Pennsylvania Act 209 Transportation Capital Improvements Plan

East Coventry Township, Chester County, PA

Prepared for

East Coventry Township

Prepared by

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TRANSPORTATION ENGINEERS & PLANNERS

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McMahon Project Number 804816.11

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Transportation Capital Improvement Plan

As part of the Pennsylvania Act 209 process, East Coventry Township has completed and adopted the *Land Use Assumptions Report,* dated June 14, 2010 and the *Roadway Sufficiency Analysis,* dated February 7, 2011. The final step in the Act 209 process is the completion of the *Transportation Capital Improvement Plan,* which is based on the analysis outlined in the *Roadway Sufficiency Analysis,* dated February 7, 2011, and identifies the improvements necessary to achieve the preferred levels-of-service. In accordance with Act 209, the following requirements were met in completion of the *Transportation Capital Improvement Plan*:

1. Public notice of a public hearing on the *Transportation Capital Improvement Plan* was published two successive weeks, between seven and thirty days from the date of the hearing, in the *Pottstown Mercury* on March 1, 2011 and March 7, 2011.
2. The *Transportation Capital Improvement Plan* was available for public inspection at the Township building at least ten working days prior to the hearing.
3. The public hearing was held on the *Transportation Capital Improvement Plan* to receive comments on March 14, 2011, and continued on April 11, 2011.

Following the public hearing, the *Transportation Capital Improvement Plan* was adopted by the Township Board of Supervisors by resolution on March 14, 2011 with modifications as indicated below. It is noted that the Board of Supervisors also previously adopted the *Roadway Sufficiency Analysis* by resolution on February 14, 2011.

The *Transportation Capital Improvements Plan* is described in detail below for the Existing, Future Pass-Through, and Future Development conditions.

Existing Transportation Capital Improvement Program

The Existing Transportation Capital Improvement Program is summarized in **Table 1** and details the improvements necessary to achieve the preferred levels-of-service under existing traffic conditions. Table 1 also provides a cost allocation of the improvements indicating the portions of the total cost for which PennDOT and the Township are responsible. **The total cost of the Existing Transportation Capital Improvement Program is approximately $1,675,000** and is allocated to PennDOT (approximately 34 percent), and to the Township (approximately 66 percent). The anticipated completion year for each of the improvements is also included in Table 1.

Table 1. Existing Transportation Capital Improvement Program
-- Transportation Service Area North --

Int. No.	Intersection	Improvements Required	Total Project Cost [1]	Allocated Funding			Construction Completion
				PennDOT Costs	Others Costs	Township Costs	
1	PA Route 724/Old Schuylkill Road	Restrict westbound PA Route 724 left-turn movement. Provide directional signing at appropriate locations.	$5,000	$0	$0	$5,000	2015
2	PA Route 724/Peterman Road	Widen eastbound and westbound PA Route 724 to provide separate left-turn lanes. Install a traffic signal.	$750,000	$187,500	$0	$562,500	2015
6	PA Route 724/Wells Road	Install a traffic signal.	$250,000	$62,500	$0	$187,500	2013
7	PA Route 724/Bethel Church Road/ Linfield Road	Widen eastbound and westbound PA Route 724 to provide separate left-turn lanes and upgrade traffic signal equipment.	$650,000	$325,000	$0	$325,000	2011
8	Bethel Church Road/ Old Schuylkill Road (Lower)	Restrict the through and left-turn movements from Old Schuylkill Road. Remove the northbound right-turn area along Bethel Church Road onto eastbound PA Route 724. Provide directional signing at appropriate locations.	$20,000	$0	$0	$20,000	2011
		Total Costs	$1,675,000	$575,000	$0	$1,100,000	

1 - Estimated costs include engineering, right-of-way, and construction. Construction costs based on recent bid prices for area projects. Future costs should be periodically reviewed and adjusted, as permitted by Act 209 legislation.

It is noted that the Existing Transportation Capital Improvement Program has been modified slightly from what is included in the *Roadway Sufficiency Analysis*, dated February 25, 2011 based on the direction of the Board of Supervisors. Specifically, the *Roadway Sufficiency Analysis* includes the restriction of all Schuylkill Road egress movements, and the conversion of Old Schuylkill Road to one-way flow away from PA Route 724. However, the Existing Transportation Capital Improvement Program has been modified to include the restriction of the westbound PA Route 724 left-turn movement only (with no conversion of Old Schuylkill Road for one-way traffic flow). As such, the traffic volumes and levels-of-service resulting from this modification are included as a supplement to this *Transportation Capital Improvement Plan*, and are provided at the end of this report.

Future Pass-Through Transportation Capital Improvement Program

The Future Pass-Through Transportation Capital Improvement Program is summarized in **Table 2** and details the improvements necessary to achieve the preferred levels-of-service under future 2019 pass-through traffic conditions. Table 2 also provides a cost allocation of the improvements indicating the portions of the total cost for which PennDOT and the Township are responsible. **The total cost of the Future Pass-Through Transportation Capital Improvement Program is approximately $1,440,000** and is allocated to PennDOT (approximately 50 percent), and to the Township (approximately 50 percent). The anticipated completion year for each of the improvements is also included in Table 2.

Future Development Transportation Capital Improvement Program

The Future Development Transportation Capital Improvement Program is summarized in **Table 3** and details the improvements necessary to achieve the preferred levels of service under future 2019 development traffic conditions. Table 3 also provides a cost allocation of the improvements indicating the portions of the total cost for which PennDOT and future development are responsible. **The total cost of the Future Development Transportation Capital Improvement Program is approximately $10,375,000** and is allocated to PennDOT (approximately 26 percent), Coventry Business Park (approximately 32 percent for Township roadway improvements), and to development (approximately 42 percent). The anticipated completion year for each of the improvements is also included in Table 3. It is noted that the Act 209 legislation only allows development to be assessed 50 percent of the costs for developer-required improvements along State Roads, and this limit has been applied to the cost allocations.

