



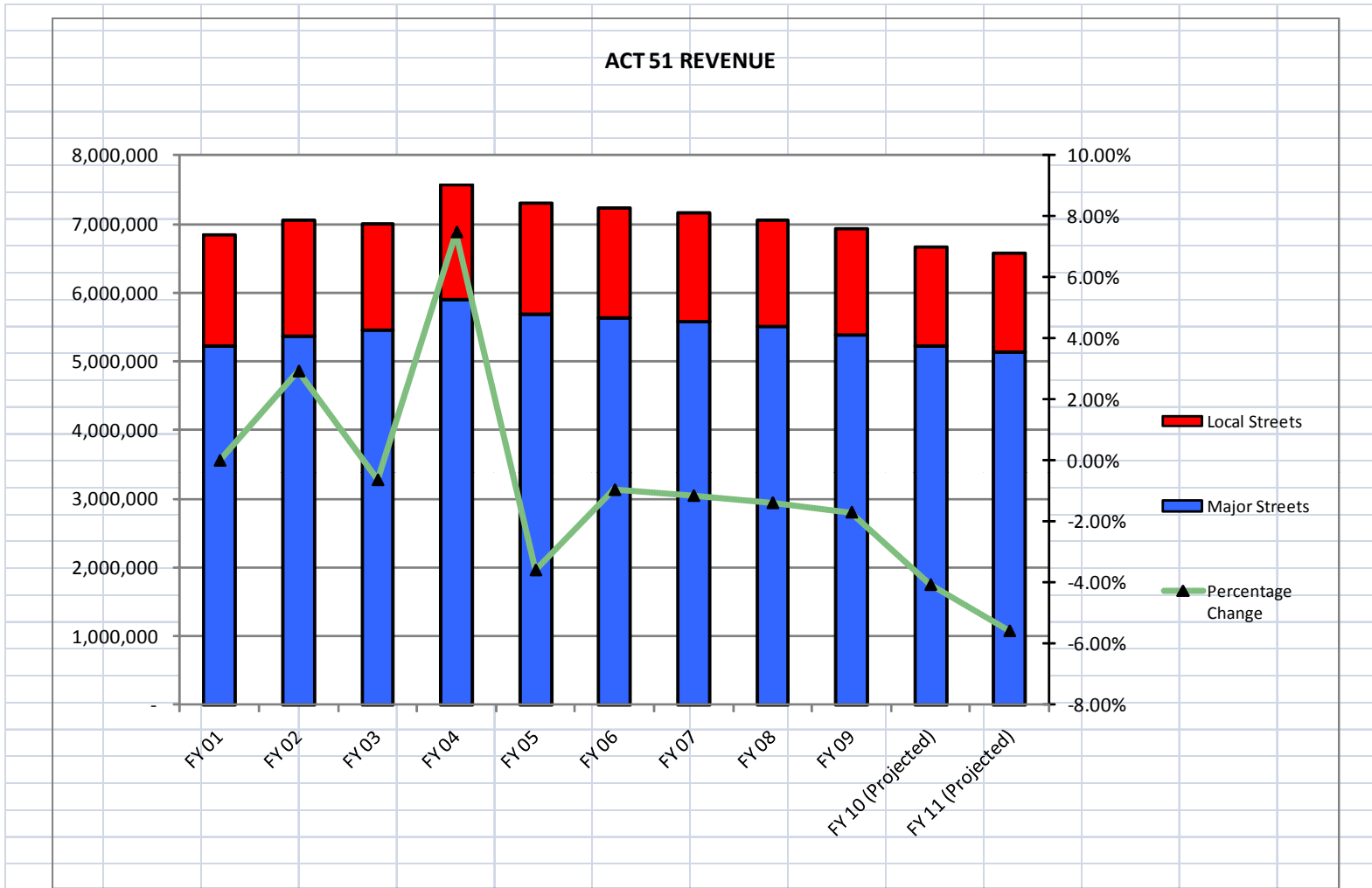
Winter Maintenance Procedures

Winter Maintenance Goal

- Provide passable roadway
 - Free from drifts, snow ridges, and as much ice and snow pack as is practical and can be traveled safely at **reasonable speeds**.
 - May not be bare pavement

Funding Sources

- All street winter maintenance is funded by State of Michigan Act 51 revenue. This revenue is received from flat rate tax on motor vehicle fuels and vehicle registration fees.
- Sidewalk and path winter maintenance is funded through the general fund.



Act 51 Revenue - Weight & Gas Tax

The State receives 19 cents per gallon of gasoline, 15 cents per gallon of diesel and 12 cents per gallon of bio diesel sold
 State disburses revenue based on miles of City Streets and Population Factor

Sales tax collected on fuel sales is not distributed to transportation programs

Winter Weather Conditions

- Light Snow - Less than four inch accumulation
- Heavy Snow - More than four inch accumulation or forecast conditions that exceed the regular street maintenance resources
- Snow Emergency - Conditions that exceed all City resources

Light Snow Response

- Salt Major roads first – if necessary switch to plowing
- The City's Public Services Area clears the high volume streets, bridges, (trouble spots)
- De-icing materials are also applied to salt route streets as they are plowed

Heavy Snow Response

- 24/7 operation - Utilize all resources
- Residential plowing started based on Solid Waste schedule
- Snow Desk staffed, webpage updated
- Encourage removal of vehicles from street
- Schools and private streets/lots are responsible for their own maintenance

Snow Emergency Response

- Declared by City Administrator or designee.
- Parking restrictions may be placed citywide or in designated areas
- Utilize all available resources.
- Use of contractors for additional services.

Anti-Icing / De-Icing / Traction Enhancement

- Salt is used to prevent bonding of snow and ice and to keep accumulation workable
- Salt is used only on designated salt routes
- Sand is used to improve traction on local streets

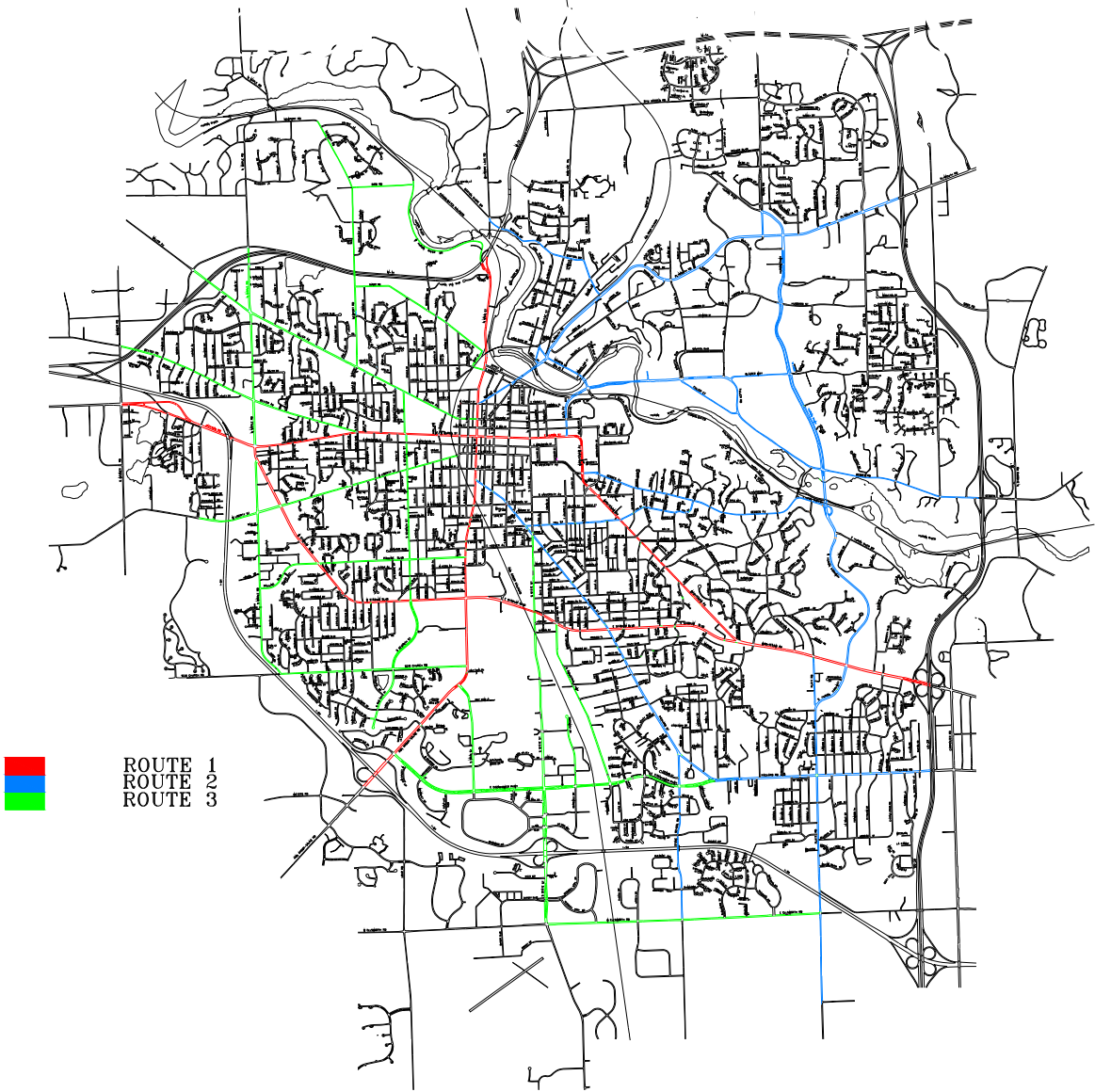
Prioritization Salt Routes

- 1 - Primary Salt/Plow Routes
 - Highest volume road travel lanes
- 2 - Secondary Salt/Plow Routes
 - Next lower volume roads, turn lanes, median lanes.
- 3 - Curb and Shoulder plowing

Primary Salt/Plow Routes

- The first priority is to clear the primary major streets
- The high-volume major are broken into three routes

