local market accessible to the residents of Belknap Lookout. This indicator meets the goal.

4.2 No change of green spaces is observed in the data. The location of two green spaces accessible within quarter of a mile distance from the Belknap Lookout households is mapped. There has been an increase in green space(s) for Grand Rapids. This indicator meets the goal.

4.3 Belknap Lookout's 22% tree canopy fell short of the 40% goal. This indicator does not meet the goal.

Eastown Conclusion:

4.1 There is no change in the number of local farmers' market providing local food. There is one local market accessible to the residents of Eastown. This indicator meets the goal.

4.2 No change of green spaces is observed in the data. The location of two green spaces accessible within quarter of a mile distance from the Eastown households is mapped. There has been an increase in green space(s) for Grand Rapids. This indicator meets the goal.

4.3 Eastown's 36% tree canopy fell short of the 40% goal. This indicator does not meet the goal.

GOAL 5

EMPOWERMENT, HUMAN CONNECTEDNESS, AND SOCIAL JUSTICE ARE PROMINENT FEATURES IN THE NEIGHBORHOODS

- **Indicator 5.1 – Strong Citizen-based Organizations are active**

Source: http://www.nwlincs.org/oreven/TRK_group.jpg

Goal 5. Empowerment, Human Connectedness, and Social Justice are Prominent Features in the Neighborhoods

The fifth goal is defined through the following indicator:

5.1 Strong citizen based organizations are active

The goal of empowerment, human connectedness, and social justice being prominent features of the neighborhoods was chosen because; this goal can help to show reinvestment in neighborhoods at a citizen level. This goal looks at citizens and their participation with in a neighborhood. With this type of goal one is able to determine what is being done at a citizen level or for citizens to move a neighborhood in a positive direction. This goal also mirrors that of other neighborhood indicator projects, especially those mentioned in the literature review, such as *The Boston Indicator Project* and *The Green Grand Rapids Project*. The similarity between this goal and others like it is that cities are using this goal to see if citizen's needs are being met or if there is a sense of community pride. There is only one indicator in this goal: "Strong citizen-based organizations are active".

Goal 5: Empowerment, human connectedness, and social justice are prominent features in neighborhoods

Indicator 5.1: Strong citizen-based organizations are active

Measure: number of organizations where 51% or more of their board members are from the neighborhood; number of meetings held in the past year with number of attendance, and number of due paying members

Method/Source: Count them and review records

Introduction: Using the above measure will help United Growth in determining whether or not their goal of empowerment is being met. By using the measures a community can see not only, the availability of forums for citizen participation but also, how many citizens are actually participating in their neighborhoods. This information will also show if citizens are participating in the reinvestment of their neighborhoods. Information is only provided for a few organizations within each neighborhood.

Assessment:

Maclaren's Indicators criteria matrix

	Yes	Inconclusive	No
Easy to understand	X		
Data easily available		X	
Relevance			X
Forward-looking			X
Congruence		X	
Practicality		X	
Replicable	X		

- **Easy to understand**: The indicator is easy to understand.
- **Data easily available**: The measure for this specific indicator is semi-consistently collected. The data is usually collected by the board of the organization or the secretary.
- **Relevance**: The indicator is relevant but, the measure is not. Looking at attendance figures and the makeup of the board does not show how active an organization is. After talking with these organizations, although attendance numbers maybe small compared to population make up, these organization are very active.

- **Forward-looking:** No accurate trend data can be established due to sporadic attendance by community members.
- **Practicality**: This indicator is able to be measured and compared to others like it. Many neighborhoods have citizen based organizations with which this data can be compared.
- **Replicable**: This information is also replicable if gathered daily.

Belknap Lookout Results: Within Belknap there is several citizen based organization. They are Neighbors of Belknap Lookout or NOBL, which is their neighborhood association, a business association, and several block clubs. Below is a brief description of the organization as well as the measurements desired for the indicator.

NOBL (Neighbors of Belknap Lookout) Neighborhood Association

The NOBL office is located at:

1042 Lafayette NE, telephone # 454-8413.

Contact: Kristi DeKraker

Website: noblegr.org

Email: nobl@choiceonemail.com

The Neighbors of Belknap Lookout is an independent, democratic association of residents and businesses organized to define and solve the problems facing the Belknap area through embarking upon programs and activities to preserve and better the area. NOBL seeks to provide residents with a vehicle by which they can address common problems and attempts to insure that all residents have an active voice in all matters affecting the quality of life in the community.

- Meetings held 2nd Tuesday of every month
- Meetings average 15-30 people depending on issue
- 2008- 37 due paying members 2007-126 due paying members varies year to year
- 8/9 board members live in Belknap
- 8 committees with 8 to 9 members in each; except for Safety Patrol which has about 40 or more volunteers

Eastown Results: Within Eastown there are a few citizen based organization. They are the Eastown neighborhood association and the Eastown Business Association. Below is a brief description of the organization as well as the measurements desired for the indicator.

Eastown Community Association

The office is located at: 415 Ethel SE Grand Rapids MI 49506

Contact: Amy Jonason

Phone: 616.451.3025

A community association especially committed to BALLE principles—we also work closely with the Eastown Business Association.

- ¾ of board members live in Eastown the other board member owns several properties in Eastown
- Meetings held once a month
- Anyone who lives or works in Eastown is considered a member
- Average of 10 residents per meeting
- No dues required but, a membership drive is held throughout the year; 08/09 season is reporting donations from 80 residents

Eastown Business Association

Contact: Jaye Van Lenten

E-mail: jaye@spiritdreamsgr.com

The Eastown Business Association (EBA) is a membership organization comprised of retailers, restaurant owners, business owners, landlords and others with an interest in preserving and enhancing the unique qualities of Eastown. It was founded as a non-profit group in 1991 under the auspices of the Grand Rapids Neighborhood Business Association (NBA). Membership to the Eastown Business Association is open to anyone with business or interests within the district.