Table 2. Pass-Through Transportation Capital Improvement Program
-- Transportation Service Area North --

Int. No.	Intersection	Improvements Required	Total Project Cost [1]	Allocated Funding			Construction Completion
				PennDOT Costs	Others Costs	Township Costs	
2	PA Route 724/Peterman Road	Widen PA Route 724 to provide a second westbound through lane. Modify the traffic signal timings.	$935,000	$467,500	$0	$467,500	2019
7	PA Route 724/Bethel Church Road/ Linfield Road/Old Schuylkill Road	Widen northbound Bethel Church Road and southbound Linfield Road to provide separate left-turn lanes.	$500,000	$250,000	$0	$250,000	2019
9	Linfield Road/ Old Schuylkill Road (Upper)	Restrict the exiting left-turn movement, and provide appropriate directional signage.	$5,000	$0	$0	$5,000	2019
		Total Costs	$1,440,000	$717,500	$0	$722,500	

1 - Estimated costs include engineering, right-of-way, and construction. Construction costs based on recent bid prices for area projects. Future costs should be periodically reviewed and adjusted, as permitted by Act 209 legislation.

Table 3. Development Transportation Capital Improvement Program
-- Transportation Service Area North --

Int. No.	Intersection	Improvements Required	Total Project Cost [1]	Allocated Funding			Construction Completion [2]
				PennDOT Costs	Others Costs	Development Costs	
3	PA Route 724/Fricks Lock Road Northern Leg Southern Leg	Realign the north leg of Fricks Lock Road, and provide separate left- and right-turn lanes. Widen eastbound PA Route 724 to provide a separate left-turn lane. Widen westbound PA Route 724 to provide a second through lane. Install a traffic signal. Restrict the northbound Fricks Lock Road left-turn movement. Widen westbound PA Route 724 to provide a separate left-turn lane.	$3,800,000	$250,000	$3,300,000 [2]	**$250,000**	2019
4	PA Route 724/Sanatoga Road	Widen PA Route 724 to provide a separate left-turn lane and a second through lane in both directions. Widen northbound Sanatoga Road to provide a separate left-turn lane, and widen southbound Sanatoga Road to provide separate left- and right-turn lanes.	$4,850,000	$1,818,750	$0	**$3,031,250**	2019
5	PA Route 724/Anderson Road	Install a traffic signal	$250,000	$187,500	$0	**$62,500**	2019
6	PA Route 724/Wells Road	Widen PA Route 724 to provide separate left-turn lanes in both directions. Widen northbound and southbound Wells Road to provide a separate right-turn lane.	$1,000,000	$250,000	$0	**$750,000**	2019
7	PA Route 724/Bethel Church Road/ Linfield Road/Old Schuylkill Road	Widen PA Route 724 to provide a separate westbound right-turn lane. Modify the traffic signal timings.	$225,000	$112,500	$0	**$112,500**	2019
		Total Costs	$10,125,000	$2,618,750	$3,300,000 [2]	$4,206,250	

1 - Estimated costs include engineering, right-of-way, and construction. Construction costs based on recent bid prices for area projects. Future costs should be periodically reviewed and adjusted, as permitted by Act 209 legislation.

2 - Cost associated with improvements required by the Coventry Business Park.

Table 3 (Continued). Development Transportation Capital Improvement Program
-- Transportation Service Area South --

Int. No.	Intersection	Improvements Required	Total Project Cost [1]	Allocated Funding			Construction Completion [2]
				PennDOT Costs	Others Costs	Development Costs	
22	PA Route 23/Bethel Church Road	Signalization.	$250,000	$93,750	$0	**$156,250**	2019
		Total Costs	$250,000	$93,750	$0	**$156,250**	

1 - Estimated costs include engineering, right-of-way, and construction. Construction costs based on recent bid prices for area projects. Future costs should be periodically reviewed and adjusted, as permitted by Act 209 legislation.

Impact Fee

The impact fee calculations for development improvements are summarized in **Tables 4 and 5**

Table 4. Transportation Impact Fee by Service Area
TSA North

Development Capital Improvement Costs	Development Trips	Impact Fee[1,2]
$4,212,564	1,480	***$2,846***

(1) – To be assessed on a per weekday afternoon peak hour new trip basis.
(2) – Development capital improvement costs divided by new development trips (rounded down to nearest dollar).
(3) – Includes developers pro-rata share of the cost of the Roadway Sufficiency Analysis ($6,314).

