

**Appendix D:**  
**Multi Modal Transportation Options**

## **Multi Modal Transportation Improvements**

These proposed improvements are not part of the Federal Action, but are proposed as future improvements in the Blue Ball Area.

### **Phase I – Short-Term Transit Improvements – FY2002**

#### *Transit Hub at AZ Gate (U.S. 202 Entrance)*

Delaware Department of Transportation (DelDOT) and AstraZeneca will work to create a transit hub at the newly designed AstraZeneca entrance of U.S. 202. This hub will be located outside the AstraZeneca gate and include an area for bus pull-ins (2 buses) and a covered passenger waiting facility. If possible, the covered area will be extended to integrate into the waiting area for the AstraZeneca internal shuttle. Good pedestrian linkages and facilities are needed to adjacent buildings and U.S. 202 and SR 141.

All northbound transit trips on Bus Routes 2 and 35 will pull into the hub, as will the new park-and-ride shuttle (described below). Southbound transit trips will stay on U.S. 202 adjacent to the hub.

#### *Pennsylvania Park-and-Ride with Shuttle*

Delaware Transit Corporation (DTC) will run a shuttle service from an existing park-and-ride location north of AstraZeneca in Pennsylvania, to the transit hub at the AstraZeneca site, continuing on to the Children’s Hospital and duPont Experimental Station. This service will pick up Pennsylvania commuters onto transit before they “invest time in congestion”.

Two suggestions have been made for the appropriate site to use as the park and ride terminus and DTC is working with planners at SEPTA to select the best site and work out the logistics (arrange for signage, parking considerations, schedule interface, etc.) The best site seems to be at U.S. 202 and US 30 – Lockwood Lane (good access and egress). Another alternative is just south of there, also on U.S. 202 at the W. Goshen Shopping Center. Each of these sites are approximately 20 miles from the AstraZeneca site hub. It is estimated that this trip will require 50 minutes one way. The extension to Children’s Hospital and the duPont Experimental Station will require an additional ten minutes for a one-way travel time of one hour.

The shuttle service will be express, stopping at only a few selected locations along U.S. 202 before continuing on to the Children’s Hospital and the duPont Experimental Station. Shuttle stops recommended to date include:

- Pennsylvania Park-and-Ride at U.S. 202/US 30 – terminus
- Pennsylvania Park-and-Ride at U.S. 202/W. Goshen Shopping Center
- U.S. 202 and US 1 – Painter’s Crossing
- U.S. 202 at Cigna/Corestates
- AstraZeneca Transit Center on U.S. 202
- Children’s Hospital/AI duPont Institute
- duPont Experimental Station

Other stops may be established in Pennsylvania as DTC continues to coordinate with SEPTA planners. In the outbound direction, the buses will only pick up passengers in Delaware and will only discharge them in Pennsylvania (and vice versa).

During this phase, the shuttle would operate on one hour headways in the peak hours only, with four trips in the AM peak hour and four (4) in the PM peak. The fare will be \$1.50 per trip which is comparable to other DTC bus fares. The service will be operated using two small transit vehicles (cutaways) and it is estimated that ridership will be approximately 100 one-way trips per day.

### *Message Boards*

As part of the ITMS implementation, real time bus information (i.e., LED message boards) will be installed at bus stops with shelters. They will display bus departure and arrival times.

### *Transportation Improvements to Support Walking,, Biking and Transit*

DelDOT will be designing and implementing a number of transportation improvements to support walking, biking and transit along U.S. 202 and SR 141. DelDOT will incorporate pedestrian, bike and transit elements into the design of the transportation improvements near the AstraZeneca expansion. These improvements will also support the proposed park and recreation improvements of the Blue Ball Properties Master Plan and other DelDOT initiatives aimed at reducing congestion and addressing clean air concerns. Design elements will include separated pedestrian/bike facilities to connect existing and proposed bus stops; shelters at key stop locations; bus queue jumper lanes at the U.S. 202/Rockland Road/Foulk Road intersection to support enhanced bus service operations; and, appropriate lighting and landscaping improvements.

### *Ridesharing*

DTC will continue with Transit Management Association (TMA) activities including ridesharing and the guaranteed ride home program for transit users in that area (may have third party vanpools for AstraZeneca). No additional cost is associated with these activities since the TMA is already highly involved.

### *Marketing*

DTC and DelDOT will market the new services to employees at AstraZeneca, the Children's Hospital, First USA, duPont Experimental Station, as well as to the general public. This marketing should also include partnerships with SEPTA and the TMA's in New Castle, Delaware and Chester Counties.

