

QUARTERLY PROGRESS REPORT

Project Title:	ADA Paratransit Facility Alternatives (2013-01)		
RFP NUMBER: 2013-01	NJDOT RESEARCH PROJECT MANAGER: Paul Thomas		
TASK ORDER NUMBER: TO 308 / RU Acct 4-36927	PRINCIPAL INVESTIGATOR: Devajyoti Deka		
Project Starting Date: 04/01/2014 <b>Original</b> Project Ending Date: 06/30/2015 <b>Modified Completion Date:</b> No-Cost Extension to 12/31/15 in progress	Period Covered: 1 <sup>st</sup> Qr 2015 (period ending 03-31-2015)		

Task #	Task	% of Total	Fixed Budget	% of Task this quarter	Cost this quarter	% of Task to date	Total cost to date
1	Literature Review & Practice Scan	6.70%	\$21,142	0.00%	\$0	100.00%	\$21,142
2	Conduct structured interviews with selected transit agency officials	6.68%	\$21,061	20.00%	\$4,212	100.00%	\$21,061
3	Assess generic costs, owning, leasing & maintaining facilities	8.47%	\$26,737	25.00%	\$6,684	45.00%	\$12,032
4	Assess & Identify appropriate service delivery strategies	7.33%	\$23,122	35.00%	\$8,093	50.00%	\$11,561
5	Identify potential facility locations	11.92%	\$37,620	25.00%	\$9,405	50.00%	\$18,810
6	Assess environmental issues, zoning & land value potential locations	17.59%	\$55,499	10.00%	\$5,550	20.00%	\$11,100
7	Conduct location specific cost benefit analysis & risk assessment	21.57%	\$68,066	20.00%	\$13,613	20.00%	\$13,613
8	Disseminate Research Results	7.17%	\$22,621	0.00%	\$0	0.00%	\$0
9	Conduct Agency briefing	3.71%	\$11,716	0.00%	\$0	0.00%	\$0
10	Qr, Draft, Final & Implementation	8.86%	\$27,929	10.00%	\$2,793	30.00%	\$8,379
	<b>TOTAL</b>	100.00%	\$315,512		\$50,350		\$117,697

**Project Objectives:**

1. Review and document the state of the practice nationwide for the delivery of ADA complementary paratransit service with a special emphasis on facility ownership, operation, and maintenance.
2. Document and assess past and present expenditures for each Access Link region on all relevant items, including facilities, maintenance, repairs, insurance, taxes, wages, etc., and prepare a location-specific inventory of costs that would be pertinent for a decision to own or lease some or all of the facilities by NJ TRANSIT.
3. Identify the impacts of potential geographic re-alignment of the existing Access Link regions on the travel patterns of the clients, including trip origins and destinations.
4. Identify the relative attractiveness of areas/locations throughout the service area for locating Access Link facilities on the basis of (a) their relative accessibility, as determined by proximity to the regional transportation network, and (b) current and future travel markets of clients.
5. On the basis of the nationwide scan of best practices, current and future travel markets, and relative accessibility of places/areas, identify and assess the advantages and disadvantages of service delivery concepts such as mega facilities, shared facilities, a mix of large and small facilities, a number of small and dispersed facilities, etc.
6. On the basis of the assessment of travel markets, service delivery concepts, and proximity to regional transportation network, prepare a preliminary list of potential locations for detailed analysis and assessment.
7. Undertake a detailed analysis of the potential locations in terms of zoning, environmental considerations, land costs, and other variables for each potential location.
8. Conduct cost-benefit analysis and risk assessment, and make recommendations on ownership/leasing of location-specific facilities by NJ TRANSIT.

**Project Abstract:**

NJ TRANSIT makes large investments each year for providing ADA-complementary Access Link paratransit service. More than 30,000 individuals are certified to use the service that is provided in all areas designated as urban core and in  $\frac{3}{4}$  mile buffers along local bus routes. The Access Link service area encompasses 18 of New Jersey's 21 counties. The entire service area is divided into six regions. In each of the six regions, service is presently provided by private contractors. Contracts are given out on the basis of competitive bids for an initial three-year period, followed by potential annual contracts for additional four years. Thus the maximum length of a contract is seven years.

