AGENDA

TRAFFIC COMMITTEE MEETING

MARCH 17, 2004 - 7:30 P.M.

LOWER LEVEL CONFERENCE ROOM

TROY CITY HALL

500 W. BIG BEAVER ROAD

1. Roll Call

2. Minutes – January 21, 2004

PUBLIC HEARINGS

3. Request for Sidewalk Waiver – 1143 Chopin

4. Request for Sidewalk Waiver –Chopin, Parcel B

5. Request for Sidewalk Waiver –Chopin, Parcel C

REGULAR BUSINESS

6. Install YIELD or STOP Sign on Hartland at Daley Street
   Requested by Tammy Cheslock, 1087 Baker Court

7. Post NO STOPPING STANDING PARKING 8 a.m.-4 p.m. SCHOOL DAYS Signs along the West Side of Castleton by Susick Elementary School
   Requested by Sgt. Robert Redmond, Troy PD

8. Section 15 Traffic Concerns
   Requested by Bruce Bloomingdale, 4264 Tallman; Dave Sysko, 4438 Yanich; Dave Bastian, 487 Randall; Tom DiMambro, 4292 Tallman

9. Parking Concerns on Smallbrook
   Requested by Judy Davis, 1923 Smallbrook

10. Visitors' Time

11. Other Business

12. Adjourn

12. Adjourn

cc: Traffic Committee Members, Including Ex-Officio Members
Gary A. Shripka, Assistant City Manager/Services
Steven Vandette, City Engineer
Captain Dane Slater, Police Department
Lt. Scott McWilliams, Police Department
Lt. Robert Matlick, Fire Department
Lori Grigg Bluhm, City Attorney
John K. Abraham, Traffic Engineer

and:	Item 3, 4 and 5	Residents within 300 feet of 1143, Parcel B and Parcel C on Chopin.
	Item 6	Residents within 300 feet of the intersection of Hartland and Daley
	Item 7	Residents within 300 feet of Susick Elementary School
	Item 8	Residents in Section 15 per attached map
	Item 9	Residents within 300 feet of 1923 Smallbrook

TRAFFIC COMMITTEE

MESSAGE TO VISITORS, DELEGATIONS AND CITIZENS

The Traffic Committee is composed of seven Troy citizens who have volunteered their time to the City to be involved in traffic and safety concerns. The stated role of this Committee is:

a. To give first hearing to citizens' requests and obtain their input.

b. To make recommendations to the City Council based on technical considerations, traffic surveys, established standards, and evaluation of citizen input.

c. To identify hazardous locations and recommend improvements to reduce the potential for traffic accidents.

Final decisions on sidewalk waivers will be made by the Committee at this meeting.

The recommendations and conclusions arrived at on regular items this evening will be forwarded to the City Council for their final action. Any citizen can discuss these recommendations before City Council. The items discussed at the Traffic Committee meeting will be placed on the City Council Agenda by the City Manager. The earliest date these items might be considered by City Council would normally be 10 days to 2 weeks from the Traffic Committee meeting. If you are interested, you may wish to contact the City Manager's Office in order to determine when a particular item is on the Agenda.

Persons wishing to speak before this Committee should attempt to hold their remarks to no more than 5 minutes. Please try to keep your remarks relevant to the subject at hand. Please speak only when recognized by the Chair. These comments are made to keep this meeting moving along. Anyone wishing to be heard will be heard; we are here to listen and help in solving or resolving your particular concerns.

AGENDA EXPLANATION
TRAFFIC COMMITTEE MEETING

MARCH 17, 2004

1. Roll Call

2. Minutes – February 18, 2004

PUBLIC HEARINGS

3. Request for Sidewalk Waiver – 1143 Chopin

Mike Agnetti, 2977 Lovington, is requesting a waiver for the sidewalk at 1143 Chopin. The sidewalk ordinance requires that sidewalk be installed in conjunction with the development of this parcel due to a recent lot split, combined and replatted. The Public Works Department recommends denial of this waiver request. Petitioner has signed an "Agreement for Irrevocable Petition for Sidewalks."

Petitioner states that there are no other sidewalks in the area, the sidewalk would lead nowhere and connect to nothing.

SUGGESTED RESOLUTIONS:

1. WHEREAS, City of Troy Ordinances, Chapter 34, Section 8(D) allows the Traffic Committee to grant temporary waivers of the City of Troy Design Standards for Sidewalks upon a demonstration of necessity; and

   WHEREAS, Mike Agnetti has requested a temporary waiver of the requirement to construct a sidewalk on the property because there are no other sidewalks in the area, the sidewalk would lead nowhere and connect to nothing; and

   WHEREAS, THE Traffic Committee has determined the following:

   a. A variance will not impair the public health, safety or general welfare of the inhabitants of the City and will not unreasonably diminish or impair established property values within the surrounding area, and

   b. A strict application of the requirements to construct a sidewalk would result in practical difficulties to, or undue hardship upon, the owners, and

   c. The construction of a new sidewalk on the property line would lead nowhere and connect to no other walk, and thus will not serve the purpose of a pedestrian travel-way.

NOW THEREFORE, BE IT RESOLVED that the Traffic Committee grants a _____-year waiver of the sidewalk requirement for the property at 1143 Chopin, which is owned by Mike Agnetti.

2. WHEREAS, the Traffic committee has determined, after a public hearing, that Petitioner failed to establish the standards justifying the granting of a waiver,

NOW THEREFORE, BE IT RESOLVED that the Traffic Committee denies a waiver of the sidewalk requirement for the property at 1143 Chopin, which is owned by Mike Agnetti.

4. Request for Sidewalk Waiver – Chopin, Parcel B

Mike Agnetti, 2977 Lovington, is requesting a waiver for the sidewalk at Chopin, Parcel B. The sidewalk ordinance requires that sidewalk be installed in conjunction with the development of this parcel due to a recent lot split, combined and replatted. The Public Works Department recommends denial of this waiver request. Petitioner has signed an "Agreement for Irrevocable Petition for Sidewalks."

Petitioner states that there are no other sidewalks in the area, the sidewalk would lead nowhere and connect to nothing.

SUGGESTED RESOLUTIONS:

1. WHEREAS, City of Troy Ordinances, Chapter 34, Section 8(D) allows the Traffic Committee to grant temporary waivers of the City of Troy Design Standards for Sidewalks upon a demonstration of necessity; and

WHEREAS, Mike Agnetti has requested a temporary waiver of the requirement to construct a sidewalk on the property because there are no other sidewalks in the area, the sidewalk would lead nowhere and connect to nothing; and

WHEREAS, THE Traffic Committee has determined the following:

a. A variance will not impair the public health, safety or general welfare of the inhabitants of the City and will not unreasonably diminish or impair established property values within the surrounding area, and

b. A strict application of the requirements to construct a sidewalk would result in practical difficulties to, or undue hardship upon, the owners, and

c. The construction of a new sidewalk on the property line would lead nowhere and connect to no other walk, and thus will not serve the purpose of a pedestrian travel-way.

NOW THEREFORE, BE IT RESOLVED that the Traffic Committee grants a _____-year waiver of the sidewalk requirement for the property at Chopin, Parcel B, which is owned by Mike Agnetti.

2. WHEREAS, the Traffic committee has determined, after a public hearing, that Petitioner failed to establish the standards justifying the granting of a waiver,

NOW THEREFORE, BE IT RESOLVED that the Traffic Committee denies a waiver of the sidewalk requirement for the property at Chopin, Parcel B, which is owned by Mike Agnetti.

5. Request for Sidewalk Waiver – Chopin, Parcel C

Mike Agnetti, 2977 Lovington, is requesting a waiver for the sidewalk on Chopin, Parcel C. The sidewalk ordinance requires that sidewalk be installed in conjunction with the development of this parcel due to a recent lot split, combined and replatted. The Public Works Department recommends denial of this waiver request. Petitioner has signed an "Agreement for Irrevocable Petition for Sidewalks."

Petitioner states that there are no other sidewalks in the area, the sidewalk would lead nowhere and connect to nothing.

SUGGESTED RESOLUTIONS:

1. WHEREAS, City of Troy Ordinances, Chapter 34, Section 8(D) allows the Traffic Committee to grant temporary waivers of the City of Troy Design Standards for Sidewalks upon a demonstration of necessity; and

WHEREAS, Mike Agnetti has requested a temporary waiver of the requirement to construct a sidewalk on the property because there are no other sidewalks in the area, the sidewalk would lead nowhere and connect to nothing; and

WHEREAS, THE Traffic Committee has determined the following:

a. A variance will not impair the public health, safety or general welfare of the inhabitants of the City and will not unreasonably diminish or impair established property values within the surrounding area, and

b. A strict application of the requirements to construct a sidewalk would result in practical difficulties to, or undue hardship upon, the owners, and

c. The construction of a new sidewalk on the property line would lead nowhere and connect to no other walk, and thus will not serve the purpose of a pedestrian travel-way.

NOW THEREFORE, BE IT RESOLVED that the Traffic Committee grants a _____-year waiver of the sidewalk requirement for the property on Chopin, Parcel C, which is owned by Mike Agnetti.

2. WHEREAS, the Traffic committee has determined, after a public hearing, that Petitioner failed to establish the standards justifying the granting of a waiver,

NOW THEREFORE, BE IT RESOLVED that the Traffic Committee denies a waiver of the sidewalk requirement for the property at Chopin, Parcel C, which is owned by Mike Agnetti.

REGULAR BUSINESS

6. Install YIELD or STOP Sign on Hartland at Daley Street

Tammy Cheslock of 1087 Baker Court requests that either a STOP or YIELD sign be installed on Hartland at Daley Street. She indicated that she has witnessed many near crashes at the intersection. Hartland runs east from Daley and is a new roadway serving a new subdivision which is being completed. Ms. Cheslock feels that motorists at the intersection do not know who has the right-of-way and often traffic on Hartland does not yield to traffic on Daley. This intersection is a "T" intersection with Daley being the through street and therefore having the right-of-way.

Traffic counts at this intersection indicate that Daley carries around 1200 vehicles and Hartland carries around 493 vehicles in a day. Daley runs off Big Beaver Road and connects to the Baker Middle School. Hartland runs east between Daley and Boyd on the north. Since Hartland is a new street, there is no crash history at the intersection.

