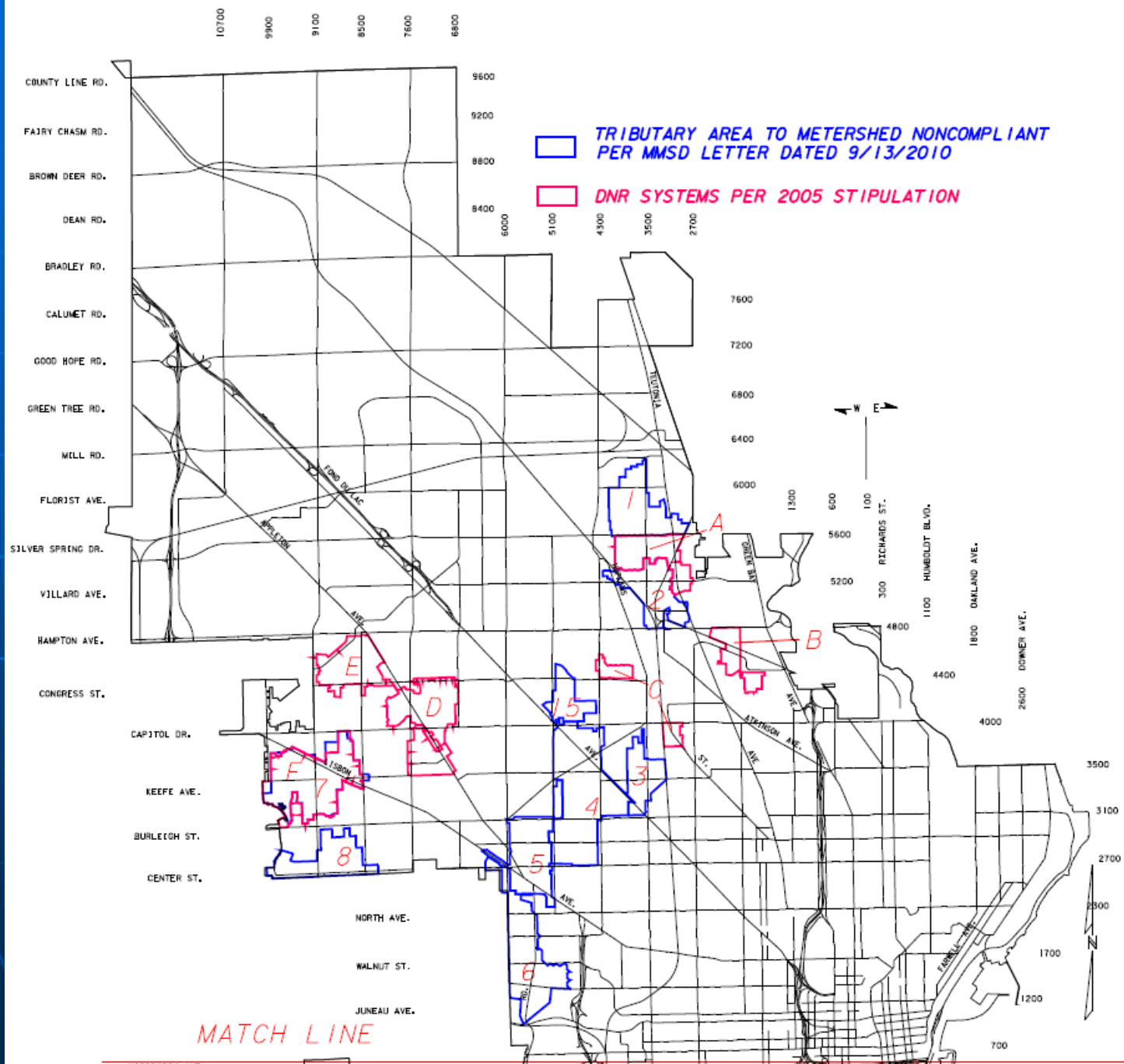


City of Milwaukee Department of Public Works

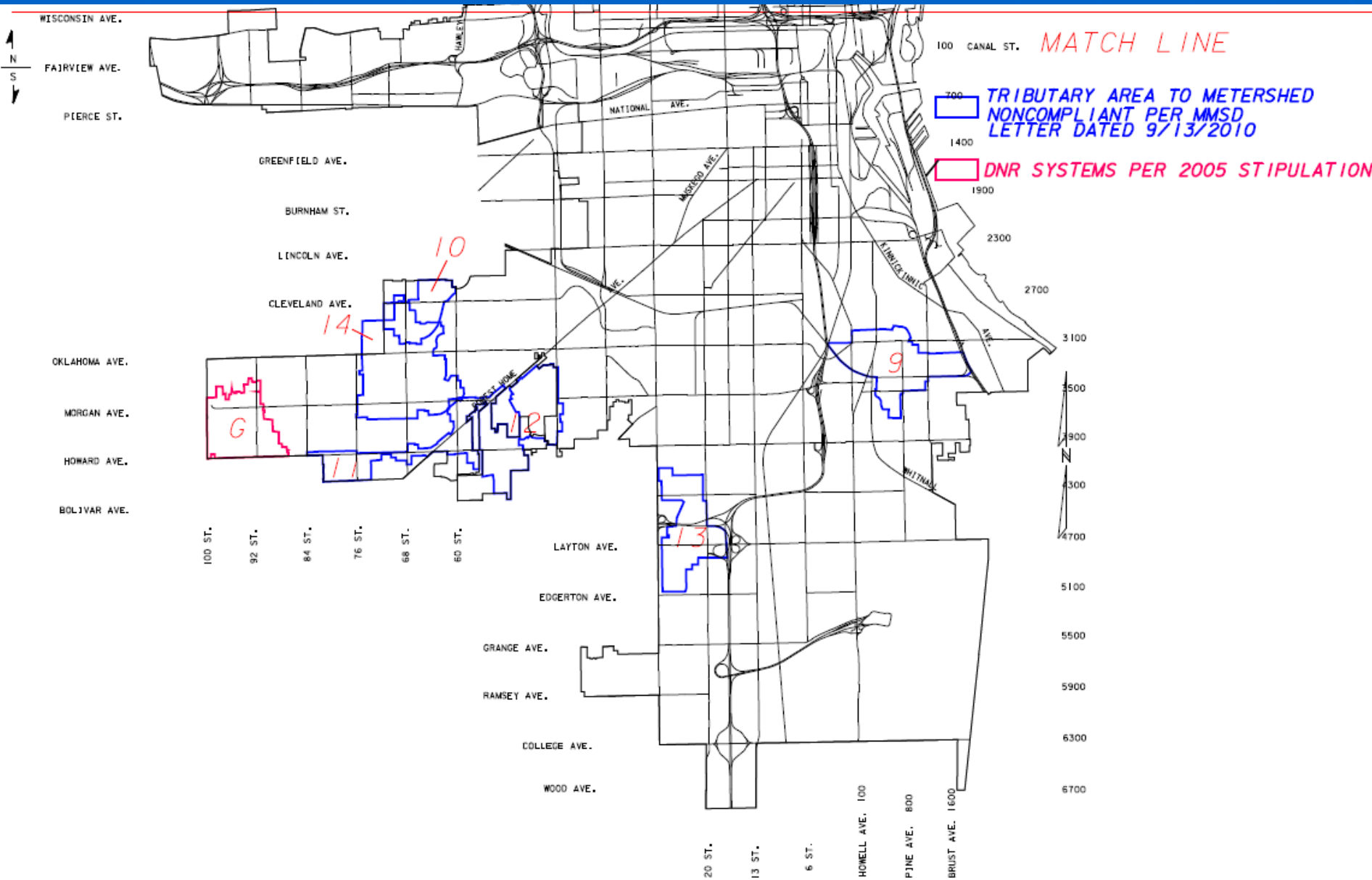


DNR Stipulated Areas and Noncompliant Tributaries

Citywide DNR Stipulations and Non-Compliant – North Side



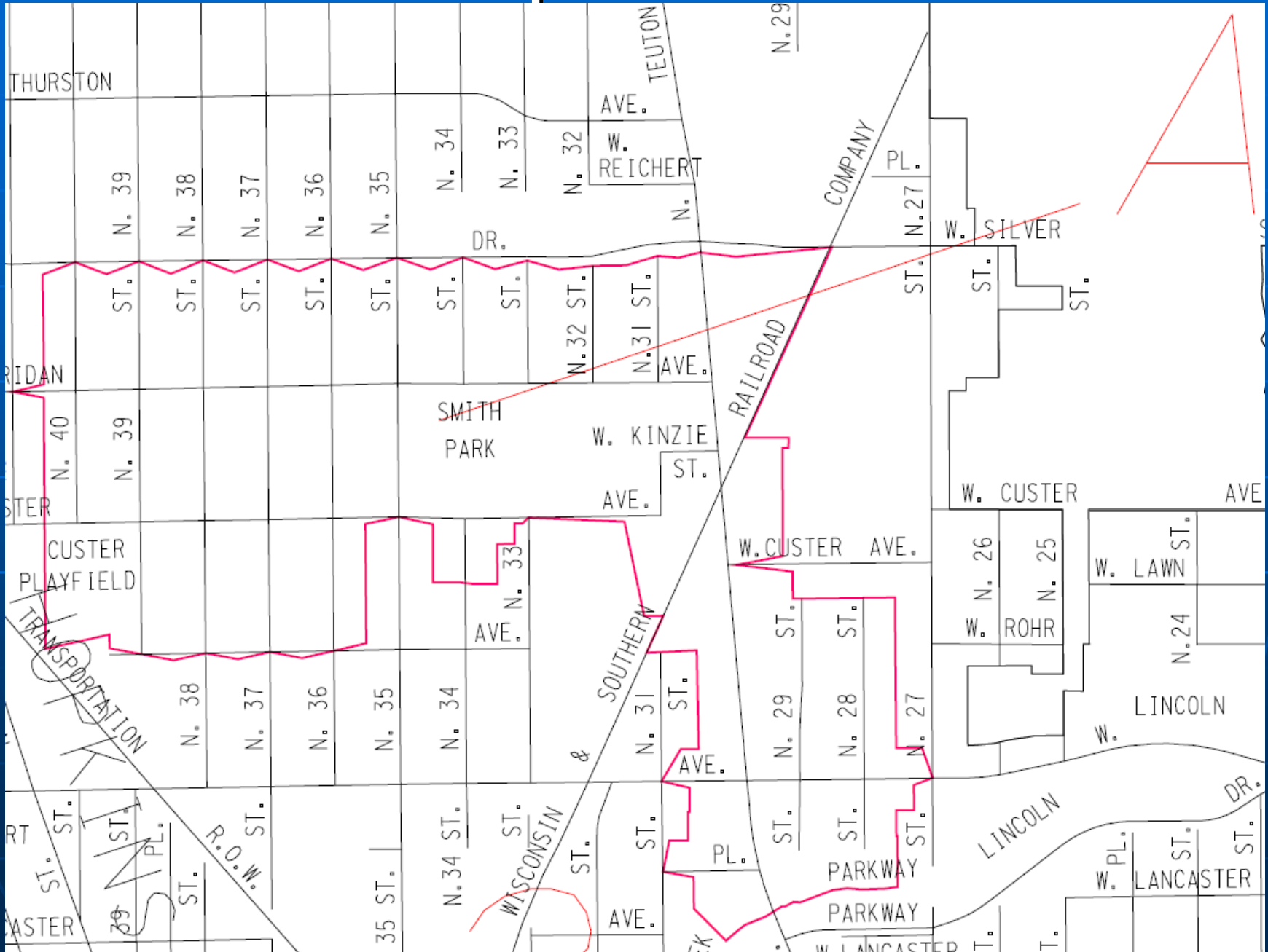
Citywide DNR Stipulations and Non-Compliant – South Side



