Country Club / Rathton Road

Corridor Study

prepared for:

York Area Metropolitan Planning Organization,
The City of York and
Spring Garden Township

March 2009
Country Club Road / Rathton Road

Corridor Study

Spring Garden Township & The City of York
York County, Pennsylvania

prepared for

York Area Metropolitan Planning Organization,
The City of York and
Spring Garden Township

prepared by

Transportation Resource Group, Inc.
&
ASC Group, Inc.

March 2009

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Project No. 125.03
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INTRODUCTION

The York County Planning Commission, on behalf of the York Area Metropolitan Planning Organization (YAMPO), has embarked on an effort to evaluate the current and future conditions of the Country Club Road and Rathton Road Corridor in Spring Garden Township and the City of York. In 2002, the York County Planning Commission (YCPC), City of York and Spring Garden Township met to discuss completing a planning study to identify improvements to the Country Club Road/Rathton Road Corridor. The initial discussions were started in response to several proposed developments and redevelopments along the corridor. These discussions were held by stakeholders, including government officials, developers, York College of Pennsylvania, Penn State York and York Hospital. Recent improvements to I-83 Exits 14 and 15, completed in December of 2006, have also impacted traffic patterns within the Corridor, and these impacts on the Corridor will be further evaluated.

The Country Club Road/Rathton Road corridor is an important roadway providing access for commuters and significant traffic generators along the roadway. It provides direct access for three significant institutional users; York College of Pennsylvania, York Hospital and Penn State York. Each of these institutional users has recently completed or is in the midst of an expansion project. Additionally, the corridor provides indirect access for other nearby generators such as York Catholic HS/JH, many medical service providers, as well as established neighborhood communities. With the combination of traffic accessing York College, York Hospital, Penn State York and the many indirect users, along with the growth in commuter traffic, the corridor experiences significant capacity problems. Country Club Road, west of George Street, experiences particularly heavy traffic volumes because it is used to complete the “unofficial bypass” around the Greater York Area. I-83 and U.S. Route 30 comprise three-quarters of this “by-pass” around Greater York. Country Club Road comprises a portion of this “missing link” of a true by-pass.
The purpose of this project is to develop a study to identify projects to improve the mobility and safety within the corridor. Specifically, the study will address the following traffic issues:

- Capacity
- Safety
- Access to the study area roadways

Working Group
The Metropolitan Planning Organization (MPO) formed a working group to oversee the development of the study. The working group is composed of leaders of the community from various private institutions, public agencies and neighborhood associations. The working group is comprised of the following members:

- Will Clark, York County Planning Commission
- Joe Marczyk, York County Planning Commission
- Don Bubb, P.E., York County Planning Commission
- Jason Bewley, P.E., PennDOT District 8-0
- Steve Smith, Spring Garden Township
- George Swartz, Spring Garden Township
- Gregory Maust, P.E., Spring Garden Township
- Barry Emig, Spring Garden Township
- James Gross, City of York
- Ben Moylan, Springdale Neighborhood Association
- Raymond Rosen, York Hospital
- Ken Martin, York College of Pennsylvania
- Holly Gumke, Penn State York
- Matt Shorb, Wyndham Hills South/Spring Garden Township 4th Ward

The Working Group conducted four meetings over the course of the study and information from each meeting is included in the Technical Appendices.
Previous Study Efforts
To gain an understanding of the study area, an inventory and review of past studies within the area was completed. Recommended improvements and implementation results from these previous studies are summarized in Table 1.

<table>
<thead>
<tr>
<th>Study Name</th>
<th>Date of Study</th>
<th>Author</th>
<th>Recommended Improvements</th>
<th>Improvement Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Business I-83 Signal Permit</td>
<td>- NA -</td>
<td>- NA -</td>
<td>S. George Street (S.R.3036) / Business 83 - Install traffic signal with two lanes on Business I-83 and S. George Street (S.R.3036)</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. George Street (S.R.3036) / York Hospital Driveway - Change SB lane configuration to a shared left/thru and an exclusive right turn.</td>
<td>Completed (Later revised)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. George Street (S.R.3036) / York Hospital Driveway - Revised SB lane configuration to separate left turn lane and a shared thru/right (11/07).</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. George Street (S.R.3036) / Rathton Road - Install EB and WB dual left turn lanes</td>
<td>Not Completed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Country Club Road (S.R.3054) / Grantley Road (S.R.4001) - Install exclusive phasing for the SB left turn lane. Investigate installation of NB left turn lane.</td>
<td>Not Completed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Country Club Road (S.R.3054) / York College Entrance - Install traffic signal or reduce the vertical curve on the west approach, and install informational signage for the College on Country Club Road.</td>
<td>Not Completed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>S. Queen Street (S.R.0074) / Rathton Road (S.R.3054) - Widen the EB and WB approaches to PennDOT standards and increase the curb radii at all four corners.</td>
<td>Not Completed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Realign Rathton Road between the York City line and Albermarle Street to 40 mph design standards.</td>
<td>Not Completed</td>
</tr>
<tr>
<td>C 1998 York City Comprehensive Plan</td>
<td>July 1999</td>
<td>City of York</td>
<td>Develop a S. George Street Gateway consistent with the City of York Illustrative Design Guide.</td>
<td>Not Completed</td>
</tr>
<tr>
<td>Study Name</td>
<td>Date of Study</td>
<td>Author</td>
<td>Recommended Improvements</td>
<td>Improvement Status</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------------</td>
<td>---------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>D  Final Traffic Impact for the York College West Campus Master Plan</td>
<td>May 2002</td>
<td>Transportation Resource Group, Inc.</td>
<td>Country Club Road (S.R.0354) / Grantley Road (S.R.4001) - Optimize signal timing and construct a WB right turn lane.</td>
<td>Not Feasible with shift for EB right turn lane</td>
</tr>
<tr>
<td>D  Final Traffic Impact for the York College West Campus Master Plan</td>
<td>May 2002</td>
<td>Transportation Resource Group, Inc.</td>
<td>Richland Avenue (S.R.3054) / Indian Rock Dam Road (S.R.3052) - Optimize signal timing and construct SB left turn lane.</td>
<td>Completed</td>
</tr>
<tr>
<td>D  Final Traffic Impact for the York College West Campus Master Plan</td>
<td>May 2002</td>
<td>Transportation Resource Group, Inc.</td>
<td>Richland Avenue (S.R.3054) / Colonial Avenue - Install appropriate signage on Colonial Avenue to prohibit westbound left turns</td>
<td>Completed</td>
</tr>
<tr>
<td>D  Final Traffic Impact for the York College West Campus Master Plan</td>
<td>May 2002</td>
<td>Transportation Resource Group, Inc.</td>
<td>Grantley Road (S.R.4001) / Jackson Street - Install traffic signal when warranted and justified</td>
<td>Not Completed</td>
</tr>
<tr>
<td>E  Penn State York, Expansion (Performing Arts)</td>
<td>February 2004 (Draft Only)</td>
<td>Transportation Resource Group, Inc.</td>
<td>Construct a low volume driveway onto Rathton Road in the vicinity of Poorhouse Run Road. Provide an EB left turn lane.</td>
<td>Completed</td>
</tr>
<tr>
<td>E  Penn State York, Expansion (Performing Arts)</td>
<td>February 2004 (Draft Only)</td>
<td>Transportation Resource Group, Inc.</td>
<td>Improve sight distance on the inside of the horizontal curves on Rathton Road.</td>
<td>Completed</td>
</tr>
<tr>
<td>E  Penn State York, Expansion (Performing Arts)</td>
<td>February 2004 (Draft Only)</td>
<td>Transportation Resource Group, Inc.</td>
<td>Upgrade the line striping and warning signs on Rathton Road through the &quot;S&quot; curve.</td>
<td>Completed</td>
</tr>
<tr>
<td>F  Traffic Impact Study for the York Hospital Campus Redevelopment Plan</td>
<td>December 2001</td>
<td>Transportation Resource Group, Inc.</td>
<td>S. George Street (S.R.3036) / York Hospital Driveway - Optimize signal timings</td>
<td>Completed</td>
</tr>
<tr>
<td>F  Traffic Impact Study for the York Hospital Campus Redevelopment Plan</td>
<td>December 2001</td>
<td>Transportation Resource Group, Inc.</td>
<td>S. George Street (S.R.3036) / Rathton Road - Optimize signal timings, provide dual NB left turn lanes and provide a second WB through lane</td>
<td>Not Completed</td>
</tr>
<tr>
<td>F  Traffic Impact Study for the York Hospital Campus Redevelopment Plan</td>
<td>December 2001</td>
<td>Transportation Resource Group, Inc.</td>
<td>S. Queen Street (S.R.0074) / Rathton Road - Eliminate split phasing, construct a separate EB left lane and optimize signal timings</td>
<td>Not Completed</td>
</tr>
<tr>
<td>F  Traffic Impact Study for the York Hospital Campus Redevelopment Plan</td>
<td>December 2001</td>
<td>Transportation Resource Group, Inc.</td>
<td>Rathton Road (S.R.3054) / Newlin Road - York Hospital Driveway - Install traffic signal</td>
<td>Completed</td>
</tr>
<tr>
<td>G  Spring Garden / York College Pedestrian Plan</td>
<td>Nov. 2004</td>
<td>LSC Design Inc./ Transportation Resource Group, Inc.</td>
<td>Install crosswalks on Grantley Road at Ludlow Ave., DuPont Ave., and Colonial Ave.</td>
<td>Completed</td>
</tr>
<tr>
<td>H  York Hospital Entrance Signalization Permit</td>
<td>March 2003</td>
<td>- NA -</td>
<td>Rathton Road (S.R.3054) / Newlin Road - York Hospital Driveway - Install traffic signal.</td>
<td>Completed</td>
</tr>
</tbody>
</table>
## TABLE 1
RECOMMENDED IMPROVEMENTS & IMPLEMENTATION RESULTS FROM PAST STUDIES

<table>
<thead>
<tr>
<th>Study Name</th>
<th>Date of Study</th>
<th>Author</th>
<th>Recommended Improvements</th>
<th>Improvement Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic Impact Study for the York Hospital Patient / Visitor Parking Garage</td>
<td>March 2006</td>
<td>Transportation Resource Group, Inc.</td>
<td>S. George Street (S.R.3036) / York Hospital Driveway - Optimize signal timing. Consider pre-emption detectors. Restripe to provide WBLT and WBR lanes.</td>
<td>Designed but not installed</td>
</tr>
<tr>
<td>Regents' Glen Development</td>
<td>December 2003</td>
<td>Transportation Resource Group, Inc.</td>
<td>Country Club Road (S.R.0354) / Grantley Road (S.R.4001) - Optimize signal timing and modify left turn phase to include protected/permitted left turn phase. Stripe an exclusive EB right turn lane.</td>
<td>Completed</td>
</tr>
<tr>
<td>I-83 Exits 14 and 15 Categorical Exclusion Report / Design Plans</td>
<td>December 2001</td>
<td>Gannett Fleming, Inc.</td>
<td>Richland Avenue (S.R.0354) / Indian Rock Dam Road (S.R.3052) - Provide traffic signalization with an advanced NB left turn phase. Construct a NB left turn lane with 150' of storage.</td>
<td>Completed</td>
</tr>
<tr>
<td>City of York Zoning Ordinance</td>
<td>November 2004</td>
<td>City of York</td>
<td>None</td>
<td>- NA -</td>
</tr>
<tr>
<td>Spring Garden Township Zoning Ordinance</td>
<td>December 2006</td>
<td>Spring Garden Township</td>
<td>None</td>
<td>- NA -</td>
</tr>
<tr>
<td>Rathton Road (S.R.3054) / Newlin Road - York Hospital Driveway - Optimize signal timing. Consider pre-emption detectors.</td>
<td>Designed but not installed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S. George Street (S.R.3036) / Rathton Road - Optimize signal timing.</td>
<td>Will be completed by PennDOT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S. Queen Street (S.R.0074) / Rathton Road (S.R.3054) - Optimize signal timing.</td>
<td>Not Completed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City of York Zoning Ordinance</td>
<td>November 2004</td>
<td>City of York</td>
<td>None</td>
<td>- NA -</td>
</tr>
<tr>
<td>Spring Garden Township Zoning Ordinance</td>
<td>December 2006</td>
<td>Spring Garden Township</td>
<td>None</td>
<td>- NA -</td>
</tr>
</tbody>
</table>
Planning studies and local traffic studies typically include recommendations for specific traffic improvements. Often times, studies “get placed on the shelf and collect dust”, with the recommendations not implemented. However, in reviewing the planning and traffic studies pertaining to the vicinity of the Country Club/Rathton Road Corridor, it was found that most of the recommendations of the studies were followed through. Some of the recommendations could not be completed due to right-of-way or funding restraints. The recommendations related to capacity and safety problems which were not completed, provide the study team with helpful insight and a starting point to evaluate possible improvements to the corridor.
STUDY AREA

The study area for this project is bound by the following limits:

- Country Club Road (S.R.3054) / Richland Avenue (S.R.3054) intersection to the west
- Rathton Road (S.R.3054) / Hill Street intersection to the east
- South George Street / Springettsbury Avenue intersection to the north
- South George Street (S.R.3001) / I-83 Spur intersection to the south (S.R.3036)

Figure 1 shows the limits of the study area, along with the twelve study intersections selected for detailed study. The Country Club/Rathton Road Corridor can be broken into three distinct segments: Richland Avenue to George Street; George Street to Queen Street; and Queen Street to Hill Street. The George Street corridor between Springettsbury Avenue and the I-83 Spur will also be studied due to its impact on the Country Club/Rathton Road Corridor. Country Club Road, west of George Street, experiences particularly heavy traffic volumes because it is used to complete the “unofficial by-pass” around the Greater York Area. Average daily traffic (ADT) on this section of Country Club Road is approximately 23,000 to 24,000 vehicles per day (vpd). The section between George Street and Queen Street is dominated by the York Hospital and the Springdale and Strathcona Hills Neighborhoods. Daily traffic volumes on this segment approach 16,000 vpd. The final section of the corridor, east of Queen Street, is dominated by the residential character of the area. Its ADT is approximately 10,000 vpd. The George Street Corridor has undergone many changes with the York Hospital development. Several changes have been made to the signalized intersections within this area. ADT volumes on South George Street in the vicinity of York Hospital are approaching 17,000 vehicles.
GOALS AND OBJECTIVES

Several goals and objectives for this project were identified and confirmed with the Working Group. These goals and objectives will be used to guide in the selection and evaluation of traffic improvements to the Country Club Road/Rathton Road corridor. The Working Group agreed to adhere to the following goals and objectives:

Study Goal #1: Provide adequate capacity to the existing road network.