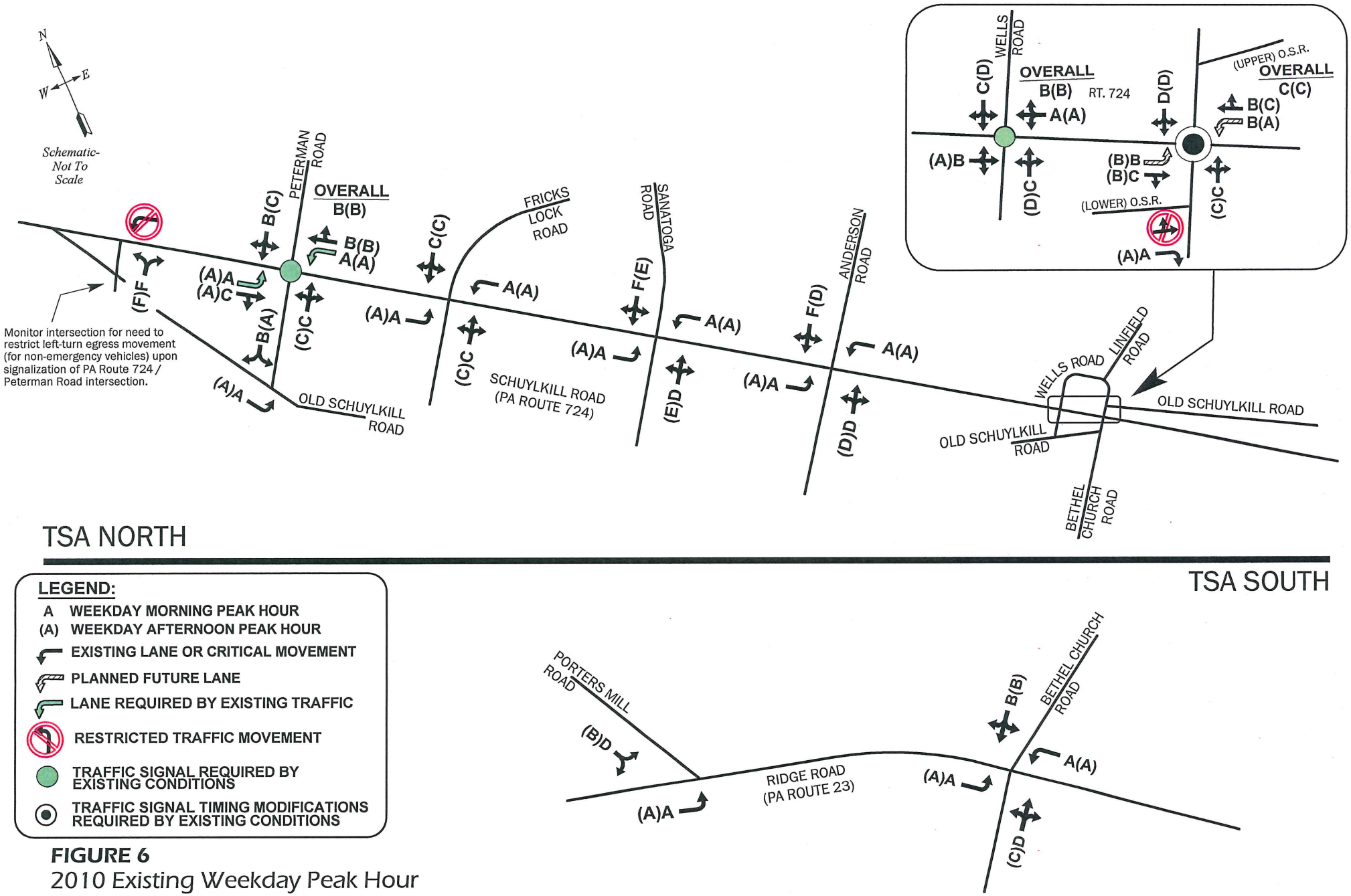
Table 5. Transportation Impact Fee by Service Area
TSA South

Development Capital Improvement Costs[1]	Development Trips	Impact Fee[1,2]
$156,255	147	***$1,062***

(1) – To be assessed on a per weekday afternoon peak hour new trip basis.
(2) – Development capital improvement costs divided by new development trips (rounded down to nearest dollar).
(3) – Includes developers pro-rata share of the cost of the Roadway Sufficiency Analysis ($5).

Supplemental Analysis

The following figures depict the modifications to the *Roadway Sufficiency Analysis* (dated February 25, 2011) approved by the Board of Supervisors when approving *the Transportation Capital Improvement Plan* on April 11, 2011



LEGEND:

- A WEEKDAY MORNING PEAK HOUR
- (A) WEEKDAY AFTERNOON PEAK HOUR
- EXISTING LANE OR CRITICAL MOVEMENT
- PLANNED FUTURE LANE
- LANE REQUIRED BY EXISTING TRAFFIC
- RESTRICTED TRAFFIC MOVEMENT
- TRAFFIC SIGNAL REQUIRED BY EXISTING CONDITIONS
- TRAFFIC SIGNAL TIMING MODIFICATIONS REQUIRED BY EXISTING CONDITIONS

FIGURE 6

2010 Existing Weekday Peak Hour
Levels of Service With Improvements

EAST COVENTRY TOWNSHIP ROADWAY SUFFICIENCY ANALYSIS

CHESTER COUNTY, PENNSYLVANIA

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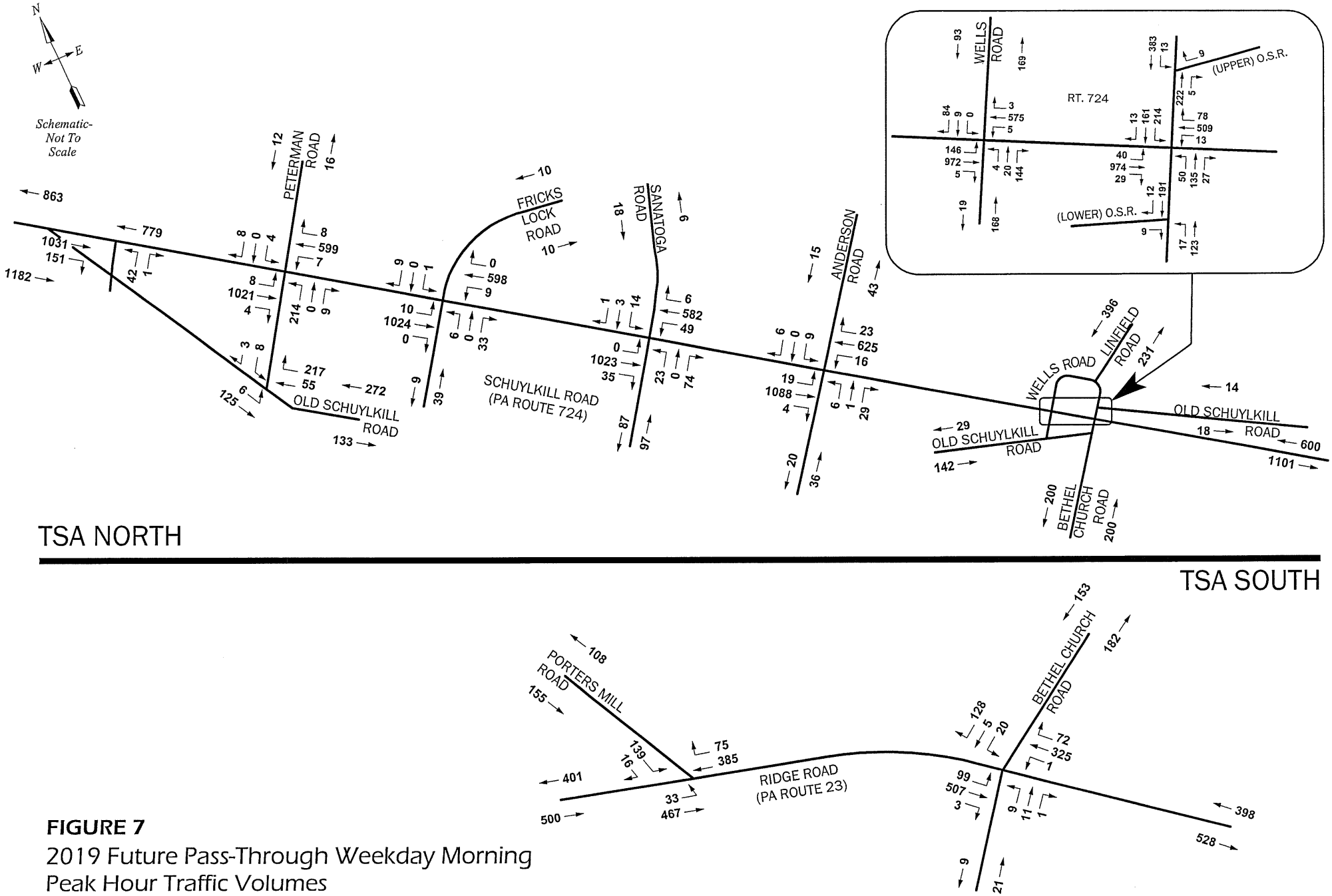