- Dues are $100 per year
- 93 various businesses within area
- Meetings are held quarterly (March, June, September, and December)
- Board is voluntary
- Attendance averages 20 to 40 people

  Dues paying members average 40 to 60 business owners within any given year

Final Conclusions

For Grand Rapids to progress in the future, each of the neighborhoods must actively work towards these characteristics of a sustainable neighborhood. Community leadership is vital in reproducing the data in the future because Grand Rapids knows of the neighborhood's unique conditions. The goals and indicators will continue to provide a framework for neighborhoods to structure their growth by defining ways that a community can work to create a more sustainable neighborhood.

For neighborhoods to be **Vibrant, Economically Sustainable Communities**, the communities must attract new growth with dense and valued property. It is important to have quality schools in close proximity and local investment in the area. Statewide MEAP testing helps demonstrate the quality of schools and US Census population data provides population statistics; however neighborhood members are the best resource for counting vacant lots, determining the amount of locally owned businesses, and measuring the proximity to neighborhood elementary schools. A future indicator that also could be counted by local residents would be the amount of mixed-use buildings in the area, which would demonstrate an efficient use of space and allow residents to be in close proximity to goods and services.

To have every neighborhood as **a Mixed Income and Diverse Neighborhood**, there must be various housing options available. Each neighborhood needs to have rental housing, affordable housing, and a diverse economic and racial demographic. Collecting this information relies heavily on easily accessible data tracked by the city and US Census. A mixed neighborhood also means that there is accessible housing and neighborhood for people with physical disabilities. The *Disability Advocates of Kent County* is a key resource for future indicator information on how neighborhoods are creating accessibility for all members of the community. According to the *Boston Indicator Project*, "A healthy community is one in which all individuals and families are welcome to live, work, or play in every neighborhood- without regard to race, income, religion, language, gender, ability, or sexual orientation".[20] Besides the need to decrease segregation in neighborhoods, it is important that diversity is also seen within local education options as well. A future indicator could look at the racial demographics found in local elementary and middle schools.

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[20] "1.5.2 Degree of residential segregation, Boston and Metro Boston." The Boston Indicator Project. 2009. The Boston Foundation. 27 Feb. 2009 <www.bostonindicators.org>.

Each neighborhood needs **A Full-Range of Transportation Modes** to increase the amount of public transit, non-motorized options, and greener cars. Neighborhoods must create attractive options for pedestrians and bikers and ensure that public transit is available. People with disabilities must have mobility around the neighborhood as well. Bike lanes, sidewalks, and bus lines, are clearly shown and mapped out. However, it is difficult to track Indicator 3.5: "Residents have become less car dependent" because measuring ownership of cars per household does not show the amount that residents actually use their cars verse other forms of transportation. Future indications of transportation modes could be measured by participation levels of public transit and frequency of public transit lines to neighborhoods. The *Boston Indicator Project 2005-2006* measured the use of low-emissions vehicles and vehicle greenhouse gas emissions as indicators of environment sustainability. Their data was collected from their statewide environmental commission. If Michigan begins to increase their state environmental study data, then Grand Rapids could also track these emission standards as a method for increasing greener car-usage. We also suggest that Indicator 3.6: "Resident with disabilities can easily access the entire neighborhood" become a separate goal instead of an indicator, because of the many issues that are encompassed by making the neighborhood suitable for residents with disabilities. The methods for gathering the data to gage the accessibility a neighborhood are widely diverse and not applicable by any one process. United Growth's original "complete streets" indicator was not used in our project because the analysis is costly and time consuming.

Neighborhoods will be **Green and Environmentally Sustainable** through a well-rounded approach to providing environment-friendly options and education to its neighbors. Residents must have access to locally grown food and neighborhoods must understand the importance of green parks and tree coverage. For future measurement of these indicators, local residents will need to be an active part in counting the amount of farmer's market and locally grown food options available as well as knowing their proximity to green space and parks. It will be difficult to replicate Indicator 4.3: "Street Canopy Reduces Greenhouse Gases", because although it is important to have street canopies, it is an expensive process to collect the data. Furthermore, fully grown trees do not actually sequester significant amounts of carbon. Future indicators could also include tracking LEED-certified buildings and measuring energy consumption through kilowatt hours per capita.

Neighbors must have **Empowerment, Human Connectedness, and Social Justice** to see their role in community outcomes. Therefore, each neighborhood needs to have opportunities for strong citizen based organizations and see them as having an important voice and opinion. We have looked to other indicator projects across the United States in order to find more indicators to demonstrate empowerment, human connectedness, and social justice, because this goal currently only has one indicator. The *Boston Indicator Project 2005-2006* used voter participation, accessibility to information through community newspapers and high levels of book circulation at the local library as measures of Civil Vitality. Boston measured Social Capital by using a Boston Police Department public safety survey asking people, "If you had a problem, could you rely on your nearby neighbors for help?' A neighborhood survey is time consuming; however it could lead to a better understanding of how neighbors felt in their community.

During our project, some of the indicators were reorganized under different goals. We suggest that, in the future, more comprehensive and concise ideal neighborhood characteristics be developed. The Maclaren analysis proved to be an efficient way of choosing proper indicators, and should be used for possible future additions.

Grand Rapids has the opportunity to be a leading city in sustainable development. It is a prime time for community members and leaders to join together to work towards a practical and more sustainable future. Successful application of these indicators and goals will create a valued Grand Rapids community that will continue to attract talent, jobs, and investment.

Appendix

Literature Review

The Literature Review serves as a research tool to enhance the Practicum Group and the clients' understanding of the project. The review provides examples and insight into other similar indicator projects across the country. We found two projects that helped shape our understanding of indicator projects: The *Boston Indicators Project 2004-2006* and *The Green Grand Rapids (GGR) Project*. These two reports have comparable goals and indicators similar to what united growth is aiming for. The Boston and Grand Rapids projects are continuously referenced in our analysis of the indicators.

