

DIRECTORATE OF TOWN & COUNTRY PLANNING, HARYANA

SCO 71-75, Sector 17C, Chandigarh

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To

Stanza Developers & Infrastructure Pvt. Ltd.
189, Tarun Enclave, Pitampura,
New Delhi-34.

Memo No. LC-826-PA(B)/2015/

4998

Dated:

27/3/15.

Subject:

Approval of service plan/estimates for Internal Development Works in respect of group housing colony over an area measuring 10.0125 acres (license No. 997 of 2006 dated 16.06.2006) in sector 19, Panipat.

Kindly refer your application on the subject cited above.

The service plan/estimates of residential group housing colony being developed over an area measuring 10.0125 acres in sector 19, Panipat have been checked and corrected wherever necessary by the Chief Administrator, HUDA & are hereby approved subject to the following terms and conditions:-

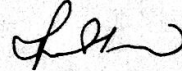
1. That you will have to pay External Development Charges as a full and no deduction on account of any services proposed from other Department/from own sources by the colonizer for the time being, as EDC works for a town as a whole will have to be got executed in view of overall planning, proposed area also covered/to be covered in EDC, Panipat Town, which is under finalization.
2. The category wise area shown on the plans and proposed density of population thereof has been treated to be correct for the purpose of services only.
3. That you are liable to maintain the licensed area for ten years or as per HUDA norms till such time, the colony is taken over by the local authority/State Govt.
4. The wiring system of street lighting will be under ground and the specifications of the street lighting fixture etc. will be as per relevant standard of HVPNL. CFL lamps shall be provided to met the requirement of HVPNL and as well environment.
5. It is made clear that appropriate provision for fire-fighting arrangement as required in the NBC/ISI should also be provided by you and fire safety certificate should also be obtained from the competent authority before undertaking any construction. You shall be sole responsible for fire safety arrangement.
6. All technical notes and comments incorporated in the estimates in two sheets will also apply. A copy of these is also appended as Annexure-A.
7. The correctness of the levels of the colony will be sole responsibility of the owner for integrating the internal sewer/ storm water drainage of the colony by gravity with the master services.
8. That level/extent of external services to be provided by HUDA will be in accordance with EDC deposited. The colonizer will be fully responsible to meet the demand, to dispose of effluent and rain water till these services are provided by HUDA.
9. You shall be sole responsible for disposal of sewage of your colony as per requirement of HSPCB/Environment Deptt. till such time the external services are made available as per the proposal of the town. All the link connections with the external services shall be made by you at your own cost after seeking approval from competent authority. There should be no pollution due to disposal of sewerage of the colony. The disposal of the effluent should be accordance to the standard norms fixed by Haryana State Pollution Board/Environment Department.
10. The estimate does not include the provision of electrification of the colony. However, it is clear that the supervision charges and O&M charges shall be paid by you directly to the HVPNL.
11. It is clarified that HUDA can make available the water only after HUDA sector in which licensed area falls is developed. It is also subject to:-
 - (i) Availability of litigation and encroachment free land.

