Competitive Projects Proposal Form

State Fiscal Year (July 1, 2017 – June 30, 2018)

Project Title	Local Technical Assistance and Community Planning Programs
Sponsoring Agency	CMAP, with suballocation to RTA depending on projects
FHWA/FTA Amount Requested	\$600,000
Local Match Amount	\$150,000
Total Project Cost (Local Match Amount must be at least 20% of Total Project Cost)	\$750,000

Description and Justification

Brief Description

This project will provide grants and consultant assistance to local governments to undertake planning activities that integrate transportation - particularly transit - with land use and housing. These grants will be available for planning activities as well as updates and reviews of local development regulations. Projects will be selected through a competitive application process administered jointly by CMAP and the RTA. This level of funding will support approximately 8 local plans and several smaller-scale follow-up activities.

Major Tasks (up to 20)

- 1. Hold an application process for new projects. As in the past several years, CMAP and the RTA will produce joint application materials. Both agencies will use the same initial application materials for both staff assistance and consultant assistance projects. CMAP and RTA will jointly host an open house event to help prospective applicants understand eligible project types, showcase previously accepted projects, and propose new project ideas. UWP funding would be used for those projects requiring consultant assistance. Project applications will be due in late June or early July.
- 2. Review and evaluate projects. CMAP and the RTA will review the applications received and divide them between the agencies based on their appropriateness (i.e. the RTA will receive applications with a heavy transit focus). The transit service boards, Counties, and Councils of Government/Councils of Mayors will be asked to participate in the review process. CMAP and the RTA will jointly agree on projects to be funded through this UWP grant, and also will decide which agency is more appropriate to administer each grant. Following the approval of the selection (Step 3, below), CMAP will then subgrant funds to the RTA to cover the projects that they will administer.
- 3. Select new projects. For projects administered by CMAP, approval from both the Board and the MPO Policy Committee will be sought in October, with a recommendation from the Transportation Committee and Local Coordinating Committee prior to approval. Projects administered by the RTA will be presented to the RTA Board in September.
- 4. Initiate new projects. Successful communities will work with CMAP/RTA to select qualified consultants.

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- 5. Implement selected projects. Each project is expected to result in the adoption of a plan or a regulatory document by at least one unit of local government. Each project is also expected to advance the implementation of GO TO 2040 by translating the principles of the regional plan into local planning practice.
- 6. Evaluate program success and make adjustments. Each year, CMAP and RTA consider and make modifications to application forms and processes, consultant procurement processes, evaluation methods, and other administrative elements of this program.

Competitive Justification (please identify the regional focus area associated with this project) Local Technical Assistance

Competitive Justification (please identify at least one principal of the regional priorities associated with this project and/or the required MPO activities)

This project responds directly to the "Local technical assistance" priority. The focus of the CMAP Local Technical Assistance and RTA Community Planning Program is to provide assistance to local governments through direct, individualized technical assistance. Because of the central role that local governments have in the implementation of GO TO 2040, this work has been identified by the UWP Committee as a high near-term priority.

Competitive Justification (will this project inform or achieve regional or subregional land use, housing, environmental, economic development, or human services goals? Please explain.) Yes. This project directly implements GO TO 2040's recommendations for resources to be provided to local governments for planning purposes. The coordination of CMAP and RTA grant programs is an explicit recommendation in GO TO 2040. This project most strongly addresses land use, housing, and transportation goals, and is also relevant to environmental, economic development, and human services goals.

Competitive Justification (which particular GO TO 2040 recommendation will this project contribute to or implement?)

This project directly implements the recommendations of the Land Use and Housing section of GO TO 2040 as well as the Regional Mobility recommendations of the plan (in the areas of Transportation Finance, Public Transit, and Freight). Because the activities funded are often comprehensive in nature, this project also implements other recommendations related to Coordinated Investment, Water and Energy Conservation, and Parks and Open Space, but projects that focus on these topics supplement UWP funding with other sources.

Is this project a continuation of previous work? If so, please explain.

Yes. CMAP and the RTA have submitted joint applications similar to this one annually since FY14.

Who will benefit from the interim or final products of this project?

The products will benefit local governments (municipalities, COGs, and counties) as well as transportation agencies whose investments are affected by local land use decisions.

What is the source of funds for the local match portion of this project?

The funds that are subgranted to the RTA will be matched by RTA funds and match provided by the local project sponsors. The funds that are programmed by CMAP will be matched by the Illinois Department of Transportation, match provided by the local project sponsors, and other sources.

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Product	Product Type	Completion Date
Selection of approximately 8 new projects to receive grant funding	Outside distribution	October (CMAP) and December (RTA)
Initiation of local projects	Plan / program	Ongoing
Completion of local projects	Plan / program	Ongoing
Process evaluation and preparation for FY 19 applications	In-house	March 2018

Expense Breakdown		
Staff (including overhead) cost	\$	
Total Person Months		
Consultant Cost	\$750,000	
Other Costs	\$	
Total Project Cost	\$750,000	

Please specify the purpose of consultant costs and time line for expenditure

All costs in this project are consultant costs (either contracted with CMAP or RTA). Projects are scheduled to be initiated in the first half of 2018 and will be completed in 2019.

Please specify the purpose of other costs

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Project Title	CREATE Program Planning Support - Passenger & Commuter Rail
Sponsoring Agency	CDOT
FHWA/FTA Amount Requested	\$240,000
Local Match Amount	\$60,000
Total Project Cost (Local	
Match Amount must be at least	\$300,000
20% of Total Project Cost)	

Description and Justification

Brief Description

The CREATE Program is a unique public-private partnership between CDOT, IDOT, USDOT, and the railroads serving the Chicago region. Over the past decade it has made significant progress towards addressing severe capacity constraints affecting freight trains, providing both public and private benefits. The major upcoming CREATE projects are critical to improving regional commuter and passenger rail capacity and service. CDOT needs technical, planning, policy, and strategy support services to ensure that the remaining CREATE investments maximizes public benefit.

