

**DRAFT**

**SINGLE OCCUPANCY VEHICLE REDUCTION STUDY  
AGREEMENT FOR PROFESSIONAL SERVICES  
FOR LAKE COUNTY**

This AGREEMENT is entered into by and between Lake County (“County”) and AECOM (“Consultant”), 303 East Wacker Drive, Suite 1400, Chicago, IL 60601.

**RECITALS**

WHEREAS, Lake County is seeking a Consultant to provide services for a Single Occupancy Reduction Study as noted in the Consultant’s proposal dated October 15, 2019, (“Services”); and

WHEREAS, Consultant has the professional expertise and credentials to provide these Services and has agreed to assume responsibility for this Agreement.

NOW, THEREFORE, Lake County and Consultant agree as follows:

**SECTION 1. AGREEMENT DOCUMENTS**

The Agreement Documents that constitute the entire Agreement between Lake County and Consultant are in order of precedence:

- A. This Agreement and all exhibits thereto; and,
- B. Consultant’s proposal and all exhibits thereto, including statement of work, dated October 15, 2019.

**SECTION 2. SCOPE OF WORK**

Refer to Exhibit A for a detailed scope of work and Consultant proposal.

**SECTION 3. DURATION**

This Agreement shall be effective as of the date Lake County gives Consultant notice to proceed, and unless terminated pursuant to Section 15 shall be effective until the date the work is complete.

The work is complete upon a determination of completion by Lake County. A determination of completion shall not constitute a waiver of any rights or claims which Lake County may have or thereafter acquire with respect to any provision of this Agreement.

At the end of the Agreement term Lake County reserves the right to extend the Agreement for an additional period up to sixty (60) days.

**SECTION 4. AGREEMENT PRICE**

The County will pay Consultant a not to exceed contract fee of \$592,490.00 for deliverables identified in Section 2 of Consultant’s proposal dated October 15, 2019 and will bill the County not more than once per month based upon the actual expense reimbursement.

## **SECTION 5. INVOICES & PAYMENT**

- A. A purchase order will be issued for the work and Consultant shall submit invoice(s) detailing the products and services provided and identify the purchase order number on all invoices.
- B. Consultant shall maintain records showing actual time devoted and cost incurred. Consultant shall permit a representative from Lake County to inspect and audit all data and records of Consultant for work and/or services provided under this Agreement. Consultant shall make these records available at reasonable times during the Agreement period and for one year after the termination of this Agreement.
- C. All payments shall be made in accordance with the Illinois Local Government Prompt Payment Act (50 ILCS 505/1 et seq.).

## **SECTION 6. CHANGE ORDERS**

In the event changes to the Scope of the project and/or additional work become necessary or desirable to the parties, the parties shall follow the procedures set forth in this Section. A Change shall be effective only when documented by a written, dated agreement executed by both parties which expressly references this Agreement (a "Change Order"). The Change Order shall set forth in detail: (i) the Change requested, (ii) the reason for the proposed Change; (iii) the cost of the Change; and (iv) the impact of the Change on time for completion of the project.

In the event either party desires a Change, the Project Manager for such party shall submit to the other party's Project Manager a proposed Change Order. If the receiving party does not accept the Change Order in writing within ten (10) days, the receiving party shall be deemed to have rejected the Change Order. If the parties cannot reach agreement on a proposed Change, Contractor shall nevertheless continue to render performance under this Agreement in accordance with its (unchanged) terms and conditions.

Changes that involve or increase in the amounts payable by the County may require execution by the County Purchasing Agent. Some increases may also require approval by the County Board. In those cases where the County Purchasing Agent's signature is required, or County Board approval is needed, the Change Order shall not be deemed rejected by County after ten (10) days provided the Project Manager has indicated in writing within the ten (10) day period of his intent to present the Change Order for appropriate signature or approval.

## **SECTION 7. INDEMNIFICATION**

Consultant agrees to indemnify, save harmless, and defend Lake County, its agents, servants, and employees, and each of them against and hold it and them harmless from any and all lawsuits, claims, demands, liabilities, losses, and expenses, including court costs and attorney's fees, for or on account of any injury to any person, or any death at any time resulting from such injury, or any damage to property, which may arise or which may be alleged to have arisen out of or in connection with the work covered by this Agreement caused directly by the negligence or willful or wanton conduct of Consultant. The foregoing indemnity shall apply except if such injury, death, or damage is caused directly by the gross negligence or willful or wanton conduct of Lake County, its agents, servants, or employees or any other person indemnified hereunder.

## **SECTION 8. INSURANCE**

The Consultant must obtain, for the Contract term and any extension of it, insurance issued by a company or companies qualified to do business in the State of Illinois with an A.M. Best Rating of at least A-and provide the County with a Certificate of Insurance 15 days before the start of the project, and thereafter annually for contracts/ projects that will last more than one year. Insurance in the following types and amounts is necessary and/or where applicable:

### Commercial General Liability Insurance

In a broad form on an occurrence basis shall be maintained, to include, but not be limited to, coverage for property damage, bodily injury (including death), personal injury and advertising injury in the following coverage forms where exposure exists:

- Premises and Operations
- Independent Contractors
- Products/Completed Operations
- Liability assumed under an Insured Contract/ Contractual Liability
- Personal Injury and Advertising Injury

With limits of liability not less than:

\$ 1,000,000 Each Occurrence

\$ 1,000,000 Products-Completed Operations

\$ 1,000,000 Personal and Advertising injury limit

\$ 2,000,000 General aggregate; the CGL policy shall be endorsed to provide that the General Aggregate limit applies separately to each of the contractor's projects away from premises owned or rented to contractor.

