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Appendix 5A

Preliminary Road Network Alternative Model Maps & Results

-Delaware County
-City of Delaware

DELAWARE COUNTY THOROUGHFARE PLAN POSSIBLE 2020 ROAD NETWORK
REVIEW OF PRELIMINARY ALTERNATIVE RESULTS

The following is a summary of the model results for each of the alternatives contained in the Preliminary Draft Delaware Thoroughfare Plan prior to deciding which alternatives to include for further study in the combined model network. The shading of the titles for Alternatives A, D, H, J2, K2, L, Q2, T, W indicated that these alternatives were not suggested for further study in the combined model network.

Notes:

ADT:	Average Daily Traffic volume
vpd:	Vehicles per Day
2020 E + C:	Existing roadways plus those roadways committed to be built by the year 2020.
Volume changes:	Refers to the volume changes noted when comparing the 2020 E + C Network with the 2020 E + C Network with the Alternative route or routes added to the roadway system.
The "Point":	Refers to railroad underpass where the combined US 36/SR 37 splits

ALTERNATIVE No. A

Manning Parkway to Church Hill Drive Connection extending from Jewett Road at the first "S" curve east of Liberty Road to SR 315 just north of Franklin County/Delaware County Line.

Modeled As: 2 lane, Moderate Speed Collector Roadway
2020 ADT on Alternative: Churchill Dr. to Manning Parkway 3,000 – 4,000

COMMENTS: Does not significantly increase or decrease traffic volumes on the adjacent arterial highway system. Traffic volumes on the existing section of Jewett Road between Liberty Road and the alternative are increase by approximately 50 percent or 2500 vehicles per day.

ALTERNATIVE No. B

Extension of Glick Road east from SR 257 to connect with Powell Road west of Wellington Boulevard.

Modeled As: 5 Lane High Speed Major Arterial
2020 ADT on Alternative: 24,000 SR 257 to Powell Rd

COMMENTS: This alternative aligns the intersections of Glick Road & SR 257 and Powell Road & SR 257 at the bridge over the O'Shaughnessy Reservoir. Traffic volumes in on Glick Road over the reservoir and into Shawnee Hills are not projected to change. Traffic patterns on the adjacent roadways are projected remain basically the same as prior to the realignment.

ALTERNATIVE No. C

Relocate Liberty Road north of Home Road southeast to align with Liberty Road south of Home Road.

Modeled As: 2 lane Moderate Speed Collector
2020 ADT on Alternative: 8,000 – 13,000 Powell Rd to Bean Oller Rd

COMMENTS: The alignment of Liberty Road at Home Road does not cause a significant change in traffic volumes on Liberty Road with the exception of an increase in volumes between Seldom Seen Road and Rutherford Road. The alignment of Liberty Road does cause a decrease of approximately13 percent to 25 percent in traffic volumes on SR 315 from north of Orange Road to south of US 23. South of Home Road, traffic volumes decrease approximately 17 percent on SR 257 and increase approximately 15 percent between Home Road and US 42. Traffic volumes on US 23, Powell Road, and Sawmill Parkway do not change significantly with this alternative

ALTERNATIVE No. D

The Extension of Winter Road west from Chapman Road to align with Clark-Shaw Road at Liberty Road.

Modeled As: 5 Lane, High Speed Major Arterial Highway
2020 ADT on the Alternative: 7,000 – 16,000 S. Section Line Rd to US 23

COMMENTS: The extension of Winter Road east from US 23 to SR 257 offers and additional east west route in the southeast section of Delaware County. Winter Road aligns with Peachblow Road at US 23. Peachblow Road becomes more attractive as a through route and traffic volumes are projected to approximately double with the extension of Winter Road. In general, traffic volumes decrease on the east west routes south of Winter Road and north of Orange Road. The exception is Home Road between Liberty Road and US 23 and Hyatts Road from SR 257 to Steitz Road, both which are projected to increase between 15 to 25 percent with the extension of Winter Road. North south routes such as Piatt Road east of US 23 and SR 256 from Rutherford Rd to US 42 also increase between 15 percent to 25 percent. Traffic volumes on Bunty Station Road and Bean Oller Road, east west routes immediately north of Winter Road, also decrease.

ALTERNATIVE No. E

The extension of Sawmill Parkway from Home Rd north past Bunty Station Road, continuing northwest to intersect with US 42 between Owen-Fraley Road at Bunty Station Road.

Modeled As: 5 lanes, High Speed Major Arterial Highway
2020 ADT on the Alternative: 11,000 – 27,000 Home Rd to US 42

COMMENTS: The extension of Sawmill Parkway provides an additional north south route between Columbus and the City of Delaware. This Alternative reduces volumes north of Home Road on the north south routes west of US 23 such as SR 315, S. Section Line Road and Liberty Road. Traffic volumes on US 23 from south of Powell Road to SR 315 are also projected to decrease by approximately 12 to 16 percent or 6,000 to 10,000 vpd. Traffic volumes on US 42 south of the Alternative are not expected to change but do increase by approximately 2,000 vpd just north of the Alternative.

ALTERNATIVE No. F

Extension of Steitz Road north from Hyatts Road to align with Owen-Fraley Road at Bunty Station Road.

Modeled As: 3 lane, Moderate Speed Minor Arterial
2020 ADT on Alternative: 10,000 – 17,000 Rutherford Rd to US 42

COMMENTS: The extension of Steitz Road to connect with Owen Fraley Road creates an additional north south road from Rutherford Road to US 42 just east of SR 257. Traffic volumes are projected to decrease on Liberty Road north of Home Road and SR 257, the adjacent north south routes. This Alternative does not affect traffic volumes on the north south routes further east such as SR 315 and US 23. Traffic volumes on US 42 also do not significantly change except for just north of the Alternative. Bean Oller, Bunty Station Road and the portion of Home Road immediately east of the Alternative are projected to increase in volume with the extension of Steitz Road.

ALTERNATIVE No. G

Extension of South Section Line Road north from SR 37 to align with North Section Line Road at Buttermilk Hill road.

Modeled As: 5 lane, High Speed Major Arterial Highway
2020 ADT on the Alternative: 8,000 – 16,000 Home Rd to Troutman Rd

COMMENTS: The connection of South Section Line Road to North Section Line Road provides a continuous north south route from south of the City of Delaware through to Marion County. It is projected to reduce volumes on SR 203 and Troy Road, existing north south routes north of the City of Delaware and also is projected to reduce by 20 to 25 percent the traffic volumes on SR 315 south of the City of Delaware. It does not appear to affect the traffic volumes on other major arterial roadways such as US 23, US 42, US 36 or SR 37. It also does not significantly change traffic volumes on Central Avenue and William Street through the City of Delaware.

ALTERNATIVE No. H

Extension of Mink Street east from River Road to connect with US 23 between Hills-Miller Road and Coover Road.

Modeled As: 5 lane, High Speed Major Arterial Highway
2020 ADT on the Alternative:

SR 257 to River Rd	1,600
River Rd to SR 203	2,000
SR 203 to Troy Rd	3,500
Troy Rd to US 23	6,000

COMMENTS: This Alternative utilizes the existing Mink Street bridge over the Scioto River to provide a connection from Union County to US 23 north of the City of Delaware. Traffic volumes on area roads will not significantly increase with the extension of Mink Street east to US 23, but will traffic volumes are projected to decrease on nearby east west routes such as Penry Road, Buttermilk Road and Hills-Miller Road. SR 203, Troy Road and River Road also are projected to decrease in volume with the extension of Mink Street to US 23.

ALTERNATIVE No. J1

Extension of Home Road east of US 23, crossing the railroad tracks connecting to Lewis Center Road east of Lewis Center and west of South Old State Road.

Modeled As: 5 Lane, High Speed Major Arterial Highway
2020 ADT on the Alternative:

Concord Rd to SR 745	12,000	Lewis Center to S. Old St.	21,000
SR 745 to SR 257	26,000	S. Old St. Rd to Bale Kenyon	18,000
S Section Line to Steitz Rd	12,000	Bale Kenyon to Africa	22,000
Steitz Rd to Liberty Rd	20,000	Africa Rd to US 71	31,000
Liberty Rd to SR 315	8,000	US 71 to Worthington Rd	25,000
SR 315 to US 23	10,000	Big Walnut to SR 3	16,000
Alternative to Lewis Center	15,000		

COMMENTS: This Alternative aligns Home Road and Lewis Center to provides a less circuitous east west route from the Union County Line to the Licking County Line in the southern portion of Delaware County. This alternative does not significantly change the traffic patterns on roadways west of US 23, but does decrease volumes on roads east of US 23 such as Hyatts Road, Cheshire Road, Shanahan Road and Orange Road.

ALTERNATIVE No. J2

Extension of Home Road east from US 23 to connect to Big Walnut Rd at its intersection with Lewis Center Road.

Modeled As: 5 Lane, High Speed Major Arterial Highway

2020 ADT on the Alternative:

Concord Rd to SR 745	12,000	Lewis Center to S. Old St.	13,000
SR 745 to SR 257	26,000	S. Old St. Rd to Bale Kenyon	15,000
S Section Line to Steitz Rd	11,000	Bale Kenyon to Africa	23,000
Steitz Rd to Liberty Rd	20,000	Africa Rd to US 71	12,000
Liberty Rd to SR 315	9,000	US 71 to Worthington Rd	12,000
SR 315 to US 23	11,000	Big Walnut to SR 3	11,000
Alternative to Lewis Center	17,000		

COMMENTS: This Alternative aligns Home Road and Lewis Center Road at US 23 connecting to Big Walnut Road at its intersection with Lewis Center Road and Bale Kenyon Road. This alternative does not significantly change the traffic patterns on roadways west of US 23, but does decrease the volumes on roads east of US 23 such as Hyatts Road, Cheshire Road, Shanahan Road and Orange Road.

ALTERNATIVE No. K1/K2

Extension of Piatt Road north from Cheshire Road to align with Roloson Road at Curve Road and:

K1: extension of Piatt Road directly south from Shanahan Road just east of the railroad, intersecting Orange Road east of the railroad and west of South Old State Road

OR

K2: extension of Piatt Road south from Shanahan Road, intersecting Lewis Center Road approximatelly midway between the railroad and South Old State Road, continuing south to intersect Orange Road east of the railroad and west of South Old State Road.

Note: The transportation model results for these two alternatives are the same since their connection points at Shanahan Road and Orange Road are the same.

Modeled As: 3 Lane Moderate Speed Arterial Highway

2020 ADT on the Alternative:

US 36/SR 37 to Curve Rd	3,000	Cheshire Rd to Shanahan Rd	11,000
Curve Rd to Berlin Station Rd	11,000	Shanahan Rd to Lewis Center Rd	16,000
Berlin Station Rd to Cheshire Rd	6,000	Lewis Center Rd to Orange Rd	13,000

COMMENTS: The extension of Piatt Road creates an additional north south route east of US 23 from Orange Road to US 36/SR 37. Traffic volumes are projected to decrease on the adjacent north south routes such as Lackey Old State Road, Africa Road south of Cheshire Road. Traffic volumes are also projected to decrease on US 23 between Powell Road and Shanahan Road by approximately 11 to 23 percent or 6,000 to 8,000 vpd.

ALTERNATIVE No. L

Great Lakes Mid-Atlantic Corridor - New interstate corridor following US 23 from the Marion County/Delaware County border to just south of Coover Road, east to connect with US 42 at its intersection with Harris Road, south along Harris Road connecting to US 36/SR 37 at its intersection with Baker Road/Sweeney Road, and east along US 36/SR 37 to IR 71.

Modeled As: Freeway
2020 ADT on the Alternative:

SR 229 to Coover Rd	40,000
Coover Rd to US 42	35,000
US 42 to US 36/SR 37 @ Baker Rd	40,000
US 36/SR 37 @ Baker Rd to Africa Rd	75,000
Africa Rd to IR 71 north of Cheshire	44,000
IR 71 north of Cheshire to the Franklin County Line	135,000

COMMENTS: Alternative L revisits the previously studied IR 73 or Great Lakes Mid Atlantic Corridor. The model results show decreases of greater than 10 percent on many roads in the County with the addition of this Alternative to the road network. Traffic volumes on US 23 are projected to decrease from 24 to 40 percent south of the Alternative to Powel Road. US 36/SR 37 is projected to decrease west of the Alternative to the Point and from the Point to US 23. However, traffic volumes on Central Avenue and William Street through the City of Delaware will not be significantly changed with the proposed IR 73 corridor. Traffic volume adjustments occur on the roads immediately east and west of US 23 with the addition of the proposed IR 73 corridor. For instance, traffic volumes on Hills-Miller Road and Coover Road are projected to increase slightly (approximately 13 to 14 percent) while volumes are projected to decrease on Panhandle Road, Troy Road and SR 521. Roads in the southwest portion of the County south of Central Avenue and west of US 23 and also the roads in the southeast portion of the County are not significantly changed by the inclusion of this Alternative.

ALTERNATIVE No. M

New interchange at IR 71 and Big Walnut Road

Modeled As: Diamond Interchange
2020 ADT on the Alternative:

IR 71 & Big Walnut Road Ramp 2020 ADT:	
Northbound Merge	3,600
Southbound Merge	17,200
Northbound Diverge	18,200
Southbound Diverge	3,400

COMMENTS: The addition of an interchange at IR 71 & Big Walnut Road is projected to decrease the volumes on roads south of Big Walnut Road including US 23 south of Lewis Center Road. Traffic volumes on the IR 71 & Polaris Parkway interchange are projected to decrease 15 to 17 percent on the northbound diverge and southbound merge ramps. The northbound merge and southbound diverge ramps at the Polaris Parkway & IR 71 interchange are projected to increase 60 to 90 percent, approximately 3000 vpd to a 2020 volume of 7,000 vpd on each ramp. The ramps at the US 36/SR 37 & IR 71 interchange are projected to not experience a significant change in traffic volumes. Traffic volumes on IR 71 south of Big Walnut Road are projected to increase approximately 20 percent.

ALTERNATIVE No. N

Extension of Cheshire Road east from 3B's & K Road, intersecting SR 3 between Sunbury and Galena, and continuing east to connect with SR 37 between Walnut Road and Longshore Road.

Modeled As: 5 lane, High Speed Major Arterial

Cheshire Rd 2020 ADT:	*Alternative. N*	*2020 E+C*
US 23 to Braumiller Rd	15,000	15,000
Braumiller Rd to Piatt Rd	11,000	11,000
Piatt Rd to Lackey Old State Rd	19,000	18,000
Lackey Old State Rd to Africa Rd	24,000	24,000
Africa Rd to S. 3B's & K Rd	9,000	9,000
2020 ADT on the Alternative:		
S. 3B's & K to IR 71	14,000	
IR 71 to Rome Corner's Rd	14,000	
Rome Corner's Rd to SR 3	12,000	
SR 3 to SR 37	7,500	

COMMENTS: A review of the model results for the extension of Cheshire Road connecting east of SR 3 with SR 37 show a reduction in traffic volumes on Cherry Street and Granville Street through the Village of Sunbury. A decrease in traffic volumes is also projected for Columbus Street through the Village of Galena and Vans Valley Road just east of Galena. Traffic volumes are projected to increase approximately 13 percent or 1000 vpd on Walnut Street between SR 3 and Columbus Street. Traffic volumes are not projected to change on roads west of Alum Creek Lake. This alternative provides an alternative east west route from between SR 3 and SR 37 other than Cherry Street and Granville Street through the Village of Sunbury.

ALTERNATIVE No. N + P

Extension of Cheshire Road east from 3B's & K Road, intersecting SR 3 between Sunbury and Galena, and continuing east to connect with SR 37 between Walnut Road and Longshore Road with a diamond interchange at the extension of Cheshire Road and IR 71.

Modeled As: 5 lane, High Speed Major Arterial; Diamond Interchange

IR 71 & Cheshire Road Ramp 2020 ADT:

Northbound Merge	1,900
Southbound Merge	17,400
Northbound Diverge	15,700
Southbound Diverge	1,600

Cheshire Rd 2020 ADT:	*Alternative N+P*	*2020 E+C*
US 23 to Braumiller Rd	12,000	15,000
Braumiller Rd to Piatt Rd	9,000	11,000
Piatt Rd to Lackey Old State Rd	16,000	18,000
Lackey Old State Rd to Africa Rd	21,000	24,000
Africa Rd to S. 3B's & K Rd	10,000	9,000
2020 ADT on the Alternative:		
S. 3B's & K to IR 71	21,000	
IR 71 to Rome Corner's Rd	22,000	
Rome Corner's Rd to SR 3	15,000	
SR 3 to SR 37	5,000	

COMMENTS: A review of the model results for the extension of Cheshire Road connecting east of SR 3 with SR 37 with the inclusion of an interchange at IR 71 are similar to those for Alternative N which does not

include an interchange at IR 71. The 2020 model results project a reduction in traffic volumes on Cherry Street and Granville Street through the Village of Sunbury. Without the interchange, the extension of Cheshire Road is projected to increase slightly the traffic volumes on Walnut Street through the Village of Galena. With the addition of the interchange at IR 71, the 2020 traffic volumes on Walnut Street between SR 3 and Columbus Street are projected to stay similar to those of the E+C Network which does not include the extension of Cheshire Road and the additional IR 71 interchange.

