

E. PHYSICAL INFRASTRUCTURE AND RESOURCES

1. Transport: Road Networks

Because of its intensive use of infrastructures, the transport sector is an important component of the economy and a common tool used for development. This is even more so in a global economy where economic opportunities have been increasingly related to the mobility of people, goods and information.

A relation between the quantity and quality of transport infrastructure and the level of economic development is apparent. High density transport infrastructure and highly connected networks are commonly associated with high levels of development. When transport systems are efficient, they provide economic and social opportunities and benefits that result in positive multipliers effects such as better accessibility to markets, employment and additional investments. When transport systems are deficient in terms of capacity or reliability, they can have an economic cost such as reduced or missed opportunities and lower quality of life.

1.a Roads

The municipality has a total road network of 52.82 kilometers which are classified into four categories: national, provincial, municipal and barangay roads.

There is no existing national road. The provincial road is approximately 11.58 kms.; municipal road is 22.66 kms., and barangay roads is 18.60 kms.

Table 78
Inventory of Roads, 2019
Municipality of San Vicente

ROAD CLASSIFICATION	LENGTH (KM)	ROAD SURFACE											
		PAVED				UNPAVED							
		Concrete		Asphalted		Gravel		Earth		Box Culvert		Bgy. Site	
		Length	%	Length	%	Lenth	%	Lenth	%	Lenth	%	Lenth	%
Provincial	11.856	6.606	13.43	4.752	9.66	0.498	1.01	-	-	-	-	-	-
Municipal	28.077	15.377	31.25	4.329	8.80	5.126	10.42	2.873	5.84	0.007	0.01	0.365	0.74
Barangay	9.271	7.242	14.72	0.234	0.48	0.562	1.14	1.233	2.51	-	-	-	-
TOTAL	49.204	29.225	59.40	9.315	18.93	6.186	12.57	4.106	8.34	0.007	0.01	0.365	0.74

Source: MPDC

The stretch of these roads is predominantly concrete and asphalted with gravel that comprises to a total of 29.225 or 59.40% and 9.315 or 18.93% kilometers respectively. Table 78 illustrates the inventory of roads as to the type of pavement and it is then broken down as follows: 59% concrete paved, 18% asphalt, 12% graveled, 8% earth, and 0.74% barangay site representing the total road length of the municipality. The dominant type of road surface are gravel and asphalt which cause the inconvenience to the modality of transportation service of the people in the municipality.

Based on the current road condition, the total road length which needs to be improved or upgraded to concrete roads is about 5.25 kms. provincial road, 12.7 kms. municipal roads and 2.03 kms. of barangay roads.

Table 79
Road Inventory Per Road Classification, 2019
Municipality of San Vicente

ROAD CLASSIFICATION / MUNICIPALITY	ROAD SURFACE (km)				TOTAL
	Concrete	Asphalt	Gravel	Earth	
PROVINCIAL ROAD	6.606	4.752	0.498	-	11.856
San Vicente - Dogongan Road	2.905	-	-	-	2.905
Poblacion - San Jose Road	1.850	1.800	-	-	3.650
Poblacion - Fabrica Road	1.851	2.952	0.498	-	5.301
MUNICIPAL ROAD	15.377	4.329	-	-	19.706
Asdum - Fabrica Road	1.200	-	-	-	1.200
Fabrica - San Antonio Road	0.069	0.200	-	-	0.269
Poblacion - Asdum Road	2.585	-	-	-	2.585
Poblacion-Cabanbanan-Sta. Cruz, Talisay Road	3.280	-	-	-	3.280
Poblacion-Calabagas-Iberica, Labo Road	1.173	0.410	-	-	1.583
Poblacion-Calabagas-Sto. Domingo, Vinzons Road	0.985	0.532	-	-	1.517
Poblacion-Iraya Sur Road	3.180	2.237	-	-	5.417
Poblacion-Man-Ogob Road	2.905	0.950	-	-	3.855
BARANGAY ROAD	7.242	0.234	0.562	1.174	9.212
Asdum	0.537	-	-	-	0.537
Cabanbanan	1.125	-	-	-	1.125
Kanluran	1.157	-	-	-	1.157
Man-Ogob	2.779	0.234	0.562	0.550	4.125
Settlement Site	0.859	-	-	0.624	1.483
Silangan	0.785	-	-	-	0.785
TOTAL	29.225	9.315	1.060	1.174	40.774

Source: MPDO/MEO-San Vicente

Table 78 shows the road inventory per road classification specifying the road section of municipal roads and total road length per barangay.

Road opening and road widening are among the challenges that the Local Government Unit of San Vicente needs to propose as the roads become dense and crowded in the passing of time.

