SUNVALE HOMES

FUNCTIONAL SERVICING REPORT

MOUNT FOREST SUBDIVISION

TOWNSHIP OF WELLINGTON NORTH

SEPTEMBER 2020

COBIDE Engineering Inc
517 10th Street
Hanover, ON N4N 1R4
TEL: 519-506-5959
www.cobideeng.com

COBIDE
ENGINEERING INC

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

APPENDICES

1. INTRODUCTION

Cobide Engineering Inc. was retained by Sunvale Homes to provide engineering services in support of a Draft Plan Approval Application. The application will be to subdivide the property into a 141 unit subdivision.

A copy of the proposed Draft Plan has been included in Appendix A as Drawing DP1.

1.1 LOCATION

The proposed subdivision development is located Part of Park Lots 10,11 &12 south of Princess Street, Plan Town of Mount Forest & Part of Park Lots I, J, K & L MacDonald's Survey & Part 2 of Division 1 of Lot 2 Concession WSOR (Arthur), Town of Mount Forest, Township of Wellington North, County of Wellington (described herein as the "site"). A Site Location Map is included as Figure 1. The subject property is approximately 9.793 hectares in area.

1.2 DEVELOPMENT PROPOSAL

The proposed development consists of 9.793 hectares of land within the Mount Forest settlement area.

The proposed plan is to develop the site into a residential subdivision. The subdivision will involve the creation of a number of new streets. The development will consist of the following:

- 58 Single Family Lots (Lots 1-44 & 111-124)
- 30 Semi-Detached Lots (Lots 45-60 & 97-110)
- 36 Street Townhouse Lots (Lots 61-96)
- One (1) Cluster Townhouse Block (Block 125)
- One (1) Open Space Blocks for stormwater conveyance as well as a Sewage Pumping Station
- One (1) Walkway Block

The road network within the subdivision will include the construction of Streets A-E. Streets C & E will connect to Cork Street.

The Draft Plan showing the lot and block configuration has been included in Appendix 1 and noted as DP1.

The proposed development is within the Mount Forest Settlement Boundary of the current Official Plan of the Township of Wellington North and thus is intended for servicing from municipal water and sewage systems.

MAP SOURCE - MTO ROAD MAP

COBIDE ENGINEERING INC
517 - 10th STREET, Hanover, Ontario N4N 1R4
Telephone: (519) 506-5959
www.cobideeng.com

Client/Project

SUNVALE HOMES - MOUNT FOREST SUBDIVISION
FORMER TOWN OF MOUNT FOREST
Township of Wellington North, Ontario
FUNCTIONAL SERVICING REPORT

Figure No.

1

Title

REGIONAL LOCATION MAP

ORIGINAL SHEET – 8 x 11

H:\Sunvale Homes\00702 Sunvale Homes Mount Forest Subdivision\Drawings\Submissions\2019-08-30 First Submission\00702 Regional Location – FSR.dwg Sep 17, 2020 – 3:42pm

2. WATER DISTRIBUTION SYSTEM

The water distribution system will be sized based on the existing conditions at the connection to the municipal system and the subdivisions demands which are determined by the Ministry of the Environment (MOE) Design Guidelines for Drinking-Water Systems (2008).

2.1 DESIGN CRITERIA

The water distribution system will be design in accordance MOE guidelines which state the system *"should be designed to satisfy the greater of the following demands:*

- *Maximum day demand plus fire flow; or,*
- *Peak hour demand*

The maximum day demand and peak hour demand are based on the projected water consumption from the development and the fire flow is based on the type of the development.

The system will require modelling during the detailed design stage to ensure the water pressure throughout the system is within the requirements of the MOE.

Based on MOE guidelines, the minimum pressure at ground level at all points in the distribution system under maximum day demand plus fire flow conditions are to be 140 kPa (20 psi). The normal operation pressure should be between 350 kPa (50 psi) to 480 kPa (70 psi). There shall be no point in the distribution system that has a normal operating pressure of less than 275 kPa (40 psi). The maximum pressure in the pipe cannot exceed 700 kPa (100 psi).