The presence of an additional interchange is projected to increase traffic volumes on IR 71 between the Polaris Parkway and US 36/SR 37. The IR 71 & Polaris Parkway and IR 71 & US 36/SR 37 interchange ramps will likewise experience a shift in traffic volumes. For instance, the Polaris Parkway diverge ramps are projected to increase while the merge ramps are projected to not significantly change with the inclusion of the Cheshire Road extension and interchange. The US 36/SR 37 diverge ramps are projected to not significantly change with the inclusion of the Cheshire Rd & IR 71 interchange while the merge ramps are projected to decrease approximately 30 percent.

ALTERNATIVE No. Q1

Realignment of SR 605 northwest from Centerburg Road connecting with Porter Central Road south of Olive Green Road.

Modeled As: 3 Lane, Moderate Speed, Minor Arterial Highway
2020 ADT on the Alternative:

Condit Road - Centerburg Rd to Alternative	3,000
Alternative Connection Condit Road to Porter Central	2,000
Porter Central – Alternative to SR 521	2,500

COMMENTS: This alternative connects Porter Central Road with Condit Road to allow a continuous north south route from Franklin County, through Delaware County and into Knox County. Traffic volumes on the roadway network in the vicinity of the alternative do not significantly change with the inclusion of this alternative. Alternative Q2 shows a different location for the connection between Porter Central Road and Condit Road. Traffic volumes on Condit Road and Porter Central Road do not vary significantly between the Alternatives. The benefit associated with both Alternative Q1 and Q 2 is a slight reduction in delay and in the potential for vehicle conflicts due to the elimination of turning movements for motorists traveling between Porter Central Road and Condit Road.

ALTERNATIVE No. Q2

Extension of Condit Road northwest to connect with Porter-Central Road south of SR 656
Modeled As: 3 Lane Moderate Speed Minor Arterial Highway
2020 ADT on the Alternative:

Condit Road - Centerburg Rd to Olive Green Rd	3,000
Alternative Connection Condit Road to Porter Central	2,000
Porter Central – Alternative to SR 656	1,500

COMMENTS: Alternative Q2 is another option to connect Condit Road and Porter Central Road, allowing a continuous north south roadway from Franklin County, through Delaware County and into Knox County. Traffic volumes do not significantly change on the roads in the vicinity of the alternative. Also, traffic volumes on Condit Road and Porter Central Road do not vary significantly between the Alternatives. The benefit associated with Alternative Q1 and Q 2 is a slight reduction in delay and in the potential for vehicle conflicts due to the elimination of turning movements for motorists traveling between Porter Central Road and Condit Road. The Alternative Q2 alignment would create an additional intersection at Ulery Road as I connects Condit Road to Porter Central. Alternative Q1 alternative does not cross any additional roads.

ALTERNATIVE No. R

Extension of Cleveland Avenue north from Maxtown Road to connect with Worthington Road.

Modeled As: 5 lane, High Speed Major Arterial Highway
2020 ADT on the Alternative: South of Worthington Rd 25,000

COMMENTS: Alternative R extends Cleveland Avenue to provide a direct connection from the Franklin County Line/City of Columbus area to Worthington Road in Delaware County. Traffic volumes on vicinity streets are not significantly changed with the addition of this Alternative with the exception of Polaris Parkway between Worthington Road and the Alternative and Africa Road south of Worthington Road. Traffic volumes on these two roadways decrease as motorists utilize the extension of Cleveland Rd to Worthington Rd.

ALTERNATIVE No. S

Extension of Rome Corners Road south to connect with Worthington Road.

Modeled As: 5 lane, High Speed Major Arterial Highway
2020 ADT on the Alternative:

Lewis Center Rd to Plumb Rd	10,000
Plumb Rd to Dustin Rd	13,000 – 15,000

COMMENTS: The extension of Rome Corners Road from Dustin Road to Worthington Road provides a direct north south connection from the south County Polaris area to the north County area via Worthington Road and Galena Road. Traffic volumes are projected to increase on Rome Corners Road between Cheshire Road and Dustin Road and decrease on South Galena Road from Cheshire Rd to SR 3 as motorists utilize this Alternative connector. Just south of the Alternative, 2020 traffic volumes on Worthington Road to Big Walnut Road and on Lewis Center Road from Worthington Rod to South Old 3 C are expected to increase. Projected volumes on other roadways in the vicinity of the Alternative are not expected to significantly change.

ALTERNATIVE No. T

Extension of Sunbury Road north from Red Banks Road east of the Hoover Reservoir northeast to connect with Harlem Road.

Modeled As: 5 lane, High Speed Major Arterial Highway
2020 ADT on the Alternative: Sunbury Rd to Woodtown Rd 5,000

COMMENTS: Alternative T provides a shorter and direct connection from Sunbury Road across the Hoover Reservoir to Harlem Road/Woodtown Road, eliminating the turns required at the existing intersection of Harlem Road & Sunbury Road. This connector, combined with Alternative J, would provide a continuous east west route through southern Delaware County from the Union County Line through to Licking County. The projected traffic volumes with the inclusion of this Alternative show a change in traffic patterns on the roads in the immediate vicinity of the Alternative connector. Traffic volumes are projected to increase approximately 15 percent or 2000 vpd on Sunbury Road, except for the section between the Alternative and Harlem Road, which is projected to decrease due to the diversion from this section to the Alternative. A decrease in volumes of approximately 40 percent is also projected for Harlem Road west of the Alternative with an increase of approximately 60 percent or 1400 vpd on Woodtown Road just east of the Alternative. Traffic volumes on Red Banks Road and on Gorsuch Road from Red Banks Road to Miller Paul Road are projected to double with the addition of the Alternative. Center Village Road is projected to decrease slightly (approximately 700 vpd) between Red Banks Road and Harlem Road with no significant change in volumes east of Harlem Road.

ALTERNATIVE No. U

New bridge over the Hoover Reservoir connecting Big Walnut Road and Center Village Road.

Modeled As: 5 lane, High Speed, Major Arterial Highway

2020 ADT on the Alternative: Big Walnut Rd to Center Village Rd 9,000

COMMENTS: Alternative U connects Big Walnut Road directly across the Hoover Reservoir to Center Village Road, creating an east west route through southern Delaware County into Licking County where Center Village Road connects to SR 62 via Duncan Plains Road. The possible interchange at Big Walnut Road and IR 71 places more importance on such an east west route between the two these two counties. Traffic volumes split between the existing Sunbury Road bridge over the reservoir and the Alternative. Woodtown Road and Center Village Road both east west routes which connect from Sunbury Road to the southeast Delaware County are projected to have an increase in traffic volumes with the addition of the Alternative.

ALTERNATIVE No. V

Extension of Fancher Road from Harlem Road southwest to Smothers Road.

Modeled As: 5 lane, High Speed Major Arterial Highway

2020 ADT on the Alternative:

Fancher Road east of Harlem Road	4,000
Smothers Road west of Harlem Road	8,000

COMMENTS: This alternative aligns Fancher Road and Smothers Road at Harlem Road. Traffic volumes do not significantly change on the roads in the vicinity of the alternative. Fancher Road and Smothers Road slightly increase, approximately 13 to 14 percent, immediately east and west of Harlem Road. Aligning these two roadways provides a continuous east west route from Worthington Road to the Licking County along the Delaware County/Franklin County Line via Hannawalt Road, County Line Road, Smothers Road and Fancher Road.

ALTERNATIVE No. W

Polaris Parkway with Split Diamond Interchange

Modeled As: 5 to 8 lane High Speed Arterial with Split Diamond Interchange

2020 ADT on the Alternative:

East of Polaris Parkway to IR 71	22,000 to 24,000
East of IR 71 to Polaris Parkway	22,500

COMMENTS: The Polaris Parkway split diamond interchange changes the traffic patterns in the vicinity of the IR 71 & Polaris Parkway interchange and splits the traffic volumes, particularly on the northbound merge and southbound diverge ramps, which are projected to be approximately 30,000 to 35,000 vpd by 2020.

ALTERNATIVE No. X

New interchange at IR 71 and SR 521

Modeled As: Diamond Interchange

2020 ADT on the Alternative:

IR 71 & SR 521 Ramp	2020 ADT:
Northbound Merge	8,900
Southbound Merge	7,900
Northbound Diverge	7,900
Southbound Diverge	8,400

COMMENTS: An interchange at SR 521 provides an additional location in the northern portion of Delaware County for motorists to access IR 71. The southbound diverge and northbound merge ramps at the US 36/SR 37 & IR 71 interchange are projected to decrease by approximately 65 to 70 percent due to use of the alternative interchange at SR 521. The projected traffic volumes on the northbound diverge and southbound merge ramps at the US 36/SR 37 interchange do not significantly change with the addition of this Alternative. Projected traffic volumes on SR 521, Kilbourne Road and US 42 are expected to increase with the addition of an interchange at SR 521 & IR 71. North south routes south of SR 521, such as 3B's & K Road, Old State Road, SR 656, SR 61, and North Galena Road are expected to experience a decrease in traffic volumes if this interchange is added.

ALTERNATIVE No. Y

Extension of Mink Street from River Road east to County Home Road at its intersection with US 42 with a new interchange at IR 71 and SR 521.

Modeled As: 5 lane, High Speed Major Arterial Highway; Diamond Interchange

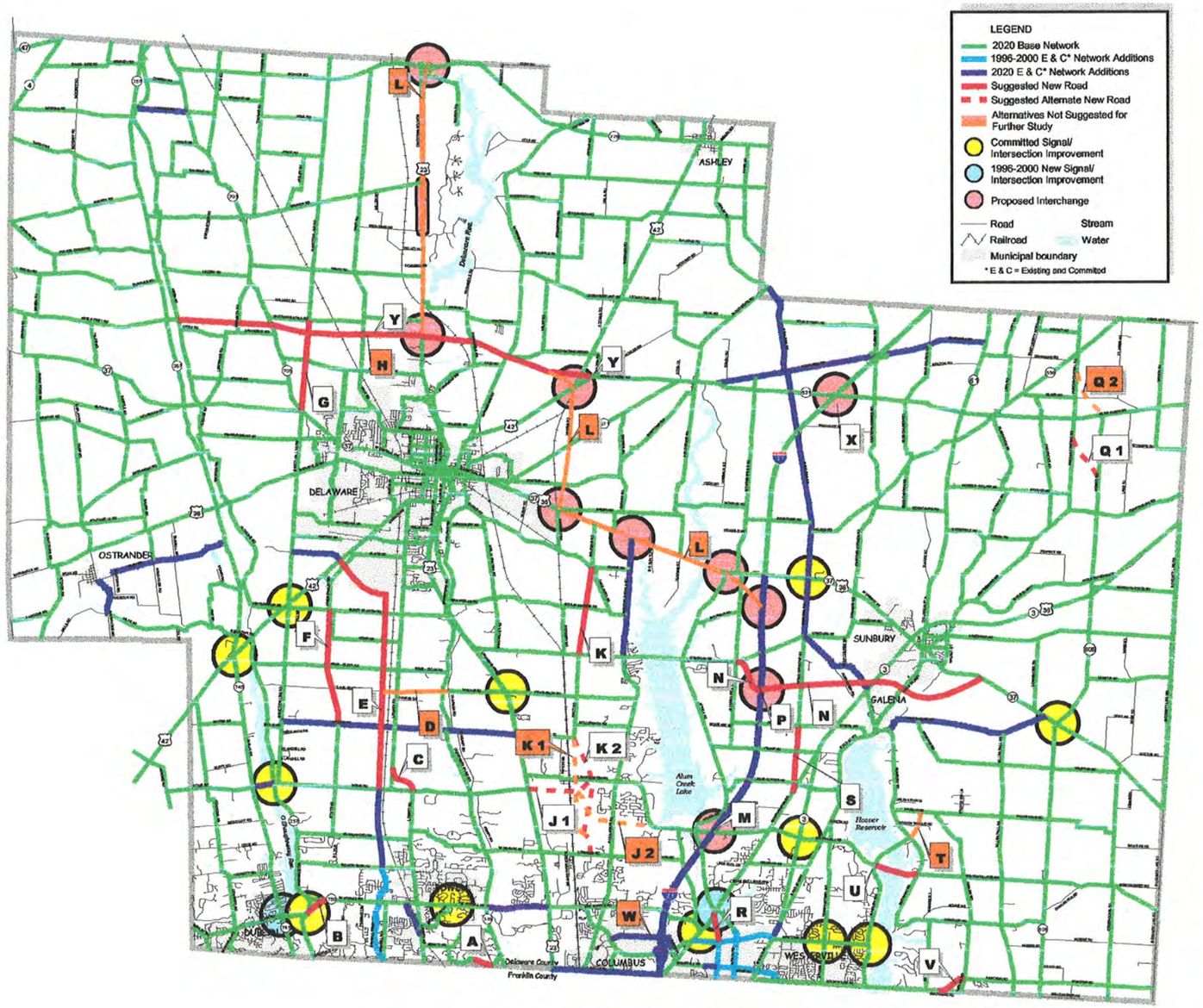
2020 ADT:		
	West of SR 203	3,000
	SR 203 to Troy Rd	6,000
	Troy Rd to Panhandle Rd	10,000
	Panhandle Rd to SR 521	17,000
	SR 521 to N Galena Rd	23,000
	N Galena Rd to IR71	30,000
	IR 71 to Carter's Corner	14,000
	Carter's Corner to SR 656	7,000
	East of SR 656	2,000

IR 71 & SR 521 Ramp	2020 ADT:
Northbound Merge	10,400
Southbound Merge	9,300
Northbound Diverge	9,800
Southbound Diverge	10,300

COMMENTS: Alternative Y creates an east west route in the north half of Delaware County which extends from SR 4 in Union County, across the existing Mink Street bridge over the Scioto River, east into Knox County via SR 521/Olive Green Road. This alternative reduces traffic volumes on the east/west roads north and south of the alternative but does not significantly change the traffic volumes projected on US 36 from the Union County line through the City of Delaware. Traffic volumes on the major north/south routes through the County immediately south of the Alternative, such as SR 61, North Galena Rd, S. Galena Rd, Carter's Corner, and Horseshoe Road are projected to decrease while volumes on some major north/south routes north of the alternative such as N Galena Road/Ashley Road, SR 257 are projected to increase with the addition of a continuous east west route through northern Delaware County

The addition of an interchange with IR 71 at SR 521 decreases traffic volumes on US 36/SR 37 east and west of IR 71. No significant traffic volume changes are projected on the remaining portion of US 36/SR 37 in Delaware County. A significant decrease in traffic volumes is projected for the northbound merge and southbound diverge ramps at the existing IR 71 & US 36/SR 37 interchange due to the additional interchange at

SR 521. Approximately 70 percent of northbound motorists use the new interchange at SR 521 rather than the existing interchange at US 36/SR 37 to access IR 71. Approximately 65 percent of southbound motorists are projected to use SR 521 to exit IR 71 rather than the southbound diverge ramp at US 36/SR 37. The northbound diverge and southbound merge ramps at the IR 71 & US 36/SR 37 interchange are not projected to significantly change.



2020 Delaware County Road Network Alternatives

A. Manning Parkway to Church Hill Drive Connection extending from Jewett Road at the first 'S' curve east of Liberty Road to SR 315 just north of the Franklin County/Delaware County Line.

B. Extension of Glick Road east from SR 257 to connect with Powell Road west of Wellington Boulevard.

C. Relocate Liberty Road north of Home Road southeast to align with Liberty Road south of Home Road.

D. Extension of Winter Road west from Chapman Road to align with Clark-Shaw Road at Liberty Road.

E. Extension of Sawmill Parkway from Home Road north past Bunty Station Road, continuing northwest to intersect with US 42 between Owen-Fraley Road and Slack Road.

