

Transportation Partnership District Study



Ferguson Township



Background

- What is a Transportation Partnership District or TPD?
- Legislative History - Act 47 of 1985
- Ferguson Township Board of Supervisors creates the TPD ad-hoc committee
- Trans Associates begins study



Problem

- Without proper planning for construction and funding, the level of service on our roads will deteriorate as growth continues.
- Municipality does not have a dedicated revenue source for major capital improvements.

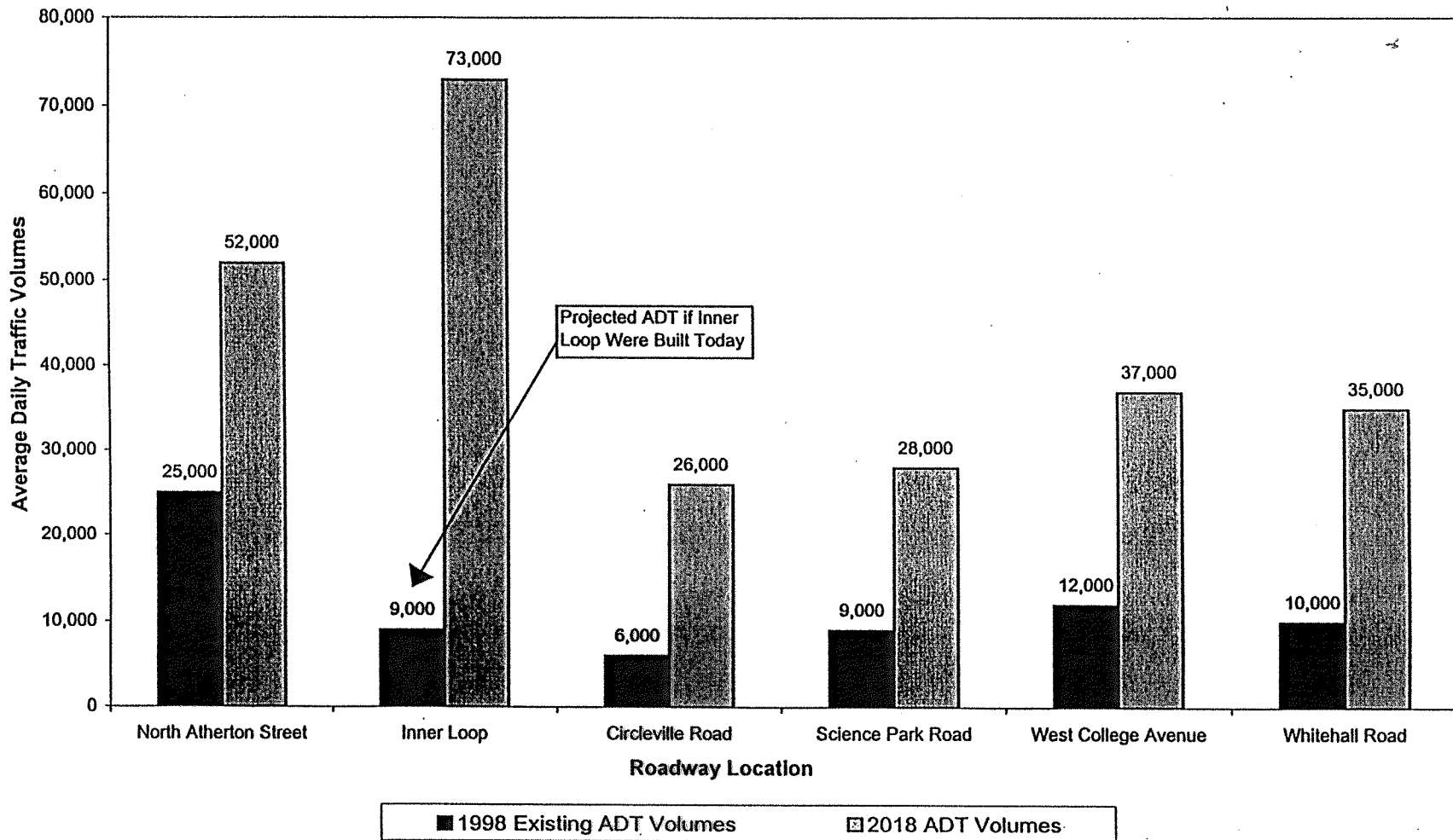


Goal

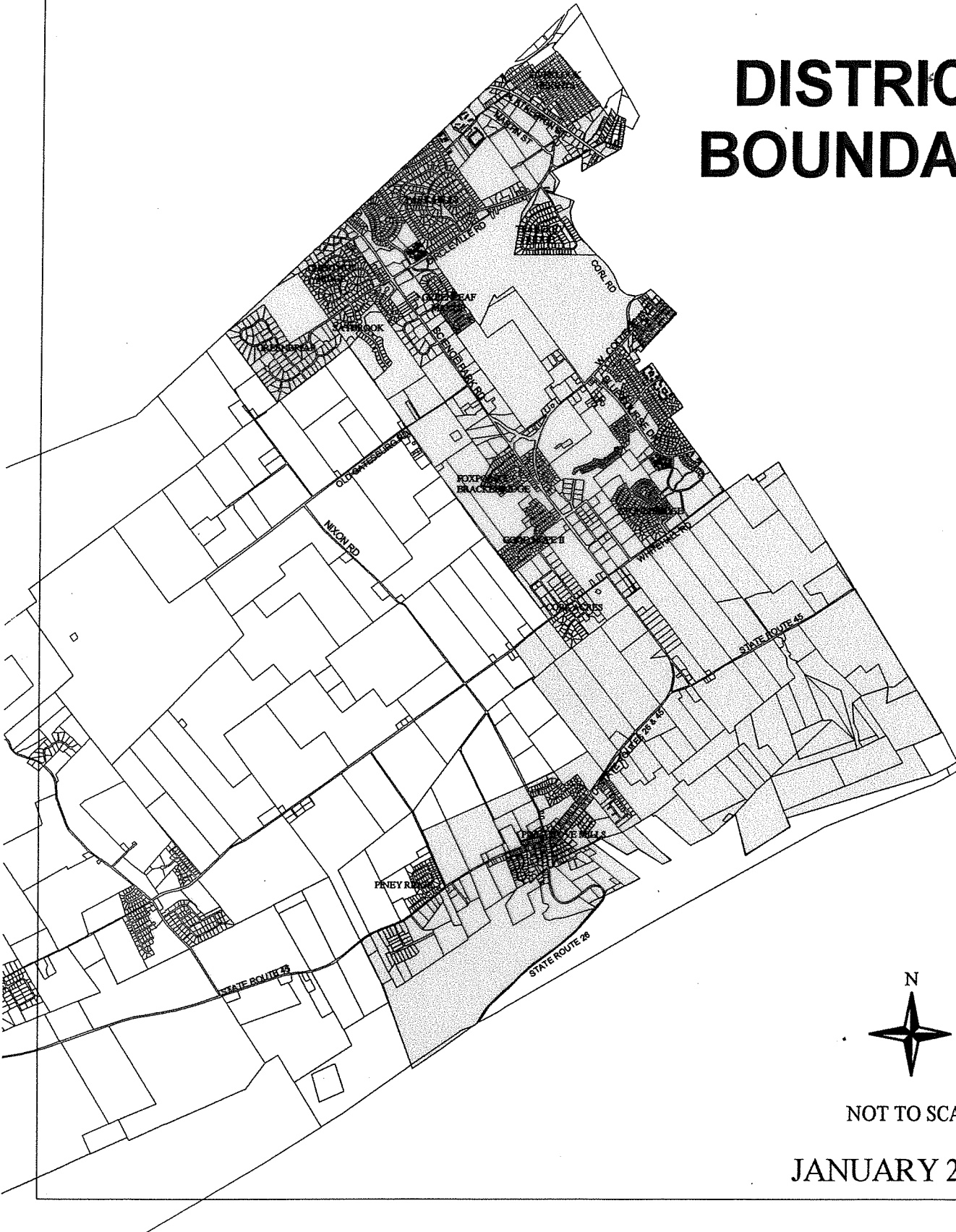
- Create an improved traffic system that adequately addresses the needs of future development and would be paid for in an equitable manner.

