

September 25, 2024 File: 161414378

Attention: Michael Pease, Manager, Development Planning

Development and Compliance Services City Hall – 6th Floor 300 Dufferin Avenue London, ON, PO BOX 5035, N6A 4L9

Dear Michael,

Reference: 4040 Colonel Talbot Road – Sanitary Servicing Brief

This sanitary servicing brief has been prepared in support of the proposed development of an existing 0.80ha parcel of land located at 4040 Colonel Talbot Road. (See site plan exhibit A.4). The land is currently part of an area external to the Heathwoods Subdivision sanitary system and has been accounted for in its design as a future medium-density residential site. The proposed development is a medium density site consisting of 2, 3-storey stacked townhouse buildings and 2, 2-storey townhouse buildings, totaling 52 units.

The purpose of this brief is to demonstrate that the proposed development is adequately supported by the existing downstream sanitary sewer design of Heathwoods Subdivision. This report will investigate both the gravity serviceability and capacity of the proposed sanitary outlet; shown in exhibit A.1. Figure 1.0.

Sanitary Servicing Strategy

The site is currently designated as a 0.80 ha part of a larger 4.0 ha external area of the Heathwoods subdivision to the south. The external area shown in figure 1.0 as "future M.D. EXT 2" is designed to outlet to the Heathwoods Avenue sewer via a proposed 200mm sanitary sewer on Colonel Talbot Road. The entire external area was designed to service a population of 720 people. The proposed development gravity serviceability and maximum sanitary contribution herein demonstrating capacity in the accepted downstream sanitary system.

Gravity Serviceability Check

A sanitary outlet stub outlet will be provided at the property line at Colonel Talbot Road per the AECOM 2-lane Colonel talbot Road Upgrade. The stub fronting the subject lands will have an elevation of 259.241 m± at the property line and will be a 200mm diameter stub at a minimum slope of 0.50%. The stub will have sufficient capacity to service the subject lands.

Capacity Check

As per the accepted drainage area plan for Heathwoods Subdivision Phase 4, the downstream accepted outlet for the 4.0ha Lands including the subject lands has capacity allocated for a total population of 720 people. As per Table 1 below, the proposed development has a density of 156 people/ha and is below the allocated 180 people/ha capacity in the accepted design. The proposed post-development peak sanitary flow is 1.61 L/s as detailed in Table 2 and is well below the capacity available in the downstream system.

Table 1 – Downstream Design Sanitary Capacity

| Location | Area | Population | Pop/Ha |
|-----------------------------|-------|------------|--------|
| Entire M.D External Area | 4.0ha | 720 | 180 |
| Proposed M.D. Site | 0.8ha | 125 | 156.25 |

Table 2 – Site Maximum Population & Site Sanitary Peak Flows (Per City of London Standards)

| | Units | Population (P) | Infiltrati on (L/s) | Peaking Factor | Sewage (L/s) | Total (L/s) |
|--------------|-------|----------------|------------------------|-------------------|--------------|-------------|
| Proposed M.D | 52 | 125 | 0.08 | 4.22 | 1.54 | 1.61 |

CONCLUSIONS

- The sanitary design of the subject site falls well within the capacity of the sanitary sewer intended to service it. The proposed population density is below what was designed for in the external areas of Heathwoods Subdivision phase 4.
- The anticipated sanitary sewer stub elevation at the Colonel Talbot right of way is 259.241m±.

Sincerely,

Stantec Consulting Ltd.