F. Extension of Steitz Road north from Hyatts Road to align with Owen-Fraley Road at Bunty Station Road.

G. Extension of South Section Line Road north from SR 37 to align with North Section Line Road as Buttermilk Hill Rd.

H. Extension of Mink Street east from River Road to connect with US 23 between Hills-Miller Road and Coover Road.

J.1. Extension of Home Road east from US 23, crossing the railroad tracks and connecting to Lewis Center Road east of Lewis Center and west of South Old State Road.
2. Extension of Home Road east from US 23 to connect to Big Walnut Road at its intersection with Lewis Center Road.

K. Extension of Piatt Road north from Cheshire Road to align with Roloson Road at Curve Road AND....
1. Extension of Piatt Road directly south from Shanahan Road just east of the railroad, intersecting Orange Road east of the railroad and west of South Old State Road OR...
2. Extension of Piatt Road south from Shanahan Road, intersecting Lewis Center Road approximately midway between the railroad and South Old State Road, continuing south to intersect Orange Road east of the railroad and west of South Old State Road.

L. Great Lakes Mid-Atlantic Corridor - New interstate corridor following US 23 from the Marion County/Delaware County border to just south of Coover Road, east to connect with US 42 at its intersection with Harris Road, south along Harris Road connecting to US 36/SR 37 at its intersection with Baker Road/Sweeney Road, and east along US 36/SR 37 to IR 71.

M. New interchange with IR 71 at Big Walnut Road.

N. Connector Road extending from the intersection of Cheshire Road & S. 3 B's & K Road to connect with SR 37 between Walnut Road and Longshore Road.

P. New interchange with IR 71 south of Cheshire Road

Q.1. Realignment of SR 605 northwest from Centerburg Road connecting with Porter Central Road south of Olive Green Road OR....
2. Extension of Condit Road northwest to connect with Porter-Central Road south of SR 656.

R. Extension of Cleveland Avenue north from Maxtown Road to connect with Worthington Road.

S. Extension of Rome Corners Road south to connect with Worthington Road.

T. Extension of Sunbury Road north from Red Banks Road east of the Hoover Reservoir northeast to connect with Harlem Road.

U. New bridge over the Hoover Reservoir connecting Big Walnut Road and Center Village Road.

V. Extension of Fancher Road from Harlem Road southwest to Smothers Road.

W. Polaris Parkway Split Diamond Interchange.

X. New Interchange at IR 71 and SR 521.

Y. Extension of Mink Street from River Road east to County Home Road at its intersection with US 42 and a new interchange at IR 71 and SR 521.

Delaware County and Delaware City Thoroughfare Plans

DELAWARE COUNTY PRELIMINARY DRAFT THOROUGHFARE PLAN

The information shown on this map is compiled from various sources available to us which we believe to be reliable.
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DELAWARE CITY THOROUGHFARE PLAN POSSIBLE 2020 ROAD NETWORK
REVIEW OF PRELIMINARY ALTERNATIVE RESULTS

Notes:

ADT:	Average Daily Traffic volume
vpd:	Vehicles per Day
2020 E + C:	Existing roadways plus those roadways committed to be built by the year 2020.
Volume changes:	Refers to the volume changes noted when comparing the 2020 E + C Network with the 2020 E + C Network with the Alternative route or routes added to the roadway system.
The "Point":	Refers to railroad underpass where the combined US 36/SR 37 splits into separate routes.

ALTERNATIVE No. 1A + 1B

East/west connector road between SR 42 and US 23.

Modeled As:	High Speed Limited Access Highway, 5 lane	
2020 ADT on the Alternative:	East of US 42	12,400
	West of US 23	20,200

COMMENTS:

Generally reduces volumes on the east/west roadways of Slack Rd, Bunty Station Rd, Hull Dr, and Hawthorne Blvd which are in close proximity to the Alternative. It should be noted that the reduction in volume on Bunty Station Rd would include a reduction in truck volumes. This Alternative has the potential of serving as a truck route between US 23, US 42, and S Section Line Road.

Traffic volumes are projected to increase on north of the Alternative on South Section Line Rd by approximately 22 % or approximately 3,000 vpd and volumes decrease south of the Alternative by approximately 20 % or approximately 2,000 vpd. Volumes on Central and William through the City, on US 23, or other major arterial highways are not affected.

ALTERNATIVE No. 2

Extension of Sawmill Parkway from Home Road north past Bunty Station Road, combining with alternative 1A to connect to US 42 south of Slack Road.

Modeled As:	High Speed Major Arterial, 5 lane	
2020 ADT on the Alternative:	East of US 42	10,800
	North of Home Rd	24,900

COMMENTS:

Provides an alternate north/south route between Delaware and Columbus. Reduces volumes by approximately 20% on the north/south routes of Liberty Rd and S. Section Line Rd south of US 42. These two roadways are projected to operate at or over capacity by 2020. Reduces volumes on Powell Road east and west of SR 315 which will help improve traffic flow in this area.

ALTERNATIVE No. 3A

Connector road beginning at the existing intersection of Armstrong Road & Pollock Road, following east along Curve Road then north to connect with US-36/SR 37 between Glenn Road and Sweeney Road.

Modeled as:	High Speed Limited Access Highway, 5 lanes	
2020 ADT on the Alternative:	East of US 23	24,700
	Armstrong to Curve	19,100
	Curve Rd to Glenn Rd	27,500
	Glenn Rd to US 36/SR37	20,400

COMMENTS: This Alternative is projected to reduce volumes on Curve Rd, Lackey Old State Rd and other connectors between Curve and US 36/SR 37 such as Sweeney Rd and Roloson Rd which are in close proximity to the Alternative. It provides a small volume reduction (13 % to 17%) on US 36/SR 37 between the Alternative and US 23. Traffic is projected to increase on US 36/SR 37 east of the Alternative a small percentage of 11 % to 13 %. No significant change in traffic volumes is projected on US 42 or other major roads west of US 23. This Alternative does not connect to US 23, which causes a traffic volume increase on S Sandusky north of US 42, affecting the US 42 & US 23 intersection/interchange.

ALTERNATIVE No. 3B

Connector road east from alternative 1B at US 23 to connect with US 36/SR 37 between Glenn Road and Sweeney Road.

Modeled as:	High Speed Limited Access Highway, 5 lanes	
2020 ADT on the Alternative:	US 23 to Berlin Station	15,300
	Berlin Station to Curve Rd	18,300
	Curve Rd to US 36/SR 37	20,000

COMMENTS: This Alternative does not provide a significant change in volumes (4% to 6%) on US 36/SR 37 between the Alternative and US 23. Traffic volumes on US 36/SR 37 east of the Alternative increase by a small percentage of 11% to 17%. No significant change in volumes on US 23 or on Central Ave. and William St through the City. No significant change in traffic volumes on US 42 or other major roads west of US 23. Volume shifts occur on the roads in close proximity to the Alternative such as Glenn Rd, Sweeny Rd, Curve Rd, Berlin Station Rd and Braumiller Rd. Better connection opportunities to US 23 than Alternative 3A.

ALTERNATIVE No. 4

Extension of Pennsylvania Avenue east from US 23 to the intersection of US 42 &-Horseshoe Road.

Modeled as:	High Speed Major Arterial, 5 lane	
2020 ADT on the Alternative:	US 23 to US 42	11,400

COMMENTS: Traffic volumes increase on existing Pennsylvania Ave. from approximately 1,300 to 2,700 vpd but these are still under the D/E threshold limit of 15,000 vpd for a two lane roadway (10,314 west of US 23, 6582 east of Euclid). Trips on residential streets north of SR 37 and south of Pennsylvania Ave increase by 16% to 30% or approximately 400 to 500 vpd -- however, these relatively low volume roadways continue to operate at a good level of service. Volumes on Liberty Road and Euclid Road south of Pennsylvania Ave do not significantly change. The volume on Panhandle Rd east of US 23 at the river crossing decreases by approximately 30% or approximately 2,500 vpd allowing the operation of this section of roadway to improve from an acceptable to a good. The volume on the Lake St decreases by 25 % or approximately 4,000 vpd providing a change in operation from poor to acceptable. The volume on Sandusky St just south of Pennsylvania Ave increases a small amount (17% or approximately 1,100 vpd) but does not affect the good level of service rating for this section of roadway. Volumes along the remaining section of Sandusky St do not significantly change and continue to operate with at an acceptable level of service. This Alternative does not significantly change the volumes on Troy Rd.

ALTERNATIVE No. 13

Modification of the US 23 & Pennsylvania Avenue Interchange to provide for all movements.

Modeled as:	Diamond Interchange		
2020 ADT on the Alternative:	*Ramp volumes:*	*E+C*	*Alternative*
	NB Merge	3,100	3,700
	SB Diverge	2,500	3,300
	SB Merge	------	2,700
	NB Diverge	------	2,600

COMMENTS: This Alternative causes no significant change in volume on US 23, US 36/SR 37, Central Ave., and William St and no significant change on Panhandle Rd east of US 23. Traffic volumes increase on Pennsylvania Ave by approximately 26% but this roadway continues to operate at a good level of service even with the additional trips. Volumes decrease on Sandusky St between SR 37 and Lincoln by approximately 19% but the traffic volumes on this roadway just south of Pennsylvania Avenue do not significantly change. (< 7% reduction)

ALTERNATIVE No. 4 + 13

Extension of Pennsylvania Avenue east from US 23 to the intersection of US 42 &-Horseshoe Road combined with the modification of the US 23 & Pennsylvania Avenue Interchange to provide for all movements.

Modeled as:	Diamond Interchange and High Speed Major Arterial, 5 lane		
2020 ADT on the *Alternative:*	US 23 to US 42	18,000	
	Ramp volumes:	*E+C*	*Alternative*
	NB Merge	3,100	4,200
	SB Diverge	2,500	2,600
	SB Merge	------	5,300
	NB Diverge	------	6,000

COMMENTS: The extension of Pennsylvania Avenue attracts trips from Executive Blvd and other city streets such as Liberty St. Traffic volumes on Executive Blvd reduce from approximately 4,500 vpd to 1,300 vpd. Volumes on Pennsylvania Ave increase 50% west of US 23 from approximately 7,500 vpd to 11,500 vpd but this road continues to operate at a good level of service even with this volume change. There is no significant impact on US 23 with the inclusion of this Alternative in the road network, although the freeway section of US 23 experiences a small increase of approximately 16% between Pennsylvania Ave and S Sandusky St. The Panhandle Rd bridge over the river east of US 23 decreases approximately 8,000 vpd to approximately half of its projected 2020 volume. The river crossing south of the city at Armstrong Rd does not experience a significant change in volume.

ALTERNATIVE No. 5E

Northeastern Bypass route connecting alternative 5W at US 23 with US 36/SR 37 at alternative 3A/3B just west of the railroad tracks.

Modeled as:	High Speed Limited Access Highway, 5 lanes	
2020 ADT on the Alternative:	US 36/SR 37 to Bowtown Rd	28,400
	Bowtown Rd to SR 521	27,600
	SR 521 to US 42	27,100
	US 42 to Horseshoe Rd	26,200
	Horseshoe Rd to Panhandle Rd	24,300
	Panhandle Rd to US 23	24,200

COMMENTS: This Alternative provides a connection between US 36/SR 37 and US 23 which does not require travel through the City of Delaware. Traffic volumes decrease on US 36/SR 37 between the Alternative the Point by approximately 20%. Traffic volumes also decrease approximately 20% to 25% on US 36 and SR 37 between the Point and US 23. Volumes on US 36/SR 37 increase approximately 20% east of the Alternative to Lackey Old State Road. Volumes on US 23 between Pennsylvania Ave and the Alternative decrease between 30% to 35%. Volumes on Central Ave and William St through the City experience no significant change.

ALTERNATIVE No. 5W

Northwestern Bypass route extending east from the existing intersection of South Section Line Road &-SR 37/SR 203 intersecting with US 23 mid-way between Hills Miller and Coover Roads.

Modeled as:	High Speed Limited Access Highway, 5 lane	
2020 ADT on the Alternative:	SR 37/SR 203 to Hills-Miller	12,300
	Hills-Miller to Troy Rd	9,700
	Troy Rd to US 23	11,100

COMMENTS: This Alternative connects US 23 to SR 37, SR 203 and S. Section Line Road. It is not projected to significantly change volumes on US 23, US 36, SR 37 or other major roads. Traffic volumes are projected to decrease on east/west roads in the vicinity of the Alternative such as Coover Rd and Hills Miller Rd. Volumes on Coover Rd would decrease by a relatively small percentage of 13 while volumes Hills Miller Rd would decrease substantially by 74 %. Hills Miller Rd is projected to operate over capacity by the year 2020; this decrease would allow this roadway to improve from a poor to a good level of service. Houk Road decreases between the Alternative and SR 37 by approximately 30% or 900 vpd and also decreases north of SR 37 by approximately 15% or 1,500 vpd with no significant change in volumes south of SR 37. County Alternatives G and H, which connect North and South Section Line and connect Mink Street with US 23, will serve the same function as Alternative 5W while providing a better opportunity for regional routes.

ALTERNATIVE No. 6

East/west connector road from the existing intersection of SR 37/SR 203 & South Section Line Road east to the committed Houk Road extension.

Modeled as:	High Speed Major Arterial, 5 lane	
2020 ADT on Alternative:	S Section Line to Houk	14,000
	Houk to Troy	10,000

COMMENTS:
This Alternative does not significantly change volumes on US 23, Central Ave/SR 37 or William St/US 36 through the City. It reduces by over half the volumes on Hills Miller Rd west of the Houk Extension. Also traffic volumes are reduced by approximately 20% on SR 203 just north of SR 37, and traffic volumes on Houk Rd between SR 37 and the Alternative are reduced by approximately one third. The addition of this Alternative to the road network does not significantly change the volume on the Panhandle Rd river crossing east of US 23.

ALTERNATIVE No. 7

Extension of the committed connector road between Houk Road and Troy Road east to align with the existing intersection of US 23 & Panhandle Road.

Modeled as:	High Speed Major Arterial, 5 lane	
2020 ADT on the Alternative:	Houk Rd to Troy Rd	8,100
	Troy Rd to US 23	10,400
	US 23 to Panhandle Rd	17,600

COMMENTS: This Alternative does not significantly change the volumes on US 23, US 36/SR 37 or Central Ave/SR 37, William St/US 36 and on the Panhandle Rd river crossing east of US 23. Volumes on Pennsylvania Ave are reduced 12% or 3,000 vpd and traffic volumes are reduced on Executive Boulevard by 42% or approximately 2,000 vpd.

ALTERNATIVE No. 6 + 7

East/west connector road from the existing intersection of SR 37/SR 203 & South Section Line Road east to align with the existing intersection of US 23 & Panhandle Road.

Modeled as:	High Speed Major Arterial. 5 lanes	
2020 ADT on the Alternative:	S Section Line to Houk Rd	17,800
	Houk Rd to Troy Rd	17,000
	Troy Rd to US 23	17,000
	US 23 to Panhandle Rd	18,000

COMMENTS: This Alternative does not significantly change volumes on US 23, US 36/SR 37, or on Central Ave/SR 37 and William St/US 36 through the City. It provides a route between SR 37/SR 203 and US 23 in the rapidly developing northwest area of the City and is projected to reduce traffic volumes by approximately 30% to 40% on the local east/west roads such as Pennsylvania Ave, Executive Blvd, and Hills Miller Rd.

ALTERNATIVE No. 8

Extension of River Oaks Drive west from Stratford Road, aligning with the intersection of US 23 & Cottswold Drive.

Modeled as: Moderate Speed Minor Arterial, 3 lanes

2020 ADT on the Alternative: East of S. Section Line Rd 6,800

COMMENTS: Traffic volumes in the vicinity of the Alternative are not projected to significantly change with the exception of a small to moderate increase on Stratford Rd of 22% south of the alternative and 34% north of the alternative. This Alternative would allow a route to access US 23 other than the intersection of SR 315/Stratford Road. The intersection of US 23 & SR 315/Stratford Road is projected to operate poorly in the year 2020 without improvements.

ALTERNATIVE No. 9A

Extension of Lexington Boulevard south to US-36.

Modeled as: Moderate Speed Minor Arterial, 3 lanes

2020 ADT on the Alternative: US 36 to SR 37 7500

COMMENTS: The addition of this Alternative to the road network causes a shift of traffic as local trips utilize the most convenient connection between US 36 and SR 37. It does not affect volumes on US 36 and SR 37 from Curtis St to the Point.

ALTERNATIVE No. 9B

Extension of Curtis Street north to SR 37.

