

Department name	Engineering Department
Circle/Division	North west Zone
IFB No/Tender Notice No.	Tender no 68 tender notice no- 01/2026-27
Name of Work	CCTV Desilting Work of Existing Drainage line and Strome Water Line at diff roads in Ambali area in s.g. highway to sp ring road in bodakdev ward NWZ.(ARC).
Estimate contract value(INR)	Rs.9995000.00
Period of Completion	12 Months (Ex.Monsoon)
Bidding Type	Open/Limited
Bid Call(Nos)	1
Tender Currency Type	-----
Tender Currency Settings	-----
Joint venture	Applicable/Not Applicable
Rebate	Applicable/Not Applicable

Amount Details:	
Bid Document Fee:	Rs.2400.00
Bid Document Fee Payable to:	Municipal Commissioner, Ahmedabad
Bid Security/ EMD (INR)	Rs.99950.00
Bid Security/ EMD In Favor of	Municipal Commissioner, Ahmedabad

Tender Dates	
Bid Document Downloading Start Dates	Automatic System Generated
Bid Document Downloading Start Dates	Automatic System Generated
Pre Bid Meeting	___/___/___; ___; ___ Hrs
Last Date & Time for Receipt of Bids	08/06/2026; 18:00 Hrs.
Bid Validity Period	120 Days
Remaks	Submission of EMD.Tender fee and Other Documents during office hours : On date 09/06/2026 & 17:00 Hrs. in the Office of Assistant Manager (North West Zone Office, Rajmata vijayaraje Sindhiya bhavan,Nr.Atithi dining hall,Judjes bunglow road, Bodakdev
Bid Opening Date	10/06/2026 ; 12:00 Hrs.

Other Details	
Officer Inviting Bids:	Assistant Manager (North West Zone)
Bid Opening Authority:	Assistant Manager (North West Zone)
Address:	Rajmata vijayaraje Sindhiya bhavan, Nr. Atithi dining hall, Judjes bungalow road, Bodakdev
Contact details:	079-32981396

અમદાવાદ મ્યુનિસિપલ કોર્પોરેશન

મહાનગર સેવાસદન – ઉત્તર પશ્ચિમઝોન

અ.મ્યુ.કો. ઉ. ઝોન ઝોનલ ઓફીસ,

અતિથી હોટલના ખાંચામાં, જજસ બંગલા રોડ, બોડકદેવ, અમદાવાદ.

ઉત્તર પશ્ચિમ ઝોન ટેન્ડર નોટીસ નં- ૦૧/૨૦૨૬-૨૭ માં આવરી લેવાયેલ કામોની વિગતો

શરતો :-

૧. ઉપરોક્ત ટેન્ડરો જે તે વર્ગમાં માન્ય રજીસ્ટ્રેશન ધરાવતા કોન્ટ્રાક્ટરશ્રીઓએ ભરવા.
૨. ટેન્ડરની નિયત ટેન્ડર ફી તથા ઇ.એમ.ડી. બંધ કવરમાં ઉપર ના સરનામે રુબરુ / રજીસ્ટર એ.ડી./ સ્પીડપોસ્ટ/ કુરીયરથી નિયત સમયમાં મોકલવાના રહેશે.
૩. કોન્ટ્રાક્ટરશ્રીઓએ ટેન્ડરની સાથે મ્યુનિસિપલ માન્ય રજીસ્ટ્રેશનની/ ગવર્નમેન્ટ રજીસ્ટ્રેશનની કોપી, (ટેન્ડર કોપી તથા અન્ય પુરાવા સાથે) અચૂક સામેલ કરવાની રહેશે અને કવર ઉપર ટેન્ડર નંબર તથા કોન્ટ્રેક્ટ નંબર જરૂર સ્પષ્ટ દર્શાવવાનો રહેશે. બંધ કવર ઉપર ટેન્ડર નોટીસ નંબર, ટેન્ડર નંબર, કામનું નામ તથા, કોન્ટ્રાક્ટરની સંસ્થાનું નામ તથા કોન્ટ્રેક્ટ નંબર અવશ્ય દર્શાવવાના રહેશે. જે કોન્ટ્રાક્ટરશ્રીઓએ રજીસ્ટ્રેશન રીન્યુ કરાવેલ ન હોય તે કોન્ટ્રાક્ટરશ્રીએ ટેન્ડર ભરવા નહીં.
૪. કોન્ટ્રાક્ટરોએ ટેન્ડરમાં બેંકનું નામ, ખાતા નંબર, માર્કર નંબર અને સરનામું સ્પષ્ટ અક્ષરોમાં લખવું.
૫. ટેન્ડર ફી પે ઓર્ડર / ડિમાન્ડ ડ્રાફ્ટથી ચૂકવવાની રહેશે. દરેક ટેન્ડર દીઠ અલગ ટેન્ડર ટેન્ડરફી ભરવાની રહેશે.
૬. ઓછી રકમની ટેન્ડર ફી, ઇ.એમ.ડી. કે ટેન્ડર ફી, ઇ.એમ.ડી. વિનાના ટેન્ડરો રદબાતલ (કન્સલ) ગણાશે.
૭. ટેન્ડર સાથે મુકવામાં આવતી અર્નેસ્ટમની, ટેન્ડરની રકમના ૧% પ્રમાણે બેંક ગેરંટી / ડિમાન્ડ ડ્રાફ્ટ / પે ઓર્ડર / લોકલ માર્કર ચેકથી જ સ્વીકારવામાં આવશે. દરેક ટેન્ડર દીઠ અલગ ઇ.એમ.ડી. ભરવાની રહેશે. ઇ.એમ.ડી. રકમ રૂ. એક કરોડ સુધીની અંદાજીત રકમના કામ માટે રોકડા, લોકલ માર્કર ચેક, ડિમાન્ડ ડ્રાફ્ટ, પે ઓર્ડર કે બેંક ગેરંટીના સ્વરૂપમાં તથા રૂ. એક કરોડથી ઉપરની અંદાજીત રકમના કામ માટે ઇ.એમ.ડી.ની રકમ માત્ર ડિમાન્ડ ડ્રાફ્ટ, પે ઓર્ડર કે બેંક ગેરંટીના સ્વરૂપમાં આપવાની રહેશે.
૮. બેંક ગેરંટી માત્ર અમદાવાદ શહેરની જ સ્વીકારવામાં આવશે.
૯. ટેન્ડર ફી તથા ઇ.એમ.ડી.ની રકમના ડી.ડી./ ચેકની પાછળ કોન્ટ્રાક્ટરશ્રીએ પોતાની સંસ્થાનું નામ તથા મોબાઇલ નંબર અવશ્ય લખવાનો રહેશે.
૧૦. શરતી ટેન્ડરો રદ બાતલ ગણાશે.
૧૧. જો ટેન્ડરમાં સ્પષ્ટ ઉલ્લેખ કરાયેલ હોય તો ચોમાસાને કારણે ખાતાકીય સૂચના અન્વયે જ્યારે જ્યારે કામ બંધ રાખવાનું થાય તે સમયને કામની મુદતમાં મજરે આપવામાં આવશે. પરંતુ આ અન્વયે કોઈ ભાવ વધારો આપવામાં આવશે નહીં. જેની નોંધ ટેન્ડરરે લેવી.
૧૨. ટેન્ડરો કોઈપણ કારણ આપ્યા સિવાય સ્વીકારવા કે નહિ સ્વીકારવા તેની સંપૂર્ણ સત્તા મ્યુનિસિપલ કમિશનરશ્રીની રહેશે.
૧૩. ટેન્ડરમાં જો કોઈ સુધારા વધારા હોય તો તે અંગ ટેન્ડર ભરતા પહેલાં છેલ્લે દિવસે નિયત વેબસાઇટ અથવા કચેરીએ જરૂરી તપાસ કરીને જ ટેન્ડર મોકલવું.
૧૪. સીક્યોરીટી ડીપોઝીટ/ પરફોર્મન્સ ગેરંટીની રકમ રૂ. એક કરોડ સુધીની અંદાજીત રકમના કામ માટે રોકડા, લોકલ માર્કર ચેક, ડિમાન્ડ ડ્રાફ્ટ, પે ઓર્ડર કે બેંક ગેરંટીના સ્વરૂપમાં તથા રૂ. એક કરોડથી ઉપરની અંદાજીત રકમના કામ માટે સીક્યોરીટી ડીપોઝીટ/ પરફોર્મન્સ ગેરંટીની રકમ માત્ર ડિમાન્ડ ડ્રાફ્ટ, પે ઓર્ડર કે બેંક ગેરંટીના સ્વરૂપમાં આપવાની રહેશે.
૧૫. ઓનલાઇન એન-પ્રોક્યુર વેબસાઇટ પરથી ભરવાના થતા ટેન્ડરમાં કોન્ટ્રાક્ટર/ એજન્સીએ ટેન્ડરની હાર્ડ કોપીમાં ભાવ ભર્યા વગરની સહી સીકકા કરી સબમીટ કરવાની રહેશે. જો તેમાં ભાવ ભરેલ હશે તો તેવા ટેન્ડર રદ કરવામાં આવશે.
૧૬. સદર ટેન્ડરની આઈટમોના ભાવો નાણા ખાતાના સરકયુલર નં.૩૮, તા. ૨૧/૧૧/૨૦૨૨ તથા સક્ષમ સત્તાની મળેલ મંજૂરી મુજબ GST સિવાય ગણતરીમાં લેવામા આવેલ તથા પ્રવર્તમાન નિયમ મુજબ GST ચૂકવવા પાત્ર થશે જેથી તમામ બીડસે તે મુજબ ગણતરી કરી ટેન્ડરો ભરવાના રહેશે.
૧. સદર ટેન્ડર અંતર્ગતના કામ સંલગ્ન અ.મ્યુ.કો.માં પર્વતમાન તમામ નિયમો/સરકયુલરો લાગુ પડશે તેમજ વખતો વખત થનાર સુધારાઓ પણ લાગુ પડશે. જેની નોંધ લઈ ટેન્ડરો ભરવાના રહેશે.

ડિમાન્ડ ડ્રાફ્ટ / ચેક “મ્યુનિસિપલ કમિશનરશ્રી, અમદાવાદ” ના નામનો કઢાવવો.

ANNEXURE – 1

As per Government of Gujarat G.R.No.- EMD/10/2021/7729/DMO Dt.28/06/2021 & Circular of Finance Department, AMC No.41, Date: 08/02/2022, approved Banks are...

(A) Guarantee issued by following banks will be accepted as SD/EMD on permanent basis.
All nationalized Banks

(B) Guarantees issued by following banks will be accepted as SD/EMD for the period up to March-31, 2022. The validity cut-off date in the GR is with respect to the date of issue of Bank Guarantee irrespective of the date of termination of Bank Guarantee.

1 Commercial Banks :-

1. RBL Bank
2. Axis Bank
3. ICICI Bank
4. HDFC Bank
5. Kotak Mahindra Bank
6. IndusInd Bank
7. DCB Bank
8. Tamilnadu Mercantile Bank
9. Ujjivan Small Finance Bank
10. A U Small Finance Bank
11. Federal Bank
12. Equitas Small Finance Bank
13. Bandhan Bank
14. Standard Chartered Bank
15. City Union Bank
16. Yes Bank

2 Co-operative and Rural Banks Of Gujarat :-

1. The Mehsana Urban Co-operative Bank Ltd
2. The Ahmedabad Mercantile Co-Operative Bank Ltd
3. Nutan nagrik Sahakari Bank Ltd
4. The Kalupur Commerical Co-operative Bank Ltd
5. Rajkot Nagarik Sahakari Bank Limited
6. The Gujarat State Co-Operative Bank
7. Sarswat Bank
8. Saurashtra Gramin Bank

સરકયુલર નં.-૮૧

મે.મ્યુનિ.કમિશ્નરશ્રી, અમદાવાદ મ્યુનિ. કોર્પોરેશનના સરકયુલર નં.-૮૧,
તા.૨૬.૦૨.૨૦૧૫ મુજબ તમામ પ્રકારની કન્સ્ટ્રક્શનની એક્ટીવીટીમાં મુખ્ય
કોન્ટ્રાક્ટર,સબ કોન્ટ્રાક્ટરના જે મજૂરો કામગીરી કરતા હોય તે તમામ મજૂરોનું ગુજરાત
બિલ્ડીંગ એન્ડ અધર કન્સ્ટ્રક્શન વર્કસમાં રજીસ્ટ્રેશન કરાવવું ફરજિયાત છે.

Tender No. : 68

Tender Fee : Rs.2400.00

Earnest Money : Rs.99950.00

Contractor's Name & Address

Date of submission : 08/06/2026 Time : 18:00 Hrs.

Date of Opening : 10/06/2026 Time : 12:00 Hrs.

AHMEDABAD MUNICIPAL CORPORATION					
TENDER ESTIMATE					
Name of work :- CCTV Desilting Work of Existing Drainage line and Storm Water Line at diff roads in Ambali area in s.g. highway to sp ring road in bodakdev ward NWZ.(ARC)					
Item No.	Item / Description	Qty	Rate	Unit	Total
1	Temporary / Permanent Plugging for blocking of sewer line, branch connections and diversion of flows and removal of all plugs by any means etc. comp. as directed by Engineer In Charge of the work.				
(A)	300 mm dia	150.00	1250.00	No.	187500.00
(B)	450 mm dia	130.00	1500.00	No.	195000.00
(C)	600 mm dia	250.00	2500.00	No.	625000.00
(D)	800 mm dia	10.00	3000.00	No.	30000.00
(E)	900 mm dia	25.00	3600.00	No.	90000.00
(F)	1000mm dia	5.00	4150.00	No.	20750.00
(G)	1200 mm dia	10.00	5000.00	No.	50000.00
(H)	1400 mm dia	1.00	5500.00	No.	5500.00
(I)	1600 mm dia	5.00	7000.00	No.	35000.00
(J)	1800 mm dia to 2200mm Dia	2.00	7500.00	No.	15000.00
(K)	RCC Duct of any size	7.00	8000.00	No.	56000.00
2	Provide everything else required for diversion of flow by pumping and / or bypassing and to maintain the sewerage system functioning normal and managing the flow without any surcharging, overflows etc during the De-silting/ rehabilitation works of the sewer line to the satisfaction of the Engineer in charge of the work.				
(A)	300 mm dia	797.07	100.00	RMT	79707.32
(B)	450 mm dia	688.00	150.00	RMT	103200.00
(C)	600 mm dia	390.00	250.00	RMT	97500.00
(D)	800 mm dia	50.00	300.00	RMT	15000.00
(E)	900 mm dia	380.00	450.00	RMT	171000.00
(F)	1000 mm dia	35.00	475.00	RMT	16625.00
(G)	1200 mm dia	250.00	510.00	RMT	127500.00
(H)	1400 mm dia	10.00	800.00	RMT	8000.00
(I)	1600 mm dia	50.00	1000.00	RMT	50000.00
(J)	1800 mm dia to 2200mm Dia	10.00	1100.00	RMT	11000.00
(K)	RCC Duct of any size	50.00	1200.00	RMT	60000.00
3	Loosen, de-silt and thoroughly clean and remove debris and objects such as boulders, bricks etc, bacteriological slimes, roots, encrustations, grease, carbonated deposits, etc from the sewer line including disposal of silt / debris / malba / objects etc, including solidification of silt/malba/debris for disposal to the dumping sites as per the direction of the				

	Engineer - in - charge.				
(A)	300 mm dia				
(i)	(For Above 80% silted line) 100 % AS / TENDER RATE	557.95	1230.00	RMT	686280.02
(ii)	(For 80% to 50 % Drainage silted line) 80 % AS / TENDER RATE	119.56	984.00	RMT	117648.00
(iii)	(For Less than 50% to 30 % Dr.silted line) 50 % AS/TENDER RATE	119.56	615.00	RMT	73530.00
(B)	450 mm dia				0.00
(i)	(For Above 80% silted line) 100 % AS / TENDER RATE	481.60	1815.00	RMT	874104.00
(ii)	(For 80% to 50 % Drainage silted line) 80 % AS / TENDER RATE	103.20	1452.00	RMT	149846.40
(iii)	(For Less than 50% to 30 % Dr.silted line) 50 % AS/TENDER RATE	103.20	907.00	RMT	93602.40
(C)	600 mm dia				0.00
(i)	(For Above 80% silted line) 100 % AS / TENDER RATE	273.00	2460.00	RMT	671580.00
(ii)	(For 80% to 50 % Drainage silted line) 80 % AS / TENDER RATE	58.50	1968.00	RMT	115128.00
(iii)	(For Less than 50% to 30 % Dr.silted line) 50 % AS/TENDER RATE	58.50	1230.00	RMT	71955.00
(D)	800 mm dia				0.00
(i)	(For Above 80% silted line) 100 % AS / TENDER RATE	35.00	3280.00	RMT	114800.00
(ii)	(For 80% to 50 % Drainage silted line) 80 % AS / TENDER RATE	7.50	2624.00	RMT	19680.00
(iii)	(For Less than 50% to 30 % Dr.silted line) 50 % AS/TENDER RATE	7.50	1640.00	RMT	12300.00
(E)	900 mm dia				0.00
(i)	(For Above 80% silted line) 100 % AS / TENDER RATE	266.00	3700.00	RMT	984200.00
(ii)	(For 80% to 50 % Drainage silted line) 80 % AS / TENDER RATE	57.00	2960.00	RMT	168720.00
(iii)	(For Less than 50% to 30 % Dr.silted line) 50 % AS/TENDER RATE	57.00	1850.00	RMT	105450.00
(F)	1000mm dia				0.00
(i)	(For Above 80% silted line) 100 % AS / TENDER RATE	24.50	4450.00	RMT	109025.00
(ii)	(For 80% to 50 % Drainage silted line) 80 % AS / TENDER RATE	5.25	3560.00	RMT	18690.00
(iii)	(For Less than 50% to 30 % Dr.silted line) 50 % AS/TENDER RATE	5.25	2225.00	RMT	11681.25
(G)	1200 mm dia				0.00
(i)	(For Above 80% silted line) 100 % AS / TENDER RATE	175.00	5040.00	RMT	882000.00
(ii)	(For 80% to 50 % Drainage silted line) 80 % AS / TENDER RATE	37.50	4032.00	RMT	151200.00
(iii)	(For Less than 50% to 30 % Dr.silted line) 50 % AS/TENDER RATE	37.50	2520.00	RMT	94500.00
(H)	1400 mm dia				0.00
(i)	(For Above 80% silted line) 100 % AS / TENDER RATE	7.00	5880.00	RMT	41160.00
(ii)	(For 80% to 50 % Drainage silted line) 80 % AS / TENDER RATE	1.50	4704.00	RMT	7056.00