FIGURE 7

2019 Future Pass-Through Weekday Morning
Peak Hour Traffic Volumes

EAST COVENTRY TOWNSHIP ROADWAY SUFFICIENCY ANALYSIS

CHESTER COUNTY, PENNSYLVANIA

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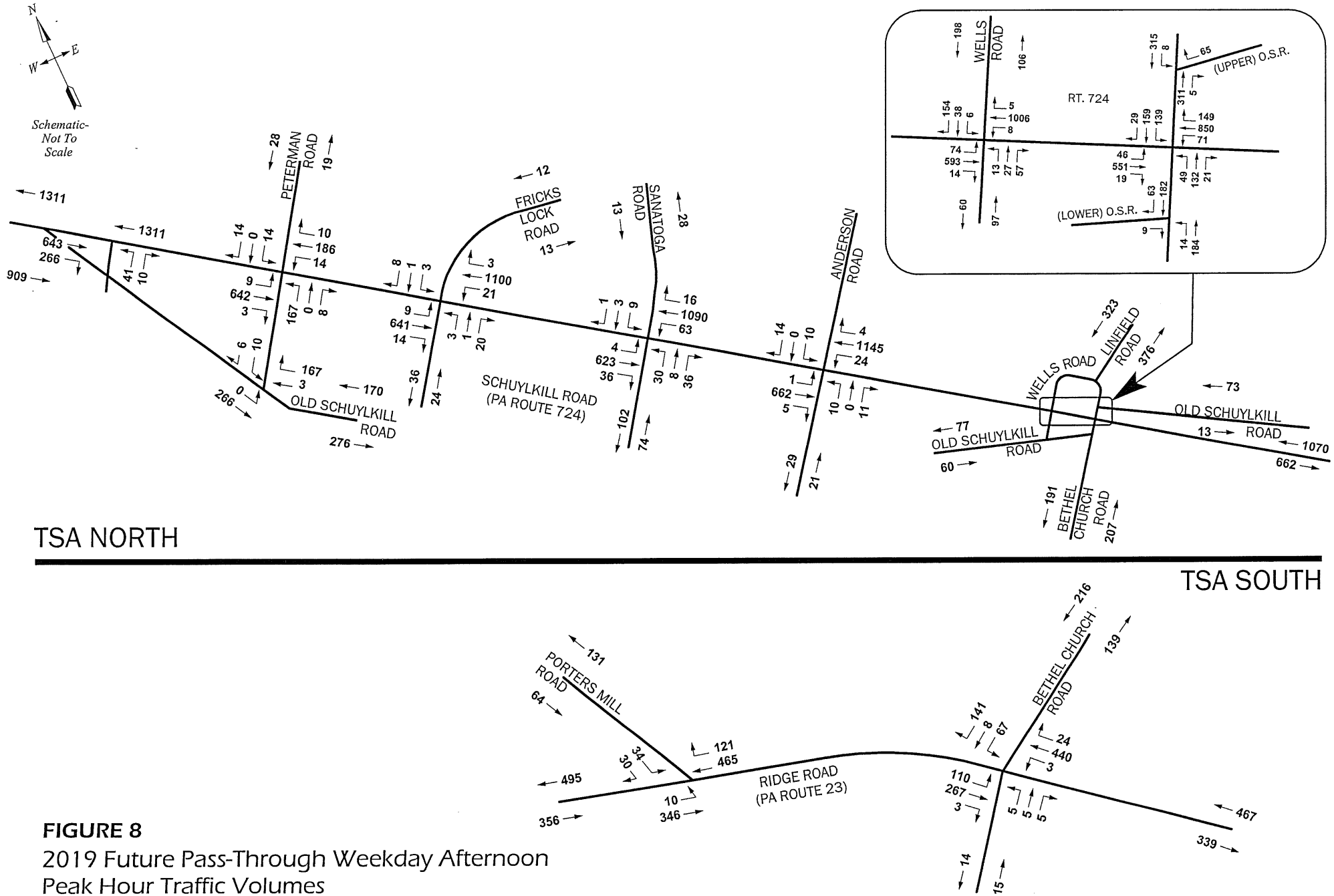

