FINAL REPORT
AND RECOMMENDATIONS

FOR

TRAFFIC CALMING GUIDELINES IN THE BOROUGH OF MADISON

BY THE

BOROUGH OF MADISON
TRAFFIC CALMING POLICY TASK FORCE
MORRIS COUNTY, NEW JERSEY

Robert H. Conley	Council Member
Donald J. Bowen	Council Member
Mary-Anna Holden	Council Member
Robert Vogel, P.E.	Municipal Engineer
Sgt. John Keymer	Police Traffic Safety
Lisa Ellis, President	Board of Education

DECEMBER 2006

R 53-2006

RESOLUTION OF THE BOROUGH OF MADISON APPOINTING TRAFFIC CALMING POLICY TASK FORCE THROUGH THE END OF THE YEAR

WHEREAS, the Borough Council wishes to establish the Traffic Calming Policy Task Force ("Task Force") for the remainder of 2006 for the purpose of developing and recommending policy and guidelines for use of traffic calming measures on Borough roads; and

WHEREAS, the Task Force will conclude and be dissolved once the traffic calming policy and guidelines are accepted by the Borough Council or at such other time as the Borough Council may determine.

NOW, THEREFORE, BE IT RESOLVED by the Council of the Borough of Madison in the County of Morris and State of New Jersey as follows:

1. There is hereby established the Traffic Calming Policy Task Force which shall be in effect for the balance of 2006 for the purpose of developing and recommending a policy and guidelines for the use of traffic calming measures on Borough roads.
2. The Task Force shall not make any recommendations on the use of traffic calming methods for any particular road within the Borough.
3. The guidelines, once developed by the Task Force, should be submitted to the Borough Council, which the Borough Council may accept or reject.
4. The Task Force shall consist of the Borough Engineer and the Chief of Police and three Council Members, to be designated by the Council.

ADOPTED AND APPROVED
February 27, 2006

ELLWOOD R. KERKESLAGER, Mayor

Attest:

MARILYN SCHAEFER, Borough Clerk

Recommendation	Target Date	Responsibility	
		Primary	Secondary
5.1. Budget $20,000 in the 2007 capital budget for an upgraded speed stalker.	2007	Police	Council
5.1.1. Purchase stalker	2nd Qrtr 2007	Police	Council
5.2. Recruit sponsor for the PACE program.	Spring 2007		
5.3. Recruit a volunteer to design the PACE sticker.	Spring 2007		School
5.4. Budget for pavement imprinter	2007	DPW	Council
5.4.1. Purchase imprinter	2nd Qrtr 2007	DPW	Council
5.5. Install imprinted crosswalks.	Summer 2007	DPW	Engineer
5.6. Update borough traffic studies and include in subsequent Master Plans.	2007	Engineer	Council
5.7. Create a borough-wide sidewalk and bike lane plan to be incorporated in the Master Plan.	4th Qrtr 2006	Engineer	Council
5.7.1. Budget to fund the plan on an annual basis.	2007	Engineer	Council
5.7.2. Revisit the sidewalk plan on every six years in preparation of the Master Plan update.	2010	Engineer	Planning
5.7.3. Budget for periodic restriping of the bike lanes.	2008	Engineer	Council

Recommendation	Target Date	Responsibility	
		Primary	Secondary
5.8. Test calming criteria on key roads	3rd Qrtr 2007	Engineer	
5.8.1. Identify initial projects.	4th Qrtr 2007	Engineer	Council
5.9. Review the Ridgedale and Central Ave area for potential bump-out and historic district entrance work.	2nd Qrtr 2007	Engineer	
5.10. Review current hot spots			
5.10.1. Greenwood Ave & Brittin St	1st Qrtr 2007	Police	Engineer
5.10.2. Niles Ave	1st Qrtr 2007	Police	Engineer
5.10.3. Chateau Thierry Calming (center Island imprinting)	Summer 2007	Engineer	Council
5.10.4. Greenwood – Add crosswalks at Hunter and Overhill	2nd Qtr 2007	Engineer	DPW
5.11. Schools			
5.11.1. Expand education for Crossing guard.	Winter 2006-7	Police	Schools
5.11.2. Review salary, including a comparison with neighboring towns, of crossing guards.	Spring 2007	Police	Council
5.11.3. Educate school parents on drop-off and pick-up courtesy.	Winter 2006-7	Schools	Police

Borough of Madison
Traffic Calming Policy Task Force

Final Report

0. Background

0.1. Mission of the Task Force, as stated in resolution 53-2006

There is hereby established the Traffic Calming Policy Task Force which shall be in effect for the balance of 2006 for the purpose of developing and recommending a policy and guidelines for the use of traffic calming measures on Borough roads.

The Task Force shall not make any recommendations on the use of traffic calming methods for any particular road within the Borough.

The guidelines, once developed by the Task Force, should be submitted to the Borough Council, which the Borough Council may accept or reject.

The Task Force shall consist of the Borough Engineer and the Chief of Police and three Council Members, to be designated by the Council.

0.1.1. Though it was the goal of the committee not to make any recommendations for traffic calming on any particular roads there are several recommendations related to current projects or traffic calming hot spots.

0.2. Members – Borough Council Members, Bob Conley (chair), Mary-Anna Holden, Donald Bowen, Police Sergeant John Keymer; Borough Engineer, Bob Vogel; Board of Education President, Lisa Ellis

0.3. Resources – Many resources were in this report in particular the traffic calming policies are cited from similar studies in the Appendices to this report of Stamford, CT. and Naperville, IL.

1. Introduction

The Borough of Madison Traffic Calming Guidelines responds to a variety of traffic concerns in our residential neighborhoods, ranging from speeding motorists and short-cutting traffic to pedestrian safety and education. Most neighborhood traffic problems are not limited to a particular site, but are area wide problems. The goals and objectives of the initiative are to:

- Improve safety,
- Preserve pleasant livable neighborhoods,
- Reduce cut-through motorized vehicle traffic where desired,
- Promote slow speeds in residential neighborhoods,
- Encourage citizen involvement in the process, and
- Promote pedestrian, bicycle and mass transit use.

The Traffic Calming Guidelines recognize that each neighborhood has unique characteristics requiring an individualized approach to solving its traffic concerns. The guidelines outline a number of different traffic calming measures that may be used to solve certain problems encountered in our neighborhoods. The initiative is committed to:

- Reinforcing the existing traffic related laws,
- Educating motorist on traffic related issues,
- Encouraging traffic to stay on the collector and arterial roadway network and,
- Installing traffic calming measures where appropriate.

Adapted from the policy of Stamford, Ct.

2. Education

2.1. Calm Driving

2.1.1. Roads are not just for cars. Drivers need to share the road with bicyclists, pedestrians (when sidewalks are not present). Though not encouraged, some neighborhoods use the streets informal non-designated play areas for children

2.1.2. Drivers need to understand the importance of driving more slowly in residential neighborhoods. A driver traveling at 40 mph who sees a pedestrian 100 feet away doesn't have enough time to react or stop, in fact he or she would likely hit the pedestrian at 38 mph. A driver going 25 mph would be able to come to a complete stop before reaching the pedestrian.

2.1.3. Traffic calming designs are only one approach to slowing traffic, creating an atmosphere of calm driving is also very effective

2.1.4. Driving the posted speed limit of 25 mph can be too fast when children are present. thus advisory speeds may be 15 mph.

2.1.5. Local roads were never intended to serve as a thoroughfare or cut through. Staying to the main roads will calm our neighborhoods and promote patient driving while adding minimal amount of travel time..

2.1.6. Residents should consider alternate modes of transportation such as bicycling or walking.

2.2. PACE Program

2.2.1. Residents would pledge to take an active role in creating safer and more livable neighborhoods by signing a pledge and displaying a bumper sticker.

2.2.2. Pledge

I pledge to support the Madison Pace Car Program by caring for others as I exhibit positive motorist behavior.

When driving, I will:

1. Recognize that use of my car use impacts the livability of other residents' neighborhoods, just as theirs impacts mine.
2. Agree to drive within the speed limit on all roads.
3. Stop to let pedestrians cross and be courteous to bicyclists and other road users.
4. Minimize car use by combining trips, and using public transit, jitneys or carpools wherever possible.
5. Keep my full attention on driving avoiding distraction such as cell phone use.
6. Let other motorists know why I am driving courteously by displaying the Pace Car emblem on my car.

When NOT driving, I will:

7. Occasionally park on the street (where sidewalks are present). Cars parked on the street narrow the travel lanes, reducing vehicle speeds. (Must allow travel width of 18 feet or more next to parked vehicles. (No parking on any borough street 2 AM to 6 AM).
8. Use my sidewalk and front yard more, recognizing that visible activity slows traffic.
9. Say "thanks" to courteous drivers by giving them a friendly wave.
10. Act in a safe manner by not jaywalking, or acting in a reckless manner

Adapted from the PACE program of Naperville, Il.

2.2.3. All borough vehicles will be PACE cars as employees need to set the example for the community.

2.3. Further information and resources

2.3.1. www.trafficcalming.org

3. **Criteria and Priority**

3.1. To provide a guide to setting priority for traffic calming measures. There is no point threshold when traffic calming would be required but obviously the greater the point value the greater the need for traffic calming measures.

3.1.1. The potential of spillover of traffic into other neighborhoods due to the implementation of traffic calming measures need to be weighed against apparent potential benefits of any restrictive controls.

3.1.2. Priority Point System

3.1.2.1. Traffic Volume (24-hour)*

Traffic volumes will be measured for a 24 hour period on the streets in the traffic calming area. Older records using publicly available data may be used with notes regarding the source, date and need for improved studies.

24 Hour Volume	Points
0-1000	0
1001-1500	1
1501-2000	2
2001-2500	3
2501-3000	4
> 3001	5

3.1.2.2. Peak Volume*

Traffic volumes will be measured during the peak hour for both directions on the streets in the traffic calming area. Points will be allocated based on the following table.

Peak Hour Volume (Vehicles Per Hour both Direction)	**Points**
150-200	0
201-250	1
251-300	2
301-350	3
351-400	4
> 401	5

3.1.2.3. Cut through traffic*

Cut through traffic will be measured during the peak hours. The highest peak hour period percentage will be used to allocate points based on the following table. [There is no documentation for this at the current time. Manual counts and video camera verifications must be conducted to obtain accurate data.]

Cut Through Traffic (Highest Peak Hour Period)	**Points**
0%-20 %	0
21%-40%	2
41%-60%	4
61%-80%	6
81%-100%	8

3.1.2.4. Speed*

The site specific existing 85th Percentile speed will be used in the evaluation process, and not the posted speed limit. Points will be allocated based on the following table.

Site specific 85th percentile speed	**Points**
0-25 MPH	0
26 MPH-30 MPH	5
31 MPH-35 MPH	10
>35 MPH or repeated incidence of accidents	15

3.1.2.5. Neighborhood Features (schools, playgrounds etc)

Points for neighborhood features will be assigned based on the type of activities that are in the neighborhood. Generators will be considered in terms of likely pedestrian and bicycle activity. The following table will act as a guide.

School Activity Generators	points
Very Low (No schools within 1/4 mile radius)	0
Low (Schools within 1/4 mile radius)	1
Medium (Schools within 1/8 mile radius)	3
High (Schools in the neighborhood)	6

Recreation and Pedestrian Activity Generators	points
Very Low (No parks, recreation activity or Central Business District within 1/4 mile radius)	0
Low (Parks, recreation activity or Central Business District within 1/4 mile radius)	1
Medium (Parks, recreation activity or Central Business District within 1/8 mile radius or passive recreation park in the neighborhood)	3
High (Parks, recreation activity or Central Business District in the neighborhood)	4

Design Features	points
Continuous Sidewalks	0
Partial Sidewalks	1
Bike lanes but no sidewalk	2
No sidewalks or bike lanes	4

3.1.2.6. Road Classification

Road classification as stated in the master plan.

Classification	points
Secondary Arterial (or State Hwy)	0
Collector (or County Rd)	4
Local Access	8

3.1.2.7. Neighborhood Support

Level of Support	Points
No Neighborhood Support	0
Some Neighborhood support	1
Strong Neighborhood Support	2
Support from outside the neighborhood	3

* Adapted from the Stamford, Ct. traffic calming policy

4. Traffic Calming measures

4.1. Traffic calming measures (see appendix A) should be selected on a case by case basis with input by the borough engineer, and the Police Traffic Safety Officer. The Borough Council would approve the traffic calming measures either as a stand-alone project or as part of road reconstruction project. Factors that should be considered when determining the method should include:

- Effectiveness based the need
- Cost
- Storm water management
- Snow removal
- Effect on neighboring roads

5. Recommendations

5.1. Budget $20,000 in the 2007 capital budget for an upgraded stalker.

5.2. Recruit sponsor for the PACE program.

5.3. Recruit a volunteer to design the PACE sticker.

5.4. Purchase pavement imprinter.

5.5. Install imprinted crosswalks at the following locations.

5.5.1. Garfield

5.5.2. Greenwood at Brittin, Underhill and Hunter

5.6. Update borough traffic studies and include in subsequent Master Plans.

5.7. Create a borough-wide sidewalk and bike lane plan to be incorporated in the Master Plan.

5.7.1. Budget to fund the plan on an annual basis.

5.7.2. Revisit the sidewalk plan on every six years in preparation of the Master Plan update.

5.7.3. Budget for periodic restriping of the bike lanes.

5.8. Test criteria on key roads

5.8.1. Identify initial projects.

5.9. Review the Ridgedale and Central Ave area for potential bump-out and historic district entrance work.

5.10. Review current hot spots

5.10.1. Greenwood Ave & Brittin St

5.10.2. Niles Ave

5.10.3. Chateau Thierry Avenue

5.11. Schools

5.11.1. Expand education for Crossing guard.

5.11.2. Review salary, including a comparison with neighboring towns, of crossing guards.

5.11.3. Educate school parents on drop-off and pick-up courtesy.

5.12. Include priority calming measures in the 20 Yr. Road Program.

5.12.1. Bike lanes.

5.12.2. Imprinted crosswalks.

6. Appendix

6.1. Common Traffic calming measures. Level 1 options tend to be less expensive and easier to implement.

Level 1	**Level 2**
Bicycle lanes	Angle parking
Crosswalks	Changes in road surface or texture
Education on traffic issues	Chicanes
Enforcement	Chokers
Graduated stops	Cul-de-sacs
Guide signs	Curb extensions
Left turn lanes	Diverters
Narrowing streets with striping	Geometric, and sight distance changes
No through truck signs	Median barrier
One-way streets	Parking "T"
Pavement markings and signing	Roadway improvements
Reflective pavement markers	Roundabouts
Rumble strips	Semi-diverters
Speed humps	Sidewalks, and pedestrian ramps
Speed limit signing	Street closure
Stop signing (full way stops)	Traffic circles
Street parking	Traffic signal timing and phasing
Tree planting and landscaping	Traffic signals
Tree trimming	Two-way left turn lanes
Turn restrictions	

6.2. Schools Report:

Traffic Calming Task Force
School Report
Presented: June 6, 2006

This report is based on interviews with the school principals and my experience as a 22 year resident with 17 years of active involvement in the schools. This report includes a summary of the existing traffic difficulties followed by some suggestions for correction. I would like to thank Barbara Lippiett, principal of Kings Road School, Philip Kennedy, principal of Central Avenue School, Michael Post, principal of Torey J. Sabatini School, Ann Marie Hodges, principal and John Leister, assistant principal of Madison Junior School, and Greg Robertson, principal, Madison High School, for their cooperation.

EXISTING TRAFFIC DIFFICULTIES

Location: All five of our active schools are located on main thoroughfares, including in several instances major county and state roadways. Speed and traffic volume threaten safety at all locations. The roadways noted include Woodland Road, Kings Road, Main Street, Central Avenue, and Ridgedale Avenue. In most instances where the schools are bordered by more than one road, the secondary road is less than desirable due to width and accessibility, as is the case with Glenwild Road, Burnet Road, and Walnut Street.

Design: All school sites are further limited, with the exception perhaps of the Madison High School, by the design of the on-site drives and parking. In the case of the Madison Junior School, the existing drive is not being used currently for drop-off or pick-up, in an effort to improve safety and traffic flow. The three elementary schools do not have any on-site access for drop-off or pick-up, which further complicates the traffic situation on the surrounding roadways during the opening and closing hours. The internal traffic flow at the high school has undergone recent evaluation and realignment, and as a result has been greatly improved.

Education: In spite of the ongoing cooperation and participation of the Parent Teacher Organizations in each school, parent understanding and associated adherence to the existing regulations is less than stellar in most cases and downright hostile in others. Improper drop-off/pick-up zone behavior, illegal parking (bus zones, staff parking lots, blocking private driveways, etc.), and double parking, all work to further jeopardize student safety.

Signage: While all three of our elementary schools have flashing school zone signals, the junior and high schools do not. The existing signs that delineate drop-off/pick-up zones in many cases are dated, hard to read, and confusing.

Crossing Guards/Crosswalks: There have been more than a few instances where questionable performance by the crossing guards has created a safety hazard. Crossing guards doing double shifts has also left stations unattended while children are still at risk. The actual crosswalks are not in all cases clearly marked or noticed.

I believe in all instances, with the exception of existing school locations, active cooperation between the school board/administration, parent teacher organizations, and the borough government and police department, can go a long way to correct all school associated traffic problems. With the building referendum project getting underway early next year, the internal driveway situation will be improved at the junior school. With the addition of either school zone flashers or preferably, an appropriate and well-designed traffic signal on Main Street, this site can be further improved. Unfortunately, the elementary school sites do not offer the same opportunity. At the high school, the situation has improved, and the site offers some other options for further evaluation.

On the parent education front, I believe that the police department needs to work more closely with the parent teacher organizations to develop a more comprehensive safety program. More stringent enforcement would also go a long way toward correcting some reprehensible parent behavior. The safety of children needs to come first. I would like to see more tickets and fewer warnings given. Some basic reevaluation of traffic patterns and existing conditions could also help, for example I have been asking for years that parking on Walnut Street, on the side opposite Central Avenue School be eliminated completely. With cars parked on both sides the lower end of Walnut Street adjacent to Central Avenue becomes too narrow for two-way traffic. When it comes to improving signage, paying and outfitting crossing guards, and the incorporation of other traffic calming measures, I understand the borough's budgetary limitations but the parent teacher organizations and board of education would like the opportunity to contribute, under the guidance of the police department, both funding and volunteer hours. New jackets, whistles, signs, and education programs are certainly ways that the schools could help the cause.

Traffic calming is one of many great, yet underdeveloped, opportunities for sharing services and resources. Together we can affect positive change.

Respectfully submitted,

Lisa Ellis
Madison Board of Education

6.3. Master Plan Circulation Element – Borough of Madison

6.4. School and Public Area Radius Maps – Borough of Madison

6.5. Sidewalk Plans (comparative) – Borough of Madison

6.6. Background information available on the web

6.6.1. TransOptions - http://www.transoptions.org/

6.6.2. State of New Jersey Future in Transportation – Calm Traffic - http://www.state.nj.us/transportation/works/njfit/toolbox/traffic.shtm

6.7. Background information available from the Borough Engineering Department

6.7.1. Morris County Traffic Planning Report

6.7.2. U.S. Federal Traffic Calming Reports

6.8. Road Inventory

MADISON TRAFFIC CALMING PRIORITY PLAN

Street Name Pontential Points	Resurface Plan (Year)	Average Volume 5	Peak Volume 5	Cut Thru Volume 8	Speed (Limit) 15	Local Schools 6	Public Activity 4	Features 4	Road Class 8	Neighbor Support 3	Total Points 58	Pct of Tlt Pts
Academy Road	2009	0	0	0	0	0	0	4	8	1	13	22.4%
Albright Circle	2007	0	0	0	0	0	0	1	8	1	10	17.2%
Alexander Avenue	2021	0	0	0	0	3	0	0	8	1	12	20.7%
Alexander Avenue (1)	2021	0	0	0	0	3	0	0	8	1	12	20.7%
Alexander Avenue (Brittin to Grove)	2021	0	0	0	0	3	0	0	8	1	12	20.7%
Alma Ave. (Baker to Douglas)	2004	0	0	0	0	0	0	1	8	1	10	17.2%
Alma Ave. (Baker to Peach Tree)	2004	0	0	0	0	0	0	1	8	1	10	17.2%
Anthony Drive	2004	0	0	0	0	0	0	1	8	1	10	17.2%
Ardsleigh Drive	2022	0	0	0	0	1	0	0	8	1	10	17.2%
Arlena Court	2008	0	0	0	0	0	0	1	8	1	10	17.2%
Ashland Road	2018	0	0	0	0	0	0	1	8	1	10	17.2%
Avon Drive	2009	0	0	0	0	0	0	4	8	1	13	22.4%
Baker Ave. (Roscoe to Rachael)	2008	0	0	0	0	0	0	1	8	1	10	17.2%
Bardon Street	2017	0	0	0	0	0	0	1	8	1	10	17.2%
Barnsdale Road	2018	0	0	0	0	1	0	1	8	1	11	19.0%
Baumgartner Drive	2017	0	0	0	0	0	0	1	8	1	10	17.2%
Beech Avenue	2015	0	0	0	0	0	0	1	8	1	10	17.2%
Belleau Avenue	2023	0	0	0	0	0	0	1	8	1	10	17.2%
Belmont Avenue	2007	0	0	0	0	0	4	1	8	1	14	24.1%
Beverly Road	2016	0	0	0	0	1	0	4	8	1	14	24.1%
Brannick Drive	2016	0	0	0	0	1	0	1	8	1	11	19.0%
Brittin St. (Greenwood to Central)	2023	0	0	0	0	3	6	0	4	1	14	24.1%
Brittin St. (Greenwood to Rosedale)	2023	0	0	0	0	3	0	0	4	1	8	13.8%
Broadview Ave.	2018	0	0	0	0	0	0	1	8	1	10	17.2%
Brooklake Road	2006	3	0	0	0	0	0	1	4	1	9	15.5%
Bruns Street	2004	0	0	0	0	0	0	1	8	1	10	17.2%
Buckingham Drive	2008	0	0	0	0	0	0	1	8	1	10	17.2%
Burnett Road	2008	0	0	0	0	6	0	1	4	1	12	20.7%

MADISON TRAFFIC CALMING
PRIORITY PLAN

Street Name Pontential Points	Resurface Plan (Year)	Average Volume 5	Peak Volume 5	Cut Thru Volume 8	Speed (Limit) 15	Local Schools 6	Public Activity 4	Features 4	Road Class 8	Neighbor Support 3	Total Points 58	Pct of Tlt Pts
Buttenheim Terrace	2012	0	0	0	0	0	0	1	8	1	10	17.2%
Candlewood Drive	2017	0	0	0	0	0	0	1	8	1	10	17.2%
Canterbury Road	2011	0	0	0	0	0	0	1	8	1	10	17.2%
Carteret Court	2015	0	0	0	0	1	0	1	8	1	11	19.0%
Cedar Ave	2015	0	0	0	0	0	0	4	8	1	13	22.4%
Cedar Ave. (Beech and Park)	2015	0	0	0	0	0	0	1	8	1	10	17.2%
Cedar Street	2023	0	0	0	0	1	0	1	8	1	11	19.0%
Central Ave.	2005	2	0	0	0	0	2	0	4	1	9	15.5%
Central Ave.(Main to Walnut)		2	0	0	0	0	6	0	4	1	13	22.4%
Centre Street	2022	0	0	0	0	1	0	4	8	1	14	24.1%
Chapel Street	2010	0	0	0	0	0	6	0	8	1	15	25.9%
Chateau Thierry Avenue	2007	0	0	0	0	1	0	0	4	1	6	10.3%
Colonial Way	2011	0	0	0	0	0	0	1	8	1	10	17.2%
Community Place	2008	0	0	0	0	1	0	0	8	1	10	17.2%
Condurso Way	2022	0	0	0	0	0	4	4	8	1	17	29.3%
Cook Avenue	2008	0	0	0	0	1	0	0	4	1	6	10.3%
Cottage Place	2022	0	0	0	0	1	0	4	8	1	14	24.1%
Coursen Way	2017	0	0	0	0	0	0	1	8	1	10	17.2%
Court Place	2019	0	0	0	0	0	0	1	8	1	10	17.2%
Crescent Road	2012	0	0	0	0	1	0	1	8	1	11	19.0%
Crestview Avenue	2018	0	0	0	0	0	0	1	8	1	10	17.2%
Crestwood Drive	2017	0	0	0	0	0	0	1	8	1	10	17.2%
Cross Gates Road	2016	0	0	0	0	0	0	1	8	1	10	17.2%
Cross Street	2004	0	0	0	0	1	0	0	4	1	6	10.3%
Danforth Road	2015	2	0	0	0	1	0	1	4	1	9	15.5%
Danforth Road (Morris Place to Beech)	2015	0	0	0	0	6	0	1	4	1	12	20.7%
Dean St. (John to Dwyer)	2014	0	0	0	0	0	0	1	8	1	10	17.2%
Dean St. (John to Station Rd)	2014	0	0	0	0	1	0	1	8	1	11	19.0%
Dean St. (Station to Rosedale)	2014	0	0	0	0	3	2	1	8	1	15	25.9%
DeHart Place	2022	0	0	0	0	0	0	1	8	1	10	17.2%