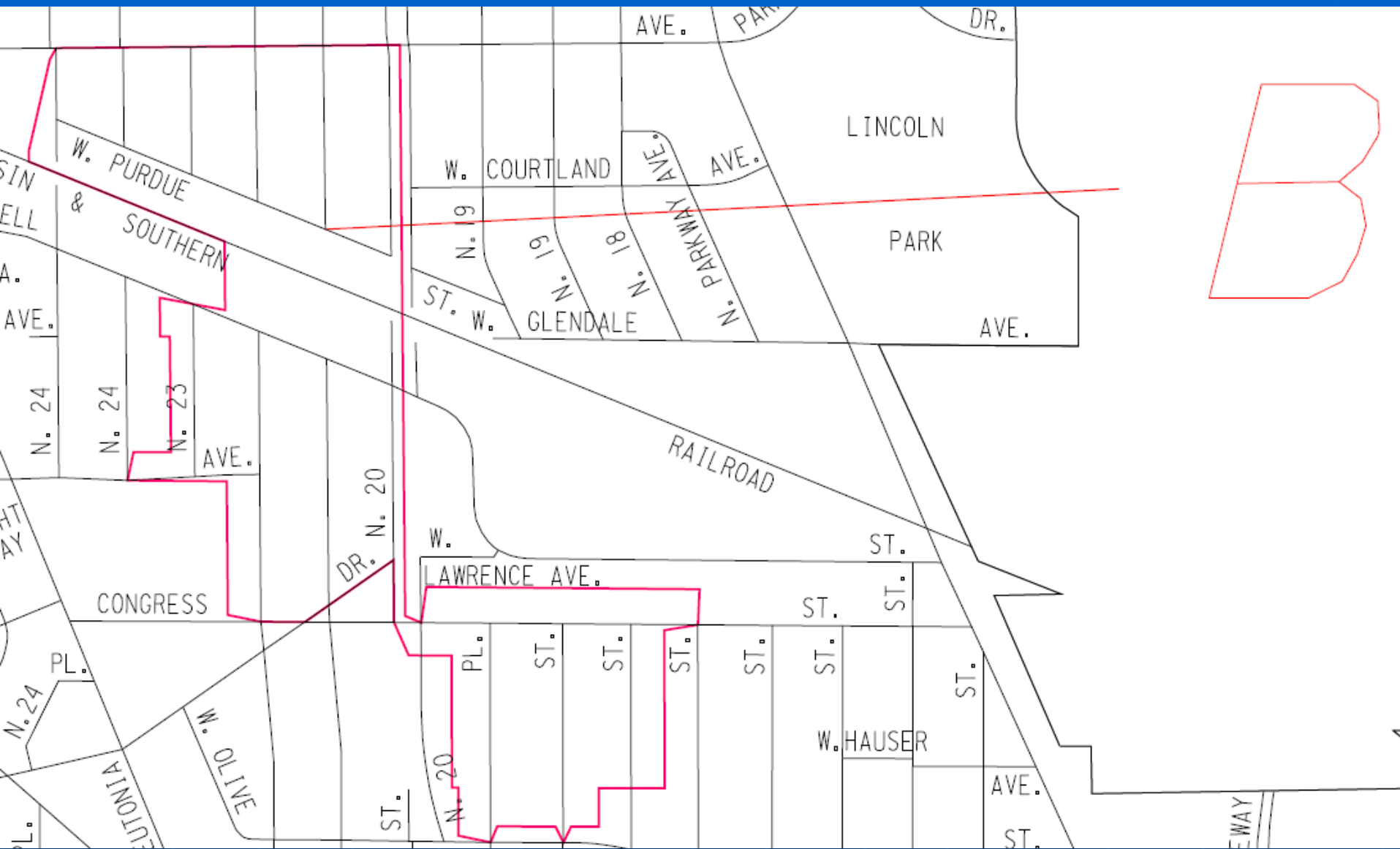
DNR Stipulated Areas

- 7 Systems were selected based on flow monitoring and modeling data
- All systems exhibiting high levels of Inflow and Infiltration (I/I) were selected