FIGURE 8

2019 Future Pass-Through Weekday Afternoon
Peak Hour Traffic Volumes

EAST COVENTRY TOWNSHIP ROADWAY SUFFICIENCY ANALYSIS

CHESTER COUNTY, PENNSYLVANIA

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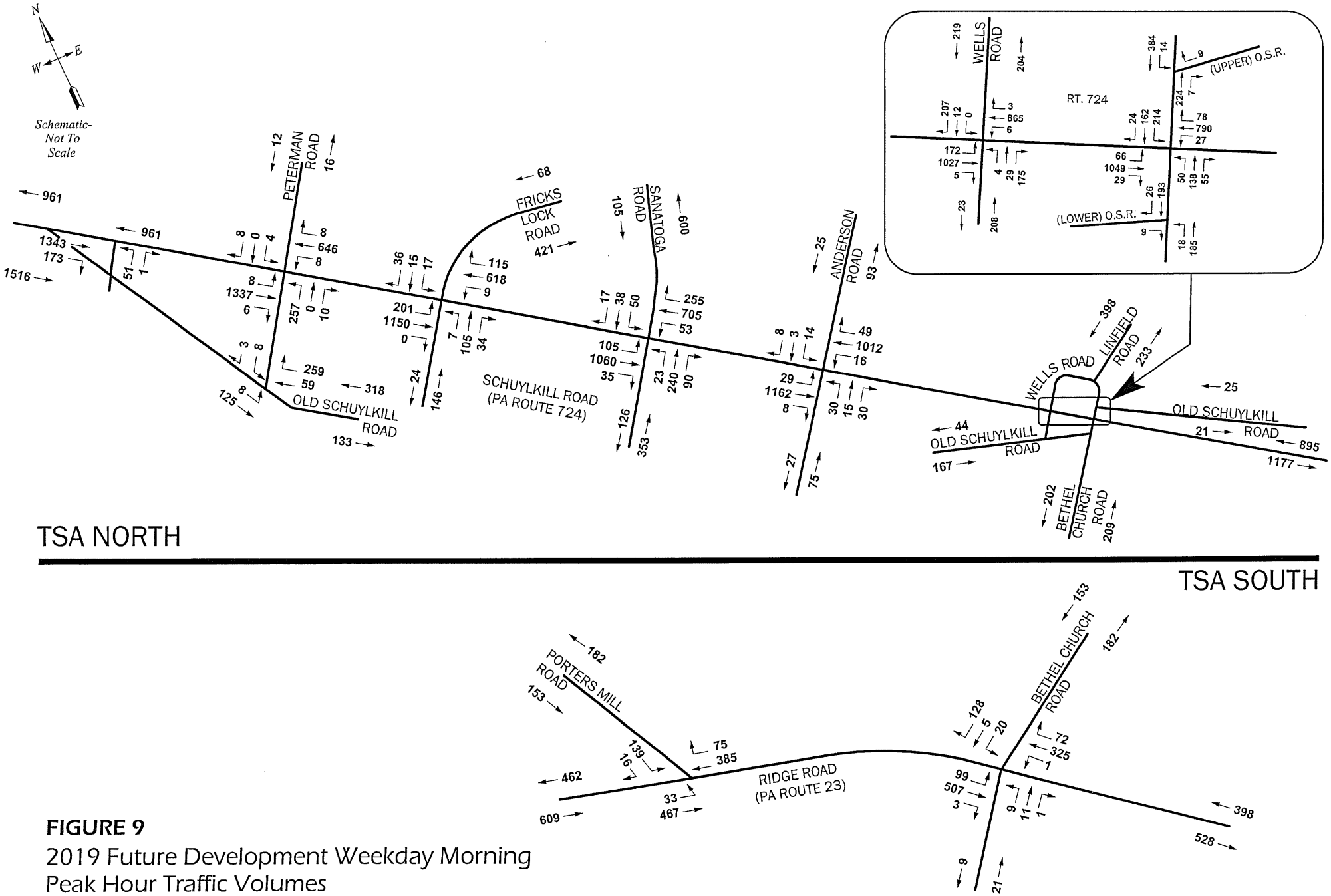

FIGURE 9

2019 Future Development Weekday Morning
Peak Hour Traffic Volumes

EAST COVENTRY TOWNSHIP ROADWAY SUFFICIENCY ANALYSIS

CHESTER COUNTY, PENNSYLVANIA

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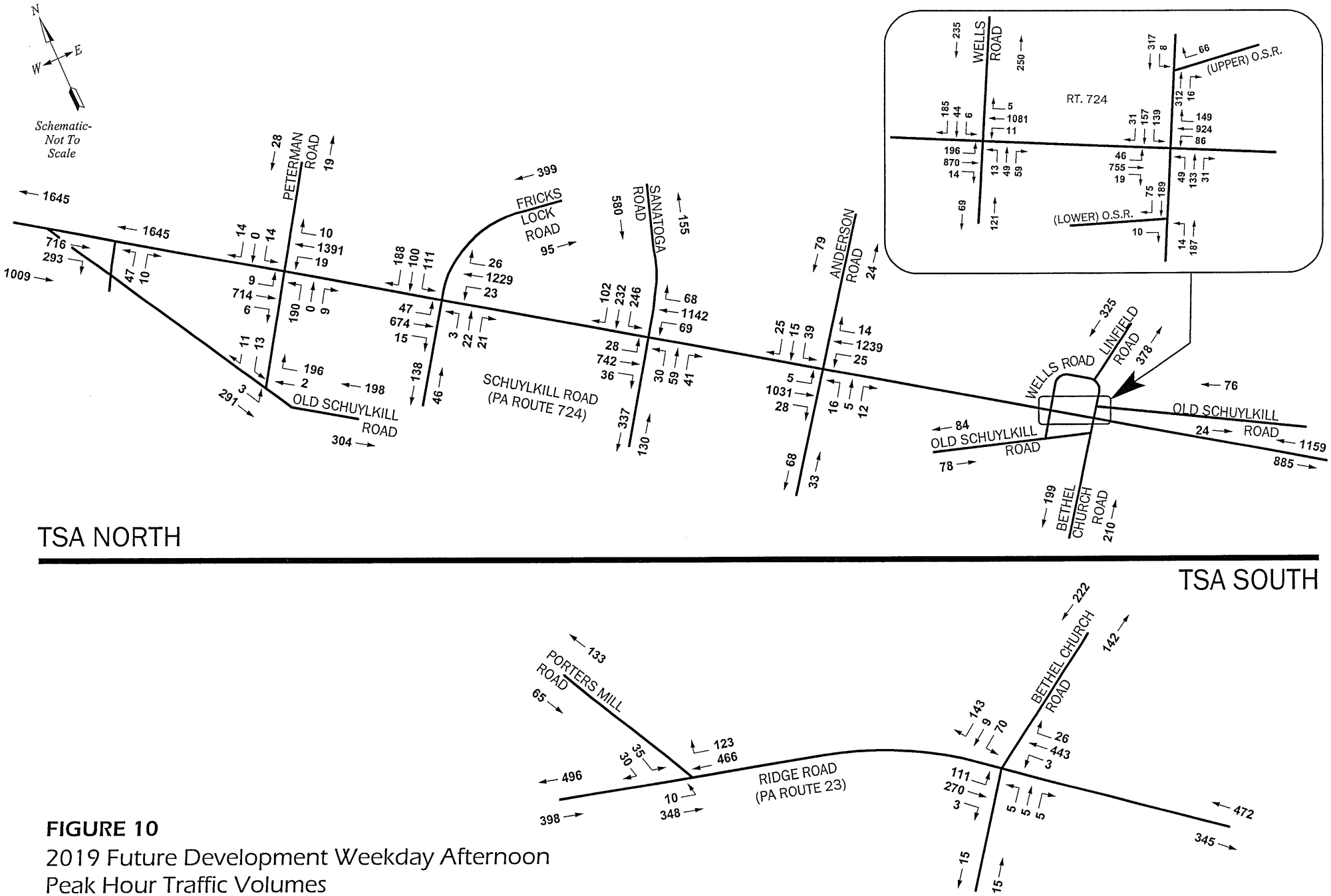