Modeled as: Moderate Speed Minor Arterial, 3 lanes

2020 ADT on the Alternative: US 36 to SR 37 4700

COMMENTS: Trips are shifted from local streets in the City area east of Curtis St to use this connection between William St/US 36 and Central Ave/SR 37. Volumes on William St/US 36 and Central Ave/SR 37 are not projected to significantly change with the inclusion of the Alternative. Traffic volumes on Houk Rd between William St/US 36 and Central Ave/SR 37 are also projected to not significantly change

ALTERNATIVE No. 10

Connector road between Firestone Drive and South Street extending west to the Houk Road extension between US 36 and Pittsburg Drive.

Modeled as: Moderate Speed Minor Arterial, 3 lanes

2020 ADT on the Alternative: Curtis St. to Houk Extension 3,100

COMMENTS: This Alternative is projected to cause a small volume reduction of between 10% to 23 % on Pittsburgh Dr. east of Houk Rd. It is also projected to increase traffic volumes by approximately 20% on Houk Rd north of the Alternative. This connection between Curtis Street and Houk Road does not attract a large volume of traffic and does not significantly impact area roads.

ALTERNATIVE No. 11

Connector road beginning at the extension of Houk Road just south of Firestone Drive, extending west, intersecting Pittsburg Drive at the west end of the "S" curve just east of South Section Line Road.

Modeled as:	Moderate Speed Minor Arterial, 3 lanes	
2020 ADT on the Alternative:	Houk Extension to Pittsburgh Dr.	4,500

COMMENTS: This Alternative is under review as an option to possible replace the shown E+C Network connection from Houk Road at US 36/William Street to Pittsburg Drive. As such, it is actually not a new roadway addition and will be relabeled as a 2020 E+C Alternate Network Addition.

ALTERNATIVE No. 12

Extension of Hull Drive east from Stratford Road to Pollock Road, crossing the Olentangy River.

Modeled as:	Moderate Speed Minor Arterial, 3 lanes	
2020 ADT on the Alternative:	Stratford Rd to Pollock Rd	9200

COMMENTS: This Alternative is projected to increase traffic volumes on local roads such as Hull Rd and Hawthorne Rd by 20% to 30%. Traffic volumes are projected to increase between 20% or approximately 1,600 vpd to 30% or approximately 1,900 vpd Stratford Rd. These two roadways along with Hull Dr. and Hawthorne Blvd continue to operate at good levels of service even with the increase in volume. However, increases in volume on Stratford Rd will affect the intersection of US 23& SR 315/Stratford Rd which is projected to operate poorly in the year 2020 without improvements. This alternative provides another river crossing south of the City which reduces the volumes on the existing crossing at Olentangy Ave/Armstrong Rd by 22% allowing this section of roadway to improve from an acceptable to a good level of service.

ALTERNATIVE No. 3B + 5E (Eastern Half)

Modeled as:	High Speed Limited Access Highway, 5 lanes	
2020 ADT on the Alternative:	US 23 to Berlin Station Rd	15,500
	Berlin Station Rd to Curve Rd	19,300
	Curve Rd to US 36/SR 37	20,400
	US 36/SR 37 to Bowtown Rd	31,100
	Bowtown Rd to SR 521	30,100
	SR 521 to US 42	27,700
	US 42 to Horseshoe Rd	24,600
	Horseshoe Rd to Panhandle Rd	23,000
	Panhandle Rd to US 23	22,900

COMMENTS: The combination of Alternative 3B and 5E is projected to decrease traffic volumes on US 36/SR 37, allowing it to operate at a good level of service between the Alternative and the Point. Volumes are projected to decrease on SR 37/Central Avenue and US 36/William Street allowing these two roadways to improve from a poor operation to an acceptable operation between the Point and US 23. This Alternative does provide some reduction in traffic volumes through the City area on US 23 from Armstrong Rd to north of Hills Miller Rd. Volumes on US 23 north of Hills Miller are projected to increase, however this portion of the roadway continues to operate at a good level of service. Volumes are projected to reduce on the Armstrong Rd river crossing east of US 23, allowing it to operate at a good rather than acceptable level of service. SR 521 and US 42 continue to operate at a good level of service due to their relatively low volumes regardless of the increases and decreases resulting from the Alternative.

ALTERNATIVE No. 5E + 5 W (Northern Half)

Modeled as:	High Speed Limited Access Highway, 5 lanes	
2020 ADT on the Alternative:	US36/SR 37 to Baker Rd	28,800
	Baker Rd to SR 521	28,000
	SR 521 to US 42	27,700
	US 42 to Horseshoe Rd	27,200
	Horseshoe Rd to Panhandle Rd	28,200
	Panhandle Rd to US 23	28,300
	US 23 to Troy Rd	17,300
	Troy Rd to Hills-Miller Rd	13,400
	Hills-Miller Rd to SR 37/SR 203	14,200

COMMENTS: The combination of Alternative 5E and 5W is projected to reduce traffic volumes on US 36/SR 37 by 30% to 40% between US 23 and the Alternative. It is not projected to affect volumes on Central Ave/SR 37 and Williams St/US 36 west of US 23 through the City. East of the alternative, US 36/ SR 37 traffic volumes are projected to increase, but the volumes remain at an acceptable level of service. This Alternative is projected to reduce volumes on the collector roads of Lake St, Pennsylvania Ave, Troy Rd., Coover Rd, Panhandle Rd and Hills-Miller Rd. In particular, it improves the operation of Hills Miller Rd, Panhandle Rd and Lake St from an acceptable level of service to a good level of service.

ALTERNATIVE No. 5W + 1A + 1B (Western Half)

Modeled as:	High Speed Limited Access Highway, 5 lanes	
2020 ADT on the Alternative:	US 23 to Troy Rd	10,100
	Troy Rd to Hills-Miller Rd	7,500
	Hills Miller Rd to SR37/SR203	10,600
	US 42 to Liberty Rd	11,500
	Liberty Rd to US 23	18,700

COMMENTS: This Alternative does not affect the traffic volumes on US 36/William Street or SR 37/Central Avenue in the City area or US 36/SR 37 east of the City. S Section Line Rd is utilized to access the Alternative, but this road is not projected to significantly increase or decrease in volume. Trips are attracted to the Alternative from adjacent routes, but the changes on these adjacent roadways do not involve a significant increase or decrease in traffic volume. As noted by the ADT shown for the Alternative, the 1A +1B section of this Western Alternative attracts more trips than the northwestern 5West section.

ALTERNATIVE No. 1A + 1B +3 B (Southern Half)

Modeled as:	High Speed Limited Access Highway, 5 lanes	
2020 ADT on the Alternative:	US 42 to Liberty Rd	15,300
	Liberty Rd to US 23	25,200
	US 23 to Berlin Station Rd	19,400
	Berlin Station Rd to Curve Rd	21,200
	Curve Rd to US 36/SR 37	22,900

COMMENTS: The combination of Alternatives 1A, 1B, and 3B are not projected to cause a significant reduction in traffic volumes on US 36/SR 37 west of the Alternative to US 23 (10% to 16% only). Volume reductions of 20% to 30% are projected to occur on Armstrong Rd and Curve Rd and all local roads in close proximity to the 3B portion of the Southern Alternative with volumes projected to decrease by half on Glenn Rd. Traffic volumes are projected to increase on Liberty Rd just south of the alternative by 40% with volume increases of 20% south of Bunty Station Rd and Bean Oller Rd.

ALTERNATIVE No. 14
Connector road from the intersection of Armstrong Road and Curve Road to the intersection of SR 521 and US 36/SR 37.

Modeled as:	Moderate Speed Minor Arterial, 3 lanes Arterial
2020 ADT on the Alternative:	Curve Rd to US 36/SR 37 14,000

COMMENTS: This Alternative is not projected to affect the traffic volumes on US 36 or SR 37 in the City area or US 36/SR 37 east of the City. An increase in traffic volumes is projected for 2020 on Curve Road and on Armstrong Road on the bridge over the river with the inclusion of this Alternative in the road network. An increase in volume is also projected for SR 521. Bowtown Road between the Point and SR 521 is projected to decrease in volume by approximately 42% or 800 vpd with no significant change in volume east of SR 521.

ALTERNATIVE No. 15
One way pair on US 36 and SR 37 from the Point to Lake Street.

2020 ADT on the Alternative:	US 36 west of the Point	25,000 to 27,000
	SR 37 west of the Point	20,000 to 24,000

COMMENTS: This Alternative considers the option of allowing one way travel westbound on SR 37/Central Avenue from the Point to Lake Street and eastbound travel on US 36 from Lake Street to the Point. Motorist can no longer head eastbound on US 36/SR 37 from southbound US 23 with the one way pair in place. Trips divert to either Union Street to access eastbound US 36 or exit at Panhandle prior to the City of Delaware traveling on Hudson, Horseshoe and Channing to head eastbound on US 36/SR 37. Traffic volumes on Cheshire Road are projected to decrease due to motorist using River Street to head eastbound on US 36/William Street or as they head north on Channing Street between US 36 and SR 37 to head west on SR 37/Central Avenue into town. Channing Street would also be used as a turn around location for motorists to access sites along US 36 when traveling west on SR 37. Union Street and Elizabeth Street appear from the model to be used in town to change directions to access the one way pair. S. Sandusky Street and Liberty Street do not experience a significant change in volume. Traffic volumes on Lake Street between US 36/William Street and SR 37/Central Avenue would increase with the one way option in place. This alternative requires further study of the intersections west of the Point to provide a more realistic assessment of the operation of the area roadways with the one way pair in place on US 36 and SR 37 between the Point and Lake Street.

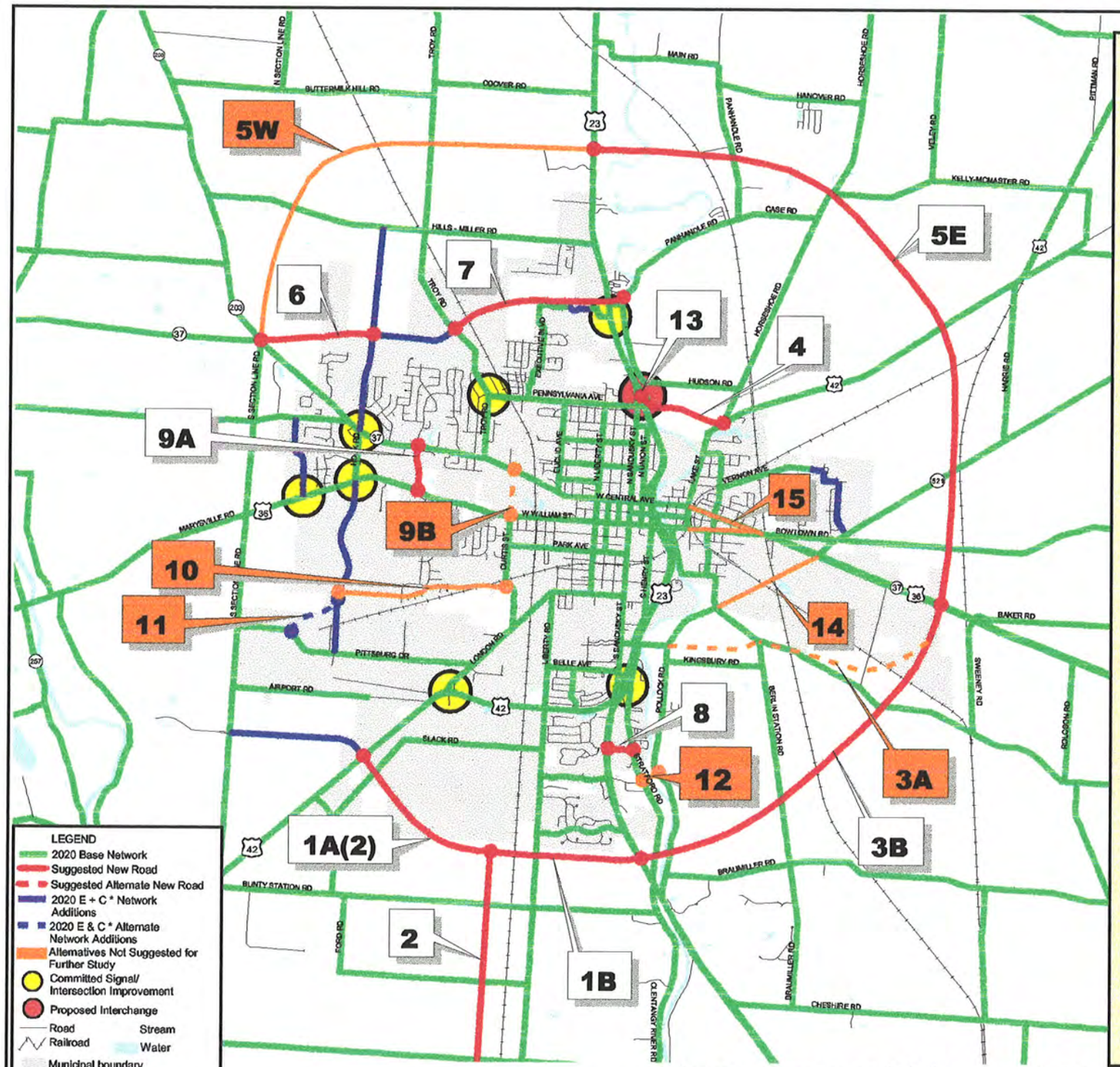
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ms consultants, inc.
engineers - architects - planners

Appendix 5B

Combined Model Network Results



2020 ROAD NETWORK ALTERNATIVES

1 A. East/west connector road between US 42 and proposed Sawmill Parkway extension (Alternative 2), south of Slack Road and north of Bunty Station Road.

B. East/west connector road between the proposed Sawmill Parkway extension (Alternative 2) and US 23, south of Slack Road and north of Bunty Station Road.

2 Extension of Sawmill Parkway from Home Road north past Bunty Station Road, ending at alternative 1A/1B. NOTE: When testing single alternatives, alternative 2 will be combined with alternative 1A.

3 A. Connector road beginning at the existing intersection of Armstrong Road & Pollock Road, following east along Curve Road then north to connect with US 36/SR 37 between Glenn Road and Sweeney Road. OR...

B. Connector road east from alternative 1B at US 23 to connect with US 36/SR 37 between Glenn Road and Sweeney Road.

4 Extension of Pennsylvania Avenue east from US 23 to the intersection of US 42 & Horseshoe Road.

5W Northwestern Bypass route extending east from the existing intersection of South Section Line Road & SR 37/SR 203 intersecting with US 23 mid-way between Hills Miller Road and Coover Road.

5E Northeastern Bypass route connecting alternative 5W at US 23 with US 36/SR 37 at alternative 3A/3B just west of the railroad tracks.

6 East/west connector road from the existing intersection of SR 37/SR 203 & South Section Line Road east to the committed Houk Road extension.

7 Extension of the committed connector road between Houk Road & Troy Road east to align with the existing intersection of US 23 & Panhandle Road.

8 Extension of River Oaks Drive west from Stratford Road, aligning with the intersection of US 23 & Cottswold Drive.

9 A. Extension of Lexington Blvd. south to US 36. OR.....

B. Extension of Curtis Street north to SR 37.

10 Connector road between Firestone Drive and South Street extending west to Houk Road extension between US36 & Pittsburgh Drive.

11 Connector road beginning at the extension Houk Road just south of Firestone Drive, extending west, intersecting Pittsburgh Drive at the west end of the "S" curve just east of South Section Line Road.

12 Extension of Hull Drive east from Stratford Road to Pollock Road, crossing the Olentangy River.

13 Modification of the US 23 & Pennsylvania Avenue interchange to provide for all the movements.

14 Connector road from the intersection of Armstrong Road & Curve Road to the intersection of SR 521 & US 36/SR 37.

15 US 36 and SR 37 as a one way pair between the Point at Bowtown Road to Lake Street.

Delaware County and Delaware City Thoroughfare Plans

DELAWARE CITY PRELIMINARY DRAFT THOROUGHFARE PLAN

Delaware Thoroughfare Plan
Combined Alternatives Model Run Results

The 2020 road network additions suggested for further study for both the County and City were placed together in the transportation model to determine their combined affect on the County road network. These alternatives include the following:

2020 Delaware County Road Network Alternatives

A. Manning Parkway to Church Hill Drive Connection extending from Jewett Road at the first 'S' curve east of Liberty Road to SR 315 just north of the Franklin County/Delaware County Line.

B. Extension of Glick Road east from SR 257 to connect with Powell Road west of Wellington Boulevard.

C. Relocate Liberty Road north of Home Road southeast to align with Liberty Road south of Home Road.

E. Extension of Sawmill Parkway from Home Road north past Bunty Station Road, continuing northwest to intersect with US 42 between Owen-Fraley Road and Slack Road.