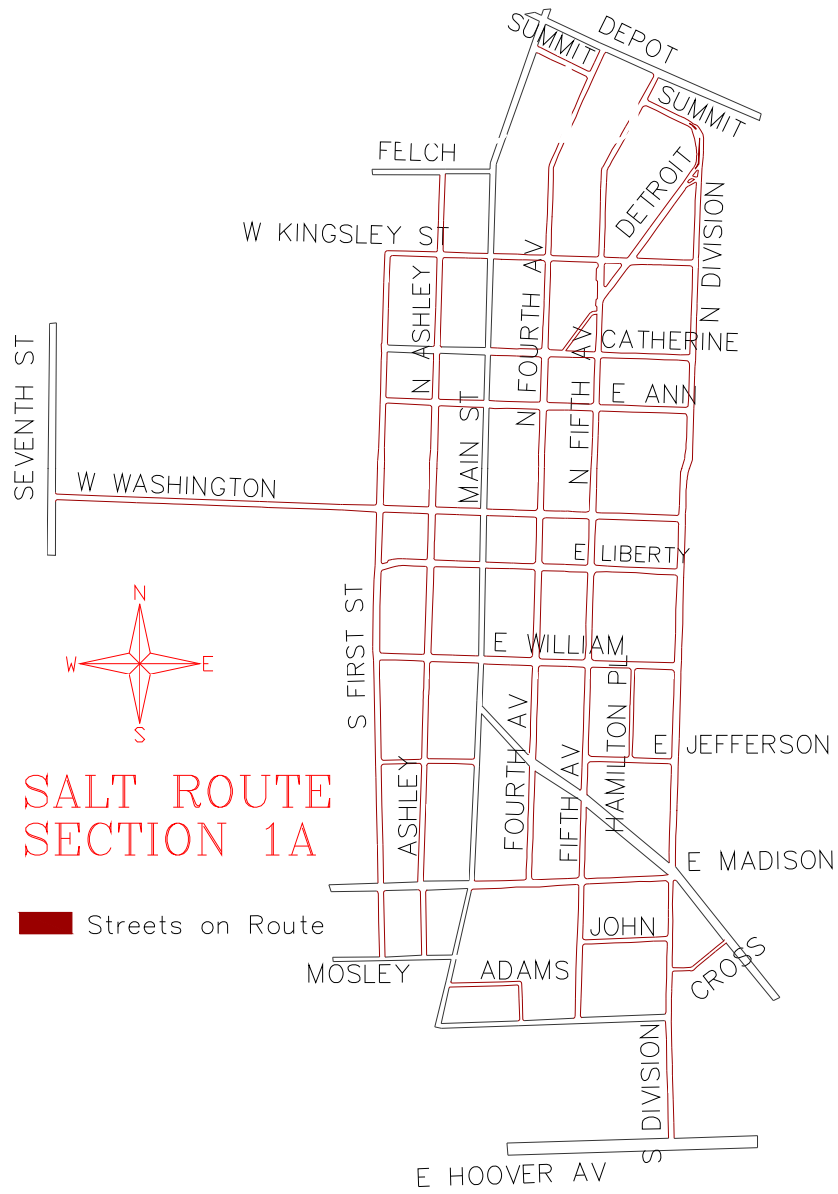
ANN ARBOR PRIMARY SALT ROUTES

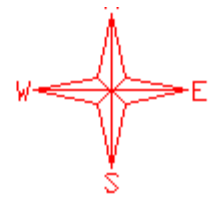


ROUTE 1
ROUTE 2
ROUTE 3

Secondary Salt Routes

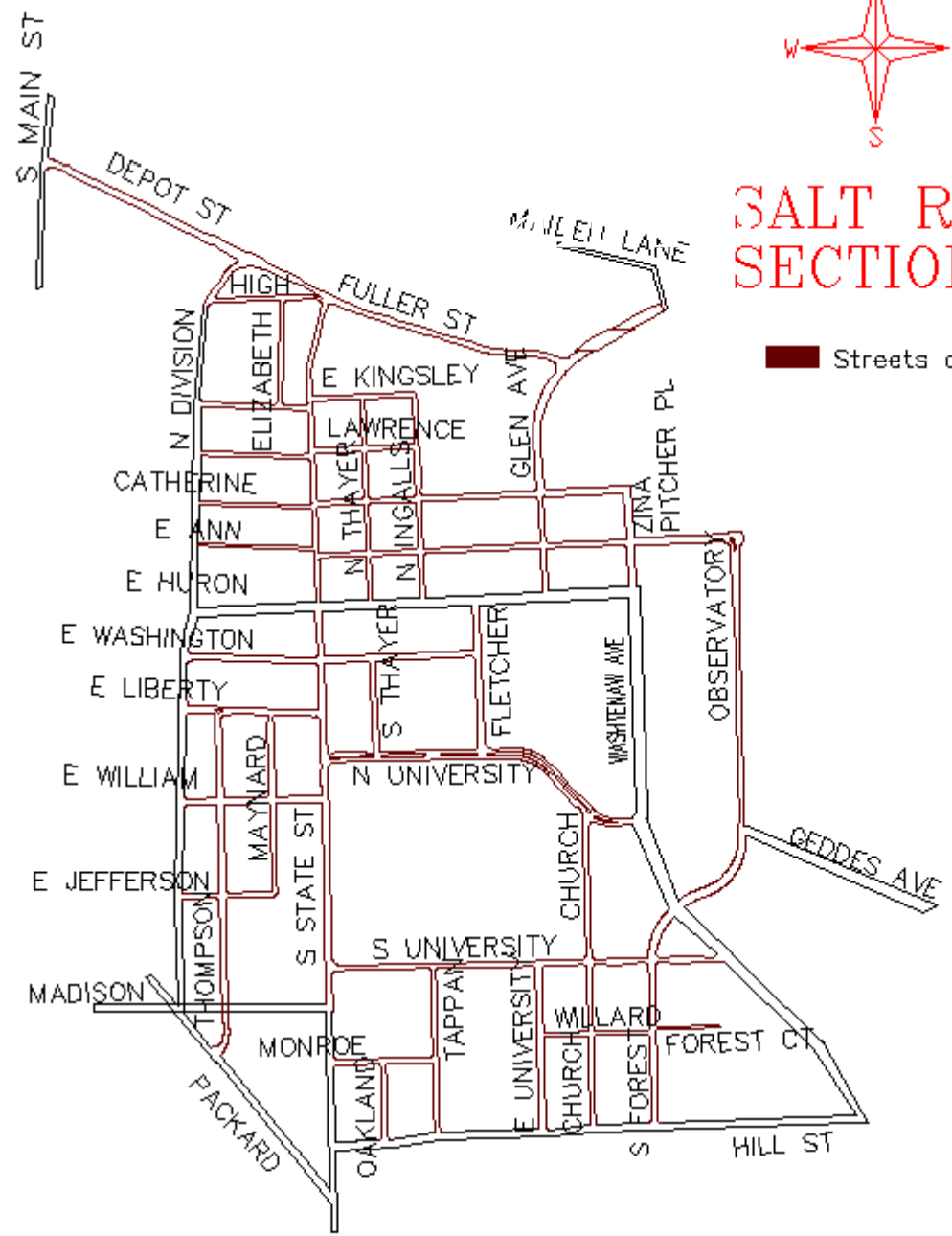
- Once the primary salt routes are cleared, the secondary salt routes are then cleared.
- There are 8 secondary salt routes.



