

DETAILED PROJECT REPORT

FOR THE CONSTRUCTION OF APPROACH ROAD TO

YUKSOM BREWERIES LTD.

AT MELLI, SOUTH SIKKIM

NAME OF WORK : CARPETING OF APPROACH ROAD TO YUKSOM BREWERIES

SL.NO.	PARTICULARS	AMOUNT
Part A :	PAVEMENT WORKS	Rs. 4,93,561.00
Part B :	DRAINAGE WORKS	Rs. 1,72,751.00
Part C :	PROTECTIVE WORKS	<u>Rs. 8,41,527.00</u>
		Rs. 15,07,893.00

Say Rs. 15,07,800.00

(Rupees fifteen lakhs and seven thousand and eight hundred)only.


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ASSISTANT ENGINEER
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Buildings & Housing Department
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Government of Sikkim

NAME OF WORK:- CARPETING OF APPROACH ROAD TO YOKSOM BREWERIES

PART - A = Pavement works

- 1) Stone Soling for road works Providing & laying hand packed stone soling of specified thickness with clean hard selected stones including hammer dressing of stone for laying as per required level and camber including packing with broken stones obtained from hammer dressing to fill the voids to give uniform surface as directed by the Engineer-in-Charge all complete but excluding carriage and consolidation using:

Manual means

3	x	30.00	x	3.75	X	0.15	=	50.625	M3
1	x	30.00	x	23	X	0.15	=	103.5	M3
								=	154.125 M3

@ Rs. 560.28 /M3

Rs. 86,353.00

- 2) Water Bound Macadam (Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with vibratory roller 8-10 tonnes in stages to proper grade and camber, applying and brooming requisite type of screening/ binding Materials to fill up the interstices of coarse aggregate, watering and compacting to the required density.)

A. By manual means

(i) Grading-I, using screening crushable type such as Moorum or gravel

3	x	30.00	x	3.75	X	0.10	=	33.75	M3
1	x	30.00	x	23.00	X	0.10	=	69.00	M3
								=	102.75 M3

@ Rs. 1,293.12 /m³

Rs. 1,32,868.00

- 3) Stone Edging Providing & laying 15 cm (6") wide and 23 cm (9") deep hammer dressed stone edging with clean hard selected stones including packing of sides to proper line, level and as per directions of the Engineer-in-Charge, complete.

3	x	30.00	=	90.00	rm
1	x	23.00	=	23.00	rm
				=	113.00 rm
Both Sides				=	226.00 rm

@ Rs. 43.27 /rm

Rs. 9,779.00

- 4) Prime coat (Providing and applying primer coat with bitumin emulsion on prepared surface of granular base including clearing of road surface and spraying primer at the rate shown in 500-I, using mechanical means)

ii) Medium porosity

3	x	30.00	x	3.75	=	337.50	sqm
1	x	23.00	x	3.75	=	86.25	sqm
						=	423.75 sqm

@ Rs. 69.52 /sqm

Rs. 23,463.00

- 5) Tack coat (Providing and applying tack coat with bitumin emulsion using emulsion pressure distributor at required rate on the prepared bituminous granular surface cleaned with mechanical broom)

ii) **Granular surface treated**

3	x	30.00	x	3.75	=	337.50 sqm	
1	x	23.00	x	3.75	=	86.25 sqm	
					=	<u>423.75 sqm</u>	
	@			Rs. 23.07 /sqm			Rs. 9,776.00

- 6) Open - Graded Premix Surfacing (Providing, laying and rolling of open - graded premix surfacing of 20 mm thickness composed of 13.2 mm to 5.6 mm aggregates either using penetration grade bitumen or cut-back or emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a smooth wheeled roller 8-10 tonne capacity, finished to required level and grades.)

