Development and Use of Social and Economic Data at MoDOT

August, 2003
Development and Use of Social and Economic Data at MoDOT

MISSOURI DEPARTMENT OF TRANSPORTATION
RESEARCH, DEVELOPMENT AND TECHNOLOGY

BY: Lance R. Huntley, M.S.
   Tracy Dranginis, Ph.D.
   Ernie Perry, M.S.

JEFFERSON CITY, MISSOURI
DATE SUBMITTED: August 2003
Final Report

The opinions, findings, and conclusions expressed in this publication are those of the principal investigators and the Missouri Department of Transportation; Research, Development and Technology. They are not necessarily those of the U.S. Department of Transportation, Federal Highway Administration. This report does not constitute a standard or regulation.
This project was designed to provide easy-to-use census data formats in the specific geographies used by the MoDOT. The website developed as a result of this project provides up-to-date, authoritative data and information for use in transportation planning and project development. The Socio-Economic Indicator Resource Web Page makes data, maps, tables, charts and graphics and analysis available at the level of geography meaningful to MoDOT personnel.

The project has been successful in increasing the use of census data in long-range and project planning, environmental clearance, and in providing a basis for Title VI, Environmental Justice and Limited English Proficiency applications related to department functions.
Executive Summary

The MoDOT Socio-Economic Indicator Resource (SEIR) can be found on the World Wide Web at: http://oseda.missouri.edu/modot. This resource is the end result of a yearlong research process centered on delivering timely and authoritative social and economic data into the hands of all personnel that need it.

A SAS database was developed to house the social and economic indicators selected by the Users-Group. This database contains all of the social and economic data at all geographic levels for the entire project. In order to facilitate trend analysis, the database is comprised of data from both the 1990 and 2000 Census.

A GIS was developed in relation to both the Administrative Units and the underlying small area geographies used to describe them: census tracts, block groups and blocks; county and city; road and interstate line work; as well as for other geographies that may or may not be used in the future, i.e. school districts and zip code tabulation areas.

Social and economic data in the form of Maps, Charts and Tables were created for Planning Districts, Regional Planning Commissions, and Metropolitan Planning Organizations and are located on the website. The tabular and graphical forms of content comprise the bulk of the website.

In addition to the pre-generated content, a web-based Data Query application was developed and implemented in order to facilitate the retrieval of user specified datasets at the appropriate Administrative Unit and at specified geographic detail. Data is provided in several formats (.csv, .sas, and .html) and for both 1990 and 2000 time periods, separately or as a trend.

Regional Profile Reports were written that describe the social and economic trends affecting MoDOT Planning Districts.

Environmental Justice Analysis Reports were written for Planning Districts and describe the social and economic environment, in terms of quality of life, for the EJ populations: minorities, low-income, disabled and elderly.

Corridor Analysis was developed using the Highway 65 corridor from the Arkansas and Missouri border to the city of Buffalo, Missouri. The corridor analysis is a prominent feature of the website and the methodology is in place in order to produce more corridor analyses in a timely fashion.

Trainings began on January 31st, and ended February 11th. Four training sites, Springfield, Kansas City, Jefferson City, and St. Louis, from around the state, were selected for administering the trainings. Training evaluations indicate that both the MoDOT Socio-Economic Indicator Resource, and the training sessions are viewed as useful and needed.
# Table of Contents

List of Figures and Tables
Introduction ................................................................. 1
Objectives ................................................................. 1
Present Conditions ....................................................... 2
Technical Approach ..................................................... 2
Results and Discussion ................................................. 7
Conclusions ............................................................... 8
Recommendations ....................................................... 8
Implementation Plan ................................................... 9
Principal Investigator and Project Members ......................... 9
Implementation Objective ............................................. 10
Implementation Period ............................................... 10
Funding ................................................................. 10
Technology Transfer .................................................... 10
Procedure .............................................................. 10
Budget ................................................................. 12
Appendix A: Training Session Evaluations .......................... 13
Appendix B: Environmental Justice Analysis of District 6 ...... 22
Appendix C: Planning District 6 St. Louis Area .................... 38
Appendix D: Regional Planning Commissions ...................... 80
Appendix E: Metropolitan Planning Organizations ................. 93
Appendix F: Corridor Study ............................................. 106
Appendix G: Understanding the US Census PowerPoint Presentation .......... 119
Appendix H: Using the Website PowerPoint Presentation .......... 159
Appendix I: Using the MoDOT SEIR Data Query Application PowerPoint Presentation ...................... 177
Appendix J: Sample Maps ............................................. 214
<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Combined Responses from all Training Sessions Regarding the Helpfulness</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>of the Information Presented During the Training Session</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Combined Responses from all Training Sessions Regarding the Helpfulness of</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>the Presentation Materials Used in the Training Session</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Combined Responses from all Training Sessions Regarding the Helpfulness of</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>the Presenters and the Presentation</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Combined Responses from all Training Sessions Regarding the Overall</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Usefulness of the Training Session</td>
<td></td>
</tr>
</tbody>
</table>
Introduction

The detailed demographic, social and economic characteristics of Missouri are essential elements of MoDOT planning, project development and Environmental Justice functions. Access to such information and its application has been problematic. There is a very great quantity of data from many sources in many different formats with unspecified reliability organized in differing geographic layers. MoDOT staff needs easy access to up-to-date social and economic information that is relevant, authoritative, convenient and understandable.

This project was designed to provide easy-to-use social and economic data in the specific geographies used by the MoDOT. The website developed as a result of this project provides up-to-date, authoritative data and information for use in transportation planning and project development. The Socio-Economic Indicator Resource Web Page makes data, maps, tables, charts and graphics, and analysis available at the level of geography meaningful to MoDOT personnel.

Objectives

The objectives of this research were to identify the relevant social and economic data for use at MoDOT, and then to develop and implement authoritative information products and electronic applications that could be easily used by MoDOT personnel for planning, project development, and for Title VI and Environmental Justice applications.

- Develop and implement a social and economic indicator database.
- Develop and implement various content formats for display on the World Wide Web.
- Provide training on the understanding and use of the social and economic data.
Present Condition

Prior to this project it was not clear how social and economic indicators should best be aligned for analysis for transportation functions. Also, there were no integrated sets of reports or information system tools available to MoDOT staff for this data. Neither was there a training program in place to encourage the appropriate use of such information.

Technical Approach

The following section details the methods that were employed in order to achieve the project objectives and when applicable a web-link to a page on the web site that illustrates the final outcome of that technical approach.

At the very outset of the project a Users-Group was created with the function of providing useful knowledge regarding the kinds of data items that would be useful as well as how these pieces should come together in regards to the web application. OSEDA established a project team with expertise in social and economic data analysis and report writing, database design and development, web application design and development, and training design and delivery. A MoDOT Steering Committee involving Kent Van Landuyt, Ernie Perry, Stefan Denson and Frank Miller provided overall guidance to the project. A Users-Group with representatives from public relations, planning, project development, environmental justice, TMS, district office and RPCs provided input on transportation planning perspectives, the review of best practices and assessment of preliminary designs.
The driving force behind the project is the Socio-Economic Indicator Resource (SEIR) database (http://mcdc2.missouri.edu/cgi-bin/uexplore?/pub/data//modotx). The SEIR database is comprised of 1990 and 2000 Census data at block group, census tract and county level geographies (as well as aggregated to the Administrative Units of the Planning District, Regional Planning Commission, and Metropolitan Planning Organization). The SEIR Database also includes 2000 Census data at all geographies for the MPO portions that fall in the States of Kansas and Illinois. The MoDOT Socio-Economic Indicator Resource database is maintained on a public access server and exists in SAS format. Aside from being the actual repository for the social and economic data, there is an extensive set of metadata describing the variables that were used to compute the indicators when necessary and a description of the indicators overall. Variables in the database come from both SF1 and SF3 Census datasets for the 1990 and 2000 Census periods.

A GIS was developed that coincides with geography layers maintained by MoDOT for use in creating the map section of the content of the web page, as well as for the corridor analysis. The GIS exists as independent “personal geodatabases” organized by the Administrative Unit for which it serves: MoDOT Planning District, Regional Planning Council, Metropolitan Planning Organization and Corridor. For each Administrative Unit, and their specific sub-regions, for example, the Northwest Planning District, through the “clip” feature of the ArcGIS software numerous geographic layers/boundaries were developed, these are: census block, census block group, census tract, city, county, school district, zip code tabulation area, state highway, federal highway and interstate. Since the GIS utilized the “personal geodatabase” framework of
Final Report

the ArcGIS 8.x software, it is possible to make these geographies available to users via a cd-rom or on a server.

The best method for deployment of a project of this nature was through the World Wide Web (http://oseda.missouri.edu/modot). Thus, the SEIR web page was developed in order to deliver the maps, tables, charts and analysis to the end user at the appropriate Administrative level (for an example of the data elements supplied for the Planning Districts see Appendix C, for an example of the web pages serving up the content for the Regional Planning Commissions see Appendix D, for an example of the web pages serving up the content for the Metropolitan Planning Organizations see Appendix E).

Over 2300 maps were created using ArcGIS 8.2 software and Adobe Photoshop 5.0, and exist in both .gif and .pdf formats (for examples of the types of maps that were created for this project see Appendix J). Breakpoints in maps were uniquely determined for each map based on the distribution of the indicator. This was done in order to present regional maps that would be meaningful to that region rather than based on a universal rubric that may or may not highlight the region’s individual trends. Over 1700 tables were created using SAS 8.2 software, these exist in.html and .pdf formats. Over 1000 Charts were created using Microsoft Excel 2000 and Adobe Photoshop 5.0, these are provided in .gif format.

A key aspect of the web application is the ability to query the SEIR database directly (http://mcdc2.missouri.edu/websas/modotda.html). A stand-alone web application, linkable from the SEIR homepage, was developed in order to accommodate this need. The Data Query application allows users to select Administrative Units and sub geographies for which they want social and economic data for the 1990 and 2000
Final Report

Census periods. Choices can be further filtered on select Administrative Units. There are three formats that data can be exported to: .csv format for use with spreadsheet programs, and GIS software, .sas for use with statistical software packages, and .html format for expedient viewing via a web browser. (For an illustration of the Data Query application see Appendix I.)

The environmental justice analysis utilized structural equation modeling to ascertain the quality of life that exists within the neighborhoods that protected populations (minorities, low-income, disabled and elderly) live in (see Appendix B, or http://oseda.missouri.edu/modot/planning/stlouis_analysis.shtml). The units of analysis for the structural equation models were the census block groups for a specific Planning District. Thus, there is an environmental justice analysis for each Planning District. Data for the EJ analysis came from the SEIR database and was analyzed using AMOS 4.0 for the SPSS software.

Corridor analysis was provided for Highway 65 running from Buffalo, Missouri to the Arkansas and Missouri border (see Appendix F). Data was captured for this corridor in 5, 10, 20 and 30-mile increments. Social and economic data were provided for the 4 buffers in the form of an .html table. This data was put together based on block centroids and census block groups. The methodology employed requires the GIS to capture all of the census block centroids that fall within the specified buffer. Since census block units do not have the detailed social and economic data associated with them, block group geographies are used to supply the more detailed social and economic data. However, the corridor buffers typically cut across the census block group geographies creating a situation where only a portion of an entire block group is within a
When this happens, an allocation factor derived from the census blocks that have been captured within a block group and weighted by population is applied to the block group. For example, if 25 percent of the block group population has been captured (based on the census blocks), the social and economic indicators for that block group are multiplied by .25 in order to get a value indicative of the percent of the block group (based on the population determined by the blocks that were captured) that fell within the buffer. ([http://oseda.missouri.edu/modot/corridor/springfield_hwy65.shtml](http://oseda.missouri.edu/modot/corridor/springfield_hwy65.shtml))

Training sessions were administered in four cities located around the state: Springfield, Jefferson City, Kansas City and St. Louis. These locations were chosen because it was felt that they would be the most central places from which participants around the state would be able to attend. The training session was broken up into 3 mini-sessions each of which served a specific purpose to the training overall, and were highly interactive. The first session (see Appendix G), the less interactive of the sessions, dealt with providing the attendees an increased understanding of the Census since it is Census data that comprises the SEIR. The “Understanding the Census” mini-session dealt with two main aspects of the Census, the geographies for which data are available and the two datasets from which data is pulled (SF1, or 100% data, and the SF3, or the sample data). The second mini-session (see Appendix H) dealt with using the SEIR website directly. Points that were covered included: an overview of the site in general, navigating the site, data from other sites that can be accessed via county selection, how to incorporate the maps, charts and tables into work documents, and illustrating the basic functionality of the SEIR web page. The third and final mini-session (see Appendix I) consisted of providing instruction on how to use the Data Query application. This session was
organized in two steps. The first step consisted of a walk-through of the various features of the Data Query application. The second step of this session focused around nine “real-world” situations provided to us from the Users-Group and were specific to transportation planning. These exercises were slightly altered for each training site in order to provide examples that would be meaningful to the attendees. The conclusion of the training session involved administering a brief survey to ascertain the effectiveness of the training overall and to receive feedback regarding future features that should be incorporated into the SEIR as well the altering of features that currently exist. These responses, as well as the instrument that was used can be found in Appendix A.

**Results and Discussion**

The following points describe the end results of the project:

1) Understand users, and user data needs.

2) Understand the levels of geography needed by various users.

3) Increase implementation through a “Team of Early Adopters” that are seen by others as progressive and successful.

4) Design SEIR Web Page to serve “light” and “power” users.

5) Offer training to enable use of the web page for internal and external data users.

6) Design project to allow for changes and data updates as new data becomes available.
Conclusions

The project has been successful in increasing the use of census data in long-range and project planning, environmental clearance, and in providing a basis for Title VI, Environmental Justice and Limited English Proficiency applications related to department functions.

Recommendations

Feedback from users has provided the impetus for the SEIR to do more. User recommendations call for the need to:

- **Provide Corridor Studies to MoDOT on a Statewide and District Basis** - A process needs to be developed and applied for initiating, prioritizing, managing and delivering each corridor study. This process will utilize the SEIR application, allowing MoDOT staff to request and track the progress of corridor studies through the web site.

- **Integrate into SEIR a Block Group and Census Tract Reference Map System** - In responding to feedback from users a feature needs to be added to SEIR that provides reference maps to identify census geographies by location.

- **Provide Access to the Geography Data Sets Included in SEIR** - To increase consistency in reporting and enhance the ability of planners, OSEDA has been asked to make the geography data sets for MoDOT Districts, RPCs, and MPOs available for use. By having access to these data sets, planners will be able to integrate their own data sets into SEIR maps as needed.

- **Integrate Cross-Tabulated Data into SEIR** - Census data provides detailed social and economic data for specific sub-populations, i.e. Racial Groups, Male and Female and Age Cohorts. Although not every item in the 2000 Census is cross-tabulated, there has been an expressed need by planners for several cross-tabulated items that are in the census.

- **Integrate Census Transportation Planning Package (CTPP) Data into SEIR** - The CTPP data set includes relevant information regarding commuting patterns and other transportation related issues. This data is organized according to a specific geography, Transportation Area Zone, which will need to be added to the GIS. Users would benefit by the inherent utility of this data coupled with the ease of data retrieval afforded by the SEIR.
Implementation Plan

Implementation of the project was put into practice post-development, but during the course of the project overall. Implementation consisted of building the database, the various content pieces, the web page, the data query application, the various reports and providing the training sessions on how to access and use the data.

Principal Investigator and Project Members

OSEDA

Lance Huntley  Primary Investigator
John Blodgett  Database Consultant
Evelyn Cleveland  Analyst
Tracy Dranginis  Analyst
Bill Elder  Technical Consultant
Diana Hammond  Web Designer
Daryl Hobbs  Senior Consultant
Tanna Klein  Analyst
Steve Meyer  Systems Support
Courtney Morris  Analyst
Suzanne Schoonover  Administrative Management

MoDOT

Steering Committee
Stefan Denson
Kent Van Landuyt
Frank Miller
Ernie Perry

Users-Group
Scott Bachman
Steven Billings
DeAnne Bonnot
Stephen Clark
Paula Gough
Kim Horton
Mike Shea
Sharon Taegel
Renate Wilkinson
Implementation Objective

The implementation objective was the same as the objective overall; developing a method in which to deliver social and economic data for use in planning and development, as well as increasing the awareness in the use of this kind of data.

Implementation Period

The implementation period began in September when the SF3 Census data was released and currently ended in February with the completion of the final training session.

Funding

Research, Development and Technology provided funding from SPR funds.

Technology Transfer

Technology transfer was carried out through the four training sessions that were administered around the state. Technology transfer was also provided through presentations that were given in January in Washington D.C. at the TRB Conference and in Jefferson City at the District Planner’s Meeting.

Procedure

The following section provides the work plan that was developed and completed for this project.