SUGGESTED RESOLUTIONS:

a. Recommend installing YIELD sign on Hartland at Daley Street

b. Recommend installing STOP sign on Hartland at Daley Street

c. Recommend no changes

7. Post NO STOPPING STANDING PARKING 8 a.m. – 4 p.m. SCHOOL DAYS Signs along the West Side of Castleton by Susick Elementary School

Susick Elementary School was recently reconstructed and normal school operations have started. Since another school in the Warren Consolidated School District is being worked on, both schools now operate out of Susick. Sgt. Redmond has worked the area to make sure traffic operations in the area are as safe as possible. In his and the traffic engineer's observations, the school traffic within the school site is being managed very well by school parking attendants and

school safety patrol students. The school now has four driveways onto Castleton, two serving the teachers' lot (in and out) and two serving the parent lot, which also serves the drop off area. During school dismissal and arrival times there are vehicles that stand/park on the west side of Castleton and pick up/drop off students. This may be hazardous considering the sheer volume of traffic that uses the driveways and Castleton during arrival and dismissal times, and the kids and parents who have to cross Castleton. There is one sign on the west side of Castleton that reads NO STOPPING, STANDING, PARKING 8 A.M.-4 P.M. MON-FRI; however, it is not effective.

The east side of Castleton is already marked NO PARKING and there is a traffic control order that was recommended by the Traffic committee that restricts stopping/standing/parking between the school drives from 8 a.m. to 4 p.m. These will be reinstalled soon (they may have been removed during school construction.)

It is felt that parking/standing/stopping should also be restricted on the west side of Castleton in the school area for safe traffic operations. Observations also show that the standing/parking concern is higher during the afternoon dismissal times. If this is recommended, stopping, standing or parking on both sides of Castleton will be restricted in the vicinity of the school on school days.

SUGGESTED RESOLUTIONS:

a. Recommend installing NO STOPPING, STANDING, PARKING 8 AM – 4 PM SCHOOL DAYS on the west side of Castleton between 50 feet north and 50 feet south of the school drives.

b. Recommend no action.

8. Section 15 Traffic Concerns

Residents of Section 15 represented by Bruce Bloomingdale, 4264 Tallman, Dave Sysko 4438 Yanich, Dave Bastian, 487 Randall and Tom DiMambro, 4292 Tallman have raised several traffic concerns in Section 15 of the City. Section 15 is the square mile that is bounded by Livernois, Long Lake, Rochester and Wattles. Concerns include:

a. Speeding all along the length of all four streets (Leetonia, Randall, Tallman and Longfellow
b. Pedestrian safety around Leonard elementary school
c. Cut-through traffic down Leetonia and Randall to Tallman to Longfellow

Speeding concerns were maximum between 4PM and 6PM on weekdays and during school arrival and dismissal times.

Mr. Bloomingdale and his neighbors expressed their traffic concerns at a City Council meeting related to Council approval of a new residential subdivision at the end of Tallman street that would add around 20 homes in the area. At the meeting

City Council expressed a desire to take a closer look at the residents' traffic concerns. As a result, Councilman David Lambert, City Manager John Szerlag and the Traffic Engineer met in mid-February with the resident representatives of Section 15 to discuss traffic concerns.

At the meeting, all the above-mentioned concerns were discussed in detail and a presentation on the Neighborhood Traffic Harmonization Program was also made. The residents would like to pursue the NTHP; however, as a first step would like to see more STOP signs installed to reduce speeds and cut-through traffic in the neighborhood. The traffic engineer explained that STOP signs, particularly multi-way, are installed *after* a study is performed to determine if state-mandated thresholds (called warrants) are met for the intersections. The traffic engineer also distributed information on how unwarranted STOP signs have not been demonstrated to reduce speeding on residential streets, and some literature on how unwarranted STOP signs may cause more crashes and provide a false sense of security to pedestrians using these intersections (all materials are attached for the reference of the committee).

A Traffic Information Survey was given to the residents to pursue the NTHP. On February 19, 2004, the core group of resident representatives also submitted a list of intersections that they would like to be converted to all-way STOP sign controlled. Following are the intersections:

a. Leetonia and Tallman
b. Randall West and Tallman
c. Randall East and Tallman
d. Longfellow and Tallman
e. Longfellow and Yanich
f. Thurber and Longfellow

Since STOP sign studies require some time, core group was informed that the intersections have been added to the list of studies to be done by the Traffic Engineering Department, and the results will be presented to the Traffic Committee when available for their consideration and recommendation to City Council.

Sgt. Redmond reports the following enforcement activities in the section: They received no complaints in 2003 regarding speeding in that area. Their records indicate that a radar trailer was utilized on Longfellow on September 10, 2003, between the hours of 7:20 am and 8:19 pm. The average speed was 24.9 mph; the high speed was 41 mph (two vehicles) as recorded by the trailer.

In 2001 and 2002, the Traffic safety Unit did conduct selective speed enforcement in the area. The results are as follows:

- Longfellow - 12 speed citations issued (December 13, 2001 and February 1, 2002)
- Tallman - No citations issued (monitored on February 6, 2002)
- Leetonia - 3 citations issued (May 8, 2002)

City and Police staff are working with Leonard Elementary School continually to ensure safety of pedestrians who walk to the school. The last study of pedestrian safety resulted in the City hiring an adult crossing guard to enhance safety of pedestrians, particularly kids walking to school. Observations this month also indicate that these measures and the school safety patrol are working effectively to ensure pedestrian safety.

A traffic crash study of the area reveals the following:

- Leetonia
  - One in 4/2001 - Motorcycle lost control
- Randall
  - One in 12/2002 - Backed into parked vehicle
  - One in 8/2000 - Parked vehicle
- Tallman
  - One in 1/2001 - Vehicle lost control (icy conditions)

Traffic volume studies indicate that the roadways in this mile section carry between 300 and 1650 vehicles in a day. The subdivision has around 825 homes, and the observed traffic volumes are consistent with what can be expected in such a residential area. Traffic volumes on Troy residential streets range between 80 and 5,000 vehicles in a day.

The first three intersections listed earlier are on this agenda for consideration.

a. <u>Three-way STOP signs at Leetonia and Tallman</u>

Mr. Bruce Bloomingdale requested a STOP sign instead of a YIELD sign on Leetonia at Tallman at the October 2003 meeting of the Traffic Committee. The City Council approved a STOP sign to replace the YIELD sign on Leetonia at Tallman. The request under consideration here is to further convert this intersection to a multi-way STOP controlled intersection.

The Michigan Manual of Uniform Traffic Control Devices states that installation of a multi-way STOP would be warranted under one of the following conditions:

- *Where traffic signals are warranted and urgently needed, the multi-way STOP is an interim measure that can be installed quickly to control traffic while arrangements are being made for traffic signal installation.*

- *An accident problem as indicated by five or more reported accidents of the type susceptible to correction by a multi-way STOP during a 12-month period. Such accidents include right and left turn collisions.*

- *Minimum Traffic Volume – The total vehicular volume entering the intersection from all approaches must average at least 500 vehicles per hour for any eight hours of an average day.*

A 24-hour volume study performed for the intersection shows the following traffic volumes entering the intersection:

Direction	Per Day
EB Leetonia	301
NB Tallman	negligible
SB Tallman	443

No significant sight obstructions were observed at the intersection, and none of the warrants for multi-way STOP signs were met.

National research shows that Installation of multiway STOP signs that are not warranted may create more hazards than solving any concerns, particularly speeding. Traffic crashes at such locations could result in the City being liable for damages since state standards were not met for the traffic control devices at the intersection.

SUGGESTED RESOLUTIONS:

a. Recommend replacing the STOP sign with a 3-way STOP signs at the intersection of Leetonia and Tallman.

b. Recommend no changes.

b. Three-way STOP signs at Randall West and Tallman

The reasoning for this request was to slow down the traffic on Tallman. Mr. Dave Sysko also mentioned that some traffic on Randall turns onto Tallman at high speeds. He also mentioned that motorists do not yield right of way to traffic on Tallman as they should be doing.

The Michigan Manual of Uniform Traffic Control Devices states that installation of a multi-way STOP would be warranted under one of the following conditions:

- *Where traffic signals are warranted and urgently needed, the multi-way STOP is an interim measure that can be installed quickly to control traffic while arrangements are being made for traffic signal installation.*

- *An accident problem as indicated by five or more reported accidents of the type susceptible to correction by a multi-way STOP during a 12-month period. Such accidents include right and left turn collisions.*

- *Minimum Traffic Volume – The total vehicular volume entering the intersection from all approaches must average at least 500 vehicles per hour for any eight hours of an average day.*

A 24-hour volume study performed for the intersection shows the following:

Direction	Per Day
EB West Randall	732
NB Tallman	386
SB Tallman	925

None of the warrants for multi-way STOP signs were met for the intersection. National research shows that Installation of multiway STOP signs that are not warranted will create more hazards than solving any concerns, particularly speeding. Traffic crashes at such locations could result in the City being liable for damages since state standards were not met for the traffic control devices at the intersection.

SUGGESTED RESOLUTIONS:

a. Recommend installing 3 way STOP signs at Randall West and Tallman

b. Recommend no action

c. Three-way STOP signs at Randall East and Tallman

This request is also made for reasons similar to those that have already been discussed above.

The Michigan Manual of Uniform Traffic Control Devices states that installation of a multi-way STOP would be warranted under one of the following conditions:

- *Where traffic signals are warranted and urgently needed, the multi-way STOP is an interim measure that can be installed quickly to control traffic while arrangements are being made for traffic signal installation.*

- *An accident problem as indicated by five or more reported accidents of the type susceptible to correction by a multi-way STOP during a 12-month period. Such accidents include right and left turn collisions.*

- *Minimum Traffic Volume – The total vehicular volume entering the intersection from all approaches must average at least 500 vehicles per hour for any eight hours of an average day.*

A 24-hour volume study performed for the intersection shows the following:

Direction	Per Day
WB East Randall	861
NB Tallman	386
SB Tallman	925

None of the warrants for multi-way STOP signs were met for the intersection. National research shows that Installation of multi-way STOP signs that are not warranted will create more hazards than solving any concerns, particularly speeding. Traffic crashes at such locations could result in the City being liable for damages since state standards were not met for the traffic control devices at the intersection.

