Off-street parking on rue de Terrebonne as built: a reading of the 1954–55 fire-insurance plans

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Summary

Of the **126** residential buildings with a rue de Terrebonne address between the west end of the protected lane (Belmore) and avenue Girouard on the sixteen sheets available, **75** were built with a garage, that is **60 %** (north side 57 of 90, 63 %; south side 18 of 36, 50 %). Counting only the readings made with high confidence gives 62 %. Weighted by the dwellings the City's assessment roll lists in the same buildings, 58 % of the 289 dwellings are in a building that was built with a garage.

The plans show garages as built, not driveways: a driveway without a garage leaves no mark, so the share of properties with a driveway or a garage as built is at least this figure. They show the stock of 1954–55, not of today; the City's roll dates 117 of the 120 matched buildings to 1955 or earlier (median 1932), so the frontage drawn is essentially the one standing today, but the use of each garage and driveway since then is not recorded here.

A street-level check of every building, made by the author on November 12, 2026 from street-level imagery (one lot at a time, without sight of any earlier reading), recorded whether at least one private place is usable today. It replaces a reading of the Gouvernement du Québec's aerial imagery made on October 25, 2026, because a check of the wider corridor from street level had shown that a view from above misses driveways. Of the 118 buildings judged (4 could not be told; one house of 1954–55 now stands inside a school lot and is left out), 99 have car access today (84 %; by dwellings 87 %). Counting a building if it either was built with a garage or has car access today gives 110 of 118, 93 % (north 83 of 86, south 27 of 32). On 28 buildings the parking has been turned to another use, wholly (12) or in part (16): a driveway fenced into a yard, a garage made into a room, a basement-garage ramp filled into a front pad. Garage interiors are not counted. (The aerial reading had found a driveway or apron on 79 of 123, 64 %, and garage or driveway on 89, 72 %.)

Both remote-sensing sources also show the cars parked on rue de Terrebonne itself. On the daytime imagery (undated, leaf-off spring, before the 2024 lane: cars still parked at both curbs) there were 158 cars at the Terrebonne curbs, 30 on the north side and 128 on the south. In the City's LiDAR, flown on two weeknights in 2015 between midnight and four, before the lane, there were 183 car-shaped objects at the curbs (north 93, south 90), counted by eye on the height raster; an automatic detector finds 85 of them. Figures 15 and 16 show every object counted; both moments predate the lane; the imagery is undated, the LiDAR is from 2015.

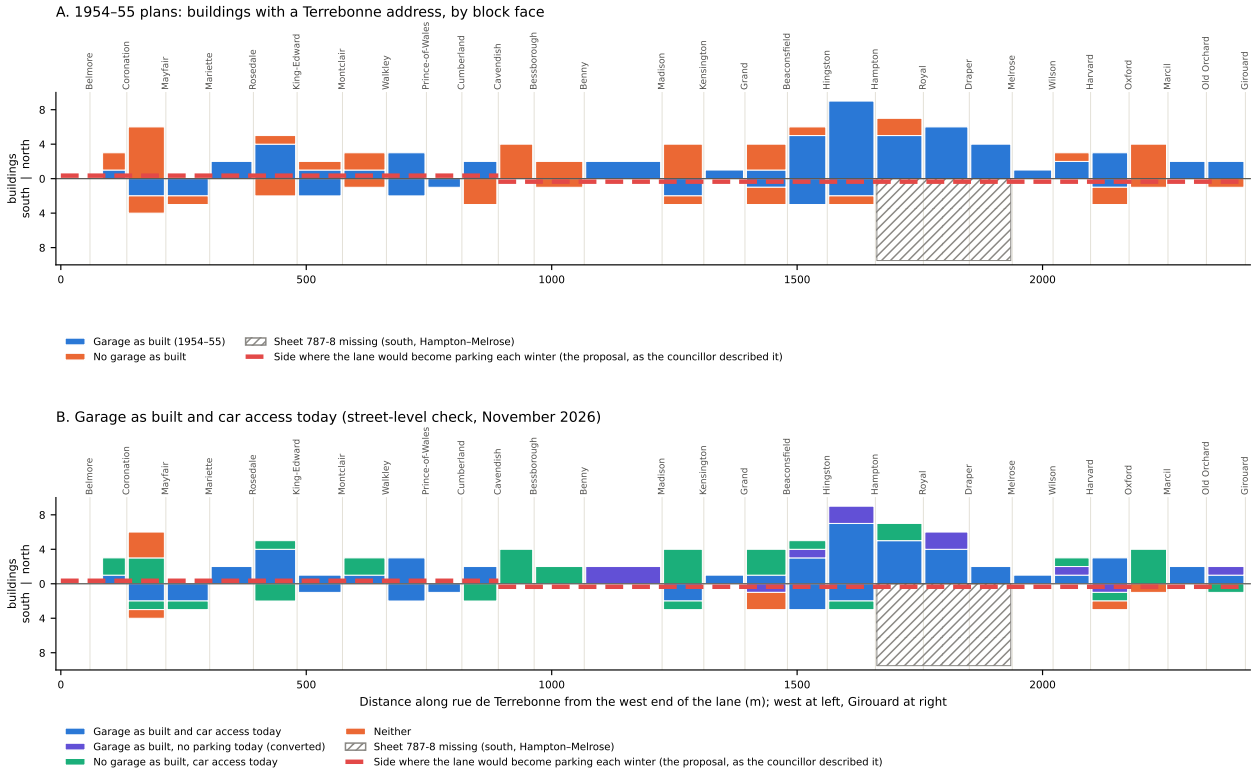


Figure 1: Off-street parking along the whole street, block face by block face (north side above the axis, south side below; west at left). A: the 1954–55 reading. B: the same buildings with the author's street-level check of November 12, 2026 (car access today; garage as built with no parking today = converted). The dashed red line marks the side where the lane is to be converted to parking each winter under the proposal, as the councillor described it (the lane running with traffic: north side west of Cavendish, south side east of it).



Figure 2: Overview map, west half: garage as built (1954–55) and car access today (street-level check), one marker per building, on the City's parcels (continued on the next page; legend at the end).



Figure 3: Overview map, east half, and the legend.

1 Source

The Underwriters' Survey Bureau, Limited, *Insurance plan of the city of Montreal*, volume 7, sheets 739-2 to 739-5, 775, 784-1, 784-2, 785-1, 787-5 to 787-7, 789-12 to 789-16 and 798-3, dated November 1954 to December 1955 on the sheets ("Montreal, vol. 7, November 1954"; sheet 775 "April 1955"; sheet 739-4 "December 1955"). Each sheet carries the notice "This plan is the property of the Underwriters' Survey Bureau, Limited, (unauthorized reproduction prohibited) . . . " and "Copyright registered at Ottawa by the Underwriters' Survey Bureau, Limited, Toronto and Montreal". The plans draw every building with its construction, storeys and civic number, and write *Auto* or *Autos* on every garage: in the basement (*Auto Bt*, *Autos Bast*), attached, or detached in the yard. The scans come from Bibliothèque et Archives nationales du Québec (BAnQ numérique, collection *Plans de villes et villages du Québec*, notice 0000174390, 273 files, `https://collections.banq.qc.ca/ark:/52327/2244199`; rights statement *Copyright Not Evaluated*); the full sheets are consulted there and not copied here. Sheet 787-8 (south side, Hampton to Melrose: the Royal and Draper blocks) is absent from BAnQ's file list (787-1 to 787-7 only) and from every other copy found; those two block faces are not counted (the north side opposite them has 15 garages on 17 buildings).

2 Method

1. **Reading.** Every building on the Terrebonne block faces, both sides, was read from the scans at two to four times magnification and recorded in `buildings_1954.csv` (one row per building: sheet, side, block, cross streets, civic numbers, building type, the street it is addressed on, corner lot, garage yes/no, kind of garage, the presumed access, a confidence grade and notes). The unit is the building with a Terrebonne civic number: a semi-detached pair is two buildings, a duplex pair is one building of two to four flats, an apartment building counts once. Corner buildings addressed on the cross street (28, of which 13 with a garage) are listed with the cross street as their frontage and left out of the share; so are the two churches, the presbytery and the two frontages vacant in 1954–55.

2. **Georeferencing.** Each sheet was fitted to the City's géobase (CC-BY 4.0) by a similarity transform on the pixel positions of its Terrebonne intersections (`controls.csv`, `georef.py`); residuals are 0–4 m (one of 7 m). The fit was checked by drawing the City's assessment-roll parcels over each sheet.

3. **Positions and dwellings.** Each row was joined to the City's *unités d'évaluation foncière* (CC-BY 4.0) by civic number and street, or, for corner buildings renumbered on the cross street since 1954, by position (`buildings.py`; 149 of 161 rows matched, the rest placed schematically along their block face). The roll gives the dwelling count and the year of construction of each matched building.

4. **LiDAR.** The City's 2015 airborne LiDAR (six 1 km tiles, classes ground, vegetation, building) was cropped to the corridor, each return given its height above ground, and rasterized at 0.2 m (`pipeline_corridor.json`); figures 6 and 8 show one block obliquely, first as the lit height surface (with and without the trees) and then as the raw point cloud, coloured by the height classes used throughout: ground under 0.3 m, low objects 0.3–0.9 m, car height 0.9–2.3 m, garages and sheds 2.3–3.6 m, houses above, and vegetation by the City's class.

5. **Maps.** Both maps use a frame straightened along the street (distance along Terrebonne, offset across; north side above). The first draws the markers on the georeferenced sheets, the second on a base made only of the City's open data (`maps.py`).

