
Traffic Demand Management Plan

Martha Jefferson
Hospital

February 2011



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I. Introduction

Item number 5 of the Martha Jefferson Health Services at Martha Jefferson Drive Proffer Statement requires that Martha Jefferson Hospital (MJH) develop a Traffic Demand Management Plan that seeks to explore, identify and institute opportunities that will potentially reduce the traffic resulting from MJH's relocation to Martha Jefferson Drive.

Upon issuance of a certificate of occupancy for the Inpatient Hospital, the owner shall submit a traffic demand management plan to Albemarle County, incorporating elements such as ridesharing programs, mass transit incentives, pedestrian and bicycle accommodation, and similar measures, each as may be appropriate and reasonable given the then-current availability of such programs, which plan shall be subject to the reasonable approval by the Director of Planning and Community Development or his/her successor, and shall be subject to implementation by the owner as described in such plan.

To address this proffer and develop a Traffic Demand Management Plan, Martha Jefferson Hospital has undertaken a comprehensive initiative that is ongoing and includes:

- Study of staff commute times, staff location, future travel routes to Martha Jefferson Drive, commuting preferences and willingness to consider alternative modes of transportation.
- Research of alternative transportation programs.
- A transportation awareness campaign aimed at promoting car pooling, RideShare, JAUNT, and Charlottesville Area Transit.
- Behavior modification.
- Development of walking and bike trails.
- Shifting of non-clinical staff commuting times.
- Promotion of flexible schedules and telecommuting.
- Development of tracking methods to monitor employees' use of alternative programs.
- Evaluation of success and employee satisfaction with programs.

Development of Action Plan

An initial meeting was held with the Vice President of Administration, Vice President of Planning, Director of Hospital Replacement Project and Director, Compensation & Benefits to discuss the proffer statement requirements and plan for response. From that meeting, a plan was developed to include specific action items and timelines. The action plan and timeline are detailed below.

Action	Details	Timeframe
Update Employee Residential Data by County of Residence using Zip Codes		Completed January 2009
Develop Relationship with State Farm	Collaborate on appropriate initiatives; research Van Pool program and cost	1 st Meeting February 2009
Survey Pantops employees to determine current travel routes	PJPI, PJPII, OCC	April 2009
Analyze Employee Commute by Street Location (Current vs. Future)	Geocoding study	May 2009
Determine Peak Hours of Incoming/Outgoing Employee Traffic		June 2009
Conduct Employee Surveys and/or Focus Groups on Transportation Behaviors and Preferences	Assess current modes, preferences, knowledge of alternatives, barriers to change.	July-November 2009
Complete Current "State of the Commute" Report	Document demographic data, awareness, participation, utilization of each mode, avg. vehicle occupancy, etc.	December 2009
Research Alternative Transportation Modes	<ul style="list-style-type: none"> ▪ Rideshare ▪ Car Pooling ▪ Mass Transit Incentives ▪ Pedestrian/Bicycle ▪ Accommodations 	January 2010
Hold Transportation Awareness Day to promote Alternative Transportation Modes	Bring in local representatives to educate employees and promote programs.	March 2010
Analyze non-clinical departments and pursue shifting of staff commute times to move evenly distribute MJH traffic.	Access current staff commute patterns by department, meet with department managers to develop alternative schedules	August-November 2010
Hold additional Transportation Days to educate employees and promote alternative transportation modes.	Coordinate with local entities during promotional events, TryTransit Week and RideShare Week	September-October 2010
Survey targeted employees regarding potential van service to new campus	Target areas with 6 or more staff with similar commute times.	December 2010
Finalize Details of Plan to be Submitted	Document efforts taken to reduce traffic.	December 2010
Present Plan to MJH Leadership		January 2010
Submit Plan to Albemarle County		February 2011
Receive approval of plan		By March 2011

II. Employee Commute Survey

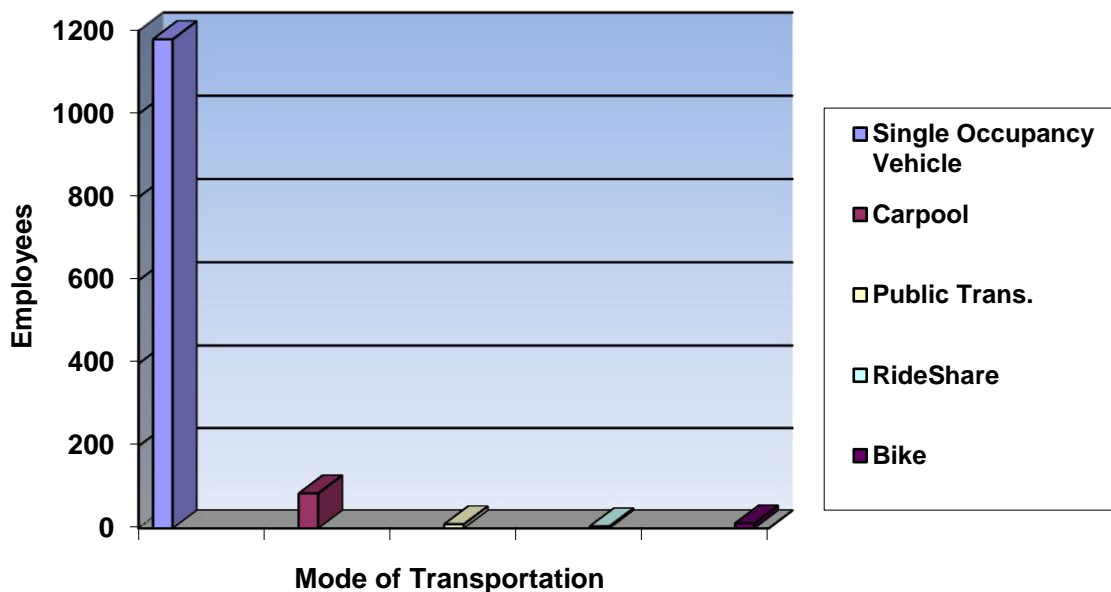
During the month of November 2009, benefit open enrollment technology was utilized to survey MJH employees. In total, 1393 employees participated in a survey regarding their commute patterns, residential location, commuting preferences and future commuting route to new location. The respondents represent approximately 87% of the MJH workforce. Of these 1393 employees 104 work at satellite offices and will not be commuting to the new campus. This leaves 1289 employees who are either currently working in buildings on Peter Jefferson Parkway or will be traveling to the new campus once the replacement hospital is in operation. The following graphs and percentages are based on these 1289 employees.