MADISON TRAFFIC CALMING PRIORITY PLAN

Street Name Pontential Points	Resurface Plan (Year)	Average Volume 5	Peak Volume 5	Cut Thru Volume 8	Speed (Limit) 15	Local Schools 6	Public Activity 4	Features 4	Road Class 8	Neighbor Support 3	Total Points 58	Pct of Tlt Pts
Delbarton Drive	2006	0	0	0	0	0	0	1	8	1	10	17.2%
Dellwood Drive	2010	0	0	0	0	0	0	1	8	1	10	17.2%
Dellwood PKY East	2010	0	0	0	0	0	0	1	8	1	10	17.2%
Dellwood PKY South	2010	0	0	0	0	0	0	1	8	1	10	17.2%
Dellwood PKY West	2010	0	0	0	0	0	0	1	8	1	10	17.2%
Division Avenue	2008	0	0	0	0	0	0	1	4	1	6	10.3%
Dogwood Drive	2007	0	0	0	0	0	0	1	8	1	10	17.2%
Douglas Ave.	2004	0	0	0	0	1	0	1	8	1	11	19.0%
Douglas Ave. (Drew to Rachael)	2004	0	0	0	0	1	0	1	8	1	11	19.0%
Drew Place	2004	0	0	0	0	1	0	1	8	1	11	19.0%
Durwood Place	2006	0	0	0	0	0	0	1	8	1	10	17.2%
Dwyer Street	2014	0	0	0	0	0	0	1	8	1	10	17.2%
East Lane	2016	0	0	0	0	0	0	1	8	1	10	17.2%
East St. (South St. to Anthony)	2014	0	0	0	0	0	4	1	8	1	14	24.1%
East Street	2014	0	0	0	0	0	0	1	8	1	10	17.2%
Edgewood Road	2007	0	0	0	0	0	0	1	4	1	6	10.3%
Elm St. (Park Ave. to West St.)	2011	0	0	0	0	3	0	0	4	1	8	13.8%
Elm Street	2011	0	0	0	0	0	0	0	4	1	5	8.6%
Elmer Street	2010	0	0	0	0	0	0	0	8	1	9	15.5%
Essex Place	2008	0	0	0	0	1	0	1	4	1	7	12.1%
Fairview Ave.	2005	0	0	0	0	0	2	1	4	1	8	13.8%
Fairview Ave. (Ridgedale to Central)	2005	0	0	0	0	1	0	1	4	1	7	12.1%
Fairwood Road	2016	0	0	0	0	1	0	0	8	1	10	17.2%
Fen Court	2008	0	0	0	0	1	0	1	8	1	11	19.0%
Ferndale Road	2016	0	0	0	0	0	0	0	8	1	9	15.5%
Fletcher Place	2006	0	0	0	0	0	0	1	8	1	10	17.2%
Floyd Street		0	0	0	0	0	0	4	8	1	13	22.4%
Forest Road	2016	0	0	0	0	1	0	0	8	1	10	17.2%
Fox Chase Road	2017	0	0	0	0	0	0	1	8	1	10	17.2%
Garden Drive		0	0	0	0	0	0	4	8	1	13	22.4%

MADISON TRAFFIC CALMING
PRIORITY PLAN

Street Name Pontential Points	Resurface Plan (Year)	Average Volume 5	Peak Volume 5	Cut Thru Volume 8	Speed (Limit) 15	Local Schools 6	Public Activity 4	Features 4	Road Class 8	Neighbor Support 3	Total Points 58	Pct of Tlt Pts
Garfield Ave.	2005	1	0	0	0	0	0	4	8	2	15	25.9%
Garfield Ave. (Green Village to Green)	2005	1	0	0	0	0	0	4	8	2	15	25.9%
Garfield Ave. (Park Lane to Old Greenhouse)	2005	1	0	0	0	0	0	4	8	2	15	25.9%
Garfield Ave. (Woodland to Park Lane)	2005	1	0	0	0	0	6	4	8	2	21	36.2%
Gibbons Place	2014	0	0	0	0	0	4	1	8	1	14	24.1%
Glendale Road	2016	0	0	0	0	1	0	0	8	1	10	17.2%
Glenwild Circle	2020	0	0	0	0	6	0	1	8	1	16	27.6%
Glenwild Road	2020	0	0	0	0	0	0	1	8	1	10	17.2%
Green Ave. (Hillside to Kings Rd.)	2009	2	0	0	0	0	0	1	4	1	8	13.8%
Green Ave. (Shunpike to Hillside)	2009	2	0	0	0	0	0	0	4	1	7	12.1%
Green Hill Road	2012	0	0	0	0	0	0	0	8	1	9	15.5%
Green Village Road		3	0	0	10	0	0	0	0	1	14	24.1%
Greenwood Ave. (Main Street to Boro line)	2020	3	0	0	0	0	6	0	4	1	14	24.1%
Greenwood Ave.(Fairview to Borough Line)	2020	3	0	0	0	0	0	0	4	1	8	13.8%
Grove Street	2014	0	0	0	0	1	0	0	8	1	10	17.2%
Hamilton Street	2019	0	0	0	0	0	0	0	8	1	9	15.5%
Harwood Drive	2013	0	0	0	0	0	0	1	8	1	10	17.2%
Highland Avenue	2014	0	0	0	0	6	0	4	8	1	19	32.8%
Highview Terrace	2014	0	0	0	0	0	0	0	8	1	9	15.5%
Hillcrest Road	2013	0	0	0	0	1	0	0	8	1	10	17.2%
Hillside Ave.(Green to Prospect)	2005	0	0	0	0	0	0	1	8	1	10	17.2%
Hillside Ave. (Green Village to Green)	2005	0	0	0	0	0	0	1	8	1	10	17.2%
Hillview Ave.	2010	0	0	0	0	0	0	0	8	1	9	15.5%
Holden Lane	2012	0	0	0	0	0	0	1	8	1	10	17.2%
Howard Street	2009	0	0	0	0	0	4	4	8	1	17	29.3%
Howell Street	2010	0	0	0	0	0	0	0	8	1	9	15.5%
Hoyt Street	2005	0	0	0	0	0	0	1	8	1	10	17.2%
Hunter Drive	2019	0	0	0	0	0	0	1	8	1	10	17.2%

MADISON TRAFFIC CALMING
PRIORITY PLAN

Street Name Pontential Points	Resurface Plan (Year)	Average Volume 5	Peak Volume 5	Cut Thru Volume 8	Speed (Limit) 15	Local Schools 6	Public Activity 4	Features 4	Road Class 8	Neighbor Support 3	Total Points 58	Pct of Tlt Pts
Independence Court	2021	0	0	0	0	1	0	1	8	1	11	19.0%
James Place	2004	0	0	0	0	1	0	1	8	1	11	19.0%
John Street	2014	0	0	0	0	0	0	1	8	1	10	17.2%
John Marshall Lane	2019	0	0	0	0	0	0	1	8	1	10	17.2%
Keep Street	2012	0	0	0	0	0	6	1	8	1	16	27.6%
Kensington Road	2008	0	0	0	0	1	0	1	8	1	11	19.0%
Kings Rd. (Madison Ave. to Green)	2016	3	0	0	0	0	0	0	4	1	8	13.8%
Kings Rd. (Samson to Prospect)	2006	3	0	0	10	0	0	0	4	1	18	31.0%
Kings Rd. (Samson to Seaman)	2023	3	0	0	0	6	0	0	4	1	14	24.1%
Kings Road (Seaman to Borough Line)	2004	3	0	0	0	0	0	0	4	1	8	13.8%
Kinney Street	2015	0	0	0	0	0	0	1	8	1	10	17.2%
Kitchell Road		0	0	0	10	0	0	0	8	1	19	32.8%
Knollwood Ave.	2012	0	0	0	0	0	0	0	8	1	9	15.5%
Knollwood Ave. (Hillview to Greenwood)	2012	0	0	0	0	0	0	1	8	1	10	17.2%
Knollwood Ave. (Rosedale to Hillview)	2012	0	0	0	0	0	0	1	8	1	10	17.2%
Lathrop Avenue	2013	0	0	0	0	1	0	0	8	1	10	17.2%
Laurel Way	2014	0	0	0	0	0	0	4	8	1	13	22.4%
Lawrence Road	2021	0	0	0	0	0	0	1	8	1	10	17.2%
Lee Avenue	2019	0	0	0	0	0	0	4	8	1	13	22.4%
Leigh Drive	2019	0	0	0	0	0	0	1	8	1	10	17.2%
Lewis Drive	2010	0	0	0	0	1	0	1	8	1	11	19.0%
Lincoln Place	2022	0	0	0	0	0	0	4	8	1	13	22.4%
Linden Drive	2004	0	0	0	0	6	0	1	8	1	16	27.6%
Loantaka Terrace	2017	0	0	0	0	0	0	1	8	1	10	17.2%
Loantaka Way		3	0	0	10	3	0	1	0	1	18	31.0%
Locust Street	2010	0	0	0	0	0	0	0	8	1	9	15.5%
Longview Avenue	2019	0	0	0	0	0	0	1	8	1	10	17.2%
Lorraine Road	2019	0	0	0	0	1	0	1	8	1	11	19.0%
Loveland Street	2011	0	0	0	0	0	0	1	8	1	10	17.2%
Lynwood Place	2017	0	0	0	0	0	0	1	8	1	10	17.2%

MADISON TRAFFIC CALMING
PRIORITY PLAN

Street Name Pontential Points	Resurface Plan (Year)	Average Volume 5	Peak Volume 5	Cut Thru Volume 8	Speed (Limit) 15	Local Schools 6	Public Activity 4	Features 4	Road Class 8	Neighbor Support 3	Total Points 58	Pct of Tlt Pts
Madison Avenue		4	0	0	10	6	4	1	0	1	26	44.8%
Magnolia Court	2022	0	0	0	0	1	0	4	8	1	14	24.1%
Main street		5	0	0	0	6	0	0	0	1	12	20.7%
Maple Avenue	2012	0	0	0	0	1	0	0	8	1	10	17.2%
Midwood Ter. (Green to Prospect)	2006	0	0	0	0	0	0	1	8	1	10	17.2%
Midwood Terrace	2006	0	0	0	0	0	0	1	8	1	10	17.2%
Morris Place	2017	0	0	0	0	0	0	1	8	1	10	17.2%
Myrtle Ave. (Ridgedale to Howard)	2011	0	0	0	0	1	4	1	8	1	15	25.9%
Myrtle Avenue	2011	0	0	0	0	3	0	1	8	1	13	22.4%
Niles Avenue	2021	1	0	0	0	0	0	0	8	1	10	17.2%
Noe Avenue	2018	2	0	0	0	0	0	1	4	1	8	13.8%
Nordling Lane		0	0	0	0	0	0	4	8	1	13	22.4%
Norman Circle	2010	0	0	0	0	1	0	1	8	1	11	19.0%
North Oak Court	2020	0	0	0	0	0	0	4	8	1	13	22.4%
North St. (East to Myrtle)	2015	0	0	0	0	0	0	0	8	1	9	15.5%
North St. (Myrtle to Burnet)	2015	0	0	0	0	3	0	0	8	1	12	20.7%
North St. (Park to East)	2015	0	0	0	0	0	0	0	8	1	9	15.5%
Oak Court	2020	0	0	0	0	0	0	4	8	1	13	22.4%
Olde Greenhouse Lane		0	0	0	0	0	0	4	8	1	13	22.4%
Orchard St. (Lathrop to Strickland)	2004	0	0	0	0	0	0	1	8	1	10	17.2%
Orchard Street(Strickland to Douglas)	2004	0	0	0	0	1	0	1	8	1	11	19.0%
Orchard Street(Woodland to Lathrop)	2004	0	0	0	0	1	0	1	8	1	11	19.0%
Overhill Drive	2019	0	0	0	0	0	0	1	8	1	10	17.2%
Oxford Lane	2011	0	0	0	0	0	0	1	8	1	10	17.2%
Page Street	2022	0	0	0	0	0	0	4	8	1	13	22.4%
Park Avenue		4	0	0	10	0	4	0	0	1	19	32.8%
Park Lane	2016	0	0	0	0	0	4	1	8	1	14	24.1%
Parkside Avenue	2019	0	0	0	0	0	0	4	8	1	13	22.4%
Peachtree Lane		0	0	0	0	0	0	1	8	1	10	17.2%
Pine Avenue	2015	0	0	0	0	0	0	1	8	1	10	17.2%

MADISON TRAFFIC CALMING
PRIORITY PLAN

Street Name Pontential Points	Resurface Plan (Year)	Average Volume 5	Peak Volume 5	Cut Thru Volume 8	Speed (Limit) 15	Local Schools 6	Public Activity 4	Features 4	Road Class 8	Neighbor Support 3	Total Points 58	Pct of Tlt Pts
Pine Tree Terrace	2006	0	0	0	0	0	0	1	8	1	10	17.2%
Plain Street	2015	0	0	0	0	0	0	1	8	1	10	17.2%
Pomeroy Road	2007	0	0	0	0	0	4	1	8	1	14	24.1%
Prospect Place		0	0	0	0	0	0	4	8	1	13	22.4%
Prospect St. (Kings to Pomeroy)	2006	2	0	0	0	0	0	0	4	1	7	12.1%
Prospect St. (Woodland to Wyndehurst)	2006	2	0	0	0	0	0	0	4	1	7	12.1%
Prospect St.(Pomeroy to Woodland)	2006	2	0	0	0	0	0	0	4	1	7	12.1%
Prospect St.(Woodland to Midwood)	2006	2	0	0	0	0	0	1	4	1	8	13.8%
Rachael Avenue (Baker to Peach Tree)	2004	0	0	0	0	0	0	1	8	1	10	17.2%
Rachael Avenue(Baker to Douglas)	2004	0	0	0	0	0	0	1	8	1	10	17.2%
Redmond Drive		0	0	0	0	1	0	0	8	1	10	17.2%
Ridgedale Avenue	2022	4	0	0	10	0	2	0	4	1	21	36.2%
Rolling Hill Court	2017	0	0	0	0	0	0	1	8	1	10	17.2%
Roscoe Avenue (Peach Tree to Baker)	2004	0	0	0	0	0	0	1	8	1	10	17.2%
Roscoe Avenue(Baker to Douglas)	2004	0	0	0	0	0	0	1	8	1	10	17.2%
Rose Avenue	2015	0	0	0	0	0	0	1	8	1	10	17.2%
Rosedale Avenue	2021	2	0	0	0	3	4	1	4	1	15	25.9%
Rosemont Avenue	2009	0	0	0	0	1	0	0	8	1	10	17.2%
Rosewood Drive	2017	0	0	0	0	0	0	1	8	1	10	17.2%
Ross Court	2020	0	0	0	0	0	0	4	8	1	13	22.4%
Samson Avenue	2016	0	0	0	0	0	0	1	4	1	6	10.3%
Samson Avenue (Kings to tracks)	2016	0	0	0	0	0	0	1	4	1	6	10.3%
Sayre Court	2014	0	0	0	0	1	0	0	8	1	10	17.2%
Seaman Street	2004	0	0	0	0	1	0	0	8	1	10	17.2%
Serpico Way	2022	0	0	0	0	0	0	1	8	1	10	17.2%
Seven Oaks Circle	2019	0	0	0	0	0	0	1	8	1	10	17.2%
Shadylawn Drive	2020	0	0	0	0	0	0	1	8	1	10	17.2%
Shepherd Lane	2017	0	0	0	0	0	0	1	8	1	10	17.2%
Sherwood Ave.	2021	0	0	0	0	0	0	1	8	1	10	17.2%
Sherwood Ave. (Hamilton to Knollwood)	2021	0	0	0	0	0	0	1	8	1	10	17.2%

MADISON TRAFFIC CALMING
PRIORITY PLAN

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Sherwood Ave. (Knollwood to Longview)	2021	0	0	0	0	0	0	1	8	1	10	17.2%
Shunpike Road		4	0	0	10	0	0	4	0	1	19	32.8%
Sinclair Terrace	2018	0	0	0	0	1	0	1	8	1	11	19.0%
South Oak Court	2020	0	0	0	0	0	0	4	8	1	13	22.4%
South Street	2011	0	0	0	0	0	0	0	8	1	9	15.5%
Spring Garden Drive	2018	0	0	0	0	1	0	1	8	1	11	19.0%
Stafford Drive	2020	0	0	0	0	0	0	1	8	1	10	17.2%
Station Road	2014	0	0	0	0	0	0	1	8	1	10	17.2%
Station Road (John Ave. to Main)	2014	0	0	0	0	0	0	1	8	1	10	17.2%
Stonegate Court	2021	0	0	0	0	0	0	1	8	1	10	17.2%
Stonehedge Lane	2007	0	0	0	0	0	0	1	8	1	10	17.2%
Strickland Place	2004	0	0	0	0	1	0	1	8	1	11	19.0%
Sunset Place	2004	0	0	0	0	1	0	1	8	1	11	19.0%
Surrey Lane	2019	0	0	0	0	0	0	1	8	1	10	17.2%
Toothe Place	2018	0	0	0	0	0	0	1	8	1	10	17.2%
Tracy Lane	2012	0	0	0	0	0	0	1	8	1	10	17.2%
Trail Place	2014	0	0	0	0	0	0	1	8	1	10	17.2%
Treadwell Avenue	2006	0	0	0	0	0	0	1	8	1	10	17.2%
Troy Court	2014	0	0	0	0	3	0	1	8	1	13	22.4%
Union Ave.		0	0	0	0	0	0	1	8	1	10	17.2%
Union Ave.	2008	0	0	0	0	0	0	1	8	1	10	17.2%
Union Hill Rd. (Woodland to Kings)	2008	1	0	0	0	0	0	1	4	1	7	12.1%
Union Hill Road	2021	1	0	0	0	1	0	1	4	1	8	13.8%
Valevue Road	2012	0	0	0	0	0	0	1	4	1	6	10.3%
Valley Road	2010	0	0	0	0	0	0	0	8	1	9	15.5%
Vinal Place	2020	0	0	0	0	0	0	1	8	1	10	17.2%
Vinton Road	2009	0	0	0	0	1	0	0	8	1	10	17.2%
Walnut Street	2008	0	0	0	0	0	0	0	4	1	5	8.6%
Washington Drive	2007	0	0	0	0	0	0	1	8	1	10	17.2%
Waverly Place	2009	0	0	0	0	0	0	0	8	1	9	15.5%

MADISON TRAFFIC CALMING
PRIORITY PLAN

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Wayne Blvd.	2019	0	0	0	0	0	0	1	8	1	10	17.2%
Wayne Blvd. (Anthony to Anthony)	2019	0	0	0	0	0	0	1	8	1	10	17.2%
West End Avenue	2012	0	0	0	0	0	0	1	8	1	10	17.2%
West Lane	2016	0	0	0	0	0	0	1	8	1	10	17.2%
West Street	2011	0	0	0	0	0	0	1	8	1	10	17.2%
Westerly Avenue	2005	0	0	0	0	1	0	1	8	1	11	19.0%
Wilmer Street	2007	0	0	0	0	1	0	0	8	1	10	17.2%
Wilson Lane	2012	0	0	0	0	0	0	4	8	1	13	22.4%
Winding Way	2018	0	0	0	0	1	0	1	8	1	11	19.0%
Wisteria Court	2017	0	0	0	0	0	0	1	8	1	10	17.2%
Woodcliff Drive	2009	0	0	0	0	0	0	0	8	1	9	15.5%
Woodland Rd. (Green Village to Green)	2013	0	0	0	0	0	0	0	4	1	5	8.6%
Woodland Rd. (Green Village to Loantaka)	2013	3	0	0	0	6	0	0	4	1	14	24.1%
Woodland Rd. (Loantaka to town line)	2013	4	0	0	0	0	0	0	4	1	9	15.5%
Woodland Rd. (Noe to Borough Line)	2013	0	0	0	0	1	0	0	4	1	6	10.3%
Woodland Rd. (Samson to Prospect)	2013	0	0	0	0	0	6	0	4	1	11	19.0%
Woodland Rd. (Samson to Union Hill)	2013	2	0	0	0	0	0	0	4	1	7	12.1%
Woodside Road	2016	0	0	0	0	0	0	0	8	1	9	15.5%
Wyndehurst Drive	2012	0	0	0	0	0	0	1	8	1	10	17.2%

6.3. Master Plan Circulation Element – Borough of Madison

Table 2

AVERAGE DAILY TRAFFIC (ADT) VOLUMES

Road	ADT Volume (1991)
Main Street (east of Rosedale)	29,000
Main Street (between Greenwood and Rosedale)	22,400
Main Street (between Park and Central)	21,800
Madison Avenue	18,400*
Park Avenue	17,500
Shunpike Road (Green Village to Loantaka)	16,700
Woodland Avenue (west of Loantaka Way)	11,700
Shunpike Road (east of Green Village)	11,500*
Ridgedale Avenue	11,000*
Loantaka Way (south of Woodland Rd.)	9,900*
Kings Road (west of Green Avenue)	8,900
Green Village Road	8,900
Woodland Road (between Loantaka and Green Village)	7,300
Brooklake Road	7,100
Loantaka Way (north of Woodland Rd.)	6,700
Greenwood Avenue	6,600
Kings Road (east of Prospect Street)	6,600
Prospect Street	4,800
Woodland Road (east of Prospect)	4,500
Central Avenue	4,200
Green Avenue	3,800
Noe Avenue	3,600
Rosedale Avenue	3,200
Danforth Road	3,000
Union Hill Road (between Woodland and Kings)	2,200*
Niles Avenue	1,500
Garfield Avenue	1,200
Morris Place	650*

*1988 Data

Sources: New Jersey Department of Transportation, Morris County Department of Transportation Management, and Madison Borough Police Department.