2.2 WATER CONSUMPTION

The system will be designed based on a domestic water demand of 450 L/cap/day. The peaking factors will be derived from Table 3-1 of the MOE Design Guidelines. Based on the projected population of 391 people the peaking factor for the maximum day demand will be 2.75 and the peaking factor for the peak hour demand will be 4.13. This population estimate is based on 3 people per single detached dwelling, 2.75 people per semi-detached dwelling and 2.5 people per townhouse dwelling.

Table 1 below summarizes the projected maximum day and peak hour demands for the proposed development.

Table 1 - Proposed Water Demands

Demand	Population	Consumption (L/cap/day)	Peaking Factor	Peak Rate (L/day)	Peak Rate (L/s)
Maximum Day	391	450	2.75	483,863	5.60
Peak Hour	391	450	4.13	726,674	8.41

2.3 FIRE FLOW

The AWWA *Manual of Water Supply Practices M31 – Distribution System Requirements for Fire Protection* and the Fire Underwriters Survey document *Water Supply for Public Fire Protection* will determine the required fire flows.

The fire flows are dependent upon many factors including the type of construction materials, building height and density of the development.

The fire flow requirements for a typical single family home within the subdivision are expected to 4000 L/min which would need to be sustained for 1.5 hours.

2.4 DESIGN FLOW RATES

The watermain within the subdivision will be required to maintain the aforementioned pressure while supplying 72.3 L/s (MDD + Fire Flow). The pipes should be designed with a pipe roughness C-value of 130 which is typically used to represent moderately aged PVC pipe. This will ensure adequate pressure for the development in the future.

2.5 WATERMAIN CONFIGURATION

The proposed watermain will be connected to the municipal system at the proposed intersections with Cork Street. There is currently a 150mm diameter watermain on the east side of Cork Street. This watermain will provide service to the proposed development via a proposed connection at Streets C & E.

A single connection will be provided to each residential lot including individual services to the proposed street townhouse units.

A drawing showing the proposed watermain distribution network has been included in Appendix A.

3. SANITARY SEWER SYSTEM

The sanitary sewer system will be sized based on the existing conditions at the connection to the municipal system and the subdivisions demands which are determined by the Ministry of the Environment (MOE) Design Guidelines for Sewage Works (2008).

3.1 DESIGN CRITERIA

The sanitary sewer system will be design in accordance MOE guidelines.

The sanitary sewer will be designed to convey the projected peak flow based upon the projected population of the development, flows from future development to the north as well as extraneous flows.

3.2 DESIGN FLOW RATES

The sanitary sewer will be designed based on a peak flow of 450 L/cap/day and a peaking factor of 4.0 for the size of the development. Based on a population of 391 the projected residential flow is 8.15 L/s. The development will contribute 9.793 ha of extraneous flows to the sanitary sewer. This will contribute 1.47 L/s to the flow. Therefore, the peak flow from the development is 9.62 L/s.

3.3 SANITARY SEWER CONFIGURATION

There will be a sanitary sewer on all streets with a single connection to the existing sanitary sewer. Based on the as built drawings received for the area, there are sanitary sewers on Cork Street that will provide the outlet for the development. The existing sanitary sewers however are not low enough to provide a gravity outlet for the development therefore a sewage pumping station will be required. A single connection will be provided to each residential lot.

All sanitary sewers are proposed to be 200mm diameter PVC pipe. The minimum slope considered will be 0.40% to maintain a minimum velocity at full flow to prevent sediment deposition and blockages. The furthest section upstream will be installed at 1.0% for that same reason where possible.

A drawing showing the proposed sanitary collection network has been included in Appendix A.

3.4 SEWAGE PUMPING STATION

The existing sanitary sewer at the intersection of Cork Street and Melissa Crescent is at a depth of approximately 2.5 m. This is nearly the minimum cover depth as per the Township Servicing Standards. Based on As Built Information from Triton Engineering, the existing invert is 409.10 m at the sanitary manhole at the intersection of Melissa Crescent and Cork Street. The proposed subdivision also drops in elevation as you move further away from this intersection. The proposed low point in the road as per the Preliminary Design is 409.11 m. Based on the existing grading the site this would require a significant amount of fill to be able to use the existing sewer in its current state. Even if a 300mm diameter sanitary sewer were run at minimum grade (0.22%) the proposed invert at the furthest point in the development would be at an elevation of 410.22 m. To have minimum cover at this point would require over 4m of fill. The site would therefore require approximately $3.75 million worth of fill.

