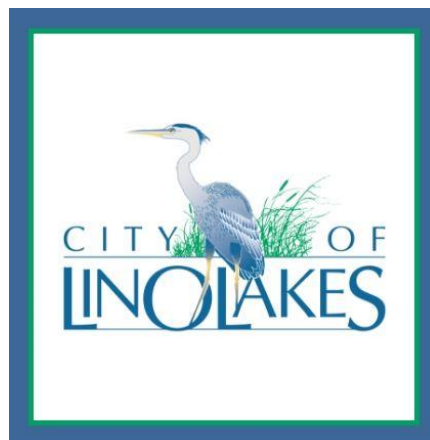


January 11, 2023

2023 PAVEMENT CONDITION REPORT

Lino Lakes, MN



PREPARED FOR: CITY OF LINO LAKES
600 TOWN CENTER PARKWAY
LINO LAKES, MN 55014

WSB PROJECT NUMBER: 023844

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Pavement Condition Summary

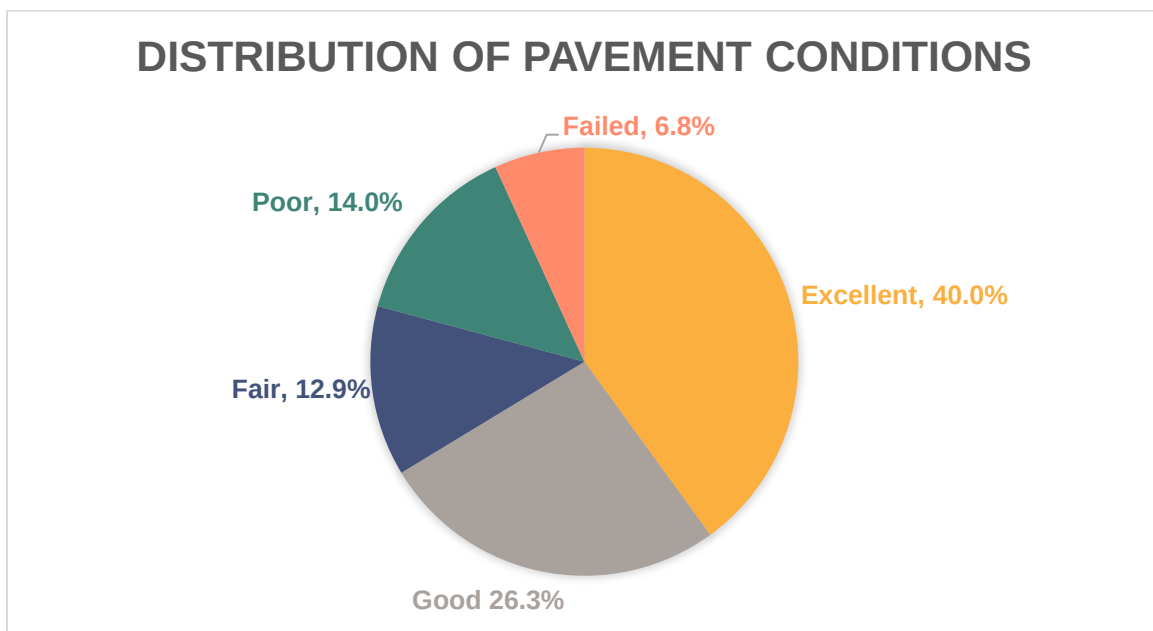
This report summarizes the findings of the pavement inspection of the road segments in Lino Lakes performed by WSB and completed in September 2023. The report gives an overview of the condition of roads in the city but is not intended to be a final document on public policy or city planning and is subject to change upon review by City Council. Approximately four miles of gravel roads and other segments the city did not want included in the analysis are not covered in this document.

A summary of the pavement condition report is listed below:

- Each year, WSB inspects approximately a quarter of the road pavement in Lino Lakes. This results in an inspection of the entire City's network over a 4-year period.
- In 2023, 21.5 miles of City road were evaluated in Lino Lakes. The other 82.5 miles of pavement that did not get inspected received an updated condition score generated by extrapolating each segment's degradation from its last inspection date.
- The current weighted average Pavement Condition Index (PCI) for bituminous roads in Lino Lakes is 74.2. PCI is based on a 0 to 100 scale, with higher PCI values corresponding to better road conditions. This weighted average is calculated from the PCI values generated on each segment of roadway. A road's PCI is based on the quantity and severity of pavement distresses identified in the field. Any type of road maintenance done prior to inspections is accounted for in the PCI value.

Each segment of bituminous roadway was sorted into one of five broad categories based on their PCI value. Figure 1. shows the percentage of bituminous roadways in each condition category in terms of surface area.

Figure 1. Percent of System in Each Pavement Condition Category.



The City previously used 3 condition categories to describe the condition of pavement segments: Adequate, Marginal, and Problem. Moving forward, the five condition categories shown in Table 1 will be used to classify the condition of pavement sections. Switching to 5 categories instead of 3 provides a better understanding of the distribution of pavement conditions in the City. Additional categories also make it easier to spot trends in how the pavement network is performing. Finally, the 5 categories used were designed to correlate to a typical recommended maintenance treatment. This is useful in pavement modeling and budgeting.

Most roadways qualified for the Excellent or Good categories. However, 33.7% of the City's roads are in Fair, Poor, or Failed condition.

Table 1. shows how the City's pavement conditions have changed over the past 3 years. The average PCI has fluctuated between 73 and 75 with this year's ratings showing a slight decrease from last year. Notable good trends include a slight decrease in the amount of roads in Failed and Poor condition. One worrisome trend to watch is the slight decrease in roads in the Excellent condition. This can be remedied by allocating additional resources to corrective and preventative maintenance projects as outlined below.

Condition	PCI Range	Percent of Roadway Network by Area		
		2023 Inspection	2022 Inspection	2021 Inspection
Excellent	85.01-100.00	40.0%	44.5%	45.2%
Good	75.01-85.00	26.3%	22.4%	19.1%
Fair	58.01-75.00	12.9%	11.6%	14.0%
Poor	40.01-58.00	14.0%	14.4%	11.4%
Failed	0.00-40.00	6.8%	7.0%	10.3%
Weighted Average PCI		74.2	75.5	73.6

Table 1. Pavement Condition Trends

For additional information on pavement management planning in Lino Lakes, refer to the Pavement Capital Improvement Planning report published in August 2023.

Appendix A includes maps of all the inspected road segments in the City with their PCI condition categories. Appendix B displays the updated PCI values of every segment.

Recommended Maintenance Action

Lino Lakes has many options at their disposal for pavement rehabilitation and preventative maintenance including reconstruction, reclamation, mill and overlays, and preventative maintenance that extend the life of a roadway. Each of these treatments should last several years and be cost-effective, if correctly implemented at the right time. WSB recommends using the recommended strategies listed in table 2. However, this general recommendation is not perfect for every situation and should serve only as a general guide. A detailed explanation of each recommended maintenance activity is included below.