Table 3

CHARACTERISTICS OF COLLECTOR ROADWAYS

February, 1992

Roadway	Cartway Width (ft)	ROW Width (ft)	Speed Limit (mph)	Parking Restrictions	Sidewalks
Brittin Street	29-40	60-66	25	NO	Y
Brooklake Road	25-26	40	25	NO	Y
Burnet Road	26-32	50-60	25	NO	P
Central Avenue	36-39	60	35	YES (one)	P
Chateau Thierry Ave.	39	60	25	NO	Y
Cook Avenue	29	50	25	NO	Y
Cross Street	32-33	50	25	NO	P
Danforth Road	25-30	50	25	YES (both)	P
Division Avenue	N/A	N/A	25	NO	N
Elm Street	27-34	44-66	25	YES (one)	Y
Elmer Street	29	50	25	YES (one)	Y
Fairview Avenue	25-36	44-50	25	NO	Y
Garfield Avenue	22-33	50	25	NO	N
Green Avenue	42-45	70	25	NO	Y
Greenwood Avenue	36-42	50-66	25	NO	Y
Kings Road	27-43	33-60	30/35	YES (one/both)	Y
Noe Avenue	25-27	60	25	NO	N
Prospect Place	32-41	60	25	NO	Y
Ridgedale Avenue	25-39	50-60	25	YES (one)	Y
Rosedale Avenue	36	50	25	YES (one)	Y
Samson Avenue	24-36	50-60	25	YES (bridge)	P
Union Hill Road	36-31	50	25	YES (bridge)	P
Walnut Street	29-31	50	25	YES	Y
Woodland Rd. (Note 1)	27-38	50-60	25	NO	P

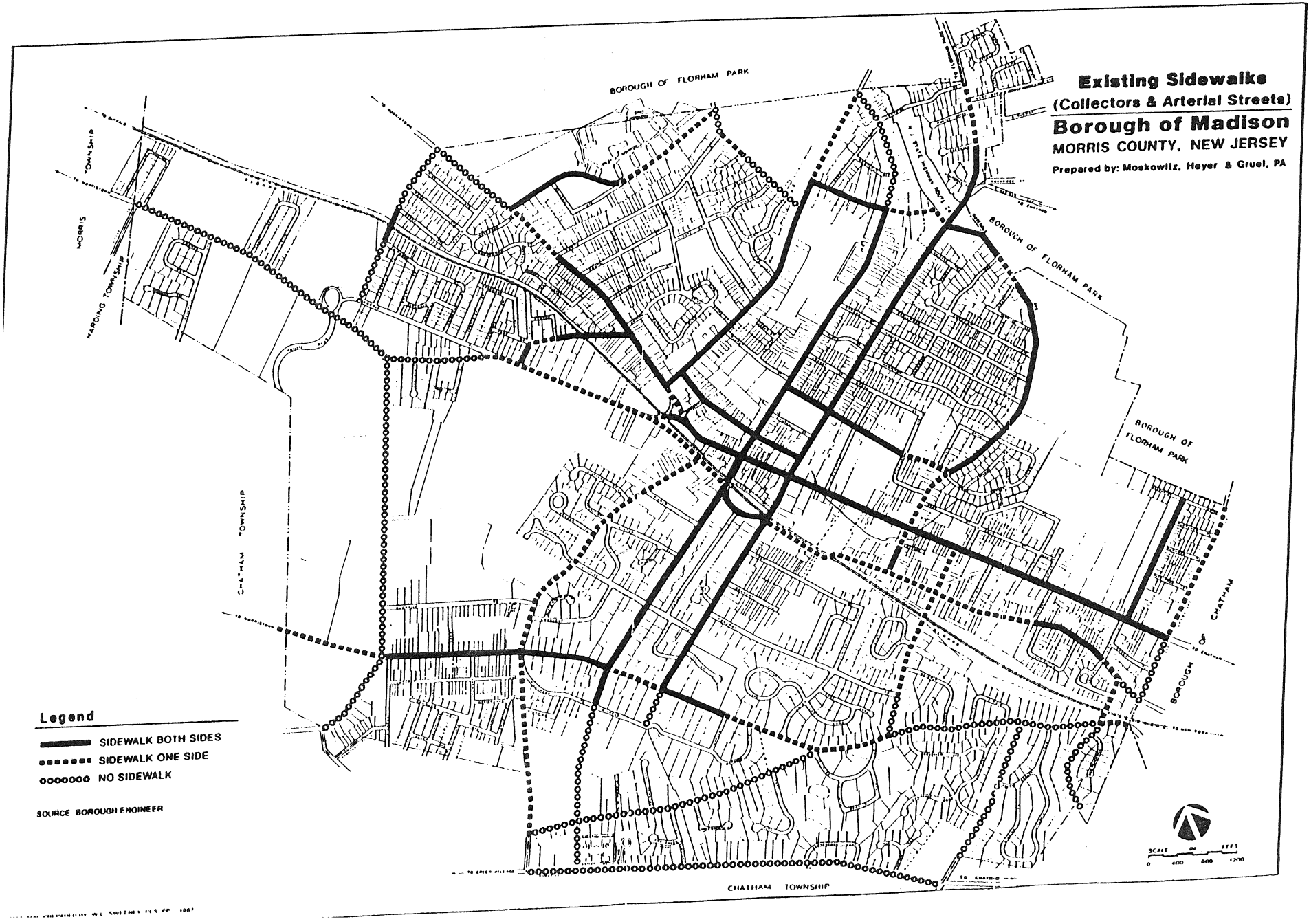
NOTES: Parking: (one): restricted on one side of street
(both): restricted on both sides of street
(bridge): restricted on railroad bridge
Sidewalks: P = partial length of roadways
N/A: Not available
(1) east of Loantaka Way

Sources: Madison Police Department; Madison Department of Land Use Services

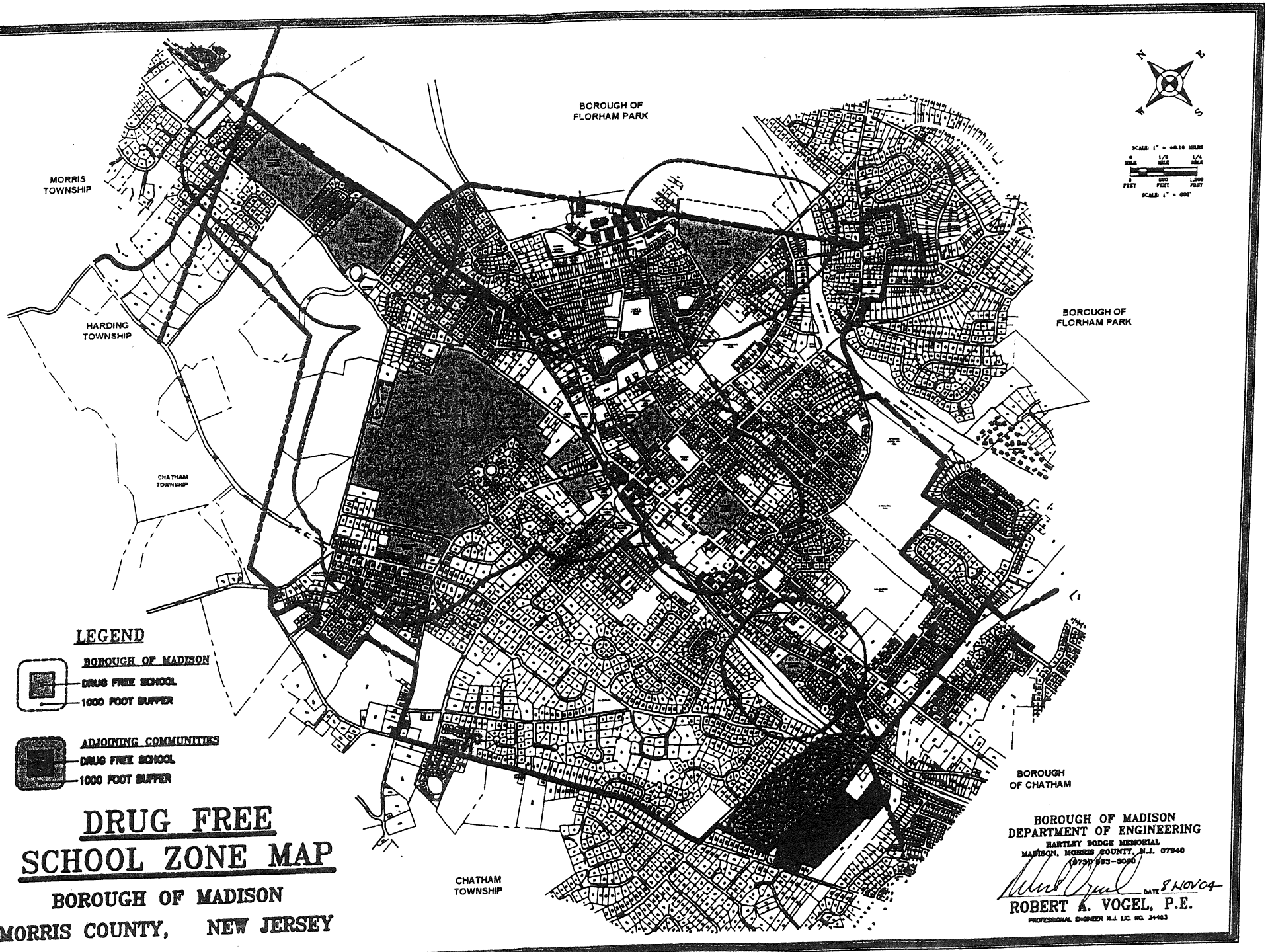
Table 4

STREET CLASSIFICATIONS

Road Name	County Road	Classification (A)			
		1975 Plan	Police	Volume Class	Proposed 1992 Master Plan Classification (D)
Brittin Street	No	Collector	Collector	--	Collector
Brooklake Road	No	Minor	--	Arterial	Collector
Burnet Road	No	Collector	Collector	--	Collector
Central Avenue	Yes	Arterial	Arterial	Collector	Collector
Chateau Thierry Avenue	No	Arterial	Collector	--	Collector
Cook Avenue	No	Coll/Arter	--	--	Collector
Cross Street	No	Collector	Collector	--	Collector
Danforth Road	No	Arterial	--	Collector	Collector
Division Avenue	No	Collector	Collector	--	Collector
Elm Street	No	Collector	Collector	--	Collector
Elmer Street	No	Arterial	--	--	Collector
Fairview Avenue	No	Collector	Collector	--	Collector
Garfield Avenue	No	Collector	Collector	Local Access	Collector
Green Avenue	No	Arterial	Arterial	Collector	Collector
Green Village Road	Yes	Collector	Collector	Arterial	Secondary Arterial
Greenwood Avenue	No	Arterial	Arterial	Arterial	Collector
Kings Road	No	Collector	Collector	Arterial	Collector
Loantaka Way	Yes	Arterial	Arterial	Arterial	Secondary Arterial
Madison Avenue	No	Arterial	Arterial	Arterial	Secondary Arterial
Main Street	No	Arterial	Arterial	Arterial	Secondary Arterial
Morris Place	No	Collector	Collector	Minor	Local Access
Niles Avenue	No	Minor	--	Minor	Local Access
Noe Avenue	No	Collector	Collector	Collector	Collector
North Street	No	Collector	Collector	--	Local Access
Park Avenue	Yes	Arterial	--	Arterial	Secondary Arterial
Prospect Street	No	Arterial	--	Collector	Collector
Ridgedale Avenue	No	Collector	Collector	Arterial	Collector
Rosedale Avenue	No	Collector	Collector	Arterial	Collector
Samson Avenue	No	Collector	Collector	--	Collector
Shunpike Road	Yes	Arterial	Arterial	Arterial	Secondary Arterial


Existing Sidewalks
(Collectors & Arterial Streets)
Borough of Madison
MORRIS COUNTY, NEW JERSEY
Prepared by: Moskowitz, Heyer & Gruel, PA
BOROUGH OF FLORHAM PARK
BOROUGH OF FLORHAM PARK
BOROUGH OF FLORHAM PARK
MORRIS TOWNSHIP
HARDING TOWNSHIP
CHATHAM TOWNSHIP
BOROUGH OF CHATHAM
CHATHAM TOWNSHIP
Legend
SIDEWALK BOTH SIDES
SIDEWALK ONE SIDE
NO SIDEWALK
SOURCE BOROUGH ENGINEER

6.4. School and Public Area Radius Maps – Borough of Madison



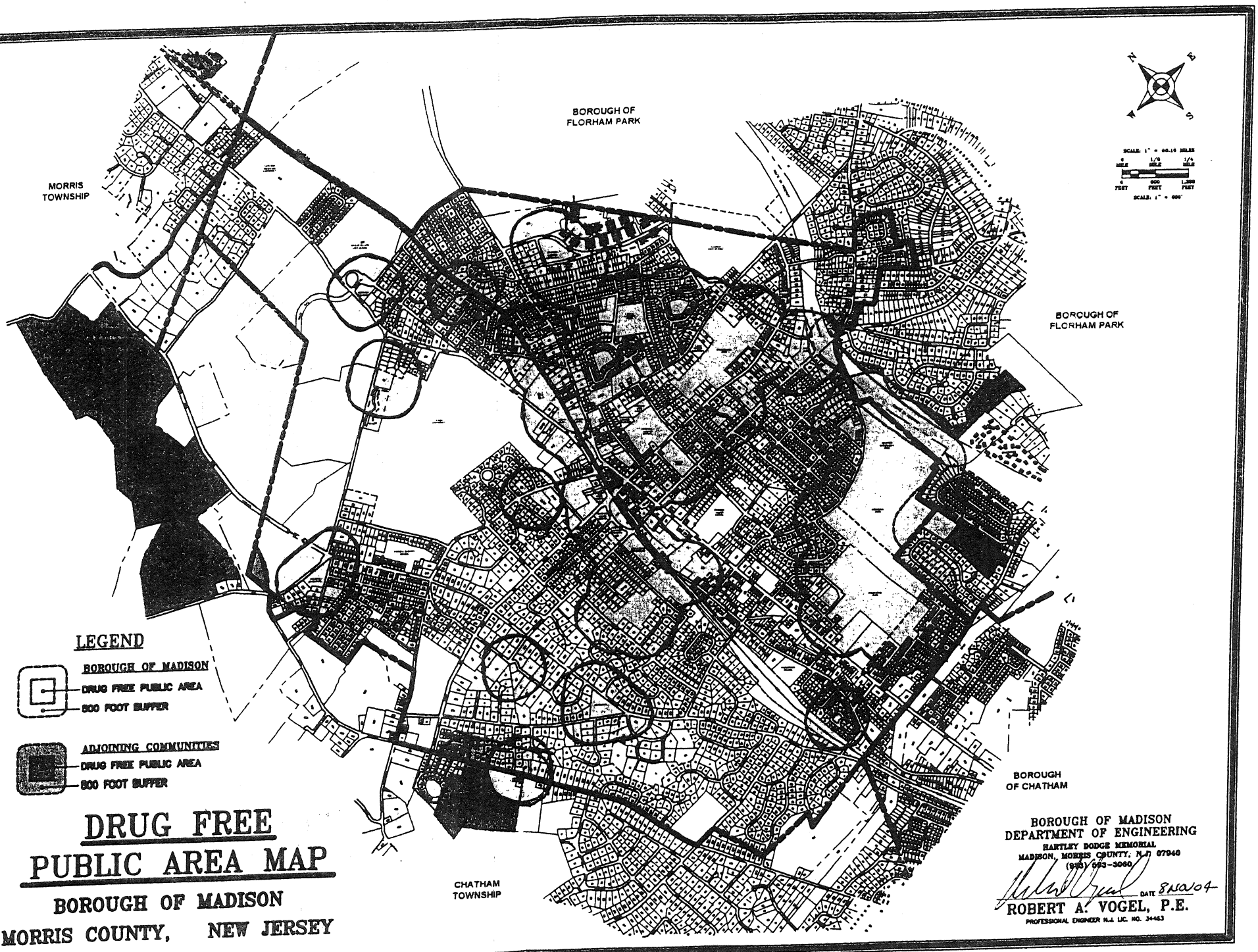
DRUG FREE SCHOOL ZONE MAP

BOROUGH OF MADISON

MORRIS COUNTY, NEW JERSEY

BOROUGH OF MADISON
DEPARTMENT OF ENGINEERING
HARTLEY DODGE MEMORIAL
MADISON, MORRIS COUNTY, N.J. 07940
(973) 593-3080

DATE 8 NOV 04
ROBERT A. VOGEL, P.E.
PROFESSIONAL ENGINEER N.J. LIC. NO. 34483



DRUG FREE PUBLIC AREA MAP

BOROUGH OF MADISON

MORRIS COUNTY, NEW JERSEY

BOROUGH OF MADISON
DEPARTMENT OF ENGINEERING
HARTLEY DODGE MEMORIAL
MADISON, MORRIS COUNTY, N.J. 07940
(973) 593-3060

DATE 8/31/04
ROBERT A. VOGEL, P.E.
PROFESSIONAL ENGINEER N.J. LIC. NO. 34463

6.5. Sidewalk Plans (comparative) – Borough of Madison

Any person who shall violate any of the provisions of §166-10 of this Article shall, upon conviction, be liable for a fine of not more than Ten Dollars ($10.00). For purposes of this section, each and every violation which continues for a period of more than twenty-four (24) hours shall constitute a separate violation for each and every such additional twenty-four (24) hour period, without limitation.

SECTION 2. Ordinance No. 55 entitled "An Ordinance relating to the sidewalks and gutters of Madison, and the paving, curbing, grading, relaying and repair of the same" adopted on February 14, 1906, is hereby repealed in its entirety and in its place a new Article IV of Chapter 166 is hereby adopted to read as follows:

ARTICLE IV

Sidewalks and Curbs: Construction and repair

§166-32. Definitions.

As used in this Article, the following terms shall have the meaning indicated:

SIDEWALK — A paved walkway for pedestrian traffic located along the side of a public street.

newspaper once a week for four weeks.

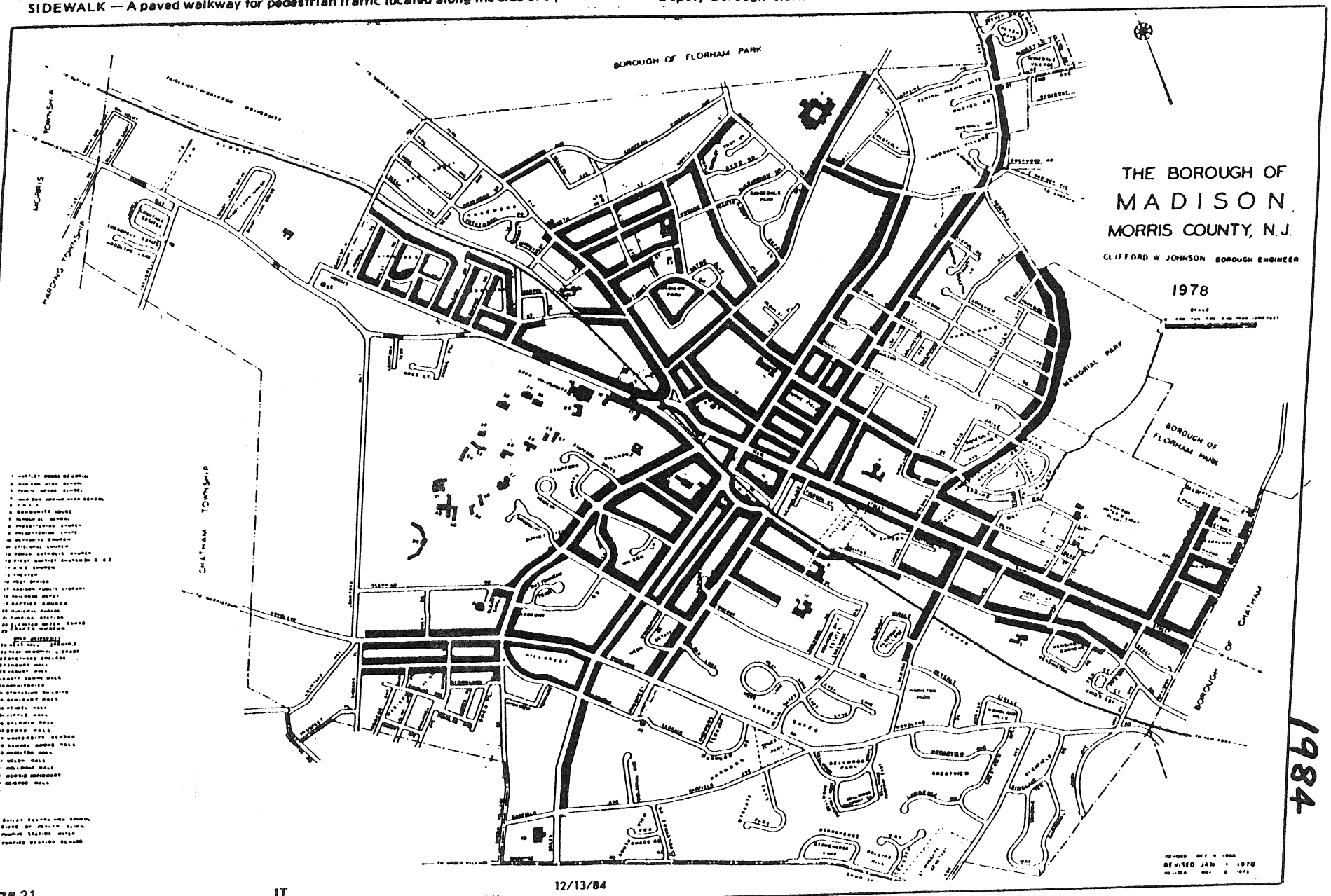
§166-37. Schedule of Primary Sidewalks.

The primary sidewalks of the Borough of Madison shall be those sidewalks, whether existing or proposed, located along the side or sides of the streets shown on the map annexed hereto, as said map may be revised from time to time by resolution of the Council.

SECTION 3. This Ordinance shall take effect as provided by law.

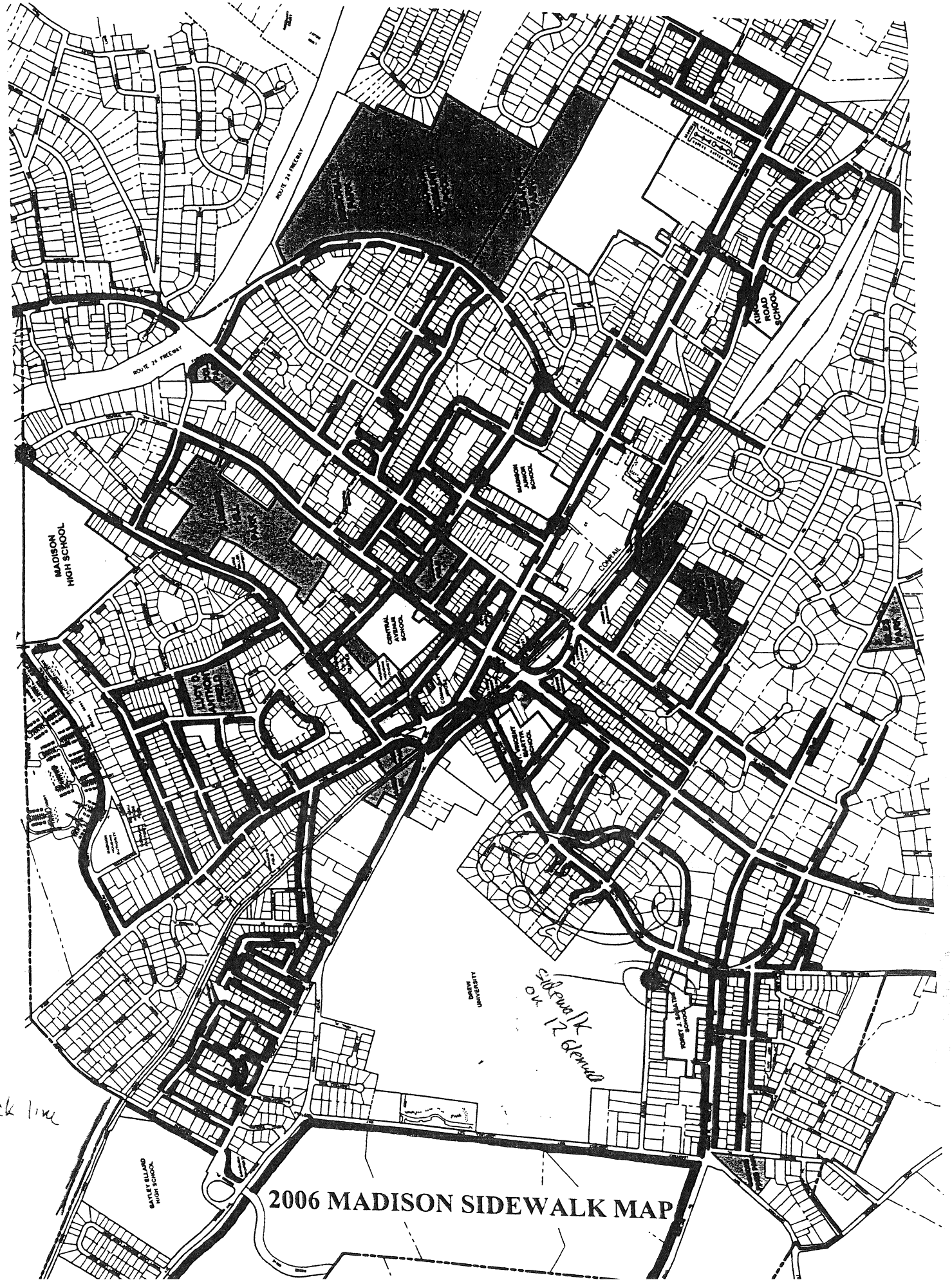
ADOPTED AND APPROVED,
December 10, 1984
Elizabeth G. Baumgartner
Mayor