1.b Road Requirements

Based on the planning standard using the road density of one (1) kilometer - road for every 100 hectares, San Vicente should have, at least, a total of 57.49 kilometers of road length. By computation: total land area of San Vicente is 5,749 hectares, thus dividing the area with 100 the standard length should be 57.49. However in comparison, the actual total road length of the municipality at present is 52.84

kilometers which means that the municipality only has a backlog of a little more than 4 kilometers.

Another basis for determining the adequacy of the road network however, is the use of Population-Road Length Relationship (road density of 3.9 kilometers (for rural) per 1,000 population). If this standard will be used, the total length requirement of the municipality is only around 40.54 kilometers, which means that the existing road length is sufficient to address the mobility of the people.

1.c Bridges

There are 13 existing bridges in the municipality; 2 are found in the town proper, 4 in Manogob which is an urban barangay and other 7 are located in the rural barangays. Land transportation is the only means of transportation. As reflected in Table 80, the total length of bridges is 252. Of this, majority are concrete and only 12 meters are made of wood.

Table 80
Bridges Name, Location and Type of Construction
Municipality of San Vicente

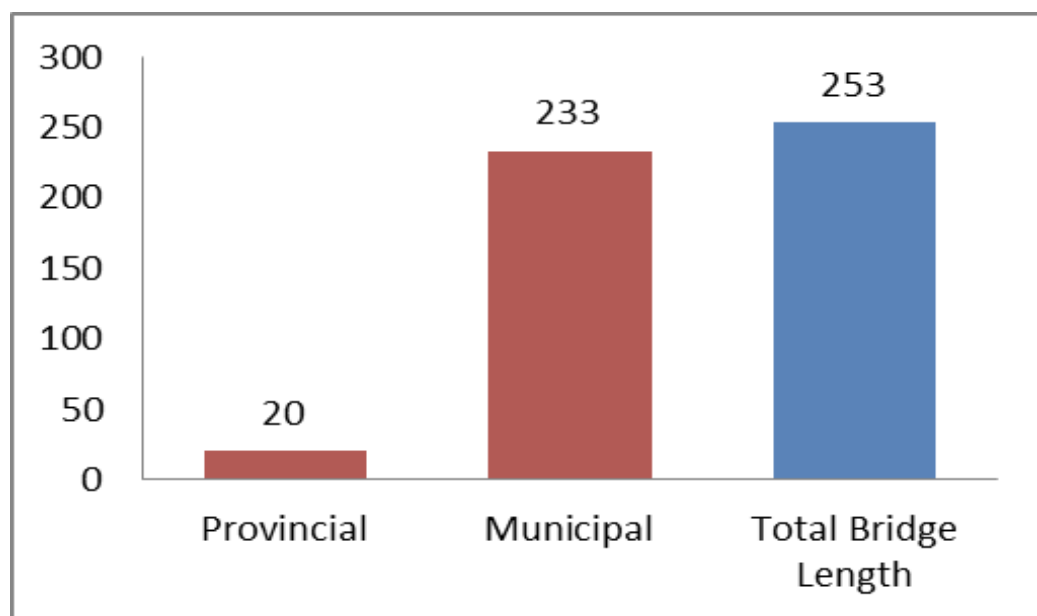
Bridge Name	Barangay	TYPE OF CONSTRUCTION MATERIALS						Remarks
		Concrete			Wood			
		L	W	IC	L	W	IC	
PROVINCIAL								Needs to Validate present condition
Palali Bridge	Man-Ogob	5	8	10 t				
Mambunga-bunga	Man-Ogob	5	8	10 t				
Nabua Bridge I	Man-Ogob	5	8	10 t				
Nabua Bridge II	Man-Ogob	5	8	10 t				
MUNICIPAL								
J. Rizal Bridge	Kanluran	3	4	5t				
Gomburza Bridge	Kanluran	3	4	5t				
Fabrica Bridge	Fabrica	5	4	5t				
Fabrica-San Antonio	Fabrica	10	4	5t				
Iraya Sur Spillway	Iraya Sur	40	4	5t				
Iraya Sur Hanging Bridge	Iraya Sur				6	1.2m	2t	
San Jose Hanging Bridge	Iraya Sur				6	1.2m	2t	
Asdum Spillway	Asdum	40	5	5t				
Cabanbanan Spillway	Cabanbanan	40	4	5t				
Cabanbanan-Calabagas Spillway	Cabanbanan	40	4	5t				
Calabagas Spillway	Calabagas	40	4	5t				
TOTAL		241	69		12			

Source: MEO, San Vicente, Cam. Norte: 2019

In Figure 39, it is shown that the municipality constructed the most number of bridges in terms of length with the total of 233 linear meters or 92% of the cumulative length of all the bridges in San Vicente irrespective of type of construction, width and load capacity. The remaining bridges (with a total length of 20 linear meters) were constructed by the provincial government.