(iii)	(For Less than 50% to 30 % Dr.silted line) 50 % AS/TENDER RATE	1.50	2940.00	RMT	4410.00
(I)	1600 mm dia				0.00
(i)	(For Above 80% silted line) 100 % AS / TENDER RATE	35.00	6720.00	RMT	235200.00
(ii)	(For 80% to 50 % Drainage silted line) 80 % AS / TENDER RATE	7.50	5376.00	RMT	40320.00
(iii)	(For Less than 50% to 30 % Dr.silted line) 50 % AS/ TENDER RATE	7.50	3360.00	RMT	25200.00
(J)	1800 mm dia to 2200mm Dia				0.00
(i)	(For Above 80% silted line) 100 % AS / TENDER RATE	7.00	7560.00	RMT	52920.00
(ii)	(For 80% to 50 % Drainage silted line) 80 % AS / TENDER RATE	1.50	6048.00	RMT	9072.00
(iii)	(For Less than 50% to 30 % Dr.silted line) 50 % AS/TENDER RATE	1.50	3780.00	RMT	5670.00
(K)	RCC Duct of any size				0.00
(i)	(For Above 80% silted line) 100 % AS / TENDER RATE	35.00	8000.00	RMT	280000.00
(ii)	(For 80% to 50 % Drainage silted line) 80 % AS / TENDER RATE	7.50	6400.00	RMT	48000.00
(iii)	(For Less than 50% to 30 % Dr.silted line) 50 % AS/TENDER RATE	7.50	4000.00	RMT	30000.00
4	Post-desilting colour CCTV/ Photographic survey including pan and Zoom inspection of laterals and defects and submission of video tapes or CD inclusive of colour photographs to the Engineer in total 2 Sets.				0.00
(A)	300mm	797.07	250.00	RMT	199268.30
(B)	450mm dia	688.00	250.00	RMT	172000.00
(C)	600mm dia	390.00	250.00	RMT	97500.00
(D)	800mm dia	50.00	250.00	RMT	12500.00
(E)	900mm dia	380.00	250.00	RMT	95000.00
(F)	1000mm dia	35.00	250.00	RMT	8750.00
(G)	1200 mm dia	250.00	250.00	RMT	62500.00
(H)	1400 mm dia	10.00	250.00	RMT	2500.00
(I)	1600 mm dia	50.00	250.00	RMT	12500.00
(J)	1800 mm dia to 2200mm Dia	10.00	250.00	RMT	2500.00
(K)	RCC Duct of any size	50.00	250.00	RMT	12500.00
5	Pre CCTV video survey/Photographic survey of the rehabilitated sewers of all sizes and submit video/photographic records in CD and still photographs taken at 10m interval in 2 Sets.	2710.07	250.00	RMT	677518.30
6	Cutting of bituminous road of DBM and Asphalt concrete of any thickness.	608.50	75.00	SMT	45637.45
7	Brick work using common burnt clay building bricks having crushing strength not less than 35kg./Sq.Cm. in foundation and plinth in Cement Mortar 1:5.(1-Cement:5-finesand) (B) Conventional (upto 10 ton)including racking out joints, curing scaffolding etc complete as directed by any height.(Bldg SOR 2015-16 Rate)	20.00	2872.00	CMT	57440.00
8	Finding & Raising buried manhole underneath road using Brick masonry with Brick Strength 35kg / quare cm and cement mortar 1:4 and CC work up to new road level as per instruction of engineer in charge	50.00	2500.00	No.	125000.00

9	Providing and fixing F.R.C. Extra Heavy Duty (EHD-35) Manhole Covers & Frames Cover : 728mm ø & 100 mm thick circular cover,35.00 MT load design, 100x2mm MS flat allround, 16mm ø plain round bar for lifting the cover & should be fitted with plastic cups. Frame : 560 mm ø clear opening, outer size- 888x888x175 mm. On the upper periphery of frame 25 x 3 mm wide MS flat should be well embed in concrete to protect the edges of frame. FRC E.H.D.-35 manhole cover & frame incl. carting to the work site etc.comp.(Based on rate of central store)	12.00	1540.00	No.	18480.00
10	Providing TMT Bar FE 415 reinforcement for R.C.C.work including bending, binding and placing inposition complete up to floor two level (upto 10 ton) including cost of steel and binding wire for reservoirs / structures only including lift up to 6 meter height or depth below G.L.for all diameter.(Bldg SOR 2015-16 Rate)	425.00	44.40	Kg.	18870.00
11	Survey to determine sewer alignment, levels, M/H positions, proximity of structures, measurement of exact length between manholes and providing two sets of autocad drawing as per instruction of Engg. incharge.(App.C.C.T.V. Disilting Tender Rate)	2710.07	7.50	Rmt	20325.55
			TOTAL RS.		9995000.00

% ABOVE Or % BELOW (in words also)

**CONTRACTOR'S SIGNATURE
& STAMP
Mobile No.:-**

**Deputy CITY ENGINEER
(North West Zone)**

AHMEDABAD MUNICIPAL CORPORATION

"North West Zone, Zonal Office", Nr. Atithi Hotel, Bodakdev Ahmedabad.

Municipal Commissioner invites Percentage Rate sealed tenders from interested contractors .

1	Name of work	CCTV Desilting Work of Existing Drainage line and Storm Water Line at diff roads in Ambali area in s.g. highway to sp ring road in bodakdev ward NWZ.(ARC)
2	Time Limit	12 month (Ex. Monsoon)
3	Eligibility Criteria	Register "D" Class in PWD in Govt. R&B/CPWD/AMC or equivalent registration with any other state Govt. or institutions.
4	Estimated Cost put to tender	Rs.9995000.00
5	Earnest Money Deposit	Rs.99950.00/- -Demand Draft, Pay order, or Cheque ,Bank Guarantee (As per finance circular No 21) in favour of Municipal Commissioner, Ahmedabad) To be submitted as prescribed in 7.0 below. Demand Draft or Bank Guarantee shall be from Nationalized Bank and valid for 120 days.
6	(A) Security Deposit:	5% of Tender Amount but Depends Upon AMC Circular Only.
	(B) Retention	1. @ 2% of the value of work done will be deducted from each RA bill. It will be released along with release of payment of Final Bill.
7	Tender fees (Non refundable)	Rs.2400.00 Demand Draft / Pay order in favour of Municipal Commissioner, Ahmedabad)
8	Submission of EMD and Tender Fees	In separate sealed cover each for EMD and Tender Fees along with Tender as described in the invitation of tender and submitted to Assistant Manager (North West zone), Ahmedabad Municipal Corporation, North West Zone, Zonal Office", Nr.Atithi Hotel, Bodakdev Ahmedabad.
9	Tenders issue date	Tenders from the website http://amc.nprocure.com and http://nprocure.com . shall be down loaded from
10	Last date of receiving Tenders.	Dt.09/06/2026 up to 17:00 Hrs The tenders received after this date and time will not be entertained under any circumstances.
11	Date of Opening	Dt.10/06/2026 at 12:00 Hrs to Assistant Manager "North West Zone Office", Rajmata vijjaraje sindhya bhavan, Near Atithi hotel, Bodakev, Ahmedabad.
12	Mode of sending the Tender Documents	Document shall be submitted in sealed envelope systems By RPAD/ Speed post/ Hand Delivery/ Courier in sealed covers as described in submission of the tender.
13	Terms, Condition, & Specification	All general condition of contract of Form B1 condition of contract shall be applicable.
14	liquidated damages- Compensation For Delay	10% of the Amount For Balance work After Date of Completion or extended time Limit.
15	Preliminary prequalification criteria of bidding firm (detailed criterias are given in the Bid Document)	Average annual financial turnover during the last 3 years, ending 31st March of the previous financial year, should be at least 30% of the estimate put to tender i.e. Rs.45,00,000/- for this work. Experience of work of similar nature during last 7 years (in lakhs) a. Single work of Rs.1,20,00,000.00/- (80 % of Estimate put to tender) OR b. Two works of Rs.75,00,000.00/- (50 % of Estimate Put to Tender) OR c. Three works of Rs.60,00,000.00 /- (40 % of Estimate put to tender)
16	Goods & Service Tax (GST)	Goods & Service Tax (GST) shall be applicable & bidder should submit all necessary supporting documents as and when asked by AMC.
Conditional tenders will not be accepted. Municipal Commissioner reserves the rights to reject any or all the tenders without assigning any reasons thereof.		

Seal and Signature of the Bidder

Deputy City Engineer
(North West Zone)

AHMEDABAD MUNICIPAL CORPORATION

Invitation for Bid (IFB)

1. The AHMEDABAD MUNICIPAL CORPORATION, (Hereinafter called "the Employer") invites sealed Tender document from reputed and qualified bidders for the construction of Works detailed in the Table below:-

Sr. No.	Name of Works	Approximate value of works (Rs.)	Bid Security (Rs.)	Completion Period
1	CCTV Desilting Work of Existing Drainage line and Storm Water Line at diff roads in Ambali area in s.g. highway to spring road in bodakdev ward NWZ.(ARC)	Rs.9995000/-	Rs.99950.00 /-	12 months (Ex.Monsoon)

2. Tender (a complete set of bidding document) fee shall be **Rs.2400/-** in the form of Demand Draft / Pay Order from any Nationalized Bank in favor of MUNICIPAL COMMISSIONER, Ahmedabad, payable at Ahmedabad, which shall be non refundable. The fees shall be paid at the time of submitting the tender.
3. Interested bidders shall download the tender documents from website <http://amc.nprocure.com> and <http://nprocure.com>. **up to Dt.09/06/2026 at 17:00** hrs tender fee as mentioned in clause 2 above shall be paid by the bidder at the time of bid submission.
4. All bids must be accompanied by Bid Security of the amount specified for the Works in the above Table payable at Ahmedabad and drawn in favor of AHMEDABAD MUNICIPAL CORPORATION, Ahmedabad. Bid Security will have to be in any one of the forms as specified in Clause of ITB (Instructions to Bidders).
5. All Bids must be delivered to Assistant Manager "North West Zone, Zonal Office", Nr.Atithi Hotel, Bodakdev Ahmedabad. **Not later than 17:00 hrs on Dt.09/06/2026.**

Seal and Signature of the Bidder

**Deputy City Engineer
(North West Zone)**

AHMEDABAD MUNICIPAL CORPORATION

ENGINEERING DEPARTMENT

GENERAL CONDITION

1. Contractor shall produce the relevant registration certificate of AMC / State Govt /Central Govt.
2. Contractor shall register the work to labour commissioner as per labour act.
3. Contractor shall not sub-let the work without permission of the authority
4. Contractor should have sufficient skilled and unskilled laborers so that he shall start work at different sites simultaneously. Contractor's having labour force available during festivals shall only apply. Contractor cannot stop the work due to non availability of labour force.
In case progress is delayed, contractor shall be penalized 0.10% of Tender amount per day for work done after time limit, maximum up to 10% for remaining value of work.
6. Advance payment / machinery advance will not be paid.
7. Payment of running bill will be made as per recent A.M.C. policy in force.
8. No extra payment will be made due to increase of central / state Govt. Taxes.
9. If the work is not completed within time limit the penalty will be recovered from immediate bills of Contractors.
10. If the material i.e. MH cover C.C block etc. supplied from Municipal Corporation store then contractor shall not claim for any extra rate for non execution of such item, partly/fully.
11. In the specifications, "as directed"/"Approved" shall be taken to mean, "as directed"/approved" by the Engineer-in-charge.
12. Wherever a reference to any Indian Standard appears in the specifications, it shall be taken to mean as a reference to the latest edition of the same in force on the date of agreement.
13. In "Mode of Measurement" in the specifications wherever a dispute arises in the absence of specific mention of a particular point or aspect, the provisions on these particular points, or aspects in the relevant Indian Standards shall be referred to.
14. All measurements and computations, unless otherwise specified, shall be carried out nearest to the following limits:
 - (i) Length, width and depth (height)----- 0.01 Meter. (RMT)
 - (ii) Areas -----0.01 Sq. Mt. (SMT)
 - (iii) Cubic Contents -----0.01 Cu.Mt. (CMT)
17. The distance, which constitutes lead, shall be determined along the shortest practical route and not necessarily the route actually taken. The decision of the Engineer-in-charge in this regard shall be taken as final.
16. Where no lead is specified, it shall mean "all leads"
17. Lift shall be measured from plinth level.
18. Definite particulars covered in the items of work, through not mentioned or elucidated in it, specifications shall be deemed to be included there in.
19. Reference to specifications of materials as made in the detailed specification of the items of work is in the form of a designation containing the number of the specification of the material and prefix 'M' e.g. 'M-5'.
20. Approval to the samples of various materials given by the Engineer-in-charge shall not absolve the contractor from the responsibility of replacing defective material brought on site or materials used in the work found defective at a later date.
21. The contract rate of the item of work shall be for the work completed in all respects.
22. No collection of materials shall be made before it is got approved from the Engineer-in-charge.

23. Collection of approved materials shall be done at site of work in a systematic manner. Materials shall be stored at site of work in a systematic manner. Materials shall be stored in such a manner as to prevent damage, deterioration or intrusion of foreign matter and to ensure the preservation of their quality and fitness for the work.
24. Materials, if and when rejected by the Engineer-in-charge, shall be immediately removed from the site of work within 24 hours.
25. No materials shall be stored prior to, during and after execution shall be kept in sufficient numbers and in good working condition on the site of the work.
26. All works shall be carried out in workmanlike manners per the best techniques for the particular item.
27. All tools, templates, machinery and equipment for correct execution of the work as well as for checking lines, levels, alignment of the works during execution shall be kept in sufficient numbers and in good working condition on the site of the work.
28. The mode, procedure and manner of execution shall be such that it does not cause damage or over loading of the various components of the structure during execution or after completion of the structure.
29. All necessary safety measures and precaution (including those laid down in the various relevant Indian Standards) shall be taken to ensure the safety of men, materials and machinery on the works as also of the work itself.
30. The testing charges of all materials shall be borne by the Contractor unless recovery at one percent towards testing charges is separately made.
31. The tenderer is required to check the web site for Addendum if any, before 48 hours of tender submission date and time. The tenderer who quotes the tender without attaching the addendum will be rejected.
32. As per City Engineer's circular no.-6/2011-12 Dt.24.6.2011 all terms & conditions will be applied.
33. Contractor has to follow Planning Department Circular No 10 Dt. 07/09/2018 strictly.
34. As per AMC's Finance department Circular No.38, Dt.21/11/2022 and approval of competent authority, rate of all the items are taken without GST and prevailing GST will be payable.
35. All the relevant prevailing AMC circulars/ its time to time revisions are applicable for this work and all the bidders are bound to follow the same, so the bidder must check before applying for the tender.

INSTRUCTION TO TENDERERS

TENDER VALIDITY PERIOD:

The tender shall be kept valid for acceptance for a period of One Hundred Twenty Calendar days (120) from opening of price bids.

SECURITY DEPOSIT

Within 10 days of receipt of Acceptance from the Corporation, the successful tender shall furnish to the Corporation Security Deposit of 5% (Five percent) of the contract price Cheque or Bank Guarantee, pay order, or demand draft of Nationalized Banks and Schedule Banks only.

**CONTRACTOR'S SIGNATURE
& STAMP
Mobile No.:-**

**ADDL.CITY ENGINEER
(North West Zone)**

AHMEDABAD MUNICIPAL CORPORATION

Section I – INSTRUCTIONS TO BIDDERS (ITB)

“TENDER DOCUMENT FOR : CCTV Desilting Work of Existing Drainage line and Storm Water Line at diff roads in Ambali area in s.g. highway to spring road in bodakdev ward NWZ.(ARC)

A. General

1. Scope of Bid

1.1 The Ahmedabad Municipal Corporation hereinafter called "the Employer" invites bids for the construction of works (as defined in these documents, hereinafter referred to as "the Works") detailed in the table given in the IFB.