### Automobile Liability Insurance (if applicable)

Automobile liability insurance shall be maintained to respond to claims for damages because of bodily injury, death of a person, or property damage arising out of ownership, maintenance, or use of a motor vehicle. This policy shall be written to cover any auto whether owned, leased, hired, or borrowed.

The Contractor's auto liability insurance, as required above, shall be written with limits of insurance not less than the following:

\$ 1,000,000 Combined single Limit (Each Accident)

### Excess/ Umbrella Liability (if applicable)

The Contractor's Excess/ Umbrella liability insurance shall be written with the umbrella follow form and outline the underlying coverage, limits of insurance will be based on size of project: \$ 2,000,000 per occurrence limit (*minimum, and may be higher depending on the project*)

### Workers Compensation (Coverage A) and Employers Liability (Coverage B)

Workers Compensation Insurance covering all liability of the Contractor arising under the Worker's Compensation Act and Worker's Occupational Disease Act at limits in accordance with the laws of the State of Illinois. Employers' Liability Insurance shall be maintained to respond to claims for damages because of bodily injury, occupational sickness, or disease or death of the

Contractor's employees, with limits listed below:

Employers Liability

- a) Each Accident \$1,000,000
- b) Disease-Policy Limit \$1,000,000
- c) Disease-Each Employee \$1,000,000

Such Insurance shall contain a waiver of subrogation in favor of Lake County.

Professional Liability – Errors and Omissions (if applicable)

The Engineers/Architects/Consultants for the plans of the project shall be written with limits of insurance not less than the following:

\$ 1,000,000 per claim per policy year

Coverage shall be provided for up to three (3) years after project completion. Policy is to be on a primary basis if other professional liability is carried.

Professional Liability – Cyber Liability (if applicable)

Cyber Liability Insurance for property damage to electronic information and/or data; first and third-party risks associated with e-business, internet, etc., with limits of insurance not less than the following:

\$ 1,000,000 per occurrence limit

Technology Errors and Omissions (if applicable)

The Contractor's Software Developer and/or IT Consultant for the plans, including developing and implementing technology for Lake County, or of the project, shall be written with limits of insurance not less than the following:

\$ 1,000,000 per occurrence limit

Liability Insurance Conditions

Contractor agrees that with respect to the above required insurance:

- a) The CGL policy shall be endorsed for the general aggregate to apply on a "per Project" basis;
- b) The Contractor's insurance shall be primary & non-contributory over Lake County's insurance in the event of a claim.
- c) Contractor agrees that with respect to the above required insurance, Lake County shall be named as additional insured, including its agents, officers, and employees and volunteers and be provided with thirty (30) days' notice, in writing by endorsement, of cancellation or material change. A blanket additional insured ISO endorsement is preferred for Contractors who have multiple projects with the County.
- d) Lake County shall be provided with Certificates of Insurance and the appropriate corresponding ISO form endorsements evidencing the above required insurance, prior to commencement of this Contract and thereafter with certificates evidencing renewals or replacements of said policies of insurance at least thirty

(30) days prior to the expiration of cancellation of any such policies. No manuscript endorsements will be accepted. Any hard copies of said Notices and Certificates of Insurance and Endorsements shall be provided to:

**Lake County  
Purchasing Division  
18 N. County 9th Floor  
Waukegan, Illinois 60085  
Attn: RuthAnne Hall, Lake County Purchasing Agent**

- e) **Electronic copies of Notices, Certificates of Insurance and Endorsements can be emailed to [Purchasing@lakecountyil.gov](mailto:Purchasing@lakecountyil.gov) in place of hard copies.**

Failure to Comply: In the event the Contractor fails to obtain or maintain any insurance coverage required under this agreement, Lake County may purchase such insurance coverage and charge the expense to the Contractor.

#### **SECTION 9. INDEPENDENT CONTRACTOR**

Consultant is defined and identified as an independent contractor, not an employee or agent of Lake County and the County has no right to control or direct Consultant's manner, detail, or means by which Consultant accomplishes tasks under this Agreement.

#### **SECTION 10. DISPUTE RESOLUTION**

All issues, claims, or disputes arising out of this Agreement shall be resolved in accordance with the Appeals and Remedies Provisions in Article 9 of the Lake County Purchasing Ordinance.

#### **SECTION 11. NO IMPLIED WAIVERS**

The failure of either party at any time to require performance by the other party of any provision of this Agreement shall not affect in any way the full right to require such performance at any time thereafter. Nor shall the waiver by either party of a breach of any provision of this Agreement be taken or held to be a waiver of the provision itself.

#### **SECTION 12. SEVERABILITY**

If any part of this Agreement shall be held to be invalid for any reason, the remainder of this Agreement shall be valid to the fullest extent permitted by law.

#### **SECTION 13. JURISDICTION, VENUE, CHOICE OF LAW AND PROFESSIONAL STANDARDS**

This Agreement shall be governed by and construed according to the laws of the State of Illinois. Jurisdiction and venue shall be exclusively found in the 19th Judicial Circuit Court, State of Illinois.