In the Barangay Profile Survey, some barangays stated the rehabilitation or construction of bridge was their priority as it will facilitate transport of people and goods in their communities and to other areas. Some hanging bridges and spillways needs rehabilitation or re-construction, the extent and location of which are needed to be given second look and adequate evaluation.

Figure 39
Bridge Length by Classification, 2018
Municipality of San Vicente



1.d Transportation Terminals

There is no existing land transportation terminal in the municipality. Jeepneys going to Daet and aircon buses such as Philtranco, Superlines, and

DLTB going to Metro Manila usually occupy a portion of San Jose Road near the public market as their waiting and pick-up area for passengers.

However, the Local Government Unit is already proposing for the construction of terminal to be located in Barangay Man-Ogob.

1.e Public Land Transport

As of 2019, the total number of public land transport vehicles in the municipality is 137 plying the route of Daet to San Vicente and vice-versa and within its different barangays. These consists of light vehicles such as jeepneys, tricycles and pedicabs.

Table 81
Inventory of Land Transport Vehicles, 2019
Municipality of San Vicente

TYPE OF VEHICLES	PUBLIC
Ligh Vehicles/JEEPNEYS	24
Truck	-
Motorcycle	-
Bus	-
Tricycle	43
Heavy Trucks	-
Tricycle Hauler	-
Pedicab	70
TOTAL	137
Source: Barangay Profile Survey	

One can easily reach this town after an approximate 20 – 30 minutes on average travel-speed from Daet, Talisay, Vinzons and Labo by jeepney, tricycle, motorcycle or other modes of land transport.

2. Other Infrastructure and Utilities

2.a Power

Of the total 2,400 households in the municipality, there are 2,231 households energized through the Camarines Norte Electric Cooperative (CANORECO). There are still 169 households or 7.04% unenergized. Most of these are found in seven (7) barangays which makes only Barangay Silangan and Kanluran with all households energized. (Table 82)

Table 82
Status of Electrification by Barangay
Municipality of San Vicente: as of July 2020

Barangay	Total No. Households	Number of Energized Households	Number of Unenergized Households	Percentage of Unenergized Households
Asdum	122	117	5	4.10
Cabanbanan	262	226	36	13.74
Calabagas	247	228	19	7.69
Fabrica	248	215	33	13.31
Iraya Sur	78	42	36	46.15
Man-Ogob	609	595	14	2.30
Silangan	154	154	-	-
Kanluran	218	218	-	-
San Jose	462	436	26	5.63
TOTAL	2,400	2,231	169	7.04

Source: CANORECO

2.b Water

Water supply system are those sources of households drinking water are own use and shared faucet / community water system, own use and shared tubed / piped deep well, dug well and protected spring. For CY 2015, there are 93.64% or 2,003 households in all barangays which are with access to safe water. All households in Barangay Kanluran have 100% access to safe water, followed by Barangays Fabrica 99.05%, Silangan 98.71%, Man-Ogob 96.29%, Calabagas 96.08%, San Jose 95.09%, Asdum 87.72% and Barangay Iraya being the least with 38.64%. (Table 83)

Table 83

**Number of Household with Access to safe water by
Barangay: CY 2014-2015
Municipality of San Vicente**

BARANGAY	TOTAL NO. OF HOUSEHOLDS	HOUSEHOLDS WITH ACCESS TO SAFE WATER	
		Number	Percentage
Asdum	114	100	87.72
Cabanbanan	216	201	93.06
Calabagas	204	196	96.08
Fabrica	211	209	99.05
Iraya Sur	88	34	38.64
Man-Ogob	593	571	96.29
Silangan	155	153	98.71
Kanluran	171	171	100.00
San Jose	387	368	95.09
TOTAL	2,139	2,003	93.64

Source: CBMS Census 2014 - 2015

In consideration of Level I water facility, only 514 households or 21.4% are served, and for Level II water facility, 449 households or 18.38%. Thus, total of 2,440 households for residential are served by Level III water facility through the Camarines Norte Water District or Prime Water which also caters to 18 commercial establishments and 11 government institutions. (Tables 84, 85 and 86).