1.2 The Works consist of:

- Temporary or permanent plugging in the running sewer/ storm drain to divert the flow to existing another line passing nearby.
- Removing debris / silt from existing storm water drain pipeline by Mechanical equipment like super sucker with jetting machine.
- Commissioning the Pipeline of the Size cited in the BOQ with Clean/ Sewage Water.
- Construction of new Manhole on existing line with brick masonry or RCC
- Repairing / Raising existing damaged manholes and any Structures carrying sewage flow
- Maintaining Environmental measures with help of mechanical / any type of equipment for the public as well as workers.
- Providing Safety Measures for the workers as well as public passing around the work.

1.3 The scope of work shall consist of full comprehensive operation and maintenance of above equipment including supply of all type of consumable and spares, Diesel and Engine oil and shall include the following services.

1.4 Provide Services of two supervisor, two mechanic for all machines, one driver cum operator, one skilled and four unskilled labours per unit including Technical back up Support of Engineer/Technician as per requirements. The sanitary staff for handling the suction hose and Jetting hose shall also be provided as actual required onsite for ease & effective out put of machine at his own cost.

1.5 Routine maintenance and servicing of machine including replacement of filters for hydraulic oil, engine oil etc as & when required.

1.6 Provide consumables such as lubricants, hydraulic oil, oil for compressor, filters, jetting hose, suction hoses diesel and engine oil etc as & when required.

1.7 All Minor and major repairs of machine including spares as per requirement.

1.8 Payment of road tax and insurance of the equipment to cover unforeseen events like theft, accident ,fire, riots, earthquake etc.

1.9 Contractor has to maintain all records regarding weight of desilting material/operation and no. of trips and time required emptying the same.

1.10 Record to be submitted on day to day basis to Asst.C.E. as demanded & as suggested in the format by AMC.

1.11 De-silting work must be carried out by super sucker machine only (vacuum system).

1.12 The works under this Contract shall be carried out in accordance with the bidding documents constituting the contract and shall consist of various salient items as generally described in the tender document:

1.13 Bidder shall note that AMC may cancel the work at any stage of the contract. AMC can terminate the contract incase of curtailment of the scope of the work. Contractor will not be entitled to raise any claim regarding curtailment of the scope of the work.

2. Source of Funds

2.1 The expenditure on these Works will be met by AHMEDABAD MUNICIPAL CORPORATION.

3. Eligibility criteria for Bidders

This invitation for bids is open to bidders who meet the following requirements:

3.1 A bidder shall have similar type experience of the work in any Govt., Semi-Govt. or ULBs of any such organisation with the latest de-silting equipment and undertaken as per Supreme Court/ High Court Guidelines / Direction of Govt. G.R.

3.2 Bidder should have registered his class in Ahmedabad Municipal Corporation within six months after allocation of the work.

3.3 Bidder shall have completed

- (i) one similar work costing 80% of the Package cost or more, OR
- (ii) two similar work costing 50% of the package cost or more OR
- (iii) Three similar work costing 40% of the package cost or more in last Seven year.

For Purpose of this clause, the works of pipe de-silting/ cleaning with the help of vacuum technology shall be considered for 'similar works' for this special task.

- 3.4 Bidder shall have experience of CCTV CAMERA de-silting of sewer diameter 300 to 1800 mm or above in India in last 7 years (ending on the date of opening of this bid) in any Municipal Corporation or in any Government organization or any such body with satisfactory certification of client.
- 3.5 Joint venture is not allowed for the work.
- 3.6 Bidders shall provide such evidence of their continued eligibility that is satisfactory to the Employer, as the Employer shall reasonably request.
- 3.7 Bidders must own 2 number high capacity vacuum machine and 3 number silt carrying pay loader for inch package tender. Bidders name should be there in RTO registration copy(RC Book) in the case of ownership of the machine.
- 3.8 Joint venture agreement for machinery shall be considered in any occasion. Bidder shall submit joint venture agreement for extra machinery to be provided in the case of providing the machinery by joint venture agreement. Right of use these machinery by this mutual agreement between the agencies should be stated on stamp paper of 100 Rs. only. Bidder shall note that, Right of use these machinery on rent shall not be considered at any occasion.
- 3.9 Bidder shall submit commitments on stamp paper of 100 Rs. for provision of machinery required (as stated in clause no. 3.7 and 3.8 above)
- 3.10 Bidder must own 1 number minimum four wheeler colour CCTV system (with sewage flow) with camera having optical zoom with pan and tilt 360 degree in all three axis, which shall be controlled from outside of the sewer manhole.
- 3.11 Bidder shall have to submit completion certificate of effective and efficient workmanship from the organisations cited above.
- 3.12 At the Employer's request, the bidder having offered the lowest evaluated financial bid may be required to provide evidence of the origin of materials, equipment and services to the satisfaction of the Employer at the time of evaluation of the technical bid.
- 3.13 Bidders must provide certificates of training of their staff, which are on their payroll at the time of evaluation of the technical bid.
- 3.14 Bidder must submit Methodology for the work in respect of Honourable Gujarat High court as well as Supreme Court order of cases related to death of labour working desilting of the sewer line.
- 3.15 Bidder shall have to submit affidavit stating that work shall be carried out by mechanized vacuum technology (by super sucker machine) ,all labour shall not enter in manhole or pipeline and Contractor shall be solely responsible incase of any accident will occur. .
- 3.16 Contractor must be registered with labour laws Act. They shall have to Act and obey as per govt. rules and regulations.

4. Qualification of the Bidder

4.1 To be qualified for award of Contract, bidders shall:

- a) Submit a written power of attorney authorizing the signatory of the bid to commit the bidder; and
- b) Have adequate experience, financial capacity, adequate available bid capacity and technical capability to undertake the Contract. Confirmation of these matters may involve the updating, verification and reassessment of information, which may previously have been considered during pre qualification.
- c) The bidder shall submit the following information (Form1 of General Information) on eligibility and qualification duly updated including any changes since pre qualification:-

5. Bid Capacity

Bidders who meet the minimum qualification criteria will be qualified only if their available bid capacity is more than the total bid value. The available bid capacity will be calculated as under:

$$\text{Available Bid capacity} = (A * N * 2 - B)$$

Where,

A = Maximum value of similar works executed in any one year during the last five years (escalation factor as specified in this section shall be used to bring/calculate the maximum value of works to the level of financial year) taking into account the completed as well as works in progress.

N = Number of years prescribed for completion of the works for which bid is invited.

B = Value of existing commitments and on-going works to be completed during the next N years (period of completion of the works for which bid is invited)

- 4.4 Sub-Contractors' experience and resources shall not be taken into account in determining the bidder's compliance with the qualifying criteria.

FORM 1

General information

All individual firms must complete the information in this form. Nationality information shall be provided for all owner(s) or applicant(s) that are partnership or individually owned firms.

1 Name of firm :

2 Head office address :

.....
.....

3 Local office address (if any) :

.....
.....

4 Telephone / Mobile no :

5 E-mail addresses :

6 Place of incorporation/registration :

7 Year of incorporation/registration :

**additional information regarding litigation, debarment, arbitration, etc.
affidavit.**

4.2 Disqualification

Even though the Bidders may meet the above criteria, they are subject to be disqualified for any of the following reasons:

- a) Misleading or false representation in the forms, statements and attachments submitted and included in document.
- b) Record of poor performance such as abandoning the work, **rescinding** of contract for which the reasons are attributable to the non-performance of the contractor, consistent history of litigation awarded against the applicant or financial failure due to bankruptcy.
- c) Has been identified by the AMC as poor performer in implementation of ongoing AMC works e.g. Works completed after notices issued by AMC or poor quality of work or completed after time limit or not responsive to Engg.incharge instruction.
- d) In case of one contractor remains lowest in most of the such North west Zone grouting work tenders, then in such case, AMC can award such tender to other contractors.**

5 Debarment/Black listing

Notwithstanding the above, the Employer may debar or blacklist any of the bidder(s) for their misleading or false representations in the forms statements etc. for the period to be decided by the Employer.

6. Cost of Bidding

6.1 The bidder shall bear all costs associated with the preparation and submission of his bid and he Employer will in no case be responsible or liable for those costs.

7. Site Visit

7.1 The bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the bidder's own expense.

7.2 The bidder and any of its personnel or agents will be granted permission by the Employer to enter its premises and lands for the purpose of such inspection, but only upon the express condition that the bidder, its personnel and agents, will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of the inspection.

B. Preparation of Bids

8. Language of Bid

8.1 The bid, and all correspondence and documents related to the bid exchanged between the bidder and the Employer shall be written in the English language. Supporting documents and printed literature furnished by the bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in the English language, in which case, for purposes of interpretation of the bid, the English translation shall prevail.

9 Documents comprising the Bid

The bids shall be submitted in hard copy and two copies, one marked as "original" and other marked as "Duplicate", both of which comprise the following documents:-

Tender Document:

- i) Bid Security for an amount as specified in the Invitation for Bids (IFB).
- ii) Power of Attorney
- iii) Information as specified.
- iv) Any other material / information required to be submitted in accordance with these Instructions to Bidders (ITB).

The Tender Document shall be hard bound. Bid security shall be furnished in "Original" set of Document.

In case of any ambiguity the "Original" set of document shall prevail.

The bidder shall prepare and submit **two copies** of the bid in original and duplicate.

10. Bid Prices

10.1 Unless stated otherwise in the bidding documents, the Contract shall be for the whole Works as described in bidding documents, based on the percentage rate amount in the Bill of Quantities submitted by the bidder.

10.2 The bidder shall fill in percentage rate above or below and total amount (both in figures and words) for overall items of the Works provided in the Bill of Quantities along with total bid price derived after application of percentage above or below (both in figures and words).

Items (for which rate has been provided) against which no quantity is entered will be paid for by the Employer on actual measurement onsite when executed.

Any corrections should be initialed.

All pages of the Bill of Quantities shall be initialed and stamped.

11. Bid Validity

11.1 Bids shall remain valid for a period of 120 days (one hundred twenty days) after the deadline date for bid submission specified in Clause. The Employer as non-responsive shall reject a bid valid for a shorter period.

11.2 In exceptional circumstances, prior to expiry of the original bid validity period, the Employer may request the bidders to extend the period of validity for a specified additional period. The request and the responses there to shall be made in writing or by fax. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid but will be required to extend the validity of his Bid Security for the period of the extension, and in compliance with Clause 14 in all respects.

12. Bid Security

12.1 The bidder shall furnish as part of its Bid, a Bid Security in the amount in the Invitation for Bid (IFB) for particular work(s). The Bid Security shall be drawn in favor of MUNICIPAL COMMISSIONER, Ahmedabad, and may be in one of the following forms:

a) Deposit-at-call Receipt from any Nationalized / Scheduled Bank approved by the Reserve Bank of India (RBI).

b) Bank Guarantee from any Nationalized or RBI approved foreign bank having net worth of more than Rs.500 crore of Indian operation and acceptable to Employer.

The format of Bank Guarantee shall be in accordance with the AMC requirement.

12.2 The Bid Security of the unsuccessful bidders, except for L1, L2 and L3 bidders will be returned as promptly as possible.

12.3 The Bid Security of the successful bidder, along with second and third lowest tenders, will be returned when the bidder has furnished the required performance security and signed the agreement.

12.4 The Bid Security may be forfeited

a) If the bidder withdraws his bid during the period of bid validity;

b) If the bidder does not accept the correction of his bid price.

c) In the case of a successful bidder, if the bidder fails within the specified time limit to

i) Furnish the required Performance Security, ii) sign the Agreement.

13. Format and Signing of Bid

13.1 The bidder shall prepare two copies of the documents comprising the bid as described in Instructions to Bidders.

13.2 The bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the bidder.

13.3 The bid shall contain no alterations, omissions or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the bidder, in which case the person or persons signing the bid shall initial all such corrections.

C. Submission of Bids

14.

14.1 The inner and outer envelopes shall

a) Be addressed to the Employer at the following address:

Assistant Manager(New West zone) , "New West Zone Office", Old Memnagar Nagar Palika Building, Near Manav Mandir, Memnagar, Ahmedabad - 380 052.

b) Bear the following identification:

(c) Indicate the name and address of the bidder.

TENDER FOR CCTV Desilting Work of Existing Drainage line and Strome Water Line at diff roads in Ambali area in s.g. highway to sp ring road in bodakdev ward NWZ.(ARC)

14.2 If the envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the bid.

15. Deadline for Submission of Bids

15.1 Bids must be received by the Employer at the address specified above not later than the time and date specified.

15.2 The Employer may, at his discretion, extend the deadline for submission of bids by issuing an amendment, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

16. Late Bids

Any bid received by the Employer after the deadline for submission of bids shall not be opened.

17. Modification and Withdrawal of Bids

17.1 The bidder may modify or withdraw his bid after bid submission, provided that written notice of the modification to the Employer prior to the deadline for submission of bids receives withdrawal. Any MODIFICATIONS in respect of tender document shall be submitted in separate sealed envelope duly marked so.

17.2 The bidder's modification or withdrawal notice shall be prepared, sealed, marked and delivered with the outer and inner envelopes additionally marked "MODIFICATIONS" or "WITHDRAWAL" as appropriate.

17.3 No bid shall be allowed to modify by the bidder after the deadline for submission of bids.

17.4 Withdrawal of a bid during the interval between the deadline for submission of bids and the expiration of the period of bid validity may result in the forfeiture of the Bid deposit.

D. Bid Opening and Evaluation

18 Opening of Tender (Bid)

- 18.1 The Employer will open the outer envelope of all the bids received for the package (except those received late) containing the sealed Tender volume and announce the names of (i) bidders, (ii) bidders who have submitted modification of Tender bids, and (iii) bidders who have given notice for withdrawal of their bids in the presence of bidders or their representatives who choose to attend on the date and time mentioned in the ITB. In the event of specified date of bid opening being declared as a holiday for the Employer, the Tender will be opened at the appointed time and location on the next working day.
- 18.2 Bids for which acceptable notice of withdrawal has been submitted pursuant to Clause mentioned previously shall not be opened.
- 18.3 Bidders detail and Tender fee, E.M.D. shall be opened first. The Employer at the opening will announce bidder's names, 'Modification of Tender', the presence/or absence of Bid Security, the amount and validity of Bid Security furnished with each bid, is valid registration and such other details, as the Employer may consider appropriate.
- 18.4 The bidders or their representatives who are present shall sign attendance sheet evidencing their attendance.
- 18.5 The Employer shall prepare besides the record of bid opening, minutes of the Bid opening, including the information disclosed to those present in accordance with Clause mentioned previously.

19. Examination of Tender and Determination of Responsiveness of Tender

- 19.1 If the Bid Security furnished does not conform to the amount and validity period as specified in the Invitation for Bid and has not been furnished in the form, the bid shall be rejected by the Employer as non-responsive.
- 19.2 Subject to confirmation of the Bid Security by the issuing bank, the Tender volume accompanied with valid Bid Security will be taken up for further evaluation. In case, the Bank does not confirm the Bid Security, the bid shall be rejected as non-responsive and no further evaluation carried out.
- 19.3 The tender volume will further be examined to determine whether the bid has been properly signed, meets the eligibility and qualification criteria, has the required available bid capacity, is accompanied by the requisite certificates, undertaking and other relevant information specified in the bid documents and is substantially responsive to the requirement of the bidding documents and provides any clarification for ascertaining the correctness of the information/details that the Employer may require.
- 19.4 If the Tender volume is not substantially responsive, it will be rejected by the Employer and will not subsequently be made responsive by correction or modification or withdrawal of the non-conforming deviation or reservation.

20. Opening of Tender

- 20.1 The Employer will open the Tender volume of those bidders whose document has been determined to be substantially responsive in accordance and who have the required available bid capacity, in presence of the bidders or their representatives who choose to attend on the date intimated to such bidders. In the event of specified date of Tender volume opening being declared a holiday for Employer, the 'Tender volume' shall be opened at the appointed time and location on the next working day.
- 20.2 The names of the bidders whose Tender volume is found to be substantially responsive, the bid prices, the total amount of each bid, any discount, 'modifications of B.O.Q and such other details, as the Employer may consider appropriate will be announced by the Employer at the opening of the Tender volume. Any bid price, which is not read out and recorded at the bid opening, will not be taken into account in Bid Evaluation.
- 20.3 The bidders or their representatives who are present shall sign attendance sheet evidencing their attendance.
- 20.4 The Employer shall prepare besides the record of bid opening, minutes of the Tender volume opening including the information disclosed.

