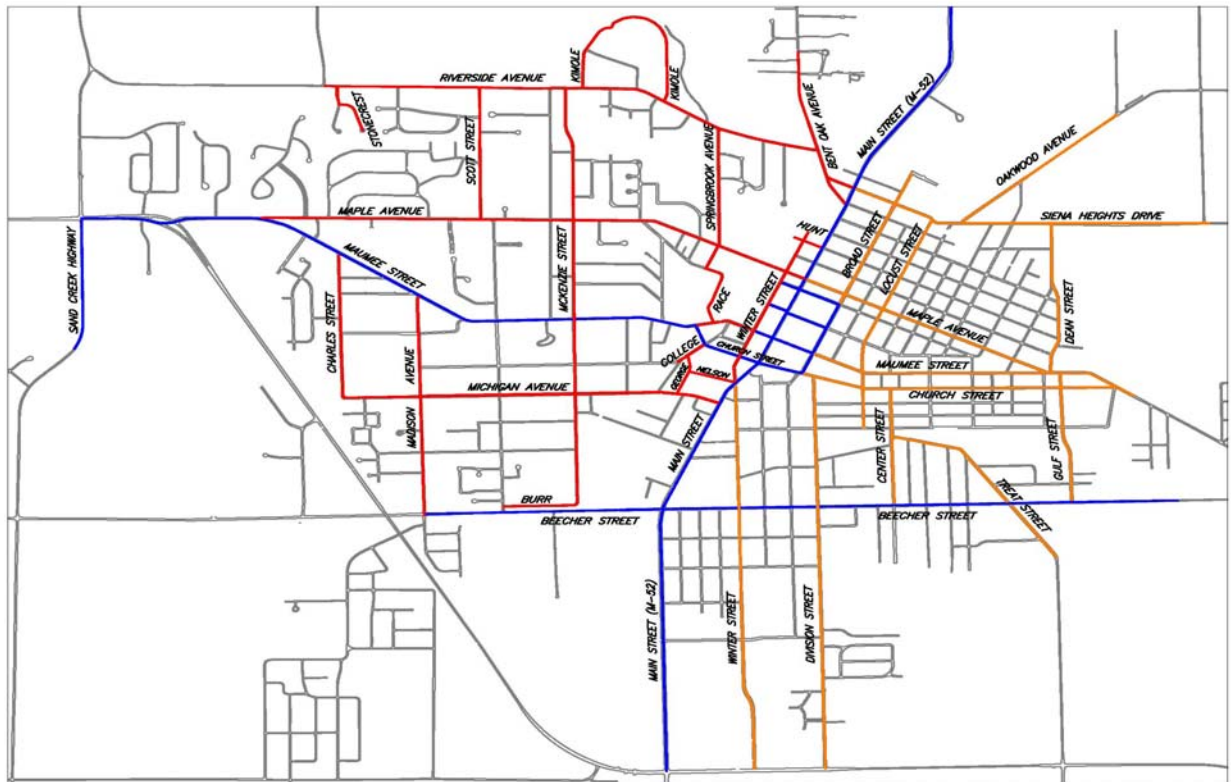




CITY OF ADRIAN

WINTER OPERATIONS MAINTENANCE PLAN



November 2011

INTRODUCTION:

Several years of budget reductions have resulted in the City of Adrian making employee cuts citywide. It is apparent that the trends seen in the last several years will not likely change in the near future. While staffing reductions have been dealt with internally in an attempt to maintain a high level of service, it is unreasonable to assume service levels will not change. The Department of Public Works (DPW) has changed operations to accommodate most of these changes, however the recent loss of an employee due to retirement and non-replacement it is likely that maintaining the same level of service may not be possible.

This plan is a definition and outline of the winter services performed on the City's 73.53 centerline miles of streets and how they may change. Obviously, each winter event is different and the end result will always be the same, clear streets curb to curb, however the means by which we this is achieved will change and may take more time. The goal is to make changes that increase effectiveness and efficiencies while maintaining a high safety standard for staff and the public.

WINTER ROAD MAINTENANCE POLICY:

The American Public Works Association (APWA) defines level of service as:

“Observed or desired conditions at various points in time during and after winter weather events”

Citizens expect streets to be “sufficiently passable”; this is a reasonable expectation. However, the definition of “sufficiently passable” is where changes will occur. The City of Adrian's policy is:

“We will provide, to the extent reasonably possible, effective and efficient measures consistent with generally accepted standard practices to restore mobility.”