FIGURE 10

2019 Future Development Weekday Afternoon
Peak Hour Traffic Volumes

EAST COVENTRY TOWNSHIP
ROADWAY SUFFICIENCY ANALYSIS

CHESTER COUNTY, PENNSYLVANIA

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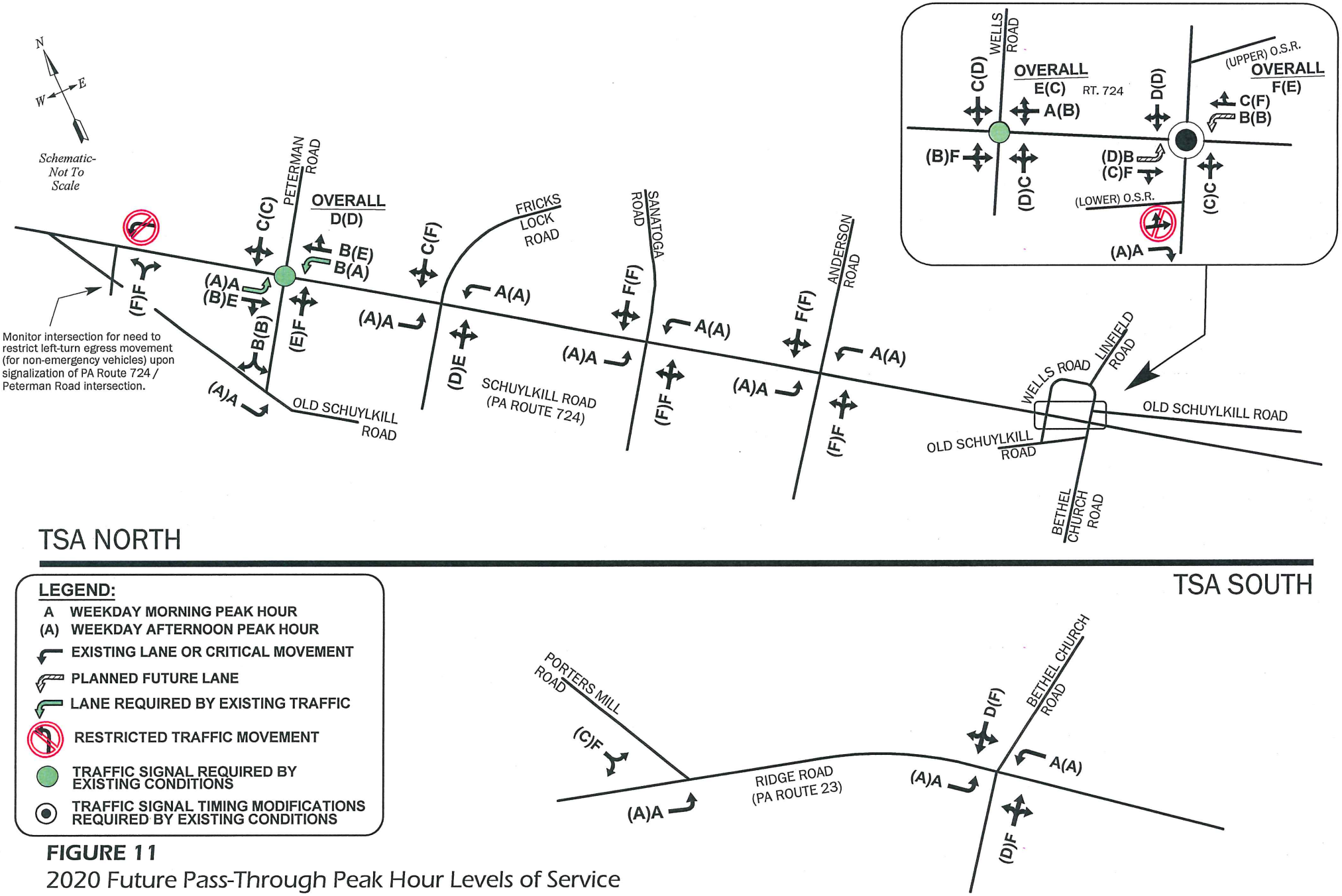