Table 2. Pavement Condition Categories Based on PCI Values

Category	Pavement Condition Index (PCI)	Recommended Strategy
Excellent	85.01 – 100.00	Corrective Maintenance
Good	75.01 – 85.00	Preventative Maintenance
Fair	58.01 – 75.00	Mill/Overlay
Poor	40.01 – 58.00	Reclamation
Failed	0.00 – 40.00	Reconstruction

Corrective Maintenance

Corrective maintenance is used to fix a road segment that is starting to show distress due to weathering or is not performing as expected. This typically involves crack sealing or patching. Corrective maintenance is recommended for roads in Excellent condition because these segments should not need any major maintenance other than minor crack sealing unless the pavement behaves unpredictably.

Preventative Maintenance

Preventative maintenance is defined as treatment to an existing road that will help preserve and protect the pavement, while also slowing future deterioration. This type of maintenance improves the condition of the system without increasing its structural capacity.

Implementing a preventative maintenance strategy is cost-effective and important since maintenance costs increase with pavement age. Preventative maintenance actions can be done at a much lower cost than preservation actions such as mill and overlays. By applying appropriate preventative maintenance before a road deteriorates, the pavement can be kept in good condition at a much lower cost. With proper preventative maintenance techniques, the life of an average paved road increases from 20 years to 60 years.

Preventative maintenance is best performed on newer pavements prior to the appearance of significant and/or severe distresses. There are many preventative maintenance applications that seek to protect pavement from deterioration. These treatments vary in effectiveness and price. Common preventative maintenance techniques include rejuvenating, crack sealing, fog sealing, chip sealing, chip sealing followed by fog sealing, micro-surfacing, and slurry sealing. Currently, the preferred preventative maintenance application in Lino Lakes is a rejuvenator application. Rejuvenators slow the oxidation reaction that wears out pavement and causes cracking. The

City utilizes seal coats for preventative maintenance on roads that have already received a seal coat treatment but no longer uses them on new roads. Patching can also be considered preventative maintenance, but it is usually implemented on small areas of severe distress. Additionally, patching a road to increase its PCI does not provide long term structural improvement. Patching may be necessary to keep roads in serviceable condition but it should not be considered routine maintenance for every road.

Overlay/Mill and Overlay

An overlay involves placing a new layer of bituminous material on top of an existing asphalt surface. A mill and overlay requires grinding all or a portion of the in-place asphalt surface and topping the ground surface with a bituminous wearing course. This rehabilitation strategy provides a structural improvement to the roadway. We recommend conducting more investigation such as pavement coring to evaluate the subsurface conditions before implementing an overlay project. Information such as depths of pavement layers, signs of debonding, and distresses that are not visible from the road surface can be obtained through pavement coring. Applying an overlay to a pavement structure with inadequate subsurface conditions will cause the new surface to fail prematurely.

Reclamation

The most common types of reclamation are full-depth reclamations (FDR) and stabilized full-depth reclamations (SFDR). FDR involves pulverizing the full depth of bituminous and a portion of the underlying materials. That material then gets blended together and placed as a sound base for new pavement. Typically, FDR reclaim depth is 12 inches, although it can be as deep as 18 inches. Excess FDR mixture may be removed to allow 6-inch lifts compaction. Additional rock may need to be provided if the mixture is expected to be deficient in crushing or gradation. The reclaimed mixture can be topped with different types of surface course, depending on the structural requirements and anticipated traffic level. A layer of tack coat needs to be applied prior to surface treatment to provide good bonding between the FDR mixture and surface course. SFDR involves the same process but includes mechanical, chemical, or bituminous stabilization. The typical minimum depth of stabilization is 4 inches, but it can go as deep as 6 inches. Mechanical stabilization involves the addition of new aggregate or recycled materials. Chemical stabilization includes the addition of lime, cement, fly ash, calcium chloride, or other proprietary products. The asphalt additives can be foamed asphalt or asphalt emulsion. These stabilizing agents if combined with additives, can help optimizing the FDR performance.

Reconstruction

Reconstruction includes the complete replacement of the road's driving surface and pavement structure. The pavement along with its base layers are then replaced with new material. Asphalt mix type, ride specification, lift thicknesses, and compaction requirements must be in accordance to the specified standard. Selecting the specific appropriate reconstruction plan for a road requires more detailed investigation such as pavement coring. Each road segment requires a specific pavement design that considers existing subgrade materials and traffic loading to create the most effective pavement structure. The City's current standard design includes 4.5 inches of bituminous over 8 inches of aggregate base and an appropriate subbase.

Subsurface water management is a significant component of a reconstruction project. Thus, addressing roadway drainage is included in roadway reconstruction projects. When performing a reconstruction, it is important to consider the entire pavement structure that includes the base and subbase. A larger initial investment in thicker base and subbase layers along with edge drains provides the pavement with a stronger foundation that reduces damage from moisture under the surface. This produces pavement that is less susceptible to damage and has a longer expected life. WSB can provide specific reconstruction design recommendations if requested.

Thin Overlays

Another common maintenance technique in Lino Lakes is a thin overlay. This treatment usually involves applying a thinner than normal overlay and serves a different purpose compared to a traditional mill/overlay project. Instead of a long-lasting structural improvement, a thin overlay seeks to resurface a road that needs a major rehabilitation such as reconstruction or reclamation but there is not enough budget to fund such a large project. Thin overlays typically do not last as long as a conventional overlay since they use a thinner layer of pavement on a road in worse condition. However, they are a useful tool the City can use to add additional life to a road and to delay major construction until additional resources are available.