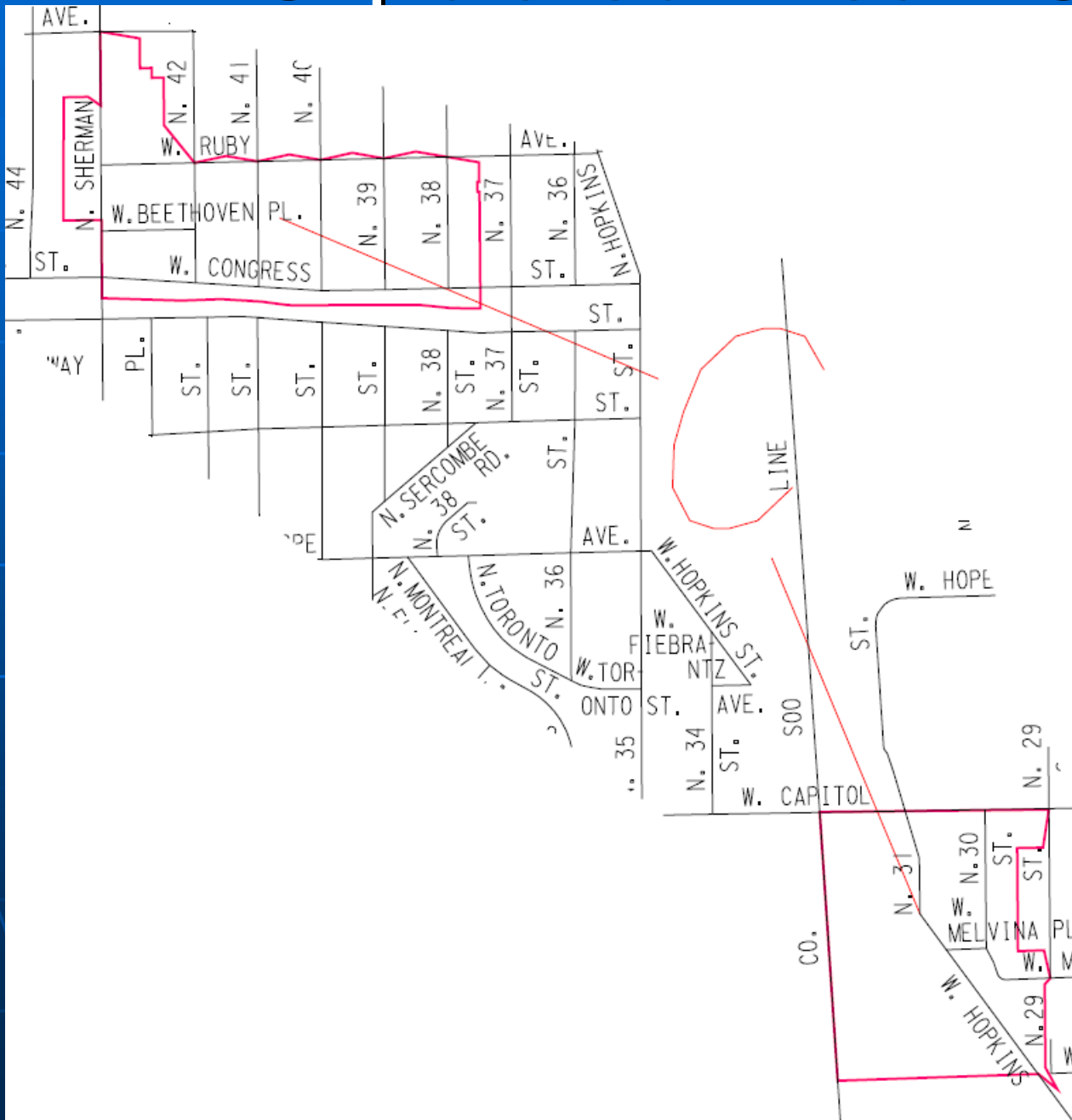
DNR Stipulated Area - A



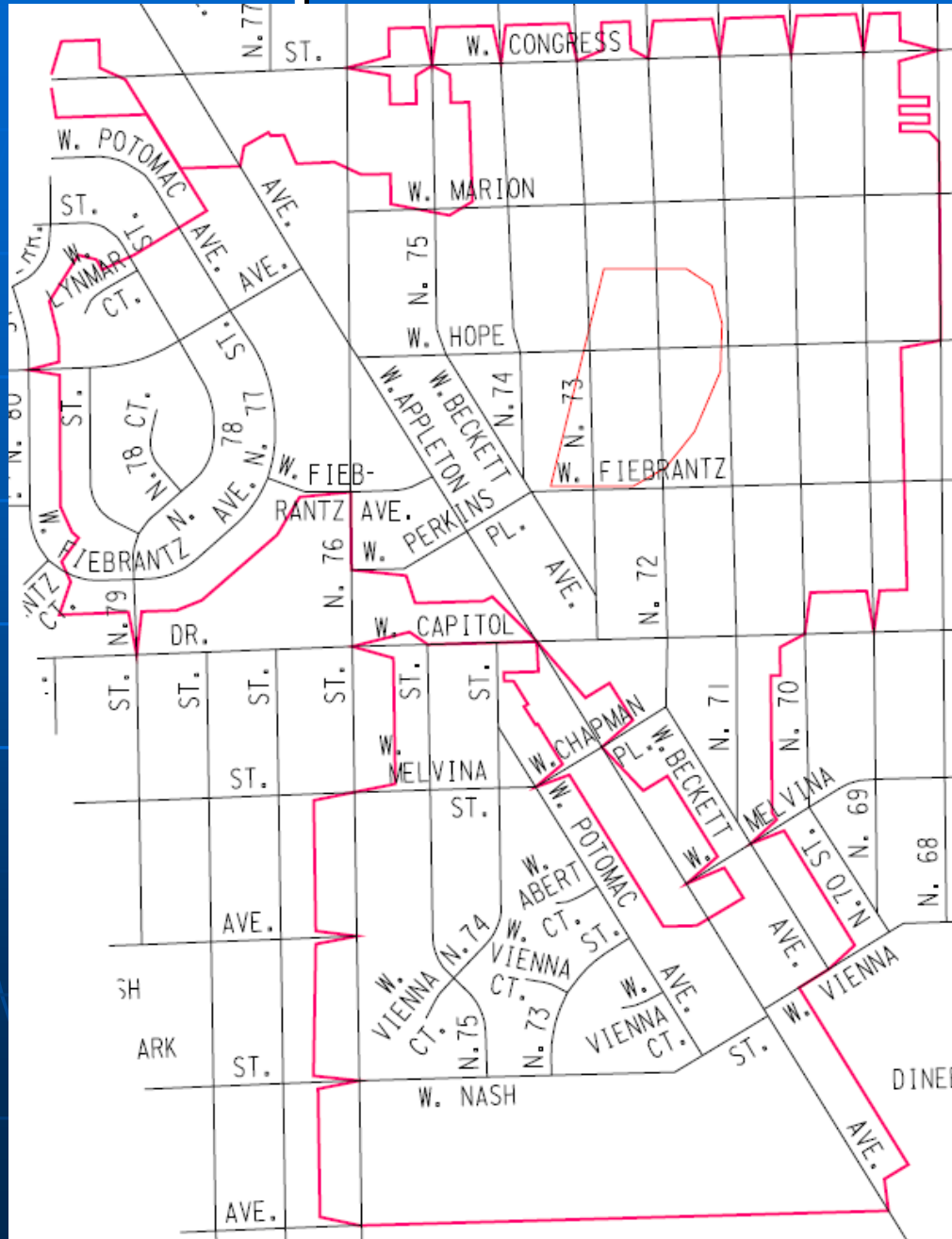
DNR Stipulated Area - B



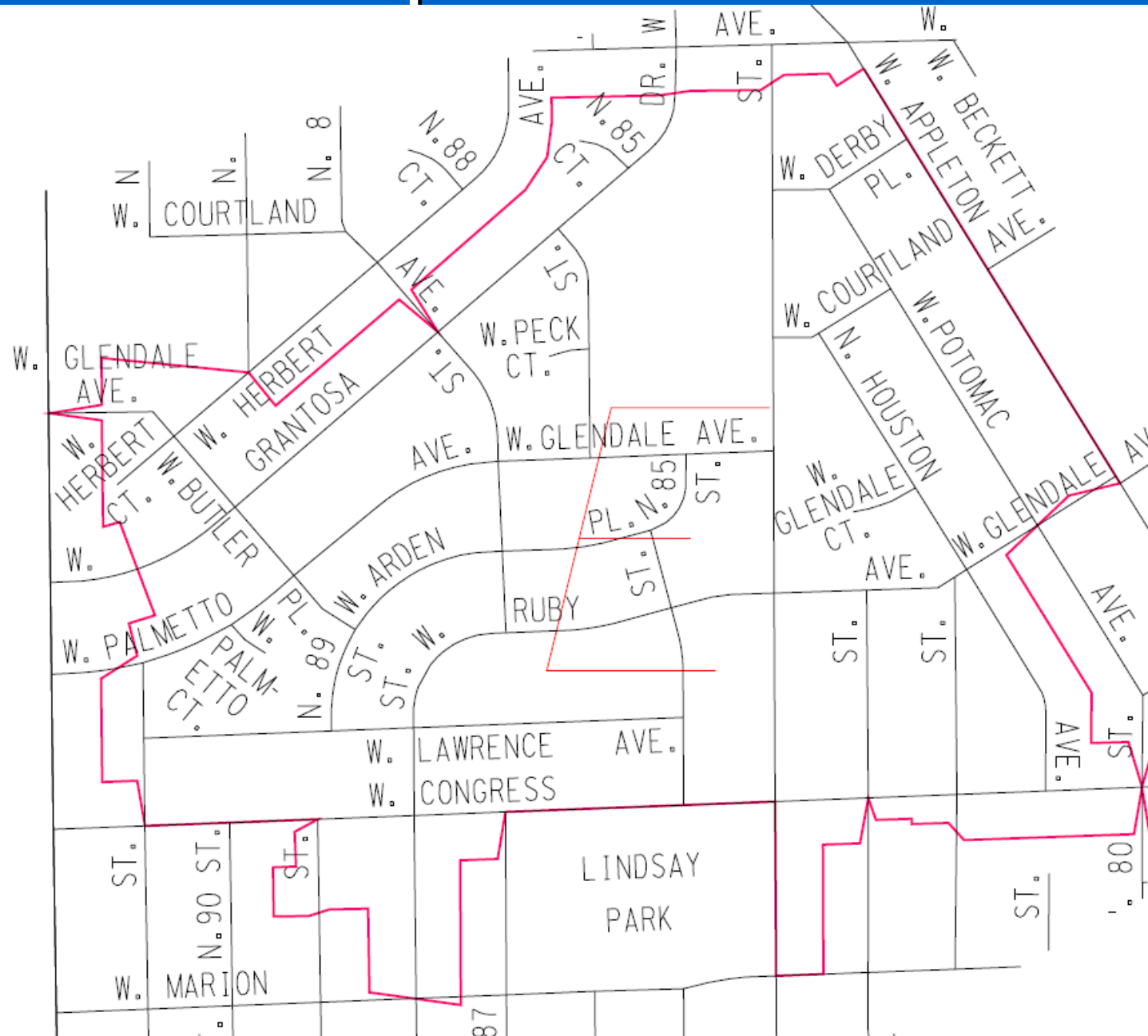
DNR Stipulated Area - C



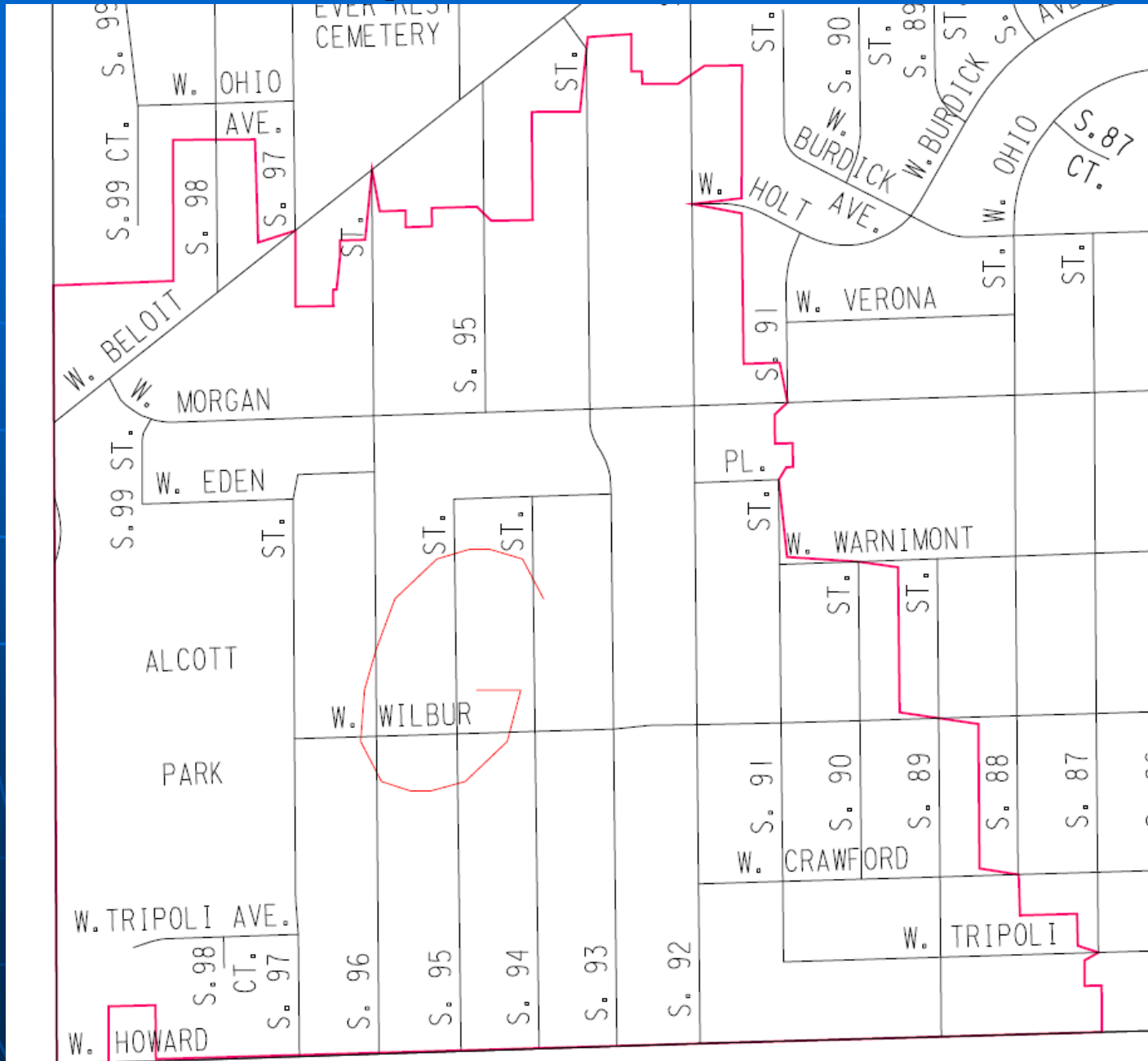
DNR Stipulated Area - D



DNR Stipulated Area - E



DNR Stipulated Area - G



Work performed related to DOJ Stipulation

- All work in the 7 critical areas as stipulated by the DNR was bid out between 2007 and 2010
- Total work performed for all area:
 - \$13,421,000 for sewer rehabilitations
 - \$ 9,206,000 for sanitary manhole rehabilitation
 - \$ 1,150,000 for dye water flooding
 - \$ 615,000 for sanitary manhole inspection
- The total cost for the work performed is \$24,392,000

