

METROPOLITAN TRANSPORTATION SUPPORT INITIATIVE (METSU)

QUARTERLY REPORT for the quarter ending March 31, 2004

CURRENT QUARTER ACTIVITIES

GENERAL AND ADMINISTRATIVE

An Urban Transportation Center and METSU Advisory Board meeting was held on February 18. A review of current projects was presented to the Board. UTC Director Sue McNeil reported receiving a \$750,000 Federal Highway Administration (FHWA) earmark grant from Congressman Danny Davis to establish a Transportation Center. Chairman Phil Pagano drafted a thank you letter and suggested testimony to Cong. Davis be given at the Annual Symposium planned for the fall. Also during the quarter, UTC held its annual one day retreat on February 13 to discuss the strategic direction of the Center and METSU.

Two major projects were begun at the request of IDOT and CATS: Statistical Analysis of the Chicago Area Treatment in the FRA's Interim Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossings and assistance to CATS in the Preparation of the Scheduled Household Travel Survey. The status of these new projects is presented below in the progress report on the activities of the Research Program, Technical Assistance, Workshops and Training during the recent quarter.

RESEARCH PROGRAM

Freight Impact Analysis Methodology: Phase Three

Ms. Shruti Mahajan, a graduate student who assisted Dr. Kawamura for the third phase of the project completed her graduate work by successfully defending the thesis that is based on the work she performed under METSU support. Ms. Mahajan used parcel level data for the city of Chicago and traffic count data from the CDOT to analyze the relationship between several traffic characteristics, such as night time truck volumes, daily traffic volume, peak hourly traffic volume, etc. and the value of single family residence properties. She found that none of the traffic characteristics had negative correlation with the property value. Some even showed positive correlation (i.e. higher traffic is correlated with higher property value). However, more rigorous statistical analysis must be performed in the next several weeks to confirm those findings.

NSF Partnership for Innovation (PFI): Large Scale Dynamic Simulation and Optimization Tools for Chicago Freight Infrastructure and Operations

As a member of the team led by the Transportation Center at the Northwestern University, Dr. Kawamura is responsible for assessing the benefit of various innovative strategies to improve efficiency of Intermodal truck operation in Chicago including reducing empty truck movements and constructing truck-only facilities. Dr. Kawamura is waiting for the data from the simulation group to begin the calculation of the benefits.

Development of Integrated Economic Impact Analysis Tool for Equity Sensitive Projects

Dr. Kawamura is collaborating with Dr. Ranier Vom Hoffe to develop the Computable General Equilibrium (CGE) model for the Chicago six-county region to assess the economic benefits of

reducing truck congestion. With the help of Ms. Amanda Perkins, a research assistant, the main input to the CGE model, the Social Accounting Matrix, has been compiled. Compared with the ordinary CGE models that only have 10 or less industry sectors, this model has 47 sectors. In addition, for the last several weeks, the research team has been trying to further refine the model by adding a sector for in-house freight transportation using the Transportation Satellite Account from the Bureau of Economic Analysis and the Bureau of Transportation Statistics. This will make the model particularly sensitive to the change in the efficiency of the freight movement by truck. Dr. Kawamura has been collaborating with the researchers from those organizations to determine the appropriate methodology to calculate the industry account for the Six County Region.

Job Access Reverse Commute

Staff is working cooperatively with various agencies in the state and the region to assist in the development of a plan, strategy and goals to address access to work and reverse commute issues in the Chicago region and the state of Illinois. Staff has developed a phase 3 project to the JARC funded Clearinghouse project for consideration by RTA.

Environmental Justice

A report addressing Tier II measures has been submitted to CATS staff for review over a year ago and there has been no response. This project is being closed.

Kane County Transit Opportunity Assessment

Nothing new to report on phase 2 study to be funded by Metra.

Rail-Highway Grade Crossing Collision Report

Undertook an analysis of highway grade crossing accidents for CATS pertaining to the whistle ban issue in northeastern Illinois. A preliminary phase one report has been submitted to CATS for review and they indicated a review and comments would be forthcoming. Still waiting comments. The FRA proposed final rules which would allow whistle bans under certain circumstances.

Data Mining and Knowledge Discovery in Civil Infrastructure Systems

Continue compiling a series of case studies demonstrating the application of the data mining software to commonly used transportation data sets in order to explore data quality and completeness.