Establish Work Groups

Establish OSEDA Team
Establish MoDOT Steering Committee
Establish MoDOT User Group

Develop Preliminary Design of Databases, Applications, Reports and Training

Conduct a Literature Review of Transportation-Related Applications of Social and Economic Data.
   Conduct the Review
   Write a Summary Report of the Review
Final Report

Present the Report to the Steering Committee for Review and Approval
Review Best Practices w/ User Group
Research Best Practices and Case Studies
Work with User Group to Document Work Practices with Data
Summarize the Functions and Practices Associated with the Information
Identify Specific Data Elements as Preliminary Key Indicators
Identify an Inclusive Set of Preliminary Key Indicators
Work with the User Group to Select Key Indicators and Relate to Function
Create Preliminary Formats for State, District and Regional "Profiles"
Organize the Key Indicators Into Profiles that "Tell a Meaningful Story"
Present Tables of Contents and Structure for Profiles
Finalize Content and Format of the Profiles
Create Preliminary Presentation Formats for Corridor Analyses
Coordinate GIS layers for Profiles and Corridor Analyses
Develop A Communications Plan to Coordinate Training and Implementation

**Develop, Test and Refine Databases, Applications, Reports and Training**
Create Key Indicator Databases
Create the SAS Data Sets for the Key Indicators
Build the Documentation Files for Key Indicators
Build Profile Applications and Reports—design layout
Write, Review and Edit Narrative Analysis for State and District Profiles
Test and Refine Profile Applications and Reports with User Group
Test and Refine Corridor Applications and Reports with User Group
Analyze and Write Draft Interpretative Narratives for Profile Sections

**Implement Databases, Applications, Reports and Training**
Initiate the Implementation Communications Plan
Launch Production Versions of the Databases, Profiles, Applications and Reports
Conduct Demonstration and Presentations of the System

**Training**
Assess Training Needs
Adopt Training Approach
Design Training and Materials
Promote and Organize Training Sessions
Conduct and Evaluate Training
Update Training Design

**Evaluate and Update Databases, Applications, Reports and Training**
Evaluate Profiles and Corridor Analysis
Update Profile and Corridor Analysis Design
Maintain and Update Key Indicator Databases
Maintain and Update Profile and Corridor Applications
### Budget

**Expenditure Report Through December, 31st, 2002**

*Development and Use of Social and Economic Data at MoDOT*

<table>
<thead>
<tr>
<th>Total Program Budget</th>
<th>Budget Items</th>
<th>Expenditures Through 12/31/2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td>$170,705</td>
<td></td>
</tr>
<tr>
<td>Salaries</td>
<td>$144,665</td>
<td>$144,478.16</td>
</tr>
<tr>
<td>Benefits</td>
<td>$26,040</td>
<td>$30,648.12</td>
</tr>
<tr>
<td>Expenses</td>
<td>$18,000</td>
<td></td>
</tr>
<tr>
<td>Travel</td>
<td>$3,000</td>
<td>$2,693.13</td>
</tr>
<tr>
<td>Supplies</td>
<td>$2,000</td>
<td>$3,043.12</td>
</tr>
<tr>
<td>Training Materials</td>
<td>$5,000</td>
<td>$3,690.00</td>
</tr>
<tr>
<td>Users-Group Support</td>
<td>$5,000</td>
<td>$3,699.02</td>
</tr>
<tr>
<td>Printing</td>
<td>$3,000</td>
<td>$19.50</td>
</tr>
<tr>
<td><strong>Total Direct Cost</strong></td>
<td><strong>$188,705</strong></td>
<td><strong>$</strong></td>
</tr>
<tr>
<td><strong>Indirect Cost (.097)</strong></td>
<td><strong>$18,304</strong></td>
<td><strong>$18,330.00</strong></td>
</tr>
<tr>
<td><strong>Total Project Cost</strong></td>
<td><strong>$207,009</strong></td>
<td><strong>$206,601.05</strong></td>
</tr>
</tbody>
</table>
APPENDIX A – Training Session Evaluations

Evaluations

The following section provides information relating to the users feedback regarding the training sessions and the overall utility of the web application. The information is divided into two sections. The first section is a listing of the textual responses, by training session location, that attendees gave regarding the training session and the project overall (questions 25 and 26 from the survey instrument). The second section is a set of bar graphs illustrating the scores that were given regarding a set of questions ascertaining the helpfulness of certain aspects of the presentation: the information presented, the materials used, the presenters and an overall rating of the presentation. When reading the bar charts, the higher the score the better. Also included is the instrument that was used to evaluate the training session.

Springfield Training Session Textual Evaluations

- Data Query. When a new geography is selected, refresh page so selection is seen. Separate tables on export (.csv) for # and percent (it’s currently harder to follow.
- I’ll probably e-mail some other suggestions as I have time to use the system.
- I’ll be able to use this a lot – thanks.
- Have participants select their own problems in addition to the ones on the presentation.
- Information at the city level.
- Possibly more tables of interest in the future, i.e. cross-tabulations.
- As stated before, information on the city level. This was provided in the data query info, but not in a lot of tables, charts, etc. in the general website.
- Many of the existing tables and charts for my MPO exist and in a timesavings mechanism to me already. Way to go in anticipating needs for local MPO districts.
- Partial tract and block group info for MPO, also add city as a level of data.
- Speak Louder.
- Very useful program, needs to continue!
- Partial tracts and block groups in calculations for MPOs (so that the sum of the tracts will equal the total for MPO).
Final Report

Kansas City Training Session Textual Evaluations

- MPO/RPC split as discussed in training. Separate geography for non-MPO portions of RPCs. Corridor Queries.
- The additional explanation below slide is good reference.
- If possible, gray out lists that are moot or unavailable after an above choice is made. Make County filter for counties in District X like the TMS interface. Make Query Selection III tables larger (the html box).
- For my purposes the available information is extensive.
- I don’t think that you need to print out all of materials, People who want them can and should be able to download them.
- ArcIMS and GIS data.
- Great work. Extremely helpful. This will save a lot of time and headaches.
- Access to GIS data.
- GIS layers. Good Job – Very useful too and the presentation was clear and informative.
- Corridor Tool – ability to do quickly.
- Try not to talk to the screen as much.
- Guidebook on website: operation, definitions, queries possible.
- Additional documentation on query how to do.
- Corridor tool: ability to click on a geographic area then route boundary select buffer and run.
- Good tool – keep tweaking – thanks.
- A way to compare corridor alternatives for a project.
- Map making capabilities.
- Great job in simplifying use of website/database.
- Again great job in simplifying the Query and Database features. I would be interested in seeing a comparison in corridor alternatives using proposed linework. (Possibly on-the-fly Digitized Linework). Also an output using GIS-Mapping would be helpful in communicating the data.
- Great job.
- Looks fairly comprehensive. I have no suggestions for additions.
- Thank you very much!

Jefferson City Training Session Textual Evaluations

- Maps within census tracts identified by county. It was discussed to perhaps have such info at the MoDOT district level. From an RPC perspective it would be helpful if it were available by county-where individual counties could be printed. If this were doable at MoDOT Planning level, that would be fine as well.
- Great stuff. In the past, we have spent considerable time compiling regional level data. We won’t have to do that for 2000. The Query Option is really a nice feature. Special thanks to MoDOT and OSEDA for all the hard work!
- Description of future census 2000 products to be released by the census bureau.
- List of related web sites or a link to find them.
• Show SAS inquiry method so people can have a greater appreciation for the data inquiry “front end” now available.
• Provide a short overview of the general OSEDA web site.
• Maybe some case studies would help, possible queries to incoming trainees so that they can benefit from an application they are interested in.
• Have your host assure the internet links are working well.
• Make sure the web works on the training computers.
• Case studies based on queries to incoming students.
• Provide links form application to maps of the census tracts / block groups. Good job/Good Tool!
• Will take back to District and apply to our needs. I think it will be very useful when I become familiar with the program.
• Block maps.
• Political and cultural trends, such as party and civic group affiliations.
• This was all very useful.
• I am interested in working with local governments to build less sprawling more compact communities of all sizes. I’d like to see MoDOT and OSEDA collaborate on assessing peoples wishes for land use and aiding local planning organizations to incorporate that information into plans related to community design.

St. Louis Training Session Textual Evaluations
• A resource map with tract data.
• Block GIS maps.
• More links.
• More GIS maps and links.
• More Case Studies.
• More interactive features on the website.
• Great site.
• Merge MoDOT data (i.e. accidents, Traffic Counts).
• Specific major corridors should be added. In District 6, the following corridors should be addressed: I-55 (from River Des Peres South to X Barracks Rd.); Rte 47 in Franklin County; the entire outer loop (I-270).
• I thought the training was timely and beneficial. The OSEDA website is a very good tool that I intend to use on a regular basis. Is the OSEDA website linked to the MoDOT website?
• Difference between SF3 and SF1. Metadata Info?
• Provide information as a link to MoDOT’s website or Internet site.
• A detail of # of minorities and women unemployed, and in the labor force. Also, as a percent of the total unemployed.
• Good information.
Figure 1. Combined Responses from all Training Sessions Regarding the Helpfulness of the Information Presented During the Training Session

Helpfulness of the Information

![Helpfulness of the Information](image1)

- Mean = 4.31
- Std. Dev = .61
- N = 45.00

Figure 2. Combined Responses from all Training Sessions Regarding the Helpfulness of the Presentation Materials Used in the Training Session

Helpfulness of Presentation Materials

![Helpfulness of Presentation Materials](image2)

- Mean = 4.32
- Std. Dev = .69
- N = 44.00
Figure 3. Combined Responses from all Training Sessions Regarding the Helpfulness of the Presenters and the Presentation

Helpfulness of the Presenter/Presentation

Helpfulness

Figure 4. Combined Responses from all Training Sessions Regarding the Overall Usefulness of the Training Session

Training Session Rating
MoDOT Socio-Economic Indicator Resource Training Evaluation Form – February 10, 2003

1st Session – Overview of US Census

1. How helpful do you find the information provided in this session?
   - Not helpful
   - Somewhat helpful
   - Very helpful

2. What additional information would you like to have?

3. Please identify any information provided that does not seem relevant to your needs.

4. How helpful do you find the presentation materials?
   - Not helpful
   - Somewhat helpful
   - Very helpful

5. What additional materials would you like to have?

6. How helpful was the presenter/presentation?
   - Not helpful
   - Somewhat helpful
   - Very helpful

7. Please suggest any changes to the presentation that would be useful.

8. Please provide a general rating for this training session.
   - Poor
   - Adequate
   - Excellent
Second Session – *Using the Website and Database*

9. How helpful do you find the information provided in this session?

   1. Not helpful
   2. Somewhat helpful
   3. Very helpful

10. What additional information would you like to have?

11. Please identify any information provided that does not seem relevant to your needs.

12. How helpful do you find the presentation materials?

   1. Not helpful
   2. Somewhat helpful
   3. Very helpful

13. What additional materials would you like to have?

14. How helpful was the presenter/presentation?

   1. Not helpful
   2. Somewhat helpful
   3. Very helpful

15. Please suggest any changes to the presentation that would be useful.

16. Please provide a general rating for this training session.

   1. Poor
   2. Adequate
   3. Excellent
**Third Session – Using the Data Query Application**

17. How helpful do you find the information provided in this session?

   Not helpful  Somewhat helpful  Very helpful

18. What additional information would you like to have?

19. Please identify any information provided that does not seem relevant to your needs.

20. How helpful do you find the presentation materials?

   Not helpful  Somewhat helpful  Very helpful

21. What additional materials would you like to have?

22. How helpful was the presenter/presentation?

   Not helpful  Somewhat helpful  Very helpful

23. Please suggest any changes to the presentation that would be useful.

24. Please provide a general rating for this training session.

   Poor  Adequate  Excellent
25. What additional features, information, products, and/or services would make the MoDOT Socio-Economic Indicator Resource more valuable to your work?

26. Please note any additional comments or suggestions regarding the training or the MoDOT Socio-Economic Indicator Resource.
Appendix B – Environmental Justice Analysis of District 6

The Relationship of Environmental Justice Populations to Key Socio-Economic Indicators in the St. Louis Area District

Introduction

This narrative provides some insights into the quality of life in MoDOT’s St. Louis Area District by considering the relationships between a number of 2000 census variables. The census variables considered were selected based upon two criteria. First, their relevance to Environmental Justice and Title VI (of the Civil Rights Act of 1964) reporting requirements and second, their ability to both describe generally understood characteristics of quality of life and to be statistically testable. It should be noted that the statistical method used, structural equation modeling, provides preliminary analysis for neighborhoods and communities within a MoDOT Planning District. This analysis cannot be generalized to other districts or the state as a whole. It is important to keep in mind that the unit of analysis refers to the conditions within a census block group, and not to any single protected population. Thus, what is being measured by considering the interaction between variables is the social and economic environment of the communities and neighborhoods that comprise the planning district.

A Quality of Life (QOL) model was selected for two important reasons. First, the purpose of transportation planning is to ensure that all members of a community benefit from planning efforts and none experience disproportionate burden. Second, there is an established use in transportation planning of considering QOL. Forkenbrock (1999) advocated considering the impact of planning on low-income and minority communities to address environmental justice issues including federally funded transportation-related programs, policies, and activities having the potential to adversely affect human health or the environment. Purvis (2001) extended the environmental justice variables to include elderly and disabled populations based on proposed metropolitan and statewide planning regulations released in May of 2000. Purvis suggested the use of a ‘discrimination assessment’ to include a geographic and demographic profile that addressed these four populations in terms of the positive and negative impacts of transportation services available and planned.
While there is no definitive list of social and economic variables that best measure the quality of life for a geographic area, the Decennial Census of Population and Housing is an exceptional data source to explore this issue. Census 2000 variables used to construct the QOL models include both the populations of importance to MoDOT – low-income, disabled, minorities, and elderly and the variables educational attainment, income, housing, transportation and employment to measure quality of life.

**Findings Summary**

Preliminary findings reveal that for all but the elderly, the St. Louis Area protected populations were more likely than the general population or other special populations to live in neighborhoods and communities with characteristics indicative of a lesser quality of life than the District in general. The analysis allows planners and other community decision-makers to understand the specific barriers to quality of life and, thus, to address them, as possible, within the context of the planning process.

**Model 1. QOL Structural Equation Model for the St. Louis Area District**
Model 2. QOL Structural Equation Model for the St. Louis Area District with Percent Poor Removed

D6 St. Louis Area
GFI: .989
GFI: .990
RMSEA: .092
Lo: .074; Up: .111
Model 3. QOL Structural Equation Model for the St. Louis Area District with Percent Minority Removed

Understanding the St. Louis Area District
The overall fit of the structural equation model for the St. Louis Area District was statistically significant and indicated that, as a whole, the protected populations and the quality of life variables are related to each other. Further, though the model did not indicate a degree of multicollinearity (i.e., populations or quality of life indicators relating to each other in a manner that detracts from the ability to measure the relationship between a single population and a quality of life variable) significant enough to nullify the overall fit of the model, not all results were as strong as anticipated or related in a manner that supports prior research and the common understanding of these relationships. To test the validity of the results of the model, two additional models were constructed; one that omitted the percent poor variable (Model 2) and one that omitted the percent minority variable (Model 3). Based on the three models, the following paragraphs first describe the relationships between each protected population and the quality of life...
variables and then describe important relationships between the quality of life indicators themselves.

**Minority Population**

For the model including all protected populations *(Model 1)*, the quality of life indicators showing relationships to the minority population were no vehicles available, unemployment, average age of housing, and median house value.

![MoDOT Planning District 6 Percent Minority, by County*](image)

These were all low strength relationships indicating that minorities are more likely to live in communities and neighborhoods with slightly higher unemployment, slightly older houses with lower than the median housing values. They were also more likely to live in neighborhoods and communities with more households that had no vehicle available than the District overall. Conversely, the relationships to median gross rent, median household income, and no high school diploma are negligible. These findings indicate that minority neighborhoods are statistically no more or less likely than all neighborhoods and communities in the St. Louis Area District to have a population that pays more or less in rent, has more or less household income, and has not finished high school.
Because the results for some of the quality of life indicators were not what were anticipated, a model was tested that did not include the variable, percent poor (Model 2). This was done to ensure that the quality of life indicators were accurately being measured in regard to the minority population and that the results were not overly influenced by the relationship between minority and poverty. In this model, the strength of the relationships between the percent minority and the variables for unemployment, households without vehicles, and average age of housing units were increased to moderate-strength relationships. Indicating that minorities are more likely to live in neighborhoods characterized by a higher percent of the population unemployed, more households without vehicles, and older housing. However, this model indicated no relationship between the minority population and the median household value, and like the first model, no relationship to median gross rent. The model also described the minority neighborhoods as slightly more likely than the overall district to be characterized by lower household incomes and a greater likelihood of not having a high school diploma.

