Piped Gas Provision policy

1. Pipe gas is a desired service and also makes the building safer. Lodha should make all efforts to provide it.
2. However, in MMR, Mahanagar Gas Limited (MGL) has a monopoly (has in 2015) and their service standards are quite poor.
3. In general, MGL insists that:
    a. They will start laying of lines only after 50%+ occupancy has been reached for a residential development.
    b. They are happy to provide immediate connection to commercial users like restaurant.
4. In view of the above, following process shall be followed:
    a. Piped gas should be promised at a project, only after Design-MEP verifies that MGL has a supply network within 2 kms. radius of the site.
    b. As soon as piped gas is promised at a project, Design-MEP will write to MGL and inform them that we would like piped gas supply at the project wef _____ (date of possession).
    c. Design-MEP will initiate follow-up conversation with MGL as to whether it is willing to lay the network through their own contractors (with Lodha paying for it) or whether MGL would like Lodha to lay the network through its own contractors.
    d. If no reply is received from MGL within 6 months of construction start (subject to at least 2 months having passed since Lodha informs them and in this time, at least follow-up meeting in done by Lodha Procurement (MEP Package) and/or Design MEP) or if MGL says Lodha should do with its own contractors, Lodha should go ahead with appointment of own contractor to carry out the work as per norms shown in *Annexure A* – if these norms are being followed, no further reference/confirmation from MGL is required. Only individual meter should in MGL's scope.
    e. The contractor appointment should be such that the contractor is responsible for:
        i. Shop drawing submission
        ii. Technical submissions, if any, to MGL
        iii. All material procurement and execution
        iv. Testing and commissioning of the system as per British Standards

    Note: any coordination with MGL shall be done by Procurement (MEP Package).
    f. Once works are completed and prior to final testing & Commissioning by procurement, CM-MEP (directly or through Lodha Procurement) should coordinate with MGL for a site visit and try to get them to takeover the infrastructure as soon as possible.

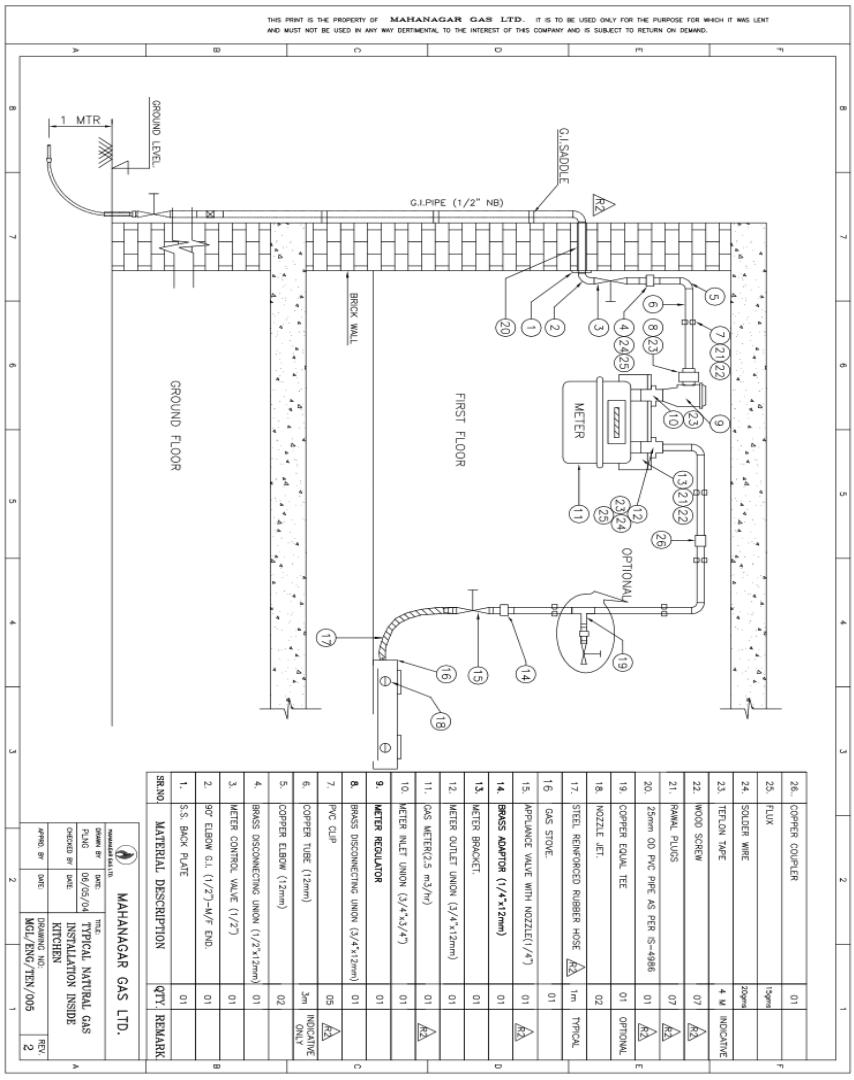
5. Agreement with MGL to provide gas and takeover/maintain infrastructure shall be coordinated by Procurement (MEP Package).

