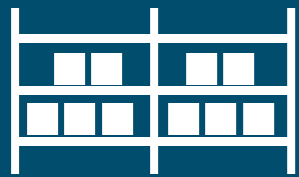
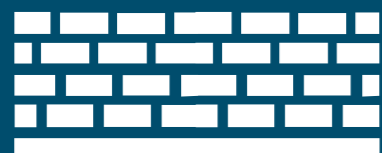


3

الهيئة العامة للغذاء والدواء
العلمية
العمالة



الهيئة العامة للغذاء والدواء
العلمية



SMART KITCHEN

INFRASTRUCTURE GUIDE

PART III - LAYOUT AND ANNEXES

PREAMBLE

This manual is divided into three parts

- I. Spatial planning and requirements
- II. Services and specifications
- III. Layout and annexes

Part III contains layouts and diagrams that illustrate smart kitchen designing. According to the number of persons catered, variations of three different kitchens have been demonstrated.

- **200 persons**
- **800 persons**
- **1600 persons**

The three layouts combined, assist you in visualising the ideal layout for your kitchen.

THE LAW IN YOUR KITCHEN

The design of a the FMB Kitchen facility is required to meet all local statutory legislation prevalent in your city/ country.

These guidelines are meant to support the existing codes of practice and standards set by local regulating authorities.

In India the most important building and food hygiene regulations are:

- National Building Code of India, 2005
- Food Safety and Standards Act, 2006
- Food Safety and Standards Authority of India, 2011

Note: All dimensions are in millimeters unless specified otherwise.

Whenever niyaz thaal are served from the same kitchen; thaal serving and related services must be taken into consideration.

CONTENTS

ANNEXES

200 PAX KITCHEN

1. Architectural Layout
2. Key Design Notes
3. Hot And Cold Water supply Layout
4. Internal And External Drainage Layout
5. Fire Extinguisher Location Layout
6. Mechanical Ventilation Layout
7. Gas Bank And Piping Layout
8. Electrical Layout

800 PAX KITCHEN

9. Architectural Layout
10. Key Design Notes
11. Hot And Cold Water supply Layout
12. Internal And External Drainage Layout
13. Fire Extinguisher Location Layout
14. Mechanical Ventilation Layout
15. Gas Bank And Piping Layout
16. Electrical Layout

1600 PAX KITCHEN

17. Architectural Layout
18. Key Design Notes
19. Hot And Cold Water supply Layout
20. Internal And External Drainage Layout
21. Fire Extinguisher Location Layout
22. Mechanical Ventilation Layout
23. Gas Bank And Piping Layout
24. Electrical Layout

25. TYPICAL SINGLE LINE DIAGRAM FOR HOT AND COLD WATER SUPPLY

26. TYPICAL SINGLE LINE DIAGRAM FOR ELECTRICAL WORKS

27. TYPICAL PIPING LAYOUT FOR GAS PIPING

28. AREA ANALYSIS DIAGRAM

29. MOUNTING AND WORKING HEIGHTS FOR HUMAN ANTHROPOMETRY

30. MOUNTING HEIGHTS OF FITTINGS AND FIXTURES IN TOILETS

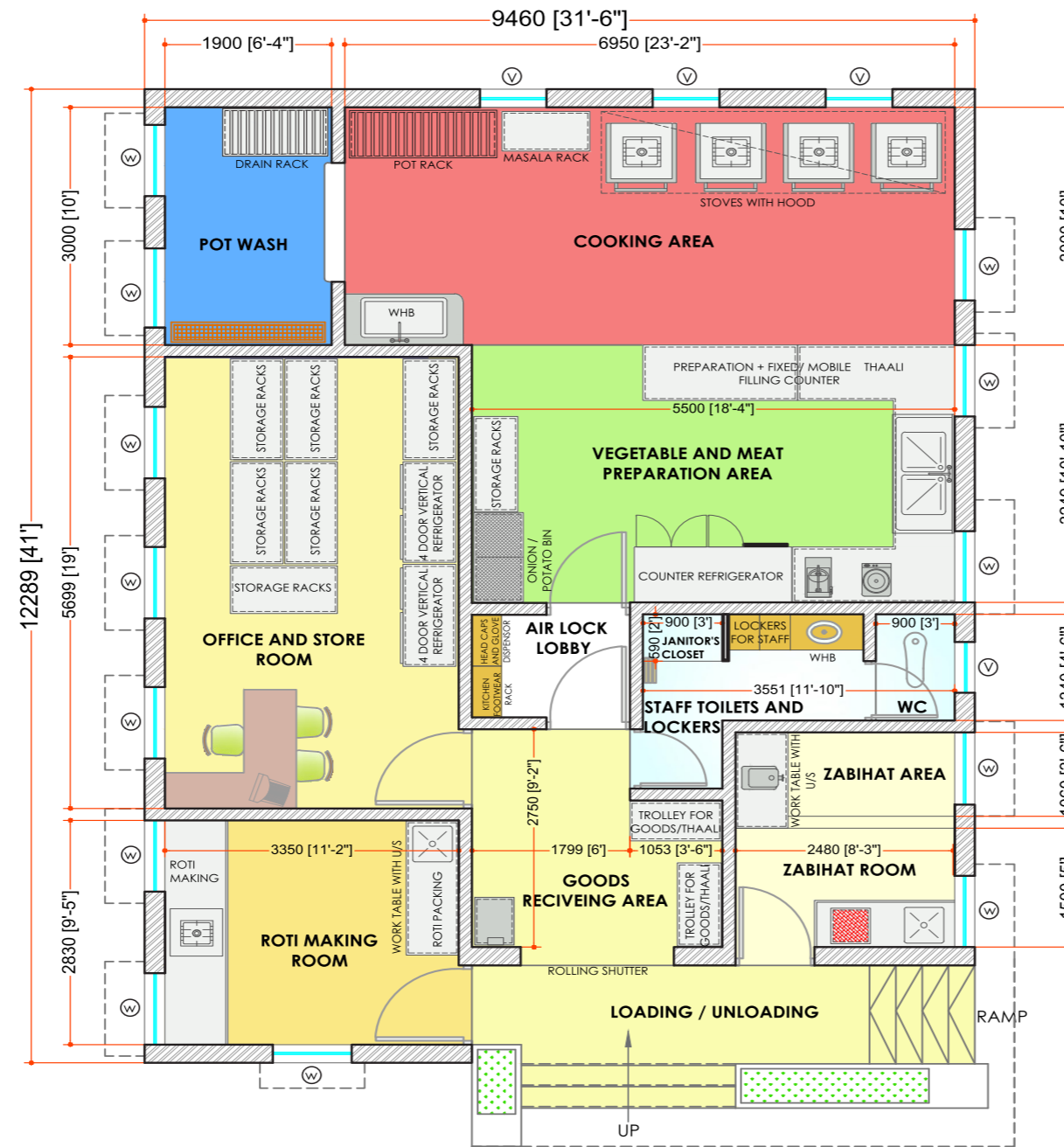
31. SEPTIC TANK

32. WORK FLOW DIAGRAM WITH PANTRY

33. PANTRY LAYOUT

ANNEXURE: 01

200 pax



LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT

BEST ORIENTATION

SATISFACTORY ORIENTATION

ACCEPTABLE ORIENTATION

PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH

KITCHEN TYPE - 200 PAX

TITLE - TYPICAL KITCHEN LAYOUT

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BUILT UP AREA - 100.00 SQ.M.

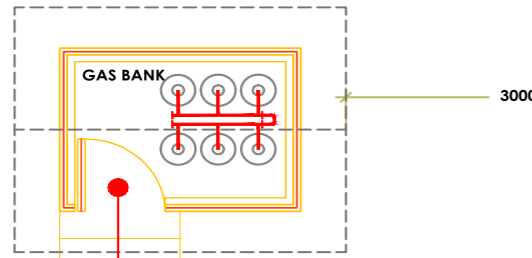


ANNEXURE: 02

200 pax

POT WASH AREA:

- has functional relationship with preparation, cooking and thaali filling areas
- to be placed at the end of the work flow to avoid interference with other functions



GAS BANK:

- should be minimum 3.0 m away from building, transformer, generator and any DP road adjoining site (as shown in the plan). It should not be in parking
- In cases where the gas bank cannot be provided as separate shed then shall be separated from the rest of the kitchen by full height RCC walls having 4 hour fire resistance rating. These walls shall have no openings

GOODS STORE:

- cold and dry store can be common in kitchens with small operations, where space is limited
- should have easy access to the kitchen and the loading - unloading area
- should be in cool area and not adjoining any area where heat transfer through the walls and piping is likely.
- access to the store and the corridors shall be wide for easy movement of goods and trolleys
- kitchen store and office can be combined to save space. Hence to be planned in close proximity to main entrance of the premises

AIR-LOCK LOBBY:

- provided to cut off the non-hygienic areas (ancillary areas like office, store, staff facilities) from hygienic areas (preparation and cooking areas)
- limits access of visitors, vendors and staff up to the kitchen office and staff facilities only

ROTI MAKING AREA:

- has indirect functional relationship with the stores and thaali filling areas.
- should have secluded entrance from outside, no interference with cooking processes
- the area may have arrangements for making roti while sitting.

LOADING / UNLOADING PLATFORM:

- to be planned in close proximity to goods receiving area and main entrance to premises
- should have vehicular access
- ramp (slope 1:12) to be provided

COOKING AREA:

- has functional relationship with dry and cold store, preparation area, thaali filling and pot wash area
- location of mechanized ventilation hoods / exhaust fans and openings for natural ventilation should be properly distributed
- design considerations (spatial and services) shall include the present numbers being served and future expansion

PREPARATION AREAS - VEGETABLE AND MEAT:

- the preparation areas should be separate from cooking areas
- vegetable and meat preparation can be common in small operation kitchens, where space is limited
- has functional relationship with dry and cold store, cooking area and pot wash area
- equipment placement to be according to their functions and actual dimensions should be taken into consideration

JANITORIAL CLOSET:

- used for the storage of cleaning materials and equipment
- should be located away from food preparation areas. can be clubbed in toilets.
- a water tap and floor trap to be provided

STAFF AMENITIES-TOILETS AND CHANGING AREAS:

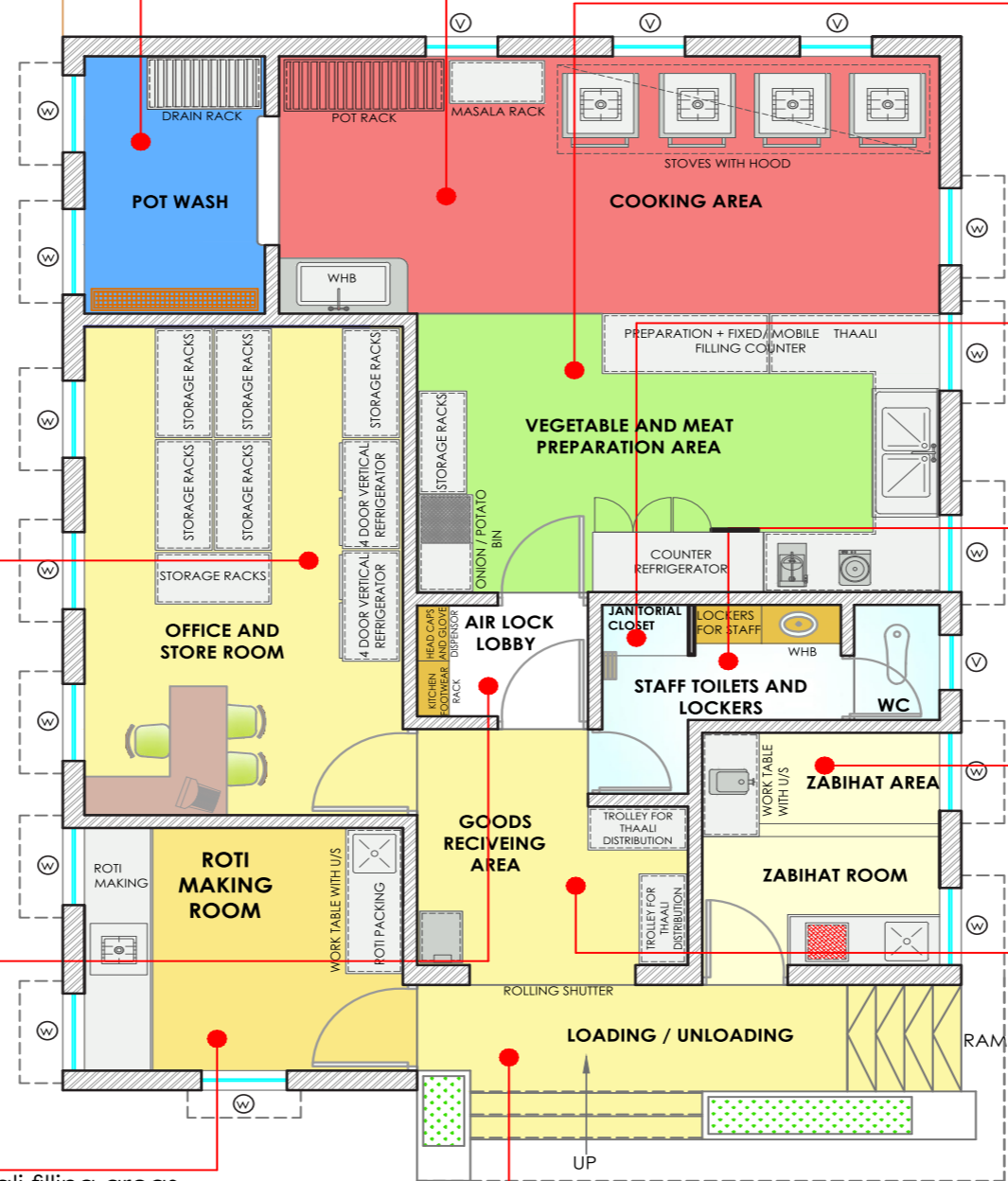
- location should not interfere with any of the kitchen activities be it goods, food or waste
- no direct access from cooking or preparation areas
- cut off lobby with lockers / wash basin must be planned to provide indirect access to WC's from other areas

ZABIHAT AREA:

- should not interfere with any other areas of the kitchen
- should have a secluded entrance
- cities where zabihats are not frequent, a zabihat area is not essential

GOODS RECEIVING AREA:

- to be located adjacent to stores, but separate from kitchen area, to avoid vendors entering the kitchen
- should have sufficient space for keeping trolleys and weighing scale, allowing unhindered movement of man and material



ENTRANCE TO KITCHEN AND PARKING FOR GOODS VEHICLE

BUILT UP AREA - 100.00 SQ.M.