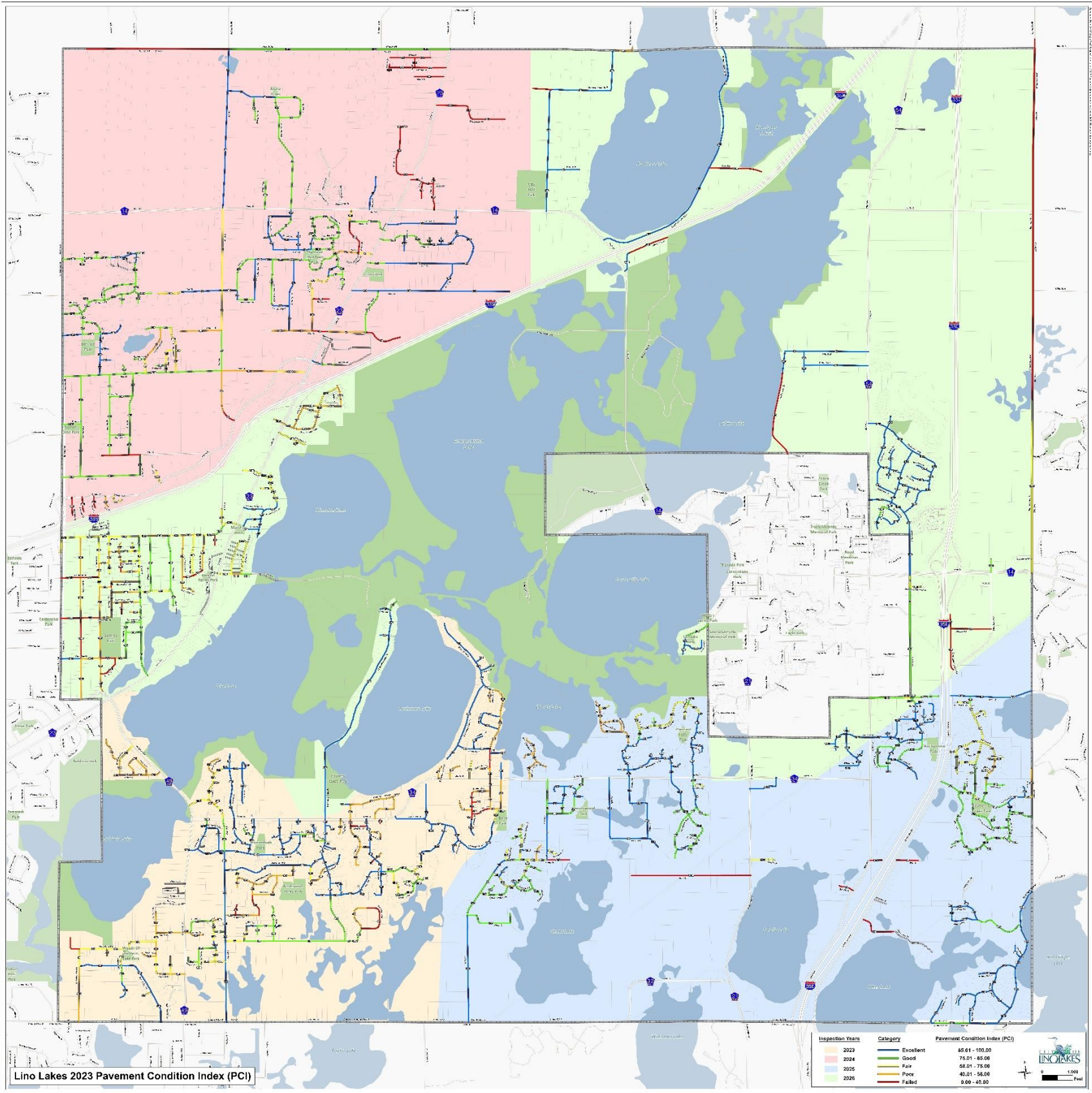
Pavement Forensics

The final decision on implementing a reconstruction, reclamation, or overlay project should come after a pavement forensic study. Pavement forensics studies the pavement structure and condition of the base underneath the visible layer of pavement. Important information results from this analysis. Examining pavement cores can determine the depths of pavement layers, signs of bonding or de-bonding, and distresses that might not be visible from the surface. Soil borings along the roadway can be used to identify aggregate depths and soil classifications to provide a better understanding of the roadway section. This information is crucial when determining what type of rehabilitation is needed and what it will cost. Several factors should be considered when deciding the number of cores to be taken such as the pavement condition and the variability in the pavement depth as cores are being taken. A pavement forensic study should be conducted less than two years before a major maintenance project to ensure the results of the study accurately reflect the road's condition. The findings of pavement forensic studies have been proven to lead to cost savings and more appropriate maintenance strategies.

WSB can provide additional information on all of the maintenance strategies discussed in this report if needed.

Appendices

Appendix A: PCI Condition Category Maps



Appendix B: PCI Values by Segment

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
12th Avenue	1	784	18,805	84
12th Avenue	3	310	10,222	86
12th Avenue	4	1,198	28,741	88
12th Avenue	5	338	8,109	83
20th Ave S	1340	1,332	37,297	90
21st Ave S	1382	1,211	39,954	83
21st Avenue	6	386	13,125	74
21st Avenue	7	908	27,254	79
21st Avenue	1351	274	10,968	88
21st Avenue	1352	489	19,548	88
21st Avenue	1355	238	9,528	83
21st Avenue	1382	1,219	48,753	88
21st Avenue	1384	473	18,915	88
21st Avenue	1389	2,216	124,110	81
21st Avenue	1390	740	29,600	94
21st Avenue	1392	543	21,702	95
21st Avenue	1393	744	29,758	95
2nd Avenue	9	338	13,529	80
2nd Avenue	10	331	13,254	80
2nd Avenue	11	333	13,338	80
2nd Avenue	12	1,457	58,294	80
2nd Avenue	13	320	12,786	78
2nd Avenue	14	343	13,734	72
2nd Avenue	15	318	12,732	74
2nd Avenue	16	484	19,347	76
2nd Avenue	17	342	13,689	78
2nd Avenue	18	309	12,347	80
4th Avenue	19	479	19,643	35
4th Avenue	20	3,838	92,101	92
4th Avenue	21	1,300	51,998	75
4th Avenue	22	1,363	32,724	92
4th Avenue	23	2,661	106,445	74
4th Avenue	24	1,327	47,772	49
4th Avenue	25	1,317	52,685	77
4th Avenue	1169	546	13,114	62
62nd Avenue	26	962	21,173	82
62nd Avenue	27	617	13,582	66
62nd Avenue	28	263	5,793	82
62nd Avenue	29	2,313	50,878	81

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
62nd Avenu	28A	141	3,103	39
64th Stree	30	708	17,002	9
64th Stree	1001	374	8,983	18
65th Stree	1007	750	18,008	77
77th Stree	37	2,087	45,913	90
77th Stree	38	624	13,724	85
77th Stree	39	551	13,232	55
77th Stree	40	1,264	30,342	25
77th Stree	41	747	17,934	40
77th Stree	42	1,246	29,901	48
77th Stree	43	495	11,875	36
79th Stree	45	763	21,366	57
79th Stree	46	442	12,368	63
81st Stree	49	1,034	24,822	94
81st Stree	50	415	12,449	27
81st Stree	51	348	10,453	27
81st Stree	1000	1,725	41,404	2
Aenon Plac	53	1,113	33,387	85
Albert Cou	54	267	6,405	83
Andall Str	56	792	23,755	79
Andall Str	57	905	27,145	86
Andall Str	58	699	20,979	85
Andall Str	59	1,254	37,626	82
Antelope D	60	167	4,521	31
Antelope D	61	176	4,759	43
Antelope D	62	333	8,999	42
Antelope D	63	484	13,063	43
Apollo Cou	1226	433	11,250	73
Apollo Dri	64	321	11,559	87
Apollo Dri	1259	475	17,100	83
Appaloosa	66	367	10,277	78
Appaloosa	67	439	12,285	69
Appaloosa	68	1,199	33,575	57
Aqua Circl	1227	2,399	57,585	63
Aqua Lane	1004	450	16,200	60
Aqua Lane	1005	303	7,276	55
Aqua Lane	1006	2,044	49,060	82
Arabian Ci	1132	315	8,809	81
Arlo Lane	73	422	11,813	85
Arlo Lane	75	818	22,913	85