The *Boston Indicators Project* was started in order to understand Boston's neighborhoods in a regional context, which is similar to the overarching goal of United Growth. Boston has collected data biennially since 2000 and plans to do so until the city's 400th anniversary in 2030. The *Boston Indicators Project* demonstrates the complexity of an indicator project and how indicators can support the goals of a neighborhood. It collects data for ten different 'sectors' which are similar to United Growth's five goals. For each sector, Boston has a list of goals, indicator measurements, and methodology for collecting data.

The *Green Grand Rapids Project* provides useful background information on Grand Rapids and their neighborhoods. *Green Grand Rapids* provides information that is directly related to many of United Growth's indicators for a sustainable neighborhood. The City of Grand Rapids started *GGR Project* as an effort to improve the city of Grand Rapids by generating a scope and goals for the city. Below is a full review of this project and the *Boston Indicators Project.*

The Boston Indicators Project

The Boston Indicator Project is a forward looking project which began in 2000 and is set to end or be reviewed in the year 2030. The Boston Foundation started this project to help Boston understand their neighborhoods in a regional context, democratize access to information, foster informed public disclosure, track progress on shared civic goals, and report on change. The Boston Indicator Project focuses on ten sectors: Civic Vitality, Cultural Life and the Arts, Economy, Education, Environment, Health, Housing, Public Safety, Technology, and Transportation. These ten sectors are goals that contain indicator measures to collect data. The

following is an example of their sixth sector: 'Housing'. The sector on housing has nine goals, each with respective indicator measures and application to Boston's neighborhoods. The following is an example of the first two indicator measures of Goal 6.2: "Housing Affordable to All Residents":

Goals	Indicator Measures	How are we doing?
6.2 Housing Affordable to All Residents	**6.2.2** Median home price, Boston neighborhood	In 2006, a median-income household could afford a median-priced single family home in 27 of 148 Metro Boston municipalities. The median price for single family homes in Greater Boston reached a peak of $492,000 in 2005, but fell 2.4% to $480,000 in 2006. Even with this small decline, higher interest rates continue to erode affordability.
	6.2.2 Median home price, Boston neighborhood	In 2000, 79% of Boston households could not afford the median priced single-family home of $216,000. Prices rose 45% between 2000 and 2006, increasing the gap between affordability and prices 101%. The Boston median home sales price fell 2.1% from 2005 to 2006, but most families will remain outside the homeownership market, with prices 169% higher than in 1997.
	6.2.3 Median advertised two-bedroom rental, Boston	Boston median asking rents in 2006 were 82% higher than 1995. Rents fell in 2001-2003, before rebounding in 2004/2005 and stabilizing in 2006. In 2005, 47% of Metro Boston renters and 51% of Boston renters paid more than 30% of income to rent. The median income renter in Boston would have to spend 45% of income to pay the 2005 median rent.

They use this format for each of the ten sectors. Each sector has several goals and several indicator measures. Boston adds and changes indicator measures and goals as deemed necessary. Through gathering of this information, Boston is able to plan and change their city accordingly.

Green Grand Rapids

The *GGR* Project is led by Suzanne Schulz, the Planning Director of the City of Grand Rapids. It is an 18-month project and will be used to update the city's 2002 Master Plan by incorporating more emphasis on green initiatives. The project brings together Grand Rapids resident opinions and concerns by encouraging residents to participate in the initiative. The project works to combine the resident's input with municipal policy and the master plan(s).

Grand Rapids residents participated in the three phases of the 'Citizen Participation' efforts. Citizens are asked to contribute in three ways: to give and prioritize their ideas, and create an action plan.

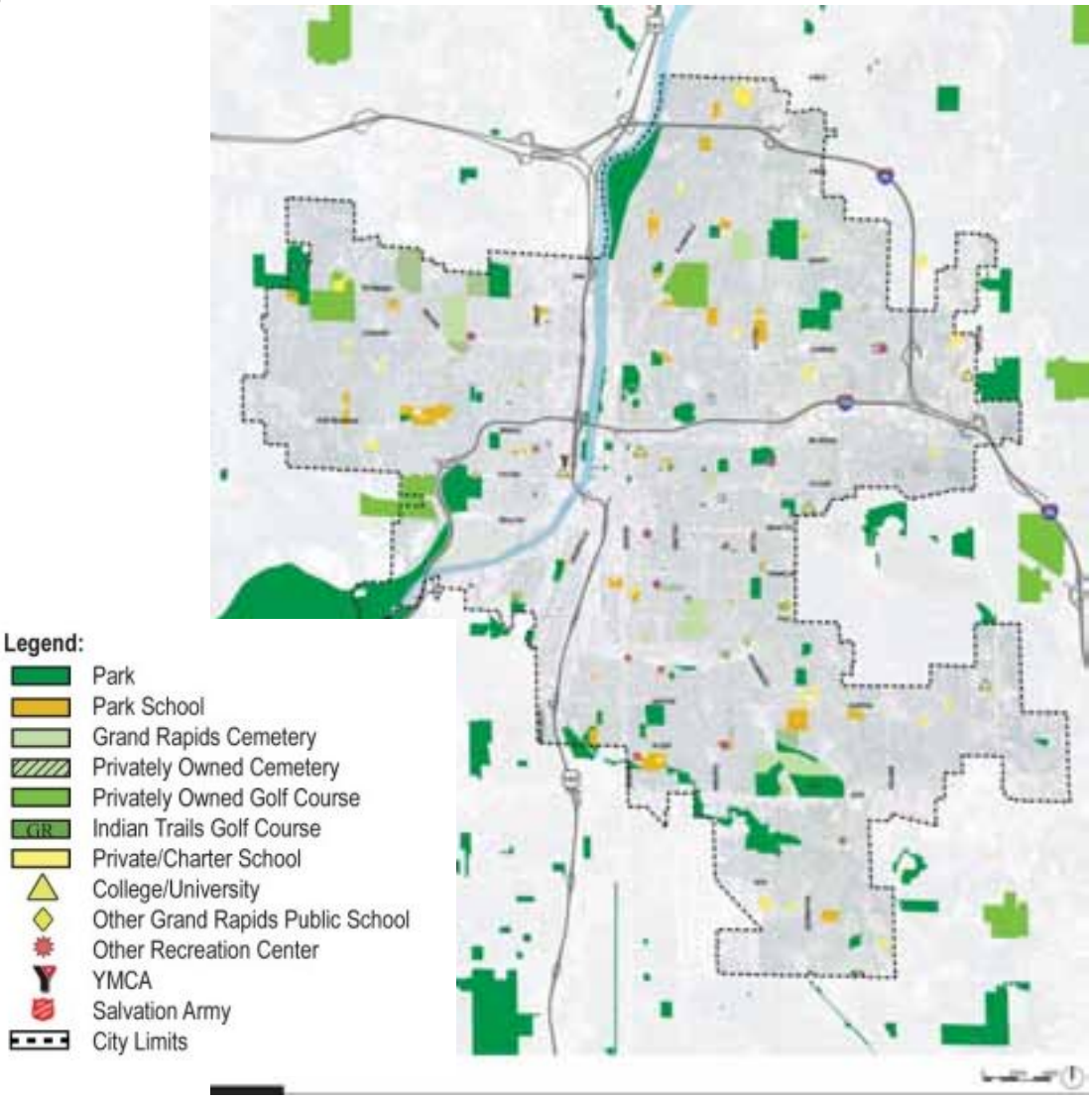
The City is required to update its Master Plan and Parks and Recreation Plan every five years. The City of Grand Rapids Planning Department and Parks and Recreation Department used this as an opportunity to create a master plan that focused on "quality of life and the physical development of community infrastructure as it relates to greening, connectivity, natural systems, the Grand River, recreation and public health".[21]