The ability to accomplish this task depends greatly on variables associated with winter weather. These include air and pavement temperatures, wind speeds and directions, precipitation rates and types, time of onset, duration and traffic activity. Availability of equipment, personnel and materials are also key factors that affect the effectiveness of snow and ice control efforts.

LEVEL OF SERVICE DEFINED:

Level of service standards is developed to maintain relatively safe traffic movements on the public streets within a reasonable time frame. This leads to a need to prioritize the streets so efforts can be concentrated on the main thoroughfares and collectors that carry the most traffic before residential and other low-volume streets.

BEST SERVICE LEVEL: This level is reached when the major thoroughfare streets and roads are “bare pavement,” clear of snow and ice, from curb-to-curb.

MINIMUM SERVICE LEVEL: This level for arterial and collector streets and roads is to clear the through lanes and left turn lanes at intersections down to a packed snow cover. Exclusive right-turn lanes and joint center turn lanes may be left unplowed and snow may be present along curbs and shoulders.

ACCEPTABLE SERVICE LEVEL: This level of service pertains to residential and other low-volume streets to provide a navigable surface; a street may still have snow or packed ice on it but plowing and material application should allow a vehicle to travel the street safely on at least one center lane.

Winter storm operations will continue until all streets meet the MINIMUM SERVICE LEVEL. As time, staffing and budgets allow, staff will begin removal of snow accumulated along street edges with the end goal being bare pavement curb-to-curb. Accumulated snow from several storms in succession will always present a problem as removal of this excess takes considerable time and resources. As successive storms develop, operations will revert back to the defined service levels for storm operations until a time develops for a more extensive cleanup. Until final clean-up is achieved, travel delays may be likely as the roadway widths are reduced by banked snow and the surface conditions may require slower speeds.

Unfortunately, in an urban setting, the location for the plowed snow is along the edge of the road between the sidewalk and curb. In some Adrian areas the sidewalk was constructed directly behind the curb which means extra shoveling for those residents. The City does not remove the snow left on these sidewalks or driveways from plowing operations.

The city does not clear snow within the road in front of individual street-side mailboxes until all the street service levels have been satisfied and final curb-to-curb cleaning of the streets begins. In many cases depending on storm succession, this can be several days or even more than a week later.

Mailbox Policy: Every winter residents claim mailboxes have been damaged by snowplows. Plowing the streets often means several lanes of heavy snow will hit mailboxes as the trucks go by. There is no escape from the hardships of a Michigan winter - including the toll it takes on mailboxes. We appreciate your understanding in our efforts to keep the streets clear. The City will not repair or replace mailboxes damaged by force of moving snow. If a City of Adrian vehicle or equipment hits a mailbox the City will take action to fix the mailbox at its earliest convenience. The City will not replace mailboxes damaged by any other means, including from the weight of snow plowed from a roadway.

STREET PRIORITIZATION:

Main thoroughfares and collectors that carry the most traffic are first to be serviced. Special attention will be given whenever practical, to steep grades, curves, bridges or other locations known to be more difficult or hazardous to negotiate by vehicles. Streets that provide access for certain institutional, academic, cultural/social or commercial areas may also receive additional treatment as time, traffic and conditions warrant.

Priority 1: Major Thoroughfares and Multi-lane Urban Arterials: These routes; M-52, M-34 and US-223 BR will be maintained first and consistently, along with the priority 2 streets. Priority 1 streets will receive the “BEST SERVICE LEVEL”.

Priority 2: Urban Collector Streets and special access routes. These routes will be maintained first, with the priority 1 streets, however the service level on these streets initially will be at the “MINIMUM SERVICE LEVEL”.

- Priority 2A streets are those around schools, hospitals and higher volume City Major streets.
- Priority 2B streets are other City Major streets.