Economic and Productivity Impacts of Intelligent Transportation Systems (ITS)

Developing a proposal to undertake this research project. Continue the development of the data needs for economic productivity analysis in the Chicago region. This project has been chosen as a thesis by one of the student research assistants.

Exploration of Tools for Regional Transportation and Land Use Modeling

As the Northeastern Illinois Planning Commission (NIPC) continues with the Common Ground project, we are providing technical support and developing a framework for evaluating the project. Current activities include a review of existing plans of municipalities and counties in the region as well as developing an understanding the role of transportation measures in the

stakeholder input software.

National Environmental Policy Act (NEPA) and the Planning Process

The research team has completed the literature review, the draft survey instrument and is putting together a list of contacts from the states identified by IDOT as crucial to learn from. The survey has received approval from the Institutional Review Board (IRB) and it is planned that the survey will be administered electronically (email, webpage) and followed up with telephone calls to assure a high return rate and to gather missing information. We will be requesting of IDOT staff for a list of potential candidates from respective state DOT's and their contact information.

McHenry County Transportation Study

During the quarter, attended an administrative Kick-off meeting on February 18 and a project Kick-off meeting with TransSystems, the consultant on March 12. Provided review and comment on proposed list of stakeholders, work scope and schedule to complete the project. The consultant is underway on the project.

Sprawl

Our current sprawl-relate work continues in two of the three areas identified in the previous quarterly reports. The work on 'sprawl and pedestrian safety' has been completed. The remaining two items are described below (1a and 1b), but we also added a new activity, analysis of the National Household Travel Survey (1c).

Census 2000: We have a pre-release version of the 2000 Census Transportation Planning Package (CTPP) from the Chicago Area Transportation Study—Table 1. It contains largely the same place-of-residence data as the regular 2000 Census but uses the quarter-section based Traffic Analysis Zones used in the Chicago six-county area. The TAZ geography in the CTPP is much preferable to census-tract geography used by the regular Census. We will now request a copy of Table 2 (place of work information) that includes information on employees by place of work. The most useful table for transportation analysis is Table 3 (the O-D table), especially for our work on sprawl.

Sprawl and Public Health -- Obesity: We continue our plans to assess the relationship between sprawl and obesity. Obesity only grows as a major concern for politicians and policy makers as well as the general public. Unfortunately, we are still awaiting the driver's license data that will allow us to proceed with this task.

National Household Travel Survey (NHTS): While we wait for the CTPP, considerably behind schedule in delivery, we have started examining the 2001 NHTS. The national survey of approximately 25,000 households includes 692 Chicago-area households. While we cannot use a smaller geography than the Chicago CMSA (metropolitan area) we can compare it with other large metropolitan areas. We are in the process of making these comparisons. From a public safety perspective we have also conducted a national analysis of the relationship between SUV ownership and household income. The conventional argument is that household vehicles should not be forced to be more energy efficient because this forces the manufacturers to produce lighter, less-safe vehicles. However, if incomes preclude households from purchasing larger vehicles (safer through large mass), then the safety argument takes on another meaning. The report shows that there is a strong relationship positive between

household income and the proportion of the vehicles owned that are SUVs, i.e., as incomes increase so do SUV ownership.

Routine Use of Locomotive Horns

In addition to our sprawl work we were asked to continue our efforts in studying the impacts of routine horn use at highway-rail crossings on collisions. We previously conducted a study that demonstrated that in the Chicago six-county area crossings where locomotive horns were routinely sounded were not safer than crossings where horns-use was banned (used only as necessary). The current work was divided into two parts, public testimony and statistical modeling.

Public Testimony: The first part consisted of reviewing the Westat study conducted for FRA. Based on that study we prepared a statement to be read and submitted at the public hearing in Western Springs (February 16, 2004—President’s Day). The statement was read with the presence of Representative Lipinski and FRA Administrator Rudder. Afterwards I was interviewed by one of the television reporters at the event. It was clear that we did not find the Westat/FRA effort sufficiently convincing to form the basis for public policy.

Statistical Modeling: The second part is ongoing and consists of reproducing the Westat model used to establish the 17.3 percent standard to be applied to the rail-highway crossings in the Chicago area where horns are not routinely used. Once this was accomplished the task was to determine whether a sound alternative model could be produced. To this end we considered several intuitively reasonable models and found several that suggested that the Chicago area had lower collision rates than the 17.3 percent figure in the Westat final model. While the rates were lower than 17.3 percent the results were not statistically significant—neither was the Westat model. Our final model and the most simple version provides statistically significant results and indicate that the Chicago-area crossings where locomotive horns are not routinely used are safer than average for national crossings where horns are routinely used. This model had two predictor variables, the Accident Protection Formula (APF) value and the ‘ban/no ban variable. The Executive Summary is complete and a more substantial technical report providing detail of the models is underway.