**Poor Population**
As anticipated, the model that includes all protected populations (Model 1) shows that the poor population tends to live in neighborhoods characterized by households with no vehicle available, high unemployment, and significantly more persons without a high school diploma than the District overall. Additionally, a low-strength relationship exists between the percent poor and median household income, the age of housing, the median house value and gross rent. Thus, the poor population is more likely to live in neighborhoods comprised of older housing units, lower household income, and lower gross rent costs.
The initial model of the St. Louis Area District shows a negligible, but positive, relationship between the percent of persons poor and median house value. Because this result seemed to contradict previous research as well as community perception, a second model was tested that excluded the minority population (Model 3). The results of this model confirmed and showed a strengthened and substantial relationship between the percent poor variable and the likelihood of increased unemployment and an increased probability of households with no vehicles available. The moderate-strength relationship between this population and the variable no high school diploma stayed the same. The relationship between poverty and median household income is stronger than in the first model, indicating that the poor are more likely to live in neighborhoods characterized by low household incomes. In the model excluding the minority population, there was no relationship found between the poverty population and the quality of life indicators measuring housing costs, median household value and median gross rent.
**Disabled Population**

There was little variation in results of the three models for the disabled population. The models indicate a moderately strong relationship between the percent of persons disabled and the percent of persons without a high school education.

MoDOT Planning District 6 Percent Disabled, by County*, 2000

![Map showing the distribution of disabled population in District 6, with color coding for different percentage ranges.]

Relationships also exist, but are not as strong, between the percent of the population that is disabled and the median household income and median house value. These findings suggest that the disabled population is more likely to live in neighborhoods and communities with a high percentage of population that does not have a high school diploma and that is poorer and has a housing stock that is overall of lesser value than the median. A similar strength of relationship exists between the percent of the population that is disabled and quality of life indicators, no vehicles and median gross rent. The relationship suggests that the disabled population lives in neighborhoods characterized by a greater percentage of households without vehicles and living in lower cost rental units. There is a negligible positive relationship between the indicator, average age of housing units and the percent disabled, indicating that the disabled are nor more likely to
live in neighborhoods and communities with housing units aged any different than the district overall. The relationship between the percent of persons disabled and the percent unemployed was also negligible, indicating that disabled persons are not very different than the overall population in regard to employment.

**65 Years Old and Over**

There was little variation in results of the three models for the disabled population. The models reveal that in the St. Louis Area District the elderly population is more likely to live in neighborhoods with higher median house values.

MoDOT Planning District 6 Percent of Persons Age 65 Years or Older, by County*, 2000

A weak relationship exists between the elderly population and the percent of housing units without an available vehicle. Something can be learned from examining the lack of relationship between protected populations and quality of life variables. For the elderly population of the St. Louis Area District the lack of findings of significant strength indicates that they typically live in neighborhoods and communities that are no different from those of the general population.
**Relationship Between Dependent Variables**

The model also offers the means with which to look at the relationship that exists between the percent of persons without a high school education and the quality of life indicators.

For the model that measures all protected populations (**Model 1**) and the model that measures the poor, disabled, and elderly populations (**Model 3**), neighborhoods that are occupied by a greater percentage of persons without a high school education are characterized by lower house values, lower rent costs, and lower incomes, though a very weak relationship did emerge indicating a greater likelihood to live in newer than average housing. In the model that included minority, disabled, and elderly populations (**Model 2**), the strength of all relationships, but that of average age of housing, were enhanced, finding a substantial relationship between the percent of persons with no high school diploma and lower house values. A moderate relationship exists between percent of persons with no high school diploma and lower rent costs and lower income. A weak relationship exists between the percent of persons without a high school diploma and the likelihood of households with no vehicle available and increased unemployment. The relationship between the percent of population without a high school diploma and the average age of

---

*Data provided at the census census tract level*
housing units decreased from a weak to negligible relationship, indicating that the age of housing stock is not a reliable predictor of where this population is located.

**Indicator Selection Criteria**

To measure the impact of education on quality of life, the variable of not having a high school education was used. Studies (Rumberger, 1987; Digest of Educational Statistics, 1998) have indicated that persons not completing a high school education are at an increased risk of not finding steady employment, living in less than adequate housing, and earning less when they do work.

Median household income and unemployment status were chosen as indicators of economic well-being. Typically, the less income available to a household, the more difficult it is to acquire the goods and services indicative of a high quality of life. Unemployment status is a useful measure of economic opportunity as well as a predictor of concentrations of poverty within MoDOT districts.

Median gross rent, median house value and the average age of the housing unit were used as measures of housing quality. Both median gross rent and median house value were included to capture the impact of quality of housing for both households that own and rent. Additionally, there is an established relationship between the market value of housing and the cost. Thus, it is a reasonable assumption that the higher these values the greater the quality of housing units. Because the populations of interest in this model are more likely to live in neighborhoods that are both older and poorer than the general population, the average age of the housing unit was used to complement the variables rent and housing value.
To measure the impact of access to transportation on quality of life, the variable of not having a vehicle available was included. The availability of a vehicle is an important indicator of mobility affecting access to employment opportunities as well as the goods and services necessary to maintain an adequate quality of life. Additionally, districts that indicate a significant number of neighborhoods without access to a vehicle will require an increased need for public modes of transportation.
Appendix: Definition of Variables

Independent Variables

**Percent Minority** – The percent minority variable is a measure of the percent of all of the single race categories, other than white, that respondents could have chosen from the census questionnaire. These include: African American, American Indian, Asian and Pacific Islander, and Other Race as well as if they selected Hispanic. Overall, 468,987 people comprised the minority population, representing 24.2 percent of the total population.

**Percent Disabled** – The percent of individuals that were classified as having a disability if any of the following three conditions were true: (1) they were 5 years old and over and had a response of “yes” to a sensory, physical, mental or self-care disability; (2) they were 16 years old and over and had a response of “yes” to going outside the home disability; or (3) they were 16 to 64 years old and had a response of “yes” to employment disability. Overall, 306,973 people comprised the disabled population, or 17.2 percent of the total population for whom disability status could be determined.

**Percent Poor** – The percent poor variable is a measure of the percent of persons for whom poverty status was determined. The Census Bureau uses the federal government’s official poverty definition. Assigning poverty status takes into account both the family size and total family income. Poverty status was determined for all people except institutionalized people, people in military group quarters, people in college dormitories, and unrelated individuals under 15 years old. The following link is the poverty threshold table for 1999 ([http://www.census.gov/hhes/poverty/threshld/thresh99.html](http://www.census.gov/hhes/poverty/threshld/thresh99.html)). Overall, there are 182,864 people, 9.6% of the district’s population, considered poor by federal guidelines.

**Percent 65 and Over** – The percent 65 and over variable is comprised of the percent of person’s aged 65 years old and over. In total, 12.7 percent of the district’s population is elderly (245,541 people).

Dependent Variables

**Percent No High School Diploma** – The percent no high school diploma variable is a measure of the persons aged 25 years or older who did not graduate high school and have not received a GED.
Overall, there were 204,151 people (16.2 percent of people aged 25 years or older) who had not received their high school diploma.

**Median Household Income** – The median household income variable is a measure of the median household income in 1999 dollars. Household income includes the income of the householder and all other individuals 15 years old and over in the household, whether they are related to the householder or not. The median household income for the St. Louis Area District is $46,184.

**Average Age of Housing Units** – The average age of housing units variable is a measure of when the unit was built. The average housing unit age for the St. Louis Area District is 37 years.

**Median Gross Rent** – The median gross rent variable is measured in 1999 dollars. Gross rent is the contract rent plus the estimated average monthly cost of utilities and heating fuels if not included in the contract rent. The median gross rent for the St. Louis Area District is $537.

**Median House Value** – The median house value variable is a measure of the median value of housing units in 1999 dollars. Housing units are defined as house and lot, mobile home and lot, or condominium unit. Housing value data were determined by asking a sample of respondents to estimate the value of their owner-occupied housing unit, any housing units that they were buying, or housing units they owned that were vacant and for sale. Value is the respondent’s estimate of how much the property would sell for if it were for sale. If the house or mobile home was owned or being bought, but the land on which it sits was not, the respondent was asked to estimate the combined value of the housing unit and property. The median value of housing units in the St. Louis Area District is $109,508.

**Percent No Vehicles** – The percent no vehicles variable is a measure of the percent of occupied housing units whose residents reported having no vehicle present. These data show the number of passenger cars, vans, and pickup or panel trucks of 1-ton capacity or less kept at home and available for the use of household members. Vehicles rented or leased for 1 month or more, company vehicles, and police and government vehicles are included if kept at home and used for nonbusiness purposes. Dismantled or immobile vehicles are excluded. Vehicles kept at home but used only for business purposes also are
excluded. Overall, there were 71,602 occupied housing units without a vehicle, or 9.4 percent of all occupied housing units.

**Percent Unemployed** – The percent unemployed variable measures the percent of persons eligible for work but who were not employed at the time they completed the census. All civilians 16 years old and over were classified as unemployed if they reported that they were neither “at work” nor “with a job but not at work” during the reference week. Also included as unemployed were those who reported that: they were looking for work during the last 4 weeks and were available to start a job, did not work at all during the reference week, were on temporary layoff from a job, had been informed that they would be recalled to work within the next 6 months or had been given a date to return to work, and were available to return to work during the reference week, except for temporary illness. Overall, there were 55,012 persons classified as unemployed, equaling 5.5 percent of the total population eligible to work.

**Interpreting Structural Equation Modeling**

A statistical method, structural equation modeling, was used to analyze the relationships between the census variables described above. The value of this statistical method is that it allows consideration of whether or not these variables have an effect on each other, and if they do, the strength of that effect. The responses to the variables were aggregated to the level of the census block group. In total, there are 1430 block groups in the St. Louis Area District, 1412 of which were used in the analyses of all three models. If data were missing for any of the eleven variables to be considered in the statistical model, that block group was excluded from the analysis. (In order to better understand the mechanics of the SEM and the terminology associated with the analysis click on the following link: http://oseda.missouri.edu/modot/planning/interpreting_sem.shtml.

This statistical method allows interpretation of the relationship between variables in two different ways. First, it measures whether or not the variables included in the analysis, when considered as a group, show a statistically significant relationship to each other. This is called the overall ‘goodness of fit’. It is important to keep in mind when interpreting this method (and all other statistical methods) that tests the relationship between multiple variables that there is a baseline standard measure that must be met for the overall relationship between variables to be considered significant. Typically this standard is either 90 or 95% agreement between variables. Once that baseline
standard has been met, then the strength of the overall relationship of variables can be considered (for example, a .99 score shows a better fit than a .95 score).

If the overall model is determined to be significant, then the relationships of individual variables to one another are significant. What then becomes of importance is the strength of the relationship between variables. Negligible strength relationships between variables in a model that has passed tests of model fit are still not any good regardless if the model has a strong goodness of fit. Additionally, the model measures whether or not the variables are positively or negatively related to each other. For example, there is a strong positive relationship between higher levels of educational attainment and having a higher income. Conversely, there is a negative relationship between having a disability and being employed. However, it is important to remember that what is being measured is the strength of the relationship between the populations of interest and the measures of quality of life of the communities that they live in. So, also measured by the model is the impact of the relationship between populations on the relationship between any single population and a quality of life variable (multicollinearity). If the scores that measure the relationship between populations are too high (above .80), then the score that measures the relationship between individual populations and quality of life variables cannot be considered reliable. Fortunately, multicollinearity was not an issue for the populations of interest in the St. Louis Area District.

**Bibliography**


Final Report

APPENDIX C – Planning District 6 St. Louis Area

This appendix provides an example of the data elements included for each MoDOT Planning District. A complete set of maps, charts and tables are presented using District 6 as an example.
Introductory Pages
Age Maps
Age Charts

Change in Population for Selected Age Cohorts, 1990-2000
D6 St. Louis

Percent Change by Selected Age Cohorts, 1990-2000
D6 St. Louis

Produced by The Office of Social and Economic Data Analysis, UOE IT, St. Louis, April 2002.
### Age Tables

#### Change in Population Under 18, 1990-2000

<table>
<thead>
<tr>
<th>Area Summarized</th>
<th>Population Under 5 Years</th>
<th>Population Age 5 to 17 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>County</strong></td>
<td>2000</td>
<td>2010</td>
</tr>
<tr>
<td>St. Louis</td>
<td>98,092</td>
<td>174,153</td>
</tr>
<tr>
<td>20071 Franklin</td>
<td>5,149</td>
<td>5,000</td>
</tr>
<tr>
<td>20080 Jefferson</td>
<td>14,565</td>
<td>10,889</td>
</tr>
<tr>
<td>20081 St. Charles</td>
<td>21,082</td>
<td>14,520</td>
</tr>
<tr>
<td>20082 St. Louis</td>
<td>84,641</td>
<td>79,761</td>
</tr>
<tr>
<td>20083 St. Louis City</td>
<td>20,477</td>
<td>17,509</td>
</tr>
</tbody>
</table>

#### Change in Senior Population in Missouri, 1990-2000

<table>
<thead>
<tr>
<th>Area Summarized</th>
<th>Population Age 65 to 74 Years</th>
<th>Population Age 75+ Years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>County</strong></td>
<td>2000</td>
<td>2010</td>
</tr>
<tr>
<td>St. Louis</td>
<td>210,227</td>
<td>238,105</td>
</tr>
<tr>
<td>20071 Franklin</td>
<td>10,281</td>
<td>9,783</td>
</tr>
<tr>
<td>20080 Jefferson</td>
<td>14,425</td>
<td>13,028</td>
</tr>
<tr>
<td>20081 St. Charles</td>
<td>22,476</td>
<td>23,285</td>
</tr>
<tr>
<td>20082 St. Louis</td>
<td>129,620</td>
<td>138,834</td>
</tr>
<tr>
<td>20083 St. Louis City</td>
<td>40,428</td>
<td>47,553</td>
</tr>
</tbody>
</table>

#### Missouri Population Age 18 to 24 Years and Age 25 to 34 Years, 1990-2000

<table>
<thead>
<tr>
<th>Area Summarized</th>
<th>Population Age 10 to 14 Years</th>
<th>Population Age 15 to 17 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>County</strong></td>
<td>2000</td>
<td>2010</td>
</tr>
<tr>
<td>St. Louis</td>
<td>59,991</td>
<td>107,380</td>
</tr>
<tr>
<td>20071 Franklin</td>
<td>7,878</td>
<td>8,219</td>
</tr>
<tr>
<td>20080 Jefferson</td>
<td>16,356</td>
<td>18,350</td>
</tr>
<tr>
<td>20081 St. Charles</td>
<td>23,034</td>
<td>21,043</td>
</tr>
<tr>
<td>20082 St. Louis</td>
<td>68,584</td>
<td>64,086</td>
</tr>
<tr>
<td>20083 St. Louis City</td>
<td>20,183</td>
<td>18,277</td>
</tr>
</tbody>
</table>

#### Missouri Population Age 35 to 54 Years and Age 55 to 64 Years, 1990-2000

<table>
<thead>
<tr>
<th>Area Summarized</th>
<th>Population Age 30 to 34 Years</th>
<th>Population Age 35 to 39 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>County</strong></td>
<td>2000</td>
<td>2010</td>
</tr>
<tr>
<td>St. Louis</td>
<td>189,286</td>
<td>376,853</td>
</tr>
<tr>
<td>20071 Franklin</td>
<td>21,163</td>
<td>30,932</td>
</tr>
<tr>
<td>20080 Jefferson</td>
<td>42,904</td>
<td>49,545</td>
</tr>
<tr>
<td>20081 St. Charles</td>
<td>71,293</td>
<td>77,323</td>
</tr>
<tr>
<td>20082 St. Louis</td>
<td>311,042</td>
<td>286,776</td>
</tr>
<tr>
<td>20083 St. Louis City</td>
<td>94,434</td>
<td>82,644</td>
</tr>
</tbody>
</table>
Race/ Hispanic Maps
Race/ Hispanic Charts
Race/ Hispanic Tables
Employment Status Maps
Employment Status Charts

Produced by: The Office of Social and Economic Data Analysis, UOE, [TDchangies, August 2002]
## Employment Status Tables

### Distribution of Employed Civilian Labor Force by Occupation, 2000

<table>
<thead>
<tr>
<th>County</th>
<th>Total Employed</th>
<th>Management, Professional, and Related Occupations</th>
<th>Sales and Office</th>
<th>Natural Resources, Construction, and Maintenance</th>
<th>Production, Transportation, and Material Moving</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Louis City</td>
<td>14,756</td>
<td>3,067</td>
<td>5,408</td>
<td>4,132</td>
<td>2,159</td>
</tr>
<tr>
<td>St. Louis County</td>
<td>37,235</td>
<td>5,417</td>
<td>10,428</td>
<td>9,262</td>
<td>7,194</td>
</tr>
<tr>
<td>St. Louis Area</td>
<td>51,991</td>
<td>8,584</td>
<td>15,836</td>
<td>13,394</td>
<td>10,349</td>
</tr>
</tbody>
</table>

### Population Age 16 Years and Over in the Civilian Labor Force, 1990-2000

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Louis City</td>
<td>14,756</td>
<td>3,067</td>
<td>14,756</td>
<td>3,067</td>
</tr>
<tr>
<td>St. Louis County</td>
<td>37,235</td>
<td>5,417</td>
<td>37,235</td>
<td>5,417</td>
</tr>
<tr>
<td>St. Louis Area</td>
<td>51,991</td>
<td>8,584</td>
<td>51,991</td>
<td>8,584</td>
</tr>
</tbody>
</table>