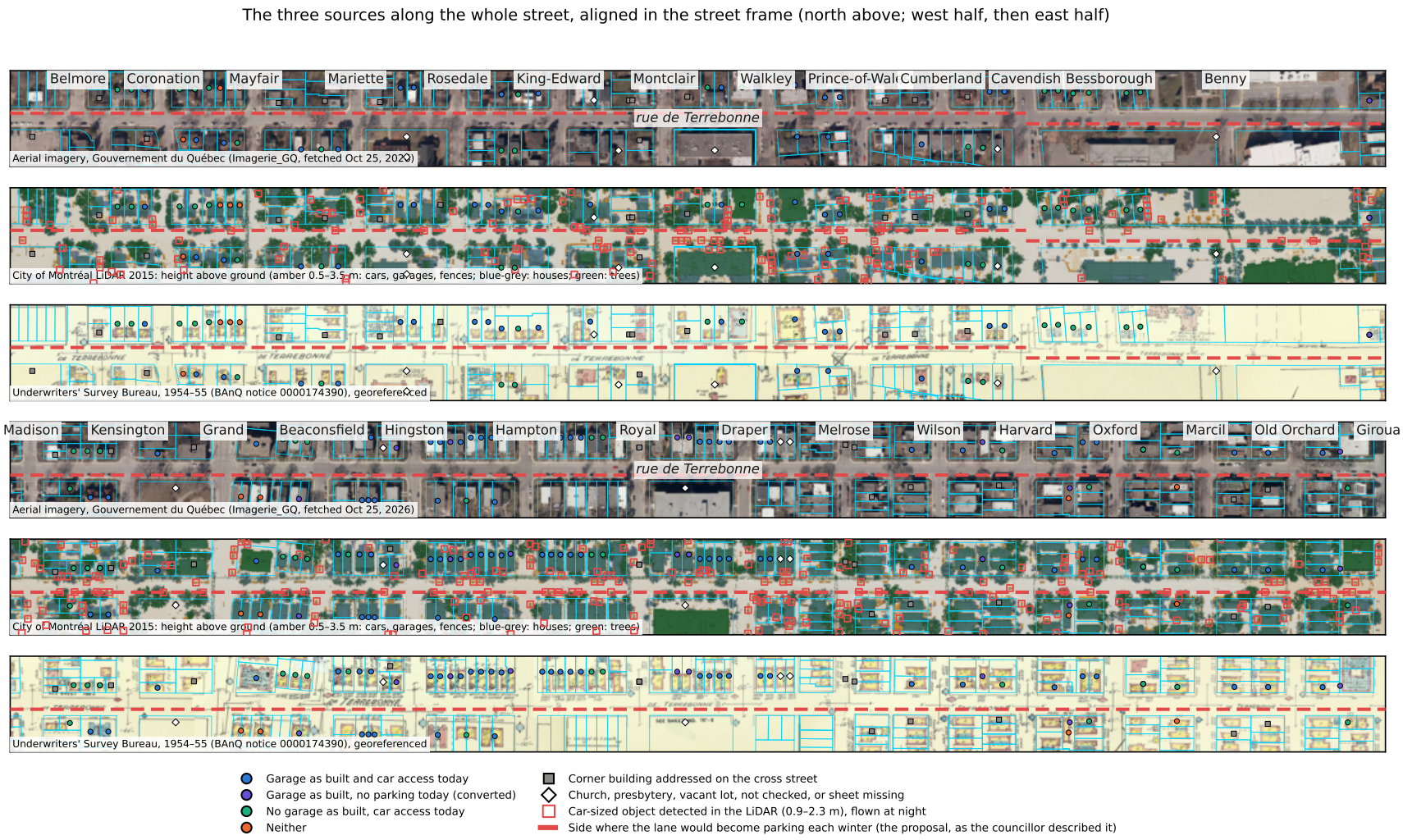
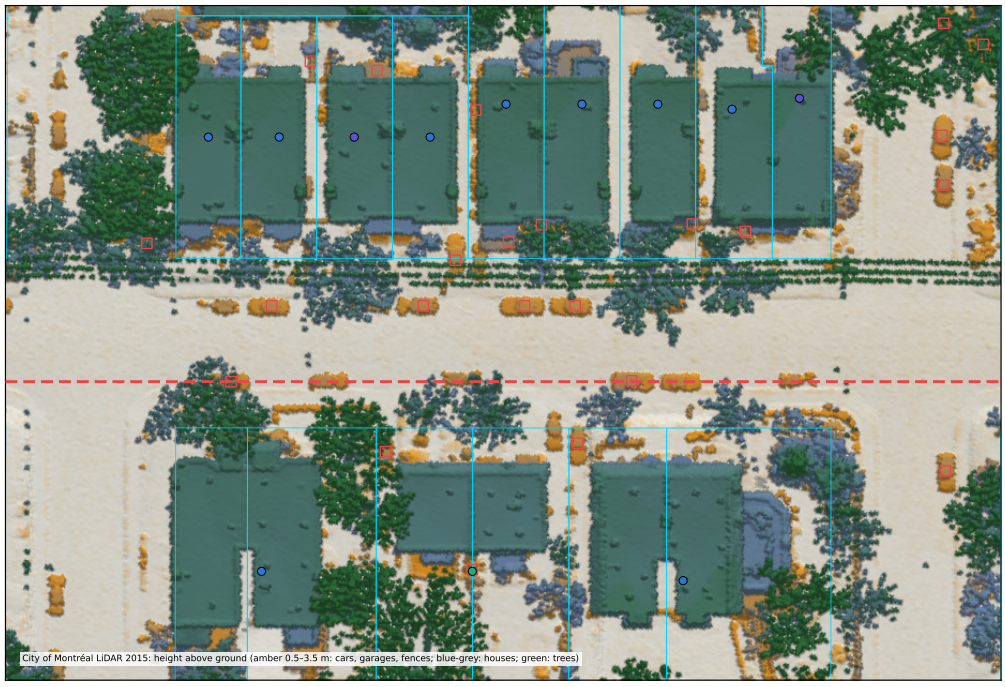
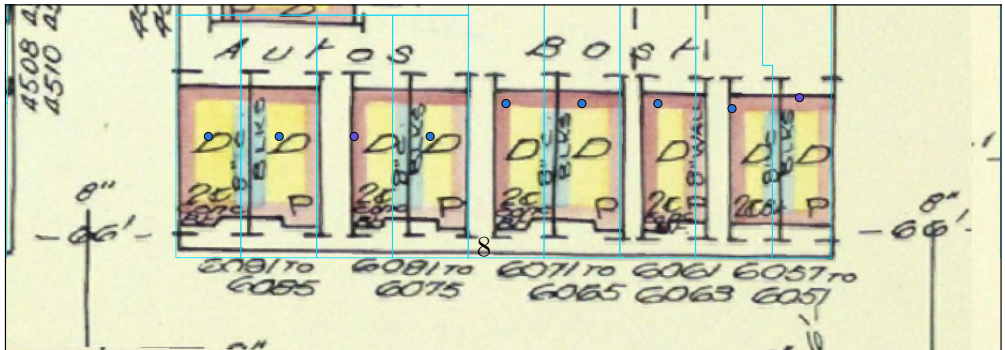


Figure 4: How the three sources were used, whole street: for each half of the street, the Gouvernement du Québec aerial imagery, the City's 2015 LiDAR as height above ground, and the 1954–55 sheets, all georeferenced into the same street frame, with the building markers.

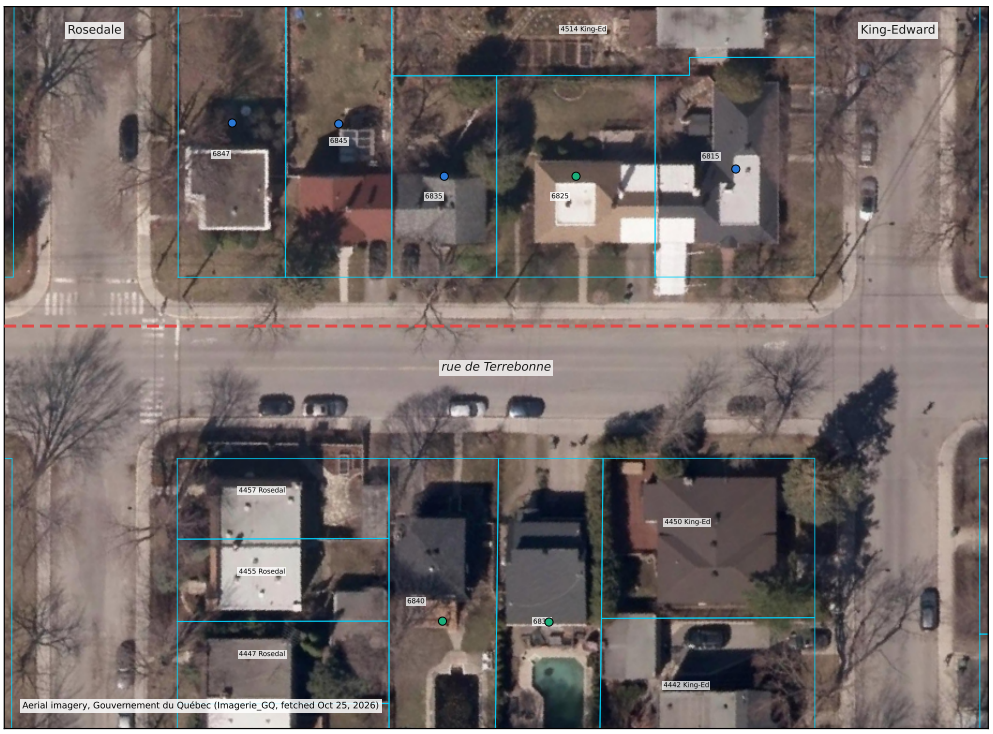
One block, Hingston to Hampton: aprons and parked cars (optical), the same cars and the garages as 0.5–3.5 m objects (LiDAR), the « Autos Bast » marks of 1954 (sheet 787-5 north, 787-7 south)