Objectives:

A. Ensure the road network can reasonably accommodate existing and future (20 year projected) traffic.
B. Recommended improvements should not encourage traffic to cut through residential neighborhoods.

Study Goal #2: Reduce the traffic demand on the existing road network

Objectives:

A. Decrease traffic volumes and congestion with increased use of public transit, ride sharing, park and ride, staggered work shifts, Intelligent Transportation Systems (ITS) techniques and other options.
B. Encourage traffic to utilize I-83 Exit 15 to decrease traffic on the Country Club Road/Rathton Road Corridor.

Study Goal #3: Identify alternatives to improve access to the major institutional users along the corridor.

Objectives:

A. Provide safe and efficient access to York College, Penn State York and York Hospital with priority to emergency vehicle accessibility.
B. Coordinate efforts to improve directional signing and wayfinding, especially for Penn State York and York College.
Study Goal #4: Increase safety along the corridor for motorized and non-motorized users (vehicular, pedestrian and bicycle traffic).

Objectives:

A. Provide transportation solutions which lead to greater vehicular safety.

B. Evaluate pedestrian safety and create pedestrian friendly streetscapes (crosswalks, sidewalks, etc.).
ENVIRONMENTAL INVENTORY

An environmental inventory of the study area was completed to include aquatic resources, land resources, hazardous or residual waste sites, wildlife, air and noise quality, utilities, environmental justice areas, public facilities and services, cultural resources, archeology, and Section 4(f) resources. Background research was conducted using published data and site reconnaissance was used to verify research. Figure 2, shows the project location.

Aquatic Resources

- There are two perennial tributaries to the Codorus Creek present within the project area. One is located between Fairview Drive and South George Street and is referred to as Tyler Run. The second is located between South Broad Street and Niles Road and is unnamed. Both tributaries are designated as Warm Water Fisheries (WWF) under Chapter 93 Water Quality Standards.
- The project area between Fairview Drive and South George Street is located within the FEMA 100-year floodplain of the tributary to Codorus Creek. A statewide floodplain is also present at the same location.
- There is no Federal Wild and Scenic Rivers and Streams or State Scenic Rivers and Streams located within the project area.
- There are no other surface waters or groundwater resources mapped or noted during the field reconnaissance within the project area.
  - A drainage culvert is located along the southern side of Country Club Road near the eastern end of the York Water Co. “Park.” It is most likely non-jurisdictional and only flows during storm events.
- There are no coastal zones located within York County, Pennsylvania.
- There are no wetlands mapped in the project area according to the National Wetlands Inventory, York quadrangle. A possible wetland and drainage swale may be located near the tributary to Codorus Creek located between South Broad Street and Niles Road. A wetland delineation will be required to determine the presence and extent of any wetlands.
Once construction activities are defined, it will need to be determined what effects the construction activities will have on soil erosion and sedimentation.

Land Resources

- The entire project area is dedicated as urban use.
- Based on the urban setting of the project, review of the Penn State University website, (www.soilmap.psu.edu), and site reconnaissance no agricultural resources are located within the project area.
- There is landscaped vegetation (yards, street trees) and also some heavily wooded areas (between the Penn State York entrance and S. Albemade Street) present within the project area but no agricultural, forest land, or range land present within the project area.
- According to "Outstanding Scenic Geologic Features of Pennsylvania, Parts 1 and 2", no unique geologic features are present in the project area.
- There are no national or state parks located within the project area.
- There are no local parks located within the project area according to the York County Department of Parks and Recreation and the York County Highway Map.
  - The York Water Company owns land along the southern side of Country Club Road. Signs indicated that the land is a “Private Park Open Free for Public Use.” However fencing surrounds the park and all entrances from Country Club Road were closed (chained) during normal posted operating hours and there was no designated parking for the “park.” These factors and its private ownership make the park not eligible as a Section 4(f) resource.
  - Signage indicated a Penn State Trail is located in the wooded area between Niles Road and S. Albemade Street on the Northern Side of Rathton Road. This Trail is located as part of the Penn State York campus and is located far enough away from Rathton Road to be considered outside of the project area.
  - Veterans Memorial Park is located off of Edgar Street, but outside of the study area.
• According to the USGS topographic map, no forests or gamelands are located in or adjacent to the project area.
• No wilderness, natural, or wild areas are located in or adjacent to the project area, as per DCNR's Wild and Natural Areas Map and www.wilderness.net.
• According to project area mapping, no wildlife or habitat resources are present in the project area.
• There are no National Natural Landmarks present within the project area according to the National Park Service.

Hazardous or Residual Waste Sites
A database search was used to determine any hazardous or residual waste sites located within or in close proximity to the project area.

Within Project Area:
• Emergency Response Notification Sites
  o York Hospital – (Located between South George Street and Irving Road along Rathton Road). On April 6, 1996, there was a 20-gallon hydraulic fluid spill. The cause and the current status are unknown.
  o York Hospital – On December 10, 1990, there was an unknown amount of gasoline released due to a piping leak that was discovered during routine maintenance. The piping was removed and the soil was placed on polyethylene tarps. Arms and Moore was hired for the remedial action and the tanks were disconnected.
  o York College of Pennsylvania – (Located between Virginia Avenue and South George Street along Country Club Road). On May 21, 1991, 2,000 gallons of fuel oil were released when a two year old tank lost its contents. The surrounding land and Tyler Run Creek (Tyler Run Creek is located outside of the project area) were affected by the released fuel oil.
• Leaking Underground Storage Tank
  o York Hospital – There were two separate leaks involving underground storage tank systems containing petroleum (dates unknown) at this site.
Both sites were cleaned up according to DEP standards and issued No Further Action or Liability Protection letters from DEP on August 23, 1996 and February 24, 1998.

- **Resources Conservation and Recovery Act (RCRA) Generator Sites**
  - York Hospital – A small quantity generator (generates 100-1,000 kg/month of hazardous waste) is located within the project area. The type of hazardous waste present is halogenated solvents which are used in degreasing. They include tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluorocarbons, and all spent solvent mixtures.
  - York College – A conditionally exempt small quantity generator (generates less than 100 kg/month of hazardous waste) is located at York College within the project area.
  - Shipley Oil Company – (Located at 980 South George Street). A conditionally exempt small quantity generator (generates less than 100 kg/month of hazardous waste) is located within the project area. The types of hazardous waste present are benzene and ignitable waste.

- **Registered Underground Storage Tanks**
  - Grumbacher Sports and Fitness Center – (Located between Richland Avenue and Grantley Road along Country Club Road). A registered underground storage tank with a capacity of 475 gallons and a second registered underground storage tank with a capacity of 500 gallons, both containing a hazardous substance, are located at this facility.
  - South George Street Exxon 26 – (Located on South George Street near the intersection with Country Club/Rathton Road). There are three 10,000-gallon gasoline underground storage tanks present at this site. There is also one 10,000-gallon kerosene tank present.
  - York College – A 1,000 gallon gasoline underground storage tank is present at York College.
  - Sunrise Mini Market – (Located at the intersection of South George Street and Country Club Road). Closed for business as of June 17, 2008 field
view. There are three 8,000-gallon gasoline underground storage tanks present at this site.

- York Hospital – There are three underground storage tanks containing diesel located at York Hospital. The capacities for these tanks are 20,000, 6,000, and 2,500 gallons.

Located within 1/8th mile of the project area:
- There are five RCRA Generator Sites located within 1/8th mile of the project area.
- There is one Brownfield site located within 1/8th mile of the project area.
- There is one Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) Site (Database of current and potential Superfund sites currently or previously under investigation) located within 1/8th mile of the project area.
- There is one Institutional Control site located within 1/8th mile of the project area.
- There are three leaking underground storage tanks located within 1/8th mile of the project area.
- There are three registered underground storage tanks located within 1/8th mile of the project area.

Located within ¼ mile of the project area:
- There are three Emergency Response Notification Sites located within ¼ mile of the project area.
- There are four registered underground storage tanks located within ¼ mile of the project area.
- There are two Brownfield sites located within ¼ mile of the project area.
- There are four Institutional Control sites located within ¼ mile of the project area.

Located within ½ mile of the project area:
- There are two CERCLIS Archived Sites – No Further Remedial Actions Planned (NFRAP) sites located within ½ mile of the project area.
- There is one RCRA Treatment, Storage, and Disposal Facilities (TSD) site within ½ mile of the project area.
- There are 19 leaking underground storage tanks located within ½ mile of the project area.
- There are two Brownfield sites located within ½ mile of the project area.

**Wildlife**
- There are no sanctuaries/refuges or resources meriting compensation for wildlife present within the project area.
- Correspondence was sent to the PA Department of Conservation and Natural Resources, the PA Game Commission, the PA Fish and Boat Commission, and the U.S. Fish and Wildlife Service to determine the presence or absence of Threatened and Endangered species in the project area. Responses were received from each of the above listed resource agencies stating that there are no Threatened or Endangered species present within the project area (Agency correspondence can be seen in the Technical Appendices).

**Air Quality**
- This project is exempt from regional ozone conformity analysis and a CO, PM10 and PM 2.5 Hot-Spot analysis because no construction activities are being planned at the time. Once construction activities are determined this will have to be reevaluated according to Table 2.1 of the Air Quality Handbook, Pub #231.
- The project area is located within an air quality nonattainment area for PM 2.5.

**Noise**
- This corridor study falls within the classification as “Other” for the type of project according to PennDOT Publication #24. Once construction activities are determined this classification will need to be re-evaluated.
- The land use categories present within the project area are designated as B (residences, schools, churches, parks, picnic areas, recreation areas, playgrounds, active sports areas, motels, hotels, libraries, and hospitals) and C
(developed lands, properties, or activities that are not listed as part of category B) according to the PennDOT Project Level Highway Traffic Noise Handbook (#24).

- There are several sensitive receptors present within the project area. They include:
  - York College
  - Penn State – York Campus
  - York Hospital
  - Private residences

Utilities
- During site reconnaissance many utilities were observed throughout the project area. Utilities observed included overhead electric, cable and telephone lines. Underground water, sewer, and gas lines were also observed in the project area. It will be necessary to coordinate with all utilities during planning and construction.
- Drainage grates are also present throughout the project area.

Environmental Justice
- An environmental justice area is located within the project area. It begins near the intersection of George Street and Country Club Road and extends west to South Albemarle Street. It is generally located slightly north of the project area but also is south of the project area near Irving Road. The Environmental Justice Area follows boundaries very similar to the boundary that separates York City from Spring Garden Township. According to DEP’s EMapPa website (http://www.emappa.dep.state.pa.us/emappa/viewer.htm), this environmental justice area is present due to a large minority population.

Public Facilities and Services
- Sidewalks are present on the northern side of Country Club Road from Richland Road to the York College parking lot located between Virginia Ave and the main entrance to York College.
• Sidewalks are present on the southern side of Country Club Road beginning at Elliot Lane and continuing to the driveway before the Water Company property. Sidewalks end on both sides of the street until the intersection of Country Club / Rathton Road with South George Street.

• Sidewalks start again on the northern side of Rathton Road at the intersection with South George Street and continue until South Broad Street. The sidewalk starts again at Midland Avenue and ends at Hill Street.

• Sidewalks are not present on the southern side of Rathton Road from the intersection with South George Street to the intersection with Hill Street (end of project area).

