

February 20, 2018

RV Sites Canada
300, 1933A 10 Avenue SW
Calgary, AB
T23C 0K3

Attn: Rick Halpern

Re: Transportation Impact Assessment – Paradise Shores RV Resort Development
Stettler County, Alberta
Progress Update – February 2018
PO# 2066052002-2018

JCB Engineering Ltd. (JCB) is pleased to present RV Sites Canada our progress update for February 2018; following is a summary of tasks completed to date.

- The scope of work for the study was discussed between JCB, RV Sites Canada and Stettler County; the scope was agreed to and JCB initiated work on the TIA
- Background data from Alberta Transportation and Stettler County was requested and obtained
- The trip and parking generation for the development was calculated, and a summary letter was prepared for use by RV Sites Canada in an upcoming meeting with Stettler County
- Preliminary findings, and potential recommendations, based on the trip and parking generation were provided to RV Sites Canada

The next steps will be to discuss the results of the upcoming meeting between RV Sites Canada and Stettler County, update the report as necessary, and then complete the analysis of the impact of the development generated traffic on the transportation network. A draft TIA report will then be presented to RV Sites Canada with the findings and recommendations, and once approved a final report will be issued.

If you wish to discuss any items within this letter, please feel free to contact the undersigned at jcbarratt@jcbengineering.ca or at (403) 714-5798.

Sincerely,



Justin Barrett, P. Eng., PTOE
President and Transportation Engineer
JCB Engineering Ltd.

February 20, 2018

 RV Sites Canada
 300, 1933A 10 Avenue SW
 Calgary, AB
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Attn: Rick Halpern

Re: Transportation Impact Assessment – Paradise Shores RV Resort Development
 Stettler County, Alberta
Preliminary Trip and Parking Generation

JCB Engineering Ltd. (JCB) has provided this preliminary information on the trip and parking generation for the proposed development of the Paradise Shores Recreational Vehicle Resort in Stettler County, Alberta. This information was compiled as part of a transportation impact assessment (TIA) for the development, and additional detail on how the trip and parking generation are calculated will be provided in the final TIA report.

1. Trip Generation

Using land use classifications from the Institute of Transportation Engineers (ITE), the trip generation for the proposed development could be calculated in ITETripGen. This is cloud based software utilizing the ITE Trip Generation, 10th Edition data; a summary of the results is provided in the following table.

Table 1-1: ITE Trip Generation Summary

Land Use		Saturday Trips			Reduced Saturday Trips		
Type	Size	Entry	Exit	Total	Entry	Exit	Total
Water Slide Park (Dolphin Pond)	1.75 acres	132	131	263	40	40	80
Water Slide Park (Children)	0.75 acres	57	56	113	18	17	35
Marina	400 berths	522	522	1,044	53	53	106
Convenience Market	1,000 ft ²	542	542	1,084	109	109	218
Amenities – Total Trips		1,253	1,251	2,504	220	219	439
Land Use		Saturday Trips			Reduced Saturday Trips		
Type	Size	Entry	Exit	Total	Entry	Exit	Total
Campground / RV Park	740 lots	1,263	1,263	2,526	1,263	1,263	2,526
Campground / RV Park (Future)	200 lots	342	342	684	342	342	684
RV Lots – Total Trips		1,605	1,605	3,210	1,605	1,605	3,210
Development – Total Trips		2,858	2,856	5,714	1,825	1,824	3,649

The Saturday data was used as these were the peak trip generators for the majority of the land uses, which is not unexpected as they are recreational land uses. No reduction in external trips were assumed as this development is vehicle oriented, and thus unlikely that visitors will use other modes to conduct their trips to and from the site. No pass-by trips were recommended by ITETripGen from the Saturday trip generation data.

The Saturday trip generation results from the previous table does not include a reduction for internal trips, and does not take into account that the majority of RV lot owners are parking their vehicle at the site for long term use, not day use only. The data in the ITE database has no information to take these issues into account for calculating the trip generation for these land uses. The following assumptions were made for internal trip capture based on information from RV Sites Canada; these are the assumptions used to calculate the 'Reduced Saturday Trips' in the previous table.