SUGGESTED RESOLUTIONS:

a. Recommend installation of 3-way STOP signs at Randall East and Tallman

b. Recommend no action

9. Review Parking Restrictions on Smallbrook/Little Creek Street

Ms. Judy Davis of 1923 Smallbrook would like parking restriction on Smallbrook/Little Creek changed so that her guests can park closer to her home. Currently parking is restricted around the corner near her home as per a traffic control order that was passed in 1990 subsequent to Traffic Committee recommendation and City Council approval. Following is an excerpt from the minutes of the Traffic Committee meeting of February 21, 1990:

This area is signed (pre-1990) in accordance with the City policy of removing parking on the fire hydrant side. Due to the water main design, the hydrants switch from the north to the south side and east side in the area of the curve. The one vehicle that parks in the area on evenings and weekends belongs to the resident at 1911 Smallbrook. Since the family residing at 1911 Smallbrook has several vehicles, some of which will not fit in the garage, it is convenient for them to park legally on the street. This causes a sight distance concern to the petitioner.

The traffic engineer explained that it is an ordinance that parking be removed from the fire hydrant side of the street. However, on Smallbrook, the fire hydrants change sides, so parking switches sides.

He (resident) believes that when parking is allowed on the inside of a curve, sight distance is restricted making negotiating the curve dangerous. Also, with snow, slippery conditions and the width of street being narrower with snow piled up adds to the danger.

Traffic Committee Recommendation from February 21, 1990:

Moved by Cotsonika
Supported by Halsey

Recommend that the existing "No Parking" sign be repositioned from the west edge of 1914 Smallbrook to the west edge of 1912 Smallbrook, directly opposite the "No Parking" sign on the other side of the street. This will prohibit parking on the fire hydrant side of the street where there is an overlay of parking being allowed on both sides of the street.

SUGGESTED RESOLUTIONS:

a. Recommend repositioning the existing NO PARKING BEGINS sign to permit parking in front of 1923 Smallbrook.

b. Recommend no changes.

9. Visitors' Time

10. Other Business

11. Adjourn

PLOT PLAN

PARCEL "A"
LOT 195 AND THE WEST 26 FT. OF LOT 196 OF "STUMPF'S BEECH GROVE SUBDIVISION"
PART OF THE S.E. 1/4 OF SEC. 27, T.2N., R.11E., CITY OF TROY, OAKLAND COUNTY,
MICHIGAN AS RECORDED IN LIBER 32 OF PLATS, PAGES 11 & 12, OAKLAND COUNTY RECORDS.

PRIOR TO CONSTRUCTION, ALL LOCATION AND DEPTH OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD.

DURING CONSTRUCTION, CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR OVERHEAD AND\OR BURIED UTILITIES. CALL MISS DIG.

7 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 (TOLL FREE) for the location of underground facilities

Planning | Structural | Civil | Electrical | Plumbing | HVAC | Building

LAWN SPRINKLER SYSTEMS SHALL NOT BE INSTALLED BETWEEN SIDEWALK & CURB WITHOUT A RIGHT-OF-WAY PERMIT ISSUED BY CITY ENGINEERING DEPARTMENT

A CERTIFICATE OF OCCUPANCY IS REQUIRED BEFORE THIS BUILDING IS OCCUPIED

APPROVAL OF THIS PERMIT DOES NOT RELIEVE THE BUILDER OR OWNER OF COMPLIANCE WITH ALL APPLICABLE CODES AND ORDINANCES

3 FULL WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171

ARCHITECTURAL FEATURES SHALL NOT ENCROACH INTO REQUIRED YARDS

Lot 195 Pg. of 196

#1150 #1132 #1131 #1137 TO BE REMOVED

205 204 203 202 201 200 199 198 197 196 195 194

PARCEL A 7920 SQ.FT.
PARCEL B 7920 SQ.FT. VACANT
PARCEL C 8159 SQ.FT. VACANT

N89°45'00"W R & M 66.00' R & M
N00°00'02"E M 120.00' R & M
N00°00'02"E M 120.00' EAST 14 FT. OF LOT 196
WEST 26 FT. OF LOT 196 46.38'
WEST 12 FT. OF LOT 198
EAST 28 FT. OF LOT 198

PROP. HOUSE
F.G.=655.00
F.F.=657.00
PR. GAR. F.F.=656.33
PORCH
DRIVE 2.75%
SUMP LEAD TO C.B.
PR. WATER LEAD
PR. SAN LEAD
2' C.B. RIM=652.75 8"INV.W.=649.85
5' Conc. Walk
EX SAN LEAD
NOTE: SWALE 2FT. OFF PL
5.50'
13.75'
25.50'

EX WATERMAIN
EX GASMAIN
INV 12"E.=652.00
Regrade Ditch - Remove Hyh Rod
110 LF 8" A2000 SLOTTED @1.00% /W PEA GRAVEL
EX SANITARY SEWER
24 L.F.-12"C.S.P.-4.17%
TAP EX. CATCH BASIN
EX STORM SEWER
12"CMP.W.=651.00
8"A2000=648.75
12"INV.S.=648.01
NOTE: REPLACE AND REPAIR EXISTING ROAD AS NECESSARY TO PRIOR CONDITION

CHOPIN AVE.
50 FT. WIDE

BENCHMARK

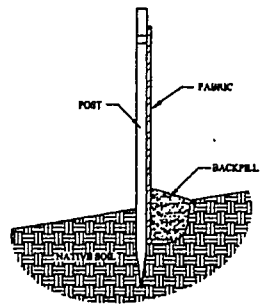
ARROW ON HYDRANT LOCATED AT THE NORTHEAST CORNER OF CHOPIN DEAD END
ELEVATION = 656.13

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 INCH = 20 FT.

LEGEND:

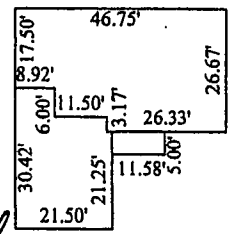
- FOUND IRON
- SET IRON
- R RECORD DISTANCE
- M MEASURED DISTANCE
- 782.0 PROP. GRADE

SILT FENCE



INSTALLATION:
DIG 4" - 6" TRENCH LINE
DRIVE POSTS INTO GROUND AT BACK SIDE.
PLACE SILT INTO TRENCH, BACKFILL, TAMP.

STATE OF MICHIGAN
GEORGE H. REICHERT
LAND SURVEYOR
No. 30099
LICENSED PROFESSIONAL SURVEYOR



George H Reichert

HOUSE DETAIL

NOTES:

1. INSTALL SOIL EROSION CONTROLS PRIOR TO CONSTRUCTION.
2. COMPLETE ALL EARTH DISRUPTION.
3. RIGHT-OF-WAY, ALL SWALE AREAS, ALL SLOPES GREATER THAN 1 ON 5 AND 10' AROUND ALL STRUCTURES MUST BE STABILIZED PRIOR TO FINAL GRADE INSPECTION.
4. AFTER PERMANENT EARTH STABILIZATION IS COMPLETE, REMOVE EROSION CONTROL MEASURES.
5. SOIL EROSION CONTROL WILL BE MAINTAINED WEEKLY AND AFTER ANY MAJOR STORM EVENT
6. SUMP LEAD TO BE CONNECTED TO AN APPROVED
7. DRIVE APPROACH NOT TO CROSS PROPERTY LI

NO.	DATE	DESCRIPTION	BY
1	11-5-03	REV. PER TROY	JB

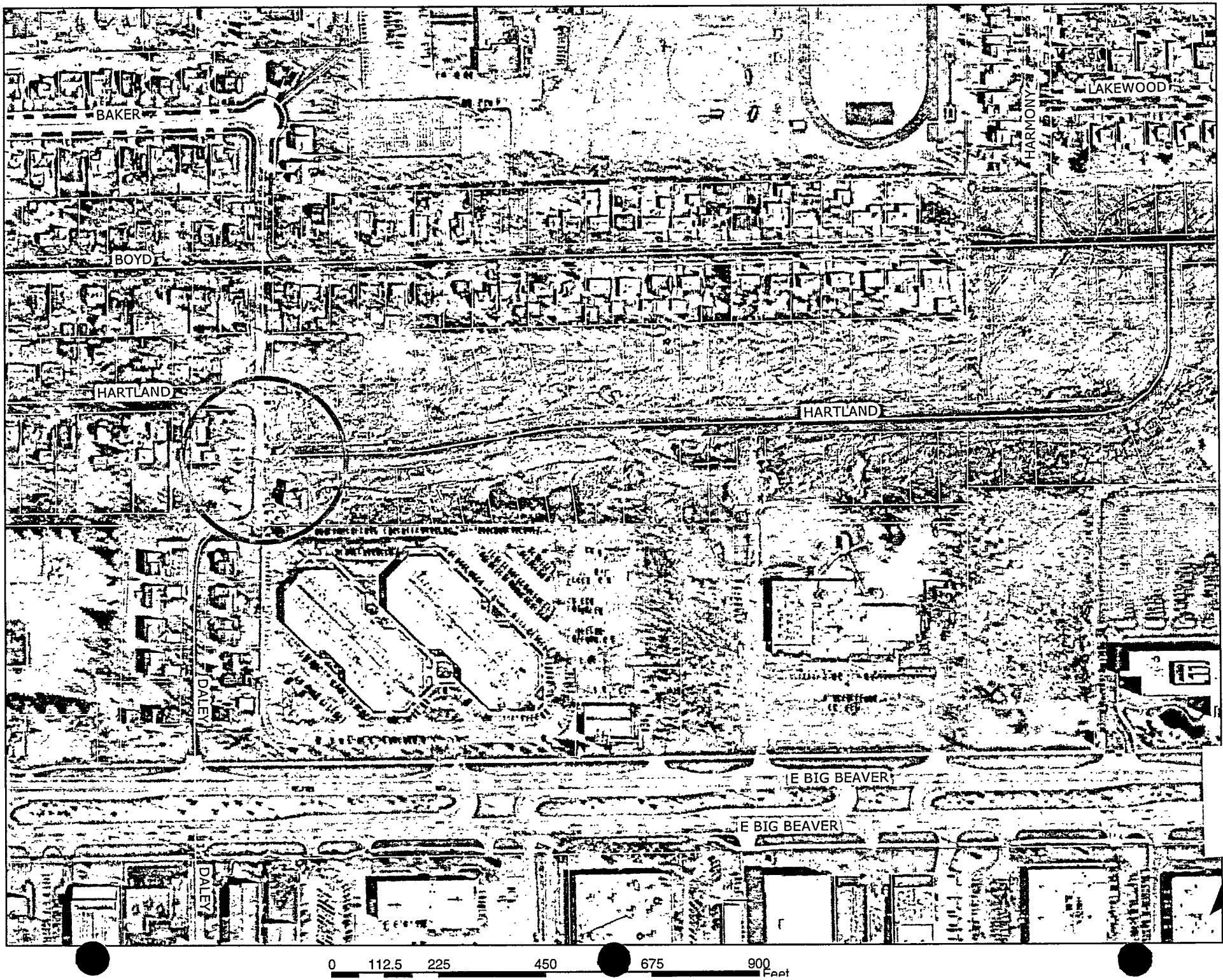
THORNHILL CO
2977 LOVING
TROY, MI 480
(248) 515-9061