### Population Age 16 Years and Over in the Armed Forces, 1990-2000

<table>
<thead>
<tr>
<th>County</th>
<th>Total 1990</th>
<th>Change</th>
<th>Total 2000</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Louis City</td>
<td>1,000</td>
<td>300</td>
<td>1,300</td>
<td>400</td>
</tr>
<tr>
<td>St. Louis County</td>
<td>2,000</td>
<td>500</td>
<td>2,500</td>
<td>750</td>
</tr>
<tr>
<td>St. Louis Area</td>
<td>3,000</td>
<td>750</td>
<td>3,750</td>
<td>1,250</td>
</tr>
</tbody>
</table>
Housing Units Maps
Housing Units Maps
Housing Units Maps
Housing Units Charts
Housing Units Charts
Housing Units Tables

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Housing Units</th>
<th>Rent-Occupied Housing Units</th>
<th>Total Vacant Housing Units</th>
<th>Total Occupied Housing Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region</th>
<th>Non-Metropolitan</th>
<th>Metropolitan</th>
<th>Non-Metropolitan</th>
<th>Metropolitan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Missouri Average</th>
<th>Rent-Occupied Housing Units</th>
<th>Total Vacant Housing Units</th>
<th>Total Occupied Housing Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Region</th>
<th>Non-Metropolitan</th>
<th>Metropolitan</th>
<th>Non-Metropolitan</th>
<th>Metropolitan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Housing Units Tables

<table>
<thead>
<tr>
<th>Table Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missouri Mo and Re Housing Units, 1958-2000</td>
<td>Table showing housing units distribution by year for Missouri and other regions.</td>
</tr>
<tr>
<td>Median Value and Rent of Occupied Housing Units, 1958-2000</td>
<td>Table showing median value and rent of occupied housing units by region.</td>
</tr>
<tr>
<td>Vacant Seasonal and Recreational Use Housing Units in Missouri, 2000</td>
<td>Table showing vacant seasonal and recreational use housing units in Missouri.</td>
</tr>
<tr>
<td>Occupied Housing Units by Number of Vehicles Available, 2000</td>
<td>Table showing occupied housing units by number of vehicles available.</td>
</tr>
<tr>
<td>Housing Unit Structures Built During the Decade, 1988-1998</td>
<td>Table showing housing unit structures built during the decade.</td>
</tr>
<tr>
<td>Housing Unit Structures Built Before 1890, 1990-2000</td>
<td>Table showing housing unit structures built before 1890 and between 1990 and 2000.</td>
</tr>
</tbody>
</table>
Household Maps
Household Charts


### Household Tables

#### Total Family Households in Missouri, 1980-2000

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Nonfamily</th>
<th>Total</th>
<th>Nonfamily</th>
<th>Total</th>
<th>Nonfamily</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Total Households in Missouri, 1980-2000

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Nonfamily</th>
<th>Total</th>
<th>Nonfamily</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Institutionalized Population in Group Quarters, 1990-2000

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Nonfamily</th>
<th>Total</th>
<th>Nonfamily</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Institutionalized Population in Group Quarters, 1990-2000

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Nonfamily</th>
<th>Total</th>
<th>Nonfamily</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Income Maps
Income Charts
# Income Tables

## Median Household and Family Income, 1989-1999

<table>
<thead>
<tr>
<th>Year</th>
<th>Median Income (Dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989</td>
<td>$30,640</td>
</tr>
<tr>
<td>1990</td>
<td>$32,129</td>
</tr>
<tr>
<td>1991</td>
<td>$33,389</td>
</tr>
<tr>
<td>1992</td>
<td>$34,123</td>
</tr>
<tr>
<td>1993</td>
<td>$35,544</td>
</tr>
</tbody>
</table>

## Missouri Miscellaneous Income Measures, 2000

<table>
<thead>
<tr>
<th>Measure</th>
<th>Number</th>
<th>Percentage of Median Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Income</td>
<td>48,390</td>
<td>16.1%</td>
</tr>
<tr>
<td>Median Income</td>
<td>30,640</td>
<td>12.5%</td>
</tr>
<tr>
<td>75th Percentile</td>
<td>48,390</td>
<td>25.4%</td>
</tr>
</tbody>
</table>

## Missouri Household Income Distribution, 2000

<table>
<thead>
<tr>
<th>Income Class</th>
<th>Number</th>
<th>Percentage of Median Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below poverty</td>
<td>12,000</td>
<td>15.1%</td>
</tr>
<tr>
<td>Poverty</td>
<td>21,000</td>
<td>26.3%</td>
</tr>
<tr>
<td>Near Poverty</td>
<td>30,000</td>
<td>37.5%</td>
</tr>
<tr>
<td>Above Poverty</td>
<td>10,000</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

## Median Family Income and Selected Family Income Categories, 1989-2000

<table>
<thead>
<tr>
<th>Year</th>
<th>Median Income (Dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989</td>
<td>$30,640</td>
</tr>
<tr>
<td>1990</td>
<td>$32,129</td>
</tr>
<tr>
<td>1991</td>
<td>$33,389</td>
</tr>
<tr>
<td>1992</td>
<td>$34,123</td>
</tr>
<tr>
<td>1993</td>
<td>$35,544</td>
</tr>
</tbody>
</table>

## Detailed Tables and Graphs

- Median Household Income by Race and Gender
- Income Distribution by Education Level
- Family Income by Occupation

### Additional Notes

- All data above are estimates based on the 1990 and 2000 Census data.
- Further analysis and detailed breakdowns available in the full report.
Poverty Maps
Poverty Charts

Persons in Poverty by Age, 2000
D6 St. Louis Area

Produced by: The Office of Social and Economic Data Analysis, UOE, [TDragarinis, September, 2002]

Families in Poverty, 2000
D6 St. Louis Area

Produced by: The Office of Social and Economic Data Analysis, UOE, [TDragarinis, September, 2002]
## Poverty Tables

### Missouri Population Between 100 and 200 Percent of Poverty Level, 1990-2000
**St. Louis**

<table>
<thead>
<tr>
<th>Area</th>
<th>Population</th>
<th>Poverty Rate</th>
<th>Percent Between 100 and 200 of Poverty Level</th>
<th>Change 1990-2000</th>
<th>Percent of All Poverties</th>
</tr>
</thead>
<tbody>
<tr>
<td>MO</td>
<td>289,001</td>
<td>9.3</td>
<td>13.6</td>
<td>14.7</td>
<td>14.1</td>
</tr>
<tr>
<td>2007</td>
<td>287,410</td>
<td>9.0</td>
<td>13.5</td>
<td>14.6</td>
<td>14.1</td>
</tr>
<tr>
<td>2009</td>
<td>281,290</td>
<td>8.8</td>
<td>13.3</td>
<td>14.6</td>
<td>14.1</td>
</tr>
<tr>
<td>2011</td>
<td>276,760</td>
<td>8.6</td>
<td>13.1</td>
<td>14.5</td>
<td>14.1</td>
</tr>
<tr>
<td>2013</td>
<td>273,190</td>
<td>8.4</td>
<td>12.9</td>
<td>14.3</td>
<td>14.1</td>
</tr>
</tbody>
</table>

### Missouri Population Below Poverty Level, 1990-2000
**St. Louis**

<table>
<thead>
<tr>
<th>Area</th>
<th>Population</th>
<th>Below Poverty Level</th>
<th>Percent of All Poverties</th>
</tr>
</thead>
<tbody>
<tr>
<td>MO</td>
<td>289,001</td>
<td>152,302</td>
<td>9.6</td>
</tr>
<tr>
<td>2001</td>
<td>287,410</td>
<td>151,249</td>
<td>9.3</td>
</tr>
<tr>
<td>2009</td>
<td>281,290</td>
<td>149,292</td>
<td>9.4</td>
</tr>
<tr>
<td>2011</td>
<td>276,760</td>
<td>146,729</td>
<td>9.2</td>
</tr>
<tr>
<td>2013</td>
<td>273,190</td>
<td>144,388</td>
<td>9.2</td>
</tr>
</tbody>
</table>

### Missouri Population Age 65 and Over Below Poverty Level, 1990-2000
**St. Louis Area**

<table>
<thead>
<tr>
<th>Area</th>
<th>Population</th>
<th>Below Poverty Level</th>
<th>Percent of All Poverties</th>
</tr>
</thead>
<tbody>
<tr>
<td>MO</td>
<td>289,001</td>
<td>141,200</td>
<td>10.2</td>
</tr>
<tr>
<td>2001</td>
<td>287,410</td>
<td>139,250</td>
<td>9.3</td>
</tr>
<tr>
<td>2009</td>
<td>281,290</td>
<td>136,200</td>
<td>9.3</td>
</tr>
<tr>
<td>2011</td>
<td>276,760</td>
<td>133,200</td>
<td>9.3</td>
</tr>
<tr>
<td>2013</td>
<td>273,190</td>
<td>130,200</td>
<td>9.3</td>
</tr>
</tbody>
</table>

### Missouri Children Under 18 Below Poverty Level, 1990-2000
**St. Louis**

<table>
<thead>
<tr>
<th>Area</th>
<th>Population</th>
<th>Below Poverty Level</th>
<th>Percent of All Poverties</th>
</tr>
</thead>
<tbody>
<tr>
<td>MO</td>
<td>289,001</td>
<td>97,400</td>
<td>9.8</td>
</tr>
<tr>
<td>2001</td>
<td>287,410</td>
<td>95,400</td>
<td>9.3</td>
</tr>
<tr>
<td>2009</td>
<td>281,290</td>
<td>93,400</td>
<td>9.3</td>
</tr>
<tr>
<td>2011</td>
<td>276,760</td>
<td>91,400</td>
<td>9.3</td>
</tr>
<tr>
<td>2013</td>
<td>273,190</td>
<td>89,400</td>
<td>9.3</td>
</tr>
</tbody>
</table>
Population Maps
Population Charts

Percent Change in Population, 1990 - 2000
D6 St. Louis Area

Produced by: The Office of Social and Economic Data Analysis, UOE [T. Dranginis, April 2002]
## Population Tables

### Missouri Population and Components of Change, 1990-2000
#### D6 St. Louis

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Rate</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Births</td>
<td>Deaths</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>201,584</td>
<td>177,491</td>
<td>104,193</td>
<td>5.9</td>
</tr>
<tr>
<td>D6 St. Louis</td>
<td></td>
<td></td>
<td>1,340,293</td>
<td>85,139</td>
<td>4.6</td>
<td></td>
</tr>
<tr>
<td>29071 Franklin</td>
<td></td>
<td></td>
<td>93,807</td>
<td>13,204</td>
<td>16.4</td>
<td>12,542</td>
</tr>
<tr>
<td>29070 Jefferson</td>
<td></td>
<td></td>
<td>198,099</td>
<td>26,719</td>
<td>15.6</td>
<td>28,733</td>
</tr>
<tr>
<td>29132 St. Charles</td>
<td></td>
<td></td>
<td>283,883</td>
<td>70,976</td>
<td>33.3</td>
<td>38,471</td>
</tr>
<tr>
<td>29199 St. Louis</td>
<td></td>
<td></td>
<td>1,016,315</td>
<td>22,736</td>
<td>2.3</td>
<td>136,914</td>
</tr>
<tr>
<td>29510 St. Louis City</td>
<td></td>
<td></td>
<td>346,189</td>
<td>-46,496</td>
<td>-12.2</td>
<td>66,924</td>
</tr>
</tbody>
</table>

Source: 1990 and 2000 Decennial Census, Summary File 4
Prepared by University Outreach & Extension - Office of Social & Economic Data Analysis (DSEDA)
Educational Attainment Maps
Educational Attainment Charts

Percent of Population by Degree Type, 2000
D6 St. Louis Area

Produced by: The Office of Social and Economic Data Analysis, UOE[TDrangins, June 2002]
Educational Attainment Tables

### Missouri Population With a College or Professional Degree, 1990-2000

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Louis</td>
<td>252,954</td>
<td>284,912</td>
<td>58.5</td>
<td>61.6</td>
</tr>
<tr>
<td>Jefferson County</td>
<td>7,794</td>
<td>8,446</td>
<td>88.1</td>
<td>90.4</td>
</tr>
<tr>
<td>St. Charles</td>
<td>2,196</td>
<td>2,214</td>
<td>12.1</td>
<td>12.1</td>
</tr>
<tr>
<td>St. Louis County</td>
<td>228,721</td>
<td>230,328</td>
<td>26.3</td>
<td>26.3</td>
</tr>
<tr>
<td>St. Louis City</td>
<td>83,618</td>
<td>85,117</td>
<td>93.8</td>
<td>93.8</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Louis Area</td>
<td>779,483</td>
<td>837,249</td>
<td>52.0</td>
<td>53.8</td>
</tr>
<tr>
<td>Jefferson County</td>
<td>139,280</td>
<td>149,064</td>
<td>24.0</td>
<td>25.3</td>
</tr>
<tr>
<td>St. Charles</td>
<td>34,870</td>
<td>35,970</td>
<td>12.0</td>
<td>12.1</td>
</tr>
<tr>
<td>St. Louis County</td>
<td>669,603</td>
<td>668,283</td>
<td>52.1</td>
<td>52.1</td>
</tr>
<tr>
<td>St. Louis City</td>
<td>264,806</td>
<td>265,313</td>
<td>97.2</td>
<td>97.2</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Louis Area</td>
<td>394,311</td>
<td>393,930</td>
<td>48.0</td>
<td>47.9</td>
</tr>
<tr>
<td>Jefferson County</td>
<td>22,308</td>
<td>22,185</td>
<td>19.5</td>
<td>19.5</td>
</tr>
<tr>
<td>St. Charles</td>
<td>5,424</td>
<td>5,420</td>
<td>16.5</td>
<td>16.5</td>
</tr>
<tr>
<td>St. Louis County</td>
<td>262,808</td>
<td>260,967</td>
<td>32.6</td>
<td>32.5</td>
</tr>
<tr>
<td>St. Louis City</td>
<td>110,014</td>
<td>108,718</td>
<td>37.6</td>
<td>37.7</td>
</tr>
</tbody>
</table>
Disability Maps
Disability Charts

Percent Employed by Disability Status, 2000
D6 St. Louis Area

Disabled & Employed  Non-disabled & Employed

<table>
<thead>
<tr>
<th></th>
<th>Disabled &amp; Employed</th>
<th>Non-disabled &amp; Employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Franklin</td>
<td>9.8</td>
<td>96.5</td>
</tr>
<tr>
<td>Jefferson</td>
<td>10.2</td>
<td>95.4</td>
</tr>
<tr>
<td>St. Charles</td>
<td>7.7</td>
<td>96.2</td>
</tr>
<tr>
<td>St. Louis</td>
<td>11.6</td>
<td>88.7</td>
</tr>
</tbody>
</table>

Produced by: The Office of Social and Economic Data Analysis, UOE [TDraginis, January, 2003]

Disabled Persons by Age, 2000
D6 St. Louis

<table>
<thead>
<tr>
<th></th>
<th>Disabled Persons 65+</th>
<th>Disabled Persons 5-64</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Louis City</td>
<td>22180</td>
<td>97135</td>
</tr>
<tr>
<td>St. Louis</td>
<td>49248</td>
<td>97135</td>
</tr>
<tr>
<td>St. Charles</td>
<td>24382</td>
<td>97135</td>
</tr>
<tr>
<td>Jefferson</td>
<td>25253</td>
<td>97135</td>
</tr>
<tr>
<td>Franklin</td>
<td>1093</td>
<td>97135</td>
</tr>
</tbody>
</table>

Produced by: The Office of Social and Economic Data Analysis, UOE [TDraginis, June 2002]
Disability Tables

Missouri Persons Age 16 Years and Older With a Work Disability, 1990-2000
D6 St. Louis Area

<table>
<thead>
<tr>
<th>Area Summarized</th>
<th>Persons Age 16 Years and Older With a Work Disability</th>
<th>Percent of All Workers 16 Yrs. and Over</th>
</tr>
</thead>
<tbody>
<tr>
<td>D6 St. Louis Area</td>
<td>154,284</td>
<td>63,211</td>
</tr>
<tr>
<td>29001 Franklin County</td>
<td>10,013</td>
<td>3,832</td>
</tr>
<tr>
<td>29009 Jefferson County</td>
<td>22,950</td>
<td>8,731</td>
</tr>
<tr>
<td>29183 St. Charles County</td>
<td>21,447</td>
<td>7,570</td>
</tr>
<tr>
<td>29189 St. Louis County</td>
<td>80,192</td>
<td>36,702</td>
</tr>
<tr>
<td>29510 St. Louis city</td>
<td>62,967</td>
<td>26,202</td>
</tr>
</tbody>
</table>

