



**Downtown Parking Study**

September 1<sup>st</sup>, 2017

## Study Purpose and Overview

This investigation was intended as a continuation of the Downtown Parking Study authored by Paul Kindiak, R.E.T., for the Town of Edson in 1999. While that study focussed exclusively on parking supply, and assessed deficiencies based on the parking requirements of the Land Use Bylaw, this study utilized the more conventional approach of vehicle counts to assess actual (rather than theoretical) parking demand. Its primary purpose was to determine whether the 60-stall shortfall cited by Kindiak actually translated into a parking shortage on the ground. The study also updated the 1999 parking supply estimates through desktop research and empirical fieldwork. Significantly, a reduced estimate of 675 stalls (compared to 938) was yielded by this approach.

Nevertheless, the significant shortage envisioned by the 1999 study failed to materialize, with actual demand throughout the study area averaging only 32% of the available stalls. This is in keeping with the experience of other municipalities, which have found that their Land Use Bylaw parking requirements drastically exceed actual need. As one particularly striking (albeit crude) example, in a comprehensive parking review of downtown Okotoks, the municipality estimated a peak demand of 721 stalls in a commercial area encompassing 23.4 ha; by contrast, Edson's 1999 study posited a parking need of 864 stalls (based on the Land Use Bylaw) for an area of only 8.16 ha.

From a planning standpoint, this study was motivated by the twin desires of ensuring adequate parking supply in the downtown and of preventing the unnecessary dedication of usable land to parking lots. It is reasonable to assume a tension between the desirability of urban space and the amount of parking lots it contains; aggressive utilization targets (perhaps up to 80%) should thus be set to ensure efficient use of parking space.

While additional utilization counts will be necessary to corroborate the findings of this study, and the Town's overall downtown parking strategy will need to evolve as economic, infrastructural, and demographic conditions change, it is hoped that this work can begin an ongoing conversation about how to effectively manage parking in the downtown, and can lay the foundation for an evidence-based approach to assessing and responding to need.

Overall, the data collected cast severe doubt on the notion of a downtown parking shortage. During three vehicle counts (completed in the morning, afternoon, and evening), there was no instance in which demand exceeded 50% of supply, either in the study area as a whole or its southern and northern halves. These estimates point not to a shortage, but a severe glut of

parking in the downtown, and indicate that any chronic parking difficulties encountered by residents should be mitigated through alternative parking strategies such as wayfinding or shared parking rather than through additional provision.

## Study Limitations

While this study provides valuable empirical evidence on parking availability in the downtown, it is not conclusive in any respect, and should be considered the start, rather than the end, of the conversation.

In particular, it provides aggregate estimates for the downtown area as a whole, and does not (as compared to the 1999 study) go into detail on the parking needs of specific businesses, or the ownership or other information of specific lots. For example, no title searches were conducted for off-parcel parking located on private property or vacant lots to determine whether these spaces were dedicated for specific businesses or were otherwise restricted. As well, the aggregate data may obscure the fact that many on-parcel spaces were restricted to customers or staff of their associated businesses. As such, there were many vacant parking spaces throughout the study area which are unavailable to downtown visitors generally. These cases are noted in the data table included in this document, though there may be some omissions. Despite this limitation, it should be noted that there was no count in which public (on-street) parking on any of the six study blocks was overutilized; the integrity of the study's core findings is therefore preserved.

As well, no distinction was made between illegal and legal parking stalls; capacity was estimated based on actual usage patterns, which often ran counter to the parking lot design guidelines of the Land Use Bylaw. The 1999 study, for example, indicates that a significant number of stalls back directly onto a lane, which this study has assumed is an acceptable form of parking. However, the line was generally drawn at tandem-parked vehicles; where tandem parking was the norm, this was taken as an indication of undersupply, giving rise to utilization rates for some lots of above 100%.

It is also worth noting that the study area itself may not constitute a full representation of Edson's "downtown," and the parking spaces included do not represent the sum of those which are conceivably usable by downtown visitors. It was delineated, for comparative purposes, identically to the 1999 study area. However, the border excludes many proximate lots, as well as many businesses (particularly along 2<sup>nd</sup> and 4<sup>th</sup> Ave) which are part of Edson's commercial centre. As such, this project could more accurately be called a "Main Street Parking Study". Once again, however, this limitation is not fatal to the endeavour as a whole. Indeed, estimates

(often quantitative, though sometimes merely observational) of parking demand in lots adjacent to the study area tended to further highlight the oversupply of parking space; if an adjoining lot had been overutilized, this would have been recorded and included in this study.

Finally, the counts themselves may be problematic for several reasons. Most apparently, only three were completed; it is thus difficult to make any representative claims about the main street parking situation. All counts were performed in the same week in August, and it is very possible that some extraneous circumstance (e.g. the approaching long weekend) lessened parking demand and limited the generalizability of these findings. Weather may muddy the waters further. While it was normal during the first two counts on August 28<sup>th</sup> and 30<sup>th</sup>, there was a significant amount of cloud/smoke cover on the 31<sup>st</sup>, and this count also occurred soon after a significant rainstorm.

## Methodology

Broadly speaking, there were two components of this study: desktop supply estimates and field verification/demand estimates. Desktop research was completed largely through the Town's Munisight webmap program using aerial photographs of the Town taken in 2014. The study area was divided into six blocks (Figure 2), with each block containing several numbered lots (generally delineated based on the businesses they serviced) (Figures 4-9). The capacity for each lot was then estimated based on the parking lot design guidelines of the Land Use Bylaw; generally, this meant an estimate of 7m per vehicle for on-street parking and 2.7m per vehicle for off-street parking (where vehicles would park perpendicular to a business). Estimates were then cross-referenced with those in the 1999 study, with similarity rather than identity being the target. In almost all cases, the lower estimate of the two was used. Throughout this process, parking studies from other municipalities were examined to determine methodological best practices, parking management approaches, acceptable walking distances, and typical parking demand.

