

# BRENTWOOD VILLAGE EXPANSION

N E I G H B O U R H O O D P L A N

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It begins with a plan.

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**DRAFT**



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## Development Overview

This Neighbourhood Plan has been prepared in general accordance with the policies contained within Section 6.3 of the Southwest Brandon Secondary Plan, By-law 7080. This plan is for the future expansion of the Brentwood Village Mobile Home Park. The plan area covers 4.67 hectares (11.54 acres) and is bounded by a mainly undeveloped property at 2210 Maryland Avenue which used to house Alternative Landscaping; Christian Heritage School at 2025 26<sup>th</sup> Street to the west and Brentwood Village to the south and east. The plan area is designated Residential under the Brandon & Area Planning District Development Plan 2013 and zoned Development Reserve (DR) under the City of Brandon Zoning Bylaw 7124.



This Neighbourhood Plan proposes to add 41 mobile home lots to the existing Brentwood Village Mobile Home Park. Due to the relatively small size of the plan area, this plan will not implement a mixed use neighbourhood, as its main purpose is for the expansion of the existing mobile home park. The property was first purchased in 1975; with lots in the 100, 200, 300 and 400 blocks developed up until 1992, thus completing Phase 1. Phase 2 was then started with the development of 500, 600, 700 and 800 blocks. Brentwood Village filled its last lot in 2009.

A Municipal Servicing Overview and Traffic Impact Statement prepared by G.D. Newton and Associates, have been submitted to the City of Brandon under separate cover; however, briefings from the servicing plan and the Traffic Impact Statement have been added to this Neighbourhood Plan as supplementary information.

**Area Context**

*Existing Development*

North

The Neighbourhood Plan area is bounded on the north by 2210 Maryland Avenue. This property used to be the home of Alternative Landscaping up until 2014. The site is mainly undeveloped as it was used for material and snow storage for the business. The office is located directly off of Maryland Avenue. Other properties in this area include a 10-acre residential parcel with a single dwelling unit located to the NW of the plan area as well as a 5-acre residential parcel with a single dwelling and barn located to the NE of the plan area.

East & South

The plan area is bounded on the east by existing mobile homes in the Brentwood Trailer Court. These homes are part of the 100 and 200 blocks, which were some of the first homes placed on the property. The plan area is bounded on the south by the existing mobile homes and a greenspace in the Brentwood Trailer Court. These homes are part of the 600 blocks, which were some of the first homes in Phase 2.



West

The plan area is bounded on the west by the Christian Heritage School grounds located at 2025 26<sup>th</sup> Street. The school itself and parking area is located directly adjacent to 26<sup>th</sup> Street along the west side of its property; leaving the eastern half of the property undeveloped and used for outdoor activities on such a large greenspace.

## Site Description

### *Topography*

The plan area for the most part, slopes gently from north to south; except for a low spot in the south east corner of the property that will be used as a green space/stormwater detention area, where water from the east portion of the site will flow and simply soak away into the ground. The remaining lands will follow the slop of the lands and drain north to south along constructed curb and gutter directed to two detention areas located within the existing portion of the Brentwood Trailer Park. This will be further explained in the Municipal Servicing Report.



### *Soils & Ground Water*

The subsurface stratigraphy in the area of Brandon including the plan area can be expected to consist of topsoil and/or fill materials followed by deltaic deposits of sand, gravel and clay underlain predominately by a clay till extending to shale bedrock. The drift thickness varies throughout the area, although generally is of significant thickness (greater than 60m).

Sand and gravel deposits within and above the till generally comprise a significant, although only marginally utilized aquifer. Using the Manitoba Department of Water Resources criteria, if significant contamination were present in the area as a result of past or current activities, the potential for groundwater contamination would be moderate.

Sources: Surficial Geological Map of Manitoba (Map 81-1, Manitoba Department of Natural Resources, 1978), the Manitoba Soils Survey (Report No. 6, 1956), Sand and Gravel Resources of the Brandon Region (The UMA Group, 1977) and Downey Lands, Neighbourhood Plan (WSP/VBJ Developments).

