

To,

Date: 06-11-2023

Chairman,
M/s Police Officer Multi State Co-operative Housing Society Ltd.
Malviya Nagar, Delhi-110017

Sub: Final Audit report relating to Construction of 616 flats by POMSCHS for Development of Group Housing Society

Sir,

This is with reference to engagement letter No. 2211 dated 02-01-2023 for Special audit to find irregularities and misappropriation of funds in procuring and developing the Police officers Multi State Cooperating Housing Society (POMSCHS) at Faridabad. We have already submitted our report related to Land on 07-07-2023. Now furnishing the audit report relating to the construction and development work by NG Constructions and other vendors.

Hope you will find the same in order.

Thanking You

Yours Faithfully

CA PK Gupta

M. No. 080386

UDIN: 23080386BGZKDE8669

Limitation

Our report is intended solely for the use of the Chairman and Board of Directors of Police Officers Multistate Cooperative Housing Society. It is important to recognize there are inherent limitations in our process. For example, our procedures are generally based on the concept of selective testing of the data being examined and are, therefore, subject to the limitation that material errors, fraud and other illegal acts having a direct and material financial impact, if they exist, may not be detected. We will however, communicate to you as appropriate, any illegal act, material errors or evidence that fraud may exist, identified during the course of our work.

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I. Civil Work

A. Background

Police Officers Multi-state Co-operative Housing Society (hereafter referred as POMSCHS) has implemented a Multi-storey housing project at Sector-49, Faridabad for construction of 616 Residential Apartments of four categories and allied services and common facilities like Community Centre, Shopping complex, 110 EWS flats, Primary and Nursery school, Electric Sub-station, Stilted areas, Podium Basement and Development works etc at 11.3875 acres of land at village Dabua and Nawada koh, Sector 49, Faridabad, Haryana.

For which Tenders has been called up from various Development contractors by M/s Architect Forum (hereafter referred as Architect) on behalf of POMSCHS, tender documents to be submitted on 12th May 2013.

B. Tender Process

On 03rd May'2013, Sealed Lump Sum Covered Area Rate Tenders were invited for Civil Works, Sewerage, Internal Plumbing, Water, Supply, Storm Water Drainage Work, Electrical Work & Development Work and common facilities of M/s. Police Officers Multi-State Co-operative Housing Society Ltd., for construction of 616 Residential Apartments of Four categories and allied services and common facilities like, Community Centre, Shopping, 110 EWS flats, Primary and Nursery School, Electric Sub-Station, Stilted Areas, Podium, Basement and Development Works etc. at 11.3875 Acres of Land at Village Dabua and Nwada Koh, Sector 49, Faridabad, Haryana, from Pre-Qualified Experienced Contractors.

Tender Documents were issued to all the four contractors out of 20 contractors who were found fit for the process on the basis of Pre-qualification bids submitted by them from the office of the Architects M/s Architects Forum, H-77, Connaught Circus, New Delhi, 110001, from 11.00 A.M. & 5.00 P.M. on payment of Rs. 5000 (Five Thousand) (Non-Refundable) on Saturday, May 04, 2013 till May 07, 2013.

Contractors submitted Pre-qualification bids against the advertisement given by society were as follows:

- 1. Topline Builtech Pvt. Ltd.**
104, Westend Marg,
M.B. Road, N Delhi – 110030
- 2. N.G.Constructions**
501, 5th Floor, Mangalam
Paradise, Plot No.8,
Mangalam Palace, Sec-3,
Rohini, Delhi- 110085.
- 3. Indsao Infratech**
Flat-1B, DDA, SFS Housing,

Pocket - 1, Sec- 10, Dwarka,
Delhi – 110075

- 4. Vilayati Ram Mittal Pvt. Ltd.**
B-33, Defence Colony,
New Delhi – 110024
- 5. Ascent Construction Pvt. Ltd.**
Ascent House, D-43, Sector 6,
Noida
- 6. Millenium Engineers**
C-109, Hari Nagar, Clock Tower,
New delhi – 110064
- 7. Gurunanak Engineering Services**
840, sector 15-A Faridabad
- 8. Hathwalia Builders**
AD-48-C, Power Apartment,
Pitampura, Delhi – 110088
- 9. Shivam Projects & Infrastructure Structures Pvt. Ltd.**
606, Shiva Apartment, GH-6,
Sec-21-D, Faridabad
- 10. Vij Contracts Pvt. Ltd.**
313, Ansal Chambers, 6 Bhikaji
Cama place, New Delhi – 110066
- 11. Five Star Constructions Pvt. Ltd.**
T-725, Faiz Road, Karol bagh,
New Delhi
- 12. Era Infra Engineering Ltd.**
153, Leela Building, Okhla Industrial Estate,
Phase III, New Delhi – 110020
- 13. SRC Realtech Pvt. Ltd.**
SCO 24, Main Market, sec-11D,
Faridabad, Haryana.
- 14. RIA Constructions Ltd.**
SCO 176,1st Floor, Sec-5
Panchkula, Haryana
- 15. Anurag Enterprises**
111- H/1 Rakesh Marg,

Nehru Nagar, Ghaziabad, 201001

16. YRG Builtech Pvt. Ltd.

A-3/17, Janakpuri, New Delhi

17. N.M.Roof Designers Ltd.

C-41, TarunPath, opp T.Udyan,
Tilak Nagar, Jaipur

18. Rohit Contractors & Builders Pvt. Ltd.

Shop 120, Blk 4, Ganga shopping,
Comp., Sec-29, Noida

19. B.R.Kohli Buildtech

T-5, Kohli Plaza, plot no 5, LSC,
CU Blk, Pitampura, Delhi

20. S.B. Consultants Pvt. Ltd.

Contractors & Builders Supplier Agents

As per Tender Notice, Sealed Lump Sum Covered Area Rate Tenders are invited for Civil Works, Sewerage, Internal Plumbing, Water, Supply, Storm Water Drainage Work, Electrical Work & Development Work and common facilities of **M/s-Police Officers Multi-State Co-operative Housing Society Ltd.**, for construction of 616 Residential Apartments of Four categories and allied services and common facilities like, Community 'Centre, Shopping, 110 EWS flats, Primary and Nursery School, Electric Sub-Station, Stilted Areas, Podium, Basement and Development Works etc. at 11.3875 Acres of Land at Village Dabua and Nwada Koh, Sector 49, Faridabad, Haryana, from Pre-Qualified Experienced Contractors.

Tender Documents can be purchased from the office of the Architects on any working day between 11.00 A.M. & 5.00 P.M. on payment of Rs. 5000 (Five Thousand) (Non-Refundable) from Saturday, May 04, 2013. to Tuesday, May 07, 2013 (both days inclusive).

Sealed Tender shall be addressed to The Chairman Police Officers Multi-State Co-operative Housing Society Ltd., Office Complex, P.T.S., Malviya Nagar, New Delhi - 110017, along with Rs.25,00,000/- (Twenty Lac only) as Earnest Money in shape of Bank Draft / Pay order only in favour of Police Officers Multi-State Co-operative Housing Society Ltd., and shall be submitted at the Registered Office of the Society, Police Officers Multi-State Co-operative Housing Society Ltd., Office Complex, P.T.S., Malviya Nagar, New Delhi - 110017, between 4.00 P.M to 4.30 P.M. on Sunday, May 12, 2013. Tenders will be opened at 4.45 P.M. on the same day in presence of the Tenderers who choose to be present.

Upon receiving Pre-Qualification bids from the above mentioned vendors, 6 (Six) Pre-Qualified Contractors were selected out of total 20 (Twenty) Pre-Qualification bids were recommended by Architect on the basis of their capabilities of executing our Project, experience, project executed and completed, and projects under construction. Vendors qualified to submit their rate contracts are as follows:

1. N.G.Constructions

501, 5th Floor, Mangalam
Paradise, Plot No.8,
Mangalam Palace, Sec-3,
Rohini, Delhi- 110085.

2. Indsao Infratech

Flat-1B, DDA, SFS Housing,
Pocket - 1, Sec- 10, Dwarka,
Delhi – 110075

3. Shivam Projects & Infrastructure Structures Pvt. Ltd.

606, Shiva Apartment, GH-6,
Sec-21-D, Faridabad

4. Five Star Constructions Pvt. Ltd.

T-725, Faiz Road, Karol bagh,
New Delhi

5. YRG Builtech Pvt. Ltd.

A-3/17, Janakpuri, New Delhi

6. B.R.Kohli Buildtech

T-5, Kohli Plaza, plot no 5, LSC,
CU Blk, Pitampura, Delhi

On 12th May'13, Lump Sum Covered Area Rate Tenders Submitted for Civil Works, Sewerage, Internal Plumbing, Water, Supply, Storm Water Drainage Work, Electrical Work & Development Work and common facilities of **M/s-Police Officers Multi-State Co-operative Housing Society Ltd.**, for construction of 616 Residential Apartments of Four categories and allied services and common facilities like, Community 'Centre, Shopping, 110 EWS flats, Primary and Nursery School, Electric Sub-Station, Stilted Areas, Podium, Basement and Development Works etc., were opened and were as follows:

Vendors	N.G.Constructions	Indsao Infratechs	Shivam Proj. & Infr. Str.	Five Star Const. Pvt. Ltd.
Bid Price quoted	127,77,69,652/-	127,32,14,605/-	125,04,41,375/-	122,77,74,513/-
Vendor Position	L3	L2	L1	L4

Detailed Item wise Quotation of all the vendors are here as under:

S. No.		Std.		T-01 N.G.Costrutions	T-02 Indsao Infratechs	T-03 Shivam P. & Inf.Str.	T-04 Five Star Const.Pvt.Ltd.				
	Block - 1 & 2 - 168 DUs.	Qty	Unit	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount
	A Type Flat - 2 BHK Area including										
	circulation area on all floors i/c										
	circulation and common area.										
1	Rate for Building Work										
	Civil,Sanitary & Electrical Work	13,194	Sqmt	12,350/-	16,29,45,900/-	12,300/-	16,22,86,200/-	12,375/-	16,32,75,750/-	12,695/-	16,74,97,830/-
		1,41,967	Sqft	1,147.77		1,143.12		1,150.09		1,179.83	
2	Balcony Area	1,405	Sqmt	8,500/-	1,19,42,500/-	8,610/-	1,20,97,050/-	9,850/-	1,38,39,250/-	6,498/-	91,29,690/-
		15,118	Sqft	789.96		800.18		915.42		603.90	
3	Stilted Area	1,026	Sqmt	9,000/-	92,34,000/-	8,610/-	88,33,860/-	8,400/-	86,18,400/-	7,147/-	73,32,822/-
		11,040	Sqft	836.43		800.18		780.66		664.21	
4	Basement Area, Under Building	1,128	Sqmt	9,000/-	1,01,52,000/-	9,225/-	1,04,05,800/-	9,950/-	1,12,23,600/-	8,447/-	95,28,216/-
		12,137	Sqft	836.43		857.34		924.72		785.03	
	Total				19,42,74,400/-		19,36,22,910/-		19,69,57,000/-		19,34,88,558/-
	Block - 3, 4, 5, & 6 - 336 DUs.										
	B Type Flat - 3 BHK Area including										
	circulation area on all floors i/c										
	circulation and common area.										
5	Rate for Building Work										
	Civil, Sanitary & Electrical Work	35,442	Sqmt	12,350/-	43,77,08,700/-	12,300/-	43,59,36,600/-	12,375/-	43,85,94,750/-	12,695/-	44,99,36,190/-
		3,81,356	Sqft	1,147.77		1,143.12		1,150.09		1,179.83	
6	Balcony Area	3,435	Sqmt	8,500/-	2,91,97,500/-	8,610/-	2,95,75,350/-	9,850/-	3,38,34,750/-	6,498/-	2,23,20,630/-
		36,970	Sqft	789.96		800.18		915.42		603.90	
7	Stilted Area	2,744	Sqmt	9,000/-	2,46,96,000/-	8,610/-	2,36,25,840/-	8,400/-	2,30,49,600/-	7,147/-	1,96,11,368/-
		29,525	Sqft	836.43		800.18		780.66		664.21	
8	Basement Area, Under Building	3,017	Sqmt	9,000/-	2,71,53,000/-	9,225/-	2,78,31,825/-	9,950/-	3,00,19,150/-	8,447/-	2,54,84,599/-
		32,463	Sqft	836.43		857.34		924.72		785.03	
	Total				51,87,55,200/-		51,69,69,615/-		52,54,98,250/-		51,73,52,787/-
	Block - 7 - 56 DUs.										
	C Type Flat - 4 BHK Area including										
	circulation area on all floors i/c										
	circulation and common area.										
9	Rate for Building Work										
	Civil,Sanitary & Electrical Work	7,781	Sqmt	12,000/-	9,33,72,000/-	12,300/-	9,57,06,300/-	12,375/-	9,62,89,875/-	12,695/-	9,87,79,795/-
		83,724	Sqft	1,115.24		1,143.12		1,150.09		1,179.83	
10	Balcony Area	1,405	Sqmt	9,000/-	1,26,45,000/-	8,610/-	1,20,97,050/-	9,850/-	1,38,39,250/-	6,498/-	91,29,690/-
		15,118	Sqft	836.43		800.18		915.42		603.90	
11	Stilted Area	651	Sqmt	9,000/-	58,59,000/-	8,610/-	56,05,110/-	8,400/-	54,68,400/-	7,147/-	46,52,697/-
		7,005	Sqft	836.43		800.18		780.66		664.21	
12	Basement Area, Under Building	715	Sqmt	9,000/-	64,35,000/-	9,225/-	65,95,875/-	9,950/-	71,14,250/-	8,447/-	60,39,605/-
		7,693	Sqft	836.43		857.34		924.72		785.03	
	Total				11,83,11,000/-		12,00,04,335/-		12,27,11,775/-		11,86,01,787/-
	Block - 8 - 56 DUs.										
	D Type Flat -5 BHK Area including										
	circulation area on all floors i/c										
	circulation and common area.										
13	Rate for Building Work										
	Civil,Sanitary & Electrical Work	9,865	Sqmt	12,350/-	12,18,32,750/-	12,300/-	12,13,39,500/-	12,375/-	12,20,79,375/-	12,695/-	12,52,36,175/-
		1,06,147	Sqft	1,147.77		1,143.12		1,150.09		1,179.83	
14	Balcony Area	1,745	Sqmt	8,500/-	1,48,32,500/-	8,610/-	1,50,24,450/-	9,850/-	1,71,88,250/-	6,498/-	1,13,39,010/-
		18,776	Sqft	789.96		800.18		915.42		603.90	
15	Stilted Area	823	Sqmt	9,000/-	74,07,000/-	8,610/-	70,86,030/-	8,400/-	69,13,200/-	7,147/-	58,81,981/-
		8,855	Sqft	836.43		800.18		780.66		664.21	
16	Basement Area, Under Building	905	Sqmt	9,000/-	81,45,000/-	9,225/-	83,48,625/-	9,950/-	90,04,750/-	8,447/-	76,44,535/-
		9,738	Sqft	836.43		857.34		924.72		785.03	
	Total				15,22,17,250/-		15,17,98,605/-		15,51,85,575/-		15,01,01,701/-
	G. Total D.U.s				101,35,57,850/-		101,23,95,465/-		100,03,52,600/-		97,95,44,833/-
17	Basement Area i/c Covered Ramp	13,662	Sqmt	11,500/-	15,71,13,000/-	11,500/-	15,71,13,000/-	9,950/-	13,59,36,900/-	9,096/-	12,42,69,552/-
		1,47,003	Sqft	1,068.77		1,068.77		924.72		845.35	
18	Podium Area	2,388	Sqmt	9,000/-	2,14,92,000/-	8,850/-	2,11,33,800/-	8,950/-	2,13,72,600/-	7,147/-	1,70,67,036/-
		25,695	Sqft	836.43		822.49		831.78		664.21	
	Total				17,86,05,000/-		17,82,46,800/-		15,73,09,500/-		14,13,36,588/-
19	Area of Development Work	66,282	Sqmt	1,111/-	7,36,39,302/-	1,120/-	7,42,35,840/-	700/-	4,63,97,400/-	956/-	6,33,65,592/-
	616 Dus. Area	7,13,194	Sqft	103.25		104.08		65.05		88.84	
	Total				7,36,39,302/-		7,42,35,840/-		4,63,97,400/-		6,33,65,592/-
	Sub Total of 01+02+03				123,58,02,152/-	10	123,48,78,105/-		120,40,59,500/-		118,42,47,013/-

20	EWS Flats Area - 4 Floors	2,650	Sqmt	10,000/-	2,65,00,000/-	9,260/-	2,45,39,000/-	10,500/-	2,78,25,000/-	10,500/-	2,78,25,000/-
		28,514	Sqft	929.36		860.59		975.83		975.83	
21	ESS Area	240	Sqmt	12,000/-	28,80,000/-	9,500/-	22,80,000/-	9,000/-	21,60,000/-	9,500/-	22,80,000/-
		2,582	Sqft	1,115.24		882.89		836.43		882.89	
	Total				2,93,80,000/-		2,68,19,000/-		2,99,85,000/-		3,01,05,000/-
22	Shopping Area - 1 Floor	325	Sqmt	9,500/-	30,87,500/-	8,500/-	27,62,500/-	12,375/-	40,21,875/-	10,500/-	34,12,500/-
		3,497	Sqft	882.89		789.96		1,150.09		975.83	
23	Nursery Schools - 2nos. - 1 Floor	490	Sqmt	9,500/-	46,55,000/-	8,500/-	41,65,000/-	12,375/-	60,63,750/-	9,500/-	46,55,000/-
		5,272	Sqft	882.89		789.96		1,150.09		882.89	
24	Community Centre/Club Area-2Fl.	510	Sqmt	9,500/-	48,45,000/-	9,000/-	45,90,000/-	12,375/-	63,11,250/-	10,500/-	53,55,000/-
		5,488	Sqft	882.89		836.43		1,150.09		975.83	
	Total				1,25,87,500/-		1,15,17,500/-		1,63,96,875/-		1,34,22,500/-
	Grand Total				127,77,69,652/-		127,32,14,605/-		125,04,41,375/-		122,77,74,513/-

Post receiving Financial Bids from the above 4 vendors, POMCHS negotiated with M/s NG constructions only, there is no documentary evidence available for negotiation held with other vendors. Since M/s Shivam Projects and Infrastructure Structure Pvt. Ltd. was already a L1 vendor on the basis on intial submitted bids. Society has to negotiate with all the vendors who has submitted the financial bids.

Revised/Negotiated Tender Amount after Final Negotiation with NG Constructions dated 17th May'2013 was INR 119,68,96,492/- which makes N.G. Constructions as L1 Vendor and hence, contract has been awarded to them.

Vendor	Initial Quoted Price	Final Negotiated Price	Percentage of Rebate negotiated
N.G. Constructions	INR 127,77,69,652/-	INR 119,68,96,492/-	6.3292%

Detailed Description of per unit change post negotiation is here as under:

N.G.Costructions							
01.	Construction of Dwelling Unit of lump sum per Sq.mt. basis as per detailed specifications mentiond herein i/c cost of all Civil, Internal Plumbing,Water Supply & Storm Water Disposal & Electrical Works etc. complete for all Floors Basement + Stilted + Fourteen Floors floors plus Mumty and Machine room.						
	Block - 1 & 2 - 168 DUs.	Qty	Unit	Quoted Rate	Quoted Amount	Negotiated Rate	Negotiated Amount
	A Type Flat - 2 BHK Area including circulation area , on all floors i/c and common area.						
	1 Rate for Building Work Civil,Sanitary & Electrical Work	13194	Sqmt	12350	162945900	11856	156428064
	2 Balcony Area	1405	Sqmt	8500	1.19,42,500	8160	11464800
	3 Stilted Area	1026	Sqmt	9000	9234000	8000	8208000
	4 Basement Area, Under Building	1128	Sqmt	9000	10152000	8000	9024000
	Total				194274400		185124864
	Block - 3, 4, 5, & 6 - 336 DUs.						
	B Type Flat - 3 BHK Area including circulation area , on all floors i/c and common area.						
	5 Rate for Building Work Civil, Sanitary & Electrical Work	35442	Sqmt	12350	437708700	11856	420200352
	6 Balcony Area	3435	Sqmt	8500	29197500	8160	28029600
	7 Stilted Area	2744	Sqmt	9000	24696000	8000	21952000
	8 Basement Area, Under Building	3017	Sqmt	9000	27153000	8000	24136000
	Total				518755200		494317952
	Block - 7 - 56 DUs.						
	C Type Flat - 4 BHK Area including circulation area , on all floors i/c and common area.						
	Rate for Building Work Civil,Sanitary & Electrical Work	7781	Sqmt	12000	93372000	11856	92251536
	10 Balcony Area	1405	Sqmt	9000	12645000	8160	11464800
	11 Stilted Area	651	Sqmt	9000	5859000	8000	5208000
	12 Basement Area, Under Building	715	Sqmt	9000	6435000	8000	5720000
	Total				118311000		114644336
	Block - 8 - 56 DUs.						
	D Type Flat -5 BHK Area including circulation area , on all floors I/c and common area.						
	13 Rate for Building Work Civil,Sanitary & Electrical Work	9865	Sqmt	12350	121832750	11856	116959440
	14 Balcony Area	1745	Sqmt	8500	14832500	8160	14239200
	15 Stilted Area	823	Sqmt	9000	7407000	8000	6584000
	16 Basement Area, Under Building	905	Sqmt	9000	8145000	8000	7240000
	Total				152217250		145022640
	G. Total D.Us				983557850		939109792
02.	Construction of Basement area beyond Building Tower & Poudium area, lump sum per. Sq. ft. as per detailed specifications mentioned here i/c cost of all Civil,Sewerage Plumbing, Plumbing Water Supply and Storm Water Disposal and & Electrical works etc. complete.						
	17 Basement Area i/c Covered Ramp	13662	Sqmt	12 11500	157113000	10000	136620000
	18 Podium Area	2388	Sqmt	9000	21492000	7500	17910000
	Total				178605000		154530000

03		External Development Work - Lump sum per Sq. ft. basis as per detailed specifications mentioned herein i/c cost of all Civil, Sewerage, Plumbing, Water Supply & Storm Water Disposal, Electrical Work Lasndscaping i/c Open Ramp,excluding Sewerage treatment plant etc.						
	19	Area of Development Work	66282	Sqmt	1111	73639302	950	62967900
		Total				73639302		62967900
		Sub Total of 01+02+03				1235802152		1156607692
04		Construction of other Building area of lump sum per Sq.mt.basis as per detailed specifications mentiond herein i/c cost of all Civil, Int Plumbing,Water Supply & Storm Water Disposal & Electrical Work.						
	20	EWS Flats Area - 4 Floors	2650	Sqmt	10000	26500000	9600	25440000
	21	ESS Area	240	Sqmt	12000	2880000	11520	2764800
		Total				29380000		28204800
05		Construction of other Building area of lump sum per Sq.mt.basis as per detailed specifications mentiond herein i/c cost of all Civil, Int Plumbing,Water Supply & Storm Water Disposal & Electrical Work.						
	22	Shopping Area - 1 Floor	325	Sqmt	9500	3087500	9120	2964000
	23	Nursery Schools - 2nos. - 1 Floor	490	Sqmt	9500	4655000	9120	4468800
	24	Community Centre/Club Area-2Fl.	510	Sqmt	9500	4845000	9120	4651200
		Total				12587500		12084000
		Sub Total of 04+05				41967500		40288800
		Grand Total				1277769652		1196896492

C. Drawbacks in Vendor Selection Process:

1. **Lack of Documentation for Negotiations with Non-Selected Vendors in Vendor Selection Process:**

During our review of the vendor selection process conducted through the tendering procedure, we noted that no documented records were provided pertaining to the negotiation process with vendors other than the selected vendor (NG Constructions). The absence of such documentation limits the transparency and accountability of the vendor selection process and its associated negotiations this has resulted the following shortcomings:

- Without documented negotiations and evaluations of non-selected vendors, there is a risk that potentially beneficial alternatives may not have been thoroughly considered. This may resulted in missed opportunities for cost savings, quality improvement, or value-added services.

- The absence of documentation impedes the audit trail for vendor selection, making it challenging to assess whether the selection aligns with the Standardized procurement policies and guidelines.

2. Non-Compliance with Board of Directors' Decision Regarding Vendor Negotiations in Tender Process:

As per the standard procedure for award of contract it is mandatory to negotiate with the participated contractor and not on pick and choose basis. It appears that the favour was given to L3 who after negotiation become L1 from reducing his rate from 127,77,69,652/- to 119,68,96,492/- for detail refer table "Description of per unit change post negotiation" as attached above. Furthermore, as per Minutes of BOD meeting held on 17th May'13 attended by Sh. Dayanand (Chairman), Sh. O.P. Sagar (Director), Sh. Sachdev kr. Rana (Director), Sh. Ashok Kr. Sharma (Director), Sh. Virender Singh (Director), it had been agreed that the negotiation has to be done with lowest bidder, However, in the same meeting it has been quoted that after hectic negotiation price has been negotiated with L3 i.e., N G Constructions which is a non-compliance to BOD decision.

3. Non-Consideration of Pre-Qualification Bid by a Vendor in Vendor Selection Process Through Tender:

During our audit of the vendor selection process conducted through the tendering procedure, we observed a significant discrepancy involving the exclusion of a pre-qualification bid submitted by a vendor i.e., **M/s B R Goyal**. It is noted that no reasons have been provided for the non-consideration of this bid, which raises concerns about the transparency and fairness of the selection process.

Impact of such negligence may result in following:

- The lack of clarity regarding the non-consideration of a vendor's pre-qualification bid undermines the transparency and fairness of the vendor selection process. Without a clear rationale, it is difficult to ensure that all vendors were given equal opportunity to participate and compete.
- The non-consideration of a vendor's pre-qualification bid without providing reasons can be perceived as inequitable treatment.
- The vendor whose bid was excluded may have offered unique value propositions or competitive advantages that could have contributed to cost savings, improved quality, or innovative solutions. The failure to consider such bids could result in missed opportunities.

4. Non-Compliance with Document Requirements for Pre-Qualification Bid in Vendor Selection Process Through Tender:

During our audit of the vendor selection process conducted through the tendering procedure, we identified issue involving the non-compliance with document requirements for pre-qualification bid submitted by vendors. As per clause 4 of tender document in which

list of documents required was specified in which qualified vendors has to submit the bank statement of last 5 years supporting the turnover of the company. It has been noted that none of the vendor has submitted the bank statement and no reasons have been provided for not ensuring the submission of Bank Statements by Vendors evidencing there turnover as required by Point no. 4 of list of Documents at the time of submitting Pre-Qualification Bids. Despite of this fact, Management has ignored and not considered this non-compliance and proceeds with the vendor selection process without disqualify them.

List of documents vendors needs to be submitted for Pre-Qualification Bids are here as under.

List of Documents Required for Pre-Qualification Bid Submission:

- I. A list of large buildings of similar nature, completed by the Contractor, giving all detail as to their magnitude and cost, the time within which the works were completed along with names, addresses and telephone numbers of Architects and Owners of the executed projects.
- II. Details of present projects under construction, Detail of project, contract value, time period as per Tender, date of commencement of works and schedule date of completion
- III. List of total equipment, plant and machinery, shuttering scaffolding etc.
- IV. Turnover of Company for last five year supported by Bank statements etc.
- V. List of permanent Technical staff with their names, qualifications& experience.
- VI. Details of organization, If partnership concern, submit partnership Deed. If Private Limited, submit the Company memorandum with list of Directors and Managing Director.
- VII. Details of disputes, arbitrations etc. if you or your Organisation have entered into at any time
- VIII. Details of Registration with DDA/CPWD/MES/RAILWAYS/P&T/GDA/HUDA etc.

Also, Five Star Const. Pvt. Ltd didn't provide details of their Technical Staff and submitted details of Turnover for 3 Yrs only instead of 5 yrs.

D. Drawback in Contract Awarding:

During our audit of the vendor selection process conducted through the tendering procedure, we identified a significant concern regarding the awarding of a contract to a vendor (NG Constructions) that appears to be technically or financially unfit as per Vendor evaluation done by the third party i.e., M/s Anil K. Gupta & Associates. Despite of Key concerns highlighted by M/s Anil K Gupta in his evaluation report of NG constructions, the contract was awarded to them.

Key points highlighting the disqualification are as below:

- I. There is a huge reduction in capital of the firm to the tune of 23% and it seems that the contractor has not tied up any long-term funding arrangement with the financier also since there are insignificant long term funds.

- II. As per the Vendor Evaluation report issued by M/s Anil K Gupta It was suggested to raise additional capital or long-term funds by 10 crores.
- III. The contractor has manipulated the figure of Fixed Assets in the opening balance as on 01-04-2012 of balance dated 31-03-2013 by 76 lacs whereas a similar figure of 68 lacs were there in the current assets schedules of the contractor, Representative of the society should go in their office and check accounts of the contractor to arrive at correct Balance sheet and P& L A/c figure and also other manipulation if any can be brought to light
- IV. Contractor will be working with old and worn-out machinery which might delay the project due to frequent break down that may happen.
- V. It seems that the contractor is doing business with short term funds i.e. Current liabilities and working capital reduction also indicates that there has been reduction in order book of the contractor.
- VI. Since the contractor is working on other projects also. He should be asked to pump in enough working capital and long-term funds for construction equipment's as suggested above. His other projects in hand and pending should be duly vetted by the architect, engineers and audit team to evaluate the capacity of contractor to complete society's project.
- VII. A strange fact has come to the notice that despite decreasing turnover the wages has increased by 24%. If turnover has reduced and there is reduction of 56% in turnover tax then, presumably there should not be increment in wages or salary. Tender fees has also been decreased which shows that contractor has not got any new projects during the year.
- VIII. Contractor should be asked to explain formally or informally this fact keeping in mind factors of quality and timely delivery are not issues with current and past customers of the contractor.
- IX. Loans and advances seem diversion of funds to related parties or capital investments not related to trade.

Non-Discussion Vendor Evaluation Report of M/s Anil K Gupta in Board of Directors Meeting Prior to awarding contract to M/s NG Constructions:

During our audit of the vendor selection process conducted through the tendering procedure, we identified a significant lapse in governance regarding the awarding of a contract to a technically unfit vendor. The vendor evaluation report of M/s Anil K. Gupta & Associates indicating technical inadequacies was not discussed in a Board of Directors (BOD) meeting before the contract was awarded, raising concerns about Contract awarding process.

E. Scope and Important Terms and Conditions of the Contract:

Scope of Contract:

1. Project constitutes 616 Apartments of Four different Categories in 8 Blocks -Basement + Stilts + 14 floors + Mumty + Machine Room, Basement, Podium, 110 EWS Fiats, Nursery and School, Shopping. Community Centre/Club, Electric Sub-stations and External Development Work etc. The Owner in consultation with the Architect may divide the Work in 2 or 3 parts and have the absolute right to award the work to 2 or 3 different Contractors.
2. The Contractor shall carry out and complete the said work in every respect in accordance with this Contract, terms and conditions and to the entire satisfaction of the Architect and the Owner. The Architect may in their absolute discretion from time to time, issue further drawings, details and written instructions, directions and explanations to be carried out by the Contractor.
3. The Contract shall include all materials, Labour, tools, plants and transport which may be required for the full and entire execution and completion of the work and snail unless otherwise stated, including wastage of labour and materials, carriage and cartage carrying of empties, hoisting setting and fixing in position testing and commissioning of aforesaid work in accordance with good Engineering practice and recognized principles.
4. The Contractor shall provide everything necessary for proper execution of the work according to the intent and meaning of the specifications and drawings, taken together whether the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred there from and if the contractor finds any discrepancy in the specification and drawings, or between different drawings, he shall immediately refer the same to the Architect in writing, who shall decide which is to be allowed, subject to provision of clauses hereinafter.
5. The Contractor shall be deemed to have satisfied, himself as to location of the site location facilities. Access of site and all other matters affecting the execution and completion of the works. No extra charges consequent on misunderstanding or miscalculation or otherwise will be allowed.
6. The Contractor shall be deemed to have satisfied as to all matters affecting the full and entire execution and completion of the works.
7. The Owner and the Architect reserve full right to delete, add, alter or modify any item from schedule of quantities. The Contractor shall not claim any profits of any kind, which he may have presumed on such Items. The Owner will have full tight to execute any of such items from any other agency or Contractor at any stage during the execution of the project.

Date of Commencement and Completion:

The Contractor shall be allowed admittance to the site on Date of Commencement to be intimated in a work order issued by the Owner and shall there upon and forthwith being 'the works,' and shall regularly proceed with and complete the same on or before the Date of Completion, subject nevertheless, to the provision for extension of time contained hereinafter. Date of completion is the date for completion of the whole or any part of the works, set out in or ascertained in accordance with. The individual work order or the tender documents or any subsequent amendment there to, as provided in the conditions.

As per the letter no. POMCHS/1523 dated 18th Aug'2018, Completion date of Project inclusive of all the extension shall be 31st October'2018.

First extension was given on 14th May'16 for 12 months from Original Completion date i.e., 01st May'16 extended upto 30th Apr'17.

Second extension was given on 19th May'17 for 8 months, time extended upto 31st Dec'17.

Third & Final extension was given on 18th Aug'18 for 10 months, time extended upto 31st Oct'18.

Work Order to Commence the work:

On acceptance of the Contract, the work order shall be issued to the Contractor by the Owner to commence the work. The period of Contract shall be reckoned from the date of commencement specified in the work order. The site is deemed to be handed over to the Contractor for mobilization of his resources and commencing the physical execution of the work shown in the work order. The Contractor shall commence work as early as possible, but not later than 15 days from the date of commencement of the Contract shown in the work order.

CPM Chart for Execution of Work:

The Contractor shall submit, within one month of the acceptance of the Contract, a CPM chart to The Architect and the Owner, which shall indicate the planning for the execution of the entire work under the contract within the stipulated time given for completion. This shall be scrutinized by the Architect. The Contractor shall carry out changes only suggested by the Architect and the Owner before finalizing the CPM chart. The mutually agreed CPM chart shall binding on the progress of the work for completion by due date.

Subletting:

The whole of the works included in the Contract shall be executed by the Contractor and the Contractor shall not directly or indirectly transfer, assign or sublet the Contract or any part thereof or interest therein without the written consent of the Architect and the Owner, but no undertaking shall relieve the Contractor from the full and entire responsibility of the Contract or from active superintendence of the works during the progress.

Mandatory Requirement:

1. The Contractor shall conform to the provisions of any Act of the legislature relating to the works, and to the Regulations and Bye Laws of any authority, and of any water, lighting and other companies and/ or authorities with whose system the structure is proposed to be connected and shall, before making any variation from the drawings or specifications that may be necessitated by so conforming, give to the Architect and the Owner written notice, specifying the variation proposed to be made and the reason for making it, within 2 weeks,

and on receiving such instructions shall proceed with the work in question. Any variations so necessitated shall be dealt with under relevant clause.

2. The Contractor shall bring to the attention of the Owner and the Architect all notices required by the said Acts, regulations or by-laws to be given to any Public Office. All fees that may be properly chargeable in respect of such works shall be paid by the Contractor and he shall lodge the receipts with the Architect and the Owner, the amount shall be reimbursed by the Owner.

Indemnify the Owner:

1. The Contractor shall indemnify the Owner and representative or employee of the Owner against any action, claim or proceeding relating to the infringement or design rights or any alleged patent or design rights, shall defend all actions arising from such claims and himself pay any royalties, license fees, damages, cost of all and every sort of or other charges which may be payable in respect of any articles or material or part thereof legally incurred in respect thereof and included in the Contract. In the event of any claim being made or action being brought against the Owner or representative or employee of the Owner in respect of such matters aforesaid, the Contractor shall be immediately notified thereof. Provided that such indemnity shall not apply when such infringement has taken place in complying with the specific directions issued by the Owner but the Contractor shall pay any royalties or other charges payable in respect of any such use.
2. The Contractor shall indemnify the Owner against all claims which may be made upon the Owner under the Workmen's Compensation Act, Maximum wages Act, Contract labour (Regulations & Abolition) Act and such other legislations having a bearing on the work executed under the Contract or under common law in respect of any employee of the Contractor.
3. The Contractor shall also be responsible for all injury to persons, animals etc. which arise from the act of negligence of himself or his authorized representative or his employees, whether such injury or damages arise from carelessness, accident or any other cause whatsoever in any way connected with the carrying out this Contract. The Contractor shall indemnify the Owner and save him against any harm in respect of any expense arising from and. such injury or damage to persons, animals etc. and also in respect of any claim made in respect of injury or damage under any Acts of Government or otherwise and also in respect of any Award of compensation or damage consequent upon such claims.
4. The Contractor shall be responsible for all structural and decorative damage to any property which may arise from the act of neglect of himself or his authorized representative or his employees, arising out of neglect, carelessness, defective work or any other cause whatsoever in any way connected with the carrying out of this Contract. This clause shall be deemed to include any damage to the buildings whatsoever, immediately adjacent or otherwise, and any damage to roads streets, footpaths, bridges or ways as well as all damages caused to the building and works forming the subject of this Contract by inclemency of weather. The Contractor shall indemnify the Owner against all claim which may be made against the Owner by any member of the public or other third party in respect of anything which may arise in respect of the works or in consequence thereof, and in respect of any cost, charges/expense arising out of any claim or proceedings and also in respect of any award or compensation or damage arising thereafter and shall reinstate all

damage of every sort mentioned in this clause, so as to make good or otherwise satisfy all claim for damage to the property of third parties.

5. The Owner with the advice of the Architect shall be at liberty and is empowered to deduct the amount of any damage, compensation, cost, charges and expense arising or occurring from or in respect of any such above said clause or any damages which become due to the Contractor.

Labour:

1. The Contractor shall employ labour in sufficient number to maintain the required pace of constructions and progress & quality to ensure good workmanship and good engineering practice and quality required as per specifications and to the satisfaction of the Architect and the Owner.
2. The Contractor shall remain liable for the payment and shall pay all wages and other dues to his work people and employees
3. In respect of all labour directly or indirectly employed on the works for the performance on the Contractor's part of this agreement, the Contractor shall comply with or cause to be complied with a current labour regulations in regard to all matters provided therein and with all other labour laws as may be applicable. However, the contractor has not provided any records/ documents for payment of ESI & PF for deposit on behalf of the labour and the society being the principal employer will be responsible for payment of ESI & PF for workers deployed at site further no document has been provided for Labour insurance taken on behalf of worker whereas as per Clause 20 of Contract, *"Contractor All Risk Insurance cover shall be arranged by the contractor within one month of acceptance of tender. The insurance cover shall be for the total amount of the contract accepted and shall be for the total period of the contract i.e., completion period plus 12 months of defect liability period. All the expenditure for insurance cover shall be borne by the contractor. The insurance cover shall be in the name of owner."*
4. The Labour Regulations aforesaid shall be deemed to be part of the Contract and any breach thereof shall be a breach of this Contract.
5. The Contractor shall take all Permits/ Licenses and deposit such fees as may be necessary under the Contract Labour (Regulation & Abolition) Act and current Labour Regulation including deposition of money on behalf of the Owner, if required. The Contractor shall at all time keep the Owner indemnified against any action for breach of these Act and Regulations. The Contractor is being the Principal employer for the purpose of the Act and Regulations.
6. The Contractor shall during the progress of the works comply at his own expense with all the statutory rules and provisions for the protection of health and sanitary arrangements and safety provisions for the workers employed and shall at his own expense provide for all facilities.
7. The Contractor shall obtain a valid license under the Contract Labour (R & A) Act, 1970 and contract Labour (Regulation of Abolition) Central Rules 1971 before Commencement of work and continue to have valid license until the completion of work. The Contractor shall not employ any labour, below the age of 15 years for the work or as per current Labour Laws.
8. The Contractor shall pay to his labour, employed directly or indirectly by him, minimum wages as fixed under law by Labour Department of Government of Haryana. The Contractor shall have to submit complete details of labour payments to the Architect and the Owner, if asked for.

Testing of Materials:

1. The Architect and the Owner shall be entitled to have tests carried out as specified by IS for any materials procured by the Contractor, at the cost of the Contractor. The Contractor shall provide at his own expense, all facilities which the Architect and the Owner may require for this purpose. The cost of material consumed as well as the cost of testing from approved laboratory shall be borne by the Contractor. Water used for construction shall be tested, materials like Bricks, Fine Sand, Coarse Sand and Structural Concrete shall be tested at regular intervals. Copy of the test reports shall be submitted to the Architect and the Owner.
2. The Contractor shall provide basic testing equipment to check crushing strength of coarse blocks and Bricks etc.

Rejection of Materials:

The Architect and the Owner shall have absolute powers to reject or order removal of any or all the materials if brought to the site by the Contractor which is not in accordance with the Contract specifications or does not conform in character or quality to sample approved. In case of default on the part of the Contractor in removing rejected materials the Architect and the Owner shall be at liberty to have these materials removed by other means at the cost and risk of the Contractor. The Contractor shall bring material conforming to specifications and quality as per approval to substitute the rejected materials.

Material Supplied by Owner:

1. Cement and Steel - Tor/TMT will be supplied by the Owner free of cost at Site. The Owner shall have the right to procure any other material on behalf of the Contractor at his cost and risk, in case the Owner observes that progress is being hampered or slow due to non-availability of particular material or materials.
2. Consumption of materials shall be as per CPWD standards, Wastage/ Saving beyond following tolerable limits shall be recovered from the Contractor at Penal Rate to be decided by the Architect in consultation with the Owner. Wastage allowed on following material shall be:
 - a. Cement not more than 3%
 - b. Steel not more than 3%
 - c. Bricks not more than 5%

Contractor Supervision:

1. The Contractor shall give all necessary personal superintendence during the execution of the works and till expiry of Defect Liability period.
2. The Contractor shall employ qualified, experienced site supervision staff to supervise the Construction. Two Graduate Engineers shall be employed as his authorized representative to supervise the works and to receive instructions from the Architect and the Owner. The employment of engineers as aforesaid shall be subject to the approval from the Architect and the Owner who may verify his qualification and experience by referring original, degree, which shall be made available by the Contractor. The engineers employed shall make himself conversant with the Contract and the drawings.
3. If the Contractor fails to appoint suitable supervisory staff and Graduate Engineers, the Owner in consultation with the Architect, shall have full powers to suspend the execution of

works until such time, supervisory staff and Graduate Engineers are appointed and the Contractor shall be held responsible for the delay so caused to the works. If the contractor fails to employ supervisory staff and Graduate Engineers, the Owner shall have the discretion to appoint supervisory staff and Graduate Engineers and the cost the expense therefore, shall be recoverable from the Contractor bill.

4. Orders given to the Contractor or his authorized representative, who will be nominated by the Contractor before commencement of work shall be considered to have been given to the Contractor.
5. The Contractor or his authorized representative shall be in attendance at the site during full working hours and shall supervise the execution of the works with additional technical assistants as per requirement of the project to the satisfaction of the Architect and the Owner,
6. The Contractor or his authorized representative shall attend all meetings whenever required, without any payment for doing so, either at site or at the office of the Owner or at the office of the Architect to receive instructions from the Architect or the Owner.

Variation:

1. No alteration, omissions or variation shall vitiate this Contract but in case the Architect or the Owner think proper, at any time during the progress of the works, to make any alterations in or, omission from the works or any alterations in the Items, specifications or the quality of the material / materials, the Architect with the approval of the Owner, shall give notice, thereof in writing, well in advance under his hand, to the Contractor and the Contractor shall alter, add or omit as the case may be.
2. The Owner through the Architect reserves their right to add/delete/alter/withdraw any items or part of the item or to reduce or increase any quantity or area to any extent without any limitations. The Contractor shall execute the work items/area/quantity as per actual requirement of the works as per instructions of the Architect and the Owner. The Contractor will be bound to execute these items as per accepted and negotiated Contract Rates, no claims or damages or part of the profit which the Contractor might lose due to change in the quantities or area will be entertained by the Owner.

Defective Work:

1. The Architect shall during the progress of the works, have power to order in writing, from time to time for the removal and proper re-execution of any work executed with materials or workmanship not in accordance with the drawings and specifications or instructions, and the Contractor shall forthwith carry out such order at his own cost. In case of defaults on the part of the Contractor to carry out such order, the Architect and the Owner shall have the power to employ other agencies to carry out the same and all expense consequence thereon or incidental thereto as certified by the Architect shall be borne by the Contractor or may be deducted by the Owner from any money due or that may become due to the Contractor against this Contract.
2. The Contractor is responsible and shall ensure that there is no leakage or seepage in the roofs, ceilings, walls, or floors, or in the water supply, electrical or sewage system. Contractor shall re-do the complete stage of work to the satisfaction of the Architect and the Owner. If these defects are not rectified in reasonable time then the Owner shall be at a

liberty to recover an amount equivalent to the cost of redoing the complete stage of work, from any money or that may become due to the Contractor against this Contract.