A. Employee Transportation Practices and Preferences

When asked which mode of transportation the employees primarily utilized we found:

- 91% travel in a single occupancy vehicles
- 7% currently carpool
- 1% bike to work
- 1% use public transportation
- <1% use RideShare

Main Campus/PJP Survey-Current Mode of Transportation Based on 1289 Respondents

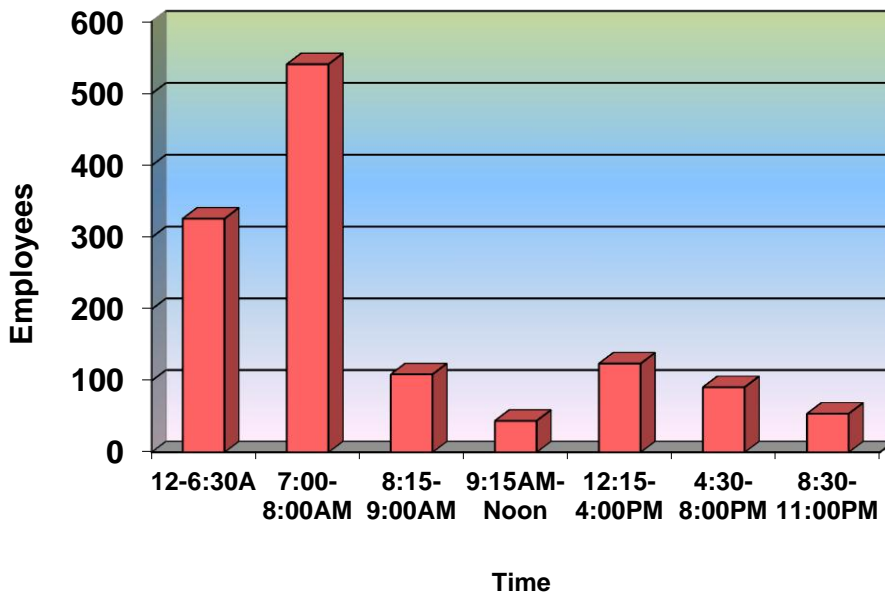


B. Employee Arrival and Departure Times

When asked at what time employees arrive and depart from work the survey yielded the following data:

- 25% arrive before 7AM
- 42% arrive between 7:00AM-8:00AM
- 9% arrive between 8:15AM-9:00AM
- 3% arrive between 9:15AM-12:00PM
- 10% arrive between 12:15PM-4:00PM
- 7% arrive between 4:30PM-8:00PM
- 4% arrive between 8:30PM-11:00PM

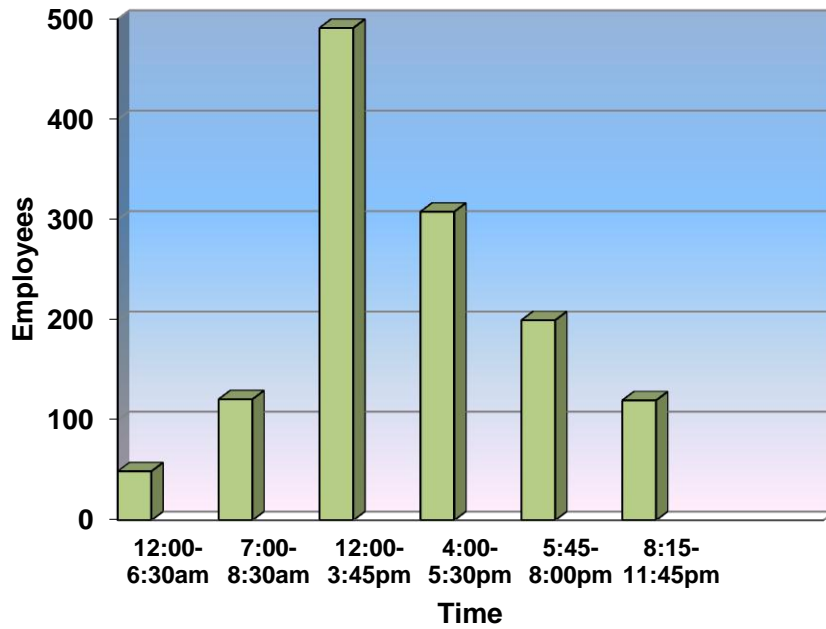
Main Campus/PJP Survey-Arrival Time Based on 1289 Respondents



When asked at what time employees depart from work we found:

- 4% depart before 6:30AM
- 9% depart between 7AM-8:30AM
- 38% depart between 12:00PM-3:45PM
- 24% depart between 4:00PM-5:30PM
- 16% depart between 5:45PM-8:00PM
- 9% depart between 8:15PM-11:45PM

Main Campus/PJP Survey-Departure Time Based on 1289 Respondents

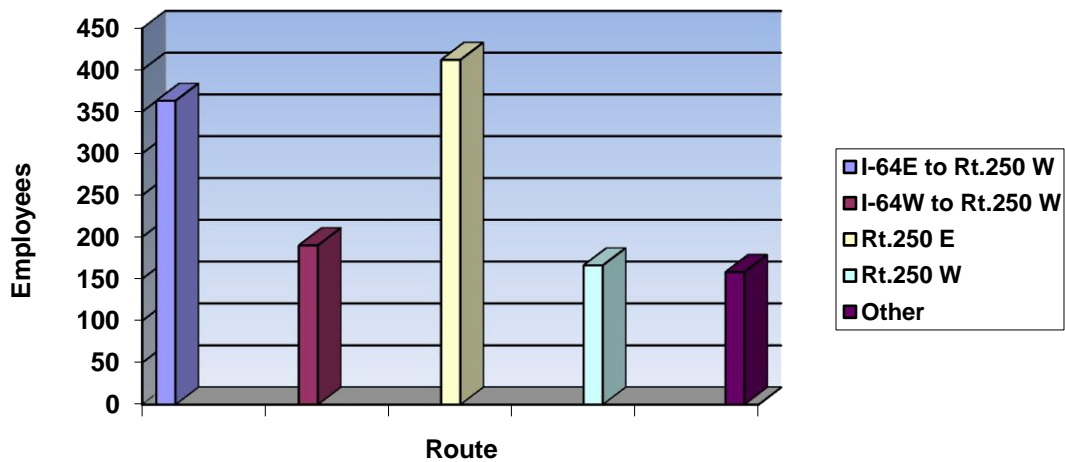


C. Employee Commute Routes by Residential Location

The surveys asked each employee to indicate which route (1-64 E to 250 W, 1-64 W to 250 W, 250 E, 250 W, or other) he or she plans to travel to the new campus.