FIGURE 11

2020 Future Pass-Through Peak Hour Levels of Service

EAST COVENTRY TOWNSHIP ROADWAY SUFFICIENCY ANALYSIS

CHESTER COUNTY, PENNSYLVANIA

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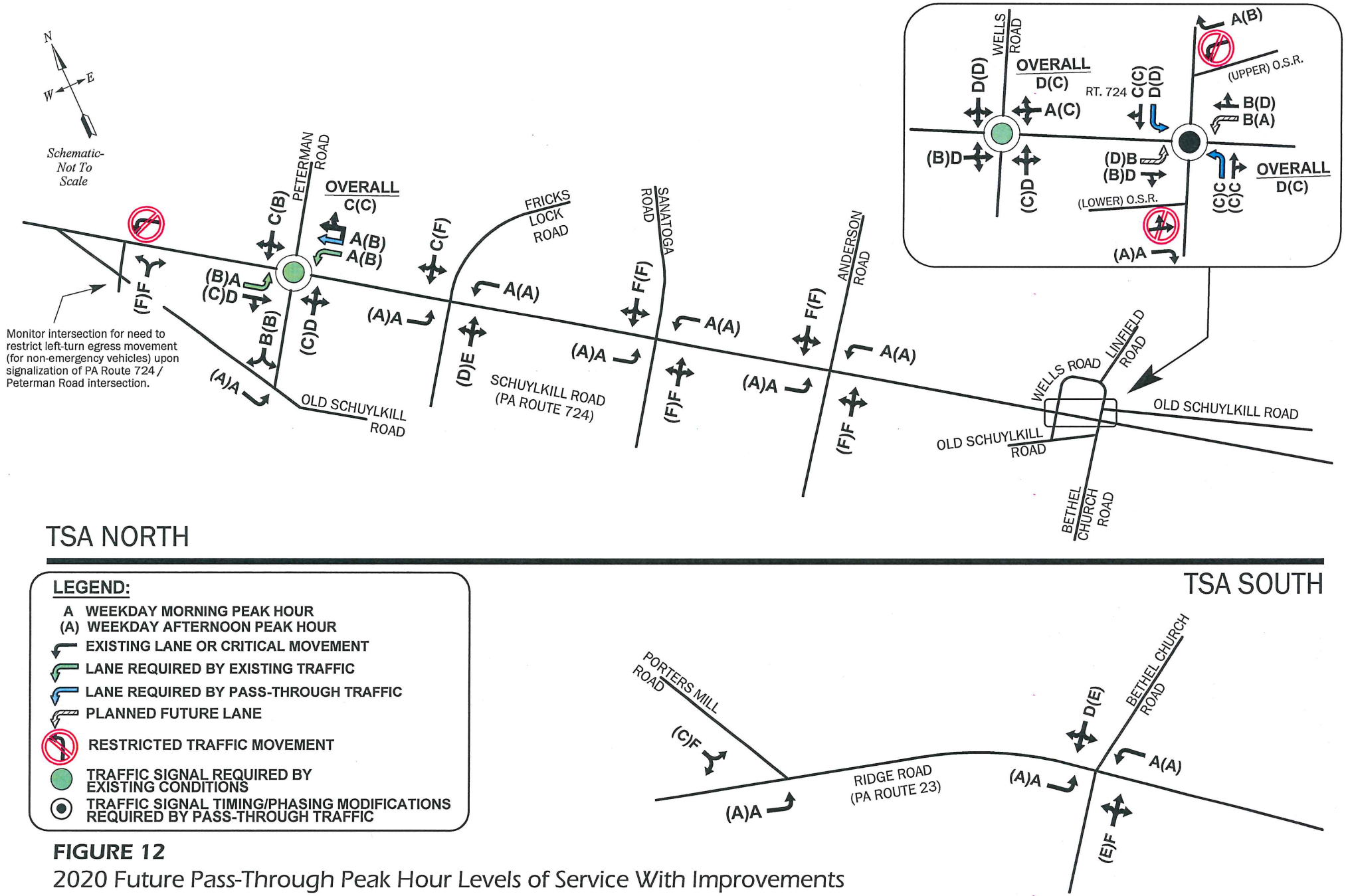

FIGURE 12

2020 Future Pass-Through Peak Hour Levels of Service With Improvements

EAST COVENTRY TOWNSHIP ROADWAY SUFFICIENCY ANALYSIS

CHESTER COUNTY, PENNSYLVANIA

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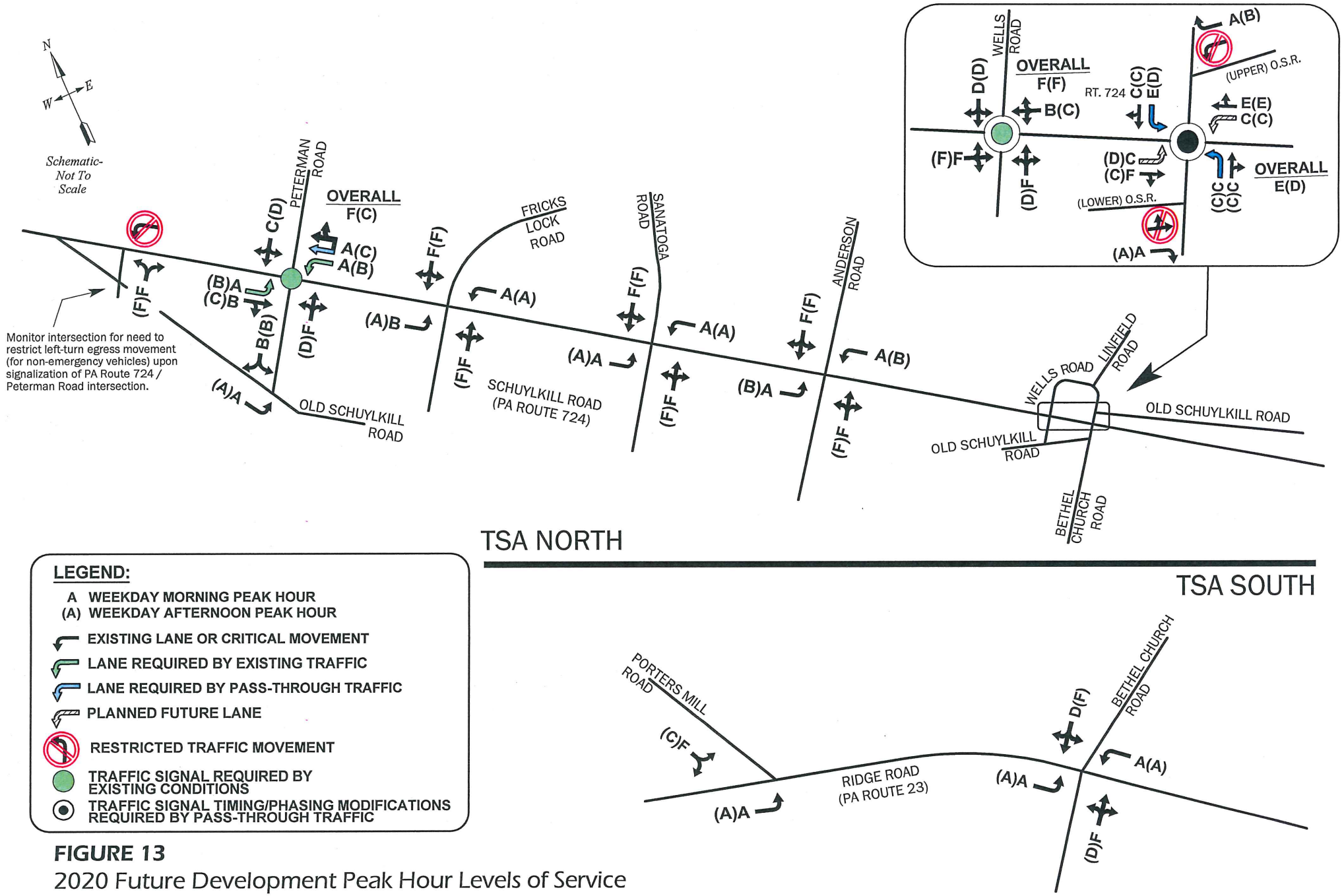