### *AstraZeneca Initiatives*

When AstraZeneca employees are transferred to the Delaware facility in 2002, AstraZeneca has indicated that there will be no shuttle from Pennsylvania to the AstraZeneca site in Delaware, since the Pennsylvania site will no longer be in operation. However, AstraZeneca will continue

a number of transit services designed to encourage company employees to use transit as part of their traffic mitigation agreements with New Castle County and DelDOT.

### *Amtrak Shuttle*

AstraZeneca will continue to operate its existing shuttle from the Wilmington Amtrak Station to the AstraZeneca site. However, when the new AstraZeneca transit center is operational and DTC routes have a better link into the AstraZeneca site, this service will overlap with DTC bus routes 2, 35 and 28 (albeit not express or closed door). At this point AstraZeneca may want to discontinue and re-direct these resources to a Claymont Station shuttle. If so, they will be encouraged to run this open door.

### *Transit Stop and Pedestrian/Bike Improvements*

AstraZeneca will make transit stop and pedestrian/bike facility improvements on site during the implementation process. As buildings are occupied, AstraZeneca will ensure that there is adequate pedestrian access to and from transit stops.

## **Phase II – Transit Improvements in FY2003-2007**

### **FY2003 – Increase Frequency on Park and Ride Shuttle**

During FY2003, DTC will decrease the headways on the park-and-ride shuttle to 30 minutes during peak hours (6:00-9:00 a.m. and 3:00-6:00 p.m.) and also begin providing hourly services in the mid-day peak. It is estimated that this will require 4,940 revenue vehicle hours to provide seven runs in the morning peak, five runs in the mid-day, and another seven runs in the afternoon peak.

### **2003 – Bus Preferential Treatment at Signals**

To the extent possible within the ITMS system, buses would be given preferential treatment at signals to support efficient bus operations.

### **FY2003 or 2004 – Add Trips on Bus Route 28**

During either FY2003 or FY2004, vehicle trips will be added to Bus Route 28. At that point, this service would not need to go onto the AstraZeneca site, because riders could use other bus routes (bus routes 2 and 35). Assuming a bus every 30 minutes in the peak and 60 minutes in the off peak, this improvement could require an additional 11 runs per day.

### **FY2004 – Brandywine Circulator**

In FY2004, DTF will establish a neighborhood feeder service along Foulk Road to AstraZeneca, the Children’s Hospital, and the duPont Experimental Station. This service will provide a route deviation type service connecting the higher density residential areas in the Brandywine area to these work locations. DTC will establish a base route and then riders will be able to request that the vehicle deviate from the route for pick-ups and drop-offs (for a premium fare).

The basic route still is to be determined, but the service will circulate in the area bordered by U.S. 202/Foulk Road/Naamans Road and then continue on to serve AstraZeneca, Children's Hospital, and terminate at the duPont Experimental Station.

#### FY2005 – SR 141 Line Haul Bus Service

In FY2005, DTC will create a new SR 141 line haul route which will be linked to the AstraZeneca transit hub and services (riders would transfer to other bus routes to get downtown). At this time DTC may consider discontinuing the current bus route 28 and serving those riders on this new route. It is anticipated that this service will be operated directly by DTC, operating on weekdays from 6:00 a.m. to 8:00 p.m. With half hour headways and an estimated 30 minutes run time, the service will require two vehicles.

#### FY2006-2007 – Bus Lane Improvements on U.S. 202

During FY2006 and FY2007, DelDOT and DTC will work to make roadway improvements that would allow the buses to travel through traffic more efficiently (e.g., diamond lanes on the shoulders).

#### FY2007 – Improve Headways on Pennsylvania Shuttle

During FY2007, DTC will be improving the headways on the Pennsylvania Park and Ride Shuttle to every 15 minutes in the peak periods and every 30 minutes in the mid-day. This will double the cost of operating the shuttle, but significantly improve the service for the riders.

### **Phase III – FY2007 and Beyond**

In the long-term, beyond FY2007, DTF and DelDOT will be considering the possibility of some fixed transit facilities along U.S. 202 (DTC is currently preparing a long-range transit plan which will address these long-term solutions). Possibilities include:

- Bus Rapid Transit
- Fixed Guideway Transportation, e.g., the extension of the downtown Light Rail Project

A complete analysis of the planned transit improvements for the Blue Ball area has been prepared which provides details related to service, cost, trips, etc. The report entitled *Blue Ball Properties Transit Plan, Final Report* is dated November 16, 2000 and can be obtained through DelDOT or DTC.