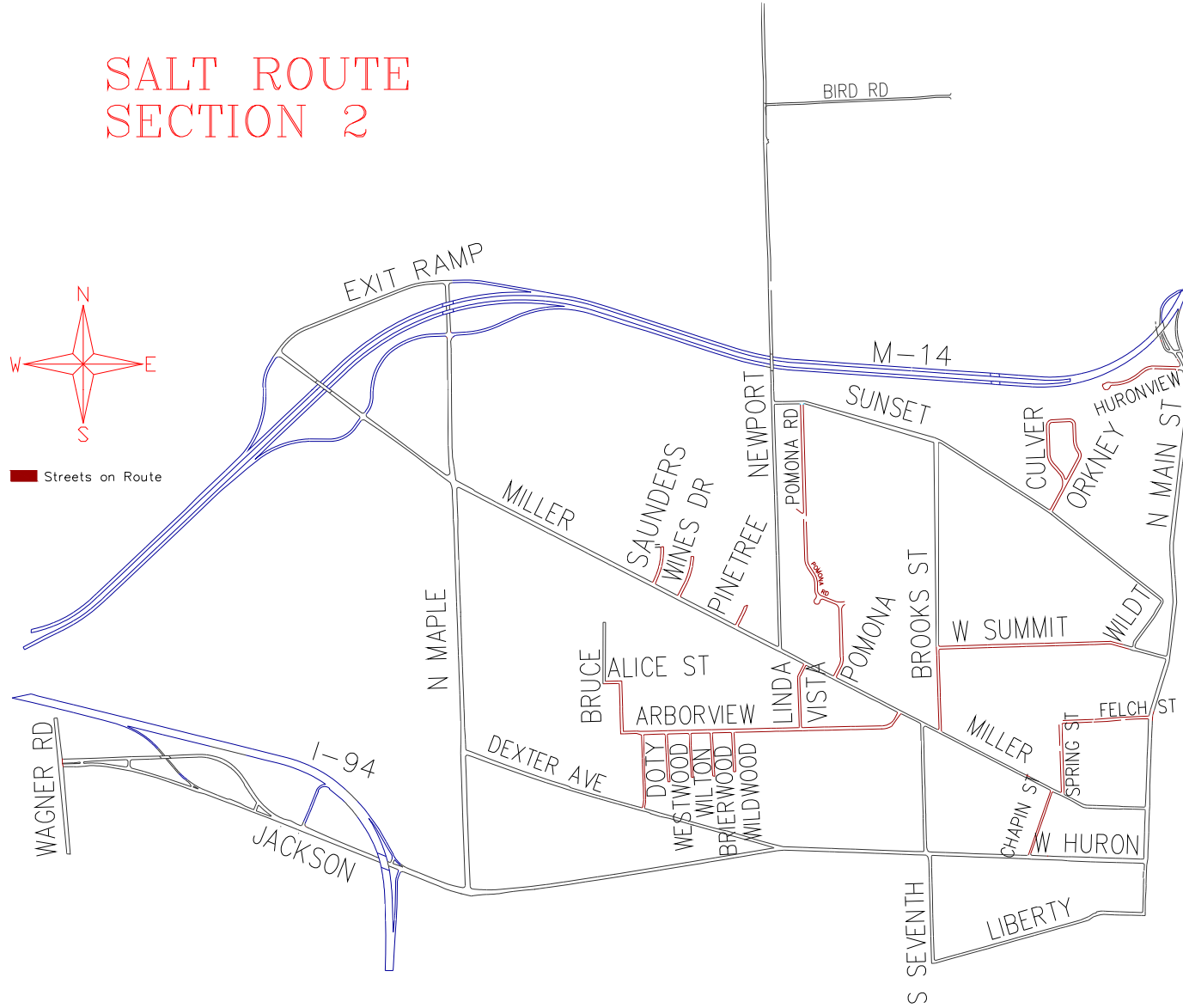


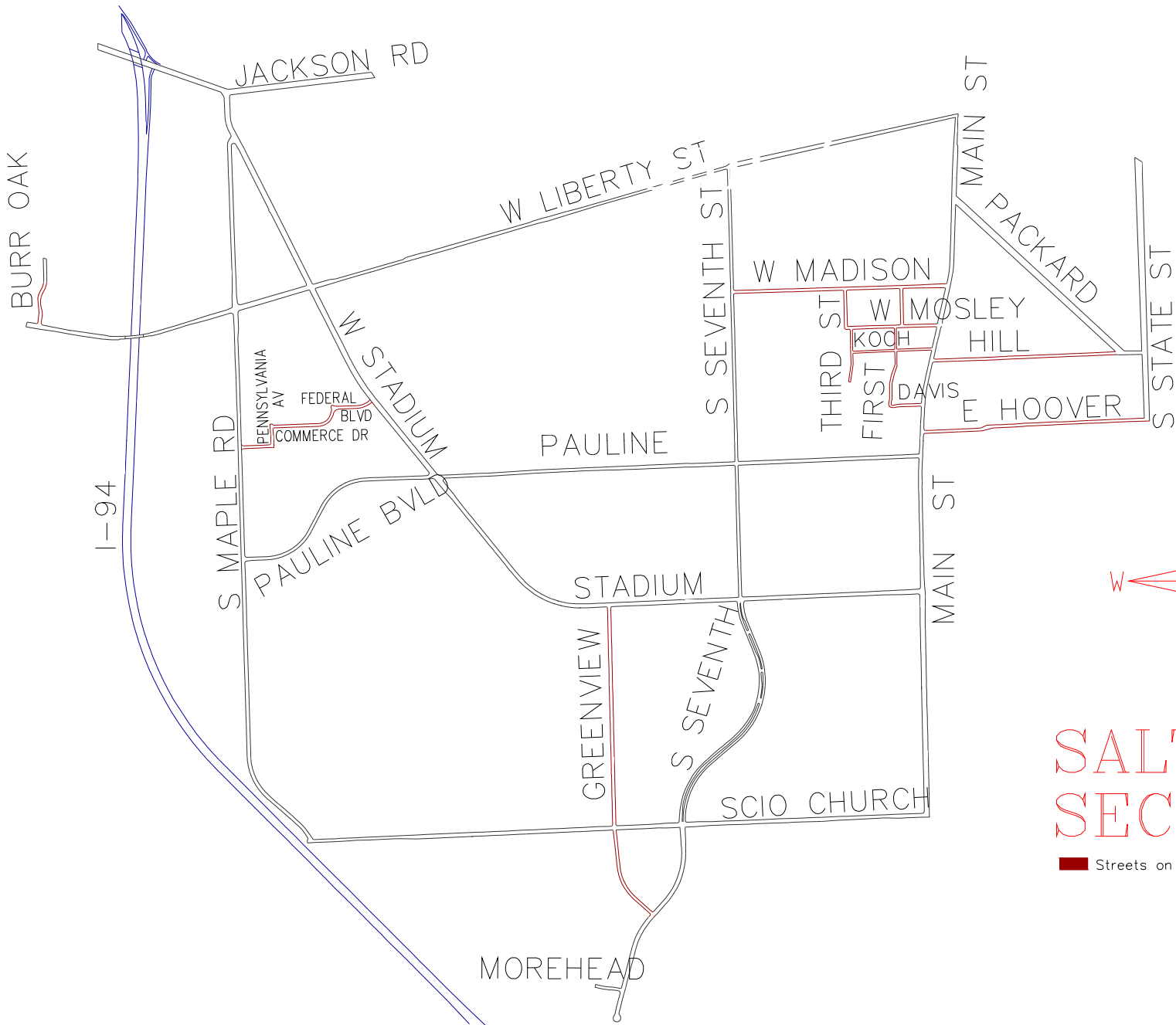
SALT ROUTE SECTION 1B

Streets on Route



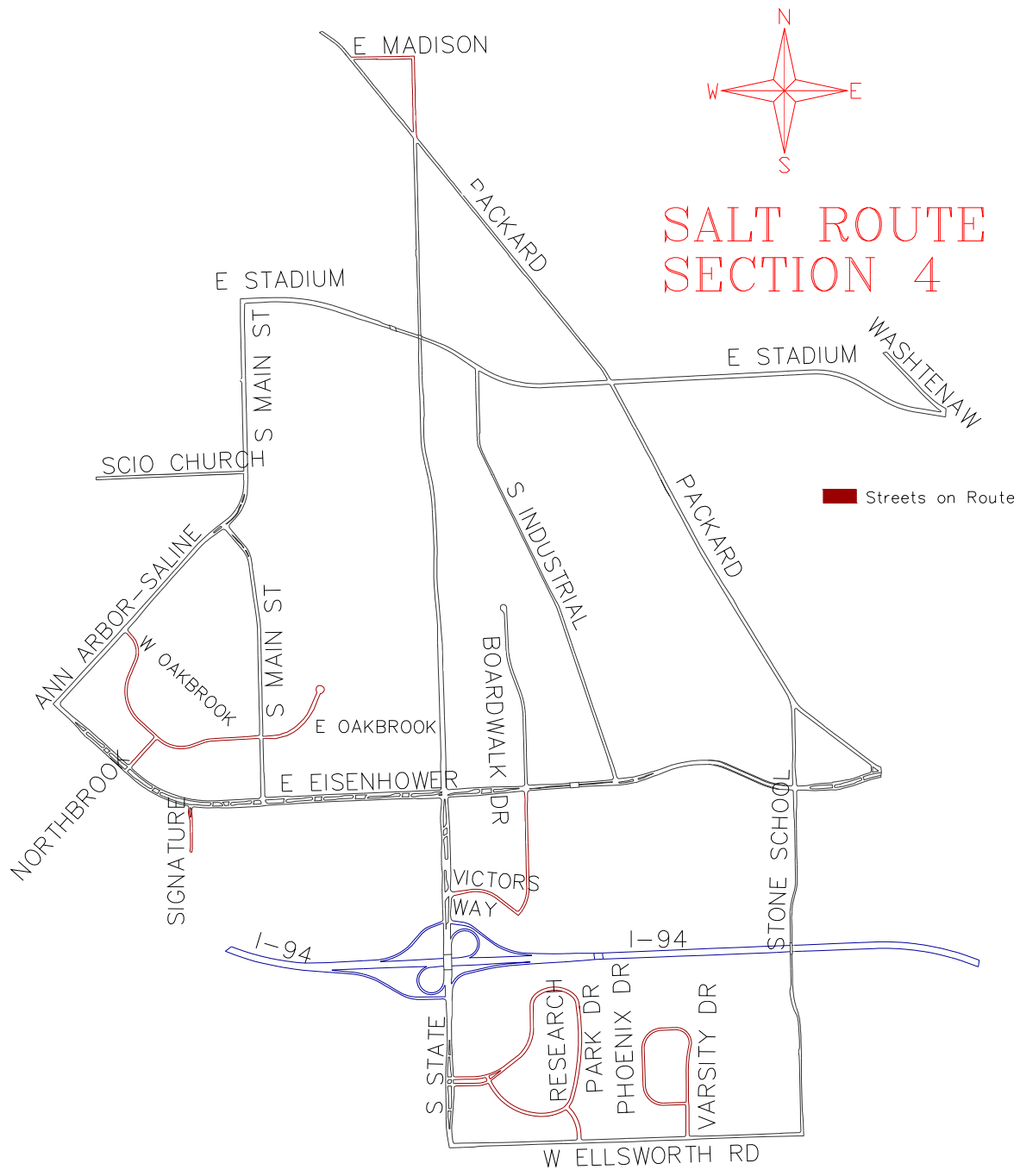
SALT ROUTE SECTION 2

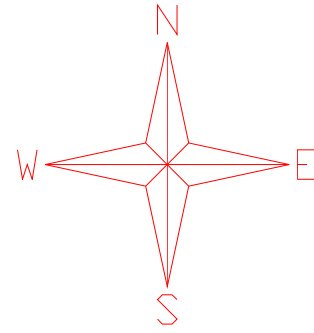




SALT ROUTE SECTION 3

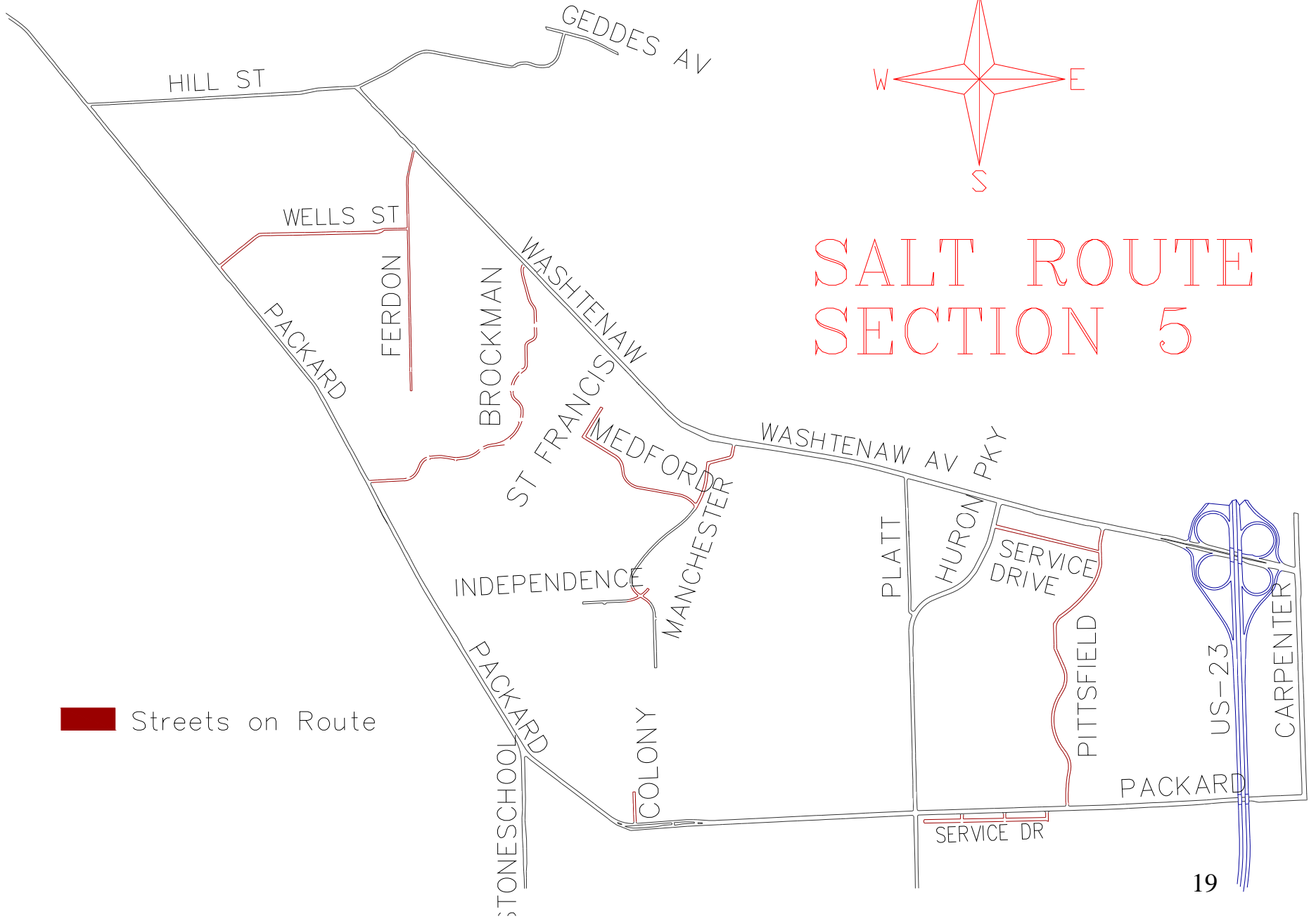
Streets on Route

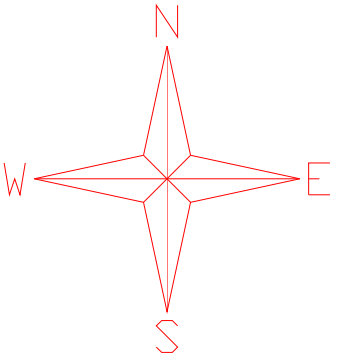
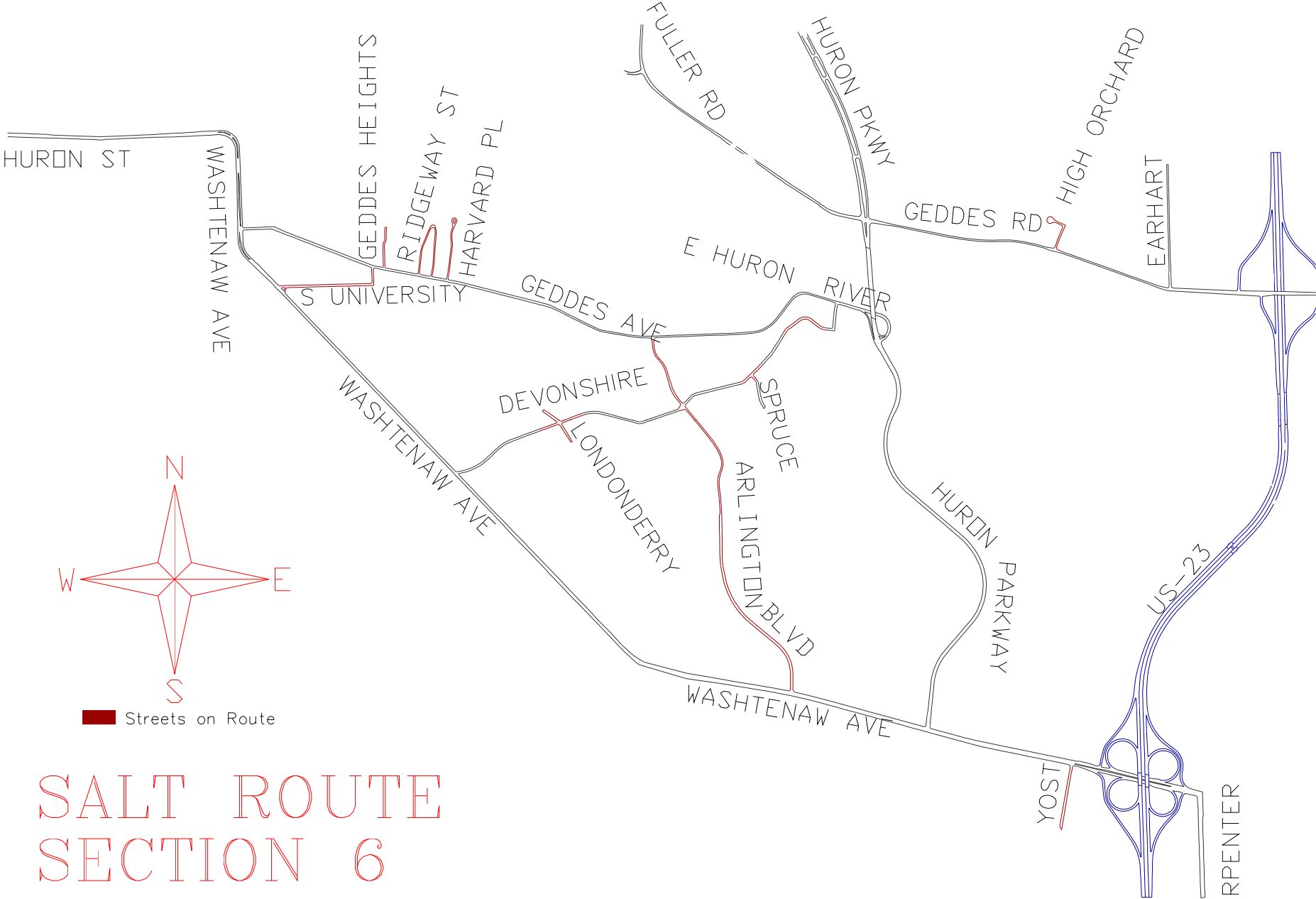




SALT ROUTE SECTION 5

 Streets on Route





Streets on Route

SALT ROUTE SECTION 6

Follow on Activities

- Turn lanes, passing lanes, deceleration lanes and median lanes are cleared and treated after the travel lanes have been completed
- Local trouble spots

Curb and Shoulder Plowing

- Bike lanes, shoulders and gutter pans are plowed back to allow for future storm events after primary and secondary salt routes have been cleared and treated

Local Sand/Plow Routes

- Once the primary and secondary major streets have been cleared and de-iced in an area, the local streets can then be cleared and treated
- The local streets are comprised of 22 routes

Local Treatment Doctrine

- Utilize all Field Operations resources on overtime if accumulation is four inches or greater. 12 hour shift operations until substantial completion is obtained
- Under four inch accumulation utilize straight time only for plowing and sanding
- Flexible based on forecast and conditions
- Sand application for traction enhancement at trouble spots. Full length sanding of streets not provided.

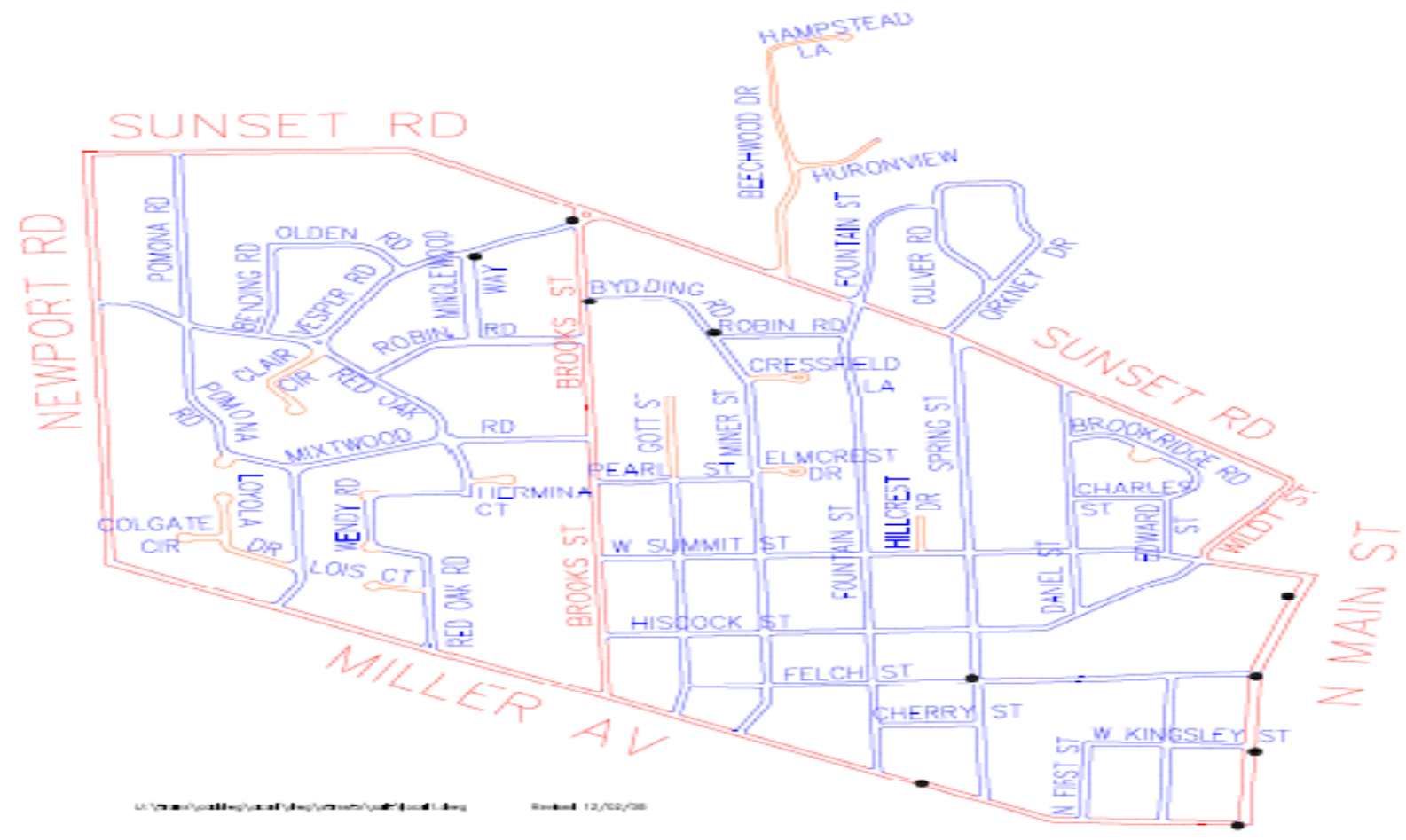
Prioritization Local Routes

- 1 - Local Street Plow Routes (residential)
 - Next Solid Waste section that containers haven't been placed out.
 - Through streets
 - Cul-De-Sacs, Dead ends and Alleys
- 2 - Sidewalks and Paths
 - City Facilities
 - Median Islands
 - Pedestrian Refuge
 - Other median island walkways
- 3 - Haul Away locations