- The RV lots are long term leases, and owners are encouraged to park their RV's on the lots as a semi-permanent cabin; Paradise Shores is advertised as a long term camping resort. There are also numerous amenities within the development that are provided so that owners and their guests do not need to leave the site on a typical day. However, as will be discussed in the following assumptions, the internal capture for trips generated by the amenities is already accounted for. The trips generated by the 'campground / RV park' land use are expected to be owners arriving and departing for their stay at Paradise Shores, guests coming for a visit, and owners running errands likely to the Town of Stettler. The number of trips calculated using the data from ITETripGen will not be reduced for this land use.
- Only 10% of the marina berths will be used by the general public, the RV lot owners will have priority to acquire the berths for the long term storage of their boats. Since 90% of the users will already be staying at the RV park, it can be assumed that 90% of the trips generated by the marina will be captured internally.
- The use by the general public for both water parks is capped at 30% of the capacity to ensure that RV lot owners will have access to the amenities. Entrance to the water parks will be strictly enforced, so once the general public cap is reached, no additional members of the public will be allowed entrance. And if the total capacity of the water parks is reached, then no additional people will be allowed entrance, even RV lot owners. Based on this information, it can be assumed that at least 70% of the trips generated by the water parks will be captured internally.
- For the camp store, the majority of the visitors will be the RV lot owners and their guests. While the location of the store will be convenient for the residents of Rochon Sands and White Sands, for most purchases residents will still need to travel to the Town of Stettler. Other residents of Stettler County would likely not find it convenient to travel to Paradise Shores to visit the camp store, when they could drive to the Town of Stettler just as conveniently. The combined population of Rochon Sands and White Sands is 206 people based on the population data provided from Alberta Municipal Affairs; this is approximately one-quarter of the population of Paradise Shores based on the number of RV lots. Even if every resident of Rochon Sands and White Sands, and every RV lot owner visited the camp store every day, approximately 20% of the

trips would be from Rochon Sands and White Sands. That would result in assuming 80% of the trips generated by the camp store to be internally captured.

2. Parking Requirements

The Stettler County Land Use Bylaw 1443-10, Sections 71 and 75 contain the parking requirements relevant for the various land uses proposed in the subject development.

Retail Store – 3.4 stalls / 100 m² (1,076 ft²) of gross floor area, plus 1 stall per staff with a minimum of 2 staff stalls (71.5 (c)); All retail, commercial and industrial uses are required to provide loading space (71.6)

All Other Uses – The number of parking spaces required shall be determined by the Development Authority, having regard for similar uses listed in 71.5 and the estimated traffic generation and attraction of the proposed use (71.5 (j))

Recreational Vehicle Park / Campground – A maximum of one Recreational Vehicle shall be allowed per lot (75 (r)); each lot shall accommodate at least one vehicle parking space other than a Recreational Vehicle (75 (s)); visitor parking shall be provided in a common area to the satisfaction of the Development Authority (75 (t))

Based on the information in the Land Use Bylaw the following table summarizes the parking requirements for this development.

Table 2-1: Land Use Bylaw Parking Requirements

Land Use	Size	Parking Stalls	
Retail Store	100 m ²	4	Visitors
		2	Staff
		1	Loading
RV Park / Campground	740 Lots	740	RVs
		740	Other Vehicles
RV Park / Campground (Future)	200 Lots	200	RVs
		200	Other Vehicles

The required parking for the RV Park / Campground will be achieved based on the layout of the RV lots that can accommodate a RV and 2 other vehicles. There is sufficient space adjacent to the camp store to provide the necessary parking as per the land use bylaw.

All of the other land uses proposed as part of the subject development do not have parking requirements specified in the Stettler County Land Use Bylaw; as well, the number of visitor stalls needed for visitors to the 'RV Park' are not specified. To determine the required parking for these other uses, the ITE Parking Generation Manual, 4th Edition was reviewed. There was limited parking information for the subject land uses, but the average parking demand could be calculated for a typical weekday, Saturday and Sunday; that information is summarized in the following table.

Table 2-2: ITE Average Peak Parking Demand

Land Use	Size	Average Peak Parking Demand		
		Weekday	Saturday	Sunday
Water Slide Park (Dolphin Pond)	1.75 acres	87	128	21
Water Slide Park (Children)	0.75 acres	38	55	9
Marina	400 berths	108	140	236
Total Average Peak Parking Demand		233	323	266

As with the trip generation calculations using the ITE data, the parking generation data does not take into account the internal trips and the limits that the general public has in the use of these amenities. The same reductions assumed previously for the trip generation will also be used for the parking generation. If the number of vehicle trips are reduced then the amount of parking for those vehicles can be similarly reduced. To summarize, the trip generation for the 'marina' was reduced by 90% and for both 'water slide parks' the reduction was 70%.

Table 2-3: Reduced Average Peak Parking Demand

Land Use	Size	Average Peak Parking Demand		
		Weekday	Saturday	Sunday
Water Slide Park (Dolphin Pond)	1.75 acres	27	39	7
Water Slide Park (Children)	0.75 acres	12	17	3
Marina	400 berths	11	14	24
Total Average Peak Parking Demand		50	70	34

There will be approximately 200 parking stalls provided along the south side of the subject site, which will be sufficient to provide parking to meet the average peak demand for any day of the week, even Saturdays. There would be between 130 to 170 parking stalls remaining for other guests to Paradise Shores, and considering there is an extra vehicle parking stall at every RV lot which could be used by guests, there will be sufficient overflow parking should it be required. With this surplus parking provided within the development, it is very unlikely that there will ever be vehicles parked along County roadways as a result of the development.

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If you wish to discuss any items within this letter, please feel free to contact the undersigned at jcbarett@jcbengineering.ca or at (403) 714-5798.

Sincerely,



Justin Barrett, P. Eng., PTOE
President and Transportation Engineer
JCB Engineering Ltd.

