



Elmira-Chemung Transportation Council

City of Elmira Sidewalk Inventory & Analysis

2024

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Executive Summary

The Elmira-Chemung Transportation Council (ECTC) undertook a systematic survey of sidewalk, curb ramp, and crosswalk conditions in the City of Elmira. The intent was to have some indication of City sidewalk quality to guide future transportation initiatives and better understand pedestrian infrastructure.

Sidewalk sections were graded on a 4-point scale by accessibility, following NYSDOT guidance. The survey data then served as the basis for further analysis to understand any patterns and disparities. Sidewalk “score” averages by location – typically census tract – were compared against other location metrics, such as income, demographics, and land use. The preliminary findings are presented in this report with implications and policy guidance.

Some notable findings include:

- Census tracts with higher average assessed property values were found to have higher quality sidewalks.
- Areas with higher proportions of disabled populations were found to have lower quality sidewalk conditions.
- Sidewalk conditions were found to correspond with historic redlining districts where underinvested communities have worse overall sidewalk conditions.
- Areas with a higher proportion of pedestrian commuters who were also economically disadvantaged had lower quality sidewalks than other areas.

Chemung County and the City of Elmira are advised to consider sidewalks as critical infrastructure with social and economic implications. Public investments in sidewalks should prioritize areas with lower property values and areas with greater disabled populations to address environmental justice.

Background

Sidewalks are an important facet of transportation infrastructure as they remain the most frequented by those with the fewest resources. Every citizen, regardless of how car dependent their area, has a right to safely move around their community. Sidewalk connectivity allows for safe travel to community destinations and enhances mobility and overall quality of life.

Sidewalk quality is of particular concern to those requiring wheelchair use or with other mobility restrictions, as poor sidewalk quality is a matter of accessibility. It is widely understood in urban planning that pedestrian transportation is highly desirable by virtue of its low environmental impact, benefits to health, and low economic barriers of use. This is all the more important for municipalities like the City of Elmira, which has a lower than statewide average income and multiple census tracts designated as Areas of Persistent Poverty from the US Department of Transportation. Cumulatively, Chemung County and the Elmira-Chemung Transportation Council encourage pedestrian infrastructure to be extensive and kept in good repair.

The City's code contains a potential obstacle to this goal as Section 154. h(1) of the City of Elmira ordinance states:

“The owner or owners of the property along or in front of which or any part of which, a sidewalk is constructed, built, rebuilt or repaired, shall pay to the city chamberlain the entire cost of the rebuilding or repairing of any sidewalk along and in front of his or their property or any part thereof”.

The requirement that property owners pay for adjacent sidewalk repair impedes the maintenance of good quality sidewalk condition in the City. Homeowners, especially low-income homeowners, are unlikely to make sidewalks their priority when most of the City's housing stock was built before 1939; other maintenance costs are inevitable for the majority of homeowners in the City.

The theory that sidewalk repair is a low priority for property owners is at least somewhat confirmed by how few City residents used Rehabilitation Grants on sidewalk repair. In 2021, the City allotted American Rescue Plan Act (ARPA) funds to provide Elmira homeowners with \$5,000 grants per household to those who applied. Of 812 grants awarded, only 30 applicants used any of the funds to repair their sidewalks.

Prior to 2023 the County had no City-wide (or indeed, any municipality-wide) assessment of sidewalk quality, and so these issues and concerns had no strong basis to build any future action on. Following ECTC's sidewalk survey however, the County has a solid foundation for further study and planning direction.

Methods of Inventory

Based on aerial image analysis, sidewalk locations were mapped by ECTC in ArcGIS Pro. A 2023 summer intern was hired by ECTC to carry geocoded, app-capable technology to survey by GoPro all of the City's 162 miles of sidewalk, and to monitor their location by GIS Field Maps Ap to ensure consistency. The recorded and verified sidewalk location was marked and graded by ECTC staff. ECTC's survey grading system was based on previous and ongoing work conducted by the Adirondack Glens Falls Transportation Council (AGFTC) and the Syracuse Metropolitan Transportation Council (SMTC), which established standards to rate sidewalks, curb ramps, and crosswalks by accessibility features. Rating of 1 for "Not Applicable" under SMTC grading was omitted by ECTC's grading system.