Attest:
Fannie Stinson,
Deputy Borough Clerk

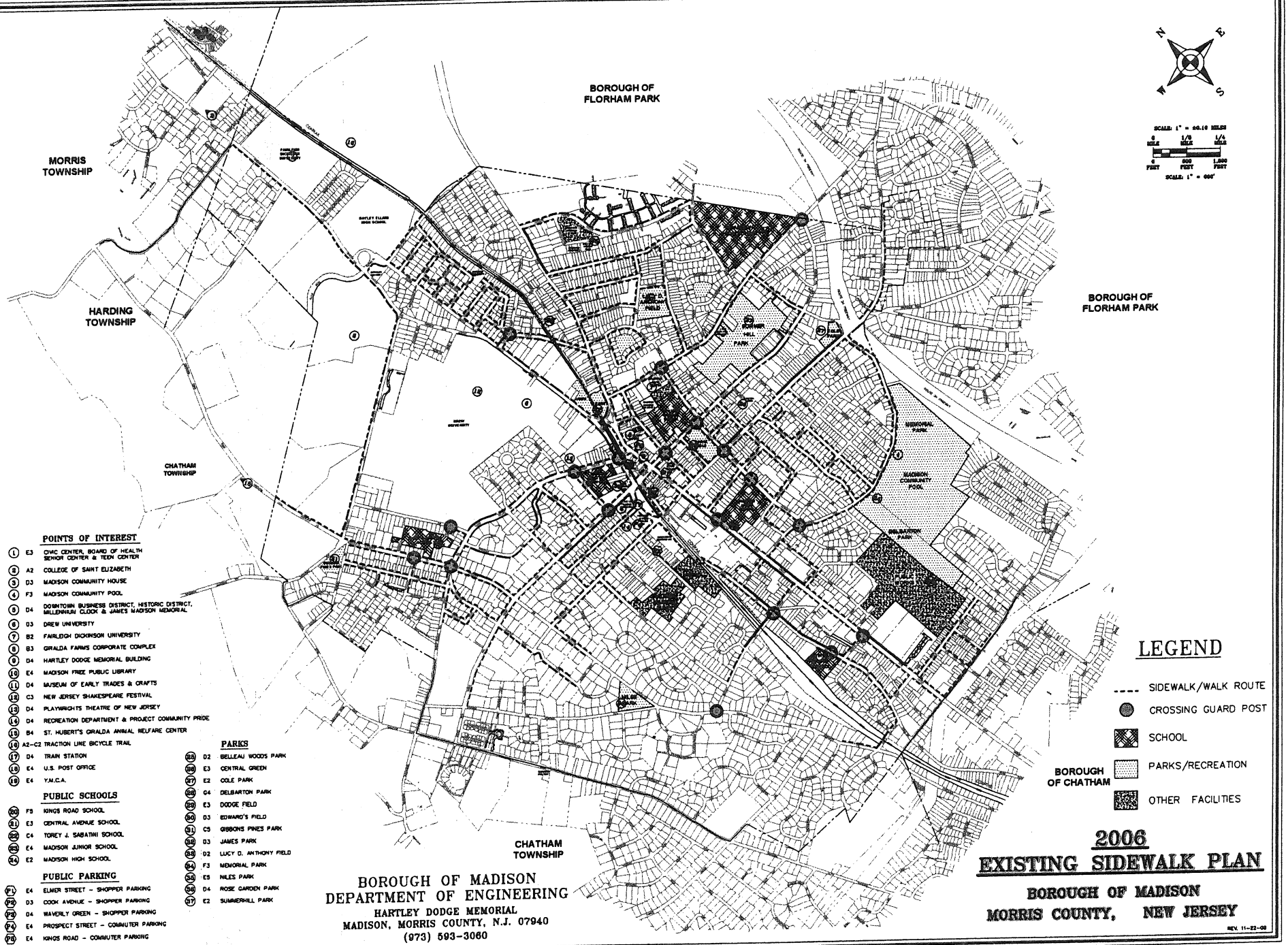


1984

$276.21 1T 12/13/84



2006 MADISON SIDEWALK MAP



BOROUGH OF MADISON
DEPARTMENT OF ENGINEERING
HARTLEY DODGE MEMORIAL
MADISON, MORRIS COUNTY, N.J. 07940
(973) 593-3060

2006
EXISTING SIDEWALK PLAN
BOROUGH OF MADISON
MORRIS COUNTY, NEW JERSEY

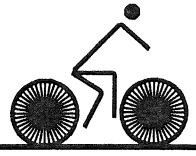
REV. 11-22-06

SIDEWALK STUDY.DWG 8-8-06

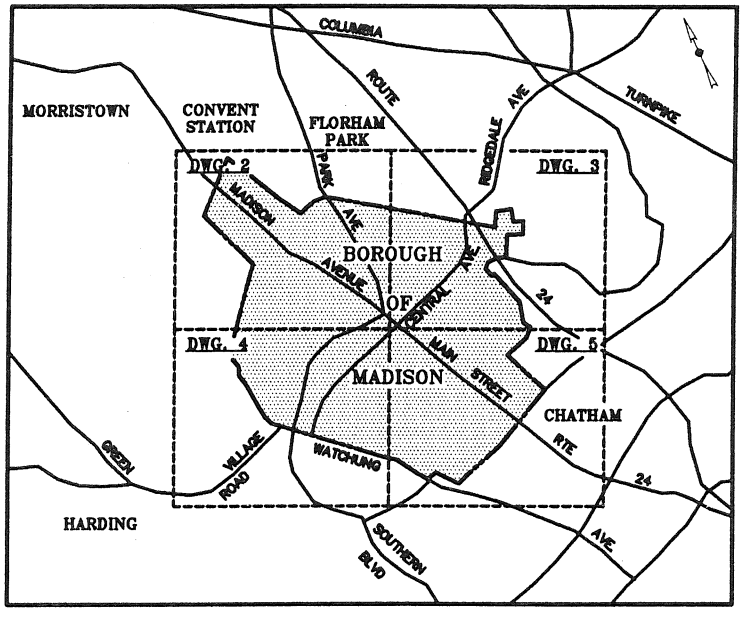
BOROUGH OF MADISON

COUNTY OF MORRIS

FEDERAL PROJECT # STP-000S(757) ENHANCEMENT



BICYCLE ROUTE



KEY MAP
SCALE: 1" = 0.5 MILES

PROJECT SCALE: 1" = 300'

PROJECT LENGTH: BASE BID = 40,460 L.F./BID ALT. 65,800 L.F.

N.J.D.O.T. STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION TO GOVERN

JULY 2005

BOROUGH COUNCIL

ELLWOOD R. KERKESLAGER, Mayor
DONALD J. BOWEN, Council President
MARY-ANNA HOLDEN, Council Member
ASTRI J. BAILLIE, Council Member
CARMELA VITALE, Council Member
SAM MANTONE, Council Member
JOHN M. ELIAS, Council Member

BOROUGH ADMINISTRATOR

JAMES R. ALLISON

BOROUGH ENGINEER

ROBERT A. VOGEL, P.E.

BOROUGH ATTORNEY

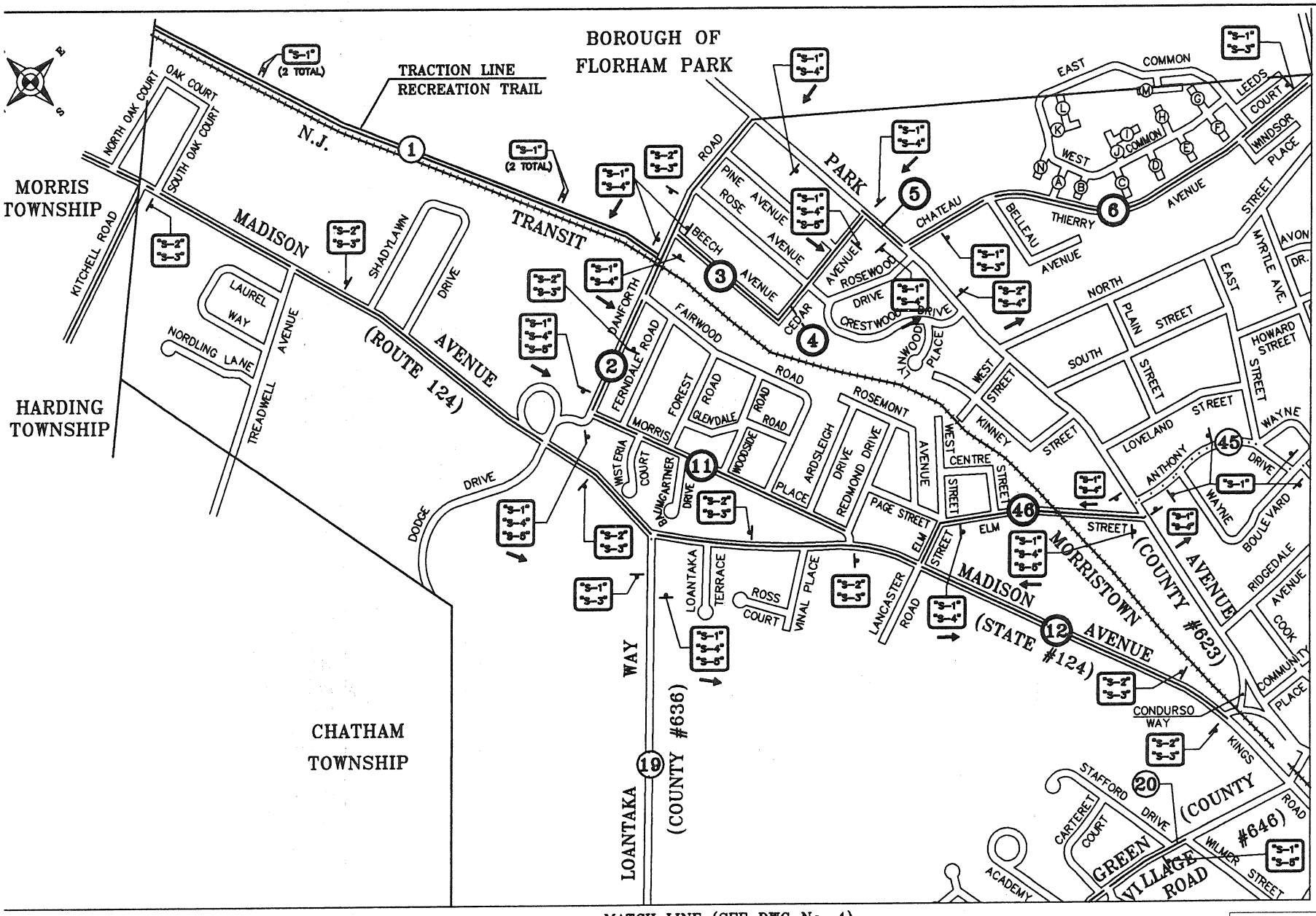
JOSEPH MEZZACCA, JR., ESQ

INDEX OF DRAWINGS

DWG.	DESCRIPTION	REVISION
1	TITLE SHEET	
2-5	BICYCLE ROUTE PLAN	
6	PRELIMINARY ESTIMATE OF QUANTITIES	
7	CONSTRUCTION DETAILS & GENERAL NOTES	

REVISION:	DATE:
QUANTITIES	10-06-00
HORIZATION	08-26-04
L.T. COMMENTS - BID DOC.	08-09-04
DTS	04-12-05
DTS	06-28-05

BOROUGH OF MADISON
DEPARTMENT OF ENGINEERING
HARTLEY DODGE MEMORIAL
MADISON, MORRIS COUNTY, N.J. 07940
(973) 593-3060



NOTE:

ROUTE 124	>10,000
PARK AVENUE	>10,000
SHUNPIKE ROAD	>10,000
RIDGEDALE AVENUE	>10,000
WOODLAND ROAD	>10,000

BICYCLE ROUTE PLAN

BOROUGH OF MADISON
DEPARTMENT OF ENGINEERING
HARTLEY BODINE MEMORIAL
MADISON, MORRIS COUNTY, N.J. 07940
(973) 593-3023

NO	REVISIONS	DATE	BY	CHK.	APPR
1	N.J.D.O.T. COMMENTS - BID DOCS.	08-13-04	D.C.B.	R.A.V.	R.A.V.

ROBERT A. VOGEL, P.E.
PROFESSIONAL ENGINEER N.J. LIC. NO. 24403

SCALE: 1" = 300'
DATE: 7-23-04
DWG. NO. 2 of 7

ESTIMATE OF QUANTITIES

			WIDTH R.O.W.	WIDTH	WIDTH PAVEMENT	GRADE	LINE (L.F.)	TYPE "B"	TYPE "C"	TYPE "C-1"	TYPE "C-2"	TYPE "C-3"	TYPE "C-4"	TYPE "C-5"	STENCIL	CROSSING
ALT. BID	1	TRACTON LINE BICYCLE TRAIL FROM: BOROUGH LINE AT MORRIS TOWNSHIP TO: DANFORTH ROAD	N.A.	30'	8'	N.A.	0	0	0	0	0	0	0	0	0	0
ALT. BID	2	DANFORTH ROAD FROM: MORRIS PLACE TO: BEECH AVENUE	N.A.	50'	30'	N.A.	2	2,600	4	1	3	2	2	3	2	8	3
ALT. BID	3	BEECH AVENUE FROM: DANFORTH ROAD TO: CEDAR AVENUE	N.A.	50'	30'	N.A.	2	1,600	0	0	1	0	0	1	0	4	0
ALT. BID	4	CEDAR AVENUE FROM: BEECH AVENUE TO: PARK AVENUE	N.A.	60'	34'	N.A.	2	800	0	0	1	0	0	1	1	4	0
ALT. BID	5	PARK AVENUE FROM: CEDAR AVENUE CHATEAU THIERY AVENUE	N.A.	50'	30'	N.A.	2	1,600	4	0	5	0	0	5	0	4	4
BASE BID	6	CHATEAU THIERY AVENUE FROM: PARK AVENUE TO: BURNET ROAD	N.A.	60'	40'	N.A.	2	6,160	18	2	2	0	2	0	0	8	3
BASE BID	7	BURNET ROAD FROM: BOROUGH LINE @ FLORHAM PARK TO: RIDGEDALE AVENUE	N.A.	50'&60'	36'	N.A.	2	3,760	12	0	2	0	2	0	0	8	7
ALT. BID	8	RIDGEDALE AVENUE FROM: WALNUT STREET TO: CENTRAL AVENUE	N.A.	60'	33'	N.A.	2	1,600	2	1	4	0	0	4	0	8	2
ALT. BID	9	FAIRVIEW AVENUE FROM: RIDGEDALE AVENUE TO: GREENWOOD AVENUE	N.A.	44'	40'	N.A.	2	2,240	4	0	4	0	0	0	0	8	3
ALT. BID	10	LORRAINE ROAD FROM: CENTRAL AVENUE TO: GREENWOOD AVENUE	N.A.	50'	30'	N.A.	2	2,480	8	0	0	0	0	0	0	8	8
ALT. BID	11	MORRIS PLACE FROM: DANFORTH ROAD TO: REDMOND DRIVE	N.A.	60'	36'	N.A.	2	3,760	0	0	0	0	0	0	0	8	0
BASE BID	12	MADISON AVENUE FROM: MITCHELL ROAD TO: KINGS ROAD	8'	60'	48'	8'	2	6,840	0	0	0	7	7	0	0	22	0
BASE BID	13	MAIN STREET FROM: GREENWOOD AVENUE TO: BROOKLANE ROAD	8'	66'	XX	8.5'	0	0	0	4	0	5	5	0	0	8	0
BASE BID	14	WOODLAND ROAD FROM: BOROUGH LINE AT CHATHAM TOWNSHIP TO: BOROUGH LINE AT CHATHAM BOROUGH	3.5'	30'-34'	30'	N.A.	2	23,720	14	0	4	12	12	4	4	38	8
ALT. BID	15	GARFIELD AVENUE FROM: GREEN VILLAGE ROAD TO: WOODLAND ROAD	N.A.	50'-60'	30'	N.A.	2	7,764	16	1	4	0	0	0	0	8	3
ALT. BID	16	EDGEWOOD ROAD FROM: FOXBURY ROAD TO: KEEP STREET	N.A.	60'	32'	N.A.	0	0	0	0	2	0	0	0	0	4	0
ALT. BID	17	CROSS GATES ROAD FROM: WOODLAND ROAD TO: FOXBURY ROAD	N.A.	50'	30'	N.A.	0	0	0	0	2	0	0	0	0	4	0
ALT. BID	18	KEEP STREET FROM: PROSPECT STREET TO: EDGEWOOD ROAD	N.A.	50'	30'	N.A.	0	0	0	0	2	0	0	0	0	8	0
ALT. BID	19	LOANTAKA WAY FROM: WOODLAND ROAD TO: MADISON AVENUE	1'	50'	28'	1'	0	0	0	0	2	2	3	1	1	12	0
ALT. BID	20	GREEN VILLAGE ROAD FROM: WOODLAND ROAD TO: KINGS ROAD	N.A.	66'	38'	N.A.	2	7,080	7	0	2	2	2	0	1	10	0
BASE BID	21	GREEN AVENUE FROM: SHOPPING ROAD TO: VILMER STREET	N.A.	70'	44'	N.A.	2	9,400	17	0	1	7	7	0	1	14	8
ALT. BID	22	CENTRAL AVENUE FROM: ELMER STREET TO: RIDGEDALE AVENUE	N.A.	60'	38'	N.A.	2	10,900	1	2	0	6	6	0	0	14	3
BASE BID	23	PROSPECT STREET FROM: WOODLAND ROAD TO: KINGS ROAD	3'	60'	32'	3'	0	0	0	0	4	0	0	0	2	10	0
BASE BID	24	GREENWOOD AVENUE FROM: ELMER STREET TO: BOROUGH LINE @ FLORHAM PARK	N.A.	66'	41'	N.A.	2	11,900	11	1	0	6	6	0	0	18	0
BASE BID	25	RIDGEDALE AVENUE FROM: MAIN STREET TO: GREENWOOD AVENUE	N.A.	50'	36'	N.A.	2	10,634	34	0	0	7	7	0	0	14	18
ALT. BID	26	NOE AVENUE FROM: SHOPPING ROAD TO: WOODLAND ROAD	N.A.	60'	28'	N.A.	2	4,700	0	0	4	0	0	0	0	8	3
ALT. BID	27	NILES AVENUE FROM: MAIN STREET TO: DELBARTON DRIVE	N.A.	50'	33'	N.A.	0	0	2	0	2	0	0	0	0	8	2
ALT. BID	28	DELBARTON DRIVE FROM: DELBARTON PARK TO: NILES AVENUE	N.A.	50'	30'	N.A.	0	0	4	0	1	0	0	0	0	4	4
ALT. BID	29	MEMORIAL/DELBARTON PARKS FROM: RIDGEDALE AVENUE TO: DELBARTON DRIVE	N.A.	N.A.	N.A.	N.A.	0	0	0	0	0	0	0	0	0	8	0
ALT. BID	30	BRITTIN STREET FROM: CENTRAL AVENUE TO: RIDGEDALE AVENUE	N.A.	60'-66'	30'	N.A.	2	5,000	0	0	4	0	0	0	0	8	0
ALT. BID	31	KINGS ROAD FROM: CROSS STREET TO: MADISON AVENUE	N.A.	44'-60'	30'	N.A.	2	6,000	0	0	6	0	0	0	3	12	3
ALT. BID	32	CROSS STREET FROM: KINGS ROAD TO: MAIN STREET	N.A.	50'	30'	N.A.	2	1,200	2	0	2	0	0	0	0	4	0
ALT. BID	33	UNION HILL ROAD FROM: WOODLAND ROAD TO: FEN COURT	N.A.	50'	28'	N.A.	0	0	0	0	0	0	0	0	0	4	0
ALT. BID	34	FEN COURT FROM: UNION HILL ROAD TO: ARLENA COURT	N.A.	50'	30'	N.A.	0	0	0	0	0	0	0	0	0	4	0
ALT. BID	35	ARLENA COURT FROM: FEN COURT TO: KINGS	N.A.	50'	30'	N.A.	0	0	0	0	0	0	0	0	0	4	1
ALT. BID	36	UNION AVENUE FROM: KINGS ROAD TO: MAIN STREET	N.A.	66'	40'	N.A.	0	0	1	0	0	0	0	0	0	0	0
ALT. BID	37	DWYER STREET FROM: MAIN STREET TO: DEAN STREET	N.A.	50'	30'	N.A.	0	0	0	0	0	0	0	0	0	0	0
ALT. BID	38	DEAN STREET FROM: DWYER STREET TO: JOHN AVENUE	N.A.	50'	28'	N.A.	0	0	0	0	0	0	0	0	0	0	0
ALT. BID	39	JOHN STREET FROM: DEAN STREET TO: STATION ROAD	N.A.	50'	28'	N.A.	0	0	0	0	0	0	0	0	0	0	1
ALT. BID	40	STATION ROAD FROM: JOHN AVENUE TO: TRAIL PLACE	N.A.	50'	20'-24'	N.A.	0	0	0	0	2	0	0	0	0	0	0
ALT. BID	41	TRAIL PLACE FROM: STATION ROAD TO: SPRING GARDEN DRIVE	N.A.	50'	30'	N.A.	0	0	0	0	2	0	0	0	0	0	0
ALT. BID	42	SPRING GARDEN DRIVE FROM: TRAIL PLACE TO: RIDGEDALE AVENUE	N.A.	50'	30'	N.A.	0	0	0	0	2	0	0	0	0	0	0
ALT. BID	43	WALNUT STREET FROM: CENTRAL AVENUE TO: RIDGEDALE AVENUE	2'-3' PARTIAL	50'	30'	N.A.	0	0	0	0	2	0	0	0	0	0	0
ALT. BID	44	SAYRE COURT FROM: RIDGEDALE AVENUE TO: WAYNE BOULEVARD	N.A.	50'	34'	N.A.	0	0	2	0	2	0	0	0	0	0	2
ALT. BID	45	ANTHONY DRIVE FROM: WAYNE BOULEVARD TO: PARK AVENUE	N.A.	50'	30'	N.A.	0	0	5	0	3	0	0	0	0	0	0
ALT. BID	46	ELM STREET FROM: PARK AVENUE TO: MADISON AVENUE	N.A.	50'	31'-35'	N.A.	2	3,200	0	0	2	0	0	2	1	6	0

BASE BID – TOTAL ESTIMATE OF QUANTITIES

PROJECT QUANTITIES					TOTAL PROJECT LENGTH	6" WIDE SOLID STATE LINE (L.F.)	BICYCLE GUIDE TYPE "B"	BICYCLE GUIDE TYPE "C"	BICYCLE GUIDE TYPE "C-1"	BICYCLE GUIDE TYPE "C-2"	BICYCLE GUIDE TYPE "C-3"	BICYCLE GUIDE TYPE "C-4"	BICYCLE GUIDE TYPE "C-5"	PAVEMENT STENCIL	REFLECTIVE MARKERS
					40,480	65,574	107	7	13	37	41	4	7	114	44

ALTERNATE BID – TOTAL ESTIMATE OF QUANTITIES

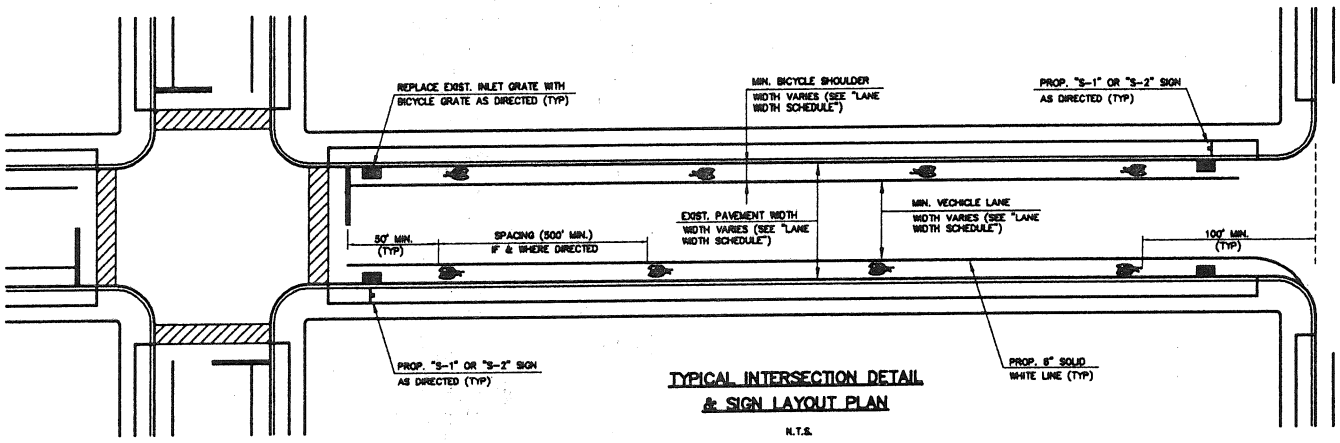
PROJECT QUANTITIES					TOTAL PROJECT LENGTH	6" WIDE SOLID STATE LINE (L.F.)	BICYCLE GUIDE TYPE "B"	BICYCLE GUIDE TYPE "C"	BICYCLE GUIDE TYPE "C-1"	BICYCLE GUIDE TYPE "C-2"	BICYCLE GUIDE TYPE "C-3"	BICYCLE GUIDE TYPE "C-4"	BICYCLE GUIDE TYPE "C-5"	PAVEMENT STENCIL	REFLECTIVE MARKERS
					65,600	71,344	60	5	66	19	20	17	9	102	40

MADISON BIKE ROUTE
ESTIMATE & DISTRIBUTION OF QUANTITIES
BOROUGH OF MADISON
DEPARTMENT OF ENGINEERING
MUNICIPAL BUILDING
MADISON, MORRIS COUNTY, N.J. 07940
(973) 593-3000

ROBERT A. VOGEL, P.E.
PROFESSIONAL ENGINEER N.J. LIC. NO. 31440
DATE

NO.	REVISIONS	DATE	BY	CHK./APPR.
1	N.J.D.O.T. COMMENTS - BID DOCS.	06-13-04	D.C.B.	R.A.V. / R.A.V.
2	BID PLOTS	09-12-06	D.C.B.	R.A.V. / R.A.V.
3	BID PLOTS	09-28-06	D.C.B.	R.A.V. / R.A.V.