The goals of the *GGR Project* coincide with United Growth's Ideal Neighborhood project. The concerns of the Planning and Zoning department of the City of Grand Rapids were the decreasing amount of vacant land in the city, downsizing of *GGR Project*, shrinking city resources, and ensuring the awareness of tree canopy benefits are evident.[21] The surveys show that the citizens have an increasing demand for bike lanes in the city and a concern for the underutilization of Grand River. There is a request for community gardens and farmers markets and a need for an economic development strategy.

United Growth's goals and indicators for goal four: "Neighborhoods are Environmentally Green and Sustainable" are similar to the results of *GGR*. The *GGR Project* provides many maps regarding the Grand Rapids' environment. Our analysis of the United Growth indicator's was supported by the information gathered from *GGR*. The following map is an example of how data collection can be complimented and presented with the help of the City of Grand Rapids Planning Department; it is a map of Parks and Recreation locations. The City of Grand Rapids uses the map: Figure L1 to show the current locations of their green space and show their three priority strategies for the future of green space. The priority strategies are to provide an accessible park with ¼ mile of all residents, to establish maintenance priorities that balance quality and cost, and to extend the riverwalk from Riverside Street to Millennium Street. These priorities are similar to United Growth's indicator "Green Spaces Are Accessible".

[21] "Green Grand Rapids." City of Grand Rapids. 13 Apr. 2009 <http://www.grand-rapids.mi.us/index.pl?page_id=8572>.

Figure L1: Parks and Recreation Locations



Source: City of Grand Rapids Planning Department. Director of Planning Department: Suzanne Schulz, Presentation at MSU, 3 March 2009.

Neighborhoods Are Vibrant, Economically Sustainable Communities

Indicator 1.1: Residential and commercial properties are fully occupied

Method:

For US Census Data on Vacant Housing:

1. Go to www.factfinder.census.gov
2. Open up the Decennial Census data and click on "Custom Table" under the title: "Census 2000 Summary File 1 (SF 1) 100-percent Data"
3. Add to the "Current Geography Selections" the preferred calculation areas: Michigan, Kent County, and Census Block Track numbers (Census Block 13 and 14 for Belknap Lookout and Census Block 24 and 33 for Eastown). Click Next.
4. Under *Select a table*, Select the data files "H1. Housing Units" and "H5. Vacancy Status (Vacancy Housing Units)". Click Go.
5. Choose "Show Results"
6. To find 1990 data, return to the page labeled "Data Sets" and choose the "1990 Census" tab at the top of the page.
7. To find yearly data that is not in the Decennial Census reports, return to the main page and begin the search under the data files labeled "American Community Survey"

For USPS Data on Residential Vacant Units and Business Vacant Units:

1. Go to: http://www.huduser.org/DATASETS/usps.html.
2. At the bottom of this page find the download files for each quarter of each recent year. After choosing to "Download File Here", then click on "Yes" if you agree with the terms of agreement.
3. When the zip file is finished opening, use SPSS to open up the data file.
4. Use Michigan code (26), Kent County Code (081) and Neighborhood Block Group codes (Eastown: 0024, 0033 or Belknap Lookout: 0013, 0014) to find Census Tract information.

Indicator 1.2: Quality neighborhood schools

Method:

1. Go to http://www.michigan.gov/mde/0,1607,7-140-22709_31168_40135---,00.html for the most recent Michigan MEAP data.
2. Click on "School and District Summary Reports"
3. Choose "School District" from the scroll down menu
4. Choose "Grand Rapids Public Schools" for the School district data and then click on 'GO'.
5. From the next list, chose which data set you would like to view, the most recent data file is on top. For example, the "Fall MEAP 2007 Grades 3-9" is on the top of the list. Click on this to retrieve all data collected from Fall MEAP 2007. The data for Grade three is the first chart in the PDF file.
6. In order to see data for each individual school, return to the "School and District Summary Reports" page and click on "Schools". From this page you can find the specific school that you need data for.