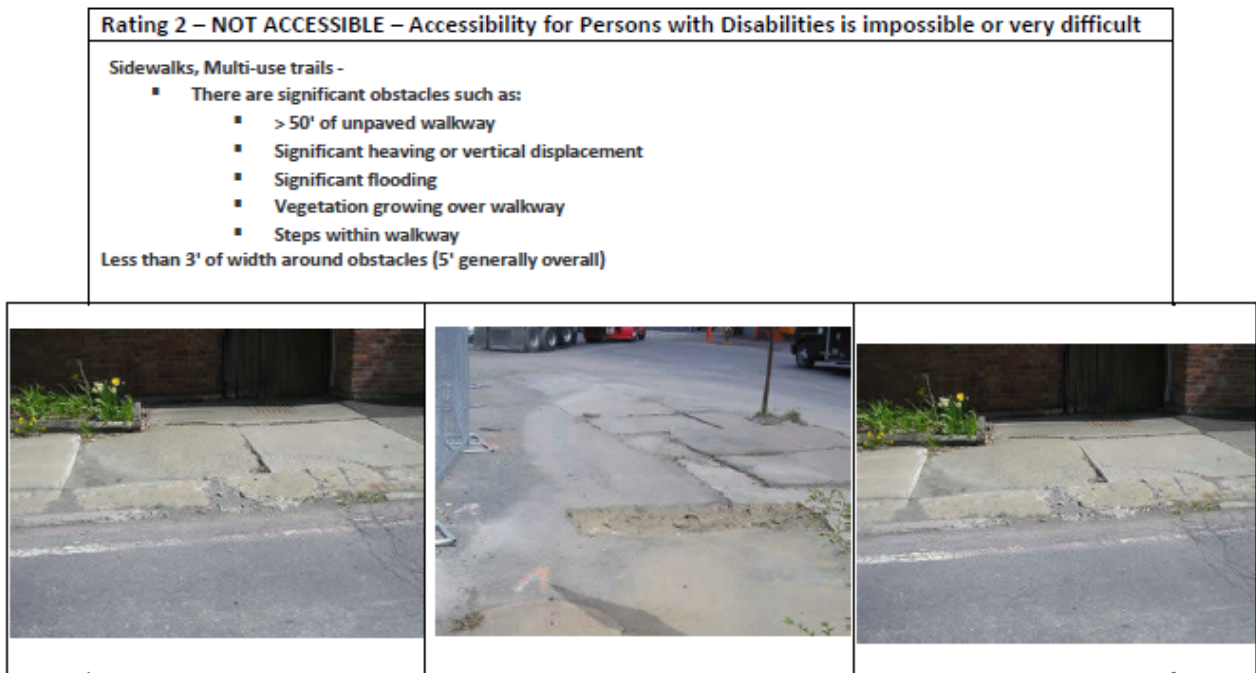


Figure 1: SMTC pedestrian rating scale, example of a 2 rating out of 5

SMTC Condition Rating Description (Based on NYSDOT Rating)

Rating	Title	Description	
1	Not Applicable	A facility or feature is not required to be accessible. If a feature is part of an accessible route, it is required to be accessible.	Generally not going to be used.
2	Not Accessible	Accessibility for Persons with Disabilities is impossible or very difficult. Think "Poor."	>50' unpaved walkway
			Significant heaving or vertical displacement
			Significant flooding
			Vegetation growing over walkway
			Steps within walkway
3	Partially Accessible	Not to current standards. Accessibility is possible, but there are problems. Think "Fair."	Less than 3' of width around obstacles (5' generally overall)
			Small heaving or vertical displacement
			No handrails on walkway ramps (not generally applicable)
4	Accessible	May need additional improvements. Think "Good."	Major maintenance issues (gravel accumulation)
			Generally minor maintenance problems
5	Fully Accessible to current standards	No improvements needed. Think "Excellent."	Minor insufficient width
			No or very minor maintenance problems
			Appropriate width (5' residential, 8' commercial)

Figure 2: SMTC pedestrian rating scale description table

Methods of Analysis

ECTC's GIS staff used ESRI's ArcPRO software to summarize sidewalk, curb ramp, and crosswalk condition rating by 10 City census tracts (excluding tract 3, which consists entirely of the Elmira Correctional Facility), presented as the percentage that was found to be in Fully Accessible, More Accessible, Less Accessible, and Not Accessible condition. This was then repeated for geographic boundaries other than census designated tracts, such as 500' radii of City points of interest, zoning districts, and historic redlining boundaries. Sidewalk condition ratings were then assigned numbers 2 to -2, with 2 being "Fully Accessible", so that location condition percentages could be assigned numerical grades. As an example, census tract 10 was found to have 50.2% Fully Accessible (2) sidewalks, 43.58% More Accessible (1) sidewalks, 2.05% Less Accessible (-1) sidewalks, and 4.10% Not Accessible (-1) sidewalks. The score percentages were multiplied by their respective rating and then summed.