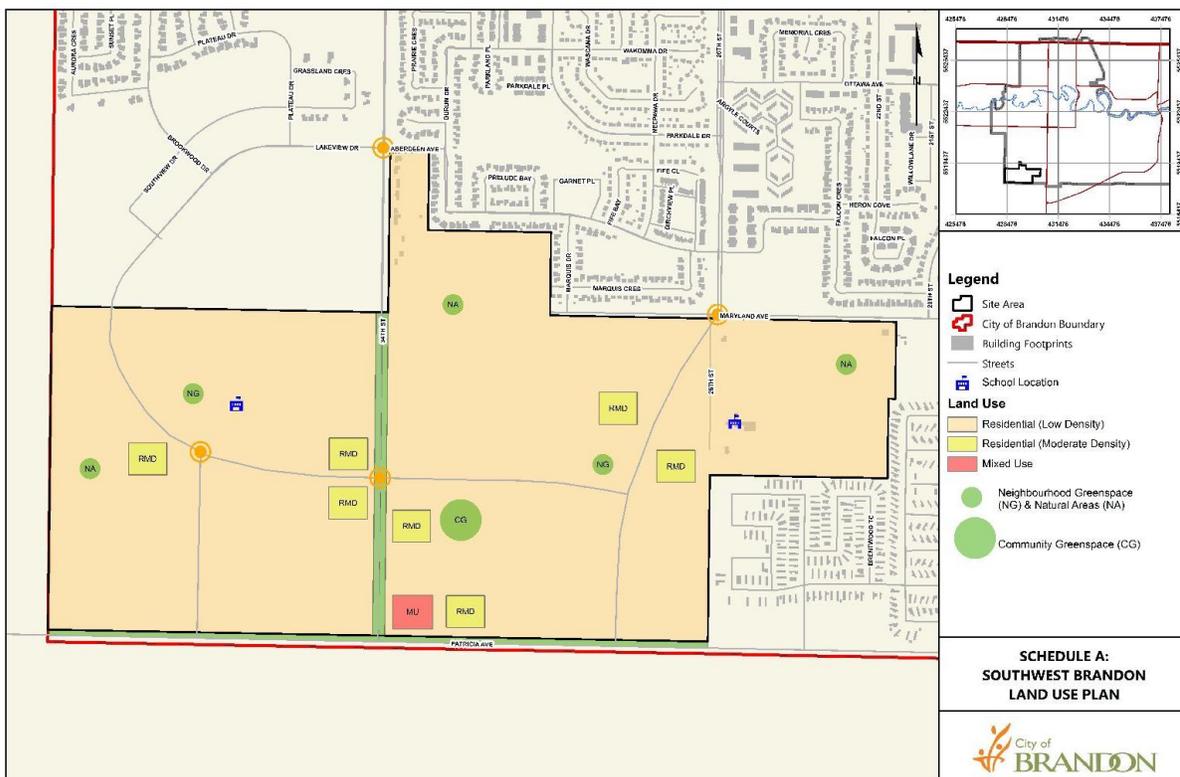
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**Neighbourhood Plan**

This Neighbourhood Plan has been prepared in general accordance with the policies contained within Section 6.3 of the Southwest Brandon Secondary Plan, By-law 7080, along with the policies contained with the Brandon & Area Planning District Development Plan 2013, City of Brandon Zoning Bylaw 7124, and any other relevant City of Brandon bylaws and/or policy documents such as the City of Brandon Fire and Emergency Services Street Development/Access Road Policy.

*Secondary Plan*

The Southwest Brandon Secondary Plan establishes a planning framework for the future subdivision and development of the Secondary Plan area. The Secondary Plan area is located at the City of Brandon's southwest corner, including lands north of Patricia Avenue and south of existing and planned residential developments on both sides of 34<sup>th</sup> Street.