The priority 1 and 2A (high priority 2) streets will be maintained overnight with 3 trucks on specified routes. If during the overnight hours these priority 1 & 2A routes are satisfactorily maintained at the stated minimum service level these trucks may begin to work on priority 2B streets in the route area. The routes established for the Priority 1 & 2A streets are as follows:

- Blue Route: M-52, M-34, BR US-223, Front St. (Winter to Main), Washburn St., Toledo St. (downtown), Maumee St. (downtown), Church St. (Main St. to Broad St.), Beecher St., and Sand Creek Hwy.
- Orange Route: Oakwood Rd., E. Siena Heights Dr., Addison St. (Siena Heights to Dean St.), Dean St. (north of Maumee), E. Maple Ave., E. Maumee St., E. Church St., Gulf St., Division St. S. Winter St., Locust St., S. Center St. and Treat St.
- Red Route: Bent Oak Ave., W. Siena Heights Dr., Riverside Ave., Kimole Ln., Stonecrest., N. Scott St. (north of Maple), W. Maple Ave., McKenzie St., Burr St., Madison Ave., Charles St., Michigan Ave., George St., College Ave (Water to Church St.), Nelson St., Race St., Springbrook Ave., W. Maumee St., N. Winter St. and W. Hunt St.

See Appendix A for the map of these priority 2A routes.

Priority 3: Residential streets, commercial area side streets and cul-de-sacs. These routes contain low-volume residential streets. The objective with these streets is to initially maintain them at the “ACCEPTABLE SERVICE LEVEL”. This will provide at least one navigable lane in the center of the street. As priority 1 & 2 streets meet the minimum service levels work will begin in earnest on the priority 3 streets.

Priority 4: Alleys, municipal parking areas and downtown on-street parking. These areas will receive service later in the schedule following achievement of at least an Acceptable Level on all the Priority 3 streets.

Appendix B is an extensive list of street priorities within the City of Adrian. These priorities do not promise service in any specific order, the list is displaying what level of service particular streets will receive during a storm event.

STAFFING LEVELS:

In 2011 the DPW has seen a reduction in staffing levels by not replacing a retired employee. At this time (5) dedicated employees operate plow trucks during a winter event. Staffing levels are modified to maximize the trucks on the streets during the daylight hours, while also accommodating safety requirements for rest for the drivers. Depending on the snow event, staff from different departments may be contacted to aid with plowing needs. However, this is not guaranteed as the other departments have their own plowing to complete to keep operations functioning.

MATERIAL APPLICATION POLICIES:

Salt applications are a very economical and effective process for ice control but needs to be applied at proper time and concentrations. Salt is not generally effective at temperatures below 20 degrees. Depending on the storm some salt may be placed when temperatures fall below this mark in anticipation of some warming and/or sun activating the salt.

In 2009, a salt shortage due to continued storms in the mid-west region caused prices to sky rocket and as such the City developed a new policy for salt application. When temperatures are favorable the following salting policy is followed:

Priority 1 & 2 streets receive salt in an application in both directions, the salt spreads to the curb line due to the crown of the road. Special attention is paid to signalized intersections and residential streets with significant hills.

Priority 3 streets may, depending on needs, receive salt in one pass down the center of the street. All intersections in residential areas receive salting as warranted by temperature.

Priority 4 alleys only receive salting as necessary for ice build up if necessary for final cleaning.

The City of Adrian does not apply sand to any city street due to the extensive clean-up in the spring it causes. It also washes into the storm system potentially plugging it over time.