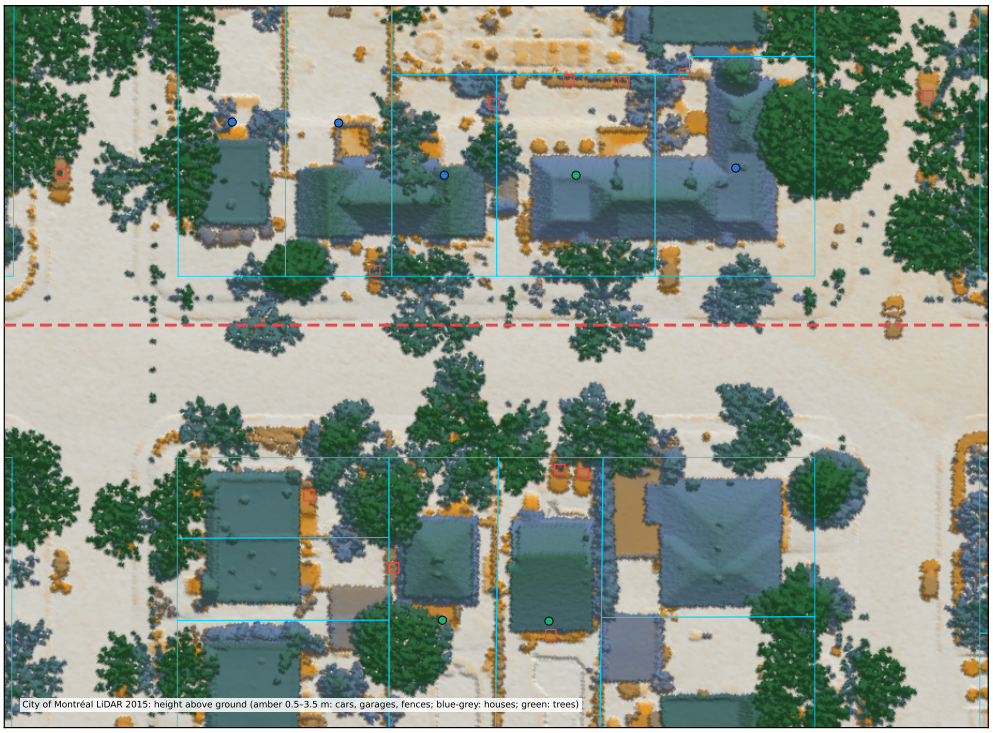


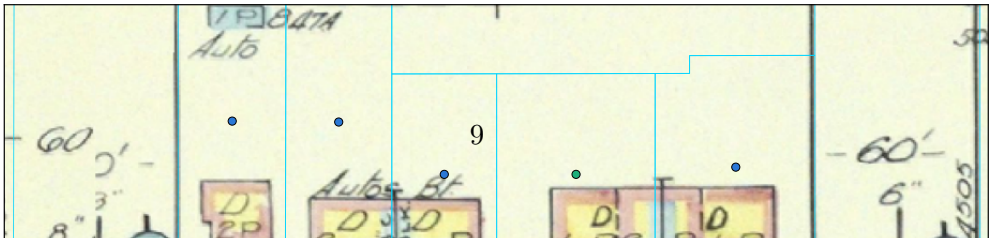




One block, Rosedale to King-Edward: detached rear garages of 1954 (sheet 789-14) seen in the LiDAR as 2.5–3.5 m boxes; aprons and a parked car on the optical image







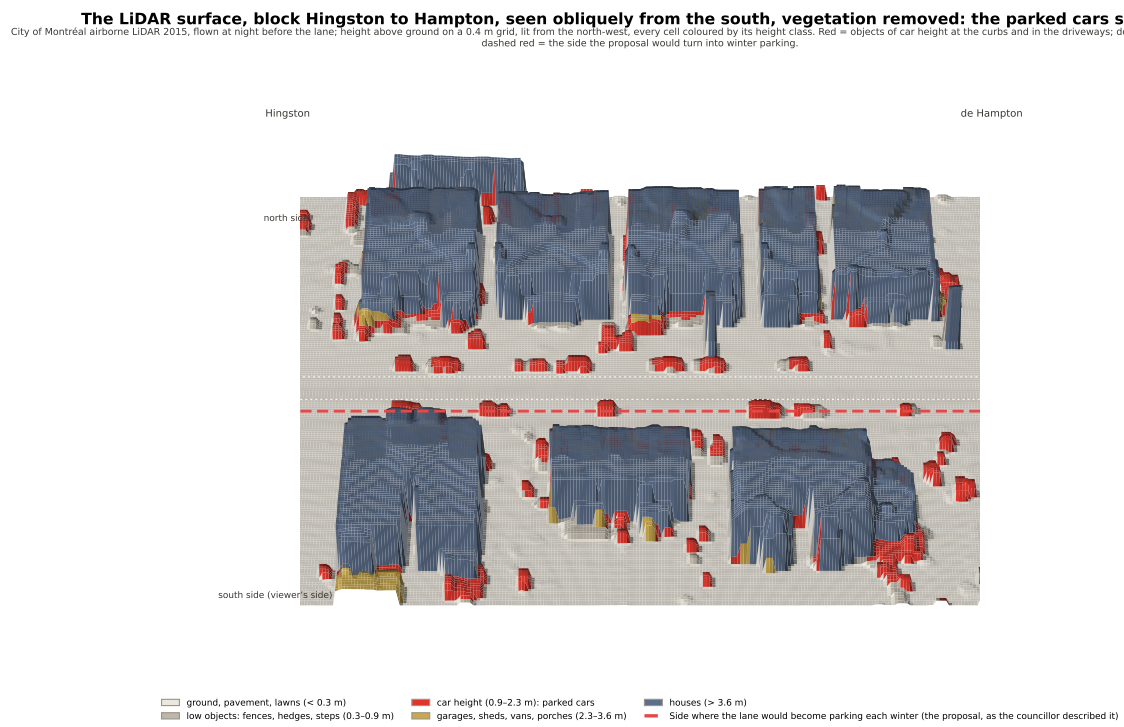


Figure 6: The LiDAR height surface of the same block seen obliquely from above the south side, vegetation returns removed, on a 0.4 m grid lit from the north-west and coloured by height class: the parked cars stand as red blocks at both curbs and in the driveways, the garages and sheds in ochre behind the houses. Anything narrower than 1.2 m (overhead wires, poles) is filtered out; houses, cars and sheds are untouched.

3 Results

	Buildings addressed on Terrebonne	With a garage as built	Share
North side	90	57	63 %
South side (sheet 787-8 missing)	36	18	50 %
Both sides	**126**	**75**	**60 %**
High-confidence readings only	97	60	62 %
Dwellings (City roll, 120 buildings)	289	168	58 %

Table 1: Garages as built on the Terrebonne frontage, 1954–55 plans.

Of the 75 garages, 46 are basement garages, 14 are detached in the yard and 15 attached or in an annex. The door opens on Terrebonne for 64, on either street for 10 corner lots, and on a rear lane for 1. Building types on the frontage (from the plans): semi 38, single 15, duplex 67, row 2, apartment 4. Years of construction from the roll, by decade: 1910s 1, 1920s 27, 1930s 45, 1940s 13, 1950s 31, 1960s 1, 2000s 2.

Table 2: By block face (residential buildings addressed on Terrebonne).

Side	Sheet	Block face	Buildings	Garage	Share
N	789-12	Belmore-Coronation	3	1	33 %
N	789-13	Coronation-Mayfair	6	0	0 %
N	789-13	Mariette-Rosedale	2	2	100 %
N	789-14	Rosedale-King Edward	5	4	80 %
N	789-14	King Edward-Montclair	2	1	50 %
N	789-14	Montclair-Walkley	3	1	33 %
N	789-15	Walkley-Prince of Wales	3	3	100 %
N	789-15	Cumberland-Cavendish	2	2	100 %
N	789-16	Cavendish-Bessborough	4	0	0 %
N	789-16	Bessborough-Benny	2	0	0 %
N	798-3	Benny-Madison	2	2	100 %
N	798-3	Madison-Kensington	4	0	0 %
N	798-3	Kensington-Grand	1	1	100 %
N	787-5	Grand-Beaconsfield	4	1	25 %
N	787-5	Beaconsfield-Hingston	6	5	83 %
N	787-5	Hingston-Hampton	9	9	100 %
N	787-6	Hampton-Royal	7	5	71 %
N	787-6	Royal-Draper	6	6	100 %
N	787-6	Draper-Melrose	4	4	100 %
N	739-2	Melrose-Wilson	1	1	100 %
N	739-2	Wilson-Harvard	3	2	67 %
N	739-2	Harvard-Oxford	3	3	100 %
N	739-5	Oxford-Marcil	4	0	0 %
N	739-5	Marcil-Old Orchard	2	2	100 %
N	739-5	Old Orchard-Hampstead apts	1	1	100 %
N	739-5	Old Orchard-Girouard	1	1	100 %
S	784-1	Coronation-Mayfair	4	2	50 %
S	784-2	Mayfair-Mariette	3	2	67 %

Side	Sheet	Block face	Buildings	Garage	Share
S	784-2	Rosedale-King Edward	2	0	0 %
S	785-1	King Edward-Montclair	2	2	100 %
S	785-1	Montclair-Walkley	1	0	0 %
S	785-1	Walkley-Prince of Wales	2	2	100 %
S	785-1	Prince of Wales-Cumberland	1	1	100 %
S	785-1	Cumberland-Cavendish	3	0	0 %
S	775	Cavendish-Madison	1	0	0 %
S	775	Madison-Kensington	3	2	67 %
S	787-7	Grand-Beaconsfield	3	1	33 %
S	787-7	Beaconsfield-Hingston	3	3	100 %
S	787-7	Hingston-Hampton	3	2	67 %
S	739-4	west cross street-Oxford	3	1	33 %
S	739-5	Oxford-Marcil	1	0	0 %
S	739-5	Old Orchard-Girouard	1	0	0 %