LOCAL-1

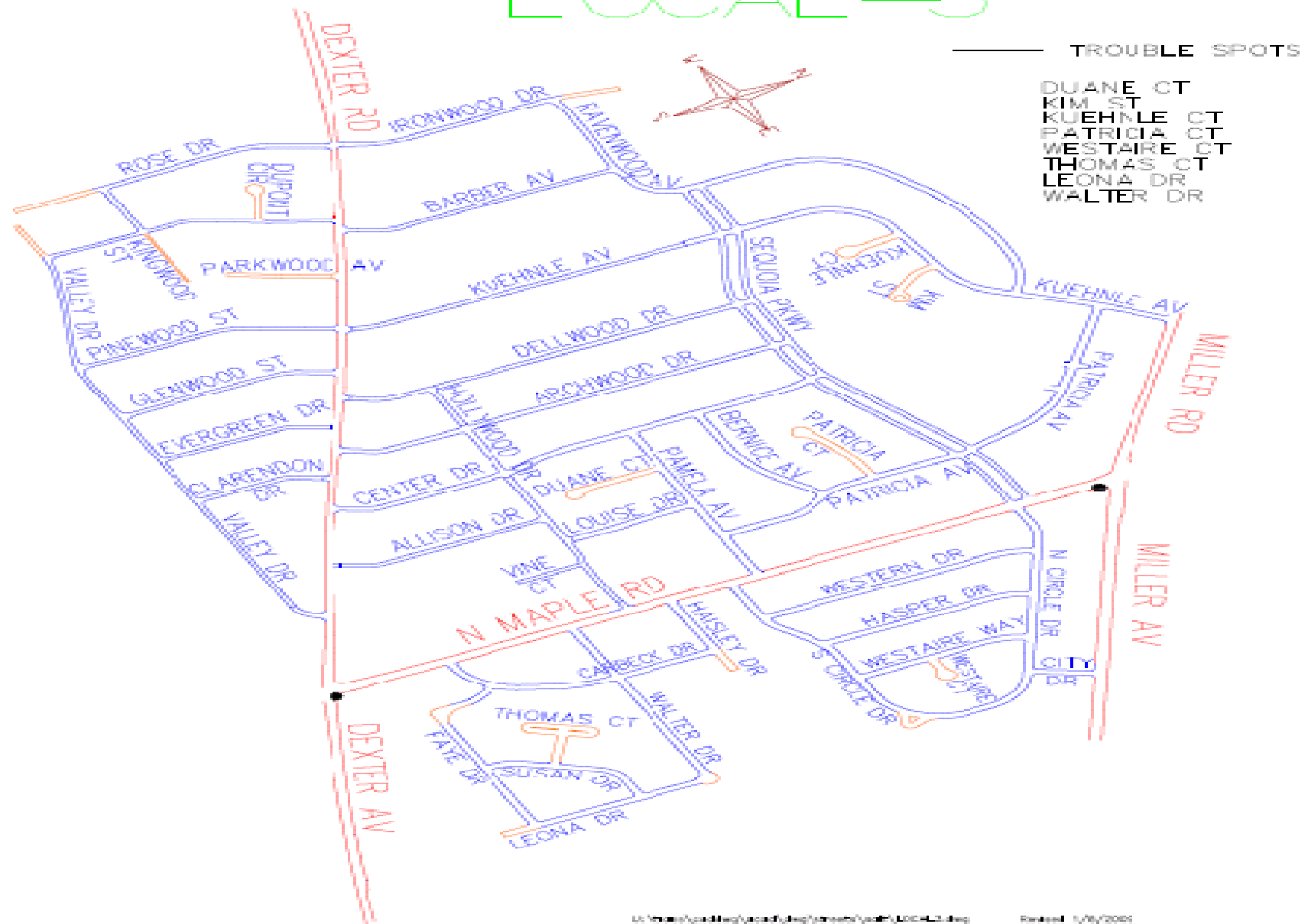
— TROUBLE SPOTS

- | | |
|--------------|-------------|
| HAMPSTEAD LA | COLGATE CIR |
| LOI... | OTT... |
| HILL... | EL... |
| CLAY... | EL... |
| H... | EL... |
| BROOK... | WILD... |