SCALE: 1"=20'	DRAWN: J.B.
DATE: 10-18-03	CHECK: G.R.
JOB NO. 03-033	SHEET: 1 OF 1

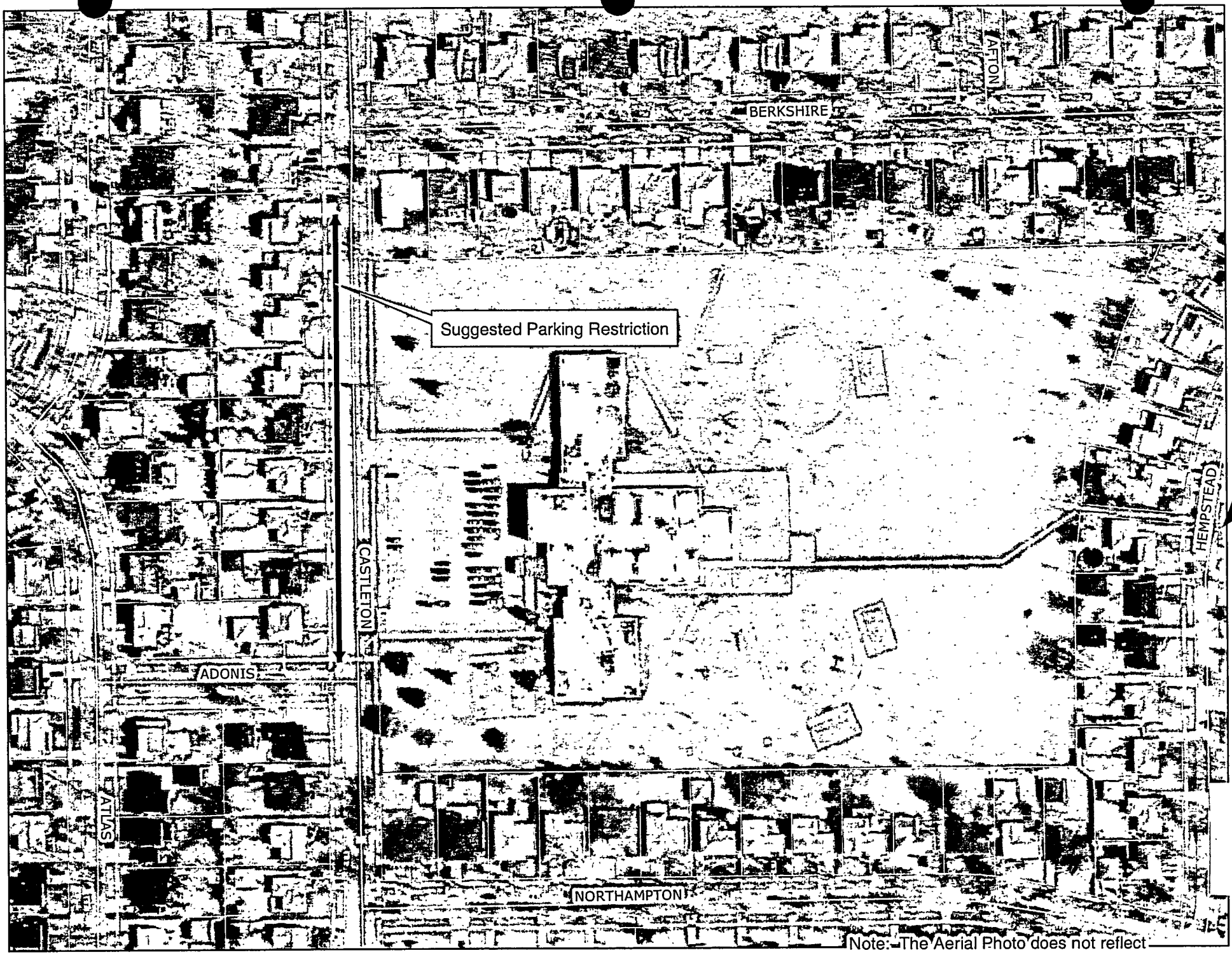
REICHERT SU
140 FLUMERFI
ROCHESTER, MI
TELE: (248)

ITEMS 3, 4 & 5

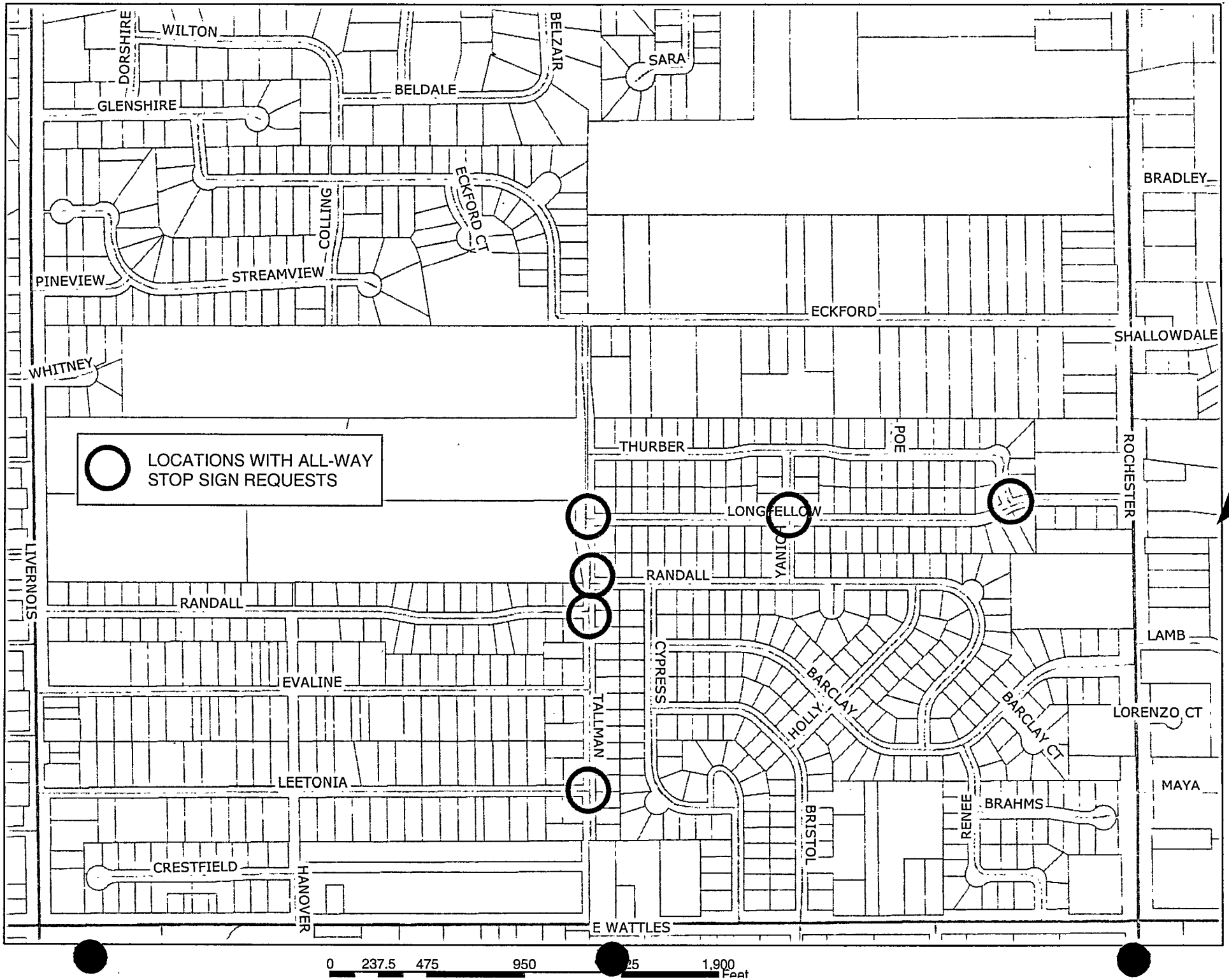
ITEM 6


BAKER
BOYD
HARTLAND
HARTLAND
DALEY
DALEY
HARMONY
LAKEWOOD
E BIG BEAVER
E BIG BEAVER
0 112.5 225 450 675 900 Feet

ITEM 6


BERKSHIRE
AFTON
Suggested Parking Restriction
CASTLETON
ADONIS
ATLAS
HEMPSTEAD
NORTHAMPTON
N
0 62.5 125 250 375 500
Note: The Aerial Photo does not reflect the new building and driveways