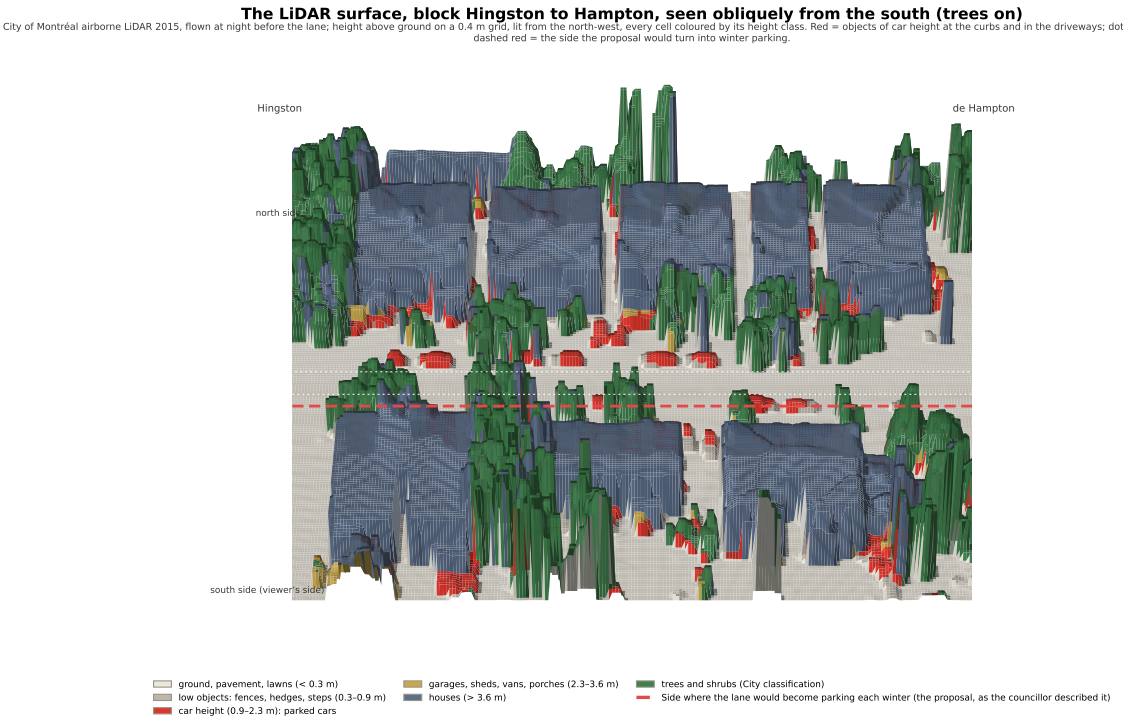


Figure 7: The same surface with the trees left in, as the scanner saw the block in summer 2015: the crowns hide part of the curbs and yards, which is why the by-eye count on the height raster is a lower bound and the automatic detector's recall is 46 %.

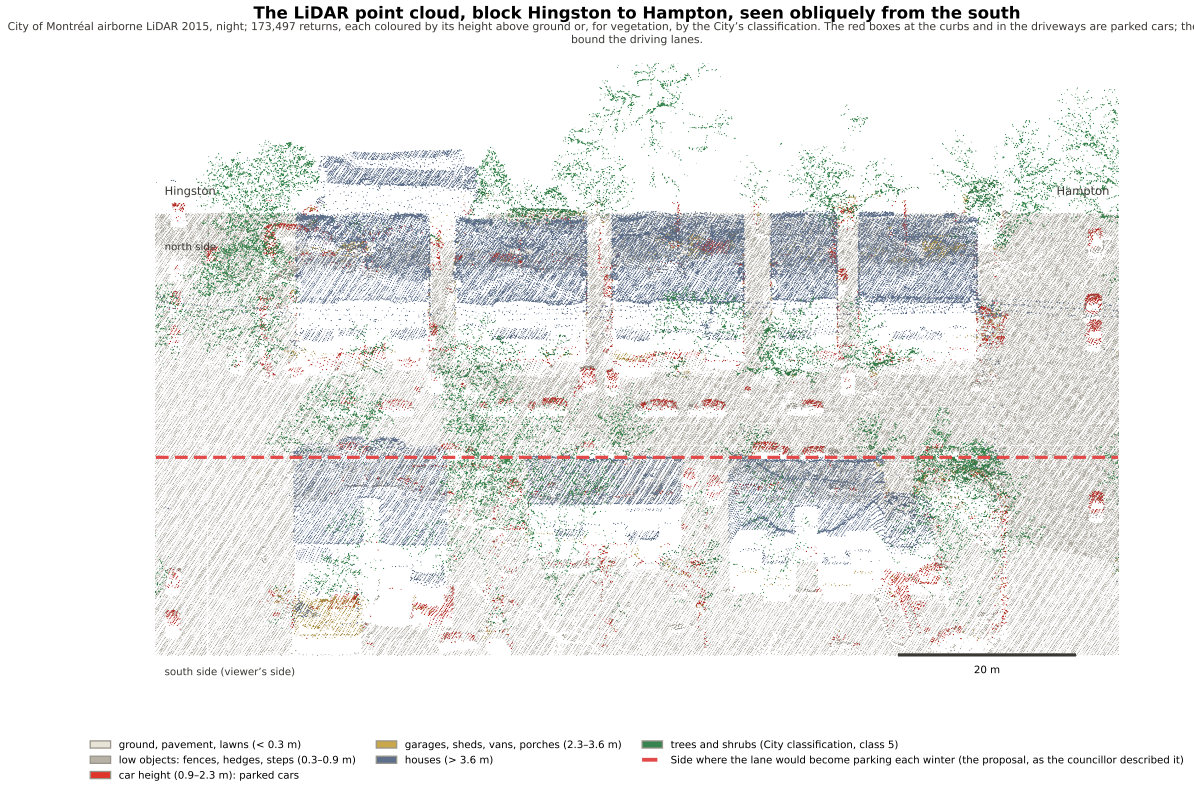


Figure 8: For the record, the raw point cloud behind the surfaces above, seen from the same side: every return coloured by its height above ground (ground, low objects, car height in red, garages and sheds, houses) or, for vegetation, by the City's classification. The cars at the two curbs and in the driveways, the basement-garage ramps and the sheds behind the houses are all resolved; the dotted lines bound the driving lanes.

Belmore
Coronation
Mayfair
Mariette
Rosedale
King-Edward
0–483 m
King-Edward
Montclair
Walkley
Prince-of-Wales
Cumberland
Cavendish
Bessborough
483–965 m
Bessborough
Benny
Madison
Kensington
Grand

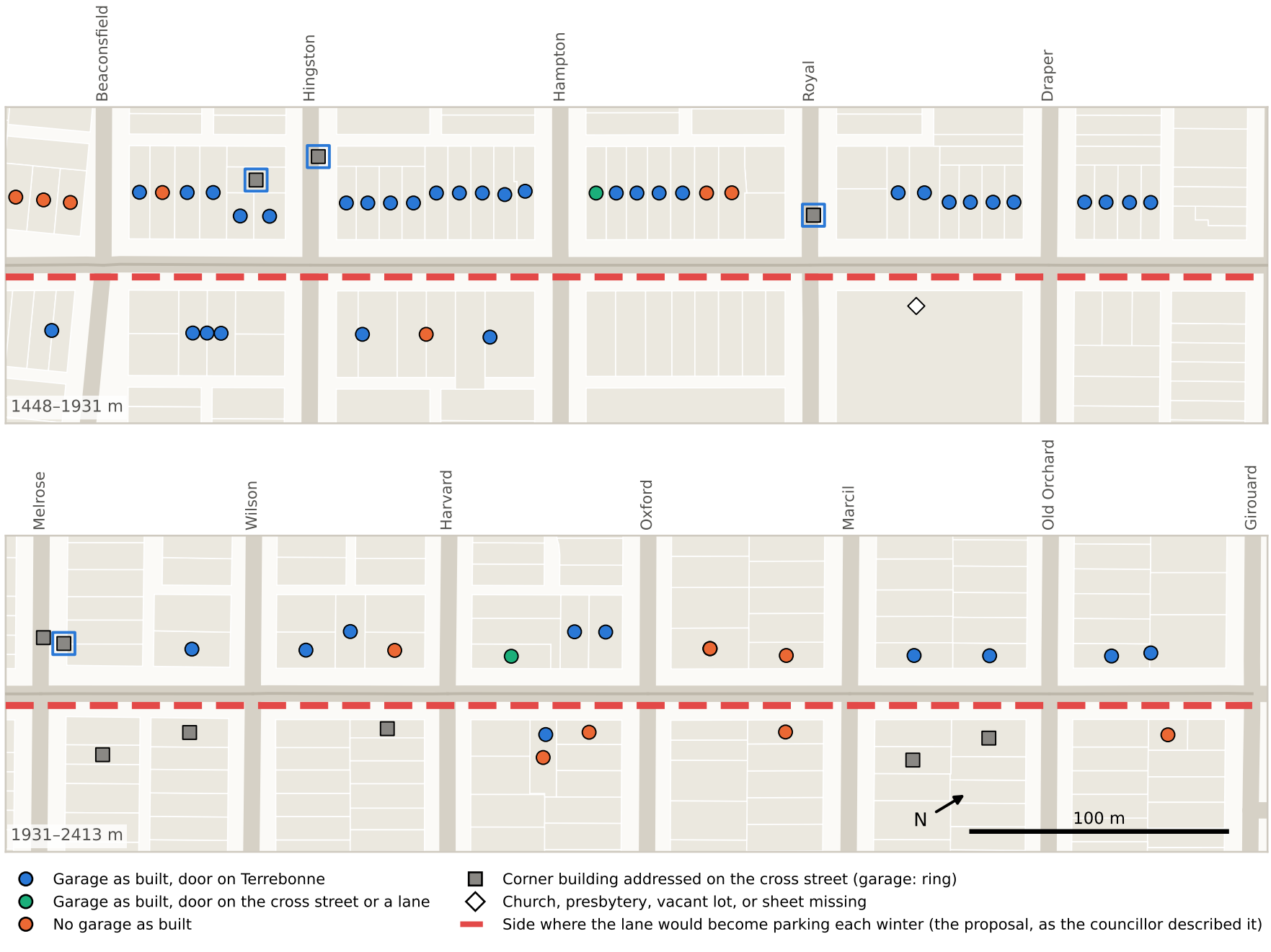


Figure 11: The 1954–55 reading on the City's parcels, east half, and the legend.