• Rabbit Transit Bus stops were identified in the project area with stops located at Read Avenue (with bench), Grantley Road, Virginia Avenue, York College, York Hospital, Peyton Road, Springdale Road and South Pine Street.

• A crosswalk is present at the intersection of Rathton Road and Newling Road providing access to York Hospital.

• The Grantley Fire Company is located off of North Virginia Avenue (outside of the project area) – arrangements with the fire company will need to be made during construction to ensure that access to the fire company remains open.

**Cultural Resources**

Within the Country Club Road/Rathton Road Corridor Study Area, there are two National Register listed resources, the Springdale Historic District and The Nook (Francis Farquhar House). These sites are shown graphically on Figure 3. There is one historic district and four previously surveyed individual historic resources whose National Register eligibility is undetermined. There are two historic resources that were determined not eligible for the National Register and two potential historic resources that have not been previously surveyed, but may need to be documented if a transportation project is planned in the area.
National Register Resources

- Springdale Historic District
  - The Springdale Historic District was listed on the National Register in 2001. It is generally bounded by Rathton Road, South Queen Street, South George Street and Lombardy Avenue. The fifty-five acre historic district is primarily residential with two hundred contributing resources. The Springdale development was laid out in 1923 and the area was annexed by the City of York in 1927. The neighborhood became one of York’s first upper middle class subdivisions with the amenities of the city in a semi-rural setting. Its strongest period of growth was between 1930 and 1941. Springdale has an exceptional collection of Colonial Revival and Tudor Revival style homes, some of which were designed by York’s leading early twentieth century architects.

- The Nook (the Francis Farquhar House)
  - The Francis Faquhar House, also known as The Nook, was listed on the National Register in 1982. It is located just west of South George Street, off the south side of Country Club Road on Farquhar Drive in Spring Garden Township. The ca. 1893 Shingle style house was the home of Francis Farquhar, the son of York industrialist A.B. Farquhar. The Nook was built on part of the Farquhar family country estate known as Edgecombe. In addition to The Nook, extant remnants of Edgecombe include a carriage house, the stone entrance to the property and an Italian garden.

Previously Surveyed Historic Resources – Status National Register Undetermined

- The South George Street Historic District, located north of the intersection of South George Street and Rathton Road, is a collection of late nineteenth and early twentieth century buildings that have been previously individually surveyed. There was no National Register determination of eligibility for these properties and they may need to be revisited if a transportation project is planned for the area.
• The Douglas Ebling property (PHMC Key # 093949) is located at 416 Rathton Road in Spring Garden Township. The ca. 1885 building was originally a school and is now a residence. The property was previously surveyed, but there was no National Register determination of eligibility.

• The Donald Brandl property (PHMC Key # 093979) is located at 496 Country Club Road in Spring Garden Township. The ca. 1910 Colonial Revival residence was previously surveyed, but there was no National Register determination of eligibility.

• The J. Nevin Trout property (PHMC Key # 093980) is located at 526 Country Club Road in Spring Garden Township. The ca. 1910 Tudor Revival residence was previously surveyed, but there was no National Register determination of eligibility.

• The Charles Fackler property (PHMC Key # 093981) is located at 600 Country Club Road in Spring Garden Township. The ca. 1840 stone Georgian residence was previously surveyed, but there was no National Register determination of eligibility.

**Historic Resources Determined Not Eligible for the National Register**

• The York Hospital & Dispensary Association (PHMC Key # 105468) is located at 1001 South George Street in York City. It was determined ineligible for listing on the National Register in 1996.

• The Wyndham Hills Historic District (PHMC Key # 103061) is located in Spring Garden Township and generally bounded by Country Club Road, Clubhouse Road, Smallbrook Lane and Elliot Lane. The historic district was determined not eligible for listing on the National Register in 2001. There are approximately five properties within the boundaries of the historic district, several quite close to the south side of Country Club Road, that were individually surveyed and whose National Register eligibility is undetermined. They may need to be revisited if a transportation project is planned in the area.
Potential Historic Resources

These are historic resources that have not been previously surveyed but may need to be documented if a transportation project is planned for the area.

- The Country Club Manor Apartments are located on the northeast corner of South Richland Avenue and Country Club Road in Spring Garden Township. The apartment complex is currently owned by York College and used for student housing. The complex was constructed between 1933 and 1950, according to historic maps. There may be historical significance concerning why apartments were built in this location during this time period. The complex may have served as housing for workers from nearby factories or for soldiers returning from World War II. It may have been one of the first apartment complexes located in the newly developed suburbs immediately adjacent to York City.

- The early to mid-twentieth century housing on both sides of Country Club Road from Virginia Avenue to Reade Avenue may be significant as an early twentieth century suburban neighborhood(s).

Archaeology

A total of four archaeological surveys and nine previously recorded sites are within one mile of the Country Club Road project area. A small portion of one of the previous archeological surveys located close to York Hospital is within the project area. None of the four archeological surveys or nine previously recorded sites are located entirely within the project area.

- On the western end of the project area, two-tenths of a mile from the Richland and Country Club Road intersection, a large archaeological survey was completed in 1991. This survey for Regents Glen identified nine archaeological sites and is located four-tenths to nine-tenths of a mile from the Country Club Road project area. None of the sites were determined eligible for the National Register of Historic Places.
• On the northern side of the project area, approximately five-tenths of a mile northwest of the northern most reach of the project area above Business Route I-83 is the Codorus Creek Interceptor Sewage project dating from 1984. There were no sites located near Country Club Road.

• Two-tenths of a mile south of the Business Route I-83 and Country Club Road intersection near York Hospital is the terminus of the archaeological survey for the I-83 Exit 14 and 15 improvement project from 2002. Approximately two-tenths of a mile of this project along Business Route I-83 is within the Country Club Road project area. There were no sites identified during this archaeological survey.

• On the north side of the project area, about three-tenths of a mile from Country Club Road near Spring Garden Memorial Park, is the end of a previous archeological survey, which was not identified and contained no sites.

• No surveys or sites were identified within the eastern end of the project area.

A review of the soils in the project area shows that the project area is made up of urban land. Urban land is characterized as areas of large scale earth moving activities for buildings and parking lots. Due to the disturbances caused by the construction of these buildings and parking lots, there is no potential for archaeological resources within the project area.

**Section 4(f) Resources**

Section 4(f) resources within the project area include the two locations listed on the National Register of Historic Places and also any locations that have the potential to be listed on the National Register of Historic Places. The two locations listed on the National Register of Historic Places include:

• The Springdale Historic District and
• The Nook (Francis Faquhar House).
Locations with the potential to be listed on the National Register of Historic Places include:

- The South George Street Historic District,
- The Douglas Ebling property,
- The Donald Brandl property,
- The J. Nevin Trout property,
- The Charles Fackler property,
- The Country Club Manor Apartments, and
- The early to mid-twentieth century housing on both sides of Country Club Road from Virginia Avenue to Reade Avenue.

The York Water Company land along the southern side of Country Club Road does not qualify as a Section 4(f) resource. Signs indicated that the land is a “Private Park open Free for Public Use.” However fencing surrounds the park and all entrances from Country Club Road were closed (chained) during normal posted operating hours. Public parking is provided at a lot located on Grantley Road. These factors cause the park to not qualify as a Section 4(f) resource.

During preliminary design, historic resources within the project area will need to be further evaluated to determine if eligible for listing on the National Register of Historic Places and therefore eligible as a Section 4(f) resource.

**Environmental Summary**

In summary, an environmental inventory was completed for the project and revealed several possible environmental issues that will need to be further addressed as the project evolves. These issues include:

- Tyler Run and unnamed tributaries to Codorus Creek are present within the project area. Tyler Run is located between Fairview Drive and South George Street. An unnamed tributary to Codorus Creek is located between South Broad Street and Niles Road. Smallbrook Lane Creek runs parallel to Grantley Road under Country Club Road; Smallbrook Lane Creek is a spring which flows into
the storm sewer system near the southwest corner of the Country Club Road/Grantley Road intersection. If any work is to take place in the area of the creeks, the impacts to the creeks and any associated floodplains will need to be determined.

- Wetlands are not present within the majority of the project area; however, a possible wetland and drainage swale may be located near the tributary to Codorus Creek located between South Broad Street and Niles Road. A wetland identification and delineation should be conducted within the project area to determine if any wetlands are present.

- An environmental justice area is located within York City (near the intersection of George Street and Country Club Road and extends west to South Albermarle Street). As the project is planned, care should be taken avoid disproportionate negative impacts to any project area environmental justice areas.

- Section 4(f) resources identified within the project area include the Springdale Historic District, the Nook (Francis Farquhar House), and any other identified project area historic resources determined eligible for listing on the National Register of Historic Places. As the project is planned, Section 4(f) resources should be avoided. If Section 4(f) resources cannot be avoided the appropriate level of Section 4(f) documentation (individual, programmatic, and/or checklist) will be required. The level of documentation will be determined upon development of the project and in consultation with PennDOT, the Client, and FHWA.

Based on review of the project setting, the NEPA documentation for highway work within the project area will likely be a Level 2 Categorical Exclusion Evaluation (CEE) due to the potential Section 4(f) resources located within the project area. Final determination on the level of the CEE cannot be made until the project is further planned. If upon project development it is determined that Section 4(f) resources will not be impacted, the project may be lowered to a Level 1b CEE with the approval of PennDOT and FHWA.
TRANSPORTATION INVENTORY

A transportation inventory of the study area was completed to include a physical inventory, crash history, transit inventory, review of historic traffic counts, bridge inventory, traffic volume counts and travel patterns.

Physical Inventory

The Country Club/Rathton Road corridor is an important roadway providing access to commuters and significant traffic generators along the roadway. Country Club/Rathton Road is a state owned roadway (S.R.3054), west of S. Queen Street (S.R.0074) and a local road east of S. Queen Street. It is classified as a principal arterial highway west of S. George Street (S.R.3036), and as an urban collector east of S. George Street (S.R.3036) according to the Federal Functional Classification System. Between Richland Avenue and Hill Street the total length of the corridor is about 2 ½ miles long.

The Country Club / Rathton Road Corridor plays an important role in providing linkage to the major highways surrounding York, including I-83 and U.S. Route 30. Country Club Road and George Street, between Country Club Road and the I-83 Spur, acts as part of the “unofficial bypass” around the Greater York Area. However, the corridor is also an important roadway which provides access for three significant institutional users; York College of Pennsylvania, York Hospital and Penn State York. Each of these institutional users has recently completed or is in the midst of an expansion project. The corridor also provides indirect access for other nearby generators such as York Catholic High School/Junior High School, many medical service providers as well as neighborhood communities. The location of these facilities and neighborhoods can be found on Figure 4.

A field inventory was conducted of the study area and Table 2 summarizes the roadway characteristics along the corridor. Detailed mapping showing sidewalks, curb, parking, lane striping and signage is included in the Technical Appendices. Figure 5 graphically shows the lane configuration through the study area.
# TABLE 2

## ROADWAY CHARACTERISTICS

<table>
<thead>
<tr>
<th>Road Name</th>
<th>Section</th>
<th>Functional Class</th>
<th>Ownership</th>
<th>Number of Lanes</th>
<th>Typical Lane Width</th>
<th>Shoulder Widths</th>
<th>Roadway Surface Conditions</th>
<th>Right of Way</th>
<th>Speed Limit</th>
<th>ADT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country Club Road</td>
<td>Richland Avenue (S.R.3054) to Grantley Road (S.R.4001)</td>
<td>Principal Arterial Highway</td>
<td>PennDOT - S.R.3054</td>
<td>2</td>
<td>Varies from 13'-25'</td>
<td>0'-12'</td>
<td>Fair</td>
<td>-Grantley Road to York College: 70' -York College to George Street intersection: 50' -At the George Street intersection: 65'</td>
<td>70</td>
<td>35</td>
</tr>
<tr>
<td>Country Club Road</td>
<td>Grantley Road (S.R.4001) to George Street (S.R.3036)</td>
<td>Principal Arterial Highway</td>
<td>PennDOT - S.R.3054</td>
<td>2</td>
<td>Varies from 11'-12'</td>
<td>8'-12'</td>
<td>Good</td>
<td>-Grantley Road to York College: 70' -York College to George Street intersection: 50' -At the George Street intersection: 65'</td>
<td>70</td>
<td>35</td>
</tr>
<tr>
<td>Rathton Road</td>
<td>George Street (S.R.3036) to Queen Street (S.R.0074)</td>
<td>Urban Collector</td>
<td>PennDOT - S.R.3054</td>
<td>2</td>
<td>Varies from 18'-20'</td>
<td>0'</td>
<td>Good</td>
<td>-Queen Street to east of Penn State York Driveway: 65' -Penn State York Driveway to Hill Street: 60'</td>
<td>80</td>
<td>25</td>
</tr>
<tr>
<td>Rathton Road</td>
<td>Queen Street (S.R.0074) to Hill Street</td>
<td>Urban Collector</td>
<td>Local</td>
<td>2</td>
<td>Varies from 12'-18'</td>
<td>0'</td>
<td>Good</td>
<td>-Queen Street to east of Penn State York Driveway: 65' -Penn State York Driveway to Hill Street: 60'</td>
<td>80</td>
<td>25</td>
</tr>
</tbody>
</table>
There are some operational and physical characteristics/changes within the study area which are worth noting and may have an impact on the transportation network:

In December 2006, PennDOT completed the I-83 Exit 14 and 15 Project which included two missing ramp movements to Exit 15 (southbound off-ramp and northbound on-ramp). This has drawn additional traffic onto George Street.