Delay & Extensions:

If the work is delayed beyond the time stipulated for completion for reasons given below, then the Contractor shall immediately give a written notice thereof to the Owner through the Architect, but the Contractor shall nevertheless constantly use his endeavors to prevent delay and shall do all that may be reasonably required, to the satisfaction of the Architect, to proceed with the work. The Owner based on the recommendations of the Architect shall allow, in writing, fair and reasonable extension of time for completion of works. However any claim in this respect or compensation or otherwise arising as a result of extension granted above shall not be allowed or admitted:

1. By force majeure: or
2. By reason of any exceptional inclement weather: or
3. By reason of proceedings taken or attended by public authorities, arising otherwise than through the Contractor's own default: or
4. By the works or delay of other Contractors or tradesmen engaged by the Owner but not referred in the schedule of quantities or specification: or
5. By reason of civil commotion, strike or lock-out affecting any of the Building trades; or
6. In consequence of Contractor's not having received in due time necessary instructions from the Architect for which he shall have applied in writing.

Defect Liability Period:

1. Defects liability period shall be twelve calendar months after Virtual completion and handing over the Project, either in one part or two parts as decided by the Architect in consultation with the Owner. Any defect in material or workmanship observed in the entire execution of work or within defect liability period shall be notified in writing by the Architect to the Contractor and shall be rectified by him at his own cost within time as specified by the Architect.
2. To facilitate prompt attention to the defects, the Contractor shall employ a team of tradesmen like masons, painters, carpenters, plumbers, fitters, electrician, plumber and labour covering all traders along with necessary materials and spares. A team of supervisors will also be available along with the maintenance team to take instructions from the Architect. The maintenance team should be available throughout the defects liability period. The composition of the tradesmen will vary according to nature of recurring defects noticed in the buildings. The nature of their work being in the form of 'after sales services' and the defects rectified being such that they could have been executed properly in the first instance, no extra payment/claim shall be admissible on this account.
3. In case of default of Contractor in carrying out the rectifications as per clause 34.02 the Architect/ Owner may employ any other agency to rectify or make good such defects. All expenses consequent thereon or incidental thereto shall be borne by the Contractor and shall be recoverable from him by the Owner and shall be deducted from his bills or retention money or performance guarantee or from any other amount of the Contractor available with the Owner.

4. The Architect shall also certify at the end of the defects liability period regarding the state of rectifications carried out during defect liability period. The performance guarantee and balance amount of Retention Money shall be released subject to compliance of the contract and relevant conditions.

Compensation for Delay:

If the Contractor fails to complete the works by the date and within stipulated period stated in the relevant clause/ within extended time under the relevant clause, the Contractor shall pay as compensation of an amount equal to Rs. 10,000/- per day of delayed period subject to maximum of 10% of his total Contract Amount or any such other amount, the Architect may decide in consultation with the Owner.

Variation in Prices:

1. Variations in Price (Escalation) of Labour and Material will be allowed to the Contractor after one calendar year from actual start of work. Variations in Prices of Labour and Material will be allowed after one year with base Index at the time after one year of actual start of work. The Contractor will be compensated for increase or decrease in Labour & Material component as per following system and will be worked out on following provisions.

Escalation will be worked out on quarterly billing basis as follows:-

- a. The basic date for working out Labour and Material escalation shall be the date after one year from actual start of work.
- b. Cost element in work done on which the escalation will be payable shall be reckoned as 85% of the work done of tender items only as per the bills, running or final bill, and from this amount, value of the material supplied by the Owner shall be deducted before the compensation / escalation is worked out.

The Component of material and labour shall be 75% and 25% Escalation will be paid on quarterly billing basis.

- c. Labour Escalation shall be worked out as per formula given below:

$$VL = (W \times 25) / 100 \times (La - Lb) / Lb$$

VL = Variation in Labour cost (increase or decrease).

W = Value of the work done, worked out as indicated in sub-para (ii) above

La & Lb = Basic Minimum rate of unskilled & adult male labour fixed under law by Haryana Government

La = Basic Labour rate on the date of receiving the tender.

Lb = Basic Minimum rate on the date of commencement of the period of reckoning.

d. Material Escalation shall be worked out as per formula given below:

$$VM = (W \times 75) / 100 \times (Ma - Mb) / Mb$$

ML = Variation in Material cost (increase or decrease).

W = Value of the work done, worked out as indicated in sub-para (ii) above

Ma & Mb = All India Whole Sale Price Index published by Economic Advisor to Govt. of India, Ministry of Industry and Commerce.

Ma = All India Whole Sale Price Index at time of start of work.

Mb = Average arithmetical mean of All India Whole Sale Price Index for all the Commodities of relevant quarter (three months).

Termination of Contract:

1. The Owner without prejudice to any other right or remedy which shall have accrued or shall accrue thereafter, will have the right to terminate the Contract in part or whole in any of the following cases:-
2. If Contractor being an individual, or if a firm, any 'partner thereof shall at any time be adjudged insolvent or have received order or orders for administration of his estate made against him or shall take any proceedings for liquidation or composition under any Insolvency Act for the time being in force or made any conveyance or assignment of this effects of composition of any arrangement for the benefit of his creditor or purport to do so , or if any application made under any Insolvency Act for the time being in force for the sequestration of (confiscation) his estate or if a trust deed be granted by him for and on behalf of his creditors; or,
3. If the Contractor being a company shall pass a resolution or the court shall make an order for the liquidation of its affairs or a receiver or a manager on behalf the debenture holders

shall be appointed or circumstances shall arise which entitle the court or debenture holders to appoint a receiver or Manager, or,

4. If the Contractor assigns, transfers or sublets or attempt's to assign, transfer or sublet any portion of the works without the prior written approval of the Owner; or,
5. If the Contractor makes default in commencing the work within a reasonable time from the date of the handing over of the site and continue the default after reasonable notice from the Architect and the Owner: or,
6. In the opinion of the Owner / Architect at any time whether before or after the date or extended date for completion, makes default in proceeding with the works with due diligence and continues the default after reasonable notice from the Architect and the Owner: or,
7. If the Contractor fails to comply with any of the terms & conditions of the Contract, orders and directions issued by the Owner / Architect after reasonable notice in writing with directions properly issued there under: or,
8. If the Contractor fails to complete the works, work order and items of work with individual dates for completion and clear- the site on or before the date of completion/extended date of completion. Then the Owner shall be at liberty to terminate the contract subject to the following:
 - a. That the Owner gives two reasonable opportunities to the Contractor for taking down the joint measurements of the works so executed by the Contractor.
 - b. And after the above opportunity has not been availed by the Contractor, then the Owner in consultation with the' Architect shall be at liberty to take down the measurement of the work executed by the defaulting Contractor, which shall be final, binding and conclusive on the defaulting Contractor.
9. Whenever the Owner exercises his authority to terminate the Contract under the relevant clause he may complete the works by any means, at the Contractor's cost, risk and expense, provided always that, in the event of cost of completion after alternative arrangements have been finalized by the Owner to get the works completed or estimated cost of completion (as certified by the Architect) and approved by the Owner being less than the Contract cost, the advantage shall go to the Owner. If the cost of completion after the alternative arrangements have been .finalized by the Owner to get the work completed or estimated cost of completion (as certified by the Architect) and approved by the Owner exceeds the money due to the Contractor under this Contract, the contractor shall either pay the excess amount assessed by the Architect or the same shall be recovered from the Contractor by other source.
10. The Owner shall also be at liberty to use the Contractor's materials, tools & plant and other stores at site, as he thinks proper, in, completing the work and the Contractor will be allowed the necessary credit. The amount of credit to be allowed in completing the work shall be assessed by the Architect and approved by the Owner and the amount so assessed shall be final and binding.

Security Money/Retention Money:

1. The person(s) whose tender may be accepted (hereinafter called the Contractor) shall permit the Owner at the time of making any payment to him, for work done and measured under the Contract, to deduct a sum at the rate of 5% of gross value of the work done, subject to maximum limit, of total retention / security money i.e. Rs.50,00,000/- (50 lac only)

as mentioned in Invitation to Tender from each Running bill. Earnest Money of Rs.25 lac deposited at the time of tendering shall be treated as part of Security Money.

2. In case of approval of the Owner and Architect, Retention / Security Deposit can be in the form of FDR or Bank Guarantee pledged in the name of the Owner valid for full period of contract including defects liability period and such other extended period will not bear any interest at all. The Performa of the bank guarantee shall be approved by the Owner. The total Retention/Security deposit will be guarantee against the defects only in work and shall be returned to the Contractor, if he rectifies all defects pointed out, in two parts --.5Q% after six months and remaining 50% after twelve months after virtual completion and handing over project to Owner.

Income Tax Deduction at Source:

1. Income Tax Deduction at source @ 2% and surcharge (or at the rate modified in future by IT Dept.) on the Gross Work done and shall be deducted from the Contractor's Running Bills as per Income Tax Act.

VAT / SERVICE / WORKS CONTRACT/TURNOVER TAX:

VAT / Service Tax / Works Contract Tax /Turnover Tax applicable as on date or as modified in future by the relevant Govt. Departments shall be borne by the Owner.

Earnest Money:

1. Each tenderer shall furnish Earnest Money of Rs.25,00,000/- (Twenty Five Lac only) as specified under Invitation of Tenders by Bank Draft of Pay Order only, Valid for 90 days, pledged In the name of the Owner, Police Officers Multi-State Co-operative Housing Society Ltd. with the Tender. The Bank Draft/Pay order will be sent back to the unsuccessful tenderers after allotment of work. Tender without the Earnest Money shall not be considered at all. Earnest Money, shall become part of total Security / Retention Money.

Billing & Payments to Contractors:

1. The Contractor has to submit the Running Bill at the end of every month or construction stage as per schedule of payment supported by Measurement Books. The Contractor is required to submit details of measurements based on standard items executed during the period of billing along with the running bill, based on covered area.
2. No Adhoc payment would be made unless the bill submitted by the Contractor is duly supported by the Measurement Books and any other documents required.
3. The Contractor is entitled to Secured Advance against the finishing material procured by the Contractor with prior approval of the Architect and the Owner, upto 75% of the Cost of any materials as assessed and verified by the Architect, supported by the bills, amount not exceeding 75% of the material element cost in the tender rate of the finished item of the work, whichever is lower, which in the opinion of the Architect and Owner are non-perishable and in accordance with the contract and have been brought at site in connection

therein and are adequately stored and protected against damage by weather or other causes. When materials on account of which an advance has been made under this sub-clause are incorporated in the work, the amount of such advance shall be deducted from the next payment against R. Bill as per conditions of contract.

The Contractor is advised not to bring any finishing materials, for which secured advance is being paid, which cannot be consumed within a period of 3 months from their first payment in the running bills. If any materials on which the Secured Advance have been paid but not consumed or incorporated in the works after three months period, the amount so paid for the unconsumed materials shall be recovered from the Contractor next payment.

4. Part rates will be allowed for the items which are Incomplete and items which are subject to testing and commissioning. Part rate shall be decided by the Architect keeping in mind that the cost of incomplete part of each item.
5. The Contractor will submit theoretical consumption of cement and consumption of steel including wastage with each running bill along with each running bill. Wastage of steel and cement will be on the account of the Contractor. Wastage beyond the allowed limit of 3% will be charged on a penalty rate to be decided by the Architect.
6. Contractor shall not execute any extra item before approval of extra item by the Architect and the Owner. Extra items shall be paid to the Contractor only after the approval of rates of extra items by the Architect and the Owner.

As per Agreement dated 21st May'2013 executed between the Police Officer Multi-State Co-operative Housing Society and M/s NG Constructions it has been agreed that:

1. In consideration of the payments to be made to the Contractor as hereinafter provided, he shall upon and subject to the said conditions of Tender Documents, execute and complete the works shown upon the said drawings and further detailed drawings as may be furnished to him by the said Architects and described in the specifications, scope of work, Schedule of Quantities as given in the Tender Documents.
2. The Owner shall' pay the Contractor provisionally such sums as shall become payable hereunder at the times and in the manner specified in the said conditions of Tender Documents. All such progressive payments shall however be regarded as Advance payments for the purpose of the Contract.
3. The term "ARCHITECT" in the said conditions shall mean the said M/s Architects Forum or in the event of their ceasing to be Architects for the purpose of this Contract, any such other Architect, as shall be appointed for that purpose by the Owner, subsequently appointed Architects under this Contract shall not be entitled to disregard or over rule any decision or approval or direction given or expressed in writing by the previous Architect.
4. The Drawings, Agreement and documents above mentioned shall form the basis of Contract and the decision of the Owner on the advice of said Architects as mentioned
5. In the conditions of Contract in reference to all matters of disputes as to the material and Workmanship and as to the intended interpretation of the clauses of this Agreement or any other document attached hereto and detailed below shall be final, conclusive and binding under the law.
6. The said Contract comprises the building above mentioned and all subsidiary works connected therewith in the aforesaid buildings at the same site as may be ordered to be

done from time to time by the said Architects & the Owner for the time being even through such works may not be shown on the Drawings or described in the said Specifications of the priced Schedule of Quantities / Rates.

7. The Owner through the Architects reserves to himself the right to altering the Drawing and nature of the work by adding to or omitting any items of work or of having portions of the same carried out departmentally or otherwise and such alterations or variations shall be carried out without prejudice to this Contract.
8. The various conditions given in the tender and as modified subsequently shall be read and construed forming part of this Agreement and the parties hereto will respectively abide by and submit themselves to the conditions and stipulations and perform the agreement on their parts respectively in such conditions contained.
9. All disputes arising out of or in any way connected with this Agreement shall be deemed to have arisen in Faridabad, Haryana and only the Courts of Faridabad, Haryana shall have jurisdiction to determine the same.
10. In reference to the negotiations, following conditions are negotiated and accepted.
 - a. The Owner will provide all the documents and fee for Water and Electrical connections, the Contractor shall have to make arrangements of these connections. In case of any treatment plants for Water is require, cost of the plant shall be paid by the Owner and shall be maintained by the Contractor. Cost of tubue well at one point shall be borne by the Owner.
 - b. Labour cess shall be borne by the Owner.
 - c. 50% Security shall be released after 3 months after virtual completion and 25% shall be released after 6 months after virtual completion and balance 25% shall be released within 1 month after defect liability period as per Tender Conditions.
 - d. Payments against R. Bills shall be as per Tender Conditions.
 - e. Escalation shall be as per Tender Clause 36. Base index shall be date of the actual start of work
 - f. Mobilization Advance of 3500 Lac shall be given, subject to the availability of funds with the society, and shall be recovered from 2nd R. Bill in 24 equal monthly installments.

Schedule of Payment:

A. BUILDING WORK, COMMERCIAL, COMMUNITY CENTRE & BALCONY

1. Work complete upto DPC level (for all storeyes).	10 %
2. Work complete upto lintel level including lintels.	8 %
3. Work complete upto roof casting.	20 %
4. Completion of Brick Work.	6 %
5. Providing & fixing electric conduits in slab and fan boxes.	1.5%
6. Providing & fixing electrical T. V. telephone conduits in walls and fixing boxes in walls.	2 %
7. Railing in balconies and stairs.	2 %
8. Providing & fixing UPVC/CI pipes (internal & external) upto 1 st manhole.	2 %
9. Providing and fixing CPVC/GI pipes.	2.5%



10. Providing and fixing all door and window frames.	6 %
11. Completion of internal plaster.	5 %
12. Completion of external plaster.	6 %
13. Completion of floors and skirting.	6 %
14. Grinding and polishing of floors and dado.	1 %
15. Completion of ceramic tiles and kitchen counter marble slab with sink.	4 %
16. Completion of parapet walls and overhead tanks and Brick Coba.	2 %
17. Completion of electric wiring with switch and sockets etc.	2.5 %
18. Completion of DB with MCB, sub main wiring, meter board and earthing.	2 %
19. Completion of door and window shutters with fittings.	6 %
20. Completion of sanitary and water supply fittings and fixtures.	2.5 %
21. Painting of walls, ceiling, doors, window and railing etc. and repolishing of floors if required.	2 %
22. Testing of water line, sewer line and electric points etc.	0.5 %
23. At the time of handing over.	0.5 %
	<hr/> 100%

B. EXTERNAL DEVELOPMENT WORKS

1. Boundary walls i/c Guard room (Brick work and finishing).	25 %
2. Boundary walls railing and gates.	8 %
3. Underground water tank i/c pump house.	17 %
4. Roads and pavements.	10 %
5. External sewerage (pipe and fitting)	12 %
6. Completion of Manholes.	5 %
7. Water supply ring main & allied connections.	8 %
8. Under ground storm water Drainage.	7 %
9. External electrification (Fittings and Fixtures).	3 %
10. Plinth protection.	1 %
11. Horticulture.	2 %
12. Miscellaneous work.	1 %
13. Handing Over.	1 %
	<hr/> 100%

C. STILTED AREA

1. Work Complete upto DPC level.	25 %
2. ON completion upto roof level.	22 %
3. On casting of roof slab.	23 %
4. On completion of electric work.	10 %
5. On completion of flooring.	10 %
6. On completion of plastering painting and other miscellaneous work.	9 %
7. Completion and handing over.	1 %
	<hr/> 100%

D. PODIUM AREA

1. Work Complete upto DPC level.	25 %
2. ON completion upto roof level.	22 %
3. On casting of roof slab.	23 %
4. On completion of electric work.	10 %
5. On completion of flooring.	10 %
6. On completion of plastering painting and other miscellaneous work.	9 %
7. Completion and handing over	1 %
	<hr/> 100%

E. E.S.S AREA

1. Work Complete upto DPC level.	25 %
2. ON completion upto roof level.	22 %
3. On casting of roof slab.	23 %
4. On completion of electric work.	10 %



5. On completion of channels & flooring.	10 %
6. On completion of plastering painting and other miscellaneous work.	9 %
7. Completion and handing over	1 %
	----- 100%

F. BASEMENT WORK – under & beyond Tower Area

1. Work Complete upto DPC level.	25 %
2. ON completion upto roof level.	22 %
3. On casting of roof slab.	23 %
4. On completion of electric work.	10 %
5. On completion of flooring.	10 %
6. On completion of plastering painting and other miscellaneous work.	9 %
7. Completion and handing over	1 %
	----- 100%

Schedule of Quantity and Price Per Unit:

N.G.Costructions					
01.		Construction of Dwelling Unit of lump sum per Sq.mt. basis as per detailed specifications mentioned herein i/c cost of all Civil, Internal Plumbing, Water Supply & Storm Water Disposal & Electrical Works etc. complete for all Floors Basement + Stilted + Fourteen Floors floors plus Mumty and Machine room.			
		Block - 1 & 2 - 168 DUs.	Qty	Unit	Rate
		A Type Flat - 2 BHK Area including circulation area , on all floors i/c and common area.			Amount
	1	Rate for Building Work Civil, Sanitary & Electrical Work	13194	Sqmt	11856
					156428064
	2	Balcony Area	1405	Sqmt	8160
					11464800
	3	Stilted Area	1026	Sqmt	8000
					8208000
	4	Basement Area, Under Building	1128	Sqmt	8000
					9024000
		Total			185124864
		Block - 3, 4, 5, & 6 - 336 DUs.			

		B Type Flat - 3 BHK Area including circulation area , on all floors i/c and common area.				
	5	Rate for Building Work Civil, Sanitary & Electrical Work	35442	Sqmt	11856	420200352
	6	Balcony Area	3435	Sqmt	8160	28029600
	7	Stilted Area	2744	Sqmt	8000	21952000
	8	Basement Area, Under Building	3017	Sqmt	8000	24136000
		Total				494317952
		Block - 7 - 56 DUs.				
	9	C Type Flat - 4 BHK Area including circulation area , on all floors i/c and common area.				
		Rate for Building Work Civil,Sanitary & Electrical Work	7781	Sqmt	11856	92251536
	10	Balcony Area	1405	Sqmt	8160	11464800
	11	Stilted Area	651	Sqmt	8000	5208000
	12	Basement Area, Under Building	715	Sqmt	8000	5720000
		Total				114644336
		Block - 8 - 56 DUs.				
		D Type Flat -5 BHK Area including circulation area , on all floors I/c and common area.				
	13	Rate for Building Work Civil,Sanitary & Electrical Work	9865	Sqmt	11856	116959440
	14	Balcony Area	1745	Sqmt	8160	14239200
	15	Stilted Area	823	Sqmt	8000	6584000
	16	Basement Area, Under Building	905	Sqmt	8000	7240000
		Total				145022640
		G. Total D.U.s				939109792
02.		Construction of Basement area beyond Building Tower & Poudium area, lump sum per. Sq. ft. as per detailed specifications mentioned here i/c cost of all Civil,Sewerage Plumbing, Plumbing Water Supply and Storm Water Disposal and & Electrical works etc. complete.				
	17	Basement Area i/c Covered Ramp	13662	Sqmt	10000	136620000
	18	Podium Area	2388	Sqmt	7500	17910000
		Total				154530000

03		External Development Work - Lump sum per Sq. ft. basis as per detailed specifications mentioned herein i/c cost of all Civil, Sewerage, Plumbing, Water Supply & Storm Water Disposal, Electrical Work Landscaping i/c Open Ramp, excluding Sewerage treatment plant etc.				
	19	Area of Development Work	66282	Sqmt	950	62967900
		Total				62967900
		Sub Total of 01+02+03				1156607692
04		Construction of other Building area of lump sum per Sq.mt.basis as per detailed specifications mentioned herein i/c cost of all Civil, Int Plumbing, Water Supply & Storm Water Disposal & Electrical Work.				
	20	EWS Flats Area - 4 Floors	2650	Sqmt	9600	25440000
	21	ESS Area	240	Sqmt	11520	2764800
		Total				28204800
05		Construction of other Building area of lump sum per Sq.mt.basis as per detailed specifications mentioned herein i/c cost of all Civil, Int Plumbing, Water Supply & Storm Water Disposal & Electrical Work.				
	22	Shopping Area - 1 Floor	325	Sqmt	9120	2964000
	23	Nursery Schools - 2nos. - 1 Floor	490	Sqmt	9120	4468800
	24	Community Centre/Club Area-2Fl.	510	Sqmt	9120	4651200
		Total				12084000
		Sub Total of 04+05				40288800
		Grand Total				1196896492

F. Observations:

1. Extra payment of 2.26 Cr for additional area charged by the vendor in running bills:

NG Construction has charged 2,26,95,275 Cr extra in their running bills for the area constructed. Vendor has charged and paid for 56876 Sq Mtr area for 6 towers mentioned below while as per Occupation certificate dated 11-12-2019 issued by Office of District Town planner Faridabad, the total area constructed is 54960.81 in these 6 towers. This is subject to investigation the roll of Architect and method applied by them to measure and approve the running bills of the vendor wherein the area charged is higher than the actually built.

Type	Tower	Area measure by DTPC	Area charged by NG Construction	Excess Area Claimed (Sq. Mtr)	Excess Amount paid
5 BHK	A	10282.14	10433.36	151.23	17,92,922
3 BHK	C	36784.73	38181.36	1396.63	1,65,58,422
	D				
	E				
	F				
3 BHK	G	7893.95	8260.34	366.39	43,43,932
Total					2,26,95,275
Rate	11856/Sq Mtr				

2. Excess payment of 2.39 Crore of Service Tax on Free of Charge (FOC) Material (Cement and Steel) provided by the society.

During the period April 2013 till June 2017, NG construction has charged the service tax on FOC material provided by the society.

Society has provided Cement and steel of amounting INR 46.31 Cr to NG Constructions on which NG has asked to pay the service tax of 2.39 Cr. in various trenches on FOC material which was ultimately paid to the NG constructions as per their demands which is not required to be paid as per relevant provisions of the service tax Act.

As per pronouncement of larger bench of CESTAT dated 06-09-2013 in case of M/s Bhayana Builders Pvt Ltd. V. Commissioner of Service Tax Delhi Service tax is not required to be paid on Material provided by the Service Recipient Free of charge.

“As per The value of goods and material supplied free of cost by a service recipient to the provider of the taxable construction service, being neither monetary or non-monetary consideration paid by or flowing from the service recipient, accruing to the benefit of service provider, would be outside the taxable value or the gross amount charged, within the meaning of later expression in section 67 of the Finance Act 1994 and value of free supplies by service recipient do not comprise the gross amount charged under notification No. 15/2004 ST including the explanation thereto as introduced by notification no. 4/2005 ST”Extract

The above decision was also affirmed by the Honorable supreme court of India vide its decision order dated 19th Feb 2018.

Summary of service tax charged by NG construction on FOC material

Sr. No.	Period	Taxable Value	Service Tax	Interest/Penalty	Amount Paid
1	01/04/2017 to 30/06/2017	2,09,81,298	12,58,878	-	12,58,878
2	01/01/2017 to 31/03/2017	1,38,74,676	8,32,481	-	8,32,481
3	01/10/2016 to 31/12/2016	61,41,366	3,68,482	-	3,68,482
4	01/07/2016 to 30/09/2016	89,16,934	5,35,016	-	5,35,016
5	01/04/2016 to 30/06/2016	1,76,80,468	10,38,424	-	10,38,424
6	01/01/2016 to 31/03/2016	1,10,11,267	6,38,653	-	6,38,653
7	01/10/2015 to 31/12/2015	1,13,49,364	6,46,256	-	6,46,256
8	01/07/2015 to 30/09/2015	1,93,31,509	10,82,565	-	10,82,565
9	01/04/2015 to 30/06/2015	3,36,56,073	17,41,688	-	17,41,688
10	01/01/2015 to 31/03/2015	5,96,05,388	29,46,890	-	29,46,890
11	01/10/2014 to 31/12/2014	7,50,76,577	37,11,786	-	37,11,786
12	01/07/2014 to 30/09/2014	5,66,05,468	27,98,574	-	27,98,574
13	01/04/2014 to 30/06/2014	6,88,01,853	34,01,564	6,710	34,08,274
14	01/01/2014 to 31/03/2014	4,32,20,120	21,36,803	-	20,80,306
15	01/01/2014 to 31/03/2014		56497	223	56,720
16	01/10/2013 to 31/12/2013	1,26,04,803	6,23,181	10016	6,51,693
17	01/07/2013 to 30/09/2013	31,51,697	1,55,820	1,287	1,38,611
18	01/04/2013 to 30/06/2013	11,74,643	58,074	401	58,475
TOTAL		46,31,83,504	2,40,31,632	18,637	2,39,93,772

Since NG has taken the amount of 2.39 Cr on account of Service tax on FOC material from the society the same needs to be investigated whether the same amount was being actually deposited by the NG construction to the Service tax department against the gross amount charged for FOC material from the society or was used to discharge its own service tax liability.

We further suggest to issue an intimation letter to the concerned service tax department to further investigate the matter in case vendor has charged the service tax on FOC material and adjusted the same against its own service tax liability.

3. Excess Payment of 2.90 Cr for constructing Boundary wall at 11.38 Acre and 7 Acre of land.

As per clause 11.01 of the contract. NG construction has to build the boundary wall along with providing and fixing 600 to 900 mm high boundary wall railing with frame of 25*25*6 mm MS angle frame with vertical & Horizontal members.

During our review we noted that NG construction in its running bills has charged an amount of 3.84 Cr for constructing the boundary wall and railing at 11.38 Acre and 7 Acre of land as below.

Description	RA bills	Area (Sq. Mtr)	Rate	% Work	Amount
Boundry wall	65	79136	950	25%	1,87,95,016
Railing and Gate	65	79136	950	25%	60,14,405
Extra for 7 acre land	65			100%	1,36,45,182
Total					3,84,54,603

However, On the basis of physical verification and measurement by the site engineer during our review period, It was found that actual boundary wall constructed was 9901.7 Sq Mtr. for which the total amount comes to 94.06 Lacs with the agreed contract rate of 950 per Sq Mtr. Which results excess payment of INR 2.30 Crore to the vendor for construction of boundary wall.

Type of Land	Length Constructed (Sq. Mtr)	Height (Sq. Mtr)	Total Build Boundary wall	Rate/Sq. Mtr	Cost of Boundry wall	Actually paid	Excess Payment
11.38 Acre Land	1038.47						
7 Acre Land	941.87						
	1980.34	5	9901.7	950	94,06,615	3,24,40,198	2,30,33,583

Also, Vendor has charged additional 60.14 lacs for railing and gate in its running bills while as per the contract clause 11.01 the same was included in the contract value of 950/- Sq Mtr.

Thus, overall excess payment of INR 2.90 Crores was made to NG construction for construction of boundary wall and railings.

Further it is prominent to mention that vendor was charging the construction of boundry wall in External development work on 18.75 acre of land till its 61st running bill dated 11-11-2020 when the complete construction of the society was already being done. Also, in general as well boundary wall construction is the first step to develop any housing society.

4. Lack of Clarity in Work Order Resulting in Varied Excavation Rates for the Same Land:

During our audit of the construction project executed by Society, a discrepancy was identified pertaining to the excavation work carried out on the same land parcel. The absence of clarity in the work order has led to different contractors executing excavation activities at varying rates, resulting in cost disparities and potential financial implications.

Contractor charged INR 3.37 crores in the name of excavation which could have been reduced if a firm rate was applied or a separate contract was made for Excavation, Excavation rates charged on same land Parcel is as follows:

Description of Area	Description of work	Rate per Sq. mtr. (INR)
Main Building	Excavation	11856
Balcony	Excavation	8160
Stilted	Excavation	8000
Basement	Excavation	8000

2. Excess Area Claimed Leading to Excessive Cash Outflow Compared to Work Order area:

During our audit of the Running Bills claimed by vendor, a significant discrepancy was identified regarding the claimed area in comparison to the area specified in the Contract. It is observed that an excess area has been claimed, resulting in an **unnecessary outflow of cash by INR 16,92,97,430.94/-** that exceeds the intended scope of the contract.

Unit wise detail of Excess Area claimed resulting in excess outflow of cash mentioned as under:

Type of Flat	Main Building					Excess Area Claimed	Rate per Sqm	Excess Amount Claimed
	DU planned	DU made	Std. Area for planned DU	Std. Area for Actual DU	Actual Area			
2 BHK	168	168	13194	13194	14068.488	-874.488	11856	-1,03,67,929.73
3 BHK	336	408	35442	43036.71429	46441.704	-3404.989714	11856	-4,03,69,558.05
4 BHK	56	56	7781	7781	8193.36	-412.36	11856	-48,88,940.16
5 BHK	56	56	9865	9865	10433.36	-568.36	11856	-67,38,476.16
Excess claimed								
								-6,23,64,904.10
Type of Flat	Balcony Area					Excess Area Claimed	Rate per Sqm	Excess Amount Claimed
	DU planned	DU made	Std. Area for planned DU	Std. Area for Actual DU	Actual Area			
2 BHK	168	168	1405	1405	1818.768	-413.768	8160	-33,76,346.88
3 BHK	336	408	3435	4171.071429	6092.664	-1921.592571	8160	-1,56,80,195.38
4 BHK	56	56	1405	1405	1616.72	-211.72	8160	-17,27,635.20
5 BHK	56	56	1745	1745	1865.136	-120.136	8160	-9,80,309.76
Excess claimed								
								-2,17,64,487.22
Type of Flat	Stilted Area					Excess Area Claimed	Rate per Sqm	Excess Amount Claimed
	DU planned	DU made	Std. Area for planned DU	Std. Area for Actual DU	Actual Area			
2 BHK	168	168	1026	1026	1109.64	-83.64	8000	-6,69,120.00
3 BHK	336	408	2744	3332	3798.336	-466.336	8000	-37,30,688.00
4 BHK	56	56	651	651	690.144	-39.144	8000	-3,13,152.00
5 BHK	56	56	823	823	868.28	-45.28	8000	-3,62,240.00
Excess claimed								
								-50,75,200.00
Type of Flat	Basement Area					Excess Area Claimed	Rate per Sqm	Excess Amount Claimed
	DU planned	DU made	Std. Area for planned DU	Std. Area for Actual DU	Actual Area			
2 BHK	168	168	1128	1128	1109.64	18.36	8000	1,46,880.00
3 BHK	336	408	3017	3663.5	3798.336	-134.836	8000	-10,78,688.00
4 BHK	56	56	715	715	690.144	24.856	8000	1,98,848.00
5 BHK	56	56	905	905	868.28	36.72	8000	2,93,760.00
Excess claimed								
								-4,39,200.00
TOTAL EXCESS AMOUNT CLAIMED for DU								
								-8,96,43,791.32
Type of Flat	Non-Tower		Excess Area Claimed	Rate per Sqm	Excess Amount Claimed			
	Contract Area	Actual Area						
Basement beyond Building	13662	19178.3308	-5516.3308	10000	-5,51,63,308.00			
Type of Flat	Main Building					Excess Area Claimed	Rate per Sqm	Excess Amount Claimed
	DU planned	DU made	Std. Area for planned DU	Std. Area for Actual DU	Actual Area			
EWS	110	122	2650	2939.090909	3356.22	-417.1290909	9600	-40,04,439.27
Type of Flat	External Development works		Excess Area Claimed	Rate per Sqm	Excess Amount Claimed			
	Contract Area	Actual Area						
External Development works for 11 acres	66282	79136.91	-12854.91	950	-1,22,12,164.50			
Type of Flat	Shopping Complex		Excess Area Claimed	Rate per Sqm	Excess Amount Claimed			
	Contract Area	Actual Area						
Shopping Complex	325	384.69	-59.69	9120	-5,44,372.80			
Type of Flat	Community Centre		Excess Area Claimed	Rate per Sqm	Excess Amount Claimed			
	Contract Area	Actual Area						
Community Centre	510	1357.52	-847.517	9120	-77,29,355.04			
TOTAL EXCESS AMOUNT CLAIMED FOR CONTRACT ITEMS					-16,92,97,430.94			

Impact of negligence result in following:

- Financial Discrepancy:** The excess area claimed beyond the scope of the Contract has led to an unnecessary and inflated cash outflow of INR 16.92 crores. This financial discrepancy adversely affects cost control efforts and impacts overall budget alignment.
- Misallocation of Resources:** The divergence between claimed area and contract area might result in misallocation of resources, including labour, materials, and equipment. This inefficiency further compounds the financial impact and affects project delivery timelines.

- c. **Reconciliation and Vendor Relations:** Excessive cash outflow due to the incorrect area claimed instigate complex financial reconciliations and settlements. Additionally, it may strain vendor relations with the society

3. Reduction in Substation Room Size Possibly to Offset Excess Area in Dwelling Units:

During our audit of the construction project executed by M/s NG Constructions, we have identified a potential discrepancy involving the size of the substation room. There are indications that the size of the substation room may have been reduced, possibly as an attempt to compensate for the excess area in dwelling units compared to the specifications agreed upon in the contract. This raises concerns about the integrity of contractual compliance and the adequacy of essential infrastructure.

Reduction in size of Electrical Sub Station room is here as under:

Type of Flat	ESS		Short Area made (in Sq. mm)
	Contract Area	Actual Area	
Electric Sub Station	240	126.37	113.625593

Impact of negligence result in following:

- a. **Infrastructure Adequacy:** A reduction in the size of the substation room may impact the adequate provision of essential infrastructure required for power distribution and management. A smaller substation room may compromise safety, efficiency, and the long-term functionality of the electrical system.
 - b. **Contractual Breach:** The reduction in the substation room size constitutes a breach of the contractual agreement. Such deviations undermine the trust and credibility of the contract between Police Officer Multi State Co-operative Housing Society and M/s NG Constructions.
- ### 4. Claiming Non-Contract Items Without any Contract, Leading to Excessive Cash Outflow to Contractor:

During our audit of the, a significant irregularity has come to our attention regarding the claiming of non-contract items by the contractor. It is noted that these claims involve items not explicitly covered in the original contract, and no separate contractual arrangement has been executed for these additional items. This has led to an **excessive outflow of cash by INR 1,89,25,810.37/- to the contractor.**

Detail of claimed additional items is here as under:

Particulars	Area	Rate Claimed	Similar Activity	Rate claimed for Similar Activity	Amount claimed
Society Office	94.78	11856	DU's Main Building	11856	11,23,711.68
HT Panel Room	43.27	11520	Electric Substation	11520	4,98,470.40
Electrical room under basement	183.37	3520	Not Available	Not Available	6,45,462.40
RO Room	69	8000	Building's Stilted and Basement under building	8000	5,52,000.00
Sewage Treatment Plant	213.6271	11520	Electric Substation	11520	24,60,984.19
External development work for 7 Acres	NA				1,36,45,181.70
TOTAL					1,89,25,810.37

5. Excess Provision of Cement Bags to Contractor Resulting in Excessive Cash Outflow:

During our review, a significant discrepancy has been identified concerning the provision of cement bags to the contractor. It is noted that as per Technical Forensic Report submitted by Mr. Vijay Pushkarna *"Slurry for mobilizing concrete pump (16 Bags for every operation). This amounts to providing cement to the contracting agency to keep his plant in running condition. There is no precedence or no industrial practice to provide anything to the contracting agency to maintain or keep his plant and machinery updated. This remains responsibility of the contractor to maintain his tools, plants, machinery, etc."* adding to it *"Thus no cement is required to be issued to the contracting agency for any work which is of temporary in nature. Hence, 32000 bags of cement issued to contracting agency for "slurry or any other temporary works" should have been avoided"*, excess 32,000 cement bags have been provided beyond the actual requirement specified in the contract. This has resulted in an **unnecessary outflow of cash by INR 81,92,744.49/-**, raising concerns about prudent resource management and cost control.

Detail of Excess amount paid is mentioned in bellow attached annexure:

Total Cement Bags Purchased	Total Cost paid by Society	Average Rate of 1 cement bag	Cost for 32000 cement bag
7,39,189.00	18,92,49,581.50	256.0232654	81,92,744.49

6. Excess Provision of Steel to Contractor Resulting in Excessive Cash Outflow:

During our review, a significant discrepancy has been identified concerning the provision of quantity of steel bars used by the contractor. It is noted that as per Technical Forensic Report submitted by Mr. Vijay Pushkarna, *"In the case of this project, the grades of concrete used were M-25 and M-35. M-35 being high grade concrete, lesser quantity of steel needs to be used. Whereas steel consumption recorded at site is 1 kg/sqft. higher than the industry practice. Hence, excess consumption of steel to the tune of 1 kg/Sqft. gives a smell of en-cashing the quantity at a later date while using 5.5 kg/Sqft. actually."*, This has resulted in an **unnecessary outflow of cash by INR 9,31,41,098.63/-** on account of excess consumption of steel at site by 1 kg/sqft.

Detail of Excess amount paid is mentioned in bellow attached annexure:

Type of Flat	Main Building						Excess Steel used (1kg/sqft)	Avg. Rate per kg of steel	Excess Amount paid
	DU planned	DU made	Std. Area for planned DU	Std. Area for Actual DU	Actual Area (in Sqmtr)	Actual Area (in Sqft)			
2 BHK	168	168	13194	13194	14068.488	151431.9444	151431.9444	41.85	63,37,426.87
3 BHK	336	408	35442	43036.71429	46441.704	499894.3411	499894.3411	41.85	2,09,20,578.18
4 BHK	56	56	7781	7781	8193.36	88192.593	88192.593	41.85	36,90,860.02
5 BHK	56	56	9865	9865	10433.36	112303.7523	112303.7523	41.85	46,99,912.03
Excess claimed									3,56,48,777.10
Type of Flat	Balcony Area						Excess Steel used (1kg/sqft)	Avg. Rate per kg of steel	Excess Amount paid
	DU planned	DU made	Std. Area for planned DU	Std. Area for Actual DU	Actual Area (in Sqmtr)	Actual Area (in Sqft)			
2 BHK	168	168	1405	1405	1818.768	19577.05581	19577.05581	41.85	8,19,299.79
3 BHK	336	408	3435	4171.071429	6092.664	65580.88945	65580.88945	41.85	27,44,560.22
4 BHK	56	56	1405	1405	1616.72	17402.22924	17402.22924	41.85	7,28,283.29
5 BHK	56	56	1745	1745	1865.136	20076.15681	20076.15681	41.85	8,40,187.16
Excess claimed									51,32,330.47
Type of Flat	Stilted Area						Excess Steel used (1kg/sqft)	Avg. Rate per kg of steel	Excess Amount paid
	DU planned	DU made	Std. Area for planned DU	Std. Area for Actual DU	Actual Area (in Sqmtr)	Actual Area (in Sqft)			
2 BHK	168	168	1026	1026	1109.64	11944.06555	11944.06555	41.85	4,99,859.14
3 BHK	336	408	2744	3332	3798.336	40884.94841	40884.94841	41.85	17,11,035.09
4 BHK	56	56	651	651	690.144	7428.648186	7428.648186	41.85	3,10,888.93
5 BHK	56	56	823	823	868.28	9346.088131	9346.088131	41.85	3,91,133.79
Excess claimed									29,12,916.95
Type of Flat	Basement Area						Excess Steel used (1kg/sqft)	Avg. Rate per kg of steel	Excess Amount paid
	DU planned	DU made	Std. Area for planned DU	Std. Area for Actual DU	Actual Area (in Sqmtr)	Actual Area (in Sqft)			
2 BHK	168	168	1128	1128	1109.64	11944.06555	11944.06555	41.85	4,99,859.14
3 BHK	336	408	3017	3663.5	3798.336	40884.94841	40884.94841	41.85	17,11,035.09
4 BHK	56	56	715	715	690.144	7428.648186	7428.648186	41.85	3,10,888.93
5 BHK	56	56	905	905	868.28	9346.088131	9346.088131	41.85	3,91,133.79
Excess claimed									29,12,916.95
TOTAL EXCESS AMOUNT CLAIMED for DU									4,66,06,941.47
Type of Flat	Non-Tower		Actual Area (in Sqft)	Excess Steel used (1kg/sqft)	Avg. Rate per kg of steel	Excess Amount paid			
	Contract Area	Actual Area (in Sqmtr)							
Basement beyond Building	13662	19178.3308	205958.0909	205958.0909	41.85	86,19,346.11			
Type of Flat	Main Building						Excess Steel used (1kg/sqft)	Avg. Rate per kg of steel	Excess Amount paid
	DU planned	DU made	Std. Area for planned DU	Std. Area for Actual DU	Actual Area (in Sqmtr)	Actual Area (in Sqft)			
EWS	110	122	2650	2939.090909	3356.22	36042.79596	36042.79596	41.85	15,08,391.01
Type of Flat	External Development works		Actual Area (in Sqft)	Excess Steel used (1kg/sqft)	Avg. Rate per kg of steel	Excess Amount paid			
	Contract Area	Actual Area (in Sqmtr)							
External Development works for 11 acres	66282	79136.91	849859.5146	849859.5146	41.85	3,55,66,620.69			
Type of Flat	Shopping Complex		Actual Area (in Sqft)	Excess Steel used (1kg/sqft)	Avg. Rate per kg of steel	Excess Amount paid			
	Contract Area	Actual Area (in Sqmtr)							
Shopping Complex	325	384.69	4131.225956	4131.225956	41.85	1,72,891.81			
Type of Flat	Community Centre		Actual Area (in Sqft)	Excess Steel used (1kg/sqft)	Avg. Rate per kg of steel	Excess Amount paid			
	Contract Area	Actual Area (in Sqmtr)							
Community Centre	510	1357.52	14578.51638	14578.51638	41.85	6,10,110.91			
Type of Flat	ESS		Actual Area (in Sqft)	Excess Steel used (1kg/sqft)	Avg. Rate per kg of steel	Excess Amount paid			
	Contract Area	Actual Area (in Sqmtr)							
Electric Sub Station	240	126.37	1357.147912	1357.147912	41.85	56,796.64			
TOTAL EXCESS AMOUNT CLAIMED FOR CONTRACT ITEMS						9,31,41,098.63			

7. Excess amount charged by Contractor:

During our review a discrepancy has been noted where the Contractor has charged INR 15,00,000 and INR 7,00,000 on account of Horticulture and Miscellaneous work respectively, whereas it has been communicated to us by the society that no work regarding Horticulture

was undertaken or Performed by the Contractor but the amount has been certified by Site Engineer and Architect, similarly no detail regarding the Miscellaneous work was also available in society records.

8. Absence of Test Reports for Civil Work

During our audit of the civil construction work, it has come to our attention that test reports for the civil work have not been provided or documented. The absence of these critical test reports raises concerns about the quality, safety, and compliance of the constructed infrastructure.