Sidewalk % (Score)	Tract 10:	A * (B/100)			
Fully Accessible (2)	50.2	1.004			
More Accessible (1)	43.58	0.4358			
Less Accessible (-1)	2.05	-0.0205			
Not Accessible (-2)	4.1	-0.041			
		1.3783	Total Sidewalk Score for Tract 10		

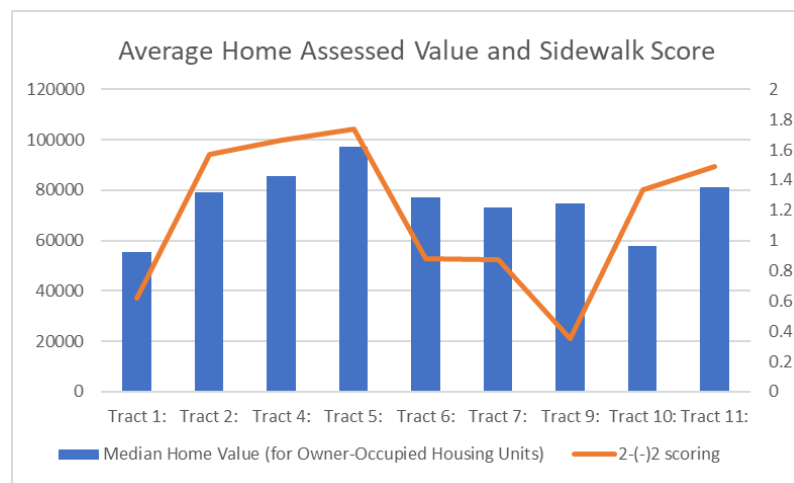
These total scores were then compared against other geographical data to find correlations.

Primarily, 2022 Census Data was used to find income, disability, age, race, commuting method, unemployment rate, homeowner rate, veteran population, and median home values, area of land, housing units, and population by census tract. The City of Elmira’s Chamberlain’s Office, Department of Public Works, and Assessment Office provided data on sidewalk construction permits, ARPA homeowner rehabilitation grants, and property values respectively.

Findings and Outcomes

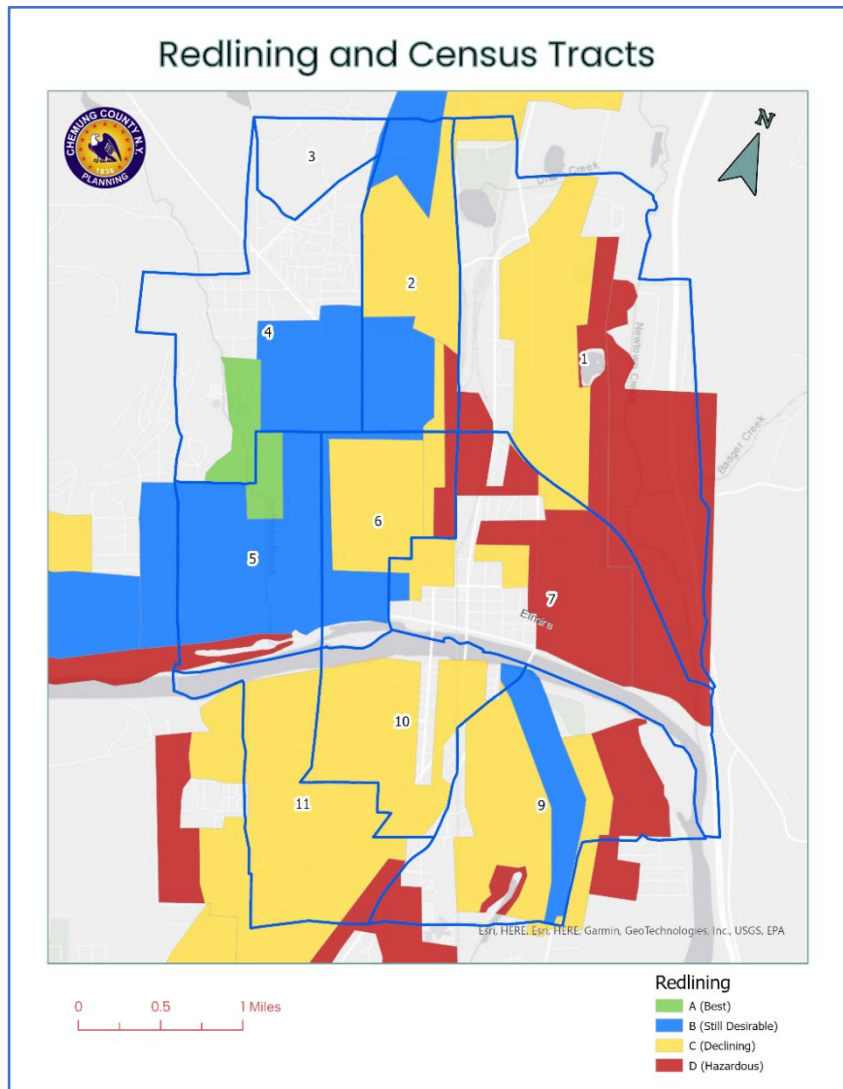
ECONOMIC

Income and poverty naturally present themselves as primary variables to study in relation sidewalk quality if homeowner income directly affects resources available for sidewalk repair. In the City of Elmira, it was found that census tracts with a higher proportion of households at or under the poverty line weakly correlate with census tracts in poorer sidewalk repair. Census tracts average house assessments very strongly with sidewalk repair.