21. Examination of Bids and Determination of Responsiveness of Bid

- 21.1 The Employer will determine responsiveness of each Tender volume with respect to filled percentage above or below of total amount of Priced Bill of Quantities, Technical Specifications, Drawings and other relevant requirement of bidding documents.
- 21.2 A substantially responsive Tender volume is one which conforms to all the terms, conditions and specifications of the bidding documents, without material deviation or reservation. A material deviation or reservation is one (i) which affects in any substantial way the scope, quality or performance of the Works; (ii) which limits in any substantial way, inconsistent with the bidding documents, the Employer's rights or the bidder's obligations under the Contract; or (iii) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive Tender volume.
- 21.3 If the Tender volume is not substantially responsive, it will be rejected by the Employer and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

22. Correction of Errors

- 22.1 Tender volume determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Arithmetic errors will be rectified on the following basis:-
- i) Where there is a discrepancy between the figures and words, for % and amount, the figure in words will govern and
 - ii) Where there is discrepancy in total amount arrived by addition of percentage (above or below), the amount arrived by addition percentage (above or below) as written in word shall govern.

22.2 The amount stated in the Form of Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and shall be considered as binding upon the bidder. If the bidder does not accept the corrected amount of bid, his bid will be rejected, and his Bid Security may be forfeited.

23. Evaluation and Comparison of Tender volume

23.1 The Employer will evaluate and compare only those Tender volumes which are determined to be substantially responsive in accordance with Clause 23 and qualified for award of Contract.

23.2 In evaluating the Tender volume, the Employer will determine for each Tender volume the valuated Bid Price by adjusting the Bid Price as follows:-

a) Making any correction for errors;

b) Making appropriate adjustments to reflect any price modifications offered.

23.3 If the Bid of the successful Bidder is seriously unbalanced or extremely higher / lower in relation to the Employer's estimate of the cost of the items of the Works to be performed under the Contract, the Employer may require the bidder to produce detailed price rate analysis for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. In case, AMC finds rates extremely below estimated SOR rate or Market Rate than Tender shall be rejected and second lowest tenderer may be awarded the work.

23.4 A bid, which is unrealistically lower than estimate and which the bidder, could not substantiate satisfactorily, may be rejected as non-responsive.

24 Clarification of Bids

24.1 To assist in the examination, evaluation and comparison of bids, the Employer may, at his discretion, ask any bidder for authentication the correctness of the information/details furnished by him in his bid. Such request by the AMC and the response by bidder shall be in writing or by cable/fax, but no change in the price or substance of the bid shall be sought, offered or permitted except as required to confirm the correction of arithmetical errors discovered by the Employer in the evaluation of the bids.

24.2 No bidders shall contact the AMC staff on any matter relating to his bid from the time of bid opening to the time contract is awarded.

24.3 Any effort by the bidder to influence the the AMC staff in the bid evaluation, bid comparison or contract award decisions may result in the rejection of his bid.

25. Process to be Confidential

25.1 Information relating to the examination, clarification, evaluation and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful bidder has been announced. Any effort by a bidder to influence the Employer's processing of bids or award decisions may result in the rejection of his bid.

F. Award of Contract

26. Award

26.1 The Employer will award the Contract to the bidder whose bid has been determined to be substantially responsive to the bidding documents and who has offered the lowest Evaluated Bid Price provided that such bidder has been determined to be (i) eligible in accordance with the provisions of previous Clauses and (ii) qualified in accordance with the provisions of previous Clauses.

27. Employer's Right to accept any Bid and Reject any or all Bids

27.1 The Employer reserves the right to accept or reject any bid and to annul the bidding process and reject all bids, at any time prior to award of Contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the Employer's action.

28. Notification of Award

28.1 Prior to expiration of the period of bid validity prescribed by the Employer, the Employer will notify the successful bidder by cable/fax and confirmed by registered letter that his bid has been accepted. This letter (hereinafter and in the Conditions of Contract called "the Letter of Acceptance") shall name the sum which the AMC will pay the Contractor in consideration of the execution, completion and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Conditions of Contract termed "the Contract Price").

28.2 The notification of award will constitute the formation of the Contract.

29. Signing of Agreement

29.1 At the same time that the Employer notifies the successful bidder that his bid has been accepted, the Employer will direct him to submit the Performance Security and attend the Employer's office on a date determined by the Employer for signing the Form of Agreement.

30. Performance Security

30.1 Within 10 (Ten) days of the date of receipt of the Letter of Acceptance, the successful bidder shall deliver to the Employer, a Initial Performance Security in the form of a Bank Guarantee for an amount equivalent to 5% (five percent) of the Contract Price plus additional security for unbalanced bids in accordance with relevant Conditions of Contract.

30.2 The Performance Security to be provided by the successful bidder in the form of a bank guarantee as per format shall be issued from any Nationalized / Scheduled bank.

31. Corrupt or Fraudulent Practices

31.1 The Employer will reject a proposal for award if he determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question. The Employer will declare the firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract by AHMEDABAD MUNICIPAL CORPORATION if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for the contract, or during execution.

i) "corrupt practice" means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves and/or those close to them, or

induce others to do so, by misusing the position in which they are placed, and it includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; and

ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition.

Seal and Signature of the Bidder

**Deputy City Engineer
(North West Zone)**

AHMEDABAD MUNICIPAL CORPORATION
Section II - CONDITIONS OF PARTICULAR APPLICATION

1. The selection process will lay high emphasis on the ability and competency of contractors to do high quality work within the given time schedule.
2. The onus of providing, all necessary company / project related information, in appropriate manner and medium, so as to demonstrate the competency of the bidder and to allow proper evaluation, will rest entirely on the Bidder.
3. All information has to be typed or hand written legibly. All pages of the Bid have to be Initialed by the bidder.
4. ALL INFORMATION HAS TO BE SUBMITTED IN THE PRESCRIBED FORMAT ONLY.
Projects for which incomplete information has been provided will not be considered for evaluation. The Bidder may attach separate sheets if so required. However, the final bound document submitted, has to be submitted in vertical A4 size (210 mm X 297 mm) except Vol. V.
5. The scope of work, project description mentioned in the document is indicative and is likely to change during detail design. Project brief, along-with the schematic drawings and colored photographs, is provided to assist the bidder in understanding the fundamental and specific requirements of the project.
6. Conditional tenders will not be accepted.
7. AMC's decision for selection or rejection of the offers shall be final and binding to all.
8. Bidder should provide information as mentioned in the prescribed forms.
Information other than that related to this work shall not be considered for evaluation.
9. If Ahmedabad Municipal Corporation is convinced that the Bidder has resorted to material misrepresentation or provided fraudulent information / statement, the said Bidder will be liable for disqualification / rejection at any stage.
10. Proof for fulfillment of eligibility criteria should be submitted along with Tender volume. If the Tender volume is submitted without valid documents and without proof of eligibility criteria will be rejected.
11. Those who do not meet with the eligibility criteria need not submit the Tender document.
12. Tenders, which do not fulfill all or any of condition or are submitted incomplete in any respect or are conditional tenders, will be rejected.
13. Municipal Commissioner reserves the rights to reduce/ increase the scope of work and contract without assigning any reason thereof.
14. **DEFECTS:** For completion of any work/ part thereof, contractor will be required to request in writing, to get completion certificate from Additional City Engineer . Date of completion for start of defect liability period will be considered as the date mentioned in the completion certificate.

The contractor shall be required to make good all the damages / defects identified and conveyed to him, during the entire defect liability period. The method and time limit of rectification will be decided by the Engineer in charge. If he fails to carry out rectification as per the instructions, the same will be carried out at his cost and it shall be recovered from the amount retained.

16. All the material and other test expenses shall be borne by the contractor. Contractor shall have to provide vehicle and other communication facilities to visit plant and testing laboratory.

17. Contractor shall have to make his own arrangements for water and electricity for the purpose of construction work at site at his own expense.

18. If the contractor fails to execute the said works within prescribed time limit, the said work will be carried out at the risk and cost by other contractors with 20 % supervision charges as may be decided by the **Additional City Engineer**.

19. Safety and Signage

Contractor has to arrange for the complete safety of the persons working for project, users of the road i.e. public and vehicles also. All the arrangements of traffic drums, metal / fiber cones, traffic blinkers, traffic signs as per design, safety tapes etc. to be arranged at site. Necessary florescent marking on traffic signs to be provided so that it should be visible at night. During night working hours safety in charge personnel shall be provided with florescent jackets.

The Contractor has to make all the necessary arrangements for making all the temporary diversions for proper working at site including traffic signage, safety cones, traffic blinkers, barricading tapes, red and green flags/lights etc for making easy smooth and safe conditions for the traffic. The Contractor shall and must provide above at his own cost. If the Contractor fails to comply this clause, Rs. 500/- per day shall be recovered from his bill.

20. Tax, Duties on Materials

All charge on account of Octroi, excise duties, terminal tax, sales tax. Service tax, VAT, govt.duties etc. on material procurement or any other component for the works from any source shall be borne by the contractors.

21. Submission of project schedule:

Contractor has to submit the following documents along with the qualification data of the tender failing in which shall lead to rejection of the tender.

Contractor shall submit the detailed Project schedule showing break up for the various tasks to be performed in order of their occurrence during the project in Microsoft Project/Prima Vera format.

22 For Flakiness and Elongation Index norms adopted by AMC shall be made applicable.

- 23.** For non-bituminous, bituminous and concrete works, the black trap aggregates of required size shall be procured from quarry situated in Sevaliya / Timba region or equivalent. Prior approval of source/ material by Additional City Engineer shall be required.
24. Contractor shall be responsible to obey all Labour Laws, Environmental and Safety Laws.(the existing laws as well as framed from time to time). Any penalties laid due to violation of such laws shall be directly deducted from the contractor's outstanding. .
- 25. As per St. Committee's resolution 0.5% testing charges shall be deducted from each R.A.Bill and the amount of actual Testing charges shall be adjusted in the final bill.**
- 26. Special Clause: As per construction works welfare cess Act – 1996 non-refundable one percent of tender amount shall be deducted against works welfare cess.**

Seal and Signature of the Bidder

**Deputy City Engineer
(North West Zone)**

AHMEDABAD MUNICIPAL CORPORATION

Section III

FORM OF BID AND APPENDIX TO BID

A: FORM OF BID

(The Appendix forms part of the Bid. Bidders are required to fill up all the blanks in the form of Bid)

NAME OF THE CONTRACT: **CCTV Desilting Work of Existing Drainage line and Storm Water Line at diff roads in Ambali area in s.g. highway to sp ring road in bodakdev ward NWZ.(ARC)**

To,

Deputy City Engineer (North West Zone)

"North West Zone, Zonal Office",

Nr. Atithi Hotel,

Bodakdev,

Ahmedabad. Gujarat

Dear Sir,

1. Having examined the Conditions of Contract, Specifications, Bill of Quantities, Drawings and Addenda No. _____ for the execution of the above named works, we, the undersigned, offer to execute and complete such works and remedy any defects therein in conformity with the Conditions of Contract, Specifications, Bill of Quantities, Drawings and Addenda for the sum of Rs _____ (Rupees _____)

My/our offer works out as under:

Amount put to tender _____ Amount put to tender Rs. _____

Add _____ % above Deduct _____ % below

%(in words) _____ %(in words) _____

Net Amount Net Amount

In figure: Rs. _____ In figure: Rs. _____

2. We acknowledge that the Appendix to Bid forms part of our Bid.
3. We undertake, if our Bid is accepted, to commence the Works on Site within the period stated in the Appendix to Bid hereto after receipt of an order of the Engineer's notice to commence, and to complete and deliver the sections and the whole of the Works comprised in the Contract within the period stated in the Appendix to Bid hereto.
4. If our Bid is accepted, we will furnish Performance Security (ies) in the form of Bank Guarantee(s) to be jointly and severally bound on us in accordance with the Conditions of Contract.
5. We agree to abide by this Bid for the period of one hundred and twenty (120) days after the date of bid opening, and it shall remain binding upon us and may be accepted at any time before the expiry of that period.

6. Unless and until a formal Agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
7. We understand that you are not bound to accept the lowest or any Bid you may receive.
8. All the partners of our Joint Venture are legally and severally bound by this Bid¹.
9. Municipal Commissioner, Ahmedabad has right to reject any or all bids without giving any reason.

Dated this _____ day of _____ 2009

Signature _____

in the capacity of _____ duly authorised² to sign Bid for and on behalf of

Address (in block capitals)

1. To be deleted if the bidder is not a Joint Venture.

Certified copy of Power of Attorney/Authorization for signature shall be furnished by the Bidder in accordance with Clause 20 of Instruction to Bidders (Section I).

Seal and Signature of the Bidder

**Deputy City Engineer
(North West Zone)**

AHMEDABAD MUNICIPAL CORPORATION
ENGINEERING DEPARTMENT
GENERAL SPECIFICATION

Time limit for the work shall be **12 month** after the order to start the works. Progress of work should be in proportion to time limit.

The contractor shall be remain responsible for Workmen's compensation if any accident. The contractor shall arrange for barricading at night and arrangement of Pagi at night to direct the traffic. He shall be responsible for any damage to public. If any incident happen, during the execution of work. In case of dispute for unseen or overlooked items the decision of the Dy. City Engineer shall be final. The contractor shall have to give site clean of all rubbish during the work and at the time of completion of work and hand over the site with final finishing of the work as directed. All the rejected materials shall be removed from site within 24 hours by contractor at this risk and cost. Debris shall have to cart daily from site.

For mixing mortar either for masonry or for plaster or for any other purpose contractor shall have to prepare through of bigger size and mix the mortar in the required proportion. In on case he shall be allowed to mix the mortar either on floor or any finished surfaces. The contractor shall have to make his own arrangement for water required for the work.

If any extra item crops up during the progress of work the same shall be carried out by the contractor and he shall be paid at the rate fixed by Add.C.E. as per the rate analysis based on latest SOR or if item is not available in SOR than based on current market rates. In case of extra item decision of Add. City Engg. shall remain final regarding rate.

If in the interest of the Corporation it is necessary to change either any site or the design of the propose work the contractor shall carry out the same at his quoted rates without charges any extra and the contractor will have to carry out the works and he will be paid at the rate quoted by him. No claim for extra rate for subsequent changes in site and design is entertained.

The cubical contents of the cement bag shall be taken as 1-20 cft. Per bag and the contractors shall have to prepare the measures boxes according to this measure.

Octroi exemption passes shall not be given for any materials required for the work. Contractor will be fully responsible for compliance of the various provisions under contract Act. 1970 and the Rules framed the to under.

The tender for the work shall remain open for a period (120) days from the date of opening of the tenders for this work and that the tenderer shall not be allowed to withdraw on modify the offer on his own during the period. If any tenderer withdraw or makes any modifications or addition in the terms and conditions of his tender not acceptable to the Municipal Corporation the Municipal Corporation shall without prejudice to any right or remedy be at liberty to forfeit in full the said earnest money and black list the contractor.

If the work is not carried out within the specified time limit. from the date of order to start the work the penalty of Rs.- (As per Form - B1) per day of delay shall be recovered from the immediate bills payable to the contractor. Contractor has to make his own arrangement for procurement of steel and cement.

Contractors should note the following conditions carefully:-

1. Conditional tender shall not be accepted.
2. All tenders are to be submitted in duplicate without which the tenders are liable to be rejected.
3. In case of tender downloaded from website, tender fee & EMD should be submitted in form of demand draft or in cash.
4. Condition of Form - B1 Standard Specification of material & code of practice will be applicable. Form B1 can be is available in website. Specification shall be as per ' R& B Dept. - Govt. of Gujarat booklets of Building Works & and Road Works Specifications published by Gujarat Book Depot, Sector-21. Gandhinagar.

**CONTRACTOR'S SIGNATURE
& STAMP
Mobile No.:-**

**Deputy CITY ENGINEER
(North West Zone)**



**AHMEDABAD MUNICIPAL CORPORATION
MAHANAGAR SEVA SADAN
NORTH WEST ZONE**

Clause : 1 Contractor shall not employ any child having age 5 to 15 years as it is prohibited by Child Labour Prohibition and Regulation Act 1986. Hon'ble Supreme Court has given certain guide lines and as per the guide lines. If child labour is employed on the site work, the contractor shall have to deposit Rs. 20,000.00 (Rupees Tw enty thousand only) in the child labour welfare fund. If the employer refuses to deposit then action will be taken for contempt of Supreme Court Judgement and also will be prosecuted by concerned authority. Because of the breach of any provision of child labour prohibition and regulation Act 1986 by the Contractor & Municipal Corporation becomes liable to pay any amount then the Municipal Corporation shall recover the said amount from the contractor.

Clause : 2 The Standing Committee has decided to deduct 1/2% amount from each running bill as per its Reso. No. 1783 Date 06--02-97, but the Municipal Corporation Board has recently decided that the actual testing charge is taken and the remaining amount is refundable at the time of final bill (As per Muni. Board Reso. No. 123 dated 25-02-97)

Clause : 3 Contractor has to follow prevailing Labour act and has to maintain labour register accordingly, and has to follow other govt.rules.

Clause : 4 Quantity taken in tender are tentative and may differ as per execution of work. No claim shall be entertain regarding QUANTITIES.

*** MODIFICATION OF DOCUMENTS**

Modification of specifications and correction/corrigendum in respect of the work if required will be made by A.M.C. The same shall be placed on A.M.C website which may be downloaded by the tendrrs enclosed along with the tender duly signed. These shall form a part of tender. The tenderer shall not add or amend the text of any of the documents except in so far as may be necessary to comply with any addendum.