MMSD Noncompliant Metersheds

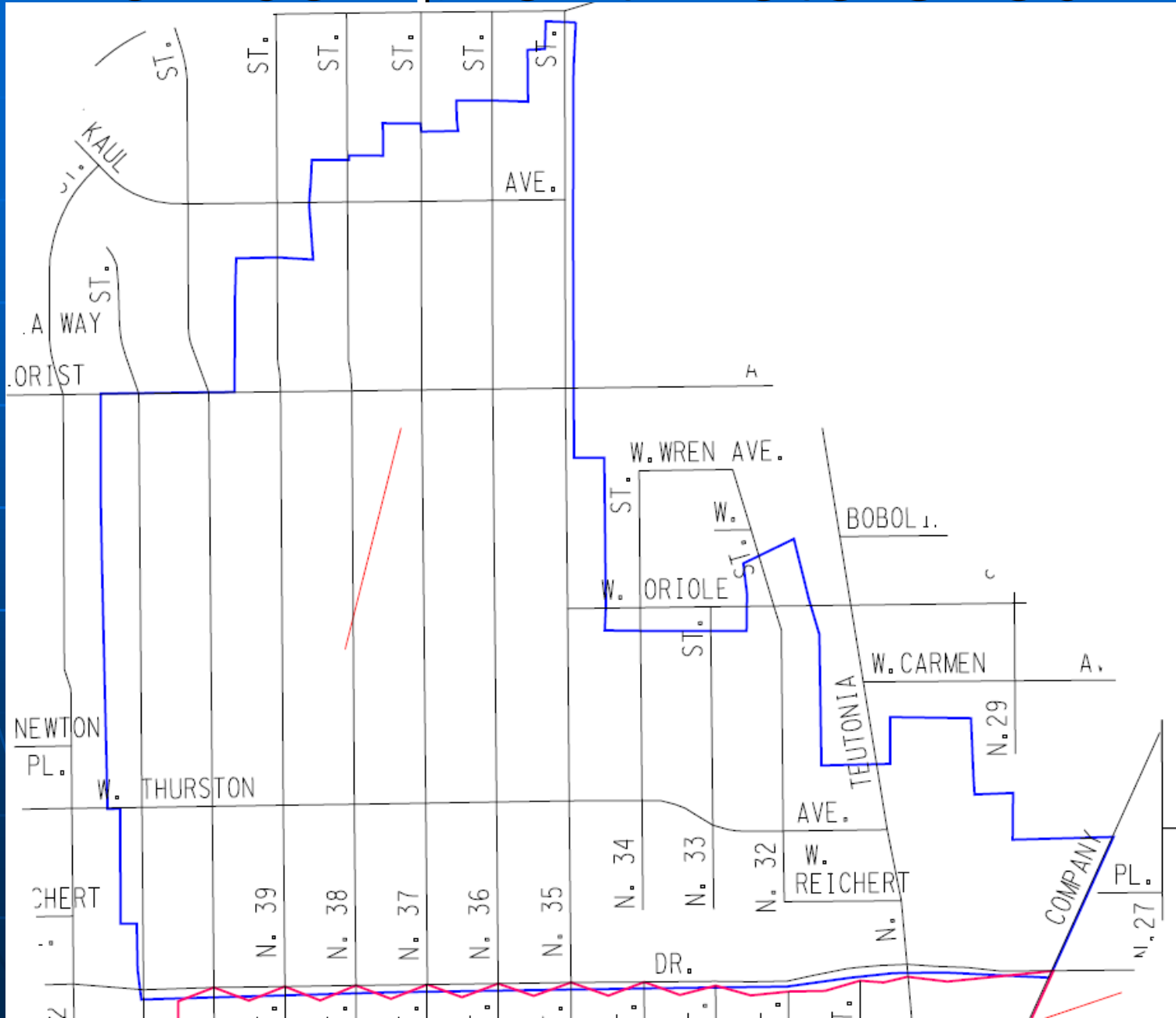
- MMSD has selected 15 metersheds that are non-compliant in the City of Milwaukee
- These areas were determined by comparing the peak hourly flow monitoring data with design data

MMSD'S Non-compliant Sewersheds

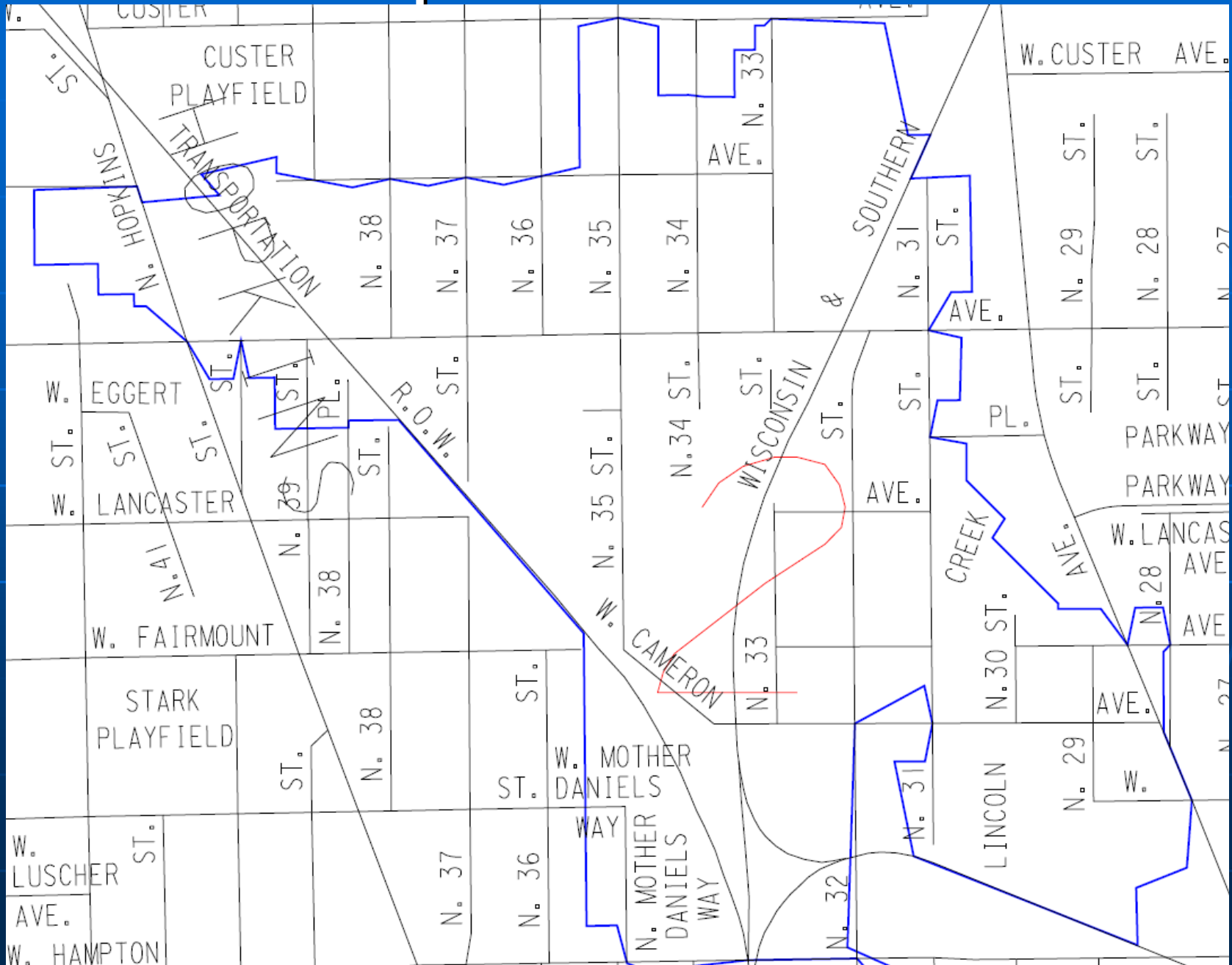
Peak Hourly Flow Rate
(gallons per acre per day)
(flow data may contain other
municipalities)

Metershed	MMSD Sewershed	Estimated Sewer Area (acres)	Area-Velocity Data	Limit
1	MS0528	240.9	25,000	22,000
2	MS0538	189.1	29,800	22,000
3	MS0513	142.2	27,700	22,000
4	MS0514	644.0	52,100	19,000
5	MS0418	275.5	26,600	21,000
6	MS0411	168.6	29,600	19,000
7	MS0339	379.3	34,900	21,000
8	MS0338	206.6	24,400	22,000
9	MS0703	365.7	25,200	21,000
10	MS0117	138.5	33,600	22,000
11	MS0608	402.6	26,600	19,000
12	MS0607	49.5	62,800	22,000
13	MS0114	347.2	21,800	21,000
14	MS0305	581.9	16,800	15,500
15	MS0420	111.4	39,300	22,000