Next, field research was completed in the form of three vehicle counts completed between 10:40 am-11:40 am, 2:00 pm-3:30 pm, and 5:25 pm-6:10 pm, on August 30<sup>th</sup>, 28<sup>th</sup>, and 31<sup>st</sup>, respectively. Data were tabulated according to lot and block, and overall estimates for the study area were generated. Data were separated for the northern (3<sup>rd</sup> Ave to 6<sup>th</sup> Ave) and southern (1<sup>st</sup> Ave to 3<sup>rd</sup> Ave) portions of the study area. This was to ensure that parking space was available within a 300m walking distance from a visitors' destination; both halves of the study area are fully covered by a 300m walking radius (Figure 2). Note that the Okotoks parking study estimated 600m as a "reasonable" walking distance, while Beaumont considered 200m to be "optimal".

The data were analysed to determine where pressure points as well as major inefficiencies existed; in the data table (Figure 1), the former are represented in red and the latter in green. Space provision was considered efficient if between 51 and 85% of stalls were utilized, and inefficient (either due to over or under-supply) otherwise. While there is some arbitrariness to these numbers, it is worth noting that a downtown parking study completed by the Town of Beaumont targeted a 90-95% peak utilization rate as optimal.

## Study Area

The study area is outlined in Figure 2, and is identical to that of the 1999 downtown parking study. It extends along 50<sup>th</sup>/Main Street from 1<sup>st</sup> Ave to 6<sup>th</sup> Ave, and is bordered by the back alleys adjacent to Main Street. It also includes the area between 1<sup>st</sup> and 2<sup>nd</sup> Avenues from 50<sup>th</sup> to 51<sup>st</sup> Street, though this portion of the study area has been omitted from the parking totals labelled “Main Street” in the data table. As noted above, the “North” section of the study area extended from 3<sup>rd</sup> Ave to 6<sup>th</sup> Ave (Blocks 3, 4, and 5), while the “South” spanned 1<sup>st</sup> Ave to 3<sup>rd</sup> Ave (Blocks 1, 2, and 6).

Each Block consists of several lots, as shown in Figures 4-9.

## Results

As shown in Figure 1, the results demonstrate a significant oversupply of parking throughout the study area. For every vehicle count, all blocks had utilization rates under 50% (with one exception of 54%), and the average utilization rate for the study area as a whole was only 32%. Regardless of how the data were separated (e.g. North/South division, exclusion of Block 6 from the tabulation) the basic picture remained unchanged. While further vehicle counts could help to corroborate these findings, these initial estimates suggest that no additional parking will be needed in the downtown for some time.

## Recommendations and Future Steps

As with any research pertaining to an evolving subject matter, it will be of primary importance to continue to build upon and refine the evidence base established by this study. Additional vehicle counts may be required, as well as an expansion of the study area’s boundaries. Parking supply and demand will need to be recalculated as development occurs.

In the short term, these findings suggest that no active measures need be taken to increase parking supply (e.g. by purchasing and developing downtown parking lots). Indeed, gradual steps towards reducing the amount of land dedicated to parking lots, perhaps by lowering parking requirements in the downtown area, may be advisable as a means of fostering a denser, more pedestrian-friendly, and more attractive Main Street.

Nonetheless, given that residents have expressed concerns regarding the downtown parking situation, it may be worthwhile to institute measures to promote optimal and expedient use of the available parking. For example, this may be as straightforward as painting stall lines for on-street parking areas to ensure that the full potential capacity is realized. This would have the added benefit of making the entire parking system more legible (e.g. illustrating where parking is permitted and guiding visitors to available stalls). In similar vein, clearer wayfinding signage could be utilized by the Town (and encouraged on the part of businesses) to minimize unnecessary “searching”.

Consideration should be given to cash-in-lieu or other parking equivalence schemes which allow a greater degree of flexibility for developers in meeting their parking requirements. For example, developers could be permitted to pay a fixed fee per stall to the Town instead of providing off-street parking spaces; these fees could then be applied to other parking management strategies (e.g. wayfinding, stall demarcation, etc.) administered by the Town.

Moving forward, the Town should encourage shared parking approaches on the part of downtown businesses. Shared lots work particularly well for establishments whose peak demand times are staggered (e.g. bars and offices), and serve to reduce overall parking space while ensuring that visitors reliably have access to convenient parking stalls at all times of day. Such arrangements should be considered when evaluating the parking requirements for future downtown developments. While it may be more difficult to encourage retroactive shared parking arrangements (i.e. for businesses already in the downtown), this should be done wherever possible, as there were several instances where multiple businesses could have been effectively served by a lot, but the lot was designated solely for customers of a single business. Lot 4.1 (Money Mart), for example, had a steady utilization rate of only 6% across all counts, yet was restricted to customers only. Any strategies possible for fostering a less prohibitive parking environment and encouraging (where possible) businesses to “democratize” their lots should be investigated (though considerable barriers exist in this regard).

Given that there seems to be no pressure on the system overall, other (more restrictive) popular parking management approaches such as paid or time-restricted parking seem

unnecessary; this may change, however, if on-street parking stalls are gradually reduced in favour of more pedestrian-centred amenities such as sidewalk patios, wider sidewalks, etc.

## Conclusion

The magnitude of available parking and the consistently low utilization rates observed in all areas of the downtown indicate that the parking situation is fairly stable at present. While certain interventions to promote more efficient utilization of the existing parking stock are advisable, no large-scale investments are necessary at present. Moving forward, the Town should remain open to measures which preserve residents' ability to find parking while reducing the amount of land used for this purpose. Continued evidence-gathering and adaptation of the policy framework in response to changing conditions on the ground will promote long-term best outcomes.