A second option was reviewed to determine if any replacement of sewer could be completed to get the majority of the development onto gravity sewers. There is a drop structure in the sanitary manhole at the intersection of Waterloo Street and Cork Street. If the sanitary sewers were to be reconstructed from this point back to the subdivision it would provide additional depth. This drop structure however is 0.98 m. The existing sewer could be lowered by this amount however that would only allow an additional 10-12 lots to be on gravity services without again requiring significant amounts of fill to be imported to the site. The cost of reconstructing approximately 370 m to only gain 10-12 gravity serviced lots is not economically feasible especially when a sewage pumping station will still be required for the remainder of the lots. The

reconstruction would cost approximately $1 million plus the approximately $2.75 million worth of fill that would be required to build the site up.

A third option was also analyzed to determine if gravity drainage directly to the Wastewater Treatment Plant was an option however, the existing forcemain discharges inside the building and there are no external structures to connect into, therefore this option also is not feasible.

Based on the above analysis, the only financially viable option is to construct a sewage pumping station to service the proposed development.

The sanitary sewer on Cork Street outlets to the existing sewage pumping station at the intersection of Cork Street and Waterloo Street. The section of sewer along this alignment with the lowest capacity is from the intersection of Cork Street and Princess Street north towards the pumping station. This section of sewer is a 300mm diameter sewer at 0.2%. This gives it a maximum capacity of 43.25 l/s.

Based on information provided by BM Ross to the previous landowner, the existing flow at this location is 32.99 L/s. Therefore, the remaining capacity is approximately 10.26 l/s. This will be just under the maximum capacity of the pipe. Ideally the maximum capacity of the pipe would not be met, however that being said the design criteria used is based on 450 L/cap/day which is the high end of the recommended range of flows. The Ministry of Environment Conservation and Parks recommends using between 225 L/cap/day and 450 L/cap/day. With the prevalence of low flow fixtures and more efficient appliances, water consumption is decreasing considerably which means using 450 L/cap/day is providing a conservative design. The majority of the sewers within this catchment area are also gasketed PVC sewers therefore the infiltration flow rate is also likely overestimating the rate of flow that groundwater is entering the system.

Therefore, based on the above information, we do not foresee the capacity of the pipe being approached as a significant issue.

3.5 SEWAGE PUMPING STATION CONFIGURATION

The sewage pumping station (SPS) is proposed to be located in Block 126. The SPS will consist of the following:

Pumps -	Flygt Submersible clog-free pumps – single phase – duplex system;
Discharge Piping -	100 mm diameter stainless steel;
Wet Well -	3000 mm diameter precast concrete wet well complete with extended base slab;
Valve Chamber -	1800 mm diameter precast concrete chamber;
Metering -	Magnetic flow meter in valve chamber
Level Detection -	ultrasonic detector
Wet Well Access -	manufactured hatches cast into chamber top, aluminum ladder with extendable safety post, intermediate aluminum landing at discharge valves with handrail;
Forcemain -	100 mm diameter PVC SDR 26
Wet Well Venting -	Two (2) passive 100mm diameter stainless steel gooseneck vents with screens;
Electrical -	Single phase power with soft start motors;
Control System -	Programable Logic Controller manufactured by Eaton or Allen-Bradley and will be SCADA programmed using language that is the same as Township facilities
Backup Power -	Exterior Standby Diesel Generator designed for 125% of the electrical loading
Control Building -	Concrete Block building with steel pitched roof

Site Access - Paved Access from proposed street. SPS will be fenced with black galvanized wire with barbed wire. Total height of fencing to be 2.4m

4. STORM SEWER SYSTEM

The preliminary stormwater management report for this site is provided under separate cover. For existing and proposed drainage conditions including quality and quantity control provisions please refer to the preliminary stormwater management report. This section will pertain to collection of the storm drainage.

The storm sewer system will be design in accordance with the municipal and conservation authority guidelines including the Ministry of the Environment (MOE) Design Guidelines. The storm sewer system will use the rationale method to size the storm sewer to accommodate the 5 year peak flow from the development. The storm sewer from Martin Street to the South Saugeen River will be sized to accommodate the 100 year storm event.