- 32% of employees take Rt.250 E to Pantops
- 28% take 1-64 E to 250 W
- 15% take I-64 W to Rt. 250 W
- 13% take Route 250 W
- 12% take some other route

Main Campus/PJP Survey-Route Traveled to New Hospital Based on 1289 Respondents



D. Impact on Major Roads During Peak Hours

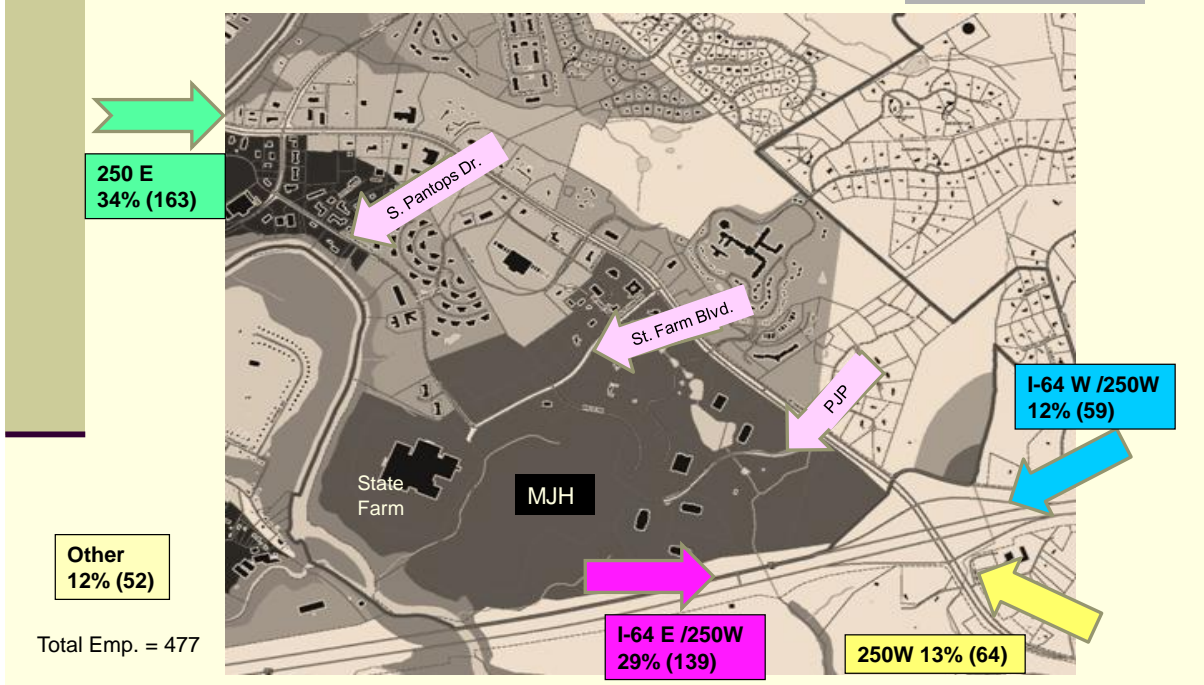
Arrival

Approximately 649 employees will be arriving to the new campus during the peak travel times from 7:00 – 9:00 a.m. Of these 649 employees 172 already work at Peter Jefferson Parkway leaving only 477 additional persons who will be accessing the new hospital. Also of note is that it is likely that many of these employees already use these same routes to reach the current hospital on Locust Avenue so this is not necessarily representative of the additional traffic load that the new hospital will place on the I-64 exchanges to 250W. Only 9%, or 121 employees, depart during peak morning hours.

The breakdown of commuting routes for the 477 additional employees during peak hours is as follows.

- 34% of employees take Rt.250 E to Pantops
- 29% take I-64 E to 250 W
- 12% take I-64 W to Rt. 250 W
- 13% take Route 250 W
- 12% take some other route

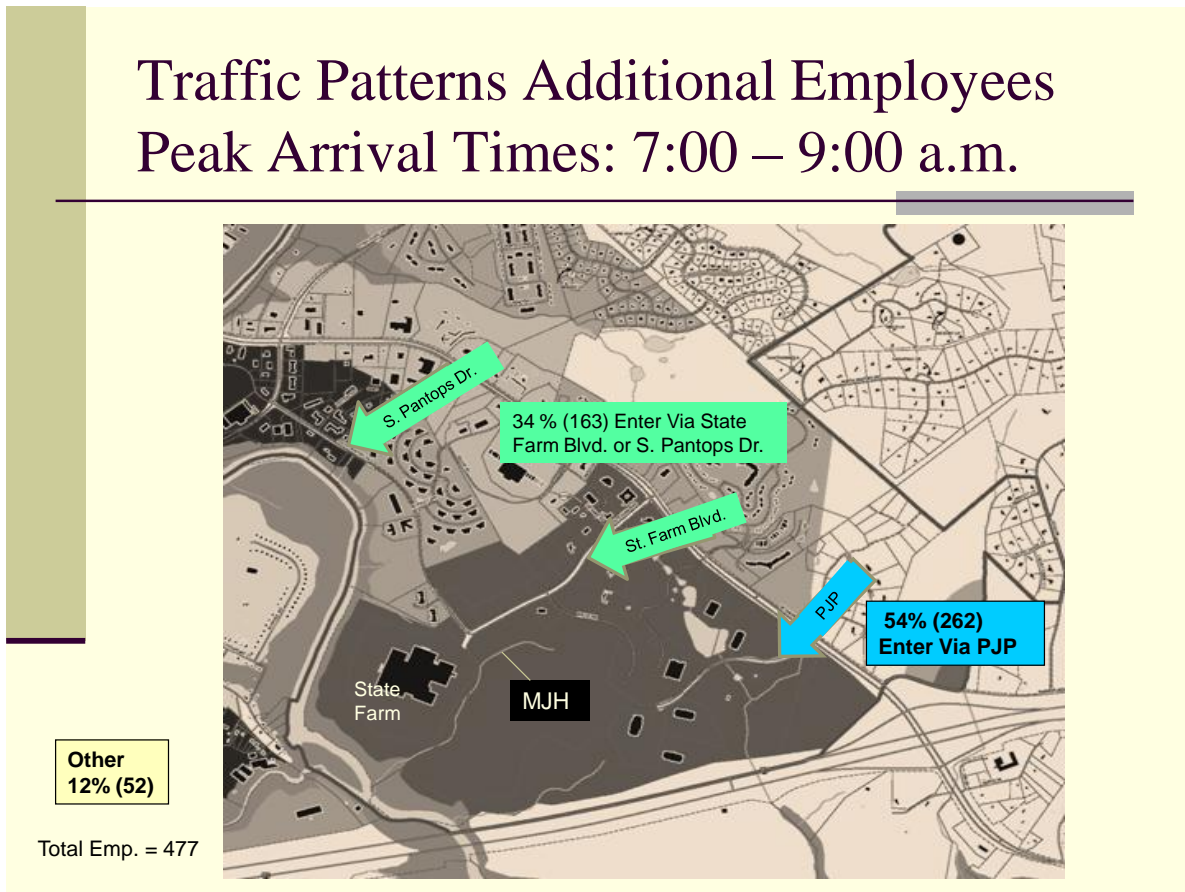
Traffic Patterns Additional Employees Peak Arrival Times: 7:00 – 9:00 a.m.