Major Tasks (up to 20)

- 1. Support CREATE Advocacy Working Group activities including developing and maintaining website content, presentations, fact sheets, Geographic Information Systems (GIS) maps, materials for elected officials and stakeholders, and other communications materials.
- 2. Provide logistical coordination and presentation material support for updates and briefings to Chicago-area civic and business organizations via regular civic meetings/tours.
- 3. Provide specialized technical analysis and policy support to develop recommendations for CDOT on infrastructure planning, finance, and federal, state, and local policy regarding freight, commuter, and intercity passenger rail (including high speed rail).
- 4. Support CDOT's relationship with other federal, state, and local transportation agencies (including but not limited to FHWA, FRA, FTA, USDOT, STB, IDOT, ICC, CMAP, RTA, Metra, CTA, Pace, and various county and municipal government entities) regarding technical aspects of the CREATE Program.
- 5. Support the development of materials to facilitate testimony by the CREATE partners at public hearings and meetings/briefings with federal, state, and local elected officials and other stakeholders.
- 6. Facilitate communications with affected communities, businesses, and related stakeholders to garner and/or sustain support for obtaining the resources required to

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- successfully complete the CREATE Program.
- 7. Facilitate outreach to relevant national, state, and local freight, transportation and business organizations to garner and/or sustain support for obtaining the resources required to successfully complete the CREATE Program.
- 8. Develop communications materials and facilitate outreach to support the pursuit of Federal, state, and local transportation funding for CREATE projects, including but not limited to the upcoming surface transportation legislation reauthorization and any other relevant transportation funding legislative initiatives.
- 9. Conduct assessments of the impacts of the CREATE program on specific stakeholders, including but not limited to: rail freight services; rail passenger services; adjacent property owners, tenants, and other abutters; employment and other economic opportunities.
- 10. Conduct specialized analyses and technical studies to advance institutional and financial support for CREATE and related initiatives. Such analyses and related data collection and forecasting activities may cover a range of topics, including but not limited to: Chicago area railroad traffic and operations trends; Chicago area intercity passenger rail (including high speed rail) travel demand and related operations and capital investment needs; assessments of the economic impacts of the CREATE Program and related freight rail, intercity passenger/high speed rail, and commuter rail initiatives.
- 11. Provide graphics, word processing, and other publishing and presentation support for reports, policy recommendations and other technical documentation for public dissemination.
- 12. Enhance and maintain internet/website and social media presence and content.

Competitive Justification (please identify the regional focus area associated with this project) Planning work towards GO TO 2040 Implementation

Competitive Justification (please identify at least one principal of the regional priorities associated with this project and/or the required MPO activities)

As noted in the GO TO 2040 plan: "The regional and national significance of CREATE make it a high priority. This public-private partnership ... should complete strategic upgrades of four critical corridors over the next two decades. Despite substantial progress ... CREATE needs to prioritize the remaining 61 projects and aggressively secure funds to implement them." These planning support services are essential to CDOT and the CREATE partners achieving these objectives.

Competitive Justification (will this project inform or achieve regional or subregional land use, housing, environmental, economic development, or human services goals? Please explain.) The GO TO 2040 plan states: "... the consumption of goods carried on our freight network creates jobs and boosts our economy, [but] freight bottlenecks caused by inadequate infrastructure ... hurts our economy." It also says that "the mobility enabled by transit helps our economy and quality of life" and "investments should be focused on maintaining and modernizing our transit system." These planning support services are essential to achieving both of these objectives as well as enhancing the environment.

Competitive Justification (which particular GO TO 2040 recommendation will this project contribute to or implement?)

These services will contribute to the implementation of three Go To 2040 recommendations: 10.

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Invest Strategically in Transportation; 11. Increase Commitment to Public Transit; and 12. Create a More Efficient Freight System.

Is this project a continuation of previous work? If so, please explain.

Yes. Similar services have been instrumental to the success of the CREATE Program so far by providing planning, technical, policy, advocacy, and related support as needed to successfully achieve the goals of the CREATE Program, consistent with the Regional Plan.

Who will benefit from the interim or final products of this project?

Continuation of these planning support services at this stage of the CREATE Program will be key to improving regional commuter and passenger rail capacity and service, which is a primary focus of the major CREATE projects that are yet to be funded and completed. The primary beneficiaries of these projects will be people, businesses, and other organizations that depend upon Metra and Amtrak service, while regional freight service will also continue to benefit strongly.

What is the source of funds for the local match portion of this project? City funds

Products and Completion Schedule		
Product	Product Type	Completion Date
CREATE Program Planning, Policy, and Advocacy Support Materials	In-house	2017-2020
CREATE Program Planning, Policy, and Advocacy Support Materials	Outside distribution	2017-2020
Specialized Technical Studies and Analyses	In-house	2017-2020
Specialized Technical Studies and Analyses	Outside distribution	2017-2020
Online content and Communication	Outside distribution	2017-2020

Expense Breakdown	
Staff (including overhead) cost \$0	
Total Person Months 10	

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Consultant Cost	\$300,000	
Other Costs	\$0	
Total Project Cost	\$300,000	
Please specify the purpose of consultant costs and time line for expenditure		
The consultant will be responsible for performing the activities described in the tasks set out		
above in order to achieve the goals of ensuring that the remaining CREATE investments		
maximize public benefit.		
Please specify the purpose of other costs		

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Project Title	Video Analytics Utilized for AADT Collection
Sponsoring Agency	Chicago Department of Transportation (CDOT)
FHWA/FTA Amount Requested	\$200,000
Local Match Amount	\$50,000
Total Project Cost (Local Match Amount must be at least 20% of Total Project Cost)	\$250,000