F. Extension of Steitz Road north from Hyatts Road to align with Owen-Fraley Road at Bunty Station Road.

G. Extension of South Section Line Road north from SR 37 to align with North Section Line Road at Buttermilk Hill Road and a connection between South Section Line Road and SR 257 south of Bean-Oller Road

J. Extension of Home Road east from US 23, crossing the railroad tracks connecting to Lewis Center Road east of Lewis Center and west of South Old State Road.

K. Extension of Piatt Road north from Cheshire Road to align with Roloson Road at Curve Road and extension of Piatt Road south from Shanahan Road, intersecting Lewis Center Road approximately midway between the railroad and South Old State Road.

M. New interchange with IR 71 at Big Walnut Road.

N. Connector road extending from the intersection of Cheshire Road & S. 3 B's & K Road to connect with SR 37 between Walnut Road and Longshore Road.

P. New interchange with IR 71 south of Cheshire Road.

Q. Realignment of SR 605 northwest from Centerburg Road connecting with Porter Central Road south of Olive Green Road.

R. Extension of Cleveland Avenue north from Maxtown Road to connect with Worthington Road.

S. Extension of Rome Corners Road south to connect with Worthington Road.

U. New bridge over the Hoover Reservoir connecting Big Walnut Road and Center Village Road.

V. Extension of Fancher Road from Harlem Road southwest to Smothers Road.

X. New interchange at IR 71 and SR 521.

Y. Extension of Mink Street from River Road east to County Home Road at its intersection with US 42 and a new interchange at IR 71 and SR 521.

2020 Delaware City Road Network Alternatives

1. A. East/West connector road from SR 42 to Sawmill Parkway.
   B. Extension of Alternative 1A east from Sawmill Parkway to US 23.

2. Extension of Sawmill Parkway north past Bunty Station Road to proposed connector road described in Item 1.

3. Connector Road extending from the intersection of Glenn Road & Curve Road south to Cheshire Road.

4. Pennsylvania Avenue extension east from US 23 to the intersection of US 42 & Horseshoe Road.

5. North/south route connecting from the intersection of Alternative Y & Horseshoe Road/Kelly McMaster Road south to intersect with US 36/SR 37 between Glenn Road and Sweeney Road and the extension of Panhandle Road east to connect with this north/south route between Horsehoe Road and US 42.

6. East/west connector road from the existing intersection of SR 37/203 & South Section Line Road east to the committed Houk Road extension.

7. Extension of the committed connector road between Houk Road and Troy Road east to align with the existing intersection of US 23 & Panhandle Road.

8. Extension of River Oaks Drive west from Stratford Road, aligning with the intersection of US 23 & Cottswold Drive.

9. Extension of Lexington Blvd south to SR 36.

13. Modification of the US 23 & Pennsylvania Avenue interchange to provide for all movements.

The following road improvements were assumed in place in the 2020 transportation model E+C network:

County Road Improvements Included in the 2020 Model

Africa Rd	Lewis Center Rd to Cheshire Rd	3
	Sherman Rd to US 36/SR 37	increased with to 24 ft
Bale Kenyon Rd	Worthington Rd to Lewis Center Rd	increased width to 24 ft
Cheshire Rd	US 23 to Piatt Rd	3
	Piatt Rd to Africa Rd	4
Concord Road	Glick Rd to Home Rd	4 lanes
N. Galena Rd	US 36/SR 37 to Berkshire Rd	3
	Berkshire Rd to N Old State Rd	increased width to 24 ft
Glick Rd	Concord Rd to SR 745	3 lanes
	SR 745 to SR 257 (bridge)	4 lanes
Home Rd	Union County Line to US 23	4 lanes
Lewis Center Rd	US 23 to Africa Rd	5
Liberty Rd	Franklin CL to Powell Village Limits	3
	Seldom Seen Rd to Home Rd	3
	Home Rd to London Rd	2
Orange Rd	SR 315 to Bale Kenyon	increased width to 24 ft
Panhandle Rd	East of US 23 (Olentangy River Bridge)	4
Piatt Rd	Shanahan Rd to Cheshire Rd	increase width to 24 ft
Polaris Parkway	Powell Rd to Worthington Rd	7
Powell Rd	SR 257 to Powell Village Limits	5
	Powell Village Limits to SR 315	3
	SR 315 to High Meadows Village Dr.	3
	High Meadows Village Dr to US 23	5
	US 23 to Polaris Parkway	5
S. Section Line Rd	Home Rd to SR 37	3 lanes
South Old State Rd	Franklin CL to Lewis Center Rd	5
	Lewis Center Rd to US 36/SR 37	3
Worthington Rd	Franklin CL to Africa Rd	5
	Africa Rd to Big Walnut Rd	3
	Big Walnut Rd to Plumb Rd	increased width to 24 ft

State Road Improvements Included in the 2020 Model

US 36/SR 37	Delaware City Limits to I 71	5
	I 71 to SR 3	5
US 36	SR 257 to Delaware City Limits	3
SR 37	S Section Line to Houk Rd	3
	Sunbury Village Limits to Licking CL	3
US 42	Union CL to US 23	3
SR 315	Franklin CL to US 23	3
US 23	Franklin CL to US 42	7
	US 42 to Hills-Miller Rd	5
	Hills-Miller Rd to Marion County Line	5

SUMMARY OF 2020 COMBINED MODEL RESULTS

The road network additions suggested for further study were selected from the preliminary set of alternatives because they were shown to address County and City transportation goals. The County transportation goals are to provide improved road continuity, additional access to the major arterial and freeway system, and relieve congestion primarily in the southern portion of the County. The City transportation goals address concerns such as congestion on downtown streets, high truck percentages on the major routes through town and additional roadways to support the rapidly developing west side of the City.

A review of the model results shows that the set of alternatives suggested for further study, when placed in the 2020 model together or in 'combination', address these concerns. Traffic is redistributed due to the addition of improved or additional continuous arterial roadways, providing relief to congested areas. The new I 71 interchange alternatives added to the model reduce traffic volumes at the already overburdened US 36/SR 37 and Polaris Parkway interchanges. Volumes on City streets are reduced with all alternatives in place, with the exception of Central Avenue and William Street in the downtown area between Elizabeth Street and Sandusky Street. This downtown area continues to attract local trips even with the addition of new roadways. In particular, the section of Central Avenue (SR 37) and William Street (US 36) between US 23 and the Point experiences a significant decrease in traffic volumes with all the road network alternatives in place.

The following review of the results of the transportation model run is provided to assist in determining whether to include or exclude a particular alternative from the final Thoroughfare Plan and assist in establishing a priority list and possible funding sources for the alternatives included in the final Thoroughfare Plan. For discussion purposes, the County road network has been divided into six areas:

Southwest Delaware County
Southeast Delaware County
North Delaware County
Delaware County Interchanges with I 71
Delaware County Major Arterials
City of Delaware

Southwest Delaware County

Southwest Delaware County in the area just north of the Franklin County line is experiencing congestion as implementation of road improvement projects has not kept pace with the rate of development. Alternatives A, B, C, E/2, F and G were proposed to add continuity to the road network in this area and to provide options to US 23 and SR 315 for commuter and local traffic.

Alternative A, the Manning Parkway connection to Churchill Drive, is modeled as a two lane, 35 mph collector roadway. It provides an additional link between Liberty Road and SR 315, both arterial roadways, via Jewett Road, a township route just north of the Franklin County line. Inclusion of Alternative A in the combined model network does not significantly affect travel patterns on the adjacent arterial road system. However, the 2020 combined model run shows over a 90 percent volume increase or an ADT of 13,000, on Jewett Road just east of Liberty Road due to the presence of Alternative A. Jewett Road west of SR 315 increases 15 and 40 with the connection to Manning Parkway included in the combined model network. The Churchill Drive/Manning Parkway connection is projected to have a 2020 ADT of between 9,000 and 10,000. Traffic volumes on Jewett Road will increase due to the added residential units along the Manning Parkway connector. However, a portion of the volumes projected by the model for Jewett Road and Manning Parkway/Churchill Drive is likely due to the assignment by the model of "cut through" trips between Liberty Road and SR 315, two important arterial routes in this area. The Manning Parkway/Churchill Drive connection would be of benefit for emergency and safety purposes, but any design should discourage cut through traffic between Liberty Road and SR 315 as residential frontage exists on both Jewett Road and Churchill Drive. As alternative A is a low priority road improvement project likely to be constructed with local and developer aid, it is suited for inclusion in the Liberty Township Comprehensive Plan and is recommended not to be included in the Delaware Thoroughfare Plan.

Recommendation: Low priority, local subdivision project. Remove from Thoroughfare Plan network but include in Liberty Township Comprehensive Plan. Connector should be constructed to deter cut through traffic between Liberty Road and SR 315.

Alternative B aligns Powell Road with Glick Road at SR 257 and the bridge over the O'Shaugnessy Reservoir. This realignment does not, in general, increase or decrease traffic volumes on area roadways. However, the benefit of this road network addition is it will provide for efficient traffic flow on an important major arterial and at one of the few reservoir crossing points in the rapidly developing south County area. It will also allow improved access to the Zoo and Wyandott Lake Water Park, a major recreational area which is expanding its facilities. There had been concerns voiced regarding the possibility of increased traffic volumes in the Shawnee Hills area due to this intersection alignment project. The results of the model run with this alternative placed singly in the network noted no significant change in traffic volumes in the Shawnee Hills area. The combination model network shows a reduction of trips in the Shawnee Hills area on SR 745 and on Concord Road north of Glick Road. This is due to the inclusion of the improvement to Section Line Road and SR 257 (Alternative G) which provides a major 5 lane arterial road continuous from the south county area into Marion county north of Delaware. There was no significant change in volumes along Glick Road or Powell Road just east of SR 257 in the combined model run.

Recommendation: High priority, regional significance, 5 lane major arterial.

Alternative C aligns South Liberty Road with North Liberty Road at Home Road, creating an additional, continuous north south arterial road east of the railroad and west of the Olentangy River. Liberty Road from the Franklin County Line up to and including the Alternative C alignment at Home Road was modeled as a moderate speed, 3 lane collector, with the north section of Liberty Road, Home Road to London Road, modeled with 2 lanes. This route attracts between 10,000 to 20,000 trips per day in the south county area between the Franklin County line and Home Road. However, it lacks an intersection with US 42 and therefore, in the combined 2020 model run, does not compete well with the five lane major arterial roads for a share of the trips between City of Delaware and the south County. The single model run for the Liberty Road alignment did not show a significant change in traffic volumes on Liberty Road. The realignment of North Liberty Road and South Liberty Road is desirable for safety purposes, and improved traffic flow in the area of the new Liberty Township Community Center area south of Home Road.
Recommendation: High priority, local significance, 3 lanes from the Franklin County Line to Home Road, 2 lanes from Home Road to London Road, minor arterial.

The portion of Sawmill Parkway between Seldom Seen Road and Home Road is assumed in place in the 2020 E+C network. The extension of Sawmill Parkway from Home Road to US 42, **Alternative E/2,** provides an additional continuous north south major arterial highway between Franklin County and the City of Delaware. This alternative and Alternative G, the connection of South Section Line to North Section Line, both modeled as 5 lane, high speed major arterial roadways, significantly contribute to a reduction of traffic volumes on US 23, one of the few existing continuous north south arterial routes in the County, along with a redistribution of trips on adjacent County roads. Traffic projections for the Sawmill Parkway extension are between 26,000 to 39,000 vpd from the Franklin County line to Rutherford Road and approximately 22,000 to 29,000 vpd north of Rutherford Road.
Recommendation: High priority, regional significance, 5 lanes, major arterial.

Alternative F connects Steitz Road to Owen Fraley Road providing a continuous collector road between Rutherford Road and US 42. This alternative was modeled as a moderate sped, 3 lane collector road. In the combined model, this alternative remains a relatively low volume collector due to the presence of the adjacent high speed, major arterial alternatives of South Section Line and Sawmill Parkway. This alternative is of low priority and local significance. However, it should remain in the Thoroughfare Plan to assist in the County goal of providing connectivity to the regional road system by adding a continuous major collector road in the rapidly developing south County area.
Recommendation: Low priority, local significance, 2 lanes, major collector.

Alternative G connects South Section Line Road with North Section Line Road and aligns South Section Line with SR 257 south of Bean-Oller Road. This alternative supplements US 23 by providing a five lane continuous north south major arterial route for commuters and local traffic between Franklin County and Marion County. This alternative will also provide an additional north south option for commuters on the rapidly developing west side of the City of Delaware. In combination with the Sawmill Parkway extension (Alternative E/2), it assists in reducing traffic volumes on US 23 between the Franklin County Line and SR 315. This alternative significantly reduces traffic volumes on SR 745 and River Road, providing the opportunity for these two circuitous routes, which line the O'Shaugnessy Reservoir and Scioto River, to become relatively low volume scenic corridors. The projected ADT on Section Line Road is 39,000 south of Powell, 17,00 to 24,000 between Powell and SR 37 and 8,000 to 12,000 from SR 37 to the north County Line.

Recommendation: High priority, regional significance, major arterial, 5 lanes on SR 257 from Powell Road to its connection with South Section Line Road south of Bean-Oller Road, 5 lanes on South Section Line Road from its connection with SR 257 north to the intersection of SR 37/SR 203, 2 lanes north of the SR 37/SR 203 intersection with preservation of ROW for possible future 5 lane major arterial roadway. Improvements could be staged with projects in the south County area given priority.

Southeast Delaware County

The southeast quadrant of Delaware County includes the growing commercial and office area surrounding Polaris Parkway and the City of Westerville. It also includes the Villages of Sunbury and Galena where state routes and major arterials are part of their downtown street system, causing concerns with truck and through trips. Roads in rural Trenton and Harlem Townships have become busy commuter routes for Knox and Licking County residents employed in Franklin County. A railroad line, Alum Creek Lake and the Hoover Reservoir all serve as physical impediments to continuous east west travel across the southeast quadrant of the County. Alternatives J, K, N, R, S, U and V were proposed to add continuity to the road network, provide options for commuter and local traffic in this area and reduce traffic volumes through village streets.

Alternative J in combination with **Alternative U** combines the existing routes of Home Road, Lewis Center Road, Big Walnut Road and Center Village Road into a continuous east west route across southern Delaware County from Union County to Licking County. Alternative J provides a realignment of Home Road and Lewis Center Road at US 23 diverting traffic around the Lewis Center residential and business district. Alternative U adds a new bridge over the Hoover Reservoir to connect Big Walnut Road with Center Village Road. Alternative J is part of the Orange County Comprehensive Plan. Home Road is modeled as a 4 lane roadway in the 2020 E+C network from the Union County Line to US 23. Lewis Center, Big Walnut Road and Center Village Road are modeled with 5 lanes in the combined alternative model network. The volumes projected along the route in the 2020 combined model run shows the need for east west connectivity in southern Delaware County. Average daily traffic volumes along this east west route vary between 10,000 to 40,000. The combination of Alternative J and U contributes to a projected decrease and redistribution of volumes on a number of adjacent area roads. Alternative M, which will be further discussed later in this report, adds an interchange at Big Walnut and I 71 to this east west connection which improves access to the interstate and contributes to use of the Alternative J and U cross County route.

Recommendation: High priority, regional significance, major arterial, 4 lanes on Home Road from the Union County line to US 23, 5 lanes on Lewis Center Road, Big Walnut Road, the Hoover Reservoir bridge (Alternative U) and Center Village Road.

Alternative K provides a north south collector road east of US 23 and east of the railroad which links US 36/SR 37 with Lewis Center Road. Between Lewis Center Road and Cheshire Road, the projected 2020 ADT for this alternative is 9,000 to 17,000. This alternative attracts less trips north of Cheshire Road where it is projected to have an ADT between 1,000 to 2,000. This alternative could be implemented in phases, with the south connection from Shanahan Road to Lewis Center Road, which attracts a greater number of trips per day, having precedence over the north connection from Roloson Road and Cheshire Road.
Recommendation: Low priority, local significance, major collector, 3 lanes from Lewis Center to Cheshire Road, 2 lanes north of Cheshire Road.