Downtown Parking Study - Field Assessment

Figure 1

Lot No.	Capacity	Date/Time: 28/08/17; 14:00-15:30		Date/Time: 30/08/2017; 10:40-11:40		Date/Time: 31/08/17; 17:25-18:10	
		Vehicle Count	Utilization Rate	Vehicle Count	Utilization Rate	Vehicle Count	Utilization Rate
1.1	28	7	25%	6	21%	2	7%
1.2	7	5	71%	9	129%	0	0%
1.3	1	0	0%	0	0%	1	100%
1.4 <sup>2</sup>	4	2	50%	2	50%	1	25%
1.5	7	5	71%	4	57%	0	0%
1.6	4	2	50%	3	75%	0	0%
1.7 <sup>2</sup>	6	0	0%	6	100%	1	17%
1.8	6	4	67%	3	50%	3	50%
1.9	8	3	38%	2	25%	1	13%
1.10	5	4	80%	4	80%	1	20%
1.11	4	2	50%	0	0%	0	0%
1.12	4	2	50%	1	25%	0	0%
1.13	0						
1.14	0						
1.15	9	8	89%	4	44%	5	56%
1.16	11	6	55%	5	45%	3	27%
1.17 <sup>2</sup>	4	4	100%	1	25%	0	0%
Block 1	108	54	50%	50	46%	18	17%
2.1 <sup>1</sup>	7	1	14%	1	14%	2	29%
2.2	2	2	100%	0	0%	0	0%
2.3	17	7	41%	5	29%	7	41%
2.4	4	4	100%	4	100%	2	50%
2.5	6	1	17%	1	17%	3	50%
2.6 <sup>1</sup>	3	2	67%	1	33%	1	33%
2.7	2	2	100%	2	100%	0	0%
2.8	2	2	100%	1	50%	0	0%
2.9	3	4	133%	3	100%	0	0%
2.10 <sup>1</sup>	2	2	100%	1	50%	0	0%
2.11	5	1	20%	2	40%	2	40%
2.12	3	0	0%	0	0%	0	0%
2.13	5	1	20%	1	20%	0	0%
2.14	4	1	25%	2	50%	3	75%
2.15	11	3	27%	9	82%	4	36%
2.16	11	3	27%	4	36%	5	45%
Block 2	87	36	41%	37	43%	29	33%
3.1 <sup>2,3</sup>	9	4	44%	4	44%	1	11%
3.2 <sup>1,6</sup>	2	3	150%	4	200%	0	0%
3.3	2	0	0%	1	50%	1	50%
3.4	4	2	50%	2	50%	1	25%
3.5 <sup>1</sup>	7	6	86%	5	71%	2	29%
3.6	2	0	0%	1	50%	1	50%
3.7	8	3	38%	4	50%	4	50%
3.8	5	2	40%	3	60%	3	60%

1. "Reserved or Private Parking"  
 2. "Customer Parking Only"  
 3. Handicap Stall Incl."  
 4. "Loading Area Only"  
 5. Many In-Use Stalls Have "No Parking" Signs  
 6. Tandem Parking Increases Actual Capacity



**Downtown Parking Study - Field Assessment**

Lot No.	Capacity	Date/Time: 28/08/17; 14:00-15:30		Date/Time: 30/08/2017; 10:40-11:40		Date/Time: 31/08/17; 17:25-18:10	
		Vehicle Count	Utilization Rate	Vehicle Count	Utilization Rate	Vehicle Count	Utilization Rate
3.9	5	1	20%	4	80%	3	60%
3.10	5	3	60%	2	40%	0	0%
3.11	1	0	0%	0	0%	0	0%
3.12	5	1	20%	0	0%	0	0%
3.13	11	4	36%	7	64%	4	36%
3.14	11	6	55%	3	27%	4	36%
3.15 <sup>4</sup>	2	1	50%	1	50%	1	50%
3.16	4	2	50%	4	100%	4	100%
3.17	4	3	75%	2	50%	4	100%
Block 3	87	41	47%	47	54%	33	38%
4.1 <sup>3</sup>	18	1	6%	1	6%	1	6%
4.2	7	3	43%	0	0%	4	57%
4.3	0						
4.4 <sup>2</sup>	3	0	0%	0	0%	0	0%
4.5 <sup>1,3</sup>	5	3	60%	3	60%	1	20%
4.6	6	2	33%	1	17%	0	0%
4.7	8	1	13%	0	0%	0	0%
4.8 <sup>2</sup>	2	0	0%	0	0%	0	0%
4.9	8	6	75%	6	75%	4	50%
4.10 <sup>2</sup>	6	3	50%	4	67%	2	33%
4.11	5	3	60%	3	60%	0	0%
4.12	0						
4.13	5	4	80%	3	60%	1	20%
4.14	5	1	20%	0	0%	1	20%
4.15	10	10	100%	7	70%	3	30%
4.16	9	6	67%	4	44%	4	44%
Block 4	97	43	44%	32	33%	21	22%
5.1	5	3	60%	3	60%	0	0%
5.2	9	3	33%	5	56%	3	33%
5.3	1	1	100%	1	100%	1	100%
5.4	17	1	6%	1	6%	0	0%
5.5 <sup>1</sup>	5	3	60%	3	60%	1	20%
5.6	20	0	0%	0	0%	0	0%
5.7	6	1	17%	2	33%	0	0%
5.8	25	6	24%	7	28%	5	20%
5.9 <sup>1</sup>	4	2	50%	2	50%	0	0%
5.10	5	1	20%	0	0%	1	20%
5.11	5	3	60%	2	40%	0	0%
5.12	5	0	0%	0	0%	0	0%
5.13	4	3	75%	4	100%	1	25%
5.14	11	4	36%	2	18%	3	27%
5.15	13	4	31%	7	54%	4	31%
Block 5	135	35	26%	39	29%	19	14%