Description and Justification

Brief Description

The Chicago Department of Transportation (CDOT) began a project in 2015 to integrate all sources of traffic data into a single centralized Advanced Traffic Management System (ATMS). The ATMS has over 15 interfaces and feeds from external entities planned, and in turn will provide this data for real time operations and planning to multiple Chicago area agencies. One of the most exciting data sources is the shared video usage of traffic cameras from the Office of Emergency Management and Communications (OEMC). The OEMC has amassed video from over 20,000 feeds from various types and locations within the City of Chicago. This video is currently used for public safety purposes. Video analytics technology for traffic and transportations uses has improved significantly in the last several years. Dedicated video cameras are currently used to generate annual average daily traffic counts (AADTs) from a standard video feed. This however require an agency to install a camera on the roadside temporarily for taking the traffic count and move it to the next location and so on. Taking a count citywide is not easy this way. Also, this method does not offer a continuous count for more accurate AADT. With this grant application, CDOT is proposing to utilize the existing camera feeds to generate citywide traffic counts at a fraction of the cost and time required for standard traffic data collection processes. Moving into the future, these analytic tools could also be used for speed collection and acceleration metrics.

CDOT is proposing to develop a process and software for taking traffic counts citywide routinely utilizing the OEMC cameras and integrating a continuous traffic counting mechanism to the ATMS. Materials, methodologies, and lessons learned from this study will be provided to other municipalities and agencies for use in developing their own video analytics for traffic studies. Additionally, the AADTs will be shared with all transportation agencies and public facing modes as needed. The last citywide traffic counts were taken in 2006 at a total cost of over \$1 million.

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Applications of the data collected will go towards citywide planning initiatives such as Vision Zero and Complete Streets. It will also help with the review of major planning developments in Chicago, many of which have regional land use and economic development impacts.

Major Tasks (up to 20)

- 1. Coordinate with OEMC to allow traffic cameras to be locked in place while counting is in progress (unless major incident requires the repositioning of the camera).
- 2. Investigate leading video analytic softwares and determine which are feasible for the needs of CDOT.
- 3. Assign developer to take analytic software and implement in the ATMS software to use existing OEMC video feeds.
- 4. Complete simultanious manual and video counts to determine validity.
- 5. Production and publication of executive summary document.
- 6. Production and publication of in-depth technical analysis document.
- 7. Production and distribution of AADT values estimated to IDOT and relevant agencies.
- 8. Technical workshop for municipalities and IDOT from across the Chicago metropolitan region to provide overview of findings and targeted technical assistance

Competitive Justification (please identify the regional focus area associated with this project) *Local Technical Assistance and the Formation of Collaborative Planning Efforts*

Competitive Justification (please identify at least one principal of the regional priorities associated with this project and/or the required MPO activities)

Local Technical Assistance and the Formation of Collaborative Planning Efforts

Competitive Justification (will this project inform or achieve regional or subregional land use, housing, environmental, economic development, or human services goals? Please explain.) This project will help determine the demand for roadways on a continual basis. In the past traffic counts were limited to a single day's effort. This never gave us a good picture of the average and changing conditions. With a continuous monitoring mechanism we are will have more accurate data to work with in planning projects.

Gathering AADT data will help citywide planning efforts, such as Vision Zero and Complete Streets. It will also help with reviewing major development projects and understanding environmental impacts of projects that reduce air pollution, such as bicycle/pedestrian infrastructure and smart signals.

Competitive Justification (which particular GO TO 2040 recommendation will this project contribute to or implement?)

This project will support the implementation of the Regional Mobility goals. Without accurate data on transportation demand we cannot "Invest Strategically in Transportation".

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Is this project a continuation of previous work? If so, please explain.

No, this is not a continuation of previous work. This project will evaluate and confirm some of the recent developments in video analytics. And, if the initial assumptions are confirmed, this project will develop a standard operating procedure and software that can be integrated to other application, like ATMS, for collecting traffic counts form surveillance cameras.

Who will benefit from the interim or final products of this project?

CDOT and all transportation agencies in the region and beyond can utilize the results of this study.

What is the source of funds for the local match portion of this project? State or local funds

Products and Completion Schedule		
Product	Product Type	Completion Date
Survey of existing reports and best practices	Memo	Fall 2017
Executive Analysis Report	Report/Publication	Winter 2017/2018
Technical Analysis Report	Report/Publication	Summer 2018
AADT results publication distributed	Spreadsheet files	Summer 2018
Technical workshop for municipalities and IDOT from across the Chicago metropolitan region to provide overview of findings and targeted technical assistance	Event	Fall 2018

Expense Breakdown		
Staff (including overhead) cost	0	
Total Person Months	0	
Consultant Cost	\$250,000	
Other Costs	\$0	

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Total Project Cost	\$250,000
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Please specify the purpose of consultant costs and time line for expenditure

The prime consultant will do the initial evaluation. They will work with the ATMS vendor to develop the video analytic software and integrate it to work within the ATMS software, as well as training and running the tests during this study.

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State Fiscal Year (July 1, 2017 – June 30, 2018)

Project Title	Blue Line Traction Power Study to Inform Core Capacity Project
Sponsoring Agency	Chicago Transit Authority (CTA)
FHWA/FTA Amount Requested	\$500,000
Local Match Amount	\$125,000
Total Project Cost (Local	
Match Amount must be at least	\$625,000
20% of Total Project Cost)	

Description and Justification

Brief Description

The purpose of the project is to conduct a comprehensive load flow study to assess traction power needs on the Blue Line, which will inform conceptual planning activities for a future Blue Line Core Capacity project to improve the line's capacity and reliability. The need for this project is supported by increasing Blue Line ridership, correlating with population shifts and new developments along the corridor. A load flow study will enable CTA to optimize its current assets and improve its rail infrastructure to accommodate the line's rapid increase in ridership and current high demand.

