

## NJDOT Bureau of Research QUARTERLY PROGRESS REPORT

Project Title:	Quantifying Patron Needs at Intermodal Facilities		
RFP NUMBER: 2010-13	NJDOT PROJECT MANAGER: Vincent Nichnadowicz		
TASK ORDER NUMBER: 247	CONSULTANT: Alan M. Voorhees Transportation Center		
CUSTOMER: NJ TRANSIT	PRINCIPAL INVESTIGATOR: Jon Carnegie		
Project Starting Date: 1/1/2010 Original Project Ending Date: 6/30/2011 Modified Completion Date: None	Period Starting Date: 10/1/2010 Period Ending Date: 12/31/2010		

Task	% of Total Project Budget	Total Budget	% of Task This Quarter	Cost This Quarter	% of Task to Date	Total Cost to Date
1. Literature and best practice review	7%	\$15,922	0%	\$0	100%	\$15,922
2. Key informant interviews	7%	\$16,880	0%	\$0	100%	\$16,880
3. Benchmark NJ Trans. Terminals	9%	\$20,599	42%	\$8,652	97%	\$19,981
4. Design and Conduct Focus Groups	13%	\$30,530	88%	\$26,866	95%	\$29,004
5. Design and pretest survey instruments	8%	\$18,567	80%	\$14,854	92%	\$17,082
6. Develop sample frame and conduct intercept survey	40%	\$92,754	2%	\$1,855	2%	\$1,855
7. Perform analysis of survey data	40%	\$9,324	0%	\$0	0%	\$0
8. Identify and formulate recommendations	2%	\$4,634	0%	\$0	0%	\$0
9. Prepare quarterly progress reports, final report and summary recommendations	5%	\$12,175	3%	\$365	21%	\$2,557
10. Undertake outreach and implementation plan	6%	\$13,153	0%	\$0	0%	\$0
<b>TOTAL</b>	<b>100%</b>	<b>\$234,538</b>	<b>22%</b>	<b>\$52,592</b>	<b>44%</b>	<b>\$103,280</b>

**Project Objectives:**

The following are the primary objectives of the research:

- 1) Describe typical design, information and service characteristics of different types of transit transfer points in NJ and benchmark these against national and international best practices.
- 2) Determine the needs, wants and concerns of riders using transit transfer points in New Jersey.
- 3) Determine facility design elements and features, as well as technologies, identified by riders as most important for facilitating transfers between transit services and modes at representative transfer points.

**Project Abstract:**

New Jersey has a varied network of commuter rail, light rail, bus, paratransit, county, and private shuttle services. These services meet a range of needs including commuter travel to major employment centers, local bus service for all types of trip purposes, and specialized services for the elderly, disabled, poor and others with special transportation needs. With such a rich network, there are extraordinary opportunities to improve transit transfers between these services. In the mature NJ TRANSIT system, it is unlikely that significant additional capacity will be added in the near future, with the exception of Access to the Region's Core trans-Hudson passenger rail tunnel. At the same time, increasing development and maturity of suburban centers will create the demand for more complex, multi-link trips. Future improvements, therefore, should focus on supporting these types of trips.

Research conducted in the United States and abroad has documented traveler needs at transit transfer facilities, as well as best practices in facility design, customer information and technologies that support transit transfers. Regardless of any specific need of a targeted customer group (e.g. commuters; people with disabilities), certain principles of customer-oriented transit are universal, such as offering a safe and secure system, having readily available and understandable service information, having an efficient fare collection system in place and designing and maintaining high quality stations and facilities.

This research study will build on the existing body of work to determine the best strategies for making transfer transit travel in the New Jersey context most appealing to both prospective and existing riders, by working directly with NJ TRANSIT riders. The aim is to identify which features are most important to riders for creating a seamless and comfortable transfer experience. Since riders may have different needs at different types of facilities, a typology of transfer terminals will be developed based on factors that may include modes, ridership, regional importance, and station area density and land use. The most important features for each type of transfer terminal will be determined through a best practices literature review, consumer focus groups, and a survey of transit riders.

**1. Progress this quarter by task:**

The following activities were undertaken by the project team during the reporting period of October 1, 2010 – December 31, 2010.

***PHASE 1 – Literature review and benchmarking***

**Task 1. Conduct literature review and best practice scan**

This task was completed during a previous reporting period.

**Task 2. Conduct structured interviews**

This task was completed during a previous reporting period.