Comparison of 1998 Existing ADT Volumes with 20 Year Projections

Ferguson Township Transportation District Study



DISTRICT BOUNDARY



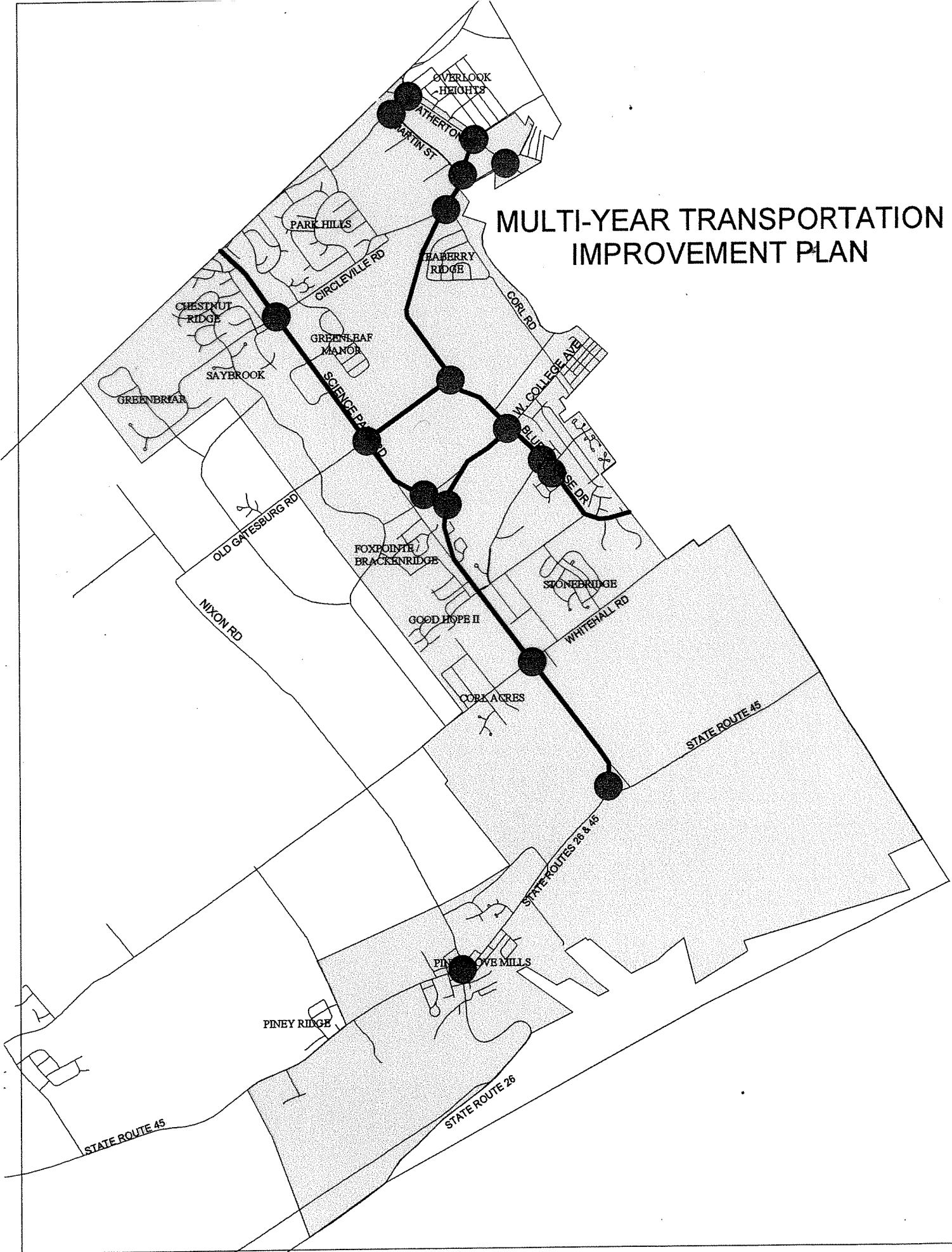
JANUARY 2000

FERGUSON TOWNSHIP TRANSPORTATION DEVELOPMENT DISTRICT

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Proj No	Project	Year	1999 Construction Cost	Construction Year Cost	1999 Design Cost	Design Year Cost	1999 P-O-W Cost	Acquisition Year Cost	State Share	State Share	Local Share
Designer											
1	Blue Course Drive	2	\$7,300,000	\$7,300,000	\$535,000	\$535,000	S	\$1,586,000	\$1,586,000	80.00%	\$1,887,000
2	Science Park Road Widening	4	\$1,750,000	\$2,127,000	\$175,000	\$193,000	T	\$0	\$0		\$2,320,000
3	Valley Vista/Science Park/Circleville	3	\$250,000	\$289,000	\$25,000	\$26,000	T	\$299,000	\$445,000		\$760,000
4	Science Park/Old Gatesburg	3	\$100,000	\$116,000	\$10,000	\$11,000	T	\$0	\$0		\$127,000
5	Science Park/Pine Hall/Circleville	3	\$100,000	\$116,000	\$10,000	\$11,000	T	\$0	\$0		\$127,000
6	Old Gatesburg Extension	5	\$1,250,000	\$1,595,000	\$125,000	\$145,000	T	\$342,000	\$561,000	80.00%	\$576,000
7	North Atherton/Vairo/Martin	6	\$500,000	\$670,000	\$75,000	\$91,000	S	\$900,000	\$1,551,000	50.00%	\$1,156,000
8	Aaron Drive/Martin Street	6	\$400,000	\$536,000	\$60,000	\$73,000	S	\$0	\$0	50.00%	\$304,000
9	Circleville/Valley Vista/Science Park	7	\$550,000	\$774,000	\$55,000	\$70,000	T	\$0	\$0		\$844,000
10	Science Park/ Old Gatesburg	7	\$600,000	\$844,000	\$60,000	\$77,000	T	\$32,000	\$58,000		\$979,000
11a	Valley Vista/Science Park Road Phase I	8	\$2,100,000	\$3,103,000	\$410,000	\$549,000	T	\$481,000	\$914,000		\$4,566,000
11b	Valley Vista/Science Park Road Phase II	10	\$2,000,000	\$3,258,000			T				\$3,258,000
12	Pine Grove/Nixon/Shingletown	9	\$700,000	\$1,086,000	\$105,000	\$148,000	S	\$485,000	\$967,000	80.00%	\$440,000
13	Science Park/Pine Hall Drive	9	\$50,000	\$78,000	\$5,000	\$7,000	T	\$0	\$0		\$85,000
14	Clinton Ave./N. Atherton	11	\$1,050,000	\$1,796,000	\$157,500	\$244,000	S	\$126,000	\$277,000	80.00%	\$463,000
15	Aaron Drive/N. Atherton Street	12	\$100,000	\$180,000	\$10,000	\$16,000	T	\$0	\$0	80.00%	\$52,000