Asaac Austin

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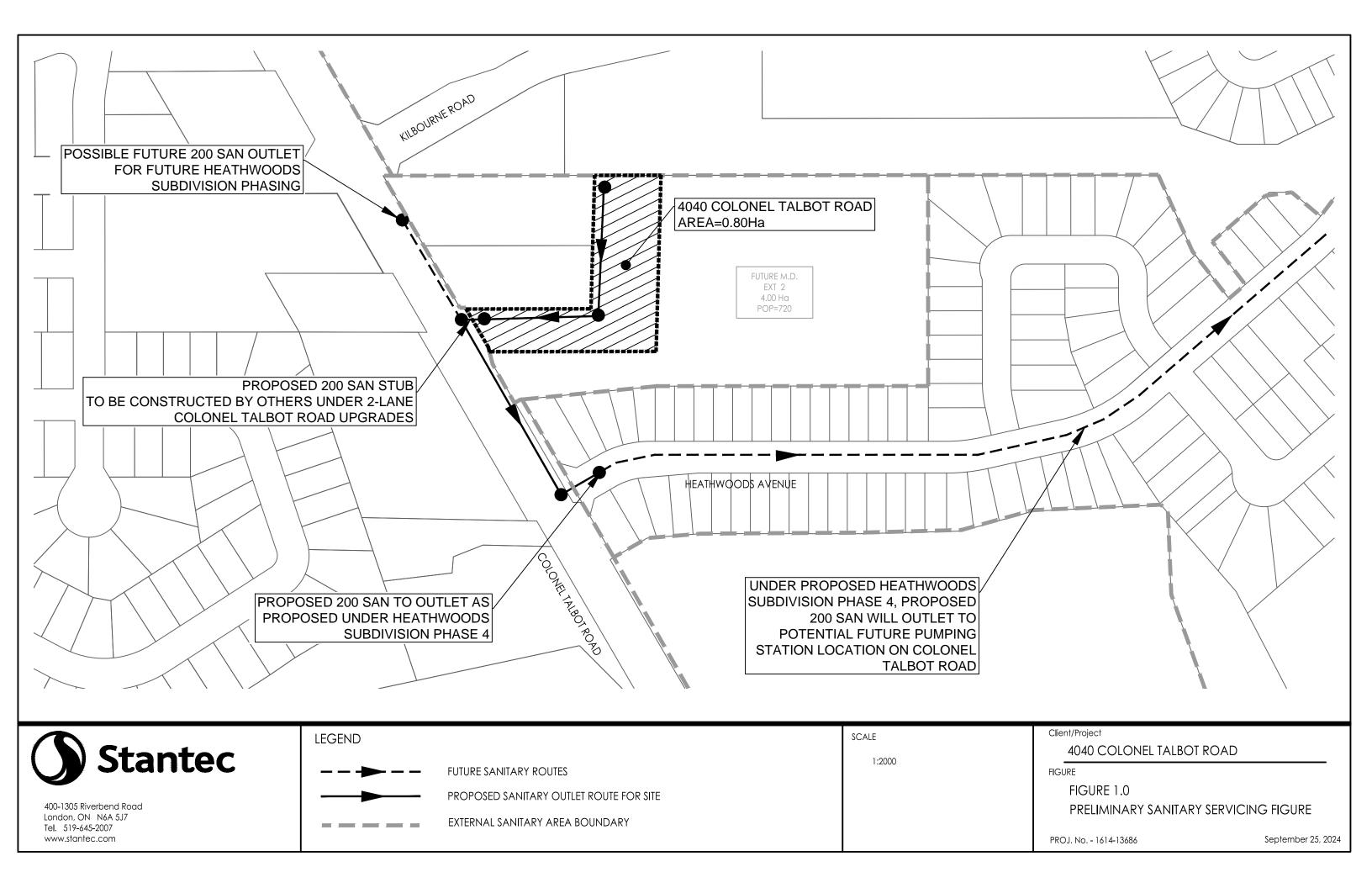
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Appendix A

A.1 FIGURE 1.0 - PRELIMINARY SANITARY SERVICING FIGURE

Submitted by Stantec Consulting Ltd. October 2023.