3	x	30.00	x	3.75	=	337.50 sqm	
1	x	23.00	x	3.75	=	86.25 sqm	
					=	<u>423.75 sqm</u>	
	@			Rs. 152.53 /sqm			Rs. 64,635.00

- 7) Seal Coat (Providing and laying seal coat sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall using Type A and B seal coats)

3	x	30.00	x	3.75	=	337.50 sqm	
1	x	23.00	x	3.75	=	86.25 sqm	
					=	<u>423.75 sqm</u>	
	@			Rs. 76.96 /sqm			Rs. 32,612.00

- 8) Loading and unloading of Bitumen by manual means.

BITUMEN

Vide item no.	4)	423.75	x	1.100	=	466.13 Kgs	
Vide item no.	5)	423.75	x	0.350	=	148.31 Kgs	
Vide item no.	6)	423.75	x	1.460	=	618.68 Kgs	
Vide item no.	7)	423.75	x	0.980	=	415.28 Kgs	
					=	<u>1648.39 Kgs</u>	
		1.65 Ton	@		Rs	62.75 /Ton	Rs. 103.00

- 9) Cost of haulage excluding loading and unloading

Vide item no.		1.65 Ton					
For	1km	5.57 ton/km					
For	30 km	167.10 ton/km					
			@		Rs	167.10 /Ton	Rs. 275.00

- 10) Loading and unloading of stone boulder/stone aggregates/sand/kanker/moorum. (Placing tipper at loading point, loading with front end loader, dumping, turning for return trip, excluding time for haulage and return trip)

Stone:

Vide item no.	1)	154.13	x	0.950	=	146.42 cum
Vide item no.	2)	102.75	x	1.210	=	124.33 cum
Vide item no.	3)	226.00	x	0.038	=	8.59 cum
Vide item no.	6)	423.75	x	0.027	=	11.44 cum
					=	<u>290.78 cum</u>

@ Rs 87.00 /cum Rs. 25,297.00

- 11) Cost of haulage excluding loading and unloading

Vide item no.

290.78 x	2200 Kg/m3	=	639706.1 Kgs
		=	639.71 Ton

For 1km 5.57 ton/km

For 30 km 167.10 ton/km

@ Rs 167.10 /Ton 1,06,895.00

- 12) Loading and unloading of stone boulder/stone aggregates/sand/kanker/moorum. (Placing tipper at loading point, loading with front end loader, dumping, turning for return trip, excluding time for haulage and return trip)

Sand

Vide item no.	7)	423.75	x	0.009	=	3.81 cum
					=	<u>3.81 cum</u>

@ Rs 87.00 /cum Rs. 332.00

- 13) Cost of haulage excluding loading and unloading

Vide item no.

3.81 x	1840 Kg/m3	=	7017.3 Kgs
		=	7.02 Ton

For 1km 5.57 ton/km

For 30 km 167.10 ton/km

@ Rs 167.10 /Ton 1,173.00

Rs. 4,93,561.00

(Rupees four lakhs ninety three thousand five hundred and sixty one) only

PART - B:- DRAINAGE WORKS

- 1 Providing box drain of 30 cm (ht) x 45 cm (width) internal dimension with 1:2:4 Plum concrete (20mm & down) in side walls thickness of 23 cm (hill side) and 30 cm (road side) and 1:3:6 (20 mm & down) base concrete of thickness of 15 cm with standard specification over 15 cm stone soling including providing & laying guard stones complete, as per the direction of the Engineer in Charge.

$$\begin{array}{rcl} 3 \times 30.00 & = & 90.00 \text{ m} \\ 1 \times 23.00 & = & 23.00 \text{ m} \\ & = & \underline{\underline{113.00 \text{ m}}} \end{array}$$

@ Rs. 1,259.90 /m

Rs. 1,42,369.00

- 2 Loading and unloading of cement

$$\begin{array}{rcl} \text{Vi no 1)} & 113.00 & \times \quad 1.156 = 130.63 \text{ bags} \\ & & = 130.63 \text{ bags} \\ & 65.314 \text{ qtls} & = 6.53 \text{ ton} \end{array}$$