Major Tasks (up to 20)

- 1. Consultant contract proposal, negotiation and approval.
- 2. Project management for a load flow study that will assess present conditions and potential future scenarios regarding the Blue Line's power needs.
- 3. Review of all previous analysis and reports on file at CTA that relate to load flow and voltage drop issues along the Blue Line.
- 4. Load flow study. Following data collection activities, including existing drawings and track data, the study will analyze where system reinforcements (i.e. tie houses, substations, and wayside energy storage systems) may be needed and recommend how they may be implemented. The study will model a series of present conditions and future scenarios that include the effects of variables such as station capacities, utility short-circuit kVA capacity and regulation, outages/items out of service, and loading alternatives that consider various schedules, train lengths, headways, rail cars, and

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speeds. Additionally, the study will also evaluate and provide recommendations on the system's energy efficiency; from the equipment, transformer, cabling and contact rail perspectives, to determine the expected benefit to CTA.

5. One-line diagram and report. The study will generate a one-line diagram of the DC power system interconnections and a report describing the system in detail.

Competitive Justification (please identify the regional focus area associated with this project)

The regional focus area is Modernization of the Public Transit System.

Competitive Justification (please identify at least one principal of the regional priorities associated with this project and/or the required MPO activities)

The proposed load flow study will provide the necessary analysis of the Blue Line's power availability, which meets the regional priority for modernization of the existing transit system. In 2013, an analysis modeled the line's existing power system at two discrete locations using 2012 service levels and the power requirements for 2600/3200 series rail cars. Yet, the analysis did not account for the newest generation of rail cars (7000 series), which is scheduled to begin delivery in 2020. Also, since the 2013 analysis, the line has reached its record high of 46.8 million riders (2015). A comprehensive study of the entire line, as proposed in this request, has not been conducted since 2003.

At present, the Blue Line operates at its maximum capacity due to power supply constraints and is unable to add service to address crowding during the AM and PM peak periods. Along the O'Hare branch, the distances between multiple substations are greater than two miles, which contributes to voltage drop issues and is beyond the recommended average spacing of up to 1.25 miles. Similarly, the Forest Park branch has outdated substations with less-than-optimal spacing.

Competitive Justification (will this project inform or achieve regional or subregional land use, housing, environmental, economic development, or human services goals? Please explain.)

Yes, the project will continue to support infill development and enhance regional mobility. The project will facilitate the needs of intensifying land uses along the Blue Line, particularly along the O'Hare branch, which includes the estimated 1,000 new units that have been added due to at least 20 projects that are either completed, under construction, or have been proposed along the corridor between Logan Boulevard and Division Street. Residents in these buildings are expected to be heavy users of CTA. The project will improve mobility for residents and visitors that rely upon the Blue Line for access to employment and educational opportunities in the region.

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Competitive Justification (which particular GO TO 2040 recommendation will this project contribute to or implement?)

This project contributes to GO TO 2040 regional mobility recommendations to "invest strategically in transportation" and "increase commitment to public transportation" by making the existing system operate more efficiently. Specifically, the project will support infrastructure improvements to increase capacity on a line that is limited in its ability to provide a necessary level of traction power to meet its demand. Weekday ridership along the Blue Line has been growing quickly over the past 10 years, outpacing the growth of the entire rail system as a whole, and currently provides 149,800 transit trips per weekday (O'Hare to Forest Park, 2016). Project tasks will enable CTA to make strategic recommendations regarding critical enhancements to the rail system.

Is this project a continuation of previous work? If so, please explain.

Yes, the 2013 analysis revealed that a more rigorous analysis of the traction power demands on the entire line is needed. A load flow study will identify problem segments of the line and will allow optimal solutions to be proposed for each problem segment. Since CTA often incorporates traction power needs into its capital planning projects, a load flow study will help provide the needed data to inform these capital planning decisions.

This project builds on the ongoing Brown Line Core Capacity Vision Study, which included an assessment of system-wide capacity needs that identified the Blue Line as currently constrained by traction power limitations (generally from Harlem to Grand on the O'Hare branch). The study recommended that augmenting the line's power supply with additional substations, as determined by the comprehensive load flow study contained in this request, could increase the line's capacity by more than 20 percent.

The project also supports the Blue Line Forest Park Branch Feasibility/Vision Study. The study is being undertaken to determine a long-term planning strategy for the Blue Line Forest Park Branch, with study limits including the entire Blue Line Forest Park Branch from Clinton station to Forest Park station. The Vision Study identified a preliminary need for six substations where only five exist today. In addition, the work efforts proposed here contribute to station, track and infrastructure improvements under CTA's Your New Blue project.

Who will benefit from the interim or final products of this project?

Current and future CTA Blue Line customers, including residents, visitors, and workers, will benefit from the increased speed, efficiency, and comfort that a faster Blue Line will provide. The over 26-mile Blue Line provides access to downtown, the Northwest and West Sides of Chicago and western suburbs; keeping cars off the roads, enhancing mobility, and bringing economic benefits to the city and region.

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What is the source of funds for the local match portion of this project?

CTA Operating Funds

Products and Completion Schedule		
Product	Product Type	Completion Date
Task 1: Contract proposal, negotiation and approval	In-House	Oct 2017 - Feb 2018
Task 2: Project management	In-House	Oct 2017 – Apr 2019
Task 3: Review of previous materials	In-House/Outside Distribution	Feb 2018 – Mar 2018
Task 4: Load flow study	Outside Distribution	Apr 2018 – Dec 2018
Task 5: One-line diagram and report	Outside Distribution	Jan 2019 –Apr 2019

Expense Breakdown		
Staff (including overhead) cost	\$125,000	
Total Person Months	28	
Consultant Cost	\$500,000	
Other Costs	n/a	
Total Project Cost	\$625,000	

Please specify the purpose of consultant costs and time line for expenditure

Consultants who provide specialized expertise in the design of traction power systems are needed to perform this work.