FIGURE 13

2020 Future Development Peak Hour Levels of Service

EAST COVENTRY TOWNSHIP ROADWAY SUFFICIENCY ANALYSIS

CHESTER COUNTY, PENNSYLVANIA

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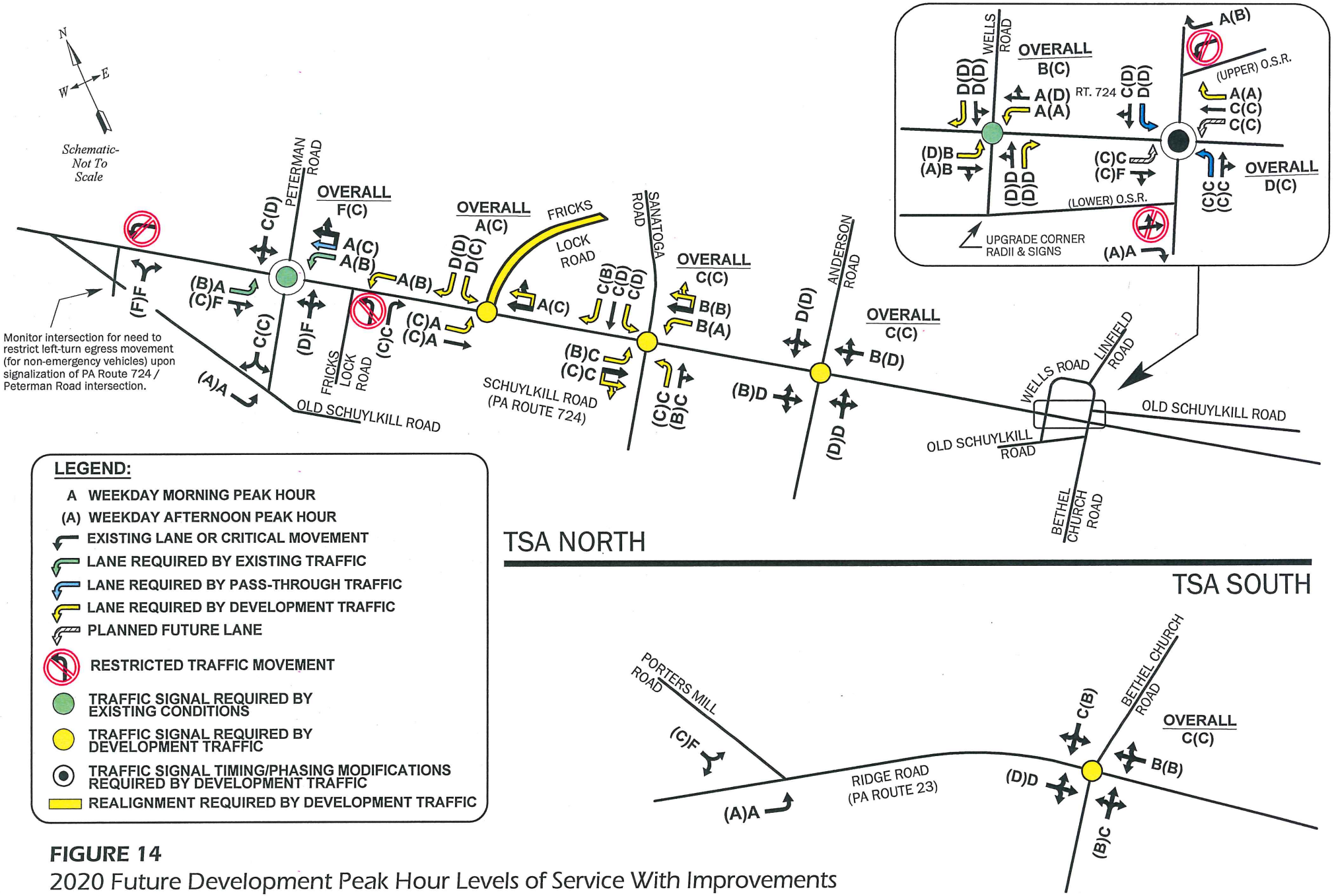

FIGURE 14

2020 Future Development Peak Hour Levels of Service With Improvements

EAST COVENTRY TOWNSHIP ROADWAY SUFFICIENCY ANALYSIS

CHESTER COUNTY, PENNSYLVANIA

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