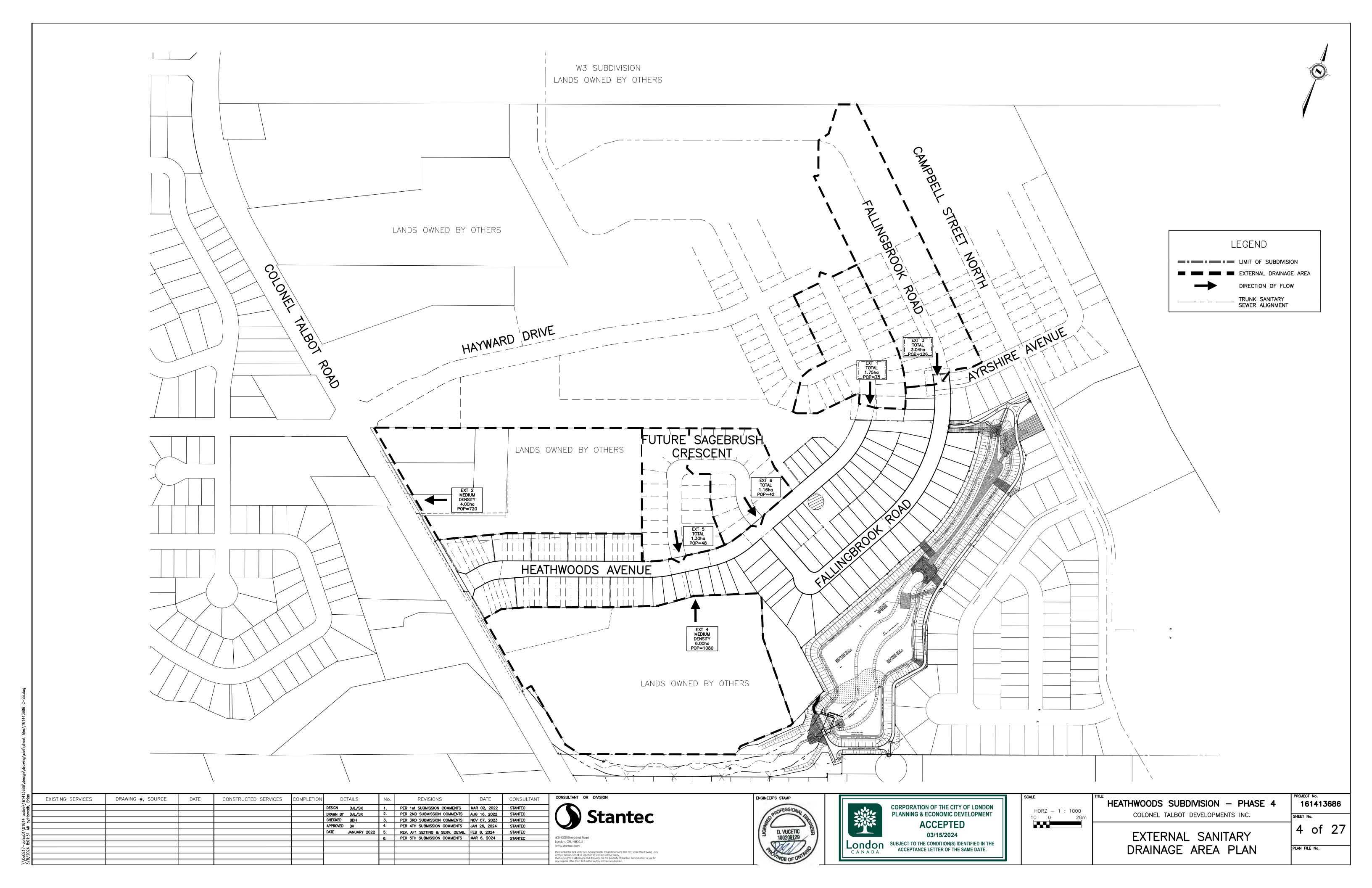


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Reference: 4040 Colonel Talbot Road Sanitary Servicing Brief

A.2 HEATHWOODS SUBDIVISION PHASE 4 - EXTERNAL SANITARY DRAINAGE AREA PLAN

Accepted by City of London. March 15, 2024.



A.3 HEATHWOODS SUBDIVISION PHASE 4 - SANITARY DESIGN SHEET

Accepted by City of London March 15, 2024.

RESIDENTIAL COMMERCIAL AND INSTITUTIONAL POPULATION DENSITIES

SANITARY SEWER DESIGN SHEET CITY OF LONDON

PROJECT NAME: <u>HEATHWOODS SUBDIVISION - PHASE 4</u>

THE FOLLOWING POPULATION ALLOWANCES WILL APPLY WHEN DESIGNING SANITARY SEWERS:
LOW DENSITY (SINGLE-FAMILY / SEMI-DETACHED) = 30 UNITS / H

LOW DENSITY (SINGLE-FAMILY / SEMI-DETACHED)
MEDIUM DENSITY (MULTI-FAMILY / TOWNHOUSE / ROWHOUSE)

HIGH DENSITY (APARTMENTS)
COMMERCIAL / INSTITUTIONAL
SECONDARY SCHOOL
ELEMENTARY SCHOOL

= 30 UNITS / HECTARE @ 3 PEOPLE / UNIT = 75 UNITS / HECTARE @ 2.4 PEOPLE / UNIT

= 150 - 300 UNIT / HECTARE @ 1.6 PEOPLE / UNIT = 100 PEOPLE / HECTARE

= 1500 PEOPLE = 600 PEOPLE DESIGN CRITERIA
SEWAGE = 230 LITRE / CAPITA / DAY
INFILTRATION = 8640 LITRES / HECTARE / DAY
PEAKING FACTOR: = 1 + _____ 14____

DATE: DESIGNED BY:

<u>n-24</u> A

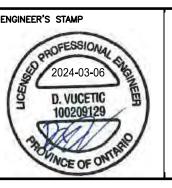
PROJECT FILE NO.