Please specify the purpose of other costs

None.

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Project Title	Next Phases of the Red and Purple Modernization (RPM) Core Capacity Expansion
Sponsoring Agency	Chicago Transit Authority (CTA)
FHWA/FTA Amount Requested	\$640,000
Local Match Amount	\$160,000
Total Project Cost (Local	
Match Amount must be at least	\$800,000
20% of Total Project Cost)	

Description and Justification

Brief Description

The purpose of this project is to support conceptual planning and National Environmental Policy Act (NEPA) compliance determination for the next phases of the Red and Purple Modernization (RPM) Core Capacity program. The RPM Core Capacity Program is being delivered in phases in order to bring improvements sooner to the people who rely on the CTA Red and Purple lines. On January 9th 2017, RPM Phase One became the first Core Capacity project to receive a Full Funding Grant Agreement through the FTA's Capital Investment Grant Program. This project to identify the next phases of RPM will build upon the success of RPM Phase One.

The RPM Program, which includes the Red and Purple Lines from approximately Belmont station in Chicago to Linden station in Wilmette, is one part of CTA's effort to enhance the entire Red Line and is an identified as GOTO 2040 fiscally-constrained project. This proposed UWP project is to determine the scope of the next phases of RPM, including RPM Phase Two. This project is necessary to identify the elements of the RPM Program that need to be pursued next. This project will include the capacity analysis, conceptual engineering, and early environmental review necessary to identify the next phases of RPM and all materials necessary to request entry into the project development phase of the FTA's Capital Investment Grant Program for RPM Phase Two.

Major Tasks (up to 20)

- 1. Consultant contract proposal, negotiation and approval.
- 2. Project management for a study that would consider costs, benefits, funding strategies and preliminary planning to group RPM corridor elements into project phases.

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- 3. Review of all previous analysis and outreach conducted as part of the RPM corridor vision development and the identification of RPM Phase One.
- 4. Creation of RPM Phase alternatives, including the analysis of capacity, speed, accessibility, and structural improvements by sections within the RPM Corridor. For each potential RPM phase, alternatives will be developed to allow a tangible review and prioritization of package options.
- 5. Stakeholder and/or Public Outreach to inform the scope of the next phases of RPM.
- 6. Analysis of cumulative capacity, speed, accessibility, and other benefits (agency cost savings, operating improvements, reliability improvements, etc.) to recommend preferred alternatives for the next RPM phases.
- 7. Development of Financial Planning concepts that include multiple strategies, including various Federal FTA/FHWA sources, state and local sources, as well as all value captured opportunities.
- 8. Development of RPM Phase Two Materials necessary to enter FTA's Core Capacity Project Development Phase.

Competitive Justification (please identify the regional focus area associated with this project)

The regional focus area is the Planning Work Toward GO TO 2040 Implementation.

Competitive Justification (please identify at least one principal of the regional priorities associated with this project and/or the required MPO activities)

The GO TO 2040 plan identified the Red and Purple Modernization Program as a fiscally constrained capital project for the region. The proposed tasks will contribute towards developing the next phase to be delivered and would advance this high priority project. This project also is related to the focus area of Modernization of the Public Transit System, as this project will modernize and make ADA-accessible another piece of the total nine and half miles of Red and Purple Lines rapid transit that is significantly past its useful life and utilized by residents of various communities.

Competitive Justification (will this project inform or achieve regional or subregional land use, housing, environmental, economic development, or human services goals? Please explain.)

This project will evaluate the alternatives for their respective transportation and community benefits as well as environmental, social, and economic impacts of the construction and operation of potential RPM phase components. The project study area encompasses significant residential and commercial developments. Currently, the CTA Red Line provides 219,000 transit

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trips per day (Howard - 95th Street) connecting residents to employment and education centers in the region.

This project will also continue to support infill development and economic redevelopment in an urban area with good access to transit. It will facilitate intensifying land use along the Red and Purple lines. The project supports increasing transit ridership goals both in terms of enabling expanded capacity and increased service quality through time savings and improved customer comfort from a smoother ride.

Competitive Justification (which particular GO TO 2040 recommendation will this project contribute to or implement?)

The CTA's North Red and Purple Line Improvement.

Is this project a continuation of previous work? If so, please explain.

Yes, this project is a continuation of previous work conducted to identify the RPM Corridor Vision and monitor the progress of the first phase of the RPM Program. CTA has conducted public outreach since 2009 including the North Red and Purple Lines Vision Study, early environmental scoping, series of open-houses on full corridor alternatives, and a robust outreach program for the NEPA analysis and project development of the RPM Phase One. This project will benefit from this past outreach and the success of the project development phase of RPM Phase One and continue this process for the next phases of RPM.

Who will benefit from the interim or final products of this project?

This project will facilitate improvements to a key transit corridor that will enhance travel options, thereby providing congestion relief and economic benefit to the city and region. The Red and Purple lines provide access for the downtown, the north side of Chicago and near northern suburbs; while linking the rest of the CTA system with neighborhoods; commercial corridors; employment centers; schools/universities; and other destinations in this corridor. Current and future CTA Red and Purple line customers—including residents, workers, and visitors—will benefit from the additional services possible through the capacity expansion anticipated through the next phases of RPM and the improved capacity, accessibility and comfort afforded by any station improvements included as part of RPM.

What is the source of funds for the local match portion of this project?