For operation, storage, and maintenance of Access Link vehicles, providers require suitable facilities. The providers in all six regions currently lease their facilities from private landlords. NJ TRANSIT bears the leasing and associated costs. The number of facilities in the regions has varied over time. Currently each region with the exception of Region 4 East has only one facility within its service area. In Region 4 East, a park-out facility in Neptune Township in Monmouth County operates with seven vehicles in addition to the main facility in Sayreville.

This research will examine the advantages and disadvantages of the current practice of NJ TRANSIT contracting private companies to lease facilities from private landlords. It will examine whether NJ TRANSIT can benefit by owning the facilities and leasing them to the service providers in some or all of the regions. Furthermore, this research will identify locations that are suitable for Access Link

facilities by considering proximity to pick-up and drop-off sites, land value, costs of owning and leasing, and environmental aspects.

The research will involve a number of critical tasks. It will begin with a review of literature with an emphasis on relevant practices and methodologies. It will be followed by a review of trip data and data on costs incurred on facilities by the providers. As a part of the review of practices, the research team will visit all existing facilities and conduct interviews with the general managers of the facilities. These tasks will be followed by a task involving interviews with officials from agencies nationwide to examine the ADA paratransit facility-related practices of those agencies as well their rationales and decision processes. In the subsequent task, the research team will assess the generic costs and benefits of owning and leasing Access Link facilities without consideration of specific regions or locations. This task will be informed by the literature review, a review of past expenditures by NJ TRANSIT, and the interviews with the agency officials.

In the next task, the research team will evaluate different service delivery strategies, including the status quo, large mega facilities that can serve multiple regions, and hub-and-spoke facilities similar to the park-out facilities some regions have had in the past. The next task will identify potential locations for Access Link facilities in different parts of the service area. The identification of facilities will be primarily based on current trip patterns, potential growth of clients and trips, access to clients and major highways, and the costs of owning or leasing facilities because of property value. In the subsequent task, a preliminary environmental assessment of the locations will be made by primarily focusing on the potential for flooding, traffic impacts, and local regulations. Location-specific risks will be assessed in the subsequent task based on monetary and environmental considerations. This task will indicate whether it would be beneficial for NJ TRANSIT to own or lease some or all facilities in the various regions and if the agency desires to do so, which locations would be the most appropriate for owning or leasing. Even if this research shows that NJ TRANSIT will not necessarily benefit from owning or leasing facilities, it will provide insights to the providers about the locations that are the most desirable and the costs that will be involved in leasing properties in such locations.

The data and methods generated by this research as well as the results will be provided to NJDOT and NJ TRANSIT. In addition, as a part of the research dissemination task, conference papers and journal articles will be prepared for national and international audiences. At the conclusion of the research, the research team will organize briefing sessions at NJ TRANSIT and/or NJDOT, where research methods will be explained. If any training is deemed essential, the research team will also perform training at these sessions.

The project management and reporting task will continue throughout the study. At the conclusion of each quarter, progress reports and pertinent deliverables will be submitted to the NJDOT and NJ TRANSIT. At the conclusion of the empirical work, a draft final report will be submitted. The report will be revised as necessary based on comments from NJ TRANSIT and NJDOT, and the final report will be submitted. The final report will include recommendations for future action.

## **1. PROGRESS THIS QUARTER BY TASK**

### **Task 1. Literature Review & Practice Scan**

This task was completed in Q1 (period ending 9-30-2014).