DATE: 6-13-04
SCALE: N.T.S.
DWG. NO. 6 of 7



TYPICAL INTERSECTION DETAIL
& SIGN LAYOUT PLAN

N.T.S.

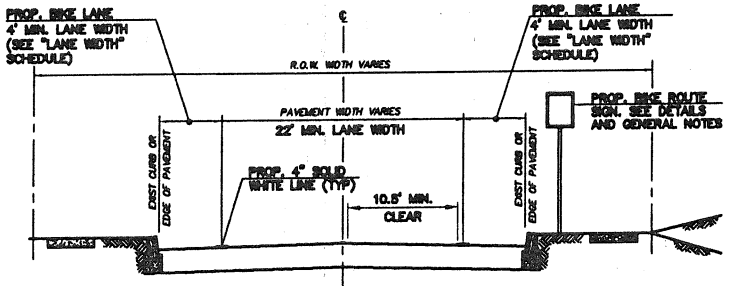
EXIST. PAVEMENT WIDTH	MINIMUM VECHICLE LANE WIDTH	MINIMUM SHOULDER WIDTH
28	22'	3'
30	23'	3.5'
32	24'	4'
34	25'	4.5'
36	26'	5'

LANE WIDTH SCHEDULE

NOTE:

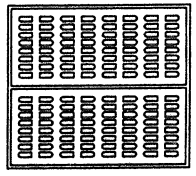
FOR ROADS THAT HAVE A TRAFFIC VOLUM LESS THAN 1,200 AADT A "SHARED LANE" IS ACCEPTABLE.

FOR ROADS THAT HAVE A TRAFFIC VOLUM GREATER THAN 10,000 AADT THE MINIMUM SHOULDER WIDTH IS 12 FEET.



TYPICAL ROAD SECTION

N.T.S.

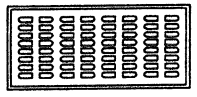


TYPE "E" INLET DETAIL
BICYCLE GRATE

N.T.S.

NOTE:

TYPE "E" GRATE TO BE CAMPBELL FOUNDRY PATTERN NUMBER 3425 OR APPROVED EQUAL.



TYPE "B" INLET DETAIL
BICYCLE GRATE

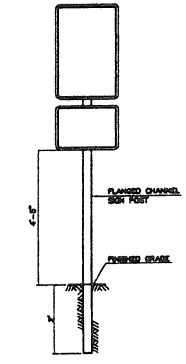
N.T.S.

NOTE:

TYPE "B" GRATE TO BE CAMPBELL FOUNDRY PATTERN NUMBER 3818 OR APPROVED EQUAL.

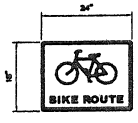
GENERAL NOTES

1. THE CONTRACTOR SHALL READ AND BE FULLY FAMILIAR WITH PART 9 BICYCLE FACILITIES SECTION OF THE MUTCD.
2. THE CONTRACTOR WILL PROVIDE COMPLETE MARKOUTS OF PROPOSED STENCILING AND SIGN LOCATIONS AND BE FULLY REVIEWED BY THE BOROUGH ENGINEER PRIOR TO PERMANENT INSTALLATION.
3. IN NO CASE SHALL PROPOSED PAVEMENT MARKINGS IN THIS CONTRACT OBLIERATE OR OTHERWISE IMPAIR ANY EXISTING TRAFFIC CONTROLS (INCLUDING STRIPING, CROSS WALKS, SIGNS AND SIGNALS) WITHOUT SPECIFIC ADVANCED WRITTEN PERMISSION OF THE BOROUGH ENGINEER.
4. IN NO CASE SHALL ANY ESTABLISHED AUTOMOBILE TRAFFIC LANE BE REDUCED IN WIDTH VIA PROPOSED STRIPING TO LESS THEN 10.5 FEET CLEAR BETWEEN NEAREST EDGES OF ANY PROPOSED LINE STRIPING.
5. ALL PROPOSED SIDELINES AT INTERSECTIONS WILL BE TRANSITIONED TO MID-RADIUS (45° ANGLE CLOSURE) UNLESS PROPOSED SIDELINES MEET A STOP BAR OR CROSS WALK.
6. THE CONTRACTOR WILL MAINTAIN A MINIMUM OF 100 TRAFFIC CONES AT THE WORKSITE AT ALL TIMES AND PERFORM WORK ON ONE SIDE OF THE ROADWAY AT A TIME UNTIL ANY SUCH IMPROVEMENTS ARE COMPLETE BEFORE OCCUPYING AN ALTERNATE SIDE OF THE ROAD.



SIGN POST DETAIL

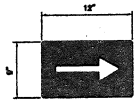
N.T.S.



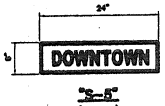
"S-1"
(D11-1)

"S-2"
(W11-1)

"S-3"
(W16-1)



"S-4"
(M7-1)



"S-5"
(D1-1)

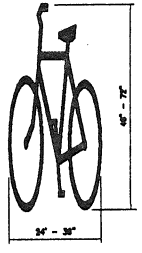
"S-6"
(R7-9)
(IF & WHERE DIRECTED)

BICYCLE ROUTE SIGN DETAILS

N.T.S.

NOTE:

SIGNS TO BE PLACED AS DIRECTED BY BOROUGH ENGINEER AND THE MADISON POLICE DEPARTMENT.



PAVEMENT STENCIL

MADISON BIKE ROUTE
CONSTRUCTION DETAILS & GENERAL NOTES

BOROUGH OF MADISON
DEPARTMENT OF ENGINEERING
HARDLEY BOROUGH MEMORIAL
MADISON, MORRIS COUNTY, N.J. 07940
(973) 593-3000

NO.	REVISIONS	DATE	BY	CHK.	APPR
3	BID PLOTS	06-28-05	D.C.B.	R.A.V.	R.A.V.
2	BID PLOTS	04-12-05	D.C.B.	R.A.V.	R.A.V.
1	N.J.D.O.T. COMMENTS - BID DOCS.	06-13-04	D.C.B.	R.A.V.	R.A.V.

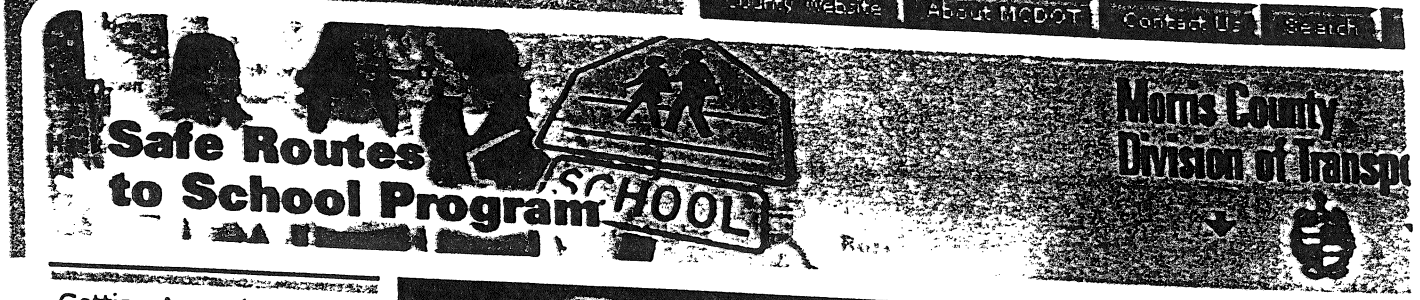
DATE

ROBERT A. VOGEL, P.E.
PROFESSIONAL ENGINEER N.J. LIC. NO. 34403

SCALE: N.T.S.
DATE: 7-23-04
DWG. NO. 7 of 7

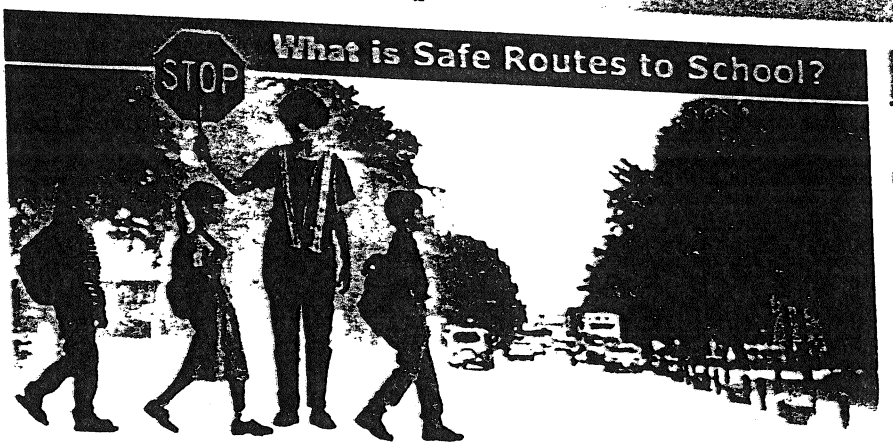
6.6. Morris County Traffic Planning Report

6.7. TransOptions Reports



Getting Around
- Home
- Bus
- Rail
- Road
- Bicycle & Pedestrian
- Special Transportation
- Air
- Transit Guide

Accessories
- Upcoming Events
- Requested Services
- Job Opportunities
- Links
- Interactive Transit Locator
- Order Publications
- Safe Routes to School



Thirty years ago as many as 70% of school age children walked to school. Walking to school is an easy way for children to be physically active and gives them a sense of independence and an opportunity to spend time with their friends at the beginning of each day. However, today the number of children walking to school has declined dramatically and is now between 10 and 15%. The reasons most often cited for this decline include distance to the school, traffic around school, poor infrastructure (lack of sidewalks, crosswalks, etc), weather, crime, and school policy.

As a result of this, there has been an increase in the number of parents driving their children to school instead. Studies have shown that 27% of morning traffic is due to school related trips. This trend has led to an increase in traffic congestion and pollution, as well as a decrease in the amount of physical activity that children are getting on a daily basis, the effect of which has led to a rise in childhood obesity, asthma, and diabetes. Overall, these factors have combined to contribute to the declining health of our environment, our communities, and our children.

Safe Routes to School is a program that aims to reduce congestion resulting from school related traffic and promote healthier lifestyles and communities by enabling children to safely walk and bike to school. The program adopts a comprehensive approach which includes four components:

- Education - Lessons which teach students skills necessary to safely walk and bike to school are integrated into the school's curriculum. Materials about walking and bike safety are also distributed to parents.
- Encouragement - Promotional events, such as contests and walk-to-school days, are held throughout the year and provide incentives for students to become involved in the program. Outreach campaigns also target parents to encourage their

Key Fa

- **Seventy percent betwee years o accide in cars.**
- **Less tha of child now rid school, more th percent 1970s.**

Snapsh

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Safe Route: kick off Wh

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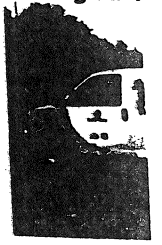


Safe Route: sponsored North Jerse

- Enforcement – Traffic regulations, including speed limits and yielding to pedestrians, are strictly enforced in the area around the school. Crossing guard programs also help to create a safer environment for students to walk and bike to school.
- Engineering – Infrastructure improvements are made around the school that help to improve the ability of students to bike and walk safely, such as sidewalk improvements, traffic calming and speed reduction improvements, pedestrian and bicycle crossing improvements, bicycle parking facilities, and traffic diversion improvements in the area surrounding the school.

A successful program requires the efforts of educators, parents, elected officials, transportation planners, and of course students. These groups working together toward a common goal will lead to an improved quality of life by decreasing the amount of traffic accidents, congestion, and air pollution around schools and improving the health and physical activity of students.

Morris County Safe Routes to School

This past September the Morris County Division of Transportation kicked off its Safe Routes to School Program at Duffy Elementary School and MacKinnon Middle School in Wharton Borough, NJ. The RBA Group has been brought on as a consultant for this project. They will work with MCDOT, school officials, parents and students to develop a Safe Routes to School plan by April 2006. This plan will include implementation strategies for each of the four E's mentioned above: education, encouragement, enforcement, and engineering. **Click here to see the latest newsletter on this program.**

Morris County Safe Routes to School Coordinator:
Patrick Franco, Jr.
Senior Planner
Morris County Division of Transportation
P.O. Box 900, Morristown, NJ 07963
Phone: 973-829-8101
Email: **mcdot@co.morris.nj.us**

New Jersey Safe Routes to School Programs

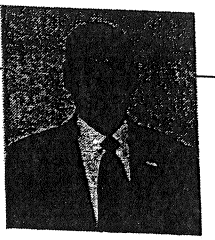
A federally funded Safe Routes to School Program was created by SAFETEA-LU, the most recent transportation reauthorization bill signed into law by the President in August of 2005. This legislation provides states with specific funding to implement Safe Routes to School programs at the local level. New Jersey has chosen three municipalities to serve as pilot programs for the state's Safe Routes to School Program. These three municipalities are Montclair, Lumberton, and Jamesburg.

New Jersey Safe Routes to School Coordinator:
Elise Bremer-Nei, AICP/PP
Safe Routes to School State Coordinator
Office of Bicycle and Pedestrian Programs
NJ Dept of Transportation
P.O. Box 600, Trenton, NJ 08625-0600
Phone: 609-530-2765; fax: 609-530-5411
Email: [illegible]

THE COMMUTER

Spring 2006

PRESIDENT'S MESSAGE



Facing the Addiction

For several weeks now, political pundits, newscasters and reporters have been referring to President Bush's State of the Union address comment in which he described the nation's dependence on imported oil as "a serious problem".

"The best way to break this addiction is through technology," said the President, who then pledged to seek a 22% increase in funding for clean energy research, including nuclear and renewable energy.

Recognizing the need for clean energy is, at least, a place to start. At TransOptions, we have been doing all we can to introduce students and the public at large to the emergence of renewable, sustainable, clean energy alternatives to gasoline. Our Environmental Education programs and the Junior Solar Sprints competition, free to area students, are but two examples of our efforts to make the drivers of tomorrow aware of the choices already available.

If we are to reach Mr. Bush's aim for a 75 percent cut in U.S. oil imports from the Middle East by 2025, we must encourage our legislators to seek the funding that would result in affordable and readily available alternative fuels and alternative fuel vehicles (AFVs). Fuels that provide the energy that we have come to expect, without the dangers posed by harmful emissions, already exist.

Today, there are no fewer than seven Hybrid Electric models, from various automobile manufacturers, available for sale in the United States. Putting aside the savings in fuel costs ($500/year vs. $2,000/year) the reduction in emissions alone should be reason enough for Americans to espouse these vehicles. From compact models to pickup trucks and SUVs, the choices are already there. And this year, too, you can get tax credits for purchasing these alternative fuel vehicles.

The next time you are purchasing a vehicle, think about the air you breathe! Think about how much cleaner our air could be if we all did our part to reduce those harmful exhaust emissions. Think about how many of us were addicted to smoking and, having quit, are breathing easier. Think about your pocketbook.

Inside this issue:

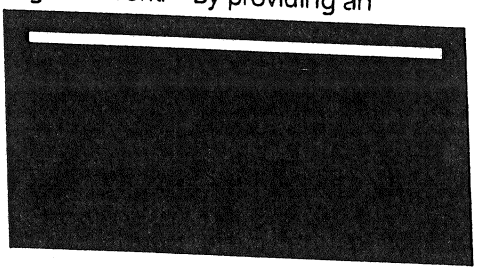
TransOptions
Managing Your Ways To Work... and More!

COMMUTER REWARDS

TransOptions Selected to Administer Commuter Rewards Program

TransOptions was one of two New Jersey Transportation Management Associations selected by the New Jersey Department of Transportation to promote and administer the pilot of its new incentive program, Commuter Rewards. TransOptions was selected because of the associations recognized ability to communicate with companies, organization and citizens throughout Northwest New Jersey and because of its extensive experience with managing commuter programs.

The Commuter Rewards is an incentive program that pays three dollars a day to commuters who switch to carpooling, vanpooling, walking, cycling, or riding transit to get to work. By providing an



incentive for people to modify their commute, Commuter Rewards will help to reduce traffic congestion and air pollution throughout Northwest New Jersey.

The Commuter Rewards Program offers commuters up to $180. Those who register for the program are awarded $3.00 dollars per day for each day they participate up to the maximum of $180. All commutes must be completed within a 90 day period.

All participants must register in advance with TransOptions. Call 973-267-7600 to request a registration packet.

EARTH DAY AND YOU

Earth Day and Rideshare Perfect Together!

TransOptions is urging all Northwest New Jersey Commuters who drive alone to work to give up their solo commute for one day during the week of April 17, 2006. Recognized as Earth Week, this annual celebration of the environment culminates on April 22, International Earth Day. The first Earth Day in 1970 rallied over 20 million Americans from around the country. Conceptualized by Gaylord Nelson and organized by Denis Hayes, Earth Day events featured the largest grassroots mobilization in US history. Out of these events emerged what has come to be known as the environmental movement and the first environmental legislation - the Clean Air and Clean Water Acts. The grass roots, spontaneous nature of the first earth day caused American heritage magazine to call the event "one of the most remarkable happenings in the history of democracy. . ."

Requesting every northwest New Jersey automobile commuter to celebrate Earth Week by commiting to giving up their solo ride to work for one day may seem to be asking for trouble, but to an organization committed to promoting socially and environmentally responsible commuting practices the request seems both fitting and practical. What better way to celebrate the earth than by ridesharing, walking or biking to work. If every solo commuter did this for one day during Earth Week, rush hour traffic would be reduced by up to 20% and the resultant air pollution by the same amount. That would be an achievement worthy of praise.

If you have never thought about finding an alternative to your solo commute, TransOptions offers a full range of services to help you make it happen. Through the Association's website www.TransOptions.org or by phone, 973-267-7600, you can sign up for carpool partner matching, find out about mass transit routes and schedules, get tips on biking and assistance with planning your "alternate" commute. Earth Week offers the opportunity to celebrate, do something for the environment and perhaps, have a new commuting experience.

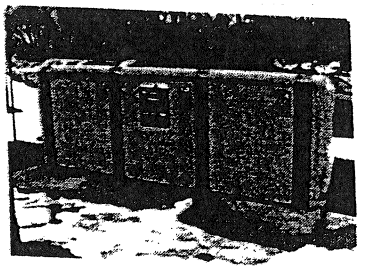
Put Earth Week on you calendar now. Promote the idea of giving up the solo commute for one day with your colleagues at work. If you are an employer, encourage those who work for you to participate. Who knows, this could be the start of something big! And remember, TransOptions is here to assist you.

BIKE LOCKERS

Lock Your Bike and Ride the Train

Want to take the train to work but don't want to deal with the hassle of finding a parking place at the railroad station? The weather is getting better and riding your bike to the station might be a great solution. Not sure you want to lock your expensive bike to an exposed rack and have is susceptible to vandalism? The bike locker program might be a great solution.

TransOptions and NJ TRANSIT have a program that offers those who ride their bikes to the train station secure, enclosed storage for their bikes. Bike lockers, located NJTransit Stations in **Chatham, Convent Station, Denville, Dover, Madison, Morris Plains and Morristown** are available for rent at a reasonable cost.



By renting a bike locker, you can ride to and from train stations without worrying about theft or damage to your bicycle. A bike, helmet, and some gear can fit easily into the lockers at each station.

The lockers can be rented for $7.50 per month (6 months at a time) with a $25 deposit refunded upon return of the key.

TransOptions now accepts - VISA & MASTERCARD for Bike Locker Payments

Please call TransOptions for bike locker information. (973) 267-7600

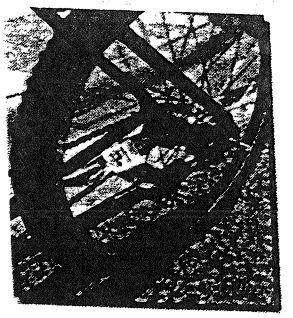
BIKE TO WORK DAY

Continuing its commitment to improving air quality and finding alternatives to the solo commute to work, TransOptions is promoting National Bike to Work Day, May 19, 2006, throughout Morris, Sussex and Warren Counties. Bike to Work Day is a national event that celebrates the ability of commuters to enhance air quality, cut down on traffic congestion and improve personal health by commuting to work by bike.

Referring to recent health and mobility studies, John F. Ciaffone, TransOptions' President, emphasized that the support of Bike to Work Day is recognition of the important role bicycling plays in reducing traffic and improving participants overall health. Ciaffone asked, "Did you know that 50% of the working population commutes 5 miles or less to work – a very bikable distance? Did you know that if the average person biked to work one day every two weeks instead of driving we could prevent the pollution from one billion gallons of gasoline entering the atmosphere every year?"

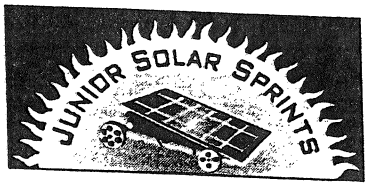
As an added incentive to participating in the event, TransOptions has arranged for all registered participants be entered into a raffle for valuable prizes provided by four area bicycle shops, CycleCraft, Whippany Cycle, Madison Cycle and Marty's Reliable Cycle. In addition, TransOptions will award a $100 American Express Gift Card to one lucky rider. Groups of riders from the same company may enter as a team and be eligible to win a pizza lunch for the group.

Participants must register in advance to be entered into the prize drawings. Registration may be done on line at TransOptions web site, www.TransOptions.org or by calling TransOptions at 973-267-7600 and requesting a registration form.



TIME TO SHINE IN THE SUN

It's almost that time of year ...



Junior Solar Sprints Time!

Each year TransOptions hosts a JSS event for middle school students in grades 6-8 in Morris, Sussex, Warren, suburban Essex, Union and Passaic counties. Students spend months applying lessons in Math and Science to build, test and race model solar-powered cars.

TransOptions provides each team with a free JSS kit containing a set of gears, motor, battery pack (for practice or in case of rain) and alligator clips. Each school was also provided with several solar panels to share among the teams. Students compete in school competitions and the top 8 teams from each school advance to one of TransOptions County Races.

The schedule of races is as follows:

Warren County – May 16, with a rain date of May 23, at Great Meadows Middle School in Great Meadows

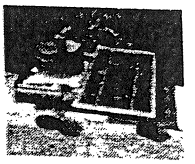
Sussex County – May 17, with a rain date of May 24, at Newton Hockey Rink in Newton

Morris County – May 18, with a rain date of May 25, at JCP&L, A FirstEnergy Company in Morristown.