This Neighbourhood Plan being such a small area, will not meet many of the provisions set out in the Secondary Plan, however, it will play its own part in the future development of the entire eastern portion of the Secondary Plan area, by providing affordable housing, future pedestrian connections to currently undeveloped residential lands, and most importantly it provides for the most natural continuation of existing land use in the area; that being mobile homes.

*Land Use*

The plan area covers 4.67 hectares (11.54 acres). The plan area is designated Residential under the Brandon & Area Planning District Development Plan 2013 and zoned Development Reserve (DR) Zone under the City of Brandon Zoning Bylaw 7124. An amendment to the zoning bylaw will be required to rezone the plan area to Residential Mobile/Modular Home (RMH) Zone.

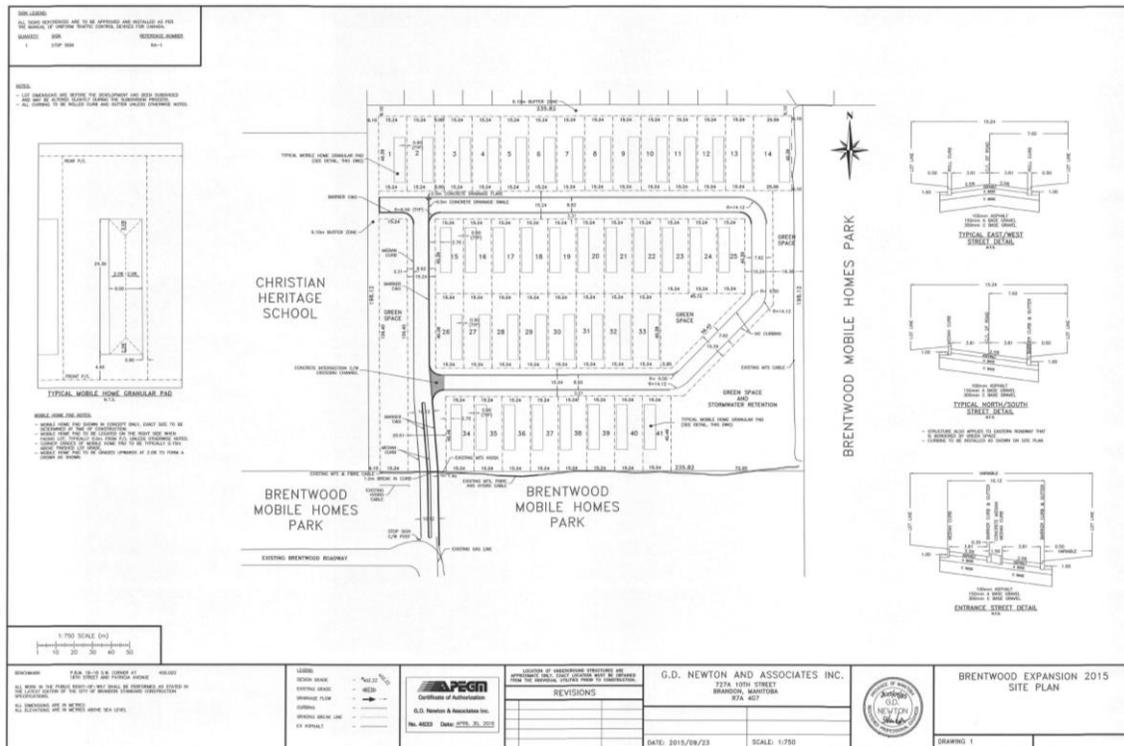


The RMH Zone provides for an area for the placement of mobile or modular homes on spaces within a mobile/modular home park, which are sold or leased to the mobile/modular home park owner, within a plan registered in the Brandon Land Titles Office.