In December 2006, PennDOT completed changes to the S. George Street (S.R.3036)/York Hospital Driveway intersection. In November 2007, revisions were made to the southbound lane configuration to provide a separate left turn lane and a shared through/right lane.
In November 2007, construction for the York Hospital Parking garage was completed. This garage eliminated the need for off-site parking/shuttle system and allowed most hospital employees to park on-site.

PennDOT is planning a curb to curb maintenance resurfacing project for late summer 2008 on Country Club Road (S.R.3054) between Grantley Road (S.R.4001) and Richland Avenue (S.R.3054) and for late 2009 on S. Queen Street (S.R.0074) from Tri-Hill Road to the City Limit. There are no other roadway projects planned in the area.
Crash History

Crash data along the Country Club Road/Rathton Road corridor was obtained from PennDOT’s Bureau of Highway Safety and Traffic Engineering and Spring Garden Township for the five year period from 2002 to 2006. PennDOT provided information on reportable accidents, which are defined as accidents in which an injury or fatality occurs or one in which at least one of the vehicles is towed from the scene. Spring Garden Township also provided information on non-reportable accidents. This data will be analyzed in the Existing Conditions section of the report to determine areas of existing safety deficiencies.

Transit

Rabbit Transit provides public transit service within the study area. Seven of their routes pass in the vicinity of the study area with five of those routes making stops at York Hospital. Additionally, York College provides the YCP Green Machine Shuttle service which provides transportation for college students in the vicinity of the College. York College provides shuttle service between the east and west campus and to York Hospital for students in the nursing program. During the past school year, approximately 130,000 riders used the Green Machine Shuttle Service.

Prior to the completion of the York Hospital parking garage, the hospital ran a shuttle program between the hospital and off-site parking areas. Although discontinued at this time, the hospital is considering restarting the shuttle operation due to shortage of spaces in the parking garage. Public school routes and stops were also inventoried within the corridor and details of these routes are included in the Technical Appendices. Figure 6 graphically shows the Rabbit Transit and YCP Green Machine bus routes and bus stop locations.

Historic Traffic Counts

Historical traffic counts were obtained from previous studies completed within the study area. A comparison was made between historic counts and existing 2008 count data. The results showed that the current traffic volumes are consistent with historic traffic
counts, actually showing negative growth at many locations. A summary of the historic traffic counts is included in the Technical Appendices.

**Bridges**

Information on the one bridge and one culvert within the study area was obtained from PennDOT and Spring Garden Township. Both structures appear to be in very good condition with no visible signs of deterioration.

The bridge traversing Tyler Run is located 122 feet from the stop bar at the George Street/Country Club–Rathton Road intersection. The bridge is 27 feet long and has a cartway width of 53 feet, plus five foot sidewalks on each side. If major widening is recommended at this intersection, the existing bridge may not be wide enough to accommodate additional travel lanes recommended for the proposed improvements.

The culvert is located on Rathton Road in the vicinity of Penn State York. Prior to 2006 a weight restriction of 5 tons was listed for the roadway, but in 2006, with work on the culvert, the weight restriction was lifted.

<table>
<thead>
<tr>
<th>Location</th>
<th>Structure</th>
<th>Ownership</th>
<th>BMS Number</th>
<th>Sufficiency Rating**</th>
<th>Life Expectancy</th>
<th>Anticipated Date of Next Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country Club Road (S.R.3054) west of George Street (S.R.3036) (Runs over Tyler Run)</td>
<td>Bridge</td>
<td>PennDOT</td>
<td>66305400601728</td>
<td>77.2</td>
<td>30 Years</td>
<td>None</td>
</tr>
<tr>
<td>Rathton Road east of Queen Street (near Penn State York)</td>
<td>Culvert</td>
<td>Spring Garden Township</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>None</td>
</tr>
</tbody>
</table>

*BMS Number: PennDOT’s Bridge Management System identification number.

**Sufficiency Rating is based on a scale from 0 to 100 with 100 being best. It notes a bridge's overall capability.
Bridge on Country Club Road (S.R.3054). If major widening is recommended at this intersection, the existing bridge is not wide enough to accommodate additional travel lanes.

Culvert located on Rathton Road east of Queen Street. Recent work was completed on the culvert in 2006 and the 5 ton weight restriction was lifted.

Traffic Volume Counts

In order to document the existing traffic flow, the York County Planning Commission conducted automatic traffic recorder (ATR) counts at eleven locations within the study area. The counts were bi-directional and provided information on vehicular volumes and vehicle class over a 48-hour time period. The counts were conducted in March 2008, after the York Hospital Parking Garage was opened, at the following locations:

- Rathton Road between Midland Avenue and Albermarle Street
- South Queen Street (S.R.0074) south of Rathton Road
Rathton Road east of South Queen Street (S.R.0074)
Rathton Road (S.R.3054) west of South Queen Street (S.R.0074)
Rathton Road (S.R.3054) between South George Street and the York Hospital Entrance
Country Club Road (S.R.3054) west of South George Street
South George Street north of Rathton Road (S.R.3054)
South George Street (S.R.3036) south of Rathton Road (S.R.3054)
Country Club Road (S.R.3054) between Richland Avenue and Grantley Road
Country Club Road (S.R.3054) between Virginia Avenue and York College Entrance
Grantley Road (S.R.4001) north of Country Club Road (S.R.3054)

The raw traffic volumes were then factored to account for day of week and time of year. The counts were completed based on PennDOT’s 2006 Pennsylvania Traffic Volumes. These factored volumes provide Annual Average Daily Traffic (AADT) volumes. Figure 7 shows the AADT volumes within the study area.

In order to provide a more detailed traffic analysis, manual turning movement counts (TMC) were conducted by TRG, Inc. in February 2008 at the following twelve study intersections:

- Country Club Road (S.R.3054) and Richland Avenue (S.R.3054) {Signalized}
- Country Club Road (S.R.3054) and Grantley Road (S.R.4001) {Signalized}
- Rathton Road and Albemarle Street
- Rathton Road and Edgar Street
- Rathton Road (S.R.3054) and South Queen Street (S.R.0074) {Signalized}
- Rathton Road (S.R.3054) and York Hospital Entrance {Signalized}
- Rathton Road (S.R.3054) and South George Street (S.R.3036) {Signalized}
- Country Club Road (S.R.3054) and York College Entrance
- South George Street (S.R.3036) and I-83 Spur {Signalized}
- South George Street (S.R.3036) and York Hospital Entrance {Signalized}
- Rathton Road at PSU – York Entrance
- Rathton Road at Midland Avenue

Transportation Inventory
Seven of the locations were at signalized intersections and five were at stop-controlled locations. The counts were conducted for a six hour period on a typical weekday from 6:00 to 9:00 AM and 3:00 to 6:00 PM. Counts were recorded in 15-minute intervals, with the peak hour being selected from the four highest consecutive 15-minute periods. Figures 8 & 9 show the existing peak hour traffic volumes at the study intersections during the AM and PM peak hours.

The George Street/Rathton Road – Country Club Road intersection is the busiest intersection within the corridor with nearly 3,000 vehicles per hour passing through the intersection during the PM peak hour. The second busiest intersection and the busiest approach leg occurs at the George Street/York Hospital Driveway intersection, where about 2,200 vehicles enter the intersection, of which nearly 1,200 vehicles are on the southbound approach during the PM peak hour. The third busiest intersection occurs at Queen Street/Rathton Road (2,100 vehicles during the PM peak hour) followed closely by the Country Club/York College Driveway.

During the manual counts, information was also collected on vehicle classification, pedestrian and bicycle volumes. None of the intersections had any significant number of pedestrians or bicycle traffic during the six hours counted. The highest number of pedestrians occurring during any peak hour was at the Rathton Road (S.R.3054) and York Hospital entrance where nine pedestrians were counted during the PM peak hour. Heavy vehicles accounted for approximately 4% of the AM peak hour traffic and 2% of the PM peak hour traffic. Traffic count summaries can be found in the Technical Appendices.
Travel Patterns
Employee address information was obtained from York College, Penn State York and York Hospital to assist in determining travel patterns of existing employees. Information was obtained and analyzed based on employee home zip codes. As would be expected, the York (17403), West York (17404) and East York (17402) postal zones combined for over forty percent of the employees’ home residences. Graphic representations showing a weighted schematic of the distribution of the local workforce is included in the Technical Appendices. A detailed table showing the breakdown of employee information by zip code and workplace is also included in the Technical Appendices.

Working Group Concerns and Roadway Audit
The members of the Working Group are intimately familiar with the study area and shared their observations and concerns during a series of Working Group meetings. Additionally, during the physical inventory phase of the project, a roadway safety and operations audit was performed. A roadway audit examines the roadway characteristics and notes areas where accident risks could be reduced and where the roadway network experiences operational deficiencies. During the audit process, problems and deficiencies are identified which are incompatible with the intended function of the roadway. A summary of the Working Group’s concerns and the roadway audit are as follows:

- There is a severe “S” curve along Rathton Road near the Penn State York driveway. The design of the curve is also compounded by the fact that a steep grade is present in the vicinity of the curve. Sight distance is limited at this intersection for vehicles turning left into Penn State York.
- Many vehicles making right turns into York College use the wide shoulder on Country Club Road. This creates confusion for vehicles exiting the College. “No Right Turn From Shoulder” signs were subsequently installed to correct this deficiency in the spring of 2008.
Emergency vehicle pre-emption should be considered at all intersections throughout the corridor. Spring Garden Township installed emergency vehicle pre-emption at the Country Club Road/Grantley Road intersection in 2008.

Eastbound left turns are difficult to make at the Country Club Road/Richland Avenue intersection due to the westbound right turn movement having a continuous green light. It was suggested that eastbound left turn phasing be examined.

Penn State and York College would like to minimize cut through traffic through their respective campuses.

Crosswalks within the study area need to be more visible

Access to residential neighborhoods is difficult within the study area due to the high traffic volumes, particularly on Country Club Road. Specifically, access to Farquhar Estates (via Fairview Drive and Farquhar Drive) is extremely difficult.

Improved directional and wayfinding signage for York Hospital, Penn State York and York College would be beneficial for the study area.

It was suggested that a permanent shuttle be considered for York Hospital to reduce traffic within the study area.

Sidewalks and pedestrian accommodations are missing for portions of the study area. Bicycles can be accommodated on the wide shoulders of Country Club Road.

The current southbound lane configuration at the South George Street/York Hospital Driveway intersection causes vehicles to queue through the South George Street/Country Club Road – Rathton Road intersection, especially during the PM peak hour.

Eastbound speed limit on Rathton Road between George Street and Queen Street is not posted.

The visibility of the traffic signal for northbound traffic on the I-83 Spur merging onto George Street is confusing and often obscured by foliage.
LAND USE AND ZONING ANALYSIS

In order to determine the potential for future development and future traffic volumes within the study area, extensive coordination was made with the key stakeholders throughout the area of influence on the corridor. TRG prepared a consolidated zoning map for the area surrounding the study corridor, which identifies current zoning and also displays non-conforming parcels where the current land does not match the current zoning. TRG utilized this information in separate interviews with key stakeholders within the project area to pinpoint potential areas of growth over the next twenty years. These meetings were held with the following stakeholders:

<table>
<thead>
<tr>
<th>Organization</th>
<th>Representatives in Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring Garden Township</td>
<td>Greg Maust, P.E., Township Manager</td>
</tr>
<tr>
<td></td>
<td>David Davidson, P.E., Township Engineer</td>
</tr>
<tr>
<td>Penn State York</td>
<td>Holly Gumke, Director of Business Services</td>
</tr>
<tr>
<td></td>
<td>Daniel Mahan, Asst. Director of Business Services</td>
</tr>
<tr>
<td>York College of Pennsylvania</td>
<td>Dr. Kenneth Martin, Dean of Campus Operations</td>
</tr>
<tr>
<td>York City</td>
<td>James Gross, Director of Public Works</td>
</tr>
<tr>
<td></td>
<td>Kevin Schreiber, Development Coordinator</td>
</tr>
<tr>
<td>York Hospital</td>
<td>Raymond Rosen, VP of Operations</td>
</tr>
<tr>
<td></td>
<td>Bruce Veseth, Operations Manager Security</td>
</tr>
<tr>
<td></td>
<td>Patrick Ball, Director of Planning for Wellspan Health</td>
</tr>
<tr>
<td>York County Economic Development Corp.</td>
<td>Darrell Auterson, President &amp; CEO</td>
</tr>
<tr>
<td></td>
<td>J. Kenetha Hansen, VP, Economic Development</td>
</tr>
<tr>
<td></td>
<td>Blanda Nace, Redevelopment Manager</td>
</tr>
</tbody>
</table>

A complete synopsis of the interviews was documented in a memo dated July 23, 2008 and is included in the Technical Appendices. Some notable findings discussed during these interviews include the following information:
1. The existing "Smurfit Stone" site located on the northeast corner of Grantley Road and Kings Mill Road, will likely be acquired by York College of Pennsylvania (YCP) and developed with a mixture of student housing, classrooms, parking and possibly light retail.