The top teams from each county including 1st – 4th in Speed, Craftsmanship, Technical Merit, Innovation and Students Choice advance to TransOptions Inter-County Final race. JCP&L, A FirstEnergy Company will host the final competition on May 30 with a rain date of June 1.

The top winners from the Inter-County Final race will advance to the Northeast Regional Competition hosted by the Northeast Sustainable Energy Association (NESEA) in Springfield, MA on June 11, 2006.

Sponsorship opportunities to help underwrite the cost of these events are available. Contact TransOptions for more information.



WHY ENVIRONMENTAL EDUCATION?

In the late 1960's and early 1970's, Environmental Education consisted of nature study, outdoor, and conservation education. As global issues concerning the environment grew, two United Nations conferences established the following definition for the field of environmental education: "Environmental education is a process aimed at developing a world population that is aware of and concerned about the total environment and its associated problems, and which has the knowledge, attitudes, motivations, commitments, and skills to work individually and collectively toward solutions of current problems and the prevention of new ones." Today, environmental education is considered a tool for creating responsible citizens.

At TransOptions, we believe that children learn what they live. As children learn more about the environment, and develop the knowledge, skills, and attitudes necessary to make informed decisions, we must show them why it is important not only to recycle or turn off lights when leaving a room, but to understand the importance of clean air and water quality.

While environmental education studies correlate to national and state standards, the *free* Environmental Education Program offered by TransOptions takes it to the next step. Introducing the emergence of alternative fuels and the vehicles that are or will be available into the next decade, along with a "hands-on" look at the existing Hybrid technology, results in a collaboration between the formal and non-formal educator that will allow the "drivers of tomorrow" to make the informed decisions needed to maintain sustainable communities.

Believing that understanding, appreciating and protecting our environment is essential to young and old alike, TransOptions offers it's Environmental Education Program not only to schools, but a wide variety of organizations and corporations throughout its service area.

For more information on TransOptions' *free* Environmental Education program, contact Joseph R. Caravella, Environmental Programs Coordinator at (973)267-7600 or jcaravella@TransOptions.org.

TransOptions
Managing Your Ways To Work... and More!

TransOptions, Inc.
2 Ridgedale Avenue, Suite 200
Cedar Knolls, NJ 07927

973-267-7600

TransOptions Quarterly Newsletter
The Commuter
will only be available online.

If you know someone who might be interested in receiving TransOptions Newsletter, please email us at info@TransOptions.org to get on the mailing list.

We're on the Web!
www.TransOptions.org

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ADP: Roseland
BASF Corporation
Bath Unlimited
Bayer Consumer Care
County College of Morris
D&B
Deloitte & Touche LLP
GlaxoSmithKline
Greater Media New Jersey (WDHA-WMTR)
Hamburg Sud North America, Inc.
Honeywell
JCP&L, A FirstEnergy Company
Mack Cali
Maersk, Inc.
Morris Catholic High School
Morris County Board of Chosen Freeholders
Morris County Chamber of Commerce
Morris County Economic Development Corporation
Morris County Planning, Development & Technology
Morris Tomorrow
NY Life Investment Management, LLC
NJ Department of Transportation
NJ TRANSIT
North Jersey Regional Chamber of Commerce
Novartis
Office of Assemblyman Alex DeCroce, Legislative District 26
Pfizer Inc.
Porzio, Bromberg & Newman, P.C.
Roche: Nutley
Rockefeller Group Development Corporation
Sussex County Board of Chosen Freeholders
Tiffany & Co.
United Way of Morris County
Verizon Wireless
Wyeth

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	Pam Fischer	AAA New Jersey Automobile Club
	John Franklin	United Way of Morris County
	Don Gill	D&B (retired)
	Clark Machemer	Rockefeller Group Development Corporation
	Rotha Maddox	Greater Media New Jersey (WDHA-WMTR)
	Aram Mardekian	NJDOT
	Christopher Marra	Morris County Economic Development Corporation
	Hon. Susan Zellman	Sussex County Board of Chosen Freeholders
	John F. Ciaffone	President

The Commuter Monthly

April 2006

Spring Cleaning Time

Spring cleaning applies to more than just your house—spring is the time to make sure your car is tuned up and in working order. Regular car maintenance saves you time and money, while also helping clean the air.

Just think...a little car maintenance now can prevent a lot of problems down the road. April is a good time to start a year-round commitment to proper vehicle maintenance. Taking the time for a spring tune-up can extend the life of your car, reduce your chance of having a breakdown, consume less gasoline, and save.

A few examples:

- Replacing a clogged air filter can improve your car's gas mileage by as much as 10%—saving up to 55 gallons of gasoline, or about three trips to the gas station, each year.
- Keeping your tires inflated to the proper pressure can improve your gas mileage by around 3%—saving up to 18 gallons of gasoline per year.
- A well-maintained vehicle produces up to 20% less volatile organic compounds (VOCs) and 10% less nitrogen oxides (NO_x)—the precursors of ground-level ozone—than a poorly maintained vehicle.

TransOptions Event Marks the Return of Warm Weather

Bike to Work Day - May 19 - This is your chance to leave the car at home, do something healthy for yourself and the environment and participate in a drawing for valuable prizes. Bike to Work day is a national celebration of alternative commuting practices. TransOptions is promoting this event throughout Morris, Warren and Sussex Counties. Registration and information is available at www.TransOptions.org or by calling TransOptions at 973-267-7600. Prizes for this year's event are being provided by Cycle Craft, Madison Bicycle Shop, Whippany Cycle, Marty's Reliable Cycle, Growth Restaurants and TransOptions. You must register and bike to work on May 19 to be eligible to win gift certificates from bicycle shops, a comprehensive bicycle tune up, Amex Gift Cards or dinner for two at a Growth Restaurant.

Earth Week 2006 - Be a Hometown Hero

Hometown Environmental Heroes are the kind of people who get things done. Motivated and hardworking, they give their time, effort and expertise to causes that might otherwise be left untouched. Their passion for the environment has resulted in healthier communities today, and provides a greener future for tomorrow.

The effort and time commitment of these unsung heroes provides inspiration and may cause us to wonder how they find the time to be so involved. Our busy lives prevent most of us from becoming committed activists. Yet each of us can take a few simple steps towards becoming a Hometown Hero. During Earth Week, April 16 - 22, try the following - it might lead to new habits–

- Rideshare to work at least one day per week
- When possible bike or walk for local errands
- If you must drive for local errands - trip chain - do them all at once
- Practice the 3 R's - Reduce, Reuse, Recycle
- Finally, strive to increase your awareness of the role you play in improving the environment

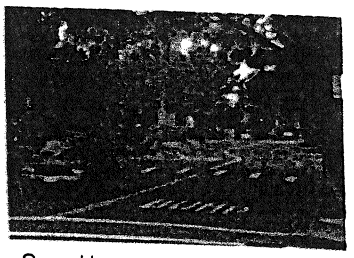
TransOptions
Managing Your Ways To Work... and More!
2 Ridgedale Ave, Suite 200
Cedar Knolls, NJ 07927

6.8. State of New Jersey Traffic Calming Reports

New Jersey FIT: Future In Transportation

Calm Traffic

Traffic calming is a system of road design and management strategies that aims to balance car traffic on streets with other uses. It is founded on the idea that streets should help create and preserve a sense of place instead of acting solely as conduits for vehicles passing through at the greatest possible speed. Traffic calming helps lower vehicle speeds, build human-scale places, and create an environment that is friendly to people on foot.



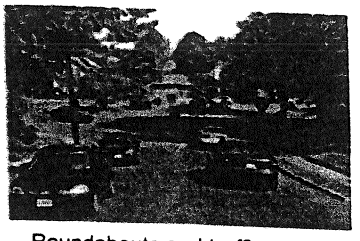
Speed humps and speed bumps force traffic to slow down.

Traffic calming can be applied quickly, inexpensively, and flexibly. It can often be accomplished just by painting lines, colors, and patterns; using planters, bollards, and other removable barriers; eliminating or adding parking; or installing sidewalk extensions or similar structures with temporary materials. Communities can experiment with various tools and combinations of strategies and locations, fine-tuning them until the desired outcomes are achieved. When funds are available, the right combination of devices can be transformed into permanent improvements and extended over a broader area.

Principles

There are dozens of possible traffic calming elements, each with its own specific applications. They include:

- **Narrower Traffic Lanes** can give more room to pedestrians and cyclists, while encouraging cars to slow down. Conventional traffic engineering calls for lane widths of 12 to 13 feet, but newer evidence shows that lanes as narrow as 9 feet are still safe.



Roundabouts and traffic circles slow traffic and

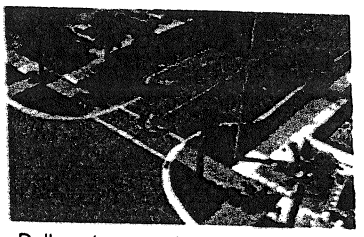
- **Two-Way Streets** reduce car speeds and shorten distances between destinations – cutting down the total amount of traffic on the road. Many communities are converting one-way streets to two-way for this reason.

way without using a traffic signal and interchange.

force cars to slow down. They work in locations where very low speeds are desired and reasonable.

- **Raised Crosswalks** provide pedestrians with a level street crossing and make them more visible to approaching motorists. Raised crosswalks are a good option when pedestrian crossings occur at haphazard locations and vehicle speeds are excessive.

- **Textured Pavements** help to visually emphasize a pedestrian crossing, an intersection, a whole Main Street, or a small residential street – wherever cars should slow down.



Bulb-outs serve to narrow the road at intersections, which shortens the distance pedestrians must cross and visually narrows the road to slow down traffic. Also, these areas can be made visually interesting with landscaping.

- **Traffic Circles and Roundabouts** serve to calm intersections and allocate right-of-way between competing movements.

- **Curb Extensions** shorten the distance between curbs, making it easier for pedestrians to cross the street. They also tighten the curb radii at the corners, which reduces the speeds of turning vehicles. They are good for intersections with substantial pedestrian activity.

- **Center Islands** narrow the travel lanes at that location. When landscaped, they can provide a visual amenity as well as serve as a refuge for pedestrians crossing the street. Center islands are good for entrances to residential areas and wide streets where pedestrians need to cross.

- **Diagonal Parking** makes drivers more alert to their surroundings and more aware of pedestrians. It also shortens the "peering distance" for people crossing the street.

Examples

NJFIT Project: Route 9, Ocean County, New Jersey
Route 9 extends through several towns and sometimes the character of the road provides no indication that one is driving through a new community. In fact, the width of Route 9 allows for a higher speed than is safe for the adjacent communities. The New Jersey Department of Transportation (NJDOT) is partnering with many of the communities in this corridor to study ways to improve mobility in the region and reduce the speed of traffic in towns. The redesigning of the road will include several traffic calming elements, including distinct shoulder treatments, speed limits, and bicycle and pedestrian facilities.

Studies have shown that traffic calming can reduce crashes by up to 40 percent.

Success Project: Clematis Street
Clematis Street was a typical one-way urban arterial, with three traffic lanes and two parking lanes. It was a run-down area with 80% vacant properties. When the city converted several wide thoroughfares into

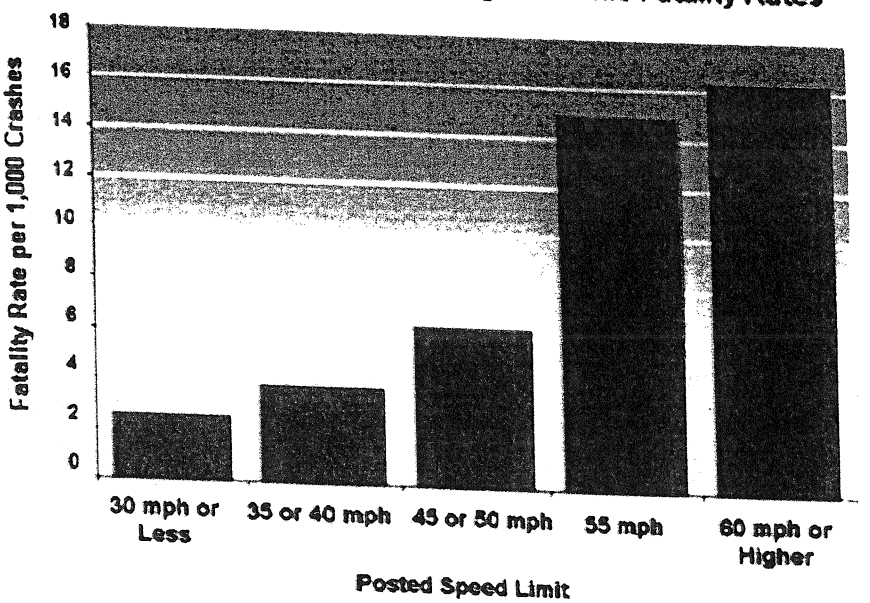
shifts, and the removal of turn lanes and traffic signals, traffic slowed significantly and pedestrians felt welcome again. The increase in pedestrian traffic attracted new shops and apartment buildings. Clematis Street has become a major activity center with a wide variety of thriving businesses and a ten-fold increase in property values.

New Jersey FIT: Future In Transportation

Safe Streets For All

Designing our streets and highways in a way that makes them safer is **NJFIT**'s most fundamental – and in many ways its most achievable – goal. Many studies have shown that the frequency and severity of car crashes are reduced when vehicles drive more slowly and when alternatives to driving are available. That's why **NJFIT** promotes a transportation system with a balance of travel options and street designs that "self enforce" the desired speed.

There is good reason to do so. For 2001-2003, an average of 749 people lost their lives annually in motor vehicle crashes in New Jersey, including 148 pedestrians and 17 bicyclists.



Did you know that a driver traveling at 40 mph who sees a pedestrian on the road 100 feet ahead doesn't have enough time to slow down? He or she will hit the pedestrian at 38 mph. A driver going 25 mph has enough time to stop in 100 feet. (Surface Transportation Policy Project)

Traffic Calming Saves Lives

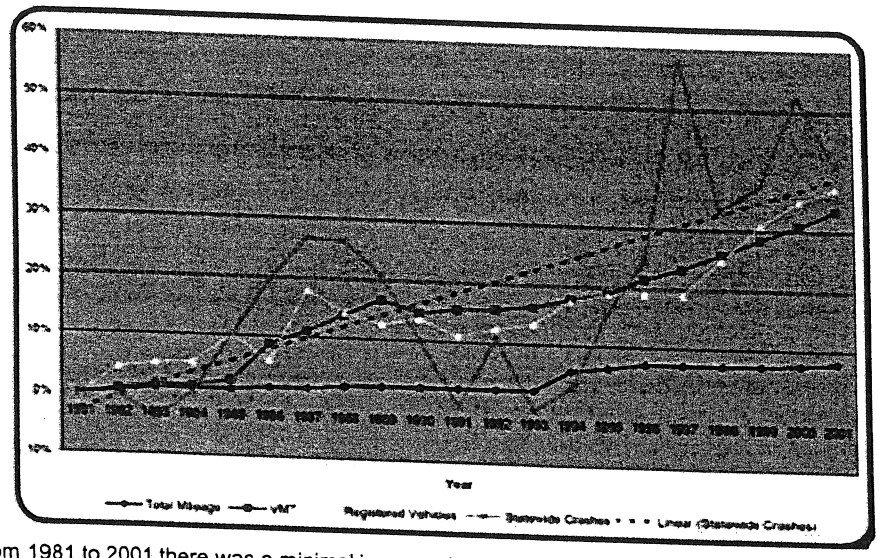
Many crashes that involve pedestrians and bicyclists take place on local streets, and excessive speed is often a factor. **NJFIT** supports traffic calming measures to slow down vehicles to appropriate speeds.

Walking and Biking Have Significant Health Benefits

The Centers for Disease Control attribute much of today's obesity epidemic to the ways our towns and cities are built, including street design, housing density, and the availability of public transit, sidewalks, and bike lanes. People who live in communities that support walking and biking are generally more fit.

Fewer Cars on the Road Mean Fewer Crashes

It seems obvious, but the fewer people that drive, the more lives are saved. Studies have estimated that every 1 percent reduction in motor vehicle travel typically reduces total crashes and casualties by 1.4 to 1.8 percent. **NJFIT** encourages people to walk, bike, and use transit as alternatives to driving.



From 1981 to 2001 there was a minimal increase in total lane miles in the State while vehicle miles traveled (VMT) and registered vehicles increased dramatically. Motor vehicle crashes also increased with more cars on the roads, and driving farther, in more congested conditions.
(Sources: NJDOT, FARS, FHWA)

Shorter Trips Mean Fewer Crashes

The number of miles traveled by New Jersey drivers each year has been rapidly increasing over time. This trend follows the sprawling development patterns that have resulted in workers living farther and farther from their employment locations. Unfortunately, as the number of miles traveled has increased, so has the number of crashes and the amount of congestion-related delay. (Source: Professor Daniel Turner, Presentation to TESC, Penn State, Dec 9, 2004). **NJFIT** encourages mixed use development in an effort to reverse this trend and locate residential and employment centers within revived downtowns and along lively main streets.

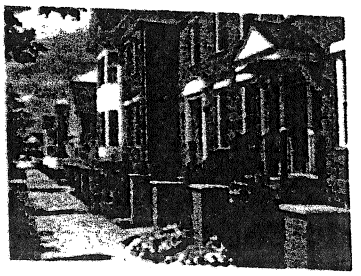
Safer Roads Promote Efficient Travel

The Safe Corridor Program, Senior Safety Initiative, Safe Routes to Schools Program, and numerous bicycle-pedestrian and other safety programs are creating safer traveling conditions in New Jersey. In doing so, the significant traffic congestion associated with traffic incidents is also being reduced as safer roads create fewer road blocks to efficient travel.

New Jersey FIT: Future In Transportation

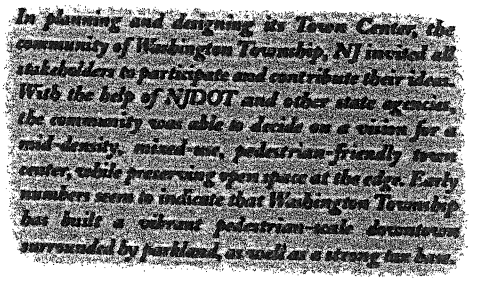
Streets For The Community

"Streets are the river of life," said the sociologist William H. Whyte. Streets are how communities connect to one another; they are where people come together. The best streets are the ones that, without too much traffic, noise, or pollution, support residents' lives with easily accessible parks, schools, playgrounds, and businesses. Yet for the last half-century, we have been creating wide and noisy streets that cut through towns, discourage street life, and reduce mobility for non-drivers. **NJFIT** supports street design that reflects and supports the community. Community-oriented street design requires that all stakeholders be involved at every stage and level of transportation planning.



The Washington Town Center was designed to be walkable and convenient for residents of all ages.

The Community is the Expert



Communities should be involved in the transportation planning and design process early and continuously, proactively crafting and refining their vision for the future, and then determining what transportation infrastructure is necessary. Transportation professionals play an important role in helping communities define and implement their vision, by listening to communities' concerns and objectives, and providing them with the technical assistance they need to realize their vision. Final project design decisions should satisfy both the transportation designers and the stakeholders.

Community Streets Emphasize Safety and are Economical

When communities are able to define their own transportation needs, they generally want safer streets, which can be achieved by narrower

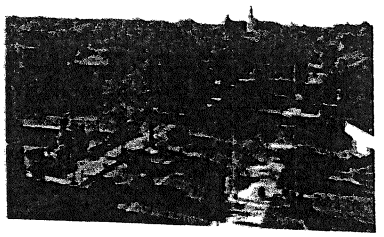
streets with traffic calming elements, as well as the amenities necessary for non-car transportation, such as sidewalks, bike lanes and curb ramps. Studies have shown that these types of streets are the safest for drivers and pedestrians alike.

A 1999 study by the Urban Land Institute of four new pedestrian-friendly communities determined that homebuyers were willing to pay a $20,000 premium for homes in these locations rather than similar homes in surrounding areas.

Communities also generally want their downtown streets to be lively, with mixed-use, medium-density development and pedestrian-scale retail, including shops, cafés, and restaurants. These walkable, vibrant neighborhoods are good for the local economy, improving retail sales and property values.

All Residents Benefit

Community-oriented street design benefits all residents by accommodating drivers and pedestrians of all ages and needs. This means safer routes for school children and design considerations for senior citizens. It also means street designs that uphold environmental justice to ensure that transportation projects do not disproportionately impact minority or low-income populations.



This street in downtown New Brunswick, NJ (above left) is clearly designed to meet the needs and character of the city, while this stretch of road in Rochelle Park, NJ (above right) looks and feels like a generic, automobile-centered highway.

Last Updated: August 3, 2005

Chapter 3

Guidelines for Encouraging Pedestrian Travel

1. Traffic Calming

a. What is "traffic calming"?

Traffic calming is a relatively new and very different approach to managing the roadway environment. Traffic calming seeks to reduce the dominance and speed of motor vehicles. It employs a variety of techniques to reduce vehicle speeds. Measures can include physical alterations to the horizontal and vertical alignment of the road and changes in priority. In some cases it may be possible to introduce a 30 km/h (20 mph) zone as part of a package of measures.

First developed and applied in several European countries, the principles and techniques of traffic calming are arousing considerable interest in the US today. Traffic calming has been used in the US to retrofit existing residential neighborhoods suffering from excessive through-traffic and in the design of new planned developments. Some techniques employed to calm traffic are familiar to US traffic engineers, others less so. What is different about traffic calming is its use as an overall integrating concept in designing for pedestrians and bicyclists over large areas. Traffic calming is rapidly being seized upon by many local communities and interest groups as an integrated alternative to conventional road planning and design. Its implementation is bound to be controversial because traffic calming reverses and challenges many currently accepted approaches to roadway design.

Aside from accident and casualty reduction, the benefits claimed for traffic calming are manifold. Slower vehicle speeds can create better driver discipline. Less acceleration and braking reduces fuel consumption, vehicle emissions and noise intrusion. Furthermore, the smoother flow of vehicles may actually improve travel times. Traffic calming also provides an opportunity for environmental improvements. Aside from a reduction in noise and air pollution from motor vehicles, aesthetic improvements such as plantings can easily be incorporated into a program of physical alterations to the road space.

In residential areas, traffic calming is frequently applied to foster the concept that roads are "living areas" and should therefore be made safe and attractive. Here particularly, changes to the street scene are applicable, and, where possible, traffic calming should provide community areas, including play spaces and places where people can sit and chat.

Traffic calming need not, however, be confined only to minor roads. In urban and suburban areas, arterial streets and highways carrying fast, heavy traffic generally pose the greatest danger to vulnerable user groups. Measures that reduce the speed and dominance of motor vehicles and facilitate safe passage for bicyclists and pedestrians are thus even more necessary on such main roads. However, the techniques seen as applicable to main urban thoroughfares generally differ from those employed to calm traffic on minor residential roads. A greater variety of features have been developed for minor roads where stricter speed control is unlikely to adversely affect roadway capacity or levels of service.

Normally, traffic calming should be applied as an area-wide technique. To apply it only to a particular street can easily shift accidents, pollution and traffic into neighboring areas.

In order that traffic calming may realize its full potential in terms of creating a safer and more attractive urban environment, it must be part of a wider and longer-term strategy to reduce dependence on private motor vehicles in towns and cities, and promote a modal shift in favor of walking, cycling and public transit.

The growing popularity of traffic calming is attributable to four perceived benefits:

- A significant reduction in road accidents and their severity.
- A greater feeling of security, particularly among vulnerable road users.
- Reclamation of roadway space for non-traffic activity such as play and social interaction.
- Improved visual and aesthetic environments created by landscaping and a reduction in the intrusive presence of motor vehicles.