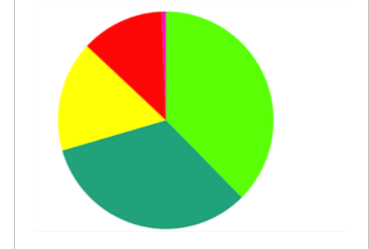


REDLINING

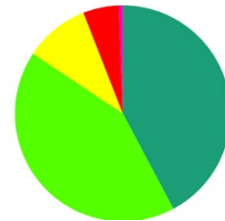
Redlining, an all too recent designated lending risk factor assigned by mortgage brokers based largely on an area's racial makeup, was deemed illegal in the 1970s. The sidewalk quality in Elmira is in starkly better condition in areas that were once designated lower risk through redlining practices.



Sidewalks in Hazardous Areas (D)



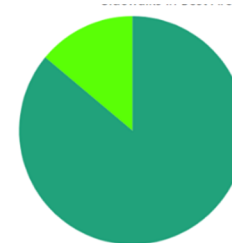
Sidewalks in Declining Areas (C)



Sidewalks in Still Desirable Areas (B)



Sidewalks in Best Areas (A)

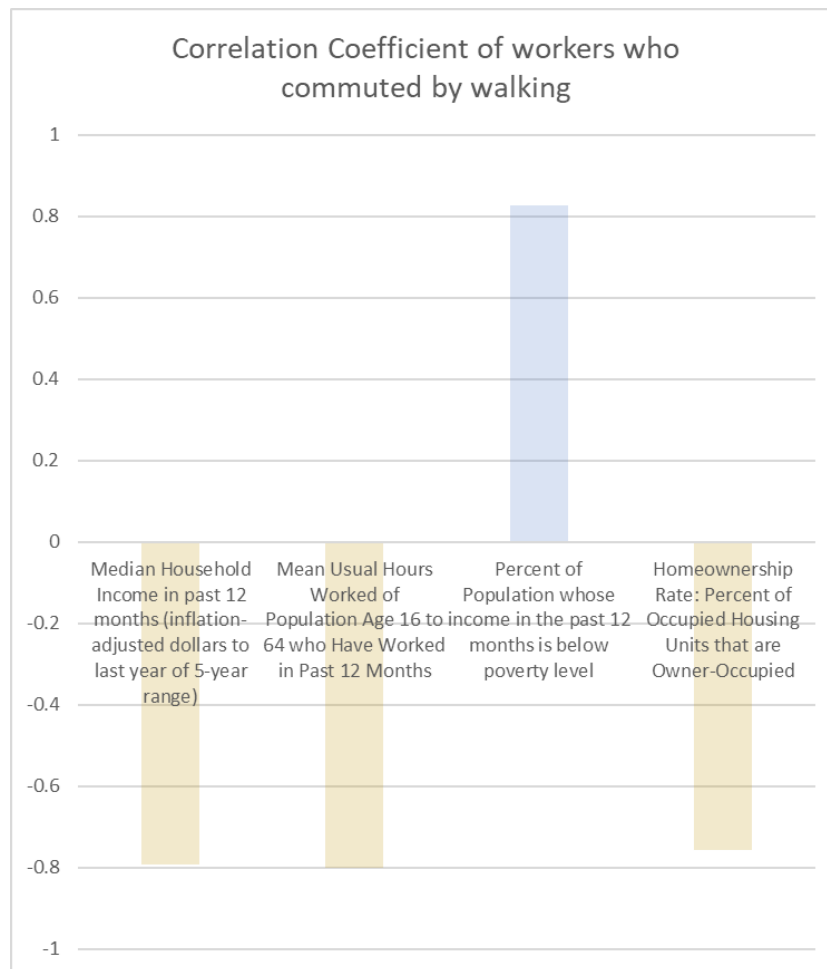


DEPENDENT POPULATIONS

Sidewalks appear to be in consistently poorer condition in census tracts with a higher population of disabled individuals and veterans. Census tracts with a higher proportion of children per household however tend to have better sidewalk conditions. Sidewalk conditions around high trafficked “destination” features, such as bus stops and landmarks, had no association with better or worse sidewalk conditions with the exception of schools. Sidewalks within 500ft of schools were in 14% worse condition than average for the City.