For the Belknap Lookout neighborhood there are two grade schools:

-Coits Art Academy (K-5)

-East Leonard School (K-5)

For the Eastown neighborhood there are three grade schools:

-Campus Elementary (K-5)

-Southeast Academic Center (K-8)

-William C. Abney Academy (K-5)

Indicator 1.3: Density has increased

Method:

1. Go to www.factfinder.census.gov
2. Click on Decennial Census
3. Under "Census 2000 Summary File 1 (SF 1) 100-Percent Data", choose "Custom Table"
4. For geography: Add Michigan, Kent county, and the desired Census Tract for comparisons
5. For Belknap: Select Census Tract 13 and 14
6. For Eastown: Select Census Tract 24 and 33
7. Under "Select a Table and click 'Go'": Select "P1. Population"
8. Then click on the 'Search' tab and search for "area", add to data list.
9. Press Go
10. Copy data to Microsoft Excel
11. Use www.calculateme.com/Area/SquareMeters/ToAcres.htm to convert each 'square meter' area into acres.
12. For each location (state, county, census block), divide population by acreage. Use this number as your density per acre.
13. On the census website, repeat steps 4 through 10 for 1990 data.

Indicator 1.4: Neighborhood elementary school

Method: The first step is locating the schools. In order to do this, use CRI (Community Research Institute) Data.

1. Go to http://www.cridata.org/
2. Click on Community Profiles
3. Click on Grand Rapids under Neighborhoods
4. Click on Desired neighborhood
5. Click on Interactive Map
6. On the right hand side of the page under Select Points click on Public Schools
7. Record the elementary schools within the neighborhood selected as well as the elementary schools within 8 blocks of the neighborhood border.
8. Not all of the elementary schools will show up on the interactive map so take note of the surrounding neighborhoods and look up each neighborhood individually.
9. In order to look up each neighborhood individually, navigate back to step #4 and choose the desired neighborhood.
10. Click on the Full Profile tab under education. This will give all of the public schools located within that neighborhood.
11. Once all the surrounding neighborhood schools have been gathered, go to Google and click on maps.
12. Under maps, put in any school address and it will give detailed directions and location data.

Indicator 1.5: Neighborhood businesses are locally owned

Method:

1. Go to http://www.localfirst.com/ for the listing of registered locally owned businesses.
2. Click on “Member Directory”
3. Select a category of service(s) offered, then count the businesses located within the desired neighborhood.
4. This will generate the total of locally owned businesses for the desired neighborhood.
5. Proceed to go to the neighborhood community group(s) website.
6. Click on the link designated for businesses.
7. Count the number of businesses for the neighborhood until a final sum of obtained.
8. Divide the total sum of businesses within the neighborhood by the number of locally owned businesses within the area to obtain the percentage of locally owned businesses.

Every Neighborhood is a Mixed-Income Neighborhood

Indicator 2.1: Rental housing is available

Method:

1. Go to this website http://factfinder.census.gov/servlet/CTGeoSearchByListServlet?ds_name=DEC_2000_SF4_U&_lang=en&_ts=251580617416
2. Put in the following data
3. Geographic type- Census Tract
4. State- Michigan
5. County- Kent County
6. Add tracts desired census tracts. (24 and 33 for Eastown and 13 and 14 for Belknap)
7. Tab- By subject
8. Under search go to Tenure (Owner/Renter Occupied Units) under Housing Characteristics
9. Under table go to tenure

Indicator 2.2: Permanently affordable housing is available

Method:

1. Go to this website http://factfinder.census.gov/servlet/CTGeoSearchByListServlet?ds_name=DEC_2000_SF4_U&_lang=en&_ts=251580617416
2. Type in the following information
3. Geographic type- Census Tract
4. State- Michigan
5. County- Kent County
6. Add desired tracts (24 and 33 for Eastown and 13 and 14 for Belknap)
7. Tab- By subject
8. Under search go to Value of Home (Owned and Vacant) under Housing Characteristics
9. Under table choose Value for Specified Owner- Occupied Housing Units
10. Next find the Income
11. Go to census American FactFinder http://factfinder.census.gov/servlet/CTGeoSearchByListServlet?ds_name=DEC_2000_SF4_U&_lang=en&_ts=254106268738
12. Geographic type- Census tract
13. Select a state- Michigan
14. Select a County- Kent
15. Add desired tracts
16. Click next
17. On this page go to the by subject tab
18. Under economic characteristics go to income(households and families)
19. Select the table household income in 1999 then click go
20. Where it says select one or more data elements click on all of them and add them all
21. Next find the median of household income and house prices. To do this, add up all of the people or all the number of homes and divide it by two. Example: Lets find the median house price in Belknap Lookout using figure 2.2.1. First add up the total number of homes. There are 774 homes in Belknap Lookout. Divide this number by two. 774/2=387. Next find what price bracket 387 falls in on the graph figure 2.2.1 . To do

this, add the number of homes together, and stop before the number exceeds 387. EX: 6+6+19+26+50+11+179=297. Since this number of 297 doesn't reach 387, take the next bracket up. The price bracket 387 falls in $50,000-$59,999. To find the median price of 50,000-59,999 simply add the two and divide by two. $50,000+$59,999=$54,999. The median house price is $54,999.

22. Follow this same process for figure 2.2.3 household income.
23. Now an equation must be done in order to find the price of an affordable home.
24. The Housing and Urban Development (HUD) web site defines an affordable home as paying no more than 30% of annual income on housing.
25. In order to find the affordable home price, a few calculations were used.
26. (Annual income *30%)/12 months= affordable monthly mortgage
27. annual income is multiplied by 30% because the Housing and Urban Development website says affordable homes cost 30% of annual income.
28. (Annual income*30%) is divided by twelve, because there are 12 months in a year and it shows what a monthly mortgage payment would be.
29. Eastown example: (35,000*.3)/12=875
30. Now that the affordable mortgage is known, affordability can be assessed.
31. Go to this http://www.roderickparker.com/affordabilitycalc.htm. This website is Rod Parker John Adams affordability calculator. It calculates the mortgage using the desired mortgage term and mortgage rate. The only three fields completed and used for this indicator was 7% interest rate, 30 year term and desired mortgage amount.
32. To find the affordable house price, get the "Total Monthly Payment" field to match the "affordable monthly mortgage" found in the calculation above. Property taxes were not taken into account.
33. Property taxes were not counted in as a factor when finding affordability. The mortgage payment can be dramatically raised as well as dramatically lowered depending on the interest rate, and mortgage term used. Many mortgage calculators are different. The one used in this report may give higher or lower figures than others. These are all estimates.