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Arlo Lane	1101	272	6,800	83
Arlo Lane	1102	441	12,794	81
Arrowhead	77	217	6,083	95
Arrowhead	78	457	12,807	94
Arrowhead	79	536	15,004	94
Arrowhead	80	581	16,257	93
Arrowhead	81	780	21,827	93
Arrowhead	1140	557	15,607	88
Arrowhead	1171	186	4,470	94
Arrowhead	1172	759	18,227	94
Arrowhead	1224	276	6,625	92
Arthur Cou	82	549	15,358	72
Ash Street	1338	1,173	32,851	83
Ash Street	1339	889	24,881	87
Aspen Lane	83	582	16,294	51
Aspen Lane	84	183	5,129	44
Aspen Lane	85	642	17,965	34
Aspen Lane	1220	164	4,584	42
August Cir	1107	170	7,303	79
Bald Eagle	1180	1,194	28,649	88
Bald Eagle	1181	1,150	27,595	88
Bald Eagle	1182	378	9,065	88
Bald Eagle	1183	1,395	33,468	86
Bald Eagle	1184	643	15,437	88
Baldwin La	95	557	15,606	68
Baldwin La	1139	1,803	37,857	46
Balsam Way	1395	160	6,386	82
Balsam Way	1396	1,307	52,279	95
Barbara La	994	543	15,196	5
Beaver Cir	98	529	14,798	42
Beaver Tra	99	534	14,943	38
Behm Lane	100	153	4,273	76
Behm Lane	101	788	22,075	72
Behm Lane	102	231	6,457	72
Birch Cour	104	129	3,602	24
Black Berr	1372	460	16,560	93
Black Berr	1379	463	12,033	84
Black Duck	105	409	11,452	44
Black Duck	106	318	8,907	42
Black Duck	108	1,147	32,103	48

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Black Duck	109	327	9,165	48
Black Duck	110	250	6,992	100
Black Duck	111	498	13,945	33
Black Duck	112	149	4,173	35
Black Duck	113	1,652	46,250	100
Black Duck	114	695	19,465	41
Black Duck	115	312	8,723	100
Black Duck	116	426	11,936	55
Black Duck	117	487	13,646	100
Black Duck	118	408	11,431	43
Black Duck	119	583	16,334	47
Blackbird	120	752	21,044	81
Bloom Cour	121	471	11,313	38
Blue Heron	122	475	13,299	55
Blue Heron	123	639	17,904	59
Bluebill L	968	883	24,717	82
Bradley St	125	605	18,156	81
Broken Oak	9778	301	8,433	88
Bubble	1151	100	12,000	83
Buckthorn	127	500	13,993	86
Butternut	1354	145	4,632	88
Canfield R	128	562	16,872	92
Cardinal W	1363	141	5,346	78
Caribou Ci	130	363	9,813	40
Carl Stree	131	773	18,561	75
Carl Stree	132	1,316	31,575	88
Carl Stree	1164	597	16,726	82
Carole Dri	133	1,483	44,504	80
Carpenter	1161	343	10,989	100
Cassiopeia	134	360	10,084	73
Cedar Stre	135	728	24,745	92
Cedar Stre	136	646	18,095	92
Cedar Stre	1251	1,302	62,501	92
Cedar Stre	1252	888	26,647	76
Cedar Stre	1344	1,127	33,818	75
Cedar Stre	1345	197	5,919	73
Cedar Stre	1356	30	936	79
Century Tr	1125	607	17,002	78
Century Tr	1126	952	26,651	77
Century Tr	1127	854	23,916	81

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Century Tr	1128	121	11,174	82
Century Tr	1159	439	12,294	83
Century Tr	1160	330	9,233	85
Century Tr	1320	642	17,966	81
Cherokee T	142	514	14,395	78
Cherokee T	1090	324	9,083	78
Chestnut S	1381	325	11,688	88
Chestnut S	1385	897	30,499	88
Chippewa T	144	759	21,253	91
Chippewa T	145	193	5,395	84
Chippewa T	1232	263	7,376	73
Chokecherr	146	425	11,902	89
Chokecherr	147	477	13,347	88
Cinnamon T	148	340	9,530	27
Clearwater	149	214	5,984	65
Clearwater	150	408	13,048	74
Clearwater	151	439	12,289	67
Clearwater	152	350	9,813	78
Clearwater	153	215	11,178	81
Clearwater	154	1,236	34,603	83
Clearwater	155	936	26,209	65
Clearwater	157	736	20,602	80
Clearwater	158	679	19,017	68
Clearwater	1112	741	20,743	81
Clydesdale	1165	310	8,680	82
Connie Lan	159	661	19,834	84
Cottonwood	1347	160	5,282	88
Country La	160	222	6,215	55
Country La	161	1,411	39,495	55
Country La	162	160	4,485	86
Country La	163	1,529	45,864	86
Country La	165	811	24,344	86
Coyote Cou	166	335	9,388	38
Coyote Tra	169	378	10,574	54
Coyote Tra	990	747	20,903	33
Coyote Tra	991	773	21,657	42
Coyote Tra	992	338	9,462	52
Crane Driv	1394	230	9,200	95
Crane Driv	1395	544	21,752	95
Crane Driv	1397	301	12,058	95

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Crane Driv	1401	814	32,571	95
Crane Driv	1406	366	14,637	95
Crane Driv	1407	341	13,636	95
Crane Driv	1413	401	16,033	95
Cripple Cr	172	345	9,674	82
Cripple Cr	173	785	21,982	81
Cripple Cr	174	281	7,879	63
Crystal Co	176	189	5,280	100
Cypress St	1375	278	10,556	80
Cypress St	1376	737	29,495	87
Cypress St	1378	155	5,890	88
Cypress St	1379	243	9,235	88
Cypress St	1380	374	14,202	88
Danube Str	177	502	15,072	0
Deer Pass	179	523	14,654	86
Deer Pass	983	120	3,353	87
Deerwood C	180	119	3,326	31
Deerwood C	181	279	16,735	41
Deerwood L	182	988	27,667	93
Deerwood L	183	223	6,241	95
Deerwood L	184	230	6,444	94
Deerwood L	185	1,242	34,766	46
Deerwood L	186	442	12,373	88
Deerwood L	187	488	13,669	92
Deerwood L	188	485	13,573	94
Delina Cir	189	260	6,246	85
Diamond La	1398	1,264	50,553	95
Diane Cour	191	214	6,411	6
Diane Cour	192	46	1,380	34
Diane Stre	193	1,550	46,486	2
Diane Stre	194	511	15,326	11
Dogwood Co	1383	345	12,410	88
Dogwood Ct	1383	345	8,273	80
Dogwood St	1386	249	7,980	88
Durango Po	197	475	13,296	82
Eden Circl	1409	311	12,447	95
Egret Lane	198	184	5,146	50
Egret Lane	199	450	12,599	50
Egret Lane	200	419	11,727	55
Egret Lane	201	464	12,986	54