LEGEND: KITCHEN EQUIPMENTS

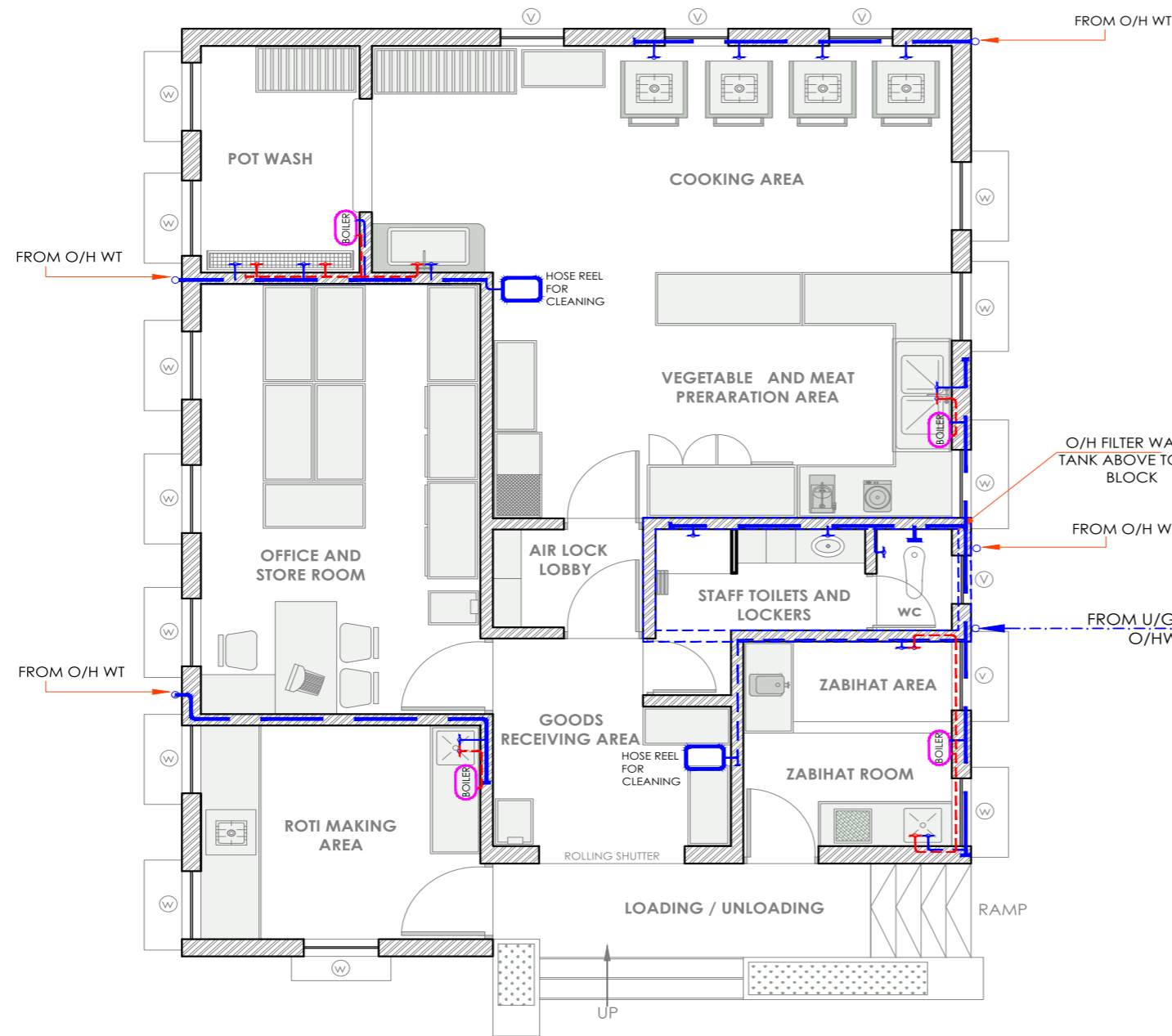
	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT

BEST ORIENTATION	
SATISFACTORY ORIENTATION	
ACCEPTABLE ORIENTATION	

PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID II BURHANIYAH			
KITCHEN TYPE - 200 PAX			
TITLE - DESIGN CONSIDERATIONS			
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ANNEXURE: 03

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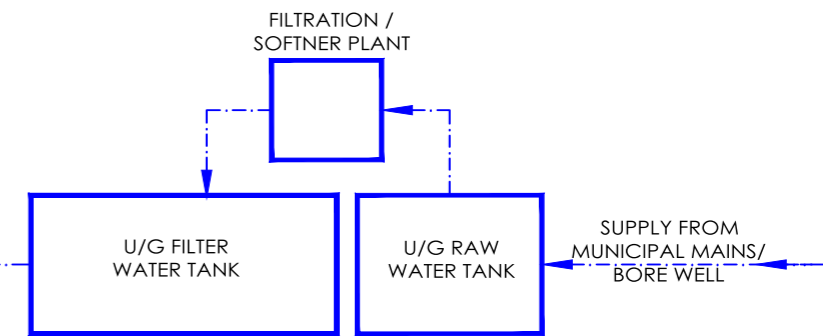


LEGEND

SR. NO.	TYPE	DESCRIPTION
1.		(RW) RAW WATER SUPPLY 40NB UPVC PIPE (CONCEALED IN WALL)
2.		(HW) HOT WATER SUPPLY - BOILER TO DISTRIBUTION 15NB CPVC PIPE (CONCEALED IN WALL)
3.		BOILER
4.		HOSE REEL

NOTES :-

1. HOT WATER SUPPLY TO BATHROOMS CAN BE PROVIDED AS PER REQUIREMENT OF MAWZE



LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE

BUILT UP AREA - 100.00 SQ.M.

BEST ORIENTATION

SATISFACTORY ORIENTATION

ACCEPTABLE ORIENTATION

PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH

KITCHEN TYPE - 200 PAX

TITLE - HOT AND COLD WATER SUPPLY LAYOUT

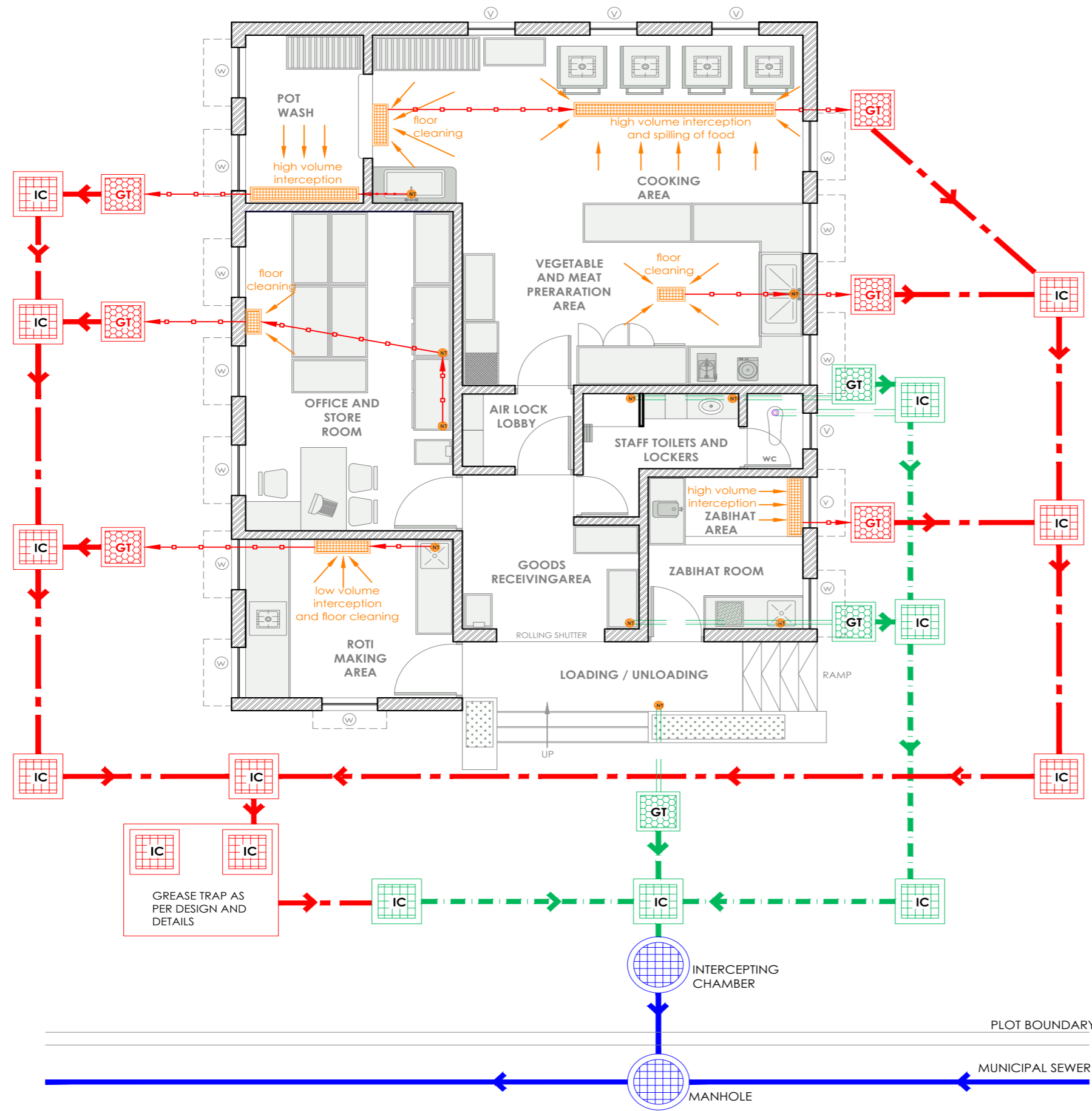
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ANNEXURE: 04

200 pax



LEGEND:-

SR. NO.	TYPE	DESCRIPTION
1.		GULLY TRAP
2.		INTERSECTING CHAMBER
3.		RCC HUME PIPE FOR CONNECTION FROM GULLY TRAP TO GREASE TRAP
4.		RCC HUME PIPE FOR CONNECTION FROM GULLY TRAP TO INTERSECTING CHAMBER
5.		RCC HUME PIPE FOR CONNECTION FROM INTERSECTING CHAMBER TO EXTERNAL MANHOLE AND MUNICIPAL SEWER
6.		NAHNI TRAP
7.		WASTE WATER DRAIN/CHANNEL WITH SS GRATING

NOTES :-

- SEWER LINE SHALL BE LAID WITH RESPECT TO SITE CONTOUR.

LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE

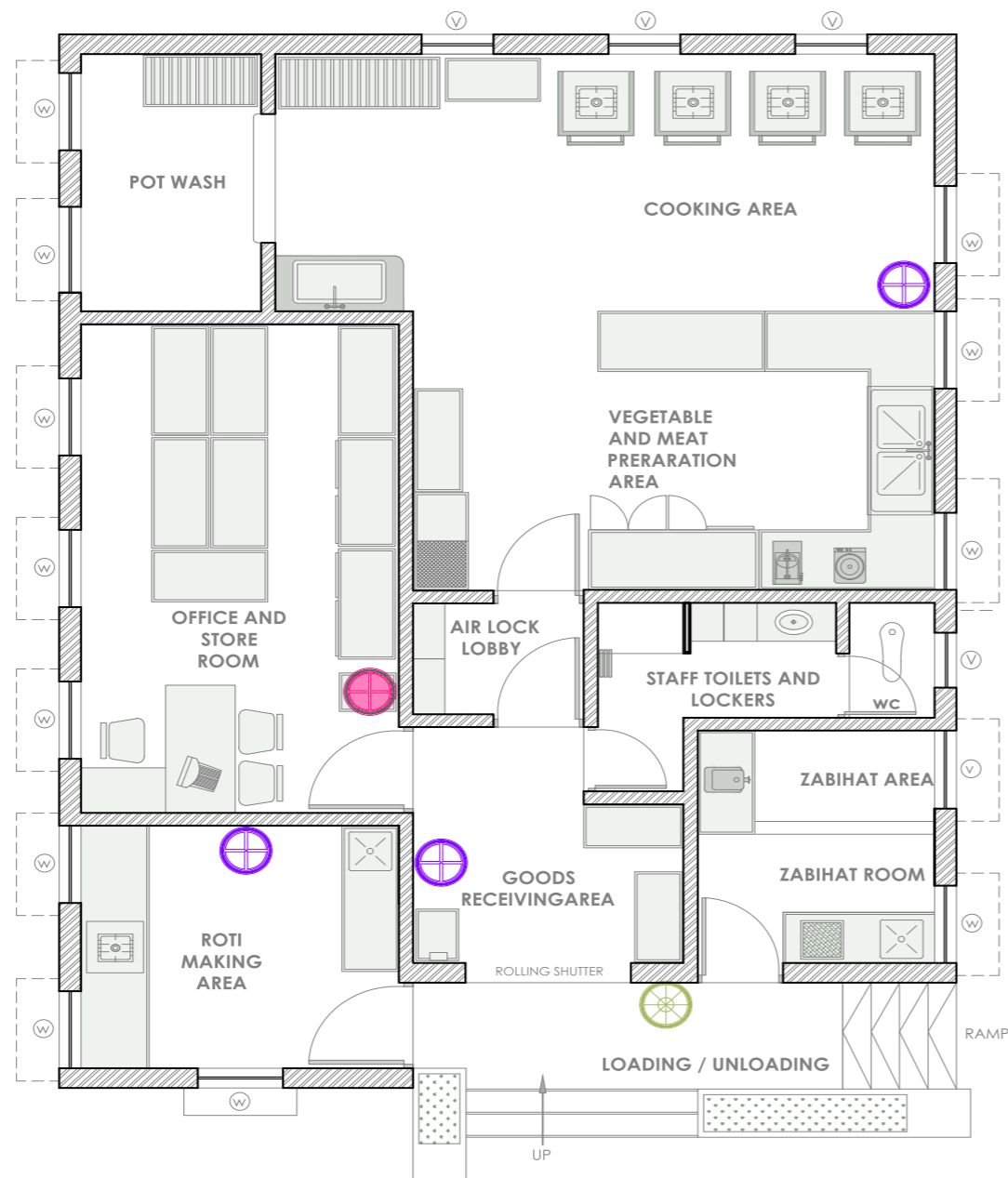
BUILT UP AREA - 100.00 SQ.M.

