

Traffic Engineering

Mission Statement

The mission of the Traffic Engineering Department is responsibility for all aspects of roadway traffic engineering and operations/maintenance including implementation of programs related thereto. General areas of responsibility include: traffic signals, traffic signs, pavement markings, street signs, impact attenuators, traffic design/review, transportation planning, accident record compiling/analysis, traffic level-of-service analysis and liaison with other agencies.

Goals and Objectives

The Traffic Engineering Department endeavors to provide safe and efficient movement of vehicles, people and goods through the community as advocated by the established regulations and the elected administration. Goals and objectives can be categorized into the following areas:

- 1) The department strives to produce and make available the maximum level of service for traffic with the limited resources available for capital improvements and operation.
- 2) The department attempts to develop new engineering techniques for moving persons and goods safely and efficiently.
- 3) The department continues to create and maintain a communication channel between the administration and the public. This is to align department services in accordance with administrative policy making, as well as provide the timely interchange of incoming and outgoing information with the public.

Indicators:

| | <u>2003</u> <u>Actual</u> | <u>2004</u> <u>Actual</u> | <u>2005</u> <u>Estimated</u> | <u>2006</u> <u>Projected</u> |
|-------------------------------------|------------------------------|------------------------------|---------------------------------|---------------------------------|
| Engineering/Administration Staff: | | | | |
| Accident Records & Analysis | 9,105 | 8,300 | 9,300 | 9,800 |
| Fatal Accident Investigation | 8 | 10 | 12 | 15 |
| Driveway Permits Processed | 44 | 60 | 40 | 50 |
| Building Permits Processed | 150 | 133 | 160 | 170 |
| Plot Plans Processed | 66 | 42 | 50 | 60 |
| Board of Safety Reports | 60 | 60 | 65 | 75 |
| Traffic Counts Conducted | 40 | 45 | 45 | 55 |
| Traffic Studies Conducted | 160 | 180 | 180 | 180 |
| Traffic Investigations (complaints) | 240 | 260 | 260 | 280 |

Signal Division:

| | | | | |
|--|-----|-----|-----|-----|
| New Signals Installed | 3 | 3 | 4 | 6 |
| Total Signals In Service | 347 | 350 | 354 | 360 |
| Total Flashing Beacons In Service | 57 | 53 | 53 | 52 |
| Total Pedestrian Signal Locations In Service | 170 | 172 | 174 | 176 |
| Signals Modernized | 4 | 5 | 4 | 4 |
| Signal Accident Repairs | 60 | 23 | 50 | 50 |

| | <u>2003</u> | <u>2004</u> | <u>2005</u> | <u>2006</u> |
|------------------------------------|--------------------|--------------------|--------------------|--------------------|
| | Actual | Actual | Estimated | Projected |
| Signal Division (cont'd) | | | | |
| Signal Bulbs Replaced (Emergency) | 400 | 357 | 350 | 0 |
| Signal Bulbs Replaced (Routine) | 9,700 | 9,463 | 0 | 0 |
| Signal Trouble Calls | 1,375 | 419 | 1,100 | 1,200 |
| Controller Maintenance | 350 | 798 | 500 | 500 |
| Detector Loop Repairs | 45 | 43 | 50 | 50 |
| Signal Work Orders | 425 | 318 | 400 | 450 |
| Cable Locations | 1,225 | 1,339 | 7,500 | 7,500 |
| Total Underground Cable In Service | 900,000 ft. | 905,000 ft. | 910,000 ft. | 915,000 ft. |
| Total Aerial Cable In Service | 56,000 ft. | 56,000 ft. | 56,000 ft. | 56,000 ft. |

Sign & Marking Division

| | | | | |
|-----------------------------------|------------|------------|------------|------------|
| Signs Installed | 1,025 | 742 | 750 | 800 |
| Signs Relocated | 300 | 322 | 340 | 360 |
| Signs Replaced | 2,100 | 2,600 | 2,400 | 2,500 |
| Signs Removed | 640 | 1,050 | 1,100 | 1,150 |
| Signs Manufactured | 4,350 | 4,746 | 4,800 | 4,850 |
| Street Lanes Marked-Painted Miles | 615 mi. | 633 mi. | 650mi. | 675 mi. |
| Curb Parking Marked (Yellow Curb) | 20,500 ft. | 29,566 ft. | 30,000 ft. | 32,000 ft. |
| Crosswalks Marked | 590 | 636 | 650 | 675 |
| Lane Arrows Marked | 600 | 795 | 825 | 850 |
| Parking Stalls Marked | 300 | 531 | 550 | 600 |

