

CANDEO PROJECTS PRIVATE LIMITED

Regd. Office: UG-39, Upper Ground Floor, Som Dutt Chamber – II, 9, Bhikaji Cama Place,
New Delhi-110066

CIN: U70101DL2010PTC207716, Telephone No.: 011-24473800, Mob: 09711399092
Email: candeopl@gmail.com

Dated:- 24/01/2022

To,
The Executive Engineer,
HSVP Division-5,
Gurugram

Subject:- Approval of Service Plan Estimate for PROPOSED
"COMERCIALPLOTTED COLONY AREA MEASURING 12.33675 ACRES
(LICENSE NO.5 OF 2022 DATED 19/01/2022) (MIGRATION OF
LICENSE NO.36 OF 2012 DATED 22/04/2012 (5.568 ACRES) AND
LICENSE NO.02 OF 2013 DATED 22/01/2013 (6.76875 ACRES)) IN
SECTOR-114, GURUGRAM-MANESAR URBAN COMPLEX BEING
DEVELOPED BY M/S. CANDEO PROJECTS PVT. LTD.

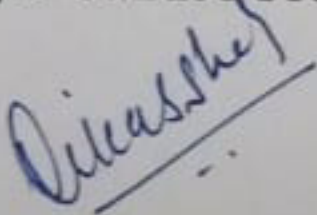
Respected Sir,

Please find enclosed herewith 5 Nos. of copy of Service Plan estimates of the
above said work as mentioned in the subject for your scrutiny and arranging
the approval from competent authorities.

Thanks,

Yours faithfully,

For M/s. Candeo Projects Pvt. Ltd.



Authorised Signatory.

Received

24/01/2022

Despatcher
O/o Executive Engineer
HSVP Division No-V,
Gurugram

**SERVICE ESTIMATE, DESIGN REPORT AND
CALCULATION OF
INTERNAL DEVELOPMENT WORKS**

FOR

**PROPOSED “COMMERCIAL PLOTTED COLONY AREA MEASURING
12.33675 ACRES”(LICENSE NO. 05 OF 2022 DATED 19.01.2022
{MIGRATION OF LICENSE NO.36 OF 2012 DATED 22.04.2012
(5.568 ACRES) AND LICENSE NO. 02 OF 2013 DATED 22.01.2013 (6.76875 ACRES)} INSECTOR - 114, GURUGRAM – MANESAR
URBAN COMPLEX BEING DEVELOPED BY M/S CANDEO
PROJECTSPVT. LTD.**

SERVICE ESTIMATE, DESIGN REPORT AND CALCULATIONS OF INTERNAL DEVELOPMENT WORKS FOR PROPOSED “COMMERCIAL PLOTTED COLONY AREA MEASURING 12.33675 ACRES” (LICENSE NO. 05 OF 2022 DATED 19.01.2022) {MIGRATION OF LICENSE NO.36 OF 2012 DATED 22.04.2012 (5.568 ACRES) AND LICENSE NO. 02 OF 2013 DATED 22.01.2013 (6.76875 ACRES)} IN SECTOR - 114, GURUGRAM – MANESAR URBAN COMPLEX BEING DEVELOPED BY M/S CANDEO PROJECTS PVT. LTD.

REPORT :-

Gurugram town of Haryana State situated on N.H. -48 road at a distance of 35 Km from Delhi. Being in the national capital region the town has fast developing tendency and potential. Further, it has also started sharing the growing residential, commercial and Industrial load of Delhi. In order to review the growing pressure of population in National Capital of Delhi, It has been decided by the Haryana Government to develop various infrastructure facilities in Gurugram-Manesar Urban Complex. This report is for a part of service estimate for proposed “commercial plotted colony” area measuring 12.33675 Acres (License No. 05 of 2022 Dated 19.01.2022) {Migration of License No.36 of 2012 dated 22.04.2012 (5.568 Acres) and License No. 02 Of 2013 dated 22.01.2013(6.76875 Acres)} in sector - 114, Gurugram – Manesar urban complex being developed by m/s CandeoProjects Pvt. Ltd.has been prepared with the following provisions which are as under:-