<p>BEST ORIENTATION</p> <p>SATISFACTORY ORIENTATION</p> <p>ACCEPTABLE ORIENTATION</p>	<p>PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH</p> <p>KITCHEN TYPE - 200 PAX</p> <p>TITLE - INTERNAL AND EXTERNAL DRAINAGE LAYOUT</p>			
	<p>APPROVED BY</p> <p>FMB</p>	<p>DATE</p> <p>20/10/15</p>		
	<p>Faiz ul Mawaid il Burhaniyah office Badri Mahal in collaboration with architects and consultants</p>			



ANNEXURE: **05**

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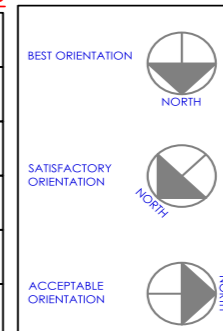


LEGEND

SR. NO.	TYPE	DESCRIPTION
1.		ABC TYPE FIRE EXTINGUISHER 2 KG.
2.		WET CHEMICAL FIRE EXTINGUISHER 4 KG.
3.		DRY POWDER FIRE EXTINGUISHER 9 KG

LEGEND: KITCHEN EQUIPMENTS BUILT UP AREA - 100.00 SQ.M.

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE



PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH

KITCHEN TYPE - 200 PAX

TITLE - FIRE EXTINGUISHER LOCATION LAYOUT

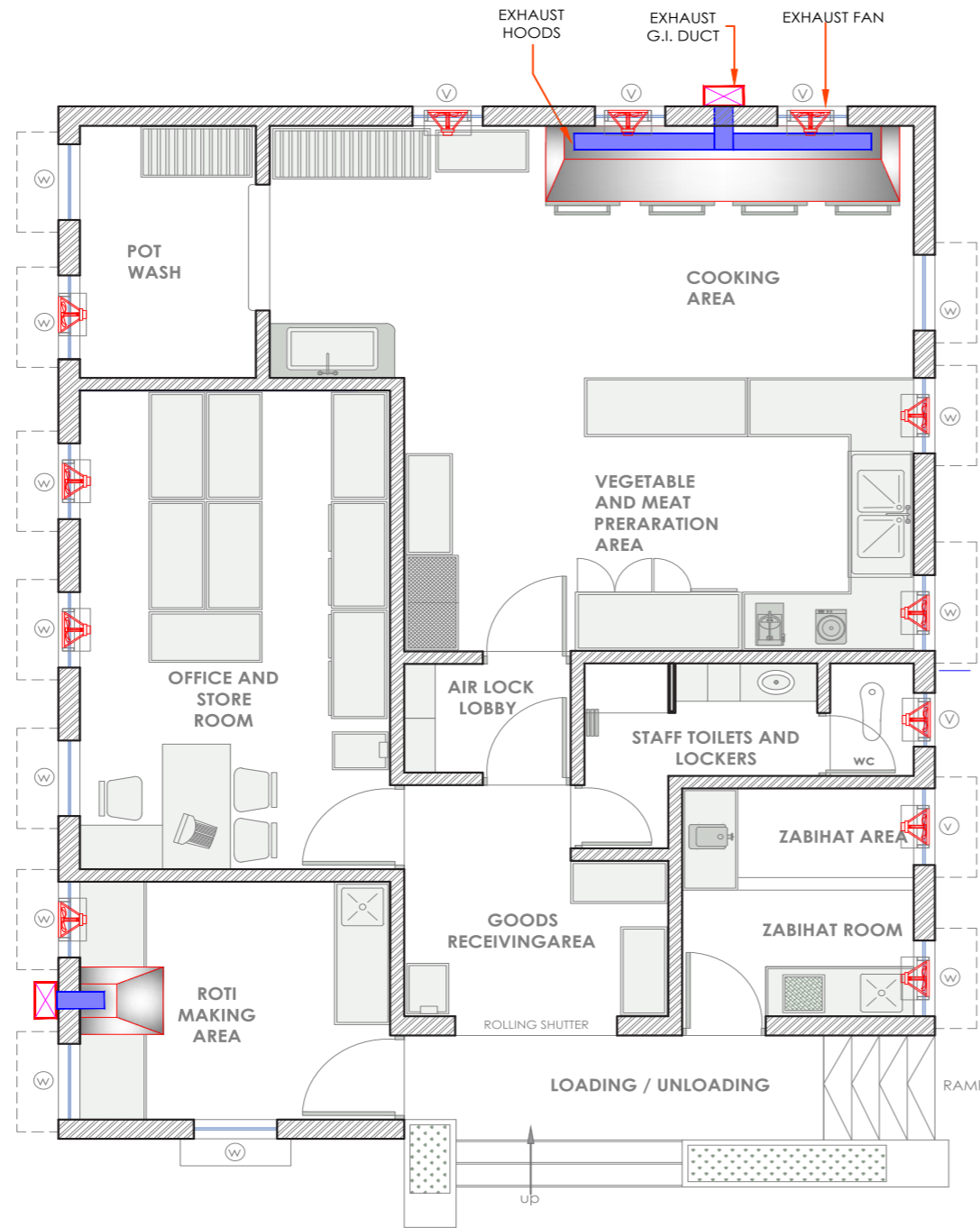
APPROVED BY	FMB	DATE	20/10/15
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ANNEXURE: 06

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NOTES :-

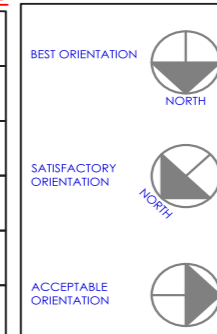
1. KITCHENS USING EXHAUST HOODS DO NOT NEED EXHAUST FANS ABOVE STOVES

LEGEND

SR. NO.	TYPE	DESCRIPTION
1.		EXHAUST HOOD
2.		EXHAUST FAN WALL MOUNTING
3.		EXHAUST DUCT

LEGEND: KITCHEN EQUIPMENTS BUILT UP AREA - 100.00 SQ.M.

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE



PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH

KITCHEN TYPE - 200 PAX
TITLE - MECHANICAL VENTILATION LAYOUT

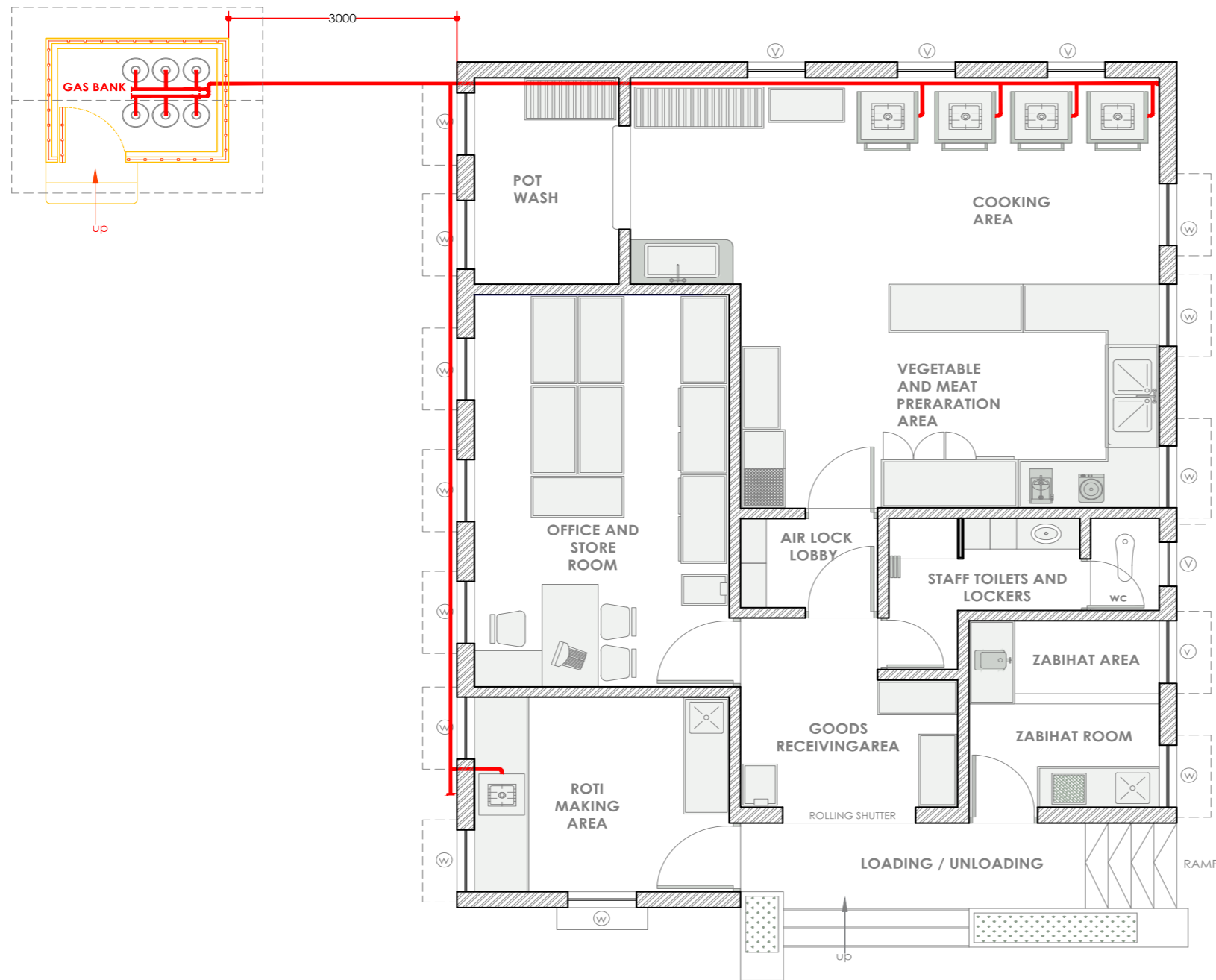
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ANNEXURE: 07

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LEGEND

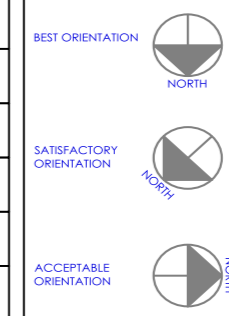
SR. NO.	TYPE	DESCRIPTION
1.		LPG GAS CYLINDER
2.		GAS PIPING

LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE

BUILT UP AREA - 100.00 SQ.M.