16	Cherry Lane/N. Atherton	12	\$50,000	\$90,000	\$5,000	\$8,000	T	\$11,000	\$25,000	80.00%	\$31,000
17	Clinton/Martin Street/Cherry Lane	12	\$750,000	\$1,347,000	\$75,000	\$122,000	T	\$93,000	\$215,000	80.00%	\$434,000
18	Inner Loop/Circleville	13	\$900,000	\$1,697,000	\$90,000	\$154,000	T	\$151,000	\$366,000	80.00%	\$567,000
19	Inner Loop/Old Gatesburg Road	13	\$750,000	\$1,414,000	\$75,000	\$128,000	T	\$9,000	\$22,000	80.00%	\$415,000
20	Park Center Boulevard/Inner Loop	14	\$100,000	\$198,000	\$10,000	\$18,000	T	\$12,000	\$31,000	80.00%	\$64,000
21	College Avenue/Inner Loop	14	\$1,650,000	\$3,267,000	\$247,500	\$444,000	S	\$94,000	\$239,000	80.00%	\$790,000
22	Westerly Parkway/Inner Loop	15	\$550,000	\$1,143,000	\$55,000	\$104,000	T	\$90,000	\$241,000	80.00%	\$381,000
23	Whitehall Road/Inner Loop	15	\$800,000	\$1,663,000	\$80,000	\$151,000	T	\$44,000	\$118,000	80.00%	\$507,000
24	Science Park/Old Gatesburg	16	\$450,000	\$982,000	\$45,000	\$89,000	T	\$90,000	\$253,000		\$1,324,000
25	College Avenue/Science Park	16	\$550,000	\$1,201,000	\$55,000	\$109,000	T	\$47,000	\$132,000	80.00%	\$376,000
26	College Avenue/Whitehall	17	\$850,000	\$1,948,000	\$85,000	\$177,000	T	\$230,000	\$678,000	80.00%	\$702,000
27a	College Avenue Widening Phase I	18	\$3,000,000	\$7,220,000	\$900,000	\$1,965,000	S	\$177,000	\$548,000	80.00%	\$1,947,000
27b	College Avenue Widening Phase II	20	\$3,000,000	\$7,960,000			S			80.00%	\$1,592,000
28	Blue Course Drive Widening	19	\$1,300,000	\$3,285,000	\$195,000	\$447,000	S	\$111,000	\$361,000	80.00%	\$819,000
29	District Formation Costs	0	\$160,000	\$160,000			T				\$160,000
Total:			\$33,660,000	\$57,443,000	\$3,735,000	\$6,112,000		\$5,410,000	\$9,588,000		\$28,053,000
PaDOT Design and Geotechnical: 15.00% of Construction Cost Local Design and Geotechnical: 10.00% 61.65% 38.35% Design Year Offset: 2 years Acquisition Year 1 year Total: \$73,159,000 Acquisition Inflation Rate: 5.00% (compound) Round To 3 Places Interest: \$0 Expense Note: Project 1 - Blue Course Drive - costs are not adjusted. Total Trips in District: 53,260 Total Assessed: \$25,515,000 35.00%											