The majority of the site will discharge to the proposed storm sewers with the exception of the rear of the lots along the west boundary and Block 125.

An inlet basin is proposed to be constructed in Block 125 to collect the overland flow and provide an inlet to the storm sewer that is designed for the 100 year storm event.

A drawing showing the proposed stormwater collection network has been included in Appendix A.

5. GRADING & EROSION AND SEDIMENT CONTROL

Erosion and sediment controls shall meet the requirements of the most recent version of the MOE *Stormwater Management Planning and Design Manual* at the time of construction.

5.1 CONSTRUCTION STAGE

Prior to the start of construction, appropriate sediment control facilities are to be in place. Following are details regarding erosion and sediment control that are to be implemented:

- Placement of heavy duty siltation fencing is required along the drainage course on Blocks 125 and 126 to intercept sediment that could potentially be transported by sheet flow across the site. Light Duty Siltation fence will also be installed at any development grading limits where runoff may discharge from the site.
- It is proposed that the major storm inlet pond be constructed first to act as a sedimentation basin.
- Placement of temporary straw check dams within swales and any other locations where a concentrated flow of runoff may occur. All proposed drainage swales are to be seeded during construction;
- Installation of filter cloth under all new and existing catchbasin grates until paving of the subdivision streets is completed;
- Mud mats will be placed at construction accesses to keep public roadways free from debris during the construction period.
- Re-vegetate all disturbed areas after underground and surface works have been constructed.

Prior to removal of sediment control facilities, ensure that sediment that may have accumulated has been removed.

Once the area has been stabilized, the silt fencing can be removed.

5.2 LOT DEVELOPMENT

During individual construction of homes within the subdivision, silt barriers are to be constructed, as appropriate, to prevent the eroding of materials into the roadside drainage system. The sedimentation control can be in the form of siltation fences placed in the direction of flow from the construction site and shallow excavated sediment traps (moats) should be constructed around any stockpiled materials.

The responsibility for the individual lot sediment control is the landowner/builder constructing the dwelling.

The proposed development grading design will generally following the existing grade. The proposed grading design will match all existing grades at the property lines and will not alter or affect the drainage patterns of the neighbouring properties. The proposed site grading will drain the stormwater through side yard swales and a storm sewer system. The majority of the slopes found on site are proposed to be between 2.0% and 6.0%.

6. TRAFFIC

Access to the subdivision will be via two connection points onto Cork Street.

Stop sign control at intersections will provide adequate traffic control for these local roads as outlined in the Traffic Impact Study.

The internal streets will be designed to meet the municipal standard for an urban street. The following parameters are proposed:

- 20m road allowance;
- 4.25m asphalt lanes with 2% cross fall
- 600.100 OPSD mountable curb and gutter
- Sidewalk on one side

7. UTILITIES

7.1 STREETLIGHTS

The configuration of the streetlights will be designed in accordance with municipal standards. Concrete poles shall be used with LED streetlights.

7.2 ELECTRICITY

Wellington North Power Inc. will be responsible for approving the design of the electrical distribution system. Each lot will be individually serviced. Underground distribution lines will be utilized for this development.

7.3 NATURAL GAS

Union Gas will be responsible for completing the design of the natural gas distribution system. Each lot will be individually serviced. The proposed design configuration and trench locations will be dictated by the Township of Wellington North standard cross section.

7.4 TELEPHONE/ CABLE TV/ INTERNET

Wightman and Eastlink will be given the opportunity to provide telephone, cable TV and internet services to the development. They will complete their own design, based upon the proposed electrical design configuration along with trench locations dictated by the Township of Wellington North standard cross section.

Sincerely,

Cobide Engineering Inc.

Travis Burnside, P. Eng.