Midwest Regional University Transportation Center Proposals

Two proposals to MRUTC have been prepared and submitted; Mode Matters: A Tool to Measure Impacts of Air Quality of Multi-Modal Investments and An Impact Analysis of Changes in the Warehousing and Distribution Industry on Modal Investments in Freight Transportation. Nothing new to report.

Traffic Impacts of In-fill Development

Partial support is being provided a project to develop a case study on the traffic impacts of in-fill development. The project will explore brownfield vs. greenfield development traffic impacts. A student research assistant has chosen this project for their thesis.

TECHNICAL ASSISTANCE

CATS Community Mobility Task Force

Participating with the Task Force and attended meeting on January 10.

CATS Intermodal Advisory Task Force (IATF)

Kazuya Kawamura continues to chair the Research and Planning Subcommittee and Sue McNeil

continues to chair the Finance Subcommittee of the CATS (IATF). Dr. Kawamura is assisting in the development of a workshop on data issues, has joined the editorial board of the IATF Newsletter and attended meeting on February 5.

CATS Private Providers Task Force

Participating with the Task Force and providing assistance in the areas of inventorying private transit providers and in JARC issues. Attended meeting on January 20.

CATS Rideshare Project

The project is complete and functioning on the CATS website. We provided input and assistance during the project design.

Commuter Choice

Jointly sponsored a workshop with CATS and ACT to market Commuter Choice benefit program and the RTA Transit Check to facilitate the use of the tax-free transit benefit for employers and employees through the use of payroll deduction.

Greater North Michigan Avenue Association (GNMAA)

Staff continues its participation as a member of the GNMAA Traffic and Transportation Committee and attended a meeting on January 22..

Environmental Protection Agency (EPA)- Ongoing assistance the EPA in their Partnership for Clean Air program by promoting Best Workplaces designation in conjunction with the Metropolitan Planning Council (MPC) and the RTA.

WORKSHOPS, TRAINING AND VISITING SCHOLARS

Transit Oriented Development (TOD) Workshop

Jointly sponsored a workshop with ACT and the Center for Urban Transportation Research (CUTR) on January 27.

River North Corridor Commuter Choice Workshop

Participated in a workshop with RTA on March 11.

Transportation, Warehousing and Logistics Work Force Summit

Participated in a workshop sponsored by the Workforce Boards and the Chicagoland Chamber of Commerce on March 3.

MPC Roundtable Luncheon

Attended a meeting on Building Sustainable Communities on March 30.

PLANNED ACTIVITIES FOR NEXT QUARTER

RESEARCH PROGRAM

Large Scale Dynamic Simulation and Optimization Tools for Chicago Freight Infrastructure and Operations- ongoing project with Northwestern University and NSF.

Freight Impact Analysis Methodology- Social and Environmental Impacts- continued data collection and analysis of social and environmental impacts of freight traffic on property values.

Integrated Economic Impact Analysis Tool for Equity Sensitive Projects- complete the Social Accounting Matrix.

Job Access Reverse Commute- continue communications with project partners and present database to IDHS and IDOT and possibly the Transportation Coordinating Committee next quarter.

Kane County Transit Opportunity Study- await new Chairman to obtain input on Phase 2.

Rail-Highway Grade Crossing Report- still awaiting review and comments by CATS.

Data Mining and Knowledge Discovery in Civil Infrastructure Systems- continue compiling case studies demonstrating the use of data mining software.

Economic and Productivity Impacts of ITS- develop data needs to estimate economic productivity due to ITS in Illinois.

Exploration of Tools for Regional Transportation and Land Use Modeling- continue to provide technical support and review of existing municipal plans in the region.

NEPA and the Planning Process- administer and follow up with the survey of state departments of transportation experience with the NEPA process and planning issues. The survey will be administered upon identifying and hiring a research assistant for the project.

McHenry County Transportation Study- planning to attend kick-off meeting and assisting the County in managing the consultant.

Sprawl- Research will continue in the areas of Census 2000 and Sprawl and Public Health-Obesity and the National Household Travel Survey.

Routine Use of Locomotive Horns

Complete technical report providing details of the models produced.

Midwest Regional University Transportation Center Proposals- awaiting status.