2. York College is currently building 364 new dorms on the west campus site. The Old York Narrow Fabrics site, located on the southeast corner of Grantley Road and Kings Mill Road, includes a new engineering building. YCP anticipates slow but steady enrollment increases in the future.

3. After a major capital campaign earlier in this decade which saw the construction of a new library and Performing Arts Center, Penn State York expects no major growth in capital improvements or enrollment in the foreseeable future. There is a 2010 Capital Campaign for the addition of a 10,000 SF engineering wing, although no increase in student population is anticipated.

4. York Hospital has a five year plan for expansion of the parking garage, which could add 300 to 400 additional spaces. The hospital also plans to expand their emergency services. Currently, there are 72,000 emergency patients per year with an anticipated 90,000 patients in the future. York Hospital expects to encounter steady growth in the foreseeable future (1 – 2 % per year).

5. The Johnson Controls site, located between Grantley Road, Richland Avenue, King's Mill Road and the Codorus Creek, could experience some growth in the future, though not to the level of employment from years past.

6. Development of the Croy Industrial Park, located on the northwest corner of Richland Avenue and Kings Mill Road, is unknown at this time.

7. Regents’ Glen will continue to build out, with approximately 20% of the proposed units remaining to be developed.
8. A neighborhood grocery store or drug store is a possibility on the tract west of the Rutter's Convenience Store on Richland Avenue.

In summary, the area surrounding the Rathton Road / Country Club Corridor is a mature and relatively densely developed area. Although pockets of growth will occur, it will not approach the level of growth which is capable in rural and suburban areas with vast expanses of vacant land. The opportunity for growth along this corridor is limited.

According to the PennDOT 2006 Pennsylvania Traffic Data Report, growth along the Country Club Road / Rathton Road corridor could expect to increase by 0.8% annually. Based on our interviews and background investigation, a 0.8% annual growth rate appears appropriate for this area. A 2% annual growth rate will be applied to driveways connecting to York College and York Hospital. A 2% growth rate was also added to the Richland Avenue intersection to account for the Regents' Glen Development.

Figure 10 graphically summarizes the anticipated developments within the study area.
Johnson Controls could experience some growth in the future, though not to the level of employment from years past.

PSU expects no major construction in the foreseeable future with the exception of a 10,000 SF engineering wing. Student population should be steady.

The Smurfit Stone property will be acquired by YCP and developed with a mixture of uses.

Development of the Croy Industrial Park is unknown at this time.

A neighborhood grocery store / drug store is a possibility for development on the CHR Tract.

Regent's Glen will continue to build out, with approximately 20% of the proposed units remaining to be developed.

York College is currently building 364 new dorms on the west campus site.

The construction of the York Hospital Parking Garage eliminated the need for an on-site parking/shuttle system. As the garage nears capacity, the shuttle operation may be restarted.

York Hospital has a five year plan for expansion of the parking garage, which could add 400 spaces.

The old York Narrow Fabrics site will include a new YCP engineering building.
ANALYSIS OF EXISTING CONDITIONS

An analysis of the existing conditions within the study area was conducted in terms of capacity analysis, time delay studies and crash analysis.

Capacity Analysis

A level of service and capacity analysis was conducted for both the study intersections and the corridor segments to assess the ability of the roadway network to carry the existing traffic volumes. The capacity analyses were performed for the existing volumes utilizing the methods outlined in the Transportation Research Board’s Highway Capacity Manual 2000 (HCM) as implemented by the software package called Highway Capacity Software. Level of Service (LOS) ranges from "A" to "F" with "A" having the most favorable performance. Level of service ranges for unsignalized and signalized intersections can be found in Table 4.

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Expected Traffic Delay</th>
<th>Average Total Delay(^1)</th>
<th>Stop Delay(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Little or No Delay</td>
<td>≤10</td>
<td>≤10</td>
</tr>
<tr>
<td>B</td>
<td>Short Traffic Delays</td>
<td>&gt;10 and ≤15</td>
<td>&gt;10 and ≤20</td>
</tr>
<tr>
<td>C</td>
<td>Average Traffic Delays</td>
<td>&gt;15 and ≤25</td>
<td>&gt;20 and ≤35</td>
</tr>
<tr>
<td>D</td>
<td>Long Traffic Delays</td>
<td>&gt;25 and ≤35</td>
<td>&gt;35 and ≤55</td>
</tr>
<tr>
<td>E</td>
<td>Very Long Traffic Delays</td>
<td>&gt;35 and ≤50</td>
<td>&gt;55 and ≤80</td>
</tr>
<tr>
<td>F</td>
<td>Failure, Extreme Congestion</td>
<td>&gt;50</td>
<td>&gt;80</td>
</tr>
</tbody>
</table>

\(^1\) Unsignalized – sec/veh  
\(^2\) Signalized – sec/veh

A detailed intersection and segment analysis was completed and the results are detailed in the Technical Appendices. The Rathton Road/Country Club Road was divided into four segments, with the fifth segment analyzed being the S. George Street Corridor. Figures 11 and 12 graphically show the results of the intersection and segment analysis. The findings are summarized below:

- The York College driveway intersection with Country Club Road (S.R.3054) operates at failing conditions during both the AM and PM peak hours.
During the PM peak hour, the South George Street / Country Club Road – Rathton Road intersection operates overall at an unacceptable LOS E. The southbound approach fails during both the AM and PM peak hours and the northbound approach operates at an LOS E during the AM peak hour.

All other intersections operate at acceptable levels of service for existing conditions.

The Rathton Road corridor from George Street to Queen Street operates at an LOS E for the eastbound approach during the AM and PM peak hours and at an LOS F for the westbound approach during the PM peak hour.

The George Street corridor from Rathton Road to the York Hospital driveway operates at an LOS E for northbound and southbound traffic during the PM peak hour, while northbound traffic flows at an LOS F during the AM peak hour.

Field observations of existing traffic conditions found long queues are experienced at several locations including:

- Northbound left turns on George Street at the Country Club Road – Rathton Road intersection during the AM and PM peak hours.
- Southbound traffic on George Street from Country Club Road – Rathton Road to the York Hospital driveway, during the PM peak hour.
- Northbound left turns on Queen Street at its intersection with Rathton Road.
- The Country Club Road – Grantley Road intersection experiences queuing on different legs throughout the peak hours (school rush, commuter rush)

**Time Delay Studies**

The studies were conducted by personnel from the York County Planning Commission along the Rathton Road/Country Club/Richland Avenue Corridor from Midland Avenue to Kings Mill Road and on George Street from Jackson Street to Tri Hill Road. Multiple trial runs were made in both directions (east-west and north-south) to determine the amount of time it takes to traverse a given section of roadway and provide information on travel times, delay, and average speed. The time delay study verifies the findings of the highway capacity analysis and establishes a separate measure of effectiveness (MOE) for determining levels of improvement to the corridor. A summary of the time delay study including a graphical depiction of delays can be found in the Technical Appendices.
Crash Analysis

Utilizing the crash data obtained from PennDOT and Spring Garden Township, the crash histories of the study area roadways and intersections were reviewed to locate areas where higher than expected accident rates occur.

A crash history analysis was conducted for both intersection and segments along the corridor utilizing data obtained from PennDOT and Spring Garden Township for the years 2002 - 2006. An accident rate safety analysis of the Rathton Road corridor was performed to determine the clusters of accidents. The number of accidents occurring on the roadways in the five year period and PennDOT's average daily traffic (ADT) volumes were used to calculate the actual accident rates, expressed in accidents per million vehicle miles of travel. The actual accident rates were compared to PennDOT's report on statewide average accident rates for roadways that exhibit similar attributes (physical characteristics and traffic conditions) to those found within the study area. Table 5 summarizes the average accident rates for the analyzed segments along the corridor. As is shown in Table 5, several of the segments exhibit an accident rate slightly higher than the statewide average, although none exhibit a rate more than 1.5 times the state average. Accident rates at this level are typical on relatively short roadway segments where major intersections are a significant factor along the segment.

A detailed intersection analysis was conducted for each of the twelve study intersections and is included in the Technical Appendices. The total number of reportable accidents occurring at each intersection is shown on Figure 13. A summary of the crash analysis follows:
### TABLE 5
**AVERAGE ACCIDENT RATE BASED ON REPORTABLE ACCIDENTS**

<table>
<thead>
<tr>
<th>Roadway</th>
<th>Location</th>
<th>Roadway Width</th>
<th>Segment Length (miles)</th>
<th>PennDOT ADT</th>
<th>Total Crashes</th>
<th>Segment Accident Rate*</th>
<th>Statewide Average Rate*</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country Club Road (S.R.3054)</td>
<td>Richland Avenue (S.R.3054) to Grantley Road (S.R.4001)</td>
<td>55’ - 50’</td>
<td>0.35</td>
<td>16,671</td>
<td>18</td>
<td>1.69</td>
<td>2.10</td>
<td>Below Average</td>
</tr>
<tr>
<td>Country Club Road (S.R.3054)</td>
<td>Grantley Road (S.R.4001) to George Street (S.R.3036)</td>
<td>50’ - 53’</td>
<td>0.70</td>
<td>21,424</td>
<td>79</td>
<td>2.89</td>
<td>2.10</td>
<td>1.4 Times Average</td>
</tr>
<tr>
<td>Rathton Road (S.R.3054)</td>
<td>George Street (S.R.3036) to Queen Street (S.R.0074)</td>
<td>51’ - 41’</td>
<td>0.52</td>
<td>13,849</td>
<td>21</td>
<td>1.60</td>
<td>2.10</td>
<td>Below Average</td>
</tr>
<tr>
<td>Rathton Road (S.R.3054)</td>
<td>Queen Street (S.R.0074) to Hill Street</td>
<td>40’ - 30’</td>
<td>0.91</td>
<td>6,337</td>
<td>29</td>
<td>2.76</td>
<td>2.29</td>
<td>1.2 Times Average</td>
</tr>
<tr>
<td>South George Street (S.R.3036)</td>
<td>Springettsbury Avenue to I-83 Spur</td>
<td>45-55’</td>
<td>0.56</td>
<td>13,256</td>
<td>44</td>
<td>3.25</td>
<td>2.10</td>
<td>1.5 Times Average</td>
</tr>
</tbody>
</table>

* Number of accidents per million vehicle miles traveled
• South George Street (S.R.3036), the section of roadway between Springettsbury Avenue and the I-83 spur exhibited an accident rate 1.5 times the statewide average. This section includes a cluster of accidents at the signalized intersections of South George Street with Springettsbury Avenue, Rathton Road/Country Club Road and the York Hospital Driveway.

• On Country Club Road (S.R.3054), the segment between Grantley Road (S.R.4001) and South George Street had an accident rate 1.4 times the state average. In addition to a high number of accidents at the Country Club Road – Rathton Road/South George Street intersection, an accident cluster was found at the York College Driveway.

• On Rathton Road, the non-state section between Queen Street (S.R.0074) and Hill Street experienced an accident rate 1.2 times higher than the state average. The majority of the accidents occurred at non-intersection locations.

• There were no pedestrian accidents reported within the study area for the five year period studied.

• Two bicycle crashes were reported within the study area. One occurred in 2004 at the intersection of Rathton Road/Newlin Road and one occurred in 2005 at the Country Club Road–Rathton Road/South George Street intersection.

• The following four study intersections, along with one non-study intersection (George Street/Springettsbury Avenue) experienced more than ten reportable accidents during the five year period studied. Collision diagrams were prepared for these intersection locations and are included in the Technical Appendices.

- Country Club Road-Rathton Road (S.R.3054)/South George Street (S.R.3036) {21 accidents}

- Country Club Road (S.R.3054)/York College Driveway {17 accidents}

- Country Club Road (S.R.3054)/Springettsbury Avenue
- {17 accidents}

- Rathton Road (S.R.3054)/South Queen Street (S.R.0074) {15 accidents}

- South George Street (S.R.3036)/York Hospital Driveway {11 accidents}
Existing Conditions Summary

Figure 14 summarizes many of the key findings found during the transportation and environmental inventory, the land use and zoning analysis, and the existing conditions analysis. These findings, as well as the concerns of the Working Group and Roadway Audit, will be studied in further detail as part of the analysis of future conditions.
The Smurfit Stone property will be acquired by YCP and developed with a mixture of uses.

Congestion through York College and residential area.

A neighborhood grocery store / drug store is a possibility for development on the CHR Tract.

The existing bridge over Tyler Run may not be wide enough to accommodate additional travel lanes for Country Club widening.

Access is very difficult exiting the York College driveway.

Springdale Historic District. Designated as eligible on the National Register of Historic Places.