#### **SECTION 14. NOTICES AND COMMUNICATIONS**

All notices and communications which may be given by Lake County to Consultant relative to this Agreement shall be addressed to the Consultant at the address shown herein below:

AECOM  
Attn: Gary Foyle  
Project Manager, Transportation Planning - Central Region  
303 East Wacker Drive  
Suite 1400  
Chicago, IL 60601

Copies of any notices and communications which propose to alter, amend, terminate, interpret or otherwise change this Agreement shall be provided to:

Lake County Division of Transportation  
Attn: Director of Planning and Programming  
600 West Winchester Road  
Libertyville, IL 60048

#### **SECTION 15. ASSIGNMENT, ALTERATIONS AND MODIFICATIONS**

Except as otherwise provided herein, this Agreement shall not be assigned, delegated, altered, or modified without the express written consent of both parties. This Agreement supersedes any and all other agreements, oral or written, between the parties hereto with respect to the subject matter hereof.

To the extent Lake County agrees to an assignment, delegation, or subcontract by Consultant, Consultant shall remain liable to Lake County with respect to each and every item, condition and other provision hereof to the same extent that Consultant would have been obligated if it had done the work itself and no assignment, delegation, or subcontract had been made.

#### **SECTION 16. TERMINATION**

Lake County reserves the right to terminate this Agreement, or any part of this Agreement, with or without cause, upon thirty (30) days written notice. In case of such termination, Consultant shall be entitled to receive payment from Lake County for work completed to date in accordance with the terms and conditions of this Agreement.

In the event that this Agreement is terminated due to Consultant's default, Lake County shall be entitled to purchase substitute items and/or services elsewhere and charge Consultant with any or all losses incurred, including attorney's fees and expenses.

#### **SECTION 17. CONFIDENTIALITY**

Both parties acknowledge that Consultant's documents and dealings related to this Agreement are subject to the Illinois Open Meetings Act (5 ILCS 120/1 et seq.) and the Illinois Freedom of Information Act (5 ILCS 140/1 et seq.).

**SECTION 18. WORK PRODUCT**

All work product prepared by Consultant pursuant to this Agreement, including, but not limited to, policies, reports, analysis, plans, designs, calculations, work drawings, studies, photographs, models, and recommendations shall be the property of Lake County. Consultant shall deliver the work product to Lake County upon completion of Consultant’s work, or termination of the Agreement, whichever comes first. Consultant may retain copies of such work product for its records; however, Consultant may not use, print, share, disseminate, or publish any work product related to this Agreement without the consent of Lake County.

**SECTION 19. NEWS RELEASES**

Consultant may not issue any news releases regarding this Agreement without prior approval from Lake County.

IN WITNESS HEREOF, the undersigned have caused this Agreement to be executed in their respective names on the dates hereinafter enumerated.

ATTEST:

Executed by the County of Lake of the State of Illinois acting by and through its County Board.

By \_\_\_\_\_  
Title Lake County Clerk  
(Seal)

By \_\_\_\_\_  
Title Chair, Lake County Board  
Date \_\_\_\_\_

RECOMMENDED FOR EXECUTION

\_\_\_\_\_  
Shane E. Schneider, P.E.  
Director of Transportation/County Engineer  
Lake County

Executed by the Consultant:

\_\_\_\_\_  
Firm

\_\_\_\_\_  
Street Address

ATTEST:

\_\_\_\_\_  
City, State

By \_\_\_\_\_  
Title \_\_\_\_\_  
Date \_\_\_\_\_

By \_\_\_\_\_  
Title \_\_\_\_\_  
Date \_\_\_\_\_



**Lake County Division of Transportation  
Single Occupancy Vehicle Reduction Study**

**SCOPE OF WORK**

**AECOM**

October 2019



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## Project Understanding

Lake County is a suburban collar county in the Chicago metropolitan area. With a 2015 population of 703,912 and employment of 338,099 (CMAP), the County is increasingly faced with congestion, environmental, workforce mobility, and quality of life issues due in part to the reliance on the automobile. Over 80 percent of commuting trips by residents and workers are made using the single occupant vehicle (SOV) transportation mode, and the trend over the past two decades has seen growth in this share. The Lake County Division of Transportation (LCDOT) seeks to investigate ways to reduce the use of SOVs. The objectives of the study include the following:

- Characterize current and future conditions
- Recommend SOV reduction measures applicable to Lake County
- Identify up to four sub-regional study areas, and recommend travel demand management (TDM) strategies for each
- Evaluate two TDM pilot projects that are to be implemented in 2019
- Recommend parameters of a potential grant program to fund projects intended to reduce SOV travel within Lake County

## Project Approach

AECOM's overall approach to this assignment is to leverage our applicable TDM experience, our knowledge of the transportation systems in Lake County, previous Lake County plans and studies, and a robust public / stakeholder outreach program to recommend practical and implementable strategies to reduce SOV trips. Our proposed technical approach includes these elements:

- Conduct a review of existing and future conditions related to travel demand and transportation facilities/services in the County
- Identify and evaluate a range of potential SOV reduction measures using peer surveys, research, and analysis
- Identify a list of potential sub-regional TDM study areas (employment centers, major destinations), and screen to up to four for more detailed investigation
- Recommend programs of TDM services for up to four potential sub-regional study areas
- Research and recommend a LCDOT policy on a potential grant program for SOV projects as a method of implementation

## Work Plan

The following program of AECOM Team activities addresses how we will meet the objectives and requirements of the LCDOT study.

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## 1. Existing and Future Conditions

### 1.1 Review Relevant Plans and Studies

Relevant Lake County, regional planning agency, transportation provider plans and studies will be reviewed and documented. Some of the documents that will be included in these reviews are listed as follows.