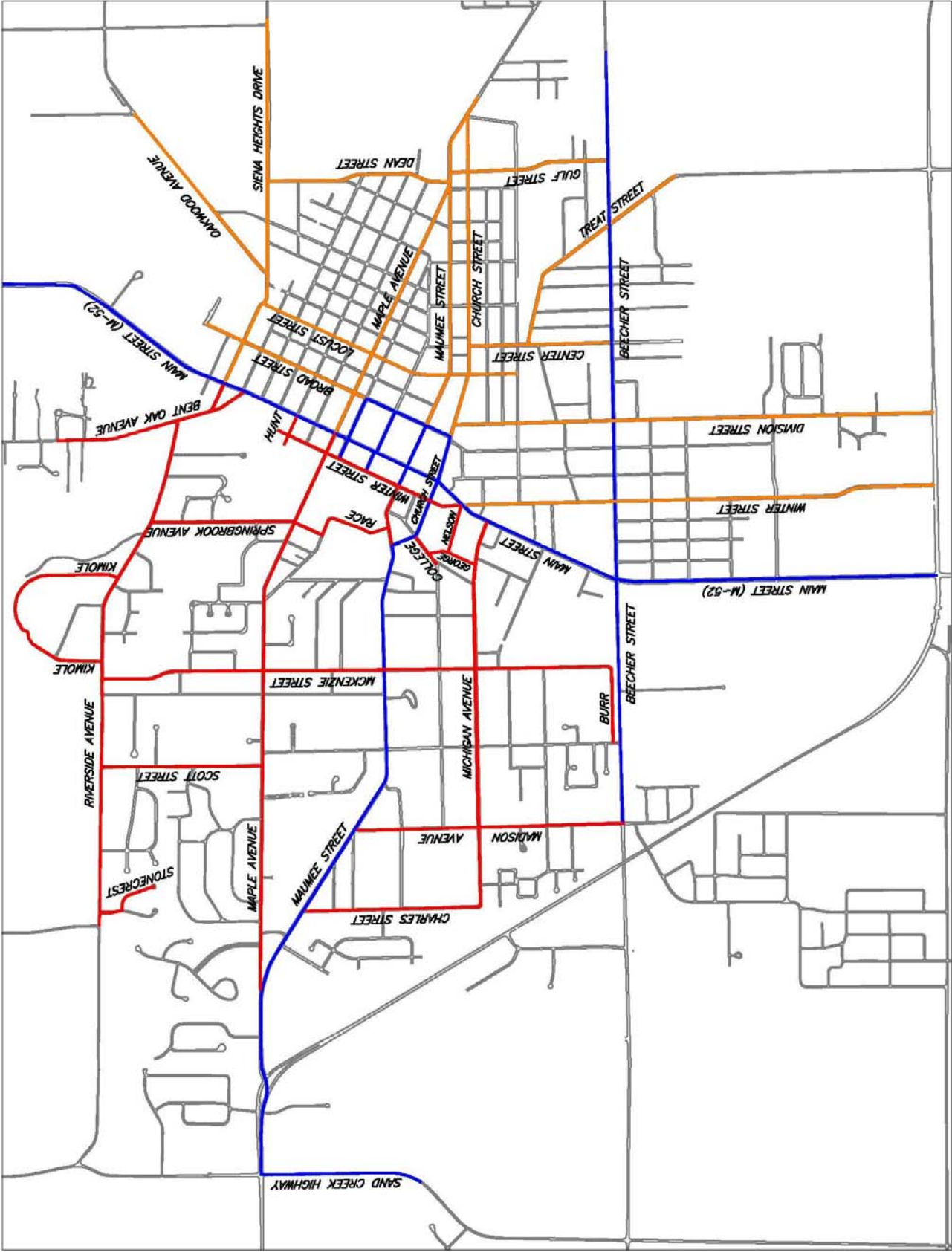
The City of Adrian and local MDOT staff are exploring other alternative chemicals from organic by-products, etc. however their efficacy and costs are still being evaluated.

CONCLUSION:

Simply stated, the job of clearing the streets during and after a winter storm event can be a tough job. The City of Adrian crews have and will continue to work long hard hours to complete this daunting task. With shrinking budgets and staff, maintaining the 73.53 centerline miles is becoming increasingly more difficult. Drivers take great pride in completing these tasks but continued understanding of the general public is important. We understand frustrations that people feel thinking that “my street is always last” or “never plowed”; however it is our hope that presentation of this plan sheds light on the systems we employ and priorities we have set to maximize our resources.