1. "Reserved or Private Parking"

2. "Customer Parking Only"

3. Handicap Stall Incl."

4. "Loading Area Only"

5. Many In-Use Stalls Have "No Parking" Signs

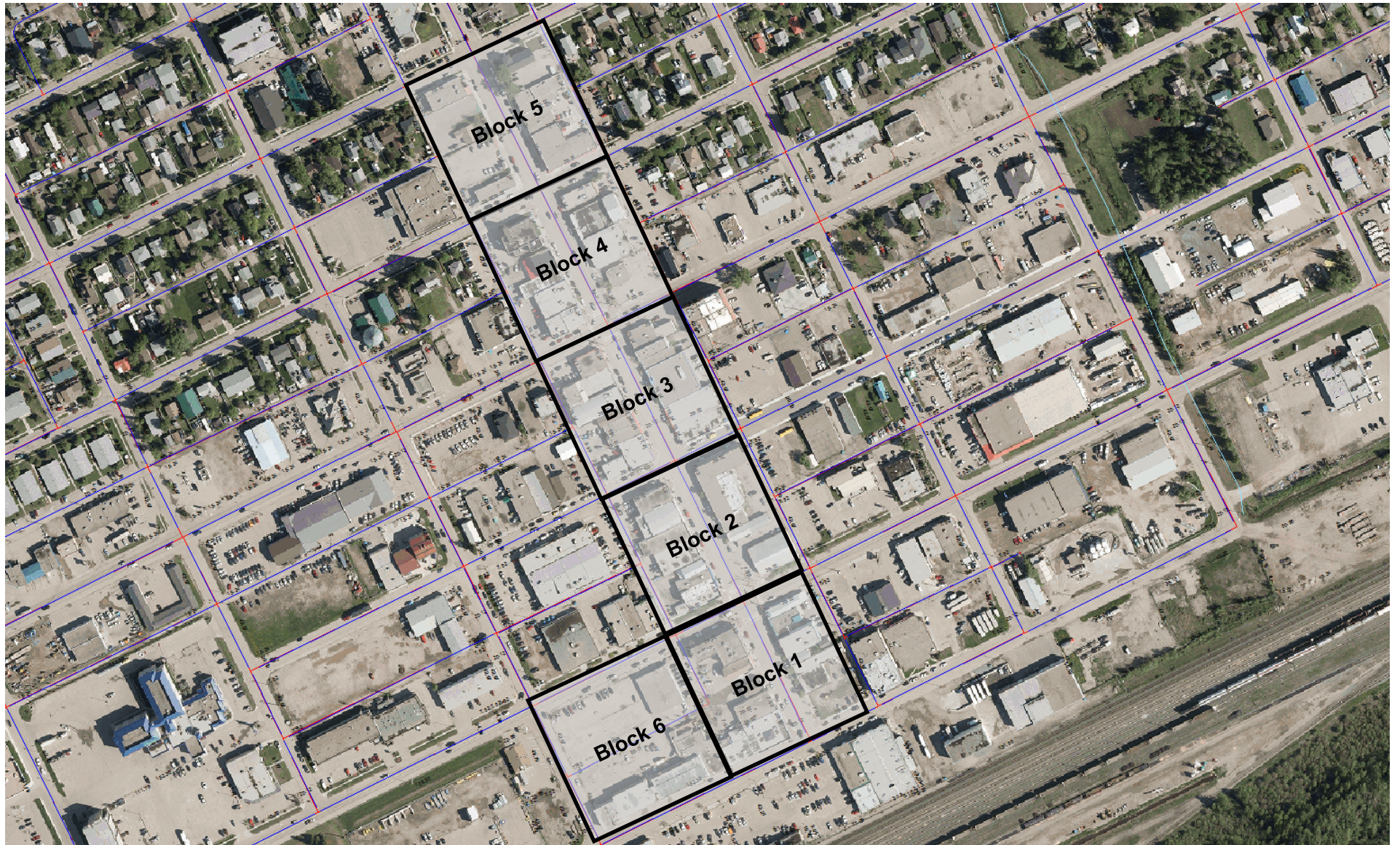
6. Tandem Parking Increases Actual Capacity

**Downtown Parking Study - Field Assessment**

Lot No.	Capacity	Date/Time: 28/08/17; 14:00-15:30		Date/Time: 30/08/2017; 10:40-11:40		Date/Time: 31/08/17; 17:25-18:10	
		Vehicle Count	Utilization Rate	Vehicle Count	Utilization Rate	Vehicle Count	Utilization Rate
6.1	86	14	16%	13	15%	14	16%
6.2 <sup>5</sup>	21	10	48%	17	81%	4	19%
6.3	26	8	31%	9	35%	7	27%
6.4	14	2	14%	1	7%	0	0%
6.5	14	5	36%	7	50%	3	21%
Block 6	161	39	24%	47	29%	28	17%
South	356	129	36%	134	38%	75	21%
South <sup>Main St</sup>	195	90	46%	87	45%	47	24%
North	319	119	37%	118	37%	73	23%
Total <sup>Main St</sup>	514	209	41%	205	40%	120	23%
Total	675	248	37%	252	37%	148	22%



1. "Reserved or Private Parking"
2. "Customer Parking Only"
3. Handicap Stall Incl."
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6. Tandem Parking Increases Actual Capacity