- (ii) Permission within reasonable period from Forest & Environment Department, wherever required.
- (iii) Till the water supply and other services made available by HUDA, the licensee will have to make their own arrangements. Tube well bored with permission from Central Ground Water Board and other concerned authority for the purposes.
- (iv) HUDA shall supply the drinking water only to the license granted in the master plan area.
- (v) Sufficient funds are made available for carrying out the External Development Works.
12. You have proposed to utilize recycled water for flushing purposes and provision of separate flashing line, storage tank, metering system, pumping system and plumbing has been made. Therefore, it is clarified that no tap or outlet of any kind will be provided from the flushing lines/plumbing lines for recycled water except for connection to the cistern of flushing tanks and any scouring arrangement. Even ablution taps should be avoided.
- (i) Two separate distribution systems, independent to each other, will be adopted, one for potable water supply and second for recycled water. Every Home/Office/business establishment will have access to two water pipe lines.
- (ii) Potable water and recycled water supply lines will be laid on opposite berms of road. Recycled water lines will be above sewer lines. Wherever unavoidable and if all pipes are required to be laid on same side of road, these will be located from the ground surface in order of descending quality. Potable water shall be above recycled water which should be above sewer. Minimum clear vertical separation between a potable water line and a recycled water line shall be one ft, if it not possible then readily identifiable sleeve should be used.
- To avoid any accidental use of recycled water for potable purposes all:-**
- (a) Recycle water pipes, fitting, appurtenances, valves, taps, meters, hydrants will be of Red Colour or painted red.
- (b) Sign and symbols signifying and clearly indicating "Recycle Water" "Not fit for Drinking" must invariably be stamped/fixd on outlets, Hydrants Valves both surface and subsurface, Covers and at all conspicuous places of recycle distribution system.
- (c) Detectable marker tapes of red colour bearing words "Recycle Water" should be fixed at suitable interval on pipes.
- (d) Octagonal covers, red in colour or painted red and words "Recycle Water-Not fit for Drinking" embossed on them should be used for recycled water.
13. That it shall be mandatory to provide dual/two button or lever flushing system in toilets.
14. You shall be sole responsible for the construction of various structures such as RCC underground tank etc. according to the standard specification good quality and its workmanship. The structural stability responsibility will entirely rest upon you.
15. In case some additional structures are required to be constructed and decided by HUDA/development agency at a later stage, the same will be binding upon you. Flow of control valves will be installed preferably of automatic type on water supply connection with main water supply line, laid by developing agency or HUDA.
16. The formation level of internal road should match with sector roads. Similar other services like water supply, sewerage and SWD level etc. should be fixed in integration of levels of EDC services of water supply, sewerage and SWD etc, which shall be ensured by you.
17. In case it is decided by Govt. that HUDA/Govt. will construct 24 m wide road and will extend master services on 24 m wide internal circulation road, then additional amounts at rates as decided by the authority/Govt. will be recoverable over and above EDC.
18. Since, the construction of master plan is yet to take place, you will get the road level/formation level of your service fixed from the concerned Superintending Engineer, before execution.
19. This estimate does not include the common services like water supply, storage tank on the top of the building block, the plumbing works etc. will part of the building works.
20. You will have to ensure that the sewer/storm water drainage to be laid by you will be connected with the proposed existing master services by gravity. If it is not possible to connect the services by gravity, it will be your sole responsibility to make the pumping arrangement and maintenance thereof for all the time to come.
21. That you shall not make any connection with the master services i.e. water supply, sewerage, storm water drainage, without prior approval of the competent authority in writing.
22. That the detailed technical proposal/scheme shall be got approved from this office before execution of work at site.
23. The firm will provide solar water heating system as per the guidelines issued by Haryana Govt./Ministry of Environment/Govt. of India.
24. It is made clear that roof top rain harvesting system shall be provided by you as per Central Ground Water Authority norms/Haryana Govt. Notification and the same shall be kept

operational/maintained all the time. The arrangement for segregation of first rain water not to be entered into the system shall also be made by you.

25. That you shall transfer the land under master plan road as well as service road to Govt./HUDA for construction of road/service road free of cost and proportionate cost for construction of service road shall also be paid by you.
26. That you shall be solely responsible to lay the services upto the external services laid/to be laid by HUDA or any developing agency on Sector dividing road at respective locations/points.
27. That you shall get the electrical service plan estimates approved from the agency responsible for installation of external electricity service as per condition of agreement executed on prescribed proforma LC-IV with the Director.

A copy of the approved service plan/estimates is enclosed herewith. You are requested to supply three additional copies of the approved service plan/estimates to the Chief Administrator, HUDA, Panchkula under intimation to this office.



(Ravi Sihag)

District Town Planner (HQ)

For Director General, Town & Country Planning
Haryana, Chandigarh

Endst. No. LC-826-PA(B)-2015/

Dated :

A copy is forwarded to the Chief Administrator, HUDA, Panchkula with reference to his office Memo No. 532 dated 15.01.2015 for information and necessary action.