Indicator 2.3: Economic diversity

Detailed Method:

1. Go to this website: http://www.census.gov/main/www/cen2000.html
2. Click on "Summary File 4."
3. Click on "Access to all tables and maps in American FactFinder."
4. Under Summary File 4, click on "Detailed Tables."
5. Add the geographies "Kent County (county)," "Grand Rapids city (place)," and census tracts from Kent County: 13, 14, 24, and 33.
6. Click on "Next."
7. Highlight table PCT 135. Sex by Earnings in 1999 for the Population 16 Years and Over with Earnings, and click "Add."
8. Click on "Next."
9. Click on "Show Result."
10. Under "Print / Download" tab, click on "Download."
11. Download in "Microsoft Excel (.xls)."
12. Open the file in Microsoft Excel.
13. Combine Male and Female categories.
14. Combine earnings brackets into

    $1-$12,499
    $12,500-$44,999
    $45,000-$99,999
    $100,000 or more

15. Combine census tracts 13 and 14 into a column titled "Belknap Lookout," and census tracts 24 and 33 into a column titled "Eastown."

For other neighborhoods, find census tract boundaries in the "Map It" function (from step 5), and compare with neighborhood boundaries on www.cridata.org.

Indicator 2.4: Housing is accessible

Detailed Method:

1. Call the Disability Advocates of Kent County (DAKC)'s ZeroStep program at 616.949.1100.
2. Ask about ZeroStep certificates given out in the specific geography.

Indicator 2.5: Racial composition mirrors the City of Grand Rapids

Detailed Method:

Neighborhood:

1. Go to http://www.cridata.org/default.aspx.
2. Move cursor over “Community Profiles”, move the cursor over “Neighborhoods of”, then click the link “Grand Rapids”.
3. Select the neighborhood that the data is desired for on the presented page and click the link with the cursor.
4. Scroll down to the “Population” column, then click on “Full Profile”.
5. This will display the population information for the neighborhood.

City:

1. Go to http://www.cridata.org/default.aspx.
2. Move cursor over “Community Profiles”, move cursor over “Cities & Townships of”, then select “Kent County”.
3. From the listing provided, select “Grand Rapids City”.
4. Scroll down to the “Population” column, then click on “Full Profile”.
5. This will display the population information for the city.

A Full Range of Transportation Modes Exist

Indicator 3.1: Public transit is accessible

Detailed Method:

1. Open Google Earth, and go to www.ridetherapid.org, and www.cridata.org.
2. Using Google Earth's polygon tool, draw the border of the neighborhood as shown on www.cridata.org.
3. Using Google Earth's line tool, draw the bus routes that pass through or near the neighborhood as shown on www.ridetherapid.org.
4. Using Google Earth's polygon tools, draw ¼ mile buffers around the bus routes, and measure the width using the ruler tool.

Indicator 3.2: Permanently affordable housing is available

Method:

1. Go to this website http://factfinder.census.gov/servlet/CTGeoSearchByListServlet?ds_name=DEC_2000_SF4_U&_lang=en&_ts=251580617416
2. Type in the following information
3. Geographic type- Census Tract
4. State- Michigan
5. County- Kent County
6. Add desired tracts (24 and 33 for Eastown and 13 and 14 for Belknap)
7. Tab- By subject
8. Under search go to Value of Home (Owned and Vacant) under Housing Characteristics
9. Under table choose Value for Specified Owner- Occupied Housing Units
10. Next find the Income
11. Go to census American FactFinder http://factfinder.census.gov/servlet/CTGeoSearchByListServlet?ds_name=DEC_2000_SF4_U&_lang=en&_ts=254106268738
12. Geographic type- Census tract
13. Select a state- Michigan
14. Select a County- Kent
15. Add desired tracts
16. Click next
17. On this page go to the by subject tab
18. Under economic characteristics go to income(households and families)
19. Select the table household income in 1999 then click go
20. Where it says select one or more data elements click on all of them and add them all
21. Next find the median of household income and house prices. To do this, add up all of the people or all the number of homes and divide it by two. Example: Find the median house price in Belknap Lookout using figure 2.2.1. First add up the total number of homes. There are 774 homes in Belknap Lookout. Divide this number by two. 774/2=387. Next find what price bracket 387 falls in on the graph figure 2.2.1 . To do

this, add the number of homes together, and stop before the number exceeds 387. EX: 6+6+19+26+50+11+179=297. Since this number of 297 doesn't reach 387, take the next bracket up. The price bracket 387 falls in $50,000-$59,999. To find the median price of 50,000-59,999 simply add the two and divide by two. $50,000+$59,999=$54,999. The median house price is $54,999.

22. Follow this same process for figure 2.2.3 household income.
23. Now an equation must be done in order to find the price of an affordable home.
24. The Housing and Urban Development (HUD) web site defines an affordable home as paying no more than 30% of annual income on housing.
25. In order to find the affordable home price, a few calculations were used.
26. (Annual income *30%)/12 months= affordable monthly mortgage
27. Annual income is multiplied by 30% because the Housing and Urban Development website says affordable homes cost 30% of annual income.
28. (Annual income*30%) is divided by twelve, because there are 12 months in a year and it shows what a monthly mortgage payment would be.
29. Eastown example: (35,000*.3)/12=875
30. Now that the affordable mortgage is known, affordability can be assessed.
31. Go to this http://www.roderickparker.com/affordabilitycalc.htm. This website is Rod Parker John Adams affordability calculator. It calculates the mortgage using the desired mortgage term and mortgage rate. The only three fields completed and used for this indicator was 7% interest rate, 30 year term and desired mortgage amount.
32. To find the affordable house price, get the "Total Monthly Payment" field to match the "affordable monthly mortgage" found in the calculation above. Property taxes were not taken into account.
33. Property taxes were not counted in as a factor when finding affordability. The mortgage payment can be dramatically raised as well as dramatically lowered depending on the interest rate, and mortgage term used. Many mortgage calculators are different. The one used in this report may give higher or lower figures than others. These are all estimates.