@ Rs 153.58 /ton

Rs. 1,003.00

Cost of haulage excluding loading and unloading

$$\text{Vi no 2)} \quad 6.53 \text{ ton}$$

For 30 kms @ Rs 167.1 /ton

Rs. 1,091.00

- 3 Loading and unloading of sand

$$\begin{array}{rcl} \text{Vi no 1)} & 113.00 & \times \quad 0.104 = 11.75 \text{ cum} \\ & & = 11.75 \text{ cum} \end{array}$$

@ Rs 87 /m³

Rs. 1,022.00

Cost of haulage excluding loading and unloading

$$\begin{array}{rcl} \text{Vi no 3)} & 11.75 & \text{cum} \\ & 28.20 & \text{ton} \end{array}$$

For 30 kms @ Rs 167.1 /ton

Rs. 4,713.00

- 4 Loading and unloading of stone

$$\begin{array}{rcl} \text{Vi no 1)} & 113.00 & \times \quad 0.439 = 49.61 \text{ cum} \\ & & = 49.61 \text{ cum} \end{array}$$

@ Rs 87 /m³

Rs. 4,316.00

Cost of haulage excluding loading and unloading

$$\begin{array}{rcl} \text{Vi no 4)} & 49.61 & \text{cum} \\ & 109.14 & \text{ton} \end{array}$$

For 30 kms @ Rs 167.1 /ton

Rs. 18,237.00

Rs. 1,72,751.00

(RUPEES ONE LAKH SEVENTY TWO THOUSAND SEVEN HUNDRED AND FIFTY ONE) ONLY

PART – C :- PROTECTIVE WORKS :

1. Excavation in foundation trenches and in drawings including dressing of sides and bottoms and disposal of spoils up to 30m lead and lift 1.5 m, disposed earth to be leveled and neatly dressed as per the direction of Engineer-in –charge all complete.

$$15.00 \quad \frac{x(0.60+3.05)}{2} \times 1.35 = 35.96 \text{ m}^3$$

$$18.00 \quad \frac{x(0.60+2.95)}{2} \times 1.35 = 43.13 \text{ m}^3$$

$$20.00 \quad \frac{x(0.60+2.85)}{2} \times 1.35 = 46.58 \text{ m}^3$$

$$12.00 \quad \frac{x(0.60+2.24)}{2} \times 1.35 = 23.00 \text{ m}^3$$

$$\frac{148.67 \text{ m}^3}{@ \text{ Rs. } 164.74 \text{ m}^3}$$

Rs. 24,492.00

2. Providing and laying coarse Rubble Stone Masonry in 1:4:8 c.c.(1 Cement, 4 sand, 8 clean and graded stone chips of size 40mm and sown) including bond stone, through stone of size 150mm x 150 mm x 450 mm manufactured in 1:4:8 (! cement, 4 clean coarse sand 8 clean hard stone aggregate of size of 40 mm and down), and curing etc, complete excluding the cost of carriage of materials.