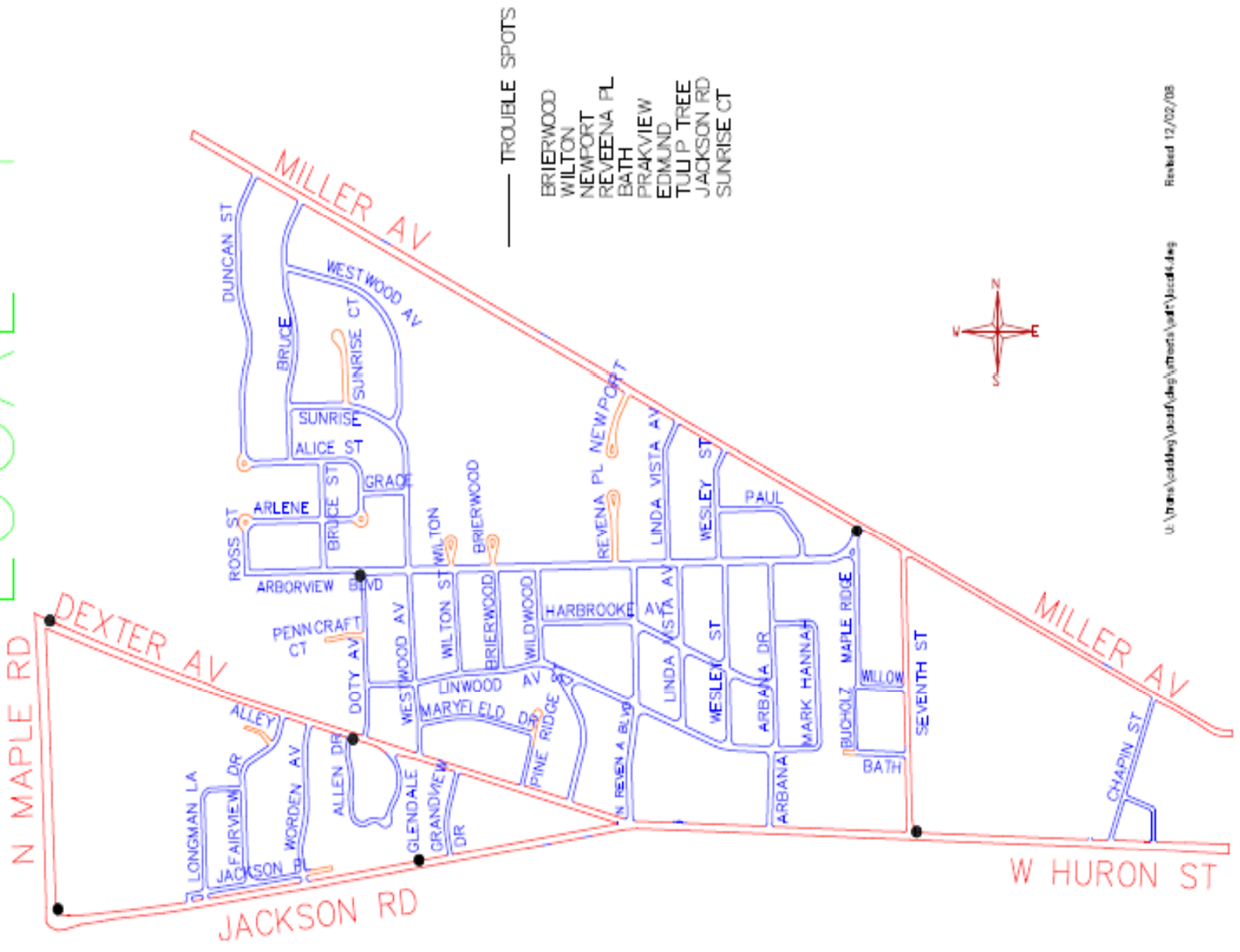


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LOCAL-3

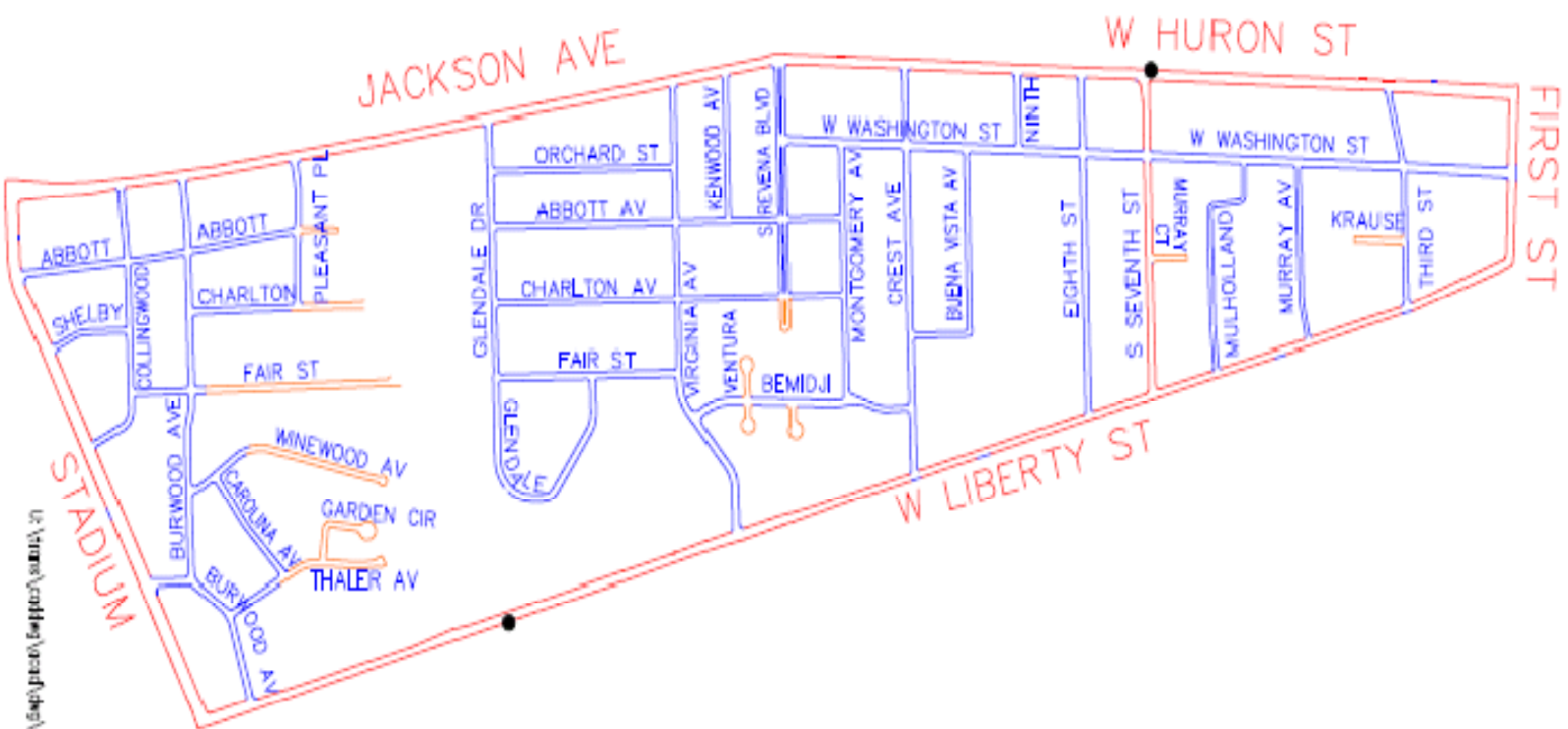


LOCAL-4



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 Revised 12/02/08

LOCAL 5-1



— TROUBLE SPOTS

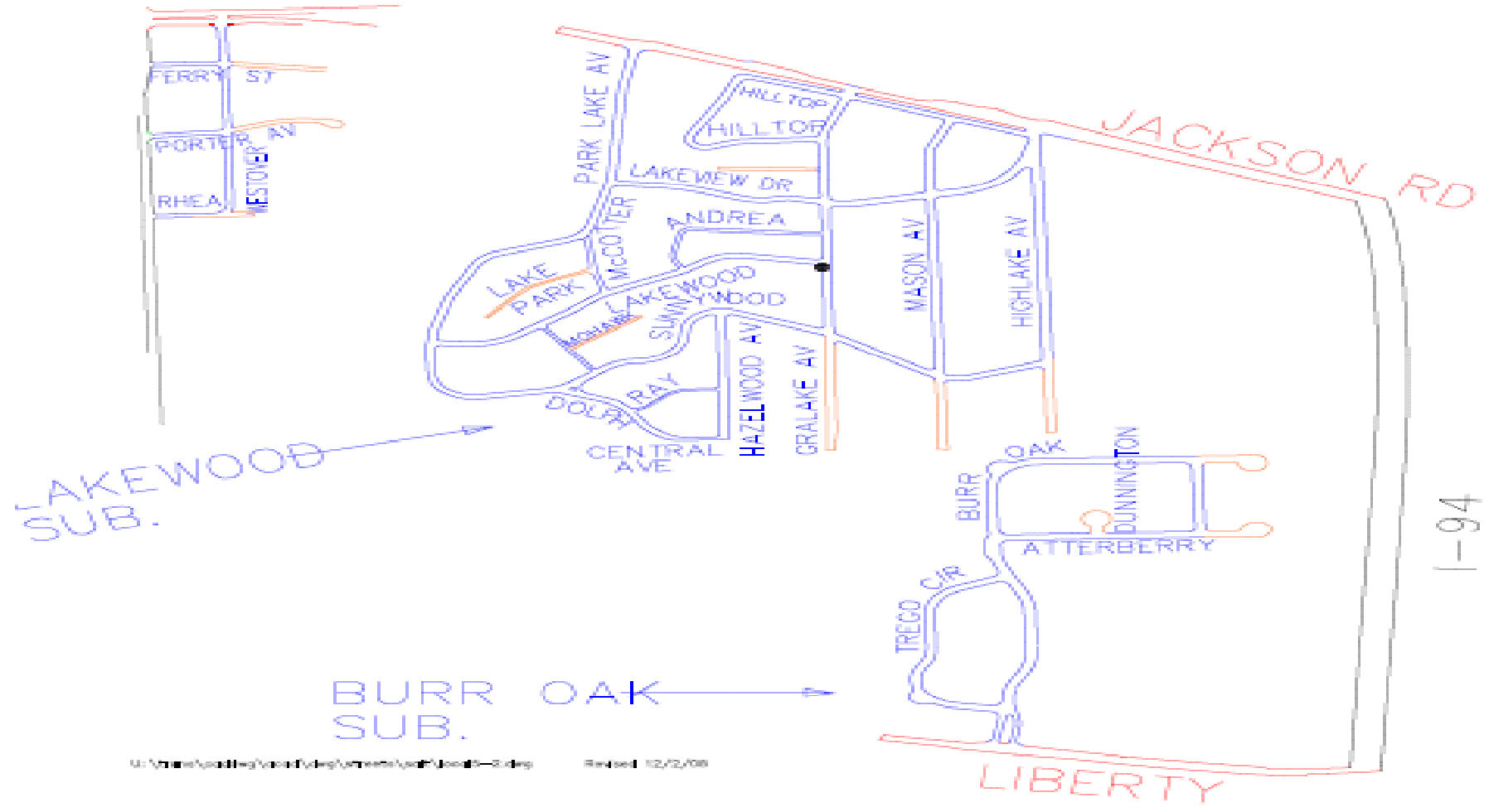
- PLEASANT PL
- VINEWOOD AVE
- GARDEN CIR
- THALER AVE
- KRAUSE
- MURRAY CT



LOCAL 5-2

— TROUBLE SPOTS

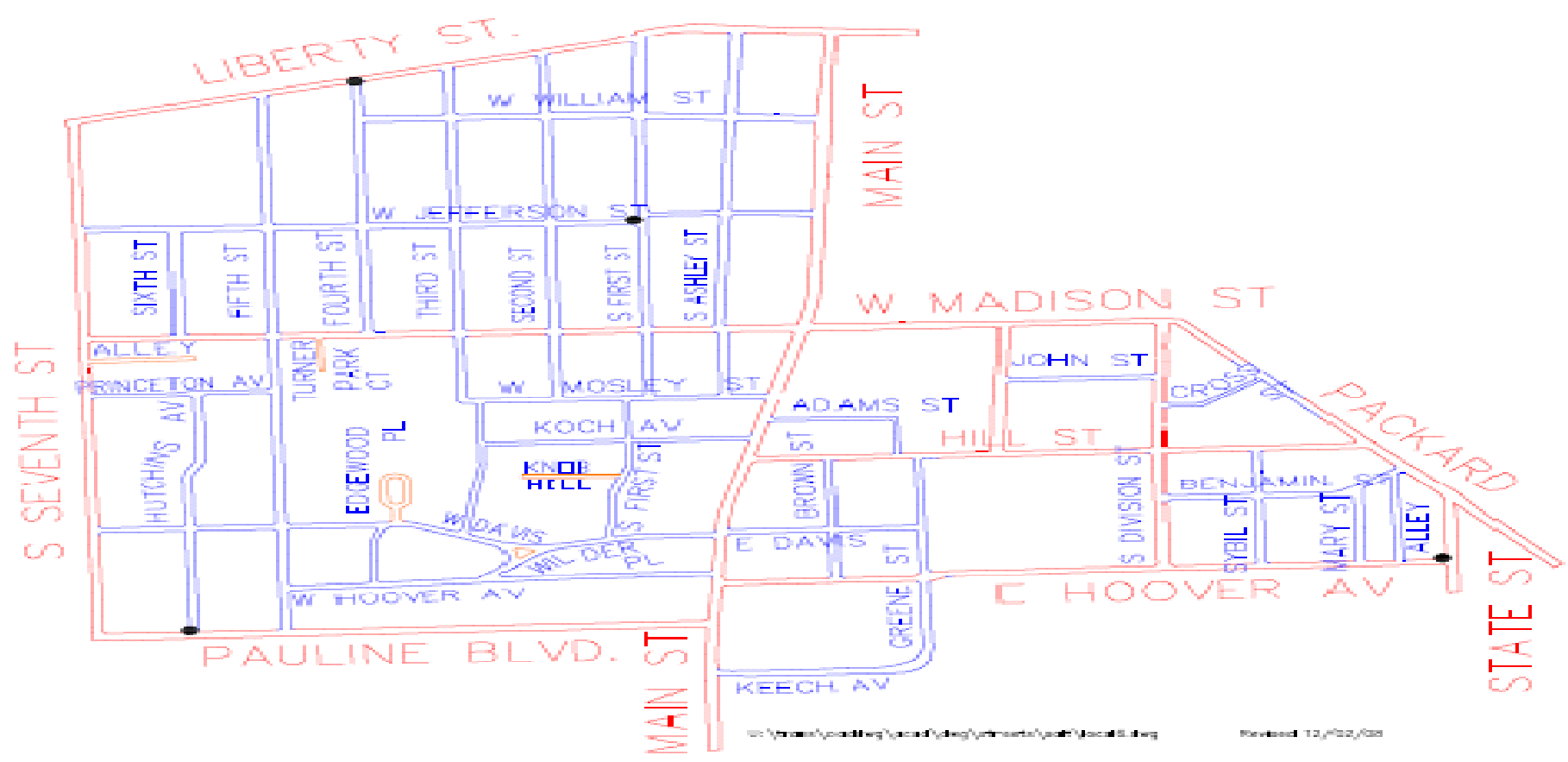
- BURR OAK
- MOHAWK
- LAKE PARK
- DUNNINGTON
- ATTERBERRY



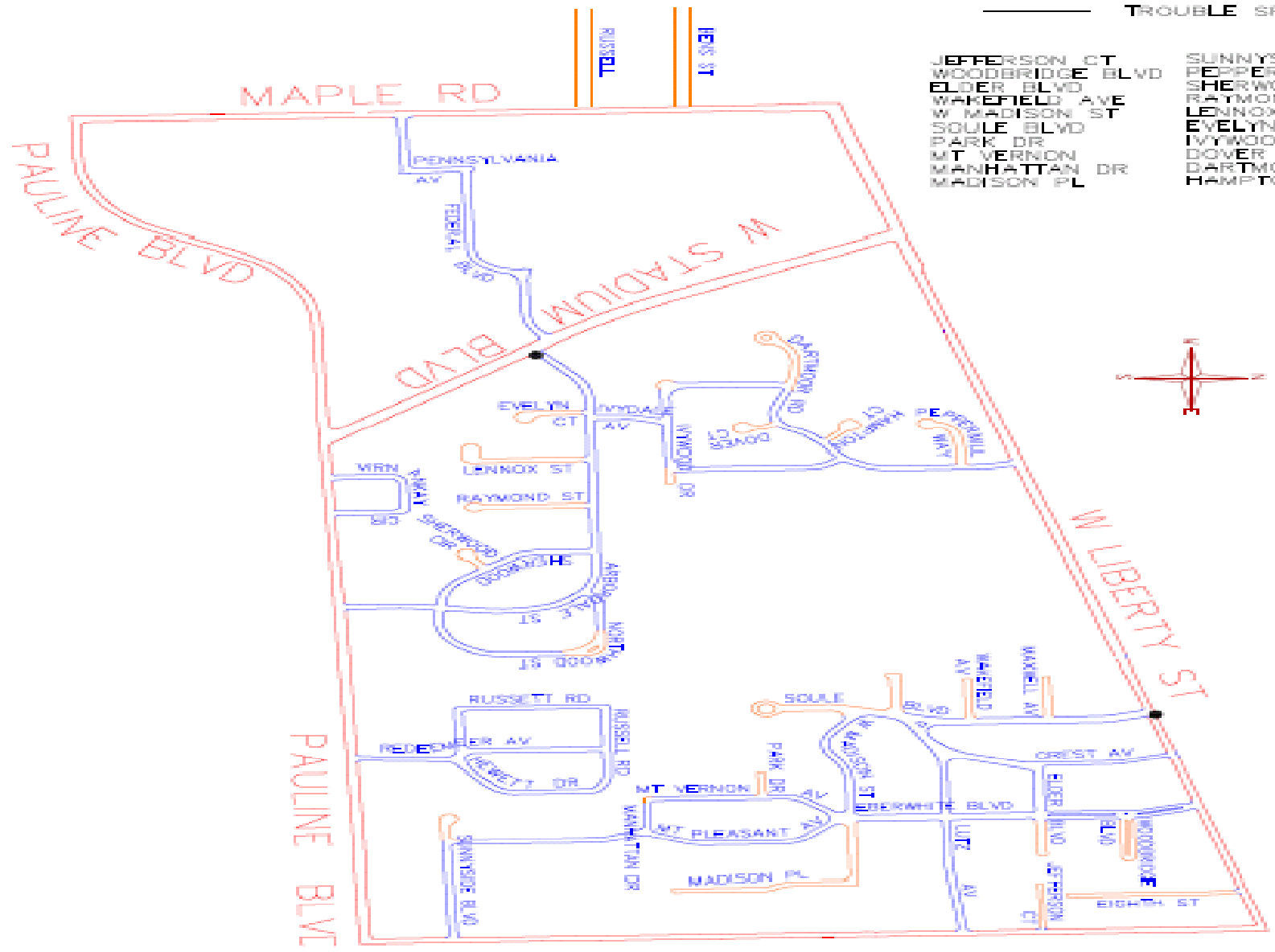
LOCAL-6

— TROUBLE SPOTS

- E MOSLEY
- TURNER PARK CT
- EDGEWOOD PL
- NOB HILL— PUBLIC TO PARKING LOT



LOCAL-7



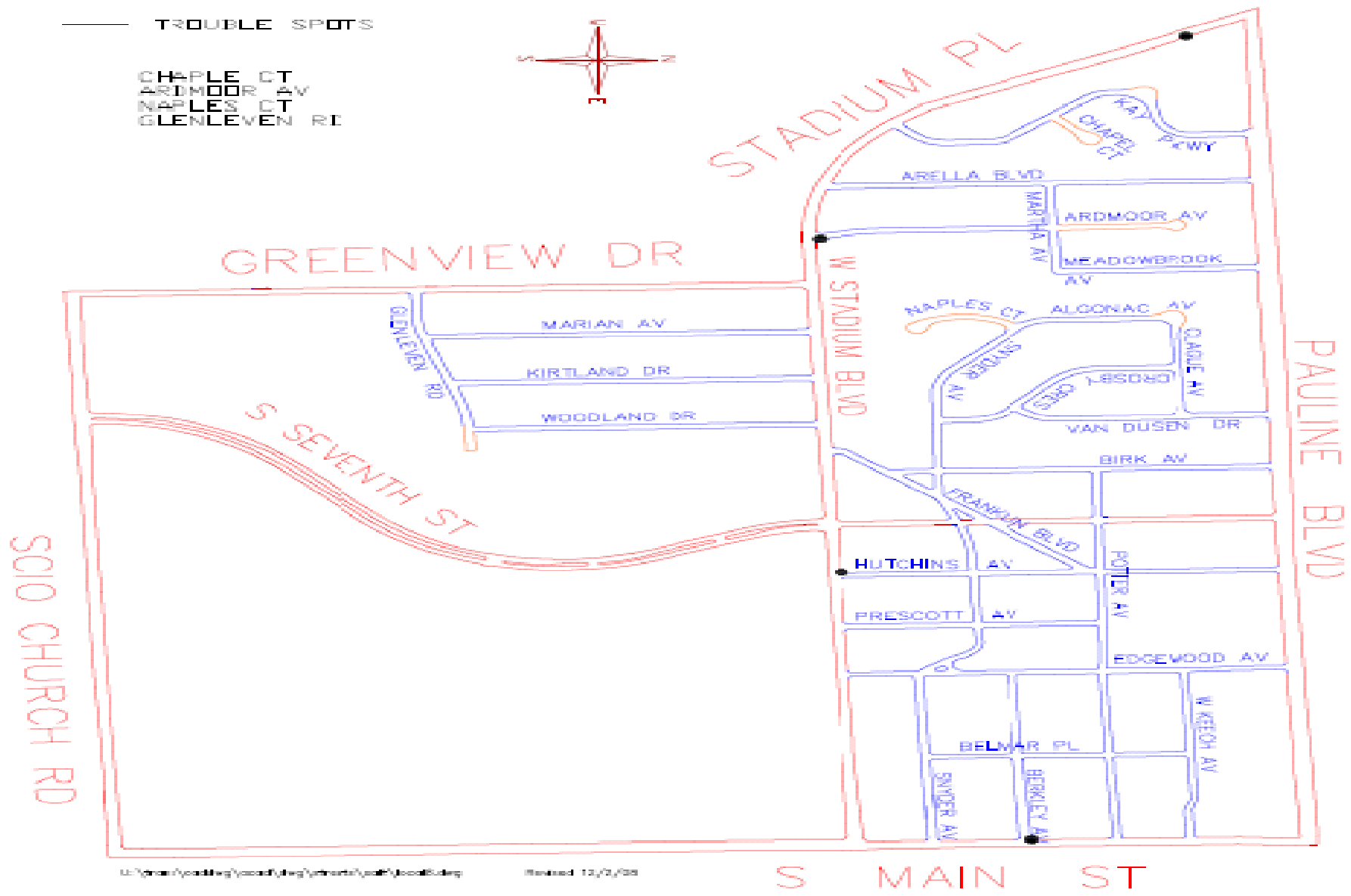
— TROUBLE SPOTS

- JEFFERSON CT
- WOODBRIDGE BLVD
- ELDER BLVD
- WAKEFIELD AVE
- W MADISON ST
- SOLLE BLVD
- BARK DR
- MT VERNON
- MANHATTAN DR
- MADISON PL
- SUNNYSIDE BLVD
- PEPPERMILL WAY
- SHERWOOD CIR
- RAYMOND ST
- LENNOX ST
- EVELYN CT
- IVYWOOD DR
- DOVER CT
- DARTMOOR RD
- HAMPTON CT