Percent of task complete: 100% (0% this quarter)

Deliverables: None this quarter

Task Report #1: Literature Review submitted at the end of Q1

### **Task 2. Conduct structured interviews with selected transit agency officials**

At the conclusion of the previous quarter, eight interviews with ADA division officials of transit agencies were completed. An additional interview was conducted with a retired administrator of one of the agencies following recommendation from the current administrator. A DRAFT task report (TASK REPORT #3), summarizing the nine interviews was submitted at the conclusion of the previous quarter. A PowerPoint presentation was also made to summarize the key findings from the interviews to the NJ TRANSIT ADA division.

During the current quarter, additional interviews were conducted with officials from three more agencies. The main highlight from the three interviews was the one with Regional Transportation Commission of Southern Nevada (Las Vegas) because they own both of their facilities and they have been very happy with ownership. Additional written comments were also received from some of the agencies. The new interviews were added to the task report's appendix and the summary of the report was expanded. The draft final task report was emailed to NJ TRANSIT ADA division on January 26, but with new information from the Las Vegas RTC, it was further revised and resubmitted on March 23. With the submission of the final task report, the task is now 100% complete.

Percent of task complete: 100% (20% this quarter)

Deliverables: Final Task Report #3 submitted this quarter.

### **Task 3. Assess generic costs, owning, leasing & maintaining facilities**

During the past quarter, we obtained aggregate cost data for the five regions from NJ TRANSIT and we reviewed the data. During the current quarter, we requested NJ TRANSIT to inquire about the availability of models used by the agency to evaluate ownership of fixed-route bus facilities. We also inquired with the interviewed transit agencies about the availability and the possibility of sharing any cost-benefit models they used. All agencies other than San Diego MTS (SDMTS) mentioned that they did not use any cost-benefit models to choose between ownership and leasing. SDMTS mentioned that they used some kind of analysis when they decided to own its only facility, but they were not able to find any specific model that they could share. Towards the end of the quarter, we learned from NJ TRANSIT that the agency did not use any cost-benefit model to determine ownership of fixed-route bus facilities. However, we were able to arrange a meeting with relevant personnel at NJ TRANSIT to

discuss the processes the agency follows to examine the factors associated with ownership of fixed-route bus facilities. The meeting is scheduled on April 13.

In the absence of a cost-benefit model that has been used and/or tested by other transit agencies, we have begun to develop an Excel-based model on our own. Our anticipation at this point is that it will have all the components of a generic cost-benefit model, but we will need to make certain assumptions and collect inputs from NJ TRANSIT for its proper functioning. Since one of the key components of the model will be savings from labor and fuel costs (variables that are associated with trip costs and duration), we are meeting with staff from NJ TRANSIT ADA Division on April 1 to discuss how to monetize distance and duration for non-revenue trips.

Percent of task complete: 45% (25% this quarter)

Deliverables: None this quarter

#### **Task 4. Assess & Identify appropriate service delivery strategies**

From the outset, we have defined delivery strategy in terms of size of facilities. Thus the choice is between large centralized facilities versus small dispersed facilities near the clients. From our literature review, we learned that there are no hard and fast rules about delivery strategies. Our interviews with the transit agencies nationwide also indicated that agencies do not pay attention to this question. Only one agency mentioned that having small facilities close to clients has been more beneficial for them than having centralized facilities. Other agencies mentioned that delivery strategy is dependent on the characteristics of the service areas.

From conversations with NJ TRANSIT ADA Division this quarter, we learned that the agency is considering two facilities in Region 5 (one main and one satellite). We indicated that we would analyze the trip data as necessary to determine the advantages and disadvantages of the main and satellite facilities when they are identified by the providers. The identification of census block groups that have high accessibility to pick-ups and are also close to freeways will be used for this assessment (see Task 5).

Percent of task complete: 50% (35% this quarter)

Deliverables: See deliverables for Task 5.