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Elbe Stree	202	177	5,304	29
Elbe Stree	203	864	25,923	25
Ellen Cour	204	200	5,606	63
Elm Street	1030	455	12,754	74
Elm Street	1031	411	11,514	76
Elm Street	1032	359	10,038	74
Elm Street	1033	339	9,491	62
Elm Street	1034	343	9,593	57
Elm Street	1035	486	13,596	68
Elm Street	1036	591	16,550	57
Elm Street	1037	361	10,116	66
Elm Street	1038	974	27,261	68
Elm Street	1039	338	9,473	66
Elm Street	1040	597	16,727	65
Elm Street	1041	1,071	29,988	64
Elmcrest A	1187	915	21,959	43
Elmcrest A	1233	5,618	157,313	66
Emily Circ	1400	673	26,906	95
Enid Trail	1369	542	20,600	94
Enid Trail	1370	1,147	43,574	93
Enid Trail	1377	542	14,095	83
Enid Trail	1378	1,147	29,814	83
Eva Street	212	325	9,759	39
Evergreen	213	503	14,072	0
Evergreen	214	884	26,527	0
Evergreen	215	1,135	31,786	0
Fairmont D	216	604	13,287	33
Fairmont D	217	620	13,642	34
Fawn Lane	218	802	22,450	42
Fawn Lane	219	223	6,239	33
Fawn Lane	220	473	13,251	52
Fawn Lane	221	698	19,554	46
Flora Cour	222	350	8,399	85
Forest Lan	1399	1,349	53,971	95
Forest Lan	1408	385	15,414	95
Forest Lan	1410	312	12,474	95
Forest Lan	1424	390	10,127	95
Forsham La	223	678	18,990	89
Fox Circle	970	173	4,832	96
Fox Cove	1152	338	8,788	78

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Fox Hollow	1153	164	4,252	84
Fox Road	225	164	4,592	95
Fox Road	228	634	17,759	93
Fox Road	229	1,056	29,581	94
Fox Road	230	506	14,167	93
Fox Road	231	341	9,552	93
Fox Road	1144	239	6,692	79
Fox Road	1145	724	18,813	84
Fox Road	1146	450	11,705	74
Fox Road	1360	377	9,797	93
Fox Road	1373	779	20,245	94
Fox Road	1430	432	11,235	93
Foxtail Co	232	804	24,124	88
Foxtail Dr	233	946	28,390	88
Foxtail Dr	234	592	17,753	88
Gaage Lane	235	831	24,944	92
Geneva Cou	1405	337	13,494	95
Gladstone	236	345	9,327	48
Gladstone	237	383	10,730	51
Gladstone	239	619	13,621	25
Gladstone	1020	643	14,157	25
Glen Circl	240	264	7,381	77
Glenview A	242	495	13,353	79
Glenview D	243	363	10,171	53
Glenview D	244	630	13,851	49
Glenview D	245	475	10,457	35
Glenview D	1098	655	14,409	89
Glenview L	247	325	8,764	78
Glenview L	984	824	22,252	81
Goldenrod	1123	259	7,242	83
Gordon Ave	249	453	13,588	87
Gordon Ave	250	224	6,732	87
Gray Heron	251	329	9,204	27
Gray Heron	252	1,159	32,460	45
Gray Heron	253	374	10,477	40
Green Bria	254	910	24,561	42
Green Bria	255	384	10,367	42
Greenwood	256	575	17,251	81
Grey Squir	257	270	7,281	49
Grey Squir	258	331	8,932	38

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Grey Squir	259	336	9,073	57
Harriet La	1403	414	16,542	95
Harriet La	1404	342	13,663	95
Hartford C	1106	165	7,103	80
Hawk Ridge	261	163	3,427	88
Hawthorn R	262	1,981	55,480	92
Hawthorn R	263	595	16,674	93
Hawthorn R	264	383	10,729	91
Heather Co	265	478	13,374	39
Henry Lane	266	1,351	37,837	85
Henry Lane	267	451	12,617	86
Heritage A	1412	311	8,088	88
Heritage A	1414	213	5,548	95
Heritage A	1416	906	23,562	95
Hickory Pl	269	185	5,171	90
Highland C	270	129	3,605	84
Highland C	271	333	9,326	82
Highland D	272	809	22,662	79
Highland D	273	663	18,553	79
Highland D	274	488	13,668	79
Highland D	275	147	4,103	85
Highland D	276	386	10,821	86
Highland L	277	196	5,502	84
Highland T	278	662	18,523	82
Hokah Driv	279	153	10,389	93
Hokah Driv	280	473	13,256	92
Hokah Driv	281	476	14,269	92
Hokah Driv	282	665	18,617	93
Hokah Driv	283	807	24,197	93
Hokah Driv	284	869	26,056	93
Hollow Lan	285	657	18,392	81
Hollow Lan	286	483	13,537	77
Holly Cour	287	1,872	44,928	85
Holly Driv	292	449	10,786	84
Holly Driv	293	245	5,879	85
Holly Driv	971	340	8,157	67
Holly Driv	972	287	6,888	59
Holly Driv	973	583	13,992	87
Holly Driv	974	760	18,236	76
Holly Driv	975	899	21,582	75