There will be three secondary roads that will provide access to the new hospital: Peter Jefferson Parkway, State Farm Boulevard and South Pantops Drive. Using the commuting route as a guide, estimates of the impact on these roads is:

- 54% will use Peter Jefferson Parkway
- 34% will use either State Farm Boulevard or South Pantops Drive

Traffic Patterns Additional Employees Peak Arrival Times: 7:00 – 9:00 a.m.

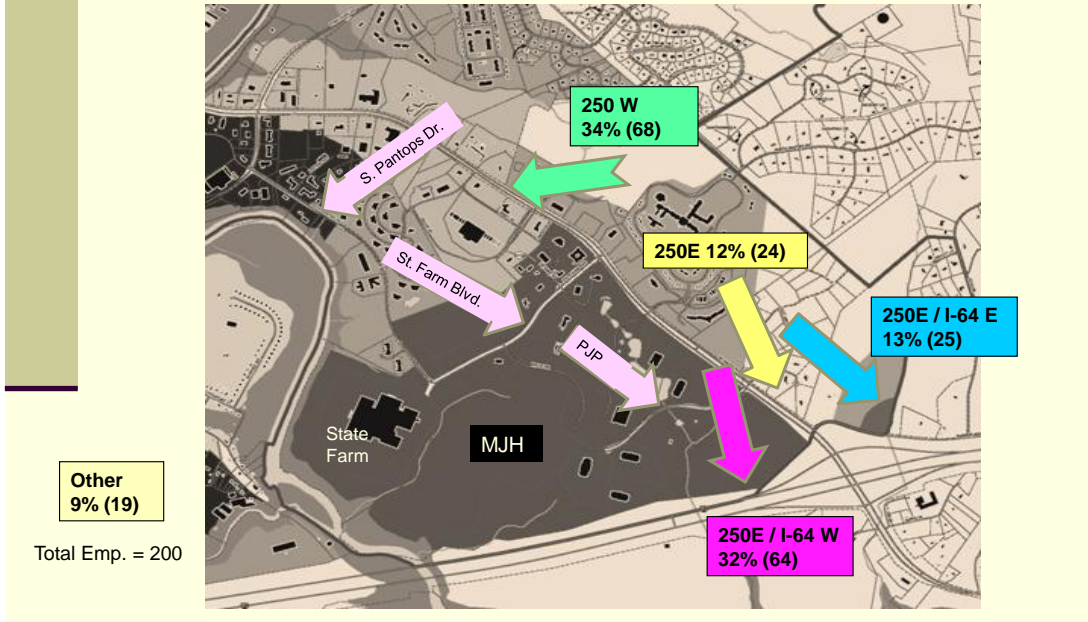


Departure

Due to alternative work schedules there will be much less impact on traffic during peak departure hours from 4:00 – 5:30 p.m. A total of only 200 additional employees will be departing during these hours; following is the breakdown of their commuting routes:

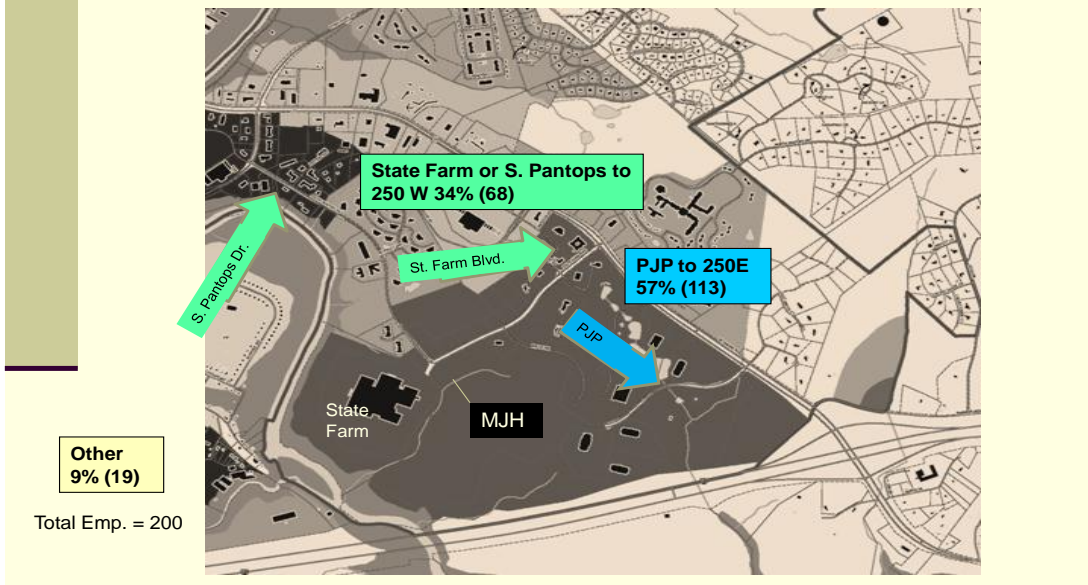
- 34% will depart via 250 W
- 32% will depart via 250 E to I-64 W
- 13% will depart via 250 E to I-64 E
- 12% will depart via 250 E
- 9% will depart via other routes

Traffic Patterns Additional Employees Peak Departure Times: 4:00 – 5:30 p.m.