Impact of such negligence may result in following:

- a. **Quality Assurance:** The absence of documented test reports undermines the ability to verify the quality of the civil work, leaving doubts about the structural integrity, durability, and adherence to industry standards.
- b. **Safety Implications:** The lack of documented test reports can pose safety risks to residents and occupants of the housing society. Without proper testing, there may be hidden defects or weaknesses in the construction that could compromise safety.
- c. **Compliance Concerns:** The absence of test reports may indicate a lack of adherence to regulatory requirements and industry best practices, which can lead to legal and regulatory implications.

9. Penalty to be Imposed on NG Constructions for delay in work:

As per Clause 35 "Compensation for Delay" of Contract, "*The contractor shall pay as compensation of an amount equal to INR 10,000 per day of delayed period subject to maximum of 10% of contract value*", As per the letter no. POMCHS/1523 dated 18th Aug'2018, Completion date of Project inclusive of all the extension shall be 31st October'2018 but the contractor failed to comply with the deadline provided to him in consequence to that Contractor is bound to **pay for Liquidated damages that amounts to INR 1,73,50,000/-** , refer below attached annexure for details:

Deadline for Completion	Penalty calculated upto	Delay in no. of Days	Penalty per day	Penalty Amount
31-10-2018	01-08-2023	1735	10000	1,73,50,000.00

10. Discrepancy in Work Certification by Site Engineer and Architect in Running Bills:

During our review of running bills approved by Site Engineer and Architect, various instances have been noticed where a discrepancy has been identified concerning the certification of work completed in running bills. It is observed that there was inconsistency between the work certifications provided by the site engineer and the architect in two perpetual Running bills as work certified in one running bill alters to uncertified in its successor running bill. Such discrepancies raise concerns about the accuracy of progress assessment, financial reporting, and potential misrepresentations.

Some of the Instances highlighting such discrepancies are below:

Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (Sq.m) to be	Total Area (Sq.m)	Rate per Sq. mtr. (INR)	Total %age	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks	
NG Constructions	Haryana	Civil	Invoice	External	External	Boundary wall / I/c guard room	Brick work and Finishing	13-10-2014	RA-12	-	-	-	67321	950	25	23	21	21	1,40,70,089.00	1,34,30,539.50	1,34,30,539.50	6,64,005.87						1,40,94,546.37			
NG Constructions	Haryana	Civil	Invoice	External	External	Boundary wall / I/c guard room	Brick work and Finishing	09-11-2014	RA-13	-	-	-	67321	950	25	23	21	21	1,40,70,089.00	1,34,30,539.50	1,37,90,990.00	6,32,386.55						1,34,23,376.55			
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (Sq.m) to be	Total Area (Sq.m)	Rate per Sq. mtr. (INR)	Total %age	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks	
NG Constructions	Haryana	Civil	Invoice	5/8	Basement under Building	Completion of Electrical work	Completion of Electrical work	03-11-2014	RA-13	84	8.83	741.72	741.58	8000	10	5	5	5	2,96,632.00	2,96,632.00	2,96,632.00	14,665.49						3,11,297.49			
NG Constructions	Haryana	Civil	Invoice	5/8	Basement under Building	Completion of Electrical work	Completion of Electrical work	20-11-2014	RA-14	84	8.83	741.72	741.58	8000	10	5	5	5	2,96,632.00	2,97,305.60	2,97,305.60	11,732.39						2,49,037.99			
NG Constructions	Haryana	Civil	Invoice	4/8	Basement under Building	Completion of Electrical work	Completion of Electrical work	03-11-2014	RA-13	84	8.83	741.72	741.58	8000	10	5	5	5	2,96,632.00	2,96,632.00	2,96,632.00	14,665.49						3,11,297.49			
NG Constructions	Haryana	Civil	Invoice	4/8	Basement under Building	Completion of Electrical work	Completion of Electrical work	20-11-2014	RA-14	84	8.83	741.72	741.58	8000	10	5	5	5	2,96,632.00	2,97,305.60	2,97,305.60	11,732.39						2,49,037.99			
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (Sq.m) to be	Total Area (Sq.m)	Rate per Sq. mtr. (INR)	Total %age	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks	
NG Constructions	Haryana	Civil	Invoice	Boundary wall / I/c guard room	Brick work and Finishing	09-11-2014	RA-13	-	-	-	-	67321	950	25	23	21	21	1,40,70,089.00	1,34,30,539.50	1,37,90,990.00	6,32,386.55						1,34,23,376.55				
NG Constructions	Haryana	Civil	Invoice	Boundary wall / I/c guard room	Brick work and Finishing	20-11-2014	RA-14	-	-	-	-	67321	950	25	23	21	21	1,40,70,089.00	1,27,90,990.00	1,27,90,990.00	6,32,386.55						1,34,23,376.55				
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (Sq.m) to be	Total Area (Sq.m)	Rate per Sq. mtr. (INR)	Total %age	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks	
NG Constructions	Haryana	Civil	Invoice	6/8	Main Building	P/Fixing Upvc/C Internal & External upto 1st M/H	P/Fixing Upvc/C Internal & External upto 1st M/H	20-11-2014	RA-14	2	108.57	217.14	217.14	1856	2	2	1	1.5	1.5	51,488.24	38,616.38	38,616.38	1,909.18						40,525.36		
NG Constructions	Haryana	Civil	Invoice	6/8	Main Building	P/Fixing Upvc/C Internal & External upto 1st M/H	P/Fixing Upvc/C Internal & External upto 1st M/H	08-12-2014	RA-15	2	108.57	217.14	217.14	1856	2	2	1	1	1	51,488.24	25,744.12	25,744.12	1,277.79						27,016.91		
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (Sq.m) to be	Total Area (Sq.m)	Rate per Sq. mtr. (INR)	Total %age	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks	
NG Constructions	Haryana	Civil	Invoice	6/8	Balcony	P/Fixing Upvc/C Internal & External upto 1st M/H	P/Fixing Upvc/C Internal & External upto 1st M/H	20-11-2014	RA-14	2	15.08	30.06	30.06	8160	2	2	1	1.5	1.5	4,904.16	3,678.12	3,678.12	181.85						3,859.97		
NG Constructions	Haryana	Civil	Invoice	6/8	Balcony	P/Fixing Upvc/C Internal & External upto 1st M/H	P/Fixing Upvc/C Internal & External upto 1st M/H	08-12-2014	RA-15	2	15.08	30.06	30.06	8160	2	2	1	1	1	4,904.16	2,452.08	2,452.08	121.23						2,573.31		
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (Sq.m) to be	Total Area (Sq.m)	Rate per Sq. mtr. (INR)	Total %age	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks	
NG Constructions	Haryana	Civil	Invoice	1/4 BHK	Main Building	P/Fixing Upvc/C Internal & External upto 1st M/H	P/Fixing Upvc/C Internal & External upto 1st M/H	20-11-2014	RA-14	1	138.95	138.95	138.95	1856	2	2	1	1.5	1.5	32,947.82	24,710.87	24,710.87	1,221.71						25,932.57		
NG Constructions	Haryana	Civil	Invoice	1/4 BHK	Main Building	P/Fixing Upvc/C Internal & External upto 1st M/H	P/Fixing Upvc/C Internal & External upto 1st M/H	08-12-2014	RA-15	1	138.95	138.95	138.95	1856	2	2	1	1	1	32,947.82	16,473.91	16,473.91	814.47						17,288.38		
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (Sq.m) to be	Total Area (Sq.m)	Rate per Sq. mtr. (INR)	Total %age	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks	
NG Constructions	Haryana	Civil	Invoice	1/4 BHK	Balcony	P/Fixing Upvc/C Internal & External upto 1st M/H	P/Fixing Upvc/C Internal & External upto 1st M/H	20-11-2014	RA-14	1	25.09	25.09	25.09	8160	2	2	1	1.5	1.5	4,094.69	3,071.02	3,071.02	151.83						3,222.85		
NG Constructions	Haryana	Civil	Invoice	1/4 BHK	Balcony	P/Fixing Upvc/C Internal & External upto 1st M/H	P/Fixing Upvc/C Internal & External upto 1st M/H	08-12-2014	RA-15	1	25.09	25.09	25.09	8160	2	2	1	1	1	4,094.69	2,047.34	2,047.34	101.22						2,148.56		
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (Sq.m) to be	Total Area (Sq.m)	Rate per Sq. mtr. (INR)	Total %age	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks	
NG Constructions	Haryana	Civil	Invoice	2/5 BHK	Main Building	P/Fixing Upvc/C Internal & External upto 1st M/H	P/Fixing Upvc/C Internal & External upto 1st M/H	20-11-2014	RA-14	1	176.16	176.16	176.16	1856	2	2	1	1.5	1.5	41,771.06	31,328.29	31,328.29	1,548.87						32,877.17		
NG Constructions	Haryana	Civil	Invoice	2/5 BHK	Main Building	P/Fixing Upvc/C Internal & External upto 1st M/H	P/Fixing Upvc/C Internal & External upto 1st M/H	08-12-2014	RA-15	1	176.16	176.16	176.16	1856	2	2	1	1	1	41,771.06	20,885.53	20,885.53	1,052.58						21,918.11		
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (Sq.m) to be	Total Area (Sq.m)	Rate per Sq. mtr. (INR)	Total %age	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks	
NG Constructions	Haryana	Civil	Invoice	2/5 BHK	Balcony	P/Fixing Upvc/C Internal & External upto 1st M/H	P/Fixing Upvc/C Internal & External upto 1st M/H	20-11-2014	RA-14	1	31.16	31.16	31.16	8160	2	2	1	1.5	1.5	5,085.31	3,813.98	3,813.98	188.56						4,002.55		
NG Constructions	Haryana	Civil	Invoice	2/5 BHK	Balcony	P/Fixing Upvc/C Internal & External upto 1st M/H	P/Fixing Upvc/C Internal & External upto 1st M/H	08-12-2014	RA-15	1	31.16	31.16	31.16	8160	2	2	1	1	1	5,085.31	2,542.66	2,542.66	125.71						2,688.36		
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (Sq.m) to be	Total Area (Sq.m)	Rate per Sq. mtr. (INR)	Total %age	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks	
NG Constructions	Haryana	Civil	Invoice	13/2 BHK	Main Building	P/Fixing Upvc/C Internal & External upto 1st M/H	P/Fixing Upvc/C Internal & External upto 1st M/H	20-11-2014	RA-14	1	78.54	78.54	78.54	1856	2	2	1	1.5	1.5	18,623.40	13,967.55	13,967.55	690.56						14,658.11		
NG Constructions	Haryana	Civil	Invoice	13/2 BHK	Main Building	P/Fixing Upvc/C Internal & External upto 1st M/H	P/Fixing Upvc/C Internal & External upto 1st M/H	08-12-2014	RA-15	1	78.54	78.54	78.54	1856	2	2	1	1	1	18,623.40	9,311.70	9,311.70	460.37						9,772.07		
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (Sq.m) to be	Total Area (Sq.m)	Rate per Sq. mtr. (INR)	Total %age	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks	
NG Constructions	Haryana	Civil	Invoice	13/2 BHK	Balcony	P/Fixing Upvc/C Internal & External upto 1st M/H	P/Fixing Upvc/C Internal & External upto 1st M/H	20-11-2014	RA-14	1	8.36	8.36	8.36	8160	2	2	1	1.5	1.5	1,364.35	1,023.26	1,023.26	50.59						1,073.85		
NG Constructions	Haryana	Civil	Invoice	13/2 BHK	Balcony	P/Fixing Upvc/C Internal & External upto 1st M/H	P/Fixing Upvc/C Internal & External upto 1st M/H	08-12-2014	RA-15	1	8.36	8.36	8.36	8160	2	2	1	1	1	1,364.35	682.18	682.18	33.73						715.90		
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (Sq.m) to be	Total Area (Sq.m)	Rate per Sq. mtr. (INR)	Total %age	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks	
NG Constructions	Haryana	Civil	Invoice	6/8	Main Building	P/Fixing Cpvc/G Pipes	P/Fixing Cpvc/G Pipes	04-02-2015	RA-18	30	108.738	3263.34	3263.34	1856	2.5	2.5	2	2	2	9,67,431.82	7,73,945.45	7,73,9									

Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	BILL No.	Total No of Flat	Area per Flat	Total Area (\$qm) to be	Total Area (\$qm)	Rate per Sq mtr (INR)	Total vsg	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Moh. Adv. Made	Recovery of Moh. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks
NG Constructions	Haryana	Civil	Invoice	6/B	Balcony		Completion of Sanitary and Water Supply Fitting & Fixtures	04-02-2015 RA-18		2	15.036	30.07	30.07	8060	2.5	2.5	2	2	6,134.69	4,907.75	4,907.75	242.64						5,150.39		
NG Constructions	Haryana	Civil	Invoice	6/B	Balcony		Completion of Sanitary and Water Supply Fitting & Fixtures	02-03-2015 RA-19		2	15.036	30.07	30.07	8060	2.5	2.5	1.5	1.5	6,134.69	3,680.81	3,680.81	181.98						3,862.79		
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	BILL No.	Total No of Flat	Area per Flat	Total Area (\$qm) to be	Total Area (\$qm)	Rate per Sq mtr (INR)	Total vsg	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Moh. Adv. Made	Recovery of Moh. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks
NG Constructions	Haryana	Civil	Invoice	5/B	Main Building		P/Fixing Cpvc/GI Pipes	04-02-2015 RA-18		27	108.759	2937.55	2937.55	10856	2.5	2.5	2	2	8,70,686.63	6,96,550.91	6,96,550.91	34,437.48						7,30,988.38		
NG Constructions	Haryana	Civil	Invoice	5/B	Main Building		P/Fixing Cpvc/GI Pipes	02-03-2015 RA-19		27	108.759	2937.55	2937.55	10856	2.5	2.5	1.5	1.5	8,70,686.63	5,22,413.18	5,22,413.18	25,828.11						5,48,241.29		
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	BILL No.	Total No of Flat	Area per Flat	Total Area (\$qm) to be	Total Area (\$qm)	Rate per Sq mtr (INR)	Total vsg	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Moh. Adv. Made	Recovery of Moh. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks
NG Constructions	Haryana	Civil	Invoice	5/B	Balcony		P/Fixing Cpvc/GI Pipes	04-02-2015 RA-18		27	15.036	405.972	405.972	8060	2.5	2.5	2	2	82,838.29	66,254.63	66,254.63	3,275.63						89,530.26		
NG Constructions	Haryana	Civil	Invoice	5/B	Balcony		P/Fixing Cpvc/GI Pipes	02-03-2015 RA-19		27	15.036	405.972	405.972	8060	2.5	2.5	1.5	1.5	82,838.29	49,690.97	49,690.97	2,456.72						52,147.69		
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	BILL No.	Total No of Flat	Area per Flat	Total Area (\$qm) to be	Total Area (\$qm)	Rate per Sq mtr (INR)	Total vsg	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Moh. Adv. Made	Recovery of Moh. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks
NG Constructions	Haryana	Civil	Invoice	4/B	Main Building		P/Fixing Cpvc/GI Pipes	04-02-2015 RA-18		14	108.759	1523.17	1523.17	10856	2.5	2.5	2	2	4,51,468.18	3,61,174.54	3,61,174.54	17,856.47						3,79,031.01		
NG Constructions	Haryana	Civil	Invoice	4/B	Main Building		P/Fixing Cpvc/GI Pipes	02-03-2015 RA-19		14	108.759	1523.17	1523.17	10856	2.5	2.5	1.5	1.5	4,51,468.18	2,70,880.91	2,70,880.91	13,392.55						2,84,273.26		
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	BILL No.	Total No of Flat	Area per Flat	Total Area (\$qm) to be	Total Area (\$qm)	Rate per Sq mtr (INR)	Total vsg	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Moh. Adv. Made	Recovery of Moh. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks
NG Constructions	Haryana	Civil	Invoice	4/B	Balcony		P/Fixing Cpvc/GI Pipes	04-02-2015 RA-18		14	15.036	210.56	210.56	8060	2.5	2.5	2	2	42,942.82	34,354.25	34,354.25	1,698.47						36,052.73		
NG Constructions	Haryana	Civil	Invoice	4/B	Balcony		P/Fixing Cpvc/GI Pipes	02-03-2015 RA-19		14	15.036	210.56	210.56	8060	2.5	2.5	1.5	1.5	42,942.82	25,765.69	25,765.69	1,273.86						27,038.55		
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	BILL No.	Total No of Flat	Area per Flat	Total Area (\$qm) to be	Total Area (\$qm)	Rate per Sq mtr (INR)	Total vsg	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Moh. Adv. Made	Recovery of Moh. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks
NG Constructions	Haryana	Civil	Invoice	3/B	Main Building		P/Fixing Cpvc/GI Pipes	04-02-2015 RA-18		18	108.759	1958.36	1958.36	10856	2.5	2.5	2	2	5,80,459.09	4,64,367.37	4,64,367.37	22,958.32						4,87,325.59		
NG Constructions	Haryana	Civil	Invoice	3/B	Main Building		P/Fixing Cpvc/GI Pipes	02-03-2015 RA-19		18	108.759	1958.36	1958.36	10856	2.5	2.5	1.5	1.5	5,80,459.09	3,48,275.45	3,48,275.45	17,218.74						3,65,494.19		
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	BILL No.	Total No of Flat	Area per Flat	Total Area (\$qm) to be	Total Area (\$qm)	Rate per Sq mtr (INR)	Total vsg	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Moh. Adv. Made	Recovery of Moh. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks
NG Constructions	Haryana	Civil	Invoice	3/B	Balcony		P/Fixing Cpvc/GI Pipes	04-02-2015 RA-18		18	15.036	270.648	270.65	8060	2.5	2.5	2	2	55,212.19	44,369.75	44,369.75	2,183.75						46,353.51		
NG Constructions	Haryana	Civil	Invoice	3/B	Balcony		P/Fixing Cpvc/GI Pipes	02-03-2015 RA-19		18	15.036	270.648	270.65	8060	2.5	2.5	1.5	1.5	55,212.19	33,127.32	33,127.32	1,637.81						34,785.13		
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	BILL No.	Total No of Flat	Area per Flat	Total Area (\$qm) to be	Total Area (\$qm)	Rate per Sq mtr (INR)	Total vsg	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Moh. Adv. Made	Recovery of Moh. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks
NG Constructions	Haryana	Civil	Invoice	1/4 BHK	Main Building		P/Fixing Cpvc/GI Pipes	04-02-2015 RA-18		1	141.947	141.95	141.95	10856	2	2	2	2	42,073.09	33,658.47	33,658.47	1,664.07						35,322.55		
NG Constructions	Haryana	Civil	Invoice	1/4 BHK	Main Building		P/Fixing Cpvc/GI Pipes	02-03-2015 RA-19		1	141.947	141.95	141.95	10856	2	2	1.5	1.5	42,073.09	25,243.85	25,243.85	1,248.06						26,491.91		
Vendor name	State	Nature	Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	BILL No.	Total No of Flat	Area per Flat	Total Area (\$qm) to be	Total Area (\$qm)	Rate per Sq mtr (INR)	Total vsg	%age claimed by NG	%age certified by Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Moh. Adv. Made	Recovery of Moh. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposits d by Society	Remarks
NG Constructions	Haryana	Civil	Invoice	1/4 BHK	Main Building		Completion of DB & MCB, Sub Main Wiring, Meter Board and Earthing	04-02-2015 RA-18		1	141.947	141.95	141.95	10856	2	2	1.5	1.5	33,658.47	25,243.85	25,243.85	1,248.06						26,491.91		
NG Constructions	Haryana	Civil	Invoice	1/4 BHK	Main Building		Completion of DB & MCB, Sub Main Wiring, Meter Board and Earthing	02-03-2015 RA-19		1	141.947	141.95	141.95	10856	2	2	1	1	33,658.47	16,829.24	16,829.24	832.04						17,661.27		

11. Non-Adherence to Payment Terms Through Unauthorized Partial Payments:

During our review of the financial transactions, it has been identified that partial payments have been made to the vendor that do not align with the specified payment terms. These partial payments have been made despite the absence of any contractual provision allowing for such partial payments. For Eg: As per my payment terms for Building work first 10% would be released when work for all storeys would be completed upto DPC level but it has been noted that partial payments were being made to vendor time to time for any part of work done by him even for 1% work as well.

Payment Schedule which was agreed between the POMSCHS and Contractor is as follows:

A. BUILDING WORK, COMMERCIAL COMMUNITY CENTRE & BALCONY

1. Work complete upto DPC level (for all storeyes).	10 %
2. Work complete upto lintel level including lintels.	8 %
3. Work complete upto roof casting.	20 %
4. Completion of Brick Work.	6 %
5. Providing & fixing electric conduits in slab and fan boxes.	1.5%
6. Providing & fixing electrical T. V. telephone conduits in walls and fixing boxes in walls.	2 %
7. Railing in balconies and stairs.	2 %
8. Providing & fixing UPVC/CI pipes (internal & external) upto 1 st manhole.	2 %
9. Providing and fixing CPVC/GI pipes.	2.5%
10. Providing and fixing all door and window frames.	6 %
11. Completion of internal plaster.	5 %
12. Completion of external plaster.	6 %
13. Completion of floors and skirting.	6 %
14. Grinding and polishing of floors and dado.	1 %
15. Completion of ceramic tiles and kitchen counter marble slab with sink.	4 %
16. Completion of parapet walls and overhead tanks and Brick Cobs.	2 %
17. Completion of electric wiring with switch and sockets etc.	2.5%
18. Completion of DB with MCB, sub main wiring, meter board and earthing.	2 %
19. Completion of door and window shutters with fittings.	6 %
20. Completion of sanitary and water supply fittings and fixtures.	2.5%
21. Painting of walls, ceiling, doors, window and railing etc. and repolishing of floors if required.	2 %
22. Testing of water line, sewer line and electric points etc.	0.5 %
23. At the time of handing over.	0.5 %
	—— 100%



B. EXTERNAL DEVELOPMENT WORKS

1. Boundary walls i/c Guard room (Brick work and finishing).	25 %
2. Boundary walls railing and gates.	8 %
3. Underground water tank i/c pump house.	17 %
4. Roads and pavements.	10 %
5. External sewerage (pipe and fitting)	12 %
6. Completion of Manholes.	5 %
7. Water supply ring main & allied connections.	8 %
8. Under ground storm water Drainage.	7 %
9. External electrification (Fittings and Fixtures).	3 %
10. Plinth protection.	1 %
11. Horticulture.	2 %
12. Miscellaneous work.	1 %
13. Handing Over.	1 %
	100%

C. STILTED AREA

1. Work Complete upto DPC level.	25 %
2. ON completion upto roof level.	22 %
3. On casting of roof slab.	23 %
4. On completion of electric work.	10 %
5. On completion of flooring.	10 %
6. On completion of plastering painting and other miscellaneous work.	9 %
7. Completion and handing over.	1 %
	100%

D. PODIUM AREA

1. Work Complete upto DPC level.	25 %
2. ON completion upto roof level.	22 %
3. On casting of roof slab.	23 %
4. On completion of electric work.	10 %
5. On completion of flooring.	10 %
6. On completion of plastering painting and other miscellaneous work.	9 %
7. Completion and handing over	1 %

100%

E. E.S.S AREA

1. Work Complete upto DPC level.	25 %
2. ON completion upto roof level.	22 %
3. On casting of roof slab.	23 %
4. On completion of electric work.	10 %
5. On completion of channels & flooring.	10 %
6. On completion of plastering painting and other miscellaneous work.	9 %
7. Completion and handing over	1 %

100%

F. BASEMENT WORK – under & beyond Tower Area

1. Work Complete upto DPC level.	25 %
2. ON completion upto roof level.	22 %
3. On casting of roof slab.	23 %
4. On completion of electric work.	10 %
5. On completion of flooring.	10 %
6. On completion of plastering painting and other miscellaneous work.	9 %
7. Completion and handing over	1 %
	100%

12. Unauthorized Alteration of Escalation Formula Leading to Excessive Price Claim:

During our audit of the contract between POMSCHS and M/s NG Constructions for development of group housing society, we have identified a significant discrepancy concerning the escalation in price claimed by the contractor. It has come to our attention that the contractor has altered the escalation formula mentioned in the contract, as per the escalation formula mentioned in the contract while calculating escalation of material and labour the dividing factor in the formula is Basic Labour Rate on the date of commencement of period of reckoning & Average of All India wholesale Price Index for all the commodities of relevant quarter for calculating escalation for Labour and Material respectively whereas while calculating the same by contractor same has been changed to Basic Labour Rate on the date of receiving of tender & All India wholesale Price Index at start of work for calculating escalation for Labour and Material respectively, resulting in an excessive claim for price escalation and **excessive cash outflow of INR 2,95,86,295.34/-**.

Escalation formula mentioned in contract is as below:

For Labour Escalation:

$$VL = (W \times 25) / 100 \times (La - Lb) / Lb$$

VL = Variation in Labour cost (increase or decrease).

W = Value of the work done, worked out as indicated in sub-para (ii) above

La & Lb = Basic Minimum rate of unskilled & adult male labour fixed under law by Haryana Government

La = Basic Labour rate on the date of receiving the tender.

Lb = Basic Minimum rate on the date of commencement of the period of reckoning.

For Material Escalation:

$$VM = (W \times 75) / 100 \times (Ma - Mb) / Mb$$

ML = Variation in Material cost (increase or decrease).

W = Value of the work done, worked out as indicated in sub-para (ii) above

Ma & Mb = All India Whole Sale Price Index published by Economic Advisor to Govt. of India, Ministry of Industry and Commerce.

Ma = All India Whole Sale Price Index at time of start of work.

Mb = Average arithmetical mean of All India Whole Sale Price Index for all the Commodities of relevant quarter (three months).

Impact of such negligence result in following:

- Contractual Violation:** Unauthorized alteration of the escalation formula constitutes a breach of the contractual agreement between POMSCHS and M/s NG Constructions. Such deviations undermine the trust and credibility of the contract.
- Financial Accuracy:** The excessive price claim due to the altered escalation formula can lead to **excessive cash outflow of INR 2,95,86,295.34/-**.

Detail of excess amount claimed per escalation running bill is as follows:

Escalation Bill no	Tender Opening Date	Agreement Date	Date of actual start of work	Escalation Payable from	Quarter Covered	Invoice during Quarter	Gross Work done	W (±1% of work done)	La (Basic Labour Rate on the date of rec. of tender)	Lb (Basic Labour Rate on the date of commencement of period of reckoning)	Escalation in labour cost W±1%-(La+Lb) Lb	Ma (All India wholesale Price Index at start of work)	Mb (Average of All India wholesale Price Index for all the commodities of rel. quarter)	Escalation in Material cost W±1%-(Ma-Mb) Mb	Escalation Cost calculated as per Contract	Escalation claimed in bill	Excess Escalation claimed in bill
RA-01	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Nov-14-Jan-15	RA-14	3,02,95,942.00										
RA-01	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Nov-14-Jan-15	RA-15	2,86,85,145.00										
RA-01	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Nov-14-Jan-15	RA-16	3,38,80,607.00	12,17,90,737.89	205.44	216.90	-16,08,715.83	180.41	192.40	-56,90,840.45	72,99,556.29	80,98,109.00	7,98,552.71
RA-01	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Nov-14-Jan-15	RA-17	2,29,14,258.00										
RA-01	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Nov-14-Jan-15	RA-18	2,75,07,268.05										
Subtotal																	7,98,552.71
RA-02	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Feb-15-Apr-15	RA-18	48,54,223.95										
RA-02	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Feb-15-Apr-15	RA-19	2,93,94,403.00	10,98,82,325.36	205.44	223.56	-22,26,547.39	180.41	194.26	-58,76,957.53	81,03,504.92	87,49,646.00	6,46,141.08
RA-02	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Feb-15-Apr-15	RA-20	2,80,14,791.00										
RA-02	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Feb-15-Apr-15	RA-21	1,27,56,498.00										
RA-02	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Feb-15-Apr-15	RA-22	5,42,53,498.00										
Subtotal																	6,46,141.08
RA-03	12/05/2013	21/05/2013	01/11/2013	01/11/2013	May-15-Jul-15	RA-23	4,28,05,694.00	11,36,23,336.05	205.44	223.56	-23,02,351.55	180.41	197.45	-73,52,983.98	96,55,335.53	1,06,85,699.00	10,30,363.47
RA-03	12/05/2013	21/05/2013	01/11/2013	01/11/2013	May-15-Jul-15	RA-24	4,43,39,180.00										
RA-03	12/05/2013	21/05/2013	01/11/2013	01/11/2013	May-15-Jul-15	RA-25	4,65,25,639.00										
Subtotal																	10,30,363.47
RA-04	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Aug-15-Oct-15	RA-26	3,20,92,579.00	9,40,03,709.15	205.44	226.40	-21,75,704.22	180.41	196.74	-58,51,938.74	80,27,642.96	87,79,311.00	7,51,670.04
RA-04	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Aug-15-Oct-15	RA-27	3,37,49,896.00										
RA-04	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Aug-15-Oct-15	RA-28	4,47,50,124.00										
Subtotal																	7,51,670.04
RA-05	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Nov-15-Jan-16	RA-29	2,07,78,503.00										
RA-05	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Nov-15-Jan-16	RA-30	2,48,21,022.00	6,18,40,220.00	205.44	292.31	-45,94,488.65	180.41	194.22	-32,98,597.90	78,93,086.55	1,10,96,627.00	32,03,540.45
RA-05	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Nov-15-Jan-16	RA-31	2,71,53,674.00										
Subtotal																	32,03,540.45
RA-06	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Feb-16-Apr-16	RA-32	2,74,57,040.00										
RA-06	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Feb-16-Apr-16	RA-33	2,38,54,118.00	6,96,16,905.70	205.44	306.77	-57,48,835.49	180.41	194.04	-36,68,422.14	94,17,257.63	1,33,10,442.00	38,93,184.37
RA-06	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Feb-16-Apr-16	RA-34	3,05,89,084.00										
Subtotal																	38,93,184.37
RA-07	12/05/2013	21/05/2013	01/11/2013	01/11/2013	May-16-Jul-16	RA-35	1,91,41,470.00	5,53,69,093.50	205.44	306.77	-45,72,277.48	180.41	196.74	-34,46,848.49	80,19,125.97	1,05,86,324.00	25,67,198.03
RA-07	12/05/2013	21/05/2013	01/11/2013	01/11/2013	May-16-Jul-16	RA-36	2,50,75,914.00										
RA-07	12/05/2013	21/05/2013	01/11/2013	01/11/2013	May-16-Jul-16	RA-37	2,69,22,736.00										
Subtotal																	25,67,198.03
RA-08	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Aug-16-Oct-16	RA-38	2,02,03,364.00	4,44,13,866.80	205.44	306.77	-36,67,615.09	180.41	196.74	-27,64,861.41	64,32,476.50	84,91,734.00	20,59,257.50
RA-08	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Aug-16-Oct-16	RA-39	1,72,10,684.00										
RA-08	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Aug-16-Oct-16	RA-40	1,48,37,560.00										
Subtotal																	20,59,257.50
RA-09	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Nov-16-Jan-17	RA-41	2,25,15,019.00										
RA-09	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Nov-16-Jan-17	RA-42	2,04,05,025.11	3,64,82,037.49	205.44	306.77	-30,12,619.27	180.41	196.74	-22,71,087.50	52,83,706.77	77,75,653.00	24,91,946.23
Subtotal																	24,91,946.23
RA-10	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Feb-17-Apr-17	RA-42	49,25,350.89										
RA-10	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Feb-17-Apr-17	RA-43	3,48,55,089.00	4,95,74,834.66	205.44	306.77	-40,93,798.28	180.41	196.74	-30,86,143.07	71,79,941.35	86,77,936.00	14,97,994.65
RA-10	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Feb-17-Apr-17	RA-44	1,85,42,895.00										
Subtotal																	14,97,994.65
RA-11	12/05/2013	21/05/2013	01/11/2013	01/11/2013	May-17-Jun-17	RA-45	2,66,95,538.00	5,28,48,160.95	205.44	306.77	-43,64,103.52	180.41	196.74	-32,89,914.87	76,54,018.39	1,01,04,331.00	24,50,314.61
RA-11	12/05/2013	21/05/2013	01/11/2013	01/11/2013	May-17-Jun-17	RA-46	3,54,74,779.00										
Subtotal																	24,50,314.61
RA-12	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Jul-17-Oct-17	RA-47	1,92,88,801.00										
RA-12	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Jul-17-Oct-17	RA-48	1,87,12,948.00	4,81,13,878.55	205.44	306.77	-39,73,155.22	180.41	196.74	-29,95,195.32	69,68,350.55	91,99,160.00	22,30,809.45
RA-12	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Jul-17-Oct-17	RA-49	1,86,03,816.00										
Subtotal																	22,30,809.45
RA-13	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Nov-17-Apr-18	RA-50	1,55,72,165.00										
RA-13	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Nov-17-Apr-18	RA-51	2,01,36,348.00	5,91,77,330.65	205.44	306.77	-48,86,754.67	180.41	196.74	-36,83,919.68	85,70,674.34	1,13,14,442.00	27,43,767.66
RA-13	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Nov-17-Apr-18	RA-52	1,89,74,378.00										
RA-13	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Nov-17-Apr-18	RA-53	1,69,37,498.00										
Subtotal																	27,43,767.66
RA-14	12/05/2013	21/05/2013	01/11/2013	01/11/2013	May-18-Nov-18	RA-54	1,49,34,889.00	2,21,54,760.40	205.44	306.77	-18,29,499.19	180.41	196.74	-13,79,182.82	32,08,682.01	42,35,891.00	10,27,208.99
RA-14	12/05/2013	21/05/2013	01/11/2013	01/11/2013	May-18-Nov-18	RA-55	1,11,29,535.00										
Subtotal																	10,27,208.99
RA-15	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Dec-18-july-19	RA-56	1,12,47,912.00										
RA-15	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Dec-18-july-19	RA-57	98,96,307.00	1,79,72,586.15	205.44	306.77	-14,84,142.97	180.41	196.74	-11,18,833.23	26,02,976.26	34,36,279.00	8,33,302.80
Subtotal																	8,33,302.80
RA-16	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Aug-19-Aug-20	RA-58	46,66,027.00										
RA-16	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Aug-19-Aug-20	RA-59	45,19,821.00	1,03,81,054.25	205.44	306.77	-8,57,248.29	180.41	196.74	-6,46,243.58	15,03,491.87	19,84,811.00	4,81,319.13
RA-16	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Aug-19-Aug-20	RA-60	30,27,157.00										
Subtotal																	4,81,319.13
RA-17	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Sept-20-Feb-21	RA-61	76,33,701.00	1,09,35,901.95	205.44	306.77	-9,03,066.58	180.41	196.74	-6,80,784.08	15,83,850.66	20,90,983.00	5,07,132.34
RA-17	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Sept-20-Feb-21	RA-62	52,32,066.00										
Subtotal																	5,07,132.34
RA-18	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Mar-21-Mar-22	RA-63	37,83,292.00	80,36,023.25	205.44	306.77	-6,63,599.96	180.41	196.74	-5,00,280.22	11,63,860.17	15,36,452.00	3,72,91.83
RA-18	12/05/2013	21/05/2013	01/11/2013	01/11/2013	Mar-21-Mar-22	RA-64	56,70,853.00										
Subtotal																	3,72,91.83
Total Excess Escalation claimed by vendor																	2,95,86,295.34

List of unused material at site are as below:

S. No.	Material	Total Purchased Amount	Total Utilised Amount	Material remain unused
1	Kajaria Ceramic Tiles	3,96,76,600.00	-3,06,67,295.50	90,09,304.50
2	M.S Pipe	37,19,651.00	-32,31,379.00	4,88,272.00
3	CPVC Items	35,18,412.00	-29,81,392.00	5,37,020.00
4	Sinks	26,86,068.00	-18,61,398.00	8,24,670.00
5	UPVC Items	65,21,564.00	-63,23,590.00	1,97,974.00
6	GI Fittings	14,06,014.00	-8,16,490.00	5,89,524.00
7	GI Pipes	34,91,525.00	-22,84,422.00	12,07,103.00
8	PRV & Bal Valve	12,80,052.00	-2,45,766.00	10,34,286.00
9	Granite	41,77,805.00	-37,58,903.00	4,18,902.00
10	Wall Putty	10,32,183.00	-7,50,500.00	2,81,683.00
11	Flush Door	1,00,50,335.00	-68,19,661.00	32,30,674.00
12	Door Lock	35,15,302.00	-33,18,927.00	1,96,375.00
13	Hardware	1,83,834.00	0	1,83,834.00
14	Wires & Cables	27,02,909.00	-15,48,088.00	11,54,821.00
15	Paints	9,88,917.00	-3,87,039.00	6,01,878.00
16	Switch & Socket	29,86,477.00	-9,91,839.00	19,94,638.00
17	MCB/RCCB	8,95,594.00	-736474	1,59,120.00
18	C.P fittings	13,95,183.00	0	13,95,183.00
19	Key Less handle	12,52,764.00	0	12,52,764.00
20	Key Less latch	1,11,378.00	0	1,11,378.00

Multiple other vendors were also admitted at site for works like setup of Electrical Sub-Station, lying of HT Cables, installation of RO plant, lifts, fountain, horticulture work, solar plant etc, for whom detailed discussion is as follows:

Police Officers Multi-state Co-operative Housing Society (hereafter referred as POMSCHS) has executed a Multi-storey housing project at Sector-49, Faridabad for construction of 688 Residential Apartments of four categories and allied services and common facilities like Community Centre, Shopping complex, 122 EWS flats, Electric Sub-station, Stilted areas, Basement and external Development works etc at 11.3875 acres of land at village Dabua and Nawada koh, Sector 49, Faridabad, Haryana.

II. Electrical Sub Station:

A. Background

This audit report provides a comprehensive overview of the implementation of an Electric Substation project within the premises of the Police Officers Multi-state Co-operative Housing Society. The project was initiated by the Management Committee with the aim of ensuring a reliable and efficient electricity supply for the residents of the society. The implementation process followed a rigorous tender process, wherein qualified contractors were selected based on competitive bidding. This report will delve into the details of the tender process, the contract terms, and the subsequent execution of the Electric Substation project.

The Police Officers Multi-state Co-operative Housing Society, recognized the need for a dedicated Electric Substation to meet the energy demands of its residents. In response to this need, the society's Management Committee embarked on a project to establish a state-of-the-art Electric Substation that would enhance the reliability of the electricity supply, and ensure the overall well-being of the residents.

B. Tender Process:

To ensure transparency, competitiveness, and adherence to industry standards, the Management Committee of initiated a tender process for the Electric Substation project. This process involved the following key stages:

1. **Project Documentation Preparation:** The Management Committee collaborated with Architect to develop comprehensive project documentation, including technical specifications, scope of work, and project timelines. These documents were designed to provide a clear understanding of the project's requirements.
2. **Invitation to Submit Pre-qualification bids:** Once the project documentation was finalized, the Management Committee issued interested vendors to submit pre-qualification bids containing all the information regarding their financials, work experience, company profile and details of similar projects executed in past.

As per records available with Police Officer Multi-state Co-operative Housing Society, following vendors had submitted their Pre-Qualification Bids.

- a. Shivani Power Engineers Pvt. Ltd.
 - b. R.K Industries
 - c. SBP Electricals
 - d. Landmark Electrical Pvt. Ltd.
 - e. MEC Engineers
 - f. Teneja Vidyut Control Pvt Ltd
 - g. Radius Synergies International Pvt. Ltd.
 - h. Sharika Enterprises
 - i. NP Power & Engineers Pvt. Ltd.
 - j. N G Constructions
3. **Invitation to Bid:** Once the pre-qualification bids were submitted by vendors, the Management Committee issued an invitation to bid, inviting qualified and experienced contractors to participate in the competitive bidding process. The invitation contained detailed instructions on submission requirements, evaluation criteria, and deadlines.

Upon receiving Pre-Qualification bids from the above mentioned vendors, 7 (Seven) Pre-Qualified Contractors were selected out of total 10 (Ten) Pre-Qualification bids were recommended by Architect on the basis of their capabilities of executing our Project, experience, project executed and completed, and projects under construction. Vendors qualified to submit their rate contracts are as follows:

- a. Shivani Power Engineers Pvt Ltd.
- b. R.K Industries

- c. Landmark Electrical Pvt Ltd.
- d. Teneja Vidyut Control Pvt Ltd
- e. Radius Synergies International Pvt Ltd.
- f. NP Power & Engineers Pvt Ltd.
- g. N G Constructions

Item wise financial bid have been submitted by the following vendors out of above mentioned vendors for Electric Substation Project executed at Police Officers Multi-state Co-operative Housing Society at village Dabua and Nawada koh, Sector 49, Faridabad, Haryana.

List of bidders submitted their financial bids are as follows:

- a. Shivani Power Engineers Pvt. Ltd.
- b. R.K Industries
- c. Landmark Electrical Pvt. Ltd.
- d. Radius Synergies International Pvt. Ltd.

Rate contract submitted by the above mentioned vendors for the execution of Electrical Sub-station project at Police Officers Multi-State Co-Operative Housing society are as follows

Vendor Name	Financial Bid Submitted	Initial Bid Amount	Vendor Position
Shivani Power Engineers Pvt. Ltd.	✓	53,714,000.00	L3
R.K Industries	✓	45,510,863.00	L2
Landmark Electrical Pvt. Ltd.	✓	29,583,575.00	L1
Radius Synergies International Pvt. Ltd.	✓	66,578,204.00	L4

Upon submission of Initial quotes the Board of Directors of Police Officers Multi-state Co-operative Housing Society rejects the bid submitted by Landmark Electricals Pvt. Ltd. On the grounds of incomplete tender documents where initially tender rates were called upon for the installation of two Electrical substations and Landmark Electricals Pvt. Ltd. Submitted their bids for installation of one Electrical Substation only afterwards Board of Directors proceeds with multiple rounds of negotiations with the remaining vendors that are as follows:

- a. Shivani Power Engineers Pvt. Ltd.
- b. R.K Industries
- c. Radius Synergies International Pvt. Ltd.

Further it has been noted that record regarding negotiation during 3 rounds of negotiation i.e., R1, R2 & R3 with the selected vendors i.e., L2, L3 & L4 as mentioned above isn't available with the society, however, Revised/Negotiated Tender Amount after Final Negotiation is INR 2,64,00,203.16/- which makes Radius Synergies International Pvt. Ltd. as L2 but L1 was not selected on the basis that rates quoted for panel fabrication was local which are below standard and very Poor Quality Vendor and this was concluded by management committee post field visit at L1 Site hence, contract has been awarded to L2, it has to be noted that at final awarding stage of contract the records of final bids reflects that during the course of negotiation BOQ for the execution of Electrical Sub-station project has been reduced from Initial BOQ of two substations to installation of one sub-station only.