**Task 3. Benchmark transfer points and facilities**

- Coordinated with NJ TRANSIT to schedule site visits at identified locations, including guided tours of NJT-owned facilities.
- Conducted field visits and collected observational data at the following transfer locations: Hoboken Terminal, Walter Rand Transportation Center, Hackensack Bus Terminal, Lindenwold Station, Metropark Station, Pennsauken/Route 73 Riverline station, Ridgewood station, Ocean County Mall, 31st St/Bergenline Ave in Union City, Garden State Plaza Mall, and Branchburg Transbridge park and ride.
- Compiled image library and facility database documenting observational data collected at each facility visited.
- Prepared site profiles for each site visit location.

***PHASE 2: Data collection, analysis and interpretation***

**Task 4. Design and conduct focus groups**

- Developed and finalized focus group recruitment protocol.
- Recruited focus group participants based on approved protocol.
- Planned, scheduled and conducted four focus group as follows:
  1. 12/14/10: Session with NJT riders at Walter Rand Transportation Center. The main purpose of this session was to gather information from riders using a major intermodal transit hub in northern Jersey.
  2. 12/15/10: Session with NJT riders at Hackensack station. The main purpose of this session was to gather information from riders using a local station.

3. 12/16/10: Session with NJT riders at Hoboken Station. The main purpose of this session was to gather information from riders using a major intermodal transit hub in southern New Jersey.
4. 12/20/10: Session with NJT Access Link riders. The main purpose of this session was to solicit input from transportation disadvantaged riders, which is a segment of the population that would be unlikely to be adequately represented in the survey.

This included identifying available meeting rooms, arranging on-site logistics, catering etc., refining and finalizing the focus group topic guide, and developing/administering a pre-focus group questionnaire.

- Began preparing post-focus group documentation, including arranging for focus group transcripts and preparing the focus group summary report.

#### **Task 5. Design and pretest survey instruments**

- Pre-tested the intercept survey questionnaire at four focus group session.
- Refined intercept survey questionnaire based on information gathered at the focus groups. This included various iterations between each focus group and a final revision and expansion of the questionnaire to 8.5x14 in. format based on focus group insights.

#### **Task 6. Develop sample frame and carry out intercept survey**

- Developed draft survey administration protocol.

#### **Task 7. Perform analysis of survey data**

No work was undertaken during the reporting period.

#### **Task 8. Identify and formulate recommendations**

No work was undertaken during the reporting period.

#### **Task 9. Prepare quarterly progress reports, final report and summary presentation**

The research team prepared a quarterly progress report for the period of October 1, 2010 to December 31, 2010.

#### **Task 10. Disseminate research results**

No work was undertaken during the reporting period.

## **2. Proposed activities for next quarter by task:**

The following activities are planned for the next reporting period, January 1, 2011 – March 31, 2011.

### ***PHASE 1 – Literature review and benchmarking***

- Finalize and submit Phase 1 report for review and comment

### ***PHASE 2: Data collection, analysis and interpretation***

#### **Task 5. Design and pretest survey instruments**

- Conduct additional pretests of final survey questionnaire on a small sample of transit riders at the New Brunswick Train Station.
- Make modifications as necessary to the survey questionnaire prior to full survey implementation.

#### **Task 6. Develop sample frame and carry out intercept survey**

- Work with NJ TRANSIT to finalize the survey data collection protocol, including final agreement on intercept survey locations and schedule for data collection.
- Administer the intercept survey according to the agreed upon survey protocol.
- Enter survey data into survey database to facilitate statistical analysis.
- Prepare intercept survey methods report.

#### **Task 7. Perform analysis of survey data**

- Begin analysis of survey data. This will include multivariate analysis to examine how the characteristics of transfer points and facilities are perceived by survey respondents. This analysis will allow the team to estimate the relative importance of various characteristics as perceived by the respondents.

#### **Task 8. Identify and formulate recommendations**

- Based on the results of tasks 1-7, begin to formulate recommendations regarding the features of transfer points and facilities that appear to be the most important to facilitating transfer trips and overcoming barriers in rider needs and perceptions regarding these trips.

**3. List of deliverables provided in this quarter by task (product date):**

The following deliverables were prepared this quarter:

- Final focus group topic guide and recruitment protocol (12/6/2010)
- Four completed focus groups (12/14/2010, 12/15/2010, 12/16/2010, and 12/20/2010)
- Revised intercept survey questionnaire (12/30/2010)
- Draft survey implementation protocol (12/30/2010)

**4. Progress on Implementation and Training Activities:**

No implementation or training activities were conducted during this reporting period.

**5. Problems/Proposed Solutions:**

None

Total Project Budget	\$234,538
<b>Modified Contract Amount:</b>	None
Total Project Expenditure to Date	\$103,280
% of Total Project Budget Expended	44%

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