(Ravi Sihag)

District Town Planner (HQ)

For Director General, Town & Country Planning
Haryana, Chandigarh

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

FOR

**PROPOSED GROUP HOUSING COLONY PLANS OF THE LAND
MEASURING 10.0125 ACRES FALLING
IN SECTOR-19, PANIPAT (HR.)**

OWNER

M/S STANZA DEVELOPERS & INFRASTRUCTURE PVT. LTD.

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SERVICE ESTIMATE, DESIGN REPORT AND CALCULATIONS OF
INTERNAL DEVELOPMENT WORKS FOR PROPOSED GROUP HOUSING COLONY ON THE
LAND MEASURING 10.0125 ACRES
IN SECTOR-19, PANIPAT (HR.)

REPORT

Panipat is located at 29.39°N 76.9°E It has an average elevation of 219 metres (718 ft.) Panipat is situated on Sher shah Suri marg (now known as G.T road or N.H1),90 KM north of DELHI .On the three sides, Panipat district boundaries touch other district of Haryana – Karnal in the north , Jind in the west and sonipat in the south. Panipat district borders the state of Uttar Pradesh across the Yamuna river in the east. The total area of the site is 10.0125 acre.

WATER SUPPLY

The source of water supply shall be Ground water; It has been proposed to construct centralized 2 Nos. underground tanks of capacity as per attached details for domestic and other purpose. The underground tank will be filled from the 2 Nos of Tube-well riser and then pumped to the overhead water tanks of each tower.

DESIGN

The scheme has been designed for the population as given in attached sheets.

PUMPING EQUIPMENTS

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

SEWERAGE SCHEME

This scheme is designed for sewer connecting the centralized sewage treatment plant to treat the sewage and to use such treated water for horticulture and flushing purpose and excess treated water overflow will be connected to the proposed HUDA sewer, passing along the sector road. The sewerage system has been marked on the respective plans.

The sewer lines have been designed for three times average D.W.F. in relation to water supply demand. It has been assumed that about 80% of the domestic water supply shall find its way into the proposed sewer. Sewer lines shall be laid to a gradient maintaining minimum 2.46 ft/sec self cleaning velocity. Necessary provision for laying S.WIRCC pipe sewer line, construction of required number of manholes etc., have been made in the estimate.

Necessary design statement for entire sewerage system has been prepared and attached with estimate.

STORM WATER DRAINAGE

We propose to construct underground pipe drain, which will be connecting rain water harvesting system for recharge the aquifer and surplus storm water will be allowed to flow to the HUDA drain along the sector road.

SPECIFICATIONS

The work will be carried out in accordance with the standard specifications of P.E as laid down by the Haryana Govt. / HUDA.

ROADS

Cost of road has been taken in the estimate.

STREET LIGHTING

Provision for lighting on surrounding area has been made.

HORTICULTURE

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

RATES

The estimate has been based on the present market rates.

COST

The total cost of the scheme, including cost of all services works out to be **Rs. 568 Lacs (Rupees Five Crore Sixty Eight Lakhs only)**. Including 3% contingencies & 49% departmental charges. Price escalation, unforeseen Admin charts.

DETAILS FOR DAILY WATER CONSUMPTION					
1	Total Water Demand				
SNo.	TYPE OF FLATS	TOTAL UNIT	PERSON/UNIT	POPULATION	Water Requirement @172.5LPCD
a	3 BHK Type - A, B	72	5	360	62100
b	2 BHK Type - C1, C2	72	5	360	62100
c	3 BHK Type- D1,D1 & E	108	5	540	93150
d	3 BHK + Servant Type- A1	36	5	180	31050
e	4 BHK + Servant Type - F1	36	5	180	31050
f	EWS	58	2	116	20010
g	Community Building	1			10000
h	Shopping Center	1			5000
	Grand Total				376560
	Total Domestic & Flushing Water per day demand				376.56
	Say				315 KL
	Domestic Consumption @ (70% of residential & 30% of other amenity)				214122
	Flushing consumption @ (30% of the residential & 70% of the other amenity)				100338
	STP CAPACITY @ (80% of total water demand)				251.6
	SAY				252 KL
II	Horticultural water requirement (Organized green)				
	25 KL/acre /per Day (For 1.7 Acre Green)				42.5
III	Fire Demand				285
	Total water Demand (Except Fire) KLD				214.12
	SAY				215 KL
2	Type of water & Type of Source				
I	Domestic water demand/ Day (From Bore well/HUDA)				215KLD
II	Flushing water demand/day (From STP)				100.338
III	Horticulture (from STP)				42.5