Annexure A

	Locating of the routing	Type of routing material to be used	Safety precautions to be taken	Servicing precautions to be taken	MGL Guidelines Reference
Routing from tapping point outside site to covered area (like building ground floor / parking podium)	**01**. Gas Metering and Regulating Station (MRS) to be located at the entry point to plot/ nearest to plot boundary. The approximate size of MRS for multi building projects shall be 3500 mm X 2000 mm X 2500 mm. **02.** Service Regulators (SR) to be located near to each building/Tower as per MGL approved Design. **03.** Tap off from MGL main pipe line to MRS shall be by MGL. **04.** MRS room to be naturally ventilated by louvers/perforated facade with 50% open area. **05.** Pipe from MRS to SR and then to building foot print/podium to be buried with minimum depth of 1000mm and with 300mm clearance between any other services. **06.** Location and area for MRS shall be as per MGL guidelines and approval to be obtained.	HDPE/MDPE with Electro Fusion joints	**01.**The distance between fencing and the wall of nearest building / structure shall not be less than two (2) meters. 02. Minimum 300 mm clearance to be provided for gas pipes from any other services. **03.** Identification label along with buried gas pipe shall be provided. **04**. All buried PE pipes to be protected with inverted 'C' section of RCC/Precast material . **05**. Adequate ventilation to be provided for receiving station depending upon size. Natural ventilation with 50% open louvers is preferred.	**01.** Pipes shall be laid in easily accessible area viz. foot path/RG area for ease access without damaging the Road or structural elements. **02**. Pipe routing should have free access at all the time for maintenance.	
Horizontal routing within the building.	**01.** Vertical piping from ground floor to top most podium/car parking floor shall be routed at location which avoids the mechanical damages. However, metal framing/ bollard to be provided around the gas piping. **02.** The shaft/riser in which the gas risers are installed shall be naturally ventilated with minimum 50% open area/as recommended by MGL. The facade treatment with louvers/perforated mesh shall be by architect. **03.** Horizontal Looping :- Horizontal looping is preferred at high level of top most parking floor. If the same is not possible for any other reason then pipe can be buried in RG area at the top most level. **04**. Pipes can also be buried at Ground floor if the building doesn't have any parking floor above ground.	**01.** GI pipes class B/C with welded Joints- Exposed piping. **02**. PE pipes with Electro Electro Fusion Joints - Buried Piping.	**01.** Ensure adequate ventilation for exposed pipes. **02.** Ensure suitable protection from mechanical damages by providing metal framing/ bollard around the gas piping. **03**. For high rise building expansion loop in riser at every 10 floors /as per design calculations should be provided to compensate the pipe expansion/contraction, seismic and building sway movement **04**. Anchor and Guide Support shall be properly located in the riser to allow pipes to compensate for thermal expansion/contraction, column shortning and building sway movement. . **05.** All exposed pipes to be painted with yellow colour enamel paint . **06.** Warning sign to be provided for gas pipe running in car park, basement and inside building. **07.**Seismic vendor/consultant to be appointed for buildings more than 150M.	**01**. Riser/horizontal gas piping at Exposed areas are ease to access, however same needs to be coordinated with architect before finalization of the routing.	**01.** MGL COP:Section 4 - PE Mains & Service Laying - Document no AIQ009 issue no 1.1 dated 20.04.2009 **02**. Annexure-1 of Section 4, Document no. AIQ009 dated 20.04.2009 issued by MGL. **03**. Drawing MGL/ENG/REL/MP/02 REV-0 DATED 18/08/2003 **04**. MGL COP : Section 11 - Installation of pipe worj operating at pressure upto 25 mbar. Issue no 1.1 and dated 01.09.2010
Vertical routing to each floor	**01.** Riser routing is preferred in utility/service ledge adjacent to kitchen minimum piping length from riser to kitchen. **02.** The shaft/riser in which the gas risers are installed shall be naturally ventilated with minimum 50% open area/as recommended by MGL. The facade treatment with louvers/perforated mesh shall be by architect **03**. Riser Isolation Valve (RIV) to be provided at the bottom of each riser at 1.5 M above from floor level. PE pipe connection to GI pipes to be extended to 0.5 M above finished level and same shall be protected with RCC guard.	**01.** GI pipes class B/C with welded Joints- Exposed piping.	**01.** Ensure adequate ventilation for exposed pipes and proper protection from mechanical damages by providing metal framing/ bollard around the gas piping. **02**. MGL has no objection to route the Gas riser along with other MEP services a. Ventilation Ducts & Vacuum pipe operate at sub atmospheric pressure. B. Services' containing oxidizing or corrosive fluids However a minimum 300mm separation shall be provided with other services for maintenance. **03**. For high rise building expansion loop in riser at every 10 floors /as per design calculations should be provided to compensate the pipe expansion/contraction, seismic and building sway movement **04**. Anchor and Guide Support shall be properly located in the riser to allow pipes to compensate for thermal expansion/contraction, column shortning and building sway movement. . **05**. All exposed pipes to be painted with yellow colour enamel paint **06**. Seismic vendor/consultant to be appointed for buildings more than 150M.	**01.** Riser/horizontal gas piping at Exposed areas are ease to access, however same needs to be coordinated with architect before finalization of the routing..	
Meter Point	**01**. Gas meter for each unit (Flat) is preferred on the wall whose external side is open to atmosphere with minimum length of uncontrolled inlet pipe to kitchen. Gas meter can also be installed in Dry Balcony next to kitchen. **02**. A Meter Control Valve (MRV) is fitted immediately upstream of the meter enable the internal pipe work inside the property to be isolated from the upstream gas supply network for maintenance and safety. The location of valve shall be easily accessible.	**01.** Copper Pipe	**01**. Ensure adequate ventilation for exposed pipes and proper protection from mechanical damages by providing metal framing/ bollard around the gas piping. **02.** Lateral extending from Riser at right angles must extend 400mm and 750 mm before passing through a wall for up to 8 floors and 18th floors respectively. **03**. For the floors above 18th floors a stainless steel flexible hose shall be fitted to horizontal branch off.	**01.** Should be provided with easy access and platform at every floor for installation, Meter Reading and maintenance. **02.** For the meter fitted externally on the building a secure weather proof housing must be provided together with ease access for regular meter reading and maintenance.	
Connection from meter to appliance in kitchen	**01**. Exposed Piping :- Pipe from gas meter to the burner can be first dropped exposed (service ledge) up to counter height and then routed inside the kitchen just above the counter to install Emergency shut off valve. **02.** Gas leak detector shall be on the ceiling for PNG system. 03. Gas leak detector shall be interfaced directly to VDP if required.	**01.** Copper Pipe	**01.** Emergency shut off valve shall be provided inside kitchen near to burner to shut off the gas supply in case of any emergency.		**Sushant B: Rev 1**