*** ADDENDAUM/CORRIGENDUM .**

Addendum or corrigendum conveying any change or correction in respect of the work shall form the part of the contract documents. The full consideration shall be given to such addendum or corrigendum or correction before submission tender duly filled in by the contractor. Therefore, the contractor shall have to watch such addendum or corrigendum or correction published by A.M.C through its website www.egovamc.com. Tenderes shall verify the number of addendum issued and enclose the same with the tender documents, failing which the tender shall be liable for rejection and no any complaint in respect to this shall be entertained under any circumstances.

**CONTRACTOR'S SIGNATURE
& STAMP
Mobile No.:-**

**Deputy CITY ENGINEER
(North West Zone)**



**AHMEDABAD MUNICIPAL CORPORATION
MAHANAGAR SEVA SADAN
NORTH WEST ZONE**

DETAILS OF BANK ACCOUT

1	Contractor's name & Parte Code	
2	Address	
3	Telephone/ mobile no.	
4	Permanent account no. (PAN no.)	
5	Name of the bank	
6	Branch name and address	
7	Account type	
8	Account no.	
9	MICR no.	
10	IFS CODE	
11	Contractor/ supplier's signature and stamp	

તા.૨૨.૦૪.૨૦૨૬ના રોજ મે.મ્યુનિસિપલ કમિશ્નર સાહેબશ્રીની વિકલી મીટીંગમાં થયેલ ચર્ચામાં મુદ્દાનં.૨૧ મુજબ જે તે સી.સી.આર.એસ. ની કારિયાદને અ.મ્યુ.કો.દ્વારા બનાવેલ વ્હોટસએપ ગ્રુપમાં મુક્યા બાદ પ્રોબ્લેમ વાઈઝા|એસ એલ.એ.ના સમયગાળા બાદ કરેલ કામગીરી માટે, ચુકાવવાના થતા નાણાંમાંથી અ.મ્યુ.કોના નીતીનિયમ મુજબ | પેનલ્ટી નીચે મુજબ કરવામાં આવશે

(A) penalty for maintenance and sla purpose

ccrs within SLA limit(category & problem wise)				ccrs after SLA time (category & problem wise penalty)		
DEPARTMENT	CATEGORY	PROBLEM	SLA	penlty 10% (hours)	penlty 20% (hours)	penlty 30% (hours)
Engineering	Water>>Engineering	Water-low pressure	240 hours	240	480	720
Engineering	Water>>Engineering	Water-No Supply	240 hours	240	480	720
Engineering	Water>>Engineering	Water -OtheR	72 hours	72	144	216
Engineering	Water>>Engineering	Water-Leakage In Main Line	48 hours	48	96	144
Engineering	Water>>Engineering	Water-Pollution In Supply	24 hours	24	48	72
Engineering	Drainage>>Engineering	Drainage- Manhole Cover Missing	24 hours	24	48	72
Engineering	Drainage>>Engineering	Drainage- Choking Of Line	48 hours	48	96	144
Engineering	Drainage>>Engineering	Drainage-Public Toilets and Urinals - Drainage Line Blockage or Choking	48 hours	48	96	144
Engineering	Drainage>>Engineering	Drainage-Other	72 hours	72	144	216
Engineering	Road	Road-Other	48 hours	48	96	144
Engineering	Road	Road-Bhuva On Road	48 hours	48	96	144
Engineering	Road	Road-Repair Require	72 hours	72	144	216
Engineering	Storm Water	Road-Catch Pit Repairing	24 hours	24	48	72
Engineering	Storm Water	Road-Waterlogged Due To Rain	96 hours	96	192	288
Engineering	Public Building	Public Building-Public Toilets and Urinals - Repairing of Doors, Windows, Tiles or Sheets	360 hours	360	720	1080
Engineering	Footpath	Road-Footpath Repairing	168 hours	168	336	504
Engineering	Building>>Engineering	Building-Municipal Schools Repairing	168 hours	168	336	504

SPECIFICATIONS OF MATERIALS – CIVIL

This section gives detail specifications for mainly used materials, for other materials refer Building Specifications.

For materials relevant specification of Building Specificat shall apply.

TECHNICAL SPECIFICATIONS

NAME OF THE WORK : CCTV Desilting Work of Existing Drainage line and Strome Water Line at diff roads in Ambali area in s.g. highway to sp ring road in bodakdev ward NWZ.(ARC)

Detailed Technical Specifications

Section D

D1:- SAFETY PROVISIONS

1. Suitable scaffolds shall be provided for workmen for all that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well, suitable footholds and handholds shall be provided on the ladder and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1 ($\frac{1}{4}$ horizontal and 1 vertical).
2. Scaffolding or staging more than 3.25 metres above the ground or floor, swung or suspended from an overhead support, or erected with stationery support, shall have a guard rail properly attached, bolted, braced, and otherwise secured at least 1 metre high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying form the building or structure.
3. Working platforms, gangways, and stairways shall be so constructed that they do not sag unduly or unequally, and if height of a platform or gangway or stairway is more than 3.25 metres above ground level or floor level, it shall be closely boarded, have adequate width and be suitably fenced as described in 2 above.
4. Every opening in floor of a building or in a working platform shall be provided with suitable means to prevent fall of persons or materials by providing suitable fencing or railing with a minimum height of 1 metre.
5. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 3 metres in length. Width between side rails in a rung ladder shall in no case be less than 30 cm for ladder upto and including 3 metres in length. For longer ladders, this width shall be increased by at least 6 mm for each additional 30 cm of length. Uniform step spacing shall not exceed 30 cm.
6. Adequate precautions shall be taken to prevent danger from electrical equipment. No material on any of the sites shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The Contractor shall provide all necessary fencing and lights to protect public from accidents and shall be bound to bear expenses of defense of every suit, action or other proceedings at law that may brought by any person for injury sustained owing to neglect of the above precautions and to pay all damages and costs which may be awarded in any suit, action or proceedings to any such person or which may with the consent of the Corporation be paid to compromise any claim by any such person.
7. Excavation and Trenching : All trenches, 1.5 metres or more in depth, shall at all time be supplied with at least one ladder for each 30 metres in length or fraction thereof. Ladder shall be extended from bottom of trench to at least 1 metre above surface of the ground. Sides of a trench which is 1.5 metres or more in depth shall be stepped back to give suitable

slope, or securely held by timber bracing, so as to avoid the danger of sides collapsing. Excavated material shall not be placed within 1.5 metres of edge of trench or half of depth of trench, whichever is more. Cutting shall be done from top to bottom. Under no circumstance shall undermining or undercutting be done.

8. Demolition : Before any demolition work is commenced and also during the process of the work :
 - (a) All roads and open area adjacent to the work site shall either be closed or suitably protected.
 - (b) No electric cable or apparatus which is liable to be a source of danger over a cable or apparatus used by operator shall remain electrically charged.
 - (c) All practical steps shall be taken to prevent danger to persons employed, from risk or fire or explosion, or flooding. No floor, roof, or other part of a building shall be so overloaded with debris or materials as to render it unsafe.
9. All necessary personal safety equipment as considered adequate by the Engineer shall be available for use of persons employed on the site and maintained in a condition suitable for immediate use, and the Contractor shall take adequate steps to ensure proper use of equipment by those concerned.
 - (a) Workers employed on mixing asphaltic materials, cement and lime mortars/concrete shall be provided with protective footwear, hand gloves and goggles.
 - (b) Those engaged in handling any material, which is injurious to eyes, should be provided with protective goggles.
 - (c) Those engaged in welding works shall be provided with welder's protective eye-shields.
 - (d) Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
 - (e) When workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that manhole covers are opened and manholes are ventilated at least for an hour before workers are allowed to get into them. Manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to public.
 - (f) The Contractor shall not employ men below the age of 18 and women on the work of painting with products containing lead in any form. Whenever men above the ages of 18 are employed on the work of lead painting, the following precautions shall be taken:
 - (g) No paint containing lead or lead products shall be used except in the form of paste or ready-made paint.
 - (h) Suitable facemasks shall be supplied for use by workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scraped.
 - (i) Overalls shall be supplied by the Contractor to workmen and adequate facilities shall be provided to enable working painters to wash during and on cessation of work.
10. When work is done near any place where there is a risk of drowning, all necessary equipment shall be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.
11. Use of hoisting machines and tackle including their attachments, anchorage, and supports shall conform to the following :

- (i) These shall be of good mechanical construction, sound material and adequate strength and free from patent defects and shall be kept in good repair and in good working order.
 - (ii) Every rope used in hoisting or lowering materials or as a means of suspension shall be durable quality and adequate strength, and free from patent defects.
- 11.1 Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years shall be in charge of any hoisting machine including any scaffold winch or give signals to operator.
- 11.2 In case of every hoisting machine and of every chain ring hook, shackle, swivel and pulley block used in hoisting or lowering or as means of suspension, safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with safe working load. In case of a hoisting machine having a variable safe working load, each safe working load and the conditions under which it is applicable shall be clearly indicated. No part of any machine or of any gear referred to above in this paragraph shall be loaded beyond safe working load except for the purpose of testing.
- 11.3 In case of departmental machine, safe working load shall be notified by the Engineer. As regards Contractor's machine, the Contractor shall notify safe working load of each machine to the Engineer whenever he brings it to site of work and get it verified by the Engineer.
12. Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguards, hoisting appliances shall be provided with such means as will reduce to the minimum risk of accidental descent of load adequate precautions shall be taken to reduce to the minimum risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations, which are already energized, insulating mats, wearing apparel such as gloves, sleeves and boots, as may be necessary, shall be provided. Workers shall not wear any rings, watches and carry keys or other materials, which are good conductors of electricity.
13. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in a safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities shall be provided at or near places of work.
14. These safety provisions shall be brought to the notice of all concerned by display on a notice board at a prominent place at the work spot. Persons responsible for ensuring compliance with the Safety Provisions shall be named therein by the Contractor.
15. To ensure effective enforcement of the rules and regulations relating to safety precautions, arrangements made by the Contractor shall be open to inspection by the Engineer or his representative and the Inspecting Officers.

16. Notwithstanding the above provisions 1 to 15, the Contractor is not exempted from the operation of any other Act or Rule in force.
17. Contractor shall fully responsible to provide safety measure / equipments necessary for breaking the dummies constructed to plug the pipe inlet and outlet in the manhole to avoid any accident.

Note: - Contractor Shall follows the directions furnished by Gujarat High court as well as Supreme court related to de-silting the sewerage pipe line & manholes. He shall take care of not lowering labour in the manhole as well pipeline during the work. He shall fully responsible for any accident if occurred during the work / contract period.

**Signature of Contractor
Name :**

**Deputy City Engineer (NWZ)
Ahmedabad Municipal Corporation**

Company's seal :

Date :

Date :

D2:- SAFE ENTRY AND WORKING IN SEWER LINES – GUIDELINES

SAFE WORK PRACTICE PRINCIPLES

1. Introduction

These general guidelines are intended to assist the Contractor in the development of safe work practices. Where the risk assessment indicates that a particular hazard cannot be present, the precautions to control that hazard do not apply. Remember that a favorable history does not guarantee absence of hazard on this occasion.

2. Confined Space

“Confined Space”, in relation to a place of work, means a space of any volume which a person may at any time enter or be allowed to be entered in which the atmosphere is liable at any time to be oxygen deficient. This includes but not limited to pipes, sewers, manholes, tunnels, shafts, ducts, other similar sewerage installations and etc.

The Contractor shall develop acceptable work practices and safe entry procedures based on the guidelines provided hereunder and the AMC's safety code on safety precautions to be observed during sewer desilting / lining work.

3. Notification to Work in Confined Space

The Contractor shall obtain an entry permit from the Engineer for each occupancy of any confined space. The Contractor shall furnish all required details in an approved format to the Engineer for permission to work in confined space at least 24 hours prior to the entry. Where prolonged work is involved, the permit must be renewed for each shift. An incident, which substantially alters the condition of a confined space entry, requires immediate evacuation and reassessment of the condition.

4. Air Quality and Ventilation

Contaminant control and effective ventilation are major factors influencing air quality in a confined space. The ventilation must be adequate to clear pre-existing contaminated air and maintain a respirable atmosphere during planned work. This ventilation may be permanently installed or portable equipment used for this task. For general ventilation, fresh air should be supplied to the workplace. Within the sewer system this creates an environment, which displaces contaminated air in the immediate vicinity.

Where a task generates atmospheric contaminants in a specific area e.g. use of chemical such as polyester resin, adequate local exhaust ventilation should be used to remove the contaminants. Where failure of the mechanical ventilation system would result in deterioration of air quality, the controls must be clearly tagged to prevent accidental interference and the ventilation system monitored while the confined space is occupied. Self-Rescuers must be carried whenever failure of the ventilation system or changes in the working environment can create a contaminated atmosphere. The self-rescuer can be a self-contained breathing apparatus, oxygen self-rescuer, or short duration self-contained breathing apparatus, depending on the time taken to reach open air.

Note: Obtain occupational hygiene advice on the selection or performance of ventilation system where this is not specified in the work practice or plant design.

5. Lighting

Any regularly accessed confined space should be illuminated to AS 1680 or equivalent

with electrical installation to AS 3000 or equivalent. Portable lighting may be used to supplement permanent lighting in the workplace. Temporary mains powered lighting installed for a task must comply with the requirements of AS 2865 or equivalent Indian Standards. Miners lamps, mounted on a safety helmet may be used as an alternative to a hand held torch for personal illumination.

Unless portable lighting complies with AS 2380.7 or similar Indian Standard the possibility of a flammable atmosphere must be eliminated by isolation, cleaning, ventilation purging etc.

Where the confined space has been proclaimed as a flammable gas hazard area to AS 2430 or similar standard all fixed and temporary electrical installation must comply with AS 2381 or equivalent standard. Torches and portable lights must comply with AS 2380.7 or equivalent standard.

Illumination standards are: -

General Lighting: - 40 lux minimum, equivalent to a poorly lit

room Stairway Lighting: - 80 lux minimum

Task Lighting :- 240 lux minimum (normal workshop requirements)

6. Equipment usage, Standards and Maintenance

All confined space safety equipment as proposed in this tender documents shall also meet the established international labour safety standards and be of appropriate designed capacity for the proposed usage at sites. The equipment must be checked for visible damage and correct operation before each use. Preventative maintenance must be performed by trained, and where necessary, authorized persons at the intervals recommended by the equipment manufacturers. The Contractor shall submit to the Engineer evidence of such periodic check and maintenance of the equipment used for confined space entry at every first week of the month.

7. Room to Work

When the constricted volume of a worksite prevents normal work postures and tool movement, the need for special tools or frequent work rotation should be considered.

8. Control of Flooding

When a confined space is normally liquid filled, accidental return to service must be prevented by double isolation e.g. insertion of suitable blanking piece, plugging with inflatable plugs, temporary coffer dams as a second isolation in a manhole or other effective means.

9. Flow Control

Where a sewer is entered while flowing, rapid increase in flow must be prevented by use of stop logs, isolation of pumping stations, weather watch and other means appropriate to the sewer catchments. Adequate communication with the person responsible for flow diversion must be maintained for the duration of the entry.

10. Drowning

Where deep flowing water is present, use personal flotation devices. Safety harness and lifeline and safety nets as appropriate to prevent drowning and washing away.

11. Fire and Explosion

Adequate precautions must be taken to minimize the risk of fire or explosion when

entering a confined space for any purpose.

12. Presence of Flammable Gas

The presence of flammable gas, flammable dust or the possibility of the presence of airborne substances in flammable quantities may create a hazardous Area. Care shall be taken by the authorized person to determine the presence of any such flammable situation in the confined space before entry. Smoking or lighting any cigarette or box matches in confined space shall be strictly prohibited. The flammable gases of concern are methane, digester gas, vapours from flammable liquid, and vapours from trade waste discharges.

13. Manual Handling of Tools, etc.

Safe system of work should be followed to protect against falls of persons or objects and crush by moving or falling objects.

14. Noise

Reverberation within a confined space can increase noise levels, especially if more than one person is working. Heavy duty hearing protection may be required.

15. Vermin / Leptospirosis

All persons working in confined spaces should be aware of the leptospirosis hazard presented by the presence of vermin. The presence of cockroaches etc. does NOT indicate that the atmosphere is free of danger to health.

16. Standby and Communication

A member of the confined space work team is allocated the task of maintaining communication with the members inside the confined spaces. This task may be rotated among the members of the team. The Standby person must be trained and be physically capable of providing the assistance and life support in an emergency and must have sufficient proficiency in Hindi, English, Urdu and Punjabi languages to promptly communicate information by radio or telephone when required.

While acting as stand-by, this person must not enter the confined space or leave the vicinity unless relieved from this duty. A standby person is needed for all confined space entries. The Safe System of Work must indicate the process for communication from the confined space to the standby e.g. 2 way radio 'man down' alarm line of sight etc.

17. Fitness Assessment

An assessment of fitness, including cardiovascular and respiratory health, is required to ensure that all persons entering confined spaces, or acting as the stand-by person, can comply with the physical demands of the job, without risk to their health.