Final quoted price by the vendors are as follows:

Vendor Name	Financial Bid Submitted	Initial Bid Amount	Revision 1	Revision 2	Revision 3	Revision 4	Final Amount	Vendor Position
Shivani Power Engineers Pvt. Ltd.	✓	53,714,000.00	Records NA	Records NA	Records NA	28,433,316.00	27,000,000.00	L3
R.K Industries	✓	45,510,863.00	Records NA	Records NA	Records NA	25,147,180.00	25,147,180.00	L1
Radius Synergies International Pvt. Ltd.	✓	66,578,204.00	Records NA	Records NA	Records NA	28,723,035.00	26,400,203.00	L2

Detailed Description of per unit rate quoted by vendors post negotiation is here as under:

COMPARATIVE STATEMENT OF EXTERNAL ELECTRICAL WORKS (ESS Revision 04) 15.01.2018									
Vendors									
S.No.	Description of Item	Qty	Unit	Shivani Rate	Shivani Amount	Rate	Radius Amount	RK Industries Rate	RK Industries Amount
1.00	MAIN LT. Cum. SYNC. PANEL and Cap. PANEL								
	Supplying, installation, testing and commissioning of 415V, 3 Phase, 50 Hz., 4 wire system, sheet steel clad, dust and vermin proof cubical and indoor type floor mounted, free standing extendible type Main LT. Panel with IP - 42 protection, compartmentalized design and fabricated out of 2 mm / 1.6 mm CRCA sheet steel complete with Aluminium Bus bars, Electrical interlocks as per the various status of all the equipments indicated on the drawings, Providing & Fixing of base plate / channel, P/F the following Switchgears, complete with earth Bus bar throughout the length of the panel, terminal arrangement for Incomings / Outgoings, cables and also outgoing terminations for various sizes of cables, The incoming and outgoing feeders shall be accommodated in a modular multi-tier arrangement, adequate size bus duct/cable tray, Sign writing, Painting, Earthing, Numbering, Danger plate etc. complete as required as per specifications and drawing.								
1.01	MAIN LT. Cum. SYNC. PANEL IN BASEMENT								
	INCOMING:								
	2 nos. 3200A 415V, 4P 50KA EDO ACB with Microprocessor based release having O/L, S/C, E/F, RPR, O/V, U/V Protection and ON/OFF/T RIP Indications with MCB.								
	2 nos. 800A 415V, 4P 50KA EDO ACB with Microprocessor based release having O/L, S/C, E/F, RPR, O/V, U/V Protection and ON/OFF/T RIP Indications with MCB.								
	4 nos. Digital type Multifunction Meters to show [V, A, kWh, KVAh, KW, KVA, KVAR, PF, Hz.] with cast resin CT's.								
	4 Set of LED phase indicating lamps with MCB protection.								
	4 nos. Trip Circuit Supervision relays.								
	1 no. 50KVAR capacitor bank with 125A TP MCCB of 36kA, with one set of indicating Lights.								
	1 no. Electronic type Automatic power factor correction relay.								
	1 nos. TPN surge protection device of Class 1 & 2.								
	BUSBARS:								
	1 Set of TPN aluminium bus bar of minimum of 3200 A capacity with heat shrinkable coloured sleeves and i/c DMCS MC bus bars supports at required intervals complete for cross section, size supports & their spacing etc. for with standing fault level of 50 KA for 1 Sec.								
	Electrical Interlocking between all incomers and Bus Couplers through PLC.								
	BUS COUPLER :								
	1 no. 3200A 415V, 4P 50KA EDO ACB with O/L & S/C protection and ON/OFF/T RIP Indications with MCB.								
a	OUTGOING FROM BUSBAR SECTION - 1								
	5 nos. 800A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection and a set of CT's., Multi Function meter (V+A+Hz.)								
	1 no. 800A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection.								
	4 nos. 630A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection and a set of CT's., Multi Function meter (V+A+Hz.)								
	2 nos. 250A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection and a set of CT's., Multi Function meter (V+A+Hz.)								
b	OUTGOING FROM BUSBAR SECTION - 2								
	3 nos. 800A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection and a set of CT's., Multi Function meter (V+A+Hz.)								
	2 nos. 630A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection and a set of CT's., Multi Function meter (V+A+Hz.)								
	2 nos. 400A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection and a set of CT's., Multi Function meter (V+A+Hz.)								
	3 nos. 250A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection and a set of CT's., Multi Function meter (V+A+Hz.)								
	3 nos. 200A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection and a set of CT's., Multi Function meter (V+A+Hz.)								
	The interlocking in the panel and the load management and AUTO ON/OFF of the DG Set shall be Achieved through a Micro PLC installed in the LT. Panel with manual overriding facility. The panel shall be complete with the Battery charger of the each DG Set and the DC supply / UPS for the relay, protection and PLC.	1	Set	3,885,500	3,885,500	4,264,000	4,264,000	2,567,000	2,567,000

1.02	i	CAP. PANEL CAP. PANEL (450 KVAR) INCOMER : Cable direct connected from Main LT Panel to Cap. Panel bus bar with a set of CT's., Multi Function meter (V+A+Hz.) and Phase indicating lamp with MCB. BUS BARS: 1 Set of TPN aluminium bus bar of minimum of 800A capacity with heat shrinkable coloured sleeves and i/c DMCS/MC bus bars supports at required intervals complete for cross section, size supports & their spacing etc. for withstanding fault level of 50KA for 1 Sec. OUT GOING 8 nos. .50kVAR capacitor bank with 125A TP MCCB of 25kA and Contactor, one set of indicating Lights and Push Buttons. 1 no. 25kVAR capacitor bank with 63A TP MCCB of 25kA and Contactor, one set of indicating Lights and Push Buttons. 2 nos. .10kVAR capacitor bank with 32A TP MCCB of 25kA and Contactor, one set of indicating Lights and Push Buttons. 1 no. 5kVAR capacitor bank with 16A TP MCCB of 25kA and Contactor, one set of indicating Lights and Push Buttons.									
1.03		3200A 4P ACB Near Transformer. Supplying, fixing in position, testing and commissioning of IP-55, M.V. cubical type totally enclosed dust, dump and vermin proof 3200A, 4P 415 volts fixed type ACB with built-in protection in weather proof enclosure for outdoor duty connection with suitable capacity aluminium strips / rods, connection of incoming and outgoing cables with thimbles, indication lamps, powder coated complete as required.	1	Set	495,000	495,000	473,770	473,770	285,000	285,000	
1.04		COMMON UTILITIES PANEL -1 INCOMER : 1 no. 630A 415V, 4P MCCB of 35kA with Microprocessor based release having O/L,E/F and S/C protection. 1 no. Digital multifunction meter (V+A+Hz) with a set of cast resin CT's 630/5A. 1 set of Phase indicating lamp with MCB BUS BARS: 1 Set of TPN aluminium bus bar of minimum of 630 A capacity with heat shrinkable coloured sleeves and i/c DMCS/MC bus bars supports at required intervals complete for cross section, size supports & their spacing etc. for withstanding fault level of 50 KA for 1 Sec. OUT GOING: 2 nos. 125A 415V, TP+N MCCB of 25kA with O/L and S/C protection with thermal magnetic trip unit 9 nos. 100A 415V, TP+N MCCB of 25kA with O/L and S/C protection with thermal magnetic trip unit 3 nos. 63A 415V, TP+N MCCB of 25kA with O/L and S/C protection with thermal magnetic trip unit	1	Set	372,000	372,000	513,075	513,075	290,000	290,000	
1.05		COMMON UTILITIES PANEL -2 INCOMER : 1 no. 630A 415V, 4P MCCB of 35kA with Microprocessor based release having O/L,E/F and S/C protection. 1 no. Digital multifunction meter (V+A+Hz) with a set of cast resin CT's 630/5A. 1 set of Phase indicating lamp with MCB BUS BARS: 1 Set of TPN aluminium bus bar of minimum of 630 A capacity with heat shrinkable coloured sleeves and i/c DMCS/MC bus bars supports at required intervals complete for cross section, size supports & their spacing etc. for withstanding fault level of 50 KA for 1 Sec. OUT GOING: 10 nos. 100A 415V, TP+N MCCB of 25kA with O/L and S/C protection with thermal magnetic trip unit 3 nos. 63A 415V, TP+N MCCB of 25kA with O/L and S/C protection with thermal magnetic trip unit	1	Set	241,200	241,200	267,712	267,712	163,700	163,700	
1.06		MAIN DISTRIBUTION BOARD Supplying, fixing, testing and commissioning of 415V, 3 Phase, 50 Hz., 4 wire system, sheet steel clad, dust and vermin proof cubical and indoor type floor mounted, free standing Main Distribution Board with IP ~ 42 protection, compartmentalized design and fabricated out of 2 mm / 1.6 mm CRCA sheet steel complete with Aluminium Bus bars, Providing & Fixing of base plate / channel, P/F the following Switchgears, complete with earth Bus bar throughout the length of the panel, terminal arrangement for Incoming / Outgoing cables and its outgoing terminations for various sizes of cables, The incoming and outgoing feeders shall be accommodated in a modular multi-tier arrangement, adequate size bus duct/kable tray, Sign writing, Painting, Earthing, Numbering, Danger plate etc. complete as required as per specifications and drawing.	1	Set	219,000	219,000	259,600	259,600	157,000	157,000	
	i	LIGHT MDB-1 & 3 (Located in Electrical Room) INCOMER : 1 no. 100A, 415V, Ics=25kA, 4P MCCB with thermal magnetic trip unit. 1 no. Digital multifunction meter (V+A+Hz) with a set of cast resin CT's 150/5A. 1 set of Phase indicating lamp with MCB BUS BARS: 150ATPN bus bars of aluminium alloy. OUT GOING: 2 nos. 63A 415V, TP+N MCCB of 25kA with O/L and S/C protection with thermal magnetic trip unit 7 nos. 40A, 415V, 4P MCB of 10kA.	2	Set	75,000	150,000	90,860	181,720	60,000	120,000	
	ii	LIGHT MDB- 2 & 4 (Located in Electrical Room) INCOMER : 1 no. 63A, 415V, Ics =25kA, 4P MCCB with thermal magnetic trip unit. 1 no. Digital multifunction meter (V+A+Hz) with a set of cast resin CT's 60/5A. 1 set of Phase indicating lamp with MCB BUS BARS: 150ATPN bus bars of aluminium alloy. OUT GOING: 8 nos. 63A, 415V, 4P MCB of 10kA.	2	Set	54,000	108,000	48,675	97,350	40,000	80,000	
	iii	POWER MDB-1,2,3 & 4 (Located in Electrical Room) INCOMER : 1 no. 63A, 415V, Ics =25kA, 4P MCCB with thermal magnetic trip unit. 1 no. Digital multifunction meter (V+A+Hz) with a set of cast resin CT's 60/5A. 1 set of Phase indicating lamp with MCB BUS BARS: 150ATPN bus bars of aluminium alloy. OUT GOING: 8 nos. 63A, 415V, 4P MCB of 10kA.	4	Set	54,000	216,000	48,675	194,700	40,000	160,000	
	iv	EMERGENCY MDB-1 & 2 (Located in Electrical Room) INCOMER : 1 no. 63A, 415V, 4P on load change over switch with ON-OFF indication. 1 no. 63A, 415V, Ics =25kA, 4P MCCB with thermal magnetic trip unit. 1 no. Digital multifunction meter (V+A+Hz) with a set of cast resin CT's 60/5A. 1 set of Phase indicating lamp with MCB BUS BARS: 150ATPN bus bars of Cu. alloy. OUT GOING: 15 nos. 25A, 220V, DP MCB of 10kA.	2	Set	83,000	166,000	56,788	113,576	39,000	78,000	
	v	LIFT MDB-1 & 2 (L ocated in Electrical Room) INCOMER : 1 no. 250A, 415V, Ics =25kA, 4P MCCB with thermal magnetic trip unit. 1 no. Digital multifunction meter (V+A+Hz) with a set of cast resin CT's 250/5A. 1 set of Phase indicating lamp with MCB BUS BARS: 300ATPN bus bars of aluminium alloy. OUT GOING: 14 nos. 63A 415V, TP+N MCCB of 25kA with O/L and S/C protection with thermal magnetic trip unit	2	Set	214,000	428,000	190,700	381,400	140,000	280,000	

1.07	Design, Manufacturing, supplying, fixing in position, testing and commissioning of the following front operated front access 2mm thick CRCA steel enclosure free standing, water, dust and vermin proof outdoor type Feeder pillars with IP-54 protection hinged and lockable doors complete with interconnections, copper crimping lugs, brass glands bonding to earth and painting, suitable for use of 415 volts, 3 phase 4 wire 50 Hz system. The panels fault withstanding capacity shall be of 25 MVA of 415 volts. All live accessories part shall be shrouded and all equipment shall be finger touch proof. The bus bars shall be of cadure coated with Heat shrinkable PVC insulated sleeves. The job includes: all labour & material required for cement concrete plot-form of suitable dimensions.									
	i. INCOMER :									
	1 no. 125A, 415V, 1cs=25kA, 4P MCCB with thermal magnetic trip unit.									
	1 no. Digital multifunction meter (V+A+Hz) with a set of cast resin CT's 150/5A.									
	1 set of Phase indicating lamp with MCB.									
	BUS BARS:									
	200A TPN bus bars of aluminium alloy.									
	OUT GOING:									
	2 nos. 100A 415V, TP+N MCCB of 25kA with O/L and S/C protection with thermal magnetic trip unit									
	1 no. 63A 415V, TP+N MCCB of 25kA with O/L and S/C protection with thermal magnetic trip unit	1	Set	61,500	61,500	89,238	89,238	46,000	46,000	
	SUB-TOTAL				6,342,200		6,836,141		4,226,700	
2.00	SUBSTATION EQUIPMENTS									
2.01	11 KV THREE BOARD HT PANEL NEAR 11 KV METER BOARD.									
	Supplying, erection, testing and commissioning of Extendable type 630A, 11KV, 3 phase, 50 Hz, metal clad, dead front, 3 Board VCB Panel, 500MVA rupturing capacity having one incoming and two outgoing as per specification and requirement.	1	Set	1,312,000	1,312,000	1,129,260	1,129,260	1,135,000	1,135,000	
2.02	11 KV SINGLE BOARD HT PANEL IN THE SUBSTATION									
	Supplying, erection, testing and commissioning of Extendable type 630A, 11KV, 3 phase, 50 Hz, metal clad, dead front, Single Board VCB Panel, 500MVA rupturing capacity having one incoming and outgoing as per specification and requirement.	1	Set	446,500	446,500	561,500	561,500	370,000	370,000	
2.03	TRANSFORMER									
	i. Supplying, receiving, erection, testing and commissioning of 2000kVA, 11kV/415Volts, oil door type, oil cooled 3 phase, 4 wire 50 Hz, with off load tap changer, +5 % to -7 % , 2.5 % per step with cable box at primary and at secondary end for outdoor installation, Winding Temperature Indicator, restricted earth fault CT, bushhole relay, silica breather, MOC with contacts, Marshal Box to connect control cable between HT panel and Transformer as per specification etc. as required.	1	Set	2,410,200	2,410,200	2,350,000	2,350,000	2,380,000	2,380,000	
2.04	Supplying, laying, testing and commissioning of 3Cx 300 sq.mmm XLPE AL. armoured cable, 11kV grade in Trench / on pole complete as per specification and requirement.	250	Mtr.	2,050	512,500	1,983	495,750	1,345	336,250	
2.05	Supplying, fixing, testing and commissioning of 11kV heat shrinkable, push on type cable end joint kit for indoor use of cable end of size 3Cx300 sq.mmm. completed as per specification.	5	Set	9,500	47,500	8,500	42,500	5,500	27,500	
2.06	Supplying, fixing, testing and commissioning of 11kV heat shrinkable, push on type cable end joint kit for outdoor use of cable end of size 3Cx300 sq.mmm. completed as per specification.	1	Set	10,500	10,500	9,000	9,000	7,000	7,000	
2.07	Supplying and laying of following sizes under ground RCC pipe Class NP-2 with collar jointed with stiff mixture of cement mortar in the proportion of 1:2, completed as required.									
	i. 200 mm dia.	20	Mtr.	450	9,000	954	19,080	380	7,600	
	SUB-TOTAL				4,748,200		4,607,090		4,263,350	
3.00	EARTHING AND MISCELLANEOUS ITEMS									
3.01	Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of overall size 100 mm dia, 3000 mm depth, 17.2 mm in dia with copper bonded MS conductor. Conductive aggregate mixed with cement to embed or backfill the voids surrounding the 17.2 mm Cu bonded MS conductor placed at the centre of a augured bore hole of 100 mm Dia & 3000 mm depth. The surface area of the earth electrode shall lower the earth resistance permanently without periodic watering or recharge of earth enhancing compound for a period of over 30 years in all type of soil conditions and shall not leach into the soil or underground water channels. Electrode's top terminal shall be sealed permanently & earth strip shall be taken out and terminated to earth bus bar, the earth electrode shall be able to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement.	22	No	9,800	215,600	11,033	242,726	5,000	110,000	
3.02	Supply, installation, effecting proper connection testing and commissioning of the following size GI earth strips/GI wires as required									
	i. 50 mm x 6 mm GI strip	300	Mtr.	350	105,000	230	69,600	180	54,000	
	ii. 25 mm x 6 mm GI strip	200	Mtr.	250	50,000	95	19,000	120	24,000	
	iii. 4mm dia GI wire	1600	Mtr.	35	56,000	8	12,800	16	25,600	
3.03	Supply, installation, effecting proper connection testing and commissioning of the following size copper earth strips as required									
	i. 50 mm x 6 mm Copper strip.	60	Mtr.	1,850	111,000	2,272	136,320	1,486	89,160	
3.07	Supplying of non-skid rubber mat 12 mm thick and 900mm width ISI approved as required including cutting to required lengths.	20	Mtr.	1,200	24,000	2,397	47,940	2,700	54,000	
3.08	Supplying of fire bucket painted red and approved quality conforming to IS :254/1974	3	No.	400	1,200	662	1,986	700	2,100	
3.09	Supplying and fixing danger plate 440 Volt, written in three languages as required	5	No.	100	500	250	1,250	170	850	
3.10	Supplying and fixing ABC fire extinguisher type 4.5 kgs. capacity of approved make with wall mounting bracket as required conforming to IS :2878/1976	6	No.	6,500	39,000	5,900	35,400	5,500	33,000	
3.11	Supplying of first aid box as approved complete with standard kit as prescribed by Indian Red Cross.	1	No.	500	500	1,000	1,000	500	500	
3.12	Supplying and fixing of shock treatment chart written in English and Local language duly framed in glass as require.	1	No.	150	150	750	750	300	300	
3.14	Fabricating and installation following sizes of perforated MS cable Trays including horizontal and vertical bends, reducers, tees, cross members and others accessories as required and duly suspended from the ceiling with MS suspenders and including painting etc. as required.									
	i. 150 mm width x 25 mm deep x 1.6 mm thickness.	600	M	550	330,000	580	348,000	570	342,000	
	ii. 300 mm width x 50 mm deep x 1.6 mm thickness.	1000	M	750	750,000	900	900,000	788	788,000	
3.15	Fabricating and installation following sizes of Ladder MS cable Trays including horizontal and vertical bends, reducers, tees, cross members and others accessories as required and duly suspended from the ceiling with MS suspenders and including painting etc. as required.									
	i. 450 mm width x 50 mm deep x 1.6 mm thickness ladder type.	300	M	850	255,000	1,495	448,500	805	241,500	
	ii. 600 mm width x 75 mm deep x 1.6 mm thickness ladder type.	800	M	1,200	960,000	1,670	1,336,000	908	726,400	
	iii. 1000 mm width x 75 mm deep x 2 mm thickness ladder type.	400	M	1,750	700,000	2,035	814,000	1,204	481,600	
	iv. 1500 mm width x 75 mm deep x 2 mm thickness ladder type.	140	M	1,900	266,000	2,540	355,600	1,507	210,980	
	SUB-TOTAL				3,863,950		4,770,872		3,183,990	

	DG SET											
4.00	Providing ,lins falling and commissioning of Silent type Diesel generator set along with having Prime Power rating of 250 KVA ,415 volt at 1500 Rpm,0.8 lagging power factor at 415 v suitable for 50 Hz, 3 phase system & 0.85 load factor and consisting of following											
a	Diesel Engine											
b	Diesel Engine 4 stroke water cooled ,Electric start of suitable BHP AT 1500 RPM suitable for above output of alternator of 40 degree c,50 % RH & at 1000 metre MSL and conforming to BS :5514,B5 :649,IS :10000,Capable of taking 10 % overloading for one hour after 12 hour of continuous operation. The engine will be fitted complete with all required accessories											
c	Engine mounted instrument panel fitted with and having digital display for following i Start-stop switch with Key ii Water temperature indication iii Lubrication oil pressure indication iv Lubrication oil temperature indication v Battery Charging Indication vi RPM Indication vii Over speed indication viii Low Lub. Oil trip indication ix Engine Hours indication											
d	Alternator											
e	Synchronous alternator rated at 250 KVA,415 volts at 1500 Rpm ,3 Phase 50 Hz,AC supply with 0.8 Lagging power factor at 40 Degree C,50 % RH & at 1000 Metre MSL.The alternator shall be having SPDP endurance,Brushless,Continuous duty, Self excited and self regulated through AVR conforming to IS: 4722/B5 :2613 suitable for Tropical condition and with class-F/H insulation.											
f	Base Frame & Foundation											
g	Both the engine and alternator shall be mounted on suitable Base frame made up of MS channel with necessary reinforcement which shall be installed on suitable cement concrete foundation and vibration isolation arrangement as per recommendation of manufacturer											
h	Exhaust System											
i	Dry exhaust manifold with hospital exhaust silencer and catalytic converter											
j	Starting System											
k	12V/24V DC Starting system comprising of starter motors : Voltage Regulator and arrangement of for initial excitation complete with suitable nos of batteries(25 Plates,180 Amp. Hours Capacity Lead acid type)as required as per specification											
l	Acoustic and weather proof enclosure with arrangement fresh air intake for cooling of the engine & alternator,extraction,discharging hot air in to the atmosphere as per specification	1	Set	1,618,000	1,618,000	1,672,650	1,672,650	1,635,000	1,635,000			
4.02	Providing ,lins falling and commissioning of Silent type Diesel generator set along with having Prime Power rating of 400 KVA ,415 volt at 1500 Rpm,0.8 lagging power factor at 415 v suitable for 50 Hz, 3 phase system & 0.85 load factor and consisting of following											
a	Diesel Engine											
b	Diesel Engine 4 stroke water cooled ,Electric start of suitable BHP AT 1500 RPM suitable for above output of alternator of 40 degree c,50 % RH & at 1000 metre MSL and conforming to BS :5514,B5 :649,IS :10000,Capable of taking 10 % overloading for one hour after 12 hour of continuous operation. The engine will be fitted complete with all required accessories											
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f	Base Frame & Foundation											
g	Both the engine and alternator shall be mounted on suitable Base frame made up of MS channel with necessary reinforcement which shall be installed on suitable cement concrete foundation and vibration isolation arrangement as per recommendation of manufacturer											
h	Exhaust System											
i	Dry exhaust manifold with hospital exhaust silencer and catalytic converter											
j	Starting System											
k	12V/24V DC Starting system comprising of starter motors : Voltage Regulator and arrangement of for initial excitation complete with suitable nos of batteries(25 Plates,180 Amp. Hours Capacity Lead acid type)as required as per specification											
l	Acoustic and weather proof enclosure with arrangement fresh air intake for cooling of the engine & alternator,extraction,discharging hot air in to the atmosphere as per specification	1	Set	2,456,000	2,456,000	2,275,000	2,275,000	2,477,400	2,477,400			
4.03	Supply, fixing and commissioning 2B5 ltrs capacity 16 SWG MS steel, Diesel oil Tank with manhole, PVC gauge, inlet and outlet connections with gate valve, drain plug, piping between tank and engine vent etc., mounted on suitable MS staging to maintain gravity flow of diesel oil From tank to DG set including painting etc., as required.											
m		2	Each	25,000	50,000	25,000	50,000	92,500	185,000			
4.04	Supplying and fixing exhaust gas piping of following dia welded black MS B class pipe conforming to IS :3589 cut to required lengths and installed with necessary Bends ,support and clamps, and anti-vibration mounting, insulation of exhaust system with mineral wool/Rockwool,50mm thick wire mesh & aluminium cladding etc.as required as per specification including Supplying, Fabricating and installation of MS fabricated support for silencer complete with welding, grouting and painting etc. including providing the suitable support on DG set side and other side complete as per the instruction of the Engineer in charge / Architect											
n	1x200mm dia Class - B MS pipe,	RO	Mtr.	4,500		7,200		5,000				
o	1x250mm dia Class - B MS pipe,	RO	Mtr.	5,500		9,750		3,800				
p	Supply, fixing testing and commissioning of 25 mm dia. Class C, MS pipe with welded joints including all accessories valves etc.	RO	Mtr.	650		2,150		2,500				
4.06	Control Cables											
q	Copper control cable armoured type XLPE 1,1KV grade											
r	2Cx2.5sqmm	RO	Mtr.	150		90		52				
s	4Cx2.5sqmm	RO	Mtr.	220		139		85				
t	12Cx2.5sqmm	200	Mtr.	550	110,000	337	67,400	415	83,000			
u	Termination of the above cables	8	Nos.	350	2,800	140	1,120	600	4,800			

substations at site and the quoted were received for same from the following vendors:

- a. Shivani Power Engineers Pvt. Ltd.
- b. R.K Industries
- c. Radius Synergies International Pvt. Ltd.

However, it has been observed that during the negotiation phase, the quantity was amended to a single substation without a discernible rationale provided for this reduction. This observation raises questions regarding transparency and effective communication in the tender modification process.

The modification of the tender quantity, especially one as substantial as transitioning from two electrical substations to a single unit, has the potential to impact the overall scope, and timeline of the project.

3) Incomplete Tender Document Rejection and Lack of Negotiation with Vendor

In the course of our thorough examination of the procurement process for the installation of electrical substations, a significant observation has come to light. During the initial bidding stage, one vendor i.e., Landmark Electricals Pvt. Ltd.'s proposal was rejected due to incomplete tender documents, specifically, a quote for only one substation was submitted when the tender originally called for the installation of two substations. Subsequently, the Bill of Quantities (BOQ) quantity was revised to accommodate a single substation. However, despite this adjustment, it has been noted that no attempt was made to re-engage in negotiations with the previously rejected Landmark Electricals Pvt. Ltd. This observation raises concerns about consistency, and effective vendor management.

The rejection of a vendor in the initial bidding stage based on incomplete tender documents is a standard practice to ensure compliance with the specified requirements. However, the subsequent change in the project scope through the reduction of the BOQ quantity necessitates a revaluation of the earlier decision. Failing to initiate negotiations with the previously rejected vendor, who could potentially meet the revised requirements, disregards an opportunity for cost efficiency, competitive pricing, and the inclusion of potentially qualified suppliers.

D. Contractual Terms and Conditions:

- 1) Scope of work encompassed to Installation, testing and commissioning of Electrical Substation- External Electrical Works at Police Officers Multi state Housing Society Ltd. Under construction at Sector 49, Faridabad, Haryana, as per tender quoted and final negotiations on 17.01.2018 in the office of society.
- 2) The Contractor has deposited INR 1,00,000/- (Rupees One Lac only) as Earnest Money with the Owner for the due-performance of the Agreement.

- 3) Time Period shall be 3 (Three) Months.
- 4) Mobilization Advance of 10% (INR 26,40,000/-) is being paid by the Society, to be recovered in Four equal instalments in Four monthly Running Bills, on pro rata basis.
- 5) Retention Money 5% of Work done, deducted from each Running Bill, subject to maximum INR 10 Lac including Earnest Money. 50% of Retention Money will be Refunded after 06 months from Virtual Completion. Balance 50% will be refunded after Defect Liability Period of 12 months from Virtual Completion.
- 6) Additional Retention Money 5% of Work done, deducted from each Running Bill, subject to maximum Rs.10 Lac. To be retained against procurement of obtaining approvals, NOCs and Final Electrical Connection from the concerned Departments and Local authorities.
- 7) Fixed Rate Contract, No Escalation on Material or Labour.

Payment Terms as per Tender are as follows:

- 1) 10% advance, subject to availability of funds with the society
- 2) 55% against supply of material at site. Material to be supplied only after taking due approval of client
- 3) 25% against installation, testing and commissioning-in 2 to 3 parts
- 4) 10% retention money

Liquidated Damages/Penalty Clause:

The contractor shall pay as compensation of an amount equal to INR 10,000 per day of delayed period subject to maximum of 10% of contract value

E. Observations:

1) Excessive Quantity Claimed in Running Bills Beyond Purchase Order Specifications:

During our audit of the running bill submissions by M/s Radius Synergies International Pvt. Ltd. for installation, testing and commissioning of Electrical Substation-External Works, a significant discrepancy has been identified in the quantities claimed for certain project components. It is observed that the contractor has claimed quantities in excess of those specified in the Purchase Order (PO). **This leads to excess outflow of cash by INR 18,99,190/- which is a loss to society.**

Impact of this negligence leads to:

- a. **Contractual Breach:** Submitting quantities that exceed the specifications in the Purchase Order constitutes a breach of the contractual agreement.
- b. **Financial Accuracy:** The excessive quantity claim in running bills lead to financial inaccuracies i.e., in additional cash outflow of INR 18.99 lacs

Item wise details regarding the excess quantity claimed by vendor is as follows:

S. No.	Particular	Per unit Rate	Claimed Qty	PO qty	Excess Qty claimed	Excess Amt. claimed
1	Light MDB-1 & 3	90,860.00	12	2	10	908,600.00
2	Feeder Pillars	89,238.00	3	1	2	178,476.00
3	Earthing	11,033.00	26	22	4	44,132.00
4	50 mm * 6 mm GI Strip	230.00	330	300	30	6,900.00
5	25 mm * 6 mm GI Strip	95.00	400	200	200	19,000.00
6	MS Cable tray- 150*25*1.6	580.00	725	600	125	72,500.00
7	2C * 2.5 sqmm Control cables	90.00	120	0	120	10,800.00
8	4C * 2.5 sqmm Control cables	139.00	120	0	120	16,680.00
9	LT Cables 3.5C*185 sq. mm.	794.00	997	810	187	148,478.00
10	LT Cables 3.5C*120 sq. mm.	566.00	540	250	290	164,140.00
11	LT Cables 4C*35 sq. mm.	278.00	1280	140	1140	316,920.00
12	LT Cables 4C*25 sq. mm.	202.00	54	50	4	808.00
13	LT Cables 4C*16 sq. mm.	169.00	2444	2400	44	7,436.00
14	XLPE Cable 3.5C*300 sq. mm.	1,440.00	40	38	2	2,880.00
15	XLPE Cable 3.5C*150 sq. mm.	720.00	14	12	2	1,440.00
Total						1,899,190.00

2) Non-Adherence to Payment Terms for Mobilization Advance Recovery

During our audit of the payment and recovery process for installation, testing and commissioning of Electrical Substation-External Works, a notable discrepancy has been identified regarding the recovery of the mobilization advance paid to the vendor. As per the payment terms, *"Mobilization Advance of 10% (INR 26,40,000/-) is being paid by the Society, to be recovered in Four equal instalments in Four monthly Running Bills, on pro rata basis"* i.e., the mobilization advance was intended to be recovered in four equal installments across the running bills. However, it has been noted that the owner did not recover any portion of the advance in the first three running bills, and the entire advance was recovered in the fourth running bill. This deviation from the agreed payment terms has led to financial inconsistencies.

3) Absence of Stamped and Signed Delivery Challans for Material Supply in Running Bills

During our audit of the material supply and payment process for installation, testing and commissioning of Electrical Substation-External Works, a significant gap has been identified regarding the evidence of material supply by the vendor. It has come to our attention that the vendor has not provided stamped and signed delivery challans by the storekeeper as proof of material supply at the site for claiming payment in the running bill 4 & 5. This discrepancy raises concerns about the adequacy of documentation, the absence of stamped and signed delivery challans

deprives the payment process of essential evidence to verify the actual timeline for supply of materials at the site.

4) Absence of Test Reports for Claiming Payment of Electrical Substation Testing

During our audit of the testing and payment process for the electrical substation, a significant deficiency has been identified regarding the provision of test reports. It has come to our attention that the required test reports, which serve as essential evidence for claiming payment of testing activities conducted on the electrical substation, were not provided. The absence of these critical test reports raises concerns about the quality, safety, and compliance of the constructed infrastructure.

5) Inappropriate Release of Retention Money Despite Noted Flaws in Electrical Line:

During our review of the payment and retention process, a significant discrepancy has been identified regarding the release of retention money as per the specified payment terms. It has come to our attention that despite the payment terms stating that *"5% of Work Done, deducted from each R.Bill, subject to maximum Rs.10 Lac. To be retained against procurement of obtaining approvals, NOCs and Final Electrical Connection from the concerned Departments and Local authorities"*, all retention was released on 18th Sept'2019. However as per letter from Executive Engineer, Electrical Department, Haryana, dated 20.09.2019 there were flaws noted in the Electrical line, therefore NO retention has to be released which is deducted against NOC.

6) Penalty to be Imposed on M.s Radius Synergies International Pvt. Ltd. for delay in work:

As per Clause "Compensation for Delay" of Contract, *"The contractor shall pay as compensation of an amount equal to INR 10,000 per day of delayed period subject to maximum of 10% of contract value"*. As the time allowed for performance of contract was 3 months i.e., contract should have been completed upto Apr'2018, & no document regarding extension of time period presented to audit team during course of audit & still some work is pending to be done there, therefore Contractor is bound to **pay for Liquidated damages that amounts to INR 26,40,020/-**, refer below attached annexure for details:

Deadline for Completion	Penalty completed upto	Delay in no. of days	Penalty per day	Penalty amount	Restricted to 10% of contract value
30/04/2018	01/08/2022	1554	10000	15,540,000.00	2,640,020.32

Detail of work still pending to be completed:

S. No.	Particular	Claimed Qty	PO qty	Qty remaining to be executed
1	Supplying, receiving, erection, testing and commissioning of 2000kVA, 11kV/415Volts, outdoor type, oil cooled 3 phase, 4 wire 50 Hz. with off load tap changer, +5 % to -7 % , 2.5 % per step with cable box at primary and at secondary end for outdoor installation, Winding Temperature Indicator, restricted earth fault CT, buchholz relay, silica breather, MOG with contacts, Marshal Box to connect control cable between HT panel and Transformer as per specification etc. as required.	0	1	1
2	Supplying and laying of following sizes under ground RCC pipe 20 mm dia	0	20	20
3	50 mm * 6 mm Copper Strip	20	60	40
4	MS Cable tray- 300*50*1.6	0	1000	1000
5	Acoustic and weather proof enclosure with arar	0	1	1
6	Diesel Oil Tank 285 ltrs.	1	2	1
7	12C * 2.5 sqmm Control cables	50	200	150
8	LT Cables 3.5C*300 sq. mm.	2278	2375	97
9	LT Cables 3.5C*240 sq. mm.	3161	3220	59
10	LT Cables 3.5C*150 sq. mm.	710	870	160
11	LT Cables 3.5C*70 sq. mm.	210	220	10
12	LT Cables 3C*10 sq. mm.	0	100	100
13	XLPE Cable 4C*16 sq. mm.	36	48	12
14	XLPE Cables 3C*10 sq. mm.	0	12	12

7) Discrepancy Between Tested/Commissioned Quantity and Installed Quantity:

During our audit of the testing and commissioning process, a significant discrepancy has been identified between the quantity of "Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of overall size 100 mm dia, 3000 mm depth, 17.2 mm in dia with copper bonded MS conductor Conductive aggregate mixed with cement to embed or backfill the voids surrounding the 17.2 mm Cu bonded MS conductor placed at the centre of a augured bore hole of 100 mm Dia & 3000 mm depth. The surface area of the earth electrode shall lower the earth resistance permanently without periodic watering or recharge of earth enhancing compound for a period of over 30 years in all type of soil conditions and shall not leach into the soil or underground water channels, Electrode's top terminal shall be sealed permanently & earth strip shall be taken out and terminated to earth bus bar, the earth electrode shall be able to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement." tested and commissioned by the vendor and the quantity that was originally installed by the vendor. It is observed that the vendor has tested and commissioned a greater quantity than was actually installed. This discrepancy raises

concerns about accuracy in testing, compliance with contractual specifications, certification of running bills.

Detail of discrepancy is as under:

Particular	UOM	Qty Supplied	Qty Installed	Qty tested	Qty commissioned
Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of overall size 100 mm dia, 3000 mm depth, 17.2 mm in dia with copper bonded MS conductor Conductive aggregate mixed with cement to embed or backfill the voids surrounding the 17.2 mm Cu bonded MS conductor placed at the centre of a augured bore hole of 100 mm Dia & 3000 mm depth. The surface area of the earth electrode shall lower the earth resistance permanently without periodic watering or recharge of earth enhancing compound for a period of over 30 years in all type of soil conditions and shall not leach into the soil or underground water channels, Electrode's top terminal shall be sealed permanently & earth strip shall be taken out and terminated to earth bus bar, the earth electrode shall be able to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement.	No.	26	25.2	26	26

III. External Electrical Work-11KV HT Cable Laying Work:

A. Background & Tender Process

This audit report provides a comprehensive overview of the implementation of an External Electrical Work-11KV HT Cable Laying Work project within the premises of the Police Officers Multi-state Co-operative Housing Society. The project was initiated by the Management Committee with the aim of ensuring a reliable and efficient electricity supply for the residents of the society. The implementation process followed a tender process, wherein qualified contractors were selected based on competitive bidding. This report will delve into the details of the tender process, the contract terms, and the subsequent execution of the Electric Substation project.

Financial Bids were received from the following qualified vendors:

1. Radius Synergies International Pvt. Ltd.
2. R.K. Industries
3. Brother Electrical Services
4. KNG Engineering Services

Rate contract submitted by the above mentioned vendors for the execution of External Electrical Work-11KV HT Cable Laying Work project at Police Officers Multi-State Co-Operative Housing society are as follows:

Vendor Name	Financial bid submitted	Initial Bid amount	Vendor Position
Radius Synergies International Pvt. Ltd.	√	1,88,81,813.00	L4
R.K. Industries	√	1,43,10,374.21	L2
Brother Electrical Services	√	1,56,21,020.00	L3
KNG Engineering Services	√	1,39,34,315.00	L1

Upon submission of Initial quotes the Board of Directors of Police Officers Multi-state Co-operative Housing Society Board of Directors proceeds with negotiation with the vendors and also decided to procure 3C x 300 sq.mm XLPE Al. armoured cable, 11 KV grade,

conforming to IS : 7098 Part-II and as per DHBVN Technical Specifications separately and the same has been decided to remove from BOQ and amount would be reduced accordingly with the remaining vendors that are as follows:

Item wise Breakup of Bid values before exclusion of 11KV Armoured cable from BOQ:

EXTERNAL ELECTRICAL WORK - 11KV HT CABLE LAYING WORK										20.08. 2018	
Note	1.) Prices shall be including all Taxes. Quantities are based on DHBVN Estimate. 2.) Makes of Material as per Guidelines of DHBVN, in case of any change in Manufactures / Makes, the Contractor shall provide separate list of Manufactures / Makes as annexure to this Tender. 3.) For items or the ratings which are not cover in the list permission to be taken from DHBVN before procurement of the material. 4.) Work to be executed as per DHBVN Specifications										
S. No.	Description of items	Unit	Qty	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount
				01 Radius Synergies		02 R.K. INDUSTRIES		03 BROTHER ELECTRIC		04 KNG ENG SERV	
1.0	Supply, fixing, testing and commissioning of PCC Pole 11 M long as per DHBVN Technical Specifications.	Nos	105	7241	760305	8602.20	903231	9700	1018500	105	1128750
2.0	Supply, fixing, testing and commissioning of 11 KV 400 Amps GO Switch complete with handle, pipe & supporting channel, as per DHBVN Technical Specifications.	Nos	3	12206	36618	8496	25488	9400	28200	45000	135000
3.0	Supply, laying, testing and commissioning of 3C x 300 sq.mm XLPE AL. armoured cable, 11 KV grade, conforming to IS : 7098 Part-II and as per DHBVN Technical Specifications.	Mtr	5500	1859	10224500	1784.88	9816840	2000	11000000	1590	8745000
4.0	Laying, testing & commissioning of 3 x 300 sq.mm 11KV (E), XLPE AL. armoured cable conforming to IS: 7098 (Part-amendments) Shall be operational at 11 KV, 50 Hz. AC system in ground at a depth of 1000 mm below ground level over a cushion of 75 mm thick sand and around and protected with bricks on sides and top on surface of cable complete in all respect. The price are inclusive of all earth work such as rock cutting, digging, back filling, supply & spreading of good earth all around the cable as per DHBVN specification and requirement of the job.	Mtr	3000	1050	3150000	466.10	1398300	525	1575000	350	1050000
5.0	Laying, testing & commissioning of 3 x 300 sq.mm 11KV (E), XLPE AL. armoured cable conforming to IS: 7098 (Part-amendments) Shall be operational at 11 KV, 50 Hz. AC system over head cable with 50 sq.mm stranded steel wire for cable support including GI Clamps for tying the cable from steel wire complete as required as per DHBVN Guidelines and specifications.	Mtr	2500	690	1725000	250.16	625400	300	750000	250	625000
6.0	Supplying, erection, testing and commissioning of 800A, 11KV, 3 phase, 50 Hz, metal clad, dead front, Single Board VCB Panel, 500MVA rupturing capacity as per DHBVN specification and requirement.	No	1	712425	712425	457427	457427	51060	51060	690300	690300
7.0	Supplying, erection, testing and commissioning of 11 KV, 3 phase, 50 Hz, HT Metering Cubical with Three nos. 11KV Epoxy resin cast CT Ratio 300/5A, 10VA, Class 0.5 and 01 no. 11KV/110V Epoxy resin cast 3 Phase Metering PT class 0.5, 25 VA including internal wiring as per electricity board requirement and handing over to the Electricity board as per DHBVN Specification complete as required.	No	2	75000	150000	88500	177000	99400	198800	69030	138060
8.0	Supplying, erection, testing and commissioning of 11 KV, 3 phase, 50 Hz, HT Meter as per electricity board requirement including calibration of the same and handing over to the Electricity board as per DHBVN Specification complete as required.	No	2	6500	13000	33040	66080	37200	74400	38350	76700
9.0	Supply, fixing, testing and commissioning of MS Channel cross arms 100x50x6mm. as per DHBVN Technical Specifications.	Kg	500	355	177500	116.82	58410	105	52500	125	62500
10.0	Supply, fixing, testing and commissioning of MS Channel cross arms 75x40x6mm. as per DHBVN Technical Specifications.	Kg	500	355	177500	116.82	58410	105	52500	125	62500
11.0	Supply, fixing, testing and commissioning of M.S. angle iron 50x50x6 mm. as per DHBVN Technical Specifications. as per DHBVN Technical Specifications.	Kg	200	296	59200	116.82	23364	105	21000	125	25000
12.0	Supply, fixing, testing and commissioning of M.S. flat iron 50x6 mm. as per DHBVN Technical Specifications.	Kg	300	296	88800	116.82	35046	105	31500	125	37500
13.0	Supply, fixing, testing and commissioning of M.S. Nuts & Bolt off size as per DHBVN Technical Specifications.	Kg	100	250	25000	116.82	11682	105	10500	150	15000
14.0	Supply, fixing, testing and commissioning of 11KV, 3C 300sqmm XLPE cable box indoor as per DHBVN Technical Specifications.	No	4	16500	66000	8590.4	34361.6	9500	38000	9970	39880
15.0	Supply, fixing, testing and commissioning of 11KV, 3C 300sqmm XLPE cable box outdoor as per DHBVN Technical Specifications.	No	20	17000	340000	9322	186440	10400	208000	11970	239400
16.0	Supply, fixing, testing and commissioning of 11 KV pin insulator with pin as per DHBVN Technical Specifications.	No	18	450	8100	503.86	9069.48	550	9900	670	12060

17.0	Supply, fixing, testing and commissioning of 11 KV Disc insulator with fitting as per DHBVN Technical Specifications.	No	16	790	12640	233.64	3738.24	260	4160	1070	17120
18.0	Supply, fixing, testing and commissioning of Stay Sels 8' Long complete with X-Plate 460mm of angle 65x65x6 Elbow & rod Wt. 13.80 Kg. as per DHBVN Technical Specifications.	No	16	3800	60800	4484	71744	5000	80000	16870	269920
19.0	Supply, fixing, testing and commissioning of Stay wire 7/8 SWG as per DHBVN Technical Specifications.	Kg	160	480	76800	120.36	19257.6	125	20000	130	20800
20.0	Supply, fixing, testing and commissioning of G.I. Pipe 40 mm dia 6 mtr. long for earthing set B class as per DHBVN Technical Specifications.	No	20	3500	70000	2714	54280	3000	60000	230	4600
21.0	Supply, fixing, testing and commissioning of G.I. Strip 25X6 mm 9 Mtr. For earthing Wt. 10.80 Kg. (TATA/SAI Make) as per DHBVN Technical Specifications.	No	20	560	11200	1678.34	33566.80	1850	37000	5370	107400
22.0	Supply, fixing, testing and commissioning of Earthing set complete as per DHBVN Technical Specifications.	No	11	3500	38500	6726	73986	7500	82500	27600	303600
23.0	Supply, fixing, testing and commissioning of wooden deal as per DHBVN Technical Specifications.	No	105	185	19425	250	26250	275	28875	425	44625
24.0	Supply, fixing, testing and commissioning of Danger plate as per DHBVN Technical Specifications.	No	105	250	26250	265.50	27877.50	290	30450	160	16800
25.0	Supply, fixing, testing and commissioning of Number plate as per DHBVN Technical Specifications.	No	105	250	26250	125	13125	135	14175	160	16800
26.0	Civil work including cost of materials, labour, excavation, earth work, complete structural work in RCC, column, beam, slab & infill brick wall, plaster, flooring, painting as per the requirement and specifications of DHBVN.	C.mtr	20	41300	826000	5000	100000	7200	144000	2500	50000
Total Cost i/c GST					18881813		14310374.21		15621020		13934315

Contract value of the vendor's post exclusion of 3C x 300 sq.mm XLPE Al. armoured cable, 11 KV grade from BOQ is as under:

Vendor Name	Initial Bid amount	Price for 11 KV armoured cable	Revised bid value post exclusion
Radius Synergies International Pvt. Ltd.	1,88,81,813.00	1,02,24,500.00	86,57,313.00
R.K. Industries	1,43,10,374.21	98,16,840.00	44,93,534.21
Brother Electrical Services	1,56,21,020.00	1,10,00,000.00	46,21,020.00
KNG Engineering Services	1,39,34,315.00	87,45,000.00	51,89,315.00

Further it has been noted that no record regarding negotiation with vendors (i.e., Radius Synergies International Pvt. Ltd., Brother Electrical Services, & KNG Engineering Services) other than selected vendor i.e., M/s R.K. Industries is available with the society, however, Revised/Negotiated Tender Amount after Final Negotiation is INR 51,00,197/- (post inclusion of liaisoning fee of INR 10,00,000 and considering a discount of 7.16%) and hence, contract has been awarded to them.