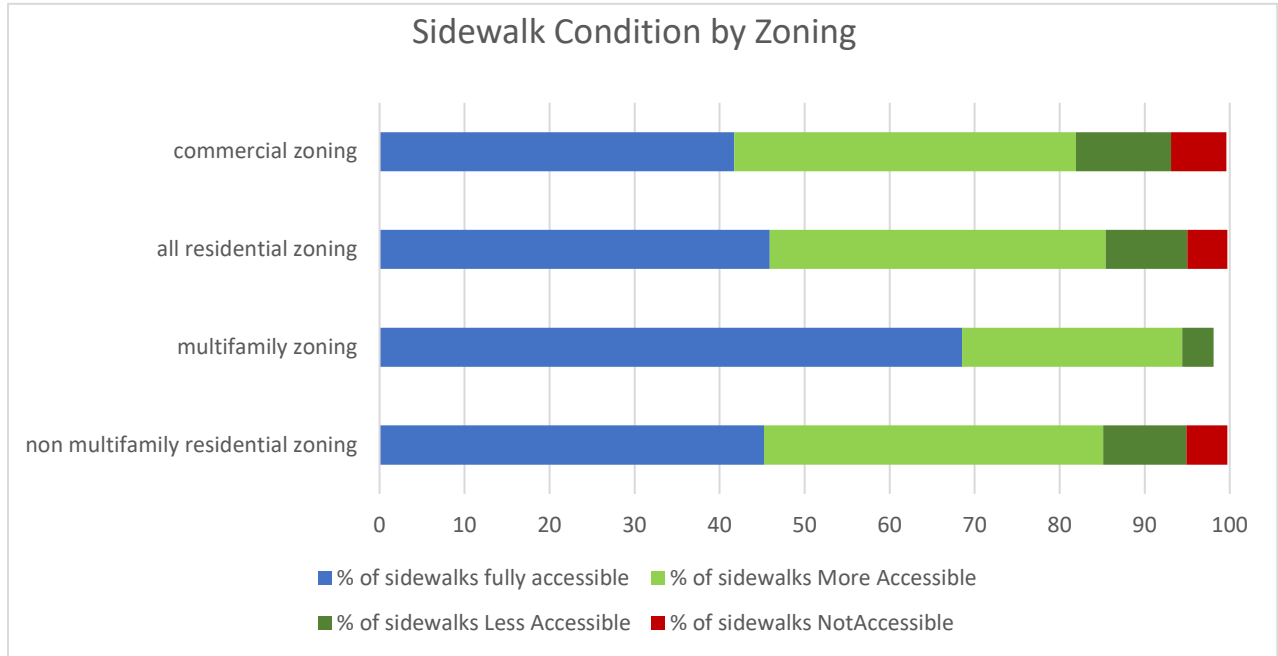
COMMUTING

Sidewalk conditions do not correlate with some equity factors, such as underemployment, low homeownership, or low median income. However, the proportion of Elmira residents who exhibit these factors were found to also be much more likely to be pedestrians.



ZONING

Sidewalk use would reasonably be associated with a greater residential density, as the later forms the foundation of walkable communities. In Elmira, commercial and single-family residential zoning largely map along city-wide trends in sidewalk repair. Multifamily zoned areas, though, had markedly better sidewalk conditions than the rest of the City.



Implications and Next Steps

It should be understood that these findings are still based on a grading scale that is qualitative rather than quantitative. Like street grading, sidewalk grading is largely subjective by the individual doing the rating, even when every effort is taken to assess quality by clear metrics. Using census tracts as the basic unit of geographic study area is itself somewhat arbitrary, and the crucial subject of a lack of sidewalks entirely in areas is not addressed. These caveats aside, some preliminary conclusions may be reached.

It was found that many metrics of economic disadvantage in census tracts correlated at least somewhat with poor sidewalk condition, with average home assessment value by tract having the strongest association. Interestingly, a direct comparison of individual home assessment values provided by the City's Assessment office against adjacent sidewalk conditions show no such correlations. It may be concluded then that although wealthier areas see better sidewalk conditions, this is an indirect influence rather than a direct one.

It is understood that the ramifications of redlining carry into the modern era as inherited wealth through homeownership is more likely to be apparent in areas originally designated "high value". This appears to be the case in the City of Elmira, with notably better sidewalk conditions in areas historically designated lower risk.

The relationship between pedestrian infrastructure dependence and disadvantages in income, housing, and employment, demonstrates that sidewalk condition is likely a matter of highest need among the most vulnerable in the City. Given that pedestrian transport is the most basic and affordable method of transportation, pedestrian access through sidewalk conditions is a matter of equity. Ensuring that the portion of the population most reliant on sidewalks are not unduly burdened with poor sidewalk conditions deserves consideration.

For land use, better sidewalk condition was found in areas with higher density zoning. This may indicate that multifamily zoned residences and businesses are more invested in maintaining sidewalk access as a quality of life factor valued by citizens who choose to live in multifamily housing, or it may indicate that density allows for efficient structural upkeep in general.

Future Direction

The varied economic and social influences that affect sidewalk condition within the unique context of the City of Elmira are necessary to note in future infrastructure planning. The recent data collected by ECTC provides some evidence that equity, efficiency, and sidewalk condition longevity, are all affected by Elmira’s delegation of repair to homeowner as well as compounding effects of poverty and historic neglect of pedestrian infrastructure. The Chemung County Planning department intends to work with the City of Elmira in partnership with ECTC to find innovative and economically sustainable methods to ensure pedestrian infrastructure is accessible to all residents. This could include future planning to identify pedestrian routes, funding for homeowner reimbursement of sidewalk repair, and partnerships with local contractors to better serve the City.