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Holly Driv	976	3,464	83,135	86
Holly Driv	1008	3,894	93,453	17
Holly Driv	1012	726	13,064	28
Hudson Tra	997	673	18,857	75
Hunters Ri	1019	983	27,531	40
Ironwood C	301	221	6,177	93
Itasca Cir	1418	605	15,732	95
Iverson Co	302	603	16,879	85
Ivywood Av	1386	249	5,985	80
Ivywood Av	1388	966	32,849	88
James Stre	307	2,202	61,661	95
James Stre	308	442	12,373	95
Jane Avenu	1211	183	5,855	87
Jeanne Dri	310	659	19,764	80
Jeanne Dri	311	720	21,614	82
Jeanne Dri	312	1,252	37,559	84
Johanna Ci	1420	535	13,898	95
Jon Avenue	313	659	18,446	82
Joseph Cou	314	225	6,307	85
Joseph Cou	315	333	9,316	85
Josephine	1415	180	4,680	95
Joyer Lane	316	1,972	59,156	92
Karth Road	317	1,220	36,605	92
Karth Road	318	454	13,623	92
Kelly Stre	1204	832	26,636	84
Kelly Stre	1205	953	30,481	84
Kelly Stre	1208	380	12,164	87
Kelly Stre	1210	621	19,866	86
Kelly Stre	1212	891	28,515	86
Killdeer C	319	155	4,340	24
Killdeer D	320	127	3,552	26
Killdeer D	321	158	4,419	23
Killdeer D	322	259	7,260	24
Killdeer D	323	332	9,288	39
Killdeer D	1342	562	15,735	91
Kingfisher	324	490	13,710	47
Knoll Driv	989	1,019	28,521	95
Lacasse Ci	981	244	6,833	66
Lacasse Co	326	237	6,626	49
Lacasse Co	980	275	7,702	62

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Lacasse Dr	330	506	14,154	57
Lacasse Dr	331	407	11,406	68
Lacasse Dr	332	529	14,825	69
Lacasse Dr	333	764	21,402	69
Lacasse Dr	334	201	7,234	70
Lacasse Dr	335	581	16,274	83
Lacasse Dr	336	418	11,715	64
Lakeview D	1042	1,307	31,375	42
Lakeview D	1043	1,325	31,790	42
Lakeview D	1044	1,324	31,777	38
Lakeview D	1045	1,316	31,585	56
Lakota Tra	1154	554	14,396	88
Lakota Tra	1155	62	1,608	94
Lakota Tra	1156	224	5,814	85
Lakota Tra	1225	198	5,148	93
Lamotte Ci	1221	826	23,118	89
Lamotte Dr	342	281	7,874	89
Lamotte Dr	344	307	8,591	87
Lamotte Dr	978	839	23,501	84
Langer Cir	1104	172	10,305	87
Langer Lan	350	1,712	41,095	83
Langer Lan	352	454	10,893	85
Langer Lan	1103	456	11,396	82
Langer Lan	1105	700	17,504	79
Langer Lan	1134	197	4,924	79
Lantern Ci	354	582	16,297	100
Lantern La	355	527	14,758	100
Lantern La	356	556	15,563	100
Laurene Av	357	675	16,195	58
Laurene Av	358	285	6,842	59
Laurene Av	359	558	13,396	65
Laurene Av	360	470	11,275	46
Lea Court	361	361	10,096	50
Leonard Av	362	1,716	48,039	82
Leonard Av	363	1,559	43,665	84
Lilac Stre	1191	895	25,069	66
Lilac Stre	1264	1,788	50,061	55
Lilac Stre	1270	5,164	144,579	79
Linda Aven	365	935	22,451	50
Linda Aven	366	182	5,107	56

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Linda Aven	367	380	10,637	76
Linda Circ	368	204	5,713	58
Linda Cour	369	472	13,214	50
Linda Lane	370	313	8,774	63
Linda Lane	371	332	9,295	74
Linda Lane	372	1,039	29,090	76
Linda Lane	1173	229	5,505	85
Linda Lane	1174	444	10,661	74
Linden Lan	373	1,317	36,886	53
Lois Lane	374	453	13,582	80
Lois Lane	375	1,377	41,316	82
Lois Lane	376	1,428	42,844	78
Lois Lane	377	177	5,302	74
Lois Lane	378	573	17,180	82
Lois Lane	379	934	28,012	86
Lois Lane	380	2,168	65,040	86
Lois Lane	381	307	9,201	85
Lois Lane	383	297	8,903	85
Lois Lane	1214	259	7,763	86
Lois Lane	1222	520	15,613	83
Lonesome P	384	334	9,347	56
Lonesome P	385	862	24,136	47
Lonesome P	386	523	14,646	50
Lonesome P	387	586	16,415	47
Main St	1260	624	13,724	94
Mallard La	388	337	9,427	100
Maple Stre	389	926	22,228	7
Marcia Lan	390	750	22,501	78
Marilyn Dr	391	425	11,896	76
Marilyn Dr	392	214	5,979	75
Marilyn Dr	393	328	9,171	84
Marilyn Dr	395	1,313	36,773	70
Marilyn Dr	396	1,043	29,218	49
Marilyn Dr	398	457	12,802	85
Marshan Co	1197	142	3,408	51
Marshan Co	1203	340	10,893	68
Marshan La	400	938	18,754	64
Marvy Stre	401	1,937	54,236	76
Marvy Stre	402	613	17,155	79
Meadow Cou	403	585	16,390	31

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Meadowlark	641	243	6,805	75
Meadowview	404	1,462	43,847	83
Meadowview	1124	233	6,518	77
Merganser	642	552	15,469	88
Mineral Po	643	418	11,711	86
Molitor Dr	1133	781	21,876	74
Morell Dri	1365	149	5,654	78
Mourning D	644	334	9,028	62
Mourning D	645	371	10,014	57
Mourning D	646	486	13,127	64
Muskrat Ru	647	331	9,264	43
Mustang Co	648	352	9,848	86
Mustang La	649	479	13,423	86
Mustang La	650	365	10,210	85
Mustang La	651	793	22,204	84
Mustang La	652	498	13,953	86
Myrtle Lan	653	766	21,460	85
N/A	1432	1,148	34,440	88
Nancy Driv	962	393	11,787	67
Nancy Driv	963	1,156	34,688	31
Nordin Str	1261	221	6,200	6
Norma Way	1417	307	7,972	88
Northern L	1002	356	12,833	62
Nottingham	659	1,319	39,582	85
NULL	1333	528	21,111	56
Oak Court	660	344	9,624	81
Oak Court	661	370	10,350	83
Oak Hollow	1178	976	23,424	77
Oak Hollow	1256	147	3,516	83
Oak Lane	97	473	13,246	79
Oak Lane	662	2,013	48,306	95
Oak Lane	663	2,256	40,609	95
Oak Lane	664	839	20,146	95
Oakview Co	1121	311	8,708	82
Oakwood Dr	668	570	15,967	63
Oakwood La	669	587	16,433	69
Oakwood La	670	530	14,838	83
Oakwood La	1250	622	17,424	87
Ojibway Pa	1158	1,099	28,564	92
Old Birch	671	2,139	51,333	85