TRAFFIC ENGINEERING (LOCAL ROAD & STREETS)

Dept # 138-011-OFFC

2006 BUDGET COMPARISON

| | | 2004 | 2005 | 2006 | \$ INCREASE (DECREASE) | % CHANGE |
|-------------------|----------------------|---------------------|--------------------------|---------------------|---------------------------|---------------------------|
| | | ACTUAL | APPROVED THRU 7/31/05 | SUBMITTED | FROM 2005 APPR TO 2006 | FROM 2005 APPR TO 2006 |
| 4111 | WAGES-REG | \$ 1,194,254 | \$ 1,352,387 | \$ 1,416,839 | \$ 64,452 | 4.77% |
| 4115 | PARTTIME | 30,326 | 41,037 | 46,152 | 5,115 | 12.46% |
| 411M | TRAFFIC ENG | (463,656) | (469,363) | - | 469,363 | -100.00% |
| 4121 | VACATION PAY | 146,589 | 8,800 | 2,369 | (6,431) | -73.08% |
| 4125 | OVERTIME | 14,683 | 16,280 | 16,768 | 488 | 3.00% |
| 412L | LONGEVITY | 12,896 | 13,412 | 6,326 | (7,086) | -52.83% |
| | TOTAL WAGES | \$ 935,092 | \$ 962,553 | \$ 1,488,454 | \$ 525,901 | 54.64% |
| 4131 | PERF | 66,017 | 69,544 | 79,667 | 10,123 | 14.56% |
| 4132 | FICA | 91,104 | 109,542 | 114,341 | 4,799 | 4.38% |
| 4134 | GROUP HEALTH INSUR | 211,248 | 224,000 | 259,050 | 35,050 | 15.65% |
| 4136 | UNEMPLOYMENT | 708 | 709 | 747 | 38 | 5.41% |
| 4137 | WORKERS COMP | 19,044 | 19,044 | 21,804 | 2,760 | 14.49% |
| 4138 | CLOTHING ALLOWANCE | 4,500 | 4,500 | - | (4,500) | -100.00% |
| 413A | PERF/FRINGE | 36,009 | 41,726 | 43,455 | 1,729 | 4.14% |
| 413R | RETIREE HEALTH INSUR | 12,997 | 7,000 | 23,550 | 16,550 | 236.43% |
| TOTAL 4100 | | \$ 1,376,719 | \$ 1,438,618 | \$ 2,031,068 | \$ 592,450 | 41.18% |
| 4212 | STATIONARY/FORMS | \$ 650 | \$ 600 | \$ 635 | \$ 35 | 5.83% |
| 4214 | SAFETY ITEMS | 4,948 | 6,500 | 6,050 | (450) | -6.92% |
| 4219 | OTHR OFFC SUPPL | 5,974 | 5,475 | 5,300 | (175) | -3.20% |
| 4231 | GASOLINE | 22,497 | 22,820 | 25,095 | 2,275 | 9.97% |
| 4232 | DIESEL FUEL | 2,344 | 2,220 | 2,770 | 550 | 24.77% |
| 4246 | HOUSEHOLD SUPPL | 1,499 | 3,035 | 2,175 | (860) | -28.34% |
| 4261 | BLDG REP MTLs | 1,500 | 2,700 | 1,400 | (1,300) | -48.15% |
| 4263 | OTHR REP PARTS | 2,873 | 2,090 | 1,400 | (690) | -33.01% |
| 4264 | SIGN DIVS | 67,532 | 83,000 | 84,000 | 1,000 | 1.20% |
| 4265 | SIGNAL DIVS | 188,113 | 296,826 | 279,000 | (17,826) | -6.01% |
| 4275 | PAVE/MARK | 75,454 | 78,350 | 84,620 | 6,270 | 8.00% |