Disabled Missouri Population Age 5 Years and Older, 2000
D6 St. Louis

<table>
<thead>
<tr>
<th>Area Summarized</th>
<th>Disabled Population Age 5 Years and Older</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>FIPS Code</td>
<td>2000</td>
<td>1990</td>
</tr>
<tr>
<td>D6 St. Louis</td>
<td>306,973</td>
<td>17.2</td>
</tr>
<tr>
<td>29001 Franklin County</td>
<td>15,282</td>
<td>17.7</td>
</tr>
<tr>
<td>29009 Jefferson County</td>
<td>32,650</td>
<td>17.9</td>
</tr>
<tr>
<td>29183 St. Charles County</td>
<td>30,281</td>
<td>12.7</td>
</tr>
<tr>
<td>29189 St. Louis County</td>
<td>148,363</td>
<td>15.6</td>
</tr>
<tr>
<td>29510 St. Louis city</td>
<td>75,467</td>
<td>24.9</td>
</tr>
</tbody>
</table>
Transportation Maps

MoDOT Planning District 6 Population 16 Years or Older Mean Travel Time to Work, by County*. 2000

MoDOT Planning District 6 Percent of Workers 16 Years or Older by Means of Travel to Work, by County. 2000

Prepared for MoDOT by Office of Research and Economic Data Analysis (OREDA)
Map generated on 1/15/2000
Transportation Charts
## Missouri Means of Travel to Work, 2000
### D6 St. Louis

<table>
<thead>
<tr>
<th>Area Summarized</th>
<th>Means of Transportation to Work, 2000</th>
<th>Distribution by Means or Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>County</td>
<td>Workers Age 16 Yrs. or Older</td>
</tr>
<tr>
<td>FIPS Code</td>
<td></td>
<td>931,570</td>
</tr>
<tr>
<td>29071</td>
<td>Franklin County</td>
<td>45,383</td>
</tr>
<tr>
<td>29099</td>
<td>Jefferson County</td>
<td>56,030</td>
</tr>
<tr>
<td>29183</td>
<td>St. Charles Coun</td>
<td>149,111</td>
</tr>
<tr>
<td>29189</td>
<td>St. Louis County</td>
<td>436,319</td>
</tr>
<tr>
<td>29510</td>
<td>St. Louis city</td>
<td>140,747</td>
</tr>
</tbody>
</table>

Source: USDC, Bureau of the Census, 1990 and 2000 Decennial Census, Summary File 3
Prepared by University Outreach & Extension - Office of Social & Economic Data Analysis (OSEDA)
APPENDIX D – Regional Planning Commissions

This appendix illustrates the screen selections for the Regional Planning Commissions.
Regional Planning Commission
Age Cohorts
Race/ Hispanic
Employment Status

Maps
- Percent of Population 16 Years or Older in the Civilian Labor Force, By County, 2000
- Percent of Population 16 Years or Older by Occupation, By County, 2000
- Percent of Population 16 Years or Older Unemployed, By County, 2000
- Percent of Population 16 Years or Older Working in County of Residence, By County, 2000

Charts
- Percent of Population 16 Years or Older in the Labor Force, 2000
- Percent Employed in Civilian Population 16 Years or Older by Occupation, 2000
- Unemployment Rate, 2000

Tables by County within MoDOT RPC 3
- Population Age 16 Years and Over in the Armed Forces, 1990-2000
- Population Age 16 Years and Over in the Civilian Labor Force, 1990-2000
- Distribution of Employed Civilian Labor Force by Occupation, 2000
- Persons Working In County of Residence, 1990-2000
- Missouri Unemployed Persons, 1990-2000

Disability
- State Overview -- Change in Missouri Civilian Labor Force and Employment, 1990-2000

Transportation
- State Overview -- Missouri Full-Time and Part-time Employment 1990-2000 - Bureau of Economic Analysis
- Commuting to Work Outside of Home County 1990-2000

View Employment Status Maps, Charts and Tables for another RPC by choosing from the list below.
RPC 1  RPC 2  RPC 3  RPC 4  RPC 5  RPC 6  RPC 7  RPC 8  RPC 9  RPC 10
RPC 11  RPC 12  RPC 13  RPC 14  RPC 15  RPC 16  RPC 17  RPC 18  RPC 19

Return to Socio-Economic Indicator Resource Main Page
Housing Units
Households

Maps
- Total Household Population, By County, 2000
- Average Family Size, By County, 2000
- Total Group Quarters Population, By County, 2000
- Noninstitutional Group Quarters Population, By County, 2000

Households
- Family Households as a Percent of Total Households, 2000
- Percent of Population in Households and Group Quarters, 2000
- Percent of Population Living in Group Quarters, By County, 2000

Income
- Table by County within MoDOT RPC 3

Population
- Total Household Population in Missouri, 1990-2000
- Institutionalized Population in Group Quarters, 1990-2000
- Noninstitutionalized Population in Group Quarters, 1990-2000
- Total Households in Missouri, 1990-2000
- Residence of Population Age 5 Years and Over Living in a Different House, 1990-2000

Disability
- Residence of Population Age 5 Years and Over Living in the Same State, 1990-2000
- Residence of Population Living in a Different State or Abroad, 1990-2000

Regional Profile Reports
- State Overview -- 2000 Census Data on Households -- Type, Location and Change 1990-2000
- Change in Family Households With Children Under 18, 1990-2000
- Change in Number and Location of Family Households 1990-2000
- Population Residing in Institutional Group Quarters, 1990-2000

View Households Maps, Charts and Tables for another RPC by choosing from the list below.

RPC 1  RPC 2  RPC 3  RPC 4  RPC 5  RPC 6  RPC 7  RPC 8  RPC 9  RPC 10  RPC 11  RPC 12  RPC 13  RPC 14  RPC 15  RPC 16  RPC 17  RPC 18  RPC 19

Return to Socio-Economic Indicator Resource Main Page
Income

East-West Gateway Coordinating Council
Income

Maps
- Per Capita Income, By County, 2000
- Average Household Income, By County, 2000
- Percent of Households by Income Cohort, By County, 2000
- Average Family Income, By County, 2000
- Percent of Families by Income Cohort, By County, 2000
- Average Female Earnings, By County, 2000
- Average Male Earnings, By County, 2000

Charts
- Per Capita Income, 2000
- Median Household Income, 2000
- Percent of Households by Income, 2000
- Median Family Income, 2000
- Median Income by Gender, 2000

Tables by County within MoDOT RPC 3:
- Median Household and Family Income, 1989-1999
- Missouri Household Income Distribution, 2000
- Median Family Income and Selected Family Income Categories, 1989-1999
- Missouri Family Income Distribution, 2000
- Missouri Miscellaneous Income Measures, 2000

Regional Profile Reports
- State Overview -- Change in Missouri Median Household Income and Family Income 1989-1999
- Median Family Income by Counties and Regions and Change in Median Family Income in Constant Dollars 1989-1999
- State Overview -- Missouri Total Personal Income 2000 and Change from 1990
- Change in Total Personal Income by County and Region 1990-2000
- Transfer Receipts as a Proportion of Total Personal Income 1990-2000
- Missouri Per Capita Income in 2000 and Change from 1990
- Change in Bank Deposits by County and Region 1990-2000

View Income Maps, Charts and Tables for another RPC by choosing from the list below. [hypothetical list of options]

Return to Socio-Economic Indicator Resource Main Page
Poverty
Population
**Educational Attainment**

<table>
<thead>
<tr>
<th>Age</th>
<th>Maps</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Percent of Persons 25 Years or Older With a Bachelor's Degree or Higher, By County, 2000</td>
<td></td>
</tr>
<tr>
<td>Race / Hispanic</td>
<td>Charts</td>
</tr>
<tr>
<td>- Percent of Persons 25 Years or Older With a High School Degree or Some College, By County, 2000</td>
<td></td>
</tr>
<tr>
<td>Employment Status</td>
<td>Tables by County within MoDOT RPC 3</td>
</tr>
<tr>
<td>- Percent of Persons 25 Years or Older Without a High School Degree, By County, 2000</td>
<td></td>
</tr>
<tr>
<td>Housing Units</td>
<td>Income</td>
</tr>
<tr>
<td>Households</td>
<td>- Missouri Population With A College or Professional Degree, 1990-2000</td>
</tr>
<tr>
<td>Population</td>
<td>Regional Profile Reports</td>
</tr>
<tr>
<td>- State Overview -- Educational Attainment of Persons Age 25 or Over, 1990-2000</td>
<td></td>
</tr>
<tr>
<td>Educational Attainment</td>
<td>- Change in Number of Missouri Adults Not Having Graduated from High School 1990-2000</td>
</tr>
<tr>
<td>Disability</td>
<td>- Change in Number of Missourians Having Acquired Some Post-Secondary Education but are Not College Graduates 1990-2000</td>
</tr>
<tr>
<td>Transportation</td>
<td>- Change in Missouri's College Graduates By County and Region 1990-2000</td>
</tr>
</tbody>
</table>

View Educational Attainment Maps, Charts and Tables for another RPC by choosing from the list below.

RPC 1  RPC 2  RPC 3  RPC 4  RPC 5  RPC 6  RPC 7  RPC 8  RPC 9  RPC 10  RPC 11  RPC 12  RPC 13  RPC 14  RPC 15  RPC 16  RPC 17  RPC 18  RPC 19

Return to Socio-Economic Indicator Resource Main Page
Disability
Transportation

East-West Gateway Coordinating Council
Transportation

Maps
- Percent of Workers 16 Years or Older by Means of Travel to Work, By County, 2000
- Population 16 Years or Older Mean Travel Time to Work, By County, 2000

Charts
- Percent of Workers 16 Years or Older by Mode of Transportation to Work, 2000
- Percent of Households by Number of Vehicles Available, 2000
- Mean Travel Time to Work in Minutes, 2000

Tables by County within MoDOT RPC 3
- Missouri Means of Travel to Work, 2000

Regional Profile Reports
- Commuting to Work Outside of Home County 1990-2000

View Transportation Maps, Charts and Tables for another RPC by choosing from the list below.
RPC 1  RPC 2  RPC 3  RPC 4  RPC 5  RPC 6  RPC 7  RPC 8  RPC 9  RPC 10
RPC 11 RPC 12 RPC 13 RPC 14 RPC 15 RPC 16 RPC 17 RPC 18 RPC 19

Return to Socio-Economic Indicator Resource Main Page
APPENDIX E – Metropolitan Planning Organization

This appendix illustrates the screen selections for the Metropolitan Planning Organizations.
Metropolitan Planning Organization
Age Cohorts

<table>
<thead>
<tr>
<th>Age</th>
<th>Race / Hispanic</th>
<th>Employment Status</th>
<th>Housing Units</th>
<th>Households</th>
<th>Income</th>
<th>Poverty</th>
<th>Population</th>
<th>Educational Attainment</th>
<th>Disability</th>
<th>Transportation</th>
</tr>
</thead>
</table>

Maps
- Percent of Population 17 Years or Younger, 2000
- Percent of Population 18 to 64 Years Old, 2000
- Percent of Persons Age 65 or Older, 2000

Tables

View Age Maps and Tables for another MPO by choosing from the list below.

MPO 1  MPO 2  MPO 3  MPO 4  MPO 5  MPO 6  MPO 7

Return to Socio-Economic Indicator Resource Main Page
Employment Status

MoDOT MPO 2 East West Gateway Coordinating Council
Employment Status

Maps
- Percent of the Population 16 Years or Older in the Civilian Labor Force, 2000
- Percent of the Population 16 Years or Older in Professional Occupations, 2000
- Percent of the Population 16 Years or Older in Service Occupations, 2000
- Percent of the Population 16 Years or Older in Sales Occupations, 2000
- Percent of the Population 16 Years or Older in Construction Occupations, 2000
- Percent of the Population 16 Years or Older in Production and Transportation Occupations, 2000
- Percent of the Population 16 Years or Older Unemployed, 2000
- Percent of the Population 16 Years or Older Working in Place of Residence, 2000

Tables
- Employment Status, 1990-2000
- Work Force by Occupation, 1990-2000
- Veteran and Armed Forces Status, 1990-2000
- Place of Work, 1990-2000

View Employment Status Maps and Tables for another MPO by choosing from the list below.

MPO 1  MPO 2  MPO 3  MPO 4  MPO 5  MPO 6  MPO 7

Return to Socio-Economic Indicator Resource Main Page
Housing Units

MoDOT MPO 2 East West Gateway Coordinating Council
Housing Units

Maps
- Percent Housing Units Owner-Occupied, 2000
- Percent Housing Units Renter-Occupied, 2000
- Percent of Total Housing Units Occupied, 2000
- Percent of Total Housing Units Vacant, 2000
- Homeowner Vacancy Rate, 2000
- Rental Vacancy Rate, 2000
- Total Housing Units, 2000
- Average Gross Rent, 2000
- Average House Value, 2000
- Average Housing Unit Age, 2000
- Percent of Housing Units that are Seasonal, 2000
- Percent of Housing Units that are Mobile Homes, 2000
- Percent of Housing Units Less Than 5 Years Old, 2000
- Percent of Housing Units with No Vehicles, 2000
- Percent of Housing Units with One Vehicle, 2000
- Percent of Housing Units with Two Vehicles, 2000
- Percent of Housing Units with Three or More Vehicles, 2000

Tables
- Housing Unit Basics, 1990-2000
- Selected Household Characteristics, Number of Vehicles, 1990-2000
- Selected Housing Unit Characteristics, Mobile Home, Boat, RV, Van, etc., 1990-2000
- Age of Structure, 1990-2000
- Gross Rents, 1990-2000
- Gross Rent as a Percentage of Household Income, 1990-2000
- Owner Costs as a Percentage of Household Income, 1990-2000
- Housing Values, 1990-2000

View Housing Units Maps and Tables for another MPO by choosing from the list below.

MPO 1  MPO 2  MPO 3  MPO 4  MPO 5  MPO 6  MPO 7

Return to Socio-Economic Indicator Resource Main Page
Households

MoDOT MPO 2 East West Gateway Coordinating Council
Households

Maps
- Average Family Size, 2000
- Average Household Size, 2000
- Total Household Population, 2000
- Percent Population Living in Group Quarters, 2000
- Institutional Group Quarters Population, 2000
- Noninstitutional Group Quarters Population, 2000

Tables
- Relationship of Persons in Households, 1990-2000
- Group Quarters, 1990-2000
- Lived in Same House 5 Years Earlier, 1990-2000

View Households Maps and Tables for another MPO by choosing from the list below.

MPO 1   MPO 2   MPO 3   MPO 4   MPO 5   MPO 6   MPO 7

Return to Socio-Economic Indicator Resource Main Page
Income

MoDOT MPO 2 East West Gateway Coordinating Council

Income

Age
Race / Hispanic
Employment Status
Housing Units
Households

Maps
- Per Capita Income, 2000
- Average Family Income, 2000
- Average Household Income, 2000
- Average Female Earnings, 2000
- Average Male Earnings, 2000

Tables
- Household Income, 1989-1999
- Other Income Measures, 1990-2000

View Income Maps and Tables for another MPO by choosing from the list below.

MPO 1  MPO 2  MPO 3  MPO 4  MPO 5  MPO 6  MPO 7

Return to Socio-Economic Indicator Resource Main Page
Poverty

MoDOT MPO 2 East West Gateway Coordinating Council
Poverty

Maps
- Percent of Persons between 100% and 200% of the Poverty Level, 2000
- Percent Poor, 2000
- Percent of Persons Under 18 Years of Age Below Poverty Status, 2000
- Percent of Persons 18 to 64 Years of Age Below Poverty Status, 2000
- Percent of Persons 65 Years of Age or Older Below Poverty Status, 2000
- Percent of Families Below Poverty Status, 2000

Tables
- Poverty, 1990-2000

Age
Race / Hispanic
Employment Status
Housing Units
Households
Income
Poverty
Population
Educational Attainment
Disability
Transportation

View Poverty Maps and Tables for another MPO by choosing from the list below.

MPO 1    MPO 2    MPO 3    MPO 4    MPO 5    MPO 6    MPO 7

Return to Socio-Economic Indicator Resource Main Page
Population

Maps
- Total Population, 2000

Tables

View Population Maps and Tables for another MPO by choosing from the list below.

MPO 1  MPO 2  MPO 3  MPO 4  MPO 5  MPO 6  MPO 7

Return to Socio-Economic Indicator Resource Main Page
Educational Attainment

View Educational Attainment Maps and Tables for another MPO by choosing from the list below.