MULTI-YEAR TRANSPORTATION IMPROVEMENT PLAN

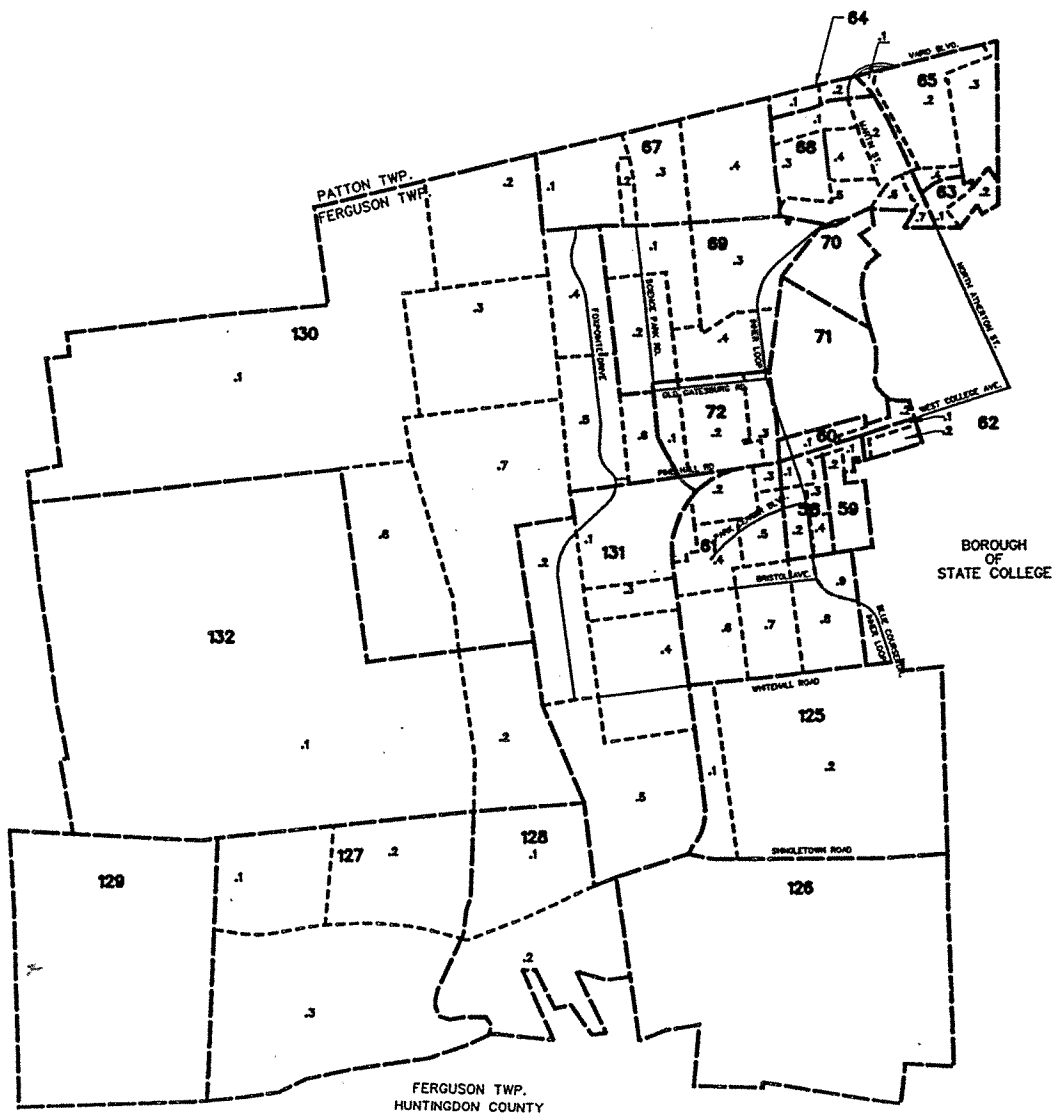




Accomplishments to Date

■ Transportation Studies by Trans Associates

- ◆ Study Area and Land Use Assumptions
- ◆ Projected traffic volumes and needed road improvements (multi-year plan)
- ◆ Established District Boundary
- ◆ Developed Funding Options
- ◆ Prepared draft ordinances



LEGEND

- 130 TAZ ZONE
- 2 TAZ SUBZONE

	PROJECT NO. FERGUSON 7071
	PROJECT: FERGUSON TOWNSHIP TRAFFIC STUDY
	TITLE: STUDY AREA
SCALE: N.T.S.	FIGURE
	D.S. C.B. REV.