ITEM 7


LOCATIONS WITH ALL-WAY STOP SIGN REQUESTS
WILTON
DORSHIRE
BELZAIR
SARA
BELDALE
GLENSHIRE
ECKFORD CT
COLLING
STREAMVIEW
PINEVIEW
BRADLEY
ECKFORD
SHALLOWDALE
WHITNEY
THURBER
POE
ROCHESTER
LONGFELLOW
YANIC
RANDALL
LIVERNOIS
LAMB
CYPRESS
BARCLAY
BARCLAY CT
HOLLY
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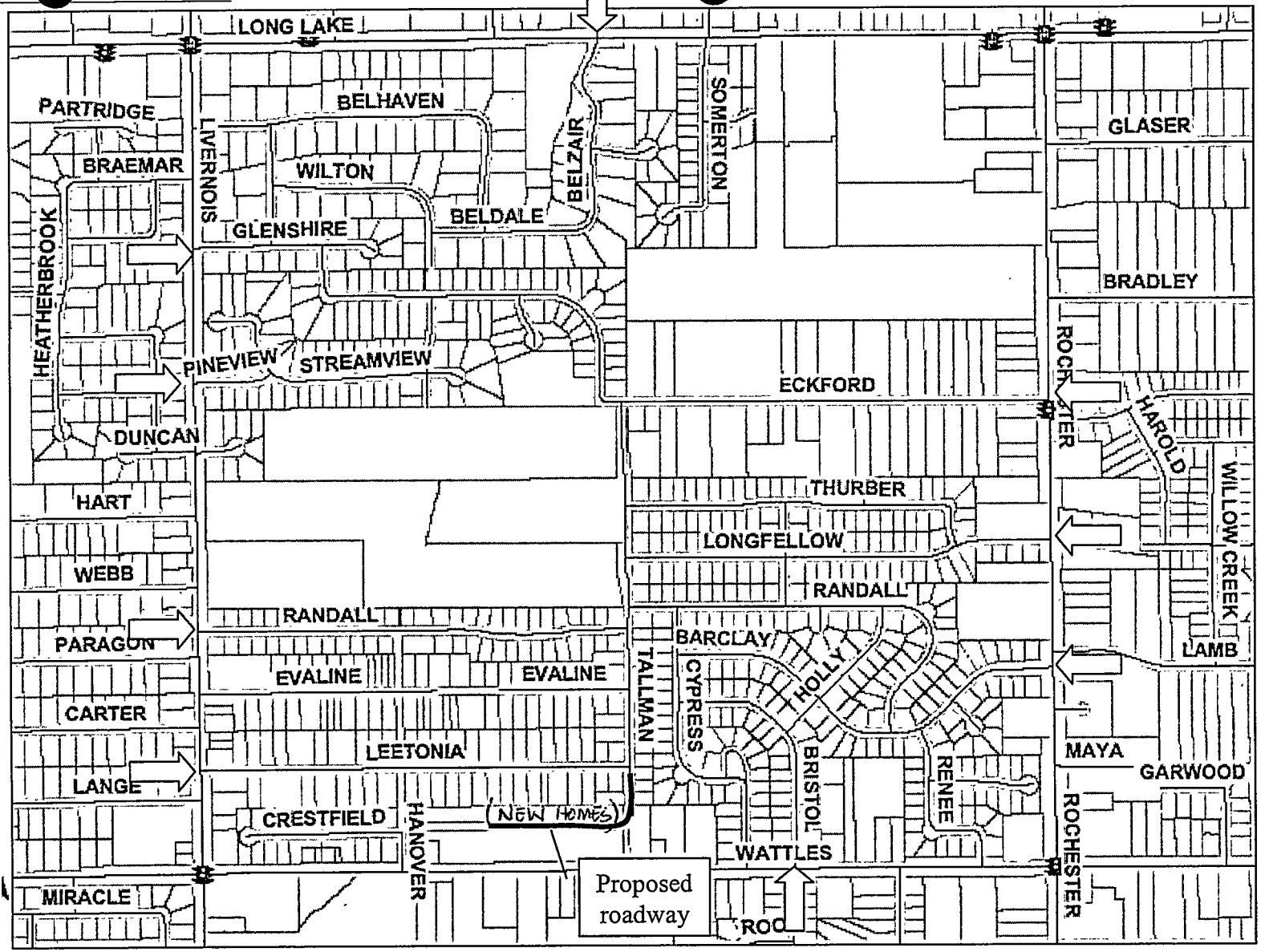

823 Homes in section, Generates around 8,200 trips in a day

Major Access from Major Roads: Barcaly, Bristol, Eckford, Longfellow, Randall, Leetonia, Glenshire, Belzair and Pineview

ITEM 8

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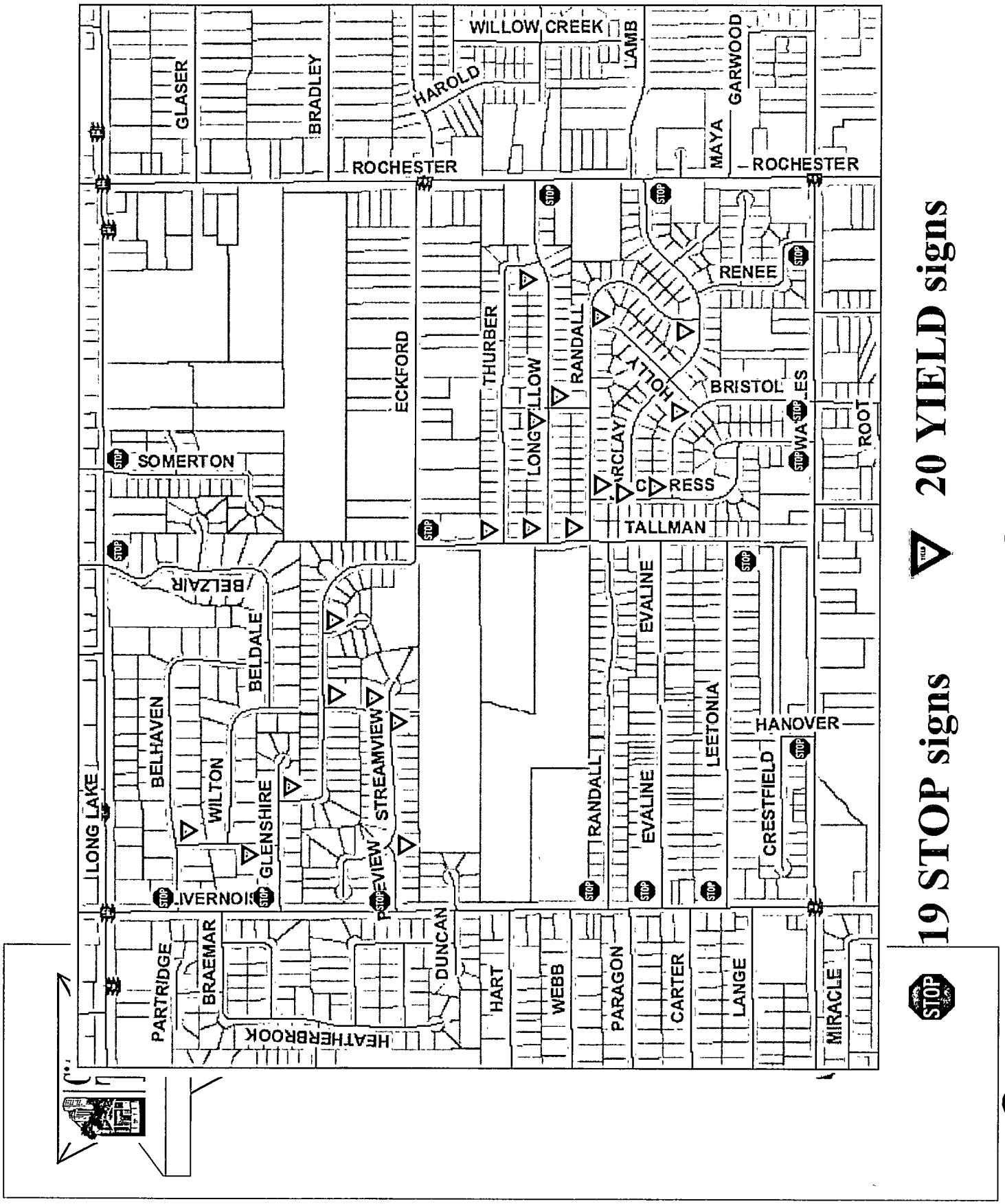
WILLOW CREEK
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SOMERTON
BELZAIR
BELDALE
BELHAVEN
WILTON
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STREAMVIEW
LONG LAKE
TALLMAN
EVALINE
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RANDALL
EVALINE
PARTRIDGE
BRAEMAR
HEATHERBROOK
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STOP
19 STOP signs
20 YIELD signs

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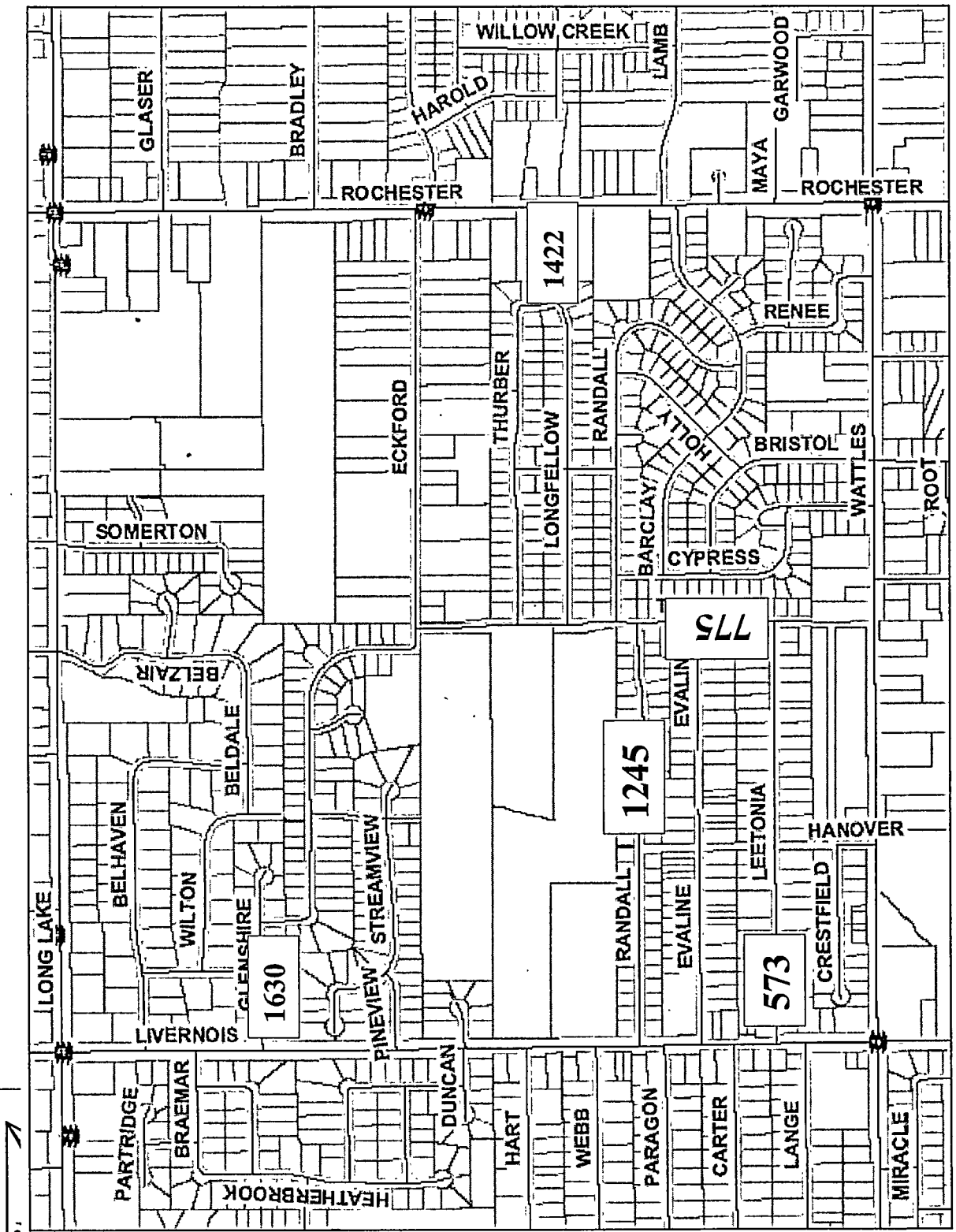


Residential Road traffic volumes range from 80 to 5000 vehicles in a day

ITEM 8

Stop Signs for Speed Control?