MPO 1  MPO 2  MPO 3  MPO 4  MPO 5  MPO 6  MPO 7

Return to Socio-Economic Indicator Resource Main Page
Disability

MoDOT MPO 2 East West Gateway Coordinating Council
Disability

Maps
- Percent Disabled, 2000
- Percent Work Disabled, 2000

Tables
- Disability, 1990-2000

Age
Race / Hispanic
Employment Status
Housing Units
Households
Income
Poverty
Population
Educational Attainment
Disability
Transportation

View Disability Maps and Tables for another MPO by choosing from the list below.
MPO 1    MPO 2    MPO 3    MPO 4    MPO 5    MPO 6    MPO 7

Return to Socio-Economic Indicator Resource Main Page
Transportation

MoDOT MPO 2 East West Gateway Coordinating Council
Transportation

Maps
- Population 16 Years or Older Mean Travel Time to Work, 2000
- Percent of Workers 16 Years or Older Driving Alone to Work, 2000
- Percent of Workers 16 Years or Older Carpooling to Work, 2000
- Percent of Workers 16 Years or Older Using Public Transportation to Work, 2000
- Percent of Workers 16 Years or Older Bicycling or Walking to Work, 2000
- Percent of Workers 16 Years or Older Working at Home, 2000

Tables
- Commuting, 1990-2000

View Transportation Maps and Tables for another MPO by choosing from the list below.

MPO 1  MPO 2  MPO 3  MPO 4  MPO 5  MPO 6  MPO 7

Return to Socio-Economic Indicator Resource Main Page
Final Report

APPENDIX F – Corridor Study

This appendix illustrates the screen selections for the Corridor Study.
Corridor Study
# Age Cohorts

MoDOT Springfield Area Highway 65 Corridor Study
Age Cohorts

<table>
<thead>
<tr>
<th>Age</th>
<th>Race / Hispanic</th>
<th>Employment Status</th>
<th>Housing Units</th>
<th>Households</th>
<th>Income</th>
<th>Poverty</th>
<th>Population</th>
<th>Educational Attainment</th>
<th>Disability</th>
<th>Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Maps**
- Map of Highway 65 Buffered Area

**Tables**
- 5 Mile Radius
- 10 Mile Radius
- 20 Mile Radius
- 30 Mile Radius

---

View Corridor Studies in another Planning District by choosing from the list below.

- Dist. 1
- Dist. 2
- Dist. 3
- Dist. 4
- Dist. 5
- Dist. 6
- Dist. 7
- Dist. 8
- Dist. 9
- Dist. 10

**Return to Corridor Studies Main Page**

**Return to Socio-Economic Indicator Resource Main Page**
# Race / Hispanic

**MoDOT Springfield Area Highway 65 Corridor Study**

## Race / Hispanic

<table>
<thead>
<tr>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race / Hispanic</td>
</tr>
<tr>
<td>Employment Status</td>
</tr>
<tr>
<td>Housing Units</td>
</tr>
<tr>
<td>Households</td>
</tr>
<tr>
<td>Income</td>
</tr>
<tr>
<td>Poverty</td>
</tr>
<tr>
<td>Population</td>
</tr>
<tr>
<td>Educational Attainment</td>
</tr>
<tr>
<td>Disability</td>
</tr>
<tr>
<td>Transportation</td>
</tr>
</tbody>
</table>

## Maps
- Map of Highway 65 Buffered Area

## Tables
- 5 Mile Radius
  - Race and Hispanic, 1990-2000
  - Language Spoken at Home, 1990-2000
- 10 Mile Radius
  - Race and Hispanic, 1990-2000
  - Language Spoken at Home, 1990-2000
- 20 Mile Radius
  - Race and Hispanic, 1990-2000
  - Language Spoken at Home, 1990-2000
- 30 Mile Radius
  - Race and Hispanic, 1990-2000
  - Language Spoken at Home, 1990-2000

---

View Corridor Studies in another Planning District by choosing from the list below.

Dist. 1 Dist. 2 Dist. 3 Dist. 4 Dist. 5 Dist. 6 Dist. 7 Dist. 8 Dist. 9 Dist. 10

[Return to Corridor Studies Main Page]

[Return to Socio-Economic Indicator Resource Main Page]
# Employment Status

**Maps**
- Map of Highway 65 Buffered Area

**Tables**

5 Mile Radius
- Employment Status, 1990-2000
- Work Force by Occupation, 1990-2000
- Veteran and Armed Forces Status, 1990-2000
- Place of Work, 1990-2000

10 Mile Radius
- Employment Status, 1990-2000
- Work Force by Occupation, 1990-2000
- Veteran and Armed Forces Status, 1990-2000
- Place of Work, 1990-2000

20 Mile Radius
- Employment Status, 1990-2000
- Work Force by Occupation, 1990-2000
- Veteran and Armed Forces Status, 1990-2000
- Place of Work, 1990-2000

30 Mile Radius
- Employment Status, 1990-2000
- Work Force by Occupation, 1990-2000
- Veteran and Armed Forces Status, 1990-2000
- Place of Work, 1990-2000

---

View Corridor Studies in another Planning District by choosing from the list below.

Dist. 1  Dist. 2  Dist. 3  Dist. 4  Dist. 5  Dist. 6  Dist. 7  Dist. 8  Dist. 9  Dist. 10

Return to Corridor Studies Main Page

Return to Socio-Economic Indicator Resource Main Page
## Housing Units

**Missouri Department of Transportation**

**Socio-Economic Indicator Resource**

**MoDOT Springfield Area Highway 65 Corridor Study**

**Housing Units**

### Maps:
- Map of Highway 65 Buffer Area

### Tables:
- **Housing Status**
  - Housing Unit Basics: 1990-2000
  - Selected Household Characteristics, Number of Vehicles, 1990-2000
  - Selected Housing Unit Characteristics, Mobile Home, Boat, RV, Van, etc., 1990-2000
- **Income**
  - Gross Rent as a Percentage of Household Income, 1990-2000
  - Owner Costs as a Percentage of Household Income, 1990-2000
  - Housing Values, 1990-2000
- **Poverty**
  - Housing Unit Basics, 1990-2000
  - Selected Household Characteristics, Number of Vehicles, 1990-2000
  - Selected Housing Unit Characteristics, Mobile Home, Boat, RV, Van, etc., 1990-2000
- **Population**
  - Housing Unit Basics, 1990-2000
  - Selected Household Characteristics, Number of Vehicles, 1990-2000
  - Selected Housing Unit Characteristics, Mobile Home, Boat, RV, Van, etc., 1990-2000
- **Education Attainment**
  - Age of Structure, 1990-2000
  - Gross Rent, 1990-2000
  - Gross Rent as a Percentage of Household Income, 1990-2000
  - Owner Costs as a Percentage of Household Income, 1990-2000
  - Housing Values, 1990-2000
- **Employment Status**
  - Housing Unit Basics, 1990-2000
  - Selected Household Characteristics, Number of Vehicles, 1990-2000
  - Selected Housing Unit Characteristics, Mobile Home, Boat, RV, Van, etc., 1990-2000

**2.5 Mile Radius**

**10 Mile Radius**

**20 Mile Radius**

- Housing Unit Basics, 1990-2000
- Selected Household Characteristics, Number of Vehicles, 1990-2000
- Selected Housing Unit Characteristics, Mobile Home, Boat, RV, Van, etc., 1990-2000
- Age of Structure, 1990-2000
- Gross Rent, 1990-2000
- Gross Rent as a Percentage of Household Income, 1990-2000
- Owner Costs as a Percentage of Household Income, 1990-2000
- Housing Values, 1990-2000

**View Corridor Studies in another Planning District by clicking from the list below:**

- Dist. 1
- Dist. 2
- Dist. 3
- Dist. 4
- Dist. 5
- Dist. 6
- Dist. 7
- Dist. 8
- Dist. 9
- Dist. 10

**Return to Corridor Studies Main Page**

**Return to Socio-Economic Indicator Resource Main Page**
Households
Income

MoDOT Springfield Area Highway 65 Corridor Study
Income

Maps
- Map of Highway 65 Buffered Area
- Household Income, 1989-1999
- Other Income Measures, 1990-2000

Tables
5 Mile Radius
- Household Income, 1989-1999
- Other Income Measures, 1990-2000
10 Mile Radius
- Household Income, 1989-1999
- Other Income Measures, 1990-2000
20 Mile Radius
- Household Income, 1989-1999
- Other Income Measures, 1990-2000
30 Mile Radius
- Household Income, 1989-1999
- Other Income Measures, 1990-2000

View Corridor Studies in another Planning District by choosing from the list below.
Dist. 1 Dist. 2 Dist. 3 Dist. 4 Dist. 5 Dist. 6 Dist. 7 Dist. 8 Dist. 9 Dist. 10

Return to Corridor Studies Main Page
Return to Socio-Economic Indicator Resource Main Page
Poverty

MoDOT Springfield Area Highway 65 Corridor Study
Poverty

Maps
- Map of Highway 65 Buffered Area

Tables
- Poverty, 1990-2000
  - Age
  - Race / Hispanic
  - Employment Status
  - Housing Units
  - Households
  - Income
  - Poverty
  - Population
  - Educational Attainment
  - Disability
  - Transportation

View Corridor Studies in another Planning District by choosing from the list below.
Dist. 1 Dist. 2 Dist. 3 Dist. 4 Dist. 5 Dist. 6 Dist. 7 Dist. 8 Dist. 9 Dist. 10

Return to Corridor Studies Main Page
Return to Socio-Economic Indicator Resource Main Page
Population

MoDOT Springfield Area Highway 65 Corridor Study
Population

Maps
- Map of Highway 65 Buffered Area

Tables
  5 Mile Radius
  10 Mile Radius
  20 Mile Radius
  30 Mile Radius

View Corridor Studies in another Planning District by choosing from the list below.
Dist. 1  Dist. 2  Dist. 3  Dist. 4  Dist. 5  Dist. 6  Dist. 7  Dist. 8  Dist. 9  Dist. 10

Return to Corridor Studies Main Page

Return to Socio-Economic Indicator Resource Main Page
Educational Attainment

MoDOT Springfield Area Highway 65 Corridor Study
Educational Attainment

Maps
- Map of Highway 65 Buffered Area
- Educational Attainment, 1990-2000

Tables
5 Mile Radius
- Educational Attainment, 1990-2000
10 Mile Radius
- Educational Attainment, 1990-2000
20 Mile Radius
- Educational Attainment, 1990-2000
30 Mile Radius
- Educational Attainment, 1990-2000

Age
Race / Hispanic
Employment Status
Housing Units
Households
Income
Poverty
Population
Educational Attainment
Disability
Transportation

View Corridor Studies in another Planning District by choosing from the list below.
Dist. 1 Dist. 2 Dist. 3 Dist. 4 Dist. 5 Dist. 6 Dist. 7 Dist. 8 Dist. 9 Dist. 10

Return to Corridor Studies Main Page
Return to Socio-Economic Indicator Resource Main Page
Disability

MoDOT Springfield Area Highway 65 Corridor Study
Disability

Maps
- Map of Highway 65 Buffered Area

Tables
- 5 Mile Radius
  - Disability, 1990-2000
- 10 Mile Radius
  - Disability, 1990-2000
- 20 Mile Radius
  - Disability, 1990-2000
- 30 Mile Radius
  - Disability, 1990-2000

View Corridor Studies in another Planning District by choosing from the list below.
Dist. 1 Dist. 2 Dist. 3 Dist. 4 Dist. 5 Dist. 6 Dist. 7 Dist. 8 Dist. 9 Dist. 10

Return to Corridor Studies Main Page
Return to Socio-Economic Indicator Resource Main Page
Transportation

MoDOT Springfield Area Highway 65 Corridor Study
Transportation

Age

Race / Hispanic

Employment Status

Housing Units

Households

Income

Poverty

Population

Educational Attainment

Disability

Transportation

Maps
- Map of Highway 65 Buffered Area

Tables
5 Mile Radius
- Commuting, 1990-2000
10 Mile Radius
- Commuting, 1990-2000
20 Mile Radius
- Commuting, 1990-2000
30 Mile Radius
- Commuting, 1990-2000

View Corridor Studies in another Planning District by choosing from the list below.

Dist. 1 Dist. 2 Dist. 3 Dist. 4 Dist. 5 Dist. 6 Dist. 7 Dist. 8 Dist. 9 Dist. 10

Return to Corridor Studies Main Page

Return to Socio-Economic Indicator Resource Main Page
APPENDIX G – Understanding the US Census PowerPoint Presentation

This appendix contains the PowerPoint handout that was distributed during the first session of the Training Session
MoDOT Socio-Economic Indicator Resource

Understanding the U.S. Census

Jefferson City
February 10, 2003

oseda.missouri.edu/modot

Office of Social & Economic Data Analysis
Geographic Hierarchy
Small-Area Geography Overview
Blocks

- Smallest units of data tabulation
- Cover the entire nation
- Do not cross census tracts or counties
- Generally bounded by visible features and legal boundaries
- Block numbers completely different from 1990
- Size: average about 100 people
Census Block Map
Block Groups

- Groups of blocks sharing the same first digit
- Smallest areas for which sample data available
- Size: optimally 1,500 people, range between 300 to 3,000
Census Tracts

- For the first time for Census 2000: Cover the nation
- Relatively homogenous population characteristics
- 65,000 Census tracts across U.S.
- Size: optimally 4,000 people, range between 1,000 and 8,000
Block Groups and Census Tracts

Legend

Boundaries
- State
- County Block
- Census Tract Block
- Block Group
- Block

Features
- Major Road
- Street

Approx. 1.3 miles across.
Prepared with American FactFinder
Places

- Incorporated Places
- Census Designated Places
Counties

- Counties in 48 States
- Independent Cities in 4 States
- Parishes in Louisiana
- Cities and Boroughs in Alaska
Census 2000
Short Form and Long Form

Short form

Long form
The Census Questionnaire

- 100% data or short form
  - 7 questions
- Sample data or long form
  - 34 topics
Census 2000 Short Form Questionnaire

7 Questions

Name
Sex
Age
Relationship
Hispanic Origin
Race
Owner/Renter Status
Hierarchy - Summary File 1: State File Summary Levels

State
County
Place (or place part)
Census tract
Block group
Block

State portion of American Indian and Alaska Native Area (with trust lands and with no trust lands) and Hawaiian home land
## Race and Ethnic Detail
**Block Level**

- Total population
- White
- Black or African American
- American Indian and Alaska Native
- Asian
- Native Hawaiian and Other Pacific Islander
- Some other race
- Two or more races
- Hispanic or Latino
- White, not Hispanic or Latino
Examples of SF1 Tabulations

Housing Tabulations

Housing Units
Occupancy Status
Owner-/Renter-Occupied
Tenure by Race, by Hispanic or Latino
Group Quarters Population

- **Institutionalized populations**
  - Correctional institutions
  - Nursing homes
  - Other institutions

- **Noninstitutionalized populations**
  - College dormitories
  - Military quarters
  - Other noninstitutional group quarters
For the U.S. as a whole, about one in six households received the long-form questionnaire.
Census 2000 Long Form Questionnaire

34 Subjects

- Social Characteristics
- Economic Characteristics
- Housing Characteristics
Summary File 3: What’s In It?

- Data tabulated from Census 2000 Long Form (Sample data)
- Data on ancestry, income, education, housing units, etc.
- Selected population and housing characteristics down to the block group or census tract level
### Population Subjects Summarized to Block Group

- Basic Population
- Disability
- Employment Status
- Households & Families
- Income
- Occupation
- Commuting

- Language Spoken
- Marital Status
- Migration
- Birthplace, Year of Entry, Citizenship
- Place of Work
- Poverty
- School Enrollment & Educ. Attainment
- Veteran Status
Population Subjects
Summarized to Block Group

Iterated by Race/Hispanic

- Basic Population Totals
- Employment Status
- Households and Families
- Income
  - (Family, Household, Individual)
- Poverty Status
- School Enrollment & Educational Attainment
<table>
<thead>
<tr>
<th>Population Subjects Summarized to Census Tract</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ancestry</td>
</tr>
<tr>
<td>• Disability</td>
</tr>
<tr>
<td>• Employment Status</td>
</tr>
<tr>
<td>• Grandparents as Caregivers</td>
</tr>
<tr>
<td>• Households and Families</td>
</tr>
<tr>
<td>• Income (Family, Nonfamily, Indiv)</td>
</tr>
<tr>
<td>• Language Spoken</td>
</tr>
<tr>
<td>• Marital Status</td>
</tr>
<tr>
<td>• Migration</td>
</tr>
<tr>
<td>• Birthplace, Year of Entry, Citizenship</td>
</tr>
<tr>
<td>• Poverty Status</td>
</tr>
<tr>
<td>• School Enrollment and Educational Attainment</td>
</tr>
</tbody>
</table>
Census 2000 Long Form Questionnaire

34 Subjects

- Social Characteristics
- Economic Characteristics
- Housing Characteristics
Summary File 3: What’s In It?

- Data tabulated from Census 2000 Long Form (Sample data)
- Data on ancestry, income, education, housing units, etc.
- Selected population and housing characteristics down to the block group or census tract level
Disability

Revised Question

• Vision or hearing impairment
• Mobility limitation
• Condition that limits:
  – Learning or remembering
  – Getting around house
  – Getting around outside
  – Working

Tables: P41-P42; PCT26-PCT34
Employment Status

• At work
• Laid off or absent
• Looking for work

Tables: P43-P48; P150(A-I); PCT35; PCT69(A-I); PCT71(A-I)
Income

8 Sources
- Wages and salary
- Self employment
- Interest, dividends and rental income
- Social security and railroad retirement
- Supplemental security income
- Public assistance or welfare
- Retirement, survivor or disability pension
- Child support, alimony, unemployment, etc.