1614-13686

| | LOCATION | | | | AREA POPULATION | | | | | | SEWAGE FLOWS SEWER DESIGN | | | | | | | | | PROFILE | | | | | | |
|-----------|--------------------------|-----------------|---------------|-----------------|-------------------|-------------------|----------------|---------|----------------|---------------|---------------------------|-------------------|---------------|---------------|--------------|-----------------|-------|------------|------------|-----------------|-------------|------------------|------------------------|-----------------|---------|---------|
| | | | | | | | | | | | | Q | | | | | | | | | | INVERT E | ELEVATION | | | |
| AREA No. | STREET | FROM MANHOLE | TO MANHOLE | NET OR GROSS | DELTA HECTARES | TOTAL HECTARES | PER HECTARE | PER LOT | NO. OF LOTS | DELTA POP. | TOTAL POP. | PEAKING FACTOR | INFILT L/s | SEWAGE L/s | TOTAL L/s | PIPE SIZE mm | n | SLOPE % | CAP L/s | VELOCITY m/s | LENGTH m | FALL IN SEWER | HEADLOSS IN U.S. MH | DROP IN MANHOLE | U.S. | D.S. |
| EXT 2 | FUT. MD - COLONEL TALBOT | FUT. S14 | S134 | | 4.00 | 4.00 | 180 | | | 720 | 720 | 3.89 | 0.40 | 8.20 | 8.60 | 200 | 0.013 | 0.50 | 23.19 | 0.74 | 99.0 | 0.495 | - | 0.000 | 258.734 | 258.239 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A135 | HEATHWOODS AVENUE | S134 | S133 | N | 0.32 | 4.32 | | | | 15 | 735 | 3.88 | 0.43 | 8.36 | 8.79 | 200 | 0.013 | 0.61 | 25.62 | 0.82 | 40.0 | 0.244 | 0.000 | 0.030 | 258.196 | 257.952 |
| A136 | HEATHWOODS AVENUE | S133 | S132 | N | 0.31 | 4.63 | | | | 20 | 755 | 3.88 | 0.46 | 8.57 | 9.03 | 200 | 0.013 | 0.61 | 25.62 | 0.82 | 24.8 | 0.151 | 0.000 | 0.030 | 257.922 | 257.771 |
| A137 | HEATHWOODS AVENUE | S132 | S131 | N | 0.78 | 5.41 | | | | 51 | 806 | 3.86 | 0.54 | 9.11 | 9.65 | 200 | 0.013 | 0.33 | 18.84 | 0.60 | 91.5 | 0.302 | 0.000 | 0.030 | 257.741 | 257.439 |
| A138 | HEATHWOODS AVENUE | S131 | S130 | N | 0.89 | 6.30 | | | | 57 | 863 | 3.84 | 0.63 | 9.70 | 10.33 | 200 | 0.013 | 0.33 | 18.84 | 0.60 | 97.9 | 0.323 | 0.000 | 0.030 | 257.409 | 257.086 |
| A139 | HEATHWOODS AVENUE | S130 | S125 | N | 0.17 | 6.47 | | 3 | 2 | 6 | 869 | 3.84 | 0.65 | 9.77 | 10.41 | 200 | 0.013 | 0.35 | 19.40 | 0.62 | 33.4 | 0.117 | 0.000 | 0.030 | 257.056 | 256.939 |