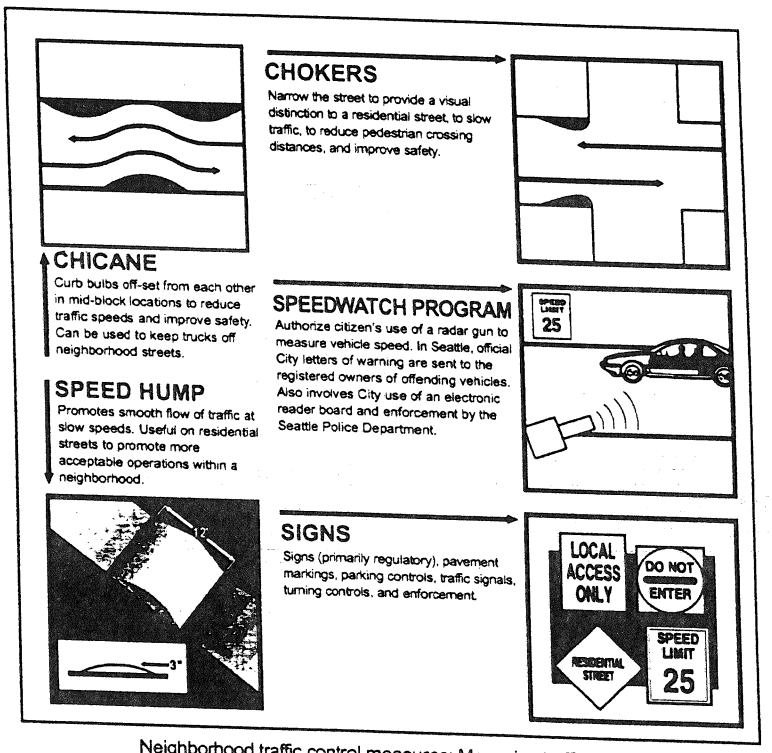
b. Traffic Calming Techniques

Three general observations should be noted from successful traffic-calming schemes that have been implemented:

- Where consistently low speeds, less than 30 km/h (20mph), are required, such as in residential areas, physical traffic-calming features should be positioned sufficiently closely together to deter unnecessary acceleration and braking.
- The use of appropriate signing is important to remind drivers that they are entering a traffic restraint area; public awareness campaigns facilitate the acceptance of lower speeds.
- Sympathetic speed limits, such as 30 km/h (20mph) in residential areas, are used to reinforce the physical speed control measures.

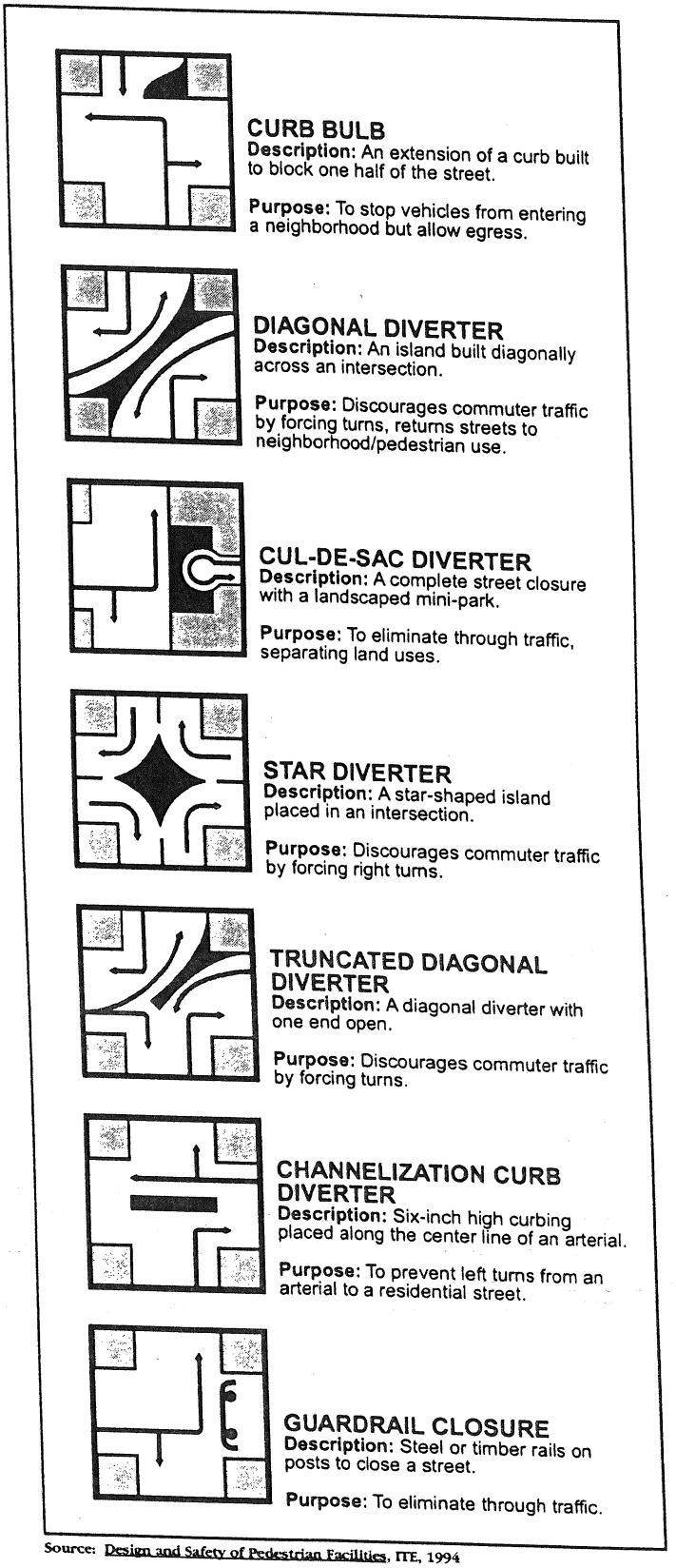
Examples of traffic calming techniques are listed and illustrated in Figures 33 through 39. Additional information can be found in the companion document to these guidelines, NJDOT Bicycle Compatible Roadways and Bikeways. These techniques are a selection of some current measures employed. Similarly, the descriptions of the various features are for illustrative purposes and should not be interpreted as rigid design criteria. It is recognized that the appropriate application of different traffic-calming techniques is dependent on the physical setting. As a result, the selection of appropriate techniques requires application of professional judgement and creativity.

Figure 33
Traffic Calming Techniques



Neighborhood traffic control measures: Managing traffic in place.

Source: Design and Safety of Pedestrian Facilities, ITE, 1994



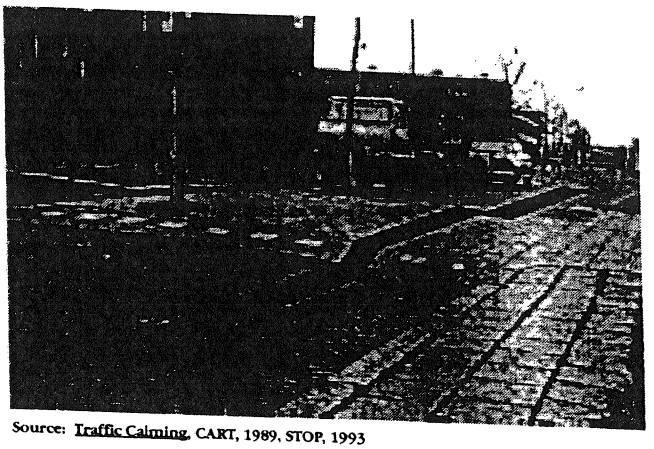
Source: Design and Safety of Pedestrian Facilities, ITE, 1994

Figure 34
Neighborhood Traffic Control Measures

Road Humps and Speed Tables

Description: Raising the surface of the road over a short distance, generally to the height of the adjacent curb. Humps are longer than speed bumps and can be round or flat topped; the latter are known as "speed tables" and can extend over 3 to 9 meters (10 to 30 feet). Humps may extend curb-to-curb, or may be cut back at the curb with tapered sides to facilitate drainage and permit a bicycle bypass.

Figure 35
Speed Table



Source: Traffic Calming, CART, 1989, STOP, 1993

While generally employed on residential roads, humps are permitted on main roads subject to a speed limit of 50 km/h (30 mph) or less. On higher speed roads, these concepts may still be appropriate to call attention to important pedestrian crossings or areas of congestion. However, care must be taken in design to provide appropriate vertical transitions.

Speed tables frequently are coincident with a pedestrian crossing.

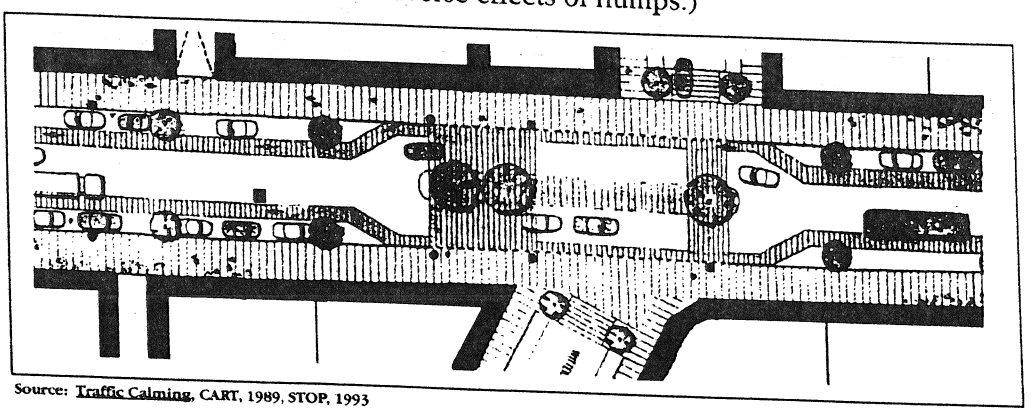
Design Considerations: To ensure the effectiveness of road humps while enabling bicyclists to negotiate them with a reasonable degree of comfort:

- gradients on the approach and exit slopes should not exceed 1:6 (16%);
- ramp faces should be clearly indicated;
- all materials employed should be skid resistant;
- the leading edge of ramps should be flush with the road surface;
- humps should be situated sufficiently far from an intersection to allow turning bicyclists to regain an upright position before they encounter the obstruction.

Where flat top humps (speed tables) are coincident with a pedestrian crossing they should extend from curb-to-curb.

Speed humps in the vicinity of bus stops should be designed to permit buses to either completely clear the raised roadway or to straddle the hump. (Bus passengers are particularly vulnerable to the adverse effects of humps.)

Figure 36
Mix of Traffic Calming Elements

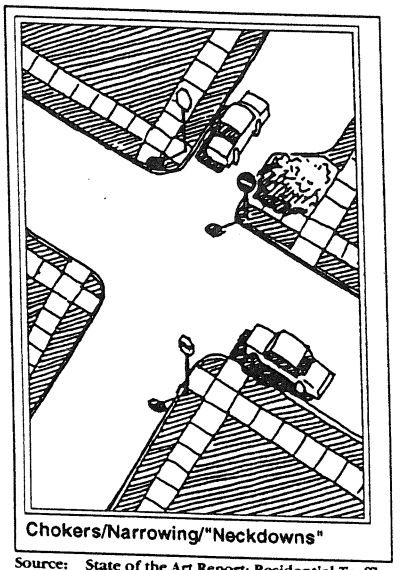


Source: Traffic Calming, CART, 1989, STOP, 1993

Traffic Throttles/Chokers or Neck-downs

Description: The narrowing of a two-way road over a short distance to a single lane. Sometimes these are used in conjunction with a speed table and coincident with a pedestrian crossing.

Design Considerations: Throttles are generally only appropriate where traffic flows are less than 4-5,000 vehicles/day. Above this level considerable delays will occur in peak periods.



Source: State of the Art Report: Residential Traffic Management, FHWA, 1980

Figure. 37
Choker/Neckdown

To reduce the risk of bicyclists being squeezed, throttles should generally be used in conjunction with other speed control measures, such as a speed table at the narrowing. Slower-moving drivers will be more inclined to allow bicyclists through before trying to pass. Where bicycle flows are high, consideration should be given to a separate right-of-way for bicyclists at the throttle point, possibly by means of a not-quite-central refuge.

Clear signing should indicate traffic flow priorities.

A textured surface such as blockwork may be used to emphasize pedestrian crossing movement. Substituting this for the normal roadway surface material may also help to impress upon motorists that lower speeds are intended.

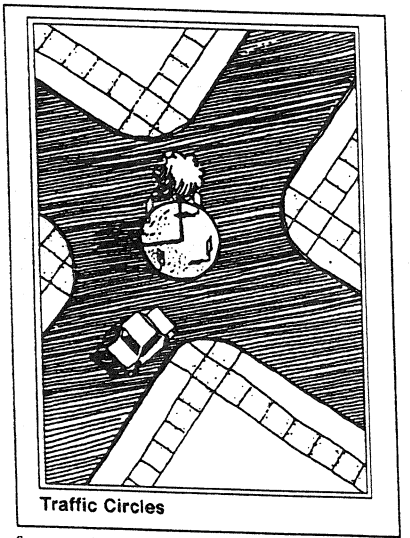
Nevertheless, such measures should not confuse pedestrians with respect to the boundary of the roadway area over which due care should still be taken, especially where a road is raised to the level of the adjacent walkway. As with all crosswalks, appropriate care must be taken to alert the blind and others with limited vision of the presence of a crossing. A tactile material should be provided at the approach which can be detected with long cane techniques. Similarly a contrasting color and texture should be provided for the benefit of the visually impaired.

Roundabouts or Traffic Circles

Description: Small radius traffic circles located at street intersections or mid-block locations. Some have raised centers, others are little more than painted circles on the road.

Design Considerations: Roundabouts should preferably have sufficiently raised and highly visible centers to ensure that motorists use them correctly rather than over-running. Frequently, roundabouts with an interior area greater than 7 square meters (75 square feet) are planted. Small roundabouts may be only painted islands with a flexible barrier.

Complementary speed reduction measures, such as road humps on the approach to roundabouts can improve safety. Clear signing is essential.



Source: State of the Art Report: Residential Traffic Management, FHWA, 1980

FIGURE 38
Traffic Circle

The design of roundabouts must ensure that large radius vehicles will be able to negotiate the roadway, in particular, garbage trucks, fire engines, moving vans and school buses, all of which can be anticipated in residential areas. However, on low speed streets with AADT less than 2000, it is appropriate to assume that these large vehicles can encroach into the opposite lane when entering or exiting a roundabout.

Raised Intersections

Description: The roadway is raised at a street intersection with a visible roadway ramp on each approach. The platform created in the intersection is elevated to curb level and should have a distinctive surfacing.

Physical obstructions such as bollards or planters can be used to restrict the area to which vehicles have access.

Design Considerations: Roadway ramps should not exceed a maximum gradient of 1:6 (16%).

Distinctive surfacing materials should be skid resistant, particularly on inclines. Ramps should be clearly marked to enable bicyclists to identify and anticipate them, particularly in conditions of poor visibility.

As with all crosswalks, care must be taken to ensure that visually impaired people have adequate cues to advise them of the roadway area. Tactile strips may be appropriate and color variation will aid those who are partially sighted.

Plug "No-Entry" (with Bicycle Slip)

Description: A cul-de-sac created by blocking access in one direction at one point in the street to motor vehicles. Unlike a traditional cul-de-sac, a "plugged" street remains open for use by bicyclists and pedestrians.

Design Considerations: Bicycle exemption should be provided as a general rule, and designed to minimize the likelihood of obstruction by parked vehicles.

Signing should acknowledge the continued existence of the route as a through one for bicyclists.

Irregular or Textured Surfaces

Description: The use of non-asphalt roadway surfaces such as brick, paving blocks or blockwork, cobblestones to reinforce the concept of a "traffic restricted" area.

Design Considerations: Care must be taken in the choice of materials to ensure that they do not pose a danger or deterrent to bicyclists and pedestrians. Cobblestones present special difficulties and are particularly discouraging for bicyclists on steep slopes because they make it harder to maintain momentum when riding uphill. Similarly, paving stones with chamfered edges impair a bicyclist's stability and should be avoided.

Cobblestones or other rough surface should not be used along pedestrian routes since they represent both an obstacle and a danger for persons in wheelchairs, walkers or other devices.

In residential areas consideration must be given to the noise that might be generated from textured surface materials.

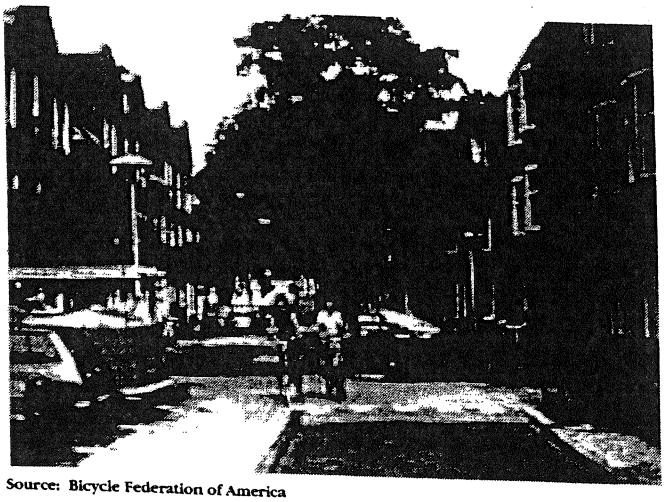
Tortuous Roads

Description: Roads designed to meander, occasionally turning sharply, reducing the image or perception of a straight and open road, thereby encouraging low vehicular speeds.

This technique is often used in new housing developments, incorporating courtyards or cul-de-sacs and thus removing through traffic.

Design Considerations: Tortuous roads are generally planned during the design of a new road rather than superimposed on an existing one. The siting of buildings may be used to accent the meanders.

Designers should be aware of the need to assure accessibility to residential properties, both in terms of emergency vehicles and service vehicles. Tortuous roads will not be viable if they severely restrict accessibility.



Source: Bicycle Federation of America

Figure 39
Woonerf

"Woonerf" or Shared Surfaces

Description: The traditional distinction between pedestrian space and vehicular space is removed and a "living courtyard" or common area is shared by both pedestrians and vehicles.

This technique is common in European communities and is created by narrowing the street entry on either end, typically on short, isolated residential streets, and installing obstacles such as planters, parking, etc., at irregular intervals to slow traffic.

Design Considerations: Woonerfs are generally acceptable for short distances only and should be used in conjunction with other physical speed control features such as textured pavement or posted 10 to 15 km/h (8 to 10 mph) speed limit signs.

c. Traffic Calming and Bicyclists

In areas subject to traffic restraint or low speed limits, special facilities for bicycles are not usually needed or provided since traffic calming offers many inherent benefits for bicyclists. Mixing with slower traffic, bicyclists can move around in comparative safety. Traffic calming also offers a more bicycle-friendly alternative to wholly pedestrianized streets. Some traffic calming measures may also be particularly appropriate on older and narrower streets, which are too narrow to allow for the provision of special bicycling facilities.

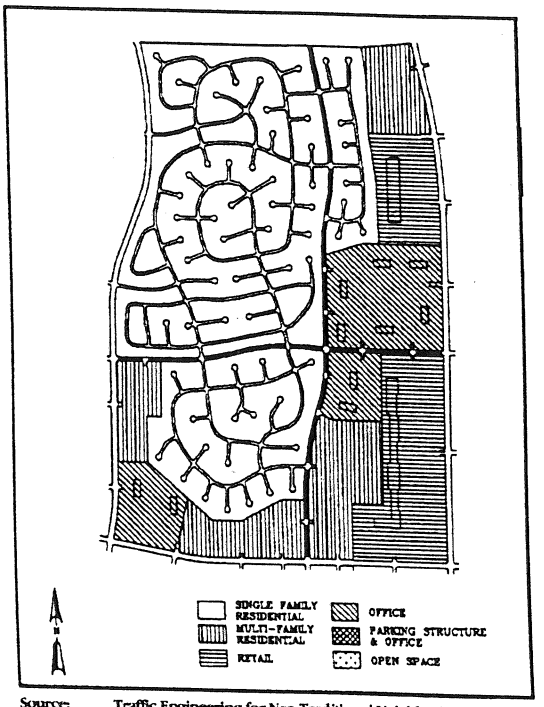
Nevertheless, poorly-designed traffic-calming facilities can inconvenience or even endanger bicyclists. Bicyclists are particularly susceptible to changes in surface height and texture, and may be put at risk by poorly-considered road narrowing. Speed-reducing measures should not be so "harsh" as to discourage bicyclists from using traffic-calmed areas. Design guidelines to accommodate bicyclists are discussed in the companion volume to this document, NJDOT Bicycle Compatible Roadways and Bikeways.

2. Traditional and Neo-Traditional Neighborhood Design

a. Background

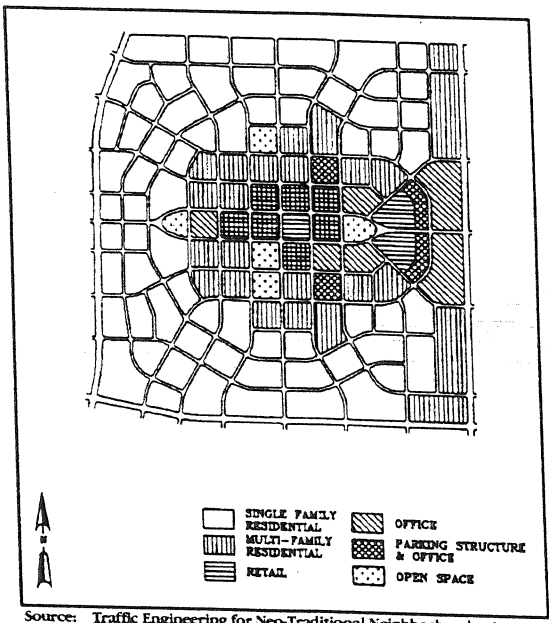
Traditional or Neo-Traditional Neighborhood Design (TND or NTND) is a development or redevelopment concept which reflects principles and techniques that link land use with transportation choices. As an alternative to suburban sprawl, TND/NTND proposes a scale and mix of land use types and a transportation network for suburban communities, that differs from suburban development patterns of the recent past. Past development has been characterized primarily by suburban sprawl, cul-de-sacs, low-density and auto-oriented land use. TND/NTND communities are characterized by neighborhood centers and civic spaces within walking distance of one another, compact development patterns with a mix of housing choices and other land uses, connected street networks, typically in a grid pattern, design features that include narrow street pavement widths and pedestrian-scale improvements. These communities are often also integrated with transit through pedestrian linkages. See Figures 40 and 41.

Figure 40
Suburban Land Use



Source: Traffic Engineering for Neo-Traditional Neighborhoods: An Informational Report, ITE Technical Committee 5P-8, 1993

Figure 41
Neo-Traditional Land Use

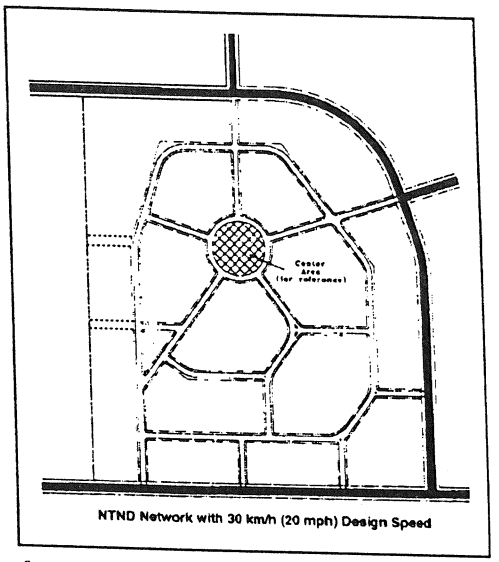


Source: Traffic Engineering for Neo-Traditional Neighborhoods: An Informational Report, ITE Technical Committee 5P-8, 1993

All of these elements contribute to creating a more pedestrian-friendly environment that will encourage walking trips. Application of TND/NTND transportation principles are described in the following section.

b. TND/NTND Transportation Principles and Techniques

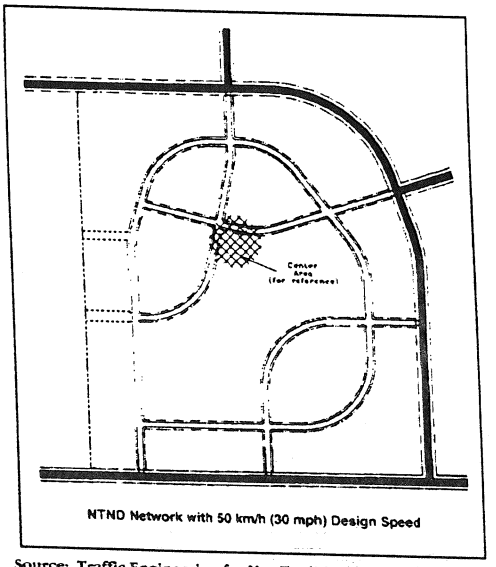
TND/NTND type road guidelines reduce roadway width, horizontal curve radii and intersection of curb radii, as Figures 42 through 44 indicate. Suggested curb radii on local streets are 3.0 to 4.6 meters (10 to 15 feet) and on subcollectors, 4.6 to 6.1 meters (15 to 20 feet). In addition, TND site planning principles are very consistent with the SDRP "Communities of Place" concepts.