**2012 Lake County Transportation Market Analysis** - carried out robust analyses using travel surveys, focus groups, and Census data, and identified five key travel markets. We will assess changes in the market over the past five years, as the economy has improved, employment has grown, and new transportation trends and technologies have come online. In particular, the modifications to Pace fixed routes, both recommended and actual, will be evaluated and new recommendations made as needed.

**2014 Lake County 2040 Transportation Plan**

**2006 State Consensus Plan for Lake County**, including updates

**Bike Lake County mobile-app**

**2018 Lake County Paratransit Market Study** – Final Plan documents expected early 2019. The study's recommended strategies include a variety of Transportation Network Company (TNC) and mobility management solutions that should be especially useful.

**2010 Policy on Infrastructure Guidelines for Non-Motorized Travel Investments**

**2010 Gap Analysis** – component of Non-Motorized Travel Investments project

**Lake County 2018-2023 Proposed Highway Improvement Program**

**2018 CMAP ON TO 2050 Regional Comprehensive Plan**

**2016 CMAP Update Northeastern Illinois Regional Greenways and Trails Plan -**

<https://www.cmap.illinois.gov/mobility/walking-and-bicycling/greenways-and-trails>

DELIVERABLE: Annotated bibliography of previous local and regional reports. Report components that have specific applicability / relevance to SOV reduction efforts will be summarized. This information will serve as a reference document for carrying our project tasks.

### 1.2 Study Travel Flows – Census Data & Mapping

Identify major clusters of employment and other activity centers in the County. Map and document key characteristics for each of these areas, including: level of employment/visitors, transportation services, travel volumes, mode splits, etc. Current work travel flow data from the Census Longitudinal Employer-Household Dynamics (LEHD) and Journey to Work will be analyzed and mapped for each cluster. These analyses will also compare results to the 2012 Lake County Transportation Market Analysis. Location-Based data from the vendor StreetLight will be purchased as a one-year subscription and used to supplement Census data to identify cluster areas and for more detailed analysis later in the study.

DELIVERABLE: Technical Memorandum describing travel flows to key County destinations. This will be later folded into a Current and Future Conditions Report.

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## **1.3 Current and Future Transportation Services and Facilities**

The Lake County transportation network will be described, and will include programmed improvements. The descriptions will be organized by mode.

### **1.3.1 Roadways**

The County roadway system will be mapped and summarized by functional classification [LCDOT to provide GIS layers]. Programmed improvements will be documented. Data on roadway volumes and congestion levels will be collected and mapped. We will request data from Lake County's PASSAGE system on historical traffic data, including ADTs, turning movement counts, travel times, traffic volume projections, and traffic reports. It is also understood that real-time traffic information will be available for the Team's use from the County's arrangement with Waze. In addition, roadway traffic condition data may be available through IDOT's HERE Technologies contract for State Routes.

### **1.3.2 Metra Commuter Rail**

The Metra system in Lake County will be summarized by line and station, including information on service levels, passenger boardings, parking capacity and use, fares, connecting transit services, etc. Planned improvements will be identified and summarized. An example is the recently approved pilot project to expand reverse commute service on the Metra Milwaukee North (MD-N) Line. An analysis of Metra's AM station origins and destinations will be performed, including mapping. Metra survey design assumes that ridership in the PM period mirrors the AM.

Other relevant projects related to Metra will be monitored; results will be documented if applicable. Examples include the MD-N Line Reverse Commute Pilot program and the Regional Transportation Authority (RTA) North Central Service (NCS) Corridor Analysis and Implementation Study.

### **1.3.3 Pace Bus**

Pace fixed route bus routes in Lake County will be mapped and analyzed for service levels, ridership, and financial performance, using Pace's service group typologies (i.e., CTA Connector, Community Service, Express Service, Intra Community, and Suburban Links). Non-fixed route services will be described, including vanpools, employee shuttles, Call-n-Ride Service (reservation based, curb-to-curb service that the general public use to get anywhere within a designated geographic service area), Dial-a-Ride service, and ADA Paratransit Service. Expansion plans will be documented, including Pace's proposed Pulse Arterial Bus Rapid Transit network. Pace also manages the region's carpool program, RideShare. An assessment of the effectiveness of the RideShare program will be made, including its usefulness for Lake County commuting.

### **1.3.4 Non-motorized**

The County's regional multi-use paths and trail system will be mapped, along with other bike trails and paths. The presence of bike share programs in the County will be researched. CMAP data on sidewalks will be requested; it is understood that a GIS-based sidewalk inventory that codes street segments by the presence of a sidewalk will be available. Roadway segments are classified as: 1) no sidewalks, 2) sidewalk on one side of roadway, or 3) sidewalks on both sides of roadway.

Other relevant plans completed or in progress will be obtained and documented. This would include, for example, the Village of Beach Park's CMAP Local Technical Assistance-funded project for the Northern Lakeshore Regional Bicycle and Pedestrian Plan. Relevant studies being performed elsewhere in the Chicagoland area will be reviewed; for example, a bike share study in selected collar counties.

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### 1.3.5 Other transportation

Other transportation types currently provided in Lake County will be identified and documented, including those listed below. Note that some of these are operated and/or subsidized by Pace.