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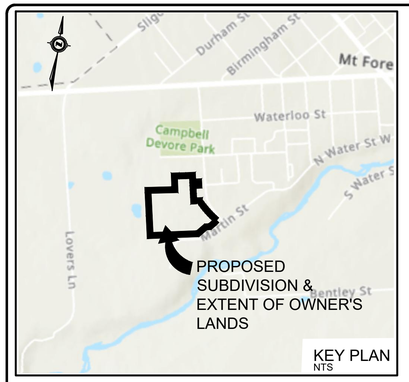
Appendix A

DRAWINGS

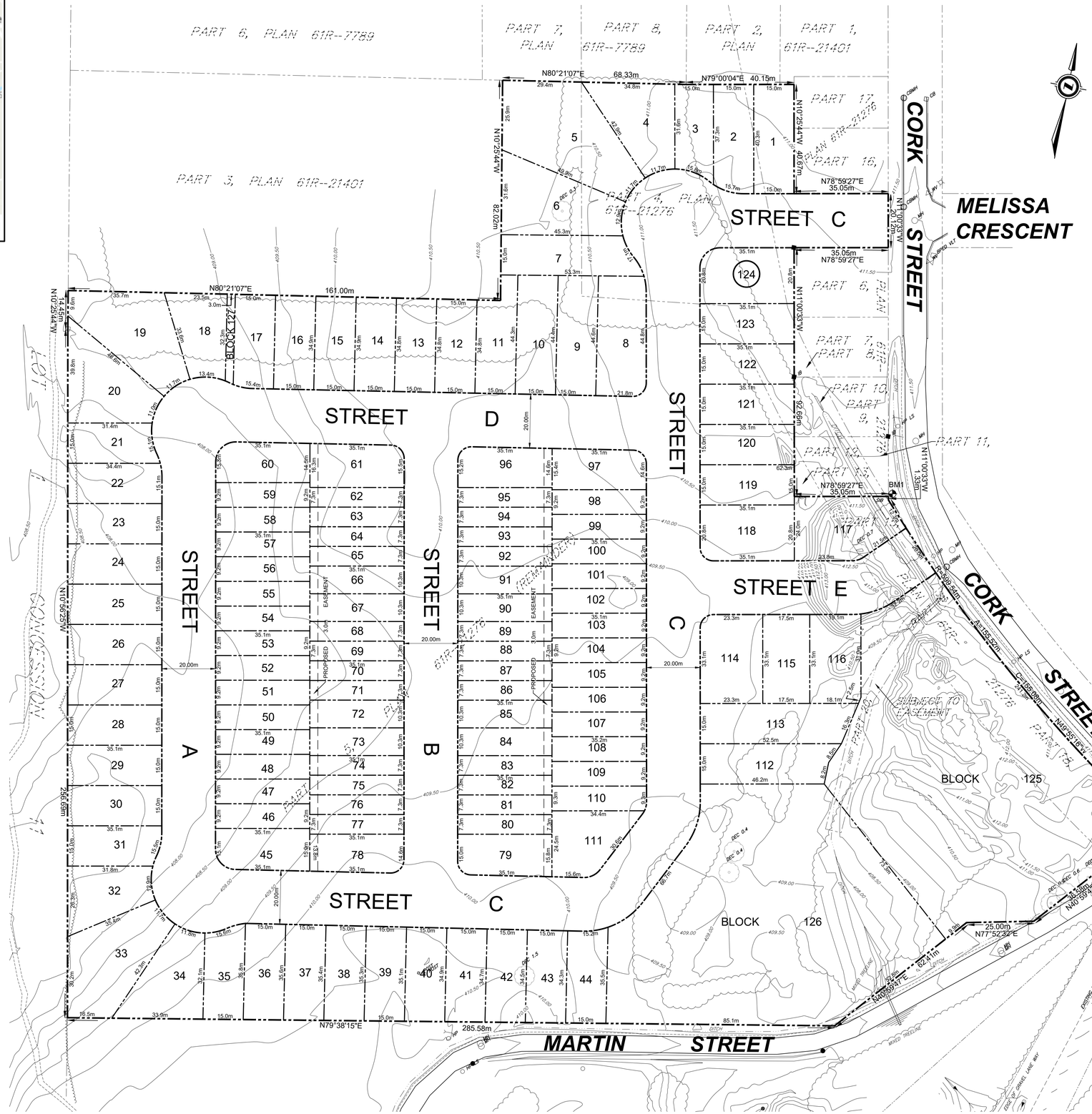
FUNCTIONAL SERVICING REPORT

SUNVALE HOMES MOUNT FOREST SUBDIVISION
TOWNSHIP OF WELLINGTON NORTH

DRAFT PLAN OF SUBDIVISION
PART OF PARK LOTS 10, 11 & 12
SOUTH OF PRINCESS STREET
PLAN TOWN OF MOUNT FOREST &
PART OF PARK LOTS 'I', 'K' & 'L'
MACDONALD'S SURVEY &
PART OF DIVISION 1 OF
LOT 2 CON WOSR (ARTHUR)
(TOWN OF MOUNT FOREST)
TOWNSHIP OF WELLINGTON NORTH
COUNTY OF WELLINGTON



KEY PLAN
NTS



LEGEND

- EXISTING STREET/PROPERTY LINES
- PROPOSED STREET/PROPERTY LINES
- EDGE OF EXISTING PAVEMENT
- EDGE OF EXISTING GRAVEL
- EXISTING STORM SEWER
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING DITCH
- EXISTING MANHOLE
- EXISTING CATCH BASIN
- EXISTING HYDRO GUY WIRE
- EXISTING HYDRO POLE
- EXISTING TELEPHONE PEDESTAL
- STANDARD IRON BAR
- IRON BAR
- EXISTING DECIDUOUS TREE AND DIAMETER
- EXISTING CONIFEROUS TREE AND DIAMETER
- EXISTING CONTOUR

RELEVANT SITE INFORMATION

DETACHED RESIDENTIAL LOTS (LOTS 1 TO 44 INCL. AND 111-124 INCL.)	3.653 ha.
SEMI-DETACHED RESIDENTIAL LOTS (LOTS 45 TO 60 INCL. & 97 TO 110 INCL.)	1.028 ha.
MULTI-FAMILY RESIDENTIAL LOTS (LOTS 61 TO 96 INCL. & BLOCK 125)	2.011 ha.