Alternative N extends Cheshire Road east from 3B's & K Road between the Villages of Sunbury and Galena to connect with SR 37 between Walnut Road and Longshore Road. This alternative provides a continuous east west route just south of US 36/SR 37 and provides an option to traveling through Sunbury or Galena to reach either SR 3 or SR 36/37. Cheshire Road is assumed to have 3 lanes between US 23 and Piatt Road and 4 lanes between Piatt Road and Africa Road by 2020. The alternative was modeled with 5 lanes from 3B's & K Road to SR 37. Traffic volumes on Cheshire Road east of US 23 to Lackey Old State Road increase approximately 20 to 40 percent but remain within the capacity of the anticipated 3 lane and 4 lane sections. The traffic volumes on the bridge over Alum Creek Lake are not significantly changed. Traffic volumes on the main roads in Sunbury and Galena such as Columbus Street and Sunbury Road in Galena and Cherry Street and Granville Street (SR 37) through Sunbury are reduced approximately 18 percent. These roads are shown to experience congestion in the 2020 E+C model. In particular, ADT's of 20,000 are projected by 2020 for the Columbus Street/Sunbury Road area in Galena without the addition of this alternative. In the combined model run, this alternative also provides access to I 71 and attracts additional trips due to its presence. The projected 2020 ADT on the extension from 3B's & K to east of SR 3 in the combined model run is from 10,000 to 20,000.
Recommendation: Medium Priority, regional significance, minor arterial, 3 lanes on Cheshire from US 23 to Piatt Road, 4 lanes from Piatt Road to Africa Road, 5 lanes for the Alternative from Africa to SR 3 with the interchange at I 71, 3 lanes without the interchange, 2 to 3 lanes east of SR 3 to SR 37.

The intent of proposing **Alternatives R and S** as additions to the County road network is to provide a more direct route between US 36/SR 37 and the Polaris and Westerville south County area. Commuters from Knox County or from north Delaware County, due to the lack of a direct connection between Rome Corners and Worthington Road, use the route from Rome Corners Road to South Galena Road connecting to SR 3 to access Worthington Road. Alternative S adds the direct connection between Rome Corners Road and Worthington Road. Alternative R adds to this north south continuous route by providing a connection from Worthington Road to Cleveland Avenue. The Westerville and Polaris area in southern Delaware County is developing with a commercial, residential and office mix which would benefit from additions to the arterial network to more evenly distribute projected volumes and improve traffic flow in this area. Alternative R and S were both modeled as 5 lane roadways. In the combined network, Alternative R attracts 8,000 to 10,000 average trips per day. The projected 2020 ADT for Alternative S is 7,000 to 10,000. The single model run for Alternative S projects an increase in traffic volumes on Worthington Road, while the combination of all alternatives in the model shows a slight decrease in trips on Worthington Road. Traffic volumes on South Galena Road are projected to decrease and traffic volumes on Rome Corners Road between Cheshire and Plumb Road are projected to increase in the combined model network
Recommendation: Medium priority, local and regional significance, minor arterial, 2 to 3 lanes

Alternative V, the alignment of Fancher Road from Harlem Road to Smothers Road, creates a continuous east west arterial route in the south County area which includes an existing bridge over the Hoover Reservoir. Westerville has future plans to extend Hanawalt Road from Smothers Road to Worthington Road which will further add to the continuity of the Fancher/Smothers Road route. Although the combined model results do not show this alternative as significantly changing area traffic volumes, it is of benefit to the Thoroughfare Plan as it adds to the connectivity of the County road network.
Recommendation: Medium priority, local significance, minor arterial, 2 to 3 lanes.

North Delaware County

Similar to the rest of the County, the road network in the region of Delaware County north of US 36/SR 37 is generally discontinuous with railroads and physical features as impediments to improving road connectivity. Transportation goals in this primarily agricultural region include improved access to the interstate and major arterial network and development of a grid network to add continuity. Although achieving these goals may not be as urgent as in the rapidly developing south County area, their inclusion in the Thoroughfare Plan is of similar importance to assure roadway planning precedes development.

Alternative Q connects Porter Central Road with Condit Road to create a continuous north south route via SR 605 from Franklin County through Delaware into Knox County. Traffic volumes on Condit Road, Porter Central Road, SR 605 and adjacent roadways in the combined model network do not alter significantly with the addition of this alternative. Average daily traffic volumes projected for 2020 on this alternative range from 2000 to 5000 north of US 36/SR 3 and 5,000 to 11,000 on CR 605/SR 605 south of US 36/SR3
Recommendations: Low Priority, regional significance, major arterial, 2 lanes with ROW reserved for 4 to 5 lanes.

Alternative Y creates an east west continuous arterial route just north of the City of Delaware which extends from SR 4 in Union County across the Mink Street Road bridge over the Scioto River into Knox County via either SR 656 or Olive Green Road. In the combined model network, an interchange at SR 521 provides access to I 71 (Alternative X). This alternative was modeled as a 5 lane arterial highway with combined model results showing 2020 ADT's between 10,000 and 24,000 from US 23 to US 42 and between 7,000 and 18,000 from US 42 to I 71. This alternative assists in decreasing traffic volumes on US 36/SR 37 and adjacent roadways in the north County region. In the combination network, it works together with Alternative 5, a north south and east west grid option in the northeast quadrant of the City of Delaware to reduce traffic volumes on City streets such as Lake Street, Bowtown Road, and on Central Avenue and William Street between US 23 and the Point. Further discussion of the traffic patterns associated with the interaction of this alternative with other proposed road network additions is included in the City of Delaware section of this report.
Recommendations: Medium Priority, regional significance, major arterial, improvements could be constructed in stages based on development needs, 2 to 3 lanes with right-of-way reserved for a future 5 lane major arterial roadway.

Delaware County Interchanges with I 71

The Polaris Parkway interchange with I 71, fairly recently constructed, is already experiencing congestion due to the rapid influx of commercial and office establishments in combination with the addition of dwelling units in nearby Orange, Genoa, and Berlin Townships. The only other existing interchange with I 71in Delaware County at US 36/SR 37 is also experiencing congestion. Alternatives M, P, and X, proposed new interchanges with I 71 at Big Walnut Road, Alternative N (Cheshire Road extension) and SR 521, respectively, were suggested to alleviate congestion at the two existing interchanges and improve access to the interstate.

Table 1 shows the traffic volumes projected in the 2020 combined model run for the three new interchanges with I 71 proposed for inclusion in the Delaware Thoroughfare Plan. A comparison of the 2020 E+C ramp volumes with the ramp volumes in the 2020 combined model at the existing I 71 interchanges with US 36/SR 37 and with Polaris Parkway is shown in **Table 2**. The northbound diverge and southbound merge ramp volumes at the proposed Big Walnut interchange are projected to attract an ADT of approximately 14,000 to 15,000. The single model run with this interchange in place showed it reduced volumes on the northbound diverge and southbound merge ramps at the I 71 & Polaris Parkway interchange, along with providing a decrease in volumes on the northbound diverge ramp at the I 71 & US 36/SR 37 interchange. Given the combined model run results shown in Table 1 and Table 2 and the attached summary for the interchange alternatives when run singly in the model, in order of priority, the I 71 & Big Walnut interchange would be first, followed by the I 71 & Cheshire Road interchange, and the I 71& SR 521 interchange.

Delaware County Major Arterial Roads – US 36/SR 37, US 36, SR 37, Central Avenue, William Street, US 23, US 42, SR 203

US 36, SR 37 and US 36/SR 37

Traffic volumes on US 36/SR 37, US 36 and SR 37 decrease with the alternatives included in combination in the 2020 transportation model. From the Point to SR 3, average daily traffic volumes on US 36/SR 37 decrease between 20 to 50 percent, with the exception of the section between Glenn Road and Roloson Road where traffic volumes remain unchanged due to the trips in the vicinity attracted to the north south segment of Alternative 5. US 36 west of the City of Delaware from Section Line Road to SR 257 decreases approximately 15 to 25 percent or from 2020 E+C network ADTs of 10,000 to 14,000 to 2020 Combined model network ADTs of 7,000 to 10,000. Average daily volume decreases of approximately 20 to 35 percent are also projected for SR 37 east of the Village of Sunbury to the Licking County Line.

Central Avenue (SR 37) and William Street (US 36)

Table 3 and **Table 4** show a comparison of the 2020 E+C ADTs with the 2020 Combined Model ADTs for Central Avenue (SR 37) and William Street (US 36) through the City of Delaware. Portions of the downtown area, from Liberty Street to Sandusky Street on Central Avenue and from Elizabeth Street to Liberty Street on Williams Street, are projected to remain unchanged when comparing the 2020 E+C network with the 2020 network which includes all alternatives in combination. Central Avenue and William Street between US 23 and the Point, an area of concern due to the physical constraints which limit improvement efforts, is shown to substantially reduce in daily traffic volumes if all road network projects are in place. The results of the transportation model indicate that Central Avenue and William Street, with a 2 to 3 lane section from US 23 to the Point, would be adequate to accommodate the projected 2020 traffic volumes with all alternatives in place.

US 23

US 23 benefits from the addition of the road network alternatives in combination. As shown in **Table 5**, average daily traffic volumes are projected to decrease from the Orange Road north to US 42 by 10 to 35 percent and 15 to 25 percent from Central Avenue to Alternative Y, the SR 521 Cross County Highway connection to Mink Street Road. In the slower growing, northern area of Delaware County from Alternative Y to the Marion County Line, ADTs are not projected to change. 2020 traffic volumes and patterns on US 23 in the vicinity of SR 315, Stratford Road and Pollock Road are dependent on the inclusion or exclusion of Alternative 1B and options for connection east of US 23. Alternative 1B and its options are further discussed in a separate section of this report.

Table 6 compares the 2020 E+C ADTs with the 2020 ADTs for the combined model at the US 23 ramps in the City of Delaware. The alternatives in the combined model which affect the volumes on the US 23 ramps include Alternative 13, the modification of the US 23 & Pennsylvania interchange, which adds a northbound diverge and southbound merge ramp in the north end of the City. This alternative reduces traffic volumes on the William Street northbound diverge and southbound merge ramps by providing an option for local travelers to access the northern area of the City in a more direct manner via the proposed northbound diverge and southbound merge ramps at Pennsylvania Avenue. According to Table 6, the largest volume decrease projected is for the Central Avenue ramps. Alternatives 6 and 7, which connect US 23 west to Section Line Road from Panhandle Road, Alternative 4, the extension of Pennsylvania Avenue along with the Alternative 5 connection east from Panhandle Road all contribute to the decrease in volume on the Central Avenue ramps and the other US 23 ramps by providing optional routes for commuters and local travelers other than US 23, Central Avenue, William Street and Pennsylvania Avenue through town. Alternative 1 A+B and Alternative 3 on the south end town also contribute to redirecting traffic around the City of Delaware. All US 23 ramp ADT volumes are less than 7,000 in the 2020 combined model network and are less than 9,000 for 2020 E+C conditions.

US 42

Average daily traffic volumes on US 42 south of the City of Delaware from SR 745 to the Sawmill Parkway extension decrease approximately 15 to 30 percent. The inclusion of all alternatives in the County road network does not significantly affect the traffic volumes on US 42 north of the City of Delaware, with the exception of the segment of US 42 between Alternative 5 and Alternative Y. This section of US 42 is projected to increase from an ADT of 9,000 to and ADT of 14,000, or 60 percent due to the use of this segment of roadway as an access route between Alternative Y and Alternative 5.

SR 203

Traffic volumes on SR 203 from north of SR 37 to Alternative Y, the SR 521 Cross County connection to Mink Street Road are projected to decrease approximately 40 to 60 percent with all alternatives in the 2020 model network. North of Alternative Y to Penry Road, traffic volumes are projected to decrease between 15 to 20 percent, with no significant change in volume noted north of Penry Road to the Marion County Line on SR 203. In the combined 2020 model network, traffic volumes projected for SR 203 range from an ADT of 4000 to 7000.

City of Delaware

Road network additions were chosen for the City of Delaware based on their potential to redirect traffic around the town with the goal of reducing congestion on downtown streets. As shown by the results of

the 2020 model, the alternatives suggested for further study meet this goal, decreasing traffic volumes on the majority of existing City of Delaware streets.

Central City of Delaware

A mentioned in the previous section regarding major arterial roads in Delaware County, Central Avenue and Williams Street through the downtown area of City of Delaware are not projected to significantly change with the addition of all alternatives to the road network. Due to the business district in this area, trips are not diverted to alternate routes as their origin/destinations are along these main roadways. The road network alternatives do provide a shift in routes allowing a general decrease in traffic volumes projected for the City Street network north of Central Avenue, west of US 23 and east of Troy Road. Average daily traffic volumes on the north south routes of Euclid Avenue ad Liberty Street decrease slightly by approximately 25 percent, or 1,000 to 2,000 vehicles per day, or experience no significant change. The east west routes of Lincoln Avenue and Fountain Avenue are projected to decrease in some areas by as much as 40 percent or 1,000 to 2,000 vehicles per day. Traffic volumes on these collector roads are generally low in the 2020 E+C network, under an ADT of 6,000, and drop to and ADT of under 4,000 with all alternatives added to the network. Average daily traffic volumes on Sandusky Street north of Central Avenue are projected to decrease by approximately one half with the alternatives added to the 2020 road network. Traffic volumes on Pennsylvania Avenue are also projected to decrease 25 to 50 percent between Troy Road and Liberty Street, remaining unchanged between Liberty Street and Sandusky Street just west of the ramps from US 23.

Northeast City of Delaware

In the northeast quadrant of the City, the combination of the Alternative 5 grid network with Alternative Y, the SR 521 Cross County connection and Alternative 4 + 13, the extension of Pennsylvania Avenue with the modification of the US 23 interchange offer options for commuter and local trips other than the US 36/SR 37 route through the Point and on US 23. Traffic volumes on Lake Street (US 42) between Central Avenue and the City limits decrease from a projected ADT in the 2020 E+C network of between 14,000 and 18,000 to and ADT of 11,000 to 12,000. As noted in the section regarding major arterial roadways, traffic volumes on Central Avenue and William Street between US 23 and the point are projected to reduce substantially with all proposed alternatives in place. The Alternative 5 grid utilizes the existing Panhandle Road bridge over the Olentangy River. Average daily traffic volumes on this bridge, one of two bridges over this river north of the City of Delaware, are projected to increase from the 2020 E+C network ADT of 12,000 to and ADT of 14,000 with all alternatives added to the network.

Northwest City of Delaware

The northwest quadrant is the most rapidly developing area of the City of Delaware. Commercial and residential units are filling in available space west of US 23 to SR 203, north of Central Avenue. Alternative 6 and 7, which provide an east west link between Section Line Road and US 23 north of Pennsylvania Avenue, along with the connection of South Section Line Road to North Section Line Road (County Alternative G) provide nearby routes other than the downtown streets for local a commuter trips on the northwest side of town. With these alternatives and the other alternatives included in the network model, average daily traffic volumes decrease on roads in the northwest area of town. Average daily traffic volumes on Troy Road, Executive Boulevard and Pinecrest Drive are projected to decrease with the alternatives added to the 2020 road network. The Troy Road/Executive Boulevard/Pinecrest Drive route, in particular, will benefit from the addition of Alternative 6 and 7 to the road network. Executive Boulevard and Pinecrest Drive have the potential to serve as an option for access to US 23 rather than the downtown Delaware,

Central Avenue and William Street route. Traffic volumes on Pinecrest Road and Executive Boulevard decrease by approximately 60 percent, according to 2020 projections, as motorists utilize the more direct arterial route between US 23 and Section Line provided by Alternative 6 and 7. Average daily traffic volumes on Hills-Miller Road with all alternatives in place are also projected to decrease 15 to 25 percent or from between 14,000 and 16,000 to between 9,000 and 12,000.

Southwest City of Delaware

Development in the City of Delaware will proceed at the slowest pace in the southwest quadrant, according to land use projections. Future plans for the southwest area include expansion of the industrial park south of William Street and east of Section Line Road which places importance on access to major arterial roads. Alternative E/2, the Sawmill Parkway extension, the Alternative 1B connection to US 23, and Alternative G, the connection of South Section Line to North Section Line Road all affect traffic patterns in this quadrant of the City. Houk Road and its planned extension south to Pittsburgh Drive provides access to William Street (US 36) and Central Avenue (SR 37) to the north. In general, traffic decreases on existing roads in the southwest area of the City with the inclusion of all alternatives. Average daily traffic volumes on Pittsburgh Drive decrease approximately 13 percent. Similar decreases are projected for London Road and US 42. As previously mentioned in the report section regarding major arterial routes, traffic volume decreases on Central Avenue and William Street are projected to vary from 10 to 30 percent between Houk Road and Elizabeth Street. Trips on Sandusky Street south of William Street and on Curtis Street are not projected to significantly change with the network additions in place in 2020. The 2020 ADT projected for Houk Road between Williams Street and Central Avenue is approximately 21,000 in the E+C model network. With the addition of all alternatives, including Alternative 9A, which provides and additional link between William Street and Central Avenue, this section of Houk Road is projected to decrease to an ADT of approximately 15,000. The ADT projected for Alternative 9A is approximately 5,0000.