The impact of these additional employees on the secondary roads is estimated is depicted on the below map.

Traffic Patterns Additional Employees Peak Departure Times: 4:00 – 5:30 p.m.

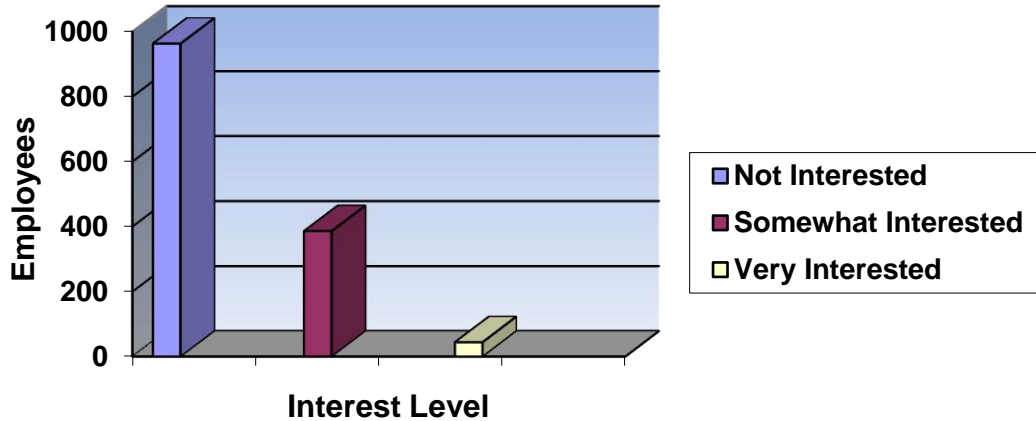


E. Interest in Carpooling

When we asked employees to gauge his or her interest in carpooling we found:

- 69% were NOT interested
- 28% were SOMEWHAT interested
- 3% were VERY interested

Main Campus/PJP Survey-Interest in Carpooling Based on 1393 Respondents

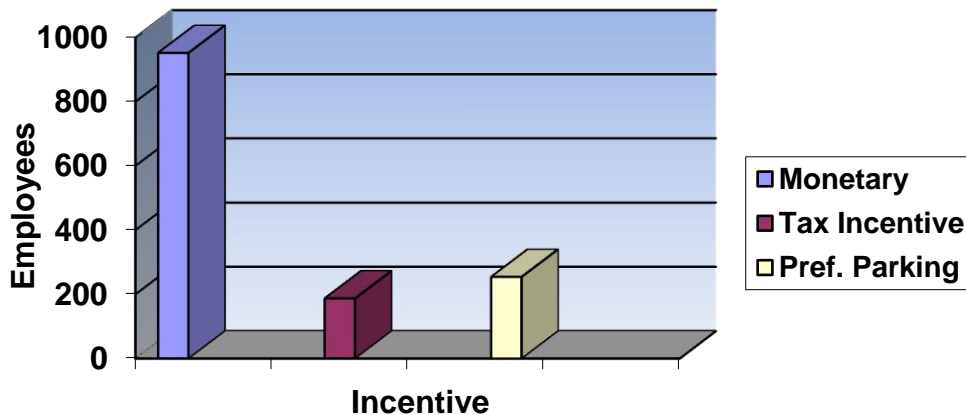


F. Incentives

When asked which category of incentives would be most convincing in regularly adopting carpooling we found:

- 68% employees stated monetary incentives would inspire the most motivation to carpool
- 13% said tax incentives
- 18% selected preferential parking as the most intriguing option

Main Campus/PJP Survey-Preferred Incentives Based on 1393 Respondents



III. Alternative Transportation Options

To further analyze the employee data, map out the residential locations and identify target areas for car pooling and/or van service, Kevin Collins, a GIS Specialist, with the Thomas Jefferson Planning District Commission (TJPDC) completed the MJH geo-coding study (see attachment #2). This study plotted on a map of Charlottesville and its surrounding counties each employee's address, allowing visual discernment of where MJH employees live in relation to the current location, as well as the new hospital.

A. Van Pool

Local companies have effectively implemented alternative transportation campaigns. State Farm, one of the area's largest employers, established a successful vanpool system and shared information with us on the details of their model, including number of vans in use, start up costs and on-going expenses, rider participation rates and employee cost per month. A partnership with State Farm to incorporate MJH employees into their current van system was explored. Although initial conversations with State Farm were hopeful for a coordinated effort, ultimately State Farm decided this was not possible due to liability and the fact that their van pool system is an employee benefit.

Preliminary results from the geo-coding study suggest four areas possibly appropriate for van pooling based on density: Greene/Madison; Lake Monticello/Palmyra; the 250 West/Crozet areas; and Dillwyn/Troy. At this time establishing an MJH owned and operated multiple van system is cost prohibitive. Discussions were held with Lisa Horanyi of RideShare regarding the VPSI van sharing service that they help coordinate. Advantages to using this service include loaner vans during repairs or in case of an accident, insurance coverage, driving record checks, and van maintenance. However, for such a service to be cost effective the commuting distance needs to be at least 35 miles each way with a minimum of 6 passengers and preferably 8.

When these areas were analyzed more closely, Dillwyn was the only area found to qualify for van pooling in terms of distance and number of employees with similar schedules. A meeting was held on December 10, 2010 with employees to explain the VPSI van pool program, costs and advantages and to ascertain their interest in committing to such a program. All 6 employees live in Buckingham County, all but 2 reside in Dillwyn and all work the same hours. When polled as to interest, all but 5 of the employees were interested; one being unsure. Concerns raised to committing to a van pool included loss of freedom, specifically in regards to smoking and music; driving in poor weather conditions; use of the van for weekend and holiday shifts; and personal conflicts that already exist between some of the employees.