Traffic Impacts of In-fill Development- explore traffic impacts of brown and green field development.

TECHNICAL ASSISTANCE

Association for Commuter Transportation (ACT)- continued activity on Board of Directors

and seek to co-sponsoring workshops.

CATS Community Mobility Task Force- ongoing assistance to CATS.

CATS Intermodal Advisory Task Force (IATF)- ongoing assistance to CATS.

CATS Private Providers Task Force- ongoing assistance to CATS

Commuter Choice- continue to develop marketing plan for pre-tax RTA Transit Check and for Commuter Choice statewide and assist CATS in giving presentations and workshops.

GNMAA- ongoing assistance with GNMAA and the Traffic Operations Committee.

EPA- ongoing assistance in conjunction with MPC and RTA.

WORKSHOPS, TRAINING AND VISITING SCHOLARS

Best Workplaces Workshop- jointly sponsoring a workshop with ACT on April 8.

Fifth Annual Symposium and 25th Anniversary- have begun planning for the event on October 29 on the topic of Innovative Financing. A reception is planned for the evening of October 28. The keynote speaker will be Glen Lyons, of the United Kingdom to speak on the Congestion Pricing scheme implemented to reduce congestion in downtown London.

PROJECTS COMPLETED

Downtown Pedestrian Activities Analysis

South Central MTD Technical Assistance

Lake Cook Road TMA Technical Assistance

Bus Rapid Transit Workshop

ITS Systems for Transit: Solving Real Problems Workshop

Visiting Scholar from Netherlands

Reinventing Transit: Planning Information-Based Transit Service Workshop

Metropolitan Conference on Public Transportation Research

Managing the Cost of ADA Paratransit Pilot Workshop

Peoria Paratransit Study

The Future of Public Transit in Chicago Discussion Panel

First Urban Sprawl Symposium

CATS Transit Workshop

CTA Transit Workshop

Pace Management Symposium

Economic Importance of Transportation Committee

Greater North Michigan Avenue Association Workshop For Employers

Travel Time Activity And Time Use Analysis

Cook County TCSP Grant Application

Rural Transportation Brokerage Project

Visiting MIT Students

Springfield Mass Transit Appreciation Day
Visiting Delegation from China
Visiting Scholars from Saudi Arabia
ITS Presentation
Rural Transportation Assistance Program Presentation
I-55 Growth Corridor Study of Will County
GIS Mapping of Traffic Signals
Visiting Scholars from Norway
2nd Urban Sprawl Symposium, Transportation and Housing
DuPage Area Transit Plan
Atlanta Leadership Delegation
1st Upper Midwest Regional Freight Transportation Workshop
Big Ten Universities Transportation Conference
80,000 lb. Truck Weight Study
Travel Time Projections
Suburban Job-Link Corp.
Commuter Rail Station Vanpools
Visiting Scholars from China (2)
3rd Annual Sprawl Symposium, Fortuitous Failures or Missed Opportunities
Public-Private Partnerships in Transit Workshop
Jennifer L. Dorn, FTA Administrator Luncheon
Visiting Scholars from Germany
Illinois State University
Abbott Labs
Asset Management Presentation to TRB
Kane County Transit Opportunity Assessment, Phase 1
Asset Management
Employee Benefit Workshop
Creating Working Opportunities Through Affordable Transportation
State of the Region Conference
Conference on Community Planning Tools
Presentation on the History of the RTA
Bus Rapid Transit Virtual Seminar
Intercity Bus Strategic Plan (IDOT-DPT)
Computer Aided Scheduling and Dispatching (CASD) Systems (IDOT-DPT)
Bus Rapid Transit Virtual Seminar
Work Welfare and Families
Incident Command System Management Workshop
Visitors from Houston
Access Management Workshop
Presentation of Transportation Funding Database
IDOT Fall Planning Conference Presentation
Freight Impact Analysis Methodology – Impact of Truck Traffic on the Value of Land
Sprawl and Pedestrian Safety
UTC Fourth Fall Symposium
Commuter Choice Benefits Workshop

Traffic Management for Special Events

Research + Action = Results

UIC Campus Shuttle Program

General Accounting Office

Visitors from Germany

Women's Transportation Seminar Panel

Transportation, Wharehousing and Logistics Work Force Summit

River North Corridor commuter Choice Workshop

Transit Oriented Develop Webinar

Work, Welfare and Families

CATS Rideshare Project

Environmental Justice