Annexure B

Comment [S1]: R1



Annexure C.

Comment [S2]: R1

MGL Reticulated System

Objective:- To enable Developers / LODHA to construct PNG infrastructure along with Building Construction.

Application:- This system is applicable to all developments up to G+40 floor buildings, and above 40 Floors. The possession of the Flats shall be within 18 Months of signing the agreement.

Description:- MGL Reticulated system will allow us to construct PNG network inside the building along with building construction. LODHA will construct the entire PNG infrastructure inside the building including procurement of material and MGL will establish connectivity to the building as per the agreed timelines.

For buildings up to G+40 Floors: - The network construction shall be as per the design provided by MGL and in accordance with T4S standards issued by PNGRB. Quality of network will be monitored by MGL appointed TPI.

For buildings Above 40 Floors: - The network construction shall be designed by the LODHA 'S Appointed Consultant in accordance with T4S standards issued by PNGRB. Quality of network will be monitored by Developer appointed TPI.

MGL will commission and buy the entire network from LODHA post quality assurance by TPI by paying **Rs. 5000 X No. of flats** and future Operations & Maintenance will be carried out by MGL.

LODHA will register all the flats in the building by paying Rs. 6250/- per flat. Billing to all the flats will start immediately after commissioning of Network.

Scope of Work:- Details of Scope of work are as follows:-

Comment [S3]: R1

Sr. No.	Activity	Responsibility	Remarks
1	MP Connectivity Till the Building	MGL	**a.** Developer shall submit a BG equivalent to cost of MGL dedicated investment for Network Creation for the building within 1 month of signing the agreement with a validity of 3 years. **b.** MGL will release the BG after Commissioning of Network.
2	SR/MRS Installation	MGL	
3	Designing of LP and GI routes and pipeline sizing.	MGL /LODHA	For buildings up to G+40 Floors:- MGL For buildings Above 40 Floors:- LODHA
4	Construction of LP and GI pipeline as per Drawing provided	LODHA	
5	Procurement of Material for LP, GI, AMR meter, meter regulator, Copper Pipe and all other fittings and Valves	LODHA	
6	Preparation of all the drawings and formats for Network Construction	LODHA	All the drawings and format shall be as per MGL approved format
7	Registration and conversion of all the Flats inside Building	LODHA	
8	Quality Monitoring and Conversion of PNG	MGL/LLODHA appointed TPI	For buildings up to G+40 Floors:- MGL For buildings Above 40 Floors:- LODHA
9	Commissioning of Network	MGL	
10	Defect Liability of Network for a period of 1 year post commissioning.	LODHA	**a.** Developer shall pay a BG equivalent to 10% of the Network Transfer Charges on or before the gasification of the Network and the same shall be valid for 1 year post Gasification. **b.** MGL will release the BG after 1 year of Network Gasification