LOCAL - 8

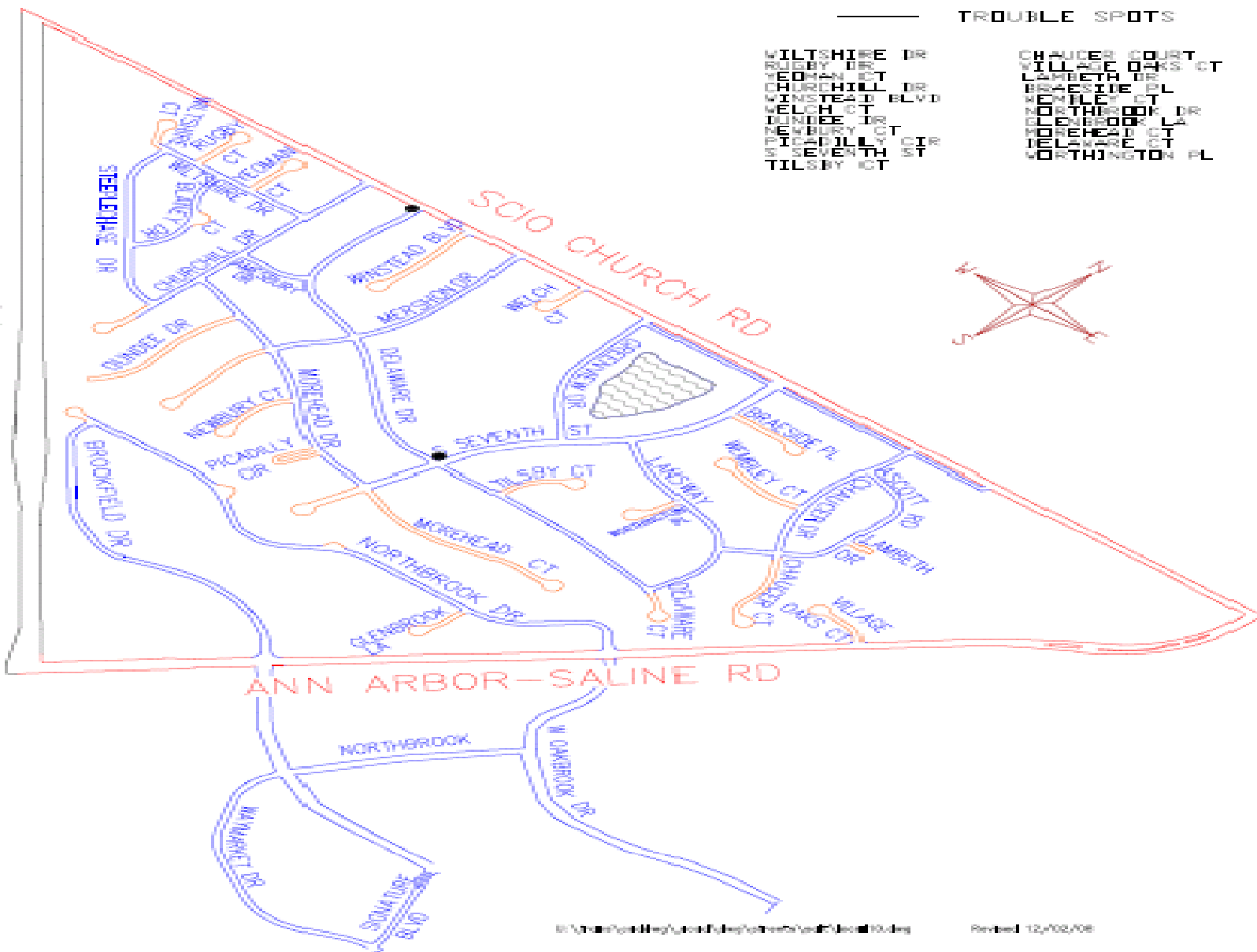
— TROUBLE SPOTS

- CHAPPLE CT
- ARDMOOR AV
- LEWIS CT
- LEWIS RD



LOCAL-10

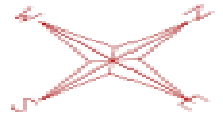
I-94



WILTSHIRE DR
 WILCOBY DR
 WILSON DR
 WILSON HILL DR
 WILSON BLVD
 WILSON CT
 WILSON DR
 WILSON CT
 WILSON DR
 WILSON CT

— TROUBLE SPOTS

CHAUDER COURT
 VILLAGE OAKS CT
 LAMBETH DR
 BRASSIE PL
 WINDY CT
 BRASSIE PL
 WINDY CT
 VILLAGE OAKS CT
 LAMBETH DR

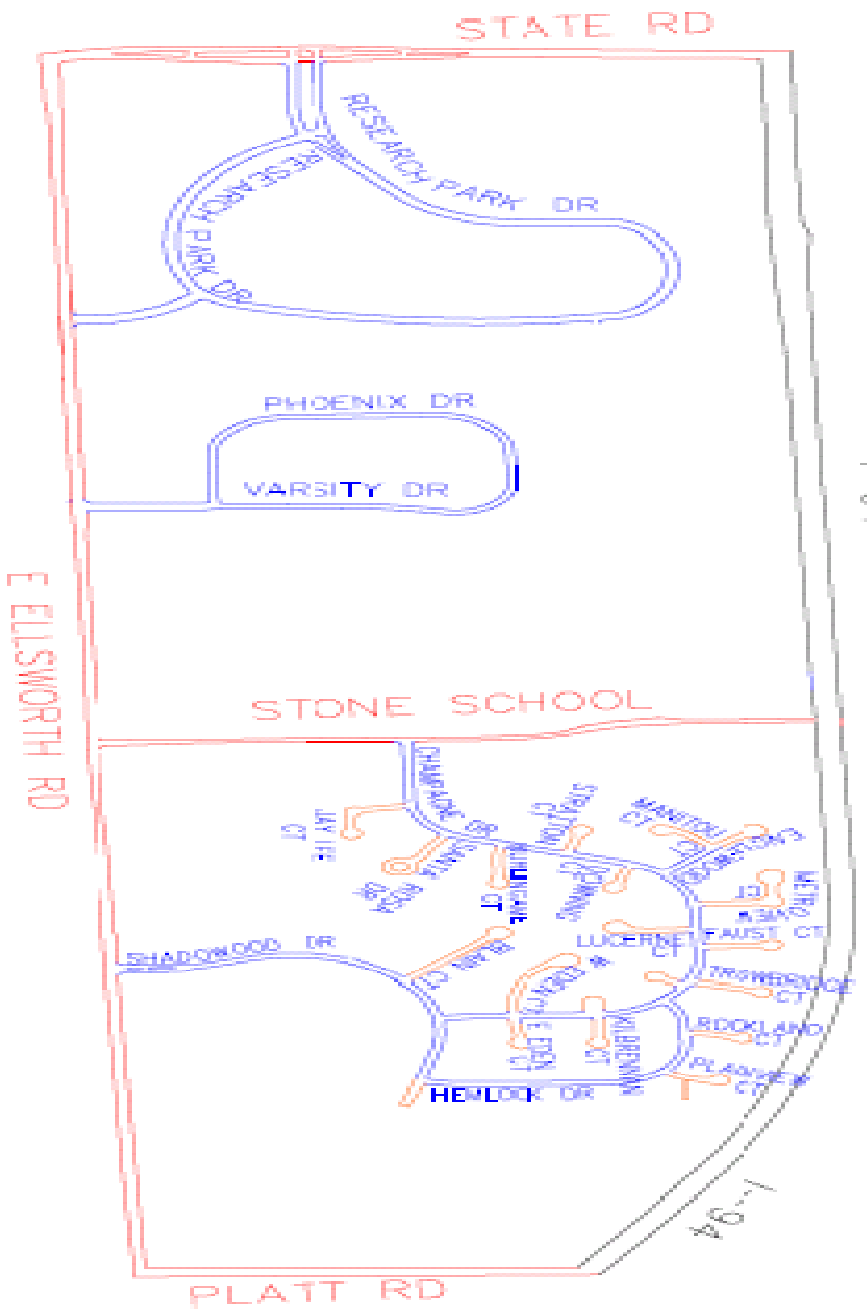


LOCAL-12



— TROUBLE SPOTS

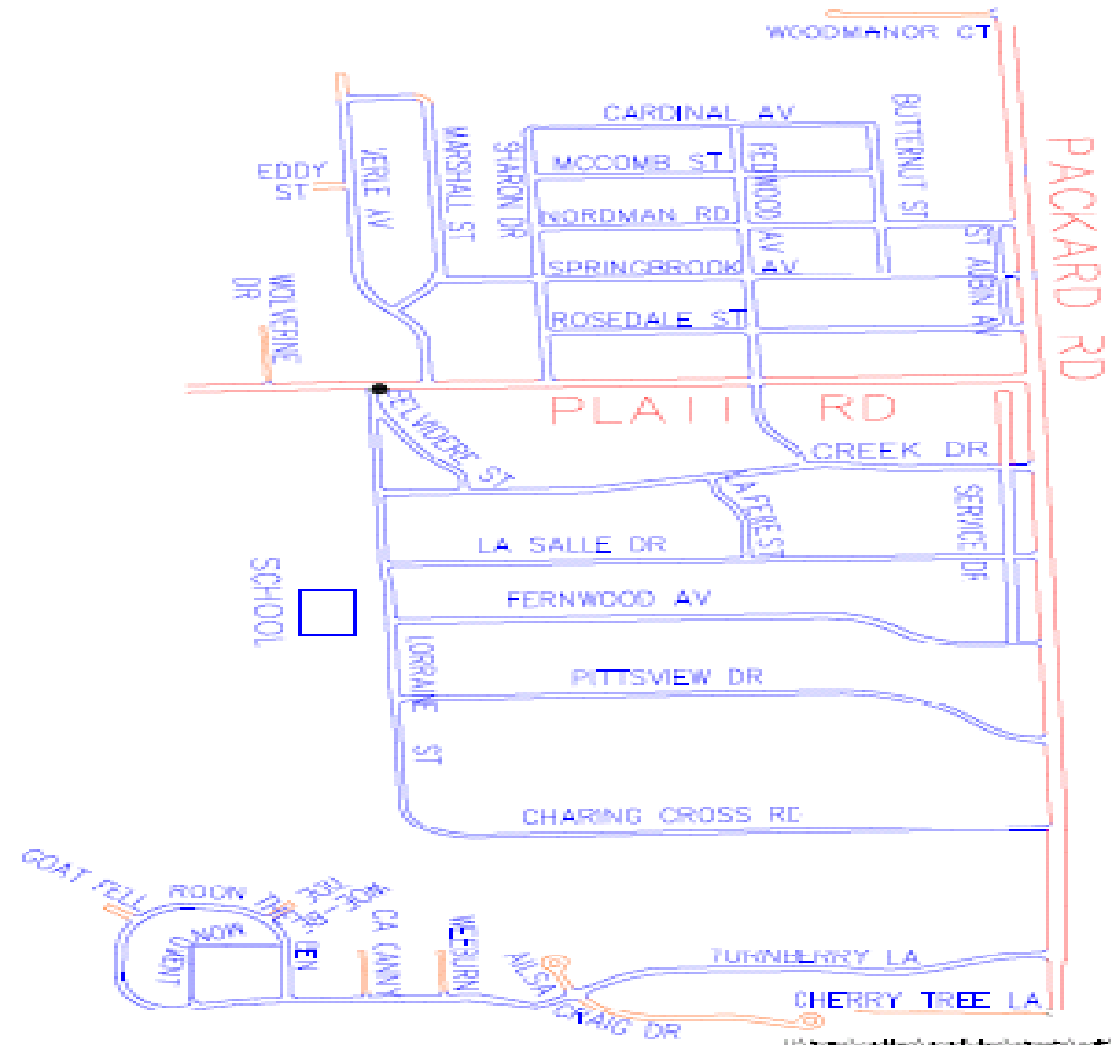
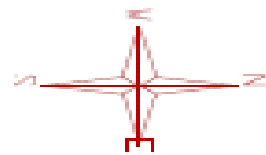
- ENGLAND CT
- STRATTON CT
- IDANING CT
- BURLINGAME CT
- LUCERNE CT
- FAUST CT
- ROCKLAND CT
- E EDEN CT
- PLAINVIEW CT
- KILBRENNAH CT
- TROUBERTSE CT
- N EDEN CT
- MANITOU CT
- BLAIN CT
- HARDYKE CT
- SANTA ROSA DR
- JAY LEE CT