Potential Sidewalk Locations



Appendix:

	Sidewalks Fully Accessible (%)	Sidewalks More Accessible (%)	Sidewalks Less Accessible (%)	Sidewalks Not Accessible (%)
Single and Two Family Residential Zoning	45.2	39.9	9.8	4.8
Multifamily Zoning	68.5	25.9	3.7	0
All Residential zoning	45.9	39.5	9.6	4.7
Commercial Zoning	41.7	40.2	11.2	6.5
Redlining "Best" Areas	86	14	0	0
Redlining "Still Desirable" Areas	55.7	32.1	8.1	3.8
Redlining "Declining" Areas	42.2	42.1	9.7	5.4
Redlining "Hazardous"	37.6	32.9	16.5	12.4
500' Buffers, schools	41.7	38.3	12.8	7.2
500' Buffers, destinations	48.9	34.4	10.3	6.4
500' Buffers, bus stops	49.5	36.4	9.0	5.2
Total City Sidewalks	46.6	37.7	9.7	5.5

	Tract 1:	Tract 2:	Tract 4:	Tract 5:	Tract 6:	Tract 7:	Tract 9:	Tract 10:	Tract 11:
miles of sidewalk	16.4	17.1	12.5	17.3	14.99	22.67	19.14	14.68	11.09
% of population below poverty line	30.5	18.02	26.87	21.54	47.1	52.37	12.31	26.33	10.38
total population	2635	2642	2113	2912	2864	2407	3355	2770	3354
% of households have cars	86.2	89.1	93.4	89.86	85.35	76.29	90.17	77.73	91.94
% of population are seniors	12.72	15.47	25.08	17	9.69	27.53	13.6	14.92	16.77
% of sidewalks fully accessible	24.35	67.04	70.5	77.89	42.32	41.23	13.15	50.2	56.86
% of sidewalks More Accessible	48.19	28.4	27.3	20.52	34.39	36	53.9	43.58	39.7
% of sidewalks Less Accessible	18.65	3.41	2.2	0.5	15.34	14.15	20.61	2.05	2.45
% of sidewalks NotAccessible	8.29	1.13	0	1	7.93	8.61	12.28	4.1	0.98
% of curb ramps fully accessible	38.96	64.14	72.6	70.89	66.15	51.89	44.72	58.85	67.47
% of curb rampsMore Accessible	36.62	27.27	27.4	25.92	27.69	33.24	39.24	36.97	28.15
% of curb ramps Less Accessible	18.77	4.04	0	2.64	3.58	10	8.43	2.08	1.94
% of curb ramps NotAccessible	5.63	4.54	0	0.53	2.56	4.86	7.59	2.08	2.42
% of crosswalks fully accessible	74	95	73.1	0	83.6	72.5	78.43	81.6	72.2
% of crosswalks More Accessible	24	5	26.9	0	16.39	22.5	19.6	17.24	27.8
% of crosswalks Less Accessible	2	0	0	0	0	5	1.96	0	0
% of crosswalks NotAccessible	0	0	0	0	0	0	0	1.15	0
numerical 4-1 scoring	0.6166	1.5681	1.661	1.738	0.8783	0.8709	0.3503	1.3373	1.4901
Percent of Population that is Less Than 18 Years	22.6	26.7	26.4	23.3	20.7	19.7	25.3	26.8	25.2
% of disabled in population	38.7	14.9	11.8	16.1	13.6	35.3	16.4	24	16.1
Percent of Population that is 65 Years and Over	22.9	10.9	21.4	18.5	4.3	24.7	19.6	8	12.3
Percent of Population in Dependent Age Groups (under 18 and 65+)	45.5	37.6	47.9	41.8	25	44.3	44.9	34.7	37.5
Median Household Income in past 12 months (inflation-adjusted dollars to last year of 5-ye	36081	44435	45991	57569	21858	16151	62969	43354	49300
% of non-white population	18	18.1	34.7	9.2	24.7	27.3	14.9	23.9	28.3
Percent of workers who commuted by walking	5.1	6.9	9.8	6.3	14.7	12.6	1.2	5.6	0.5
Mean Usual Hours Worked of Population Age 16 to 64 who Have Worked in Past 12 Months	34	36.2	36.3	37.9	29.6	31.6	37	36.7	37.5
Percent of Population whose income in the past 12 months is below poverty level	35.9	17.4	29.3	18.7	41.5	48.2	10	29.2	12.3
Homeownership Rate: Percent of Occupied Housing Units that are Owner-Occupied	67.3	60.5	58.8	54.3	25.3	7.9	72.7	26	72.1
Median Home Value (for Owner-Occupied Housing Units)	55400	79300	85400	97400	77000	73200	74900	58000	81000
Total Veterans 18 Years and Over	316	74	122	170	155	64	165	119	143
Total Housing Units	1580	1271	1047	1493	1431	1217	1471	1269	1451
Vacant Housing Units	300	261	98	388	312	266	350	137	247
Total Occupied Housing Units	1280	1010	949	1105	1119	951	1121	1132	1204
Total Population	2590	2550	2329	2589	3455	2298	2871	2859	3350
Area of Land (Square Meters)	4167032	1503301	2388288	1493597	1117295	2441946	2439842	1251867	1499424
Area of Land (Square miles)	1.608899389	0.580428	0.922123	0.576681	0.43139	0.94284	0.942028	0.483348	0.578931
density (population/area)	1610	4393	2526	4489	8009	2437	3048	5915	5787