- Amtrak Intercity Rail
- Intercity Bus
- Township and Community Demand Response Services, including non-for-profit provided services
- Social Services Transportation Programs
- Privately Operated/Funded Employee Shuttles and/or van pools
- TNC services (e.g., Uber, Lyft)
- Taxis
- Carshare programs

**DELIVERABLE:** Technical Memorandum describing the current transportation network in Lake County. This will be later folded into a Current and Future Conditions Report.

## 1.4 Stakeholder Interviews and Small Group Meetings

In coordination with LCDOT, a list of key stakeholders will be compiled and an Advisory Group will be established. Possible candidate entities for the Advisory Group include Lake County Partners, Transportation Management Association (TMA) of Lake Cook, Lake County Transportation Alliance, Lake County Forest Preserve District, Lake County Workforce Development Board, Lake County Planning, Building & Development Department, Lake County Council of Mayors – Transportation Committee, Lake County Municipal League, RTA, Pace, and Metra. The Group could meet as many as seven times during the course of the study, providing feedback on draft deliverables and input on key data collection efforts (e.g., survey questionnaires). Note that the maximum of seven meetings would cover all project phases.

Interviews and/or small group meetings would be conducted with stakeholders and employers who are not part of the Advisory Group in order to gain a sense from a County-wide perspective of issues, concerns, and possible solutions. The purpose of these interviews and meetings will be to provide an overview and purpose of the study, gather insight regarding existing mobility obstacles, and gather input regarding potential TDM solutions. It will be important to meet with these stakeholders early-on as the project team intends to partner with these entities to assist with distributing the employee and public surveys. Small group meetings would consist of representative employers, representative municipalities, human service agencies, township representatives, representative shopping center managers, and others. It is assumed that no more than twenty interviews/small group meetings would be held. A script of questions would be used to insure consistency in the interviews/meetings. As noted above, a standing Advisory Group will also be formed and meet at key decision points of the study.

A general public survey would also be conducted. This would involve a brief survey that both collects some very basic data and also informs/educates the public (and employers) about the study. It would be very brief, and cover travel behaviors and knowledge of/previous use of TDM strategies.

**DELIVERABLE:** Advisory Group meeting materials. Stakeholder list and interview questions. Technical Memorandum describing the interview approach, and summary of each session. This will be later folded into a Current and Future Conditions Report.

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## **1.5 Goals and Objectives**

Goals and objectives will be developed to help guide the analysis and in selecting strategies to advance. This will begin with a review of goals and objectives from the other Lake County plans, such as the 2040 Lake County Transportation Plan, Illinois Route 53/120 Corridor Land Use Plan, various TOD studies, etc.

DELIVERABLE: Technical Memorandum of goals and objectives. This will be later folded into a Current and Future Conditions Report.

## **1.6 Existing and Future Conditions Report**

Compilation of technical memoranda from above will be prepared into a full report. A draft will be circulated for LCDOT comment.

DELIVERABLE: Draft and Final versions of Existing and Future Conditions Report.

## **2. Research SOV Reduction Measures**

This section will identify a full range of SOV reduction measures. The applicability to Lake County will be assessed, as well as the comparative impact on reducing SOV travel and the costs associated with each will be indicated. Potential Lake County implementers of measures will be identified.

### **2.1 Lit/Web Search of SOV Reduction Best Practice**

AECOM will conduct a literature/web search of SOV reduction best practice. This research will include a 2018 survey of transportation network company (TNC) / transit partnerships in pilot projects across the country that team member Dr. Joe Schwieterman participated in.

DELIVERABLE: Technical Memorandum of research findings. This will be later folded into a SOV Reduction Measure Report.

### **2.2 Peer Interviews**

We will identify peer agencies that have SOV reduction programs in place, and serve areas similar to Lake County (i.e., suburbs with comparable socio-economic profiles). It will be important that some of the peer agencies include counties. Potential peer interview candidates include:

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Arlington County, VA	Middle Peninsula PDC, VA
Asheville region and Western NC	Northern Neck PDC, VA
Atlanta Regional Commission, GA	Northern Shenandoah Valley Regional Commission, VA
Autonomous Shuttle Project, City of Lincoln, NE	Potomac & Rappahannock Transportation Commission, VA
Central Shenandoah PDC, VA	Puget Sound, WA
Denver Regional COG, CO	Rappahannock-Rapidan Regional Commission, VA
Dulles Area Transportation Association, VA	Regional Transportation Commission of Southern Nevada
Fairfax County, VA	Roanoke Valley, VA
George Washington Regional Commission, VA	Thomas Jefferson PDC, VA
Hampton Roads TRAFFIX, VA	Triangle Region, NC
Loudoun County, VA	Wilmington, NC

We will draft questions in advance, and conduct up to five interviews. This task will help identify successful TDM measures and best practices from around the country. It will provide useful “lessons learned” on the effectiveness of measures, and strategies for implementing and sustaining programs.

DELIVERABLE: Peer interview questions. Technical Memorandum of peer interview findings, best practices, and implementation strategies. This will be later folded into a SOV Reduction Measure Report.

### **2.3 Lake County SOV Reduction Case Studies**

Study recommendations should build upon the SOV reduction programs already in place in Lake County. For example, the history, governance, funding, and progress towards reducing auto trips for the Lake County TMA and other programs (e.g., Ravinia Festival) will be documented as case studies. The lessons learned from these initiatives would be helpful in planning other pilot efforts.