Appendix A

Overall Snow Routes



Appendix B

Snow Street Priorities

Segment Name	From	To	Act51	Priority
Abbott Ct	Oak Hill	Bent Oak	City Minor	3
Addison St	Dean St	Siena Heights	City Major	2A
Addison St	Maumee	Dean St	City Minor	3
Albert St	Broad	Dead-End	City Minor	3
Alden Dr	Division		City Minor	3
Alexander Dr	Maple	Alexander	City Minor	3
Alleys	ALL		Alley	4
Allis St	Merrick	Michigan Ave	City Minor	3
Ann St	Erie	Maumee	City Minor	3
Anthony Ct	Feeman	College Park	City Minor	3
April Ln	June	July	City Minor	3
Argyle Dr	Canterbury	Charles	City Minor	3
Auborne Rd	Scott	Trenton	City Minor	3
Baker St	Main	Winter	City Minor	3
Ballenberger Rd	Riverside	City/Twp Line	City Minor	3
Barrington Ln	Lexington Dr	Dead-end	City Minor	3
Beecher St	Main	Eastern City Limits	City Major	2A
Beecher St (M-34)	Main	Madison Ave.	State Route	1
Bent Oak Ave	Main	Northern City Limits	City Major	2A
Berkshire Ct	Berkshire	Cul-de-Sac	City Minor	3
Berkshire Dr	Country Club	Scott Ridge Dr	City Minor	3
Berry St	Winter	Division	City Minor	3
Bradish St	Beecher	dead-end	City Minor	3
Bristol St	Dean	Main St	City Minor	3
Broad St	Front	Island Park	City Major	2A
Broad St (M-52)	Church	Front	State Route	1
Brookfield Ct	Meadowbrook	Cul-de-Sac	City Minor	3
Brookside Dr E	Scott	cul-de-sac	City Minor	3
Budlong St	Maumee	Riverside	City Minor	3
Burning Bush Ct	Melrose	Cul-de-Sac	City Minor	3
Burr St	Scott	Mckenzie	City Major	2A
Butler St	Dean	N Main	City Minor	3
Canterbury St	Inverness	Stratford	City Minor	3
Caton Ave	Baker	Beecher	City Minor	3
Center St	Church	Beecher	City Major	2A
Center St	Maumee	Toledo	City Minor	3
Chandler St	College	Maumee	City Minor	3
Charles St	Michigan	Maumee	City Major	2A
Cherry St	River	Northwestern	City Minor	3
Chestnut St	Dean	Main	City Minor	3
Church St	Broad	Maumee	City Major	2A
Church St (M-52)	Main	Broad	State Route	1
Church St (US-223 BR)	Maumee	Main	State Route	1
Clay St	State	Division	City Minor	4
Clinton St	Maumee	Seeley	City Minor	3

Segment Name	From	To	Act51	Priority
College Ave	George	Church	City Major	2A
College Ave	Madison	George	City Major	2B
College Park Dr	Feeman	Michigan Ave	City Minor	3
Company St	Mckenzie	Greenly	City Minor	3
Comstock St	Toledo	Siena Heights	City Minor	3
Country Club Rd	Tipton	Scott	City Major	2A
Cross St	Main	Winter	City Minor	3
Croswell St	Toledo	Dead-End	City Minor	3
Crystal Spring Ave	Main	dead-end	City Minor	3
Dallas St	Main	Dennis	City Minor	3
Dawes Ave	Winter	Division	City Major	2B
Dean St	Maumee	Addison St	City Major	2A
Dean St	Michigan	Maumee	City Minor	3
Dennis St	Dallas	South	City Minor	3
Division St	US 223	Church	City Major	2A
Dorr	Northview	US 223	City Minor	3
Elm St	Toledo	Oakwood	City Major	2B
Enterprise Dr	Industrial	Dead-end	City Minor	2B
Erie St	Division	Dean	City Minor	3
Evergreen Rd	City Limits	W Maumee St	City Minor	3
Feeman Ct	College Park	College Park	City Minor	3
Ferguson Ave	Main	Michigan	City Minor	3
Finch St	Toledo	Seeley	City Minor	3
Forest St	Dead-end	Anthony	City Minor	3
Frank St	Locust	Division	City Minor	3
Frank St	Locust	Dean	City Minor	3
Frazier Dr	Oram	Scottdale	City Minor	3
French St	Beecher	Treat	City Minor	3
Front St	Winter	Main	City Major	2A
Front St (M-52)	Main	N Broad	State Route	1
Geddes St	Bristol	Mulberry	City Minor	3
George St	Michigan	College	City Minor	2A
Gettysburg Dr	Scott	cul-de-sac	City Minor	3
Glendale Ave	Oregon	Auborne	City Minor	3
Grand St	Riverside Ave	Trestle Park	City Minor	3
Greenly St	Maumee	River St	City Major	2B
Gulf St	Beecher	Maumee	City Major	2A
Haan St	Beecher	Dead-end	City Minor	3
Harkness Dr	Mckenzie	Loveland	City Minor	3
Harrison Pl	Anthony	Dead-end	City Minor	3
Hawthorne Dr	Oregon	Trenton	City Minor	3
Helme Ave	Rogers	Springbrook	City Minor	3
High Ct	High	Dead-End	City Minor	3
High St	Stockford	Sheffield	City Minor	3
Highland Dr	Maple	Dead-end	City Minor	3
Hillcrest Dr	Budlong	Cul-de-Sac	City Minor	3
Hoch Ave	Baker	Beecher	City Minor	3
Howell Ave	Baker	Beecher	City Minor	3