1. WATER SUPPLY

The source of water supply in this area is by HSVP/GMDA Mains. It has been proposed to construct underground tanks of capacity as per attached details and the location for domestic purpose and for fire protection. The underground tanks will be fed from the HSVP/GMDA based supply, which will feed O.H. tanks on the roof of the SCO's and has been designed as per the Hazen Williams formula. Presently there is HSVP/GMDA W/S in this area. However the provision of tube well has been taken in this estimate due to non availability of water but after getting the approval from the competent authority through tube well / tankers / any other approved source till HSVP/GMDA W/S will made available. The proposed tube well shall be 510mm bore drilled with reverse rotary rig and installed with 80mm i/d housing pipe and 50mm i/d slotted tube as strainer.

DESIGN

The scheme has been designed for population of 12164 persons, considering 1 person per 3 sqm area for ground floor and 1 person per 6 sqm for first floor for plotted commercial colony and considering @ 10% for shopkeeper @ 45 LPCD and @ 90% for visitors @ 15 LPCD and office area 1 person per 10 sqm for 2 to 4 floor and considering @ 90% for official @ 45 LPCD and @ 10% for visitors @ 15 LPCD and other provision etc.as per design calculations.

PUMPING EQUIPMENTS

It has been proposed to install pumping set as described with standby of equal capacity. The provision for standby generating set has also been provided in case of any time electricity failure. Generator will be provided separately or added to the capacity of main generator.

2. SEWERAGE

The scheme is designed for sewer line connecting to the STP and bypass connection to HSVP/GMDA sewer scheme.

The sewer lines have designed for three times average D.W.F in relation to water supply demand. It has assumed that about 80% of the domestic and flushing water supply shall find its way into the proposed sewer. Sewer lines shall be running by gravity and discharge to STP proposed. Treated water will be used for Irrigation & Flushing purpose (through recycling) under the pipe line system.

3. STORM WATER DRAINAGE

It has been proposed to lay R.C.C Np3 pipes with required number of manholes for disposal of storm water, which will be connected to the HSVP/GMDA drain. The intensity of rain fall has been taken as 6.00mm (1/4”)per hour. A minimum size of 400mm i/d R.C.C Np3 pipe for storm water drain will be provided and designed as per manning’s formula. Necessary provision of rainwater harvesting arrangement has also been taken in this estimate.

4. ROADS

Road have been provided to above areas and estimate is prepared as revised specifications adopted by HSVP/GMDA.

5. STREET LIGHTING AND ELECTRIFICATION

Provision for external lighting and ESS of proposed area has been made.

6. HORTICULTURE

Estimate and details of plantation, landscaping, signage etc. has been included.

7. FIRE FIGHTING

As per N.B.C, fire tanks and required capacity pumps have been taken in the estimate and marked on the plan.

8. SPECIFICATIONS

The work will be carried out in accordance with the standard specifications of PH as laid down by the Haryana Government / HSVP/GMDA.

9. RATES

The estimate has been based on the present market rates.

10. COST

The total cost of the scheme including cost of all services works out to Rs. 609.23Lacs (Rupees SixCroresNineLacsTwenty ThreeThousand only) including 3% contingencies and 49% departmental charges + price escalationand cost per acre comes out to Rs. 49.39Lacs.

(Authorized Signatory)

DESIGN CALCULATION

Total Area of Plot (Commercial)	=	12.33675 Acres
Or		49924.977 Sqm
Permissible Ground Coverage @ 35%	=	17473.742Sqm
Permissible FAR @ 150%	=	74887.465Sqm
Proposed Ground coverage	=	17472.300Sqm
Area Under Public Utility (3 Nos. Public Toilets)	=	187.73Sqm
Proposed FAR Achieved	=	68720.10Sqm
Proposed area under Transformer(3 Nos.)	=	1297.83Sqm
Nos. Of S.C.O.'s	=	210 Nos.