Belmore
Coronation
Mayfair
Mariette
Rosedale
King-Edward
DE TERREBONNE
DE TERREBONNE
0–483 m
King-Edward
Montclair
Walkley
Prince-of-Wales
Cumberland
Cavendish
Bessborough
DE TERREBONNE
DE TERREBONNE
8570
483–965 m
Bessborough
Benny
Madison
Kensington
Grand

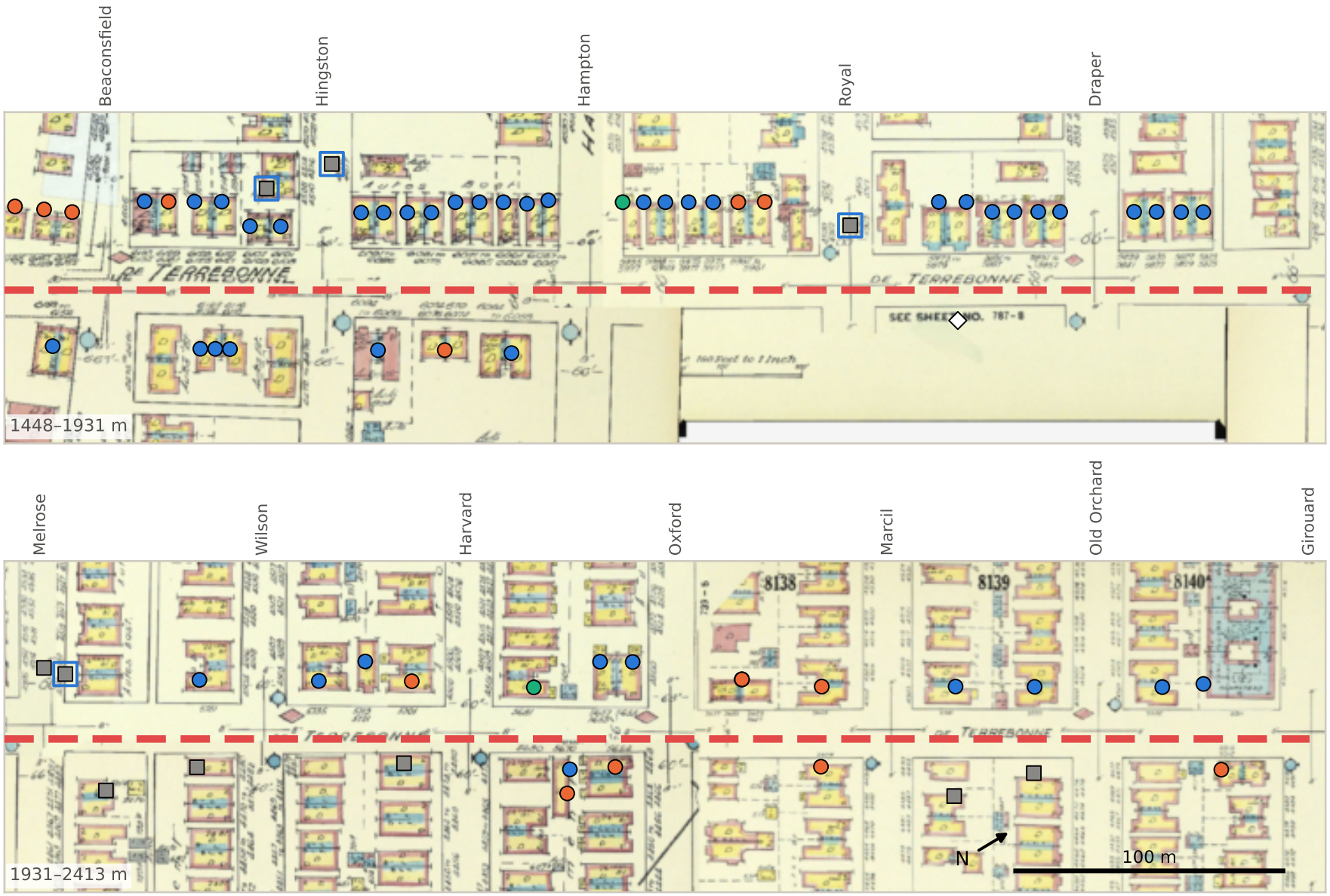


Figure 13: The 1954–55 sheets, east half, and the legend.

4 The frontages today

The author checked every building addressed on Terrebonne from street-level imagery on November 12, 2026, on a private page that showed each lot's aerial crop with the lot outlined, a link to the street-level view at its address, and no earlier reading. For each lot: whether at least one private place is usable today (*car access*), its kind (own or shared driveway, front pad, rear access, underground garage), whether parking has been turned to another use (none left, some left), the number of places, independent and in tandem, and whether a garage exists (`street_check/`; columns `access_street_check`, `converted_street_check` of `buildings_geo.csv`). Where the 1954–55 plans show a garage, they take precedence for conversions, because not every conversion can be seen from the street: a garage as built with no parking today counts as a conversion with none left; a garage as built, with car access today but no garage today, as a conversion with some left. The check replaces the reading of the Gouvernement du Québec's aerial imagery made on October 25, 2026 (columns `driveway_today` and following, kept as the record of that reading): from above, 32 buildings read without a driveway have car access from the street, and 9 read with one have none, most of them conversions that leave the paving visible from above.

	Buildings	Share
Judged (one house of 1954–55, now inside a school lot, left out; 4 could not be told)	118	
Car access today (at least one private place)	99	84 %
by dwellings (City roll)	225 of 259	87 %
Garage as built (1954–55) *or* car access today	110	93 %
north side	83 of 86	97 %
south side	27 of 32	84 %
Garage of 1954–55, car access today	60	
Garage of 1954–55, no parking today	11	
No garage in 1954–55, car access today	39	
Parking turned to another use: none left / some left	12 / 16	
For the record: aerial reading of Oct. 25, 2026, garage or driveway	89 of 123	72 %

Table 3: The frontages today (the author's street-level check, November 12, 2026).

5 Cars parked on the street in the two acquisitions

Both remote-sensing sources also show the cars parked on rue de Terrebonne itself, at two very different moments. The aerial imagery was taken in daytime, in a leaf-off spring, undated by the service; cars still parked at both curbs and no lane markings, so before the June 2024 lane; counting by eye on the block strips gives 158 cars at the Terrebonne curbs (north side 30, south side 128), of which 90 on the side where the lane would be converted. The City's LiDAR was flown in 2015, before the lane, at night. The files carry GPS week seconds, which give the day of the week and the hour but not the date: the west end of the street to about Walkley was flown in the night from Sunday to Monday, 02:40–03:50 local, and Walkley to Girouard in the night from Monday to Tuesday, 00:00–01:50 local (the two passes overlap between Rosedale and Walkley; whether the two nights fall in the same week is not recorded). Both are weeknights, when residents' cars are home. The trees are in leaf, so the flight was between late spring and early autumn; the City's product sheet gives only the release dates (November 24 to December 8, 2015) and the contractor (XEOS imagerie). Read by eye on the height-above-ground raster (a parked car is a 1.2–1.8 m object the size of a car, at the curb), the night count is 183 at the Terrebonne curbs (north 93, south 90), 98 on the side to be converted. An automatic detector (`lidar_cars.py`: returns 0.9–2.3 m above ground not classed building or vegetation, rasterized at

0.25 m, car-sized connected components, rows of touching cars split by length) finds 85 of them (north 38, south 47), and also 253 car-sized objects on private lots within 45 m of the street and 70 on the cross streets within the same band; the detector's recall at the curbs, checked block by block against the by-eye count, is 46 % (section 6), its misses being cars under tree crowns, cars touching in a row, and tall vehicles; the lot and cross-street figures, not checked by eye, are therefore lower bounds of the same order. The night count is the one that bears on resident parking; in 2015 the street had parking on both sides (EXP counted 475 spaces in 2022 before the redesign, 171 after). Table 4 and figure 14 give the block-by-block counts (`on_street_cars_by_block.csv`); figure 15 places every detected object on today's parcels, and figure 16 shows, panel by panel, the daytime image above the night height raster with the detections drawn, so that each square can be checked against a car-shaped object and the by-eye counts recounted. Figure 18 goes closer: on one block every detection is drawn as a box of its measured size, and two of them, one at the curb and one in a driveway, are shown at 40 pixels per metre with their heights, so that the reader can judge whether the object is a car and whether it stands on the street or on the lot. The street-or-lot distinction is made by position: an object 2.2 to 7 m from the street axis is at the curb, one farther away and not on a cross street is on a lot; the City's parcel polygons, drawn on every figure, show that the lot objects sit in driveways and yards.