MUNICIPAL STREET (STREETS A TO E)	2.286 ha.
OPEN SPACE (BLOCK 126)	0.805 ha.
WALKWAY (BLOCK 127)	0.010 ha.
TOTAL PROPOSED SUBDIVISION	9.793 ha.

ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51 OF THE PLANNING ACT

a. AS SHOWN
b. AS SHOWN
c. AS SHOWN
d. SINGLE FAMILY RESIDENTIAL, SEMI-DETACHED RESIDENTIAL MULTI-FAMILY RESIDENTIAL
e. AS SHOWN
f. AS SHOWN
g. AS SHOWN
h. MUNICIPAL WATER SUPPLY
i.SDAND,SANDY SILT & GRAVEL
j. AS SHOWN
k. WATER, STORM SEWERS, SANITARY SEWERS, HYDRO, TELEPHONE
l. AS SHOWN

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:
THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO THE ADJACENT LANDS ARE CORRECTLY SHOWN.

DATE

XX
ONTARIO LAND SURVEYOR
VAN HARTEN SURVEYING INC.
660 RIDDELL ROAD, UNIT 1
ORANGEVILLE, ON L9W5G5

OWNER'S CERTIFICATE

I, THE REGISTERED OWNER OF THESE LANDS, HEREBY AUTHORIZE COBIDE ENGINEERING INC. TO SUBMIT THIS DRAFT PLAN FOR APPROVAL.

DATE

OWNER:
SUNVALE HOMES
685 RIDDELL ROAD, UNIT 6
ORANGEVILLE, ON
L9W 5J7

SUNVALE HOMES

Notes

1. TOPOGRAPHICAL INFORMATION DERIVED FROM TOPOGRAPHICAL SURVEY BY TRITON ENGINEERING LTD. AND FIELD SURVEY BY COBIDE ENGINEERING INC. 2016.
2. PROPERTY BOUNDARY DERIVED FROM INFROMATION SHOWN ON PLAN 61R-21276 AND 61R-21401.