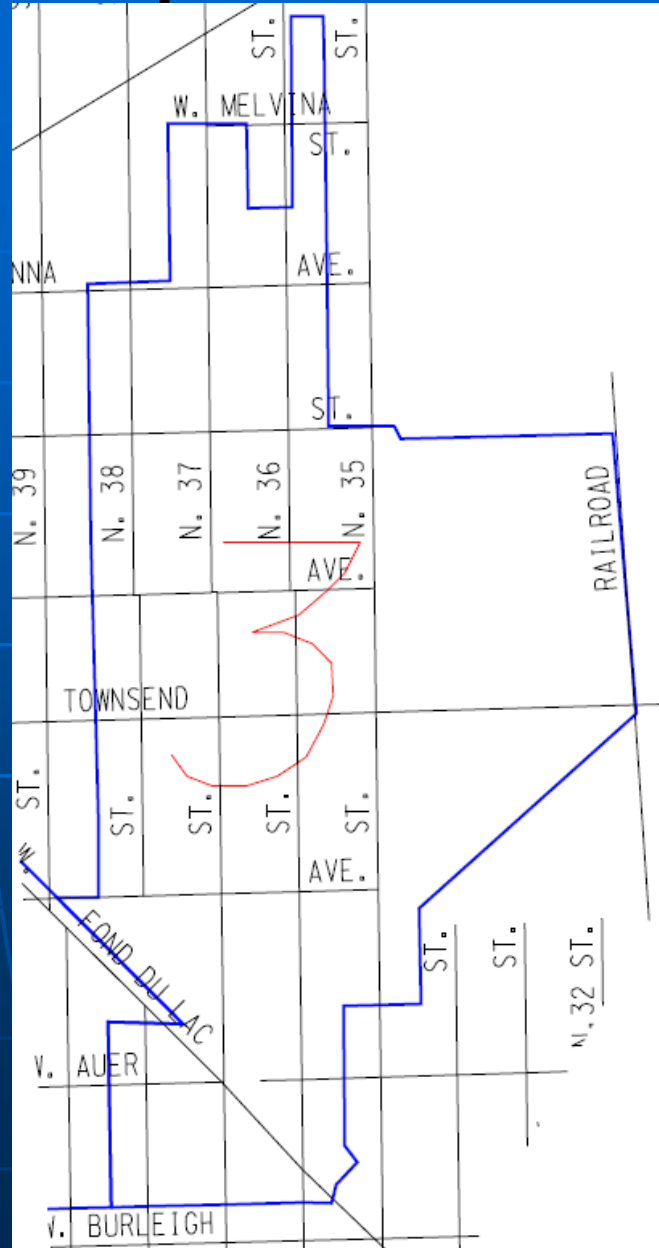
Non-compliant Metershed - 1



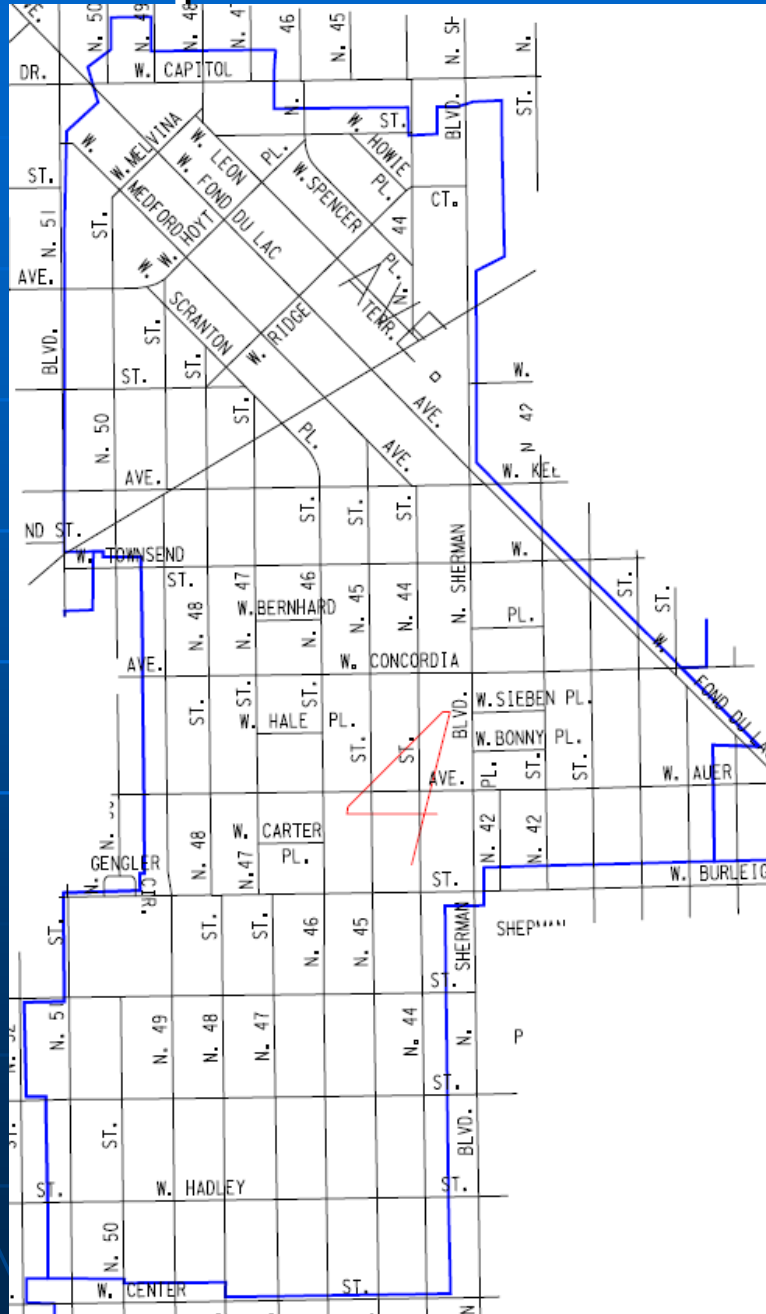
Non-compliant Metershed - 2



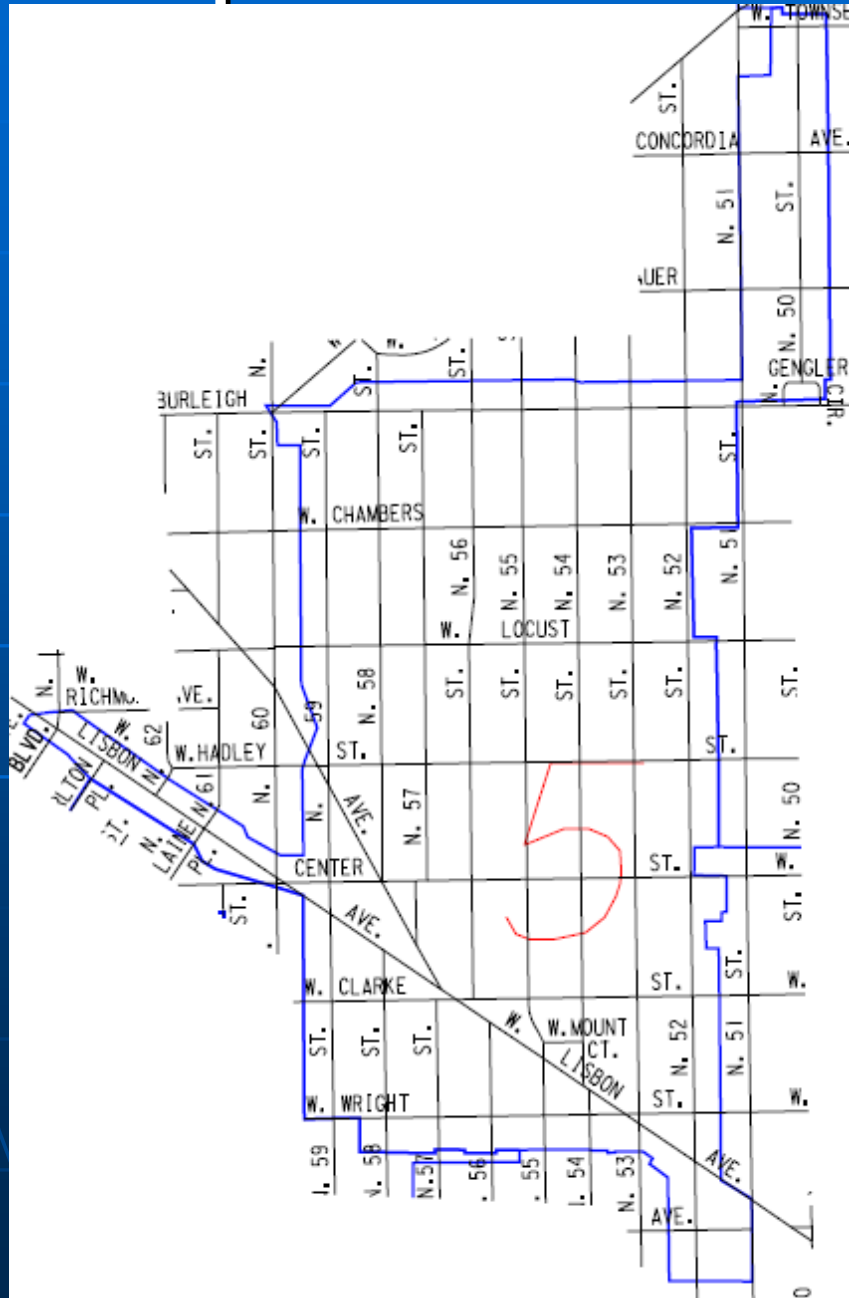
Non-compliant Metershed - 3



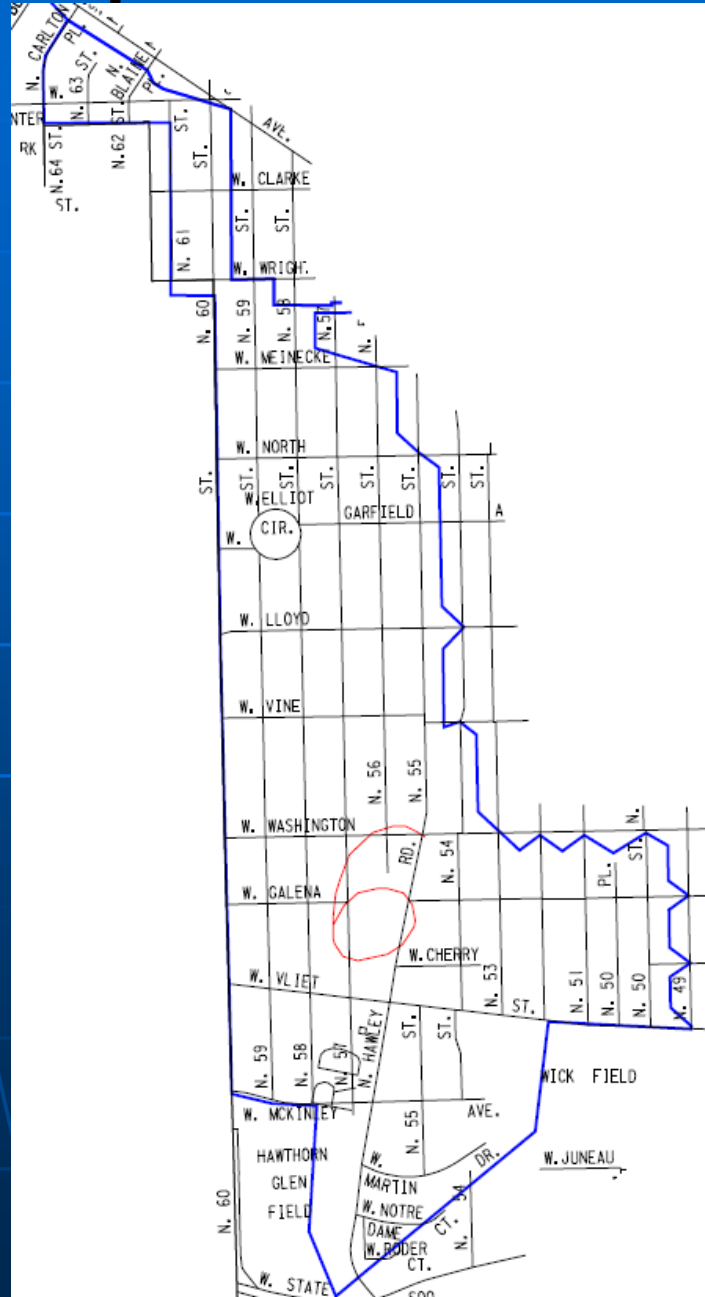
Non-compliant Metershed - 4



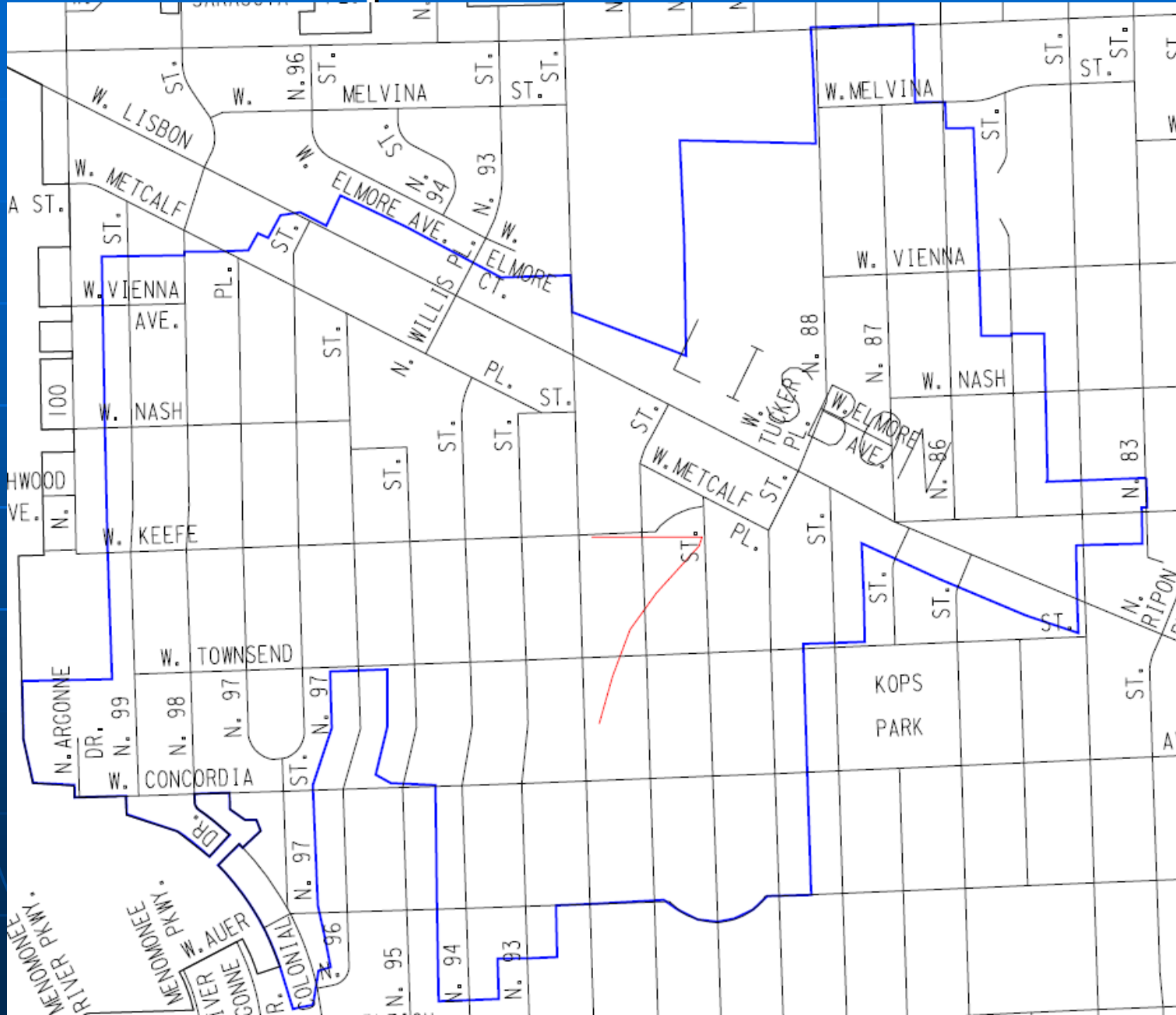