18. Emergency Rescue and First Aid

No person shall enter any confined space, even in an emergency, without first ensuring all safety requirements have been met. A safety emergency plan may assist in a safe, speedy response in the event of an emergency.

All confined space work teams must be trained and equipped to sustain life and be able to summon emergency help, provide first aid and assist emergency service personnel, if requested.

Trained persons using supplied air breathing apparatus must only attempt rescue of persons apparently overcome by toxic gases in a sewer or other confined spaces. Stabilization of other injuries must be prioritized against the availability of breathable air.

19. Gas Detector

The Contractor shall engage an authorized person for gas monitoring and detection. This person shall be trained to operate and response test gas testing equipment and is authorized by management to perform the necessary tests to decide whether a category 2 or 3 confined space is fit to enter.

Gas testing can only be performed by persons trained in gas testing, using equipment appropriate for the anticipated contaminants. This person can perform other duties provided these do not conflict with the gas-testing task.

20. Specialist Gas Detector

This person has technical qualifications and acceptable training to operate and response test gas testing equipment, including hydrocarbon detectors and detector tubes and assesses portable ventilation systems. He is authorized by management to carry out atmospheric testing to establish entry conditions for all confined space categories, and to establish whether a Category 1 confined space can be re-classified to a Category 2. He also performs tests to verify whether hot work is permitted in gas hazard areas.

21. Cleaning

Where possible, cleaning should be performed without entry to the confined space, even if only preliminary cleaning is possible.

Particular attention should be given to the probability of releasing hydrogen sulphide when disturbing microbial active sludge and sediments, which have accumulated in a confined space. Supplied air respiratory protection shall be worn where such residues exist and effective ventilation cannot be guaranteed. Continuous gas monitoring is required even when supplied air respirator protection is used.

Hose couplings should be designed to resist accidental dislodging or loosening. Both the operators and the standby person should be able to stop the flow of cleaning material into the confined space.

Hydro jetting must be performed according to the relevant regulations. Where chemical compound is used in within the confined space, the chemical compound should be classed in the Material Safety Data Sheets as non-irritant to respiratory system, eyes and skin. If this is not possible then appropriate respirator skin and eye protection must be worn. Substance specific air monitoring may be required.

22. Visitors

A visitor to a confined space is a person other than a contractor, who is not a member of the Confined Space Work team. Visitors must be escorted and trained or inducted in the necessary skills for that entry and shall sign an indemnity form before entry into a confined space. No visitor shall be allowed to enter the confined space without prior permission of Engineer.

23. Hazard Control

Hazards to be identified and controlled include but are not limited to access mechanical and electrical isolation, flow isolation and control, drowning and engulfment, last known contents, atmospheric contaminants, temperature extremes, security and public access.

24. Air Quality Standard For Entry

The acceptable limits of some gases in confined spaces are:

Gas/Vapor Present	Acceptable Limits
a. Oxygen Content (o)	19.5% to 23.5% by volume
b. Flammable Gas/Vapor	5% of Lower Explosive Level (LEL)
c. Hydrogen Sulphide (H ₂ S)	5 ppm
d. Carbon Monoxide (CO)	10 ppm

25. Carbon Monoxide (CO)

Carbon monoxide is colorless, odorless, flammable and toxic. Its common sources are fire, motor vehicle exhausts and cigarette smoke.

This gas is a chemical asphyxiant and is readily absorbed by the hemoglobin in the blood. Then hemoglobin is unable to transport oxygen to the body tissues and the body becomes oxygen starved. These effects are more pronounced with hard work or for heavy smokers. Symptoms include headache (50-200ppm), nausea (400ppm), irregular heartbeat (1200ppm). Collapse and death (2000ppm).

The entry permit limit is 10 Parts Per Million (ppm). Maximum with an IDLH value of 1500 ppm. (IDLH-Immediately Dangerous to Life and Health)

Note: Some gas detecting machine sensors are cross sensitive, H₂S being detected by the CO cell and vice versa. Alarm by either sensor requires evacuation and re-evaluation of the safe system of work.

26. Flammable Gas/Vapor

A gas or vapor that will burn when mixed with air in certain proportions and ignited.

The mixture, which contains the least amount of flammable gases that will explode, is called the Lower Explosive Limit (LEL). The mixture, which contains just enough Oxygen to let the flammable gas explode, is called the Upper Explosive Limit (UEL). The flammable range varies for gases and vapors.

Many of these have toxic effects when inhaled and a Workplace Exposure Standard has been issued to protect workers from these Gas/Vapor. The Contractor shall obtain relevant Workplace Exposure Standard (WES) for use in the site.

Gas / Vapour	Flammable Range in %	5% LEL (FOR ENTRY PERMIT LEVEL)	WES
Butane	1.9 – 8.5	950 ppm	800 ppm
n-Hexane	1.2 – 6.9	600 ppm	50 ppm
Methane	5 – 15	2500 ppm	Axphyxiant
Petrol	1.3 – 6	650 ppm	900mg/cum
Trichloroethylene	12.5 – 90	6259 ppm	50 ppm

27. Hydrogen Sulphide (H₂S)

Hydrogen Sulphide is a colourless, toxic and flammable gas, which usually has the odour of rotten eggs. In sewerage systems it is usually derived from the action of bacteria on the sulphur compounds in anaerobic or old sewage. A small amount of sludge or slime in wet wells or sewers will release a lot of H₂S when disturbed.

After a few minutes exposure, the ability to smell hydrogen sulphide by a person is lost and then hydrogen sulphide becomes more dangerous as its presence is no longer obvious and the person could become an innocent victim.

It can sometimes be detected by odour at less than 0.1 ppm but can be readily detected by odour at 4 ppm. More serious health effects include eye irritation (10 ppm), respiratory irritation (50 ppm), headache, nausea, dizziness (200 ppm), collapse and death (700 ppm).

The entry permit limits is 5 parts Per Million (ppm), Maximum with an Immediately Dangerous to Life and Health (IDLH) value of 300 ppm.

Note :

Some gas detecting machine sensors are cross sensitive, H₂S being detected by the CO cell and vice versa. Alarm by either sensor requires evacuation and re-evaluation of the safe system of work.

28. Methane (CH₄)

The most common flammable gas found in sewers is methane. This mainly comes from gas pipe leaks in the city's gas distribution system. It can also be derived from the action of anaerobic bacteria on rotting material. However a range of other flammable gases and vapours may be encountered. These include LPG, petrol vapour and other solvents.

Digester gas, found in anaerobic sludge digesters on sewage treatment plants is a flammable mixture of methane nitrogen and carbon dioxide.

Methane is a colourless, odourless gas. Although pure methane is slightly lighter than air the relative density of methane / air mixture is similar to air entry permit range. Methane is hazardous because of its flammability, i.e. between concentrations of 5% to 15% in air, it may explode if an ignition source is present.

High concentrations of methane may result in oxygen deficiency. Injury or death result from lack of oxygen not methane toxicity classifying methane as a simple asphyxiant.

29. Oxygen Content (O₂)

Fresh air contains 20.9% oxygen, equivalent to a partial pressure of 211.8 hectopascal of oxygen at sea level.

The readings obtained on a gas detection instrument in open air may vary depending on instrument calibration and barometric pressure.

In a confined space, oxygen can be used up by bacteria in sewage or sludge, rusting of iron fittings, burning (or welding) or displaced (pushed out) by other gases.

Breathing of air, which contains reduced oxygen results in increasingly serious health effects. These range from impaired coordination and faulty judgment (12-16% O₂) to collapse and rapid death (less 6% O₂).

Increased oxygen readings can only come from instrument error or by leakage from oxygen cylinders, liquid oxygen tank, etc. High oxygen levels greatly increase fire hazards, fires burn fiercely; oily clothing and hair can catch fire without an ignition source.

The entry permit levels are 19.5% to 23.5% by volume.

30. Definition

Parts per million (ppm)

Parts of gas or vapour per million parts of contaminated air by volume at 20°C and 1 bar pressure.

$$1 \text{ ppm} = 0.00001\%$$

Percentage

Parts of substance per 100 parts of air, water
etc. 1% = 10,000 P

31. Other Atmospheric Contaminants

Entry, unless wearing air supplies breathing apparatus is not permitted unless atmosphere contaminants are below the relevant 8-hour time weighted average (TWA)

Workplace Exposure Standard. This limit applies for all entries including brief exposures. Entry wearing breathing apparatus is only permitted where the concentration of the contaminant is within the protection factor of the breathing apparatus and below the IDLH (Immediately Dangerous to Life and Health) value.

32. Sewer Gases

Air in contact with live sewage contains gases released from the sewer. For safe entry, contaminated air must be replaced with clean air by ventilation of the confined space. The resulting atmosphere must be confirmed by gas testing.

Discharge of untreated wastes, e.g. hypochlorites, electroplating effluent, acids may result in generation of chlorine, hydrogen cyanide and other harmful gases some distance from the original discharge.

33. Confined Space Categorisation

The confined space category is a guide to developing a safe system of work. The confined space category may change to a more stringent level as a result of adverse environmental factors or work produces contaminants. Alternatively it may change to a less restrictive category if appropriate engineering upgrades, whether temporary or permanent, are implemented.

1.1 Category 1 – Confined Space

Entry allowed only if flammable gas is below 5% of L.E.L. and other gases are within the protection factor of the respiratory protective equipment used.

Visibility must be adequate

Personal Safety

- Wear specified protective clothing for the hazards.
- Wear safety harness.
- Use lifeline where appropriate.

Respiratory Protection

- Test air quality prior to entry by a Specialist Gas Detector.
- Ventilate to reduce contamination.
- Monitor air quality as directed by the Specialist Gas Director.
- Wear airline breathing apparatus with backup air supply OR wear self-contained breathing.

Note: An Oxygen self rescuer is not a backup for an airline used in contaminated atmospheres,

If the Category 1 confined space is a chemical storage tank, it can be reclassified to a Category 2 or 3-confined space when the specialist gas detector confirms that the chemical has been cleared from the interior.

Sewer, wet wells etc can be reclassified by a specialist gas detector to a lesser confined space only when an approved safe system of work is employed. This safe system of work must provide for demonstrated control of airborne contaminants and other hazards in the workplace, to provide conditions equivalent to a Category 2.

Hot work requires control of fire and explosion hazards and may require air supplied breathing apparatus to control fumes irrespective of the confined space category. A Hot word permit is required in addition to the normal entry permit.

1.2 Category 2 – Confined Space

Entry allowed only if all gases are within entry permit limits. Personal Safety

- Wear specified protective clothing for the hazards.
- Wear safety harness.
- Use lifeline where appropriate.

Respiratory Protection

- Test air quality prior to entry
- If air quality test fails, refuse entry until reason found and rectified, or revert to Category 1 entry conditions.

- Ensure adequate ventilation
- Monitor air quality during entry.
- Carry oxygen self rescuer

Note: Standby person must have SCBA readily available.

Hot work requires control of fire and explosion hazards and may require air supplied breathing apparatus to control fumes irrespective of the confined space category. A Hot work permit is required in addition to the normal entry permit. A hydrocarbon check by a “specialist gas detector” is required unless the environment can be upgraded to Category 3 conditions

1.3 Category 3 – Confined Space

Entry permit required (unless using a posted entry procedure for routine operation of the facility) for each shift that the structure be occupied.

Person Safety

- Wear protective clothing specified for the hazards.

Respiratory Protection

- Test air quality prior to entry
- If the proposed work can generate airborne contaminants, arrange ventilation. Respiratory protection and / or air quality monitoring as appropriate.

Hot work required hot work permit and control of fumes.

If air quality test fails, revert to Category 1 entry conditions or refuel entry until reasons found and rectified.

1.4 Category 4 – Confined Space

Follow facility safety procedures.

Person Safety

- Wear protective clothing specified for the hazards

Respiratory Protection

- Evacuate when alarms advise

Hot work requires control of fumes.

Separate Permit(s) required for chemical cleaning and / or hot work. If evacuation alarm sounds, evacuate following site emergency procedure. Reoccupy as a Category 2 confined space.

Generic Entry Summary

	Category 1	Category 2	Category 3	Category 4
Entry Permit	Yes	Yes	Yes	Yes
Standby Person	Yes	Yes	Yes*	*
Communication to remote standby		Yes*		
Protective Clothing	Yes*	Yes*	Yes*	Yes*
Safety Harness	Yes	Yes		
Lifeline/Fall arrester	Yes	Yes		
SCBA	Yes*	#		
Airline and backup	Yes*			
OSR	Yes*	Yes*		
Specialist gas tester	Yes			
Gas tester		Yes	Yes	Yes
Gas monitoring	Yes	Yes		
Ventilation	Yes*	Yes*	Yes	Yes

*Appropriate choice given in Safe Work practice for the task

Required by Standby Person

34. Entry Permit Format

A general entry permit for working in sewerage works is given below as an example. The contractor shall develop his own format of the entry permit form and submit it for

the approval of Engineer.

35. Maintenance of Equipment

This equipment must be maintained as per manufacturer's recommendation and records kept of this maintenance.

Compressed air bottles must be refilled by a source, which warrants that the air meets quality standards of AS1715 or equivalent.

Air from air compressors must be treated to meet quality standards of AS1716 and tested periodically to demonstrate compliance.

All respiratory protection system must be used in accordance with AS1715.

36. Gas Detecting Machines

The instrument must be operated according to the manufacturer's instructions.

The instrument must be checked for correct functioning using a test gas ('Response Check') every day when the instrument is used to check possibly contaminated atmospheres.

If the instrument is used less frequently, it can be response checked each time it is used.

37. Standards

The following equipment must meet the relevant section of AS1716 or any equivalent standard

- A. Self contained breathing apparatus.
- B. Oxygen Set (Rescuer).
- C. Airline compressed air breathing apparatus.

All workmen should use all the same-model of this equipment for interchangeability.

Obtain professional advice for selection of airline breathing apparatus and compressed air self-rescuers.

Portable gas detection instruments must meet the following requirements.

Manual of Practice

Sr.No.	Gas Monitored	Range Required	Resolution Required
1	Oxygen	1% - 30%	Resolution 1%
2	Flammable Gas	1% - 100% of LEL	Resolution 1% of LEL
3	Hydrogen Sulphide	1 - 50 ppm	Resolution 1 ppm
4	Carbon Monoxide	1 - 400 ppm	Resolution 1 ppm

ENTRY PERMIT FOR CONFINED SPACES

(Required for an confined space entries)

CONFINED – SPACES CATEGORY []

Is a hot word permit also required? Y/N

If Yes. Permit No.

1. SITE AND TASK INFORMATION	
Location of Work.....	
Work Team	Standby Person
Contractor's Name	Visitor's Name
Description of work to be Undertaken	Requested By
.....	Date
2. ISOLATION OF CONFINED SPACE	5. PERSONNEL PROTECTIVE EQUIPMENT
<input type="checkbox"/> Water/ sewer flow isolation/control	<input type="checkbox"/> Supplied air respirator
<input type="checkbox"/> Harmful substance present	<input type="checkbox"/> Oxygen self rescuer
<input type="checkbox"/> Warning notices, locks or tags in place	<input type="checkbox"/> Safety harness
<input type="checkbox"/> Other (specify)	<input type="checkbox"/> Safety line
	<input type="checkbox"/> other protective clothing/equipment
3 AIR QUALITY

Oxygen (19.5% - 23.5%)	6. OTHER PRECAUTIONS
Hydrogen Sulphide (<10 ppm)	<input type="checkbox"/> Warning notices / barricades in place
Flammable gas (<5% LEL)	<input type="checkbox"/> Smoking prohibited
Carbon monoxide(<30ppm)	<input type="checkbox"/> Rescue system in place
Other specify	<input type="checkbox"/> Emergency rescue trolley available
Limit () Result.....	<input type="checkbox"/> Other precaution (Specify)
Ventilation Operating / provide.....

Time and date of Test.....	7. CONFINED SPACE ENTRY PERMIT
Response test date for gas testing Machine.....	This confines space in my opinion safe for entry and work under the listed indications.
Monitor while occupied: Yes/No.	<input type="checkbox"/> The work team is trained and equipped for this entry.
Additional category1	Safe entry valid On.....
Substance checked (identify and limits)	From.....am/pm To.....am/pm
.....	Responsible Person.....
.....	
Monitoring delegated to gas tester (Y/N)	8. SIGNING OUT
Condition.....	<input type="checkbox"/> All persons have left the confined space and no further entry is permitted on this permit
Specialist gas tester.....	
From.....am/pm To.....am/pm	
4. CHEMICALS (to be used in the confined space)	9. OBSERVED FAULTS / INCIDENTS
.....	

D3:- SAFETY PRECAUTIONS TO BE OBSERVED DURING CLEANING, DESLITING AND LINING WORK.

1. Special Direction to Tenderers

- 1.1 Precautionary measures to be taken by the contractor for the safety and welfare of the labours connoted with desilting and lining work.