| EXT 5 | SAGEBRUSH CRESCENT | CAP | S125 | N | 1.30 | 1.30 | | 3 | 16 | 48 | 48 | 4.32 | 0.13 | 0.61 | 0.74 | 200 | 0.013 | 1.30 | 37.40 | 1.19 | 18.3 | 0.238 | 0.000 | 0.100 | 260.013 | 259.775 |
| EXT 4 | EASEMENT | CAP | S125 | N | 6.00 | 6.00 | 180 | | | 1080 | 1080 | 3.78 | 0.60 | 11.95 | 12.55 | 200 | 0.013 | 0.50 | 23.19 | 0.74 | 44.5 | 0.223 | - | 0.000 | 257.161 | 256.939 |
| 0.4.4.4 | | 0405 | 0404 | N | 0.44 | 44.40 | | | | 45 | 2040 | 2.50 | 4.40 | 04.44 | 20.50 | 050 | 0.040 | 0.05 | 00.70 | 0.04 | 60.5 | 0.450 | 0.000 | 0.050 | 050,000 | 050 700 |
| A144 | HEATHWOODS AVENUE | S125 | S124 | N | 0.41 | 14.18 | | 3 | 5 | 15 | 2012 | 3.58 | 1.42 | 21.11 | 22.53 | 250 | 0.013 | 0.25 | 29.73 | 0.61 | 62.5 | 0.156 | 0.000 | 0.050 | 256.889 | 256.733 |
| A145 | HEATHWOODS AVENUE | S124 | S116 | N | 0.09 | 14.27 | | 3 | 0 | 0 | 2012 | 3.58 | 1.43 | 21.11 | 22.54 | 250 | 0.013 | 0.25 | 29.73 | 0.61 | 48.9 | 0.122 | 0.000 | 0.050 | 256.683 | 256.560 |
| EXT 6 | SAGEBRUSH CRESCENT | CAP | S116 | N | 1.16 | 1.16 | | 3 | 14 | 42 | 42 | 4.33 | 0.12 | 0.53 | 0.65 | 200 | 0.013 | 1.00 | 32.80 | 1.04 | 18.8 | 0.188 | 0.000 | 0.200 | 259.611 | 259.423 |
| EXT 1 | HEATHWOODS AVENUE | CAP | S135 | N | 1.75 | 1.75 | | 3 | 25 | 75 | 75 | 4.28 | 0.18 | 0.94 | 1.11 | 200 | 0.013 | 0.45 | 22.00 | 0.70 | 12.6 | 0.057 | 0.000 | 0.100 | 257.761 | 257.704 |
| FUT. A134 | HEATHWOODS AVENUE | S135 | S112 | N | 0.10 | 1.85 | | 3 | 1 | 3 | 78 | 4.27 | 0.19 | 0.98 | 1.16 | 200 | 0.013 | 0.45 | 22.00 | 0.70 | 25.2 | 0.113 | 0.000 | 0.030 | 257.674 | 257.561 |
| A155 | HEATHWOODS AVENUE | S112 | S113 | N | 0.25 | 2.10 | | 3 | 3 | 9 | 87 | 4.26 | 0.21 | 1.09 | 1.30 | 200 | 0.013 | 0.45 | 22.00 | 0.70 | 32.9 | 0.148 | 0.000 | 0.030 | 257.531 | 257.383 |
| A154 | HEATHWOODS AVENUE | S113 | S114 | N | 0.19 | 2.29 | | 3 | 3 | 9 | 96 | 4.25 | 0.23 | 1.19 | 1.42 | 200 | 0.013 | 0.45 | 22.00 | 0.70 | 27.3 | 0.123 | 0.000 | 0.030 | 257.353 | 257.230 |
| A153 | HEATHWOODS AVENUE | S114 | S115 | N | 0.73 | 3.02 | | 3 | 9 | 27 | 123 | 4.22 | 0.30 | 1.52 | 1.82 | 200 | 0.013 | 0.45 | 22.00 | 0.70 | 91.4 | 0.411 | 0.000 | 0.030 | 257.200 | 256.789 |