$$15.00 \quad \frac{x(0.60+1.35)}{2} \times 3.00 = 43.88 \text{ m}^3$$

$$15.00 \quad x 0.5 \times 0.34 \times 1.35 = 3.44 \text{ m}^3$$

$$18.00 \quad \frac{x(0.60+1.35)}{2} \times 3.00 = 52.65 \text{ m}^3$$

$$18.00 \quad x 0.5 \times 0.34 \times 1.35 = 4.13 \text{ m}^3$$

$$20.00 \quad \frac{x(0.60+1.35)}{2} \times 3.00 = 58.50 \text{ m}^3$$

$$20.00 \quad x 0.5 \times 0.34 \times 1.35 = 4.59 \text{ m}^3$$

$$12.00 \quad \frac{x(0.60+1.35)}{2} \times 3.00 = 35.10 \text{ m}^3$$

$$12.00 \quad x 0.5 \times 0.34 \times 1.35 = 2.75 \text{ m}^3$$

$$\frac{205.04 \text{ m}^3}{@ \text{ Rs. } 2766.09 / \text{m}^3}$$

Rs. 5,67,159.00

3. P/L hand packed stone filling in road works with clean hard selected stones,
All completes.

$$15.00 \times 0.5 \times 0.90 \times 1.30 = 8.78 \text{ m}^3$$

$$18.00 \times 0.5 \times 1.10 \times 1.40 = 13.86 \text{ m}^3$$

$$20.00 \times 0.5 \times 1.20 \times 1.50 = 18.00 \text{ m}^3$$

$$12.00 \times 0.5 \times 1.50 \times 1.10 = \underline{9.90 \text{ m}^3}$$

$$= 50.54 \text{ m}^3$$

$$@ \text{Rs. } 359.6 / \text{m}^3$$

Rs. 18,174.00

4. Providing and laying parapet of standard size on 1:4: 8 (1 cement,
4 coarse sand, 8 clean hard graded stone chips of 20mm down nominal gauge)
Plum concrete and plastering with 1:4 mix cement mortar of 12mm thick with
Recron 3s with lime washing three or more coats, complete as per the direction
Of the Engineer-in-charge size T30cm, B45 cm, h 45 cm.

90 Rm

@Rs. 834.62 / m³

Rs. 7, 51,116.00

5. Loading and unloading of cement.

$$\text{Vi no. 2)} \quad 205.04 \times 1.261 = 258.56 \text{ bags}$$

$$\text{Vi no. 4)} \quad 90.00 \times 0.711 = \underline{60.99 \text{ bags}}$$

$$= 322.55 \text{ bags}$$

$$= \underline{161.275 \text{ qtls}}$$

$$= \underline{16.12 \text{ ton}}$$

$$@ \text{Rs. } 153.58 / \text{ton}$$

Rs. 2,476.00

Cost of haulage excluding loading and unloading.

$$\text{Vi no. 5)} \quad 16.12 \text{ ton}$$

$$\text{For} \quad 30 \text{ kms} \quad @ \text{Rs. } 5.57 / \text{ton}$$

Rs. 2,694.00

6. Loading and unloading of sand
Sand

$$\text{Vi no. 2)} \quad 205.04 \times 0.174 = 35.68 \text{ m}^3$$

$$\text{Vi no. 4)} \quad 90.00 \times 0.062 = \underline{5.58 \text{ m}^3}$$

$$= 41.26 \text{ m}^3$$

$$@ 87 / \text{m}^3$$

Rs. 3,590.00

Cost of haulage excluding loading and unloading.

Vi no. 6) 41.26 m³ @ 1.84 / m³

75.92 ton

For 30 kms @ Rs.5.57 /ton

Rs. 12,686.00

7. Loading and unloading of stone

Vi no. 2) 205.04 x 1.17 = 239.90 m³

Vi no. 3) 50.54 x 0.85 = 42.96 m³

Vi no. 4) 90.00 x 0.16 = 14.40 m³

= 297.26 m³

@ 87 /m³

Rs. 25,862.00

Cost of haulage excluding loading and unloading.