CTA Operating Funds

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Products and Completion Schedule		
Product	Product Type	Completion Date
Task 1: Contract proposal, negotiation and approval	In-House	Oct 2017 - Feb 2018
Task 2: Project management	In-House	Feb 2018 – Feb 2019
Task 3: Review of previous materials	In-House/Outside Distribution	Feb – Apr 2018
Task 4: Initial program analysis and phasing alternatives	Outside Distribution	Apr - Aug 2018
Task 5: Stakeholder/public outreach	Outside Distribution	Sept - Oct 2018
Task 6: Recommendation of preferred phasing packages	Outside Distribution	Oct 2018 - Jan 2019
Task 7: Financial planning for proposed project phasing	Outside Distribution	Oct 2018 - Jan 2019
Task 8: RPM Phase Two Project Development Materials	Outside Distribution	Dec 2018 - Feb 2019

Expense Breakdown		
Staff (including overhead) cost	\$160,000	
Total Person Months	8-14	
Consultant Cost	\$640,000	
Other Costs	n/a	
Total Project Cost	\$800,000	

Please specify the purpose of consultant costs and time line for expenditure

Consultant expertise is required to support this planning effort and expenditures are anticipated to occur throughout the full duration of this study.

Please specify the purpose of other costs

None.

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State Fiscal Year (July 1, 2017 – June 30, 2018)

Project Title	Origin-DestinationSurvey - Fall 2018
Sponsoring Agency	Metra
FHWA/FTA Amount Requested	\$371,573.22
Local Match Amount	\$ 92,893.30 [Excludes Metra staff mgmt. & data analysis time]
Total Project Cost (Local Match Amount must be at least 20% of Total Project Cost)	\$464,466.52 [Excludes Metra staff mgmt. & data analysis time]

Description and Justification

Brief Description

Update the existing (2016, 2014, 2006, 2002) data on:

- Metra riders' modes of access to and egress from all 241 Metra year-round stations, plus the Metra-subsidised Hegewisch station in Chicago on the NICTD South Shore line.
- locations of Metra riders' homes ("productions") and non-home destinations ("attractions"),
- Metra riders' trip purposes, and
- usage of different ticket types (for FTA Title VI reporting), concurrently with Metra's "Station/Train Boarding and Alighting Count" data-collection project.

Major Tasks (up to 20)

- 1. Update survey questionnaire.
- 2. Distribute survey to all Metra riders on all weekday trains between start-of service and noon.
- 3. Tabulate survey data.
- 4. Geocode origin and destination addresses.
- 5. Document methodology.

Competitive Justification (please identify the regional focus area associated with this project) Congestion Relief (Multi-Modal (Management, Research, Planning).

Competitive Justification (please identify at least one principal of the regional priorities associated with this project and/or the required MPO activities)

- Modernization of the Public Transit System.
- Improving Decision-Making Models and Evaluation Criteria for Project Selection.
- Planning Work Toward Implementation of GO TO 2040 Major Capital Projects, Including Supportive Land Use.

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• Local Technical Assistance and the Formation of Collaborative Planning Efforts.

Mode-of-station-access, mode-of-station-egress, origin, and destination data are used to more accurately predict future ridership and access needs for each station on new and upgrade rail line projects for the RTP, and for existing and new "infill" stations for the TIP. FTA's New Starts program requires this survey (no less than once every 5 years) for updating the Chicago Transit New Starts ridership forecast model for Metra's New Starts funding applications. The data are used to support FTA-required Title VI reporting.

Competitive Justification (will this project inform or achieve regional or subregional land use, housing, environmental, economic development, or human services goals? Please explain.) Project's data will support CMAP's, RTA's and others' transit-oriented design studies, and support decisions for expanding transit as efficiently as possible to induce auto users to shift modes and to better connect underserved populations to jobs.

Competitive Justification (which particular GO TO 2040 recommendation will this project contribute to or implement?)

The 2040 Plan has three recommendations for improving regional mobility; all three will be supported by this project. Understanding where Metra passengers are traveling, why they are traveling, and how they are accessing the stations is absolutely necessary in order to make strategic investments in regional rail thereby increasing the region's commitment to public transit. Additional, as many Metra lines share freight corridors, understanding changing service needs and usage along these lines can help make better decisions to create a more efficient freight network.

Is this project a continuation of previous work? If so, please explain.

Very similar surveys were done very successfully in 2002, 2006, 2014 and 2016, so this survey will use the same tried-and-true methodology. More limited surveys were done several times in the 1990s. The origin-destination survey is to be coordinated (for data weighting) with a separate system-wide count of passenger boardings and alightings for every weekday train and every station.

Who will benefit from the interim or final products of this project?

Directly: the region's transit agencies and DOTs, CMAP, municipalities that host, or are adjacent to, Metra stations, and Amtrak (as owner of Chicago Union Station, and co-user of 5 other suburban stations). Indirectly: the region's transit and highway users, FTA.

What is the source of funds for the local match portion of this project? Metra operating.

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Products and Completion Schedule		
Product	Product Type	Completion Date
Tabulations	In-house	April 2019
Tables to CMAP for model validations, etc.	Plan/Program	April 2019
Modes-of-Access feed to Metra's public website and to RTA's RTAMS website	In-house & Outside distribution	June 2019

Expense Breakdown		
Staff (including overhead) cost		
Total Person Months		
Consultant Cost	\$464,466.52	
Other Costs		
Total Project Cost	\$464,466.52	

Please specify the purpose of consultant costs and time line for expenditure

Assist with questionnaire revision. Print questionnaires. Deploy survey teams on Metra trains to uniformly distribute questionnaires. Collect/receive questionnaires. Record data from questionnaires. Do initial tabulation of results.

Metra already has the vendor under contract. This vendor is nearing completion of Metra's Fall 2016 count, and would execute Metra's Fall 2018 count from mid 2018 through early 2019.