# Study Area



# Walking Distances - 2017 Downtown Parking Study

## Area Layout

-  Study Area Centre
-  Study Area

## KML Circle

-  200 m walking radius

## KML Circle

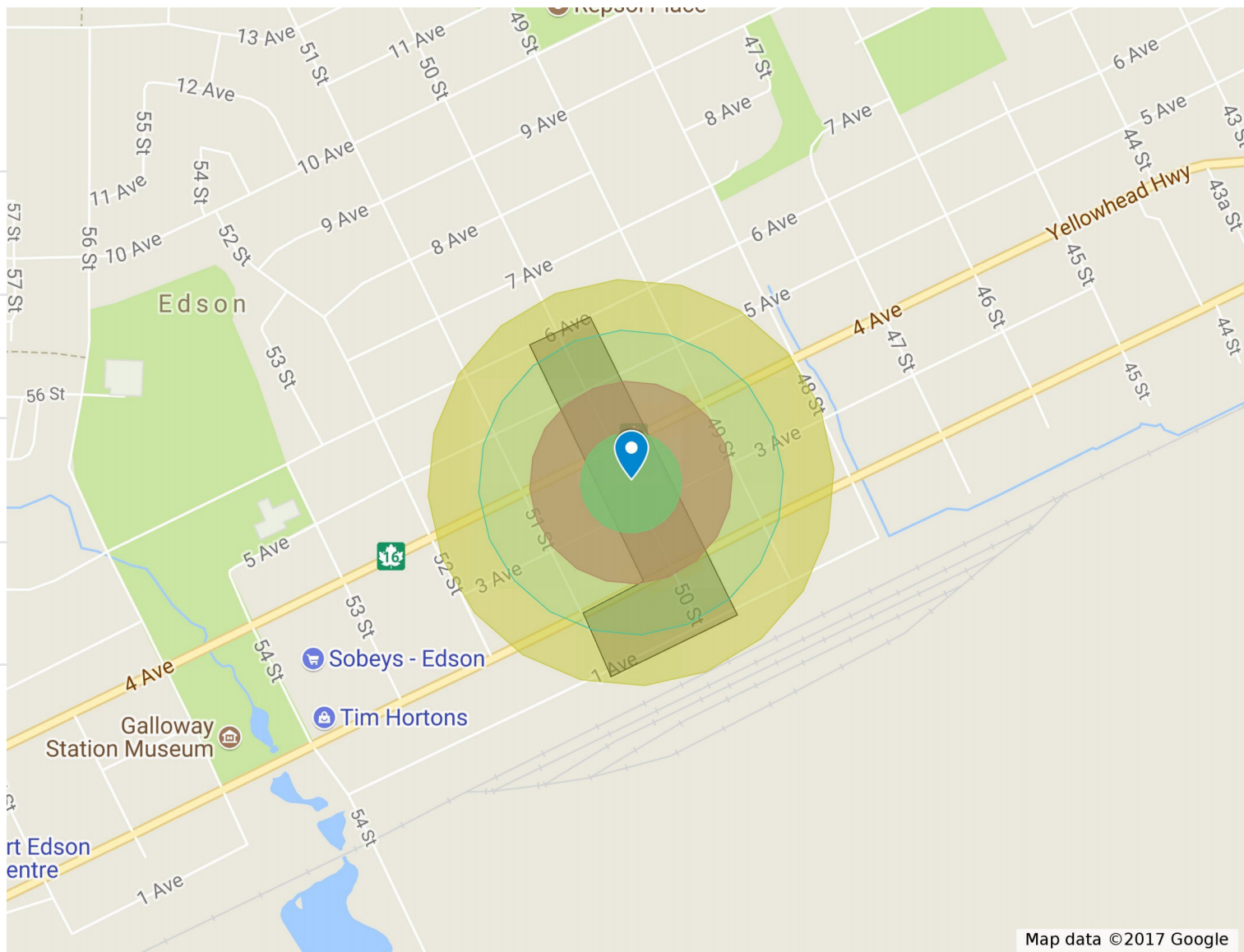
-  100 m walking radius

## KML Circle

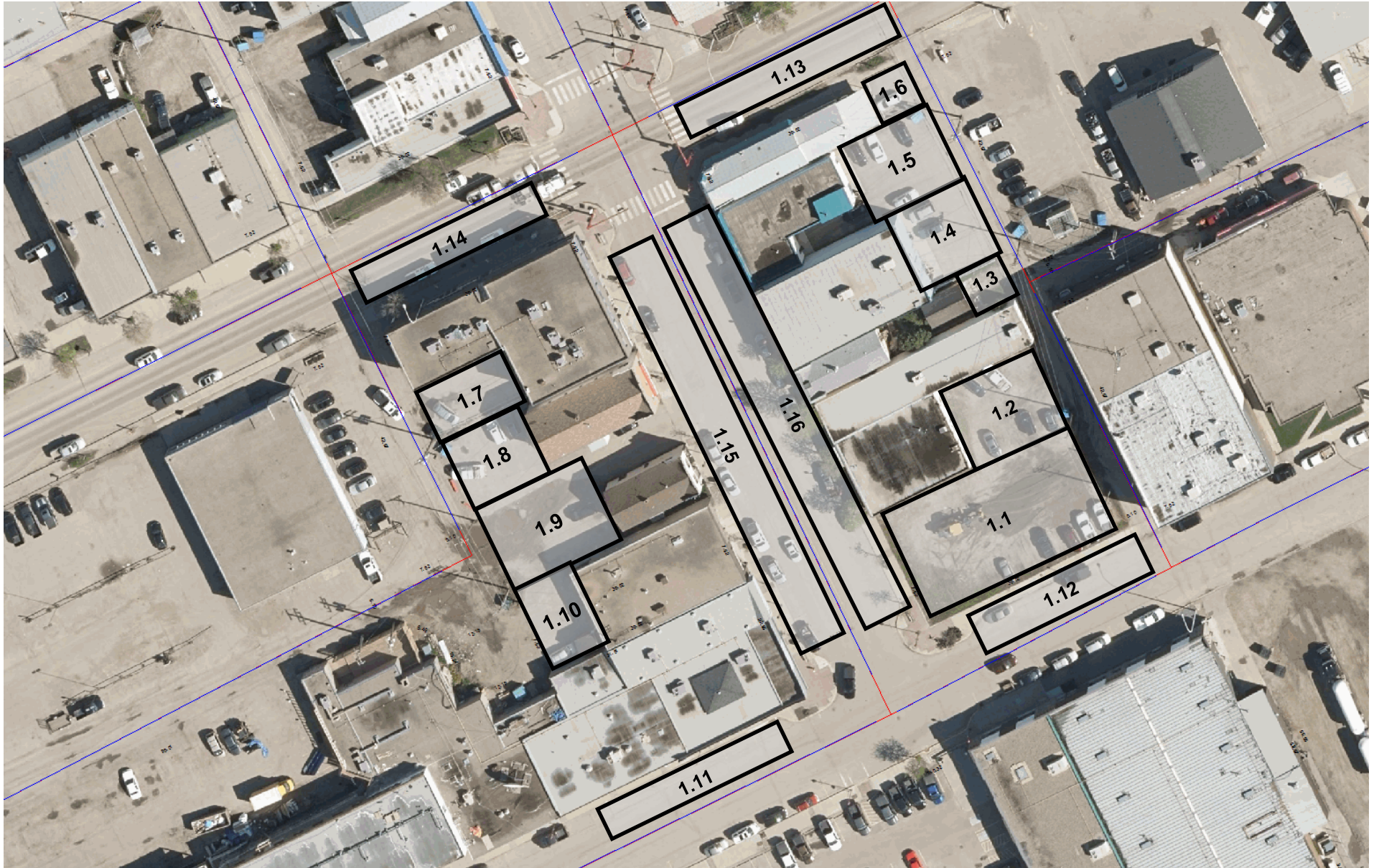
-  400 m walking radius

## KML Circle

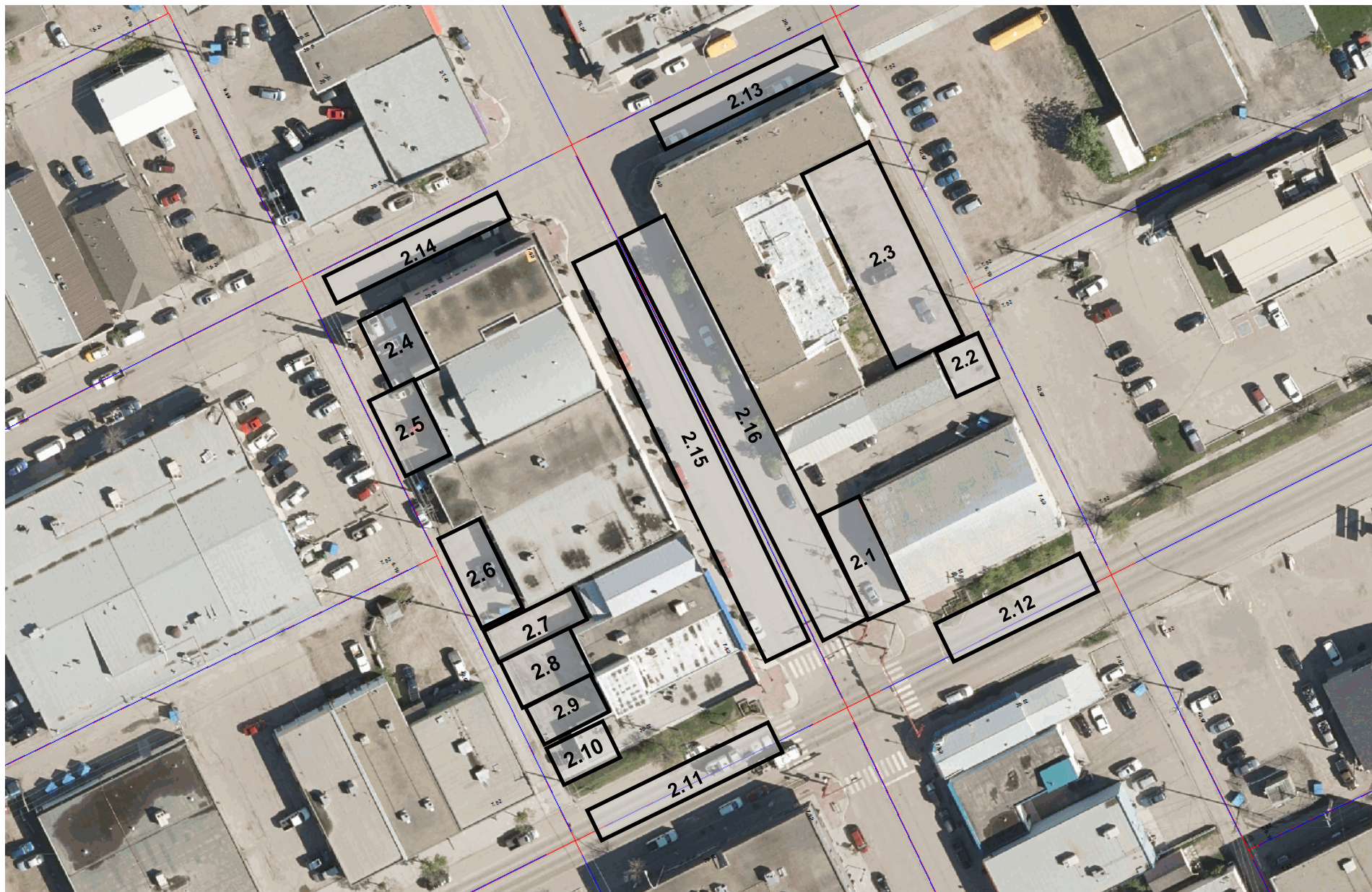