Benchmark Information

BM1
TOP OF SIB LOCATED ON THE WEST SIDE OF CORK STREET AT THE SOUTHEAST CORNER OF PART 12 PLAN 61R-21276.
ELEVATION 410.86m

SCALE 1:750 (24 x 36)
10 0 10 20 50 METRES
50 0 25 50 100 FEET

No.	DATE	DESCRIPTION	BY	APPD
0	SEP 1/20	PRELIMINARY SUBMISSION	TLB	TLB

REVISION / ISSUE

COBIDE ENGINEERING INC
517 10th STREET, UNIT A, Hanover, Ontario N4N 1R4
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www.cobideeng.com

Client:	SUNVALE HOMES INC.
Design:	TLB
Drawn:	JAF
Checked:	SJC
Date:	AUG 2020
Scale:	1:750
Approved:	Design Engineer
DRAWING No.	00702-DP1

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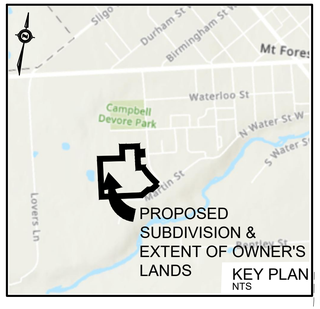

CAUTION:
THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

Notes

1. TOPOGRAPHIC INFORMATION DERIVED FROM FIELD SURVEY BY TRITON ENGINEERING COMPLETED IN 2018.
2. LOT FABRIC OF DERIVED FROM PLAN 61R-21276 PREPARED BY WILSON FORD SURVEYING ON FEBRUARY 14, 2018.

LEGEND

- SUBDIVISION BOUNDARY
- PROPOSED RIGHT OF WAY
- PROPOSED PROPERTY LINES
- EDGE OF EXISTING PAVEMENT
- EDGE OF EXISTING GRAVEL
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- PROPOSED STORM SEWER
- EXISTING STORM SEWER
- PROPOSED SUBDRAIN
- PROPOSED WATERMAIN
- EXISTING WATERMAIN
- PROPOSED SANITARY SERVICE
- EXISTING SANITARY SERVICE
- PROPOSED WATER SERVICE
- PROPOSED STORM SERVICE
- PROPOSED SANITARY MANHOLE
- EXISTING SANITARY MANHOLE
- PROPOSED STORM MANHOLE
- EXISTING STORM MANHOLE
- PROPOSED CATCHBASIN MANHOLE
- PROPOSED TWIN INLET CATCHBASIN MANHOLE
- PROPOSED TWIN INLET CATCHBASIN
- PROPOSED CATCH BASIN
- EXISTING CATCH BASIN
- PROPOSED DITCH INLET CATCHBASIN
- PROPOSED SANITARY SERVICE CLEANOUT
- EXISTING SANITARY SERVICE CLEANOUT
- PROPOSED CURB STOP VALVE
- EXISTING CURB STOP VALVE
- PROPOSED HYDRANT SET
- EXISTING FIRE HYDRANT
- PROPOSED GATE VALVE
- EXISTING GATE VALVE
- PROPOSED CAP C/W THRUST BLOCK
- PROPOSED BLOWOFF
- EXISTING UNDERGROUND TELEPHONE CABLE
- EXISTING UNDERGROUND TV CABLE
- EXISTING UNDERGROUND GAS LINE
- EXISTING UNDERGROUND HYDRO CABLE
- EXISTING HYDRO GUY WIRE
- EXISTING HYDRO POLE
- EXISTING CABLE TV PEDESTAL
- EXISTING TELEPHONE PEDESTAL
- STANDARD IRON BAR
- IRON BAR
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- EXISTING GAS MARKER
- EXISTING WELL
- BENCHMARK
- BOREHOLE
- PROPOSED ELEVATION / EXISTING ELEVATION
- DROP CURB

SCALE 1:750 (24 x 36)
10 0 10 20 50 METRES
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Benchmark Information

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ELEVATION 410.86m

No.	DATE	DESCRIPTION	BY	APPD
0	SEPT 16/20	DRAFT PLAN APPROVAL SUBMISSION	TLB	TLB

REVISION / ISSUE

Seal not valid unless signed and dated

LICENSED PROFESSIONAL ENGINEER
9/16/2020
T. L. BORNSIDE
100199868
PROVINCE OF ONTARIO

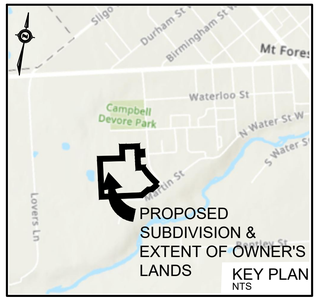
COBIDE ENGINEERING INC
517 10th STREET Hanover, Ontario N4N 1R4
Telephone: (519) 506-5959
www.cobideeng.com