3	NO. OF BORE WELL/ HUDA Main Water Supply Calculation		
a	Actual discharge of pump	500	Lt./Min
b	Size of Bore well	350 x 300	MM
c	Size of Tube well Casing pipe	200	MM
d	Size of Tube well Slotted pipe	200	MM
e	Depth of Tube well	As per water strata	(About 100 To 120 meter)
f	Total running of Tube well	4	HR/DAY
II	NO. OF TUBE WELLS		
a	Total Net daily water requirement	215	KL
	By assuming discharge of each Tube well @ 500		
	By taking 6 hrs running of each Tube well		
b	No. of Tube wells required $215000/(500 \times 60) \times 4$	1.79	-
		1.79	NOS
III	No. of Tube wells required	2	NOS.
It is suggested to provide 2 nos. Tube well.			

4	TOTAL U.G. TANK		
i	TOTAL U.G. STORAGE DOMESTIC & RAW TANK	400	KL
ii	FIRE WATER TANK	200	KL
iii	TOTAL U.G. STORAGE FLUSHING (Flushing & horticulture) (IN STP)	105	KL
Therefore it is proposed to construct underground tank			
FIRE TANK U.G- 200KL			
RAW WATER TANK- 200 KL = 125 KL X 1 nos , 75 KL X 1 nos			
DOMESTIC WATER TANK-200 KL = 125 KL X 1 nos , 75 KL X 1 nos			
FLUSHING WATER TANK- 105 KL = 105 KL X 1 Nos. in STP			

5	PUMPS FOR DOMESTIC WATER SUPPLY TYPE 2,3,4 BHK SERVANT) = (75 KL +130.5 KL) = 205.5 KL			
		Tank -1	Tank -2	Unit
i	Potable Water Requirement Per Day for (TYPE- A,B,C1,C2,A1,D1,D2,E &F1)	75	130.5	KL
ii	Pumping duration per day	3	4	Hrs
iii	Suction lift	0	0	Mtr
iv	Clear Head Required	40	40	Mtr
v	Residual Head	5	5	Mtr
VI	Friction Head Loss	10	10	Mtr
vii	Total head required	55	55	Mtr
VIII	Discharge of Pump in LPM	416.67	543.75	LPM
IX	Power Required (Lpm*head (m)/4500* .65{effi)	7.83	10.22	HP
	say	8	10.5	HP

6	PUMPS FOR DOMESTIC WATER SUPPLY FOR ALL OTHER BLOCK = 4.5 KL)		
i	Potable Water Requirement Per Day	4.5	KL
ii	Pumping duration per day	1	Hrs
III	Suction lift	0	Mtr
iv	Clear Head Required	30	Mtr
v	Residual Head	5	Mtr
vi	Friction Head Loss	10	Mtr
vii	Total head required	45	Mtr
viii	Discharge of Pump = 4.5/1 = 4.5 cu.m lhr= 75 lpm		
	Say	75	LPM
IX	Power Required (Lpm*head (m)/4500* .65{effi)	1.15	HP
	Say	1.3	HP

7	PUMPS FOR FLUSHING WATER SUPPLY FOR (TYPE- A,B,C1,C2,A1,D1,D2,E &F1)= 90.3 KL		
i	Flushing Water Requirement Per Day	90.3	KL
ii	Pumping duration per day	4	Hrs
iii	Suction lift	0	Mtr
iv	Clear Head Required	40	Mtr
v	Residual Head	5	Mtr
vi	Friction Head Loss	10	Mtr
vii	Total head required	55	Mtr
viii	Discharge of Pump= 100.4/4 = 25.1 cu.m lhr = 418.33 lpm		
	Say	376.25	lpm
ix	Power Required (Lpm*head (m)/4500* .65{effi)	7.07	HP
	say	7.5	HP