Summary of Revision of contract value as mentioned below:

Tender Opening Amount	Rs. 1,43,10,374/-
Less: Cost of cable shown in item No. 03 of tender i.e. Rs.98,16,840/-	Rs. 88,16,840/-
less: liaisoning fee of Rs.10 lakhs	Rs. 54,93,434/-
Net amount	

Less: As per negotiation 7.16%	Rs. 3,93,337/-
Net amount as negotiated	Rs. 51,00,197/-

(Rupees Fifty-one lakhs one hundred and ninety-seven nonly)

NOTE:

The above amount is inclusive of taxes and all other charges.

Detailed Description of per unit change post negotiation is here as under:

S. No.	Description of items	Unit	Qty	R.K.Industries			
				Initial Rate	Initial Amount	Negotiated Rate	Negotiated Amount
1.0	Supply , fixing , testing and commissioning of PCC Pole 11 M long as per DHBVN Technical Specifications.	Nos	105	8602.20	903231	7986.2825	838559.66
2.0	Supply , fixing , testing and commissioning of 11 KV 400 Amps GO Switch complete with handle, pipe & supporting channel, as per DHBVN Technical Specifications.	Nos	3	8496	25488	7887.6864	23663.06
3.0	Laying, testing & commissioning of 3 x 300 sq.mm 11KV (E), XLPE Al. armoured cable conforming to IS: 7098 (Part-amendments) Shall be operational at 11 KV, 50 Hz. AC system in ground at a depth of 1000 mm below ground level over a cushion of 75 mm thick sand around and protected with bricks on sides and top on surface of cable complete in all respect. The price are inclusive of all earth work such as rock cutting, digging, back filling, supply & spreading of good earth all around the cable as per DHBVN specification and requirement of the job.	Mtr.	3000	466.10	1398300	432.7272	1298181.72
4.0	Laying, testing & commissioning of 3 x 300 sq.mm 11KV (E), XLPE Al. armoured cable conforming to IS: 7098 (Part-amendments) Shall be operational at 11 KV, 50 Hz. AC system over head cable with 50 sq.mm stranded steel wire for cable support including GI Clamps for tying the cable from steel wire complete as required as per DHBVN Guidelines and specifications.	Mtr.	2500	250.16	625400	232.2485	580621.36
5.0	Supplying, erection, testing and commissioning of 800A, 11KV, 3 phase, 50 Hz. metal clad, dead front, Single Board, VCB Panel, 500MVA rupturing capacity as per DHBVN specification and requirement.	No	1	457427	457427	424675.2268	424675.23
6.0	Supplying, erection, testing and commissioning of 11 KV, 3 phase, 50 Hz. HT Metering Cubical with Three nos. 11KV Epoxy resin cast CT Ratio 300/5A, 10VA, Class 0.5 and 01 no. 11KV/110V Epoxy resin cast 3 Phase Metering PT class 0.5, 25 VA including internal wiring as per electricity board requirement and handing over to the Electricity board as per DHBVN Specification complete as required.	No	2	88500	177000	82163.4000	164326.80
7.0	Supplying, erection, testing and commissioning of 11 KV, 3 phase, 50 Hz. HT Meter as per electricity board requirement including calibration of the same and handing over to the Electricity board as per DHBVN Specification complete as required.	No	2	33040	66080	30674.3360	61348.67
8.0	Supply , fixing , testing and commissioning of MS Channel cross arms 100x50x6mm. as per DHBVN Technical Specifications.	Kg	500	116.82	58410	108.4557	54227.84
9.0	Supply , fixing , testing and commissioning of MS Channel cross arms 75x40x6mm. as per DHBVN Technical Specifications.	Kg	500	116.82	58410	108.4557	54227.84
10.0	Supply , fixing , testing and commissioning of M.S. angle iron 50x50x6 mm. as per DHBVN Technical Specifications. as per DHBVN Technical Specifications.	Kg	200	116.82	23364	108.4557	21691.14
11.0	Supply , fixing , testing and commissioning of M.S. flat iron 50x6 mm. as per DHBVN Technical Specifications.	Kg	300	116.82	35046	108.4557	32536.71
12.0	Supply , fixing , testing and commissioning of M.S. Nuts & Bolt off size as per DHBVN Technical Specifications.	Kg	100	116.82	11682	108.4557	10845.57
13.0	Supply , fixing , testing and commissioning of 11KV, 3C 300sqmm XLPE cable box indoor as per DHBVN Technical Specifications.	No	4	8590.4	34361.6	7975.3274	31901.31
14.0	Supply , fixing , testing and commissioning of 11KV, 3C 300sqmm XLPE cable box outdoor as per DHBVN Technical Specifications.	No	20	9322	186440	8654.5448	173090.90

15.0	Supply , fixing , testing and commissioning of 11 KV pin insulator with pin as per DHBVN Technical Specifications .	No	18	503.86	9069.48	467.7836	8420.11
16.0	Supply , fixing , testing and commissioning 11 KV Disc insulator with fitting as per DHBVN Technical Specifications .	No	16	233.64	3738.24	216.9114	3470.58
17.0	Supply , fixing , testing and commissioning of Stay Sets 8' Long complete with X-Plate 460mm of angle 65x65x6 Elbow & rod Wt. 13.80 Kg. as per DHBVN Technical Specifications .	No	16	4484	71744	4162.9456	66607.13
18.0	Supply , fixing , testing and commissioning of Stay wire 7/8 SWG as per DHBVN Technical Specifications .	Kg	160	120.36	19257.6	111.7422	17878.76
19.0	Supply , fixing , testing and commissioning of G.I. Pipe 40 mm dia 6 mtr. long for earthing set B class as per DHBVN Technical Specifications .	No	20	2714	54280	2519.6776	50393.55
20.0	Supply , fixing , testing and commissioning of G.I. Strip 25X6 mm 9 Mtr. For earthing Wt. 10.80 Kg. (TATASAIL Make) as per DHBVN Technical Specifications .	No	20	1678.34	33566.80	1558.1709	31163.42
21.0	Supply , fixing , testing and commissioning of Earthing set complete as per DHBVN Technical Specifications .	No	11	6726	73986	6244.4184	68688.60
22.0	Supply , fixing , testing and commissioning of wooden cleat as per DHBVN Technical Specifications .	No	105	250	26250	232.1000	24370.50
23.0	Supply , fixing , testing and commissioning of Danger plate as per DHBVN Technical Specifications .	No	105	265.50	27877.50	246.4902	25881.47
24.0	Supply , fixing , testing and commissioning of Number plate as per DHBVN Technical Specifications .	No	105	125	13125	116.0500	12185.25
25.0	Civil work including cost of materials, labour, excavation, earth work, complete structural work in RCC, column, beam, slab & infill brick wall, plaster, flooring, painting as per the requirement and specifications of DHBVN.	C. mtr	20	5000	100000	4642.0000	92840.00
Total Cost i/c GST					14310374.21		4171797.1698
Liaisoning Fee after 7.16% discount (10,00,000-7.16%)							928400.0000
Total Contract Value							5100197.1698

B. Drawbacks in Vendor Selection Process and Contract Awarding:

1. Lack of Documentation for Negotiations with Non-Selected Vendors in Vendor Selection Process:

During our review of the vendor selection process for implementation of an External Electrical Work-11KV HT Cable Laying Work project within the premises of the Police Officers Multi-state Co-operative Housing Society conducted through the tendering procedure, we noted that no documented records were provided pertaining to the negotiation process with vendors other than the selected vendor. The absence of such documentation limits the transparency and accountability of the vendor selection process and its associated negotiations.

Impact of such negligence may result in following:

- Without documented negotiations and evaluations of non-selected vendors, there is a risk that potentially beneficial alternatives may not have been thoroughly considered. This could result in missed opportunities for cost savings, quality improvement, or value-added services.
- The absence of documentation impedes the audit trail for vendor selection, making it challenging to assess whether the selection aligns with the Standardized procurement policies and guidelines.

2. Impact of Unforeseen Liaisoning Fee on Contract Award for HT Cable Project:

During our audit of the contract award process for the laying of 11KV HT cables, an observation of significant concern emerged. The selected vendor's introduction of a Liaisoning fee of 10 lakhs stating that same was inclusive in value of HT Cables however nothing like that was mentioned in bids submitted to the society, during the negotiation process upon society's decision of not procuring 11KV HT Armoured cables and after getting selected in comparative as lowest bidder, which was not initially accounted for, and the subsequent alterations in contract terms had a noteworthy impact on the ultimate contract value and the vendor selection outcome.

Impact of such negligence may result in following:

- **Cost Escalation:** The unanticipated introduction of a 10 lakh liaisoning fee by the initially selected vendor contributed to a notable escalation in the overall contract value. This increase directly impacted the project's cost structure, potentially exceeding the budgeted allocation.
- **Contract Value Inflation:** The addition of the liaisoning fee post-negotiation inflated the contract value, which may have compromised the originally intended competitiveness of the bid.
- **Contract Award Decision:** The revised contract value, influenced by the introduction of the liaisoning fee, must have led to the reconsideration of the vendor selection outcome. The alteration could have played a decisive role in awarding the contract to the second-lowest bidder (L2).

C. Contractual Terms and Conditions:

1. Scope of work encompassed to Laying, Installation, Testing & Commissioning of 11KV HT Armoured Cable Work - External Electrical Works at Police Officers Multi state Housing Society Ltd. Under construction at Sector 49, Faridabad, Haryana, as per tender quoted and final negotiations in the office of society.
2. **Payment terms:**
 - 10% Advance
 - 55% against supply of material at site.
 - 25% against installation
 - 10% will be retained towards security deposit. 50% of the Security deposit will be released after six months from the Date virtual and satisfactory completion of work. Balance 50% after expiry of the defect liability period.
3. **Contract Price:**

Contract price for Laying, Installation, Testing & Commissioning of 11KV HT Armoured Cable Work - External Electrical Works fixed at INR 51,00,197/-. Detailed description is as under:

Tender Opening Amount	Rs. 1,43,10,374/-
Less: Cost of cable shown in item No. 03 of tender i.e. Rs.98,16,840/- less: liaisoning fee of Rs.10 lakhs	Rs. 88,16,840/-
Net amount	Rs. 54,93,434/-
Less: As per negotiation 7.16%	Rs. 3,93,337/-
Net amount as negotiated	Rs. 51,00,197/- =====
(Rupees Fifty-one lakhs one hundred and ninety-seven only)	

NOTE:

The above amount is inclusive of taxes and all other charges.

4. Time Period shall be 2 (Two) Months from the date of LOI.
5. Society had paid INR 5,04,900/- towards 10% advance via Cheque bearing cheque no. 048589 dated 08/10/2018.
6. HT Cable 3x300 sqmm XLPE Al. Armoured Cable will be supplied by the Society free of Cost. The Negotiated amount of Rs.51,00,197/- shall include all Tender Items excluding Item no.03 (3x300 sqmm XLPE Al. Armoured Cable).
7. All type of Liaisoning expenditure for Cable Laying from DHBVN Sub-Station to Society HT Room, including expenditure of Pre-Inspection or Inspection of all Material & HT Cable by DHBVN Officials, including inspection charges.
8. Fixed Rate Contract, No Escalation on Material or Labour.
9. **Liquidated Damages:** INR 10,000/- (Rupees Ten Thousand only) per day subject to a maximum of 10% of the contract amount.

D. Observations:

1. Delay in Providing Agreed Discount as per Contract Terms:

During the course of our audit, a concerning observation was noted regarding the application of the agreed discount in the contract for the project under review. Despite the presence of a negotiated discount clause, the discount was not applied in the first three running bills and was only provided in the final running bill. This deviation from the contract terms has implications for the project's financial management and potentially raises concerns about adherence to agreed-upon terms as it leads to enhanced cash outflow in first 3 running bills and the same was adjusted in final running bills.

Details of different arises in bills due to non-consideration of discount amount in first three running bills:

Running Bill	Total Amount as per bill	Total amount needs to be	Excess amount claimed in bill
RA-1	16,52,019.00	15,33,729.40	1,18,289.60
RA-2	31,55,740.00	30,48,069.80	1,07,670.20
RA-3	46,74,249.00	45,65,521.93	1,08,727.07

2. Absence of Delivery Challan and Measurement Certificate for HT Cable Installation Work:

During the course of our audit of the 11KV HT armoured cable installation work, a notable observation has come to light regarding the absence of supporting documentation in the form of delivery challan and measurement certificate. These documents are essential for verifying the actual work performed and the quantities of materials delivered. The absence of these documents raises concerns about the accuracy and transparency of the reported work and its alignment with the contract terms.

Impact of this negligence leads to:

- **Verification Challenges:** The absence of a delivery challan makes it difficult to verify the receipt of the specified quantity of HT armoured cable.
- **Material Accountability:** Without a proper delivery challan, it becomes challenging to establish a clear link between the materials used in the installation and the actual quantities delivered.

3. Penalty to be Imposed on M.s R.K. Industries for delay in work:

As per Clause "Liquidated Damages", *"The contractor shall pay as compensation of an amount equal to INR 10,000 per day of delayed period subject to maximum of 10% of contract value"*. As the time allowed for performance of contract was 2 months i.e., contract should have been completed upto Dec'2018, & no document regarding extension of time period presented to audit team during course of audit & Final bill was submitted by contractor on 16th Oct'2019 i.e., beyond the permissible completion date, therefore Contractor is bound to **pay for Liquidated damages that amounts to INR 5,10,019.70/-**, refer below attached annexure for details:

Deadline for completion	Work Completed on	Delay in no. of days	Penalty per day	Penalty amount	Restricted to 10% of Contract Value
12-12-2018	16-10-2019	308	10,000.00	30,80,000.00	5,10,019.70

IV. Supply of HT Line Cable:

A. Background

This audit report provides a comprehensive overview of the procurement of 11KV HT Armoured Cable for the premises of the Police Officers Multi-state Co-operative Housing Society. The project was initiated by the Management Committee with the aim of ensuring a reliable and efficient electricity supply for the residents of the society. The implementation process followed a tender process, wherein qualified contractors were selected based on competitive bidding. This report will delve into the details of the tender process, the contract terms, and the subsequent execution of the project.

B. Tender Process:

Financial Bids were received from the following qualified vendors:

1. KEI Industries Ltd.
2. Polycab Wires
3. Paramount Cables
4. Havells India
5. Shree Nursingsahay Mudungopal (Engineers) Pvt. Ltd.

Rate contract submitted by the above mentioned vendors for the supply of External Electrical Work-11KV HT Cable at Police Officers Multi-State Co-Operative Housing society are as follows:

S.No.	Company Name	Bid Amount	Vendor Position
1	KEI Industries Ltd.	56,65,000.00	L5
2	Polycab Wires	56,21,000.00	L3
3	Paramount Cables	54,45,000.00	L2
4	Havells India	56,48,665.00	L4
5	Shree Nursingsahay Mudungopal (Engineers) Pvt.Ltd.	53,90,000.00	L1

Item wise Breakup of Bid values are as follows:

Comparative Statement of HT Cable										
S.N	COMPANY NAME	QTY IN K.M	RATE per mtr	RATE PER K.M	TOTAL	GST @ 18%	TOTAL	SCHEDULE OF SUPPLY	FREIGHT & TRANSIT INSURANCE	Unloading at site
1	KEI Industries Ltd.	5.5	1,030.00	10,30,000	56,65,000	10,19,700	66,84,700	10-12 weeks after PI	Including	By Society/ Contractor
2	Polycab Wires	5.5	1,022.00	10,22,000	56,21,000	10,11,780	66,32,780	3-5 weeks after PI	Including	By Society/ Contractor
3	Paramount Cables	5.5	990.00	9,90,000	54,45,000	9,80,100	64,25,100	6-8 weeks after PI	Including	By Society/ Contractor
4	Havells India	5.5	1,027.03	10,27,030	56,48,665	10,16,760	66,65,425	Completed upto 26.12.2018	Including	By Society/ Contractor
5	Shree Nursingsahay Mudungopal (Engineers) Pvt.Ltd.	5.5	980.00	9,80,000	53,90,000	9,70,200	63,60,200	6-8 weeks after PI	Including	By Society/ Contractor

Further it has been noted that Tender Amount quoted by Shree Nursingsahay Mudungopal (Engineers) Pvt.Ltd. is INR 53,90,000/- (excl. GST) which makes Shree Nursingsahay Mudungopal (Engineers) Pvt.Ltd. as L1 Vendor and hence, contract has been awarded to them.

C. Contractual Terms and Conditions:

1. Purchase Order for Supply of KEC-HT Cable XLPE Insulated Aluminium Conductor 3 core 300 sqmm 11KV (E) at site, Police Officers Multi State Co-operative Housing Society Ltd., Sector-49, Faridabad (Haryana) awarded to Shree Nursingsahay Mudungopal (Engineers) Pvt.Ltd. on 10th Dec'2018.
2. Quantity to be supplied will be 5,500 Mtrs.
3. Per Unit rate for the Supply of KEC-HT Cable XLPE Insulated Aluminium Conductor 3 core 300 sqmm 11KV (E) at site is INR 980/- per mtr.
4. Contract price for Supply of KEC-HT Cable XLPE Insulated Aluminium Conductor 3 core 300 sqmm 11KV (E) fixed at INR 53,90,000/- (excl. GST)
5. GST to be paid at 18% which makes the total contract value to INR 63,60,200/- (incl. GST)
6. The Supply in 6 weeks from the date of Purchase Order
7. Freight & Transit Insurance & Inspection by DHBVN at Factory at Vadodara is included in the rates and shall be the responsibility of Shree Nursingsahay Mudungopal (Engineers) Pvt.Ltd.
8. Guarantee/Warranty 12 months from date of Supply or 18 months from Installation date.
9. Unloading at Site/any other location shall be responsibility of society or their contractor
10. Payment terms (20%+80%), 20% along with Purchased Order & 80% against Performa Invoice before dispatch
11. Time will be considered essence of the contract, Entire delivery shall be completed within period stipulated.

D. Invoice details:

Contractor i.e., Shree Nursingsahay Mudungopal (Engineers) Pvt. Ltd. Has issued the following invoice for Supply of KEC-HT Cable XLPE Insulated Aluminium Conductor 3 core 300 sqmm 11KV (E) at site, Police Officers Multi State Co-operative Housing Society Ltd., Sector-49, Faridabad (Haryana) and the same has been paid by the society as per contract terms upon deducting TDS.

Vendor's name	Invoice No.	Tender Date	Invoice Date	Taxable Value	GST	Total
Shree Nursingsahay Mudungopal (Engineers) PVT.LTD	SODL/181010873/DEL	10-12-2018	12-12-2018	53,90,000.00	9,70,200.00	63,60,200.00

V. Fiber to the Home:

A. Background:

This audit report provides a comprehensive overview of Supply Order for "Fiber to the home (FTTH" Infrastructure through GPON (Gigabit passive optical network) Technology for providing Voice, Video (DTH) & Data services for all the residents/users for "Police Officers Multi State Co-Op. Housing Society Ltd" residential multi-storied project Sector-49, Faridabad (Haryana). The project was initiated by the Management Committee with a commitment to providing modern amenities and enhanced living experiences to its members, the society has embarked on a transformative project focused on bringing advanced communication services to its residents. The implementation process has not followed a tender process for vendor selection, and the contract has been awarded on single rate contract basis.

B. Tender Process:

In the course of our comprehensive audit of Fiber to the home (FTTH" Infrastructure through GPON (Gigabit passive optical network) Technology for providing Voice, Video (DTH) & Data services conducted for Police Officer Multi-State Co-operative Housing Society Ltd., we examined the vendor selection process employed for employing M/s Softone Solutions Pvt. Ltd. Our evaluation focused on the methods adopted for vendor selection and the subsequent awarding of contracts. Notably, our observation reveals that the traditional competitive tender process was not employed in this instance, and the decision to award the contract was made on a single vendor basis.

It has been noted that Contract Amount quoted by M/s Softone Solutions Pvt. Ltd. is INR 65,36,000/- (incl. of applicable taxes) and as this is a single vendor contract hence, contract has been awarded to M/s Softone Solutions Pvt. Ltd.

Detailed Breakup for Contract value is as follows:

SN	Description	UoM	Supply Rate (INR)	Total UoM	Supply Rate @ per unit (INR)
1	ONT Box Total	1	1250	688	860000
2	Uninterrupted Power Supply (UPS) for ONT	1	1250	688	860000
3	Audio IP phone	1	2200	688	1513600
4	One port in RG/ONT for BMS	1	2050	688	1410400
5	ONT in common areas				
6	Perpetual IRU (Indefeasible Right of Use) of 20 Mbps/port in common areas and 10 Mbps/port in each home for running Building Management Services (BMS). SIP based IPBX server Passive Fiber Infrastructure Cloud based Intelligent Building Management Solution (iBMS) for near real time remote monitoring and smart management of water level, DG and common area lights.	1	2750	688	1892000
Taxes		Total			6536000
Above Rates are in exclusives of applicable taxes.					

C. Drawbacks in Vendor Selection and Contract Awarding:

Absence of Tender Process for Vendor Selection and Single Vendor Contract Award:

During our audit of the vendor selection process for Fiber to the home, a significant observation has come to light regarding the absence of a formal tender process. Instead, the contract has been awarded on a single vendor basis. This approach departs from established procurement practices and raises concerns about transparency, and competition in the selection of vendors.

Impact of absence of a formal tender process leads to:

- **Lack of Competitive Bidding:** The absence of a tender process means that multiple vendors were not provided an equal opportunity to compete for the contract. This raises doubts about whether the selected vendor truly offers the best value for the project in terms of cost, quality, and expertise.
- **Transparency and Accountability:** The absence of a competitive bidding process diminishes the transparency and accountability of the vendor selection
- **Risk of Higher Costs:** Without a competitive bidding process, there is a risk that the project might not achieve optimal cost savings. A lack of market benchmarking could lead to higher costs compared to what might have been achieved through competitive bids.

D. Contractual Terms and Conditions:

1. SCOPE OF WORK

"Fiber to the home (FTTH)" as per BOQ for "Police Officers Multi State Co- Op. Housing Society Ltd" Housing Complex at Sector-49, Faridabad, (Haryana)

2. TIME SCHEULE

Since time of completion is the essence of this supply contract all efforts should be made by you to Supply all the materials within stipulated time/schedule to be decided by the Society in consultation with M/s Softone Solutions Pvt. Ltd.

3. PRICE

- a. This is an item rate contract and the price quoted shall be final within the scope as mentioned in BOQ. These unit rates shall remain firm and shall not be subject to any revision whatsoever during the currency of this supply contract and any extension thereof.
- b. The rates quoted are inclusive of all applicable taxes and duties & nothing extra shall be payable on these accounts.
- c. Any increases either market or statutory on labour and materials shall not be entertained.

4. **PAYMENTS**

It is agreed that payment shall be made as under:

- a. 20% advance along with PO.
- b. 55% against proforma invoice. (ONT Box-Rs1250, UPS with battery- Rs.1250, 1P Audio Phone-Rs. 250, Gateway-Rs.2050, Networking, Optical Fiber deployment BMS and iBMS-Rs.2750)
- c. 15% after installation of material on prorated basis
- d. 10% after complete handover to POMCHS LTD

5. **DEFECT LIABILITY PERIOD/WARRANTY**

The supplier shall warranty the equipment against all defects of materials and Workmanship for a period of 12 (Twelve) months from the date of commissioning as certified by the Society. Any defects arising during the Warranty Period shall be rectified by the Contractor at his own expense to the satisfaction of the Society.

6. You shall abide by all labour laws in that respect of all the labour/manpower engaged for this work. In the event of any liability on M/s Police Officers Multi State Co-Op. Housing Society Ltd. by virtue of its being the Principal Employer, due to your failure to comply with the said Acts, you will indemnify and reimburse the amount payable by the Society on this account.

7. **ESCALATION**

No escalation of the prices shall be allowed during the period of the supply contract and any extension thereof for any reasons whatsoever and the prices quoted by the contractor shall be deemed to be fixed.

8. **PENALTY CLAUSE:**

In case the contractor fails to complete the work in time without justified reason, penalty of Rs.5,000/- per day shall be levied.

E. Observations:

1. **Absence of Delivery Challan and Measurement Certificate for HT Cable Installation Work:**

During the course of our audit of the 11KV HT armoured cable installation work, a notable observation has come to light regarding the absence of supporting documentation in the form of delivery challan and measurement certificate. These documents are essential for verifying the actual work performed and the quantities of materials delivered. The absence of these documents raises concerns about the accuracy and transparency of the reported work and its alignment with the contract terms.

Impact of this negligence leads to:

- **Verification Challenges:** The absence of a delivery challan makes it difficult to verify the receipt of the specified quantity of HT armoured cable.

- **Material Accountability:** Without a proper delivery challan, it becomes challenging to establish a clear link between the materials used in the installation and the actual quantities delivered.

2. **Absence of Time Schedule for Contract Completion and Uncertainty Regarding Penalty Applicability**

The contract executed between POMSCHS and M/s Softone Solutions Pvt Ltd. lacks a clearly defined time schedule for the completion of the project as Clause mentioned for Time Schedule in Contract state that, *“Since time of completion is the essence of this supply contract all efforts should be made by you to Supply all the materials within stipulated time/schedule to be decided by the Society in consultation with M/s Softone Solutions Pvt. Ltd.”*. The absence of such a specific timeline raises concerns about the contract's enforceability with respect to potential delays and penalties.

The absence of a specified time schedule and its related implications impact several key areas:

- **Penalty Applicability:** Without a defined time schedule, the determination of whether delays warrant the imposition of penalty clauses becomes challenging.
- **Financial Consequences:** The ambiguity surrounding the applicability of penalties for delay can impact the project's financial aspects. The absence of penalties might discourage timely completion

Details of Quantity still pending for installation at site is:

Material Description	PO qty	Actual Qty Supplied	Actual Qty installed	Balance Qty to be installed
UPS for ONT	688	688	317	371
Audio IP phone	688	688	317	371
RNT/ONS for BMS	688	688	317	371

VI. **Security System**

A. **Background:**

This audit report provides a comprehensive overview of Supply Order for of Supply, Installation, Testing and Commissioning of “Security System” for "Police Officers Multi State Co-Op. Housing Society Ltd" residential multi-storied project Sector-49, Faridabad (Haryana). The project was initiated by the Management identified the need to booster its security infrastructure, Recognizing the increasing importance of modern security solutions in enhancing the quality of life and safeguarding the community, the society has undertaken a project to install a comprehensive security system. The implementation process has not followed a tender process for vendor selection, and the contract has been awarded on single rate contract basis.

B. Tender Process:

In the course of our comprehensive audit of Supply, Installation, Testing and Commissioning of "Security System" conducted for Police Officer Multi-State Co-operative Housing Society Ltd., we examined the vendor selection process employed for employing M/s Radius Infotech Pvt. Ltd. Our evaluation focused on the methods adopted for vendor selection and the subsequent awarding of contracts. Notably, our observation reveals that the traditional competitive tender process was not employed in this instance, and the decision to award the contract was made on a single vendor basis.

It has been noted that Contract Amount quoted by M/s Radius Infotech Pvt. Ltd. is INR 28,99,920/- (incl. of applicable taxes) and as this is a single vendor contract hence, contract has been awarded to M/s Radius Infotech Pvt. Ltd.

Detailed Breakup for Contract value is as follows:

POLICE OFFICERS MULTISTATE HOUSING SOCIETY LTD, FARIDABAD	
Description	Amount
IP VIDEO SURVEILLANCE SYSTEM	1663500
CONTROL ROOM EQUIPMENTS	260170
IP NETWORKING, CONDUITING & CABLING	683000
Sub Total	2606670
WCT @5.25% on Total	136850
Service Tax @ 6 % on Total	156400
Grand Total	2899920

Unit Wise Breakup of Contract value is as below:

SUBHEAD : SECURITY AND SURVEILLANCE SYSTEM FOR PHASE-I					
BILL OF QUANTITIES - IP CCTV SYSTEM, WITH PROJECT MODEL					
S.No.	DESCRIPTION	UNIT	QTY.	Unit Rate	Amount
I	IP VIDEO SURVEILLANCE SYSTEM				
	All Cameras have to be UL, ONVIF, SIP & NMS Compliant models only				
1)	Supply, installation, testing and commissioning of UL Listed 1.3 Megapixel CMOS, Network Bullet Camera, (1280x960) resolution, 1/3" Progressive scan CMOS, 0.01@F1.2, AGC ON. 0 Lux with IR on, IR cut filter with auto switch,, H.264 / MPEG4 , Dual stream, Bit rate 32 Kbps-16Mbps, ROI, BLC, 3D DNR, DWDR, Standard IP66, PoE , with Fixed Lens between (4 - 12mm), size of lens shall be as per site requirement, IR range 30mtr illuminators, motion detection, with ONVIF, SIP & NMS supported, connectors complete as required IR Bullet fixed type for mounting on wall or surface mounted (For Gates, Ramp Entry / Exit, Basement Lobby & Perimeter security)	Set	62	12750	790500
	Make: HIKVISION, (DS-2CD2015-I)				
2)	Supply, installation, testing and commissioning of UL Listed 1.3 Megapixel CMOS Vandal-proof, Network Dome Camera (1280 x 960) resolution, 1/3" Progressive scan CMOS, 0.01Lux@F1.2, AGC ON. 0 Lux with IR on, IR cut filter with auto switch, H.264 / MJPEG, Dual stream, motion detection, Bit rate 32 Kbps-16Mbps, BLC, 3D DNR, DWDR, Standard IP66, 12 VDC ± 10%, PoE ,with fixed lens between (2.5 - 12mm), size of lens shall be as per site requirement. IR range up to 20 mtrs, ONVIF, SIP & NMS supported, connectors complete as required in Dome shape fixed type for mounting recessed in false ceiling complete as per technical specifications required. (For Stilt floor Lift Lobby, T-1, 2, 3, 4, 5, 6, 9, 13, 14)	Nos.	20	12750	255000

DESCRIPTION	UNIT	QTY.	Unit Rate	Amount
IP Lift Camera: UL Listed CMOS Vandal-proof, Network Dome Camera 1/3" Progressive scan CMOS, 0.01Lux@F1.2, AGC ON. 0 Lux with IR on, IR cut filter with auto switch, H.264 / MJPEG, Dual stream, motion detection, Bit rate 32 Kbps-16Mbps, BLC, 3D DNR, DWDR, Standard IP66, 12 VDC ± 10%, PoE ,with fixed lens between (2.8 - 8mm), size of lens shall be as per site requirement. ONVIF, SIP & NMS supported, connectors complete as required in Dome shape fixed type for mounting in lift inside, T-1, 2, 3, 4, 5, 6, 9, 13, 14	Nos.	18	10000	180000
Make: HIKVISION, (DS-2CD7164-E)				
4) Supply, installation, testing and commissioning of Professional Video management and recording software and hardware comprising 32Ch. NVR to record output of all cameras mentioned above, Third-party network cameras supported, H.264 Compression - Up to 5 Megapixels resolution recording, multiple Hard Disk with each having maximum storage capacity of 4 TB & 4 SATA , as required for, 10/100/1000 MBps network interface with each NVR, 2 USB2.0, HTTP Networkable, backup by USB/DVDWR, required Client software included, Client licenses complete as per technical specifications and as required	Nos.	4	50000	200000
Make: HIKVISION, (DS-7732NI-ST-R)				
5) Special Surveillance 4 TB HDD for NVR	Nos.	8	12,000	96000
6) Supply, installation, testing and commissioning of 21" LCD TFT monitor complete as required as per specification.	Nos.	4	8500	34000
7) Extended Surveillance Box (ESB) / Decoder for monitoring of CCTV, Display (1 / 4 / 9 / 16 split) maximum up to 64 cameras in Each, with HDMI Cable up to 5mtr at Main Gates,	Set	2	29000	58000

8)	32" HD LED Professional Display for Monitoring with mounting accessories for CCTV View at Main Gates	Set	2	25000	50000
IP VIDEO SURVEILLANCE SYSTEM - S.TOTAL					1663500
II CONTROL ROOM EQUIPMENTS					
1)	Supply, installation, testing and commissioning of 2 KVA Online UPS with sealed maintenance free batteries (to support NVR /Access control PC etc.) complete as required.	Set	1	30170	30170
2)	Supply installation Testing and Commissioning of NMS (Network Monitoring System) support for all IP active devices upto 200 nos. (Cameras, Managed network switches, Access Control Systems, Monitoring & Storage system PC / NVR) include all required hardware and the software cost for the same as per required specifications.	Set	1	150000	150000
Supply, installation, testing and commissioning of Layer 3 switch with 24 Ports PoE Managed, 10/100/1000 EB core switches to support all IP cameras, For Control Room		UNIT Nos	QTY. 1	Unit Rate 35000	Amount 35000
Supply, installation of 42U Network Rack for Control Room		Set	1	45000	45000
CONTROL ROOM EQUIPMENTS- S.TOTAL					260170
III IP NETWORKING, CONDUITING & CABLING					
1)	Providing and fixing in position the following medium duty ISI marked PVC conduit including all accessories (i.e clamps, nuts,bolts, bends, junction boxes, pull boxes etc.) for CCTV,				
a	25mm dia.	RM	2,000	40	80000
2)	Supplying, laying, marking, making connections and testing of 3 core Un-Armoured power cable of size 1.5 sqmm in existing conduits.	RM	RO	68	
3)	Supplying, laying, marking, making connections and testing of CAT-6 Un-Armoured Data cable in existing conduits/Tray. (For CCTV Cameras, Access & required Intercom Network)	RM	4,500	32	144000
4)	Supply,installation,testing and commissioning of Managed switches - 24 Port PoE 10/100 EB Switch with Fibre uplinks including for LAN base feature set with support to integration with CCTV, with all related hardware Box (L2 Switch)	Nos	9	25000	225000
5)	Supply,installation,testing and commissioning of Managed switches - 8 Port PoE 10/100/1000 EB Switch with Fibre uplinks including for LAN base feature set with support to integration with CCTV System with all related hardware Box	Nos	6	15000	90000
6)	Supply,installation,testing and commissioning of Wireless Access point for lift camera(transmitter & reciever pair)	pair	18	8000	144000
IP NETWORKING, CONDUITING & CABLING - S.TOTAL					683000

C. Drawbacks in Vendor Selection and Contract Awarding:

Absence of Tender Process for Vendor Selection and Single Vendor Contract Award:

During our audit of the vendor selection process for Security System, a significant observation has come to light regarding the absence of a formal tender process. Instead, the contract has been awarded on a single vendor basis. This approach departs from established procurement practices and raises concerns about transparency, and competition in the selection of vendors.

Impact of absence of a formal tender process leads to:

- **Lack of Competitive Bidding:** The absence of a tender process means that multiple vendors were not provided an equal opportunity to compete for the contract. This raises doubts about whether the selected vendor truly offers the best value for the project in terms of cost, quality, and expertise.
- **Transparency and Accountability:** The absence of a competitive bidding process diminishes the transparency and accountability of the vendor selection
- **Risk of Higher Costs:** Without a competitive bidding process, there is a risk that the project might not achieve optimal cost savings. A lack of market benchmarking could lead to higher costs compared to what might have been achieved through competitive bids.

D. Contractual Terms and Conditions:

1. SCOPE OF WORK

- The entire scope of Security system works (As per attached BOQ) is a fixed item rate Contract being awarded to M/s. Radius Infotech Pvt. Ltd.
- All the works shall be carried out in accordance and as per Technical Specification, Makes in the BOQ and drawings.
- Approval of drawings, materials along with all necessary accessories is the scope of the Society.
- All necessary statutory requirements like furnishing of Labour License, Provident Fund, Excise Tax, Sales Tax, ESI, etc. are to be complied by the Contractor.
- The Contractor shall be responsible to furnish all necessary Technical Guarantees, Operation Manuals and other desired documentation for the said works

2. PAYMENT TERMS:

Following shall be terms of payment:

- 20% of the contract value shall be paid advance along with Work Order
- 55% of the contract value against Proforma Invoice against delivery
- 15% of the contract value after installation
- 10 % after testing & commissioning on pro-rata basis

3. Completion Dates:

Contractor have to complete the work within 3 months from the date of issue of work order depending upon the site condition But any extension in the contract duration shall be on back to back basis upon approval by the Society. Contractor had been awarded work order on 22nd Dec'16.

4. Taxes & Duties:

The rates quoted by you are inclusive of all Taxes & Duties, ESI, Insurance or any other Direct/ Indirect Tax.

5. Escalation:

The Contract is on fixed price basis and the price will remain fixed and firm till March 2017 or completion of the work and no escalation stand admissible

6. Defect Liability / Maintenance period:

Defect liability/ Maintenance period shall be 12 months from the date of handing over the work after successful commissioning.

7. Penalty Clause:

In case the contractor fails to complete the work in time without justified reason, penalty of Rs.5,000/- per day shall be levied.

E. Observations:

1) Absence of Test Reports for Claiming Payment of Security System

During our audit of the testing and payment process for the Security System, a significant deficiency has been identified regarding the provision of test reports. It has come to our attention that the required test reports, which serve as essential evidence for claiming payment of testing activities conducted on the Security System, were not provided. The absence of these critical test reports raises concerns about the quality, safety, and compliance of the constructed infrastructure.

2) Penalty to be Imposed on M.s Radius Infotech Pvt. Ltd. for delay in work:

As per Clause "Compensation for Delay" of Contract, "*The contractor shall pay as compensation of an amount equal to INR 5,000 per day of delayed period*". As the time allowed for performance of contract was 3 months i.e., contract should have been completed upto Mar'2017, & no document regarding extension of time period presented to audit team during course of audit & final bill was submitted by vendor

in Jan'22, therefore Contractor is bound to **pay for Liquidated damages that amounts to INR 88,15,000/-** , refer below attached annexure for details:

Date of Work Order	Contract to be performed upto	Actual Date of Completion	Delay in no. of days	Penalty per day	Penalty to be imposed
22-12-2016	22-03-2017	18-01-2022	1763.00	5000.00	88,15,000.00

VII. Smart Meter and Electricity Meter

A. Background:

This audit report provides a comprehensive overview of Supply Order for of Supply of “Automatic Dual Energy Meter Reading System” for "Police Officers Multi State Co-Op. Housing Society Ltd" residential multi-storied project Sector-49, Faridabad (Haryana). The project was initiated by the Management, the society has undertaken a project to procure Energy meter reading system. The implementation process has not followed a tender process for vendor selection, and the contract has been awarded on single rate contract basis.

B. Tender Process:

In the course of our comprehensive audit of Supply of “Automatic Dual Energy Meter Reading System” conducted for Police Officer Multi-State Co-operative Housing Society Ltd., we examined the vendor selection process employed for employing M/s Radius Synergies International Pvt. Ltd. Our evaluation focused on the methods adopted for vendor selection and the subsequent awarding of contracts. Notably, our observation reveals that the traditional competitive tender process was not employed in this instance, and the decision to award the contract was made on a single vendor basis.

It has been noted that Contract Amount quoted by M/s Radius Synergies International Pvt. Ltd. is INR 65,36,000/- (incl. of applicable taxes) and as this is a single vendor contract hence, contract has been awarded to M/s Radius Synergies International Pvt. Ltd.

Detailed Breakup for Contract value is as follows:

BOQ OF DUAL RECORDING ENERGY METERS					
Sr.No	Description	UOM	QTY	Supply Rate	Supply Amount
1	BIS-13779 APPROVED 3 PHASE 4 WIRE, Smart ENERGY METER (WHOLE CURRENT UPTO 60A (IB-IMAX:10-60A) compatible for Automatic Meter Reading System with internal disconnection, dual source, kWh.	Nos	688	4,750.00	32,68,000.00
2	RF enabled Data Concentrator supporting embedded client-server module for maximum of 12 Energy Meters supporting feature like source based dynamic Load Allocation facility for every meter, Over the Air(OTA) for on the fly configuration AES-128 bit encryption for RF Communication. Embedded firmware for each consumer to perform - interval based and on-demand data acquisition and storage for each consumer Meter - Communication protocol for wired link with each meter and embedded encryption hardware - Protocol multiplexer and aggregator functionality - Fault detection - Data Validation - Alert Generation - Configuration management for each meter.	Nos	688	4,750.00	32,68,000.00
Total					65,36,000
Taxes	Above Rates are inclusive of applicable taxes.				

C. Drawbacks in Vendor Selection and Contract Awarding:

Absence of Tender Process for Vendor Selection and Single Vendor Contract Award:

During our audit of the vendor selection process for Security System, a significant observation has come to light regarding the absence of a formal tender process. Instead, the contract has been awarded on a single vendor basis. This approach departs from established procurement practices and raises concerns about transparency, and competition in the selection of vendors.

Impact of absence of a formal tender process leads to:

- **Lack of Competitive Bidding:** The absence of a tender process means that multiple vendors were not provided an equal opportunity to compete for the contract. This raises doubts about whether the selected vendor truly offers the best value for the project in terms of cost, quality, and expertise.
- **Transparency and Accountability:** The absence of a competitive bidding process diminishes the transparency and accountability of the vendor selection
- **Risk of Higher Costs:** Without a competitive bidding process, there is a risk that the project might not achieve optimal cost savings. A lack of market benchmarking could lead to higher costs compared to what might have been achieved through competitive bids.

D. Contractual Terms and Conditions:

1. Purchase Order for Supply of Automatic Dual Energy Meter Reading System at Police Officer Multi State Co-operative Housing Society Ltd.
2. Date of Completion- Within 10 Weeks. Work order was awarded to M/s Radius Synergies International Pvt Ltd on 22nd Dec'16

3. The supply has to be started immediately.
4. The supply is to be carried out as per standard engineering practices and direction of the mentioned in the order.
5. The complete system will be warranted for 18 month from the date of commissioning, unless otherwise specified in the item itself.
6. In case the contractor fails to complete the work in time without justified reason, penalty of Rs.5,000/- per day shall be levied.
7. The Payment will be released as per following Payment terms:
 - 20% Advance Along with PO.
 - 55% against Proforma invoice.
 - 15% after installation of Material on prorata Basis
 - 10% after complete handover to POMCHS LTD.

E. Observations:

1. Claiming Non-BOQ Items Without any Contract, Leading to Excessive Cash Outflow to Contractor:

During our audit of the, a significant irregularity has come to our attention regarding the claiming of non-BOQ items by the contractor. It is noted that these claims involve items not explicitly covered in the original contract, and no separate contractual arrangement has been executed for these additional items. This has led to an **excessive outflow of cash by INR 61,500/- to the contractor.**

Detail of claimed additional items is here as under:

Particulars	Qty Claimed	Rate per unit	Total Amount
Cordination Bridges	2	19500	39000
M2M Gateway	1	22500	22500
Total			61500

2. Penalty to be Imposed on M/s Radius Synergies International Pvt. Ltd. for delay in work:

As per Clause "Compensation for Delay" of Contract, "The contractor shall pay as compensation of an amount equal to INR 5,000 per day of delayed period". As the time allowed for performance of contract was 10 weeks i.e., contract should have been completed upto 2nd Mar'2017, & no document regarding extension of time period presented to audit team during course of audit & final bill was submitted by vendor in Dec'20, therefore Contractor is bound to pay for Liquidated damages that amounts to INR 69,00,000/- , refer below attached annexure for details:

Date of work order	Contract to be completed upto	Actual date of Completion	Delay in no. of Days	Penalty Per Day	Penalty to be imposed
22-12-2016	02-03-2017	11-12-2020	1380	5000.00	69,00,000.00

VIII. RO System:

A. Background:

This audit report provides a comprehensive overview of the implementation of an RO System project within the premises of the Police Officers Multi-state Co-operative Housing Society. The project was initiated by the Management Committee with the aim of ensuring to ensuring the health and well-being of its members, the society has initiated a project to install Reverse Osmosis (RO) water purification systems. The implementation process followed a rigorous tender process, wherein qualified contractors were selected based on competitive bidding. This report will delve into the details of the tender process, the contract terms, and the subsequent execution of the Electric Substation project.