A meeting with JAUNT was held to discuss adding MJH to their current commuter routes and the possibility of dedicated JAUNT commuter routes that would essentially

serve as a van pool system for the above identified areas. JAUNT was very amenable to this but unfortunately comparison of JAUNT commuter routes with MJH employee work hours revealed very few employees able to take advantage of this option. Again, further analysis of current employee data revealed limited similarity for location and work hours. In most cases only 6 to 10 employees shared commonalities that would allow for van pooling. If one optimistically assumes that half of these employees would be interested in van pooling this results in 3-5 employees willing to commit. These low numbers do not allow for a cost effective, dedicated van pooling system through Jaunt at this time.

As Jaunt continues to expand their commuter services, areas to pursue in the future include:

- Rt. 29 North, Ruckersville/Hollymead
- Rt. 15 South, Dillwyn/Troy
- Rt. 250 West, Crozet
- Rt. 53 South, Palmyra

According to the survey information 155 employees live in the above communities and could benefit from a JAUNT commuter service. In November 2010 information was sent to Jaunt at their request regarding numbers of employees who live in Buckingham County, including Scottsville. MJH will continue to work with Jaunt on possible collaborative efforts for commuter services and dedicated vans.

B. Carpool

Employee commute data shows that 54% of polled employees come from west of Pantops (via 250 W, or I-64 W/E to 250 W) and 31% utilize 250 E and 14% use another route. Though the data is, for the most part, evenly dispersed, it cannot be ignored that roughly 86% of all employees rely on I-64 and Route 250 to get to work. This data confirms that the target areas for possible car pooling or the establishment of Park and Ride lots is at the opposite ends of 250 with more emphasis being placed on west bound traffic.

The general survey showed 31% of polled employees were either VERY or SOMEWHAT interested in carpooling, with 69% of employees stating they are not interested in carpooling. This data addressed the importance of developing an effective marketing campaign and offering attractive incentives in order to successfully encourage participation in an alternative transportation initiative.

C. Ride Share and Public Transportation

Research into the area's public transportation options and RideShare programs was undertaken. RideShare, a program of the Thomas Jefferson Planning District Commission, prides itself on facilitating an increased reliance on public transportation

and carpooling. RideShare which collects employees' addresses and commute information provides an extremely personal matching process for people looking to carpool. RideShare's database consists of 600 participants. This matching power combined with RideShare's "Guaranteed Ride Home" program serves as a very attractive addition to MJH's own 'car pool connection' site. RideShare also sponsors Park and Ride Lots throughout central Virginia which can also be used for van pools. RideShare is also willing to work in developing new Park and Ride Lots if necessary to accommodate MJH employee needs.

Charlottesville Area Transit (CAT) offers continuous bus service Monday through Saturday from 6:15 AM to 6:45 PM. There are several routes that meander throughout the greater Charlottesville area. Bus Route 10 makes its way from the Downtown Transit Center to Peter Jefferson Parkway (with various stops in between). CAT does offer a nighttime service that runs from 6:45 PM-11:45 PM, however, this service does not include Peter Jefferson Parkway. Conversations with CAT revealed that there are no plans to extend night time service to the Pantops area past the Pantops Shopping Center; any extension of service would be based on need. For employees who live on a bus route the cost of \$1.50 for a Day Pass or \$20 for Monthly Passes offers a great cost savings alternative.

Efforts to promote these programs are detailed under Section V, Marketing.

D. Bike and Walking Paths

The creation of biking and walking paths to the new campus coincides with Martha Jefferson's mission *"to improve the health status of the community by maintaining, enhancing and restoring personal health and well being."* As a LEED certified facility MJH will also have lockers and showers for employees that support the healthy choice of biking or walking to work. A total of 16 bike racks which will accommodate 32 bikes are planned for locations in the parking garage.

Great efforts have gone into pursuing the possibility of creating this option. Conversations and meetings have been held with Chris Gensic, Park and Trails Planner for the City of Charlottesville; Dan Mahone, Outdoor Recreation Supervisor, Albemarle County Department of Parks and Recreation; Sarah Eissler of the Thomas Jefferson Planning District; Ken Boyd, Albemarle County Board of Supervisors; and Barbara Elias, MJH Replacement Hospital Project Director.

Access to the new hospital would take place via South Pantops Drive which runs from Riverbend Drive to State Farm Boulevard. VDOT has plans to create a bike lane on this road when resurfacing is done in 2011. Creating bike lanes on the hospital entrance road that connects with State Farm Boulevard will create a continuous path from the Pantops Shopping Center.

There are a couple of options in creating paths to South Pantops Drive. A very rough trail currently exists that runs from Darden Towe Park close to the Shopping Center. The City of Charlottesville has a comprehensive plan for bike trails throughout the city that could connect into the county at Pantops and paths already exist from Riverside Park to Riverbend Drive. However, there is a very steep embankment that needs to be addressed in order to connect any of these planned or existing paths with South Pantops Drive. Obstacles to this happening include the need to cross private property and cost. A rough estimate of funds needed to complete such projects is \$1 million dollars.

IV. Additional Programs

A. Behavior Modification

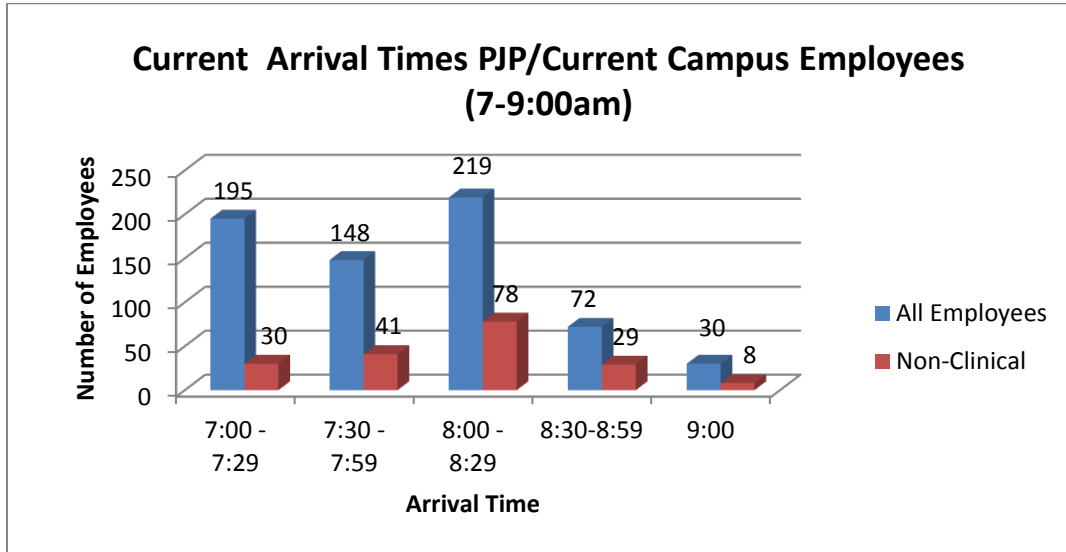
The key to the success of an effective traffic demand management plan will depend upon the response of the employee base to participate in alternative transportation or their eagerness to change their current transportation preferences. Behavior change often does not come unless employees are motivated by convenience or financial gains. Martha Jefferson will continue to investigate programs that will motivate and encourage employee participation. Planned programs include preferential parking with quarterly prize drawings for participation, continued exploration of a van pool program with local agencies, and promotion of public transportation as an alternative. No matter what type of program is selected, its' worth and efficacy are defined by its ability to conjure employee willingness to leave the car at home.