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Indicator 3.3: Every Street has a complete sidewalk on both sides of the street

Method/Source: Count number of streets with complete sidewalks on both sides of the street and the total mileage of these streets

Detailed Method:

1. Go to Google Maps and search for the intended neighborhood in the city that you wish to keep track on. In this situation, we are using the pilot neighborhoods of Belknap Lookout and Eastown, both of which are from the city of Grand Rapids.
2. After locating the neighborhood, go to Google Maps Street View by dragging the small orange figurine that is on top of the zooming bar on the left corner of the Google Map's screen. Drag the figurine onto a road that is of interest to you within the neighborhood.
3. Immediately after dragging the figurine and placing it on top of one of the roads that is in map view, the screen would show you the Street View, which is essentially what one would see when walking along the streets. From then on, one would be able to navigate by clicking onto the arrow buttons or using the compass that is provided.
4. In order to take note of the complete sidewalks that are on both sides of the street, one would have to look carefully at both sides of the street to ensure that there are complete sidewalks. You could then continue looking at other areas along the same street by clicking on the arrow buttons, or also by dragging the small figurine to strategic locations along the same road, such as at an intersection.
5. After taking note of the road that has complete sidewalks on both sides, go to Google Maps and use the Print Screen button to capture the image of the neighborhood's map. After doing so, open this Map on Paint program. In Paint, use the line function to draw a colored line along the center of the road that has complete sidewalks so as to indicate that the road fulfills the indicator and also to allow one to keep track of the roads that have already being covered.
6. Next, go to the Google Maps Distance Calculator at http://www.daftlogic.com/projects-google-maps-distance-calculator.htm, plot 2 points along the road that fulfills the criteria of the indicator and take note of the distance. Record the distance in a table using Excel or other similar program. For roads that do not run in a straight line, more than 2 points would be needed as you would plot along the route.

7. With the marking out of the roads that have complete sidewalks on both sides of the streets in Paint Program, one would be able to have a visual sense of how much coverage the neighborhood has in terms of having complete sidewalks. With the raw data that was found through the Distance Calculator, sum up all the streets that fulfill the indicator's criteria. After doing that, find out from the distance calculator the distance of those streets that do not fulfill the criteria of the indicator and add them to the distance of the streets that fulfill the criteria in order to take note of the total mileage of all the roads within the neighborhood.
8. By using this formula:

(C/T)100% where:

C = Total Mileage of Roads with complete sidewalks on both sides in the neighborhood

T = Total Mileage of Roads within the neighborhood

One would be able to find out the coverage percentage within the neighborhood. For future uses, users would be able to compare the previous percentage coverage with the new one to see if there were any improvements to the coverage of roads that have complete sidewalks on both sides of the street within the neighborhood. This percentage could also be used to compare the coverage percentage of other neighborhoods that are similar in nature.

Indicator 3.4: Bike lanes are common

Method:

Go to the City of Grand Rapids website, which would have a map that shows the different bike routes that are available at Grand Rapids. http://www.grand-rapids.mi.us/download_upload/binary_object_cache/planning_Bike%20GR%20v4.pdf

From the map, go to the neighborhood(s) that you wish to identify the bike lanes and take note of the name of the streets. In the case for this indicator, the two neighborhoods that were picked out are Belknap Lookout and Eastown. Follow the legend that the map has in identifying the type of bike paths you wish to keep track of. There are various types of bike paths such as Preferred Bicycle Route or Secondary ones. For the case of this indicator, we shall stick to the Preferred and Secondary Bicycle Routes.

1. Next, go to the website called the Google Maps Distance Calculator at http://www.daftlogic.com/projects-google-maps-distance-calculator.htm, which is essentially a distance-mapping website that allows you to find out the distance between different points on a Google map.
2. From the Biking route map that shows all the possible biking routes that are available in Grand Rapids, take note of the bike lanes that are within the targeted neighborhood and then use the Distance Calculator to calculate the distances of the roads that have bike lanes by plotting two points if the road runs in a straight line.
3. For roads that are not running in a straight line, you will have to plot more than once in order to follow the route of the road. This would give an accurate measurement of the distance.
4. After taking note of the roads that have bike lanes, go to Google Maps and use the Print Screen button to capture the image of the neighborhood's map. After doing so, open this Map on Paint program. In Paint, use the line function to draw a colored line along the center of the roads that have bike lanes as to indicate that the roads fulfill the indicator and also to allow one to keep track of the roads that have already being covered.
5. With the marking out of the roads that have bike lanes in Paint Program, one would be able to have a visual sense of how much coverage the neighborhood has in terms of roads with bike lanes. With the raw data that was found through the Distance Calculator, sum up all the streets that fulfill the indicator's criteria. After doing that, find out from the

distance calculator the distance of those streets that do not fulfill the criteria of the indicator and add them to the distance of the streets that fulfill the criteria in order to take note of the total mileage of all the roads within the neighborhood.

6. By using this formula:

(B/T)100% where:

B = Total Mileage of Roads with bike lanes in the neighborhood

T = Total Mileage of Roads within the neighborhood

One would be able to find out the coverage percentage within the neighborhood. For future uses, users would be able to compare the previous percentage coverage with the new one to see if there were any improvements to the coverage of roads that have bike lanes within the neighborhood. This percentage could also be used to compare the coverage percentage of other neighborhoods that are similar in nature.

Indicator 3.5: Residents have become less car dependant

Method:

Belknap Lookout

1. Go to www.city-data.com
2. Enter the name of the neighborhood for which the data is needed, in this case enter Belknap lookout, Grand Rapids, MI and press "find".
3. You will be directed to a page full of latest Census data and city facts, in this case you will be directed to Belknap lookout, Grand Rapids, Michigan (MI)
4. Select the relevant data for Belknap lookout and the figures mentioned in case of the number of cars per household in till July 2007.
5. The "Data Sets" are available and can be chosen from this page.