Vi no. 7) 297.26 m³ @ 2.20 / m³

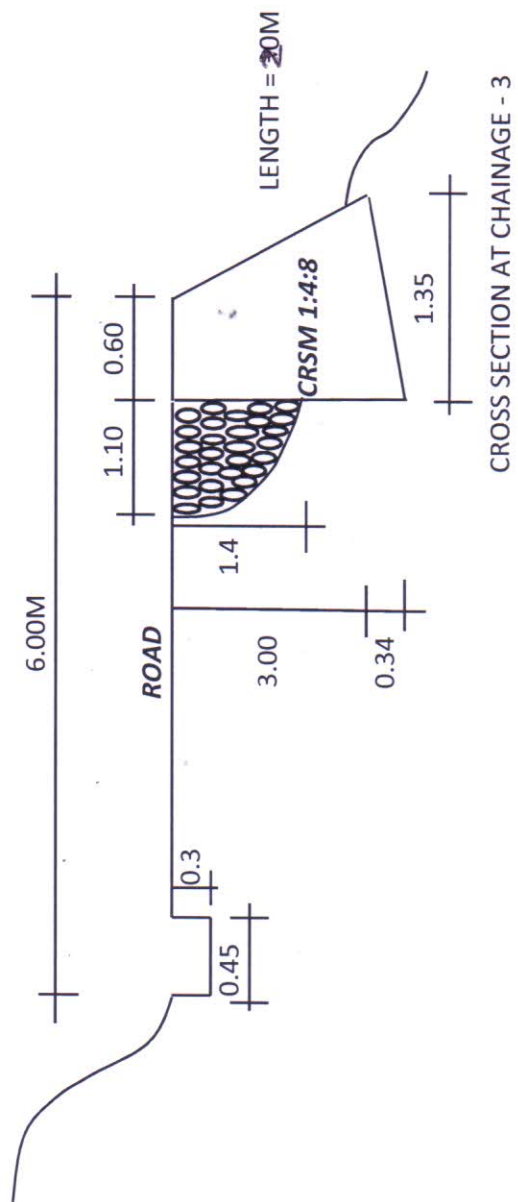
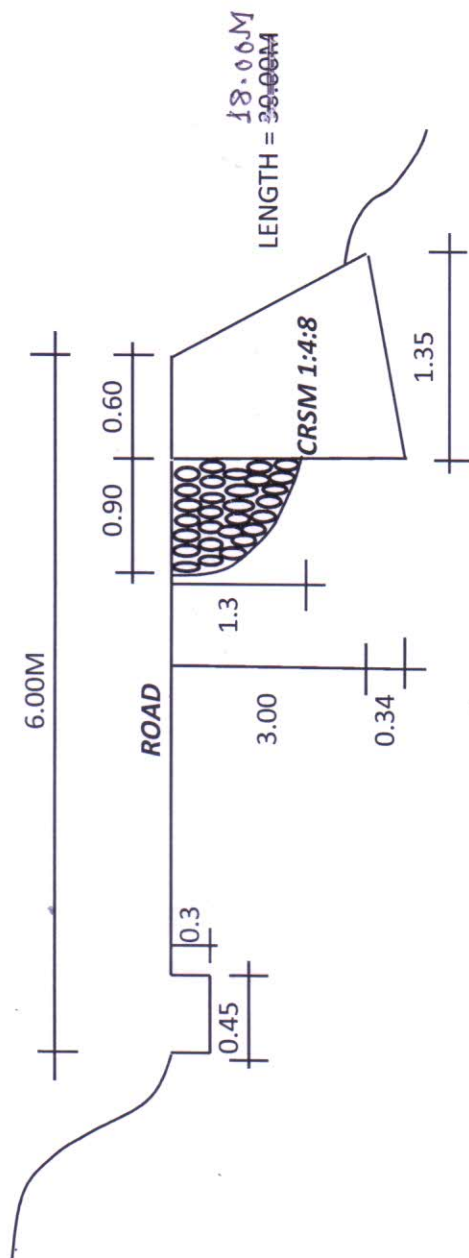
653.97 ton