Non-compliant Metershed - 5



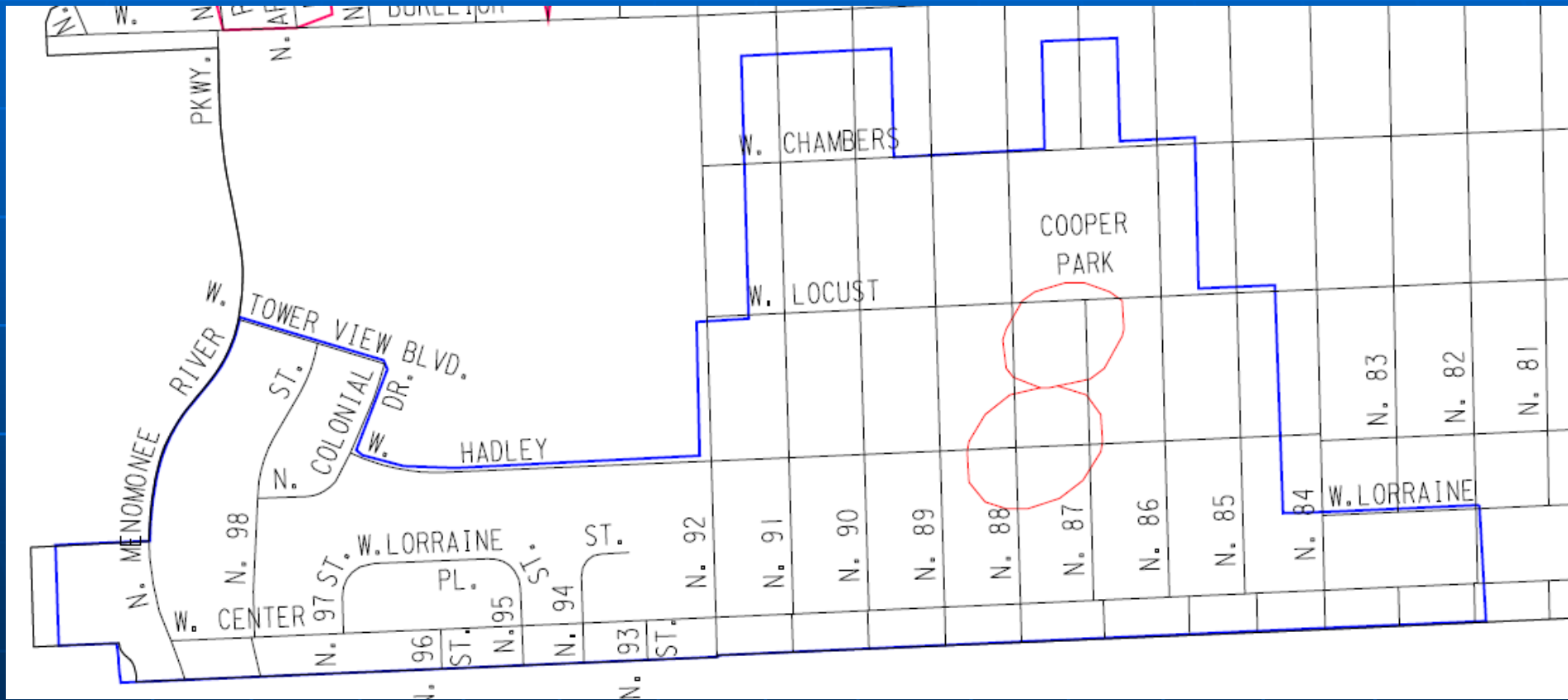
Non-compliant Metershed - 6



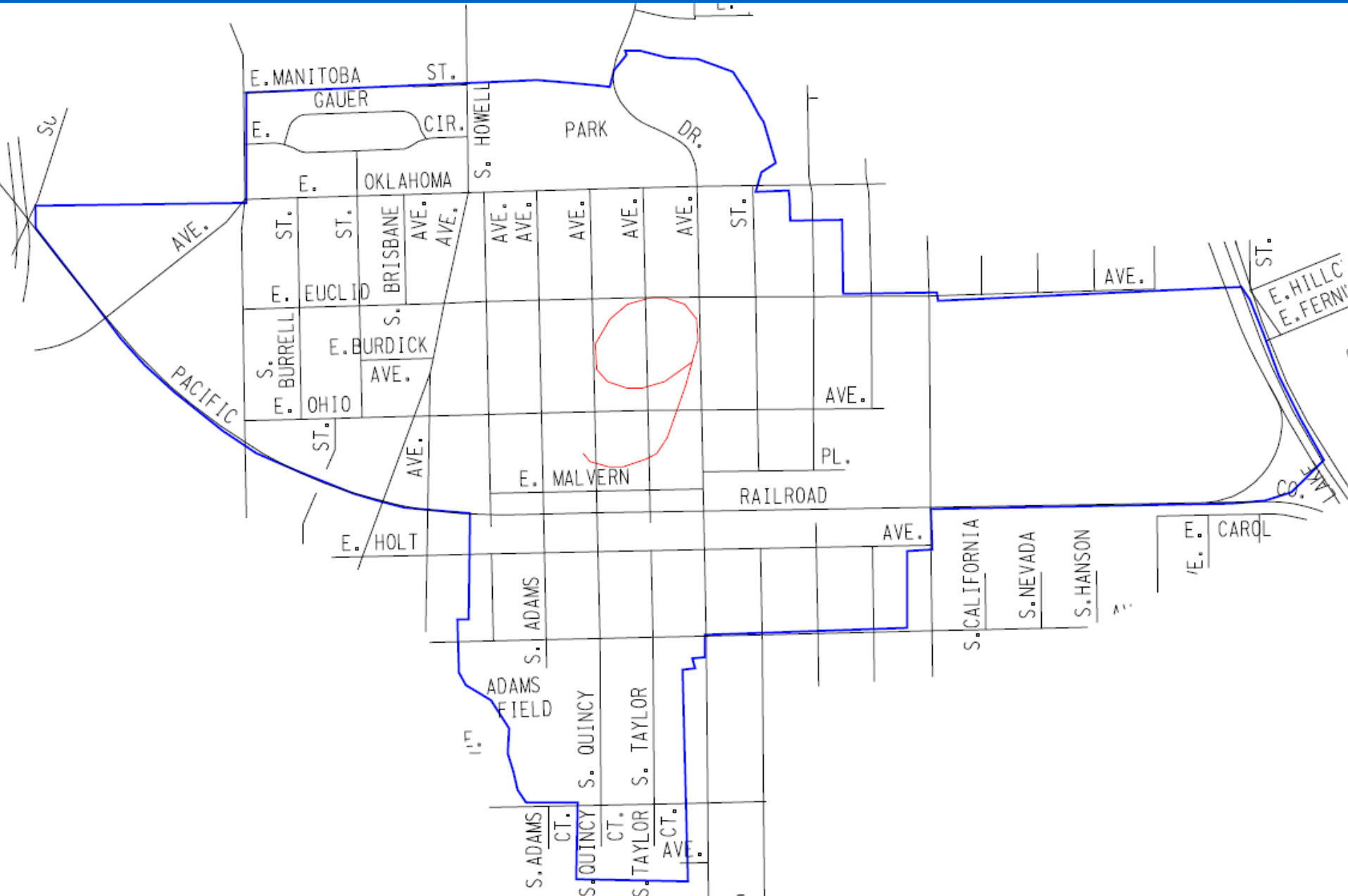
Non-compliant Metershed - 7



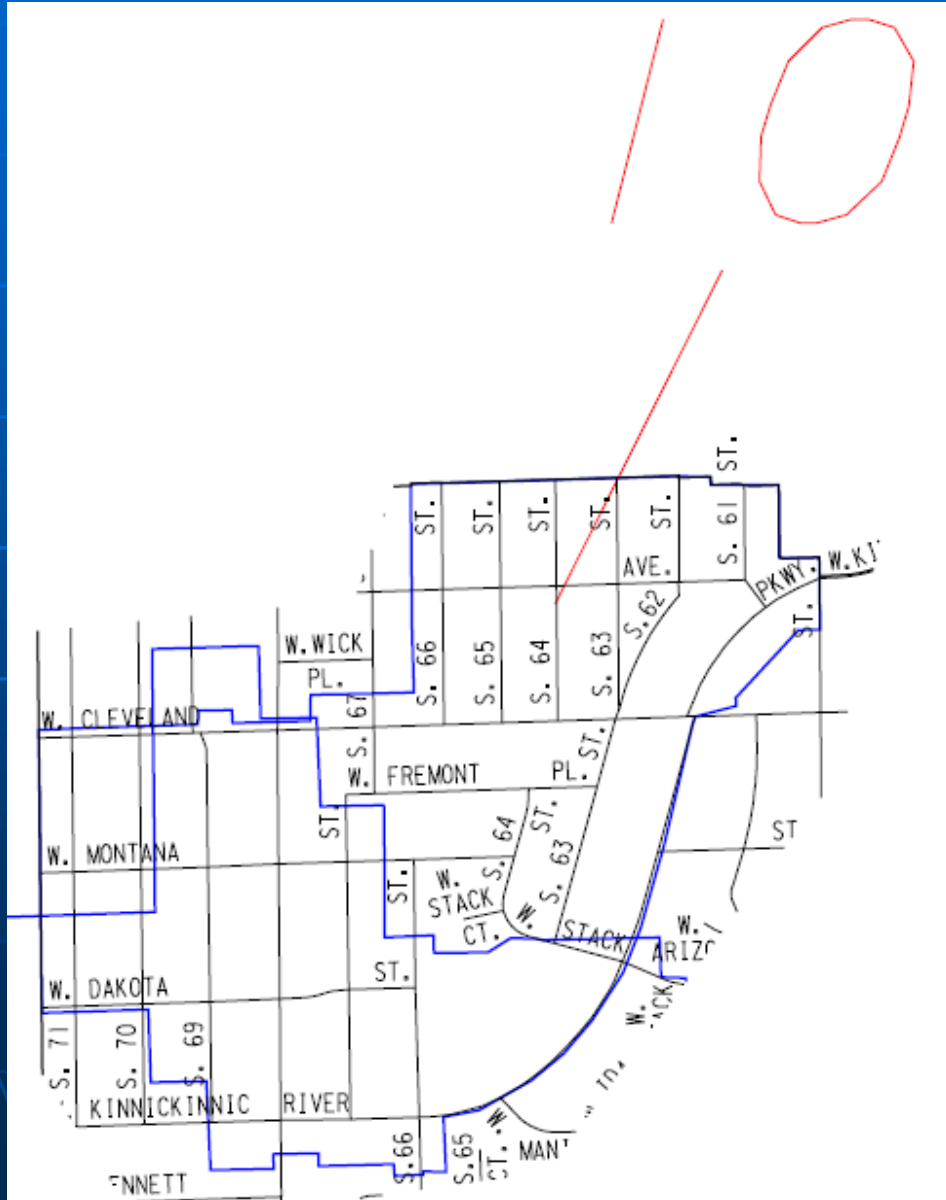
Non-compliant Metershed - 8



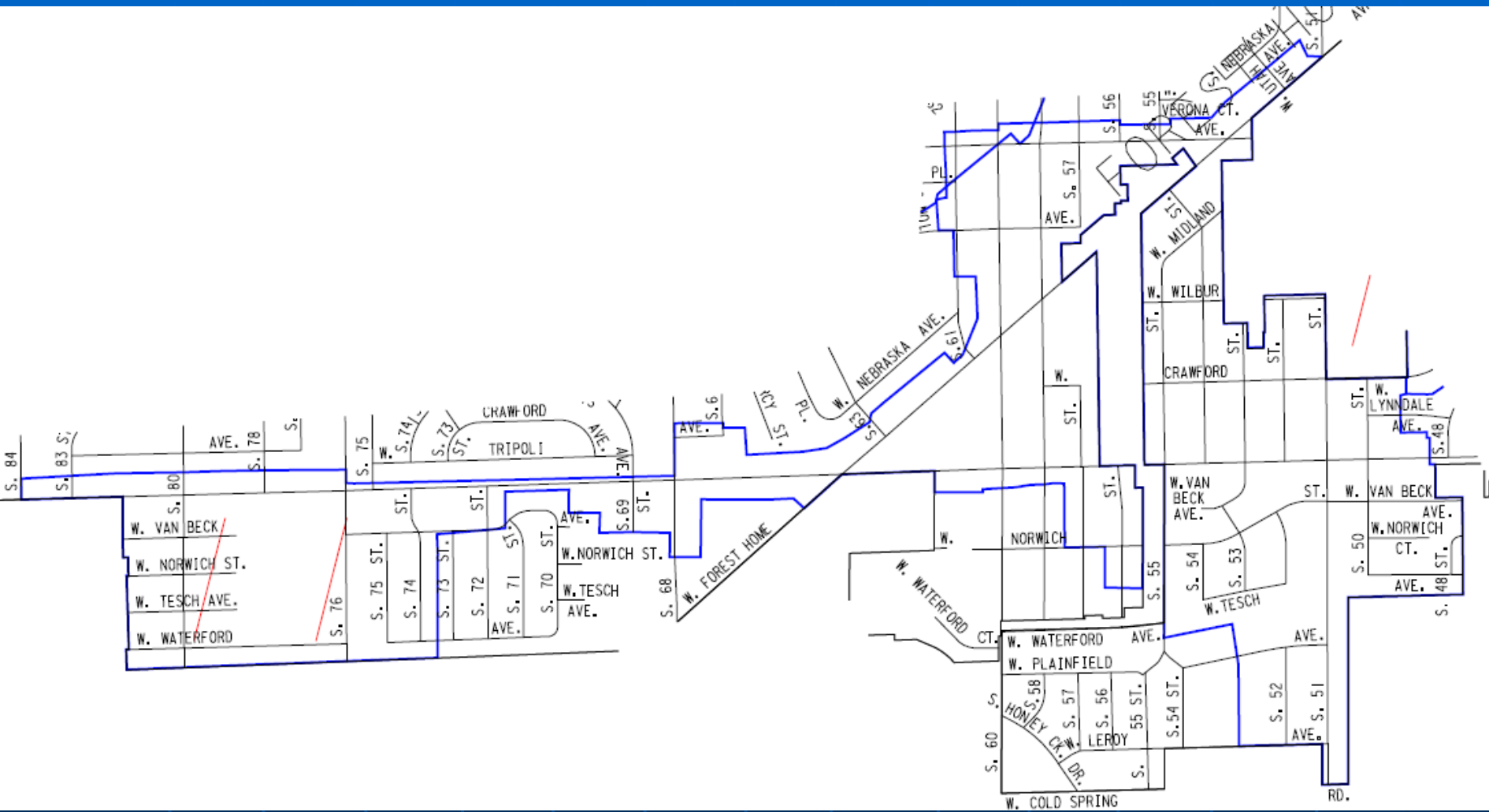