According to the Spring Garden Township Police Department a safety problem occurs at the "S" curve on Rathon Road.

The construction of the York Hospital Parking Garage eliminated the need for an off-site parking / shuttle system. As the garage nears capacity, the shuttle operation may be restarted.

York Hospital has a five year plan for expansion of the parking garage, which could add 400 spaces.

Extreme congestion and queuing occurs at the George Street / Country Club Road - Rathon Road intersection.


The lane configuration changes at the George Street / York Hospital Driveway intersection have resulted in excessive congestion and queuing. This forces approximately 1,200 vehicles into one travel lane during the PM peak hour.

Although overall the Rathon Road / Queen Street intersection operates at acceptable levels of service, long queues during the AM peak hour on the northbound approach result in vehicles turning into the residential neighborhood on Highland Road.

Split phasing on Rathon Road results in inefficient signal operations. During peak periods the side street approaches operate at unacceptable levels of service.

Regents' Glen will continue to build out, with approximately 20% of the proposed units remaining to be developed.

York College is currently building 264 new dorms on the west campus site.

The old York Narrow Fabrics site will include a new YCP engineering building.

In December 2008, PennDOT completed its I-83 Ext 14 + 15 Project which included two missing ramp movements to Exit 15, which has drawn additional traffic onto George Street.

Country Club Road / Rathon Road Corridor Study

Figure 14
Existing Conditions Summary

Legend
- Municipal Boundary
- Streets
- Roads
- Springdale Historic District
- Existing Bridge

Scale: 1/2000 Feet
ANALYSIS OF FUTURE CONDITIONS

This section discusses projected conditions over the next twenty years to the year 2028. The future conditions of the Rathton Road/Country Club Road corridor will first be evaluated assuming no alternatives or transportation improvements are completed in the future.

The traffic volumes utilized in the future analysis will be derived by using existing traffic volumes and applying a 0.8% average annual growth rate. This calculates to 17.27% growth for the twenty year projection. This percentage was based on the information obtained and discussed in the Land Use and Zoning Analysis section. A 2.0% annual growth rate will be applied to York College and York Hospital driveways, to account for their anticipated growth. A 2.0% annual growth rate was also used at the Richland Avenue intersection to account for the Regents' Glen Development. Figures 15 and 16 show the projected 2028 traffic volumes for the AM and PM peak hour future conditions.

A level of service and capacity analysis was completed for the future 2028 “No-Build” conditions and is included in the Technical Appendices. The results are shown graphically in Figures 17 and 18. A summary of the findings follows:

- The York College driveway intersection with Country Club Road (S.R.3054) will continue to operate at failing conditions during both the AM and PM peak hours.
- The South George Street/Country Club Road – Rathton Road intersection will operate at failing conditions during both the AM and PM peak hours. During the AM peak hour, the northbound and southbound approaches will operate at an LOS F. During the PM peak hour, the southbound approach will operate at an LOS F, while the westbound approach will operate at an LOS E.
- The Rathton Road/S. Queen Street intersection overall will operate at an LOS E during the AM and PM peak hours, while the intersection approaches will operate at no better than an LOS D.
• The Country Club Road Corridor from Richland Avenue to Grantley Road will operate at an LOS F during the AM peak hour on the eastbound approach.
• The Rathton Road corridor from George Street to Queen Street will operate at an LOS F during the PM peak hour and at an LOS E and LOS F during the AM peak hour for the westbound and eastbound approaches respectively.
• The George Street Corridor from Rathton Road to the York Hospital driveway is expected to operate at an LOS F during the PM peak hour and at an LOS D and LOS F during the AM peak hour for the southbound and northbound approaches respectively.
• The Country Club Road corridor from Grantley Road to S. George Street will operate at an LOS E during the AM peak hour and on the eastbound approach during the PM peak hour.
STUDY ALTERNATIVES

Development of Preliminary Alternatives

Based on the findings from the existing and future conditions analysis, transportation alternatives were developed to address the capacity and safety deficiencies and meet the goals and objectives of the study. Many of the study alternatives were developed in conjunction with PennDOT’s new publication “Smart Transportation Guidebook – Planning and Designing Highways and Streets that Support Sustainable and Livable Communities”. This guidebook incorporates the principles of “Smart Transportation”, whereby factors such as financial constraints, community needs and aspirations, land use, and environmental constraints are incorporated during project development. The improvements considered for analysis included:

- Additional lane capacity
- Traffic signal operation improvements
- Improved traffic control devices
- Directional and Wayfinding signage for major institutional destinations
- Access control and management
- Roundabout construction
- Public transportation/transit improvements
- Ridesharing programs
- Pedestrian accessibility improvements
- Intelligent Transportation System (ITS) Options
- Work shift adjustments
- Land use/Zoning controls
- Other Transportation Demand Management (TDM) options

A preliminary list of alternatives was identified and discussed with the Working Group. During this meeting, alternatives were fine-tuned and additional alternatives were added. Table 6 summarizes these preliminary alternatives, identifying each as short term, mid term or long term.
## TABLE 6
**PRELIMINARY ALTERNATIVES**

<table>
<thead>
<tr>
<th>Location</th>
<th>Improvement</th>
<th>Timing</th>
</tr>
</thead>
</table>
| Rathton Road S-Curve (At PSU York Entrance) | - Cut back bushes and shrubbery to improve sight distance  
- Paint white edge lines  
Bituminous micro surfacing @ the S-curve | Short Term  
Mid Term |
| Queen Street (S.R.0074) / Rathton Road (S.R.3054) | Add an EB left turn lane and take signal off split phasing  
Radius improvements on southeast and southwest corners  
Single Lane Roundabout  
Two Lane Roundabout | Mid Term  
Mid Term  
Long Term  
Long Term |
| George Street (S.R.3036) / Country Club Road (S.R.3054) - Rathton Road (S.R.3054) | Optimize signal timings  
ITS PennDOT signal monitoring  
Traffic responsive/adaptive signal system in conjunction with the George Street/York Hospital Driveway intersection  
Add dual northbound left turn lane  
Two lane roundabout | Short Term  
Mid Term  
Mid Term  
Long Term  
Long Term |
| George Street (S.R.3036) / York Hospital Driveway | **Option 1**  
- Eliminate southbound left turns into hospital except for emergency vehicles  
- Convert southbound left turn lane to through lane  
- Add signage to route hospital traffic to Rathton Road entrance | Short Term |
| | **Option 2**  
Restripe George Street to add southbound left turn lane in existing 54’ cross-section | Short Term |
| | **Option 3**  
- Stripe a separate left and two through lanes southbound on George Street  
- Stripe northbound left turn lane and single through lane | Short Term |
| | **Option 4**  
Resign and stripe the intersection for the two southbound lanes to allow for a shared left/through lane and a shared right/through lane  
Traffic responsive/adaptive signal system in conjunction with the George Street/Country Club Road-Rathton Road intersection  
Widen to add additional southbound left turn lane (five-lane cross section) | Short Term  
Mid Term  
Long Term |
| Bus. Route 83 (S.R.3036) / George Street (S.R.3001) | Improve visibility of traffic signals | Short Term |
### TABLE 6 (Con’t)
#### PRELIMINARY ALTERNATIVES

<table>
<thead>
<tr>
<th>Location</th>
<th>Improvement</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country Club Road (S.R.3054) / Fairview Drive</td>
<td>Restripe to provide westbound left turn storage area on Country Club Road</td>
<td>Short Term</td>
</tr>
<tr>
<td></td>
<td>Restripe to decrease length of eastbound right turn lane and eliminate use of shoulder</td>
<td>Short Term</td>
</tr>
<tr>
<td></td>
<td>Consider left turn time restrictions from Country Club Road to Fairview Drive</td>
<td>Short Term</td>
</tr>
<tr>
<td></td>
<td>Eliminate left turns from Country Club Road to Fairview Drive (in conjunction with short term Farquhar Drive improvements)</td>
<td>Short Term</td>
</tr>
<tr>
<td></td>
<td>Physically narrow road to eliminate use of shoulder before Fairview Drive</td>
<td>Mid Term</td>
</tr>
<tr>
<td></td>
<td>Provide alternative access for the Farquhar Estates Neighborhood via Grantley Road</td>
<td>Long Term</td>
</tr>
<tr>
<td>Country Club Road (S.R.3054) / Farquhar Drive</td>
<td>Restripe to provide westbound left turn storage area on Country Club Road</td>
<td>Short Term</td>
</tr>
<tr>
<td></td>
<td>Relocation of Farquhar access intersection</td>
<td>Long Term</td>
</tr>
<tr>
<td>Country Club Road (S.R.3054) / York College Driveway</td>
<td>Signalize intersection with separate westbound right turn lane and eastbound left turn lane</td>
<td>Short to Mid Term</td>
</tr>
<tr>
<td></td>
<td>Single Lane Roundabout or Two Lane Roundabout</td>
<td>Long Term</td>
</tr>
<tr>
<td>Country Club Road (S.R.3054) / Grantley Road (S.R.4001)</td>
<td>Optimize signal timings / phasing</td>
<td>Short Term</td>
</tr>
<tr>
<td></td>
<td>Add a separate westbound right turn lane</td>
<td>Mid Term</td>
</tr>
<tr>
<td></td>
<td>Northbound Left Turn Lane on Grantley Road</td>
<td>Long Term</td>
</tr>
<tr>
<td></td>
<td>Two Lane Roundabout</td>
<td>Long Term</td>
</tr>
<tr>
<td>Country Club Road (S.R.3054) / Richland Avenue (S.R.3054)</td>
<td>Add eastbound advance left turn phase</td>
<td>Short Term</td>
</tr>
<tr>
<td>Three Lane Country Club Road (S.R.3054)</td>
<td>Widen roadway to include 2 eastbound through lanes, 1 westbound through lane and turn lanes at the intersections</td>
<td>Mid to Long Term</td>
</tr>
<tr>
<td>Four Lane Country Club Road (S.R.3054)</td>
<td>Widen roadway to include 2 eastbound through lanes, 2 westbound through lanes and a continuous center turn lane from Grantley Road to George Street</td>
<td>Long Term</td>
</tr>
<tr>
<td>Pedestrian Issues</td>
<td>Evaluate intersection crossings - i.e. markings, timings</td>
<td>Short Term</td>
</tr>
<tr>
<td></td>
<td>Install additional sidewalk throughout the corridor</td>
<td>Mid Term</td>
</tr>
<tr>
<td>Transit</td>
<td>Encourage ridership for York College Students to York Hospital due to limited parking at hospital</td>
<td>Short Term</td>
</tr>
<tr>
<td></td>
<td>Discuss transit options with Rabbit Transit</td>
<td>Short Term</td>
</tr>
<tr>
<td>Transportation Demand Management (TDM)</td>
<td>Stagger shift times to reduce peak hour traffic</td>
<td>Short / Mid Term</td>
</tr>
<tr>
<td></td>
<td>Promote use of transit / ridesharing</td>
<td>Short / Mid Term</td>
</tr>
<tr>
<td></td>
<td>Encourage walking / bicycle usage</td>
<td>Short / Mid Term</td>
</tr>
</tbody>
</table>
Evaluation of Preliminary Alternatives

After identifying the preliminary improvement alternatives found in Table 6, a further detailed analysis was conducted for each of the possible improvements to determine the impact on the study area. The alternatives were evaluated considering both roadway capacity and safety. Results are included in the Technical Appendices. Input from the Working Group was also included in the evaluation process. A brief summary of each of the preliminary alternatives follows.

**Rathton Road S-Curve (At PSU York Entrance)**

Based on the analysis, capacity was not a main concern at this intersection. The vast majority of accidents at the S-curve were single vehicle crashes, which did not result in serious injury. The S-curve acts as a natural traffic calming affect, keeping vehicular speeds down. However, it was determined that safety can be improved at this location by removing trees and shrubbery on the south side of Rathton Road that currently limits the sight distance for vehicles turning left onto the Penn State York campus. In addition to improving sight distance, a bituminous micro surfacing can be applied to the S-curve to provide better traction and reduce the probability of crashes. Both of these improvements are low cost options that can be implemented in the short term.

**Queen Street (S.R.0074) / Rathton Road (S.R.3054)**

Based on the analysis, capacity is the major concern at this intersection. To improve capacity, split phasing should be eliminated on the Rathton Road approaches to the intersection. To eliminate split phasing, the left turn lanes on Rathton Road should be aligned. This can be achieved by widening the eastbound approach of Rathton Road to include separate left, through and right turn lanes. By adding this eastbound left turn lane, eliminating split phasing and improving intersection radii, the intersection capacity will be greatly improved at this intersection. These improvements can be completed in the mid term.

A long term improvement option is the construction of a roundabout. Based on the analysis, a two-lane roundabout would be required in the long term to provide an acceptable level of service operation. However, a single lane roundabout can be
constructed in the interim and converted to a two-lane roundabout to address long term capacity needs. It should be noted that the northbound Queen Street approach has a grade of 5% which exceeds the desirable approach grade for roundabouts.