Urethane Associates
Transportation Solutions for Today and Tomorrow
2000 Industrial Road, Pittsburgh, Pennsylvania 15202 (412) 487-4070

COST SUMMARY

Ferguson Township Transportation District Study

PHASE	COST ⁽¹⁾					
	Construction Cost	Engineering Cost	Right-of-Way Cost	Total Cost	Local Cost	State Cost
TOTAL ⁽²⁾	\$57,443,000	\$6,112,000	\$9,588,000	\$73,143,000	\$28,050,000	\$45,093,000

(1) Costs indicated are year of construction dollars.

(2) Includes 28 construction projects over a twenty year construction period.

Source: Analysis by Trans Associates and David Toal

IMPACT ASSESSMENT METHOD OF FUNDING SUMMARY
FERGUSON TOWNSHIP TRANSPORTATION DISTRICT STUDY

Impact Assessment Fee Per Trip ⁽¹⁾	\$528.46
Transportation Millage	0.48 mills
Transfer Tax Increase	0.35%

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- (1) Total trips for a development include both the A.M. and P.M. peak hour trips combined. Impact fee is collected prior to the issuance of a building permit, transfer of property, change in use that would generate more trips, the transfer of trips (some exemptions allowed).

Source: Analysis by Trans Associates.

EXAMPLES OF IMPACT FEES FOR TYPICAL LAND USES FERGUSON TOWNSHIP TRANSPORTATION DISTRICT STUDY

TYPICALLY SIZED LAND USE	NUMBER OF PEAK HOUR TRIPS ⁽¹⁾	IMPACT ASSESSMENT FEE ⁽²⁾
Townhouse (1 Dwelling Unit)	1.8	\$951.23
Single Family Home (1 Dwelling Unit)	2.5	\$1,321.15
Mobile Home (1 Dwelling Unit)	2.5	\$1,321.15
Church (10,688 S.F.)	15	\$7,926.90
General Light Industrial Development (48,000 S.F.)	76	\$40,162.96
Apartments (56 Units)	80	\$42,276.80
Restaurant (6,000 S.F.)	121	\$63,943.66
Office Building (20,000 S.F.)	154	\$81,382.84
Retail (16,000 S.F.)	203	\$107,277.38
Convenience Store (2,000 S.F.)	238	\$125,773.48

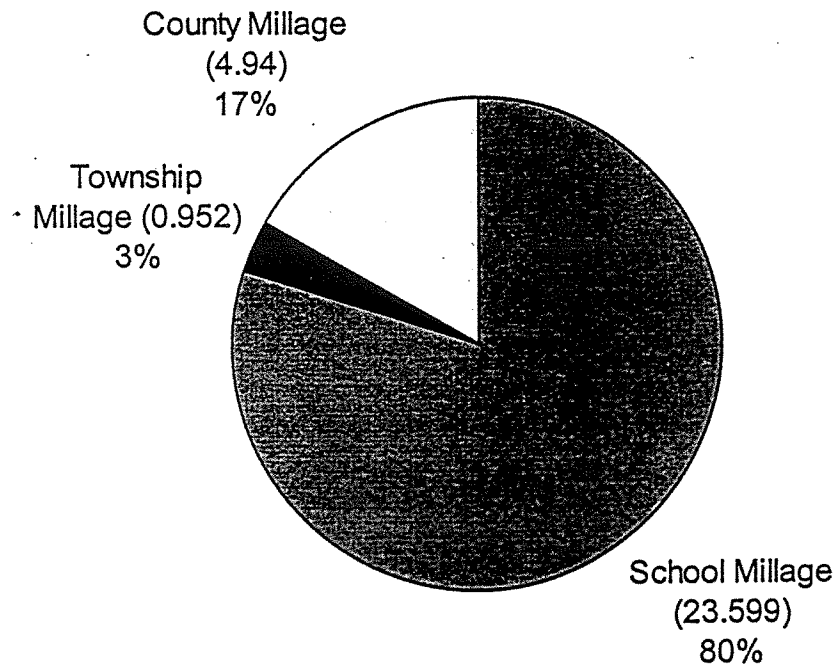
(1) Both A.M. and P.M. peak hour trips.

(2) \$528.46 per trip payable upon transfer of ownership, expansion of existing use or development of vacant property.