The Police Officers Multi-state Co-operative Housing Society, recognized the significance of ensuring potable water for its residents. In response to this need, the society's Management Committee embarked on a project to establish a state-of-the-art RO System Purification plant that would enhance water quality and accessibility through the installation of modern RO systems.

➤ Universal Tech Trade Pvt. Ltd.

B. Tender Process:

To ensure transparency, competitiveness, and adherence to industry standards, the Management Committee of initiated a tender process for the RO System project. , the Management Committee issued an invitation to bid, inviting qualified and experienced contractors to participate in the competitive bidding process.

Following qualified vendors submitted their financial Bids as follows:

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Vendor Position
M/s. Clear-Ion Enterprises (P) Ltd.	√	1280000	L4
M/s. Watertec Enterprises	√	1170000	L3
M/s. ENKI Water Environment Co. Pvt. Ltd.	√	1114400	L2
M/s. Universal Tech Trade Pvt. Ltd.	√	900000	L1

The above tenders were scrutinised by the BOD in its meeting held 09/04/2019 and decided to finalise the tender in the next BOD Meeting. In the meantime, the BOD decided to negotiate with the bidders for price deduction.

All the aforesaid bidders were asked to attend the PNC meeting on 13/04/2019. The outcome of the PNC meeting is as under:

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Negoatiated amount	Vendor Position
M/s. Clear-Ion Enterprises (P) Ltd.	√	1280000	1125000	L4
M/s. Watertec Enterprises	√	1170000	1080000	L3
M/s. ENKI Water Environment Co. Pvt. Ltd.	√	1114400	1051000	L2
M/s. Universal Tech Trade Pvt. Ltd.	√	900000	900000	L1

After scrutiny, the price quoted by M/s. Universal Tech Trade Pvt. Ltd. was found to be the lowest and hence the BOD decided to award the tender to them.

C. Contractual Terms and Conditions:

1. Work Order for Supply and installation of RO Plant capacity 10,000 LPH at our project at Sector49, Faridabad.
2. Contract value: Rs.9,00,000/-(Rupees Nine lakhs only)+ GST @18%. The price is inclusive of Erection and Commissioning.
3. Fixed Rate Contract, no escalation on material or labour
4. **Mode of payment:**
 - 25% advance along with Work Order
 - 45% against delivery
 - 15% against installation
 - 10% on testing & commissioning of the System
 - 5% after 6 months of handing over the System.
5. Delivery/Completion: 3-4 weeks after getting advance and commercial clear.
6. Warranty: One year from the date of installation against manufacturing defect on mechanical item

➤ Clear-Ion Experts Pvt. Ltd. & Watertec Enterprises

D. Tender Process:

In the course of our comprehensive audit of RO System project conducted for Police Officer Multi-State Co-operative Housing Society Ltd., we examined the vendor selection process employed for employing M/s Watertec Enterprises and M/s Clear-Ion Experts Pvt Ltd in 2013 & 2014 respectively. Our evaluation focused on the methods adopted for vendor selection and the subsequent awarding of contracts. Notably, our observation reveals that the traditional competitive tender process was not employed in this instance, and the decision to award the contract was made on a single vendor basis.

It has been noted that Contract Amount quoted by M/s Watertec Enterprises and M/s Clear-Ion Experts Pvt Ltd is INR 6,18,750 & INR 14,00,000 respectively (incl. of applicable taxes)

and as this is a single vendor contract hence, contract has been awarded to the respective vendors.

E. Drawbacks in Vendor Selection and Contract Awarding:

Absence of Tender Process for Vendor Selection and Single Vendor Contract Award:

During our audit of the vendor selection process for Security System, a significant observation has come to light regarding the absence of a formal tender process. Instead, the contract has been awarded on a single vendor basis. This approach departs from established procurement practices and raises concerns about transparency, and competition in the selection of vendors.

Impact of absence of a formal tender process leads to:

- **Lack of Competitive Bidding:** The absence of a tender process means that multiple vendors were not provided an equal opportunity to compete for the contract. This raises doubts about whether the selected vendor truly offers the best value for the project in terms of cost, quality, and expertise.
- **Transparency and Accountability:** The absence of a competitive bidding process diminishes the transparency and accountability of the vendor selection
- **Risk of Higher Costs:** Without a competitive bidding process, there is a risk that the project might not achieve optimal cost savings. A lack of market benchmarking could lead to higher costs compared to what might have been achieved through competitive bids.

IX. Horticulture:

A. Background:

This audit report provides a comprehensive overview of the implementation of an RO System project within the premises of the Police Officers Multi-state Co-operative Housing Society. The project was initiated by the Management Committee of enriching the living experience of its residents and enhancing the aesthetic appeal of its surroundings, the society is embarking on a transformative project focused on comprehensive horticulture work.

➤ Preetam Singh Horticulture:

B. Tender Process:

To ensure transparency, competitiveness, and adherence to industry standards, the Management Committee of initiated a tender process for the Horticulture work project. , the Management Committee issued an invitation to bid, inviting qualified and experienced contractors to participate in the competitive bidding process.

Following qualified vendors submitted their financial Bids as follows:

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Vendor Position
M/s. Preetam Singh Horticulture Contractor & Supplier	√	608000	L1
M/s. Nature's Lap Landscaping & Nursery	√	822600	L2
Dada Dev Nursery	√	902900	L3

After scrutiny of the above quotations, the BOD decided to negotiate the price with the lowest bidder M/s. Preetam Singh Horticulture Contractor & Supplier who had quoted Rs.6,08,000/-

Outcome of the negotiation:

After negotiation, M/s.Preetam Singh Horticulture Contractor & Supplier had agreed to reduce the price to Rs.5,00,000/- (Rupees Five lakhs). So, the BOD decided to award the tender to M/s.Preetam Singh Horticulture Contractor & Supplier for the Horticulture work at Sector-49, Faridabad project Site on the following terms & conditions:

- They will maintain the plantation for one year including watering the Trees and Plants and pruning etc.
- In case any Tree or Plant is dead, it will be replaced by them with fresh Trees & Plants free of cost.
- They will keep a watch that the plantation is not destroyed by vehicles or by animals or for any other reason.

➤ Vijay Nursery

In the course of our comprehensive audit of Horticulture work conducted for Police Officer Multi-State Co-operative Housing Society Ltd., we examined the vendor selection process employed for employing M/s Vijay Nursery in 2019. Our evaluation focused on the methods adopted for vendor selection and the subsequent awarding of contracts. Notably, our observation reveals that the traditional competitive tender process was not employed in this instance, and the decision to award the contract was made on a single vendor basis.

It has been noted that Contract Amount quoted by M/s Vijay Nursery is INR 16,00,000/- (Post Negotiation) and as this is a single vendor contract hence, contract has been awarded to the respective vendors.

C. Drawbacks in Vendor Selection and Contract Awarding:

Absence of Tender Process for Vendor Selection and Single Vendor Contract Award:

During our audit of the vendor selection process for Security System, a significant observation has come to light regarding the absence of a formal tender process. Instead, the contract has been awarded on a single vendor basis. This approach departs from established procurement practices and raises concerns about transparency, and competition in the selection of vendors.

Impact of absence of a formal tender process leads to:

- **Lack of Competitive Bidding:** The absence of a tender process means that multiple vendors were not provided an equal opportunity to compete for the contract. This raises doubts about whether the selected vendor truly offers the best value for the project in terms of cost, quality, and expertise.
- **Transparency and Accountability:** The absence of a competitive bidding process diminishes the transparency and accountability of the vendor selection
- **Risk of Higher Costs:** Without a competitive bidding process, there is a risk that the project might not achieve optimal cost savings. A lack of market benchmarking could lead to higher costs compared to what might have been achieved through competitive bids.

X. Sewage Treatment Plant:

A. Background:

This audit report provides a comprehensive overview of the implementation of an Sewage Treatment Plant project within the premises of the Police Officers Multi-state Co-operative Housing Society. The project was initiated by the Management Committee with the aim of ensuring efficient waste management and ecological preservation. The implementation process followed a rigorous tender process, wherein qualified contractors were selected based on competitive bidding. This report will delve into the details of the tender process, the contract terms, and the subsequent execution of the STP project.

B. Tender Process:

To ensure transparency, competitiveness, and adherence to industry standards, the Management Committee of initiated a tender process for the Electric Substation project. This process involved the following key stages:

1. **Project Documentation Preparation:** The Management Committee collaborated with Architect to develop comprehensive project documentation, including technical specifications, scope of work, and project timelines. These documents were designed to provide a clear understanding of the project's requirements.
2. **Invitation to Submit Pre-qualification bids:** Once the project documentation was finalized, the Management Committee issued interested vendors to submit pre-

qualification bids containing all the information regarding their financials, work experience, company profile and details of similar projects executed in past.

As per records available with Police Officer Multi-state Co-operative Housing Society, following vendors had submitted their Pre-Qualification Bids.

- a. M/s Enki Water & Environment Co. Pvt. Ltd.
 - b. M/s Fontus Water Pvt. Ltd.
 - c. M/s Cleanko India Pvt. Ltd.
 - d. M/s Watech Consultants and Engineers
 - e. M/s Netsol Water Solutions Pvt. Ltd.
 - f. M/s Vision Solutions
 - g. M/s. Gautam Tehno Sanitation
 - h. M/s Clear-Ion Experts P. Ltd.
3. **Invitation to Bid:** Once the pre-qualification bids were submitted by vendors, the Management Committee issued an invitation to bid, inviting qualified and experienced contractors to participate in the competitive bidding process. The invitation contained detailed instructions on submission requirements, evaluation criteria, and deadlines.

Upon receiving Pre-Qualification bids from the above mentioned vendors, 7 (Seven) Pre-Qualified Contractors were selected out of total 10 (Ten) Pre-Qualification bids were recommended by Architect on the basis of their capabilities of executing our Project, experience, project executed and completed, and projects under construction. Vendors qualified to submit their rate contracts are as follows:

- a. M/s Enki Water & Environment Co. Pvt. Ltd.
- b. M/s Fontus Water Pvt. Ltd.
- c. M/s Watech Consultants and Engineers
- d. M/s Netsol Water Solutions Pvt. Ltd.
- e. M/s Vision Solutions
- f. M/s. Gautam Tehno Sanitation
- g. M/s Clear-Ion Experts P. Ltd.

Item wise financial bid have been submitted by the following vendors out of above mentioned vendors for Electric Substation Project executed at Police Officers Multi-state Co-operative Housing Society at village Dabua and Nawada koh, Sector 49, Faridabad, Haryana.

Rate contract submitted by the above mentioned vendors for the execution of Electrical Sub-station project at Police Officers Multi-State Co-Operative Housing society are as follows

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Vendor Position
M/s Enki Water & Environment Co. Pvt. Ltd.	√	57,80,540.00	L6
M/s Fontus Water Pvt. Ltd.	√	39,81,000.00	L2
M/s Watech Consultants and Engineers	√	49,78,000.00	L4
M/s Netsol Water Solutions Pvt. Ltd.	√	63,89,000.00	L7
M/s Vision Solutions	√	51,95,000.00	L5
M/s. Gautam Tehno Sanitation	√	47,00,000.00	L3
M/s Clear-Ion Experts P. Ltd.	√	36,67,000.00	L1

Detailed unit wise breakup in Comparative statement is attached as under:

Police Officers Multistate Co-op. Housing Society Ltd., Sector 49, Farodabad, Haryana.																	
INSTALLATION, TESTING & COMMISSIONING OF STP																	
COMPARATIVE STATEMENT (400x2 KLD)																	
	Description	Unit	Qty	01 ENKI		02 FONTUS		04 WATECH		05 VISION		06 GAUTAM		07 NETSOL		08 CLEAR-ION	
				Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount
A	Preliminary Works																
A1	Shop Drawings.																
	Detailed GA drawing, flow diagram, equipment list, power load requirement with design calculations of all elements of the plant, electrical and mechanical work to satisfy / supply adequacy of design followed by submission of detailed GOOD FOR CONSTRUCTION' architectural, structural, construction, electrical, mechanical and piping drawing for approval.	LS/ Job	1	25,000/-	25,000/-	150,000/-	15,000/-	1,00,000/-	1,00,000/-	2,90,000/-	2,90,000/-	75,000/-	75,000/-	1,50,000/-	1,50,000/-	50,000/-	50,000/-
	TOTAL				25,000/-		150,000/-		1,00,000/-		2,90,000/-		75,000/-		1,50,000/-		50,000/-
B	SEWAGE TREATMENT PLANT																
	Design, Supplying, Installing, Testing & Commissioning of Sewage Treatment Plant capacity400 X 2 KLD. The plant is proposed to be installed in basement level accessible from the top through stair case, for the following :																
	Nature of effluent - Domestic Sewage from Toilet use and kitchen waste.																
	Daily average flow - 800 Cum / Day (400X2)																
	pH - 7.5 - 8.5																
	BOD5 - upto 200-250 Mg/L																
	S. Solids - 200- 400 Mg/L																
	COD - upto 400-500 Mg/L																
	Oil & Grease - 30 Mg / L																
	Effluent discharge standard after treatment																
	pH - 6.0 - 8																
	BOD5 - Less than 10 Mg/L																
	S. Solids - Less than 10 Mg/L																
	COD - Less than 40 Mg/L																
	Oil & Grease - Less than 5mg/l																
	Sewage treatment plant shall include the following items																
	Screen Chamber / Oil and Grease Chamber - 1No																
	Equalization / Collection Tank - 1 No																
	FAB TANK - 4 Nos																
	Secondary Settling Tank - 2 Nos																
	Clear water tank - 2 Nos																
	Treated Effluent Tank - 1 Nos																
	Sludge Holding Tank 1 Nos																
	Filtration through MGF & ACF																
	UV System / Ozonator																
	Air Blowers, Pumps & equipment																
	Piping, valves etc																
	Electrical Panel & Cabling																
	Common plant room adjacent to STP.																
	All piping, valves & level indicator/controller etc. within plant room.																
B.1	Supply, installation, testing & commissioning of 1 Nos Stainless Steel Perforated Screen with suitable lifting arrangement mechanically (size 450mm wide x 600 mm high approx)Bar sizing will be 40mm x 6mm & Bar spacing should be min 15mm	Set	1	9,900/-	9,900/-	13,000/-	13,000/-	5,000/-	5,000/-	15,000/-	15,000/-	37,500/-	37,500/-	40,000/-	40,000/-	40,000/-	40,000/-
B.2	Supply, installation, testing & commissioning of electronic type level indicator and controller for automatic operation of the system with high/low level alarm complete with auxiliary NO/NC contacts.	Set	2	9,450/-	18,900/-	7,500/-	15,000/-	4,000/-	8,000/-	8,500/-	17,000/-	37,500/-	75,500/-	8,000/-	16,000/-	26,000/-	52,000/-
B.3	Supply, installation, testing & commissioning of non clogging type pumps, having CI casing & SS shaft, bronze impeller complete with all accessories, motor of required capacity. Delivery header with isolation valve/NRV etc, pressure gauge on delivery line with isolation cock level controller with wiring to control the level of sump automatically. Pump shall following duty.																

B.3.1	Submersible Sump Pumps for equalisation tank/ Sewage lifting pump (3 Nos. - 2 working & one standby) :- (Solid handling cap. 30-40 mm) Flow rate (each) = 20 m ³ / hr Head = 15 Mts <i>(presently installed 2 pumps + keep provision 1 pump for future)</i>	Nos	2	1,22,400/-	2,44,800/-	92,000/-	1,84,000/-	1,10,000/-	2,20,000/-	1,01,000/-	2,02,000/-	1,05,000/-	2,10,000/-	36,000/-	72,000/-	52,000/-	1,04,000/-
B.3.2	Submersible Sump Pumps for plant room sump 2 Nos (1 working + 1 standby) Flow rate = 35.0 cum/hr Head = 10 Mts (Solid handling size for this pump shall be 15 mm).	Each	2	1,22,400/-	2,44,800/-	99,000/-	1,98,000/-	1,10,000/-	2,20,000/-	1,17,500/-	2,35,000/-	1,05,000/-	2,10,000/-	49,500/-	99,000/-	66,000/-	1,32,000/-
B.3.3	Sludge Recirculation Pumps (CI IMPELLER, CS SHAFT) (Solid handling cap. 8-15 mm) Flow rate (each) = 5 m ³ / hr Head = 10 Mtr <i>(presently installed 2 pumps + keep provision 1 pump for future)</i>	Each	2	1,17,000/-	2,34,000/-	19,500/-	39,000/-	22,000/-	44,000/-	22,000/-	44,000/-	85,000/-	1,70,000/-	18,700/-	37,400/-	28,000/-	56,000/-
B.4	Air diffusion system shall include the following: Twin type rotary air blowers (2 working & 1 standby) capable of delivering 400 cum/hr (each) of free air at 0.55 kg/cm ² driven through "V" belt or directly coupled through flexible coupling to a TEFC motor of suitable HP Suitable for 415 ± 10% volts, 3 phase, 50 cycles a/c supply <i>(presently installed 2 air blowers + keep provision 1 air blower for future)</i>	Each	2	2,97,000/-	5,94,000/-	2,07,000/-	4,14,000/-	3,00,000/-	6,00,000/-	2,38,000/-	4,76,000/-	2,80,000/-	5,60,000/-	2,15,000/-	4,30,000/-	1,56,000/-	3,12,000/-
B.5	Air piping shall comprise of pipes droppers/ laterals with M 5 (epoxy coated) Header complete with all fittings such as tees, crosses, plugs, sockets, elbows, reducers, supports & clamps, puddle flanges etc cutting chases & making good.	Lot	1	81,000/-	81,000/-	28,000/-	28,000/-	1,75,000/-	1,75,000/-	1,68,000/-	1,68,000/-	3,25,000/-	3,25,000/-	75,000/-	75,000/-	1,25,000/-	1,25,000/-
B.6	Non clog type air dispersion system capable of handling 3-5 cfm of air with oxygen transfer efficiency of 3-4% per/meter water depth. Air dispersion grid shall be assembled in modular form so that they can be replaced / repaired. Fine bubble diffusers required Nos																
a)	For Equalization / Collection Tank -1 Nos.																
b)	For Sludge Holding Tank - 1 No.																
c)	FAB Reactor Tank -4Nos. (Presently 2 Nos) Note : Air dispersion system shall be provided for Equalisation Tank, Sludge holding Tank and FAB reactor Tank.	Lot	1	1,22,000/-	1,22,000/-	1,16,000/-	1,16,000/-	1,00,000/-	1,00,000/-	1,35,000/-	1,35,000/-	2,50,000/-	2,50,000/-	1,10,000/-	1,10,000/-	75,000/-	75,000/-
B.7	Providing and fixing all piping (as described below) and isolation control valves for making the system complete. SS 304 :Submerged air piping MS Epoxy : Air piping PVC piping :Pumped effluent & tank overflow pipe line	Job	1	5,31,000/-	5,31,000/-	2,54,000/-	2,54,000/-	1,50,000/-	1,50,000/-	3,70,000/-	3,70,000/-	1,85,000/-	1,85,000/-	4,50,000/-	4,50,000/-	68,000/-	68,000/-
B.8	Supply, installation, testing and commissioning of PVC bio deck FAB circular floating type media to be installed in FAB Tank (4Nos.) presently in 2 tanks and PVC tube deck settling media to be installed in Secondary Settling Tank alongwith suitable sludge removal arrangement Considered for 800KLD	Job	1	6,69,600/-	6,69,600/-	5,15,000/-	5,15,000/-	4,90,000/-	4,90,000/-	5,36,000/-	5,36,000/-	2,80,000/-	2,80,000/-	7,35,000/-	7,35,000/-	3,75,000/-	3,75,000/-
B.9	Supply, installation, testing & commissioning of UV system of capacity 20 cum/hr & min 12Nos of UV lamps, electrical cabinete including Auto cleaning system as per requirement, SS treatment chamber mat etc complete with all accessories to functioning the plant properly. <i>(presently installed 1 set + keep provision 1 set for future)</i>	Set	1	5,58,000/-	5,58,000/-	3,80,000/-	3,80,000/-	1,57,000/-	1,57,000/-	3,86,000/-	3,86,000/-	3,60,000/-	3,60,000/-	1,30,000/-	1,30,000/-	1,75,000/-	1,75,000/-
B10	Supply, installation, testing & commissioning of ozonator of min 120mg capacity complete with all accessories to functioning the plant properly.	Set	1	6,30,000/-	6,30,000/-	2,48,000/-	2,48,000/-	6,70,000/-	6,70,000/-	8,90,000/-	8,90,000/-	3,60,000/-	3,60,000/-	4,45,000/-	4,45,000/-	2,58,000/-	2,58,000/-
B11	Supplying, installing, testing & commissioning of centrifugal filter feed water pumps CI Body, CS shaft, CI Impeller with mechanical seal along with motor. Pressure gauge with isolation cock, NRV, isolation valve on delivery line. Isolation valve, stainer at suction. The pump shall be suitable for 415 ± 10% volts, 3 phase, 50 cycles a/c supply Capacity : 25 M ³ /hr. Head : 25-30 M No. of Pumps (2 working + 1 standby) (for Phase-1 consider 2 nos of pumps +1 no to be added in phase-2)	No	2	76,920/-	1,53,840/-	30,000/-	60,000/-	31,000/-	62,000/-	33,000/-	66,000/-	80,000/-	1,60,000/-	40,500/-	81,000/-	65,000/-	1,30,000/-
Note:	Operation of pump shall be based on level controller proposed to be installed in tank as per site location. The contractor to ascertain the Head required for pumps as per site conditions and provide accordingly. <i>(presently installed 2 pumps + keep provision 1 pump for future)</i>																
B12	Supplying, installing, testing and commissioning of MS with epoxy paint (thickness of 6/8 mm) vessel filter with frontal piping and associated valves and accessories. Filter shall be suitable for minimum working pressure of 5 kg / cm ² and shall include media, standard fittings like pressure.																
B12.1	Multigrade pressure sand filter media Flow rate : 25 cum/hr Filtration velocity : 17 cum/hr/sqm Filter Diameter : 1400 mm.	Set	1	2,28,600/-	2,28,600/-	1,70,000/-	1,70,000/-	2,00,000/-	2,00,000/-	2,01,000/-	2,01,000/-	3,00,000/-	3,00,000/-	2,60,000/-	2,60,000/-	1,90,000/-	1,90,000/-
B12.2	Activated Carbon Filter Flow Rate : 25 cum/hr Filtration velocity : 17 cum/hr/sqm Filter Diameter : 1400 mm	Set	1	2,43,000/-	2,43,000/-	1,80,000/-	1,80,000/-	2,45,000/-	2,45,000/-	2,18,000/-	2,18,000/-	3,25,000/-	3,25,000/-	2,85,000/-	2,85,000/-	2,56,000/-	2,56,000/-
Note:	Contractor may be asked to alter the number of filters and pumps subject to any revision to meet the desired capacities.																
B13	Approval from pollution board at initial & various other stages of works including preparation of report / drawings as per pollution board requirement, arrangement of raw sewage for testing & commissioning. Contractor shall include the cost of all chemicals (consumed during testing & commissioning and the cost of such items of works which are not explicitly mentioned above, but are mandatory to have pollution board approval. Nothing extra shall be payable in this regard. (ONLY TECHNICAL SUPPORT WILL BE GIVEN BY CONTRACTOR FOR APPROVAL)	Job	1	90,000/-	90,000/-	15,000/-	15,000/-	75,000/-	75,000/-	60,000/-	60,000/-	62,500/-	62,500/-	Nil	Nil	2,50,000/-	2,50,000/-

B14	Supply, installation, testing and commissioning of Filter Press of plate size 30" X 30" plate with screw feed pumps for required capacity for total capacity with interconnecting piping and poly dosing system all complete.	Set	1	2,19,600/-	2,19,600/-	2,20,000/-	2,20,000/-	4,00,000/-	4,00,000/-	5,33,000/-	5,33,000/-	4,25,000/-	4,25,000/-	2,50,000/-	2,50,000/-	2,90,000/-	2,90,000/-
B15	Providing & fixing bypass line with arrangement of valve from equalization tank tank to outside sewer manhole/ for tanker connection. PIPE - GI 'C' Class, DIA - 100 mm, LENGTH - 200 Mt	Set	1	35,000/-	35,000/-	25,000/-	25,000/-	3,10,000/-	3,10,000/-	4,19,000/-	4,19,000/-	2,00,000/-	2,00,000/-	3,74,000/-	3,74,000/-	2,00,000/-	2,00,000/-
B16	Supply, installation, testing & commissioning of pH Meter (only in outlet), Electronic magnetic flow meter in inlet & outlet of filtration system complete in all respect.	Set	1	21,000/-	21,000/-	1,10,000/-	1,10,000/-	2,20,000/-	2,20,000/-	3,26,000/-	3,26,000/-	42,500/-	42,500/-	1,45,000/-	1,45,000/-	88,000/-	88,000/-
B17	Supply, installation, testing and commissioning of Energy Meter for electrical panel of STP complete in all respect.	No.	1	7,500/-	7,500/-	2,000/-	2,000/-	20,000/-	20,000/-	4,000/-	4,000/-	37,500/-	37,500/-	15,000/-	15,000/-	18,000/-	18,000/-
B18	Supply, installation , testing & commissioning of Dosing System. Horizontal centrifugal with PP/ PVC impeller, Capacity 0-12 LPH, HDPE tank 500 ltrs.	Each	2	19,500/-	39,000/-	20,000/-	40,000/-	20,000/-	40,000/-	39,000/-	78,000/-	42,500/-	85,000/-	30,300/-	60,600/-	19,000/-	38,000/-
	TOTAL				49,75,540/-		32,26,000/-		44,11,000/-		53,79,000/-		46,60,000/-		41,10,000/-		32,32,000/-
C	ELECTRICAL INSTALLATION FOR STP																
C.1	Design, fabrication, assembling, wiring, supply, installation, testing and commissioning of motor control centre fully compartmentalised fabricated out of 14 gauge CRCA sheet steel. Cable gland plates shall be provided on top as well as at the bottom of the panels. Panels shall be treated with all anticorrosive process before painting as per specifications with 2 coats of red oxide primer and final approved shade of powder coated paint. 2 Nos. earthing terminals shall be provided for 3 phase, 4 wire, 50 Hz supply system. Lifting hooks shall also be provided in case of large panels. Approval shall be taken for each panel before fabrication. Quoted rates shall be inclusive of cables (in accordance to specification) with earthing from panel to each motor / equipment.																
	Motor Control Centre																
	Incoming																
	125 amps TPN MCCB with the following accessories:																
	a. 0-500 volts 96 x 96 mm square electronic voltmeter with selector switch shall be protected by 2 amps TP MCB. 1 Set																
	b. 0-200 amps 96 x 96 mm square electronic ammeter with selector switch and 125/5 amps 10 VA CL:1 CTs. 1 Set																
	c. Phase indicating lamps shall be protected by 2 amp SP MCB 3 Sets																
	Bus Bar																
	200 amps TPN (15 KA) copper bus bar with heat shrinkable insulation sleeves.																
	a. Required Nos of required capacity TPN MCB for direct on line starter/star delta starters and out going feeders to all the pumps/blowers etc. (including standbys). Each compartment shall contain auto / manual selector switch and indicating lamp with MCB's for 'ON/OFF/TRIP' status of motor																
	b. Spare MCB's of following capacities:																
	i. 32 amps TPN MCB's 4 Nos.																
	c. Necessary cable alleys, internal / cabling, wiring, cabling from MCC to various pumps / equipment and interlocking, earthing for all equipment shall also included																
Notes :	a. All MCCBs / MCBs shall be of 15 KA breaking capacity and suitable for motor duty application.																
	b. All motor starters shall be provided with Automatic level controller																
	c. DOL starters shall be used for motors below 10HP and Star-Delta Starters for other motors .																
	d. Provision shall be made for providing potential free contacts to all pumps starters																
	MCC for all STP equipments/pumps as described in sub head II	Job	1	4,95,000/-	4,95,000/-	3,45,000/-	3,45,000/-	3,10,000/-	3,10,000/-	3,90,000/-	3,90,000/-	1,85,000/-	1,85,000/-	2,40,000/-	2,40,000/-	2,90,000/-	2,90,000/-
	TOTAL				6,05,000/-		5,20,000/-		4,00,000/-		6,45,000/-		4,35,000/-		3,90,000/-		3,30,000/-
D	MAINTENANCE CONTRACT																
D.1	To operate the entire STP under available load conditions for further period as desired by client on round the clock basis. All tools equipment and testing devices to be provided by the contractor. Consumable including lubricants and chemicals will be provided by Owners. This is not to be misred with the 24 months warranty period stated in the specs.	Month	1	75,000/-	75,000/-	85,000/-	85,000/-	67,000/-	67,000/-	75,000/-	75,000/-	25,000/-	25,000/-	50,000/-	50,000/-	55,000/-	55,000/-
	TOTAL				75,000/-		85,000/-		67,000/-		75,000/-		25,000/-		50,000/-		55,000/-
	GRAND TOTAL				57,80,540/-		39,81,000/-		49,78,000/-		63,89,000/-		51,95,000/-		47,00,000/-		36,67,000/-

After Various discussions and negotiations in regard of various possibilities in regard to expendable system and functioning of this STP System, revise quotations are waited.

Revised possibilities in reference to expandable system in open or in basement were received from following Contractors.

1. M/s. ENKI Water & Environment Co. Pvt. Ltd.,
2. M/s, Gautam Tehno Sanitation.
3. M/s. Fontus Water Pvt. Ltd..
4. M/s. Watech Consultants & Engineers.
5. M/s. Vision Solutions.

After discussion with all above Contractors, it was decided to get revised offer from all the above Contractors of 200 x4 expandable system with Steel Zink alloy tanks, due to following reasons.

- No RCC STP Structure, which is time Consuming &Costly, approximately 1 10 lac.
- Only Last manhole shall be made bigger in RCC to be used as collection chamber.
- Steel Zink alloy tanks in place of MS Tanks.
- Expandable STP system as occupation of flats will be in phases.
- Choose Technically Sound organization.

Revised Offers were reteived from 3 following Contractors.

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Vendor Position
M/s Enki Water & Environment Co. Pvt. Ltd.	√	75,38,906.00	L1
M/s Vision Solutions	√	92,70,000.00	L3
M/s. Gautam Tehno Sanitation	√	89,16,000.00	L2

Revised Offers were discussed in terms of Technical Feasibility and quote was Negotiated on 18.03.2017 in the office of the Society.

M/s. ENKI Water & Environment Co. Pvt. Ltd., were found best & Cost was negotiated to Rs.71,00,000/- including Taxes, it was decided to award he work io M/s. ENKI Water & Environment Co. Pvt. Ltd.

C. Observations:

1) Absence of Test Reports for Claiming Payment of STP

During our audit of the testing and payment process for the STP, a significant deficiency has been identified regarding the provision of test reports. It has come to our attention that the required test reports, which serve as essential evidence for claiming payment of testing activities conducted on the STP, were not provided. The absence of these critical test reports raises concerns about the quality, safety, and compliance of the constructed infrastructure.

XI. Water Treatment Plant:

A. Background:

This audit report provides a comprehensive overview of the implementation of laying, installation, testing & Commissioning of Pumps & WTP work within the premises of the Police Officers Multi-state Co-operative Housing Society. The implementation process followed a tender process, wherein qualified contractors were selected based on

competitive bidding. This report will delve into the details of the tender process, the contract terms, and the subsequent execution of the Electric Substation project.

Financial Bids were received from the following qualified vendors:

1. M/s. ENKI Water & Environment Co. Pvt. Ltd.,
2. M/s, Gautam Tehno Sanitation
3. M/s Univeral Tech Trade Pvt. Ltd.

Rate contract submitted by the above mentioned vendors for the execution of laying, installation, testing & Commissioning of Pumps & WTP work project at Police Officers Multi-State Co-Operative Housing society are as follows:

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Vendor Position
M/s Enki Water & Environment Co. Pvt. Ltd.	√	36,20,675.00	L3
M/s Univeral Tech Trade Pvt. Ltd.	√	34,91,125.00	L1
M/s. Gautam Tehno Sanitation	√	35,59,675.00	L2

Upon submission of Initial quotes the Board of Directors of Police Officers Multi-state Co-operative Housing Society Board of Directors proceeds with negotiation with the vendors and impact of negotiation with the vendors was as follows:

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Negotiated Amount	Vendor Position
M/s Enki Water & Environment Co. Pvt. Ltd.	√	36,20,675.00	36,20,675.00	L3
M/s Univeral Tech Trade Pvt. Ltd.	√	34,91,125.00	34,00,007.00	L1
M/s. Gautam Tehno Sanitation	√	35,59,675.00	35,00,000.00	L2

Item wise Breakup of Bid value is as follows:

POLICE HOUSING AT SECTOR 49, FARIDABAD, HARYANA									
SUPPLY, ERECTION, TESTING & COMMISSIONING OF PUMPS, WATER TREATMENT & ALLIED EQUIPMENT SYSTEM									
COMPARATIVE STATEMENT - REV-02 - 28.09.2018 FINAL									
NO.	DESCRIPTION	UNIT	QTY.	Enki		Gautam		Universal Tech	
				RATE (Rs.)	AMOUNT (Rs.)	RATE (Rs.)	AMOUNT (Rs.)	RATE (Rs.)	AMOUNT (Rs.)
1	PUMPS, WATER TREATMENT & ALLIED EQUIPMENT								
	Vertical/horizontal monoblock centrifugal transfer pumping set with SS body and SS impeller, SS shaft mechanical seal, connected to a TEFC induction motor suitable for 415 volts \pm 3% phase 50 cycles AC supply with a common suction header with Butterfly valves, Y strainer, Bellow, in suction side and NRV and butterfly valves in delivery side on main connecting & pumps inlet and a common delivery header with MS galvanized supports and painting with one coat of primer and two coats of synthetic enamel paint including a 100mm dia pressure gauge, Vibration eliminating pads under foundation, all mounted on a common base plate of MS 80x40mm I section bolted to RCC foundation complete in all respects.								
a)	Filter feed pump								
	(1 working + 1 stand by + 1 provision only)								
	Capacity - 500 lpm (Each)								
	Head - 30 m	Set	1	195000	195000	150000	150000	200000	200000
	WILLO Make Vertical Multistage Pump Model: MV13203 /5.5Kw/3Phase(2W+IS) (MOC:SS304 Shaft/Impeller/Casing) with GI Suc. & Disch. Header, Valves & Fittings Complete Set.				0				
2	Domestic Water Supply Pump (Hydropneumatic System With variable Speed System)				0				
	Providing, fixing and testing of packaged fixed skid mounted hydropneumatic system comprising of :-				0				
a)	Vertical, inline multistage centrifugal pumping set with stainless steel SS-304 stage casing and SS-304 impellers with stainless steel SS-431 shaft as per IEC standards and GJL250 cast iron suction & discharge casing, connected to TEFC ventilated induction motor of 2 pole, 2900rpm, suitable for 400/440 Volts, 3 phase, 50 Hz A.C.				0				
b)	Pressure vessel of non corrosive FRP composite construction lined with NSF and/or FDA listed material, like high density polyethylene with fully replaceable polyurethane. Air cell burst pressure of minimum of 5 times the vessel operating pressure and cycle tested for 2,50,000 cycles.				0				
	No. and capacity of Pressure Vessel - 01 Nos. x 200 Ltrs				0				
c)	Control Panel with programmable logic controller (PLC) for cyclic operation of pumps. Pump working sequence should change after every operation. Contractor overload relays and MCBs should confirm to IEC 898 - 1995/ specifications. Blinking indications for pumps start, trip, low level trip, health supply should be provided in the panel along with the ammeter & voltmeter. Control panel should also consist of cooling fan.				0			0.00	
d)	Pressure switches bellow type fitted with micro switch and having maximum pressure and differential scale should confirming BS-6134 standards and IP55 protection class.				0				0.00
e)	Stainless steel suction and delivery header, ball valve on each pump on section delivery side, non return valves, Y strainer complete in all respect.				0				0.00
f)	Ball valves to be used should be Hot Pressed brass OT-58 with stainless steel ball and P.T.F.E seal and O-Ring. NRVs to be used should be with Springs and O-Ring arrangement.				0				0.00
g)	Complete set system to be mounted on a common base frame and shall follow following duty.				0				0.00
1	For Domestic Water Supply (Make - WILLO)				0				0.00
	(2 working + 1 stand by)				0				0.00
	Capacity : 750 lpm				0				0.00
	Head : 80 m	Set	1	1150000	1150000	1200000	1200000	700000	700000
	WILLO Make Hypn (VFD) System with GI Suc. & Disch. Header, Pressure Transmitter & Gauge, Ele VFD Control Panel & 1 Nos.x200 Ltr. Pressure Tank Complete Set.				0				
3	Drainage Sump Pumps				0				0.00
	Submersible pumps for basement drainage & Pump Room drainage. Submersible single stage single entry pumps with C.I. body and C.I. two vane enclosed type impeller connected to TEFC submersible motor for 415 volts, 3 phase, 50 cycles including MCC panel with level controllers, auto control, sequential change over facility with one proper working at low level & two proper working at high level with an audible alarm including all interconnectivity cables, with both pumps connected to common outlet header including valves, non return valves, lifting chains etc. complete in all respect.				0				0.00
a)	(one working + one standby) both working in high flow conditions (2 Pump)	Set	1	63000	63000	90000	90000	130000	130000
b)	(one working + provision for one standby) working in high flow conditions (1 Pump)	Set	9	35000	315000	45000	405000	65000	585000
	For Pump room / Basement drainage					S.Phase Pumps			0.00
	(Solid handling capacity 10 mm)				0				0.00
	Capacity- 200 lpm (Each)				0				0.00
	Head - 10 m								
	WILLO Make Sub. Drainage Pump Model: STS 50-15/0.75Kw/3Phase the Set Consist of 1 No. Pump (MOC:CI Casing/CI Impeller/SS Shaft with 26MM Solid Handling) with Common Outlet Header & Electrical Control Panel Etc.								

4	Vertical Downflow Filter				0				
	Providing and fixing Vertical Downflow Filter in MS fabricated in accordance with IS 2825 from minimum 6 mm thick M.S. plate on shell and minimum 8 mm thick M.S. plate on dished ends, epoxy coated construction. The filter shall have :				0				0.00
	a) One no. pressure tight manholes and at least one no. pressure tight side hole for maintenance purposes.				0				0.00
	b) Initial charge of Filter Media.				0				0.00
	c) Complete underdrain system and raw water distributor as per manufacturer's design.				0		0.00		
	(d) Complete uPVC frontal face piping (10 kg/cm ² rating conforming to IS:4985) and valves battery with CI Butterfly valves, pressure gauges and sampling points at inlet and outlet, etc. covering all functions of service, backwash, rinse, air release etc.				0				0.00
	e) Pressure gauges (100 mm dia bourdon type pressure gauge)/ sampling points as per manufacturer design.				0				0.00
	f) All internal parts of the filtration plant shall be coated with two coats of epoxy paint after thorough sand blasting. All external surfaces of the plant including piping shall be coated with two coats of red iron oxide/zinc chromate primer followed by two coats of high gloss enamel paint.				0				0.00
	g) The filter shall be complete with all gaskets/fasteners of standard quality as required.				0		0.00		
	h) The filter shall be designed to give rated output at given raw water quality and flow rate without any operational problem and should not get any loss of performance as long as the operating pressure remains within the given range. Any additional provision is required to make the item complete, the same should be included herein.				0				0.00
	a) Dual Media Filter				0				0.00
	Capacity - 30000 lph				0				0.00
	Filtration rate - 14,500 lph/m ²				0		0.00		
	Filter dia approx. 1800 mm				0				0.00
	Working pressure: 4.5 kg/cm ²				0				0.00
	Test pressure: 7.0 kg/cm ²	Set	1	323000	323000	325000	325000	275000	275000
	UNIVERSAL Make SMF Plant with Upvc Frontal Piping & Different Grade of S and Media Complete Set.						0.00		
5	Chlorination System								0
	Providing and fixing chemical dosing pump capacity 0-6 lph mounted including 500 lit capacity uPVC container with lid, injection fitting assembly, suction and delivery hose upto the point of injection including supports complete in all respects.	Set	1	14000	14000	40000	40000	10500	10500
6	Control Cables						0.00		
	Supply, laying, testing and commissioning of the following sizes of 1.1 KV grade PVC insulated, stranded copper conductor, round armoured control/Power cable in the existing pipes, channels, trays etc. complete as required and as per specifications. It should include both ends terminal joints providing tinned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required.							0.00	
7	2 core x 2.5 sq. mm cable	RM	100	212	21200	250	25000.00	350	35000
b	3 core x 2.5 sq. mm cable	RM	50	335	16750	350	17500.00	410	20500
	Supply, Unloading, shifting, Storing, Laying, Fixing, Testing & Commissioning of following sizes of 1.1kv grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Laying & IS:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable.								
	Laying of cables on existing cable trays / in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slabs, walls or masonry/ RCC trenches/ ducts including cables ties, GI saddles, clamps and necessary hard ware. It should include both ends terminal joints providing tinned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required.							0.00	0.00
a)	4 core 10 sq.mm. Al Ar. XLPE cable	Metre	100	530	53000	400	40000	315	31500
b)	3 core 16 sq.mm. Al Ar. XLPE cable	Metre	50	600	30000	500	25000	290	14500
c)	3 core 10 sq.mm. Al Ar. XLPE cable	Metre	60	500	30000	450	27000	270	16200
d)	3 core 6 sq.mm. Al Ar. XLPE cable	Metre	60	350	21000	300	18000	220	13200
e)	3 core 6 sq.mm. Copper Flexible Cable with IP:67 gland inside water for Sump Pump	Metre	120	550	66000	450	54000	450	54000
8	Supply, fabrication and installation of M.S. Painted factory built in perforated type cable trays complete with all bends, tees, elbows, reducers etc. of various width in two tier/ three/ five tier fashion either on one side of the wall or on two sides of the wall or at other places and paint afterward if required. (The cost of angle iron/C Channel, Fastener & GI Down rod shall be included here measured & paid).					0.00			
a)	150mm wide	Metre	100	350	35000	550	55000	450	45000
9	Providing, fixing, testing and commissioning motorise Ball valve of following sizes, for filling of overhead tanks complete with high & low level switches & pressure switch to control the valve. The level controller shall be installed in over head tank. The level switch will close the valve when water level is high & open the valve when level is low in the tank. The system should be complete in all respect with accessories, 220V AC / 24 V DC, IP 67 water level control unit, copper control wiring in weather proof casing etc.								
a)	80mm dia Domestic	Each	9	35000	315000	36000	324000	25000	225000
b)	65mm dia Flushing	Each	9	30000	270000	30000	270000	19000	171000
10	Providing, fixing, testing and commissioning Air release valve complete as per instruction. (On every riser)								
a)	25mm dia	Each	9	4000	72000	3000	54000	2500	45000

11	Providing and fixing G.I. pipes to IS 1239 (heavy class) with GI fittings, flanges & clamps & galvanized MS structural supports including cutting and making good the walls etc. complete.								
a)	40 mm dia	Metre	10	600	6 000	600	6000	550	5500
b)	50 mm dia	Metre	10	800	8 000	880	8800	745	7450
c)	65 mm dia	Metre	25	1000	25 000	1100	27500	951	23775
d)	80 mm dia	Metre	200	1200	2 40 000	1250	250000	1188	237600
e)	100mm dia	Metre	20	1700	34 000	1550	31000	1705	34100
12	Painting GI pipes (heavy class) with two or more coats of synthetic enamel paint of approved quality and shade over a coat of approved priming coat including galvanized MS supports and clamps as directed by the Engineer-in-charge (shade as per pipe colour code).								
a)	40 mm dia	Metre	10	20	200	40	400	726	7260
b)	50 mm dia	Metre	10	25	250	50	500	1006	10060
c)	65 mm dia	Metre	25	25	625	55	1375	1268	31700
d)	80 mm dia	Metre	200	30	6 000	65	13000	1584	316800
e)	100mm dia	Metre	20	30	600	80	1600	2274	45480
13	ELECTRICAL PANELS								
	Design, Manufacture, Supplying, Transport to the site, Receiving, Unloading, Shifting to Sub-Station at various locations, handling, assembling, installation in correct aligned position, making proper connections, grouting with dash fasteners, GI nuts-bolts, testing and commissioning of the following Modular cubical type construction, Electrical Panels up to 450Volts ±10%, 3Phase, 4Wire, 50Hz ±6% , are housed in CRCA Sheet bolted cubicle made up of 1.6mm for non-stress members & 2.0mm for all stress bearing members and 3.0mm for Removable Glad Plate & base Frame Material, unless specified otherwise, vermin proof hinged lockable doors & door earthed for each compartment provide bus bar interconnections for incoming and outgoing, Single front compartmentalized, totally enclosed, free standing, Floor / Wall mounted type as case may, indoor (IP: 44) / semi outdoor (IP:54) / Fully Outdoor (IP:65), extendible type, duly wired up and ready for installation at site.				0				0
	The Bus bars will be Copper purity 99.9% / electrolytic grade E91 Aluminium duly sleeved with Helogen Free heat shrink coloured Insulated tube (make-GALA or Eq.) conforms to RoHS & IEC 6068-3-247 Standard. Provide electrical insulating shrouds, reusable type covers for busbars Boots on corners Panels will be painted with Powder coating (60-80micron as per IS:13871 for indoor and 90-100 micron for outdoor), include one size higher terminal block in cable alley and interconnecting wires between bus bars and terminals via MCB/MCCB.				0				0
	General Notes for site visit report for Panels/ Rising Main before submitting GA.				0				0
	The Manufacturer must visit the site before submitting GA drawings and submit a report consisting following:				0				0
a.	Possible height for Panel.				0				0
b.	Possible width for Panel				0				0
c.	Back access will be possible or not.				0				0
d.	Cable entry will be from top or bottom.				0				0
e.	If entry from bottom whether MS Stand is required or not.				0				0
f.	If the panel is wall mounted whether the wall is available or not.				0				0
g.	Path for movement of transportation of panel is possible or not i.e length, width etc. and the transportation sections shall be designed accordingly.				0				0
h.	Sufficient space available at front & back after door opening.				0				0
i.	Sufficient height available above panel for cable drop.				0				0
j.	Actual floor to floor height for rising mains.				0				0
	ELECTRICAL PLUMBING PANEL as described above.	Set	1	310000	310000	100000	100000	200000	200000
									0
	G. TOTAL				3620675		3559675		3491125
	Rebate			Less		Less	59675	Less 2.61%	91118
	Net Amount				3620675		3500000	Net Amount	3400007

B. Contractual Terms and Conditions:

1. Work Order for laying, installation, testing & Commissioning of Pumps & WTP work within the premises of the Police Officers Multi-state Co-operative Housing Society.
2. Price: 34,00,007/- (excl. GST)
3. Fixed Rate Contract, No Escalation on Material or Labour

7. Mode of payment:

- 25% advance along with Work Order
- 45% against delivery
- 15% against installation
- 10% on testing & commissioning of the System
- 5% after 6 months of handing over the System

8. Warranty: 18 Months

9. Delivery/ Completion: 6-8 weeks from the date of work order and signing the agreement.

C. Observations:

1) Absence of Test Reports for Claiming Payment of WTP

During our audit of the testing and payment process for the WTP, a significant deficiency has been identified regarding the provision of test reports. It has come to our attention that the required test reports, which serve as essential evidence for claiming payment of testing activities conducted on the WTP, were not provided. The absence of these critical test reports raises concerns about the quality, safety, and compliance of the constructed infrastructure.