| 4299 | OTHER MTLs | 136 | 500 | 300 | (200) | -40.00% |
| TOTAL 4200 | | \$ 373,520 | \$ 504,116 | \$ 492,745 | \$ (11,371) | -2.26% |
| 4312 | MEDIC SRVCS | \$ 330 | \$ - | \$ - | \$ - | 0.00% |
| 4317 | INSTRCT SRVCS | 390 | 850 | 430 | (420) | -49.41% |
| 431E | DRUG TEST | 408 | 420 | 345 | (75) | -17.86% |
| 431M | SECRTL SRVCS | 272 | 280 | 280 | - | 0.00% |
| 431Q | RADIO SHOP | 64 | 1,165 | 1,150 | (15) | -1.29% |
| 4321 | FREIGHT | 900 | 1,100 | 1,060 | (40) | -3.64% |
| 4322 | POSTAGE | 491 | 550 | 435 | (115) | -20.91% |
| 4323 | TELEPHONE | 14,983 | 14,855 | 20,145 | 5,290 | 35.61% |
| 4324 | TRAVEL | 1,141 | 1,950 | 3,000 | 1,050 | 53.85% |
| 4326 | MILEAGE | - | 600 | 300 | (300) | -50.00% |
| 432C | CELL PHONE | 5,770 | 4,920 | 4,800 | (120) | -2.44% |
| 432L | LONG DISTANCE | 310 | 600 | 420 | (180) | -30.00% |
| 4331 | PRINTING | - | 200 | 150 | (50) | -25.00% |
| 4332 | PUB LEGAL | - | 400 | 400 | - | 0.00% |
| 4333 | PHOTO/BLPRNT | 1,749 | 2,240 | 1,950 | (290) | -12.95% |
| 4341 | PROPERTY INSUR | 1,154 | 952 | 2,281 | 1,329 | 139.60% |
| 4342 | LIABILITY INSUR | 1,164 | 1,166 | 1,200 | 34 | 2.92% |
| 4343 | OFCL/CRIME BOND | 274 | 150 | 317 | 167 | 111.33% |
| 4344 | OTHER CSLTY INSR | 652 | 1,710 | 402 | (1,308) | -76.49% |
| 4345 | AUTO INSUR | 4,501 | 4,427 | 7,062 | 2,635 | 59.52% |
| 4351 | ELECTRICITY | 235,109 | 246,000 | 151,800 | (94,200) | -38.29% |
| 4352 | NATURAL GAS | 14,277 | 18,156 | 18,500 | 344 | 1.89% |
| 4353 | WATER | 2,067 | 1,710 | 1,680 | (30) | -1.75% |
| 4356 | SOLID WASTE DISPOSAL | 763 | 1,075 | 1,075 | - | 0.00% |
| 4358 | HAZARD DISPOSAL | - | 1,000 | 1,400 | 400 | 40.00% |
| 4361 | CONT BLD REP | 448 | 1,200 | 950 | (250) | -20.83% |
| 4362 | CONT VEH REP | 149 | - | - | - | 0.00% |
| 4363 | CONT OTH REP | 12,481 | 15,400 | 13,000 | (2,400) | -15.58% |
| 4365 | JANITORIAL SRVCS | 7,401 | 9,060 | 6,930 | (2,130) | -23.51% |
| 436N | GARAGE NON-TARGET | 6,212 | 3,000 | 3,000 | - | 0.00% |
| 436T | GARAGE TARGET | 65,076 | 70,188 | 77,592 | 7,404 | 10.55% |
| 4374 | OTHR EQ RENT | - | 1,500 | 1,500 | - | 0.00% |
| 4377 | CC BLD PKG | 850 | 900 | 840 | (60) | -6.67% |
| 4391 | SUBS & DUES | 1,503 | 2,005 | 1,505 | (500) | -24.94% |

