

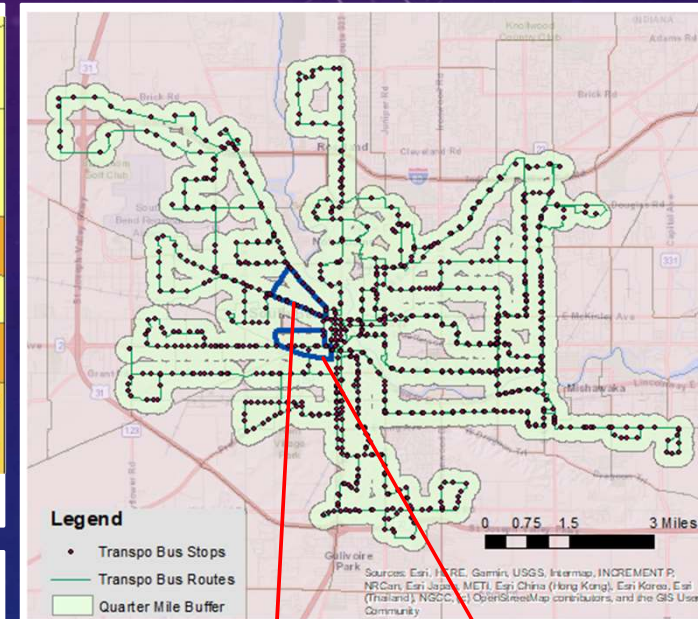
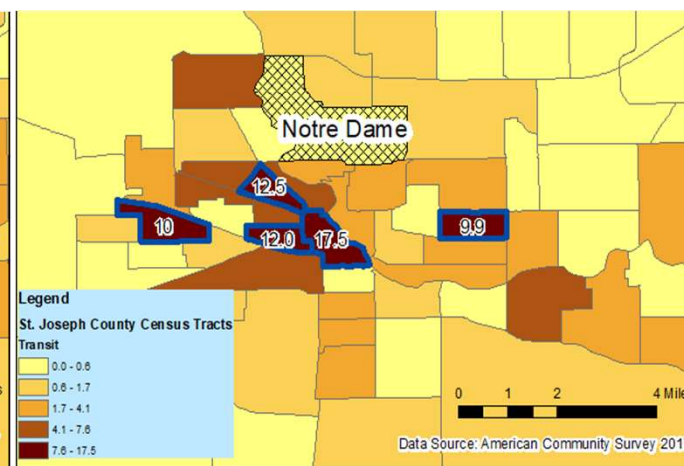
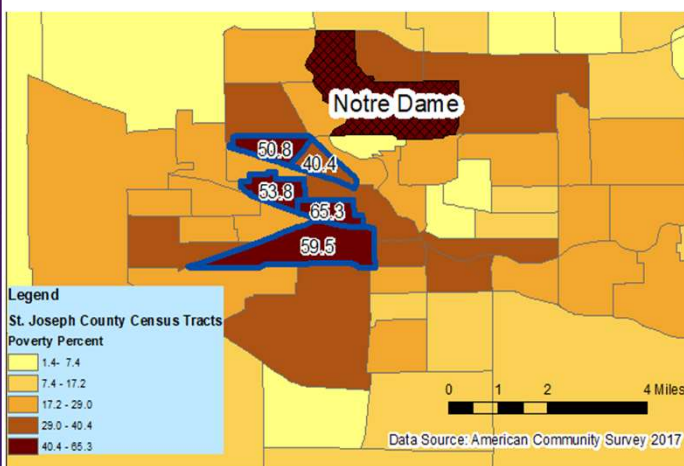
Background

I am part of a team partnering with the City of South Bend Office of Innovation looking to evaluate the status of local transportation. This poster represents an initial background analysis centered around the research question: *Does the current public transportation infrastructure meet the needs of marginalized populations?*

Research Methodology

To begin, I examined the census tracts in St. Joseph County that contained the highest percentage of people living below the poverty line, as well as those who relied upon public transportation to go to work (according to the American Community Survey 2017). The census tract containing the University of Notre Dame was excluded from this analysis since it is an unrepresentative outlier. Two census tracts were among the top five in both categories: Census Tract 6 and 20. Zoning data is then presented for each of these census tracts to provide an additional layer of description. Finally, I conducted a buffer analysis around Transpo bus stops to explore the degree to which it meets the needs of marginalized populations. A quarter mile buffer was used as it represents an average walk time of five minutes.

Results and Data Analysis



****In both maps, the top 5 census tracts for each category are highlighted in blue and the numeric value of that category is highlighted in white****

Census Tract 6:
Poverty Rate: 40.4%
Use Public Transportation: 12.5%
Unemployment Rate: 15.7%

Zoning Type	Count of Zoning Type	Shape Area
SOUTH BEND "SF2" SINGLE FAMILY AND TWO FAMILY DISTRICT	130	6,150,210
SOUTH BEND "MU" MIXED USE DISTRICT	17	398,326
SOUTH BEND "MF1" URBAN CORRIDOR MULTIFAMILY DISTRICT	21	344,602
SOUTH BEND "LB" LOCAL BUSINESS DISTRICT	5	127,421
SOUTH BEND "LI" LIGHT INDUSTRIAL DISTRICT	2	29,314
SOUTH BEND "OB" OFFICE BUFFER DISTRICT	2	22,228
SOUTH BEND "GB" GENERAL BUSINESS DISTRICT	1	18,945

Census Tract 20:
Poverty Rate: 65.3%
Use Public Transportation: 12.0%
Unemployment Rate: 26.3%

Zoning Type	Count of Zoning Type	Shape Area
SOUTH BEND "SF2" SINGLE FAMILY AND TWO FAMILY DISTRICT	74	2,682,284
SOUTH BEND "MU" MIXED USE DISTRICT	32	1,641,242
SOUTH BEND "CBD" CENTRAL BUSINESS DISTRICT	4	823,598
SOUTH BEND "MF1" URBAN CORRIDOR MULTIFAMILY DISTRICT	8	790,863
SOUTH BEND "MF2" HIGH-DENSITY MULTIFAMILY DISTRICT	2	498,034
SOUTH BEND "PUD" PLANNED UNIT DEVELOPMENT	2	456,915
SOUTH BEND "O" OFFICE DISTRICT	4	306,814
SOUTH BEND "CB" COMMUNITY BUSINESS DISTRICT	2	143,251
SOUTH BEND "LI" LIGHT INDUSTRIAL DISTRICT	3	115,086
SOUTH BEND "LB" LOCAL BUSINESS DISTRICT	1	37,061
SOUTH BEND "GB" GENERAL BUSINESS DISTRICT	1	11,963

	Census Tract 6	Census Tract 20
Total Area	10,419,214 ft ²	10,217,706 ft ²
Area Within Quarter Mile of Bus Stop	10,174,584 ft ²	9,603,624 ft ²
Percent Covered	97.7%	94.0%

Conclusion and Future Work

The initial analysis presented in this poster indicates that the current level of public transportation infrastructure provides adequate access to marginalized populations. Future research should examine other relevant factors beyond transportation infrastructure access, including the frequency of bus scheduling, the degree of financial affordability and alternatives to public transportation.