The Working Group reached a consensus that the footprint needed for the roundabout created excessive impacts at this intersection due to impacting the properties on the four corners of the intersection, three of which are commercial properties. The Working Group determined the road widening to eliminate the split phasing was the preferred alternative.

**George Street (S.R.3036) / Country Club Road – Rathton Road (S.R.3054)**

Capacity at this intersection can be improved with the optimization of signal timings and by making improvements to the George Street / York Hospital Driveway intersection. A big concern at the George Street / Country Club Road – Rathton Road intersection is vehicle queues extending between the York Hospital Driveway and the Country Club Road intersection during the PM peak hour, impacting the eastbound, westbound and southbound approaches. Improvements at the York Hospital Driveway intersection will improve flow through this intersection and increase intersection capacity.

As an interim measure, a traffic responsive/adaptive signal system or PennDOT ITS signal monitoring system could be installed to assist with traffic flow through the intersection. These measures can be implemented before long term physical improvements are constructed.

A dual northbound left turn lane would increase capacity at this intersection in the long term since the current 40 second northbound advance phase could be reduced with this time distributed to other critical movements. Widening for this improvement would occur only on the Hospital side of the roadway. Due to the nature of the impacts, including extensive utility relocation, curb widening, grade issues, and widening of the bridge over Tyler Run this would be a long term improvement.
The construction of a two-lane roundabout with a channelized eastbound right turn lane could also be considered as a long term improvement option at this intersection. This improvement would require right of way acquisitions on three corners of the intersection, including the relocation of the retaining wall on the hospital property. As with the dual northbound left turn lanes, this improvement would increase capacity but would require extensive utility relocation, curb widening, grade issues and widening of the bridge over Tyler Run.

The Working Group saw merits in both long term projects and felt that both projects should be considered in any long term plans at the intersection. It should be noted that as part of the Strategic Comprehensive Plan, developed in 1999, York City envisioned a scenic gateway at this intersection which would include a roundabout.

**George Street (S.R.3036) / York Hospital Driveway**

Capacity at this intersection is the main issue, although safety must be considered when planning improvements. The current southbound lane configuration allows for safe left turn movements into the hospital from George Street, but forces nearly 1,200 vehicles into the right lane during the PM peak hour. The 1,200 vehicles in the right lane cause queuing through the George Street / Country Club – Rathton Road intersection and actually decreases safety for through and right turning vehicles at this intersection. Providing a lane configuration which previously existed at this intersection where a southbound condition of a shared left/through lane and a separate right turn lane was used, safety may be compromised as impatient motorists heading southbound waiting for a left turning vehicle into the hospital, swerve into the right lane causing additional vehicle conflicts. Because of these conditions, short term alternatives were considered which would both increase capacity and maximize safety at this intersection.

Short Term Option 1 - Eliminate southbound left turns from George Street into the York Hospital Driveway (except for emergency vehicles). This would provide two separate lanes for traffic heading south on George Street and turning right onto I-83. Since the volume of traffic heading to George Street and I-83 is nearly identical, vehicles queuing through the Country Club Road – Rathton Road intersection would be eliminated.
Detailed signage would be required for this option which would direct hospital traffic away from this entrance to the Irving Road entrance, thus increasing traffic through the residential neighborhood.

Short Term Option 2 - Restripe George Street to provide separate southbound left, through, and right turn lanes. This option must be fit within the existing 54’ cartway width. However, without additional widening, the lane widths would not meet PennDOT’s typical lane width criteria of 12’ lanes with 14’ curb lanes. For this option, design exceptions would be needed to fit the five lanes in a 54’ wide curb to curb space. A benefit of the reduced lane widths is the narrow lanes serve as a traffic calming device.

Short Term Option 3 – Stripe a separate left and two through lanes southbound on George Street. In the northbound direction, traffic would be limited to an opposing left turn lane and a single through lane. Queuing analysis showed that this alternative is not feasible since northbound queues would extend into the signalized intersection of George Street and the I-83 northbound Spur Ramp.

Short Term Option 4 – Restripe and provide signage to provide a lane configuration where the two southbound lanes allow for shared left/through and right/through maneuvers. This option eliminates the queuing which extends from the hospital driveway through the George Street/Country Club Road – Rathton Road intersection. It will also provide additional capacity at the George Street/York Hospital Driveway intersection.

To fully improve capacity and maximize safety at this intersection, a five-lane section on George Street is required. If the five-lane section is not permitted with restriping alone (short term Option #2), widening will be required to add this additional southbound lane on George Street. Widening of George Street will impact the parking of the Rest Haven facility as well as the frontage of the York Hospital. Because any widening will create impacts on sidewalks, utilities and private property, this would be a long term project.
The Working Group and the consultant team preferred short term option #2, if the lane widths are allowed by PennDOT. If option #2 is not possible, option #4 would become the preferred short term option. However, to optimize both capacity and safety, the long term solution of widening to a full five-lane cross section should be carried forward.

**Business Route 83 (S.R.3036) / George Street (S.R.3001)**
Safety at this intersection can be improved by providing separate mast arms for the signals for the northbound approach of George Street and the I-83 Spur. Currently, the signal indicators for both the I-83 Spur and George Street are on the same mast arm and can cause confusion, especially at night. If the signal mast arms were separate and the signal indicators were visible only for the desired approach, any confusion relating to signal visibility could be eliminated.

**Country Club Road (S.R.3054) / Fairview Drive**
This intersection provides one of only two access points to the Farquhar Estates neighborhood. Although this intersection was not a study intersection, based on public meeting comments and Working Group concerns, safety at this intersection became a major concern.

To improve safety at this intersection, a short westbound left turn storage area on Country Club Road at Fairview Drive could be provided, as well as striping the shoulder in the eastbound direction and decreasing the length of the eastbound right turn lane to direct vehicles into the eastbound through lane. With these improvements, westbound vehicles turning left would only need to cross one lane of opposing traffic which would reduce the likelihood of crashes caused by vehicles traveling in the eastbound right turn lane. Although these improvements will reduce capacity at the George Street / Country Club Road – Rathton Road intersection and increase queuing on Country Club Road, it will make access to the Farquhar Estates safer. Since these improvements only require striping changes, they can be completed in the short term. PennDOT District 8-0 approval will be needed before implementation of these changes.
Another short term option to control access at the Country Club/Fairview Drive intersection is either eliminating or putting time restrictions on left turns being made from Country Club Road onto Fairview Drive. However, this option would lead to more traffic utilizing the Farquhar Drive intersection. The Working Group felt this created additional problems because of the skewed angle intersection existing at Farquhar Drive and because of the bad grades and internal hair-pin turn which motorists would have to make once inside the development on Farquhar Drive.

The Working Group reached a consensus that restriping to allow a westbound left turn lane on Country Club Road would be a positive first step. Restriping to eliminate the shoulder would be a second step if necessary. Due to the concerns of emergency vehicles accessing the hospital, the idea of physically eliminating the shoulder on Country Club Road was eliminated. Spring Garden Township should examine the long term solution of providing access from this development to/from Grantley Road.

**Country Club Road (S.R.3054) / Farquhar Drive**

In addition to Fairview Drive, this intersection provides the second of only two access points to the Farquhar Estates neighborhood. This intersection was also not a study intersection, but based on Public meeting comments and Working Group concerns, safety at this intersection and access to the Farquhar Estates became an issue. Although re-aligning Farquhar Drive to intersect Country Club Road at a 90-degree angle will improve sight distance and safety at this intersection, with the steep grades and existing residences, realigning Farquhar Drive may be difficult. With the proposed improvements recommended at the Fairview Drive intersection, the Working Group felt access to the Farquhar Estates would be improved and did not recommend this improvement to move forward.

**Country Club Road (S.R.3054) / York College Driveway**

Based on the analysis, both capacity issues and safety are a concern at this intersection. To improve safety for vehicles entering and exiting the College, a traffic signal could be installed with a separate eastbound left turn lane and a separate westbound right turn lane. This improvement will improve levels of service for York
College while slightly increasing delay to Country Club Road. A traffic signal with lane additions can be completed in the short to mid term.

An alternative option to the installation of a traffic signal, is the installation of a roundabout. A single lane roundabout with a channelized westbound right turn lane will be acceptable in the mid term with the conversion to a two-lane roundabout likely in the long term. The roundabout will improve safety at the intersection.

The Working Group and the Consulting Team thought that both the traffic signal and the roundabout were very good and viable solutions to the access problem for the College. Dr. Kenneth Martin, Dean of Campus Operations at York College would prefer the alternative which could address the access problem in a most timely manner at a reasonable cost.

**Country Club Road (S.R.3054) / Grantley Road (S.R.4001)**

Based on the analysis, capacity is the biggest concern at this intersection. Due to the right of way constraints at this intersection, the most feasible short term improvement is to optimize traffic signal timings.

Due to the long westbound queuing, a separate westbound right turn lane should be provided at this intersection in the mid term. This will improve the level of service operation for the Country Club Road traffic.

The installation of a northbound left turn lane on Grantley Road will improve the alignment and both increase capacity and improve safety at this intersection. However, the widening of Grantley Road to provide a separate northbound left turn lane will require the acquisition of the potentially historic house (circa 1850) located on the southwest corner of the intersection. This improvement should be considered in the long term.

The installation of a roundabout was also analyzed at this intersection. The analysis shows that the installation of a two-lane roundabout will be required to address capacity
issues. The installation of a roundabout will require right of way from all four corner properties at this intersection. The acquisition of the required right of way for a roundabout installation may be cost prohibitive.

It was recognized by the Working Group and the Consultant Team that both the widening and the roundabout improvement may be impractical to construct due to the large impacts and costly nature of the alternatives.

**Country Club Road (S.R.3054) / Richland Avenue (S.R.3054)**

Based on the analysis, this intersection operates at an acceptable overall level of service. However, eastbound left turning vehicles have difficulty during peak hour time periods. To improve the eastbound left turn movement and improve safety, an eastbound left turn phase can be installed. It was the consensus of the Working Group that this project would be a worthwhile safety enhancement to this intersection.

**Three Lane Country Club Road (S.R.3054)**

As a capacity improvement, a four lane cross section on Country Club Road was analyzed. The four-lane Country Club Road alternative assumed two eastbound through lanes and one westbound through lane, with turn lanes at the intersections. This four lane alternative improves capacity in the eastbound direction with minimal impact on right of way. Since Country Club Road is currently 50 feet in width, limited widening would only be required at the Grantley Road and York College intersections. The Working Group agreed that this improvement provided a high cost-benefit ratio and recommended it be considered in the mid to long term.

**Four Lane Country Club Road (S.R.3054)**

As an alternative to the four lane Country Club Road alternative, a five lane Country Club Road cross section was also evaluated. The analysis assumed two eastbound and two westbound through lanes with a continuous center turn lane from Grantley Road to George Street. Widening Country Club Road to provide five lanes will significantly improve capacity throughout the corridor. The widening will require
significant right of way at several locations along the corridor that may make this option cost prohibitive, although it should still be considered in the long term.

**Pedestrian Issues**
With improvements to the study area, the installation of sidewalk along the entire Country Club Road – Rathton Road corridor will promote walking and reduce the amount of total traffic on the corridor. In addition to the capacity improvements at the intersections, pedestrian improvements including crosswalks and pedestrian timings will improve pedestrian activity and safety. The additional marking and timing modifications can be completed as part of corridor improvement projects for minimal cost.

**Transit**
In an effort to reduce demand on the corridor, transit options should be encouraged including York College students utilizing the shuttle from the College to York Hospital and increased use of Rabbit Transit. Additional coordination and planning can be facilitated with Rabbit Transit to increase ridership in the study area. These improvements can be implemented in the short term.

**Transportation Demand Management (TDM)**
Transportation demand management (TDM) is the application of strategies to reduce vehicular demand on the road network, or to redistribute the demand to off-peak times. There are a wide variety of options available to assist with TDM. Although it is difficult to quantify the direct impact of TDM improvements, viable options include: continuing to encourage and support staggering work shifts at the hospital and the colleges, promoting transit and ridesharing, encouraging walking and bicycle usage, investigating institution of parking fees to encourage alternative modal options, and subsidizing transit. Additionally, the installation of car pool information signs (D12-2) can be installed along the corridor to also decrease demand on the corridor.
FUNDING SOURCES

Potential Funding Sources
There is an array of funding sources available for transportation related improvements. The particular funding depends upon the implementing agency. For the short term improvements, Spring Garden Township, or the beneficiary of the improvement, would be best suited to implement these improvements since these are low cost and have a local responsibility. For example, it would be appropriate for York College to participate in the funding of a traffic signal that would benefit their access point.