| A152 | HEATHWOODS AVENUE | S115 | S116 | N | 0.15 | 3.17 | | 3 | 2 | 6 | 129 | 4.21 | 0.32 | 1.59 | 1.91 | 200 | 0.013 | 0.42 | 21.26 | 0.68 | 30.7 | 0.129 | 0.000 | 0.030 | 256.759 | 256.630 |
| A156 | FALLINGBROOK ROAD | S116 | S109 | N | 0.12 | 18.72 | | 3 | 1 | 3 | 2186 | 3.56 | 1.87 | 22.76 | 24.63 | 250 | 0.013 | 0.25 | 29.73 | 0.61 | 21.1 | 0.053 | - | 0.000 | 256.498 | 256.445 |
| A158 | FALLINGBROOK ROAD | S109 | S108 | N | 0.49 | 19.21 | | 3 | 4 | 12 | 2198 | 3.55 | 1.92 | 22.87 | 24.79 | 250 | 0.013 | 0.25 | 29.73 | 0.61 | 64.4 | 0.161 | 0.000 | 0.030 | 256.415 | 256.254 |
| A159 | FALLINGBROOK ROAD | S109 | S107 | N | 0.38 | 19.59 | | 3 | 3 | 9 | 2207 | 3.55 | 1.96 | 22.96 | 24.92 | 250 | 0.013 | 0.25 | 29.73 | 0.61 | 17.7 | 0.044 | 0.000 | 0.060 | 256.194 | 256.150 |
| A160 | FALLINGBROOK ROAD | S107 | S106 | N | 0.98 | 20.57 | | 3 | 12 | 36 | 2243 | 3.55 | 2.06 | 23.29 | 25.35 | 250 | 0.013 | 0.25 | 29.73 | 0.61 | 99.0 | 0.248 | 0.000 | 0.060 | 256.090 | 255.843 |
| A161 | FALLINGBROOK ROAD | S106 | S105 | N | 0.49 | 21.06 | | 3 | 6 | 18 | 2261 | 3.54 | 2.11 | 23.46 | 25.57 | 250 | 0.013 | 0.25 | 29.73 | 0.61 | 51.8 | 0.130 | 0.000 | 0.030 | 255.813 | 255.683 |
| A162 | FALLINGBROOK ROAD | S105 | S104 | N | 0.42 | 21.48 | | 3 | 5 | 15 | 2276 | 3.54 | 2.15 | 23.60 | 25.75 | 300 | 0.013 | 0.25 | 48.35 | 0.68 | 51.4 | 0.129 | 0.000 | 0.060 | 255.623 | 255.495 |
| A163 | FALLINGBROOK ROAD | S104 | S103 | N | 0.43 | 21.91 | | 3 | 5 | 15 | 2291 | 3.54 | 2.19 | 23.74 | 25.93 | 300 | 0.013 | 0.25 | 48.35 | 0.68 | 44.1 | 0.110 | 0.000 | 0.030 | 255.465 | 255.354 |
| A157 | FALLINGBROOK ROAD | _ | S103 | N | 0.14 | 0.14 | | 3 | 0 | 0 | 0 | 4.50 | 0.01 | 0.00 | 0.01 | | | | | | | | | | | |
| A164 | FALLINGBROOK ROAD | S103 | S13 B.O. | N | 0.27 | 22.32 | | 3 | 3 | 9 | 2300 | 3.54 | 2.23 | 23.83 | 26.06 | 300 | 0.013 | 0.38 | 59.61 | 0.84 | 59.4 | 0.226 | 0.000 | 0.030 | 255.324 | 255.099 |
| EXT 3 | FALLINGBROOK ROAD | CAP | S183 | N | 3.04 | 3.04 | | | | 126 | 126 | 4.21 | 0.30 | 1.56 | 1.86 | 200 | 0.013 | 0.34 | 19.12 | 0.61 | 10.5 | 0.036 | 0.000 | 0.200 | 258.546 | 258.510 |
| | FALLINGBROOK ROAD | S183 | \$13 B.O. | N | 0.00 | 3.04 | | | | 0 | 126 | 4.21 | 0.30 | 1.56 | 1.86 | 200 | 0.013 | 0.34 | 19.12 | 0.61 | 2.6 | 0.009 | 0.000 | 0.060 | 258.450 | 258.441 |