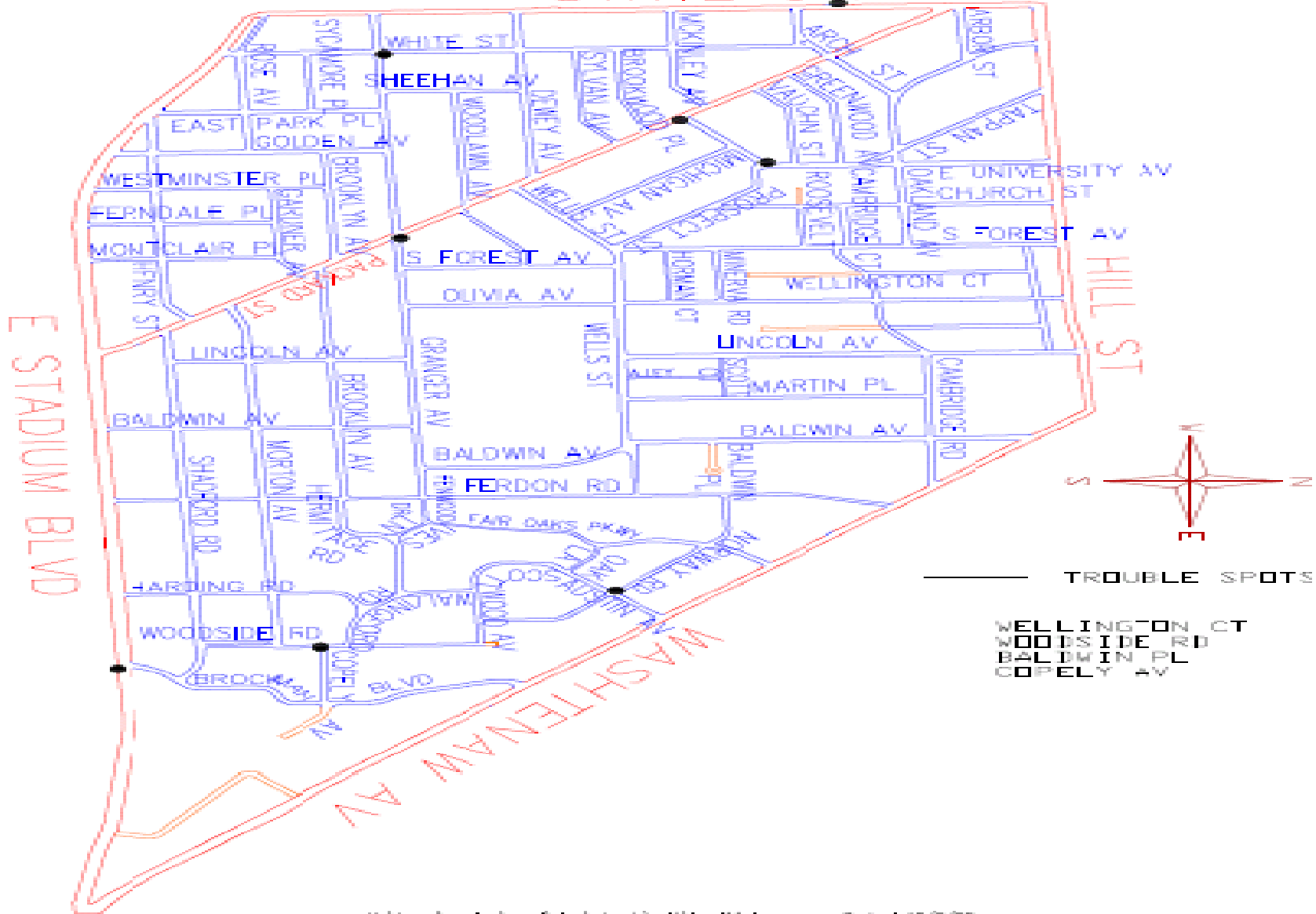
LOCAL-13

— TROUBLE SPOTS

- WOODMANOR CT
- EDDY ST
- MARSHALL ST
- WOLVERINE DR
- VERLE AV
- PACKARD RD SERVICE WEST SECTION

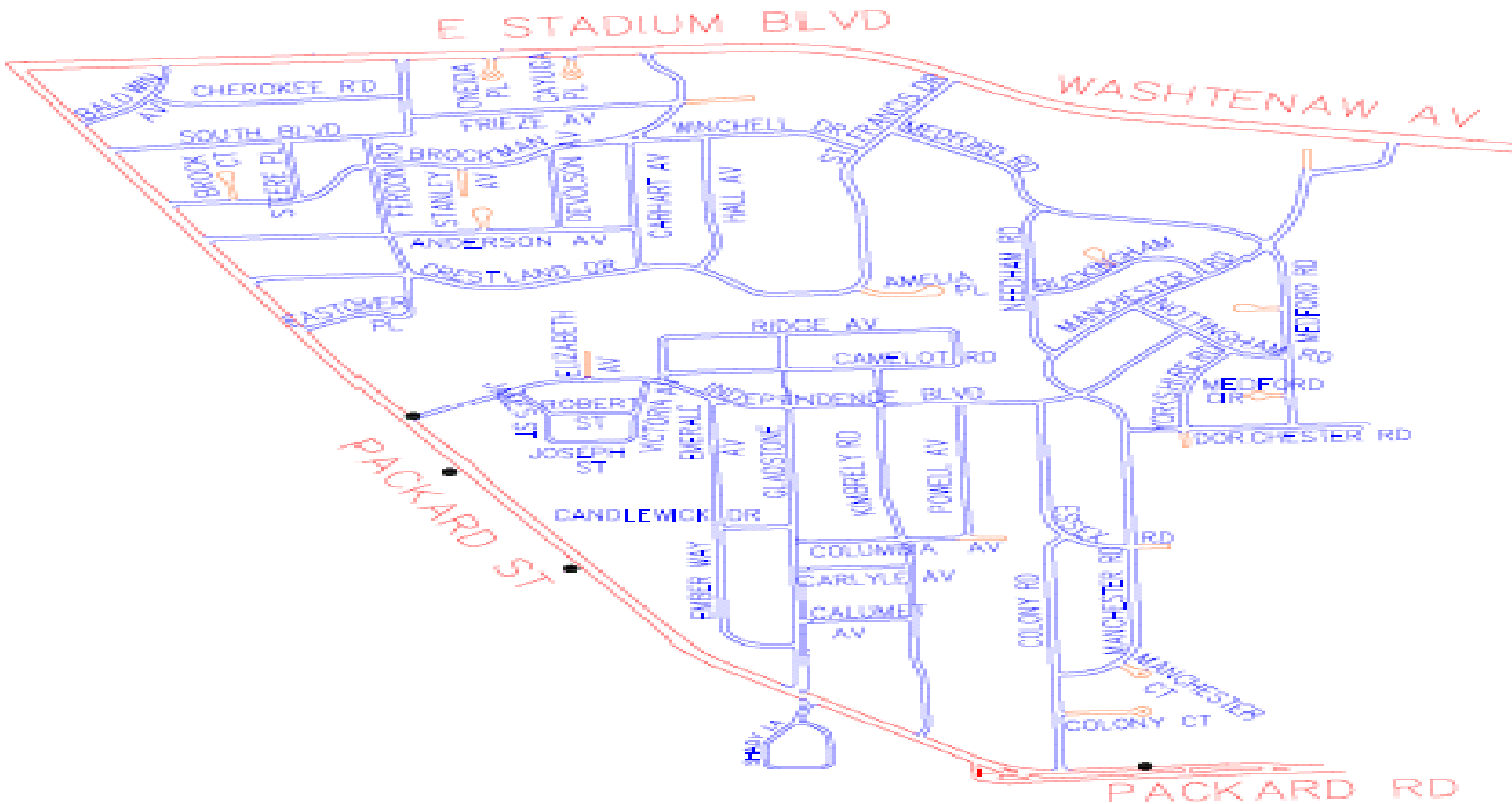


LOCAL-14 STATE ST.



LOCAL-15

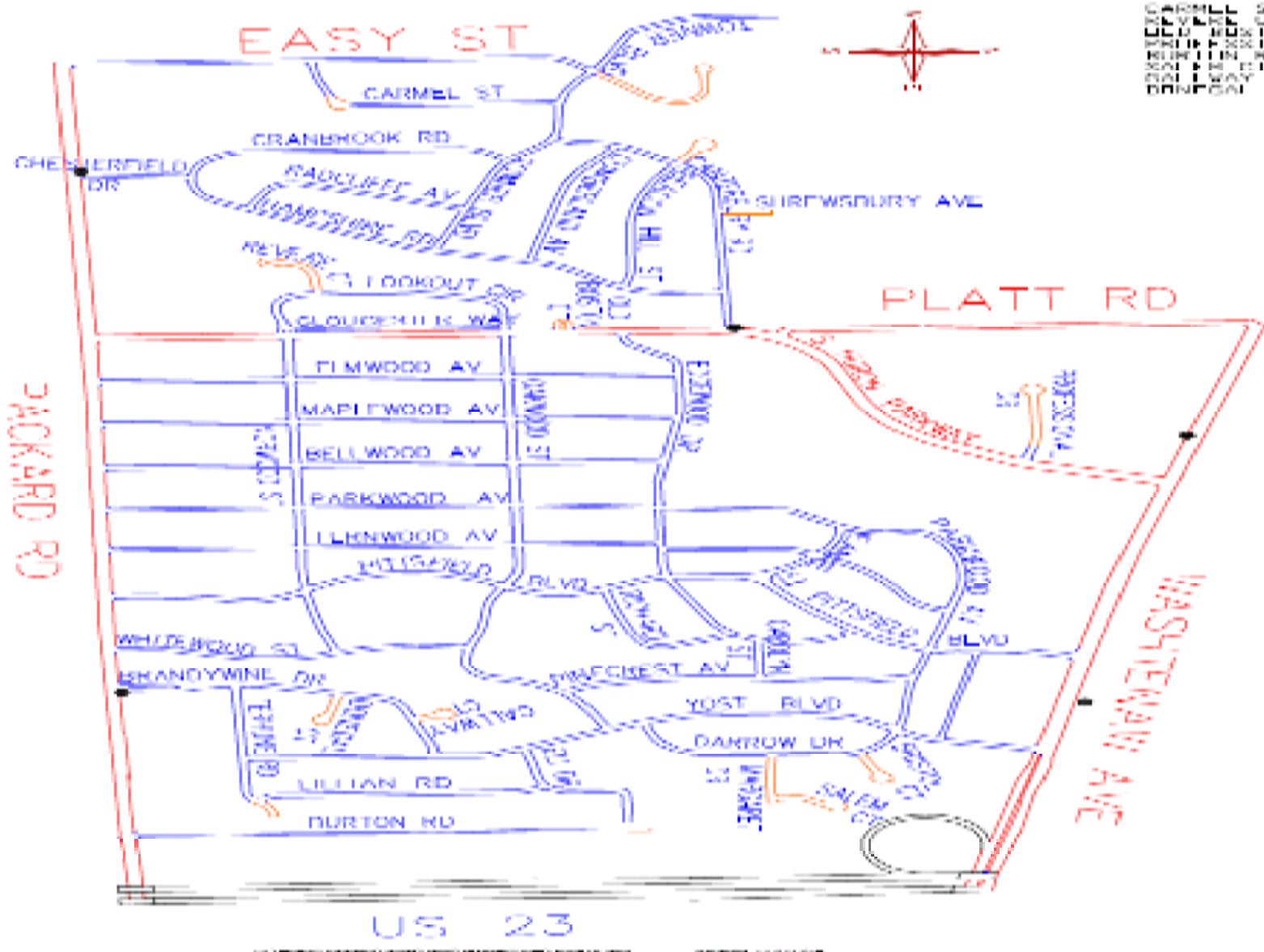
- TROUBLE SPOTS
- 1210 MILWAUKEE
 - 1210 ST. LOUIS
 - 1210 W. 10TH
 - 1210 W. 9TH
 - 1210 W. 8TH
 - 1210 W. 7TH
 - 1210 W. 6TH
 - 1210 W. 5TH
 - 1210 W. 4TH
 - 1210 W. 3TH
 - 1210 W. 2TH
 - 1210 W. 1TH
 - 1210 W. 10TH
 - 1210 W. 9TH
 - 1210 W. 8TH
 - 1210 W. 7TH
 - 1210 W. 6TH
 - 1210 W. 5TH
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 - 1210 W. 8TH
 - 1210 W. 7TH
 - 1210 W. 6TH
 - 1210 W. 5TH
 - 1210 W. 4TH
 - 1210 W. 3TH
 - 1210 W. 2TH
 - 1210 W. 1TH



LOCAL 16

TROUBLE SPOTS

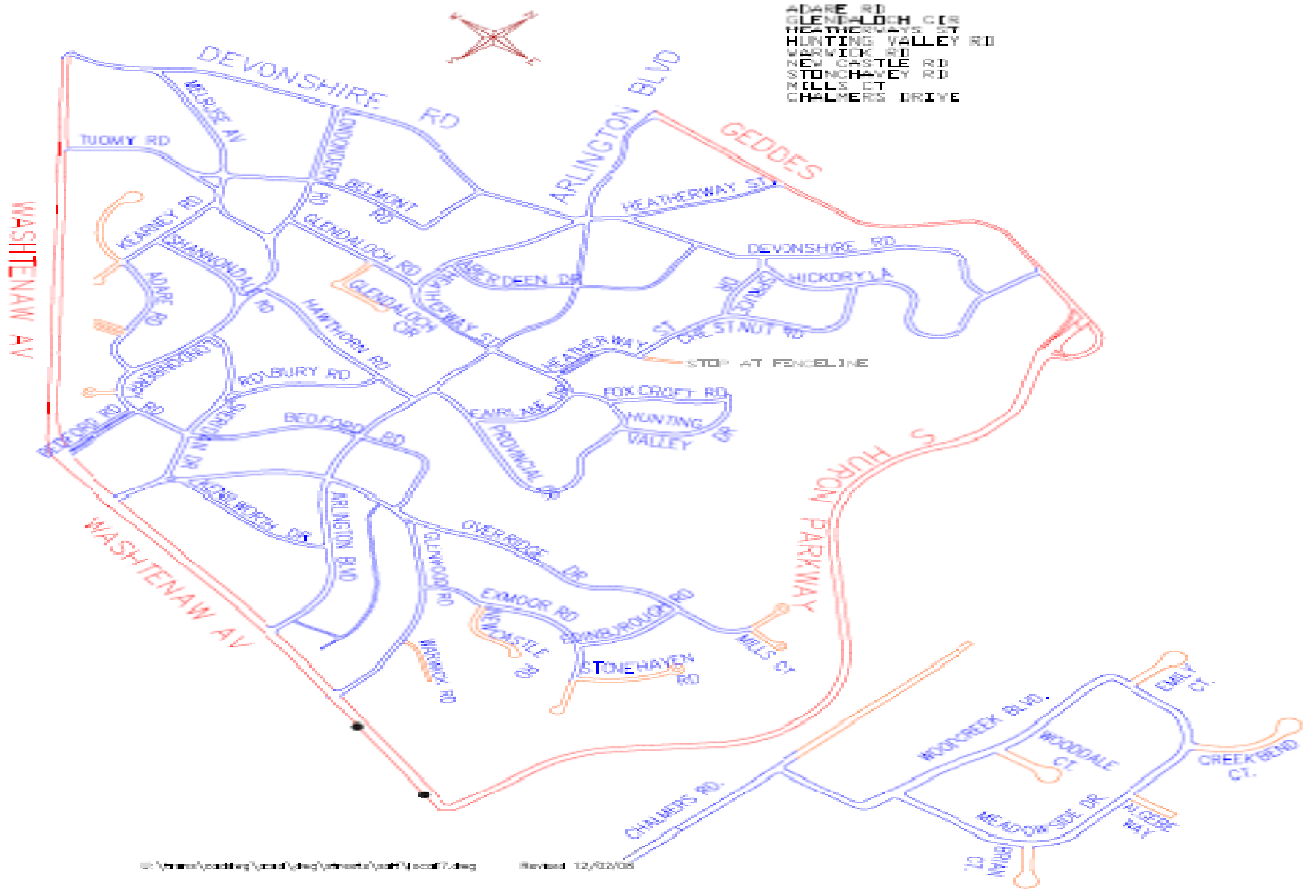
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CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
CR	CR	CR	CR	CR	CR	CR	CR	CR	CR
CR	CR	CR	CR	CR	CR	CR	CR	CR	CR