Though they are frequently suggested as appropriate traffic control devices for reducing vehicular speeds in residential areas, they are not only ineffective in this respect but also frequently ignored, as this study shows.

By Richard F. Beaubien, P.E.

City officials are frequently confronted by citizens demanding that stop signs be placed on residential streets to control speeding. These citizens are convinced that stop signs will reduce speeds on their streets, thereby enhancing the safety of children playing near or in the streets. City councils usually respond favorably to these requests in order to provide a tangible sign of their concern for public safety at a relatively low cost. Moreover, it seems obvious to them also that stop signs will reduce speeds and promote public safety.

The *Manual on Uniform Traffic Control Devices for Streets and Highways** states that stop signs *should not* be installed for speed control. One argument for this is that misuse of this traffic control device promotes lack of respect for all traffic control devices, and nonobservance of such devices is potentially hazardous. Perhaps a more effective argument is that stop signs are *not* effective in reducing speeds. Recent studies in the City of Troy, Michigan suggest that placing stop signs for speed control tends to increase peak speeds. The studies also showed an alarmingly high disobedience rate for these signs. The speed and stop sign observance studies were made from an unmarked city car, the former with a radar unit before and after the installation of stop signs. The highest speed observed for each vehicle was the speed recorded. The results are as follows:

Anvil Drive. Anvil Drive is a collector street in a new residential area. The street is approximately 0.6 miles long and has a curved alignment to emphasize its residential character and discourage speeding. Residents felt that speeding was a problem, however, and spot speed studies were conducted to determine the extent of it.

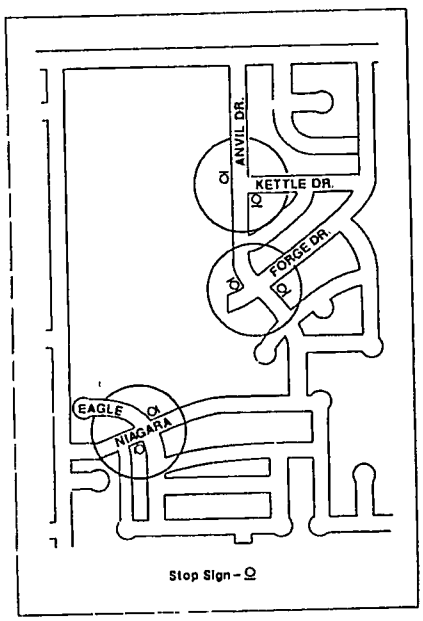


Figure 1.

Table 1. Anvil Drive.

Speed Studies		
Speed	Without Stop Signs mph	With Stop Signs mph
Low	15	15
Average	24.1	24.6
85th Percentile	28	28
High	38	35

Stop Sign Observance		
	Number	Percent
Full Stop	14	25
Roll Stop	35	64
No stop	6	11
Total	55	100

The average peak speed was 24.1 miles per hour—a typical result for residential streets in Troy. Residents petitioned City Council, and stop signs were placed on Anvil at Forge and Kettle Drives, two local streets, as a result of council action (Figure 1). Studies conducted on Anvil between these two streets 30 days after the stop signs were installed showed that the average peak speed was 24.6 mph—or no significant difference because of the signs.

Stop sign observance studies made at Anvil and Kettle at the same time showed that only 25 percent of the motorists came to a full stop, suggesting that drivers don't feel that a stop is required at this intersection. Study results are shown in Table 1.

Niagara Drive. Niagara Drive is a collector street in a new residential area. Approximately 0.4 miles long, Niagara, too, has a curved alignment to emphasize its residential character and discourage speeding. Residents in the area, concerned about speeding, petitioned City Council for installation of stop signs on Niagara and Eagle, a local street (Figure 1). Spot speed studies made to determine the extent of the speeding problem found average peak speed to be 23.8 mph. Stop signs were installed, and speed studies were conducted again 30 days after installation. With the signs in place, average peak speed was 25.2 mph, indicating that the

* U.S. Department of Transportation, Federal Highway Administration, Washington, D.C., 1971.

stop signs were not effective in reducing speeds.

Stop sign observance studies, made at the same time, showed that 51 percent of the motorists came to a full stop at Eagle and Niagara, suggesting that about half of them don't feel that a stop sign is necessary at Eagle. Study results are shown in Table 2.

Robinwood Street. Robinwood is a collector street in an established residential area. It is about 0.5 miles long; its connection with other streets provides a continuous route between Livernois and Rochester, both arterials. In 1964, stop signs were placed on Robinwood at Van Courtland (Figure 2), creating a three-way intersection, in response to citizen requests after a child was killed near the intersection. The accident report indicates that the child was struck by a car going approximately 12 mph at a point some 150 feet east of the intersection. The driver was not considered to be at fault. Studies showed an average speed of 24.4 mph and that only 26 percent of the motorists came to a full stop. The latter indicates that over a period of more than 11 years, motorists have developed a habit of not stopping for the signs on Robinwood at Van Courtland. The signs were removed on a temporary basis and speed studies conducted 30 days later. The average peak speed was 23.4 mph, so there was no significant difference in speeds after the stop signs were removed. Study results are shown in Table 3.

Crimson Street. Crimson is a collector street in a new residential area; many homes are still under construction. It is about 0.6 miles long and has a curved alignment, like Anvil and Niagara. However, speeding seemed to be a problem and residents in the area asked that stop signs be installed on Crimson at Crestline and on Crimson at Lakewood to reduce speeds (Figure 3), but they

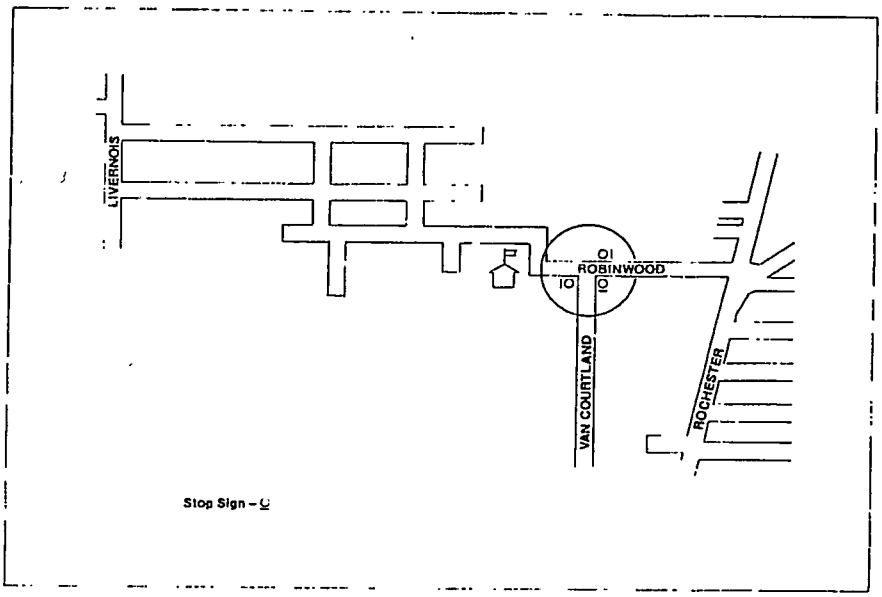


Figure 2.

Table 2. Niagara Drive.

Speed Studies		
Speed	Without Stop Signs mph	With Stop Signs mph
Low	15	15
Average	23.8	25.2
85th Percentile	26	29
High	34	34

Stop Sign Observance		
	Number	Percent
Full Stop	21	51
Roll Stop	14	34
No Stop	6	15
Total	41	100

Table 3. Robinwood Street.

Speed Studies		
Speed	Without Stop Signs mph	With Stop Signs mph
Low	10	13
Average	23.4	24.4
85th Percentile	30	30
High	38	38

Stop Sign Observance		
	Number	Percent
Full Stop	21	26
Roll Stop	39	48
No Stop	21	26
Total	81	100

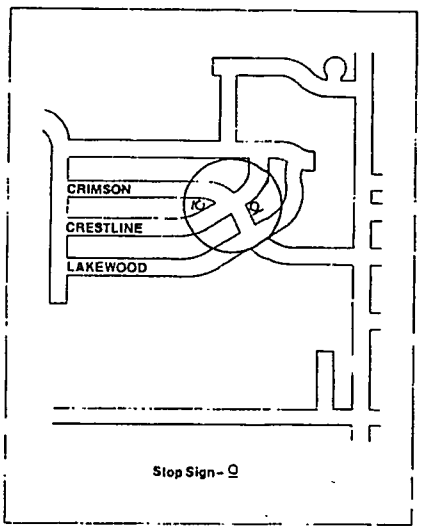


Figure 3.

Table 4. Crimson Street.