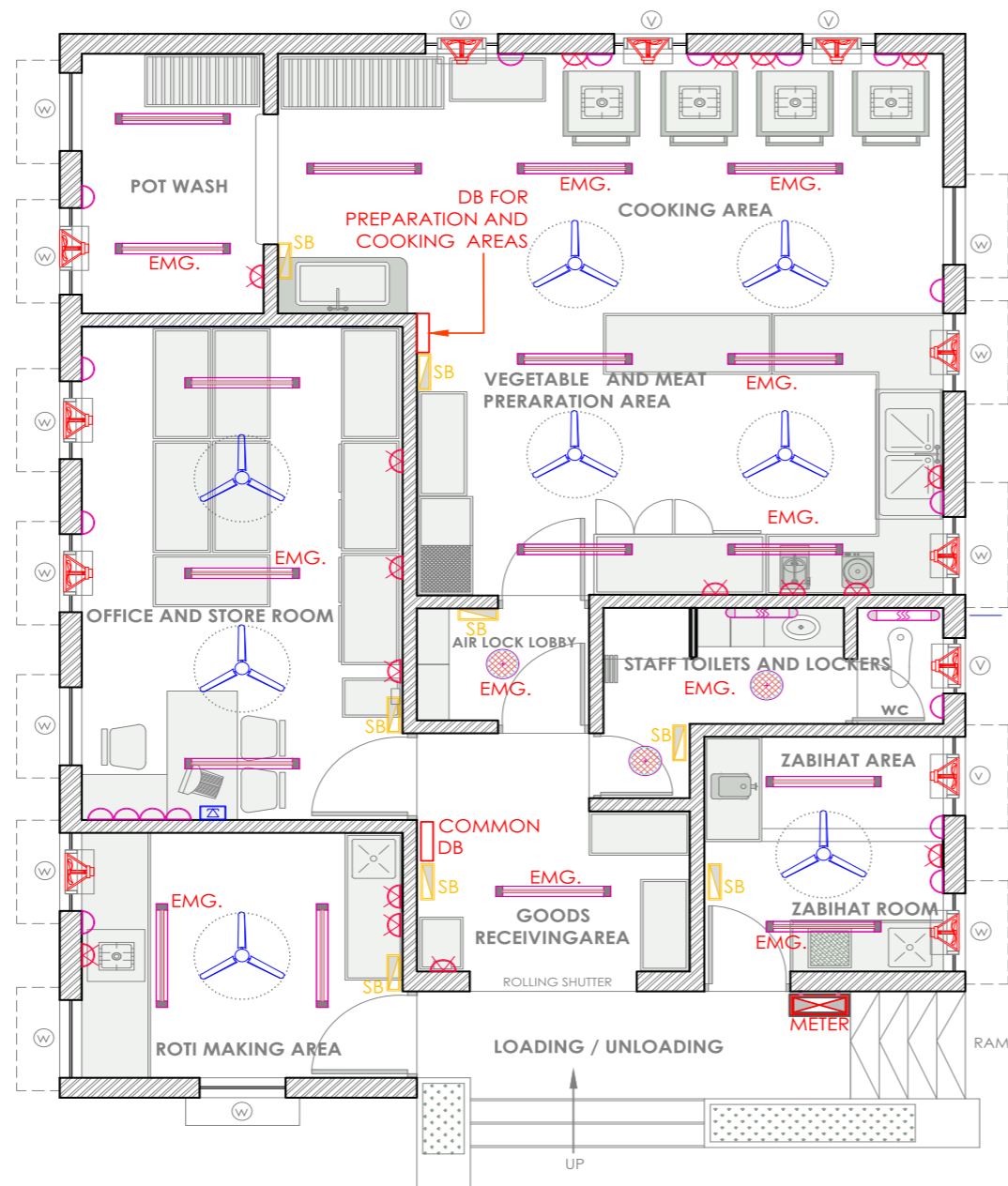
PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH			
KITCHEN TYPE - 200 PAX			
TITLE - GAS BANK AND PIPING LAYOUT			
APPROVED BY	FMB	DATE	20/10/15
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ANNEXURE: 08

200 pax

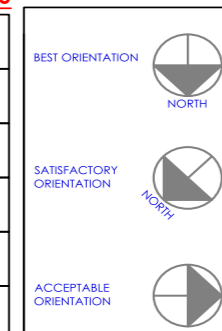


LEGEND

SR.NO.	SYMBOL	DESCRIPTION	FITTING TYPE
1.		TUBE LIGHT	SURFACE / WALL MOUNTING
2.		SMALL TUBE LIGHT	SURFACE / WALL MOUNTING
3.		ROUND BULK HEAD LIGHT	SURFACE / WALL MOUNTING
4.		FAN	CEILING MOUNTING
5.		EXHAUST FAN	WALL MOUNTING
6.		LIGHTING SWITCH BOARD	WALL MOUNTING
7.		TELEPHONE POINT (RJ11 SOCKET)	(2 PAIR TWISTED 0.5 SQMM ANNEALED CU CABLE)
8.		RAW POWER SOCKET, FED BY DB	6A 5 PIN UNIVERSAL SOCKET ERECTED ON CONCEALED/SURFACE MOUNT
9.		RAW POWER SOCKET, FED BY DB	16A 5 PIN UNIVERSAL SOCKET ERECTED ON CONCEALED/SURFACE MOUNT
10.	EMG.	EMERGENCY LIGHT POINT	-

LEGEND: KITCHEN EQUIPMENTS BUILT UP AREA - 100.00 SQ.M.

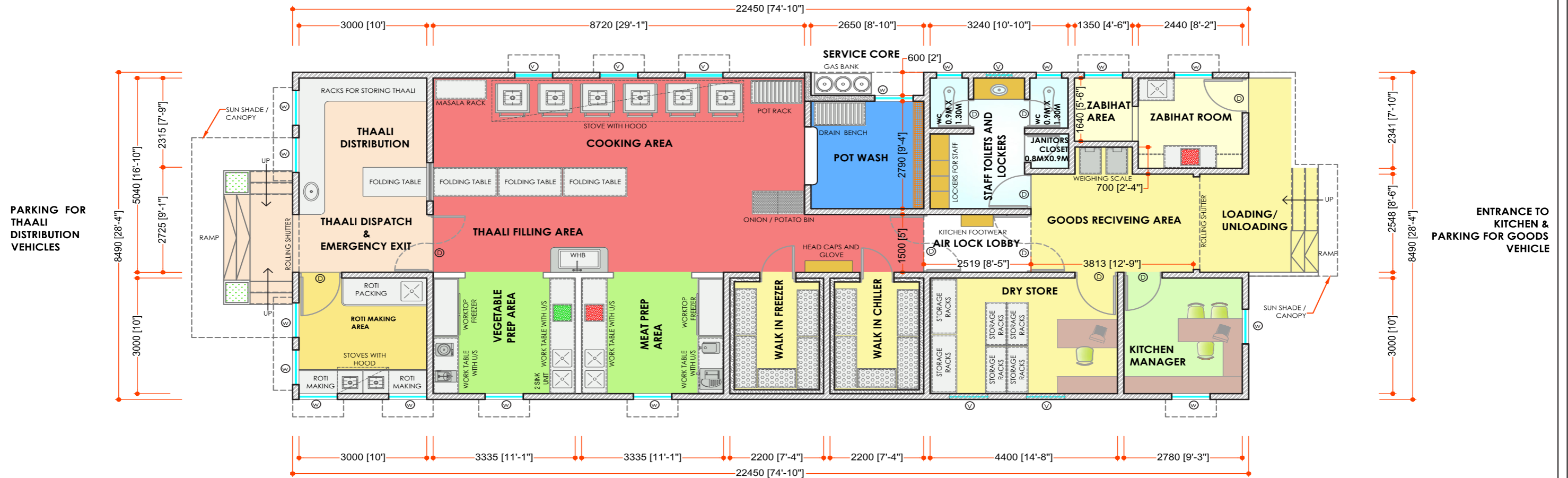
	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE



PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH			
KITCHEN TYPE - 200 PAX			
TITLE - ELECTRICAL LAYOUT			
APPROVED BY	FMB	DATE	20/10/15
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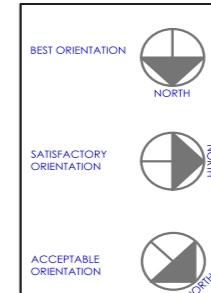
ANNEXURE: 09

800 pax



LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - VEGETABLE
	CHOPPING BOARD - MEAT
	PERFORATED STORAGE RACK



PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH			
KITCHEN TYPE - 800 PAX			
TITLE - TYPICAL KITCHEN LAYOUT			
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Faiz ul Mawaid il Burhaniyah office Badri Mahal in collaboration with architects and consultants			

BUILT UP AREA - 190.00 SQ.M.



GAS BANK:

- should be minimum 3.0 m away from building, transformer, generator and any DP road adjoining site. It should not be in parking
- In cases where the gas bank cannot be provided as separate shed then shall be separated from the rest of the kitchen by full height RCC walls having 4 hour fire resistance rating. These walls shall have no openings (as shown in the plan)

COOKING AREA:

- has functional relationship with dry and cold store, preparation area, thaali filling and pot wash area
- location of mechanized ventilation hoods / exhaust fans and openings for natural ventilation should be properly distributed
- design considerations (spatial and services) shall include the present numbers being served and future expansion

THAALI DISTRIBUTION AREA:

- has functional relationship with the external delivery area and should be located to allow the collection of thaalis by individuals or groups without accessing the kitchen/thaali filling area
- should be accessible from kitchen and sufficient circulation and holding space for staff, utensils with cooked food, empty tiffins and mobile furniture should be provided

STAFF AMENITIES-TOILETS AND CHANGING AREAS:

- location should not interfere with any of the kitchen activities be it goods, food or waste
- no direct access from cooking or preparation areas
- cut off lobby with lockers / wash basin must be provided to provide indirect access to wc's from other areas

ANNEXURE: 10

800 pax

AIR-LOCK LOBBY:

- provided to cut off the non-hygienic areas (ancillary areas like office, store, staff facilities) from hygienic areas (preparation and cooking areas)
- limits access of visitors, vendors and staff up to the kitchen office and staff facilities only

JANITORIAL CLOSET:

- used for the storage of cleaning materials and equipment
- should be located away from food preparation areas. can be clubbed in toilets.
- a water tap and floor trap to be provided

GOODS RECEIVING AREA:

- to be located adjacent to stores, but separate from kitchen area, to avoid vendors entering the kitchen
- to be completely separate from storage areas, thaali distribution and waste disposal areas
- should have sufficient space for keeping trolleys and weighing scale, allowing unhindered movement of man and material

ZABIHAT AREA:

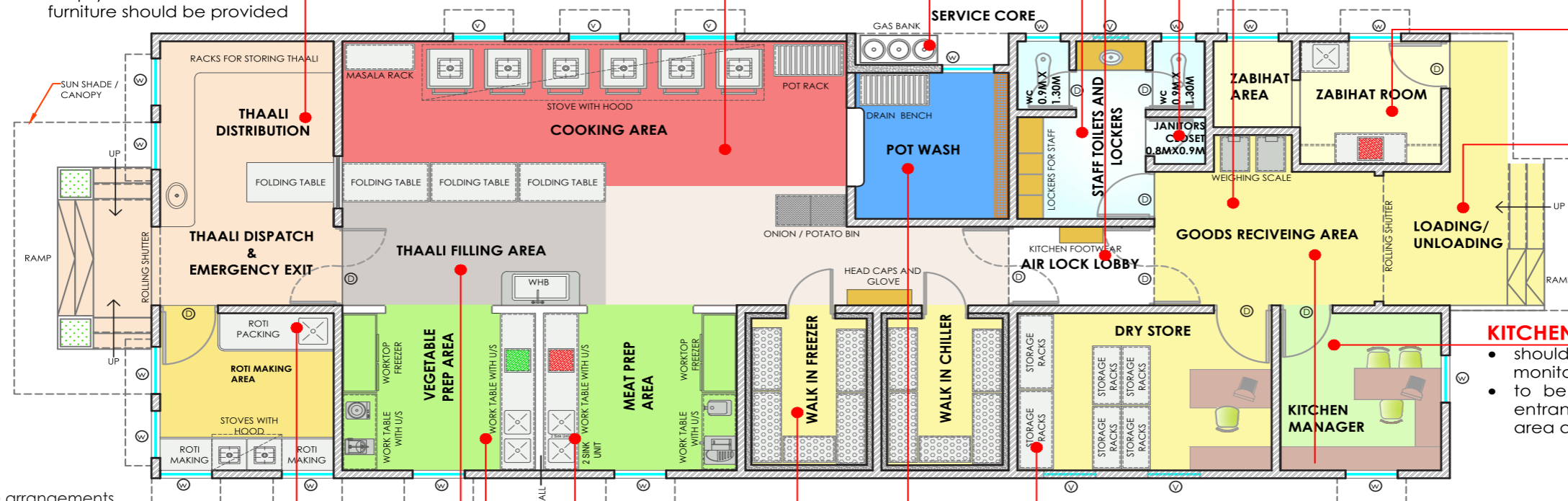
- should not interfere with any other areas of the kitchen
- should have a secluded entrance

LOADING / UNLOADING PLATFORM:

- to be planned in close proximity to goods receiving area and main entrance to premises
- should have vehicular access
- ramp (slope 1:12) to be provided

KITCHEN OFFICE:

- should be located such that it provides monitoring of all the activities
- to be planned in close proximity to main entrance of the premises, goods receiving area and stores



- the area may have arrangements for making roti while sitting.
- ROTI MAKING AREA:**
- has indirect functional relationship with the stores and thaali filling areas.
 - should have secluded entrance from outside, no interference with cooking processes

THAALI FILLING AREA:

- has functional relation with cooking and thaali distribution area and should be next to it
- moveable / folding counter is advisable for better utilization of space
- sufficient circulation and holding space for staff, utensils with cooked food, empty thaali and mobile furniture/equipments must be provided

PREPARATION AREAS - VEGETABLE AND MEAT:

- the preparation areas should be separate from cooking areas
- has functional relationship with dry and cold store, cooking area and pot wash area
- equipment placement to be according to their functions and actual dimensions should be taken into consideration

LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - VEGETABLE
	CHOPPING BOARD - MEAT
	PERFORATED STORAGE RACK

DRY STORE:

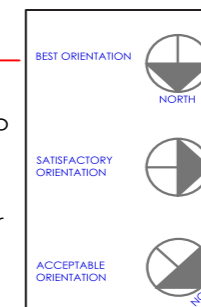
- should have easy access to the kitchen office, the kitchen and the loading - unloading area
- should be in cool area and not adjoining any area where heat transfer through the walls and piping is likely.
- access to the store and the corridors shall be wide for easy movement of goods and trolleys.

POT WASH AREA:

- has functional relationship with preparation, cooking and thaali filling areas
- to be placed at the end of the work flow to avoid interference with other functions

COLD STORE:

- should have easy access from preparation areas
- should not be adjoining any area where heat transfer through the walls and piping is likely
- access and the corridors shall be wide for easy movement of goods and trolleys



BUILT UP AREA - 190.00 SQ.M.

PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH

KITCHEN TYPE - 800 PAX

TITLE - DESIGN CONSIDERATIONS

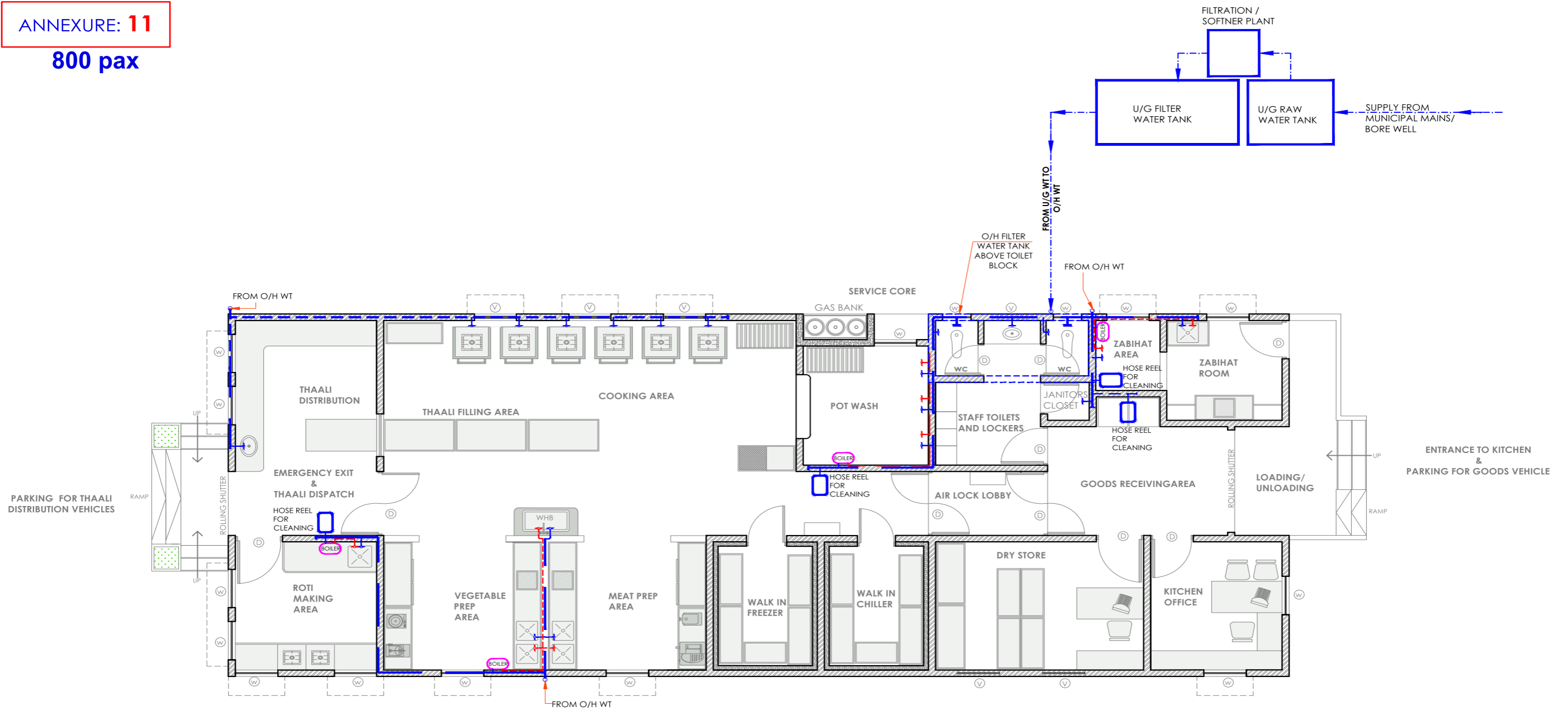
APPROVED BY	FMB	DATE	20/10/15
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Badri Mahal**

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ANNEXURE: 11

800 pax



PARKING FOR THAALI DISTRIBUTION VEHICLES

ENTRANCE TO KITCHEN & PARKING FOR GOODS VEHICLE

NOTES:
1. HOT WATER SUPPLY TO BATHROOMS CAN BE PROVIDED AS PER REQUIREMENT OF MAWZE

LEGEND

SR. NO.	TYPE	DESCRIPTION
1.		(RW) RAW WATER SUPPLY 40NB UPVC PIPE (CONCEALED IN WALL)
2.		(HW) HOT WATER SUPPLY - BOILER TO DISTRIBUTION 15NB CPVC PIPE (CONCEALED IN WALL)
3.		BOILER
4.		HOSE REEL

LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE

BEST ORIENTATION

SATISFACTORY ORIENTATION

ACCEPTABLE ORIENTATION

BUILT UP AREA - 190.00 SQ.M.

PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH

KITCHEN TYPE - 800 PAX

TITLE - HOT AND COLD WATER SUPPLY LAYOUT

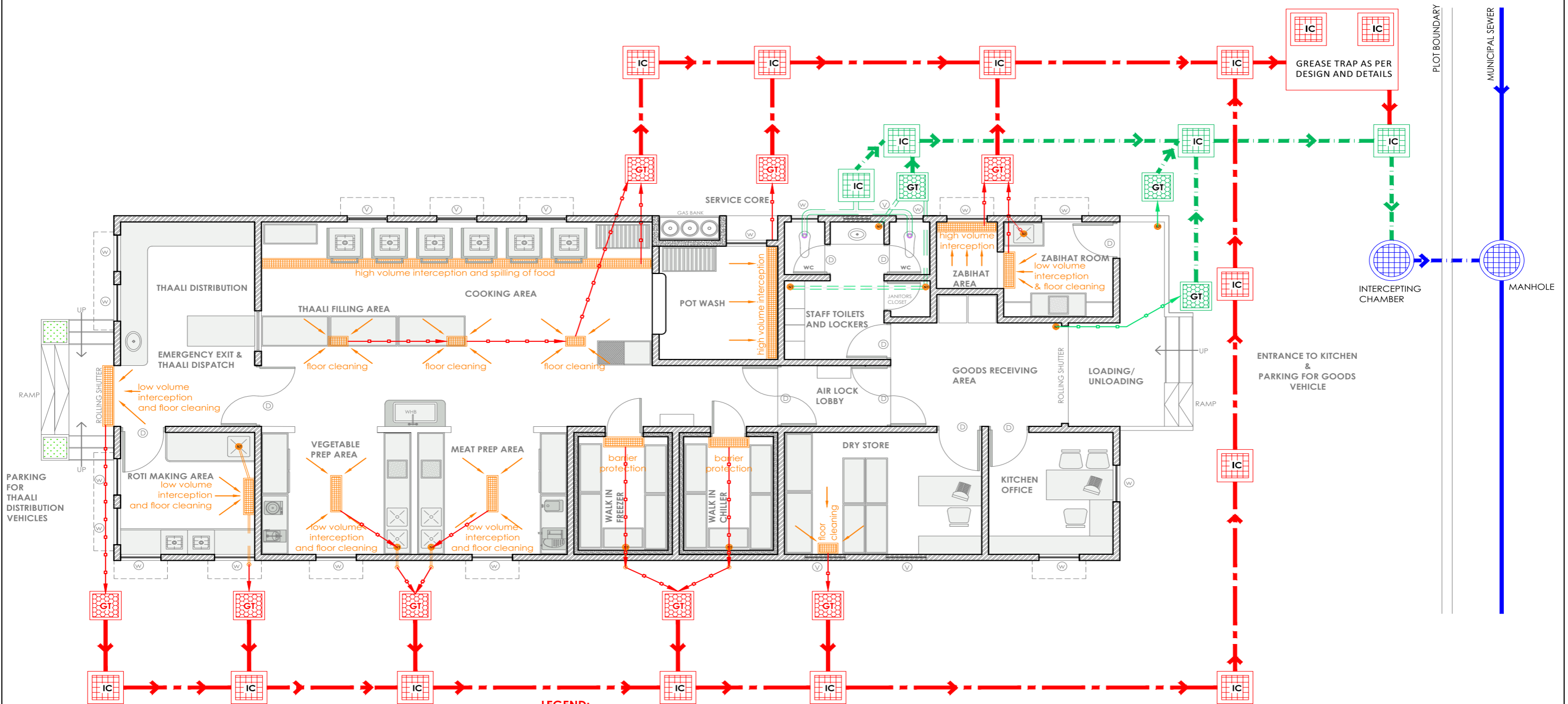
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ANNEXURE: 12

800 pax



BUILT UP AREA - 190.00 SQ.M.

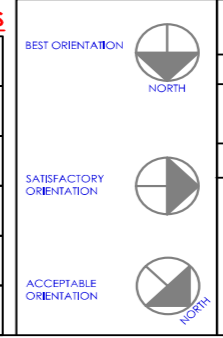
NOTES :-
1. SEWER LINE SHALL BE LAID WITH RESPECT TO SITE CONTOUR.

LEGEND:-

SR.NO.	TYPE	DESCRIPTION
1.		GULLY TRAP
2.		INSPECTION CHAMBER
3.		RCC HUME PIPE FOR CONNECTION FROM GULLY TRAP TO GREASE TRAP
4.		RCC HUME PIPE FOR CONNECTION FROM GULLY TRAP TO INTERCEPTING CHAMBER
5.		RCC HUME PIPE FOR CONNECTION FROM INTERCEPTING CHAMBER TO EXTERNAL MANHOLE AND MUNICIPAL SEWER
6.		NAHNI TRAP
7.		WASTE WATER DRAIN/CHANNEL WITH SS GRATING

LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE



PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH

KITCHEN TYPE - 800 PAX

TITLE - INTERNAL AND EXTERNAL DRAINAGE LAYOUT

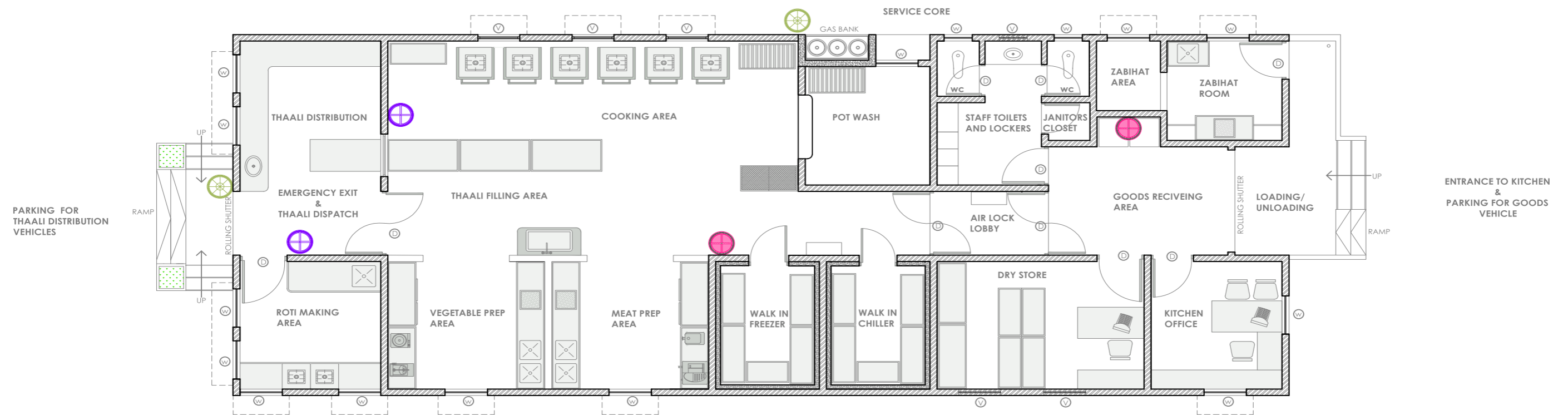
APPROVED BY	FMB	DATE	20/10/15
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ANNEXURE: 13

800 pax



LEGEND

SR. NO.	TYPE	DESCRIPTION
1.	+	ABC TYPE FIRE EXTINGUISHER 2 KG.
2.	⊕	WET CHEMICAL FIRE EXTINGUISHER 4 KG.
3.	☆	DRY POWDER FIRE EXTINGUISHER 9 KG

LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE

BEST ORIENTATION	
SATISFACTORY ORIENTATION	
ACCEPTABLE ORIENTATION	

BUILT UP AREA - 190.00 SQ.M.

PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH

KITCHEN TYPE - 800 PAX

TITLE - FIRE EXTINGUISHER LOCATION LAYOUT

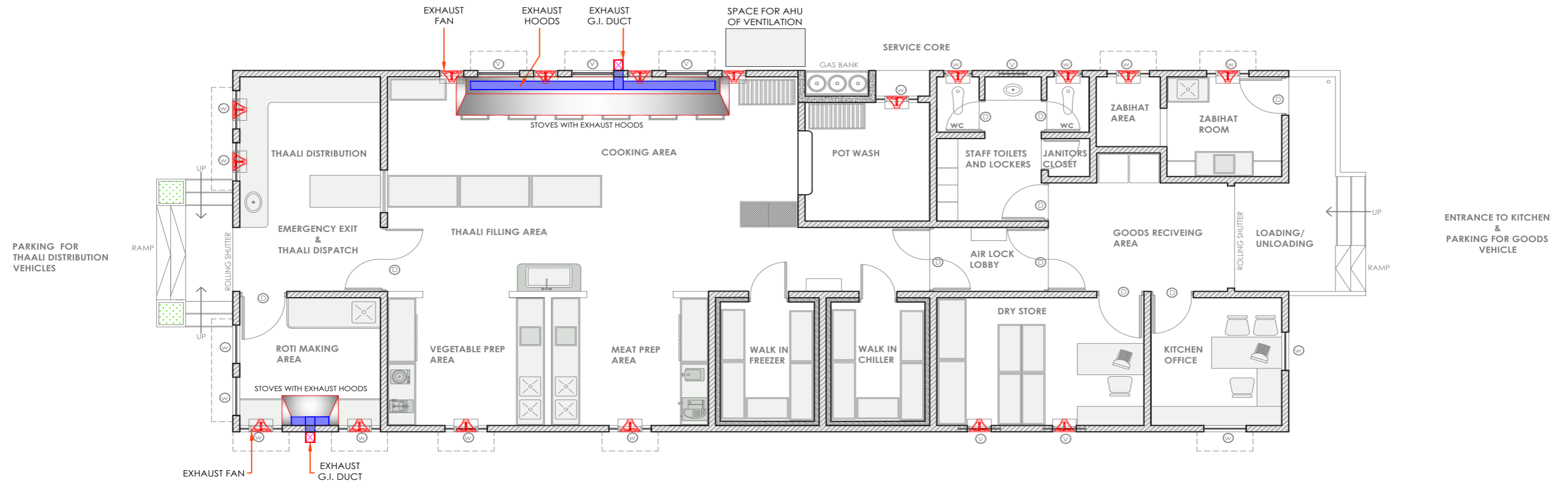
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ANNEXURE: 14

800 pax



NOTES :-

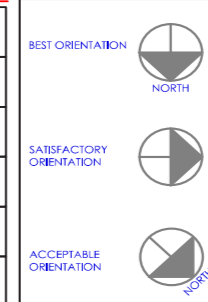
1. KITCHENS USING EXHAUST HOODS DO NOT NEED EXHAUST FANS ABOVE STOVES

LEGEND

SR. NO.	TYPE	DESCRIPTION
1.		EXHAUST HOOD
2.		EXHAUST FAN WALL MOUNTING
3.		EXHAUST DUCT

LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE



BUILT UP AREA - 190.00 SQ.M.

PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH

KITCHEN TYPE - 800 PAX

TITLE - MECHANICAL VENTILATION LAYOUT

APPROVED BY	FMB	DATE	20/10/15
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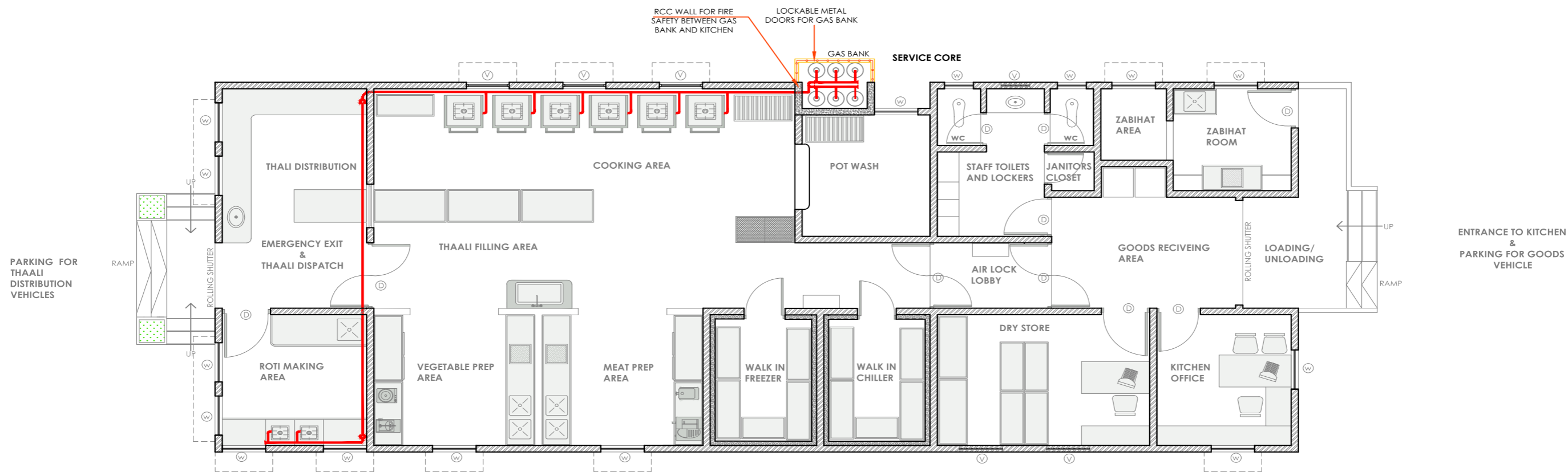
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ANNEXURE: 15

800 pax



LEGEND

SR. NO.	TYPE	DESCRIPTION
1.		LPG GAS CYLINDER
2.		GAS PIPING

LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE

BEST ORIENTATION	
SATISFACTORY ORIENTATION	
ACCEPTABLE ORIENTATION	

BUILT UP AREA - 190.00 SQ.M.

PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH

KITCHEN TYPE - 800 PAX

TITLE - GAS BANK AND PIPING LAYOUT

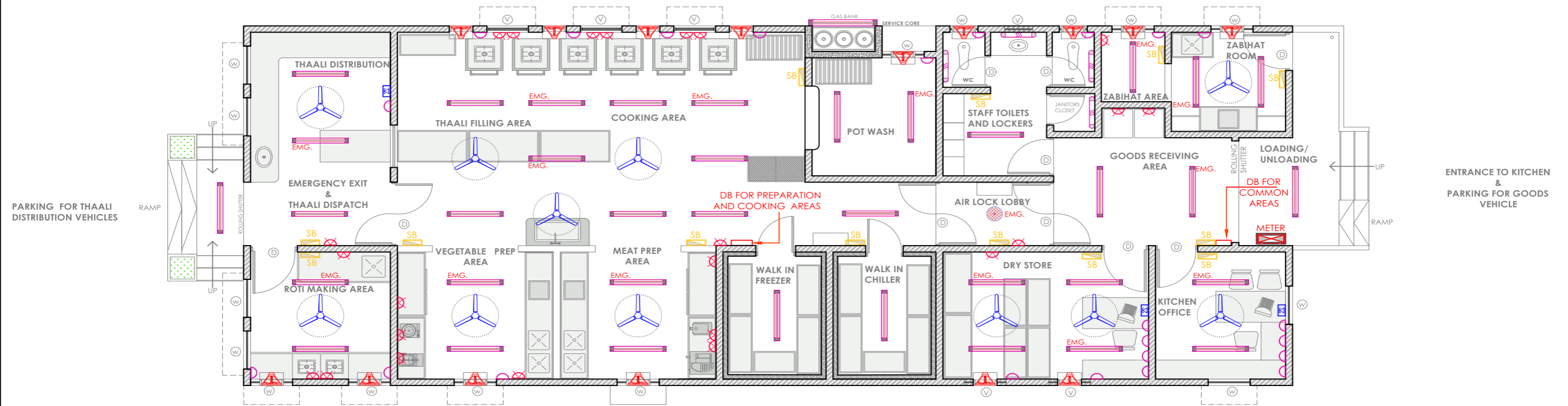
APPROVED BY	FMB	DATE	20/10/15
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ANNEXURE: 16

800 pax

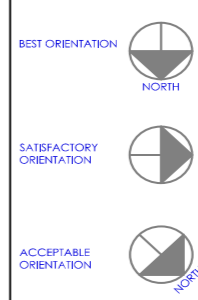


LEGEND

SR.NO.	SYMBOL	DESCRIPTION	FITTING TYPE	SR.NO.	SYMBOL	DESCRIPTION	FITTING TYPE
1.		TUBE LIGHT	SURFACE / WALL MOUNTING	6.		EXHAUST FAN	WALL MOUNTING
2.		SMALL TUBE LIGHT	SURFACE / WALL MOUNTING	7.		LIGHTING SWITCH BOARD @ 1.2MTS	WALL MOUNTING
3.		ROUND BULK HEAD LIGHT	SURFACE / WALL MOUNTING	8.		TELEPHONE POINT (RJ11 SOCKET)	(2 PAIR TWISTED 0.5 SQMM ANNEALED CU CABLE)
4.		FAN	CEILING MOUNTING	9.		RAW POWER SOCKET, FED BY DB	6A 5 PIN UNIVERSAL SOCKET ERECTED ON CONCEALED/SURFACE MOUNT
5.	EMG.	EMERGENCY LIGHT POINT	-	10.		RAW POWER SOCKET, FED BY DB	16A 5 PIN UNIVERSAL SOCKET ERECTED ON CONCEALED/SURFACE MOUNT

LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE



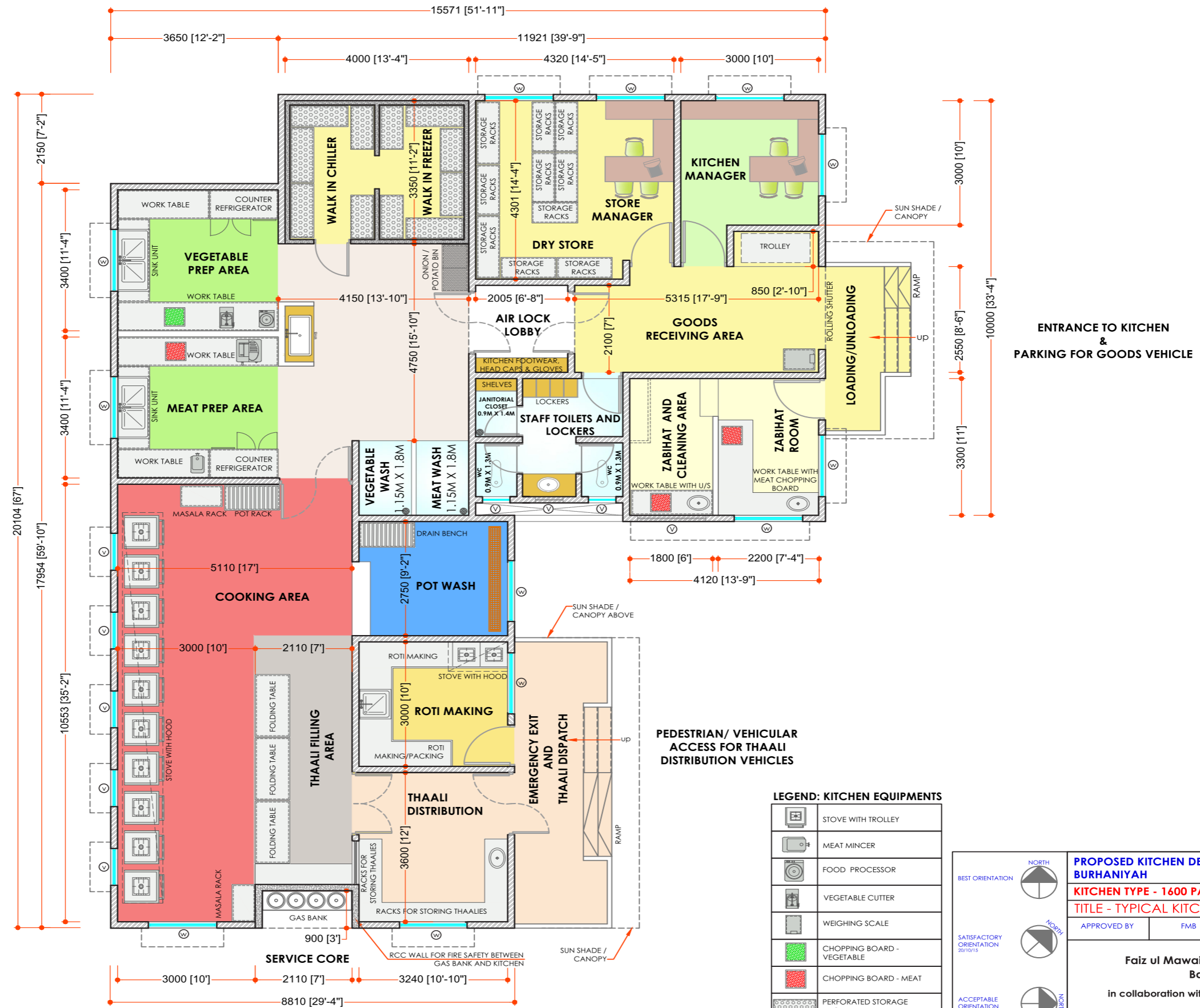
PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH
KITCHEN TYPE - 800 PAX
TITLE - ELECTRICAL LAYOUT

APPROVED BY	FMB	DATE	20/10/15
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ANNEXURE: 17

1600 pax



BUILT UP AREA - 235.00 SQ.M.

LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - VEGETABLE
	CHOPPING BOARD - MEAT
	PERFORATED STORAGE RACK

BEST ORIENTATION

SATISFACTORY ORIENTATION 20/10/15

ACCEPTABLE ORIENTATION

PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH			
KITCHEN TYPE - 1600 PAX			
TITLE - TYPICAL KITCHEN LAYOUT			
APPROVED BY	FMB	DATE	20/10/15
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ANNEXURE: 18

1600 pax

DRY STORE:

- should have easy access to the kitchen office, the kitchen and the loading - unloading area
- should be in cool area and not adjoining any area where heat transfer through the walls and piping is likely.
- access to the store and the corridors shall be wide for easy movement of goods and trolleys.