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*Site Design*

The Neighbourhood plan provided for the future development of 41 mobile home lots. The expansion area was designed simply as one bay with a single entrance from the existing private Brentwood street network to the south. The typical lot widths within the plan area are 15.24 metres (50 feet) but could range from 12.1 to 18 metres (40 to 60 feet) depending on the type of home and garage chosen for a particular lot. The standard depth of lots is 40 metres (131 feet). A buffer area of 6.0 metres has been provided along the west and north boundary of the site as per the requirement in the City Zoning By-law 7124; subsection 52(e).



*Traffic Access and Design*

Access to the site is provided by the extension of an existing road within Brentwood Village to the expansion area. The proposed right-of-way provided is 20.51 metres (67.3 feet). A 1.5 metre (4.92 feet) median separated entrance will provide to one-way traffic lanes of 3.81 metres exclusive of rollcurb. This orientation was done to comply with Fire and Emergency Services requirements. The streets within the plan area are 7.62 metres (25 feet) pavement edge to pavement edge, and are located within a 15.2 metre (50 feet) right-of-way. All measurement provided comply with subsection 52(h) in the City of Brandon Zoning Bylaw 7124 and the Brandon Fire and Emergency Services Street Development/Access Road Policy.

*Transit*

Transit stops, in close proximity to the plan area, are located east of Brentwood Village along Currie Boulevard near the intersections of Allan Avenue, David Avenue and Patricia Avenue. Each location provides access to Route 9 – 18<sup>th</sup> Street South transit route.

*Green Space*

The Neighbourhood Plan provides 2.9 acres of total green space. This green space will be used for recreation, drainage, snow storage and for possible future pedestrian connections. A proposed park space area, identified below, will be used to relocate the existing children’s play structure that is currently located east of the proposed entrance into the expansion area. The new proposed park area is located within Phase 4 of the development, so will not be developed until full build out is achieved. The play structure will then be relocated at that time.