2-(-)2 scoring	density (population/area)	Percent of Population that is Less Than 18 Years	% of disabled in population	Percent of Population that is 65 Years and Over	Percent of Population in Dependent Age Groups (under 18 and 65+)	Median Household Income in past 12 months (inflation-adjusted dollars to last year of 5-year range)	% of non-white population	Percent of workers who commuted by walking	Mean Usual Hours Worked of Population Age 16 to 64 who Have Worked in Past 12 Months	Percent of Population whose income in the past 12 months is below poverty level	Homeownership Rate: Percent of Occupied Housing Units that are Owner-Occupied	Median Home Value (for Owner-Occupied Housing Units)	Total Veterans 18 Years and Over	Total Housing Units	Vacant Housing Units	Total Occupied Housing Units
0.6166	1609.796	22.6	38.7	22.9	45.5	36081	18	5.1	34	35.9	67.3	55400	316	1580	300	1280
1.5681	4393.313	26.7	14.9	10.9	37.6	44435	18.1	6.9	36.2	17.4	60.5	79300	74	1271	261	1010
1.661	2525.694	26.4	11.8	21.4	47.9	45991	34.7	9.8	36.3	29.3	58.8	85400	122	1047	98	949
1.738	4489.485	23.3	16.1	18.5	41.8	57569	9.2	6.3	37.9	18.7	54.3	97400	170	1493	388	1105
0.8783	8008.997	20.7	13.6	4.3	25	21858	24.7	14.7	29.6	41.5	25.3	77000	155	1431	312	1119
0.8709	2437.316	19.7	35.3	24.7	44.3	16151	27.3	12.6	31.6	48.2	7.9	73200	64	1217	266	951
0.3503	3047.681	25.3	16.4	19.6	44.9	62969	14.9	1.2	37	10	72.7	74900	165	1471	350	1121
1.3373	5914.989	26.8	24	8	34.7	43354	23.9	5.6	36.7	29.2	26	58000	119	1269	137	1132
1.4901	5786.531	25.2	16.1	12.3	37.5	49300	28.3	0.5	37.5	12.3	72.1	81000	143	1451	247	1204

	density (population/area)	Percent of Population that is Less Than 18 Years	% of disabled in population	Percent of Population that is 65 Years and Over	Percent of Population in Dependent Age Groups (under 18 and 65+)	Median Household Income in past 12 months (inflation-adjusted dollars to last year of 5-year range)	% of non-white population	Percent of workers who commuted by walking	Mean Usual Hours Worked of Population on Age 16 to 64 Have Worked in Past 12 Months	Percent of Population whose income in the past 12 months is below poverty level	Homeownership Rate: Percent of Occupied Housing Units that are Owner-Occupied	Median Home Value (for Owner-Occupied Housing Units)	Total Veterans 18 Years and Over	Total Housing Units	Vacant Housing Units	Total Occupied Housing Units
2-(-)2 scoring	0.243254627	0.441271437	-0.48142	-0.224156165	-0.060249242	0.229218	0.173429	0.026629	0.465585	-0.24978	0.059261	0.569395	-0.40814	-0.43099	-0.38348	-0.33001
Percent of workers who commuted by walking	0.171720938	-0.58927387	0.058969	-0.096368035	-0.317068564	-0.79155	0.339915	1	-0.80065	0.826651	-0.75774	0.083727	-0.30191	-0.42889	-0.12631	-0.54459