TRAFFIC ENGINEERING (LOCAL ROAD & STREETS)

Dept # 138-011-OFFC

2006 BUDGET COMPARISON

| | <u>2004</u> <u>ACTUAL</u> | <u>2005</u> <u>APPROVED</u> <u>THRU 7/31/05</u> | <u>2006</u> <u>SUBMITTED</u> | <u>\$ INCREASE</u> <u>(DECREASE)</u> <u>FROM 2005 APPR</u> <u>TO 2006</u> | <u>% CHANGE</u> <u>FROM 2005 APPR</u> <u>TO 2006</u> |
|-----------------------|------------------------------|---|---------------------------------|--|--|
| 4392 LICENSES | 328 | - | 100 | 100 | 100.00% |
| 4399 OTHR SRVCS | 1,823 | 750 | 600 | (150) | -20.00% |
| 439B MASTER LEASE | - | - | 10,988 | 10,988 | 100.00% |
| TOTAL 4300 | \$ 383,040 | \$ 410,479 | \$ 337,587 | \$ (72,892) | -17.76% |
| 4425 PUR FIXED EQPT | \$ - | \$ - | \$ 16,000 | \$ 16,000 | 100.00% |
| 4431 CONST GROUND | 2,362 | 6,000 | 4,000 | (2,000) | -33.33% |
| 4441 PUR VEHICLE | - | 34,000 | - | (34,000) | -100.00% |
| 4442 PUR HVY MACH | 122,412 | - | - | - | 0.00% |
| 4443 PUR OFFC EQP | - | 2,500 | 2,500 | - | 0.00% |
| 4444 PUR OTHR EQP | 139,102 | - | - | - | 0.00% |
| 4445 PUR COMPUTER | 3,244 | 3,040 | - | (3,040) | -100.00% |
| TOTAL 4400 | \$ 267,120 | \$ 45,540 | \$ 22,500 | \$ (23,040) | -50.59% |
| TOTAL EXPENSES | \$ 2,400,399 | \$ 2,398,753 | \$ 2,883,900 | \$ 485,147 | 20.22% |

Traffic Engineering 2006-2010 Capital Improvement Program

| Traffic Engineering 2006-2010 Capital Improvement Program | | | | | | | |
|---|---|--|----------------|---|----------------|----------------|----------------|
| FUNDING SOURCE CODE: CC-Cumulative Capital Fund CDBG-Community Development Block Grant CEDIT-Co. Economic Development Income Tax CO-County Source FED-Federal Source GOB-General Obligation Bond GRA-Grant Approved | | GRP-Grant Pending LE-Lease InfraBd-Infrastructure Bond LRS-Local Roads & Streets MISC-Miscellaneous MVH-Motor Vehicle Highway PCBF-Park Cumulative Bldg. Fund PS-Private Source | | PT-Property Tax RB-Revenue Bond ST-State Source SU-Sewer Utility SWU-Stormwater Utility TIF-Tax Increment Financing UF-User Fee WU-Water Utility | | | |
| Item # | Project Title & Description | Funding Source | Expenditure | | | | |
| | | | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1 | Vehicles | LE | 94,000 | 137,000 | 103,000 | 85,000 | 123,000 |
| 2 | Equipment | LRS | 16,000 | 11,000 | 13,000 | 10,000 | 5,000 |
| 3 | Computer Equipment Replacement | CC | - | - | - | - | - |
| | | LE | 5,524 | 6,594 | 2,904 | 5,524 | 2,904 |
| 4* | <u>Traffic Signal Modernization Program</u> - 4 intersections/year | LRS | 120,000 | 120,000 | 120,000 | 90,000 | 90,000 |
| | a. Broadway & Taylor | | | | | | |
| | b. Harrison & Williams | | | | | | |
| | c. Oxford & Wayne Trace | | | | | | |
| | d. Fairfield & Kinsmoor | | | | | | |
| 5* | <u>Traffic Signal Controller Replacement Program</u> - 6 units complete 2006 Replacements - Oxford & Warsaw Pontiac & Smith, Brooklyn & Covington Main & Runnion, Creighton & Hanna Decatur & Hanna | LRS | 35,000 | 35,000 | 35,000 | 35,000 | 35,000 |
| 6* | <u>Northeast Annexation Ph. V</u> - Installation/replacement of streetname signs and stop signs. | LRS | 3,400 | - | - | - | - |
| 7* | Southwest Extended Annexation - Installation of streetname signs. | LRS | 11,500 | 11,500 | - | - | - |
| 8* | <u>Conflict Monitor/Malfunction Management unit Modernize</u> - Update of outdated, unrepairable electronics | LRS | 16,000 | 16,000 | - | - | - |
| 9* | <u>Traffic Signal Head Replacement</u> - 10 intersections/year 2006 Upgrades - State & Reed Hobson & Vance, Hobson & Trier St. Joe Rd. & Broyles, St. Joe Rd. & Canterbury Crescent & Reed, St. Joe Rd. & Crescent Stellhorn & Northwood, Maplecrest & Stellhorn Maplecrest & Northwood | LRS | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 |
| 10* | Expand/Upgrade ATMS Computerized Signal System | LRS | - | 70,000 | 84,000 | 30,000 | 25,000 |
| 11 | Office Equipment Replacement | LRS | 2,500 | 4,000 | 4,000 | 4,000 | 4,000 |
| TOTAL | | | 318,924 | 426,094 | 376,904 | 274,524 | 299,904 |