Southeast City of Delaware

The southeast quadrant of the City of Delaware, east of US 23 and south of William Street (US 36) is projected to develop with a mix of commercial and residential uses. This region, when compared with other areas of the City, is projected to develop last. The southeast quadrant of the City of Delaware lacks direct north south routes to provide access to US 36/SR 37. It also lacks direct east west routes between US 23 and other north south arterials such as Lackey Old State Road. Development of east west routes in this region will be difficult due to the location of the Olentangy River, the area terrain, and the presence of two north south railroad lines. Alternative 3 is a north south route proposed in this quadrant to provide a link between Cheshire Road and US 36/SR 37, connecting to Alternative 5 north of US 36/SR 37 and adding a much needed continuous route to the road system on the east side of town. The need for such a route is reinforced by the 17,000 to 30,000 ADT projected for Alternative 3. Traffic projections for existing roads in this quadrant are dependent upon the inclusion or exclusion of Alternative 1B, which will be discussed in the next section of this report.

Alternative 1B Options

Alternative 1B connects the Sawmill Parkway extension (Alternative E/2) with US 23. Due to potential physical constraints associated with this route, four options were modeled in the 2020 network with all other alternatives added to the road network:

Option A	Alternative 1B terminating at US 23
Option B	Alternative 1B omitted from the combined model network
Option C	Alternative 1B terminating at Liberty Road
Option D	Alternative 1B connecting east from US 23 to Braumiller Road

Observations regarding a comparison of the four options:

- Projected volumes on Cheshire Road, Section Line Road, and the Sawmill Parkway extension (Alternative E/2- including the portion of this alternative that connects west to US 42) do not significantly change with any option

- There is no benefit to providing a connection to Liberty Road (Option C) over not providing a connection east at all (Option B). Both Option B and Option C increase traffic on Bunty Station road between Sawmill Parkway extension and US 23 by 25 to 75 percent and increase traffic on Hawthorne Road.

- Option D, the connection to Braumiller Road east of US 23, attracts 12 to 13 percent more trips on the 1B connection between the Sawmill Parkway Extension and US 23 than Option A, which terminates at US 23.

- All options increase volumes on Braumiller Road as motorist seek a connection east of US 23 to US 36/SR 37. Option D is projected to have the most impact on Braumiller Road, increasing volumes approximately four times the 2020 E+C ADT of 3,000 between Pollock and Berlin Station. Options B and C are projected to increase volumes on this roadway approximately 2-1/2 times, or 4,000 to 5,000 vpd.

- Option D reduces traffic volumes on US 23 between Stratford Road and Pollock Road by approximately 20 percent or 9,000 vpd. All other options are not projected to significantly change volumes in this area of US 23.

- All options for Alternative 1B affect the traffic volumes at the US 23 & SR 315/Stratford Road intersection. They also all affect traffic volumes on Bunty Station Road, Braumiller Road, Pollock Road as motorists seek some path to access routes east of US 23. Without a connection to US 23 or east across US 23, as in Options B and C, trips divert east on Bunty Station Road, north on SR 315, south on US 23, then north on Pollock Road to head east on Braumiller Road en route to Alternative 3 and a connection north to US 36/SR 37. This circuitous path negatively impacts the US 23 & SR 315/Stratford Road intersection which is projected to operate poorly with future traffic volumes. A comparison of the 2020 traffic projections in this area for each of the four options is shown in **Table** 7. As can be seen in this table, Option D which adds a connection east across US 23 to Braumiller Road is the only option which provides some potential to reduce traffic volumes at the US 23 & SR 315/Stratford Road intersection.

City of Delaware Alternative Recommendations

The 2020 model results show that the alternatives suggested for further study, both City and County network additions, when placed together in the transportation model perform as desired to meet City transportation goals and objectives. All alternatives studied are recommended as remaining in the Thoroughfare Plan, with the exception of Alternative A which is a subdivision minor collector road more suited for inclusion in the Liberty Township Comprehensive Plan. Alternative 1B, which received extra review due to physical constraints surrounding its corridor, should remain in the Thoroughfare Plan as it reduces traffic volumes on Bunty Station Road. However, a connection across US 23 east, possibly to Braumiller Road should be pursued to aid in improving the operation of the US 23 & SR 315/Stratford Road intersection and Pollock Road rather than negatively impacting this key intersection.

Cheshire Rd Extension Alternative in combined model network in place of Alternative 1A+B and w/o Steitz Rd/Owen Fraley Alternative F

The extension of Cheshire Road west to US 42 was placed in the 2020 combined model network (all other alternatives added in combination in the 2020 base model network) instead of the 1A+B Alternative which extends from US 42 to US 23 north of Bunty Station Road and south of Slack Road,. The primary difference between Alternative 1A+B and the extension of Cheshire Road is location:

> The extension of Cheshire Road lies south of Bunty Station Road and south of the US 23& SR 315/Stratford Road intersection;
>
> Alternative 1A+B connects US 42 to US 23 north of Bunty Station Road and north of the US 23 & SR 315/Stratford Road intersection, closer to the City of Delaware limits than the Cheshire Road extension.

The other notable difference between the alternatives is that the existing Cheshire Road extends across half of the County and includes a bridge over the Alum Creek Lake. Extending Cheshire Road to US 42 would create a continuous east west route crossing most of the County with the potential to extend further east to SR 37 if a recommended connection which would run between the Villages of Sunbury and Galena is constructed.

Observations regarding the results of the Cheshire Extension model run when compared with the results of other 2020 combined model network runs are as follows:

- Traffic volumes on Bunty Station Road between the Sawmill Parkway extension and SR 315 are projected to decrease when the Cheshire extension are placed in the combined model network similar to the reduction in volume projected in the model run with the 1A+B Alternative connected to Braumiller Road across US 23.

- The Cheshire extension, located south of Bunty Station Road is projected to more significantly reduce volumes on the segment of Bunty Station Road between Section Line and Sawmill Parkway than the 1A+B Alternative, which is located north of Bunty Station Road. Motorists from the southwest area of the County encounter the Cheshire extension before Bunty Station Road and utilize the Cheshire extension to access roadways to the east such as SR 315, US 23 or Alternative 3. Travel patterns when the 1A+B Alternative is in the combined model network show use of Bunty Station Road and Sawmill Parkway to access the 1A+B Alternative to connect east to US 23 or Alternative 3.

- Alternative 3/Glenn Road is the preferred route to access US 36/SR 37 from either the Alternative 1A+B connector or the Cheshire extension. Projected volumes on the section of Alternative 3 between Braumiller Road and US 36/SR 37 are comparable to those projected for the Alternative 1A+B alternative (15,000 to 17,000 ADT). The projected ADT on adjacent north south connectors between Cheshire Road and US 36/SR 37, such as Africa Road, Lackey Old State Road and Galena Road, do not increase significantly with the inclusion of the Cheshire extension in the model network.

- The results of many combined model runs in the region south of the City of Delaware show that the transportation network would benefit from an east west route south of the City which connects to US 36/SR 37 east of the Point. This is verified by the traffic patterns reviewed for the model runs where either the 1A+B Alternative or Cheshire Road extension is terminated at Liberty Road. Without a connection across US 23, both the 1A+B alternative and the Cheshire extension model runs show increased volumes on Bunty Station Road, SR 315, Braumiller Road, and Pollock Road as motorists use this path to access US 36/SR 37 east of the Point. A connection across US 23 is needed if future impacts to the US 23 & SR 315/Stratford Road intersection are to be minimized.

- The existing section of Cheshire Road has a bridge over Alum Creek Lake. Connecting this roadway west to US 42 adds continuity to the transportation network. Cheshire Road also has the potential to extend further east to SR 37 via a proposed connection between the villages of Sunbury and Galena. The presence of an improved and regionally connected Cheshire Road reduces volumes on adjacent, smaller east west connector roads in the south County area such as Bean-Oller, Shanahan, Hyatts, Peachblow, Berlin Station, Curve, Plumb, and Dustin. In comparison, a connector north of the US 23 & SR 315/Stratford Road intersection has greater potential to reduce traffic volumes on the smaller east west routes just south of the City such as Belle Avenue, Olentangy Avenue, Hull Drive or Hawthorn Boulevard. A connector closer to the City of Delaware southern limits does not have a route which extends over Alum Creek Lake past Lackey Old State Road to provide a more regional connection.

- The location of any connection between US 42 and Alternative 3 requires a new crossing of the Olentangy River and will involve difficulties with terrain, proximity to existing roads or intersections (US 23 & SR 315, Stratford Road, Pollock Road, Chapman Road, SR 315), historic and ecological sites and railroad crossings. The number of new railroad crossings could be minimize if connecting to and improving existing routes such a Braumiller Road or Cheshire Road are part of the alternative alignment. As data regarding these issues is speculative at this beginning level of roadway planning, detailed alignment studies should be done to allow an educated assessment of alternative routes for this corridor.

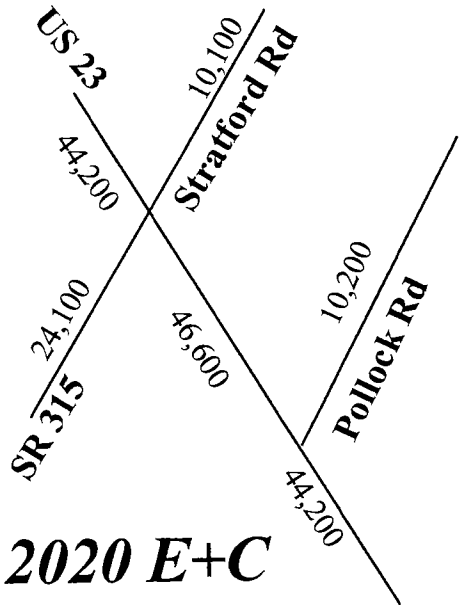
SUMMARY AND CONCLUSION

Transportation model results reconfirm that a major route between US 42 and Alternative 3, the north south connection between US 36/SR 37, would provide an important network link just south of the City of Delaware. This connector would provide an east west route south of the City of Delaware, supporting the planned expansion of the industrial park, reducing trucks and vehicles in general utilizing existing Bunty Station Road. This connection, if extended east past US 23, would work in combination with the north south connection to US 36/SR 37 provided by Alternative 3 to route traffic around the Point, allowing options to travel on US 23 and US 36 through the City of Delaware. To aid in improving the US 23 & SR 315/Stratford Road intersection rather than negatively impacting this key intersection, the connector should extend east from US 23 to Alternative 3, the north south route connecting to Glenn Road and US 36/SR 37.

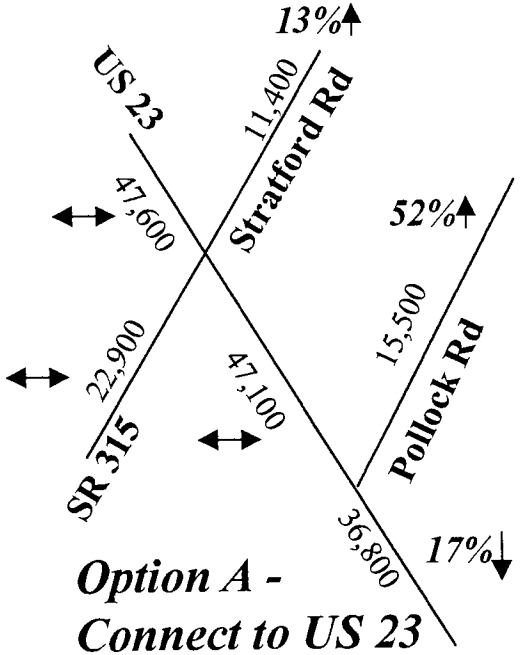
Mounting development pressures and public concern with this particular route necessitates a study of the details and specifics of an east west route in this region. It is therefore recommended that a detailed alignment study with both City of Delaware and Delaware County involvement be conducted as soon as economically feasible. Given that regional connectivity is desirable, the alternative should be shown on the Thoroughfare Plan as connecting Cheshire Road and US 42, however the study area corridor should remain as designated, with boundaries of US 42 on the West, Cheshire Road on the South, Glenn Road/Alternative 3 on the East, Hawthorn Blvd (extended) on the North.

Table 7 – Comparison of 2020 ADT Results for Alternative 1B Options

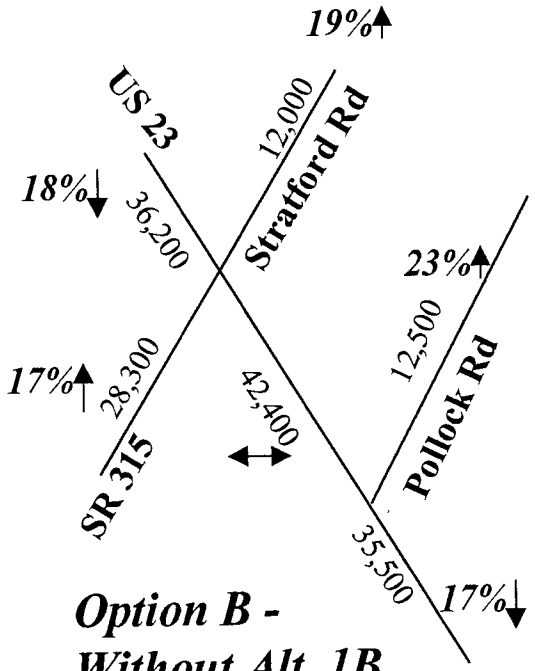
	2020 E+C	Option A Connects to US 23		Option B No Connection east from Sawmill Pkwy		Option C Connection to Liberty Rd		Option D Connection to Braumiller Rd E/O US 23	
Bunty Station									
W/O Liberty	7,200	4,700	35% ↓	12,500	74% ↑	10,600	47% ↑	3,100	57% ↓
E/O Liberty	9,400	5,500	41% ↓	11,800	26% ↑	11,600	23% ↑	4,000	57% ↓
Braumiller Rd **Pollock to Berlin Station**	3,000	10,200	240% ↑	7,500	150% ↑	7,800	160% ↑	12,700	320% ↑
Stratford Rd **N/O US 23**	10,100	11,400	13% ↑	12,000	19% ↑	11,900	18% ↑	11,500	14% ↑
Pollock Rd **N/O US 23**	10,200	15,500	52% ↑	12,500	23% ↑	13,000	27% ↑	6,400	37% ↓
SR 315 **N/O Bunty Station**	24,100	22,900	↔	28,300	17% ↑	27,700	15% ↑	21,500	11% ↓
US 23									
N/O Stratford	44,200	47,600	↔	36,200	18% ↓	36,400	↔	42,900	↔
Stratford to Pollock	46,600	47,100	↔	42,400	↔	42,800	↔	37,700	19% ↓
S/O Pollock	44,200	36,800	17% ↓	35,500	17% ↓	35,500	20% ↓	37,200	16% ↓