To begin with the work of desilting, initially six consecutive manholes are

to be opened, two on the up-stream and two on the down-stream side of the two manholes, on the actual stretch to be cleaned or desilted. The manholes should be kept open for one hour prior to the starting of cleansing operations and should be so kept open during the whole duration of cleaning operations. This to be done for allowing the combustible gases to escape naturally. No lighted matchsticks should be thrown in the manhole. This may cause fire and explosions endangering the life of the workmen and the pedestrians. This may also damage to the sewer and other adjoining utility services, if any Jalis should be placed over all the opened manholes to prevent pedestrians etc. from falling in. Tripod stands with flags it should be written in white bold letters "Danger Manhole Open."

- 1.2 When working at night, lantern fitted with red globe and lights shall be hung from the tripod stand. Each manhole kept open should be guarded by one labourer or C.I. heavy cover with holes exactly fitting up to the frame and capable of taking the load of lorry should be placed over the manhole, so that top of the cover is flush with the road surface. The contractor without any extra cost shall provide the covers. The same should be removed and replaced with regular manhole cover when the work is closed.
- 1.3 The contractor should keep sufficient number measurement rods. The measurement rods shall be made out of solid bamboo/M.S. rod of sufficient length fixed with M.S. flat 150 mm X 150 mm X 6 mm (6"X6" and ¼") thick at one end and fitted with point at other end, to take measurement of water and silt.
- 1.4 Manholes shall be kept open for minimum one hour to allow foul gases to escape and simultaneously there should be forced purging with the help of an air blower to completely clean the air in the sewer.
- 1.5 Sewage levels shall be checked in the manholes and the same should not be more than 450 mm (18").
- 1.6 Wet lead acetate paper shall be inserted in the manholes which should not turn even light brown or black. If the lead acetate paper turns light brown or black, then the manhole shows the presence of Hydrogen Sulphide Gas (H₂S) and in that case this test shall be repeated after every ten minutes till positive result is achieved. The sensitivity of lead acetate paper should be ascertained to suit and detect the minimum allowable concentration (MAC) for long-term exposure.

This paper should be held as low as possible in the manhole atmosphere. In spite of long waiting for about one and half hour, if the lead acetate paper continues to show negative gas detector shall be used for half an hour. Thereafter gas detector shall be used to check the presence of gases and the worker shall be allowed only after it is confirmed that the

condition inside the manhole is safe for man entry.

Whenever necessary, or where the sewer line is heavily silted or there are chances of gas eruption, the person entering the manhole shall be provided with gas mask or breathing apparatus (respiratory system) and hand blower or mechanical blower be used during the desilting operation. In every case use of gas monitor in working condition is mandatory. In addition to this, the conventional methods like lead acetate paper test etc. be done. The gas monitors should be accurately calibrated after regular intervals to maintain their reliability.

After the lead acetate paper test, a lighted safety lamp shall be inserted in the manhole, which should burn smoothly. If not, it shows the presence of Carbon monoxide (CO) and in that case precautionary measures as stated in sub-para (g) should be followed.

After the presence of combustible gases are ruled out the following further tests are required to be carried out for the presence of oxygen.

A lighted naked candle placed at the center of the candle testing equipment covered with glass on three sides should be lowered down slowly. If the flame is extinguished or flickers, it indicates the presence of carbon monoxide and or carbon dioxide. If it burns for not less than five minutes uniformly, it indicates the presence of oxygen, which is required for breathing for the workman working inside the manhole.

2. Working Inside the Manhole

After all these tests are carried out successfully, particular care should be taken where sewer is heavily silted, the scum and siltage should thoroughly be stirred and disturbed by means of long bamboos/ G.I. rod from the top of the manhole to allow entrapped gases within silt pockets to escape before allowing the labourers to go down into the manhole.

The depth of water should be measured and the labourer should be asked to get down when the level of water is less than 450 mm (18"). Before the labourer is allowed to get down inside the manhole, he should be asked to apply barrier creams all over the body as a precautionary measure to safe guard against itching and burning sensation. Safety belt should be tied around his waist and chest when the labourers are getting down, another man at the top should hold the other end of the rope. Not less than two people should be allowed to work inside the manhole at a time.

If the labourers who are working inside the manhole show slight discomfort, they should be asked to come up or pulled up. The labourers who are working inside the manhole should give jerks every few minutes to signify that everything is okay with them.

After getting satisfactory test result and after taking precautionary measures as stated above, the worker shall be allowed to descend or enter in the manhole. The workers entering the manhole shall be provided with wadded suit, hand gloves protective head gears and head lamp. If the wadded suits are not available the worker shall be provided with Barrier Creams with germicide to be applied to their entire body to prevent harmful effect due to contact with harmful bacteria and germs.

The worker entering the manhole shall wear Harness belt around his waist. In spite of the manhole entry tests being carried out, there are chances of eruption of poisonous gasses in the silt. If the worker finds any difficulty in breathing initially or during the work then he should be taken out immediately by means of harness belt. Where the sewer line is heavily silted or there are chances of gas eruption, gas mask shall be used while entering the manhole and also during desilting.

On completion of the work all manholes shall be checked and it should be ascertained that

the same are properly closed.

3. Safety (General)

Proper ventilation shall be maintained in the manhole and sewer line being desilted. Hand operated or mechanical blower should be preferable used for half an hour to one hour before entering the sewer line even after getting the safe working condition, while desilting sewer lines where accumulation of silt is heavy. While the blowers shall be operated continuously during the desilting of sewer lines which are heavily silted or susceptible to gas generation.

While carrying out desisting, the sewer lines of man-entry size, the contractors shall use blower during the entire period. This would not only ensure safe condition but also ensure comfortable working condition for the worker and would in turn increase his performance and output.

In some manhole where sewage is falling over workman or causing obstruction, plugging the upstream sewer will be allowed temporarily without any charges, provided the Contractor ensures that the upstream sewer line does not overflow. The plugs shall be removed immediately after the work has been completed.

The Contractor shall, as far as possible, use mechanical process for cleaning and desilting sewer lines and progressively minimise manual process of desilting so that entry of workers in the sewers for purpose of cleaning and desilting shall be avoided.

A list of various safety tools, overhauls and safety equipment.

- Harness Belts
- Overalls
- Thigh Belts
- Hand Gloves
- Protective Head Gear with Lamp
- Breathing apparatus
- Gas Monitors
- Thigh and Wadder Suits
- First Aid Box
- Barrier Creams with Germicides
- Other related safety items, as directed by the Engineer

No worker of Contractor shall be allowed to enter into the manhole for cleaning and desilting the sewer lines unless all the safety tools, shackles and equipment are at site and the worker is equipped with personal safety gear such as gumboot, wadder suit, headgear, head lamp and, harness belt etc.

The Contractor should keep “first aid box at the site of works”.

One vehicle with the safety equipment such as breathing apparatus, diver suit, air blower, escape set etc., shall be made available at each Desilting. The same vehicle shall have other facility such as first aid kit, provision for eye wash.

4. Welfare of the Workman Engaged For Desilting / Lining Works

No person below the age of 18 years shall be employed for carrying out cleaning and desilting work of the sewerage system / sewer lines.

Adequate safety measures shall be taken by the Contractors.

The Contractor should impart training to the supervisory staff, all the workman entrusted with the task of sewer rehabilitation.

A detailed medical checkup of all the workers must be immediately undertaken. This check up should include a full clinical examination, proper blood tests, routine radiological tests, pulmonary functions test, a psychiatric evaluation and other specialized tests wherever necessary. Special emphasis must be given to the study of the respiratory system, the eyes and the skin problems.

Each worker engaged in cleaning the desilting of the sewer lines / manholes, shall be medically examined once a year and shall not be engaged, if he is suffering from any of the diseases such as respiratory, skin, eye-problems, infections, cardiovascular, spinal, psychiatric nature etc. He should not be engaged for cleaning and desilting work inside the manhole or sewer lines till he is cured.

Whether a person is suffering from any of the above mentioned diseases or not shall be certified by any Municipal Doctor. Similarly, the contractors engaged in cleaning and desilting operation, shall get their workers, employees medically examined and shall not employ any worker who is found to be suffer from any of the above mentioned ailments.

The workers should be provided with vaccination against certain diseases commonly prevalent among sewage workers due to the nature of their work.

First Aid Box properly stocked including washing bottle to wash skin and eyes, should be kept at the site of work.

Proper arrangement should be made to get treatment expeditiously, including facilities for speedy admission and treatment in any nearby hospital to the work site. Location of the hospital should be displayed at the site of work.

The Contractors engaged by AMC for sewer cleaning desilting and repair work, should take out workmen insurance policy at Contractor's cost (individual or group) for workers engaged by him for sewer cleaning and / or desilting or repairing.

The Contractor shall maintain washing, drinking water and toilet facility at each Chowky. If no toilet is provided in the Chowky, it should be so located that the public toilet is available within a distance of 300 m. The site Chowky should also be equipped with full first aid kit.

Contractor should provide carbolic soap at the rate of one cake for four days for washing clothes that are used by workers. The workers should be asked to take bath after the work is over. In cold seasons i.e. December to February, Contractor should supply sufficient fire wood to workers for warming up after taking the bath.

5. Contractor's Responsibility towards Welfare of the Workmen

A responsibility officer of the supervisory cadre of the Contractor should be physically present at the site and he/she should ensure and document compliance of the guidelines under the scheme for measures of safety and welfare of the workers and entry worthiness in the manhole. He / She should remain physically present throughout the operation and the onus of compliance of these guidelines should lie on.

A log book should be maintained by him/her for giving the date and time, the names of workers, place and other relevant particulars of stay in the manhole etc. The said official should hold a certificate of training from a Competent Body such as National Safety Council, New Delhi Fire Brigade etc. in First-Aid and Emergency Measures. If the Supervising Officer is not satisfied about the various requirements as specified in the above specification, then the work should be stopped immediately.

List of the Contractor's employees including their residential addresses, age, etc. is required to be supplied by the Contractor in separate register.

If the Contractor has engaged 20 or more labourers, then the Contractor is required to be registered under the Contract Labour Act and Inter-State Migrate Labour Act, wherever applicable.

Contractors should abide by all the rules and regulations in respect of labour laws prescribed by the Government Authorities and submit the returns etc.

The workmen compensation should be paid to the Contractor's employees as per the provisions of Workmen's Compensation Act.

Contractor should maintain a muster of all the labourer working at site and his supervisor should prepare a triplicate copy of the same specifying the persons getting down the manhole. The Contractor shall send one copy to the Engineer and another copy shall be kept in his office for his record. The copy should reach the Engineer on the day before 11 AM without any extra cost.

The Contractor shall also ensure that the silt is transported within 24 hours to the Dumping ground or to the site as directed by the Engineer. If the Contractor fails to remove the silt within 24 hours the same will be removed by the AMC at his risk and cost, after the Contractor has been notified in writing.

The Contractor should not make the silt storage depot etc., near the water gully. If found that the Contractor disregarded the above and caused blockage in the water gully, the AMC will clean the gully at the risk and cost of the Contractor. Contractors shall located depots at places where.

All the silt removed from manholes / chambers near bus stop or junctions should be transported immediately to a place approved by the Engineer at say 100 meters from the manhole, and from where the same shall be transported to the approved dumping yard as soon as possible.

The Contractor should sprinkle sufficient quantity of bleaching powder over the silt removed site to prevent smell emanating from the silt.

No person other than the Contractor's workers should be allowed to go inside the manhole. If it is found that any unauthorized person has entered the manhole and injured or died the Contractor will be solely and fully responsible for the consequences including damages etc. claimed by the person or his heirs.

Plugging etc., if required to be done for stopping the flow or diverting the flow and pumping out sewage to facilitate removal of the choke or for any other purpose connected with cleaning work should be done by the Contractor without any extra cost.

Even though the Contractors takes all the precautionary measures and by chance any workman is injured or dies due to negligence or otherwise the Contractor will be responsible for the claims of damages by the workman or his heirs.

6. **SAFETY PROVISIONS:-** Suitable scaffolds shall be provided for workmen for all that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well, suitable footholds and handholds shall be provided on the ladder and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1 ($\frac{1}{4}$ horizontal and 1 vertical).

7. Scaffolding or staging more than 3.25 metres above the ground or floor, swung or suspended from an overhead support, or erected with stationery support, shall have a guard rail properly attached, bolted, braced, and otherwise secured at least 1 metre high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
8. Working platforms, gangways, and stairways shall be so constructed that they do not sag unduly or unequally, and if height of a platform or gangway or stairway is more than 3.25 metres above ground level or floor level, it shall be closely boarded, have adequate width and be suitably fenced as described in 2 above.
9. Every opening in floor of a building or in a working platform shall be provided with suitable means to prevent fall of persons or materials by providing suitable fencing or railing with a minimum height of 1 metre.
10. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 3 metres in length. Width between side rails in a rung ladder shall in no case be less than 30 cm for ladder upto and including 3 metres in length. For longer ladders, this width shall be increased by at least 6 mm for each additional 30 cm of length. Uniform step spacing shall not exceed 30 cm.
11. Adequate precautions shall be taken to prevent danger from electrical equipment. No material on any of the sites shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The Contractor shall provide all necessary fencing and lights to protect public from accidents and shall be bound to bear expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay all damages and costs which may be awarded in any suit, action or proceedings to any such person or which may with the consent of the Corporation be paid to compromise any claim by any such person.
12. Excavation and Trenching : All trenches, 1.5 metres or more in depth, shall at all time be supplied with at least one ladder for each 30 metres in length or fraction thereof. Ladder shall be extended from bottom of trench to at least 1 metre above surface of the ground. Sides of a trench which is 1.5 metres or more in depth shall be stepped back to give suitable slope, or securely held by timber bracing, so as to avoid the danger of sides collapsing. Excavated material shall not be placed within 1.5 metres of edge of trench or half of depth of trench, whichever is more. Cutting shall be done from top to bottom. Under no circumstance shall undermining or undercutting be done.
13. Demolition: Before any demolition work is commenced and also during the process of the work:
 - 13.1 All roads and open area adjacent to the work site shall either be closed or suitably protected.
 - 13.2 No electric cable or apparatus which is liable to be a source of danger over a cable or apparatus used by operator shall remain electrically charged.
 - 13.3 All practical steps shall be taken to prevent danger to persons employed, from risk or fire or explosion, or flooding. No floor, roof, or other part of a building shall be so over-loaded with debris or materials as to render it unsafe.
14. All necessary personal safety equipment as considered adequate by the Engineer shall be available for use of persons employed on the site and maintained in a condition suitable for

immediate use, and the Contractor shall take adequate steps to ensure proper use of equipment by those concerned.

15. Workers employed on mixing asphaltic materials, cement and lime mortars/concrete shall be provided with protective footwear, hand gloves and goggles.
16. Those engaged in handling any material, which is injurious to eyes, should be provided with protective goggles.
17. Those engaged in welding works shall be provided with welder's protective eye-shields.
18. Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
19. When workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that manhole covers are opened and manholes are ventilated at least for an hour before workers are allowed to get into them. Manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to public.
20. The Contractor shall not employ men below the age of 18 and women on the work of painting with products containing lead in any form. Whenever men above the ages of 18 are employed on the work of lead painting, the following precautions shall be taken:
 - 20.1 No paint containing lead or lead products shall be used except in the form of paste or ready-made paint.
 - 20.2 Suitable facemasks shall be supplied for use by workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scraped.
 - 20.3 Overalls shall be supplied by the Contractor to workmen and adequate facilities shall be provided to enable working painters to wash during and on cessation of work.
21. When work is done near any place where there is a risk of drowning, all necessary equipment shall be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.
22. Use of hoisting machines and tackle including their attachments, anchorage, and supports shall conform to the following :
 - 22.1 These shall be of good mechanical construction, sound material and adequate strength and free from patent defects and shall be kept in good repair and in good working order.
 - 22.2 Every rope used in hoisting or lowering materials or as a means of suspension shall be durable quality and adequate strength, and free from patent defects.
23. Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years shall be in charge of any hoisting machine including any scaffold winch or give signals to operator.
24. In case of every hoisting machine and of every chain ring hook, shackle, swivel and pulley block used in hoisting or lowering or as means of suspension, safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with safe working load. In case of a hoisting machine having a variable safe working load, each safe working load and the conditions under which it is applicable shall be clearly indicated.. No part of any machine or of any gear referred to above in this paragraph shall be loaded beyond safe working load except for the purpose of testing.
25. In case of departmental machine, safe working load shall be notified by the Engineer. As regards Contractor's machine, the Contractor shall notify safe working load of each machine to the Engineer whenever he brings it to site of work and get it verified by the

Engineer.

26. Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguards, hoisting appliances shall be provided with such means as will reduce to the minimum risk of accidental descent of load adequate precautions shall be taken to reduce to the minimum risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations, which are already energized, insulating mats, wearing apparel such as gloves, sleeves and boots, as may be necessary, shall be provided. Workers shall not wear any rings, watches and carry keys or other materials, which are good conductors of electricity.
27. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in a safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities shall be provided at or near places of work.
28. These safety provisions shall be brought to the notice of all concerned by display on a notice board at a prominent place at the work spot. Persons responsible for ensuring compliance with the Safety Provisions shall be named therein by the Contractor.
29. To ensure effective enforcement of the rules and regulations relating to safety precautions, arrangements made by the Contractor shall be open to inspection by the Engineer or his representative and the Inspecting Officers.
30. Notwithstanding the above provisions 1 to 15, the Contractor is not exempted from the operation of any other Act or Rule in force.
31. Contractor shall fully responsible to provide safety measure / equipments necessary for breaking the dummies constructed to plug the pipe inlet and outlet in the manhole to avoid any accident.