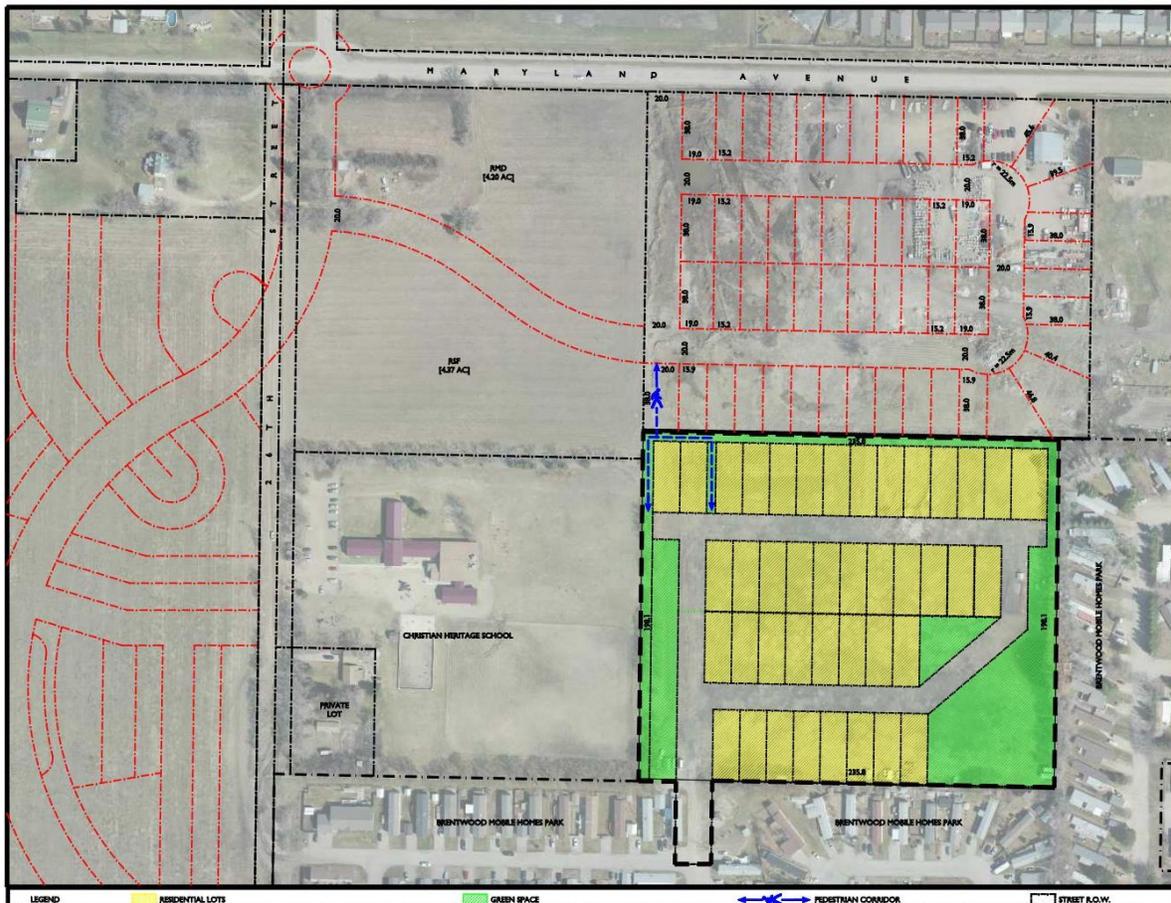


*Trail Network*

There is currently no trail network within Brentwood Village, however, there is a possibility when land to the north of the plan area develops, that a pedestrian connection could be made. With this in mind this plan provides for two possible connections that could be made within the plan area to the land to the north.

*Shadow Plan Area*

A shadow plan was created for the land north of the plan area to identify, in theory, how these lands could be developed in the future. This shadow plan in no way indicates that this is how the land will be developed, but rather only indicate one option to show how a future pedestrian connection could be made between the two properties. The shadow plan shows a very simple single family crescent shaped street along the east side with larger parcels, each roughly 4 acres, along the west side for future residential development of either low or medium density; that would adhere to the density requirements in the Secondary Plan.



*Phasing Plan*

The Neighbourhood Plan area has been separated into 4 phases that will total 41 mobile home lots. The table below outlines the amount of units, estimated population and land area per type that will be developed in each phase. The established phases are a best guess at this point in time and could change based on market conditions; either combining the development of multiple phases or further breakdown of proposed phases into separate stages.



### *Population & Housing*

The population estimates outlined in the table below were derived for the submitted site plan of 41 lots. The calculations indicate that the development has the potential for an additional 94 occupants, based on population estimates of 2.3 persons per unit. (2011 Census)

<b>LAND USE, HOUSING &amp; POPULATION BREAKDOWN BY PHASE</b>						
	<b>PHASE</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>ALL PHASES</b>
<b>LAND USE</b>						
Residential Mobile/Modular Home		4924	4924	8001	7601	25450
Greenspace		2063	0	1992	7690	11745
Street ROW		3611	923	2397	3322	10253
Total Area (m2)		10598	5847	12390	18613	47448
<b>HOUSING &amp; POPULATION ESTIMATES</b>						
Residential Mobile/Modular Home Zone		8	8	13	12	41
Population Estimates at 2.3 persons per unit		18	18	30	28	94

### *Building Layout*

The mobile homes will be located on the property as per the site plan prepared by G.D. Newton and Associates. Homes contained in the same row will all be located on one side of the lot, never having two homes back to back. This will allow all homes within the plan area to comply with the Manitoba Building Code dealing with the maximum area of glazed openings on exterior walls in relations to adjacent buildings.

### *Building Design*

Mobile Home building designs will vary depending on the supplier, manufacturer and also the budget the purchaser. Building designs have definitely been updated over the years and now provide a wide array of options. The renderings below, provide a few options to what mobile homes look like in 2016. They feature a mixture of exterior building materials, defined entranceway, and added architectural features on corners and around windows. Future home owners of the park will also have the option of single or double garages along with attached decks.