8	PUMPS FOR FLUSHING WATER SUPPLY FOR ALL OTHER BLOCK = 10.5 KL		
i	Flushing Water Requirement Per Day	10.5	KL
ii	Pumping duration per day	1	Hrs
iii	Suction lift	0	Mtr
iv	Clear Head Required	12	Mtr
v	Residual Head	5	Mtr
vi	Friction Head Loss	10	Mtr
vii	Total head required	27	Mtr
viii	Discharge of Pump = $4.5/1 = 4.5$ cu.m /hr = 75 lpm		
	Say	175	lpm
ix	Power Required (Lpm*head (m)/4500* .65 {effi})	1.6	HP
	say	1.8	HP

9	Irrigation pump 42.5 KL Per Day		
i	Proposed Pump discharges		
ii	Proposed pumping for irrigation	42.5	lpm
iii	(1 working+ 1 stand)		
iv	Max Clear Head required	20	
v	Residual Head	5	Mtr
vi	Friction Head Loss	10	Mtr
vii	Total head required	35	Mtr
viii	Discharge of Pump = $42.5/4 = 10.6$ cu.m /hr = 177.08 lpm	177.08	
	Say	177.08	lpm
ix	Power Required (Lpm*head (m)/4500* .65 {effi})	2.12	HP
	Say	3	HP

10	PUMPS FOR FIRE PROCTION					
i	PUMPS DESCRIPTION	LOCATION	NOS	DISCHARGE (LPM)	HEAD IN MTR	HP
ii	DIESEL PUMP	PUMP ROOM	1	2280	70	55
iii	FIRE PUMP	PUMP ROOM	1	2280	70	55
iv	JOCKY .PUMP	PUMP ROOM	1	180	70	4

11	Tube well Total Domestic Demand = 210KLD.			
		Tubewell-1	Tubewell-2	Unit
i	Approx. discharge of tube well	100	110	KL
ii	working for 4 hours /day	4	4	Hrs
iii	Residual Head	55	55	Mtr
iv	Friction Head Loss	5	5	Mtr
v	Total head required	10	10	Mtr
vi	Discharge of Pump = $42.5/4 = 10.6$ cu.m /hr = 177.08 lpm	70	70	Mtr
	Say	417	458	LPM
vii	Power Required (Lpm*head (m)/4500* .65{effi)	10	11	HP
	Say	10	11	HP

12	Equipment Description	No's	Power Req. (HP)	Total Power (HP)	
i.)	DOMESTIC WATER SUPPLY FOR TANK-2 (TYPE - A,B,C1& C2)	1 Set (IW+1S)	8	8	
ii.)	DOMESTIC WATER SUPPLY FOR TANK-2 (TYPE - A1,D1,D2,E &F1)	1 Set (IW+1S)	10.5	10.5	
iii.)	DOMESTIC WATER SUPPLY FOR ALL OTHER BLOCK	1 Set (1W+1S)	1.3	1.3	
iv.)	FLUSHING Water SUPPLY FOR (TYPE- A,B,C1,C2,A1,D1,D2,E &F1)	1 Set (IW+1S)	7.5	7.5	
v.)	FLUSHING Water SUPPLY FOR ALL OTHER BLOCK	1 Set (1W+1S)	1.5	1.5	
vi.)	IRRIGATION PUMP	1 Set (1W+1S)	3	3	
vii.)	JOCKYPUMP	1 Set	4	4.3	
viii.)	TUBEWELL -1	1 Set	10	10	
ix.)	TUBEWELL -2	1 Set	11	11	
			SAY	57.11	HP
				42.60	KW
				50.12	KVA
	Total DG Power Requirement For Services		SAY	51	KVA

Entire water to the proposed development is to be supplied by ground water source and therefore it is proposed to install two tube wells.

Requirement of 51 KVA capacities will be added in to the main D.G. set to provide stand by supply.