Note: - Contractor Shall follows the directions furnished by Gujarat High court as well as Supreme court related to de-silting the sewerage pipe line & manholes. He shall take care of not lowering labour in the manhole as well pipeline during the work. He shall fully responsible for any accident if occurred during the work / contract period.

Signature of Contractor

Name :

**Deputy City Engineer
(NWZ)**

Ahmedabad Municipal Corporation

D:- TECHNICAL SPECIFICATIONS -

D1:- GENERAL

Sewers to be inspected shall be suitably cleaned by high vacuum suction equipment and by high pressure water jetting to remove all silt, grease and loose materials.

- Where necessary mechanical cleaning tools may be used to scrape off grease and encrustations in the sewer.
- All mass roots, intruding laterals and concrete shall be neatly cut off as required for proper structural lining work.
- Cleaning shall be carried out from the downstream access manhole or chamber (otherwise employer will direct to start the de-silting work) to the upstream access manhole or chamber and shall include all operations necessary to remove grease, slime, silt and loose materials from the sewer bore and manhole or chamber. All loosened and inherent silt and grease material in the pipeline shall be prevented from passing downstream by necessary stanking arrangement.

a) INSPECTION OF MANHOLES :

- Inspection of manhole conditions in accordance with WRC / MSCC is will be carried out concurrently during the inspection of sewer.
- Manhole inspection can also carried out manually with data logging of defects and general conditions.
- Provision will be made to provide photographic / video evidence of defects where applicable.
- Any defects found will be repaired by suitable method after getting approval from DJB.

b) BYPASS PUMPING / DIVERSION OF FLOW:

- The main and branch sewers including cross connections are considered flowing full generally in the morning peak hours. The bypass system provided shall be of sufficient capacity to handle the estimated flows on 24 hours basis.
- The bypass pumping/flow diversion arrangement shall be continuously monitored and cleaned or cleared off any obstructions due to the silts / grits with appropriate and quick disposals.
- Every day to ensure that the bypass arrangement is working properly and no overflow of sewage exists.
- The main sewer shall regularly desilt the diverted sewer network to ensure that there is no overflow of sewage occurs at any time.
- Joint inspection of the flow diversion arrangements can be carried out during lean and peak flow periods at least once in a week.
- Flow diversion plan shall be done at site to deploy necessary pumps of suitable capacity as per the site condition.

c) PUMPING FACILITIES:

- The provision will be made for , operation, maintenance and noise suppression of all over pumping plant, for the provision (including establishment and removal), operation & maintenance of all delivery hose installed and for the period during which bypass pumping work is required ; sinking hoses in trenches; backfilling and reinstating these trenches as required ; placing horizontal and/or ramped metal planting over temporary diversion of the delivery hose either in trench or at the road surface and for routing delivery hoses through other conduits, standing and plugging lateral connections as well as other relevant requirement. The pumping equipment shall be attended to all the time by competent pump operator

d) TELEVISION INSPECTION OF SEWERS

- The WORK of this Section includes pre-cleaning, when necessary, and performing a closed circuit television (CCTV) inspection of the indicated reaches of sewers. The minimum diameter of sewer for television inspection shall be 4 inches.
- The purpose of inspection is to detect and locate defects and document the current condition of the sewer, leading to evaluation and selection of repair methodology by the OWNER.][The purpose of inspection is to inspect and document the physical condition of the sewer after rehabilitation.] [The purpose of inspection is to document the condition of the new sewer.]
- The CONTRACTOR is cautioned that sewage will continue to flow to the sewers and that the WORK must be performed under permit required for confined space entry conditions.

a) SHOP DRAWINGS AND STANDARDS

The following shall be submitted in compliance with Section 01300.

1. CCTV equipment operational manual.
2. Location where debris from cleaning sewers will be disposed.
3. Schedule for cleaning and inspecting each sewer reach.

D2:- EXECUTION OF CLEANING THE SEWER LINE:

DIVERSION PUMPING

The CONTRACTOR shall install and operate sewage diversion pumping equipment to maintain sewage flows without backup, overflow or spill. He shall divert the flow of the existing line to be de-silted in to downstream of the same line. He shall inform to AMC staff about the diversion of the flow .He shall install the pumps of sufficient capacity so that no heading should be in upstream of the de-silting work. He shall study all the branch lines falling in the line to be de-silted. He shall keep well maintained register for every stacking used for diversion of the flow.

CLEANING

The CONTRACTOR shall select the cleaning equipment and method for cleaning based on the age, the material, and the probable condition of the sewer. More than one type of equipment or attachments may be required on a single reach or at a single location. The CONTRACTOR shall not damage the sewer or any manhole during cleaning.

When requested by the CONSTRUCTION MANAGER, the CONTRACTOR shall demonstrate the performance capabilities of the cleaning equipment and method proposed for use. If results obtained by the demonstration are not satisfactory, the CONTRACTOR shall select other methods or equipment that will clean the sewer line, and shall perform another demonstration.

For water pressure cleaning equipment, the CONTRACTOR shall install a gauge to monitor working pressure on the discharge of high-pressure water pumps.

The CONTRACTOR shall remove dirt, debris, and grease from the entire circumference of the sewer between manholes.

Acceptance of sewer cleaning work is contingent upon the successful completion of the television inspection. If television inspection shows debris, solids, sand, grease, or grit remaining in the line, the cleaning will be considered unsatisfactory, and the CONTRACTOR shall repeat cleaning and televising of the sewer line at no increased cost to the OWNER until cleaning is acceptable to AMC

CONSTRUCTION MANAGER

- A The CONTRACTOR shall remove sludge, dirt, sand, rocks, grease, roots, and other solid or semisolid material resulting from the cleaning operation at the downstream manhole of the section being cleaned. A suitable sand trap, weir, dam, or suction in the next downstream manhole shall be installed so that solids and debris are trapped for removal. Passing debris from one sewer section to any other sewer section shall not be allowed. Debris from the manholes shall be loaded into a leak proof, enclosed container that is permitted by applicable regulations for liquid waste hauling. All solids or semi-solid wastes shall be removed from the Site at the end of each work day. Debris, liquid waste, or sludge shall not accumulate at the Site.
- B The CONTRACTOR shall dispose of waste using a licensed waste transporter to a location licensed for the type of waste involved.

TELEVISION

A. CCTV Equipment

1. The camera system shall include a pan-and-tilt, radial viewing, pipe inspection camera that pans plus or minus 275 degrees and rotates 360 degrees with zooming capability. The CONTRACTOR shall use a camera with an accurate footage counter which displays, on the operator's monitor and the videotape, the distance of the camera from the centreline of the starting manhole. The CONTRACTOR shall use a camera with height adjustment so that the camera lens is always centered at one-half the inside diameter, or higher, in the pipe being televised. The CONTRACTOR shall provide a lighting system that allows the features and condition of the pipe to be clearly seen. A reflector in front of the camera may be required to enhance lighting in large diameter pipe. The camera system shall be controlled from the operator's truck.
2. Recording shall be on a 4-head VHS format VCR recorded at standard play mode in color.
 - b. Only segments between manholes on the same sewer reach shall be included on one videotape.
 - c. Two permanent labels are required. One label shall be placed on the spine and the other on the face of the videotape.
 - d. Cassette spine information
 - (1) CONTRACTOR NAME
 - (2) Project Name

(3) Tape Number

(4) Date Televised

(5) Date Submitted

e. Cassette face information

(1) Name of street

(2) From Manhole Number and VCR counter number

(3) To Manhole Number and VCR counter number

(4) Pipe Length and Size

(5) Project Name

(6) Tape Number

f. For each cassette the CONTRACTOR shall prepare a TV Inspection Report which shall be a complete written log of pipe conditions [and connections], indexed to the footage counter.

B. Inspection

1. The CONTRACTOR shall televise the sewer immediately after cleaning. It shall notify the CONSTRUCTION MANAGER 24 hours in advance of TV inspection so that the CONSTRUCTION MANAGER may observe inspection operations.
2. In addition, the CONTRACTOR shall clean all associated sewer manholes, and shall pan the camera to document the conditions of manholes. Camera operator shall slowly inspect each connection and sewer transitions from one pipe material to another.
3. Sewage flow during television inspection shall not be deeper than: Nominal Diameter Depth as Percent of Inches Inside Diameter

6 - 10 10

12 - 24 15

Greater than 24 20

If the flow exceeds the depth limit, the CONTRACTOR shall either perform the inspection during minimum flow times, pump or otherwise divert some flow, or use a camera with provisions for high velocity jet flushing.]

4. The CONTRACTOR shall move the camera downstream at a uniform rate not greater than 30 feet per minute. The CONTRACTOR shall stop and thoroughly inspect each of the following:
 - a. Collapsed pipe, obstructions
 - b. Structural cracking, with and without deflection
 - c. Missing portion of wall
 - d. Sag, excessively deflected joint
 - e. Cracked and open joints
 - f. Root intrusion
 - g. Protruding joint sealing material
 - h. Corrosion conditions, including exposed aggregate, exposed reinforcement, and disintegrated wall which exposes the soil surrounding the pipe.
 - i. Missing, damaged, bulging PVC sheet lining.

j. Protruding lateral joint

k. Inflow point]

5. The camera operator shall log on a suitable form his/her observations in the inspection of the above items.
6. If the camera is unable to pass an obstruction even though flow is unobstructed, the CONTRACTOR shall also approach the obstruction from the other direction in order to obtain complete video on both sides of the obstruction. The CONTRACTOR shall notify the CONSTRUCTION MANAGER whenever such an obstruction is encountered. The CONSTRUCTION MANAGER will determine if the obstruction must be removed.

D3:- Additional Conditions For Particular Work

1. Contractor shall work of cleaning the manhole as well as Pipe section with the use of machinery and all necessary instruments. Contractor shall work outside of the manhole and nobody shall work inside of the manhole in any occasion. If he will have to put any labour in manhole he shall make following necessary arrangement
 - A. Contractor shall keep both end of pipe in the manhole open if there will be any labour work in the manhole. He has to suck the foul gases from the manhole as well as pipe and blow the fresh air in the manhole as well as pipe section.
 - B. Contractor shall protect / Barricade the working site if any cover of manhole will be open for the work. He shall put the caution board around the Opened Manhole.
 - C. Contractor shall keep the manhole opened without any body in the manhole & blow the air as well as fresh water in the manhole check whether the gas has been removed from the manhole and then after he shall allow for labour in the manhole.
 - D. Contractor shall put the Gas detector in the manhole as well as put the lightened candle in the manhole so that Oxygen gas can be checked in the manhole.
 - E. Contractor shall put the alarm system in the manhole.
 - F. Any labour shall lower down in the manhole with the safety belt, Mask, Oxygen Cylinder, First Aid Box and contractor shall take care of the labour.
 - G. Contractor shall provide any tool to the labour very carefully while he is working in the manhole so that any hazardous may not be arises.
 - H. Contractor shall arrange Mucadum and Supervisor continuous on the site during the work
 - I. Contractor shall arrange the training for the labours working in the manhole to operate the safety measures.
 - J. Contractor shall provide Uniform as well as operating tools to work in the manhole.
 - K. Contractor shall make the arrangement that every cover of the manhole shall be fixed on the manhole sheet after the work will be completed.
 - L. Contractor shall remove the sludge/ silt removed from the manhole and pipe section such a way that it may not be dangerous for health of public and traffic of the road around vicinity of the work area.
 - M. Contractor shall furnish the data daily to the AMC office and shall make the arrangement accordingly.
 - N. Contractor shall provide the Mobile phone to his supervisor/ Engineer on the work place for better coordination with AMC staff.
 - O. Contractor shall appoint eligible and capable supervisor to handle the any type of situation / accident at the site and he should remain present at the work site.
 - P. If any accident occurs at the work site contractor shall fully responsible and AMC will not provide any help in that manner.
 - Q. The Contractor shall maintain suitable working conditions such as approach for labours and the Vehicles / Equipments up to the Manhole on his cost.

R. Contractor shall arrange water tanker as and when required water during the commissioning of the network.

Seal and Signature of the Bidder

Deputy City Engineer

(NWZ)

Date:

Ahmedabad Municipal Corporation

D4:- MEASUREMENT FOR INDIVIDUAL ITEMS

ITEM -

Survey to determine sewer alignment, levels, M/H positions, including tracing of buried manholes along alignment, proximity of structures, measurement of exact length between manholes & invert level, position and detail of cross connections & submission of drawing in two sets etc complete as per direction of engineer in charge of the work:-

Measurement shall be on No. bases. Contractor shall find the buried manholes by high frequency metal detector or other latest modified technology equipment. He shall survey the existing manhole and submit the drawing to the engineer in charge of the work.

ITEM :-

Temporary / Permanent Plugging and blocking of sewer line, branch connections and diversion of flows and removal of all plugs etc.

Measurement shall be on No. bases. Contractor shall construct temporary pucca dummy in main line or branch lines opening in the manhole to close the sewer flow for de-silting the sewer pipe in working stretch and to divert the sewage flow by brick masonry or other means in optional pipe.

Contractor shall open the dummy after de-silting work completed and remove all debris from the manhole.

Rate also includes of line commissioning after de-silting it with if available nearby freely. If it not available in the near vicinity area freely Contractor himself provide it on his own cost

ITEM :-

loosen, de-silt and thoroughly clean and remove debris and objects such as boulders, bricks etc, bacteriological slimes, roots, encrustations, grease, carbonated deposits, etc from heavily surcharged sewer line by super sucker machine with high flow jetting and vacuum system including safe disposal of silt / debris / malba / objects etc with carting within AMC limit. Rate includes divergence of the sewer flow from working stretch of the line by installation of proper pumping system so that there should not be over surcharging in upstream of the working stretch (upstream of the plugged line). Rate includes 100% CCTV survey of de-silted sewer line with camera on pan and tilt rotated 360 and recording and submitting 3 sets of CD and sufficient copies of Still Photographs. Rate also includes supply of all material, labours, tools and plants, temporary power connection with standby generator of sufficient power output, gas detector, forced air ventilators and provision of safety equipments as per guideline laid by ISI1972(and 1987), international standard traffic control arrangements and proper lighting at night, barricading, display of sign boards:-

Measurement shall be considered on Running meter length bases. Item includes De-silting work for existing following size dia. sewerage line and its manhole of any size and depth. Work shall be executed as per guideline of honorable Supreme Court. Rate includes Loosen, de-silt and thoroughly clean and remove debris and objects such as boulders, bricks etc, bacteriological slimes, roots, encrustations, grease, carbonated deposits, etc from heavily surcharged sewer line by super sucker machine with high flow jetting and vacuum system including safe disposal of silt / debris / malba / objects etc with carting within AMC limit. Rate includes divergence of the sewer flow from working stretch of the line by installation of proper pumping system so that there should not be over surcharging in upstream of the working stretch (upstream of the plugged line). Rate includes 100% CCTV survey of de-silted sewer line with camera on pan and tilt rotated 360° and recording and submitting 3 sets of CD and sufficient copies of Still Photographs. Rate also includes supply of all material, labours, tools and plants, temporary power connection with standby generator of sufficient power output, gas detector, forced air ventilators and provision of safety equipments as per guideline laid by ISI1972 (and 1987), international standard traffic control arrangements and proper lighting at night, barricading, display of sign boards

Contractor shall arrangement for the safety and securities system with barricading on site, carting of silt up to 5.0 Km lead, required power arrangement, machinery, equipments and manpower at the work. If any water found in the pipeline or manhole contractor shall dewater from the manhole or pipeline by any means of machinery. He shall take care of not disturbing any people residing in the vicinity area during the work of dewatering and de-silting. He shall take care of not lowering any labour in the manhole / pipe. Contractor shall use any kind of machinery as well as equipments for de-silting the pipeline. After de-silting the pipe as well as manhole Engineer in charge of the work shall verify the pipeline whether it is cleared or not. He shall have to make the arrangement of any kind of material like water

and equipments like pump, hosepipe, Fighter, Jetting, Suction machinery, for testing and commissioning the pipeline. All rates are inclusive of dewatering, de-silting, carting the silt at 5 km lead, testing and commissioning the pipeline with barricading, safety guards.

Contractor shall have to make the line dead (Free of sewage flow) if the line found flowing with the Clean or Sewage Flow at his own risk and cost. He shall make the arrangement for diverting the sewage flow from the sewage flow.

Seal and Signature of the Bidder

Deputy City Engineer
(NWZ)

Mobile No.:-

**AHMEDABAD MUNICIPAL CORPORATION
ENGINEERING DEPARTMENT
GENERAL CONDITION**

As per City Engineer's circular no.-6/2011-12 Dt.24.6.2011 all terms & conditions will be applied.

**Seal and Signature of the Bidder
Date:**

**Deputy City Engineer
(North West Zone)**