-  300m walking radius



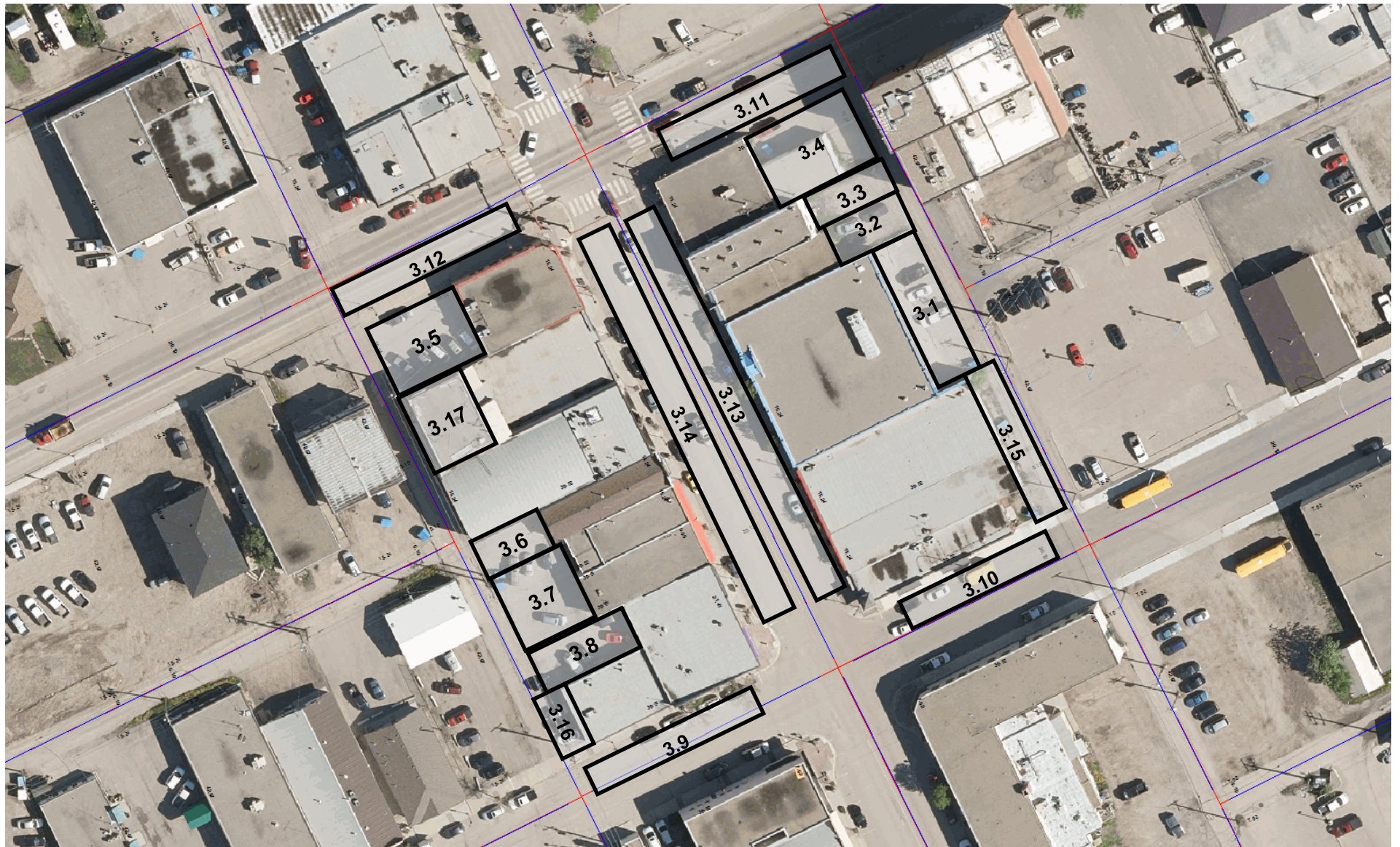
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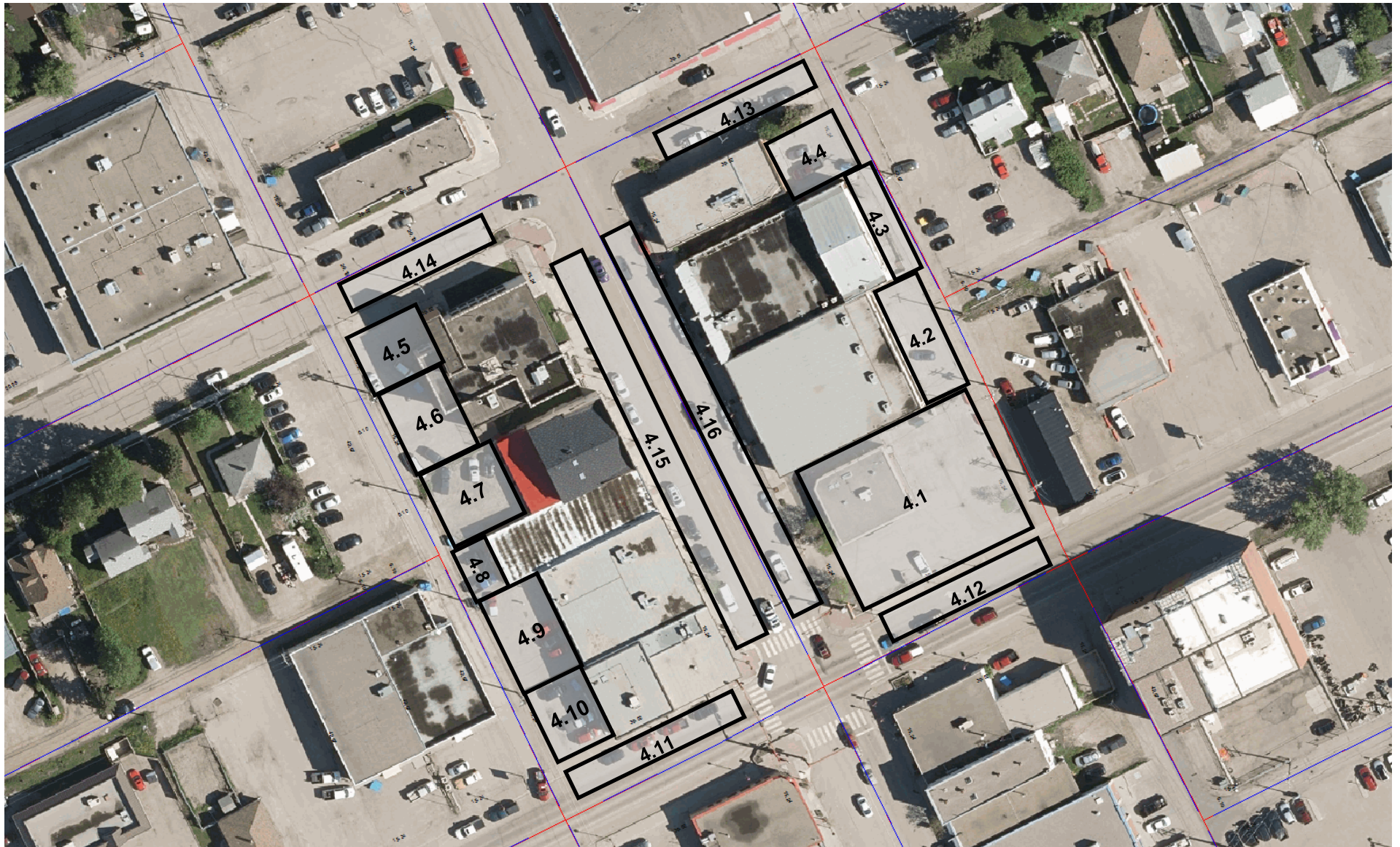
# Block 2