Title:
SUNVALE HOMES
PROPOSED MOUNT FOREST SUBDIVISION
Township of Wellington North
CONCEPTUAL SERVICING PLAN

Client: SUNVALE HOMES

Design:	TLB	Scale:	1:750
Drawn:	TLB	Approved:	
Checked:	TLB		
Date:	JAN 2019		Design Engineer

DRAWING No. 00702-SP1



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2. LOT FABRIC OF DERIVED FROM PLAN 61R-21276 PREPARED BY WILSON FORD SURVEYING ON FEBRUARY 14, 2018.

LEGEND

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- PROPOSED WATERMAIN
- EXISTING WATERMAIN
- PROPOSED SANITARY SERVICE
- EXISTING SANITARY SERVICE
- PROPOSED WATER SERVICE
- PROPOSED STORM SERVICE
- SANMH — PROPOSED SANITARY MANHOLE
- SANMH — EXISTING SANITARY MANHOLE
- STMMH — PROPOSED STORM MANHOLE
- STMMH — EXISTING STORM MANHOLE
- CBMH — PROPOSED CATCHBASIN MANHOLE
- TICBMH — PROPOSED TWIN INLET CATCHBASIN MANHOLE
- TICB — PROPOSED TWIN INLET CATCHBASIN
- CB — PROPOSED CATCH BASIN
- CB — EXISTING CATCH BASIN
- DICB — PROPOSED DITCH INLET CATCHBASIN
- CO — PROPOSED SANITARY SERVICE CLEANOUT
- CO — EXISTING SANITARY SERVICE CLEANOUT
- CSV — PROPOSED CURB STOP VALVE
- CSV — EXISTING CURB STOP VALVE
- PROPOSED HYDRANT SET
- HYD — EXISTING FIRE HYDRANT
- PROPOSED GATE VALVE
- GV — EXISTING GATE VALVE
- PROPOSED CAP C/W THRUST BLOCK
- PROPOSED BLOWOFF
- T — T — EXISTING UNDERGROUND TELEPHONE CABLE
- CATV — EXISTING UNDERGROUND TV CABLE
- GAS — EXISTING UNDERGROUND GAS LINE
- H — H — EXISTING UNDERGROUND HYDRO CABLE
- EXISTING HYDRO GUY WIRE
- HP — EXISTING HYDRO POLE
- CATV — EXISTING CABLE TV PEDESTAL
- BRTD — EXISTING TELEPHONE PEDESTAL
- SIB — STANDARD IRON BAR
- IB — IRON BAR
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- EXISTING GAS MARKER
- EXISTING WELL
- BM — BENCHMARK
- BH — BOREHOLE
- 486.21 / 486.21 — PROPOSED ELEVATION / EXISTING ELEVATION
- DROP CURB

SCALE 1:750 (24 x 36)

10 0 10 20 50 METRES
50 0 25 50 100 FEET

Benchmark Information

BM1 — TOP OF SIB LOCATED ON THE WEST SIDE OF CORK STREET AT THE SOUTHEAST CORNER OF PART 12 PLAN 61R-21276.
ELEVATION 410.86m

No.	DATE	DESCRIPTION	BY	APPD
0	SEPT 16/20	DRAFT PLAN APPROVAL SUBMISSION	TLB	TLB

REVISION / ISSUE

Seal not valid unless signed and dated

LICENSED PROFESSIONAL ENGINEER
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www.cobideeng.com

Title:
SUNVALE HOMES
PROPOSED MOUNT FOREST SUBDIVISION
Township of Wellington North
CONCEPTUAL GRADING PLAN

Client: SUNVALE HOMES

Design:	TLB	Scale:	1:750
Drawn:	TLB	Approved:	
Checked:	TLB		
Date:	JAN 2019		Design Engineer

DRAWING No. 00702-GR1

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