### **2.4 SOV Reduction Measures**

Informed by the literature/web search, peer interviews, and our experience with TDM and SOV reduction programs elsewhere, measures that could have applicability in Lake County will be documented and assessed. This will include factors such as cost, time to implement, expected effectiveness, and whether there is a potential sponsor. Assessments will also be framed from a time perspective; i.e., short, mid- and long-term solutions. Barriers to implementation will also be identified. This section will serve as a resource for formulating proposed programs for sub-regional study areas in Task 3. Measures are grouped into categories of common attributes.

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### **2.4.1 Rideshare Programs**

Rideshare in its broadest definition involves participation in an arrangement in which a passenger travels in a vehicle on a pre-arranged basis. These can involve door-to-door (e.g., home to work) or first/last mile service (e.g., from a train station to a work site). Various forms include the following.

- Carpool (Pace's RideShare)
- Vanpool
- Transportation Network Companies (TNC)
- Car sharing
- Micro transit
- Emerging technologies (e.g., connected and automated vehicles, Mobility-as-a-Service, dynamic carpools)

### **2.4.2 Park-n-Ride**

- Metra station parking capacity and use
- Pace Transit/Transfer Centers
- Satellite parking/shuttles
- Parking pricing and management
- Mobility Hubs

### **2.4.3 Pedestrian, Bicycle, Scooter**

- Gap and last mile analysis of regional path/trail system
- Assessment of pedestrian and bicycle facilities at employment centers, major trip generators, rail stations, transit centers, etc.
- Assessment of ebike and e-scooter use on regional trails
- Bike parking at rail stations and transit centers

### **2.4.4 Transit**

- Summarize transit service types in Lake County
- Document range of costs and performance
- Collect info on rider satisfaction and preferences
- Document fares, fare incentives, pass prices, commuter benefit programs
- Identify privately-provided services
- Identify transit service types not currently offered in Lake County

### **2.4.5 Commute Options Programs**

Commute Options will be described; in addition to the modes and services discussed previously, these programs can also include telecommuting, compressed work week programs, flextime, and job sharing.

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## **2.4.6 Land Use**

While outside of the purview of LCDOT, it may be useful to prepare background material on the relationship between land use and transportation to affect SOV use. The type, density, design and location of development can impact transportation choice. While it is not anticipated that this strategy will be applied to the sub-regional study area plans, it may be useful to highlight as another tactic to consider in the larger effort to reduce SOV use.

## **2.4.7 Reduction Measure Evaluation Tools**

Several tools can be deployed to help assess SOV reduction measures and in developing program recommendations in Task 3.

### **2.4.7.1 Trip Reduction Impacts of Mobility Management Strategies (TRIMMS)**

TRIMMS™ was developed by the National Center for Transit Research and the Center for Urban Transportation Research. TRIMMS is a spreadsheet model that estimates the impacts of a broad range of transportation demand initiatives and provides program cost effectiveness assessments. The model evaluates strategies directly affecting the cost of travel, like public transportation subsidies, parking pricing, pay-as-you-go pricing, and other financial incentives. Subsidies are provided to the employee by the employer to reduce the costs associated with the use of a particular method of commuting.

TRIMMS also evaluates the impact of strategies affecting access and travel times and a host of employer-based program support strategies, such as: TDM initiatives, alternative work schedules, telework and flexible work hours, and worksite amenities. TRIMMS can be found at <http://trimms.com/>.

### **2.4.7.2 Mobilitics**

Emerging technologies have the potential to greatly impact the use of SOVs in several ways. Automated shuttle buses can provide first-mile/last-mile transit connections to neighborhoods and developments that are currently difficult to serve. Connectivity and automation are combining into fleets of shared automated taxis, with the potential for shared rides (like UberPool) that decrease auto ownership rates while increasing auto occupancy. These technologies are on the horizon, and planners need to consider their impacts on transportation and how they can be utilized to encourage shared mobility. Existing travel demand models and other standard planning tools do not account for any of these coming changes.

AECOM has developed a scenario planning tool designed to help agencies understand the impacts of emerging technologies and behavioral trends on their long-range transportation planning efforts. Mobilitics incorporates the latest research from the many evolving fronts of transportation, including automated vehicles, connected vehicles, electric vehicles, shared mobility, virtual presence, changing demographics, the gig economy and others. The Mobilitics tool can be used to understand the possible paths of evolution for transportation based on technology development cycles, development and operational costs, consumer acceptance and preferences, potential business models, and regulatory and policy regimes. Many of these variables remain uncertain at the current time, but how they play out will greatly impact the operations of the future transportation system, including the future use of transit and other high occupancy modes.

Mobilitics allows agencies to understand how these trends and technologies will impact their communities, but also what levers the agency can use to shape how these technologies are used. This understanding allows agencies to make sound investments today in policies, programs and infrastructure that support their community goals. A preview of Mobilitics' capabilities can be found on the web tool at <https://www.aecom.com/mobilitics/>.

### **2.4.7.3 Pre and Post Surveys**

Depending on the recommended service/program, pre and post survey efforts of implemented strategies will be an important evaluation tool.



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DELIVERABLE: Technical Memorandum describing the range of SOV measures that can be considered, with recommendations on those most applicable to Lake County.

## **2.5 SOV Reduction Measures Report**

A report will be prepared that compiles technical memoranda from above. A draft will be circulated for LCDOT comment. The documentation and assessment of SOV reduction measures will be formatted as single-page profiles to enable easy reference and sharing of concepts with others.

DELIVERABLE: Draft and Final versions of SOV Reductions report. SOV Reduction Measure profile sheets (case on a page).