Total Income
Tabulation Groupings

- **Family and Nonfamily**
  - Tables: P76-P81; P154(A-I)-P156(A-I); PCT36-PCT43
- **Household**
  - Tables: P52-P75; P151(A-I)-P153(A-I); PCT72(A-I)
- **Individual**
  - Tables: P82-P86; P157(A-I)-P158(A-I); PCT44-PCT48; PCT73(A-I)-PCT74(A-I)
Income: Poverty

- Poverty status derived from answers to income questions

  Tabulation Groupings

- Family and Nonfamily
  - Tables: P90-P91; P154(A-I)-P156(A-I); PCT36-PCT43

- Household
  - Tables: P92-P93; P151(A-I)-P153(A-I); PCT72(A-I)

- Individuals
  - Tables: P87-89; P157(A-I)-P158(A-I); PCT44-PCT48; PCT73(A-I)-PCT74(A-I)
### Occupation, Industry and Class of Worker

- Kind of Business or Industry
- Occupation
- Year last worked
- Class of worker:
  - Private for profit, Private not-for profit,
  - Local, state or federal government employee
  - Self employed: incorporated/not incorporated
  - Working without pay

Tables: P49-P51
Place of Work & Journey to Work

- Location of work last week
- Mode of transportation to work
- Vehicle occupancy, if car truck or van
- Time left for work
- Travel time to work

Tables: P26-P35; PCT65(A-I)
School Enrollment and Educational Attainment

- Enrollment: public or private school
- Grade or level attending
- Highest degree or level of school completed

Tables: P36-P38; P147(A-I)–P149(A-I); PCT23-PCT25
Housing Subjects

- Units in Structure
- Year Built
- Rooms
- Year Householder Moved In
- Rent/Value
- House Heating Fuel

- Vehicles Available
- Mortgage Status and Monthly Costs
- Plumbing and Kitchen Facilities
- Telephone Service
- Occupants Per Room
Tenure and Vacancy Status

- Owner/Renter status
- Occupied/ Vacant units
- Many housing tables cross-tabulated by tenure
## Units in Structure

**Type of housing unit (detached house, townhouse, apartment, mobile home, etc.)**

Tables: H30-H33, H72, H79; HCT3, HCT4, HCT6, HCT8, HCT14, HCT30(A-I)
Housing Value or Monthly Rent

- **Value:** How much do you think this house and lot, apartment, or mobile home and lot would sell for?

- **Rent:** What is the monthly rent? Also asks if rent includes meals.
  - Tables: H53-H73; HCT18, HCT36(A-I)-HCT40(A-I)
Vehicles Available

- Any vehicles under one-ton capacity for use by members of household

Tables: H44-H46; HCT33(A-I)

<table>
<thead>
<tr>
<th>VEHICLES AVAILABLE</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>10,861,067</td>
<td>10.3</td>
</tr>
<tr>
<td>1</td>
<td>36,123,613</td>
<td>34.2</td>
</tr>
<tr>
<td>2</td>
<td>40,461,920</td>
<td>38.4</td>
</tr>
<tr>
<td>3 or more</td>
<td>18,033,501</td>
<td>17.1</td>
</tr>
</tbody>
</table>
Mortgage Status and Selected Monthly Owner Costs

Cost of

• Utilities
• First and second mortgage
• Taxes insurance
• Fuel costs

Tables: H80, H83, H90-H98; HCT13, HCT44(A-I)-HCT48(A-I)
APPENDIX H – Using the Website PowerPoint Presentation

This appendix contains the PowerPoint handout that was distributed during the second session of the Training Session.
MoDOT Socio-Economic Indicator Resource

Using the Website

Jefferson City
February 10, 2003

oseda.missouri.edu/modot

presented by:
Office of Social & Economic Data Analysis
MoDOT Socio-Economic Indicator Resource

Geographies
- Counties
- Districts
- RPCs
- MPOs
- Corridors

US Census
- Population
- Age
- Race/Hispanic
- Employment Status
- Housing Units
- Households
- Income
- Poverty
- Educational Attainment
- Disability
- Transportation

Requested Data

Data Query
Layer 1: Home Page

The entry page allows the user one of six navigational options:

- Geographies
  - Counties
  - Regional Districts
  - RPCs
  - MPOs
  - Corridor Studies

- Downloadable Data Sets
  - MoDOT database
County level data are available through the MCDC/OSEDA County Data page.

To access 2000 US census data organized by standard census tables, and special reports click on selected county.
Layer 3: County Report Menu

For each Missouri county links are provided in a number of formats to the following data sources:

**Federal Sources**
- US Census tables
  - DP1-4
  - SF1, SF3 (2000, 1990)
- Census of Agriculture
- County Business Patterns
- Bureau of Econ. Analysis

**State Sources**
- MICA
- Kidscount
- DESE
- DED
District and sub-district level US Census data are available as tables, maps, and graphics.

To view information, click on selected region.
Layer 3: Regional Indicators

Indicators are organized by the following categories:

- Analysis
- Age
- Race/Hispanic
- Employment Status
- Housing Units
- Households
- Income
- Poverty
- Population
- Educational Attainment
- Disability
- Transportation
Layer 4: Regional Indicators

For each indicator, selected characteristics are available in html format. Links at the bottom of the page provide access to other districts by indicator.
Layer 2: RPC Page

Regional Planning Commission and sub-RPC level US Census data are available as tables, maps, and graphics.

To view information, click on selected RPC.
Layer 3: RPC Indicators

Indicators are organized by the following categories:

- Age
- Race/Hispanic
- Employment Status
- Housing Units
- Households
- Income
- Poverty
- Population
- Educational Attainment
- Disability
- Transportation
Layer 2: MPO Page

Metropolitan Planning Organization and sub-MPO level US Census data are available as tables, maps, and graphics.

To view information, click on selected MPO.
Layer 3: MPO Indicators

Indicators are organized by the following categories:

- Age
- Race/Hispanic
- Employment Status
- Housing Units
- Households
- Income
- Poverty
- Population
- Educational Attainment
- Disability
- Transportation
Layer 2: Corridor Page

From the MoDOT Corridor page, select a Regional District to see current and archived corridor studies.

Corridor studies include tables and maps of requested socio-economic indicators.
Layer 3: Regional Corridor Page

Yellow tags indicate the name and location of Corridor studies in a Regional District. Clicking on a yellow tag links to maps and selected indicator data for that Corridor study.
Layer 4: Buchanan County – Rte. 59 Study

The specific corridor study page displays:

- a map of the corridor
- the corridor’s buffer zone
- census blocks
- census block centroids

Requested socio-economic indicators can be displayed via map as well as in other graphic forms.
Based on estimates provided through the MoDOT Socio-Economic Indicators Resource, Dallas County exhibits growth rates similar to other areas in the southwest region of the state. The 2000 population of the county was 15,661, up from 12,646 in 1990 and a 23.8% increase. Map 1 displays this increase.

Map 1.

While population growth increased significantly in the 1990’s, the population characteristics remained relatively stable in regard to racial composition, economic characteristics, age, and housing values.

To insert a map or chart from the MoDOT Socio-Economic Indicator Resource into a Microsoft Office document:

- Right click on the image.
- Select ‘Save picture as’.
- Save .gif image to folder.
- Open document to be placed in.
- Position cursor where .gif image is to be inserted.
- Select drop down ‘Insert’ menu.
When compared to statewide and district wide demographics, the population in the project area and surrounding county has a more homogeneously white population, lower average income, lower housing costs and values, and higher unemployment.

Graph 1.

Graph 1 indicates the population as distributed by race categories.

Directions for inserting graphics continued.

- Select ‘picture’
- Select ‘from file’
- Navigate to folder where .gif was placed
- Select file
- Click ‘Insert’
- To edit in MSWord
  - Right click mouse and choose ‘edit’. This allows manipulation of size & placement on page.
- To edit in MSPowerpoint
  - Left click mouse. This highlights image and allows manipulation.
APPENDIX I – Using the MoDOT SEIR Data Query Application PowerPoint

This appendix contains the PowerPoint handout that was distributed during the third session of the Training Session.
MoDOT Socio-Economic Indicator Resource

Using the MoDOT SEIR Data Query Application

Jefferson City
February 10, 2003

oseda.missouri.edu/modot

presented by:
Office of Social & Economic Data Analysis
MoDOT SEIR Data Query Application

Welcome to the Missouri Department of Transportation Socio-Economic Indicator Resource Web Page. A joint collaboration between the Missouri Department of Transportation (MoDOT) and the Office of Social and Economic Data Analysis (OSEDA) to provide up-to-date, authoritative data and information for use in transportation planning and project development. The Indicator Resource Web Page makes available data, maps, tables, charts and graphics and analysis at the level of geography meaningful to MoDOT personnel.

Select the geography of interest below in order to access the informational elements of choice.

- Missouri Counties
- Planning Districts
- Regional Planning Commissions
- Metropolitan Planning Organizations
- Corridor Studies
- Data Query
The SEIR Data Query application allows users to filter through social and economic datasets and retrieve data from them.

This application outputs to several file types: a .csv file for use with excel, a .sas dataset, and in .html format for direct viewing on the world wide web.
Part I: Selecting Units of Analysis

The Data Query application begins by selecting the geographic area of interest. This is also referred to as the universe.

Upon selecting the geographic area of interest, the user then selects the type of geographic units for which to see data.
Part II: Select Geographic Areas

Part 2 allows the user to further filter the query on the geographic area that was selected for analysis.

Ex. Selecting one specific county, Adair. If we had chosen MPOs, we would get data at the specified geography of interest for all of the MPOs.
Part III: Choose Tables, Times, Output

There are 25 tables with subset data inside the MoDOT Social and Economic Indicator Resource. 1990 and 2000 data are available for trend analysis.

There are 3 data output types: .csv file for use with spreadsheet and GIS software; .sas for use with statistical or database software and .html for immediate viewing on the world wide web.
Output Selection

MoDOT Data Extraction Results

modotda program, revised 1/15/2003 1:19PM
Processing started at 23:36:46 on 26JAN03
Job ID: 26JAN2336687

As we generate the specified output files you can click on the hyperlinks below to view/retrieve the results.

csv file for year 2000: place2000.csv
SAS dataset for year 2000: place2000.sas7bdat
Demographic profile report for 2000: place2000.html

*** Processing Complete ***

Upon selecting the appropriate parameters and submitting the selection, the SAS application is invoked, and the various types of output formats that had been previously selected are now made accessible.
The .csv format is useful for working in a spreadsheet. It is also a useful format for working with Access or ArcView 8.x
The .sas format is useful for statistical applications like SAS or SPSS. There are virtually no limitations on the number of columns and rows that can be in the dataset.
The .html format is useful for either viewing the data immediately, via a web browser, or for posting in web based applications since it is already in .html format.
MoDOT SEIR Data Query Application

Welcome to the Missouri Department of Transportation Socio-Economic Indicator Resource Web Page. A joint collaboration between the Missouri Department of Transportation (MoDOT) and the Office of Social and Economic Data Analysis (OSEDA) to provide up-to-date, authoritative data and information for use in transportation planning and project development. The Indicator Resource Web Page makes available data, maps, tables, charts and graphics and analysis at the level of geography meaningful to MoDOT personnel.

Select the geography of interest below in order to access the informational elements of choice.

- Missouri Counties
- Planning Districts
- Regional Planning Commissions
- Metropolitan Planning Organizations
- Corridor Studies
- Data Query
Exercise 1: Disabled Population

This exercise involves obtaining data about the disabled population in the City of Columbia, and Boone County.

Specifically, what number exists in Columbia and how many in the remainder of the county.

This example image shows the filters used to select “Boone County” and Columbia, and “Table 10. Disability”.

[Image of a filter selection interface for selecting geographic areas]
Exercise 1: Disabled Population

After selecting the appropriate filter, the next step is to select the relevant variables.

Due to the large number of individual variables in the data set, they have been organized according to the social and economic category to which they are most likely to fit.
Exercise 1: Disabled Population

MODOT Demographic Profile - 2000
Boone County, 29019

<table>
<thead>
<tr>
<th>Subject</th>
<th>Number</th>
<th>Percent</th>
<th>SF3 Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Disability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universe: Civilian Non-Institutionalized Persons Over 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civ Noninstitutionalized Pop. Pop 5 Yrs and Over</td>
<td>125,988</td>
<td></td>
<td>P42</td>
</tr>
<tr>
<td>Persons With 1 or more disabilities</td>
<td>18,273</td>
<td>14.6</td>
<td></td>
</tr>
<tr>
<td>Civ Noninstitutionalized Pop. 65 Years and Over</td>
<td>10,922</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons 65 Yrs and Over With a Disability</td>
<td>5,773</td>
<td>52.9</td>
<td></td>
</tr>
<tr>
<td>Civ Noninstitutionalized Pop. 16-64</td>
<td>95,622</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons 16-64 with a Work Disability</td>
<td>12,564</td>
<td>13.1</td>
<td></td>
</tr>
<tr>
<td>Employed Persons 16-64 with a Work Disability</td>
<td>7,611</td>
<td>8.0</td>
<td></td>
</tr>
</tbody>
</table>

This is the .html output for the disabled population of Boone County.
**Exercise 1: Disabled Population**

MODOT Demographic Profile - 2000
Columbia city, 29-15670

<table>
<thead>
<tr>
<th>Subject</th>
<th>Number</th>
<th>Percent</th>
<th>SF3 Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil Noninstitutionalized Pop. Pop 5 Yrs and Over</td>
<td>79,108</td>
<td></td>
<td>P42</td>
</tr>
<tr>
<td>Persons With 1 or more disabilities</td>
<td>11,144</td>
<td>14.1</td>
<td></td>
</tr>
<tr>
<td>Civil Noninstitutionalized Pop. 65 Years and Over</td>
<td>6,818</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons 65 Yrs and Over With a Disability</td>
<td>3,618</td>
<td>53.1</td>
<td></td>
</tr>
<tr>
<td>Civil Noninstitutionalized Pop. 16-64</td>
<td>62,290</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons 16-64 with a Work Disability</td>
<td>7,755</td>
<td>12.4</td>
<td></td>
</tr>
<tr>
<td>Employed Persons 16-64 with a Work Disability</td>
<td>4,786</td>
<td>7.7</td>
<td></td>
</tr>
</tbody>
</table>

HTML data capture for the city of Columbia.
Exercise 2: Median Family Income

Exercise 2a asks to compare the median family income of all of the counties in MoDOT Planning District 5 to each other and to the state average.

The first step is to select the universe that the query is to be constrained by, in this case “One or more MoDOT Planning Districts”.
Exercise 2: Median Family Income

The second step is to select the geographic area that data is needed for. In this case, “County or independent city”.

The third step involves selecting the Planning District of interest. In this case, “District 5 Central / Jefferson City”.
Exercise 2: Median Family Income

This screenshot shows the .html output for the various counties in the Central District.

Not all variables are comparable from the 2000 and 1990 census.

Run this query for 2000 only and see what you get.
Exercise 2: Median Family Income

Getting the state average is pretty much the same process, except with a different geographic unit, “State(MO)”. The screenshot shows the values for the entire state. This then can be compared to District 5’s counties.
Exercise 3: Ashland Workers

Exercise 3 asks to locate where the population of Ashland works.

The appropriate geographic universe and units need to be selected first. In this case the universe is the “Planning District” and our geographic units are “City(place)”.

Exercise 3: Ashland Workers

Upon selecting the universe and the geographic units, you can then filter the universe to include only those Planning Districts for which you want data. In this case, “Planning District 5” is used to select data for only this region.
Exercise 3: Ashland Workers

The last parameter to be selected is the data itself including, the years that you want the data for, and the format that you want it in.

In this case, “Table 6. Place of Work”, contains the data that informs where Ashland’s workers reside.
Exercise 3: Ashland Workers

MODOT Demographic Profile - 2000
Ashland city, 29-02242

<table>
<thead>
<tr>
<th>Subject</th>
<th>Number</th>
<th>Percent</th>
<th>SF3 Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Place of Work</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universe: Workers over 16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workers 16 and Over</td>
<td>982</td>
<td></td>
<td>P26</td>
</tr>
<tr>
<td>Work in County of Residence</td>
<td>790</td>
<td>80.4</td>
<td></td>
</tr>
<tr>
<td>Workers Living in a Place</td>
<td>982</td>
<td>100.0</td>
<td>P27</td>
</tr>
<tr>
<td>Work in Place of Residence</td>
<td>216</td>
<td>22.0</td>
<td></td>
</tr>
</tbody>
</table>

HTML output regarding place of work for Ashland.
Exercise 4: Elderly Population

Exercise 4 involves determining the percent of persons 65 years of age and older by census tract for Benton and Camden Counties.