Non-compliant Metershed - 9



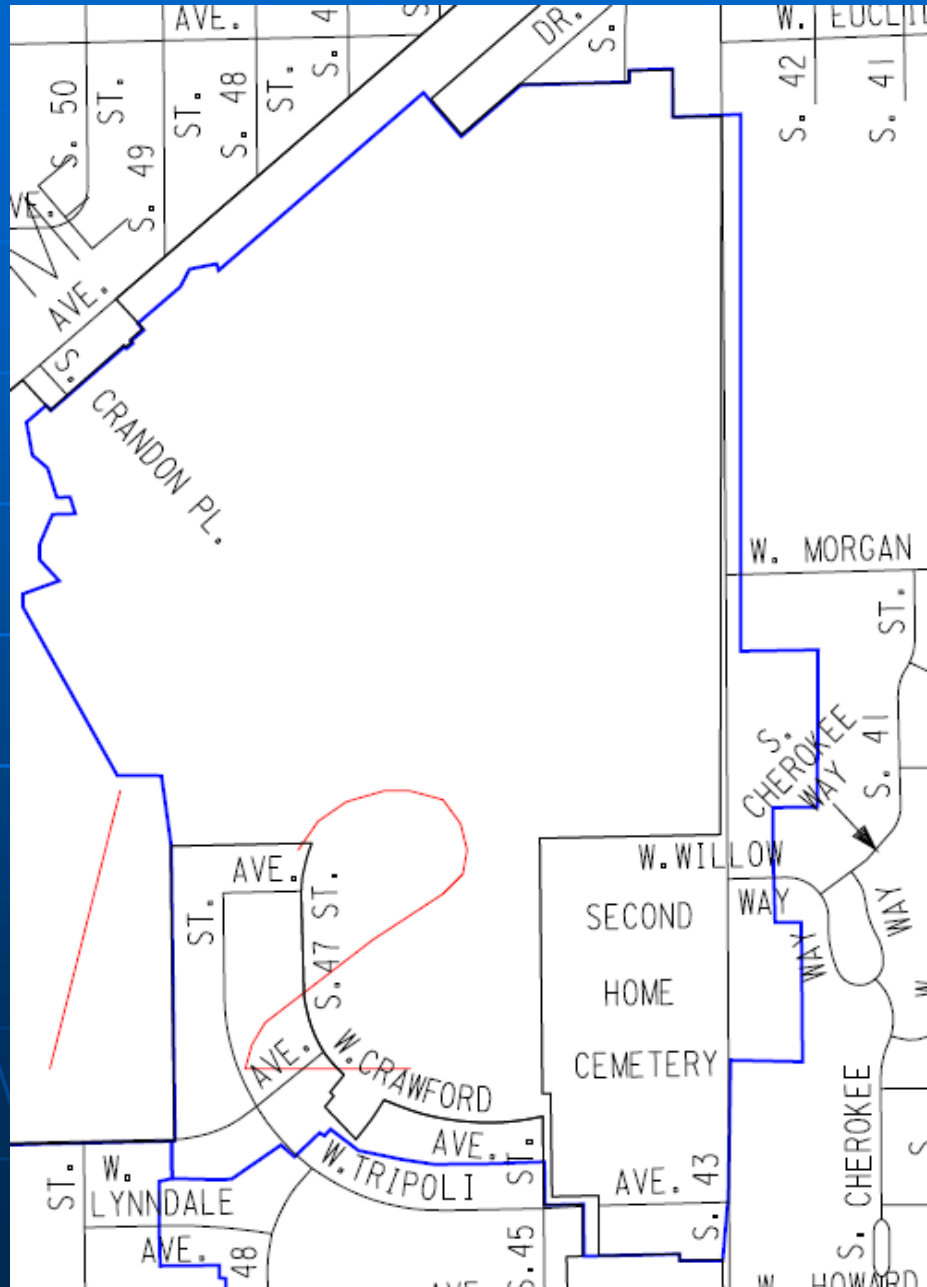
Non-compliant Metershed - 10



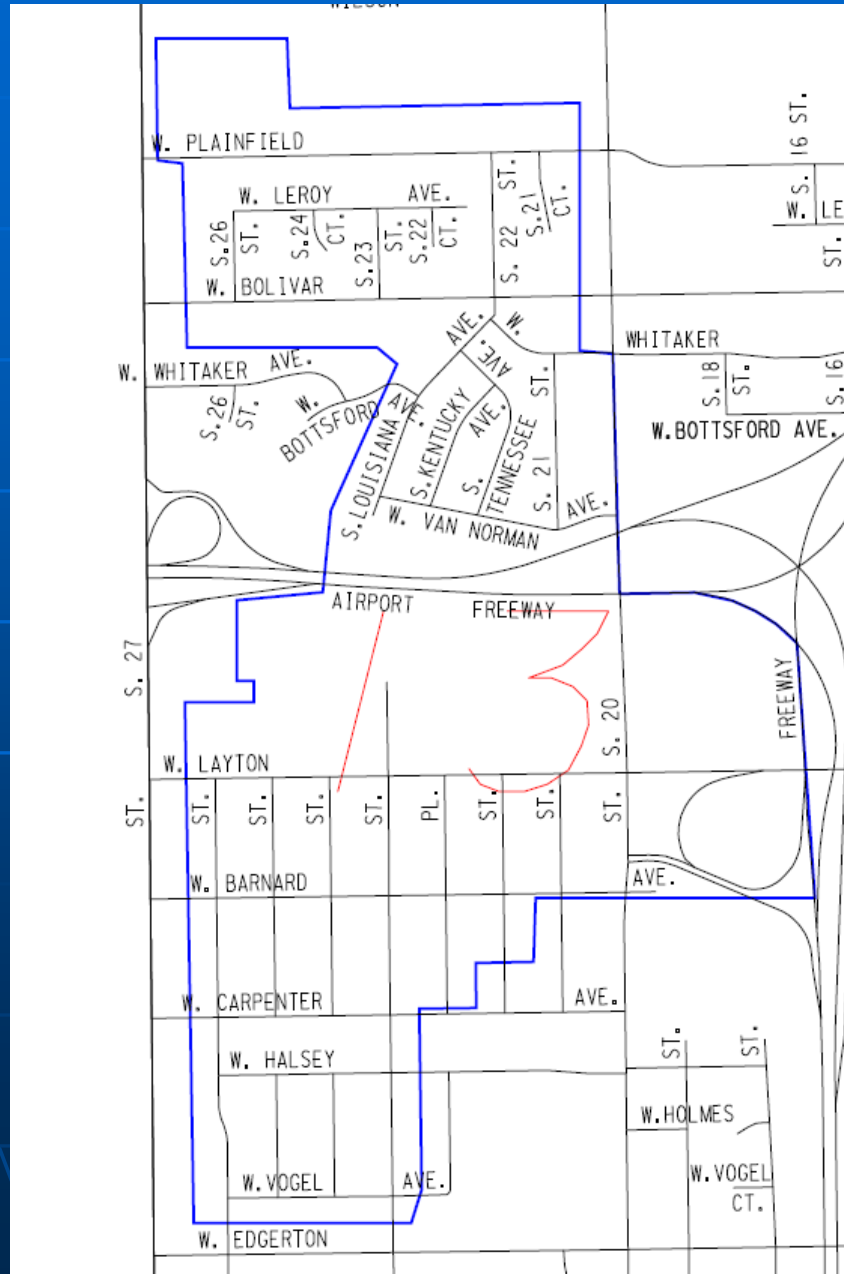
Non-compliant Metershed - 11



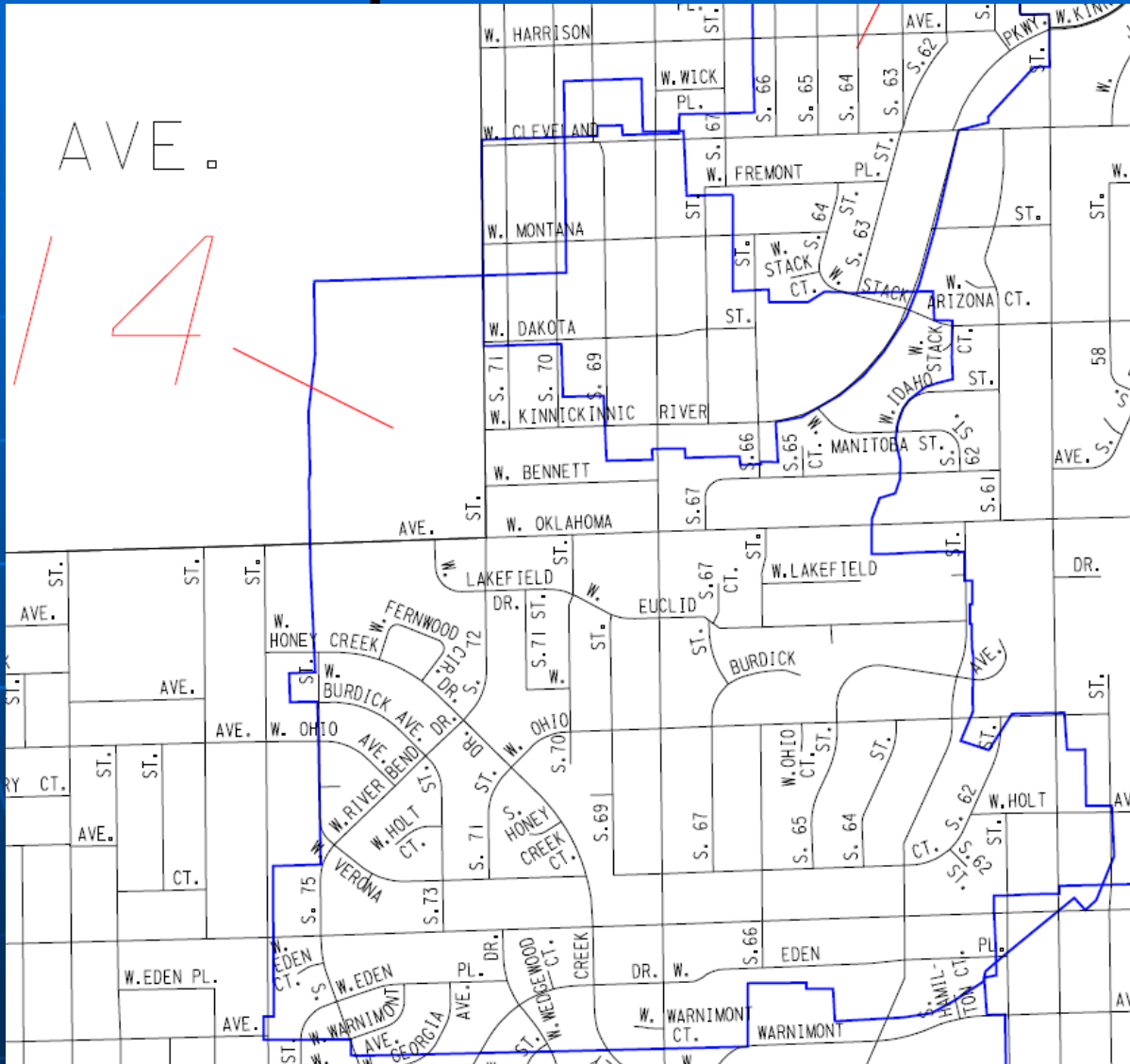
Non-compliant Metershed - 12



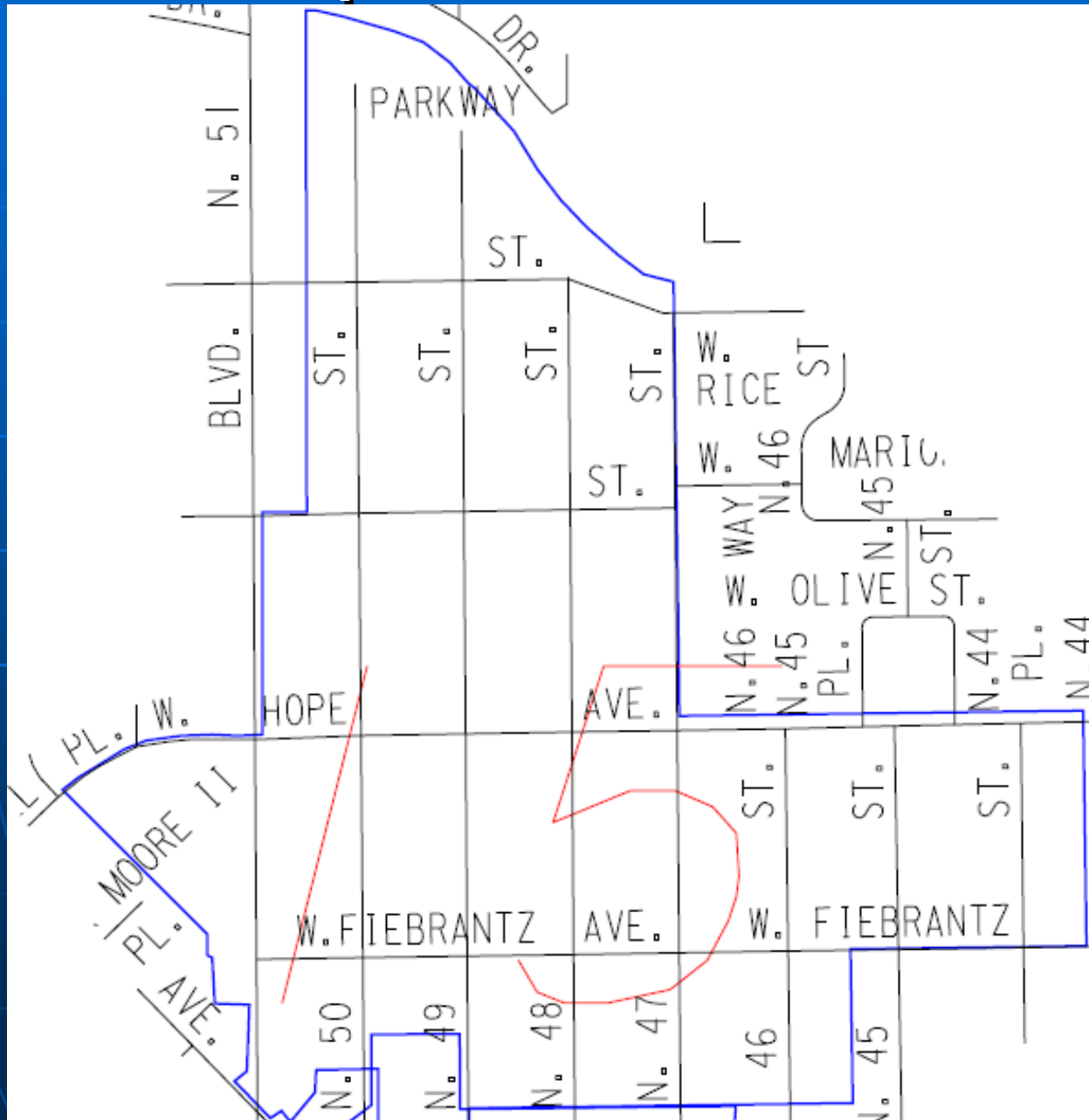
Non-compliant Metershed - 13



Non-compliant Metershed - 14



Non-compliant Metershed - 15



MMSD'S Non-compliant Sewersheds

- Currently sewer rehabilitation work has been completed in area numbers 7 and 8
- Studies and investigation are ongoing to determine what rehabilitation methods are necessary for each area to address MMSD's concerns