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Olive Stre	672	498	11,962	9
Olive Stre	673	799	19,184	0
Orange Str	674	827	23,161	0
Orange Str	675	1,017	24,416	20
Osprey Cou	676	523	14,639	74
Osprey Cou	1253	122	14,650	85
Otter Lake	679	1,243	29,826	38
Otter Lake	1343	427	31,582	78
Painted Tu	680	152	4,266	51
Painted Tu	681	475	13,307	94
Painted Tu	682	463	12,962	62
Palm Stree	1350	1,175	39,943	88
Palomino L	683	358	10,033	77
Palomino L	684	482	13,484	78
Palomino L	685	803	22,476	86
Palomino L	686	785	21,975	74
Palomino L	687	698	19,549	71
Palomino L	688	586	16,411	82
Palomino L	689	643	18,000	86
Park Court	1198	561	17,937	62
Park Court	1199	368	11,764	72
Parkview D	690	501	13,538	79
Partridge	691	449	12,565	88
Partridge	693	719	20,145	100
Partridge	694	799	22,360	100
Patti Driv	405	1,275	38,258	80
Patti Driv	695	663	19,896	80
Patti Driv	696	737	22,104	77
Pelican Pl	406	1,382	38,691	47
Peltier La	408	2,902	63,836	21
Peltier La	409	656	14,429	86
Peregrine	410	346	8,992	74
Pheasant H	411	145	4,054	88
Pheasant H	412	323	9,056	88
Pheasant H	413	361	10,102	88
Pheasant H	414	349	9,768	87
Pheasant H	415	246	6,882	88
Pheasant H	416	260	7,267	92
Pheasant H	417	874	24,466	86
Pheasant H	1120	1,134	31,741	86

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Pheasant H	1122	983	27,518	82
Pheasant H	1135	298	8,342	85
Pheasant H	1136	451	12,635	82
Pheasant H	1137	403	11,286	89
Pheasant R	418	505	14,146	100
Pheasant R	420	961	26,922	42
Pheasant R	995	399	11,166	65
Pheasant R	1341	1,506	42,157	92
Pheasant R	1357	1,118	40,259	92
Pheasant R	1359	455	16,368	93
Pheasant R	1361	321	11,569	93
Phelps Roa	421	1,318	36,892	20
Pine Stree	1323	3,846	115,380	82
Pine Stree	1324	1,811	54,344	82
Pine Stree	1327	1,542	46,264	81
Pinto Lane	425	403	11,285	84
Pinto Lane	1130	291	8,142	78
Pinto Lane	1131	551	15,421	80
Pondview C	426	425	11,904	86
Pony Court	427	262	7,344	85
Post Road	428	442	11,937	90
Post Road	429	845	22,822	90
Praire Vie	432	579	17,365	86
Prairie Fl	430	243	6,805	88
Prairie Fl	431	573	16,057	78
Quarter Ho	433	286	8,005	81
Ravens Cou	1175	351	8,413	65
Ravens Cou	1176	531	12,733	64
Ravens Cou	1177	473	11,343	80
Red Birch	434	575	16,105	65
Red Clover	435	594	16,038	48
Red Fox Ro	1147	784	20,382	73
Red Fox Ro	1148	777	20,211	75
Red Fox Ro	1149	196	5,098	76
Red Fox Ro	1150	305	7,940	74
Red Hawk T	436	296	8,289	46
Red Hawk T	437	267	7,486	60
Red Maple	438	1,515	42,414	27
Red Maple	439	432	12,088	82
Red Maple	441	1,111	31,096	56

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Red Oak La	1346	560	22,407	88
Red Oak La	1348	246	9,829	88
Red Oak La	1349	251	10,059	88
Red Oak La	1426	791	20,577	95
Red Oak La	1427	559	14,534	95
Red Oak La	1429	195	5,073	95
Redwood Av	1387	438	14,883	88
Rehbein St	443	2,081	62,423	89
Reiling Ro	444	872	24,410	86
Rice Court	445	404	11,314	84
Rice Lake	446	528	14,792	76
Rice Lake	447	1,775	49,704	78
Rice Lake	448	1,769	49,525	78
River Birc	449	652	18,245	88
River Birc	450	769	21,545	53
Robinson D	1162	396	12,675	85
Robinson D	1163	40	1,280	83
Robinson D	1168	83	1,999	84
Robinson D	1263	426	13,622	85
Robinson D	1362	450	19,811	78
Robinson D	1364	480	21,120	78
Robinson D	1366	618	27,791	78
Rohavic La	451	445	13,363	51
Rohavic La	452	477	14,320	46
Rolling Hi	453	551	13,226	87
Rolling Hi	454	1,657	39,773	85
Rolling Hi	982	198	3,966	87
Rondeau La	455	1,682	40,368	94
Rondeau La	456	2,471	59,313	94
Rondeau La	457	3,088	74,118	94
Rondeau La	458	1,505	36,123	94
Rondeau La	461	678	16,276	43
Rondeau La	462	1,294	31,052	94
Rondeau La	463	1,966	47,187	94
Rondeau La	464	2,603	62,464	94
Rondeau La	465	1,349	32,383	94
Rosewood S	1377	1,459	49,621	88
Royal Pine	1179	532	12,760	54
Ruffed Gro	467	362	10,145	53
Ruffed Gro	468	357	9,993	45

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Ruffed Gro	469	631	17,660	54
Ruffed Gro	470	270	7,548	57
Rustic Lan	471	785	14,121	18
Saddle Clu	1358	182	6,556	93
Sandhill D	472	891	24,961	44
Sandpiper	473	333	7,336	90
Sargent Co	474	911	25,506	87
Savanna Co	475	424	11,023	74
Schlavin C	476	478	14,345	49
Sedge Cour	1117	352	9,865	74
Service Ro	477	460	11,032	25
Service Ro	479	1,361	32,655	34
Shadow Cou	480	282	7,894	90
Shadow Lak	481	407	11,410	48
Shadow Lak	482	558	15,632	100
Shadow Lak	483	2,167	60,675	100
Shadow Lak	484	1,614	71,028	85
Shadow Lak	485	3,363	80,705	90
Shadow Lak	487	331	7,934	77
Shadow Lak	488	213	9,353	93
Shadow Lak	489	157	6,286	91
Shadow Lak	490	418	16,701	91
Shadow Lak	491	498	19,920	92
Shadow Lak	492	331	13,224	93
Shadow Lak	493	846	20,316	90
Shadow Lak	494	3,327	79,857	90
Shadow Lak	495	388	15,515	93
Shadow Lak	496	538	21,520	93
Shelia Ave	1206	484	15,483	86
Sherman La	497	102	5,083	88
Sherman La	498	229	6,407	88
Sherman La	500	498	13,931	65
Sherman La	501	1,078	30,180	88
Sherman La	502	1,593	44,604	64
Sherman La	503	516	14,443	74
Sherman La	504	482	13,491	86
Sherman La	505	611	17,119	88
Sherman La	506	458	12,835	88
Sherman La	507	324	9,069	81
Sherman La	1115	271	7,601	76