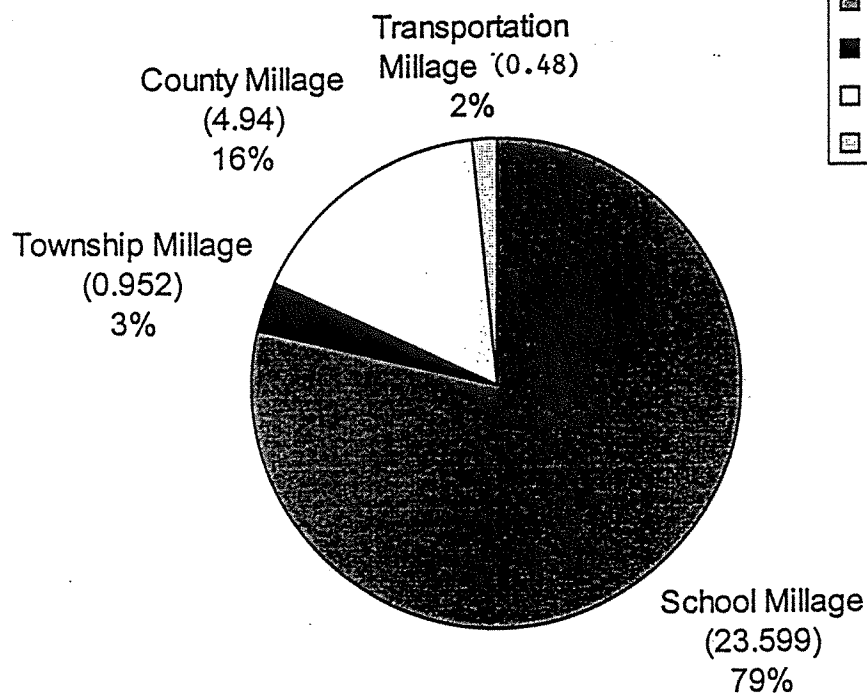
Source: Analysis by Trans Associates and David Toal

TAX BURDEN COMPARISON

Ferguson Township Transportation District Study



EXISTING
(29.491 Total Millage)



■	School Millage (23.599)
■	Township Millage (0.952)
□	County Millage (4.94)
■	Transportation Millage (0.50)

PROPOSED
(29.971 Total Millage)

FERGUSON TOWNSHIP

TRANSPORTATION DISTRICT, FUNDING STUDY

EXAMPLE: AGRICULTURAL PROPERTY

DESCRIPTION		EXISTING General Real Estate Tax of 0.952 mills 0.000952	ADDITIONAL PROPOSED TPD Real Estate Tax of 0.48 mills 0.00048	EXISTING Real Estate Transfer Tax of 0.5 percent 0.005	ADDITIONAL PROPOSED Real Estate Transfer Tax of 0.35 percent% 0.0035	ADDITIONAL PROPOSED Impact Fee Per Peak Hour Trip \$528.46
60.0 acres, 3 lots, 3PHT each						
Peak Hour Trips	9					
Market Value	\$173,200			\$866.00	\$606.20	\$4,756.14
Assessed Value	\$86,600	\$82.44	\$41.57			
Assessed Value "CG"	\$28,850	\$27.47	\$13.85			

EXAMPLE: RESIDENTIAL (single family)

DESCRIPTION		EXISTING General Real Estate Tax of 0.952 mills 0.000952	ADDITIONAL PROPOSED TPD Real Estate Tax of 0.48 mills 0.00048	EXISTING Real Estate Transfer Tax of 0.5 percent 0.005	ADDITIONAL PROPOSED Real Estate Transfer Tax of 0.35 percent% 0.0035	ADDITIONAL PROPOSED Impact Fee Per Peak Hour Trip \$528.46
Peak Hour Trips	2.5					\$1,321.15
Market Value	\$123,480			\$617.40	\$432.18	
Assessed Value	\$61,740	\$58.78	\$29.64			

EXAMPLE: COMMERCIAL OFFICE

DESCRIPTION		EXISTING General Real Estate Tax of 0.952 mills 0.000952	ADDITIONAL PROPOSED TPD Real Estate Tax of 0.48 mills 0.00048	EXISTING Real Estate Transfer Tax of 0.5 percent 0.005	ADDITIONAL PROPOSED Real Estate Transfer Tax of 0.35 percent% 0.0035	ADDITIONAL PROPOSED Impact Fee Per Peak Hour Trip \$528.46
Peak Hour Trips	68					\$35,935.28
Market Value	\$781,540			\$3,907.70	\$2,735.39	
Assessed Value	\$390,770	\$372.01	\$187.57			