Preferential parking is always at a premium. The new hospital will provide great parking flexibility which will make the implementation of a preferred parking program for car poolers simple, efficient and easily expanded or contracted based on employee participation.

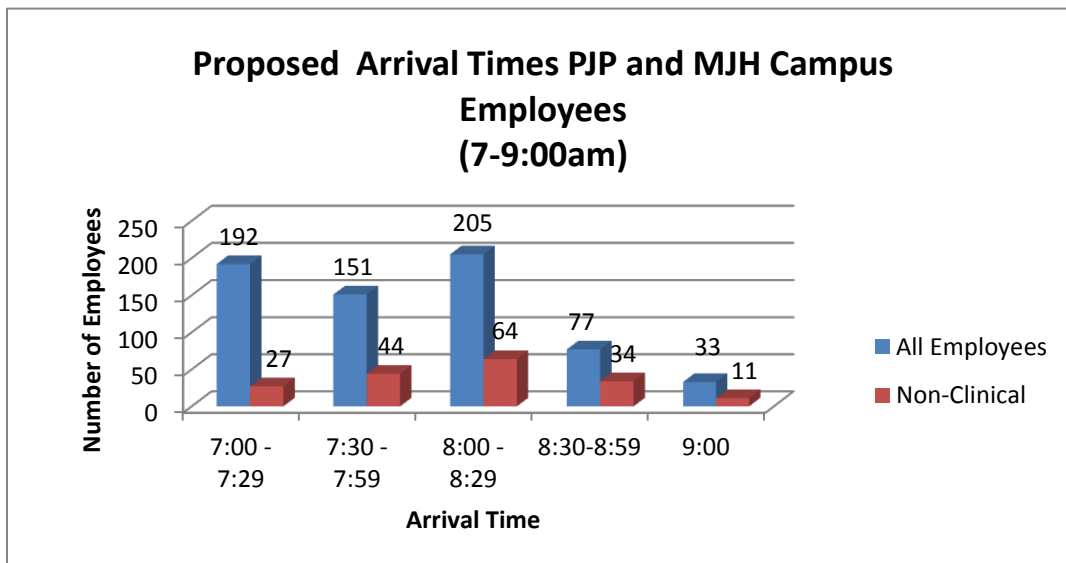
There are numerous options and creative ideas that all have the potential to increase the reliance on alternative transportation at MJH. However, any program that will require hospital funding will depend on budgetary resources and the availability of human resources necessary to administer such programs.

B. Peak Commute Time & Staggered Shift

With the goal of staggering staff commute times, to the extent possible, and to more evenly distribute and offload traffic during peak times both Wayne Cilimberg of Albemarle County and Lou Hatter of VDOT were contacted. Although both identified peak hours as being from 7:00 – 9:00 a.m. neither were able to further define traffic patterns within those hours. An analysis of MJH staff arriving during peak hours was performed. In these analysis specific non-clinical departments that have more flexibility as to work hours were analyzed separately.



The data shows that the majority of employees begin work between 7:00am and 8:00am with slightly less starting at the mid-point of 7:30. Since State Farm employees all begin work at 8:30 and 9:00 this skew toward the earlier half of peak hours is desirable. Efforts to more evenly distribute the arrival times have been made by shifting non-clinical staff. When these shifts are implemented a further shift of staff from the 8:00am time frame will occur.



C. Telecommuting

In addition to alternative transportation and staggered shifts, telecommuting of non-clinical staff offers an ideal option in reducing traffic during peak hours. Below are the numbers of employees by department that already telecommute or could with proper IT support.

Currently Telecommuting:

- Health Information Services – 7 full time staff
- Information Systems – 1 full time staff 3 days a week
- Regulatory Affairs – 1 full time staff 2 days a week

Total Full Time Equivalents = 8

Potential Future Telecommuting Positions:

- Central Billing Office – 10 full time staff *
- Information Systems – 18 full time staff each 1 day a week*
- Foundation Staff – 3 full time staff 1 day a week; 1 staff ½ day a week
- Risk Management – 1 staff 2 days a week*
- Performance Improvement – 3 full time staff 1 day a week*

*Will require substantial investment in equipment and personnel to initiate telecommuting capability.