Data:

Figure 2.5.1 Vehicles Per Household

	Average Number of vehicles per household (2000)	Average Number of vehicles per household (2007)
Belknap Lookout	1.1	1.6
Grand Rapids	1.2	1.8

Source: city-data.com

Method:

Eastown

1. Go to www.city-data.com
2. Enter the name of the neighborhood for which the data is needed, in this case enter Eastown, Grand Rapids, MI and press "find".
3. You will be directed to a page full of latest Census data and city facts, in this case you will be directed to Eastown, Grand Rapids, Michigan (MI)
4. Select the relevant data for Eastown and the figures mentioned in case of the number of cars per household in till July 2007.
5. The "Data Sets" are available and can be chosen from this page.

Data:

Figure 3.5.1

	Average Number of vehicles per household (2000)	**Average Number of vehicles per household (2007)**
Eastown	1.6	1.8
Grand Rapids	1.2	1.8

Source: city-data.com

Indicator 3.6: Residents with disabilities can easily access the entire neighborhood

Method:

No discernable method could be developed.

Contacts:

City Clerk's Office
Main Office
City Hall – 2nd Floor
300 Monroe Avenue NW
Grand Rapids, Michigan 49503
Phone: 616.456.3010
E-mail: cityclerk@grcity.us

Lauri S. Parks – City Clerk
Phone: 616.456.3015

City Archives
Community Archives and Research Center
223 Washington Street SE
Grand Rapids, MI 49503
Phone: 616. 456.3114
Fax: 616.456.4411

Engineering Department
300 Monroe Avenue NW
Grand Rapids, Michigan 49503
Phone: 616.456.3060
Fax: 616.456.3828
E-mail: engineering@grcity.us

Disability Advocates of Kent County (DAKC)
3600 Camelot Drive SE
Grand Rapids, Michigan 49546
Phone: 616.949.1100
Fax: 616.949.7865

Frank Lynn III – Housing Specialist
Extension 238
E-mail: frank.l@dakc.us

Neighborhoods are Green and Environmentally Sustainable
Indicator 4.1: Residents support locally grown food

Method:

Belknap Lookout

1. Go to http://maps.google.com/
2. Enter the name of the neighborhood and local farmers market for which the data is needed, in this case enter Farmers Market Belknap Lookout, Grand Rapids, MI and press "enter".
3. You will be directed to a map locations of all the local markets in this neighborhood, in this case you will Fulton's Farmers Market, Grand Rapids, Michigan (MI)
4. Go to get directions or Calculate distance tab and press this tab, in the section A, type Belknap Lookout, Grand Rapids, Michigan (MI) and in section B, type Fulton's Farmers Market, Grand Rapids, Michigan (MI) and press "enter".
5. The distance between these two points will be displayed on the screen along with a map with the route.

Data:

Figure 4.1.1 Belknap Lookout Local Farmers Market

	Belknap Lookout
Number of Local Farmers Market	1
Distance from neighborhood	2.2 miles

Source: www.googlemap.com

Sources:

http://maps.google.com/

http://www.ci.grand-rapids.mi.us/index.pl?page_id=8572

Method/Source: http://maps.google.com/, http://www.ci.grand-rapids.mi.us/index.pl?page_id=8572

Detailed Method:

Eastown

1. Go to http://maps.google.com/
2. Enter the name of the neighborhood and local farmers market for which the data is needed; in this case enter Farmers Market Eastown, Grand Rapids, MI and press "enter".
3. You will be directed to a map locations of all the local markets in this neighborhood, in this case you will Fulton's Farmers Market, Grand Rapids, Michigan.
4. Go to get directions or Calculate distance tab and press this tab, in the section A, type Eastown, Grand Rapids, Michigan (MI) and in section B, type Fulton's Farmers Market, Grand Rapids, Michigan (MI) and press "enter".
5. The distance between these two points will be displayed on the screen along with a map with the route.

Data:

Figure 4.1.2 Eastown Local Farmers Market

	Eastown
Number of Local Farmers Market	1
Distance from neighborhood	2.2 miles

Source: www.googlemap.com

Indicator 4.2: Green space is accessible

Method: Count/ map green spaces and measure distance to all households.

1. Go to http://maps.google.com/
2. Enter the name of the neighborhood and Park and green spaces for which the data is needed, in this case enter "parks loc: Belknap Lookout, Grand Rapids, MI" and press "enter".
3. Press within 1/4th mile option in the distance section.
4. You will be directed to a map location of all the green spaces in this neighborhood, in this case you will be able to locate two green areas within quarter mile distance.

Indicator 4.3: Street canopy reduces greenhouse gases

Method/Source:

- Contact Rod Denning he has done a project which looks at street canopy
- This is not an measurement that can be replicated through any other tool at a general level

Rod Denning

Research Associate, GISP

Grand Valley State University

Annis Water Resources Institute

Lake Michigan Center

740 W. Shoreline Dr.

Muskegon, Michigan 49441

Personal Phone: 616.331.3793

Fax: 616.331.3864

Department: 616.331.3749

Empowerment, Human Connectedness, and Social Justice are Prominent Features in the Neighborhoods

Indicator 5.1: Strong citizen based organization are Active

Method:

1. Using the internet, search for community based organizations within the respective neighborhoods or the webpage Local First, http://www.localfirst.com/.
2. On the left hand side of the Local First screen select "Member Directory".
3. Once re-directed click on "Community Organizations" on the left side of the screen under the heading "Member Categories".
4. Once this list is formed, go through and decide according to address, which organization is located within the respective neighborhood.

1. Community Research Institute, http://www.cridata.org.
2. On this website select neighborhood from the center of the screen.
3. Select neighborhood to be researched.
4. After being directed to the new webpage, select the interactive map. This link will take you to a site called MAPAS.
5. On this site, select "non-profit organizations" from "select points" heading on the left side of the screen. A set of colored squares will appear within the neighborhood boundaries.
6. After viewing all of the sites and compiling a list, use your own discretion to decide what qualifies as a student organization.
7. E-mail or call the neighborhood associations; they will provide this information.