Next Steps

- Finalize funding methodology
- Finalize draft ordinances
- Various agency approvals of multi-year plan
- Public Hearing
- Adopt Ordinance



Summary

- Improve traffic system
- Establish a TPD of benefited properties
- Implement a funding program that will:
 - ◆ obtain State participation
 - ◆ assess benefited properties
 - ◆ phase improvements
 - ◆ guide growth before, rather than after congestion occurs

**Ferguson Township Improvements Funding
Ferguson Township, Centre County, Pennsylvania**

PROJECT	LOCATION	RECOMMENDED IMPROVEMENTS	ROW/DESIGN/AND CONSTRUCTION COST ESTIMATE IN YEAR OF CONSTRUCTION
1	VALLEY VISTA ROAD /SCIENCE PARK ROAD AND CIRCLEVILLE ROAD (2003)	<ul style="list-style-type: none"> - Designate a left turn lane on the northbound approach of Science Park Road - Construct a left turn lane on the southbound approach of Valley Vista Road - Install traffic signal 	\$799,000
2	SCIENCE PARK ROAD AND OLD GATES BURG ROAD (2003)	<ul style="list-style-type: none"> - Designate a left turn lane on the northbound approach of Science Park Road - Designate a left turn lane on the southbound approach of Science Park Road - Install traffic signal 	\$133,000
3	SCIENCE PARK ROAD WIDENING (2005)	<ul style="list-style-type: none"> - Widen Science Park Road between Circleville Road and Pine Hall Road from two (2) travel lanes to two(2) travel lanes with (1) center left turn lane 	\$2,558,000
4	OLD GATESBURG ROAD EXTENSION (2007)	<ul style="list-style-type: none"> - Extend Old Gatesburg Road between Blue Course Drive and Science Park Road - Install traffic signal at Blue Course Drive 	\$2,665,000
5	CIRCLEVILLE ROAD AND VALLEY VISTA ROAD/SCIENCE PARK ROAD (INTERSECTION ONLY) (2010)	<ul style="list-style-type: none"> - Construct a left turn lane and a right turn lane on the northbound approach of Science Park Road - Construct a left turn lane and a right turn on the southbound approach of Valley Vista Road - Construct a left turn lane and a right turn lane on the eastbound approach of Circleville Road 	\$1,026,000

**Ferguson Township Improvements Funding
Ferguson Township, Centre County, Pennsylvania**

PROJECT	LOCATION	RECOMMENDED IMPROVEMENTS	ROW/DESIGN/AND CONSTRUCTION COST ESTIMATE IN YEAR OF CONSTRUCTION
5	CIRCLEVILLE ROAD AND VALLEY VISTA ROAD/SCIENCE PARK ROAD (INTERSECTION ONLY) (2010)	<ul style="list-style-type: none"> - Construct a left turn lane and a right turn lane on the westbound approach of Circleville Road - Modify existing traffic signal 	
6	OLD GATESBURG ROAD AND SCIENCE PARK ROAD (INTERSECTION ONLY) (2010)	<ul style="list-style-type: none"> - Construct a left turn lane and a right turn lane on the northbound approach of Science Park Road - Construct a left turn lane and a right turn Lane on the southbound approach of Science Park Road - Construct a left turn lane and a right turn lane on the eastbound approach of Old Gatesburg Road - Construct a left turn lane and a right turn lane on the westbound approach of Old Gatesburg Road - Modify existing traffic signal 	\$1,189,000
7	PINE GROVE ROAD AND SHINGLETOWN ROAD (S.R. 0045)/PINE GROVE ROAD AND S. WATER STREET/NIXON ROAD (2012)	<ul style="list-style-type: none"> - Construct a right turn lane on the northbound approach of Pine Grove Road - Construct a left turn lane on the southbound approach of Pine Grove Road - Construct a right turn lane on the westbound approach of Shingletown Road (S.R. 0045) 	\$2,676,000

**Ferguson Township Improvements Funding
Ferguson Township, Centre County, Pennsylvania**

PROJECT	LOCATION	RECOMMENDED IMPROVEMENTS	ROW/DESIGN/AND CONSTRUCTION COST ESTIMATE IN YEAR OF CONSTRUCTION
7	PINE GROVE ROAD AND SHINGLETOWN ROAD (S.R. 0045)/PINE GROVE ROAD AND S. WATER STREET/NIXON ROAD (2012)	<ul style="list-style-type: none">- Construct a right turn lane on the northbound approach of S. Water Street- Construct a left turn lane on the southbound approach of Nixon Road- Construct a left lane on the approach of Pine Grove Road- Install traffic signal at each intersection	