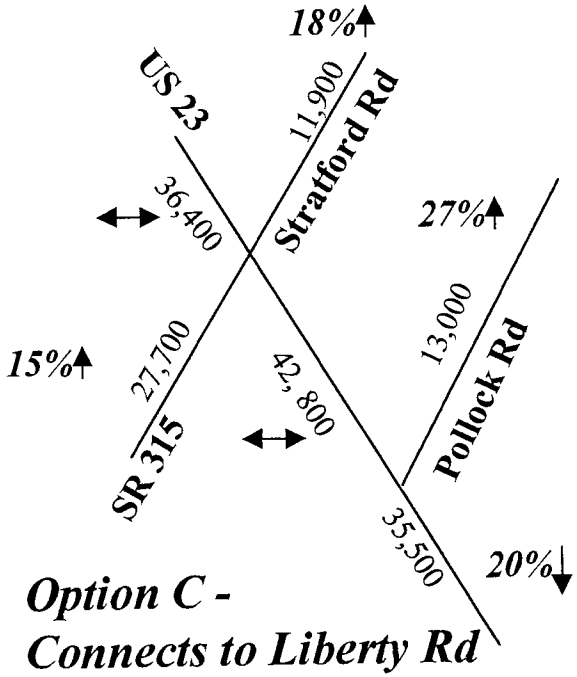
2020 E+C



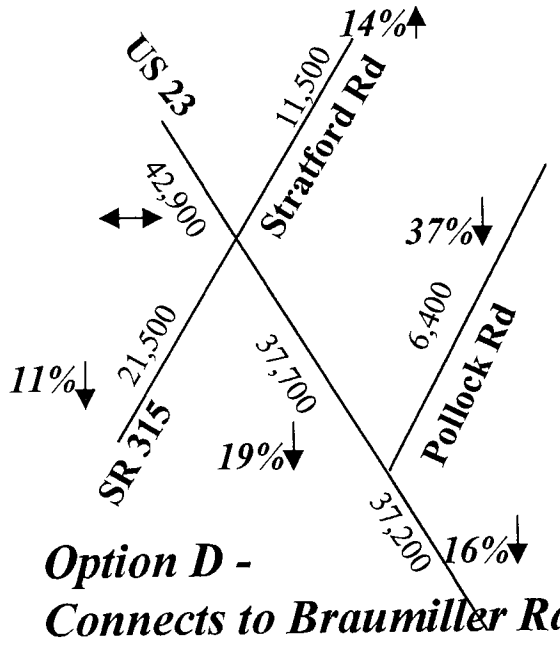
Option A - Connect to US 23



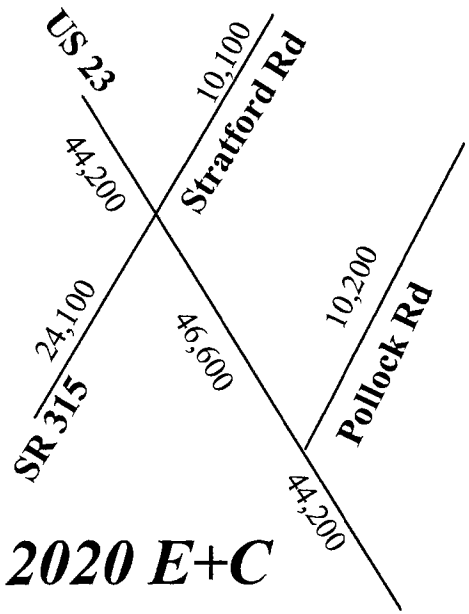
Option B - Without Alt. 1B



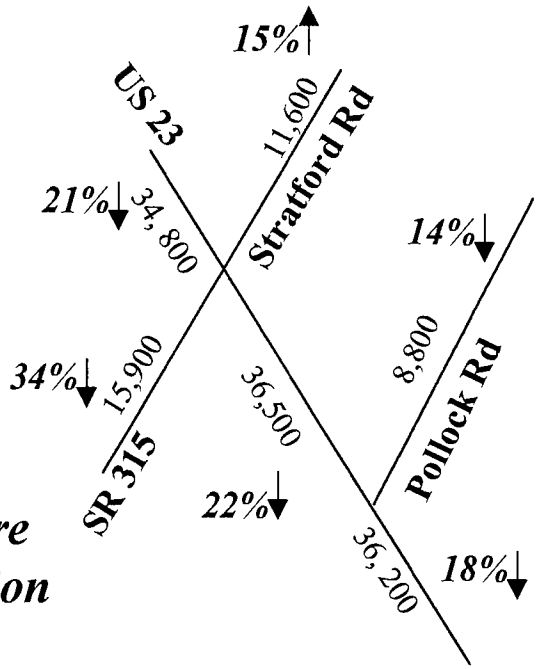
Option C - Connects to Liberty Rd



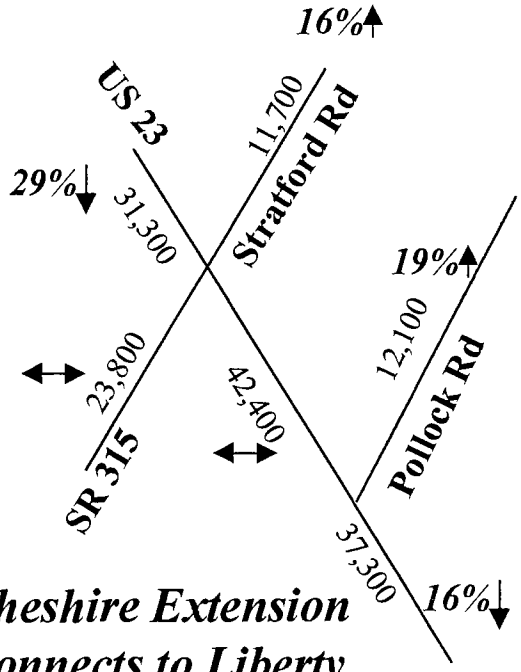
Option D - Connects to Braumiller Rd



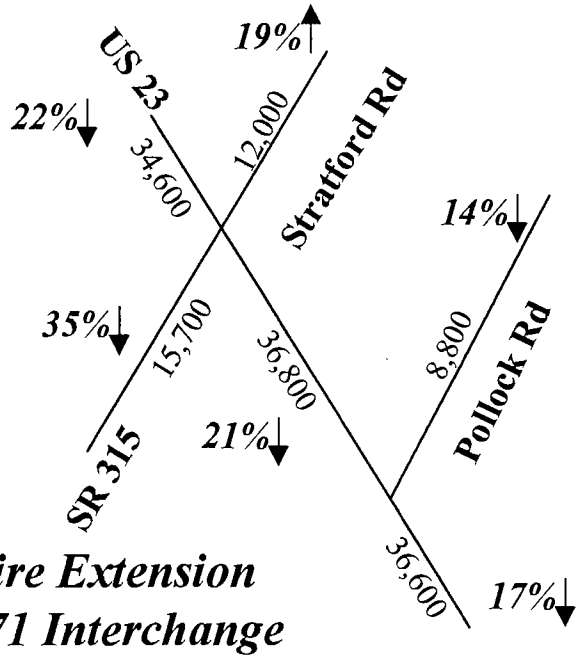
2020 E+C



Cheshire Extension

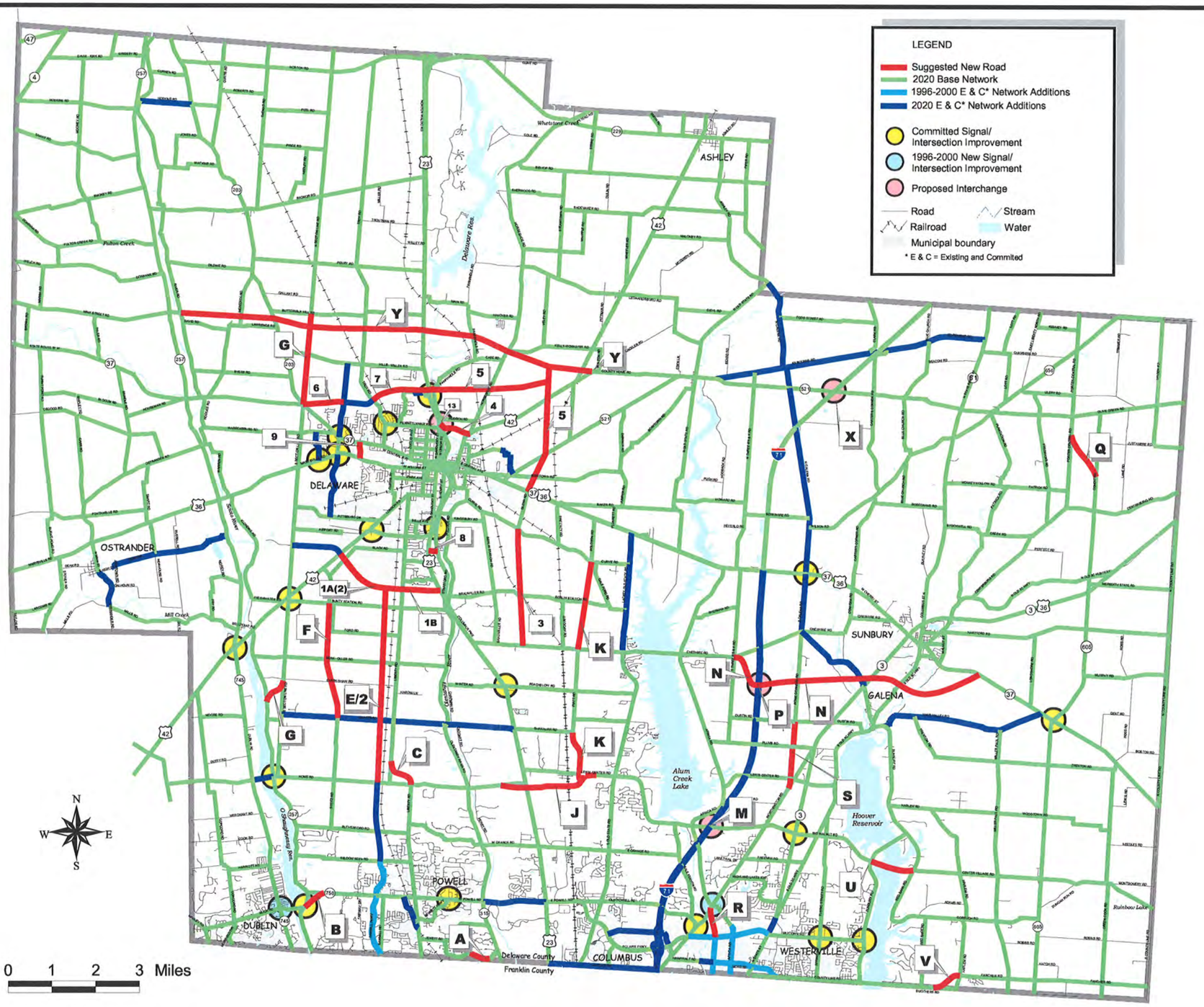


Cheshire Extension Connects to Liberty



Cheshire Extension with I71 Interchange

Preliminary Draft
Delaware Thoroughfare Plan



February 2001

2020 County Road Network Alternatives

A. Manning Parkway to Church Hill Drive Connection extending east from Jewett at the first 'S' curve east of Liberty Road to SR 315 just north of the Franklin County/Delaware County line.

B. Extension of Glick Road east from SR 257 to connect with Powell Road west of Wellington Boulevard.

C. Relocate Liberty Road north of Home Road southeast to align with Liberty Road south of Home Road.

E. Extension of Sawmill Parkway from Home Road north past Bunty Station Road, continuing northwest to intersect with US 42 between Owen-Fraley Road and Slack Road.

F. Extension of Steitz Road north from Hyatts Road to align with Owen-Fraley Road at Bunty Station Road.

G. Extension of South Section Line Road north from SR 37 to align with North Section Line Road at Buttermilk Hill Road and a connection between South Section Line Road and SR 257 south of Bean-Oller Road.

J. Extension of Home Road east from US 23, crossing the railroad tracks and connecting to Lewis Center Road east of Lewis Center and west of South Old State Road.

K. Extension of Piatt Road north from Cheshire Road to align with Roloson Road at Curve Road and extension of Piatt Road south from Shanahan Road, intersecting Lewis Center Road east of the the railroad.

M. New interchange with IR 71 at Big Walnut Road.

N. Connector Road extending from the intersection of Cheshire Road & S. 3 B's & K Road to connect with SR 37 between Walnut Road and Longshore Road.

P. New interchange with IR 71 south of Cheshire Road.

Q. Realignment of SR 605 northwest from Centerburg Road connecting with Porter Central Road south of Olive Green Road.

R. Extension of Cleveland Avenue north from Maxtown Road to connect with Worthington Road.

S. Extension of Rome Corners Road south to connect with Worthington Road.

U. New bridge over the Hoover Reservoir connecting Big Walnut Road and Center Village Road.

V. Extension of Fancher Road from Harlem Road southwest to Smothers Road.

X. New Interchange at IR 71 and SR 521.

Y. Extension of Mink Street from River Road east to County Home Road at its intersection with US 42 and a new interchange at IR 71 and SR 521.

2020 City Road Network Alternatives

1 A. East/west connector road corridor between US 42 and the proposed Sawmill Parkway extension (Alternative 2), in the region of Slack Road and north of Ford Road.

B. East/west connector road between the proposed Sawmill Parkway extension (Alternative 2) and the extension of Glenn Road south to Cheshire Road (Alternative 3), in the region from just north of Hawthorn Road to just south of Cheshire Road.

2 Extension of Sawmill Parkway from Home Road north past Bunty Station Road, ending at alternative 1A/1B. NOTE: When testing single alternatives, alternative 2 will be combined with alternative 1A.

3 Connector road extending from the intersection of Glenn Road and Curve Road south to Cheshire Road.

4 Extension of Pennsylvania Avenue east from US 23 to the intersection of US 42 & Horseshoe Road.

5 North/south route extending from the intersection of Alternative Y between Horseshoe Road and US 42 south to intersect with US 36/SR37 at Glenn Road and the extension of Panhandle Road east to connect with the north/south route between Horseshoe Road and US 42.

6 East/west connector road from the existing intersection of SR 37/SR 203 & South Section Line Road east to the committed Houk Road extension.

7 Extension of the committed connector road between Houk Road & Troy Road east to align with the existing intersection of US 23 & Panhandle Road.

8 Extension of River Oaks Drive west from Stratford Road, aligning with the intersection of US 23 & Cottswold Drive.

9 Extension of Lexington Boulevard south to US 36.

13 Modification of the US 23 & Pennsylvania Avenue interchange to provide for all the movements.

City of Delaware Alternatives Summary of Criteria and 2020 Combined Model Results

Modeled As:					2020 Combined Model Results		
Alternative	# of Lanes	Capacity	Speed	Functional Class	ADT	Proposed Functional Class	Recommended # of Lanes
1	5	24,000	55	MAJOR ARTERIAL	25 – 26,000	MAJOR ARTERIAL	5
2	5	24,000	55	MAJOR ARTERIAL	20 – 40,000	MAJOR ARTERIAL	5
3	5	24,000	55	MAJOR ARTERIAL	10 – 20,000	MINOR ARTERIAL	5 n/o Cheshire 3 s/o Cheshire
4	4	20,000	45	COLLECTOR	9 – 10,000	MINOR ARTERIAL	3
5	5	24,000	55	MAJOR ARTERIAL	10 - 14,000 EW 20 - 30,000 N/S	MINOR ARTERIAL	3 e/w route 5 n/s route
6	4	20,000	45	MINOR ARTERIAL	10,000	MINOR ARTERIAL	3
7	4	20,000	45	MINOR ARTERIAL	11,000	MINOR ARTERIAL	3
8	3	14,000	35	LOCAL	9,000	MINOR COLLECTOR	3
9	3	14,000	35	COLLECTOR	5,000	MINOR COLLECTOR	3
13	1 (ramps)	9,000	25	--	2,000	--	1 lane ramps

Delaware County Alternative Summary of Criteria and 2020 Combined Model Results

Modeled As:					2020 Combined Model Results		
Alternative	# of Lanes	Capacity ADT	Speed	FunctionalClass	2020 ADT	Proposed Functional Class	Recommended # of Lanes
A	2	8,000	35	(6) LOCAL	9 – 10,000	LOCAL	2
B	5	30,000	45	(3) MINOR ARTERIAL	34,000	MAJOR ARTERIAL	5
C	3	14,000	45	(4) COLLECTOR	10 –20,000	MINOR ARTERIAL	2 – 3
E	5	24,000	55	(2) MAJOR ARTERIAL	20 – 40,000	MAJOR ARTERIAL	5
F	3	15,000	45	(4) COLLECTOR	1 – 2,000	MAJOR COLLECTOR	2
G	5	24,000	55	(2) MAJOR ARTERIAL	10 – 40,000	MAJOR ARTERIAL	5 s/o SR 37/SR203 2 – 3 n/o SR 37/SR 203
J	5	30,000	45	(2) MAJOR ARTERIAL	10 – 40,000	MAJOR ARTERIAL	4 – 5
K	3	15,000	45	(4) COLLECTOR	1 – 17,000	MAJOR COLLECTOR	2 – 3
M	ramps	9,000	25		NB Diverge 15,000 SB Merge 14,000 NB Merge 3,500 SB Diverge 3,500		
N	5	24,000	55	(2) MAJOR ARTERIAL	10 – 20,000	MINOR ARTERIAL	4 – 5 w/o SR 3 2 – 3 e/o SR 3
P	ramps	9,000	25		NB Diverge 8,000 SB Merge 6,000 NB Merge 1,000 SB Diverge 2,000		
Q	3	12,000	45	(6) LOCAL	2 – 10,000	MAJOR ARTERIAL	2
R	5	30,000	30	(3) MINOR ARTERIAL	8 – 10,000	MINOR ARTERIAL	2 – 3
S	3	14,000	45	(4) COLLECTOR	7 – 10,000	MINOR ARTERIAL	2 – 3
U	5	30,000	45	(2) MAJOR ARTERIAL	28,000	MAJOR ARTERIAL	5
V	3	15,000	45	(4) COLLECTOR	8,000	MINOR ARTERIAL	2
X	ramps	9,000	25		NB Diverge 3,000 SB Merge 3,000 NB Merge 8,000 SB Diverge 8,000		
Y	5	24,000	45	(2) MAJOR ARTERIAL	10 –24,000	MAJOR ARTERIAL	2 - 3