#### **Task 5. Identify potential facility locations**

During the previous quarter, we prepared several maps showing the accessibility levels of census block groups to the Access Link pick-up and drop-off locations by using gravity models. During this quarter (on March 4), we made a presentation at the NJT to describe the methodology to estimate accessibility for locations in terms of Access Link pick-ups. From the interviews with transit agencies nationwide and discussions with the NJ TRANSIT ADA Division, we learned that quick access/egress to/from freeways are as important for facility location as is access to pick-up and drop-off sites. With that understanding, we overlaid maps of the freeway networks, including ramps, on the accessibility maps and subsequently we identified the block groups that are within the top 20% in terms of

accessibility to pick-ups and are also within five minutes of freeway ramps. For the identification of block groups within five minutes of ramps, we used the ArcGIS network analyst. We prepared maps and tables of the block groups for the six regions and submitted them as deliverables for the current quarter.

To complete the remaining part of the task, we will require inputs from NJ TRANSIT to convert non-revenue Access Link trip hours to dollar amounts. For that purpose, we are meeting ADA Division staff on April 1.

Percent of task complete: 50% (25% this quarter)

Deliverables: Maps and tables of census block groups with the highest level of accessibility to pick-ups and also within five minutes of highway ramps.

#### **Task 6. Assess environmental issues, zoning & land value potential locations**

In a previous quarter, we provided NJ TRANSIT maps of flooding areas and industrial land uses around the current Access Link facilities. Currently, we have begun to overlay similar information on the maps of the census block groups that have the highest accessibility and are in close proximity of freeway ramps.

Percent of task complete: 20% (10% this quarter)

Deliverables: None this quarter.

#### **Task 7. Conduct location specific cost benefit analysis & risk assessment**

As a first step, we inquired about the availability of a cost-benefit model that is used to assess potential fixed-route bus facilities. After learning from NJ TRANSIT that such models are not used by the agency, we requested a meeting with agency officials with experience with facility acquisition and facility construction to understand the process involved. The meeting is scheduled on April 13.

In the meantime, we have also begun to work on a generic cost-effectiveness model that can be modified in the future to experiment with Access Link facility scenarios. We are presenting a version of the generic model at the quarterly meeting.

Percent of task complete: 20% (20% this quarter)

Deliverables: A generic version of a DRAFT cost-effective model applicable to transportation

#### **Task 8. Disseminate Research Results**

No activity was undertaken for this task during the current quarter.

Percent of task complete: 0%

Deliverables: None

**Task 9. Conduct agency briefing**

No activity was undertaken for this task during the current quarter.

Percent of task complete: 0%

Deliverables: None

**Task 10. Quarterly, Draft, Final Report and Implementation**

One quarterly report was prepared during this quarter.

Percent of task complete: 30% (10% this quarter)

Deliverables: Quarterly report #3

**2. PROPOSED ACTIVITIES FOR NEXT QUARTER BY TASK**

1. Tasks 3 and 7: Prepare a demonstration cost-benefit analysis model
2. Task 4: Finalize methods to measure impacts on trips from different delivery strategies for specific regions
3. Task 5: Complete the remaining analysis with input from NJ TRANSIT regarding the conversion of non-revenue trips to dollar amounts
4. Task 6: Complete the analysis on environmental and land use assessment

**3. LIST OF DELIVERABLES PROVIDED IN THIS QUARTER BY TASK/DATE**

1. Final Task Report #3: Interviews with transit agency officials
2. PowerPoint presentation on Accessibility measurement (presented on March 4)
3. Maps and Tables of census block groups with highest accessibility and in close proximity of freeway ramps
4. PowerPoint slides on progress and key observations

**4. PROGRESS ON IMPLEMENTATION AND TRAINING ACTIVITIES**

No training or implementation activities were undertaken during this quarter.

**5. PROBLEMS/PROPOSED SOLUTIONS**

No problems were encountered during this quarter.

Total Project Budget	\$315,512
<b>Modified Contract Amount:</b>	N/A
Total Project Expenditure to date	\$117,697
% of Total Project Budget Expended	37.30%

NJDOT Research Project Manager Concurrence: \_\_\_\_\_ Date: \_\_\_\_\_