* Although capital improvements, actual expenditures will be made from the 4200 budget line series.

The Traffic Engineering Department is responsible for all aspects of roadway Traffic Engineering operations and maintenance. Areas of responsibility include: the design, Revenue for departmental funding comes from Local Roads and Streets (LRS), contracts with INDOT, Allen County, New Haven, and claims reimbursements, as well as

1. - 2. Vehicles and equipment are replaced on a rotating basis based on 1) maintenance costs 2) mileage 3) age.
3. Computer equipment replacement - There are 20 pc's in the department. This item will include replacing those computers that are five years old and also money is included to replace two (2) printers and two (2) monitors, in addition to the pc's. A fax Machine is also included.
4. Traffic Signal Modernization - This program updates a signalized intersection to aluminum mast arm poles, 12" traffic signal indications and new wiring. Intersections with steel poles and 8" signal indications that were last modernized in the 60's are currently being done. This program is updated annually to coordinate with transportation projects.
5. Traffic Signal Controller Replacement - This program replaces obsolete and discontinued traffic signal control units that have been in service for at least ten years.
6. - 7. Annexation projects - Shall consist of installation of a green standard street name sign at an intersection that is unmarked or where the neighborhood desires replacement of wood street name signs.
8. Conflict Monitor/Malfunction Management Modernize-This program updates old non repairable conflict monitors updating to new technology.
9. Traffic Signal Head Replacement-This program replaces traffic signal indications which were installed in the 70's The program is designed as a preventative maintenance and safety program.
10. In 2000 and 2001 our Eagle Contract Traffic Signal Control System was replaced with an Eagle Actra Advanced Traffic Management System. The new system allows expansion of our computerized traffic signal network. The expansion/upgrade of the ATMS will include adding additional traffic signals to our network.
11. Furniture replacement will consist of replacing standard office chairs with ergonomic chairs, providing additional workstation space in conjunction with the new advanced Traffic Management Computer System and replacing worn furniture.

**STAFFING LEVELS
BUDGETED
TRAFFIC ENGINEERING DEPARTMENT**

| CLASSIFICATION TITLE | EXEMPT GRID/ * UNION | | | | | | | | | | | | | | |
|---|----------------------|-----|-----|------|------|------|------|------|------|------|------|------|------|------|--|
| | | 98 | 99 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | |
| Dir. Traffic Eng/Street Light | J | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Asst. Traffic Engineer | J | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Administrative Asst. | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Project Coordinator | 14/IAM | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Signal Superintendent/Signal Supervisor* | F | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Engineer Coordinator | 13/IAM | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Signal Foreman * | F | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Sign & Marking Supt./Sign & Marking Supervisor* | F | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Engineer Technician | 10/IAM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Signal Electrician | 11/FF/IAM | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | |
| Sign Marking - Foreman * | F | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Sign & Marking Specialist | 9/IAM | 3 | 3 | 3 | 3 | 2 | 9 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| Signal Technician | 9/IAM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Data Processing Technician | 10 /IAM | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Bookkeeper/Clerk | 9/IAM | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Secretary VII | 7/IAM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Signal Electrician/Tech. Apprentice | 9/IAM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Marking Electrical Tech. Apprentice | 9/IAM | 6 | 6 | 6 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Sign Fabricator | 10/IAM | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | |
| Supervisor | H | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Infrastructure Technician * | F | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Assoc. Dir. Traffic Eng/Street Light | J | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Traffic Engineer * | H | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | |
| TOTAL | | 33 | 33 | 33.5 | 33.5 | 33.5 | 32.5 | 32.5 | 32 | 33 | 33 | 33 | 33 | 33 | |

* Reflects Grid and Salary Ordinance changes