Please specify the purpose of other costs

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Project Title	Station/Train Boarding and Alighting Count - Fall 2018
Sponsoring Agency	Metra
FHWA/FTA Amount Requested	\$405,826.69
Local Match Amount	\$101,456.67 [Excludes Metra staff mgmt. & data analysis time]
Total Project Cost (Local Match Amount must be at least 20% of Total Project Cost)	\$507,283.36 [Excludes Metra staff mgmt. & data analysis time]

Description and Justification

Brief Description

Measure weekday passenger use at the rail station/train level, complementing other regularly collected ridership data which are at more aggregate levels of detail.

Major Tasks (up to 20)

- 1. An outside contractor has been engaged to conduct the count of passengers boarding and alighting each weekday train at each station for an entire rail line's schedule of service. All trains would be covered on most lines in a single day, limited to Tuesdays, Wednesdays or Thursdays. The entire system would be counted in about a 10-week period. On the lines with the highest service levels, as many as 200 personnel are required, including counters, back-up counters and supervisors. Counts are taken on-board, with survey personnel placed at each rail car door.
- 2. Metra staff will provide pre-printed survey forms, and validate, collate, and report on the data.

(This proposal does not include weekend counts.)

Competitive Justification (please identify the regional focus area associated with this project) Congestion Relief (Multi-Modal (Management, Research, etc.)

Competitive Justification (please identify at least one principle of the regional priorities associated with this project and/or the required MPO activities)

- *Modernization of the Public Transit System.*
- Improving Decision-Making Models and Evaluation Criteria for Project Selection.
- Planning Work Toward Implementation of GO TO 2040 Major Capital Projects, Including Supportive Land Use.
- Local Technical Assistance and the Formation of Collaborative Planning Efforts.

Weekday ridership data are used to more accurately predict future ridership and access needs

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for each station on new and upgrade rail line projects for CMAP's regional transportation plan, and for existing and new "infill" stations for the TIP. CMAP's air quality modeling efforts are also supported with this data. FTA's New Starts program requires this count (no less than once every 5 years) for updating the Chicago Transit New Starts ridership forecast model for Metra's New Starts funding applications. The data are used to support FTA-required Title VI reporting.

Competitive Justification (will this project inform or achieve regional or sub regional land use, housing, environmental, economic development, or human services goals? Please explain.) Project's data will support CMAP's, RTA's and others' transit-oriented design studies, and support decisions for expanding transit as efficiently as possible to induce auto users to shift modes and to better connect underserved populations to jobs.

Competitive Justification (which particular GO TO 2040 recommendation will this project contribute to or implement?)

The 2040 Plan has three recommendations for improving regional mobility; all three will be supported by this project. Understanding where and when passengers board and alight Metra trains is necessary in order to make <u>strategic investments</u> in regional rail thereby <u>increasing the region's commitment to public transit</u>. Additional, as many Metra lines share freight corridors, understanding changing service needs and usage along these lines can help make better decisions to <u>create a more efficient freight network</u>.

Is this project a continuation of previous work? If so, please explain.

Very similar counts were done very successfully in 2002, 2006, 2014, 2016, and earlier years. This count would use the same tried-and-true methodology. The count is to be conducted at the same time as an origin and destination survey, for which it will provide data weights (expansion factors). (In addition to these counts every several years, to track trends and changes in ridership, Metra:

- records maximum passenger loads by train, as reported by conductors daily,
- undertakes field counts of parking capacity and utilization rates at all of its stations each year, and

estimates monthly passenger trips using ticket sales.)

Since 2007, Metra has been very actively following the development of Automated Passenger Count (APC) technology, as well as other technologies to determine a cost effective solution to Metra's counting methods. Metra cars are not equipped with the appropriate wiring, computer, and communications equipment necessary to accommodate robust APC technology currently available, nor have APCs been tested in commuter rail cars similar to those used by Metra. Metra is exploring certain upgrades to its on-board technology, one of which will allow Metra to test APCs.

Who will benefit from the interim or final products of this project?

Directly: the region's transit agencies and DOTs, CMAP, municipalities that host, or are adjacent to, Metra stations, and Amtrak (as owner of Chicago Union Station, and co-user of 5 other suburban stations).

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Indirectly: the region's transit and highway users, FTA.

What is the source of funds for the local match portion of this project? Metra operating.

Products and Completion Schedule		
Product	Product Type	Completion Date
Report: Boarding/Alighting Count - Station Summary (by Metra staff)	In-house/public website	March 2019
Report: Boarding/Alighting Count - Train-by-Train detail (by Metra staff)	In-house/public website	March 2019
Feed to RTA's RTAMS website	Outside distribution	April 2019
Tables to CMAP for model validation, etc.	Plan/Program	April 2019

Expense Breakdown		
Staff (including overhead) cost	\$	
Total Person Months		
Consultant Cost	\$507,283.36	
Other Costs	\$	
Total Project Cost	\$507,283.36	

Please specify the purpose of consultant costs and time line for expenditure

On the lines with the highest service levels, as many as 200 personnel are required, including counters, back-up counters and supervisors. Counts are taken on-board, with consultant personnel placed at each rail car door.

Metra already has the vendor under contract. This vendor is nearing completion of Metra's Fall 2016 count, and would execute Metra's Fall 2018 count from mid 2018 through early 2019.

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Please specify the purpose of other costs	

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State Fiscal Year (July 1, 2017 – June 30, 2018)

Project Title	Pace 2040 Comprehensive Plan Update
Sponsoring Agency	Pace
FHWA/FTA Amount Requested	\$220,000
Local Match Amount	\$55,000
Total Project Cost (Local Match Amount must be at least 20% of Total Project Cost)	\$275,000

Description and Justification

Brief Description An update of Pace's Strategic Plan Vision 2020 – timeframe to 2040

Major Tasks (up to 20)

- 1. Develop a Strategic Vision and Goals
- 2. List options for Mobility and Assessibility Improvements
- 3. Plan for Land Use and Transportation Integration including TOD
- 4. Corridor Development Plan
- 5. Rapid Transit investment options including Pulse/Express service
- 6. Develop ITS/Emerging Technologies
- 7. Develop Innovative service delivery
- 8. List Service Enhancements
- 9. Public Involvement and Guidance
- 10. List Performance measures
- 11. Financial Investment Plan
- 12. Final Report

Competitive Justification (please identify the regional focus area associated with this project) Modernization of the public transit system.