# Block 3

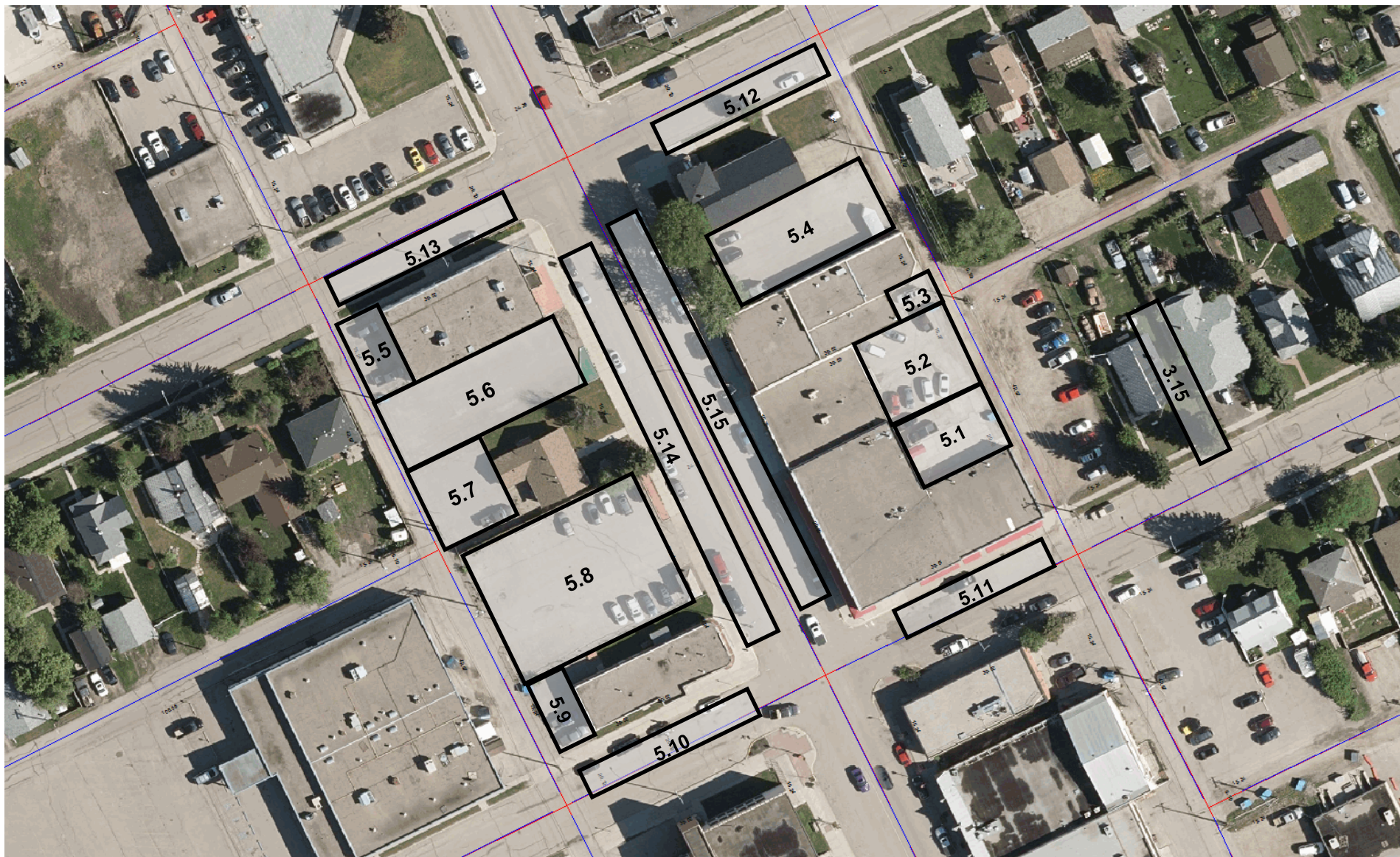


# Block 4





# Block 5



# Block 6