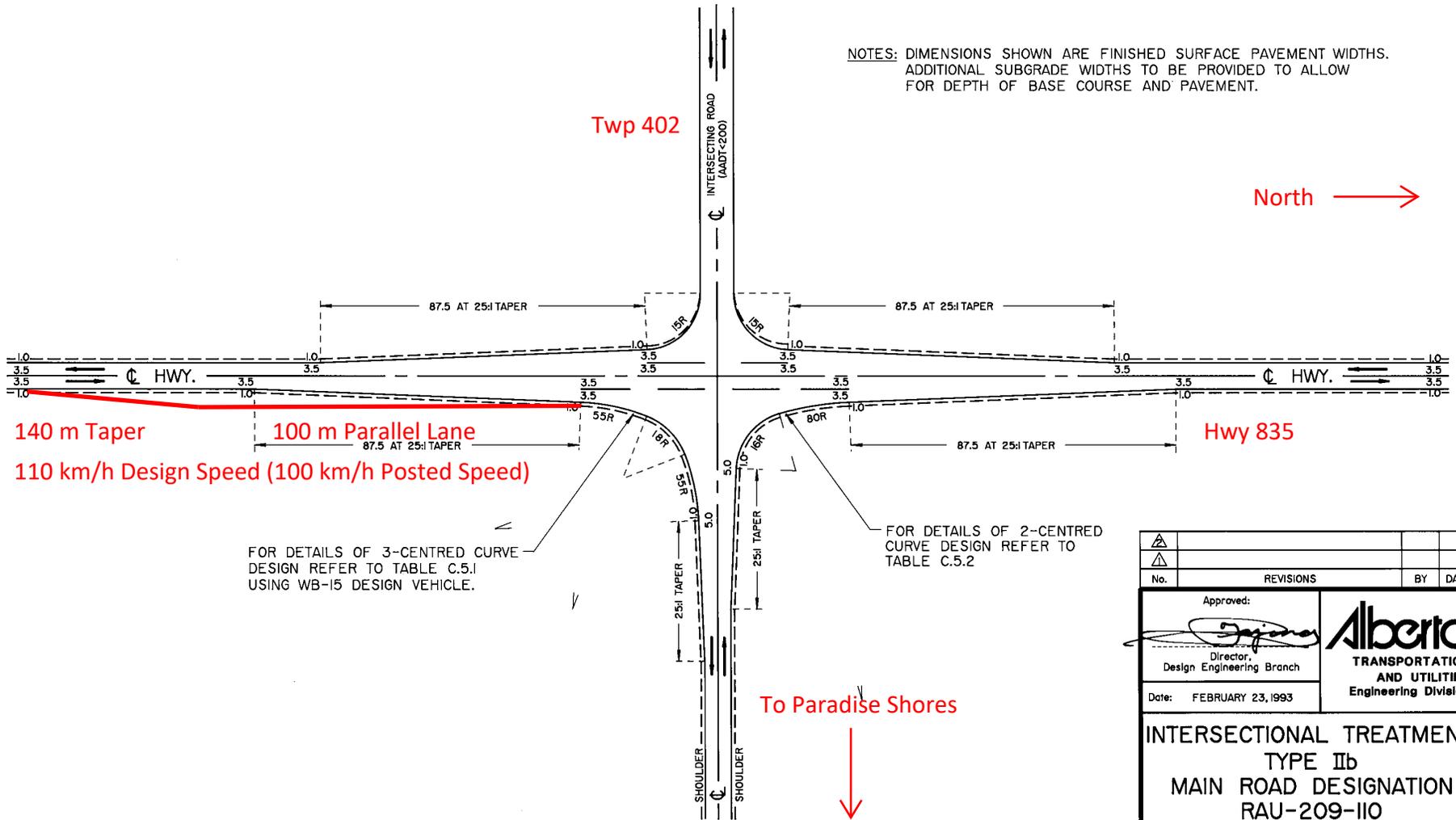
INTERSECTIONAL TREATMENT (TYPE IIb)

(TWO-LANE HIGHWAY)

NOTES: DIMENSIONS SHOWN ARE FINISHED SURFACE PAVEMENT WIDTHS.
ADDITIONAL SUBGRADE WIDTHS TO BE PROVIDED TO ALLOW
FOR DEPTH OF BASE COURSE AND PAVEMENT.

Twp 402

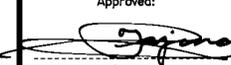
North →



FOR DETAILS OF 3-CENTRED CURVE
DESIGN REFER TO TABLE C.5.1
USING WB-15 DESIGN VEHICLE.

FOR DETAILS OF 2-CENTRED
CURVE DESIGN REFER TO
TABLE C.5.2

REVISIONS		BY	DATE
No.			

Approved: 
Director,
Design Engineering Branch

Date: FEBRUARY 23, 1993

Alberta
TRANSPORTATION
AND UTILITIES
Engineering Division

**INTERSECTIONAL TREATMENT
TYPE IIb
MAIN ROAD DESIGNATION
RAU-209-110**

Prepared By: Cgk	Checked By: 	Scale: N.T.S.	Dwg No.: CB6-2.3C25D
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