Begin by selecting “One or more counties” as your universe and “2000 Census Tract” as your geographic units.
Exercise 4: Elderly Population

Select the counties of Benton and Camden from the “Counties” scroll down menu.

The population variable is in Table 1.
### Exercise 4: Elderly Population

The screenshot shows the data output in the .csv format.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Geocode</td>
<td>AreaName</td>
<td>esriid</td>
<td>County</td>
<td>Over65</td>
</tr>
<tr>
<td>2</td>
<td>29015-9601.00</td>
<td>Census Tract 9601</td>
<td>29015960100 001</td>
<td>Benton MO</td>
<td>571</td>
</tr>
<tr>
<td>3</td>
<td>29015-9602.00</td>
<td>Census Tract 9602</td>
<td>29015960200 001</td>
<td>Benton MO</td>
<td>440</td>
</tr>
<tr>
<td>4</td>
<td>29015-9603.00</td>
<td>Census Tract 9603</td>
<td>29015960300 001</td>
<td>Benton MO</td>
<td>1055</td>
</tr>
<tr>
<td>5</td>
<td>29015-9604.00</td>
<td>Census Tract 9604</td>
<td>29015960400 001</td>
<td>Benton MO</td>
<td>419</td>
</tr>
<tr>
<td>6</td>
<td>29015-9607.00</td>
<td>Census Tract 9607</td>
<td>29015960700 001</td>
<td>Benton MO</td>
<td>608</td>
</tr>
<tr>
<td>7</td>
<td>29015-9608.00</td>
<td>Census Tract 9608</td>
<td>29015960800 001</td>
<td>Benton MO</td>
<td>740</td>
</tr>
<tr>
<td>8</td>
<td>29029-9501.00</td>
<td>Census Tract 9501</td>
<td>29029950100 001</td>
<td>Camden MO</td>
<td>653</td>
</tr>
<tr>
<td>9</td>
<td>29029-9502.00</td>
<td>Census Tract 9502</td>
<td>29029950200 001</td>
<td>Camden MO</td>
<td>970</td>
</tr>
<tr>
<td>10</td>
<td>29029-9503.00</td>
<td>Census Tract 9503</td>
<td>29029950300 001</td>
<td>Camden MO</td>
<td>461</td>
</tr>
<tr>
<td>11</td>
<td>29029-9504.00</td>
<td>Census Tract 9504</td>
<td>29029950400 001</td>
<td>Camden MO</td>
<td>520</td>
</tr>
<tr>
<td>12</td>
<td>29029-9505.00</td>
<td>Census Tract 9505</td>
<td>29029950500 001</td>
<td>Camden MO</td>
<td>515</td>
</tr>
<tr>
<td>13</td>
<td>29029-9506.00</td>
<td>Census Tract 9506</td>
<td>29029950600 001</td>
<td>Camden MO</td>
<td>435</td>
</tr>
<tr>
<td>14</td>
<td>29029-9507.00</td>
<td>Census Tract 9507</td>
<td>29029950700 001</td>
<td>Camden MO</td>
<td>855</td>
</tr>
<tr>
<td>15</td>
<td>29029-9508.00</td>
<td>Census Tract 9508</td>
<td>29029950800 001</td>
<td>Camden MO</td>
<td>842</td>
</tr>
<tr>
<td>16</td>
<td>29029-9509.00</td>
<td>Census Tract 9509</td>
<td>29029950900 001</td>
<td>Camden MO</td>
<td>371</td>
</tr>
<tr>
<td>17</td>
<td>29029-9511.00</td>
<td>Census Tract 9511</td>
<td>29029951100 001</td>
<td>Camden MO</td>
<td>702</td>
</tr>
<tr>
<td>18</td>
<td>29029-9512.00</td>
<td>Census Tract 9512</td>
<td>29029951200 001</td>
<td>Camden MO</td>
<td>604</td>
</tr>
</tbody>
</table>
Exercise 5: Walk or Bike to Work

Exercise 5 involves finding out how many people bike or walk to work in Columbia?

Though for a city any universe can be selected, it’s advisable to select the smallest universe appropriate to the query to reduce excess city listings.
Exercise 5: Walk or Bike to Work

In this example the universe selected is the “Planning District” and the geographic area is the “City(place)” filter.

Then select “D5 Kansas City Area” from the “MoDOT Districts” to narrow your query to only those cities in that district.

“Table 7. Commuting” contains the variables regarding mode of transportation to work.
Exercise 5: Walk or Bike to Work

The output screen reveals how many people walk or cycle to work, as well as the percent and change in percent from 1990 to 2000.
Exercise 6: Average Commute Time

Exercise 6 asks the question ‘What is the average commuting time of residents in Miller and Morgan County communities?’.

By selecting “City(place)” from the geographic unit menu you can get data for all cities in Miller and Morgan Counties.
Exercise 6: Average Commute Time

The indicator for average commute time is found in “Table 7. Commuting”.

Besides average commute time, this table also provides data on the modes of transportation to work.
Exercise 6: Average Commute Time

<table>
<thead>
<tr>
<th>AreaName</th>
<th>county</th>
<th>AvgCommute_90</th>
<th>AvgCommute_00</th>
<th>AvgCommuteCh90_00</th>
<th>AvgCommutePCh90_00</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Bagnell town</td>
<td>Miller MO</td>
<td>14.8</td>
<td>13.2</td>
<td>-1.6</td>
<td>-10.8</td>
</tr>
<tr>
<td>3 Barnett city</td>
<td>Morgan MO</td>
<td>21.3</td>
<td>31.4</td>
<td>10.1</td>
<td>47.6</td>
</tr>
<tr>
<td>4 Brumley town</td>
<td>Miller MO</td>
<td>25.1</td>
<td>21.8</td>
<td>-3.3</td>
<td>-13.2</td>
</tr>
<tr>
<td>5 Eldon city</td>
<td>Miller MO</td>
<td>16.1</td>
<td>19.8</td>
<td>1.7</td>
<td>9.5</td>
</tr>
<tr>
<td>6 Gravois Mills town</td>
<td>Morgan MO</td>
<td>19.5</td>
<td>12.3</td>
<td>-7.2</td>
<td>-36.8</td>
</tr>
<tr>
<td>7 Iberia city</td>
<td>Miller MO</td>
<td>24.8</td>
<td>26.6</td>
<td>1.8</td>
<td>7.2</td>
</tr>
<tr>
<td>8 Lake Ozark city</td>
<td>Miller MO</td>
<td>14.4</td>
<td>20</td>
<td>5.5</td>
<td>38.4</td>
</tr>
<tr>
<td>9 Lakeside city</td>
<td>Miller MO</td>
<td>13.7</td>
<td>6.7</td>
<td>-7</td>
<td>-51.3</td>
</tr>
<tr>
<td>10 Laurie village</td>
<td>Morgan MO</td>
<td>12.5</td>
<td>17.1</td>
<td>4.5</td>
<td>36.2</td>
</tr>
<tr>
<td>11 Olean town</td>
<td>Miller MO</td>
<td>27.7</td>
<td>19.3</td>
<td>-8.4</td>
<td>-30.2</td>
</tr>
<tr>
<td>12 St. Elizabeth village</td>
<td>Miller MO</td>
<td>25.4</td>
<td>36.1</td>
<td>10.8</td>
<td>42.6</td>
</tr>
<tr>
<td>13 Stover city</td>
<td>Morgan MO</td>
<td>15.2</td>
<td>24.8</td>
<td>9.6</td>
<td>63.5</td>
</tr>
<tr>
<td>14 Syracuse city</td>
<td>Morgan MO</td>
<td>17.4</td>
<td>22.6</td>
<td>5.2</td>
<td>30.2</td>
</tr>
<tr>
<td>15 Tuscumbia town</td>
<td>Miller MO</td>
<td>20.9</td>
<td>29.9</td>
<td>8.9</td>
<td>42.7</td>
</tr>
<tr>
<td>16 Versailles city</td>
<td>Morgan MO</td>
<td>14.1</td>
<td>18.1</td>
<td>3.9</td>
<td>27.8</td>
</tr>
</tbody>
</table>

Miller and Morgan County cities’ average commute time.
Exercise 7: Population Change

Exercise 8 asks ‘what are the fastest growing census block groups in Cole County?’.

How would you measure “fastest” growing?
Exercise 7: Population Change

“Counties” are the universe and “2000 block groups” are the geographic units.

“Cole County” is selected from the “Counties” menu.

Population data is found in “Table 1. Total Population and Population by Age”.
### Exercise 7: Population Change

**Output in .csv format of population and change in population at the block group geography for Cole County.**

<table>
<thead>
<tr>
<th>A</th>
<th>Geocode</th>
<th>B</th>
<th>esrid</th>
<th>C</th>
<th>gcsid</th>
<th>D</th>
<th>TotPop_90</th>
<th>E</th>
<th>TotPop_00</th>
<th>F</th>
<th>TotPopCh90_00</th>
<th>G</th>
<th>TotPopPCh90_00</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>29051-0101.00-2</td>
<td>290510101002</td>
<td>510101002</td>
<td>836</td>
<td>2647</td>
<td>1811</td>
<td>216.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>29051-0106.00-3</td>
<td>290510108003</td>
<td>510108003</td>
<td>2891</td>
<td>4439</td>
<td>1548</td>
<td>53.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>29051-0107.00-5</td>
<td>290510107005</td>
<td>510107005</td>
<td>1621</td>
<td>2910</td>
<td>1288.8</td>
<td>79.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>29051-0107.00-4</td>
<td>290510107004</td>
<td>510107004</td>
<td>1983.4</td>
<td>2678</td>
<td>717.6</td>
<td>38.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>29051-0204.00-2</td>
<td>290510204002</td>
<td>510204002</td>
<td>1103.6</td>
<td>1698</td>
<td>569.4</td>
<td>33.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>29051-0104.00-5</td>
<td>290510104005</td>
<td>510104005</td>
<td>887.1</td>
<td>1304</td>
<td>516.9</td>
<td>59.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>29051-0206.00-3</td>
<td>290510206003</td>
<td>510206003</td>
<td>1250</td>
<td>1604</td>
<td>434</td>
<td>34.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>29051-0201.00-2</td>
<td>290510201002</td>
<td>510201002</td>
<td>2196</td>
<td>2584</td>
<td>386</td>
<td>17.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>29051-0204.00-3</td>
<td>290510204003</td>
<td>510204003</td>
<td>1608</td>
<td>1856</td>
<td>248</td>
<td>15.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>29051-0202.00-2</td>
<td>290510202002</td>
<td>510202002</td>
<td>1054</td>
<td>1277</td>
<td>223</td>
<td>12.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>29051-0106.00-3</td>
<td>290510106003</td>
<td>510106003</td>
<td>1092</td>
<td>1286</td>
<td>196</td>
<td>17.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>29051-0206.00-1</td>
<td>290510206001</td>
<td>510206001</td>
<td>1152.6</td>
<td>1344</td>
<td>191.4</td>
<td>16.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>29051-0108.00-1</td>
<td>290510108001</td>
<td>510108001</td>
<td>1603</td>
<td>1781</td>
<td>178</td>
<td>11.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>29051-0203.00-3</td>
<td>290510203003</td>
<td>510203003</td>
<td>1287</td>
<td>1465</td>
<td>178</td>
<td>13.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>29051-0108.00-3</td>
<td>290510108003</td>
<td>510108003</td>
<td>907</td>
<td>1068</td>
<td>181</td>
<td>17.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>29051-0203.00-2</td>
<td>290510203002</td>
<td>510203002</td>
<td>623.9</td>
<td>783</td>
<td>159.1</td>
<td>25.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>29051-0103.00-3</td>
<td>290510103003</td>
<td>510103003</td>
<td>1340</td>
<td>1473</td>
<td>133</td>
<td>9.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>29051-0104.00-6</td>
<td>290510104006</td>
<td>510104006</td>
<td>1327</td>
<td>1455</td>
<td>128</td>
<td>9.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>29051-0108.00-2</td>
<td>290510108002</td>
<td>510108002</td>
<td>1010</td>
<td>1130</td>
<td>120</td>
<td>11.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Exercise 9: Minority, Disability and Low-Income

Can you locate the block groups in the Capital Area Metropolitan Planning Organization which contain the highest percentage of Minority, Disability and Low-Income persons?
APPENDIX I – Sample Maps

This appendix contains examples of the types of maps that were created for SEIR.
Ozark Foothills Regional Planning Commission
Percent Disabled, by County*, 2000

Percent Disabled
- 14.1 - 20.0
- 20.1 - 25.0
- 25.1 - 30.0
- 30.1 - 35.0
- 35.1 - 48.9

Other Major Roads
County

Regional Avg. = 27.5%

*Data provided at the census block group level

Source: USDC, Bureau of the Census, Census of Population and Housing [2000 SF3]
Prepared for MoDOT by: Office of Social and Economic Data Analysis (OSEDA)
Map Generated on 01.03.2003
St. Joseph Area Transportation Study Organization Percent of Persons 25 Years or Older Without a High School Degree, by Block Group, 2000

Percent
- 4.4 - 15.0
- 15.1 - 20.0
- 20.1 - 25.0
- 25.1 - 30.0
- 30.1 - 55.6

Source: USDC, Bureau of the Census, Census of Population and Housing [2000 SF3]
Prepared for MoDOT by: Office of Social and Economic Data Analysis (OSEDA)
Map Generated on 1.10.2003
MoDOT Planning District 5 Percent of the Population 16 Years or Older Working in County of Residence, by County*, 2000

Percent
- 12.2 - 40.0
- 40.1 - 60.0
- 60.1 - 80.0
- 80.1 - 90.0
- 90.1 - 100.0

District 5 = 76.6%

*Data provided at the census blockgroup level

Source: USDC, Bureau of the Census, Census of Population and Housing [2000 SF3]
Prepared for MoDOT by: Office of Social and Economic Data Analysis (OSEDA)
Map Generated on 12.27.2002
MoDOT Planning District 4 Median Household Income, by County*, 2000

District 4 = $42,203

*Data provided at the census tract level

Source: USDC, Bureau of the Census, Census of Population and Housing [2000 SF3]
Prepared for MoDOT by: Office of Social and Economic Data Analysis (OSEDA)
Map Generated on 1.12.2003
MoDOT Planning District 9 Percent of Families Below Poverty Status, by County*, 2000

Percent
- 0.0 - 5.0
- 5.1 - 10.0
- 10.1 - 15.0
- 15.1 - 25.2

Interstate
Other Major Roads
County

District 9 = 9.8%

*Data provided at the census blockgroup level

Source: USDC, Bureau of the Census, Census of Population and Housing [2000 SF3]
Prepared for MoDOT by: Office of Social and Economic Data Analysis (OSEDA)
Map Generated on 1.8.2003
East-West Gateway Coordinating Council
Percent Minority, by Census Tract, 2000

Percent
- 0.0 - 5.0
- 5.1 - 10.0
- 10.1 - 20.0
- 20.1 - 60.0
- 60.1 - 100.0

Source: USDC, Bureau of the Census, Census of Population and Housing [2000 SF3]
Prepared for MoDOT by: Office of Social and Economic Data Analysis (OSEDA)
Map Generated on 1.16.2003

MPO = 23.4%
Meramec Regional Planning Commission Population 16 Years or Older Mean Travel Time to Work, by County*, 2000

Minutes
- 7 - 20
- 21 - 25
- 26 - 30
- 31 - 35
- 36 - 49

Regional Avg. = 27

Source: USDC, Bureau of the Census, Census of Population and Housing [2000 SF3]
Prepared for MoDOT by: Office of Social and Economic Data Analysis (OSEDA)
Map Generated on 1.8.2003

*Data provided at the census block group level
MoDOT Planning District 10 Percent of Housing Units by Gross Rent as a Percentage of Household Income, by County, 2000

Source: U.S. Census Bureau, Census of Population and Housing (2000 SF3)
Prepared for MoDOT by Office of Social and Economic Data Analysis (OSEDA)
Map Generated on 1.13.2003
Mid-Missouri Regional Planning Commission Change in Total Population, by County*, 1990 - 2000

Population Change
- -1125 - -100
- -99 - 0
- 1 - 50
- 51 - 150
- 151 - 350
- 351 - 3136

Regional Avg. = 44,839

*Data provided at the census block group level

Source: USDC, Bureau of the Census, Census of Population and Housing [1990 STF1, 2000 SF1]
Prepared for MoDOT by: Office of Social and Economic Data Analysis (OSEDA)
Map Generated on 11.18.2002
Capital Area Metropolitan Planning Organization
Total Population, by Block Group, 2000

Total Population

1 Dot = 10 People

Other Major Roads
MPO Boundary

MPO = 41,844

Source: USDC, Bureau of the Census, Census of Population and Housing [2000 SF3]
Prepared for MoDOT by: Office of Social and Economic Data Analysis (OSEDA)
Map Generated on 1.16.2003
Highway 65 Corridor - Arkansas and Missouri Border to Buffalo, MO

[Map showing the Highway 65 corridor with buffer zones and planning districts highlighted.]