Competitive Justification (please identify at least one principal of the regional priorities associated with this project and/or the required MPO activities)

In addition to Modernization of the Public Transit System, work will include coordinating services, technological improvements including traveler information systems, improve passenger amenities and advanced vehicle recommended principles.

Competitive Justification (will this project inform or achieve regional or sub regional land use, housing, environmental, economic development, or human services goals? Please explain.) This project will touch on all these goals, including housing, environmental and economic

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development, access to jobs and reduce emissions by diverting more travelers out of private cars and on to transit.

Competitive Justification (which particular GO TO 2040 recommendation will this project contribute to or implement?)

Expansion of the transit system to include corridor development, and land use/transportation improvements.

Is this project a continuation of previous work? If so, please explain.

The project will build upon, update and enhance Pace's current Vision 20/20 Strategic Plan.

Who will benefit from the interim or final products of this project?

The transit customer due to improved service and better regional connectivity. The customer and the region due to more efficient service and reduced emissions through diversion of auto traffic onto transit.

What is the source of funds for the local match portion of this project? Pace Funds

Products and Completion Schedule		
Product	Product Type	Completion Date
Develop Vision and Goals	In House/Outside Distribution	10-11/17
Corridor Development	In House/Outside Distribution	1/18
Public Involvement	Outside Distribution	6/18
Financial Investment	Outside Distribution	10/18
Final Report	Outside Distribution	5/19

Expense Breakdown	
Staff (including overhead) cost	\$0

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Total Person Months		
Consultant Cost	\$275,000	
Other Costs	\$0	
Total Project Cost	\$275,000	
Please specify the purpose of consultant costs and time line for expenditure To conduct the study and bring together the components of the study. The Agency does not have the resources to conduct the study in-house.		
Please specify the purpose of other costs N/A		

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Project Title	Cost-Benefit Analysis of Pace Rapid Transit Program
Sponsoring Agency	Pace Suburban Bus
FHWA/FTA Amount Requested	\$160,000
Local Match Amount	\$40,000
Total Project Cost (Local	
Match Amount must be at least	\$200,000
20% of Total Project Cost)	

Description and Justification

Brief Description

Utilize FTA's STOPS (Simplified Trips-on-Project Software) to evaluate the future development of the **Pace Rapid Transit Program**, including both **Pulse Arterial Rapid Transit** and the **Expressway-Based Bus** system.

Major Tasks (up to 20)

- Review the plans for the Pulse Arterial Rapid Transit and Express Bus System
- 2. Develop schedules for modeling planned Rapid Transit System. Create Incremental Service Plan.
- 3. Determine the benefits of each project using FTA's STOPS Software.
- 4. Determine the Capital Costs of each proposed Rapid Transit route.
- 5. Determine the Operating Costs of each proposed Rapid Transit route.
- Compare the resulting costs and benefits and produce a list of priority corridors, midand long-term corridors.
- Create a project schedule, which takes into consideration the priorities assigned in the previous task, from corridor development to planning, engineering, construction, and implementation.

Competitive Justification (please identify the **regional focus area** associated with this project) Pace Service Area

Competitive Justification (please identify at least one principal of the regional priorities associated with this project and/or the required MPO activities)

- 1. Modernization of the Public Transit System,
- 2. Financial Planning Including Innovative Financing Strategies,
- 3. Improve Decision Making Models and Evaluation Criteria

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Competitive Justification (will this project inform or achieve regional or subregional land use, housing, environmental, economic development, or human services goals? Please explain.)

This project will inform regional land use, housing, environmental, economic
development, and human services goals. By implementing a complete and thorough
network of service throughout the region, Pace will increase job accessibility to more
residents. The dense development fostered by an Arterial Rapid Transit line may
increase development and job opportunities in the area.

Competitive Justification (which particular GO TO 2040 recommendation will this project contribute to or implement?)

- **Invest Strategically in Transportation** (this project aims to efficiently distribute resources across the region to equitably and affordably implement the Pace Rapid Transit Program vision)
- **Increase Commitment to Public Transit** (this project aims to invest in a regional system that will increase accessibility and mobility for all residents)

Is this project a continuation of previous work? If so, please explain.

Yes, This project will build on Pace's strategic Vision 2020, and will be key to the implementation of Pace's Rapid Transit System.

Who will benefit from the interim or final products of this project?

Primary: Pace current and future riders who will see benefit through the increasingly connected Rapid Transit System.

Secondarily: Residents of the RTA service area, who will benefit due to the streamlining of service, the expanded ability to get around independently.

What is the source of funds for the local match portion of this project?

Pace Funds

Products and Completion Schedule		
Product	Product Type	Completion Date
Develop schedules for modeling planned Rapid Transit System	Consultant Assistance	January 2018
Model ridership on each Rapid Transit Line, including Express Bus and PULSE	Consultant Assistance	March 2018
Develop Capital and Operating Cost Estimates for each Rapid Transit Line	Consultant Assistance	June 2018
Develop final analysis and create priority list of lines.	Consultant Assistance	November 2018

Competitive Projects Proposal Form

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Expense Breakdown		
Staff (including overhead) cost	\$25,000	
Total Person Months		
Consultant Cost	\$125,000	
Other Costs	\$0	
Total Project Cost	\$150,000	
Please specify the purpose of consultant costs and time line for expenditure		
Consultant will do data analysis and budgetary predictions, Pace will provide oversight for all		
deliverables. Expenditure period July 2018-April 2019		
Please specify the purpose of other costs		
N/A		