Segment Name	From	To	Act51	Priority
Hunt St	Main	Dean	City Minor	3
Hunt St	Main	Trestle Park	City Minor	2A
Huntington Dr	Auborne	Dead-End	City Minor	3
Industrial Dr	Industrial Dr (State)	Dead-end	City Minor	2B
Inverness Dr	Canterbury	Dead-end	City Minor	3
Ironwood Ct	Joy	Cul-de-Sac	City Minor	3
James St	Beecher	Dead-End	City Major	2B
James St	Treat	Beecher	City Minor	3
Jordan St	Main	Winter	City Minor	3
Joy Rd	Northview	Dead-End	City Minor	3
July Dr	May	March	City Minor	3
June Ln	May	March	City Minor	3
Kimole Ln	Riverside Ave	Riverside Ave	City Minor	2A
Lake St	Sheffield	Riverside	City Minor	3
Lakeshire Trl	Riverside	Kimole	City Minor	2B
Lansing St	James	Treat	City Minor	3
Lawrence St	Division	rail crossing	City Minor	3
Leland Ct	Northwestern	Leland	City Minor	3
Lenawee St	Rogers	Riverside	City Minor	3
Lexington Dr	Southfield	Barrington	City Minor	3
Liberty St	Beecher		City Minor	4
Lincoln Ave	Oden Way	Mckenzie	City Minor	3
Locust St	Michigan St	Siena Heights	City Major	2A
Logan St	Division	Center	City Major	2B
Loveland Rd	Budlong	Mckenzie	City Minor	3
Loveland Rd	Mckenzie	Northwestern	City Minor	3
Lowe Ave	Treat	Dead-end	City Minor	3
Madison Dr	Extents		City Minor	3
Madison St	Beecher	Maumee	City Major	2A
Maiden Ln	Main	Winter	City Minor	4
Main St	Church	Front	City Major	2A
Main St. (M-52)	North City Limits	Front St	State Route	1
Main St. (M-52)	Church St.	US-223	State Route	1
Maple Ave	E Maumee	W Maumee St	City Major	2A
Maplewood Ct	Maple	Cul-de-Sac	City Minor	3
March Dr	Division	July	City Minor	3
Martinez Ct	Croswell	Dead-End	City Minor	3
Maumee Ct	Maumee	Extents	City Minor	3
Maumee St	W Church St	Eastern City Limits	City Major	2A
Maumee St (US-233 BR)	W Church St	US 223	State Route	1
May Dr	Division	July	City Minor	3
McKenzie St	Riverside	Burr	City Major	2A
McVicar St	Michigan St	Toledo	City Minor	3
Meadowbrook Dr	Full Extents		City Minor	3
Meadowview Ct	Meadowbrook	Cul-de-Sac	City Minor	3
Melrose Ave	Joy	Northview	City Minor	3
Merrick St	Main	Mckenzie	City Minor	3

Segment Name	From	To	Act51	Priority
Metcalf St	Main	Winter	City Major	2B
Michigan Ave	Main	Mckenzie	City Major	2A
Michigan Ave	Madison	Charles	City Major	2A
Michigan Ave	Madison	Mckenzie	City Minor	2A
Michigan St	Winter	Wabash	City Major	2B
Miles Dr	Division		City Minor	3
Mill Rd	Main	Dead-End	City Minor	3
Mixer St	Chandler	Maumee	City Minor	3
Mulberry St	Ormsby	Addison	City Minor	3
Mulzer	Division	Haan	City Minor	3
Scott St	Maple	Riverside	City Minor	2A
Nelson St	Winter	George	City Minor	2A
Northview Dr	Melrose	Dorr	City Minor	3
Northwestern Dr	Maple	Loveland	City Minor	3
Norton St	Greenly	Dead-end	City Minor	3
Oak Hill Blvd	Bent Oak	City/Twp Line	City Minor	3
Oak St	Dead-end	Treat	City Minor	3
Oakwood Ave	Siena Heights	City Limits	City Major	2A
Oden Way St	Vine	Lincoln	City Minor	3
Oram Dr	Frazier	Scott	City Minor	3
Orchard Ct	Orchard Rd	Cul-de-Sac	City Minor	3
Orchard Rd	Full Extents		City Minor	3
Oregon Rd	Trenton	Westwood	City Minor	3
Ormsby St	Toledo	Siena Heights	City Minor	3
Ottawa Dr	Melrose	Joy	City Minor	3
Oxford Ct	Northwestern	Oxford	City Minor	3
Park PI E	Church	Maumee	City Minor	3
Park PI W	Church	Maumee	City Minor	3
Park St	Maumee	Michigan	City Minor	3
Parkview Ln	Barrington	Division	City Minor	3
Pearl St	Winter	College	City Minor	3
Petoskey Ct	Oden Way		City Minor	3
Pleasant Knoll Dr	US 223	Dead-end	City Minor	3
Race St	Maumee	River St	City Minor	2A
Railroad St	Treat	Lowe	City Major	3
Railroad St	Gulf	Dead-end	City Minor	3
Renfrew Ave	Dead-end	Cul-de-Sac	City Minor	3
Rice St	Merrick	Michigan	City Minor	3
Rich St	Budlong	Mckenzie	City Minor	3
River St	Greenly	Maple	City Major	2B
River St	Springbrook	Greenly	City Minor	3
River St	Race	Springbrook	City Minor	2A
Riverside Ave	Scott	Bent Oak	City Major	2A
Rogers Ct	Rogers	Cul-De-Sac	City Minor	3
Rogers Rd	Springbrook	Riverside	City Minor	3
Saint Joseph St	Mckenzie	Greenly	City Minor	3
Sand Creek Hwy	City/Twp Line	US 223	City Major	2A
Sarah St	Erie	Maumee	City Minor	3