I) WATER REQUIREMENT**A). Ground + First Floor**

1 Area on Ground Floor (Shopping Area)S.C.O.'s	=	17472.30Sqm
Occupancy @ 3m ² / person	=	5824 Persons
2 Shopping area on First floors	=	17472.30Sqm
Occupancy @ 6 m ² /person	=	2912 Persons
Total occupancy	=	8736 Person
Water Requirement @ 10% shopkeeper		
=140 nos. @ 45 LPCD	=	39330 LPD
Water Requirement @ 90% visitors		
=1261 nos. @ 15 LPCD	=	117930 LPD
Total Occupancy	=	157260LPD....(A)

B. 2nd Floor to 3rd Floor (Office Area)

i) Office Area	=	33775.50Sqm
(Remaining Area of Proposed FAR = 68720.10 - 34944.60 sqm.)		
Occupancy @ 10 m ² / Person	=	3378 Persons
Water Requirement @ 90% official = 3040Persons		
@ 45 LPCD	=	1,36,800 LPD
Water Requirement @ 10% visitors = 338Nos		
@ 15 LPCD	=	5070 LPD
Total	=	1,41,870LPD.....(B)

C) For Public Utility Services (3 Nos. Toilets @ 5000 LPD/each)= 15000.00 LPD.....(C)**D) For Transformer's (3 Nos. transformer @ 2000LPD/ each)= 6000.00 LPD.....(D)****E) MTC. STAFF + GUARD ETC.**

Considering water requirement for mtc. Staff		
+ Guard etc. L.S.	=	50 Persons
Water Requirement @ 45% LPCD	=	2250 LPD(D)

Total Water Requirement (A+B+C+D+E) = 3,22,380.00 LPD
OR 323 KLD Say 350 KLD

II) FIRE DEMAND

(i) For UGT i.e. Population = 12164 Persons
(p) $\frac{1}{2} \times 100/1000 = (12.164) \frac{1}{2} \times 100$ = 349.00KLD Say 360 KL

III) Garden Irrigation Requirement (For Total Area) = 120.00 KLD

IV. Total Water Requirement = 350.00 KLD

(Excluding Fire Demand)

Hence Domestic Water Requirement (67%) = $350 \times 67\%$ = 240.00 KLD

Hence Flushing Water Requirement (33%) = $350 \times 33\%$ = 120.00 KLD

Day Requirement @ 60% = 144.00 K.L. for Domestic Say 150.00

K.L.D.

= 72.00 K.L. for Flushing Say 80.00

K.L.D.

But it is proposed to construct an underground tank capacity 150 K.L. in two compartment for domestic use, 80 K.L. for non potable water in two compartment (at STP) and 360 K.L. for fire fighting purposes for UGT in two compartment as shown location in the plan with UGT.

- Total Capacity of UGT = $150 + 360$ = 510.00 KLD
- Total Storage Capacity at S.T.P.(120+120) = 240.00 KLD

V. Tube Well**For UGT**

- a) Yield = 15 K.L. / Hr.
- b) Working Hour per day = 16 Hr. / Per Day
- c) Total water demand = 240 M3/Day
- d) Number of tube well required = 1.00
(Water Demand / Discharge / Hr. working Per day)
- e) Add 5% extra = 0.05
- Total = 1.05Nos
- Say = 1Nos

(Water to the proposed development is to be supplied by HSVP/GMDA. However, it is proposed to install only one No.tube wells for augmentation / standby purposes and provision has also been taken in the estimates due to non-availability of water but after getting the approval from competent authority..

I) Pumping Machinery for Tube wells

- a) Gross Working Head = 50 Mtr
- b) Average fall in S.L = 2 Mtr
- c) Depression Head = 6 Mtr
- d) Friction loss in main = 10 Mtr
- Total = 68 Mtr
- e) Discharge = 15000 LPH (Or 4.17 LPS Say 4.50 LPS)

f) Horse Power

$$HP = (4.50 \times 68) / (75 \times 0.60)$$

$$= 6.80 \text{ H.P.}$$

Say

$$= 7.50 \text{ H.P.}$$

It is proposed to provide 1 No. pumping set of 4.50 LPS discharge at 68Mtr head (1W)