# **3. Lake County Sub-Regional TDM Strategies & Action Plans**

## **3.1 Sub-Regional TDM Study Areas**

Using data and mapping from the Existing and Future Conditions task, a screening methodology will be developed to identify areas to target for potential TDM programs. The potential areas to study can include employment centers, retail/entertainment districts (e.g., Gurnee Mills, Great America), or institutional campuses (e.g., College of Lake County or Naval Station Great Lakes). Selection criteria will be used that result in a cross section of areas to study, including such factors as:

- Geography (e.g., four quadrants of County),
- Activity type (employment, retail, institution, entertainment),
- Scale (level of employment, visitation)
- Presence of transit service
- Degree of transportation problems (e.g., roadway congestion)
- Willing and interested local groups

AECOM will apply the screening methodology and present results as part of a workshop with LCDOT staff to reach consensus on up to four areas to prepare sub-regional TDM action plans.

DELIVERABLE: Technical memorandum of screening analysis and results.

## **3.2 Develop Sub-Regional Study Area TDM Strategies**

The development of tailored TDM strategies for each of the sub-regional study areas will involve a series of concurrent steps that will draw from the prior tasks and from the Team's knowledge of TDM programs. A broad range of strategies will be considered for each sub-region. Strategies will consider short / mid / long term options, estimated costs, potential implementer, and estimated return on investment. The tasks proposed for each sub-regional study area are listed as follows.

### **3.2.1 Engagement**

Three surveys are envisioned: of sub-regional area businesses (1) and with employees/commuters (2) to help guide recommendations and inform subsequent marketing efforts. A third survey will involve a county-wide online survey to gauge public perception of recommended TDM strategies from the first two survey efforts.

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The first survey will determine transportation issues that employers face, and what solutions they believe could help address those issues. TDM services they may currently use will be identified. Entities will be asked to determine their awareness of program resources and their attitudes of service offerings. Respondents will also be asked to provide basic information about their business such as location, number of employees, and industry classification. Capturing and understanding this information will help our team develop TDM recommendations and marketing strategies that are segmented, localized, and ultimately more effective. The project team will work with interview/small group meeting participants to assist in deploying the survey. An online survey tool will be used.

The second effort will involve surveying employees (or visitors, shoppers, students), asking how they currently get to work, what transportation issues they face, what types of TDM programs would help them, and about previous participation in TDM programs. Demographic and behavioral questions will also be included. The combined data will guide the development of sub-regional study area TDM strategy recommendations that are based on the geographic location, unique demographic characteristics, and transportation resources at each of the four sub-regional study areas. The project team will develop a survey distribution plan which will include working with interview/small group meeting participants, municipalities and employers to assist in deploying the survey. An online survey tool will be utilized.

The third effort will involve a county wide online survey to determine the public feedback on the recommended TDM strategies that were viewed positively in each of the four sub-regional study areas.

The project team will develop and format all surveys. The project team will review the recently-completed survey data from the Lake County Paratransit Market Analysis before developing questions.

DELIVERABLES: Survey Plans, questionnaires, collateral materials survey distribution. Technical memo on outreach results.

### **3.2.2 Transportation Network Improvements**

Current service reviews will be made and recommendations for improvements to the transportation network within each sub-regional study area will be proposed. This would include seeking input from transportation providers. Examples of improvements include:

- Last Mile services – shuttle buses, employer van pools
- Last Mile facilities – trail links, sidewalks, satellite park-n-rides, bus pads/shelters
- Door-to-door rideshare (carpool, vanpool)
- New or improved bus routes
- Expanded commuter rail schedules (including reverse commuter services), new stations
- Park-n-ride facilities at Metra stations and Pace transit centers
- Application of emerging technologies

DELIVERABLE: Technical memorandum on transportation improvement recommendations for each sub-regional study area.

### **3.2.3 Program Performance Metrics**

The AECOM Team will analyze the recommended TDM strategies for each sub-regional study area and using available SOV reduction measure evaluation tools from Section 2.4.7, and other analytical methodologies, will estimate the potential mode shift for the recommended TDM strategies within each sub-regional study area.

DELIVERABLES: Technical memorandum on the metrics of expected costs, ROI and mode shift for recommended strategies in each sub-regional study area. Results for each recommended strategy will

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be formatted as single-sheet profiles, similar to the Texas A&M Transportation Institute's "Case on a Page" format.

### **3.2.4 Sub-Regional TDM Strategies Report**

A report will be prepared that compiles technical memoranda from above. A draft will be circulated for LCDOT comment.

DELIVERABLE: Draft and Final versions of SOV Reductions report.

## **3.3 Site Specific or Partner Specific Action Plans**

Within the budget allocated for this task, the project team will assist LCDOT in finding a willing partner(s) within each sub-regional study area to develop, or collaborate on, an action plan for site-specific or partner-specific TDM strategies. This assistance may also lead to the formation of one or more new Transportation Management Associations (TMA). The Action Plans will evaluate TDM strategies geared towards a specific location or partner and include return on investment (ROI), costs, and marketing and business plans to advance the implementation of TDM strategies. The tasks proposed for each sub-regional study area are listed as follows.

### **3.3.1 Develop Site- or Partner-Specific Marketing Plans**

The AECOM Team will develop draft marketing packages for site or partner-specific TDM strategies to provide messaging and communications directed at the commuter audiences that will encourage program participation, as well as promote the information and resources. The package will include: an outline of the products and messages that will be developed for TDM strategies within each sub-regional study area; a plan for material development and production; and recommendations for campaigns, events, and other major promotions to be undertaken.