Segment Name	From	To	Act51	Priority
Sawmill Ct	Ballenberger to cul-de-sac		City Minor	3
Scott Ct	Scott	Cul-de-Sac	City Minor	3
Scott Ridge Dr	Scott	Cul-de-Sac	City Minor	3
Scott St	Maple	Beecher	City Minor	3
Scottdale Ct	Scottdale	cul-de-sac	City Minor	3
Scottdale Dr	Frazier	Scott	City Minor	3
Seel Dr	Maple	Meadowbrook	City Minor	3
Seeley St	Dead-end	Main	City Minor	3
Sheffield St	Dead-End	Riverside Ave	City Minor	3
Sherman St	Forest	Madison	City Minor	3
Shrewsbury Ave	Renfrew	Dead-End	City Minor	3
Siena Heights Dr	Bent Oak	Howell	City Major	2A
South St	Main	Division	City Minor	3
Southfield Dr	Division	Dead-end	City Minor	3
Spencer Pl	Forest	Spencer	City Minor	3
Spielman Ct	Forest	cul-de-sac	City Minor	3
Spring St	Allis	dead-end	City Minor	3
Springbrook Ave	River	Riverside Ave	City Major	2A
State St	Church	Dawes	City Minor	3
Stockford Dr	Riverside	Dead-end	City Minor	3
Stockford Dr	Northwestern	Loveland	City Minor	3
Stonecrest Dr	Stoneridge	Cul-de-Sac	City Minor	2A
Stoneridge Dr	Country Club	Cul-de-Sac	City Minor	3
Stratford Dr	Maumee	Canterbury	City Minor	3
Summer St	River	Maple	City Minor	3
Summit St	Main	Division	City Minor	3
Swanson Ct	Cherry	Springbrook	City Minor	3
Tabor St	Beecher	City Limits	City Major	2B
Tabor St	Beecher	Treat	City Minor	3
Tecumseh St	Michigan St	Toledo	City Major	2B
Terrace Ave	Charles	Maumee	City Minor	3
Toledo St	Main	Broad	City Major	2A
Toledo St	Elm	Broad	City Major	2B
Toledo St	Front	Elm	City Minor	3
Treat Hwy	City/Twp Line	Center	City Major	2A
Trenton Rd	Maple	Auborne	City Minor	3
Union St	Dennis	State	City Minor	3
University Ave	Charles	Maumee	City Minor	3
Vine St	College Park	Mckenzie	City Minor	3
Wabash Ave	Michigan St	Church	City Major	2B
Washburn St	Main	Winter	City Major	2A
Water St	Michigan	College	City Minor	3
Westwood Dr	Maple	Oregon	City Minor	3
Williams St	Charles	Maumee	City Minor	3
Winter St	Hunt	US-223	City Major	2A
Wolf Ridge Ct	Evergreen Rd.	Cul-de-Sac	City Minor	3
Woodfield Dr	N. Scott St	Cul-de-Sac	City Minor	3