Cars on rue de Terrebonne	North side	South side	Total
Aerial imagery, daytime, spring, undated, before the 2024 lane (by eye)	30	128	158
City LiDAR 2015, two weeknights, 00:00–03:50, before the lane (by eye)	93	90	183
of which found by the automatic detector	38	47	85
LiDAR 2015, night, detector only: car-sized objects on private lots within 45 m	144	109	253
LiDAR 2015, night, detector only: on the cross streets within the same band			70

Table 4: Cars parked at the moment of each acquisition.

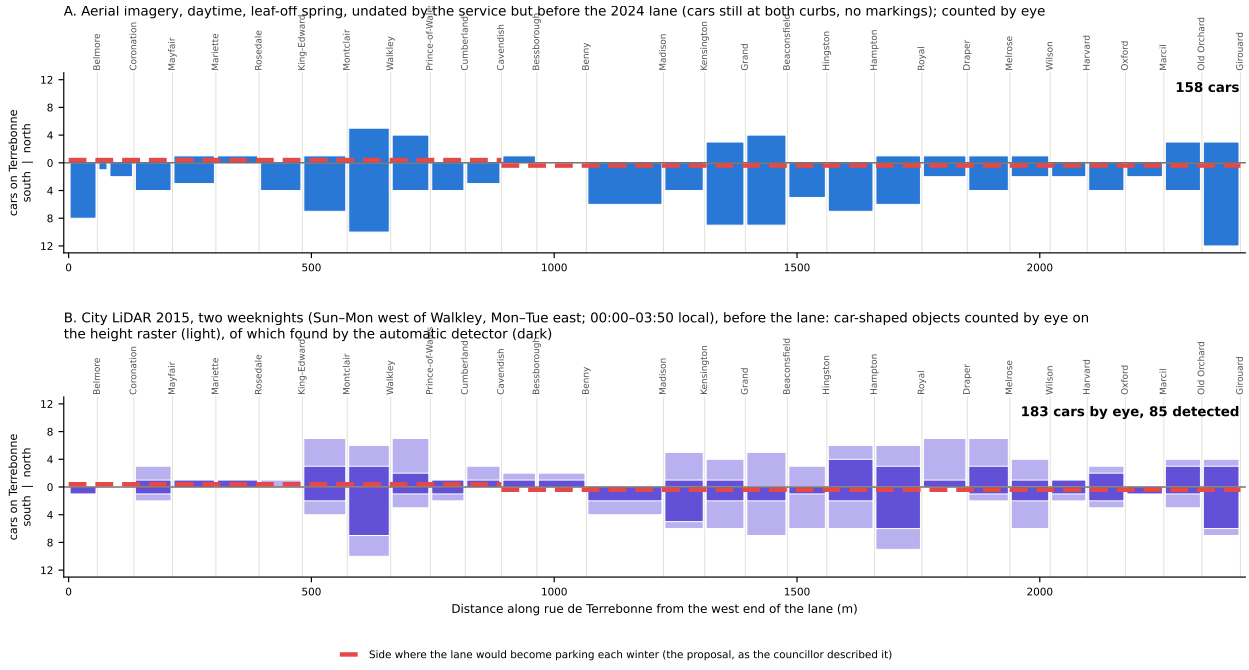


Figure 14: Cars parked on rue de Terrebonne, block by block and by side, in the daytime imagery (A, undated, before the lane) and in the 2015 night LiDAR (B: by eye in light purple, found by the detector in dark purple).

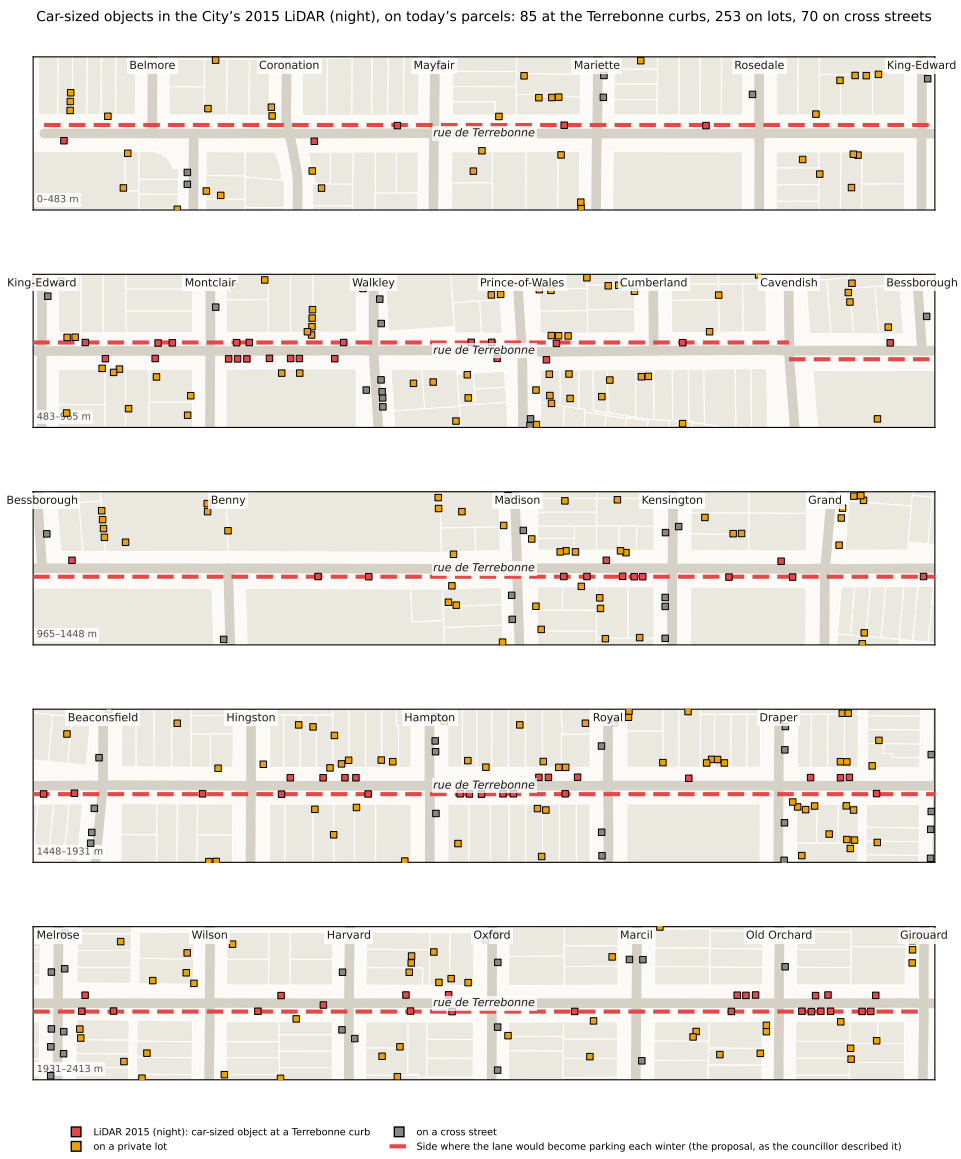


Figure 15: Every car-sized object the detector found in the 2015 night LiDAR, on today's parcels: red at a Terrebonne curb, orange on a private lot, grey on a cross street.

Parked, not moving. The hour of the flight reduces the number of moving vehicles but does not by itself say how many remain, so the distinction rests on checks that do not depend on it. Position: an object is counted at the curb only if it lies 2.2 to 7 m from the street axis; a moving car is in the driving lanes, within 2.2 m of the axis, and exactly one car-sized object on the whole street was found there (Wilson–Harvard, south lane). Orientation and shape: all 85 curb objects lie within 20 degrees of the street direction, 3.1 to 6.3 m long (median 4.3) and 2.3 m wide (median), the dimensions of a stationary car; a car moving under an airborne scanner is stretched or broken along the flight line. Traffic, as a check of plausibility rather than proof: the borough's counter at Kensington records about four motor vehicles an hour between midnight and 4 a.m. (2025–26, 1.2 % of the day's 1,350), and in 2015, with roughly four times the daily traffic (EXP: 6,300 vehicles a day in 2022), perhaps fifteen to twenty an hour; a car crosses the 2.4 km in about four minutes, so at any instant about one moving car is expected on the whole street. Other motor vehicles: vans and trucks taller than 2.3 m and anything smaller than 5 m^2 (motorcycles, bicycles) are outside the height and size bands and are not counted, which biases the count down, not up. Figure 17 shows the stretch from Grand to Melrose with every surface coloured by height and the trees removed, and one detected car under the magnifier.