DELIVERABLE: Marketing plan document for site- or partner-specific TDM strategies in each sub-regional study area.

### **3.3.2 Develop Site or Partner-Specific Business Plans**

AECOM will recommend approaches to implement strategies within each sub-regional study area. This will include management, resources required, budgets, schedules, etc. Note that management could be facilitated by a partner within the sub-region or an entity serving this role on a county-wide basis, for example, Lake County Partners or the Lake Cook TMA. Metrics for measuring program performance will be proposed.

DELIVERABLE: Business plan for site or partner-specific TDM strategies in each sub-regional study area.

## **4. SOV Reduction Grant Program**

AECOM will research the development of a potential grant program for Lake County entities to fund improvement projects to reduce SOV travel. The recommendations will draw from the LCDOT 2010 report *Policy on Infrastructure Guidelines for Non-Motorized Travel Investments*.

This study will generate a range of ideas that could be implemented at different levels: countywide, as corridors, within municipalities, or by consortia of private parties such as businesses. Pursuing a grant program would avoid remaining in the theoretical realm; the County may find value in enabling trials or

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rollouts of proposed strategies with funding resources. The *Invest in Cook* model established by Cook County (a community call for projects that align with its Long Range Transportation Plan priorities) could be used by Lake County to fund projects that satisfy TDM Plan recommendations. Candidate projects could be tailored to test specific transportation solutions or pilot recommendations. An evaluation process would be recommended based on a variety of criteria, including, for example, expectations for trip/VMT reduction outcomes. Based on the evaluation outcomes, more formal County policies and requirements could evolve.

**DELIVERABLE:** Report on recommendations for developing a grant program to implement SOV reduction projects.

## 5. Evaluation of Lake County Pilot Projects

AECOM was requested to include additional scope to measure the impacts on SOV travel of two pilot projects implemented by other parties that are anticipated to be operational in 2019. This includes the addition of Metra reverse commuter service on the Milwaukee District North (MD-N) Line and a bike share pilot program in the Grayslake area to serve the College of Lake County.

### 5.1 Metra Reverse Commute Pilot

This project will involve a jointly funded program to expand the MD-N Line schedule by one round trip train during the reverse peak period (i.e., from downtown Chicago in the AM Peak, and to downtown Chicago in the PM Peak). The service is targeted to employees in the Tri-State Tollway Corridor near Lake Forest, and is intended to help recruit and retain employees residing in Chicago and other communities along the MD-N.

It is proposed that intercept surveys be distributed at the Lake Forest Station. It is thought that surveying riders during the PM Peak, while riders are boarding trains, would be more effective than the AM Peak. Riders of the added PM train as well as riders on existing reverse commuter PM trains at the station would be surveyed. The survey questionnaire would be short (e.g., half page), and respondents would be referred to an online survey for additional questions. The questions would be framed to determine the extent that this service improvement resulted in changes in travel choice. A metric of public cost per SOV trip reduced will be calculated.

### 5.2 Grayslake / College of Lake County Shared Bike Pilot

The project will involve setting up five shared bike stations in the Grayslake / College of Lake County area. The evaluation would involve surveying users, and would cover basic travel information on the when, where and why shared bikes were used. The survey will also ask how the trip would have been made had a bike not been available. The Team envisions having access to registration information on bike subscribers, and conducting the surveys via email, phone or mail. Program statistics on number of subscribers, trips made by station, and usage patterns by day will be requested. Costs to operate the program as well as user costs (i.e., revenues to program) will also be obtained. It is expected that surveys would be conducted twice, after six months and after one year. Metrics such as on estimated SOV trips reduced and public cost per reduced trip will be calculated.

**DELIVERABLE:** Reports on SOV impacts of Metra Reverse Commute and Grayslake / College of Lake County Shared Bike Pilot programs.

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## 6. Final Report

A final report will be prepared. It is proposed that this would be a more externally-oriented document than the task technical memorandums and reports, and would represent an executive summary of the overall project findings.

DELIVERABLE: Draft and Final Report SOV Reduction project.

## 7. Project Management

Once the scope of work and cost has been approved and a written notice to proceed has been given by LCDOT, AECOM will commence work on the Project. We will develop a Project Management Plan (PMP), including a project organization chart, schedule, safe work plan, and quality management plan. We will also prepare a Public Engagement Plan in close coordination with LCDOT's Communication Coordinator, which would include the following elements:

- Public engagement calendar
- Stakeholder list
- Logo/branding - Metro Strategies will draft branding options for the study. This would include three logo and study name options. The branding would be used on all study materials and collateral.
- Outreach materials – Metro Strategies will develop a study fact sheet, as well as survey promotion collateral, etc.
- Website content - Metro Strategies will develop website content for a page located on existing LCDOT website (similar to existing 2040 Transportation Plan). The webpage would include study overview, process, calendar, and graphics/images. Metro Strategies would provide periodic content updates.

AECOM will obtain guidance on such items as format for progress reports, submittal requirements, data and record management, invoicing, schedule, cost control, contract, administration, and Disadvantaged Business Enterprise (DBE) reporting requirements from LCDOT. With LCDOT, we will establish the frequency for status meetings and protocols for making external contacts. Direction on other administrative requirements will be handled at a project kick-off meeting with LCDOT staff.

DELIVERABLES: Project Management Plan, monthly progress reports and invoices, Project meeting agendas, meeting notes, and materials.