XII. Fire Fighting System:

A. Background:

This audit report provides a comprehensive overview of the implementation of Fire Fighting System project within the premises of the Police Officers Multi-state Co-operative Housing Society. The project was initiated with its commitment to providing a secure living environment, the society has undertaken a pivotal project focused on the installation of a comprehensive Fire Fighting System. The implementation process followed a rigorous tender process, wherein qualified contractors were selected based on competitive bidding. This report will delve into the details of the tender process, the contract terms, and the subsequent execution of the Fire Fighting System project.

The Police Officers Multi-state Co-operative Housing Society, the importance of proactive measures in preventing and addressing fire emergencies. In response to this, the society's Management Committee had taken a proactive approach to enhance its fire safety infrastructure through the installation of advanced fire fighting systems.

B. Tender Process:

To ensure transparency, competitiveness, and adherence to industry standards, the Management Committee of initiated a tender process for the Fire Fighting System project. This process involved the following key stages:

4. **Project Documentation Preparation:** The Management Committee collaborated with Architect to develop comprehensive project documentation, including technical specifications, scope of work, and project timelines. These documents were designed to provide a clear understanding of the project's requirements.
5. **Invitation to Submit Pre-qualification bids:** Once the project documentation was finalized, the Management Committee issued interested vendors to submit pre-qualification bids containing all the information regarding their financials, work experience, company profile and details of similar projects executed in past.

As per records available with Police Officer Multi-state Co-operative Housing Society, following vendors had submitted their Pre-Qualification Bids.

- a. Jaspin Jacob Wire Drawing Pvt. Ltd.
 - b. Avert Fire Protection Systems
 - c. Shanti Trading Company
 - d. Everaleem Systems
 - e. Bavaria Fire Appliances
 - f. Gautam Techno Sanitation
 - g. RSR Engineering
 - h. SSE & S Engineers Pvt. Ltd.
 - i. Creative System
6. **Invitation to Bid:** Once the pre-qualification bids were submitted by vendors, the Management Committee issued an invitation to bid, inviting qualified and experienced contractors to participate in the competitive bidding process. The invitation contained detailed instructions on submission requirements, evaluation criteria, and deadlines.

Upon receiving Pre-Qualification bids from the above mentioned vendors, 5 (Five) Pre-Qualified Contractors were selected out of total 9 (Nine) Pre-Qualification bids were recommended by Architect on the basis of their capabilities of executing our Project, experience, project executed and completed, and projects under construction. Vendors qualified to submit their rate contracts are as follows:

- a. Avert Fire Protection Systems
- b. Gautam Techno Sanitation
- c. RSR Engineering
- d. SSE & S Engineers Pvt. Ltd.
- e. Creative System

Item wise financial bid have been submitted by the following vendors out of above mentioned vendors for Fire Fighting System Project executed at Police Officers Multi-state Co-operative Housing Society at village Dabua and Nawada koh, Sector 49, Faridabad, Haryana.

List of bidders submitted their financial bids are as follows:

- a. Gautam Techno Sanitation
- b. SSE & S Engineers Pvt. Ltd.
- c. Creative System

Rate contract submitted by the above mentioned vendors for the execution of Fire Fighting System project at Police Officers Multi-State Co-Operative Housing society are as follows

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Vendor Position
Gautam Techno Sanitation	✓	2,55,98,960.00	L3
SSE & S Engineers Pvt. Ltd.	✓	2,48,97,279.00	L2
Creative System	✓	2,44,20,363.00	L1

Detailed unit wise rate submission by contractors are as below:

POLICE OFFICERS MULTISTATE HOUSING SOCIETY AT SEC 49, FARIDABAD, HARYANA SUPPLY, ERECTION, TESTING & COMMISSIONING OF FIRE FIGHTING SYSTEM COMPARATIVE STATEMENT									
NO.	DESCRIPTION	UNIT	QTY	02 GAUTAM TECHNO		04 SSE & S ENGINEERS		05 CREATIVE STSTEM	
				RATE	AMOUNT	RATE	AMOUNT	RATE	AMOUNT
1	FIRE PUMPS								
1.01	Electrical Fire Pumps								
	Providing and fixing horizontal split casing single/multi stage, single/multi outlet pumping set with bronze impeller with C.I. body and connected by a flexible coupling to a totally enclosed fan cooled induction motor mounted on a common structural base plates with all pump accessories complete as per specifications including anti vibration pads, motor to be suitable for 415 volts, 3 phase, 50 cycles A.C. supply (Specifications as per fire fighting requirements and on the pattern of TAC or local authority approval) as per instruction and following specifications:								
(A)	Main fire Pump								
	Type : Split casing								
	Speed (rpm) : 2965								
	Capacity : 2280 lpm								
	Head : 100 Mtr.	Each	2	4,10,000/-	8,20,000/-	3,90,631/-	7,81,262/-	3,68,000/-	7,36,000/-
(B)	Fire Jockey Pump								
	Speed (rpm) : 2900								
	Capacity : 180 lpm								
	Head : 100 Mtr.	Each	1	1,65,000/-	1,65,000/-	1,13,644/-	1,13,644/-	1,38,000/-	1,38,000/-
1.02	Providing and fixing horizontal split casing single/multi stage, single/multi outlet pumping set with C.I. body and bronze impeller connected by means of a flexible coupling to a water cooled diesel engine mounted on a common structural base plate with anti-vibration pads and foundation complete with electric panel, battery, automatic starting arrangement exhaust pipe of required length to discharge outside building with muffler, day oil tank mounted on suitable structural supports complete in all respects as per specifications ready for use and as per latest requirement of fire authority regularities.								
	Fire Diesel Pump								
	Speed (rpm) : 1800								
	Capacity : 2280 lpm								
	Head : 100 Mtr.	Each	1	5,50,000/-	5,50,000/-	7,72,778/-	7,72,778/-	7,10,000/-	7,10,000/-
1.03	Air Vessel for Fire Pump								
	Providing and fixing double flanged vertical air vessel fabricated from 10mm M.S. plate with dished ends from 10mm M.S. plate, outside with one coat of primer and two coats of synthetic enamel paint of approved shade, complete with approved quality of pressure switches, pressure gauge and all other required accessories to operate commonly main fire pump, sprinkler pump and Jockey pump at drop of pressure, automatically at required pressure setting.								
	Recommended dia. : 400								
	Height of shell : 2000mm								
	Working pressure : 7 Kg/Sq.cm								
	Test Pressure : 10 Kg/Sq.cm	Each	1	30,000/-	30,000/-	25,603/-	25,603/-	34,500/-	34,500/-
1.04	Panel for Fire Pumps								
	Providing and fixing in position, testing and commissioning of the following front operated cubicle type, front access 2mm thick steel enclosed free standing, dust and vermin proof, switchboard with IP42 protection with hinged and lockable doors complete with interconnections, timed copper crimping lugs, bonding to earth and painting, suitable for use at 415 volts, 3 phase 4 wire 50 Hz system and suitable for a fault level of 25 MVA symmetrical at 415 volts with a suitable power capacitor to improve power factor.								
	All switchboards shall have provision for entry of cables from the top or bottom as required.								
	All live accessible parts shall be shrouded and all equipment shall be finger touch proof. The busbars insulation shall be with heat shrinkable sleeves. SMC/DMC shrouds and busbar supports shall be used. Padlocking facility shall be provided on all outgoing feeders doors and switch handles shall be lockable in OFF position.								
	INCOMING								
a)	2 No. 250 amps TPN switch fuse unit with HRC fuses complete.								
b)	1 No. square flush mounting 0-500 volts scaled voltmeter with selector switch & control MCB'S								
c)	Three phase indicating lights with 2A 5P Control MCB'S.								

OUTGOING UNITS												
a)	4 Nos. 160 amps TPN MCCB (25KA) c curve with rotary handle											
b)	4 No 63amps TPN MCCB 25KA "C" Curve with rotary handle.											
c)	4 Nos. fully automatic Star-delta starters suitable for main pump motor with OLR, SPP, timer, Push button, Auto, manual selector switch, ON OFF lamp etc. complete.											
d)	1 No. fully automatic Star-delta starter suitable for terrace fire pump motor with OLR, SPP, timer, Push button, Auto, manual selector switch, ON OFF lamp etc. complete.											
e)	2 No. fully automatic DOL Starter for jockey pump with OLR, SPP, timer, Push button, Auto, manual selector switch, ON OFF lamp etc. complete.											
f)	1 No. fully automatic DOL Starter for water curten pump with OLR, SPP, timer, Push button, Auto, manual selector switch, ON OFF lamp etc. complete.											
g)	Provide digital ameter for each pump with CTS ASS etc.											
h)	Phase Indicating lamps with each starter											
i)	All inter connecting busbar/power cable control cable etc inside panel shall be fully automatic DE starting panel complete with battery charger, Hooter, Annunciator window, transformer, Rectifier, Ameter, Volt meter, push button, Relay etc complete as required.											
The motor control panel shall be prewired with colour coded wires with identification labels complete in all respects as required.		Set	1	4,50,000/-	4,50,000/-	3,91,875/-	3,91,875/-	2,25000/-	2,25000/-			
1.05 Providing and fixing heavy duty aluminium armored cables 1.1 KVA grade including necessary support clamps at ceiling level and connection legs complete in all respects.												
a)	Power cable 3 core 16 Sq.mm	Metre	60	300/-	18,000/-	119/-	7,140/-	1,058/-	63,480/-			
b)	Power cable 3 core 70 Sq.mm	Metre	75	800/-	60,000/-	328/-	24,600/-	1,840/-	1,38,000/-			
1.06 G.I. earthing wire 8 gauge from all motor and M.C.C panel to be connected in as approved manner to the general earthing system complete.		Metre	100	150/-	15,000/-	48/-	4,800/-	87/-	8,700/-			
1.07 Providing earthing station for pumps and M.C.C panel including excavation, C.I. manhole cover and frame complete as per specifications and I.E. rules.		Each	1	15,000/-	15,000/-	9,928/-	9,928/-	8,500/-	8,500/-			
1.08 Providing and fixing M.S. slotted cable tray supported from ceiling at intervals of 60cms on both ends including cable clips with nuts and bolts welding of support rods with ceiling inserts or through dash fasteners cutting and making good complete.												
a)	300mm wide	Metre	30	800/-	24,000/-	497/-	14,910/-	575/-	17,250/-			
b)	150mm wide	Metre	30	600/-	18,000/-	340/-	10,200/-	345/-	10,350/-			
1.09 Providing and fixing Copper Earthing strip of Size 25 x 3mm for higher size motors and MCC panels to be connected in as approved manner to the general earthing system complete.		Metre	120	450/-	54,000/-	194/-	23,280/-	195/-	23,400/-			
1.10 Providing, laying on steel supports, jointing and testing of Mild Steel Black Pipe (IS: 1239 Part-I) Medium class including cutting, welding/screwing etc. and providing all fittings viz. Flanges, Bends, Tees, Elbow, Reducers, Clamps, Hangers etc. including cutting holes and chases in brick or RCC walls/slabs and making good the same to the approval of engineer/consultant complete including painting with one coat of primer and two or more coats of enamel paint of approved make and shade including steel work. Note: All pipe should be proper welded												
a)	65mm dia pipe	Metre	12	1,000/-	12,000/-	675/-	8,100/-	736/-	8,832/-			
b)	80mm dia Pipe	Metre	12	1,200/-	14,400/-	863/-	10,356/-	890/-	10,680/-			
c)	150mm dia pipe	Metre	50	2,200/-	1,10,000/-	1,949/-	97,450/-	1,680/-	84,000/-			
d)	200mm dia pipe	Metre	24	3,200/-	76,800/-	2,978/-	71,472/-	2,500/-	60,000/-			
e)	250mm dia pipe	Metre	Rate Only	4,800/-		3,736/-		3,680/-				
1.11 Providing and fixing rubber expansion joints (to provide relief from stresses at pipe flanges) as per specification of the manufacturers												
a)	65mm dia pipe	Metre	Rate Only	6,000/-		4,849/-		2,800/-				
b)	80mm dia pipe	Each	2	8,000/-	16,000/-	5,424/-	10,848/-	5,500/-	11,000/-			
c)	150mm dia pipe	Each	6	12,500/-	75,000/-	8,408/-	50,448/-	12,000/-	72,000/-			
d)	200mm dia pipe	Each	Rate Only	22,000/-		12,383/-		15,800/-				
1.12 Providing and fixing C.I double flanges suction strainer bucket type/ "Y" type including, nuts, bolts and 3mm thick rubber insertion complete.												
a)	100 mm dia pipe	Each	Rate Only	15,000/-		5,476/-		5,750/-				
b)	150mm dia pipe	Each	3	18,000/-	54,000/-	10,743/-	32,229/-	12,000/-	36,000/-			
1.13 Providing and fixing C.I butterfly valve, wafer end type class PN 1.6 as per IS:13095 or BS:5155, including necessary nuts, bolts, gaskets etc., complete												
a)	65mm dia nominal bore.	Each	Rate Only	4,500/-		1,850/-		2,930/-				
b)	80mm dia nominal bore.	Each	Rate Only	5,500/-		2,138/-		3,200/-				
c)	100mm dia nominal bore.	Each	2	6,500/-	13,000/-	2,613/-	5,226/-	4000/-	8000/-			
d)	150mm dia nominal bore.	Each	6	10,000/-	60,000/-	3,486/-	20,916/-	7,500/-	45,000/-			
e)	200mm dia nominal bore.	Each	2	16,500/-	33,000/-	6,349/-	12,698/-	14,000/-	28,000/-			
1.15 Providing and fixing C.I double flanged horizontal/vertical type non-return valve including nuts, bolts, 3mm thick rubber insertions complete to IS:5312, Part-I, swing type, class PN 1.6.												
a)	25mm dia nominal bore	Each	Rate Only	3,500/-		957/-		1,725/-				
b)	65 mm dia nominal bore.	Each	Rate Only	4,000/-		4,776/-		2,550/-				
c)	80 mm dia nominal bore.	Each	Rate Only	4,800/-		5,925/-		2,985/-				
d)	100mm dia nominal bore.	Each	2	5,800/-	11,600/-	8,648/-	17,296/-	4,000/-	8000/-			
e)	150mm dia nominal bore.	Each	3	8,800/-	26,400/-	14,030/-	42,090/-	7,500/-	45,000/-			
f)	200mm dia nominal bore.	Each	2	12,500/-	25,000/-	25,190/-	50,380/-	14,000/-	28,000/-			
1.16 providing & fixing standard type pressure switches to operate /stop fire pumps as per requirement with complete required accessories		Each	10	8,000/-	80,000/-	1,568/-	15,680/-	3,500/-	35,000/-			
1.17 Providing and fixing M.S. structural work fabricated from standard section e.g. M.S rounds, angles, channels, plates including cutting to size, drilling, welding fixing and welding to insert plates in RCC structural members or through dash fasteners as per site conditions as directed by Engineer-in-charge including cutting and making good the walls, ceilings and floors (for pipe supports, clamps etc.)		Kg	60	90/-	5,400/-	89/-	5,340/-	90/-	5,400/-			
1.18 Providing and fixing Pressure gauge with isolation cock suitable with 'U' tube for maximum pressure of 7 Kg/cm2. (0-14 Kg/cm2; dial size:100 mm dia.)		Each	12	1,200/-	14,400/-	888/-	10,656/-	1,200/-	14,400/-			
1.19 Providing and fixing MS class C diesel engine exhaust pipe (including all fitting clamps steel support) of suitable dia for the engine. The pipe shall be provided with 12mm thick supercera ceramic fire rope.		Metre	60	2,200/-	1,32,000/-	2,717/-	1,63,020/-	2,500/-	1,50,000/-			
TOTAL					30,26,600/-		28,04,225/-		27,39,992/-			

II	HYDRANT SYSTEM								
2.01	Providing and fixing MS black pipes as per IS 1239 (Part I) MEDIUM Class including cutting, welding etc. complete with fittings viz Tees, Elbows, Bends, flanges, reducer, clamps, hanger etc. including painting with one coat of primer and two coat of synthetic enamel paint of approved make and shade								
a)	150 mm dia.	Metre	1675	1,850/-	30,98,750/-	1,949/-	32,64,575/-	1,680/-	28,14,000/-
c)	80 mm dia.	Metre	113	1,200/-	1,35,600/-	863/-	97,519/-	890/-	1,00,570/-
d)	25 mm dia.	Metre	181	350/-	63,350/-	324/-	58,644/-	280/-	50,680/-
2.02	Providing, laying, jointing and testing of Mild Steel black pipe (IS: 1239/IS: 3895) MEDIUM class including cutting, screwing, welding etc. complete with fitting viz tees elbow, bends, flanges, reducers etc including excavation in all kind of soil, refilling, ramming, shoring, removing the excavated surplus material, providing adequate support to the pipe and making good the same. Providing anti-corrosive treatment (coating and wrapping) with 4 mm thick tape and holiday test check as per IS: 10221 complete as required. Note: All the Pipes shall be proper welded.								
a)	150 mm dia.	Metre	900	2,400/-	21,60,000/-	2,341/-	21,06,900/-	1,800/-	16,20,000/-
b)	80 mm dia	Metre	100	1,550/-	1,55,000/-	1,035/-	1,03,500/-	1000/-	1,00,000/-
2.03	Providing and fixing butterfly valves, wafer end type class PN 1.6 as per I.S:13095 - 1991, includingb lever key and necessary nuts, bolts, gaskets etc. complete								
a)	150 mm dia	Each	Rate Only	12,500/-		3,486/-		7,500/-	
b)	80 mm dia	Each	60	4,500/-	2,70,000/-	2,138/-	1,28,280/-	3,200/-	1,92,000/-
2.04	Providing, fixing, testing and commissioning of Single headed stainless steel, ISI marked oblique pattern hydrant landing valve Type 'A' with 80mm dia flanged inlet & 63mm dia instantaneous type female outlet complete with gunmetal cap and chain, twist release type lug and all accessories as per (IS : 5290:1983)	Each	201	5,500/-	11,05,500/-	6,435/-	12,93,435/-	5,200/-	10,45,200/-
2.05	Providing and fixing standard short size Stainless steel branch pipe with Stainless steel nozzle 20mm nominal bore outlet with standard instantaneous type 63mm dia coupling in all respects.	Each	201	1,600/-	3,21,600/-	1,698/-	3,41,298/-	2,000/-	4,02,000/-
2.07	Providing and placing in proper position Controlled Percolating (CP) Hose ISI marked (IS:8423) 63 mm dia x 15 m long complete with instantaneous type gunmetal 63 mm dia, ISI marked Male & Female couplings (IS:903) bound and riveted to hose pipe with copper rivets and 1.5 mm copper wire.	Each	402	4,500/-	18,09,000/-	5,198/-	20,89,596/-	5,500/-	22,11,000/-
2.08	Providing, fixing, testing and commissioning of First-Aid-fire Hose reel wall mounting swinging type complete with drum, bracket, stop valve and 20mm dia. 30M long high pressure thermoplast hose reel tubing with shutoff nozzle conforming to IS: 8090 - 1976 with 5mm orifice. The hose reel shall be as per IS:884-1985.	Each	181	6,800/-	12,30,800/-	9,405/-	17,02,305/-	7,500/-	13,57,500/-
2.09	Providing and fixing standard fire man's axe with heavy insulated rubber handle (ISI marked)	Each	181	500/-	90,500/-	471/-	85,251/-	650/-	1,17,650/-
2.10	Providing and fixing pre fabricated 5 mm thick glass door (with MS frame) of size 2.1 m x 0.9 m with center opening for fire hose cabinet. Suitably marked on the outside with the letters "FIRE HOSE" including locking arrangement. All MS work to be in Red P.O. colour over appropriate primer. The above item is only for masonry fire station.	Each	181	8,800/-	15,92,800/-	7,425/-	13,43,925/-	9,200/-	16,65,200/-
2.11	Providing and fixing external fire hose box, wall mounting or free standing type, made out of fibre glass reinforced plastics of approved colour of 76.8x61.44x25.80cm (30"x24"x10") size to accommodate two 15m length of delivery hoses and a branch pipes with glass fronted double door with lock and keys and break glass recess for keys, all complete.	Each	20	5,500/-	1,10,000/-	4,703/-	94,060/-	3,500/-	70,000/-
2.12	Providing and fixing C.I. ball with wheel tested to 20 Kg/cm2 (I.S:778-1971, Class - II) of approved quality for hose reel								
a)	25 mm dia.	Each	181	1,000/-	1,81,000/-	826/-	1,49,506/-	415/-	75,115/-
2.13	Providing and fixing 150mm dia TWO-way fire brigade inlet connection consisting of 63mm instantaneously male coupling and a check valve protected by cap scored with a chain glass bore etc. complete with one 150mm dia valve and 150mm dia non-return valve (To be connected to Riser/RING)	Each	2	15,000/-	30,000/-	12,375/-	24,750/-	10,500/-	21,000/-
2.14	Providing and fixing 4-way fire brigade inlet connection of 4 nos. 63mm dia instantaneous type male coupling with built in check valves and 150mm dia flanged outlet complete with bolts, nuts and rubber insertions as per I.S:904. (to be connected to static tank).	Each	2	16,500/-	33,000/-	14,355/-	28,710/-	15,000/-	30,000/-
2.15	Providing and fixing fire brigade suction (draw out connection) with female coupling as per I.S:902-1974 complete and with 150mm dia. suction pipe and foot valve (To be connected to static tank)	Each	1	12,500/-	12,500/-	15,494/-	15,494/-	7,500/-	7,500/-
2.16	Providing and fixing Pressure gauge with isolation cock suitable with 'U' tube for maximum pressure of 7 Kg/cm2. (0-14 Kg /cm2; dial size:100 mm dia.)	Each	181	1,200/-	2,17,200/-	888/-	1,60,728/-	1,200/-	2,17,200/-
2.17	Providing fixing testing commissioning of MS air cushion tank on top of each riser fabricated from 8mm thick MS plate 200mm in diameter 1.2 m in height with dished ends fabricated from 8mm thick MS plate with Air release valve with stop cock flanged inlet connection and drain arrangement with 25mm dia valve pressure gauge with gun metal stop cock complete with all accessories as required and conforming to IS 4736-1968(the cushion tank should be suitable for rated working pressure).	set	11	15,000/-	1,65,000/-	12,375/-	1,36,125/-	7,000/-	77,000/-
	TOTAL				1,27,81,600/-		1,32,24,601/-		1,21,73,615/-

III SPRINKLER SYSTEM									
3.01	Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS-1239 Part-I) medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost of structural work for supports fabricated from standard sections of required sizes and thickness e.g. galvanised M.S. rods, angles channels, slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates, including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade including all steel work. Note -All Pipes shall be welded								
a)	150mm dia	Metre	750	1,850/-	13,87,500/-	1,949/-	14,61,750/-	1,680/-	12,60,000/-
b)	100mm dia	Metre	420	1,400/-	5,88,000/-	1,264/-	5,30,880/-	1,180/-	4,95,600/-
c)	80mm dia	Metre	380	1,000/-	3,80,000/-	863/-	3,27,940/-	890/-	3,38,200/-
d)	65 mm dia	Metre	671	800/-	5,36,800/-	675/-	4,52,925/-	736/-	4,93,856/-
e)	50mm dia	Metre	310	650/-	2,01,500/-	658/-	2,03,980/-	575/-	1,78,250/-
f)	40mm dia	Metre	450	550/-	2,47,500/-	470/-	2,11,500/-	425/-	1,91,250/-
g)	32mm dia	Metre	900	450/-	4,05,000/-	403/-	3,62,700/-	360/-	3,24,000/-
h)	25mm dia	Metre	6000	330/-	19,80,000/-	324/-	19,44,000/-	280/-	16,80,000/-
3.02	Providing, laying, jointing and testing of Mild Steel black pipe (IS- 1239/IS- 3895) medium class including cutting, screwing, welding etc. complete with fitting viz. tees elbow, bends, flanges, reducers. etc including excavation in all kind of soil , refilling , ramming,shoring removing the excavated surplus material , providing adequate support to the pipe and making good the same. Providing anti-corrosive treatment (coating and wrapping) with 3 mm thick tape and holiday test check as per IS- 10221 complete as required. Note : All the Pipes shall be proper welded								
a)	150 mm dia.	Metre	10	2450/-	24,500/-	2,341/-	23,410/-	1,800/-	18,000/-
3.03	Providing and fixing brass/bronze lever operated ball valve of full flow with stainless steel ball (AISI 304 and spindle AISI 410) with setting and gland of superior quality having minimum working pressure of 20 kg/cm ² .								
a)	50 mm dia	Each	Rate Only	3200/-		2,947/-		2,800/-	
3.04	Providing and fixing C.I butterfly valve, wafer end type class PN 1.6 as per IS:13095 or BS-5155, including necessary nuts, bolts, gaskets etc., complete								
a)	150mm dia	Each	5	10,000/-	50,000/-	3,486/-	17,430/-	7,500/-	37,500/-
b)	100mm dia	Each	Rate Only	8000/-		2,613/-		4,300/-	
c)	80mm dia	Each	Rate Only	6,000/-		2,138/-		3,200/-	
d)	65mm dia	Each	Rate Only	5,000/-		1,850/-		2,930/-	
3.05	Providing, fixing, and testing of 15mm dia. Chrome finished sprinkler head with quartz bulb, set to operate at 68°C, complete as per given specifications. (UL/FM Approved) wherever required								
a)	Pendent type /UP right Sprinkler	Each	2652	380/-	10,07,760/-	261/-	6,92,172/-	300/-	7,95,600/-
b)	Side wall	Each		680/-		470/-			
3.06	Providing and fixing of corrugated stainless steel (AISI 304) un braided flexible sprinkler pipe drops of 25 mm dia of following length and maximum working pressure of 175 psi with all accessories and clamps as required. The flexible pipe drop shall be UL approved. The pipe drop shall be of following sizes:								
a)	1.2 m length	Each	Rate Only	1650/-		1,933/-		1,500/-	
b)	1 m length	Each	Rate Only	1550/-		1,620/-		1,200/-	
c)	0.8 m length	Each	Rate Only	1400/-		1,411/-		1,000/-	
3.07	Providing and fixing electrically operated flow indicating switches with threaded connection for indicating water flow in sprinkler branch line with necessary junction box installed in accessible place. including cost of cable etc. complete. (Wiring from switches to panel and stair-case pressurisation not included).								
a)	150mm dia	Each	5	11,000/-	55,000/-	3,396/-	16,980/-	5,500/-	27,500/-
b)	100mm dia	Each	Rate Only	11,000/-		3,292/-		4,500/-	
c)	80mm dia	Each	Rate Only	11,000/-		3,187/-		3,800/-	
3.08	Providing and fixing dial type pressure gauge with isolation cock and pipe at sprinkler line near flow switch								
a)	Dia diameter 150 mm calibration 0-16 Kg.	Each	5	1200/-	6,000/-	888/-	4,440/-	1,200/-	6,000/-
3.09	Providing & Fixing of Installation Control Valve with turbine type automatic Alarm Gong to be connected with control valve, drain & test valve and all other necessary components as per manufacturer's specifications complete as required.								
a)	150mm dia	Each	2	48,000/-	96,000/-	56,953/-	1,13,906/-	40,000/-	80,000/-
3.10	Providing, fixing, testing & commissioning of annunciator Panel for flow control switches, providing Audio/Visual Indication of actuation of Automatic Sprinkler system for each zone complete as per specifications. The panel should have interface for connection to complete controlled building management system. The panel should have :								
a)	Fault indication for each zone.								
b)	Indication of zone fire								
c)	Fire/fault hooter.								
d)	Alarm Panel for fire/fault.								
e)	Battery for emergency.								
f)	Battery charger.								
g)	Mains supply, and shall cater for								
h)	minimum 6(Szones working + 1 zones spare)	Each	1	1,00,000/-	1,00,000/-	26,125/-	26,125/-	50,000/-	50,000/-
3.11	Providing and fixing aluminium armored cables 1.1 KVA grade including necessary support clamps and connection legs complete in all respects.								
a)	4core x 1.5sqmm	Metre	1000	150/-	150,000/-	114/-	1,14,000/-	400/-	4,00,000/-
3.12	Providing and fixing 25mm dia inspecting & testing assembly with isolation valve, gunmetal sight glass bypass valve & connected to line drain complete in all respect as per standard practice of code including pressure gauges of approved make.								
		Each	5	4,500/-	22,500/-	8,883/-	44,415/-	7,000/-	35,000/-
3.13	Providing fixing testing commissioning of MS air cushion tank on top of each riser fabricated from 6mm thick MS plate 200mm in diameter 1.2 m in height with dished ends fabricated from 8mm thick MS plate with Air release valve with stop cock flanged inlet connection and drain arrangement with 25mm dia valve pressure gauge with gun metal stop cock complete with all accessories as required and conforming to IS 4736-1968(the cushion tank should be suitable for rated working pressure).								
		set	Rate only	25,000/-		12,375/-		7,000/-	
	TOTAL				72,38,060/-		65,48,553/-		64,10,756/-
IV HAND APPLIANCES									
4.01	Providing and fixing ISI marked portable fire extinguishers including intial fill & wall suspension bracket of the following type.								
a)	CO ₂ type 4.5Kg. capacity Fire Extinguisher flat base including valve , discharge hose of not less than 10 mm dia 1 m long and complete in all respects including intial fill wall suspension bracket and conforming to IS- 15683.	Each	170	5,500/-	9,35,000/-	5,957/-	10,12,690/-	6,000/-	10,20,000/-
b)	Providing and fixing 4 kg capacity ABC Stored Pressure type fire extinguisher ISI marked under IS:15683 complete with imported Mono Ammonium Phosphate based ABC Powder suitable for all classes of fire.	Each	170	1800/-	3,06,000/-	1,599/-	2,71,830/-	2,000/-	3,40,000/-
	TOTAL				12,41,000/-		12,84,520/-		13,60,000/-
V FIRE ALARM SYSTEM									
5.01	Supply, Installation, testing & Commissioning of manual call box for Fire Alarm System								
		Each	225	350/-	78,750/-	261/-	58,725/-	400/-	90,000/-
5.02	Supply, Installation, testing & Commissioning of 4 watt speaker cum hooter with line matching transformer enclosed in a MS box manual call box with hinged cover plate and fixing screws as per IS 2189								
		Each	225	350/-	78,750/-	309/-	69,525/-	600/-	1,35,000/-
5.03	Supply, Installation, testing & Commissioning of Smoke Detector for Fire Alarm System								
		Each	135	1200/-	1,62,000/-	904/-	1,22,040/-	1,800/-	2,43,000/-
5.04	Providing and fixing of 16 zone manual fire alarm panel complete in all respects and confirming to the requirements of IS- 2189								
		Each	9	30,000/-	2,70,000/-	21,632/-	1,94,688/-	50,000/-	4,50,000/-
5.05	Providing and fixing of 4 zone manual fire alarm panel complete in all respects and confirming to the requirements of IS- 2189								
			1	10,000/-	10,000/-	5,957/-	5,957/-	15,000/-	15,000/-
5.06	Supply, Erection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rack mounted comprising of:								
	SMF batteries of 24V, 27 ah DC								
	350 x 2 W Amplifier								
	Cardiod gooseneck microphone								
	16 zone floor selector console with individual / all call facility								
	Monitor Panel comprising of speaker, volume control, on/off sw, fuses & with all indications								
	Panel & PA system to confirm to IS:2189								
5.07	Providing and fixing of Fire Exit Signages								
		Each	180	650/-	1,17,000/-	564/-	1,01,520/-	650/-	1,17,000/-
5.08	Providing and fixing of "DO NOT USE LIFT IN CASE OF FIRE" caution sign sheet 600mm x 100mm								
		Each	180	750/-	1,35,000/-	752/-	1,35,360/-	650/-	1,17,000/-
5.09	Siren 1/2 KM Range								
		Each	4	3,800/-	1,52,000/-	2,822/-	11,288/-	6,000/-	24,000/-
5.10	Providing and fixing aluminium armored cables including necessary support clamps and connection legs complete in all respects.								
		Each	2000	160/-	3,20,000/-	115/-	2,30,000/-	160/-	3,20,000/-
	SUBTOTAL				13,11,700/-		10,35,380/-		17,36,000/-
	GRAND TOTAL				2,55,98,960/-		2,48,97,279/-		2,44,20,363/-

Upon submission of Initial quotes the Board of Directors of Police Officers Multi-state Co-operative Housing Society, Board of Directors proceeds with negotiations with the vendors.

Final quoted price by the vendors post negotiation are as follows:

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Negotiated Amount	Vendor Position
Gautam Techno Sanitation	V	2,55,98,960.00	2,30,00,153.00	L1
SSE & S Engineers Pvt. Ltd.	V	2,48,97,279.00	2,48,97,279.00	L3
Creative System	V	2,44,20,363.00	2,31,99,345.00	L2

Gautam Techno Sanitation was found to be lowest bidding vendor upon final Negotiation which makes him L1, therefore contract for fighting system had been awarded to him.

C. Contractual Terms and Conditions:

1. Work Order for Installation Testing & Commissioning of Fire Fighting System at Police Officers Multistate Co-op. Housing Society Ltd., under Construction at Sector 49, Faridabad, Haryana.
2. **Contract Value:** INR 2,30,00,154/- (detail as under)

M/s. Gautam Tehno Sanitation,	Tender Opening Amount	Rs. 2,55,98,960/-
	Less 10.152% Discount	Rs. 25,98,806/-
	Net Final Negotiated Amount	Rs. 2,30,00,154/-

3. **Date of Commencement:** 7 days from the date of issue of Letter of Intent
4. **Mobilization Advance** - Rs.10,00,000/- (Approximately 57%) without Bank Guarantee, to be recovered in 4 equal monthly instalments in 4 monthly R. Bills.
5. **Date of Completion:** 4 months from the date of receiving of Letter of Intent
6. **Compensation for Delay:** INR 10,000/- (Ten Thousand only) per day subject to maximum of 10% of Contract Value.
7. **Defect Liability Period:** 2 (Two) years from the date of issue of certificate of Virtual Completion.
8. Retention Money 5% of Work done, deducted from each Running Bill, subject to maximum Rs.10 Lac l/c E. Money. 50% of Retention Money will be refunded after 12 months from Virtual Completion. Balance 50% will be refunded after Defect Liability Period of 24 months from Virtual Completion.

9. Additional Retention Money 5% of Work done, deducted from each Running Bill, subject to maximum Rs.10 Lac. To be retained against procurement NOC/Completion from Haryana Fire Service. Shall be refunded after procurement of NOC by the Contractor.

10. Payment Terms:

- 65% on Approval of Shop Drawings and Supply of Material at Site. Material to be Supplied only after taking due approval from Owner & Architect.
- 20% against Installation of Complete System.
- 7.5% against Testing of Complete System.
- 7.5% against Commissioning of Complete System as whole.

D. Observations:

1) Excessive Quantity Claimed in Running Bills Beyond Purchase Order Specifications:

During our audit of the running bill submissions by M/s Gautam Techno Sanitation for Supply, installation, testing and commissioning of Fire Fighting System, a significant discrepancy has been identified in the quantities claimed for certain project components. It is observed that the contractor has claimed quantities in excess of those specified in the Purchase Order (PO). **This leads to excess outflow of cash by INR 26,48,399.20/- which is a loss to society.**

Impact of this negligence leads to:

- Contractual Breach:** Submitting quantities that exceed the specifications in the Purchase Order constitutes a breach of the contractual agreement.
- Financial Accuracy:** The excessive quantity claim in running bills lead to financial inaccuracies i.e., in additional cash outflow of INR 26.48 lacs

Item wise details regarding the excess quantity claimed by vendor is as follows:

Particulars	Actual Qty completed	Qty to be implented	Excess Qty executed	Rate	Excess amount claimed
Providing, laying on steel supports, jointing and testing of Mild Steel Black Pipe (IS: 1239 Part- 1) Medium class including cutting. and providing all fittings viz welding/screwing etc. Flanges. Bends, Tees, Elbow, Reducers, Clamps. Hangers etc. including cutting holes and chases in brick or RCC walls/slabs and making good the same to the approval of engineer/consultant complete including painting with one coat of primer and two or more coats of enamel paint of approved make and shade including steel work. Note : All pipe should be proper welded: 150 mm dia pipe	51.41	50.00	1.41	2,200.00	3,102.00
Providing and fixing CI double flanges suction strainer bucket "Y" type including, nuts, bolts and 3mm thick rubber complete. 100 mm dia pipe	1.00	-	1.00	15,000.00	15,000.00
Providing and fixing C.I butterfly valve, wafer end type class PN 1.6 as per I.S:13095 or BS:5155, including necessary nuts, bolts, gaskets etc., complete 65 mm dia nominal bore	1.00	-	1.00	4,500.00	4,500.00

Providing and fixing C.I butterfly valve, wafer end type class PN 1.6 as per I.S:13095 or BS:5155, including necessary nuts, bolts, gaskets etc., complete 80 mm dia nominal bore	8.00	-	8.00	5,500.00	44,000.00
Providing and fixing C.I butterfly valve, wafer end type class PN 1.6 as per I.S:13095 or BS:5155, including necessary nuts, bolts, gaskets etc., complete 150 mm dia nominal bore	9.00	6.00	3.00	10,000.00	30,000.00
Providing and fixing C.I double flanged horizontal/vertical type non return valve including nuts, bolts, 3mm thick rubber insertions complete to I.S:5312, Part-I, swing type, class PN 1.6 80 mm dia nominal bore	1.00	-	1.00	4,800.00	4,800.00
Providing and fixing C.I double flanged horizontal/vertical type non return valve including nuts, bolts, 3mm thick rubber insertions complete to I.S:5312, Part-I, swing type, class PN 1.6 150 mm dia nominal bore	15.00	3.00	12.00	8,800.00	1,05,600.00
Providing and fixing M.S. structural work fabricated from standard section e.g. M.S rounds, angles, channels, plates including cutting to size, rilling, welding fixing and welding to insert plates in RCC structural members or through dash fasteners as per site conditions as directed by Engineer-in-charge including cutting and making good the walls, ceilings and floors (for pipe supports, clamps etc.)	137.38	60.00	77.38	90.00	6,964.20
Providing and fixing MS black pipes as per IS 1239 (Part 1) MEDIUM Class including cutting, welding etc. complete with fittings viz Tees,) Elbows, Bends, flanges. reducer, clamps, hanger etc. including painting with one coat of primer and two coat of synthetic enamel paint of approved make and shade 150 mm dia	2,227.41	1,675.00	552.41	1,850.00	10,21,958.50
Providing and fixing MS black pipes as per IS 1239 (Part 1) MEDIUM Class including cutting, welding etc. complete with fittings viz Tees,) Elbows, Bends, flanges. reducer, clamps, hanger etc. including painting with one coat of primer and two coat of synthetic enamel paint of approved make and shade 80 mm dia	169.99	113.00	56.99	1,200.00	68,388.00
Providing and fixing butterfly valves, wafer end type class PN 1.6 as per I.S:13095 - 1991, includingb lever key and necessary nuts, bolts, gaskets etc. complete 150 mm dia	44.00	-	44.00	12,500.00	5,50,000.00
Providing end fixing external fire hose box, wall mounting or free standing type, made out of fibre glass reinforced plastics of approved colour of 76.8x61.44x25.80cm (30"x24"x10") size to accommodate two 15m length of delivery hoses and a branch pipes with glass fronted double door with lock and keys and break glass recess for keys all complete	30.00	20.00	10.00	5,500.00	55,000.00
Providing and fixing CI. ball with wheel tested to 20 Kg/cm2 (I.S:778 1971, Class -1) of approved quality for hose reel 25 mm dia	228.00	181.00	47.00	1,000.00	47,000.00
Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:1239 Part-I) medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost of structural work for supports fabricated from standard sections of required sizes and thickness e.g. galvanised M.S. rods, angles channels, slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates, including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade including all steel work. Note :All Pipes shall be welded 150 mm dia	893.49	750.00	143.49	1,850.00	2,65,456.50
Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:1239 Part-I) medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost of structural work for supports fabricated from standard sections of required sizes and thickness e.g. galvanised M.S. rods, angles channels, slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates, including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade including all steel work. Note :All Pipes shall be welded 50 mm dia	443.30	310.00	133.30	650.00	86,645.00

Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:1239 Part-I) medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost of structural work for supports fabricated from standard sections of required sizes and thickness e.g. galvanised M.S. rods, angles channels, slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates, including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade including all steel work. Note :All Pipes shall be welded 40 mm dia	797.80	450.00	347.80	550.00	1,91,290.00
Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:1239 Part-I) medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost of structural work for supports fabricated from standard sections of required sizes and thickness e.g. galvanised M.S. rods, angles channels, slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates, including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade including all steel work. Note :All Pipes shall be welded 32 mm dia	1,136.70	900.00	236.70	450.00	1,06,515.00
Providing, fixing, and testing of 15mm dia. Chrome finished sprinkler head with quartz bulb, set to operate at 68 C, complete as per given specifications. (UL/EM Approved) wherever required Pendant type/UP right sprinkler	2,763.00	2,652.00	111.00	380.00	42,180.00
Total					26,48,399.20

2) Commissioning Despite Pending Work Due to Discrepancies in Material Execution and Testing:

During our audit of the execution, installation, and testing processes for Fire Fighting system project, significant discrepancies have been identified in the quantities of materials executed, installed, and tested by the vendor compared to the quantities mentioned in the Purchase Order (PO). Additionally, it has come to our attention that certain materials were installed and tested in quantities less than those actually supplied, and some material are pending for even to be supplied, yet the site was commissioned.