Table 84

**Household Population served by Level I Water Supply
System: CY 2019
Municipality of San Vicente**

Barangay	Total No. Households	Deep Well Household Population Served	
		No.	%
Asdum	128	94	73.44
Cabanbanan	235	20	8.51
Calabagas	300	100	33.33
Fabrica	279	40	14.34
Iraya Sur	82	11	13.41
Man-Ogob	582	145	24.91
Silangan	222	2	0.90
Kanluran	223	-	0.00
San Jose	392	102	26.02
TOTAL	2,443	514	21.04

Source: MEO/RSI

Table 85
Household Population served by Level II Water
Supply System: CY 2019
Municipality of San Vicente

Barangay	Total No. Households	Household Population Served	
		No.	%
Asdum	128	-	-
Cabanbanan	235	-	-
Calabagas	300	-	-
Fabrica	279	221	79.21
Iraya Sur	82	63	76.83
Man-Ogob	582	-	-
Silangan	222	-	-
Kanluran	223	-	-
San Jose	392	165	42.09
TOTAL	2,443	449	18.38

Source: MEO/RSI

Table 86
Household Population served by Level III Water
Supply System by Type of Consumers: CY 2019
Municipality of San Vicente

Barangay	Total No. Households	Type of Consumer		
		Residential	Commercial	Government
Asdum	128	128	-	-
Cabanbanan	235	235	-	1
Calabagas	300	300	-	2
Fabrica	279	279	-	-
Iraya Sur	82	82	-	-
Man-Ogob	582	582	5	4
Silangan	222	222	11	3
Kanluran	223	223	2	1
San Jose	392	392	-	-
TOTAL	2,443	2,443	18	11

Source: MEO/RSI

2.c Sanitation Facilities

On sanitation facilities based from CBMS data, the municipality has various types of toilet facility such as water sealed (sewer septic tank and other depository) and closed pit and open pit. There is a

total of 2,139 households with access to sanitary toilets and for those without access these was recorded a magnitude of 28 and 1.31 proportion for households without access to sanitary toilet facility (Table 87).

Table 87
Number of Household with Access to Sanitation Facility by Barangay
Municipality of San Vicente: CY 2014-2015

BARANGAY	Total No. of Households	TYPE OF TOILET FACILITY							
		Water-sealed, sewer septic tank, sariling gamit	Water-sealed, sewer septic tank, kasalo ang ibang sambahayan	Water-sealed, other depository, sariling gamit	Water-sealed, other depository, kasalo ang ibang sambahayan	Closed pit	Open pit	Others (pail system, and others)	Others (pail system, and others)
Asdum	114	108	6	-	-	-	-	-	-
Cabanbanan	216	195	20	1	-	-	-	-	-
Calabagas	204	199	4	1	-	-	-	-	-
Fabrica	211	181	26	3	-	-	-	-	1
Iraya Sur	88	22	7	23	4	10	14	2	6
Man-Ogob	593	554	17	20	-	-	1	-	1
Silangan	155	121	9	17	7	-	1	-	-
Kanluran	171	169	1	-	-	-	-	-	1
San Jose	387	291	33	41	16	3	-	-	3
TOTAL	2,139	1,840	123	106	27	13	16	2	12

Source: CBMS Census 2014 - 2015

2.d Communication Facilities

The government's Postal Service and other private sector provide the communication facilities in the municipality. Mobile phone service providers Globe and Smart have 2 cell sites in the locality, while PLDT provides landline services. There are also cable and internet providers located in the poblacion.

The municipality has no Early Warning System (EWS).

2.e Solid Waste Management Facilities

San Vicente has a controlled dump site with 7,500 square meters area with 1.2 kilometers distance from the town's center and is owned by the LGU.

However, this has been closed since September 2018. Residual containment area is being used as alternative waste disposal.

For solid waste management services, the municipality owns a dump truck, payloader and backhoe. As shown in Table 88, San Vicente generates a total of 3,675.41 kgs. of waste per day; 52% (1,911.21 kgs.) of which are biodegradable; 25% (918.85 kgs.) are residual; 21% (771.84 kgs.) are recyclable; and the remaining 2% (73.57% kgs.) are special waste.

Table 88
Solid Waste Generation, Year 2018
Waste Generation per Day
Municipality of San Vicente

Classification	Sources of Solid Waste (kg/day)					
	Residential	Public Market	Commercial	Institutional	Total	Percentage
Biodegradable	1,710.65	0.624	189.202	10.733	1,911.21	52.00
Recyclable	690.84	0.252	76.410	4.330	771.83	21.00
Residual	822.43	0.300	90.960	5.160	918.85	25.00
Special Waste	65.79	0.024	7.277	0.413	73.50	2.00
TOTAL	3,289.71	1.200	363.849	20.636	3,675.40	100.00

Source: LGU San Vicente