LOCAL-17

— TROUBLE SPOTS

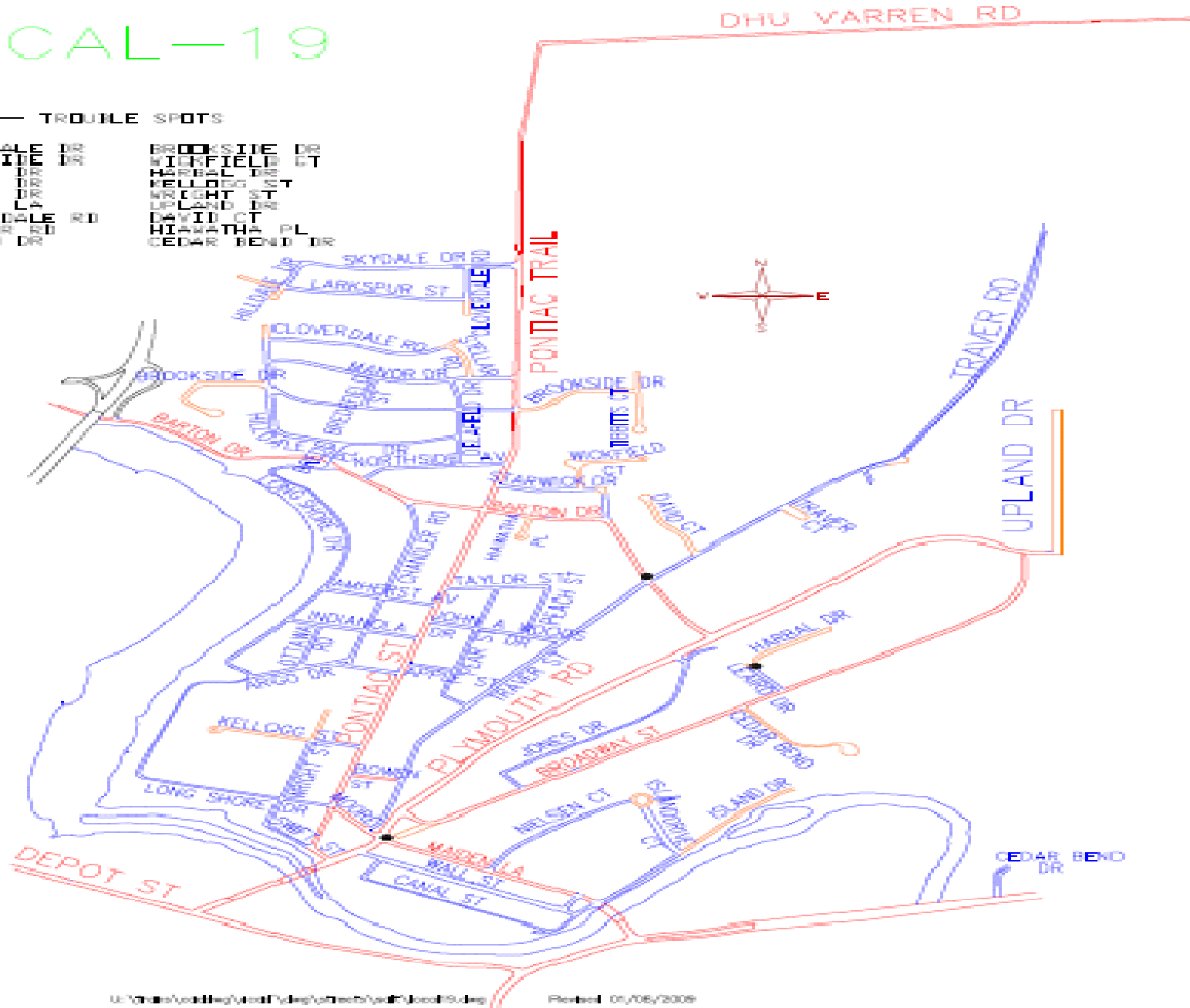
- ADARE RD
- GLENDALICH CIR
- HEATHERWAYS ST
- HUNTING VALLEY RD
- WERRICK RD
- NEW CASTLE RD
- STONEHAYEN RD
- MILLS CT
- CHALMERS DRIVE



LOCAL-19

— TROUBLE SPOTS

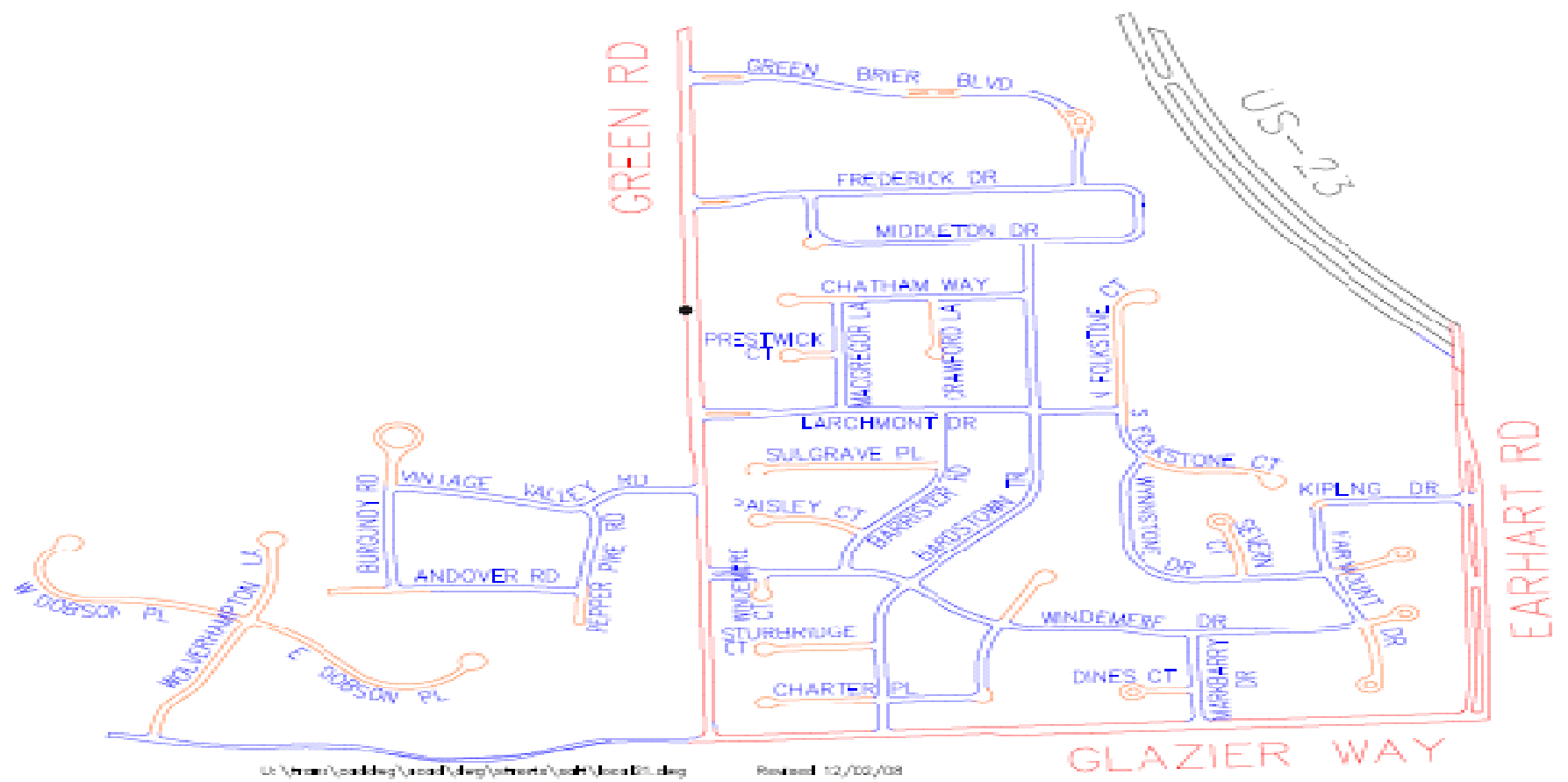
HILL CROFT DORRIS BROOK HAY LAW MILL MAY NORTH RIVER SUN WATER WIND YARD	WINDY HILL MAY NORTH RIVER SUN WATER WIND YARD	WINDY HILL MAY NORTH RIVER SUN WATER WIND YARD	WINDY HILL MAY NORTH RIVER SUN WATER WIND YARD
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LOCAL-21

— TROUBLE SPOTS

- | | |
|----------------|----------------|
| BURGUNDY RD | CRAWFORD LA |
| ANDOVER RD | MACGREGOR LA |
| PEPPER PIPE RD | PAISLEY CT |
| SULGRAVE PL | PRESTWICK CT |
| W DOBSON PL | WINDEMERE CT |
| E DOBSON PL | DINES CT |
| CHARTER PL | FAIRMOUNT DR |
| STURBRIDGE CT | SEVERN CT |
| DINES CT | N FOLKSTONE CT |



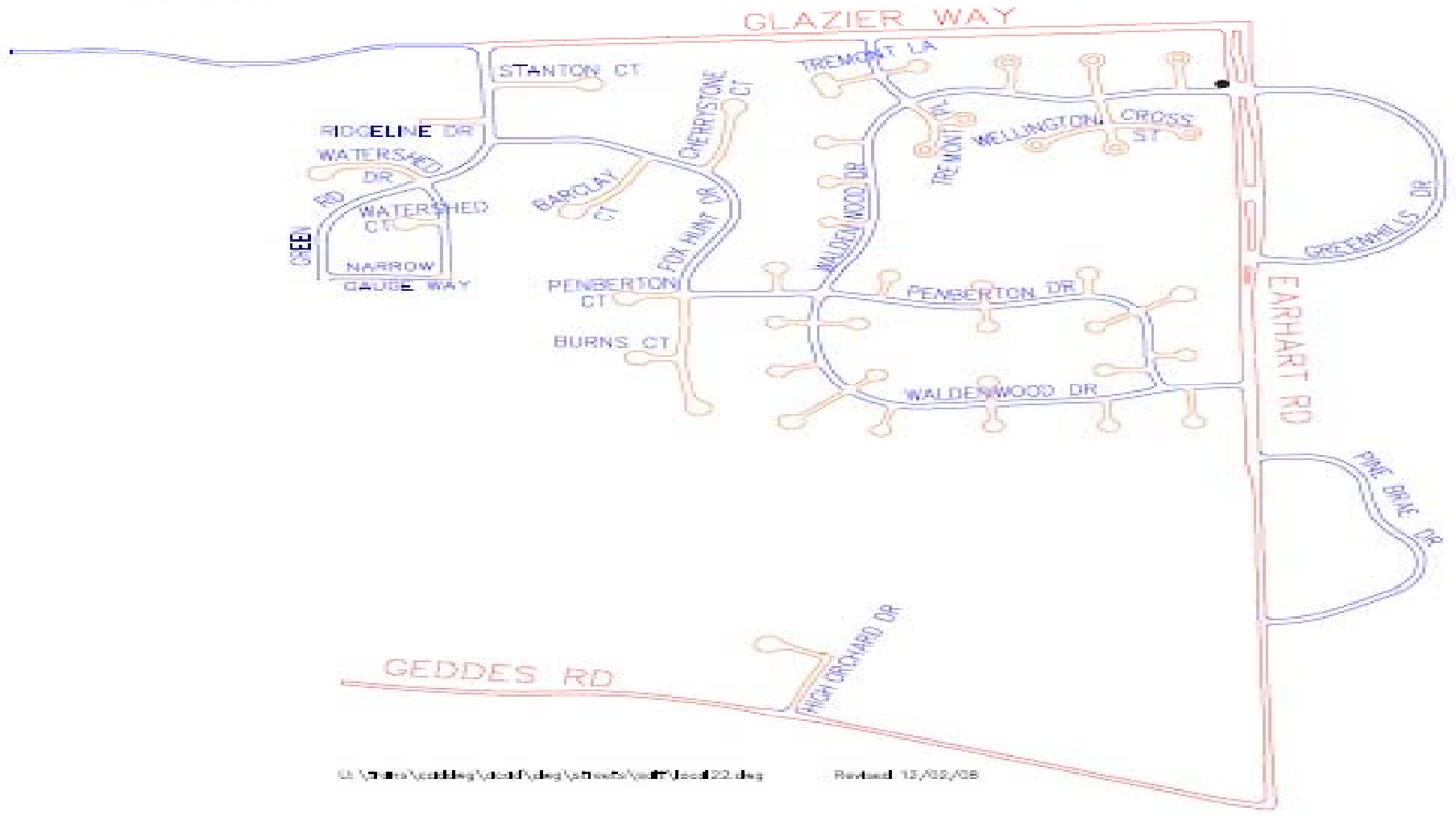
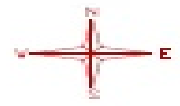
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Revised 12/03/08

LOCAL-22

— TROUBLE SPOTS

- STANTON CT
- BARCLAY CT
- PENBERTON CT
- BURNS CT
- RIDGELINE CT
- WALDENWOOD DR
- PARCLAY CT
- RIDGELINE DR
- TREMONT LA
- WELLINGTON CROSS
- TREMONT FL
- PENBERTON DR
- WATERSHED DR
- WATERSHED CT
- CHERRYSIDE CT



AATA bus routes and shelters

- The majority of AATA routes are currently on City designated salt routes
- Clearing of snow and ice accumulation at designated bus stops and shelters is provided by AATA

Non Motorized Routes

- There are 11 non-motorized routes
- Routes are staffed only after street maintenance vehicles are fully mobilized
- Equipment utilized is unsuitable for road and street use
- Site conditions may require haul away at a later time (bridge shoulders)

Sidewalks fronting City property

- Our goal is to clear and treat all city owned walks within the timeframes specified by ordinance for the adjacent properties if not earlier
 - **Non residential** All snow and ice which has accumulated on the adjacent public sidewalk prior to 6am must be removed by noon.
 - **Residential** Within 24 hours after the end of each accumulation of snow greater than 1 inch, the owner of every residentially zoned property must remove the accumulation from the adjacent public sidewalk and ramps leading to a crosswalk

Questions

- ?

Additional Information

- Field Operations Plowing progress web page
www.a2gov.org/government/publicservices/fieldoperations/Pages/StreetSnowPlowingStatus.aspx
- Snow Desk phone number 734-794-6367
- Sidewalk Snow removal complaints can be submitted via web at
www.a2gov.org/government/safety/services/Police/Pages/SnowRemovalonSidewalks.aspx