II) Boosting Machinery for domestic water For UGT

Total Water Requirement

$$= 240.00 \text{ KLD}$$

Pumping per hour @ 8 hr. pumping / day

$$= 240 / 8 \text{ KL / hr.}$$

$$= 30.00 \text{ KL / hr.}$$

$$= 500.00 \text{ lpm} = 8.33 \text{ lps}$$

$$\text{Say } 9.00 \text{ lps}$$

Gross working head

For UGT

Suction lift

$$= 7.00 \text{ mts.}$$

- Frictional loss in mains & specials

$$= 6.00 \text{ mts.}$$

- Clear Head required

$$= 40.00 \text{ mts.}$$

Total

$$= 53.00 \text{ mts.}$$

Say

$$= 53.00 \text{ mts.}$$

Pump HP

$$= (9.00 \times 53) / (75 \times 0.60)$$

$$= 10.60 \text{ H.P.}$$

Say

$$= 12.50 \text{ HP}$$

It is proposed to provide 2 No. of pumping set of 9.00 lps discharge at 53mts Head each (1W + 1SB) for UGT

III) Boosting Machinery for flushing water at STP

Total Water Requirement

$$= 120 \text{ K.L.D}$$

Pumping per hour @ 8 hr. pumping / day

$$= 120 / 8 \text{ KL / hr.}$$

$$= 15.00 \text{ KL / hr.}$$

$$= 250.00 \text{ lpm} = 4.16 \text{ lps,}$$

$$\text{Say } 1 \text{ No. } 5.00 \text{ lps each}$$

Gross working head

- Suction lift

$$= 7.00 \text{ mts.}$$

- Frictional loss in mains & specials

$$= 6.00 \text{ mts.}$$

- Clear Head required

$$= 40.00 \text{ mts.}$$

Total

$$= 53.00 \text{ mts.}$$

Say

$$= 53.00 \text{ mts.}$$

Pump HP

$$= (5.00 \times 53) / (75 \times 0.60)$$

$$= 5.89 \text{ HP}$$

Say

$$= 7.50 \text{ HP}$$

It is proposed to provide 2 No. of pumping set of 5.00lps discharge at 53mts Head each (1W + 1S)

IV) Boosting Machinery for Irrigation water

Total Water Requirement

$$= 120 \text{ KLD}$$

Pumping per hour @ 5 hr. pumping / day

$$= 120 / 5 \text{ KL / hr.}$$

$$= 24.00 \text{ KL / hr.}$$

$$= 4.00 \text{ lpm} = 6.67 \text{ lps}$$

Say = 7.00 LPS

Gross working head

- Suction lift = 3.00 mts.
- Frictional loss in mains & specials = 3.00 mts.
- Clear Head required = 25.00 mts.

Total = 31.00 mts.

Say = 31.00 mts.

Pump HP = $(7.00 \times 31) / (75 \times 0.60)$
= 4.82 HP

Say = 5.00 HP

It is proposed to provide 2 No. of pumping set of 7.00 lps discharge at 31mts Head each (1W + 1S)

V) DG Set for plumbing

DG Set Requirement

Submersible Pump (1 x 7.50)	= 7.50 HP
Domestic Pump (1 x 12.50)	= 12.50HP
Flushing Pump (1 x 7.50)	= 7.50 HP
For External Electrification	= 20.00 HP
For Irrigation (1 x 5.00)	= 5.00 HP
Total pump load	= 52.50 HP
	= $52.50 \times 0.746 \times 1.50$
	= 58.75K.W

Total DG capacity = 1 No. 63 KVA

Hence it is proposed to provide 1 No. D.G. Set of 63 KVA capacity

VI) FLOW TO SEWAGE TREATMENT PLANT

Total Water Requirement =240 KLD for domestic &120 KLD for flushing

i) 80% of total Domestic Water Demand = 80% of 240 KLD = 192.00 KLD

ii) 80% of total Flushing Water Demand =80% of 120 KLD = 96.00KLD

Total =288.00 KLD

Considering 5% marginal factor = 28.80 KLD

G. Total = 316.80 KLD

Say 350 KLD

Proposed STP Capacity = 350KLD Or0.35 MLD

(Authorized Signatory)