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**PUBLIC CONSULTATION SUMMARY:**

A Public Consultation report will be provided as part of this document once it has been done through the rezoning application process.

## MUNICIPAL SERVICING OVERVIEW SUMMARY

The information provided below has been taken from studies provided by G.D. Newton and Associates to the City of Brandon under separate cover.

### **SITE OVERVIEW**

The proposed Brentwood expansion is a 4.67 hectare development to be located north of the existing Brentwood Mobile Home Park and east of the Christian Heritage School site. To service the 41 lots proposed to be constructed within the development, 616m of watermain and 491m of wastewater sewer piping will be installed. In addition, asphalt paved roads complete with curb and gutter, as well as two stormwater retention areas are proposed to be constructed as part of the development.

### **WASTEWATER SEWER SYSTEM**

#### ***Estimated Wastewater Flows***

The wastewater flows that will be generated by the development have been estimated to be 1.30L/s. This figure is the sum total of the wastewater flows generated by the estimated population for the entire development, as well as any extraneous flows. Extraneous flows are from stormwater runoff and ground water entering the wastewater system through manholes. The projected wastewater flow stated above was calculated as follows:

1. Resident-generated wastewater
  - The average daily flow was calculated by using a per capita consumption of 225 L/day and by assuming 3 residents per lot.
  - The peak hourly flow rate was calculated by using a Harmon peaking factor of 4.
2. Extraneous flows
  - Infiltration into the wastewater system was calculated by assuming an infiltration rate of 12L/min/manhole. This figure was obtained from the City of Winnipeg website.

The projected total wastewater flow for the entire Brentwood expansion is shown in Table 1.

Table 1: Projected Water/Wastewater Flows for Brentwood Expansion

	Flow Rates (L/s)
<b>Water/Wastewater Flow – Resident Generated</b>	
Average Daily Flow	0.32
Peak Hourly Flow	<b>1.28</b>
<b>Wastewater Flow - Extraneous</b>	
5 manholes at 12L/min/manhole	0.02
<b>Total Projected Wastewater Flow</b>	<b>1.30</b>

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### ***Proposed Wastewater Sewer System***

The proposed expansion will be serviced by 200mm gravity sewer lines. Wastewater from the proposed expansion will be conveyed to the existing wastewater sewer system within Brentwood Mobile Homes Park. The proposed connection point to the existing Brentwood wastewater sewer system will be at an existing manhole located approximately 40m south of the expansion site.

The existing Brentwood wastewater system has been found to have adequate capacity to handle the peak flows from the proposed expansion. The capacity of the City of Brandon Wastewater collection system has been reviewed by a modeller working on behalf of the City of Brandon. It was found that the City's system has adequate capacity to handle the projected increase in wastewater flow rate.

### **WATER DISTRIBUTION SYSTEM**

#### ***Estimated Water Demand***

The water demand for the development is calculated in the same way as the resident-generated wastewater flow. As shown in Table 1, the total average daily flow estimated for the development is 0.32 L/s. Using a Harmon Parking Factor of 4, the peak hourly demand was estimated to be 1.28 L/s.

#### ***Proposed Water Distribution System***

The water distribution system for the Brentwood expansion will be comprised of 150mm water main. The proposed water main will connect to the existing Brentwood water distribution system at a location approximately 50m south of the expansion site. Fire hydrants are provided as part of the distribution system.

The capacity of the City of Brandon water distribution system has been reviewed by a modeller working on behalf of the City of Brandon. It was found the City's system has adequate capacity to convey the projected increase in water flow rate.

### **STORM WATER MANAGEMENT**

Manitoba Water Stewardship and the City of Brandon have different design criteria for handling storm water runoff. These criteria are listed below.

- Manitoba Water Stewardship - The 1 in 25 year post-development discharge rate must be equal to or less than the 1 in 5 year pre-development discharge rate.
- City of Brandon - The 1 in 100 year post-development discharge rate must be equal to or less than the 1 in 100 year pre-development discharge rate.