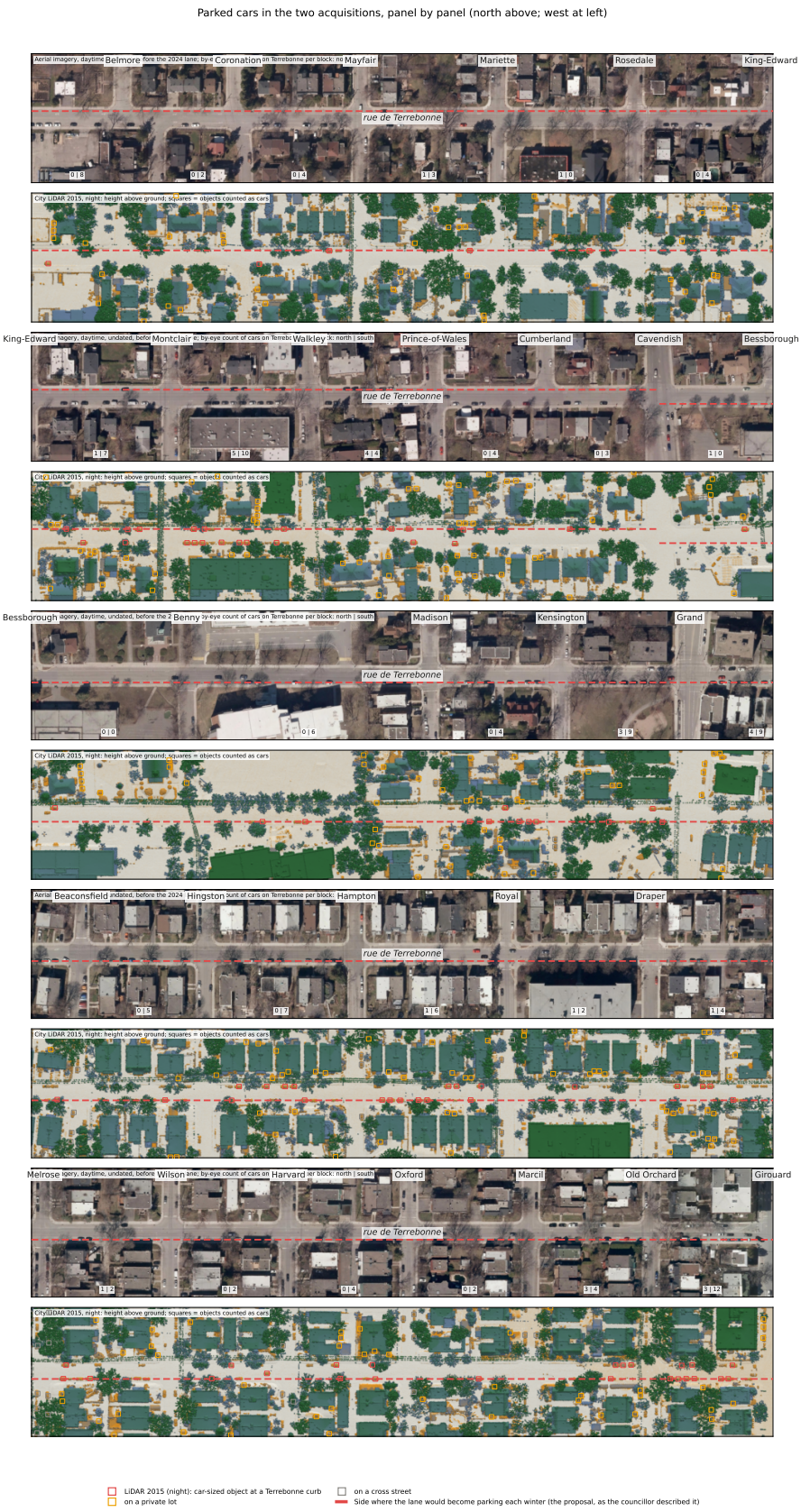


Figure 16: Parked cars in the two acquisitions, panel by panel: the daytime image (with the by-eye count per block, north | south) above the night height raster (amber 0.5–3.5 m objects; squares = the detector's cars).

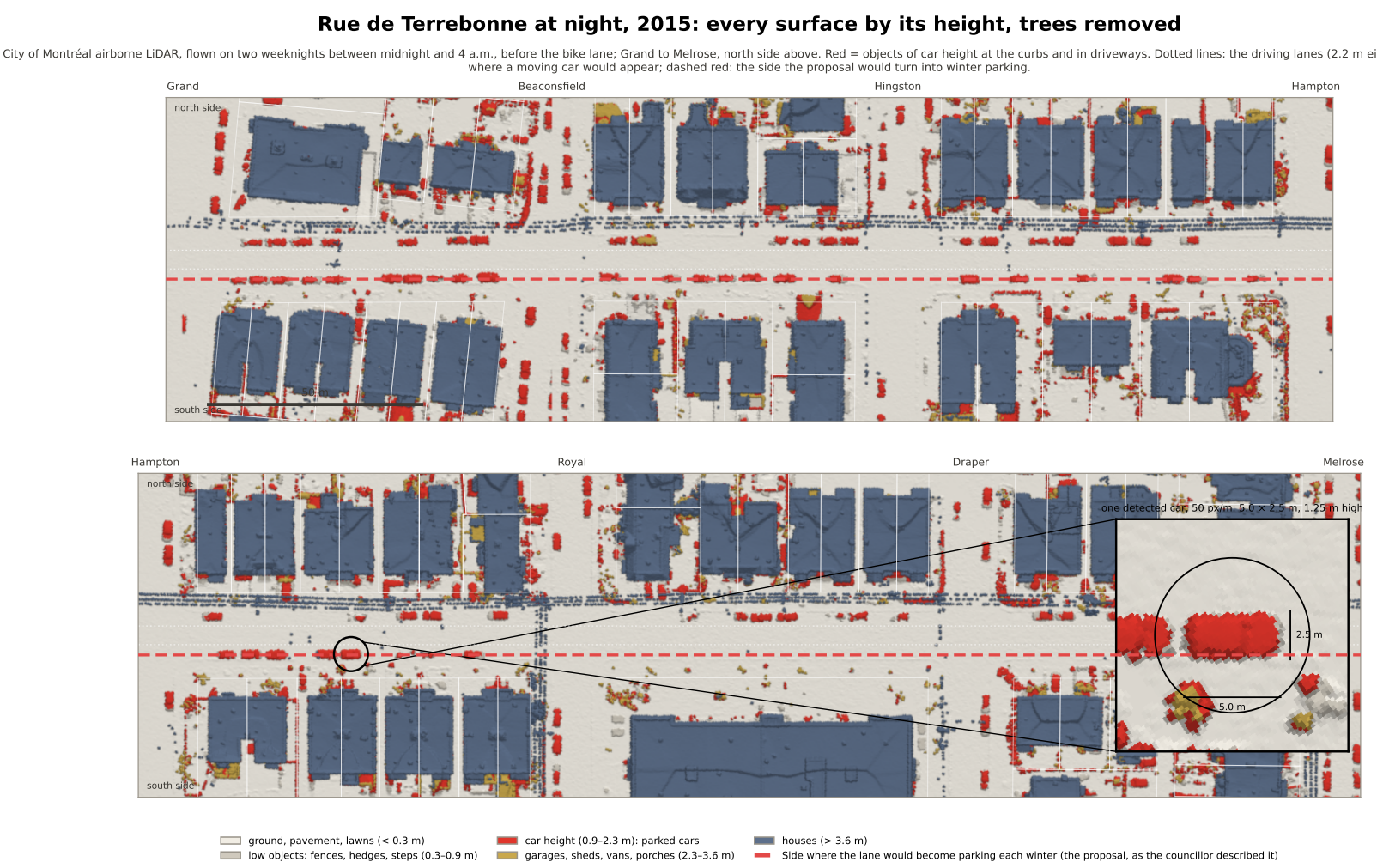


Figure 17: Rue de Terrebonne at night, 2015, Grand to Melrose: every surface by its height above ground with the vegetation returns removed; red is car height (0.9–2.3 m). Dotted lines mark the driving lanes, where a moving car would appear; the magnifier shows one detected car at 50 pixels per metre. Published alone as a PNG and PDF pair, in three versions: this one; one with a marker per building for the buildings' own off-street parking (garage as built and/or car access today) and the car-height objects left grey; and one with both.

6 Checks on the method

A reader who doubts a figure should be able to see what would have to be wrong for it to be wrong. The checks made, and what they found:

1. **Georeferencing.** Each sheet is fitted by a similarity transform (scale, rotation, translation) on its Terrebonne intersections; the fit is over-determined on fourteen of sixteen sheets. Residuals at the control points: mean 0.3–3.5 m per sheet, largest 7.0 m on sheet 739-4 (one intersection), 4.3 m on 787-7, under 3.3 m on every other sheet (`sheet_transforms.json`). The fit was then checked by drawing the City's parcel polygons over every sheet (`georef.py -check`): the 1954 lot lines and today's parcels coincide to within a lot width along the whole street. A residual of a few metres cannot move a building from one lot to the next, let alone from one side of the street to the other.

2. **The 1954–55 reading against an earlier, independent one.** In June 2024, before this question was put, the repository's author marked every *Auto* on the same sheets for another purpose (a band count, Somerled to Monkland). Those marks, carried in the table as `owner_star`, agree with the present building-by-building reading on all 126 buildings addressed on Terrebonne (75 with, 51 without). The two readings were made two years apart, by different readers, the first without any per-building or per-side purpose.

3. **The present-day check.** It is one person's judgment from public street-level imagery, lot by lot, with a note where the case was unusual; the answers as exported are filed (`street_check/owner_street_check.` and any lot can be looked at again. Street-level imagery is itself not current to the day, and parking behind a building reached from a lane is sometimes out of view (4 buildings could not be told). An earlier reading from the aerial imagery (October 25, 2026) is kept as a record; it missed driveways, as a check of the wider corridor had shown.

4. **The LiDAR car detector.** Every block's roadway was read by eye on the height raster and the car-shaped objects at the two curbs counted (`lidar_detector_check.csv`, 29 blocks): 183 by eye, 85 found by the detector, a recall of 46 % (north 41 %, south 52 %). The misses are cars under tree crowns, cars touching in a row that the splitting rule does not separate, and vehicles taller than 2.3 m; no false positive was seen at the curbs. The by-eye count is therefore the figure reported for the curbs and the detector's count is given beside it; the lot and cross-street counts, which only the detector gives, are lower bounds of the same order.

5. **Join to the roll.** 149 of 161 rows match a City assessment unit by civic number and street, or by position for corners renumbered since 1954; the 12 unmatched (cross-street corner groups, the missing sheet, two vacant frontages, two buildings since replaced) are placed schematically and carry no dwelling count. The dwelling-weighted shares use the matched rows only.