Source: Traffic Engineering for Neo-Traditional Neighborhoods: An Informational Report, ITE Technical Committee 5P-8, 1993

Figure 42
NTND Network with 30 km/h (20 mph) Design Speed

From an urban design perspective, a compact network of streets, with sharp turns and rectilinear road patterns as shown in Figure 42, will help create a strong visual identity and sense of place. This sense of place is further promoted by requiring buildings to front close to the street to create a sense of enclosure and to shorten the walking distances between destinations. These bounded spaces can allow for variations for special buildings or events which the pedestrian can appreciate at a walking pace. Thus, civic buildings such as meeting halls, theaters, churches and museums often open onto squares. Sometimes streets end at a civic building to accentuate their importance and provide aesthetic "vista terminations" which help to create this "sense of place" (Figure 45). These elements of design make for memorable views along streets and for neighborhood "legibility" that bland suburban designs cannot begin to emulate.

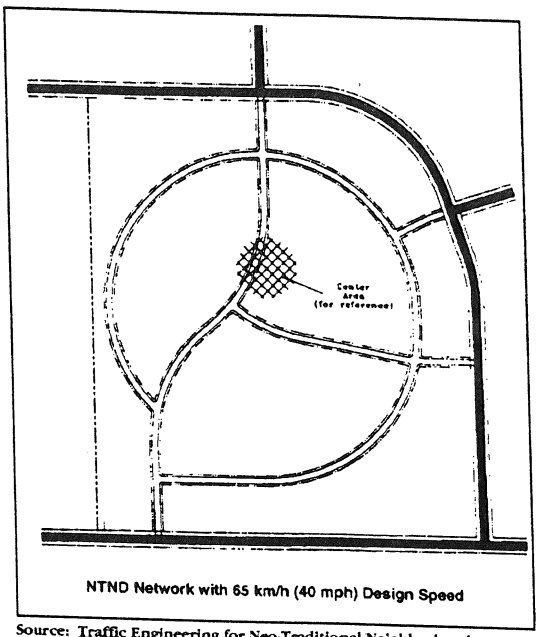


Source: Traffic Engineering for Neo-Traditional Neighborhoods: An Informational Report, ITE Technical Committee 5P-8, 1993

Figure 43
NTND Network with 50 km/h (30 mph) Design Speed

Grid patterns of narrow, well-designed streets improve community access in spite of low design speeds. The narrower streets provide smaller, more numerous intersections that disperse congestion. The gridded network of streets that is built into the TND plan disperses traffic from the major generators to a myriad of local streets. This is in direct contrast to the conventional hierarchical street system which focuses traffic from numerous generators onto single links of the arterial system (Figure 46). The gridded network that is built into the TND also disperses the turning-movement load onto a large number of intersections, rather than funneling a large number

Figure 44
NTND Network with 65 km/h (40 mph) Design Speed

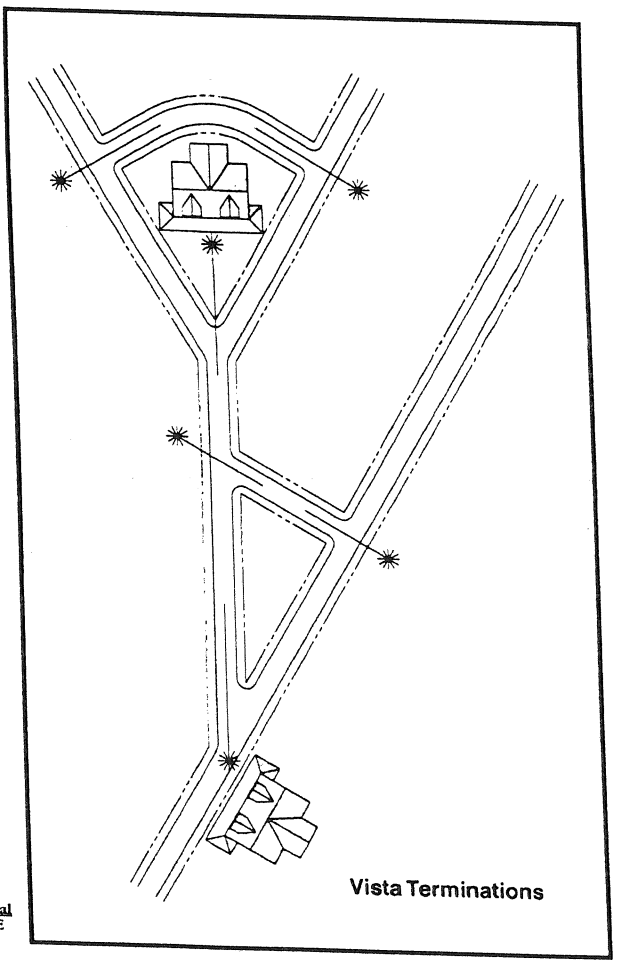


Source: Traffic Engineering for Neo-Traditional Neighborhoods: An Informational Report, ITE Technical Committee 5P-8, 1993

of turning movements into a single intersection.

A simple example illustrates the surprising amount of turning-movement capability that is gained in an intersection grid of streets, contrasted to a single multi-lane intersection (see computation on Figure 47).This example illustrates a fundamental point of network capacity: the total intersection capacity of a street system increases dramatically as the network expands.

Figure 45
Vista Terminations



Source: Traffic Engineering for Neo-Traditional Neighborhoods: An Informational Report, ITE Technical Committee 5P-8, 1993

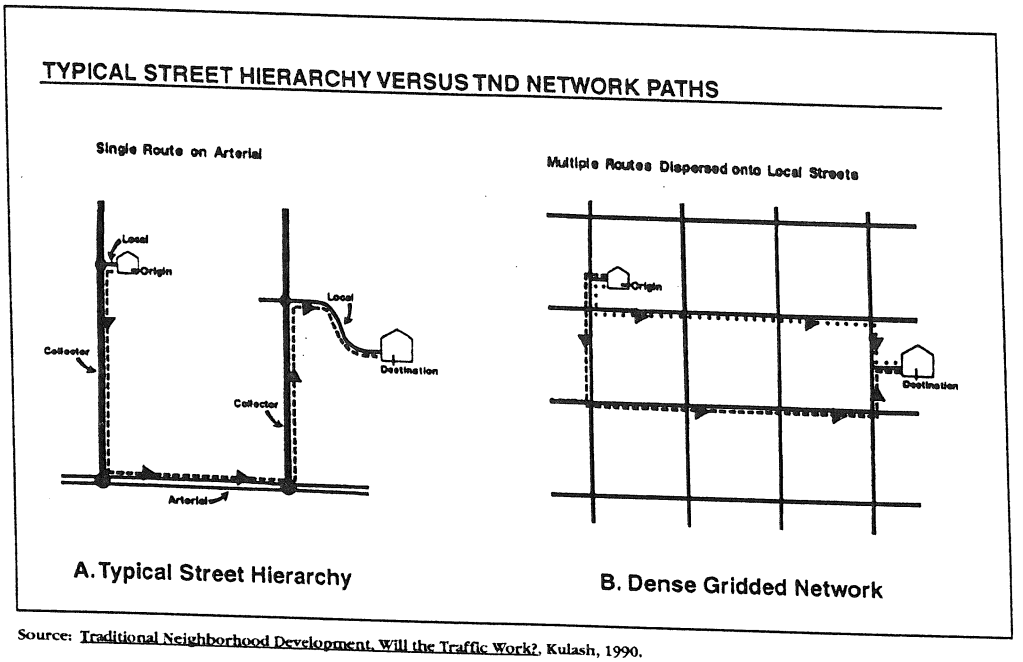


Figure 46
Typical Street Hierarchy Versus TND Network Paths

Source: Traditional Neighborhood Development, Will the Traffic Work?, Kulash, 1990.

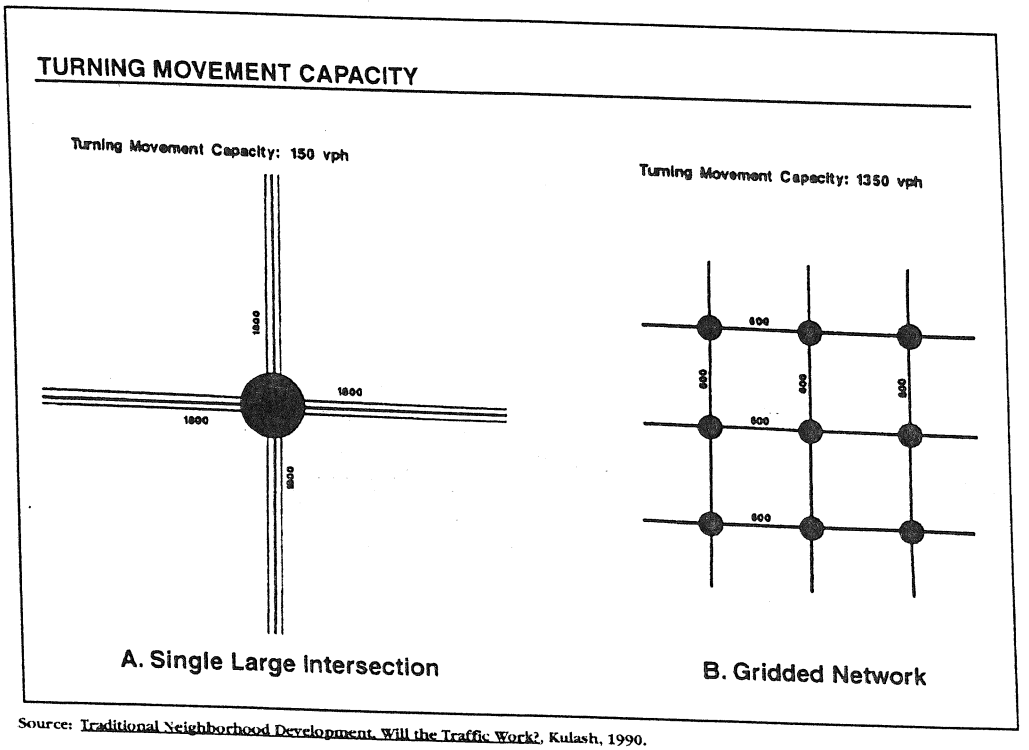


Figure 47
Turning Movement Capacity

Source: Traditional Neighborhood Development, Will the Traffic Work?, Kulash, 1990.

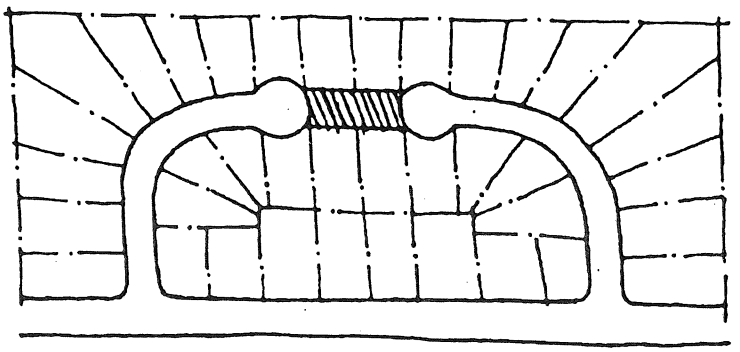
3. Pedestrian Linkages

When a grid or other dense street network is not available, pedestrian linkages should be provided to maintain walking continuity. Cul-de-sacs, loop roads and similar treatments which disrupt pedestrian continuity should incorporate pedestrian linkages such as "cut-thrus" to adjoining developments. See Figure 48. These shortcuts enable pedestrians to travel by the most direct route between destinations. In most cases, routes will have fewer vehicular conflicts since the pedestrian does not have to use an arterial to get from one local street to another. Streets with a mid-block length greater than 180 meters (600 feet) should provide a mid-block pedestrian linkage to adjoining blocks.

Similarly, large lot commercial developments, such as office buildings or shopping centers, should provide numerous linkages with surrounding residential areas to permit nearby residents to walk to the site. Linkages should also be provided between adjoining commercial/ residential/office uses; for example, walkways connecting an office building parking area with an adjacent restaurant. It is not necessary to demonstrate that there is a latent demand for walking. The linkage is required to service even the single trip if it is generated.

Policy for linkages can be defined in the land use element of municipal master plans, in the circulation element of municipal master plans, and on the official map as provided in the Municipal Land Use Law.

Figure 48
Pedestrian Connections and Linkages

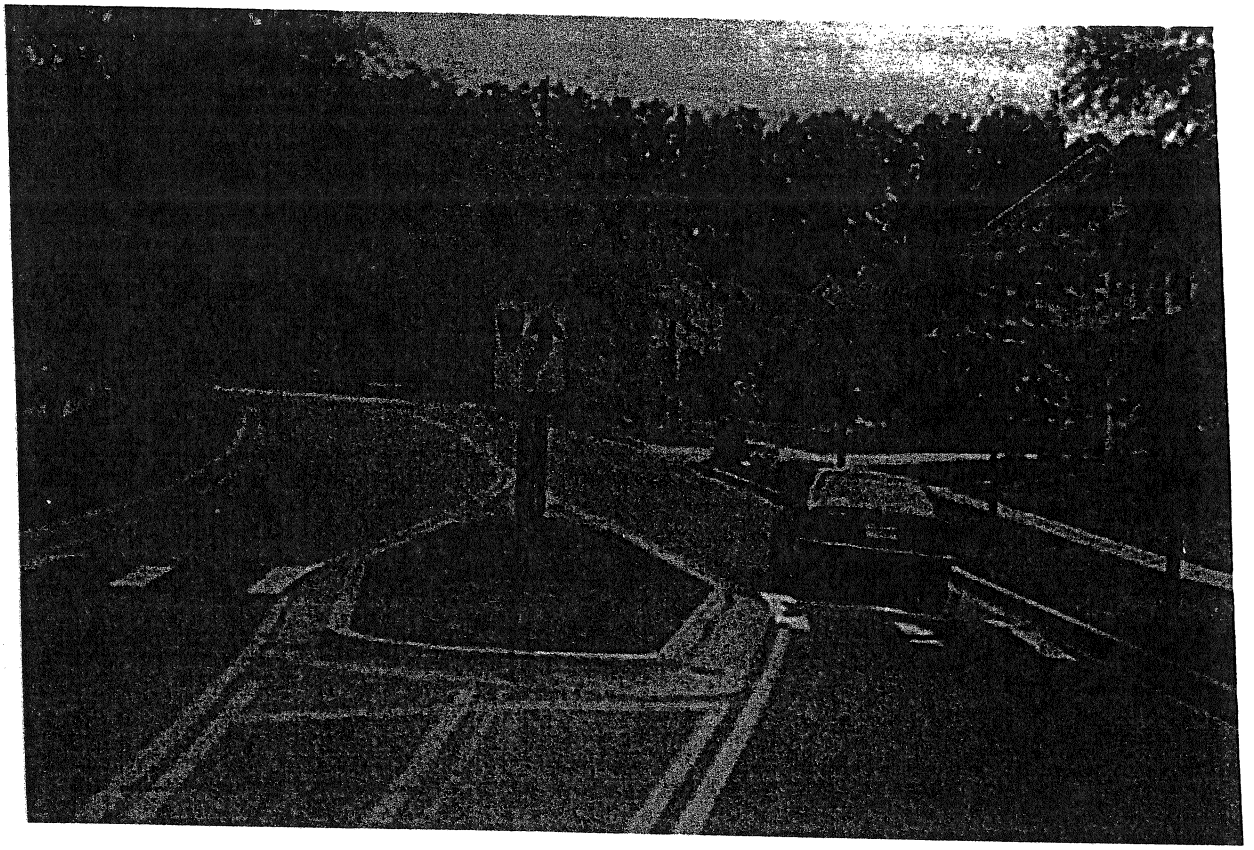


Source: Accommodating the Pedestrians, Untermann

6.9. U.S. Federal Traffic Calming Reports

Traffic Calming

General Objectives of Traffic Calming



- To encourage citizen involvement in the traffic calming process by incorporating the preferences and requirements of the citizens,
- To reduce vehicular speeds,
- To promote safe and pleasant conditions for motorists, bicyclists, pedestrians, and residents,
- To improve the environment and livability of neighborhood streets
- To improve real and perceived safety for nonmotorized users of the streets,
- To discourage use of residential streets by non-citizens cut through vehicular traffic.

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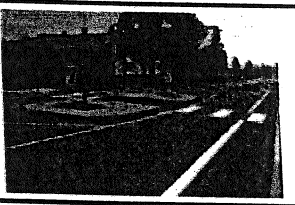
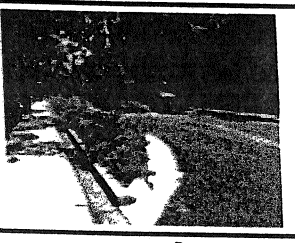
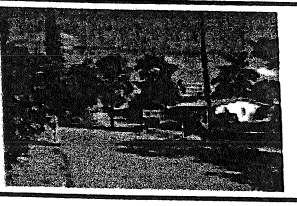
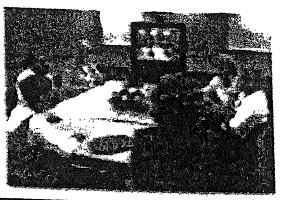
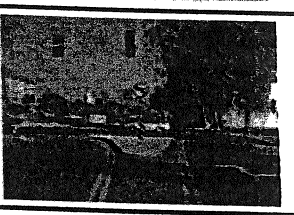
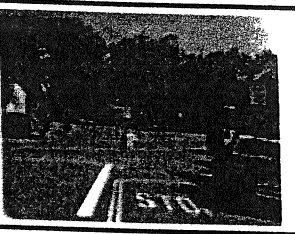
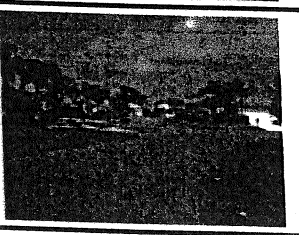
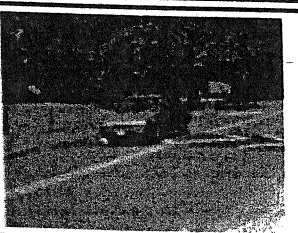
Environment

Traffic Calming

Traffic Calming Measures

Descriptions and Pictures of Traffic Calming Devices and Techniques		
Devices and Techniques	**Descriptions**	**Pictures**
Bike Lanes	A portion of a roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists.	
Bulbouts/Neckdowns/ Chokers	Curb extensions at intersections that reduce curb-to-curb roadway travel lane widths.	
Center Islands	Raised islands located along the centerline of a roadway that narrow the width at that location.	
Chicanes/Lateral Shifts	Curb extensions that alternate from one side of the roadway to the other, forming s-shaped curves.	
Closures (Cul-de-sacs)	Barriers placed across roadways to completely close through vehicle traffic.	
Diverters	Barriers placed diagaonally across an intersection, blocking certain movements.	
Education	Instructions given to the residents on safe on-street vehicle travel.	

		
Forced Turn Lanes	Raised islands located on approaches to an intersection that block certain movements.	
Median Barriers	Raised islands located along the centerline of a roadway and continuing through an intersection to block cross traffic.	
Police Enforcement	Involve employing the services of law enforcement agencies to impose the local safe vehicle laws, including those for posted speeds and traffic signal/signs.	
Realigned Intersections	Changes in alignments that convert T-intersections with straight approaches into curving roadways meeting at right angles.	
Roundabouts	Barriers placed in the middle of an intersection, directing all traffic in the same direction.	
Speed Humps	Rounded raised pavement devices placed across roadways to slow and/or discourage traffic	
Speed Tables/ Textured Pavement/ Raised Crossings	Flat-topped speed humps often constructed with a brick or other textured material to slow traffic	
Traffic Circles	Barriers placed in the middle of an	

Environment

Traffic Calming

Links to Traffic Calming Programs

Examples of and variations of the term "traffic calming" include the street calming in Fort Wayne, "neighborhood traffic management" in Boulder and Santa Fe, "neighborhood traffic control" in Seattle and "traffic abatement" in Sarasota, FL. This page is dedicated to all the known electronically publiciz websites. Click on the following web addresses.

Municipality	Web Address
Anchorage, Alaska	www.ci.anchorage.ak.us/Services/Departments/Com/Trans/Calming_Pro_Man_Nov
Tempe, Arizona	www.tempe.gov/traffic/trafmgnt.htm
Berkeley, California	www.ci.berkeley.ca.us/PW/traffic/trafcalm.html
Calabasas, California	www.ci.calabasas.ca.us/trafcalming.html
Sacramento, California	pw.sacto.org/traffic/ntmpglance.html
San Jose, California	www.ci.san-jose.ca.us/council/dist10/Issues/traffic_calming.htm
Boulder, Colorado	www.ci.boulder.co.us/publicworks/depts/tr7.html
Colorado Springs, Colorado	www.colorado-springs.com/trafficeng/city.htm
Douglas County, Colorado	www.douglas.co.us/DC/Services.htm
Fort Collins, Colorado	fcgov.com/traffic/traffic-calming.asp
Loveland, Colorado	www.ci.loveland.co.us/calming.htm
Wheat Ridge, Colorado	www.ci.wheatridge.co.us/neighborhood_traffic_management_.htm
Collier County, Florida	colliergov.net/transportation/ntmp.html
Sarasota, Florida	www.ci.sarasota.fl.us/Eng.nsf/Frameset?OpenForm&URL=traffic+calming+home
Tampa, Florida	www.ci.tampa.fl.us/dept_Public_Works/transportation.HTM#NEIGHBORHOOD

Honolulu, Hawaii	www.co.honolulu.hi.us/dts/tcalming.pdf
Chicago, Illinois	w5.ci.chi.il.us./trans/html/Culdesacs.html
Iowa City, Iowa	www.iowa-city.com/city/planning/trafficCalming.htm
Howard County, Maryland	www.co.ho.md.us/spdcntrl.htm
Montgomery County, Maryland	www.dpwt.com/TraffPkgDiv/triage.htm
Cambridge, Massachusetts	www.ci.cambridge.ma.us/~CDD/envirotrans/trafcalm/
Missoula, Montana	www.ci.missoula.mt.us/publicworks/calming.htm
Las Vegas, Nevada	www.ci.las-vegas.nv.us/speed_bumps.htm
Albuquerque, New Mexico	www.cabq.gov/streets/ntmp.html
Rochester, New York	www.ci.rochester.ny.us/streetcalm/index.htm
New York City, New York	www.ci.nyc.ny.us/html/dot/html/get_around/ped/pedest.html
Charlotte, North Carolina	www.ci.charlotte.nc.us/citransportation/programs/trafcalm.htm
Winston-Salem, North Carolina	www.ci.winston-salem.nc.us/DOT/trafficcalming.html
Broken Arrow, Oklahoma	www.city.broken-arrow.ok.us/trafcalm.htm
Portland, Oregon	www.trans.ci.portland.or.us/Traffic_Management/Trafficcalming/
Johnson City, Tennessee	pages.preferred.com/~traffic/trcalming.htm
Austin, Texas	www.ci.austin.tx.us/roadworks/program.htm
Fort Worth, Texas	ci.fort-worth.tx.us/tpw/SpeedHumpPilot2.htm
Houston, Texas	www.ci.houston.tx.us/departme/works/humps.htm
Salt Lake City, Utah	www.slcgov.com/transportation/traffic_management.htm

Charlottesville, Virginia	www.ci.charlottesville.va.us/government/trafcalm.html
Seattle, Washington	www.cityofseattle.net/td/trafcirc.asp
Madison, Wisconsin	www.ci.madison.wi.us/transp/ntmpbro.html
Vancouver, British Columbia	www.city.vancouver.bc.ca/engsvcs/transport/calming.htm
Ottowa, Ontario	www.city.ottawa.on.ca/ottawa/city/web/g/g9/g9-traffic-eval.html

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