Speed	Without Stop Signs mph	With Stop Signs mph
Speed Studies		
Westbound Crimson East of Crestline		
Low	12	15
Average	21.6	23.7
85th Percentile	25	26
High	32	30
Westbound Crimson West of Crestline		
Low	7	15
Average	24.0	23.7
85th Percentile	29	27
High	40	32
Eastbound Crimson East of Crestline		
Low	10	10
Average	23.5	24.8
85th Percentile	27	27
High	32	34
Eastbound Crimson West of Crestline		
Low	8	15
Average	24.5	26.6
85th Percentile	31	32
High	39	36

	Number	Percent
Stop Sign Observance		
Eastbound		
Full Stop	2	6
Roll Stop	19	54
No Stop	14	40
Total	35	100
Westbound		
Full Stop	10	10
Roll Stop	42	43
No Stop	46	47
Total	98	100

agreed to await the results of an evaluation of a temporary stop sign on Crimson at Crestline before pressing their request for permanent signs. Before and after speed studies were made at locations chosen with the cooperation of the residents. The speed studies were made on both sides of the signs, the results separated by direction of travel. The after studies were made 30 days following installation of the temporary signs.

Sign observance studies were made at the same time. These showed that only 9 percent of the motorists came to a full stop, revealing that the other 91 percent did not consider a full stop necessary. Results of the studies are shown in Table 4. After seeing the results, residents agreed that stop signs were not effective in reducing speeds in their area. The temporary signs have been removed.

Conclusions. The studies conducted in Troy show that stop signs are not effective in controlling speeds in residential areas. The difference in average speeds is not significant after installation of stop signs but the tendency is for a slight increase in speeds, possibly because motorists are trying to make up for lost time after passing the sign. The same tendency occurs in reverse when stop signs which have been in place for many years are removed. After removal, there was no significant change in speeds, but speeds were slightly lower without the stop signs.

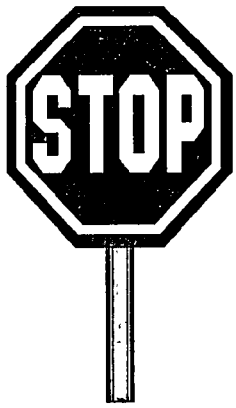
The stop sign observance studies showed that stop signs placed for speed control are generally disregarded. Approximately half of the motorists made a rolling stop; one quarter came to a full stop; one quarter did not stop at all. !

Mr. Beaubien (M) is transportation engineer for the City of Troy, a suburban community in the metropolitan area of Detroit. Before entering this position in 1975, he was chief engineer with the firm of Reid, Cool & Michalski, Detroit. From 1968 to 1973 he served with the Federal Highway Administration in various parts of the country.

ITEM 8

STOP SIGNS

Why Don't They Install More Stop Signs...??!!!



A stop sign is one of our most valuable and effective control devices when used at the right place and under the right conditions. It is intended to help drivers and pedestrians at an intersection decide who has the right-of-way. One common misuse of stop signs is to arbitrarily interrupt through traffic, either by causing it to stop, or by causing such an inconvenience as to force the traffic to use other routes. Where stop signs are installed as "nuisances" or "speed breakers," there is a high incidence of intentional violation. In those locations where vehicles do stop, the speed reduction is effective only in the immediate vicinity of the stop sign, and frequently speeds are actually higher between intersections. For these reasons, it should not be used as a speed control device. A school crossing may look dangerous for children to use, causing parents to demand a stop sign to halt traffic. Now a vehicle which had been a problem for 3 seconds while approaching and passing the intersection becomes a problem for a much longer period. A situation of indecision is created as to when to cross as a pedestrian or when to start as a motorist. Normal gaps in traffic through which crossings could be made safely no longer exist. An intersection which previously was not busy now looks like a major intersection. It really isn't -- it just looks like it. It doesn't even look safer and it usually isn't. Most drivers are reasonable and prudent with no intention of deliberately violating traffic regulations; however, when an unreasonable restriction is imposed, it may result in flagrant violations. In such cases, the stop sign can create a false sense of security in a pedestrian and an attitude of contempt in a motorist. These two attitudes can and often do conflict, sometimes with tragic results. The City follows established well-developed, nationally recognized guidelines to indicate when stop signs become necessary. These guidelines also called warrants are published in the Michigan Manual of Uniform Traffic Control Devices. These guidelines identify specific traffic and pedestrian volumes, accident history, sight distance, and any unusual conditions at the intersection.

Criteria for Two-Way Stop Signs --Two-way stop signs are used:

- Where a street enters a through street; or
- Where a safe approach speed is less than 10 mph due to permanent visibility obstructions -- such as buildings, trees or shrubs; or
- Where crash history indicates three or more reported crashes in a 12 month period, and the crashes could have been avoided by the use of a stop sign; or

- Where circumstances and crash history indicate that observing the normal right-of-way rule could still be hazardous, resulting in crashes.

4-WAY Criteria for Four-Way or All-Way Stops:

In most cases, a two-way stop sign is sufficient to define who has the right-of-way. A four-way or all-way stop is considered only when an intersection with a two-way stop is the site of numerous crashes or traffic congestion problems. Four-way stop signs are used:

- Where traffic signals are needed; four-way or all-way stops may be used as an interim measure; or
- On local streets, where there has been an average five or more reported crashes per year. These crashes would likely have been prevented by an all-way stop; or
- Where the number of vehicles entering an intersection averages at least 500 vehicles per hour for any eight hours of a typical day, and the combined vehicular and pedestrian volumes from the minor street averages at least 200 per hour for the same eight hours.

Advantages of Approved Stop Signs:

- Stop signs establish right-of-way.
- The number of broadside accidents is reduced.

Disadvantages of Stop Signs:

- Acceleration and deceleration increase noise and air pollution near the signs.
- The frequency of rear-end accidents is likely to increase.
- Stop signs cause unnecessary delay.

Citizen Concerns: The City takes its role in solving traffic problems very seriously, yet the ultimate burden of safety rests on you, the motorist in the City of Troy. We will respond to every traffic concern you have. Since we receive over 400 citizen concerns per year, we may not be able to investigate your request as quickly as we would like to. We appreciate your patience and understanding in this matter.

to go to general information in traffic signals

-->Home<--

National SAFE KIDS Campaign

STOP SIGN VIOLATIONS PUT CHILD PEDESTRIANS AT RISK

A National Survey of Motorist Behavior at Stop Signs in School Zones and Residential Areas

October 2003

INTRODUCTION

Walking is a no-cost transportation option that allows parents and children to spend time together, get exercise and improve air quality by not creating vehicle pollutants. Unfortunately, recent evidence indicates that kids are walking less. In 1969, nearly half of elementary school students walked or biked to school.[1] By 1995, only 10 percent of children traveled by foot to school.[2] This decline can be attributed to many causes, including traffic danger and other hazards that make walking unsafe for children.[3]

Decreased walking has contributed to a significant decline in child pedestrian deaths and injuries. However, pedestrian injury remains a leading cause of unintentional injury-related death among children.[4] In 2000, 706 children ages 14 and under died[5], an estimated 47,300 were treated in hospital emergency rooms for pedestrian-related injuries in 2001.[6] Nearly 76 percent of these deaths and 73 percent of injuries were motor vehicle-related. The total annual cost of traffic-related pedestrian death and injury among children ages 14 and under is more than $7.2 billion.[7]

Speeding and other driver behaviors are a contributing factor to pedestrian-related injuries. In 1999, a National SAFE KIDS Campaign survey found that two-thirds of drivers exceeded the posted speed limit in school zones during the 30-minute periods before and after school.[8]

Each year, stop sign violations are associated with approximately 200 fatal crashes and 17,000 non-fatal injury crashes.[9] Children are at risk of injury when stop sign and pedestrian right-of-way laws are violated, yet studies investigating the rate of compliance with stop signs at intersections where children could be present have been lacking. Now SAFE KIDS and FedEx Express have closely examined driver behaviors at intersections in school zones and residential neighborhoods. This observational study determined the frequency of driver compliance with stop signs at unsignalized, marked and unmarked pedestrian crosswalks near schools and in residential areas.

METHODOLOGY

Data were collected by 72 SAFE KIDS coalitions, representing 39 states and the District of Columbia. Two hundred eighty-eight intersections were surveyed, using instruments and protocols developed by the National SAFE KIDS Campaign. A total of 25,660 vehicles were observed. All surveyed intersections were marked with stop signs and had no additional traffic control measures, such as crossing guards or flashing lights. All intersections were located in a school zone (52 percent) or a residential neighborhood with child pedestrian traffic (48 percent).

Each intersection was observed for 30 minutes by two observers who collected information about vehicle body type, stopping behavior, presence of pedestrians and whether pedestrians were crossing when the vehicle arrived at the intersection. Stopping behaviors were categorized as follows:

Stop before crosswalk – the wheels of the vehicle came to a complete stop before the crosswalk or stop sign (if crosswalk is unmarked)
Stop in or past crosswalk – the wheels of the vehicle came to a complete stop in or past the crosswalk (or past the stop sign if crosswalk is unmarked)
Rolling stop – the vehicle slowed at the crosswalk (marked or unmarked), but the vehicle wheels never came to a complete stop
No stop – the vehicle did not stop or slow significantly at the intersection

All coalitions submitted their surveys to the National SAFE KIDS Campaign for analysis. TELEform 7.0 software was used for data entry. Frequencies were generated using SPSS 8.0.

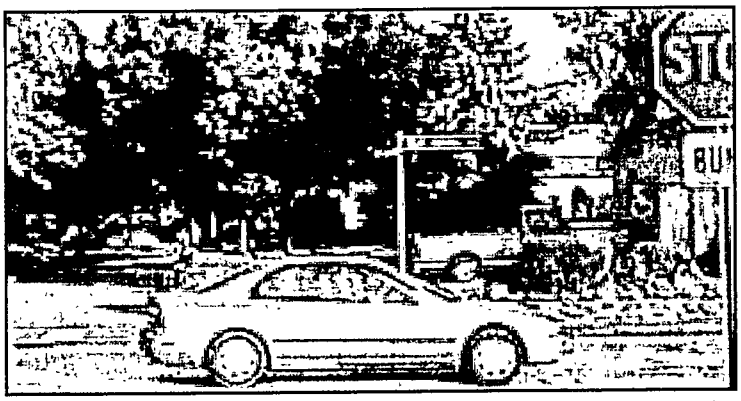
RESULTS

- Motorists did not obey stop signs, putting pedestrians and passengers in other vehicles at risk. Nearly half (45 percent) of vehicles surveyed violated the stop signs by not coming to a complete stop at intersections.
  - More than a third (37 percent) of motorists rolled through the stop signs.
  - Nearly a tenth (7 percent) of motorists did not even slow down for the stop signs.