6. **A census, not a sample.** Every building with a Terrebonne address between the west end of the lane and Girouard on the sheets available is in the table; nothing was sampled or extrapolated except the recall correction above, which is not applied.

7. **Reproducibility.** Every number is produced by a script in `derived/` from inputs that are public: the City's open data (CC-BY 4.0), the Gouvernement du Québec's imagery service, and BAnQ's copy of the plans. The only hand-made inputs are the two readings, each a CSV with one row per building.

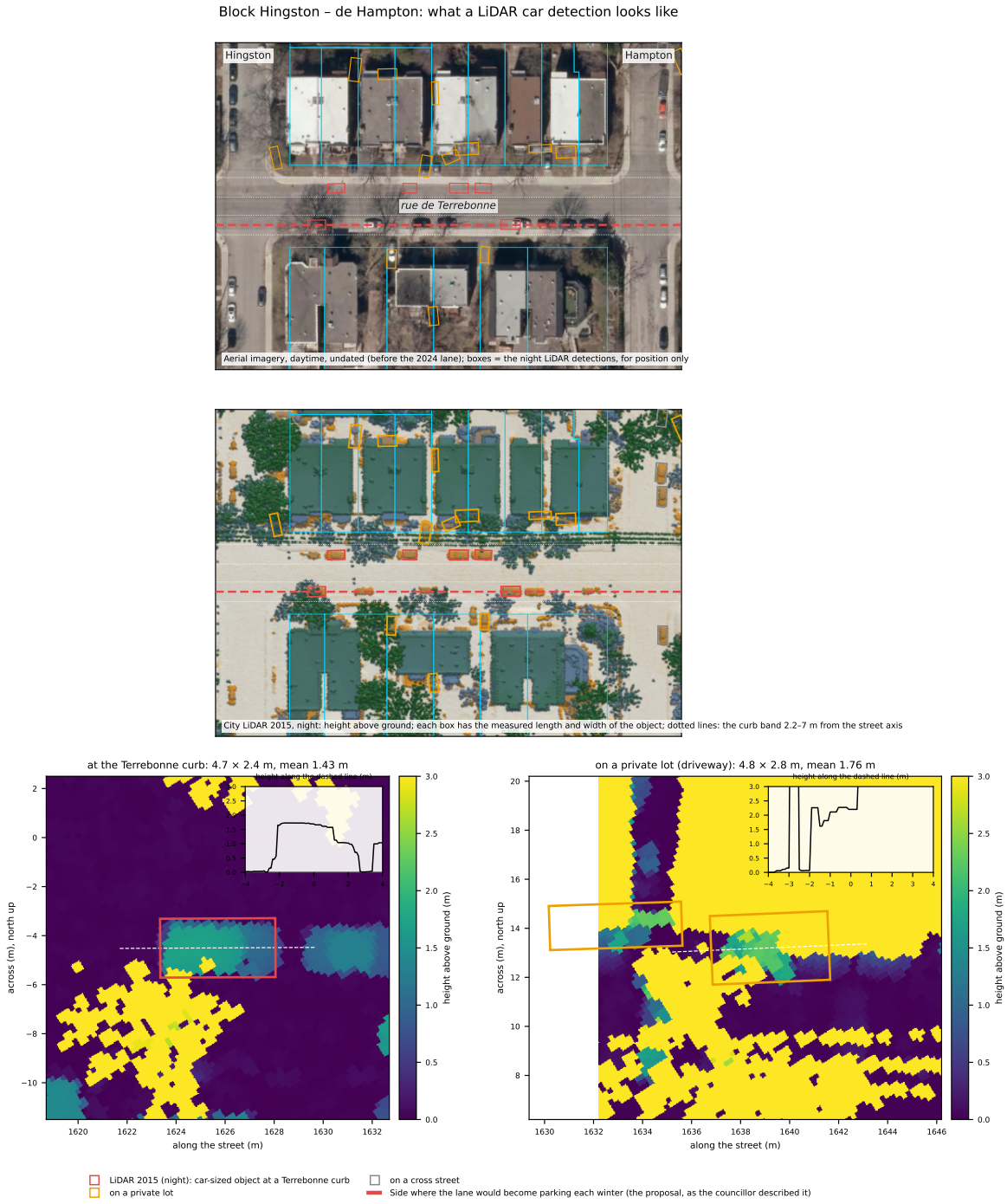


Figure 18: What a LiDAR car detection looks like, block Hingston to Hampton: every detection drawn as a box of its measured length and width on the daytime image and on the night height raster (the dotted lines bound the curb band, 2.2 to 7 m from the street axis, that separates a car on the street from a car on a lot); below, one car at the curb and one in a driveway at 40 pixels per metre, with the height above ground in metres and its profile along the car's length: a flat top at 1.4–1.5 m over about 4.5 m, dropping to the ground at both ends.

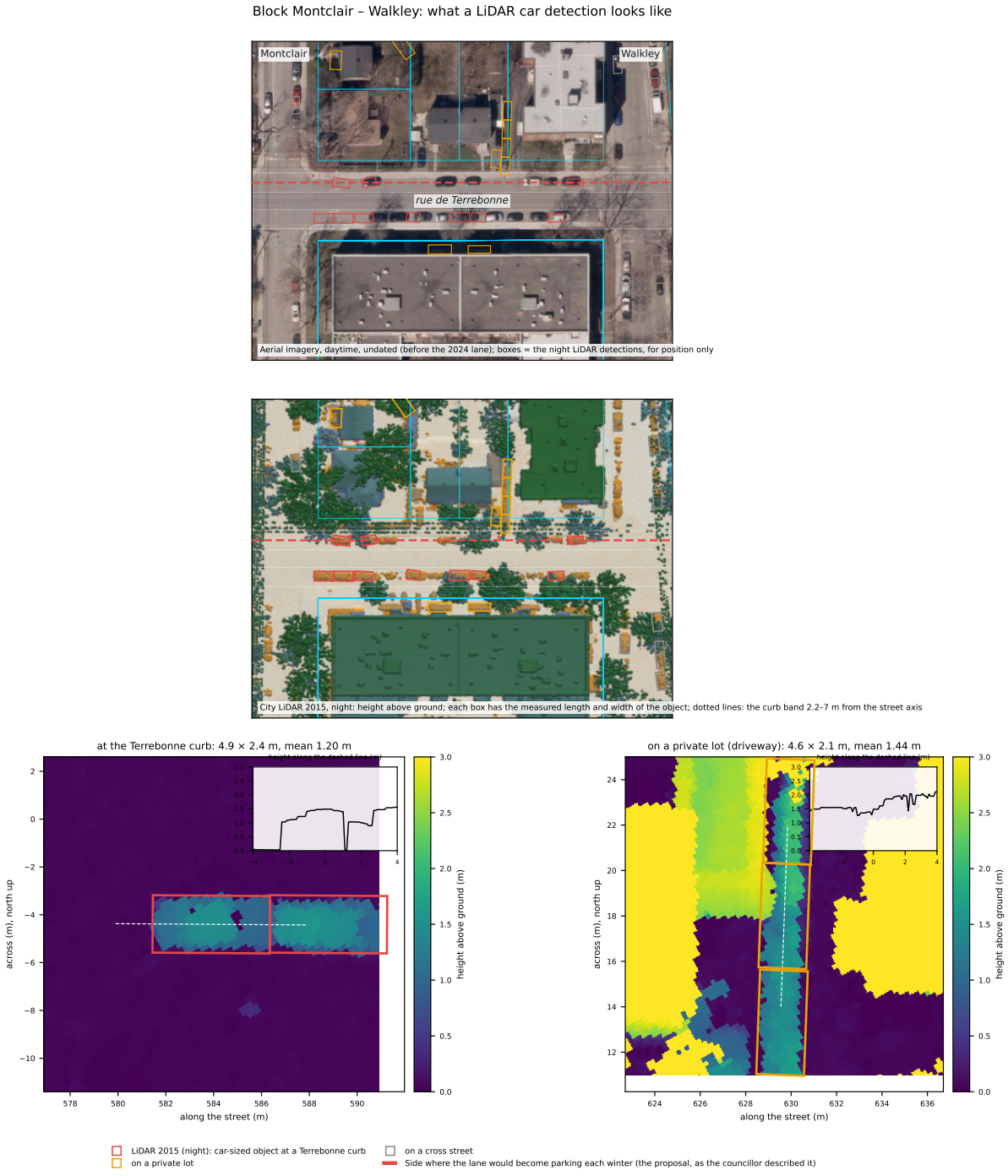


Figure 19: The same for the block Montclair to Walkley, where cars stand bumper to bumper on the south curb.

7 Caveats

- **Garages, not driveways.** The plans mark structures. A driveway or parking pad without a garage leaves no mark, so the as-built share with a driveway or garage is a lower bound.
- **As built, as usable.** The 1954–55 share counts structures; the street check records whether a place is usable today but not what a garage holds inside (a workshop, storage), so neither figure is the share of households that park off-street today. A garage built in 1930 or 1950 may also be too small for a large vehicle of today. Garage interiors and the places in the underground garages of larger buildings are not counted.
- **Buildings, not households.** The share by building and the share by dwelling happen to agree (60 % and 58 %), but a duplex pair has two to four flats and one or two garages, and three of the four apartment buildings have a basement garage of unrecorded capacity.
- **One sheet missing** (787-8) and 29 readings graded medium (noted row by row).
- **Two moments, not a time series.** The daytime imagery (undated, before the 2024 lane) and the night LiDAR (2015) are some years apart and both predate the lane; their car counts describe each moment, by day and by night, and are not before-and-after figures for the lane.
- **Corner lots.** Which street a corner building is addressed on changed in places between 1954 and the present roll; the table keeps the 1954 numbering and the join records the present unit.