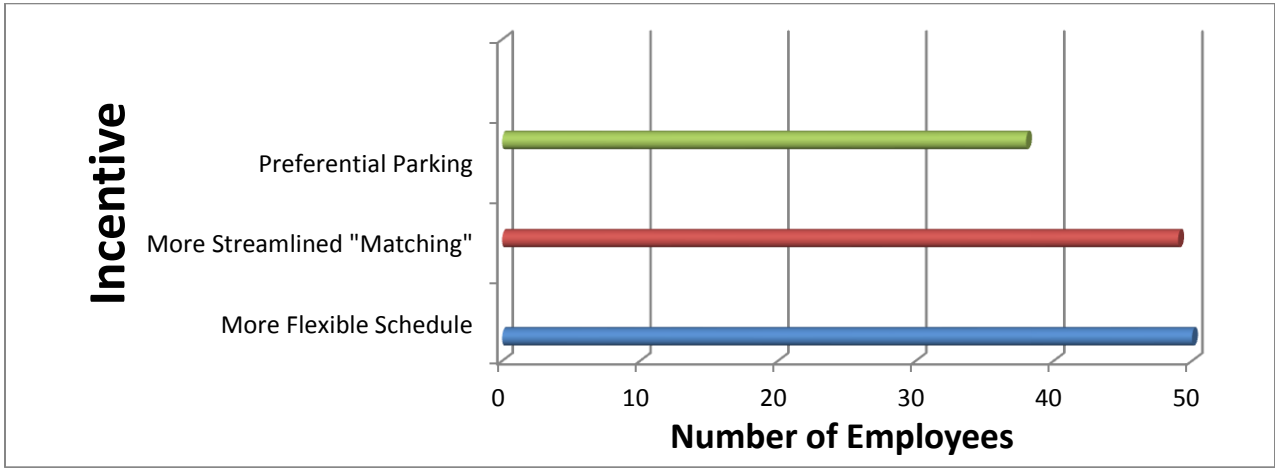
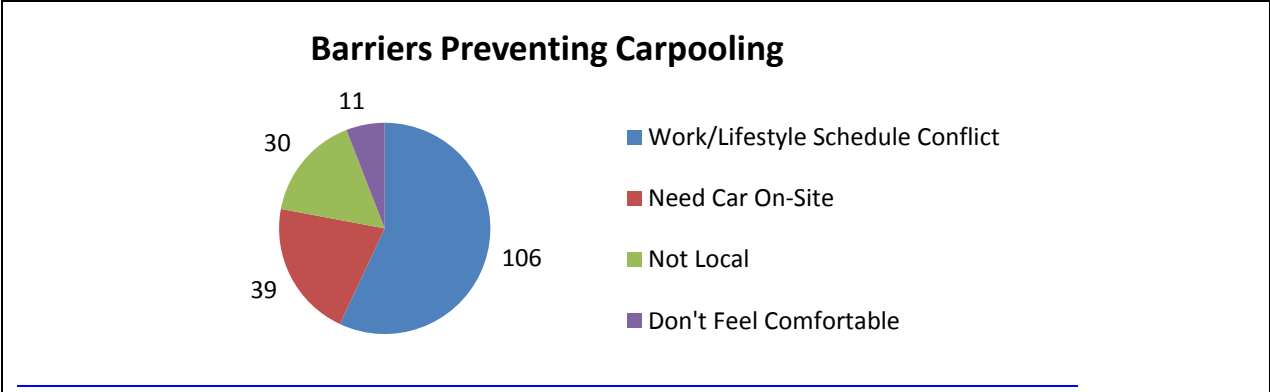
Total Full Time Equivalents = 15.3

The above is equivalent to 23.3 employees not commuting during peak hours to the Pantops campus. Increasing the number of employees telecommuting is planned to begin in June 2011; the number of targeted employees will depend on costs and available funds.

V. Marketing and Education

On March 31 and April 1, 2010 Employee Transportation Awareness Days were held to inform and encourage employees to consider alternative commuting opportunities. Representatives from RideShare, CAT, JAUNT, and Department of Parks and Recreation provided information on their services. Approximately 200 or 36% of the employees on site attended and were asked to fill out a survey on their interest in carpooling and barriers that prevent their interest. Of the 155 employees who completed the survey, 69% said they are or might be interested in carpooling as compared to 31% in the initial survey. Although a self-selected population attended the event, the number of staff expressing interest speaks to the positive effects that a marketing campaign can have in encouraging public transportation and ride sharing.

This mini-survey also queried as to the barriers to carpooling, preferred methods of matching and again about motivating incentives. The graphs below show that the major barrier to carpooling is work/lifestyle schedule conflict and the biggest incentive as a more flexible schedule.



Promotion and implementation of a flexible staffing philosophy will address both the primary barrier and most desired incentive. As for a more streamlined matching system the MJH Human Resources intranet site currently offers a “carpool connection” link available to all employees. Effectively marketing this feature as well as RideShare should serve to overcome this barrier.

Two additional Transportation Days were held in September and October 2011. On September 23, during TryTransit week, representatives from RideShare, Jaunt and CAT once again set up information booths at the main hospital to provide information and answer questions. RideShare returned on October 21 during RideShare Week to promote online registration. Attendance, although less than April, was satisfactory and all total at least 30 people signed up for the RideShare matching or guaranteed ride home programs. The Martha Jefferson TryTansit Day was featured in our employee newsletter.

A broader marketing campaign to promote and educate employees on programs and transportation alternatives will be undertaken in the spring of 2011 with an eye towards piloting ride sharing and public transportation programs in April 2011. E-mail blitzes and the MJH intranet, employee mailings and newsletters will be utilized as our transportation campaign gets into full swing. The existing car pool match-up feature MJH already provided will be encouraged with a contest in spring. Further promotional events with RideShare, Jaunt and CAT that include incentives will also be planned for spring. Introduction of incentive programs to encourage participation will also be presented during the campaign.

VI. Future Steps

The Traffic Demand Management Plan will be implemented according to the following timetable:

Action	Item	Timeline
Education / Promotion	*During Open Enrollment *Martha's Murmurs *Try Transit Week *RideShare Week *Mass communication campaign	Oct-Nov 2010 Fall/Winter '10/'11 September 20-24, 2010 October 18-22, 2010 Spring 2011
Finalize Plan	*Submit plan to county *Receive approval	March 2011 March 2011
Begin Programs	*Survey staff interest in van pool *CATS registration *Carpool registration *Begin staggered schedules *Begin/increase telecommuting	October 2010 April 2011 April 2011 June-August 2011 June-August 2011

VII. Evaluation of Program Effectiveness

The effectiveness of the Traffic Demand Management Plan and its associated programs will be assessed in three ways:

1. Internal Tracking – Human Resources will track and trend employee participation in programs (Car Pooling, use of Public Transit, Staggered Schedules, Telecommuting and Van Pool ridership).
2. Perform an analysis of shift in transportation modes using the 2009 survey results as the comparison.
3. Employee Satisfaction – Employees will be surveyed during the fall of 2011 to re-assess commute routes, level of satisfaction with their arrival and departure commutes, traffic flow and traffic management programs.

Attachments

#1 Geocoding Map

#2 Employee Event Promotions

#3 Employee Newsletters