However, in these times with fiscal restraints and budgetary pressure, all avenues of funding should be investigated. Possible sources of funding for projects include:

Federal Transportation Funds
- Surface Transportation Program (STP) Funds
- Congestion Mitigation and Air Quality (CMAQ) Funds
- Federal Earmarked (SXF) Funds
- Federal Transit Funding Programs

State Transportation Funds
- Appropriation 581 Funds
- Act 44 Funds
- State Transit Funding Programs
- Maintenance & Operation Funds (SPM Projects)
- Smart Transportation Funding
- Spike Funds
- Pennsylvania Infrastructure Bank (PIB) – Loans to municipalities, economic development agencies, non-profits, and private corporations

Local Transportation Funds
- Municipal Capital Budget
- Liquid Fuels
• Institution/Developer Funding (Public / Private Partnership)

To advance the timetable for the implementation of any improvement project, PennDOT's Local Lead Project Process should be considered. This is a program whereby the local municipality or partnership entities provide funding for engineering and design, with PennDOT providing the construction funding.

**Monitoring**

The traffic volumes and conditions within the study area should continue to be monitored throughout the design period. Future developments within the study area should be clearly monitored by the York County Planning Commission, Spring Garden Township and York City to assure conformance to the recommended improvements. During review of future development projects, improvements recommended for these developments should be required to coincide with the improvements recommended in this study.
PUBLIC INVOLVEMENT

A series of two public meetings were held for the Country Club/Rathton Road Corridor Study. The first public meeting was held on October 22, 2008, and followed the completion of the future conditions analysis. The purpose of the meeting was to:

- Formally introduce the project to the community
- Present information gathered for the project to date, describing the existing and future deficiencies within the study area.
- Obtain input from the public on the project and gather information on their views of the area deficiencies and potential improvements.

The meeting used an Open House format, allowing visitors the opportunity to view displays at their own pace. Visitors were encouraged to interact with the project team, providing feedback and sharing information on all areas of the project. As a final station during the Open House, visitors were asked to complete a survey questionnaire, providing input on a list of problems in the area, and provide a priority ranking to be assigned to each deficiency.

A total of 41 people completed the survey during the Public Meeting and 17 people completed the survey on-line.

Information obtained from the public meeting follows:

- Most of the attendees live or work within the area, traveling the study roadways several times per day.
- Almost half of the people who completed the questionnaire live in Farquhar Estates and have major concerns regarding access to their neighborhood.
- Congestion and queuing at the George Street/Country Club Road – Rathton Road intersection was the problem area most identified as a high priority. Additionally, it was also the problem area receiving the most top three rankings.
• Access from the residential streets/driveways onto the corridor was also identified as a high priority problem area. Residents from Farquhar Estates shared many concerns regarding ingress/egress from their neighborhood. About half the comments received on the survey questionnaire dealt with access to/from Farquhar Estates.

• The lane configuration at the George Street/York Hospital driveway intersection received the third highest ranking of the problem areas identified.

• The majority of the comments regarded Farquhar Estates, although almost ¾ of attendees provided additional comments regarding many issues within the project area.

The second public meeting was held on March 18, 2009 and presented the recommended alternatives along with concept plans for each alternative. This meeting also used an open house format, with display boards of the improvement alternatives available to allow for detailed review and discussion with the project team. Additionally, a ten minute looping power point presentation was on display for the public which described the various improvement alternatives. Approximately 40 residents attended the meeting with seven people completing a comment card. There were no major comments regarding the project and no changes were made to the plans based on public comment.

Information and public comments from the meetings is included in the Technical Appendices.
RECOMMENDATIONS

Recommended Alternatives
The evaluation of the preliminary alternatives was used to develop a Recommended Improvement Program. This program identifies key projects that would be needed to correct the existing and future deficiencies and allow the study area to operate acceptably through the year 2028. Projects are categorized by when they are needed (short, mid, or long term). In addition, estimated project costs (in 2009 dollars) are provided with funding responsibilities identified. Estimated costs include preliminary engineering, final design, utilities and construction costs. Right-of-way costs are not included in the cost estimates. Table 8 in the Technical Appendices provides a breakdown of the estimated costs. Potential impacts in terms of right-of-way and environmental impacts will also be identified. The improvement program should be used as a guide to provide clear direction for project implementation and a solid foundation for future activities. Table 7 summarizes the Recommended Improvement Program.

Concept Plans
Concept plans for each of the applicable recommended improvements follow. The concept plan number on Table 7 corresponds with the number designated on the plan sheet.
<table>
<thead>
<tr>
<th>Location</th>
<th>Concept Plan #</th>
<th>Improvement</th>
<th>Timing</th>
<th>Funding</th>
<th>Estimated Cost</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Rathton Road S-Curve (At PSU York Entrance) | | - Cut back bushes and shrubbery to improve sight distance  
- Paint white edge lines | Short Term | Spring Garden Twp/ Penn State York | $5K | Trees that limit sight line may be on private property |
| | | Bituminous micro surfacing @ the S-curve | Mid Term | Spring Garden Twp | $20K | The exact area for micro surfacing will need to be determined |
| Queen Street (S.R.0074) / Rathton Road (S.R.3054) | A 1 | Add third EB lane and take signal off split phasing | Mid Term | Spring Garden Twp/ YAMPO | $550K– $650K | Right of Way will need to be obtained from the properties to the south of Rathton Road |
| | | Radius improvements on southeast and southwest corners | Mid Term | Spring Garden Twp/ YAMPO | Included in cost above | Right of Way will need to be obtained from the properties to the south of Rathton Road |
| George Street (S.R.3036) / Country Club Road (S.R.3054) - Rathton Road (S.R.3054) | | Optimize signal timings | Short Term | York City/ Spring Garden Twp | $10K–$15K | Improvements at George Street / York Hospital intersection will also improve operations at this intersection |
| | | ITS PennDOT Signal Monitoring | Mid Term | York City/ Spring Garden Twp/ YAMPO | $100K–$150K | Coordinate with PennDOT 8-0 Traffic Operations Center |
| | | Traffic responsive/adaptive signal system in conjunction with the George Street/ York Hospital Driveway intersection | Mid Term | York City/ Spring Garden Twp/ YAMPO | $75K–$100K |
| | B 1 | Add dual northbound left turn lane  
-OR-  
Two lane roundabout | Long Term | YAMPO/ Other | $3.0M–5.5M | Both improvements will require extensive utility relocation, curb widening, grade issues, and widening of the bridge over Tyler Run |
**TABLE 7 (con’t)**

**RECOMMENDED ALTERNATIVES**

<table>
<thead>
<tr>
<th>Location</th>
<th>Concept Plan #</th>
<th>Improvement</th>
<th>Timing</th>
<th>Funding</th>
<th>Estimated Cost</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>George Street (S.R.3036) / York Hospital Driveway</td>
<td>C 1</td>
<td>Option 2 - Restripe George Street to add southbound left turn lane in existing 54' cross-section <strong>-OR-</strong></td>
<td>Short Term</td>
<td>York Hospital</td>
<td>$ 50K – $ 75K</td>
<td>Design exceptions would be needed for Option 2 to allow for lane widths which would not meet PennDOT’s typical lane width criteria</td>
</tr>
<tr>
<td>C 2</td>
<td></td>
<td>Widen to add southbound left turn lane (five lane cross section)</td>
<td>Mid Term</td>
<td>York Hospital</td>
<td>$ 900K – $ 1M</td>
<td>Widen roadway to meet PennDOT desirable lane width criteria</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Traffic responsive/adaptive signal system in conjunction with the George Street / Country Club Road - Rathton Road intersection</td>
<td>Mid Term</td>
<td>Spring Garden Twp / PennDOT</td>
<td>$75K– $100K</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C 3</td>
<td>If five lane section options cannot be implemented then: Option 4 – Re-sign and stripe the intersection for the two southbound lanes to allow for a shared left/through lane and a shared right/through lane</td>
<td>Short Term</td>
<td>Spring Garden Twp / PennDOT</td>
<td>$ 50K</td>
<td></td>
</tr>
<tr>
<td>Bus. Route 83 (S.R.3036) / George Street (S.R.3001)</td>
<td></td>
<td>Improve visibility of traffic signals</td>
<td>Short Term</td>
<td>Spring Garden Twp</td>
<td>$ 20K – $ 30K</td>
<td>Install signal on separate mast arms to improve visibility</td>
</tr>
<tr>
<td>Country Club Road (S.R.3054) / Fairview Drive</td>
<td>D 1</td>
<td>Restripe to provide westbound left turn storage area on Country Club Road</td>
<td>Short Term</td>
<td>Spring Garden Twp</td>
<td>$ 20K</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D 2</td>
<td>Restripe to decrease length of eastbound right turn lane and eliminate use of shoulder</td>
<td>Short Term</td>
<td>Spring Garden Twp</td>
<td>$ 5K</td>
<td>This improvement should be completed as a second step to providing a westbound left turn storage area</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide alternative access to the Farquhar Estates neighborhood via Grantley Road</td>
<td>Long Term</td>
<td>Spring Garden Twp</td>
<td>TBD</td>
<td></td>
</tr>
</tbody>
</table>

* This option should only be considered if roundabout at York College driveway is not planned.
<table>
<thead>
<tr>
<th>Location</th>
<th>Concept Plan #</th>
<th>Improvement</th>
<th>Timing</th>
<th>Funding</th>
<th>Estimated Cost</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country Club Road (S.R.3054) / York College Driveway</td>
<td>E-1</td>
<td>Signalize intersection with separate westbound right turn lane and eastbound left turn lane -OR- Single Lane Roundabout or Two Lane Roundabout</td>
<td>Mid to Long Term</td>
<td>York College</td>
<td>$400K-$500K</td>
<td>A single lane roundabout will be acceptable in the mid term with a conversion to a two lane roundabout likely in the long term.</td>
</tr>
<tr>
<td></td>
<td>E 2</td>
<td></td>
<td></td>
<td>York College / Spring Garden Twp / YAMPO</td>
<td>$1.5M-$2.5M</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country Club Road (S.R.3054) / Grantley Road (S.R.4001)</td>
<td>F 1</td>
<td>Optimize signal timings / phasing</td>
<td>Short Term</td>
<td>Spring Garden Twp</td>
<td>$5K-$10K</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Add a separate westbound right turn lane</td>
<td>Mid Term</td>
<td>Spring Garden Twp</td>
<td>$300K-$400K</td>
<td>In conjunction with roundabout at York College Driveway</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eliminate northbound left turns</td>
<td>Mid Term</td>
<td>Spring Garden Twp</td>
<td>$20K</td>
<td></td>
</tr>
<tr>
<td>Country Club Road (S.R.3054) / Richland Avenue (S.R.3054)</td>
<td></td>
<td>Add eastbound advance left turn phase</td>
<td>Short Term</td>
<td>Spring Garden Twp</td>
<td>$20K</td>
<td>This will improve safety at the intersection</td>
</tr>
<tr>
<td>Three Lane Country Club Road (S.R.3054)</td>
<td>G 1</td>
<td>Widen roadway to include 2 eastbound through lanes, 1 westbound through lane and turn lanes at the intersections</td>
<td>Mid to Long Term</td>
<td>Spring Garden Twp</td>
<td>TBD</td>
<td>This option includes two eastbound and one westbound travel lanes with turn lanes at intersections. The three lane widening could be completed as an interim phase prior to the four lane widening project.</td>
</tr>
<tr>
<td>Four Lane Country Club Road (S.R.3054)</td>
<td>H 1</td>
<td>Widen roadway to include 2 eastbound through lanes, 2 westbound through lanes and a continuous center turn lane from Grantley Road to George Street</td>
<td>Long Term</td>
<td>Spring Garden Twp</td>
<td>TBD</td>
<td>This option includes two eastbound and two northbound travel lanes with turn lanes at intersections. This option requires major widening of Country Club Road and ROW acquisitions.</td>
</tr>
</tbody>
</table>
## TABLE 7 (con't)
### RECOMMENDED ALTERNATIVES

<table>
<thead>
<tr>
<th>Location</th>
<th>Concept Plan #</th>
<th>Improvement</th>
<th>Timing</th>
<th>Funding</th>
<th>Estimated* Cost</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian Issues</td>
<td></td>
<td>Evaluate intersection crossings - i.e. markings, timings</td>
<td>Short Term</td>
<td>Spring Garden Twp/York City/Property Owners</td>
<td>$10K – $150K</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Install additional sidewalk throughout the corridor</td>
<td>Mid Term</td>
<td>Spring Garden Twp/York City/Property Owners</td>
<td>$25K- $250K</td>
<td></td>
</tr>
<tr>
<td>Transit</td>
<td></td>
<td>Encourage ridership for York College Students to York Hospital due to limited parking at hospital</td>
<td>Short Term</td>
<td>York College/York Hospital</td>
<td></td>
<td>Coordinate with YCP and York Hospital</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Discuss transit options with Rabbit Transit</td>
<td>Short Term</td>
<td>YCPC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation Demand Management (TDM)</td>
<td></td>
<td>Stagger shift times to reduce peak hour traffic</td>
<td>Short / Mid Term</td>
<td></td>
<td>Coordinate with institutional facilities in the study area</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Promote use of transit / ridesharing</td>
<td>Short / Mid Term</td>
<td></td>
<td>Coordinate with Rabbit Transit</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Encourage walking / bicycle usage</td>
<td>Short / Mid Term</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*Estimated costs do not include right-of-way acquisitions. All costs are in 2009 dollars.*