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|-------------|-------------------|-------------------|------|----------------------|------------|-------------------|-----|---------------------------------|--------------|------------|-----|
| Brian | EXISTING SERVICES | DRAWING #, SOURCE | DATE | CONSTRUCTED SERVICES | COMPLETION | DETAILS | No. | REVISIONS | DATE | CONSULTANT | |
| ate late | | | | | | DESIGN DJL/SK | 1. | PER 1st SUBMISSION COMMENTS | MAR 02, 2022 | STANTEC | 1 |
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| 25. | | | | | | DATE JANUARY 2022 | 5. | REV. AF1 SETTING & SERV. DETAIL | FEB 8, 2024 | STANTEC | 1 |
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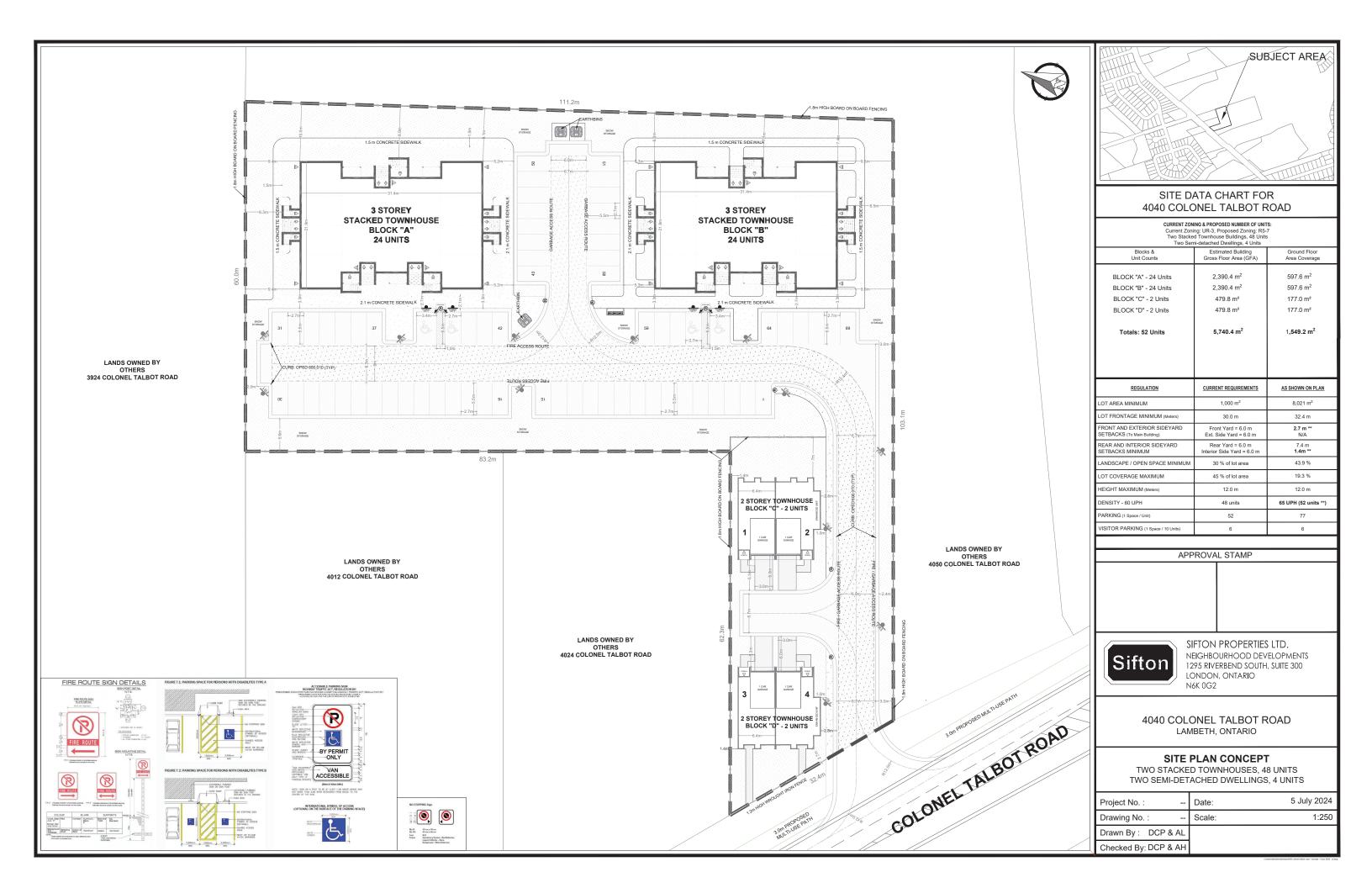
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| | COLONEL TALBOT DEVELOPMENTS | INC. | |

PROJECT No.
161413686

SHEET No.
5 of 27

PLAN FILE No.

A.4 4040 COLONEL TALBOT ROAD - SITE PLAN



A.5 - COLONEL TALBOT ROAD - TWO LANE UPGRADE - PROFILE

Received from City of London September 10, 2024.