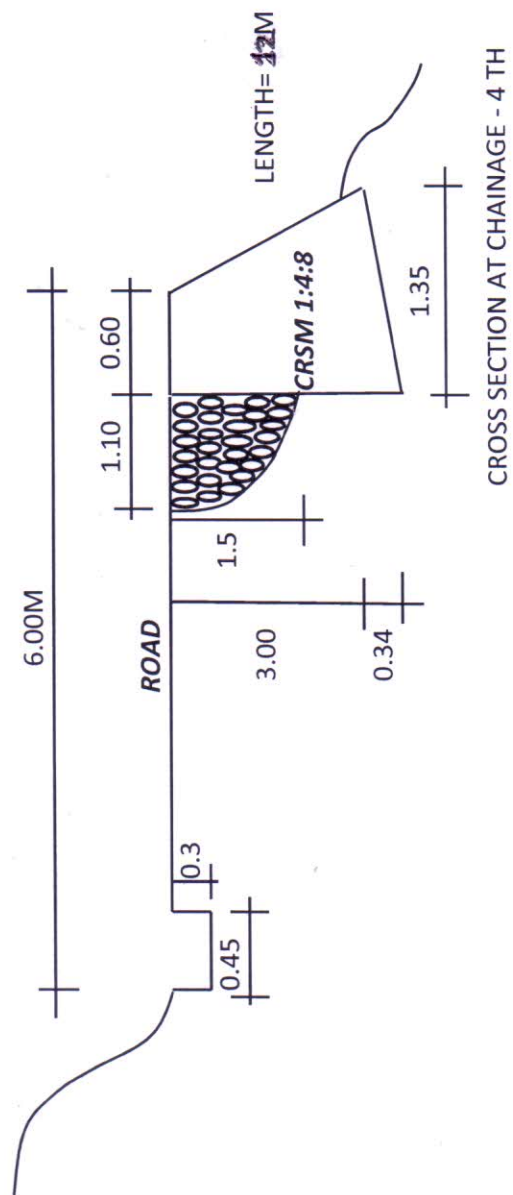
For 30 kms @ Rs.5.57 /ton

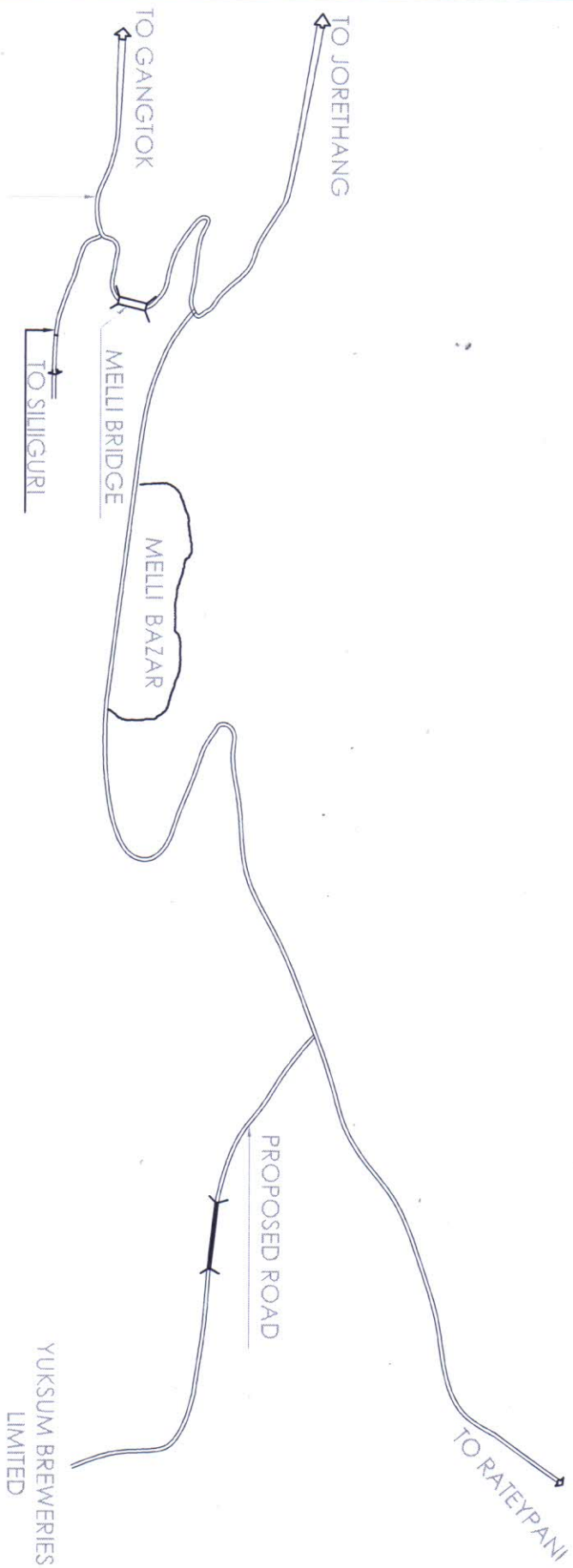
Rs. 1,09,278.00

Rs. 8,41,527.00

(Rupees Eight lakhs forty one thousand five hundred and twenty seven)only







SITE PLAN
(NOT TO SCALE)