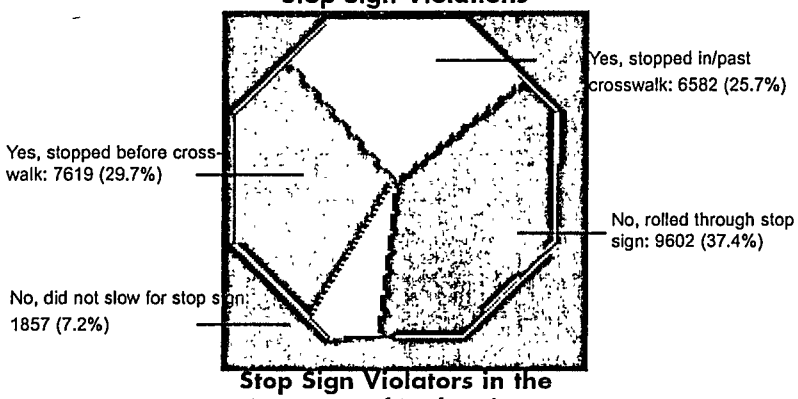
- When a motorist completed a stop, the vehicle frequently stopped in or past the crosswalk, thus increasing the risk to pedestrians walking across the street. At intersections with marked crosswalks, one quarter (25 percent) of vehicles stopped in or past the crosswalks, impeding the pedestrian pathway.

- Motorists were more likely to stop when pedestrians were present.
  - Nearly a third (32 percent) of motorists violated the stop signs when child pedestrians were present.
  - Nearly half (47 percent) of motorists violated the stop signs when no pedestrians were present.

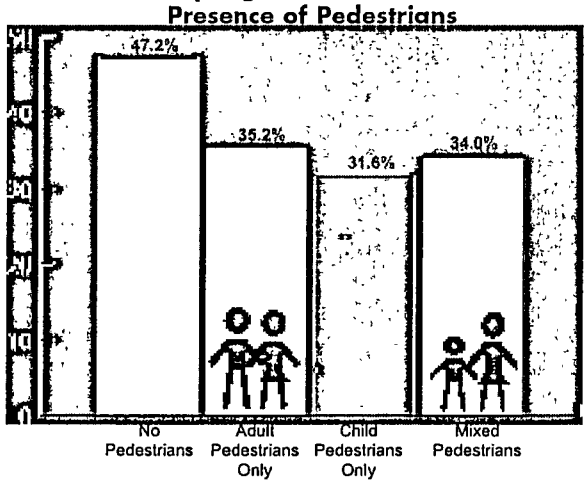
- Drivers were more likely to stop for pedestrians who were crossing than for those waiting to cross.
  - Nearly a quarter (24 percent) of drivers did not come to a complete stop at intersections where pedestrians were crossing.
  - More than a third (36 percent) of motorists violated the stop signs when pedestrians were waiting to cross.



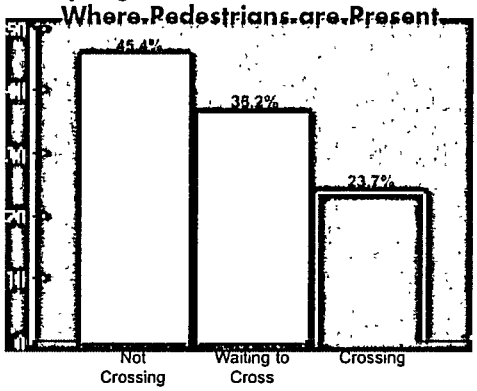
Observation of Stop Sign Violations



Stop Sign Violators in the Presence of Pedestrians



Stop Sign Violations at Intersections Where Pedestrians are Present



DISCUSSION

This observational survey of stop sign compliance in school zones and residential areas indicates that child pedestrians are at risk every day because of motorist behaviors. Child pedestrian safety must be a higher priority for our nation's drivers.

Teaching children pedestrian safety is not enough, especially since we know that children under age 10 are exposed to traffic threats that exceed their cognitive, developmental, behavioral, physical and sensory abilities. This is exacerbated by the fact that parents often overestimate their children's pedestrian skills.[10]

Child pedestrians cannot ensure their own safety, and parents cannot be sure their children are walking in a safe environment unless motorists – many of whom are also parents – respect traffic laws. Drivers need to be educated about the risks of traffic violations that they may consider to be minor, such as rolling through a stop sign. Enhanced awareness and enforcement of the laws being violated can save lives and create environments that are safe for child pedestrians.

CALL TO ACTION

Since 1999, SAFE KIDS and FedEx Express have teamed up to bring national and local attention to pedestrian safety issues. The two organizations launched the SAFE KIDS Walk This Way program, which has been instrumental in educating local communities about safe pedestrian behaviors and making school zones safer for child pedestrians. Now they are calling upon the 600 SAFE KIDS coalitions and chapters, concerned FedEx Express employees, other safety advocates, and transportation and law enforcement officials to heighten awareness in local communities about stop sign compliance and other safe driving behaviors.

Education

- Create and distribute public awareness tools like public service announcements and brochures to raise awareness of stop sign laws and penalties for violations
- Conduct media campaigns to help drivers learn about safe behaviors
- Encourage parents to walk or bike with their children to school, if possible, to decrease traffic congestion and increase safety
- Provide ongoing drivers' education through state motor vehicle departments
- Promote programs that encourage more walking and less driving, such as the Partnership for a Walkable America's International Walk to School Day
- Develop "walking school buses" or other programs that provide adult supervision along routes child pedestrians take to school

Enforcement and Enactment

- Conduct targeted stop sign enforcement campaigns regularly
- Establish new pedestrian right-of-way and jaywalking laws, and enforce existing ones
- Advocate for stricter penalties and increased fines for violators of stop sign and other traffic laws
- Support federal funding to support Safe Routes to School through the Pedestrian and Cyclist Equity Act of 2003

Engineering

- Dedicate more funds to slowing down cars and increasing the visibility of traffic signs and signals
- Evaluate effectiveness of existing traffic-calming markings, signals and signs
- Assess driving conditions in residential areas and near school zones and determine effective traffic-calming measures

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National SAFE KIDS Campaign

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www.pedbikeimages.org

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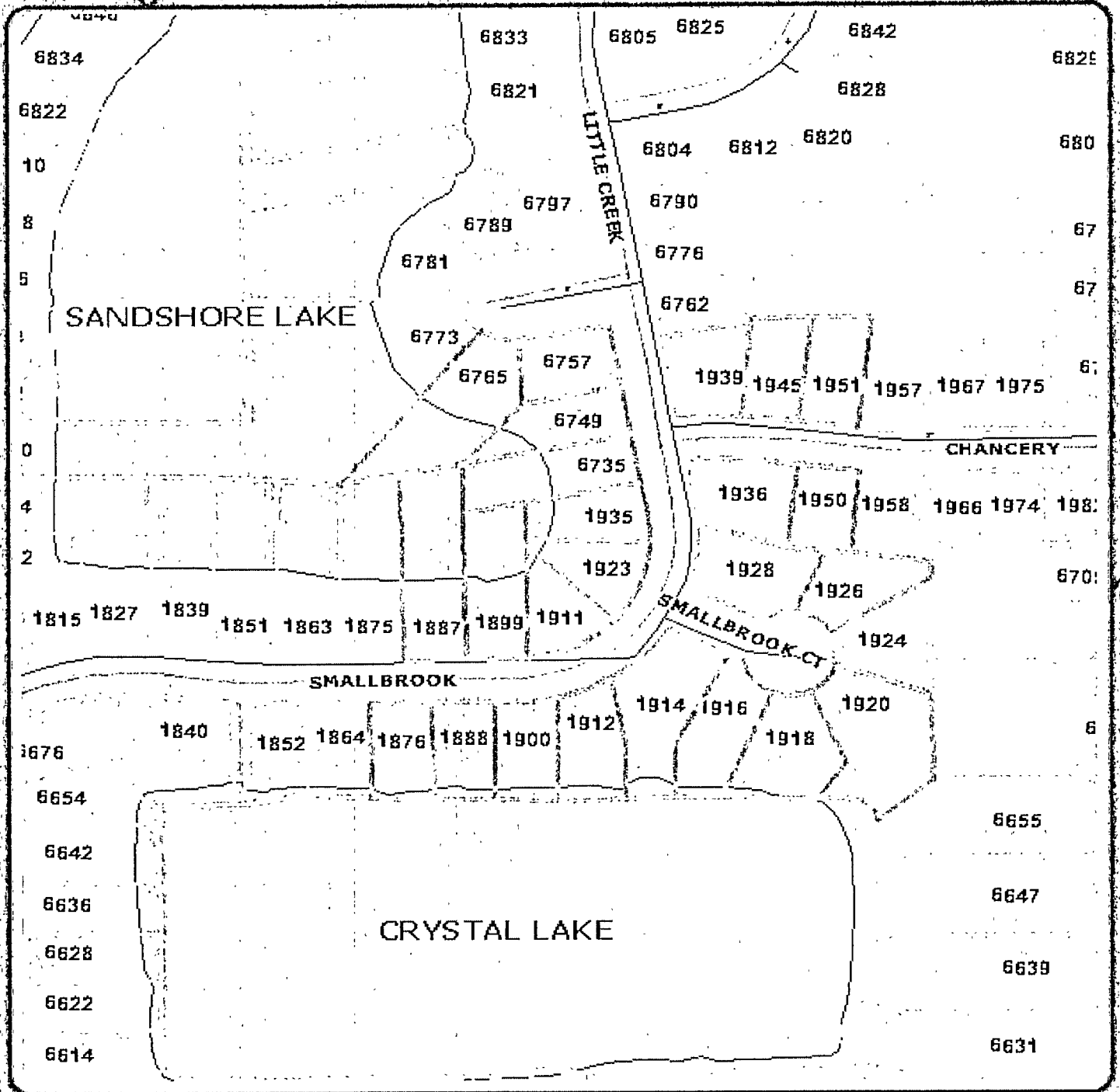
Geographical Information Systems Online



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