	miles of sidewalk	% of population below poverty line	total population	% of households have cars	% of population are seniors	% of sidewalks fully accessible	% of sidewalks More Accessible	% of sidewalks Less Accessible	% of sidewalks Not Accessible	% of curb ramps fully accessible	% of curb ramps More Accessible	% of curb ramps Less Accessible	% of curb ramps Not Accessible	% of crosswalks fully accessible	% of crosswalks More Accessible	% of crosswalks Less Accessible	% of crosswalks Not Accessible
Tract 1:	16.4	30.5	2635	86.2	12.72	24.35	48.19	18.65	8.29	38.96	36.62	18.77	5.63	74	24	2	0
Tract 2:	17.1	18.02	2642	89.1	15.47	67.04	28.4	3.41	1.13	64.14	27.27	4.04	4.54	95	5	0	0
Tract 4:	12.5	26.87	2113	93.4	25.08	70.5	27.3	2.2	0	72.6	27.4	0	0	73.1	26.9	0	0
Tract 5:	17.3	21.54	2912	89.86	17	77.89	20.52	0.5	1	70.89	25.92	2.64	0.53	0	0	0	0
Tract 6:	14.99	47.1	2864	85.35	9.69	42.32	34.39	15.34	7.93	66.15	27.69	3.58	2.56	83.6	16.39	0	0
Tract 7:	22.67	52.37	2407	76.29	27.53	41.23	36	14.15	8.61	51.89	33.24	10	4.86	72.5	22.5	5	0
Tract 9:	19.14	12.31	3355	90.17	13.6	13.15	53.9	20.61	12.28	44.72	39.24	8.43	7.59	78.43	19.6	1.96	0
Tract 10:	14.68	26.33	2770	77.73	14.92	50.2	43.58	2.05	4.1	58.85	36.97	2.08	2.08	81.6	17.24	0	1.15
Tract 11:	11.09	10.38	3354	91.94	16.77	56.86	39.7	2.45	0.98	67.47	28.15	1.94	2.42	72.2	27.8	0	0

	miles of sidewalk	% of population below poverty line	total population	% of households have cars	% of population are seniors	% of sidewalks fully accessible	% of sidewalks More Accessible	% of sidewalks Less Accessible	% of sidewalks NotAccessible	% of curbs ramps fully accessible	% of curbs rampsMore Accessible	% of curbs ramps Less Accessible	% of curbs ramps NotAccessible	% of crosswalks fully accessible	% of crosswalks More Accessible	% of crosswalks Less Accessible	% of crosswalks NotAccessible
miles of sidewalk	1																
% of population below poverty line	0.424399	1															
total population	-0.11436	-0.55029582	1														
% of households have cars	-0.52556	-0.668060335	0.2332854	1													
% of population are seniors	0.244961	0.26029763	-0.5981867	-0.1490889	1												
% of sidewalks fully accessible	-0.37992	-0.139720437	-0.3345989	0.27719016	0.33964159	1											
% of sidewalks More Accessible	0.117881	-0.136258548	0.4412796	-0.2248426	-0.358561	-0.9111784	1										
% of sidewalks Less Accessible	0.513722	0.352783133	0.1658213	-0.2142759	-0.2738201	-0.9176755	0.678197899	1									
% of sidewalks NotAccessible	0.60306	0.350656273	0.253812	-0.4022984	-0.2627226	-0.9364347	0.736674256	0.946442735	1								
% of curbs ramps fully accessible	-0.5352	-0.110800242	-0.1409091	0.36931566	0.19641429	0.88613821	-0.816153079	-0.8055794	-0.81262192	1							
% of curbs rampsMore Accessible	0.377338	-0.011751176	0.2016335	-0.4467121	-0.1661928	-0.8368863	0.89445939	0.615946719	0.744706617	-0.87216282	1						
% of curbs ramps Less Accessible	0.505869	0.251339822	-0.031896	-0.2767823	-0.1467294	-0.7120913	0.561371898	0.759503925	0.662358708	-0.90117416	0.60005967	1					
% of curbs ramps NotAccessible	0.591991	-0.036519388	0.3309857	-0.1928094	-0.249436	-0.8357011	0.736237126	0.79546804	0.791421901	-0.86299743	0.695423015	0.71971506	1				
% of crosswalks fully accessible	-0.09193	0.108027562	-0.1035066	-0.1900032	-0.1244866	-0.4238978	0.490197723	0.322016826	0.280079986	-0.29546826	0.32742079	0.127034873	0.439803018	1			
% of crosswalks More Accessible	-0.28836	0.119407775	-0.085447	-0.0270736	0.27027095	-0.4367275	0.53691678	0.312404729	0.240744566	-0.28859575	0.35400647	0.218292346	0.136647129	0.48099958	1		
% of crosswalks Less Accessible	0.801618	0.514776705	-0.1894269	-0.5511909	0.47175096	-0.542253	0.349426463	0.613643838	0.643053221	-0.65872588	0.494678218	0.653382028	0.593803728	0.09698034	0.304272406	1	
% of crosswalks NotAccessible	-0.16527	-0.024425915	-0.0125684	-0.5559046	-0.1336301	0.01604104	0.23550311	-0.31026521	-0.069494209	-0.02111194	0.407973935	-0.233619453	-0.193151553	0.15881835	-0.0186316	-0.21589782	1
2-(-)2 scoring	-0.49163	-0.268712999	-0.2650371	0.2962131	0.30619649	0.97945806	-0.809796188	-0.97372478	-0.978122381	0.861780556	-0.759846275	-0.732614036	-0.830144811	-0.36134712	-0.35383673	-0.6049064	0.126923305