Details of Materials short supplied by Contractor are:

Particulars	Actual Qty executed at site	Qty to be executed as per PO	Qty short supplied and executed
Providing and fixing heavy duty aluminium armored cables 1.1 KVA grade including necessary support clamps at ceiling level and connection legs complete in all respects. Power cable 3 core 16 Sq.mm	17.00	60.00	-43.00
Providing and fixing heavy duty aluminium armored cables 1.1 KVA grade including necessary support clamps at ceiling level and connection legs complete in all respects. Power cable 3 core 70 Sq.mm	73.20	75.00	-1.80
G.I. earthing wire 8 gauge from all motor and M.C.C panel to be connected in as approved manner to the general earthing system complete.	33.00	100.00	-67.00
Providing earthing station for pumps and M.C.C panel including excavation, C.I. manhole cover and frame complete as per specifications and I.E. rules.	-	1.00	-1.00

Providing and fixing M.S. slotted cable tray supported from ceiling at intervals of 60cms on both ends including cable clips with nuts and bolts welding of support rods with ceiling inserts or through dash fasteners cutting and making good complete. 300 mm wide	12.30	30.00	-17.70
Providing and fixing M.S. slotted cable tray supported from ceiling at intervals of 60cms on both ends including cable clips with nuts and bolts welding of support rods with ceiling inserts or through dash fasteners cutting and making good complete. 150 mm wide	20.00	30.00	-10.00
Providing and fixing Copper Earthing strip of Size 25 x 3mm for higher size motors and MCC panels to be connected in as approved manner to the general earthing system complete.	-	120.00	-120.00
Providing, laying on steel supports, jointing and testing of Mild Steel Black Pipe (IS: 1239 Part-1) Medium class including cutting, welding/screwing etc. and providing all fittings viz. Flanges, Bends, Tees, Elbow, Reducers, Clamps, Hangers etc. including cutting holes and chases in brick or RCC walls/slabs and making good the same to the approval of engineer/consultant complete including painting with one coat of primer and two or more coats of enamel paint of approved make and shade including steel work. Note : All pipe should be proper welded 65 mm dia pipe	3.50	12.00	-8.50
Providing, laying on steel supports, jointing and testing of Mild Steel Black Pipe (IS: 1239 Part-1) Medium class including cutting, welding/screwing etc. and providing all fittings viz. Flanges, Bends, Tees, Elbow, Reducers, Clamps, Hangers etc. including cutting holes and chases in brick or RCC walls/slabs and making good the same to the approval of engineer/consultant complete including painting with one coat of primer and two or more coats of enamel paint of approved make and shade including steel work. Note : All pipe should be proper welded 80 mm dia pipe	4.68	12.00	-7.32
Providing, laying on steel supports, jointing and testing of Mild Steel Black Pipe (IS: 1239 Part-1) Medium class including cutting, welding/screwing etc. and providing all fittings viz. Flanges, Bends, Tees, Elbow, Reducers, Clamps, Hangers etc. including cutting holes and chases in brick or RCC walls/slabs and making good the same to the approval of engineer/consultant complete including painting with one coat of primer and two or more coats of enamel paint of approved make and shade including steel work. Note : All pipe should be proper welded 200 mm dia pipe	18.00	24.00	-6.00
Providing and fixing C.I double flanged horizontal/vertical type non-return valve including nuts, bolts, 3mm thick rubber insertions complete to I.S:5312, Part-I, swing type, class PN 1.6. 100 mm dia pipe	-	2.00	-2.00
providing & fixing standard type pressure switches to operate /stop fire pumps as per requirement with complete required accessories .	4.00	10.00	-6.00
Providing and fixing MS class C diesel engine exhaust pipe (including all fitting clamps steel support) of suitable dia for the engine. The pipe shall be provided with 12mm thick supercra ceramic fire rope.	37.80	60.00	-22.20
Providing and fixing MS black pipes as per IS 1239 (Part I) MEDIUM Class including cutting, welding etc. complete with fittings viz Tees, Elbows, Bends, flanges, reducer, clamps, hanger etc. including painting with one coat of primer and two coat of synthetic enamel paint of approved make and shade 25 mm dia	-	181.00	-181.00

Providing, laying, jointing and testing of Mild Steel black pipe (IS: 1239/IS: 3895) MEDIUM class including cutting, screwing, welding etc. complete with fitting viz. tees elbow, bends, flanges, reducers. etc including excavation in all kind of soil , refilling , ramming,shoring, removing the excavated surplus material , providing adequate support to the pipe and making good the same. Providing anti-corrosive treatment (coating and wrapping) with 4 mm thick tape and holiday test check as per IS: 10221 complete as required. Note : All the Pipes shall be proper welded.	849.65	900.00	-50.35
150 mm dia			
Providing, laying, jointing and testing of Mild Steel black pipe (IS: 1239/IS: 3895) MEDIUM class including cutting, screwing, welding etc. complete with fitting viz. tees elbow, bends, flanges, reducers. etc including excavation in all kind of soil , refilling , ramming,shoring, removing the excavated surplus material , providing adequate support to the pipe and making good the same. Providing anti-corrosive treatment (coating and wrapping) with 4 mm thick tape and holiday test check as per IS: 10221 complete as required. Note : All the Pipes shall be proper welded.	15.10	100.00	-84.90
80 mm dia			
Providing and fixing butterfly valves, wafer end type class PN 1.6 as per I.S:13095 - 1991, includingb lever key and necessary nuts, bolts, gaskets etc. complete	55.00	60.00	-5.00
80 mm dia			
Providing, fixing, testing and commissioning of Single headed stainless steel, ISI marked oblique pattern hydrant landing valve Type 'A' with 80mm dia flanged inlet & 63mm dia instantaneous type female outlet complete with gunmetal cap and chain, twist release type lug and all accessories as per (IS : 5290:1983)	198.00	201.00	-3.00
Providing and fixing standard short size Stainless steel branch pipe with Stainless steel nozzle 20mm nominal bore outlet with standard instantaneous type 63mm dia coupling in all respects.	198.00	201.00	-3.00
Providing and placing in proper position Controlled Percolating (CP) Hose ISI marked (IS:8423) 63 mm dia x 15 m long complete with instantaneous type gunmetal 63 mm dia, ISI marked Male & Female couplings (IS:903) bound and riveted to hose pipe with copper rivets and 1.5 mm copper wire.	394.00	402.00	-8.00
Providing, fixing, testing and commissioning of First-Aid-fire Hose reel wall mounting swinging type complete with drum, bracket, stop valve and 20mm dia. 30M long high pressure thermoplast hose reel tubing with shutoff nozzle conforming to IS: 8090 - 1976 with 5mm orifice. The hose reel shall be as per IS:884-1985.	173.00	181.00	-8.00
Proving and fixing standarad fire man's axe with heavy insulated rubber handle.(ISI marked)	173.00	181.00	-8.00
Providing and fixing pre fabricated 5 mm thick glass door (with MS frame) of size 2.1 m x 0.9 m with center opening for fire hose cabinet. Suitably marked on the outside with the letters "FIRE HOSE" including locking arrangement. All MS work to be in Red P.O. colour over appropriate primer. The above item is only for masonary fire station.	170.00	181.00	-11.00
Providing and fixing 150mm dia TWO-way fire brigade inlet connection consisting of 63mm instantaneously male coupling and a check valve protected by cap scored with a chain glass bore etc. complete with one 150mm dia valve and 150mm dia non-return valve (To be connected to Riser/RING)	1.00	2.00	-1.00

Providing and fixing 4-way fire brigade inlet connection of 4 nos. 63mm dia instantaneous type male coupling with built in check valves and 150mm dia flanged outlet complete with bolts, nuts and rubber insertions as per I.S:904. (to be connected to static tank).	1.00	2.00	-1.00
Providing and fixing Pressure gauge with isolation cock suitable with 'U' tube for maximum pressure of 7 Kg/cm ² . (0-14 Kg./cm ² ; dial size:100 mm dia.)	171.00	181.00	-10.00
Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:1239 Part-I) medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost of structural work for supports fabricated from standard sections of required sizes and thickness e.g. galvanised M.S. rods, angles channels, slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates, including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade including all steel work. Note :All Pipes shall be welded 100 mm dia	412.20	420.00	-7.80
Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:1239 Part-I) medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost of structural work for supports fabricated from standard sections of required sizes and thickness e.g. galvanised M.S. rods, angles channels, slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates, including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade including all steel work. Note :All Pipes shall be welded 80 mm dia	371.80	380.00	-8.20
Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:1239 Part-I) medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost of structural work for supports fabricated from standard sections of required sizes and thickness e.g. galvanised M.S. rods, angles channels, slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates, including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade including all steel work. Note :All Pipes shall be welded 65 mm dia	586.10	671.00	-84.90
Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:1239 Part-I) medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost of structural work for supports fabricated from standard sections of required sizes and thickness e.g. galvanised M.S. rods, angles channels, slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates, including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade including all steel work. Note :All Pipes shall be welded 25 mm dia	5,988.75	6,000.00	-11.25
Providing, laying, jointing and testing of Mild Steel black pipe (IS: 1239/IS: 3895) medium class including cutting, screwing, welding etc. complete with fitting viz. tees elbow, bends, flanges, reducers. etc including excavation in all kind of soil , refilling , ramming,shoring, removing the excavated surplus material , providing adequate support to the pipe and making good the same. Providing anti-corrosive treatment (coating and wrapping) with 3 mm thick tape and holiday test check as per IS: 10221 complete as required. Note : All the Pipes shall be proper welded 150 mm dia	-	10.00	-10.00
Providing and fixing dial type pressure gauge with isolation cock and pipe at sprinkler line near flow switch Dia diameter 150 mm calibration 0-16 Kg.	-	5.00	-5.00

Providing & Fixing of Installation Control Valve with turbine type automatic Alarm Gong to be connected with control valve, drain & test valve and all other necessary components as per manufacturer's specifications complete as required. 150 mm dia	1.00	2.00	-1.00
Providing, fixing, testing & commissioning of annunciater Panel for flow control switches, providing Audio/Visual Indication of actuation of Automatic Sprinkler system for each zone complete as per specifications. The panel should have interface for connection to complete controlled building management system. The panel should have : minimum 6(5zones working + 1 zones spare)	-	1.00	-1.00
Providing and fixing aluminium armored cables 1.1 KVA grade including necessary support clamps and connection legs complete in all respects. 4core x 1.5sqmm	-	1,000.00	-1,000.00
Providing and fixing 25mm dia inspecting & testing assembly with isolation valve, gunmetal sight glass bypass valve & connected to line drain complete in all respect as per standard practice of code including pressure gauges of approved make.	-	5.00	-5.00
Providing and fixing ISI marked portable fire extinguishers including initial fill & wall suspension bracket of the following type. CO2 type 4.5Kg. capacity Fire Extinguisher flat base including valve , discharge hose of not less than 10 mm dia 1 m long and complete in all respects including initial fill wall suspension bracket and conforming to IS: 15683.	142.00	170.00	-28.00
Providing and fixing ISI marked portable fire extinguishers including initial fill & wall suspension bracket of the following type. Providing and fixing 4 kg capacity ABC Stored Pressure type fire extinguisher ISI marked under IS:15683 complete with imported Mono Ammonium Phosphate based ABC Powder suitable for all classes of fire.	142.00	170.00	-28.00
Supply, Installation, testing & Commissioning of mannual call box for Fire Alarm System	142.00	225.00	-83.00
Supply, Installation, testing & Commissioning of 4 watt speaker cum hooter with line matching transformer enclosed in a MS box mannual call box with hinged cover plate and fixing screws as per IS 2189	142.00	225.00	-83.00
Supply, Installation, testing & Commissioning of Smoke Detector for Fire Alarm System	-	135.00	-135.00
Providing and fixing of 16 zone mannual fire alarm panel complete in all respects and confirming to the requirements of IS: 2189	5.00	9.00	-4.00
Providing and fixing aluminium armored cables including necessary support clamps and connection legs complete in all respects.	-	2,000.00	-2,000.00

Details of Material having discrepancy between Quantity supplied and executed:

S. No.	Particulars	Qty Supplied	Qty Installed	Qty Tested	Qty Commissioned	Remarks
1	Providing and fixing MS black pipes as per IS 1239 (Part I) MEDIUM Class including cutting, welding etc. complete with fittings viz Tees, Elbows, Bends, flanges, reducer, clamps, hanger etc. including painting with one coat of primer and two coat of synthetic enamel paint of approved make and shade 150 mm dia	2227.41	2227.41	2227.41	2728.2	Qty Commissioned is more than Qty exected at site
2	Providing and fixing butterfly valves, wafer end type class PN 1.6 as per I.S:13095 - 1991, includingb lever key and necessary nuts, bolts, gaskets etc. complete 80 mm dia	60	55	55	55	Qty Supplied is more than Qty installed, tested & Commissioned
3	Providing, fixing, testing and commissioning of Single headed stainless steel, ISI marked oblique pattern hydrant landing valve Type 'A' with 80mm dia flanged inlet & 63mm dia instantaneous type female outlet complete with gunmetal cap and chain, twist release type lug and all accessories as per (IS : 5290:1983)	201	198	198	198	Qty Supplied is more than Qty installed, tested & Commissioned

4	Providing and fixing standard short size Stainless steel branch pipe with Stainless steel nozzle 20mm nominal bore outlet with standard instantaneous type 63mm dia coupling in all respects.	200	198	198	198	Qty Supplied is more than Qty installed, tested & Commissioned
5	Providing and placing in proper position Controlled Percolating (CP) Hose ISI marked (IS:8423) 63 mm dia x 15 m long complete with instantaneous type gunmetal 63 mm dia, ISI marked Male & Female couplings (IS:903) bound and riveted to hose pipe with copper rivets and 1.5 mm copper wire.	400	394	394	394	Qty Supplied is more than Qty installed, tested & Commissioned
6	Providing and fixing standard fire man's axe with heavy insulated rubber handle. (ISI marked)	180	173	173	173	Qty Supplied is more than Qty installed, tested & Commissioned
7	Providing and fixing external fire hose box, wall mounting or free standing type, made out of fibre glass reinforced plastics of approved colour of 76.8x61.44x25.80cm (30"x24"x10") size to accommodate two 15m length of delivery hoses and a branch pipes with glass fronted double door with lock and keys and break glass recess for keys, all complete.	35	30	30	30	Qty Supplied is more than Qty installed, tested & Commissioned
8	Providing and fixing 150mm dia TWO-way fire brigade inlet connection consisting of 63mm instantaneous male coupling and a check valve protected by cap scored with a chain glass bore etc. complete with one 150mm dia valve and 150mm dia non-return valve (To be connected to Riser/RING)	2	1	1	1	Qty Supplied is more than Qty installed, tested & Commissioned
9	Providing and fixing 4-way fire brigade inlet connection of 4 nos. 63mm dia instantaneous type male coupling with built in check valves and 150mm dia flanged outlet complete with bolts, nuts and rubber insertions as per I.S:904. (to be connected to static tank).	2	1	1	1	Qty Supplied is more than Qty installed, tested & Commissioned
10	Providing and fixing Pressure gauge with isolation cock suitable with 'U' tube for maximum pressure of 7 Kg/cm ² . (0-14 Kg./cm ² ; dial size:100 mm dia.)	181	173	173	173	Qty Supplied is more than Qty installed, tested & Commissioned
11	Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:1239 Part-I) medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost of structural work for supports fabricated from standard sections of required sizes and thickness e.g. galvanised M.S. rods, angles channels, slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates, including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade including all steel work. Note :All Pipes shall be welded	412.2	412.2	142.2	142.2	Qty Supplied & installed is more than Qty tested & Commissioned
12	Providing and fixing ISI marked portable fire extinguishers including initial fill & wall suspension bracket of the following type. CO2 type 4.5Kg. capacity Fire Extinguisher flat base including valve, discharge hose of not less than 10 mm dia 1 m long and complete in all respects including initial fill wall suspension bracket and conforming to IS: 15683.	165	142	142	142	Qty Supplied is more than Qty installed, tested & Commissioned
13	Providing and fixing ISI marked portable fire extinguishers including initial fill & wall suspension bracket of the following type. Providing and fixing 4 kg capacity ABC Stored Pressure type fire extinguisher ISI marked under IS:15683 complete with imported Mono Ammonium Phosphate based ABC Powder suitable for all classes of fire.	170	142	142	142	Qty Supplied is more than Qty installed, tested & Commissioned
14	Supply, Installation, testing & Commissioning of manual call box for Fire Alarm System	225	142	142	142	Qty Supplied is more than Qty installed, tested & Commissioned
15	Supply, Installation, testing & Commissioning of 4 watt speaker cum hooter with line matching transformer enclosed in a MS box manual call box with hinged cover plate and fixing screws as per IS 2189	225	142	142	142	Qty Supplied is more than Qty installed, tested & Commissioned
16	Providing and fixing of 4 zone manual fire alarm panel complete in all respects and confirming to the requirements of IS: 2189	65	0	0	0	Qty Supplied is more than Qty installed, tested & Commissioned
17	Providing and fixing of Fire Exit Signages	180	0	0	0	Qty Supplied is more than Qty installed, tested & Commissioned
18	Providing and Fixing of "DO NOT USE LIFT IN CASE OF FIRE" caution sign sheet 600mm x 100mm	180	0	0	0	Qty Supplied is more than Qty installed, tested & Commissioned
19	Siren 1/2 KM Range	4	0	0	0	Qty Supplied is more than Qty installed, tested & Commissioned

3) Absence of Test Reports for Claiming Payment of Fire Fighting System

During our audit of the testing and payment process for the Fire Fighting System, a significant deficiency has been identified regarding the provision of test reports. It has come to our attention that the required test reports, which serve as essential evidence for claiming payment of testing activities conducted on the Fire Fighting System, were not provided. The absence of these critical test reports raises concerns about the quality, safety, and compliance of the constructed infrastructure.

4) Penalty to be Imposed on M/s Gautam Techno Sanitation for delay in work:

As per Clause "Liquidated Damages", "The contractor shall pay as compensation of an amount equal to INR 10,000 per day of delayed period subject to maximum of 10% of contract value". As the time allowed for performance of contract was 4 months i.e., contract should have been completed up to Jun'2017, & no document regarding extension of time period presented to audit team during course of audit & Final bill was submitted by contractor on 21st Oct'2019 i.e., beyond the permissible completion date, therefore Contractor is bound to **pay for Liquidated damages that amounts to INR 23,00,000/-**, refer below attached annexure for details:

Deadline for completion	Work Completed on	Delay in no. of days	Penalty per day	Penalty amount	Restricted to 10% of Contract Value
21-06-2017	21-10-2019	852	10,000.00	85,20,000.00	23,00,000.00

XIII. Lift Work:

This comprehensive audit report embarks on an insightful exploration into the installation of elevators within the prestigious Police Officer Multi State Co-operative Housing Society. The foresight of the Management Committee in envisioning and executing this vital addition to the society's infrastructure is a testament to their commitment to elevating the living standards of the residents.

As the Minutes of meetings of Board of Directors dated 16th July'2016, the chairman informed the BOD that the society has received tenders from 3 bidders for installation of 18 lifts at Sector-49, Faridabad. The Architect has checked the bids in general and particularly the technical specification of the lift quoted in all 3 bids.

The following are the price quoted by them:

Vendor	Amount per lift for	
	13 People	8 People
Kone	22,25,000.00	20,50,000.00
Otis	22,12,000.00	19,95,000.00
Johnson	21,25,000.00	18,75,000.00

The Chairman also informed the board of Directors that in its meeting held on 8th July'16. The BOD had authorised him to negotiate the price with the aforesaid bidders with the help of Architect and accordingly the prices were negotiated with the bidders and the reduced prices are as under:

Vendor	Amount per lift for		Negotiated Amount per lift for	
	13 People	8 People	13 People	8 People
Kone	22,25,000.00	20,50,000.00	21,35,000.00	19,90,000.00
Otis	22,12,000.00	19,95,000.00	21,00,000.00	19,00,000.00
Johnson	21,25,000.00	18,75,000.00	20,90,000.00	18,40,000.00

On 20th July'16, as per BOD minutes of meetings, After going through the details of the findings and taking into consideration the price factor, the quality and matching of our specifications of the lifts, the BOD have found that the OTIS Lift specifications meet exactly

as per our requirement and as such all the Board of Directors have finally decided the tender in favour of OTIS Elevator Company (India) Ltd, despite being L2 the contract was awarded to OTIS as decided by BOD which leads to excess cash outflow.

XIV. Fountain Work:

This comprehensive audit report embarks on a captivating exploration of the installation of a magnificent fountain within the Police Officer Multi State Co-operative Housing Society. The visionary undertaking of the Management Committee to enhance the aesthetics and ambiance of the society's common areas underscores their commitment to creating a harmonious living environment for the residents.

It has been noted that the quotes had been received from qualified vendors for Supply, Installation, Testing and Commissioning of “Diamond with Foam Jet Fountain with Filtration system” at Sector 49, Faridabad.

Quoted has been received from three vendors which are mentioned below along with their quoted price:

Vendor	13 People	Taxes & Freight	Vendor Position
Gautam Techno Sanitation	7,97,090.00	GST & Freight included	L3
OASES water care	2,59,400.00	1.) GST excuded 2.) Freight included	L1
ENKI Water & Environment Co.	5,19,746.00	GST & Freight excluded	L2

The BOD had decided to negotiate the price with all the above three vendors and give the work order to the lowest bidder. Accordingly the price was negotiated with all the bidders and only M/s OASES water care had agreed to reduce the price after allowing a discount of 15% which reduces the contract value from INR 2,59,400/- to INR 2,20,490/- (excl. GST) which makes him L1 and accordingly it was decided to award the work order to them with 25% advance for installation of Fountain in Faridabad Project.

XV. Solar Power Generation System:

A. Background:

This audit report embarks on an enlightening journey to explore the installation of a solar power generation system within the prestigious Police Officer Multi State Co-operative Housing Society. The forward-thinking initiative of the Management Committee in harnessing renewable energy sources underscores their dedication to sustainability and the well-being of the society's residents.

B. Tender Process:

It has been noted that the quotes had been received from qualified vendors for Supply, Installation, Testing and Commissioning of 40KW Solar Power Generation System at Sector 49, Faridabad.

Quoted has been received from four vendors which are mentioned below along with their quoted price

SOLAR POWER GENERATION SYSTEM - COMPARATIVE STATEMENT					
S.N	Name of Contractor	Cost	GST	Total	Term & Conditions
1	M/s. Powergreen Energy Solutions	17,50,000	1,55,750	19,05,750	Operation & Maintenance of the plant is not included in this scope. For Modules : - 90% Peak Output Warranty for first 10 years - 80% Peak Output Warranty for next 15 years For Inverters : - 5 years warranty against manufacturing defects Payment Terms : - 30% advance along with technically clear Purchase Order - 60% prior to despatch of material against proforma invoice - 5% against Installation of Structure & Modules Balance 5% against Commissioning of Solar Power Plant Delivery & Commissioning Within 8 - 10 weeks from the date of receipt of technically clear PO, drawings, advance and availability of site for construction.
2	M/s. Creative Systems	2160000	108000	2268000	Delivery & Installation: A. Delivery: 07 to 10 Days from the date of order along with advance. 2. Warrantee: A. 05 years warranty for complete System. B. 25 years performance warranty for Solar Panels Payment Terms: • 50% along with Purchase order. • 35% amount shall be released at the time of delivery • 10% after Installation of the system • Balance 5% after handing over of the project. Net meter cost & other related Govt. fees will be paid by the client. Meter Charges additional, payable to DISCOM Transportation Charges are additional. Equipment Cost 50% advance with PO to initiate the approval process. 20% on Structure Dispatch 25% on Panel Dispatch 5% on Inverter Dispatch Labour Cost 40% on Structure Erection completion 25% on Inverter & Panel Mounting 25% on Wiring Completion 10% on Inverter ON Solar Inverter Exclusive 7 Years from Manufacturer Solar PV Panel 27 Years from Vikram Solar ACDB & DCDB Comprehensive Replacement 5 Years from GeoPower Earthing 5 Years from GeoPower AC-DC Cable Comprehensive Replacement 5 Years from GeoPower Insurance 5 Years included Service Support & AMC Comprehensive Service support for breakdown for 5 Years RMS One time Configuration Included. Support @chargeable basis if WIFI connection error at client end. Maintenance Quarterly maintenance visit for general plant health check
3	M/s. Geo Power	1480000	131720	1611720	Freight and Insurance : Excluding Product Warranty : 12years on SolarEdge inverter AND 5yrs of SMA Solid Q ,with"25 years for linear power warranty" on solar modules as per company policy. Service Warranty : 1 year Validity : 15 days from the date mentioned herein. Payment Terms : All payments are made through DD/Cheques payable at par of current date. * 50% Advance along with confirmed order. * 50% before dispatch of material. Taxes and Duties: The offer is Inclusive of GST @ 5% as mentioned in above price schedule. Please note that the rates quoted above are subject to the Purchase Order being issued to us and not as per Work order. However, rate prevalent at time of dispatch will be finally applicable, governed by the DVAT or GST Act / other taxations governed by the central / state authorities. Any other or additional taxes / Work Contract Tax payable will be extra to customer's account.
4	M/s. Alpine Energies	1517000	135013	1652013	Freight and Insurance : Excluding Product Warranty : 12years on SolarEdge inverter AND 5yrs of SMA Solid Q ,with"25 years for linear power warranty" on solar modules as per company policy. Service Warranty : 1 year Validity : 15 days from the date mentioned herein. Payment Terms : All payments are made through DD/Cheques payable at par of current date. * 50% Advance along with confirmed order. * 50% before dispatch of material. Taxes and Duties: The offer is Inclusive of GST @ 5% as mentioned in above price schedule. Please note that the rates quoted above are subject to the Purchase Order being issued to us and not as per Work order. However, rate prevalent at time of dispatch will be finally applicable, governed by the DVAT or GST Act / other taxations governed by the central / state authorities. Any other or additional taxes / Work Contract Tax payable will be extra to customer's account.

Further it has been noted that no record regarding negotiation with vendors other than selected vendor i.e., M/s Alpine Energies is available with the society, however, Revised/Negotiated Tender Amount after Final Negotiation is INR 16,52,013/- (post inclusion of freight & Insurance) and hence, contract has been awarded to them.

C. Observations:

1) Lack of Documentation for Negotiations with Non-Selected Vendors in Vendor Selection

Process:

During our review of the vendor selection process for implementation of Solar Power Generation System project within the premises of the Police Officers Multi-state Co-operative Housing Society conducted through the tendering procedure, we noted that no documented records were provided pertaining to the negotiation process with vendors other than the selected vendor. The absence of such documentation limits the transparency and accountability of the vendor selection process and its associated negotiations.

Impact of such negligence may result in following:

- Without documented negotiations and evaluations of non-selected vendors, there is a risk that potentially beneficial alternatives may not have been thoroughly considered. This could result in missed opportunities for cost savings, quality improvement, or value-added services.
- The absence of documentation impedes the audit trail for vendor selection, making it challenging to assess whether the selection aligns with the Standardized procurement policies and guidelines.

XVI. LED Lights:

I. Background:

This audit report embarks on an illuminating exploration of the installation of LED lights within the Police Officers Multi-State Co-operative Housing Society. The visionary pursuit of the Management Committee to upgrade lighting infrastructure signifies their commitment to energy efficiency, sustainability, and enhancing the residents' quality of life.

➤ Paul Enterprises:

II. Observation:

Lack of Formal Contract and Work Order for Vendor Payment:

During our audit of the procurement and payment process for LED Lights project, a significant concern has been identified regarding the lack of a formal contract and work order for Paul Enterprises who was awarded the contract based solely on their quote. It has

come to our attention that payments have been released to the vendor against the Invoice no. 26 & 47 dated 22nd Aug'19 & 22nd Aug'2020 for INR 1,06,908/- & INR 41,772/- without the establishment of a formal contractual agreement. This deficiency raises serious concerns about contractual integrity, financial accountability, and potential risks to the project.

➤ **Tredava Sourcing & Trading:**

In the course of our comprehensive audit of LED Lights work conducted for Police Officer Multi-State Co-operative Housing Society Ltd., we examined the vendor selection process employed for employing M/s Tredava Sourcing & Trading in 2020. Our evaluation focused on the methods adopted for vendor selection and the subsequent awarding of contracts. Notably, our observation reveals that the traditional competitive tender process was not employed in this instance, and the decision to award the contract was made on a single vendor basis.

It has been noted that Contract Amount quoted by M/s Tredava Sourcing & Trading is INR 18,800/- (dated 13th Jun'2020), INR 37,600/- (dated 22nd Jun'2020) & INR 64,500/- (dated 24th Jun'2020) and as this is a single vendor contract hence, contract has been awarded to the respective vendors.

III. Drawbacks in Vendor Selection and Contract Awarding:

Absence of Tender Process for Vendor Selection and Single Vendor Contract Award:

During our audit of the vendor selection process for Security System, a significant observation has come to light regarding the absence of a formal tender process. Instead, the contract has been awarded on a single vendor basis. This approach departs from established procurement practices and raises concerns about transparency, and competition in the selection of vendors.

Impact of absence of a formal tender process leads to:

- **Lack of Competitive Bidding:** The absence of a tender process means that multiple vendors were not provided an equal opportunity to compete for the contract. This raises doubts about whether the selected vendor truly offers the best value for the project in terms of cost, quality, and expertise.
- **Transparency and Accountability:** The absence of a competitive bidding process diminishes the transparency and accountability of the vendor selection
- **Risk of Higher Costs:** Without a competitive bidding process, there is a risk that the project might not achieve optimal cost savings. A lack of market benchmarking could lead to higher costs compared to what might have been achieved through competitive bids.

XVIII. Summary of Total Loss:

Total loss suffered by Society is as under:

Sr. No.	Nature of Work	Particulars	Amount
1	Civil	Extra payment of Additional area charged by NG Construction	2,26,95,275
2	Civil	Excess payment made to NG Construction on account of service tax on FOC material	2,39,93,772
3	Civil	Excess payment made to NG Construction on account of Construction of boundary wall	3,84,54,603
4	Civil	Excess Area Claimed Leading to Excessive Cash Outflow Compared to Work Order area	16,92,97,431
5	Civil	Claiming Non-Contract Items Without any Contract, Leading to Excessive Cash Outflow to Contractor	1,89,25,810
6	Civil	Excess Provision of Cement Bags to Contractor Resulting in Excessive Cash Outflow	81,92,744
7	Civil	Excess Provision of Steel to Contractor Resulting in Excessive Cash Outflow	9,31,41,099
8	Civil	Excess amount charged by Contractor	22,00,000
9	Civil	Penalty to be Imposed on NG Constructions for delay in work	1,73,50,000
10	Civil	Unauthorized Alteration of Escalation Formula Leading to Excessive Price Claim	2,95,86,295
11	Electrical Sub Station	Excessive Quantity Claimed in Running Bills Beyond Purchase Order Specifications	18,99,190
12	Electrical Sub Station	Penalty to be Imposed on M/s Radius Synergies International Pvt. Ltd. For delay in work	26,40,020
13	External Electrical Work- 11KV HT Cable Laying Work	Penalty to be Imposed on M/s R. K. Industries for delay in work	5,10,020
14	Security System	Penalty to be Imposed on M/s Radius Infotech Pvt. Ltd. For delay in work	88,15,000
15	Smart Meter and Electricity meter	Penalty to be Imposed on M/s Radius Synergies International Pvt. Ltd. For delay in work	69,00,000
16	Fire Fighting System	Excessive Quantity Claimed in Running Bills Beyond Purchase Order Specifications	26,48,399
17	Fire Fighting System	Penalty to be Imposed on M/s Gautam Techno Sanitation for delay in work	23,00,000
TOTAL LOSS TO SOCIETY			44,95,49,659

Footnote: As per layman's interpretation of contractual terms of the contract executed between Police Officer Multi State Co-operative Housing Society & M/s N G Constrictions for construction of 616 Residential Apartments of four categories and allied services and common facilities like Community Centre, Shopping complex, 110 EWS flats, Primary and Nursery school, Electric Sub-station, Stilted areas, Podium Basement and Development works etc at 11.3875 acres of land at village Dabua and Nawada koh, Sector 49, Faridabad, Haryana. As per Clause 36, "Variation in Prices" of contract M/s N G Constrictions is obliged to pay the escalation amount which were paid by Police Officer Multi State Co-operative Housing Society in good faith during construction phase & the final escalation amount due on the basis of our calculations, total amount to be recovered by society due to in-accurate escalation formula is INR 25,07,21,372.66/- on account of escalation (refer below attached annexure for details):

Escalation Bill no	Tender Opening Date	Agreement Date	Date of actual start of work	Escalation Payable from	Quarter Covered	Invoice during Quarter	Gross Work done	W (% of work done)	La (Basic Labour Rate on the date of rec. of tender)	Lb (Basic Labour Rate on the date of commencement of period of reckoning)	Escalation in labour cost $WP \times (Lb - La) \times W$	Ma (All India wholesale Price Index at start of work)	Mb (Average of All India wholesale Price Index for all the commodities of all quarter)	Escalation in Material cost $WP \times (Mb - Ma) \times W$	Escalation Cost calculated as per Contract (which was to be recovered from contractor)	Escalation claimed in bill paid in good faith, now to be repaid by contractor	Escalation amount to be recovered by PCHMS
RA-01	12/05/2013	21/05/2013	01/11/2013	Nov-14-Jan-15	RA-34	3,02,95,942.00											
RA-01	12/05/2013	21/05/2013	01/11/2013	Nov-14-Jan-15	RA-35	2,86,85,145.00											
RA-01	12/05/2013	21/05/2013	01/11/2013	Nov-14-Jan-15	RA-36	3,38,80,607.00	12,17,90,737.89		205.44	216.90	-16,08,715.83	180.41	192.40	-56,90,840.45	-72,99,556.29	80,98,109.00	1,53,97,665.29
RA-01	12/05/2013	21/05/2013	01/11/2013	Nov-14-Jan-15	RA-37	2,29,14,258.00											
RA-01	12/05/2013	21/05/2013	01/11/2013	Nov-14-Jan-15	RA-38	2,75,07,269.05											
Subtotal																	1,53,97,665.29
RA-02	12/05/2013	21/05/2013	01/11/2013	Feb-15-Apr-15	RA-38	48,54,223.95											
RA-02	12/05/2013	21/05/2013	01/11/2013	Feb-15-Apr-15	RA-39	2,93,94,403.00											
RA-02	12/05/2013	21/05/2013	01/11/2013	Feb-15-Apr-15	RA-40	2,80,14,791.00	10,98,82,325.34		205.44	223.56	-22,26,547.39	180.41	194.26	-58,76,957.53	-81,03,504.92	87,49,646.00	1,68,53,150.92
RA-02	12/05/2013	21/05/2013	01/11/2013	Feb-15-Apr-15	RA-41	1,27,56,408.00											
RA-02	12/05/2013	21/05/2013	01/11/2013	Feb-15-Apr-15	RA-42	5,42,53,498.00											
Subtotal																	1,68,53,150.92
RA-03	12/05/2013	21/05/2013	01/11/2013	May-15-Jul-15	RA-39	4,28,05,694.00											
RA-03	12/05/2013	21/05/2013	01/11/2013	May-15-Jul-15	RA-24	4,43,39,180.00	11,36,23,336.05		205.44	223.56	-23,02,351.55	180.41	197.45	-73,52,983.98	-96,55,335.53	1,06,85,699.00	2,03,41,034.53
RA-03	12/05/2013	21/05/2013	01/11/2013	May-15-Jul-15	RA-25	4,65,29,639.00											
Subtotal																	2,03,41,034.53
RA-04	12/05/2013	21/05/2013	01/11/2013	Aug-15-Oct-15	RA-26	3,20,92,579.00											
RA-04	12/05/2013	21/05/2013	01/11/2013	Aug-15-Oct-15	RA-27	3,37,49,896.00	9,40,03,709.15		205.44	226.40	-21,75,704.22	180.41	196.74	-58,51,938.74	-80,27,642.96	87,79,313.00	1,68,06,955.56
RA-04	12/05/2013	21/05/2013	01/11/2013	Aug-15-Oct-15	RA-28	4,47,50,124.00											
Subtotal																	1,68,06,955.56
RA-05	12/05/2013	21/05/2013	01/11/2013	Nov-15-Jan-16	RA-29	2,07,78,563.00											
RA-05	12/05/2013	21/05/2013	01/11/2013	Nov-15-Jan-16	RA-30	2,48,71,023.00	6,58,40,220.00		205.44	292.31	-45,94,488.65	180.41	194.22	-32,98,597.90	-78,93,086.55	1,10,96,627.00	1,89,89,713.55
RA-05	12/05/2013	21/05/2013	01/11/2013	Nov-15-Jan-16	RA-31	2,71,53,674.00											
Subtotal																	1,89,89,713.55
RA-06	12/05/2013	21/05/2013	01/11/2013	Feb-16-Apr-16	RA-32	2,74,57,940.00											
RA-06	12/05/2013	21/05/2013	01/11/2013	Feb-16-Apr-16	RA-33	2,38,56,118.00	6,96,16,905.70		205.44	306.77	-57,48,835.49	180.41	194.04	-36,68,422.14	-94,17,257.63	1,33,10,442.00	2,27,27,699.63
RA-06	12/05/2013	21/05/2013	01/11/2013	Feb-16-Apr-16	RA-34	3,05,89,084.00											
Subtotal																	2,27,27,699.63
RA-07	12/05/2013	21/05/2013	01/11/2013	May-16-Jul-16	RA-35	1,91,43,470.00											
RA-07	12/05/2013	21/05/2013	01/11/2013	May-16-Jul-16	RA-36	2,50,75,814.00	5,53,69,093.50		205.44	306.77	-45,72,277.48	180.41	196.74	-34,46,848.49	-80,19,125.97	1,05,86,324.00	1,86,05,449.97
RA-07	12/05/2013	21/05/2013	01/11/2013	May-16-Jul-16	RA-37	2,09,22,726.00											
Subtotal																	1,86,05,449.97
RA-08	12/05/2013	21/05/2013	01/11/2013	Aug-16-Oct-16	RA-38	2,02,03,364.00											
RA-08	12/05/2013	21/05/2013	01/11/2013	Aug-16-Oct-16	RA-39	3,72,10,684.00	4,44,13,866.80		205.44	306.77	-36,67,615.09	180.41	196.74	-27,64,861.41	-64,32,476.50	84,91,734.00	1,49,34,210.50
RA-08	12/05/2013	21/05/2013	01/11/2013	Aug-16-Oct-16	RA-40	3,48,87,560.00											
Subtotal																	1,49,34,210.50
RA-09	12/05/2013	21/05/2013	01/11/2013	Nov-16-Jan-17	RA-41	2,25,15,019.00											
RA-09	12/05/2013	21/05/2013	01/11/2013	Nov-16-Jan-17	RA-42	2,04,05,025.11	3,64,82,037.49		205.44	306.77	-30,12,619.27	180.41	196.74	-22,71,087.50	-52,83,706.77	77,75,653.00	1,30,59,359.77
Subtotal																	1,30,59,359.77
RA-10	12/05/2013	21/05/2013	01/11/2013	Feb-17-Apr-17	RA-42	49,25,350.89											
RA-10	12/05/2013	21/05/2013	01/11/2013	Feb-17-Apr-17	RA-43	3,48,34,089.00	4,95,74,834.66		205.44	306.77	-40,93,798.28	180.41	196.74	-30,86,143.07	-71,79,941.35	86,77,936.00	1,58,57,877.35
RA-10	12/05/2013	21/05/2013	01/11/2013	Feb-17-Apr-17	RA-44	1,83,42,895.00											
Subtotal																	1,58,57,877.35
RA-11	12/05/2013	21/05/2013	01/11/2013	May-17-Jul-17	RA-45	2,66,99,528.00											
RA-11	12/05/2013	21/05/2013	01/11/2013	May-17-Jul-17	RA-46	1,54,74,779.00	5,28,48,160.95		205.44	306.77	-43,64,103.52	180.41	196.74	-32,89,914.87	-76,54,018.39	1,01,04,333.00	1,77,58,351.39
Subtotal																	1,77,58,351.39
RA-12	12/05/2013	21/05/2013	01/11/2013	Aug-17-Oct-17	RA-47	1,92,88,801.00											
RA-12	12/05/2013	21/05/2013	01/11/2013	Aug-17-Oct-17	RA-48	1,87,13,946.00	4,81,13,878.55		205.44	306.77	-39,73,155.22	180.41	196.74	-29,95,195.32	-69,68,350.55	91,99,360.00	1,61,67,510.55
RA-12	12/05/2013	21/05/2013	01/11/2013	Aug-17-Oct-17	RA-49	1,86,02,816.00											
Subtotal																	1,61,67,510.55
RA-13	12/05/2013	21/05/2013	01/11/2013	Nov-17-Apr-18	RA-50	1,53,72,165.00											
RA-13	12/05/2013	21/05/2013	01/11/2013	Nov-17-Apr-18	RA-51	2,01,36,348.00	5,91,77,330.65		205.44	306.77	-48,86,754.67	180.41	196.74	-38,83,919.68	-85,70,674.34	1,13,14,442.00	1,98,85,116.34
RA-13	12/05/2013	21/05/2013	01/11/2013	Nov-17-Apr-18	RA-52	1,69,74,778.00											
RA-13	12/05/2013	21/05/2013	01/11/2013	Nov-17-Apr-18	RA-53	1,65,87,498.00											
Subtotal																	1,98,85,116.34
RA-14	12/05/2013	21/05/2013	01/11/2013	May-18-Nov-18	RA-54	1,49,34,889.00											
RA-14	12/05/2013	21/05/2013	01/11/2013	May-18-Nov-18	RA-55	1,11,25,535.00	2,21,54,760.40		205.44	306.77	-18,29,499.19	180.41	196.74	-13,79,182.82	-32,08,682.01	42,35,891.00	74,44,573.01
Subtotal																	74,44,573.01
RA-15	12/05/2013	21/05/2013	01/11/2013	Dec-18-py-19	RA-56	1,12,47,912.00											
RA-15	12/05/2013	21/05/2013	01/11/2013	Dec-18-py-19	RA-57	98,96,307.00	1,79,72,586.15		205.44	306.77	-14,84,142.97	180.41	196.74	-11,18,833.23	-26,02,976.20	34,36,279.00	60,39,255.20
Subtotal																	60,39,255.20
RA-16	12/05/2013	21/05/2013	01/11/2013	Aug-19-Aug-20	RA-58	46,66,027.00											
RA-16	12/05/2013	21/05/2013	01/11/2013	Aug-19-Aug-20	RA-59	45,25,821.00	1,03,81,054.25		205.44	306.77	-87,248.29	180.41	196.74	-6,46,243.58	-15,03,491.87	19,84,821.00	34,88,302.87
RA-16	12/05/2013	21/05/2013	01/11/2013	Aug-19-Aug-20	RA-60	30,27,157.00											
Subtotal																	34,88,302.87
RA-17	12/05/2013	21/05/2013	01/11/2013	Sept-20-Feb-21	RA-61	76,33,701.00											
RA-17	12/05/2013	21/05/2013	01/11/2013	Sept-20-Feb-21	RA-62	52,32,066.00	1,09,35,901.95		205.44	306.77	-8,03,066.58	180.41	196.74	-6,80,784.08	-15,83,850.66	20,90,983.00	36,74,933.66
Subtotal																	36,74,933.66
RA-18	12/05/2013	21/05/2013	01/11/2013	Mar-21-Mar-22	RA-63	37,83,292.00											
RA-18	12/05/2013	21/05/2013	01/11/2013	Mar-21-Mar-22	RA-64	50,36,853.00	80,36,023.25		205.44	306.77	-6,63,099.96	180.41	196.74	-5,00,260.22	-11,63,860.17	15,36,452.00	27,00,312.17
Subtotal																	27,00,312.17
Total Excess Escalation claimed by vendor																	25,87,21,374.68