The City of Brandon's criteria was found to be the limiting criteria for this location. Therefore, the City of Brandon criteria was used in the design of the stormwater management system.

The proposed expansion will utilize curb and gutter to collect and convey runoff from the site towards two detention areas. The eastern area of the site will drain towards a proposed green space/stormwater detention area in the southeast corner of the development site, where it will simply soak away into the ground.

Runoff from the rest of the site will drain to the proposed entrance to the expansion and enter the existing Brentwood Mobile Home Park. Runoff will flow south along the main north-south street and drain towards the Patricia Avenue north ditch. Runoff will be stored within the ditch and be discharged into a large marsh area located south of Patricia Avenue and west of 18th Street. Discharge will be done via an existing 300mm CMP under Patricia Avenue.

To prevent any increase in the discharge rate through the existing 300mm CMP after development, **additional storage capacity** will be provided to complement the storage capacity in the existing ditch. According to the City of Brandon design criteria as outlined above, **630m<sup>3</sup>** of additional storage will be required. Additional storage will be provided in the form of a detention pond that is to be constructed on Brentwood property, but will be directly attached to the existing ditch.

Increasing the storage capacity of the ditch will ensure that water levels within the ditch do not exceed pre-development levels. Therefore, there will be no increase in head on the CMP and no increase in discharge rates compared to the pre-development condition.

# **Brentwood Expansion 2016**

## **Municipal Servicing Study Supplement - Traffic Flow Report**

### **Background**

This report is written as a supplement to the Municipal Servicing Study for Brentwood Mobile Homes Park that was previously authored by the undersigned. This document only addresses the traffic flow generated by the proposed expansion of Brentwood Mobile Home Park.

### **Analysis**

During the construction stage of the proposed expansion construction traffic will be generated in relation to the development of the infrastructure. However, due to the nature of infrastructure development, the volume of construction traffic will be minimal. The traffic will consist of gravel trucks and vehicles conveying heavy equipment. This style of traffic can be accommodated by the existing infrastructure. However, it is recommended that construction traffic not occur as the ground is thawing in the spring or after extended periods of precipitation. During these periods the potential exists for damaging the existing roadway infrastructure within Brentwood Mobile Homes Park.

The style of housing within this site is entirely pre-constructed modular homes. Minimal traffic volume will be generated that is related to the placement of the homes. The traffic will include delivery vehicles that transport and place the homes. This traffic will require infrastructure that has sufficient space within the asphalt and boulevard areas to allow for the placement of these homes on the granular pads. The existing streets within Brentwood have already accommodated the transportation of the existing homes within Brentwood Mobile Home Park. Therefore, the infrastructure prior to the proposed expansion clearly has sufficient width to allow these vehicles to pass through. All streets and boulevards within the expansion have sufficient room to allow for these vehicles to maneuver.

Upon full build out, the vast majority of the traffic generated by the proposed expansion will be residential vehicles. The traffic consist of trips generated by the residents of the proposed expansion of 41 new residential units. It is expected that the trips generated by the residents on this expansion will be less than 100 vehicle trips in a peak hour period. An increase of this nature is not expected to have a significant impact on the existing City of Brandon roadway infrastructure around Brentwood Mobile Home Park. It is also not expected to have any notable impact on the existing Brentwood Mobile Home Park roadway network.

## Summary & Recommendations

The traffic generated by the proposed expansion of Brentwood Mobile Home Park is not expected to have any notable impact on the existing traffic infrastructure of the City of Brandon or Brentwood Mobile Homes Park, with implementation of the following recommendations.

- It is recommended that heavy construction equipment traffic not occur as the ground is thawing in the spring or after extended periods of precipitation. During these periods the potential exists for damaging the existing roadway infrastructure within Brentwood Mobile Homes Park.

I trust you will find everything in order. Should you have any questions please contact the undersigned.

Yours truly,



Glen Newton, P.Eng.