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Sherman La	1116	470	13,157	81
Sherman La	1138	730	20,428	87
Sherwood L	508	493	18,726	85
Sioux Cour	509	168	4,703	61
Sioux Lane	1335	185	5,175	93
Sioux Look	514	736	20,617	56
Sioux Trai	511	358	10,023	64
Sioux Trai	512	637	17,844	64
Sioux Trai	513	289	8,091	64
Sioux Trai	1335	185	5,175	85
Sioux Trai	1368	412	15,655	94
Smoketree	515	603	16,284	62
Smoketree	516	328	8,868	57
Snow Goose	977	289	8,101	88
Snow Owl C	518	393	11,011	51
Snow Owl L	519	1,361	38,115	49
Snow Owl L	520	355	9,948	56
South Glen	521	134	3,763	92
South Glen	522	497	13,923	74
South Glen	523	360	10,084	90
South Glen	993	519	14,530	83
Stage Coac	524	589	16,502	90
Stage Coac	525	291	8,147	90
Stage Coac	526	252	7,043	90
Stage Coac	527	345	9,650	90
Stage Coac	1200	132	4,239	71
Stage Coac	1201	336	10,753	65
Stage Coac	1202	174	5,580	72
Stage Coac	1218	342	10,956	70
Stallion L	1129	1,355	37,941	81
Stella Cir	1108	135	5,786	85
Stella Lan	1109	351	8,421	80
Stella Lan	1110	528	12,665	75
Stella Lan	1111	310	7,431	86
Stoneybroo	1118	368	10,298	84
Stoneybroo	1119	1,616	45,258	82
Sunfish Co	529	266	7,180	59
Sunflower	530	320	8,639	56
Sunflower	531	208	5,617	45
Sunflower	532	446	12,033	63

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Sunrise Dr	533	586	14,065	51
Sunrise Dr	534	451	10,828	54
Sunrise Dr	535	1,003	24,062	54
Sunrise Dr	536	1,317	31,609	51
Sunrise Ro	537	316	7,593	63
Sunrise Ro	539	505	12,122	56
Sunrise Ro	540	865	20,751	65
Talle Lane	541	1,130	33,886	92
Tamarack L	542	571	15,988	47
Tart Court	543	342	9,588	88
Tart Lake	544	223	6,238	70
Tart Lake	545	173	4,846	77
Tart Lake	546	327	9,166	69
Tart Lake	547	337	9,449	74
Tart Lake	548	672	18,811	77
Tart Lake	549	916	25,656	85
Tart Lake	550	615	17,231	87
Teal Court	551	650	18,196	60
Teckla Cou	552	316	8,844	77
Tele Drive	553	631	17,664	65
Tele Lane	554	355	9,940	72
Tele Lane	555	377	10,566	66
Terra Cour	556	366	10,245	38
Thomas Str	999	1,349	40,484	55
Timberwolf	558	213	10,210	88
Timberwolf	559	268	7,518	53
Timberwolf	560	586	16,400	52
Timberwolf	562	900	25,201	49
Timberwolf	563	260	8,322	88
Timberwolf	564	423	12,701	88
Timberwolf	565	469	13,119	87
Timberwolf	566	462	12,930	50
Timothy Co	1207	202	6,464	84
Tomahawk C	567	253	7,079	92
Tomahawk T	568	345	9,668	92
Tomahawk T	569	292	8,163	92
Tomahawk T	570	534	14,941	92
Totem Trai	571	542	15,172	92
Totem Trai	572	282	7,897	92
Totem Trai	573	326	9,120	85

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Town Cente	574	756	33,248	52
Town Cente	575	344	15,133	50
Town Cente	1195	618	24,734	56
Town Cente	1258	481	19,249	55
Town Cente	1336	598	23,923	53
Town Cente	1337	325	9,111	59
Town Cente	1367	335	32,792	56
Trappers C	576	327	9,160	81
Trappers C	581	222	6,213	74
Trappers C	582	322	9,026	67
Trappers C	583	219	6,125	60
Trappers C	584	254	7,100	67
Trappers C	585	402	11,258	75
Trappers C	587	441	12,335	73
Trappers C	1254	156	18,983	90
Trappers X	577	795	22,253	73
Trappers X	579	398	11,157	71
Trappers X	1255	114	14,099	91
Ulmer Driv	588	928	25,065	43
Ulmer Driv	589	643	17,365	65
Ulmer Driv	590	374	10,101	68
UNKNOWN	1362	165	4,615	80
UNKNOWN	1363	163	4,564	80
Vaughan Co	1167	187	5,237	86
Velvetleaf	591	278	7,770	86
Vicky Lane	592	1,343	40,297	78
Villiage D	595	792	17,421	55
Villiage D	1196	864	34,553	59
Ware Circl	596	206	5,761	45
Ware Road	597	2,630	92,061	90
Ware Road	599	1,045	36,559	84
Ware Road	601	1,461	51,140	91
Ware Road	603	309	10,827	90
Ware Road	605	571	15,984	70
Ware Road	942	625	21,874	90
Ware Road	944	542	18,957	86
Ware Road	947	241	6,750	47
Ware Road	1170	677	16,258	63
Watermark	1391	894	35,744	95
Watermark	1402	563	22,516	95

Branch ID	Section ID	Length (ft)	Area (sqft)	2023 PCI
Watermark	1419	286	7,425	95
Watermark	1421	463	12,041	95
Watermark	1422	732	19,043	95
Watermark	1423	1,131	29,413	95
Watermark	1425	638	16,581	95
Wayne Cour	1209	201	6,443	86
Whippoorwi	606	1,329	37,210	62
White Birc	607	578	16,192	45
White Oak	608	497	13,909	84
White Oak	609	453	12,681	84
White Oak	610	233	6,515	91
White Oak	611	852	23,842	84
White Owl	612	726	20,331	98
White Pine	613	208	5,837	51
White Pine	614	1,217	32,857	59
White Pine	615	577	15,566	70
White Pine	616	907	25,405	70
Whitetail	617	412	12,360	88
Whitetail	618	336	9,400	85
Whitetail	619	556	15,565	88
Wild Turke	620	700	19,592	56
Wildflower	621	333	8,991	47
Wildflower	622	604	16,306	50
Wolf Circl	623	310	8,687	62
Wood Duck	624	169	4,744	86
Wood Duck	625	244	6,818	85
Wood Duck	626	702	19,658	82
Wood Duck	964	333	9,336	80
Wood Duck	966	3,123	87,438	83
Wood Duck	967	679	19,010	84
Woodchuck	627	821	24,637	88
Woodchuck	628	588	17,642	88
Woodchuck	629	764	22,930	88
Woodchuck	630	573	17,176	88
Woodland D	636	1,364	30,000	14
Woodridge	227	262	7,077	72
Woodridge	638	1,059	28,589	87
Woodridge	639	1,379	37,227	90
Woodridge	640	1,442	38,943	89
Woods Edge	1223	668	26,710	56