COLD STORE:

- should have easy access from preparation areas
- should not be adjoining any area where heat transfer through the walls and piping is likely
- access and the corridors shall be wide for easy movement of goods and trolleys

PREPARATION AREAS - VEGETABLE AND MEAT:

- the preparation areas should be separate from cooking areas
- has functional relationship with dry and cold store, vegetable/meat wash area, cooking area and pot wash area
- equipment placement to be according to their functions and actual dimensions should be taken into consideration

WASH AREAS - VEGETABLE AND MEAT:

- additional vegetable and/or meat wash area can be provided in preparation/precooking area for large sized kitchens for cleaning bulk quantities

POT WASH AREA:

- has functional relationship with preparation, cooking and thaali filling areas
- to be placed at the end of the work flow to avoid interference with other functions

COOKING AREA:

- has functional relationship with dry and cold store, preparation area, thaali filling and pot wash area
- location of mechanized ventilation hoods / exhaust fans and openings for natural ventilation should be properly distributed
- design considerations (spatial and services) shall include the present numbers being served and future expansion

THAALI FILLING AREA:

- has functional relation with cooking and thaali distribution area and should be next to it
- moveable / folding counter is advisable for better utilization of space
- sufficient circulation and holding space for staff, utensils with cooked food, empty tiffins and mobile furniture/equipments must be provided

GAS BANK:

- should be minimum 3.0 m away from building, transformer, generator and any DP road adjoining site. It should not be in parking
- In cases where the gas bank cannot be provided as separate shed then shall be separated from the rest of the kitchen by full height RCC walls having 4 hour fire resistance rating. These walls shall have no openings (as shown in the plan)

KITCHEN OFFICE:

- should be located such that it provides monitoring of all the activities
- to be planned in close proximity to main entrance of the premises, goods receiving area and stores

AIR-LOCK LOBBY:

- provided to cut off the non-hygienic areas (ancillary areas like office, store, staff facilities) from hygienic areas (preparation and cooking areas)
- limits access of visitors, vendors and staff up to the kitchen office and staff facilities only

LOADING / UNLOADING PLATFORM:

- to be planned in close proximity to goods receiving area and main entrance to premises
- should have vehicular access
- ramp (slope 1:12) to be provided

GOODS RECEIVING AREA:

- to be located adjacent to stores, but separate from kitchen area, to avoid vendors entering the kitchen
- to be completely separate from storage areas, thaali distribution and waste disposal areas
- should have sufficient space for keeping trolleys and weighing scale, allowing unhindered movement of man and material

JANITORIAL CLOSET:

- used for the storage of cleaning materials and equipment
- should be located away from food preparation areas. can be clubbed in toilets.
- a water tap and floor trap to be provided

ZABIHAT AREA:

- should not interfere with any other areas of the kitchen
- should have a secluded entrance

STAFF AMENITIES-TOILETS AND CHANGING AREAS:

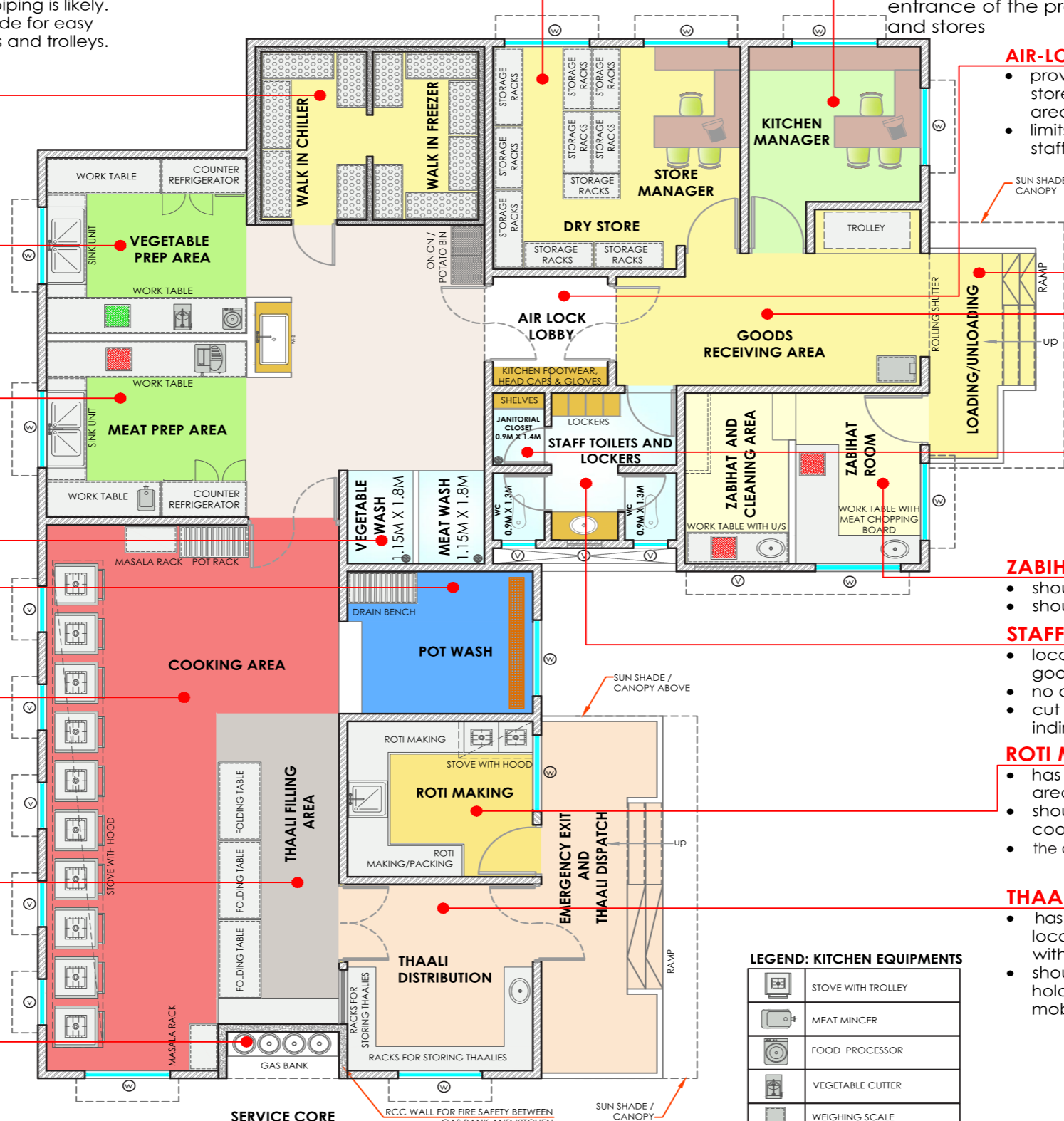
- location should not interfere with any of the kitchen activities be it goods, food or waste
- no direct access from cooking or preparation areas
- cut off lobby with lockers / wash basin must be planned to provide indirect access to wc's from other areas

ROTI MAKING AREA:

- has indirect functional relationship with the stores and thaali filling areas.
- should have secluded entrance from outside, no interference with cooking processes
- the area may have arrangements for making roti while sitting.

THAALI DISTRIBUTION AREA:

- has functional relationship with the external delivery area and should be located to allow the collection of thalis by individuals or groups without accessing the kitchen/thaali filling area
- should be accessible from kitchen and sufficient circulation and holding space for staff, utensils with cooked food, empty tiffins and mobile furniture should be provided.



LEGEND: KITCHEN EQUIPMENTS

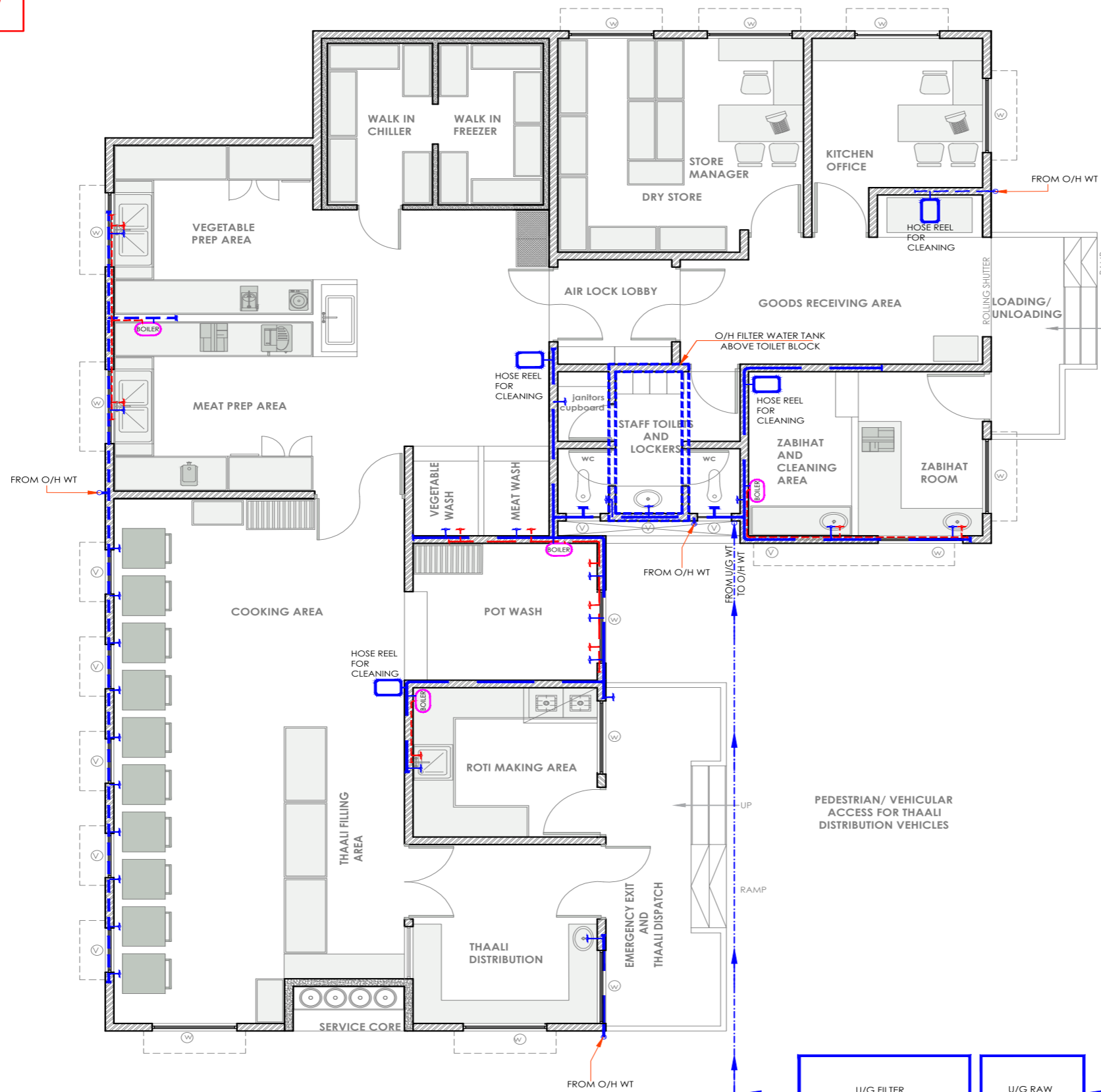
	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - VEGETABLE
	CHOPPING BOARD - MEAT
	PERFORATED STORAGE RACK

BUILT UP AREA - 235.00 SQ.M.

BEST ORIENTATION SATISFACTORY ORIENTATION ACCEPTABLE ORIENTATION 	PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH			
	KITCHEN TYPE - 1600 PAX			
	TITLE - DESIGN CONSIDERATIONS			
APPROVED BY	FMB	DATE	20/10/15	
Faiz ul Mawaid il Burhaniyah office Badri Mahal in collaboration with architects and consultants				

ANNEXURE: 19

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LEGEND

SR. NO.	TYPE	DESCRIPTION
1.		(RW) RAW WATER SUPPLY 40NB UPVC PIPE (CONCEALED IN WALL)
2.		(HW) HOT WATER SUPPLY - BOILER TO DISTRIBUTION 15NB CPVC PIPE (CONCEALED IN WALL)
3.		BOILER
4.		HOSE REEL

ENTRANCE TO KITCHEN & PARKING FOR GOODS VEHICLE

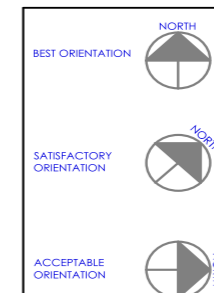
NOTES:

- HOT WATER SUPPLY TO BATHROOMS CAN BE PROVIDED AS PER REQUIREMENT OF MAWZE

LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE

BUILT UP AREA - 235.00 SQ.M.



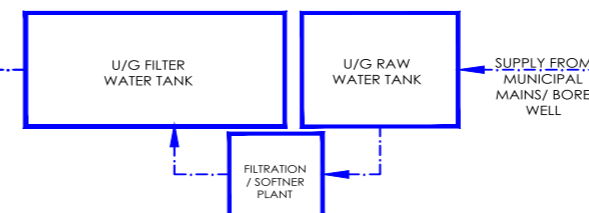
PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH

KITCHEN TYPE - 1600 PAX

TITLE - HOT AND COLD WATER SUPPLY LAYOUT

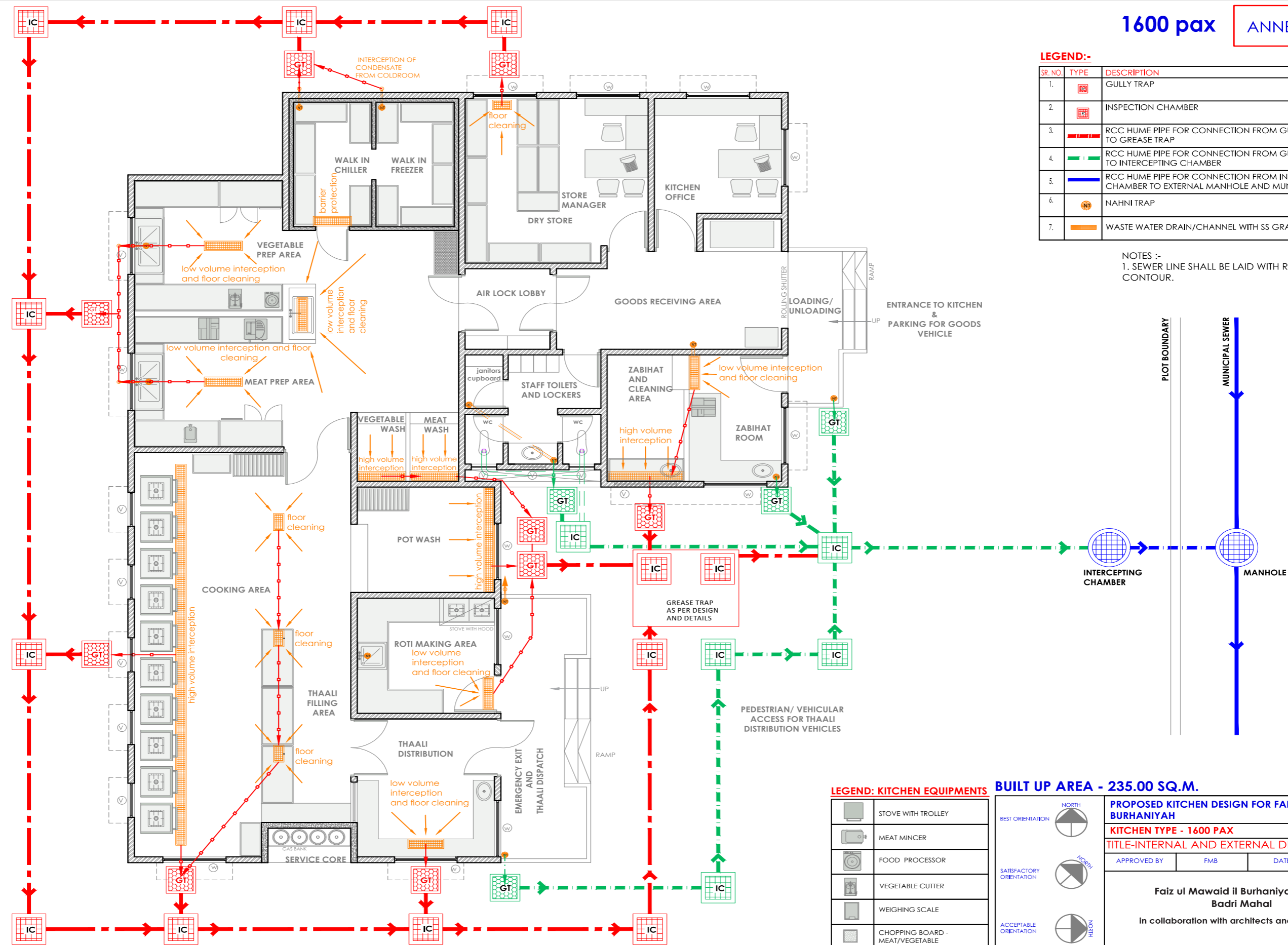
APPROVED BY	FMB	DATE	20/10/15
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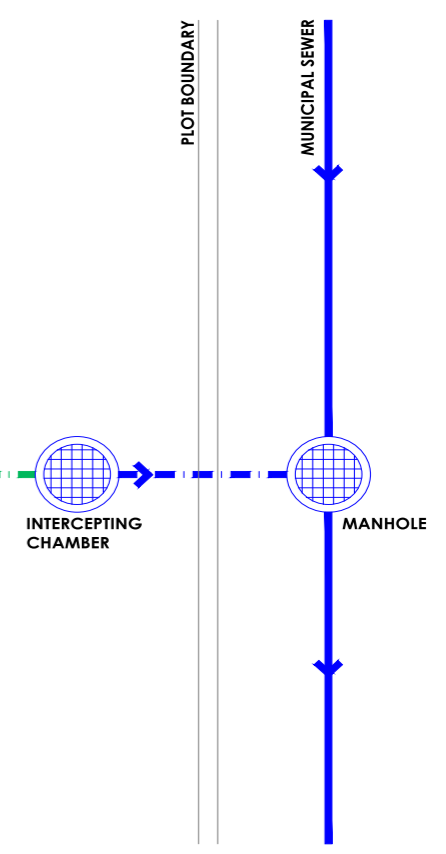
1600 pax ANNEXURE: 20



LEGEND:-

SR.NO.	TYPE	DESCRIPTION
1.		GULLY TRAP
2.		INSPECTION CHAMBER
3.		RCC HUMI PIPE FOR CONNECTION FROM GULLY TRAP TO GREASE TRAP
4.		RCC HUMI PIPE FOR CONNECTION FROM GULLY TRAP TO INTERCEPTING CHAMBER
5.		RCC HUMI PIPE FOR CONNECTION FROM INTERCEPTING CHAMBER TO EXTERNAL MANHOLE AND MUNICIPAL SEWER
6.		NAHNI TRAP
7.		WASTE WATER DRAIN/CHANNEL WITH SS GRATTING

NOTES :-
1. SEWER LINE SHALL BE LAID WITH RESPECT TO SITE CONTOUR.



LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE

BUILT UP AREA - 235.00 SQ.M.

PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH
KITCHEN TYPE - 1600 PAX
TITLE-INTERNAL AND EXTERNAL DRAINAGE LAYOUT

APPROVED BY	FMB	DATE	20/10/15
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BEST ORIENTATION

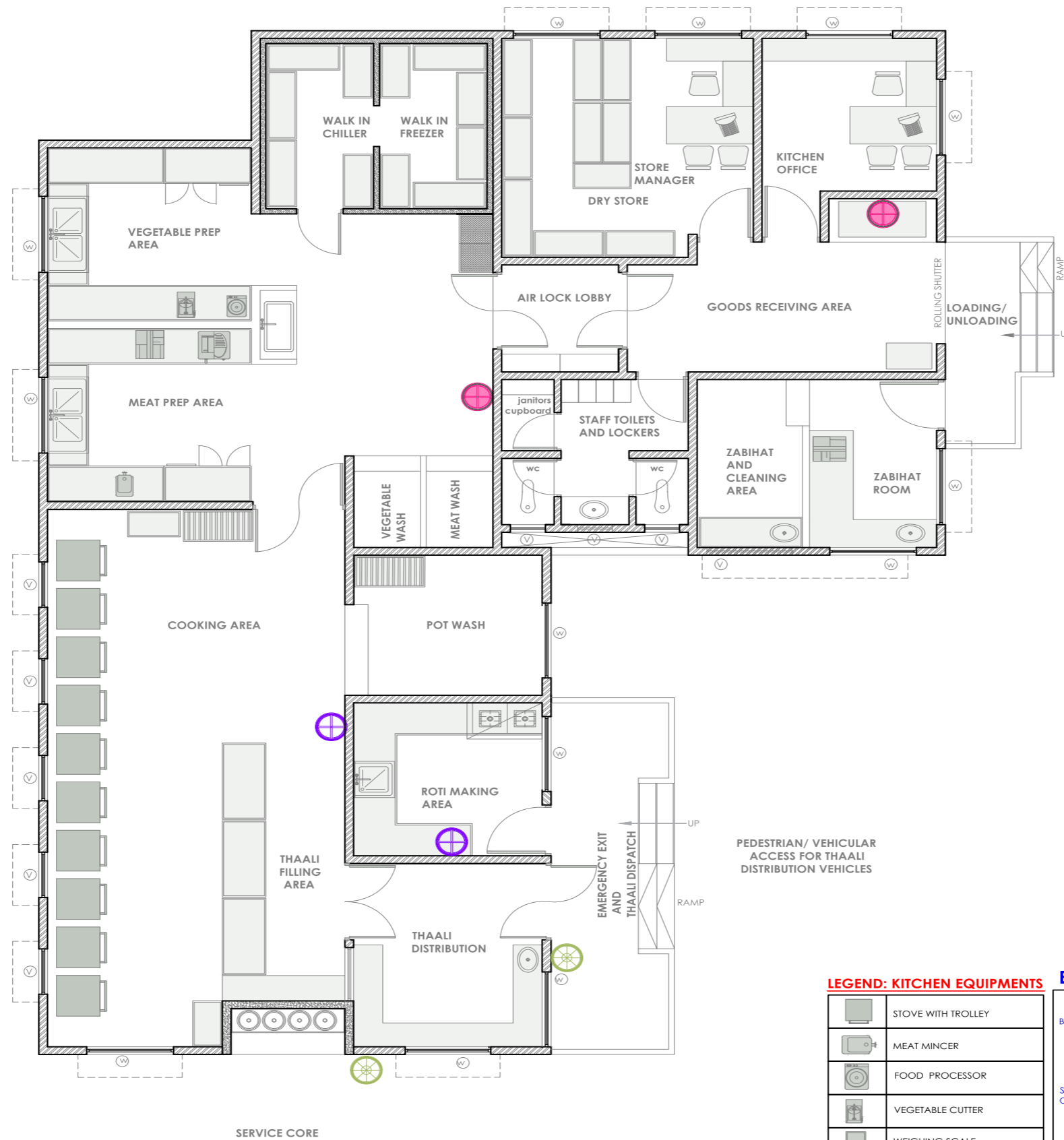
SATISFACTORY ORIENTATION

ACCEPTABLE ORIENTATION



ANNEXURE: 21

1600 pax



LEGEND

SR. NO.	TYPE	DESCRIPTION
1.	+	ABC TYPE FIRE EXTINGUISHER 2 KG.
2.	⊕	WET CHEMICAL FIRE EXTINGUISHER 4 KG.
3.	⊗	DRY POWDER FIRE EXTINGUISHER 9 KG

ENTRANCE TO KITCHEN & PARKING FOR GOODS VEHICLE

PEDESTRIAN/ VEHICULAR ACCESS FOR THAALI DISTRIBUTION VEHICLES

BUILT UP AREA - 235.00 SQ.M.

LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE

BUILT UP AREA - 235.00 SQ.M.

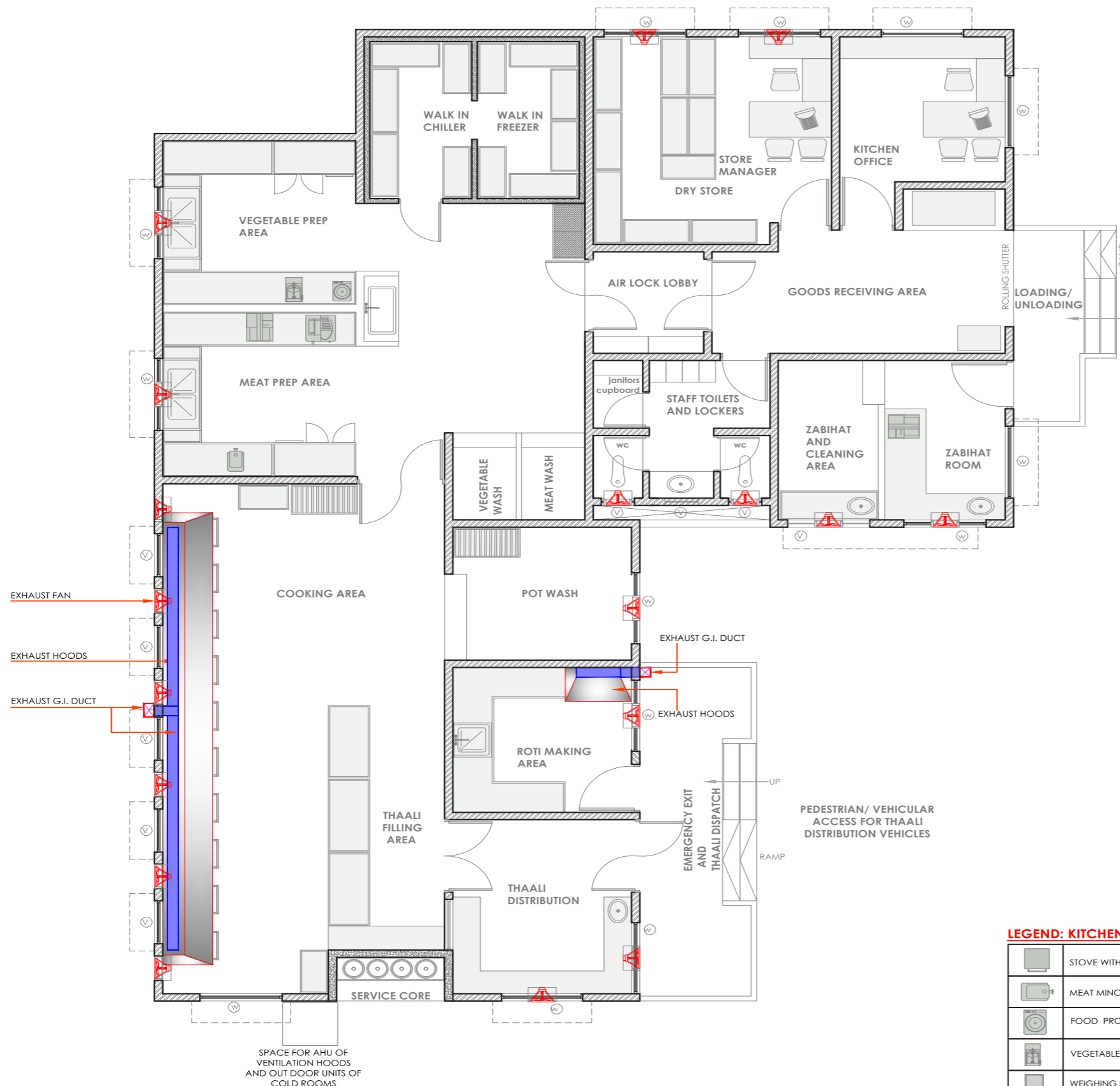
BEST ORIENTATION	
SATISFACTORY ORIENTATION	
ACCEPTABLE ORIENTATION	

PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH			
KITCHEN TYPE - 1600 PAX			
TITLE - FIRE EXTINGUISHER LOCATION LAYOUT			
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ANNEXURE: 22

1600 pax



LEGEND

SR. NO.	TYPE	DESCRIPTION
1.		EXHAUST HOOD
2.		EXHAUST FAN WALL MOUNTING
3.		EXHAUST DUCT

ENTRANCE TO KITCHEN & PARKING FOR GOODS VEHICLE

NOTES :-
1. KITCHENS USING EXHAUST HOODS DO NOT NEED EXHAUST FANS ABOVE STOVES

LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE

BEST ORIENTATION	
SATISFACTORY ORIENTATION	
ACCEPTABLE ORIENTATION	

PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH

KITCHEN TYPE - 1600 PAX

TITLE - MECHANICAL VENTILATION LAYOUT

APPROVED BY	FMB	DATE	20/10/15
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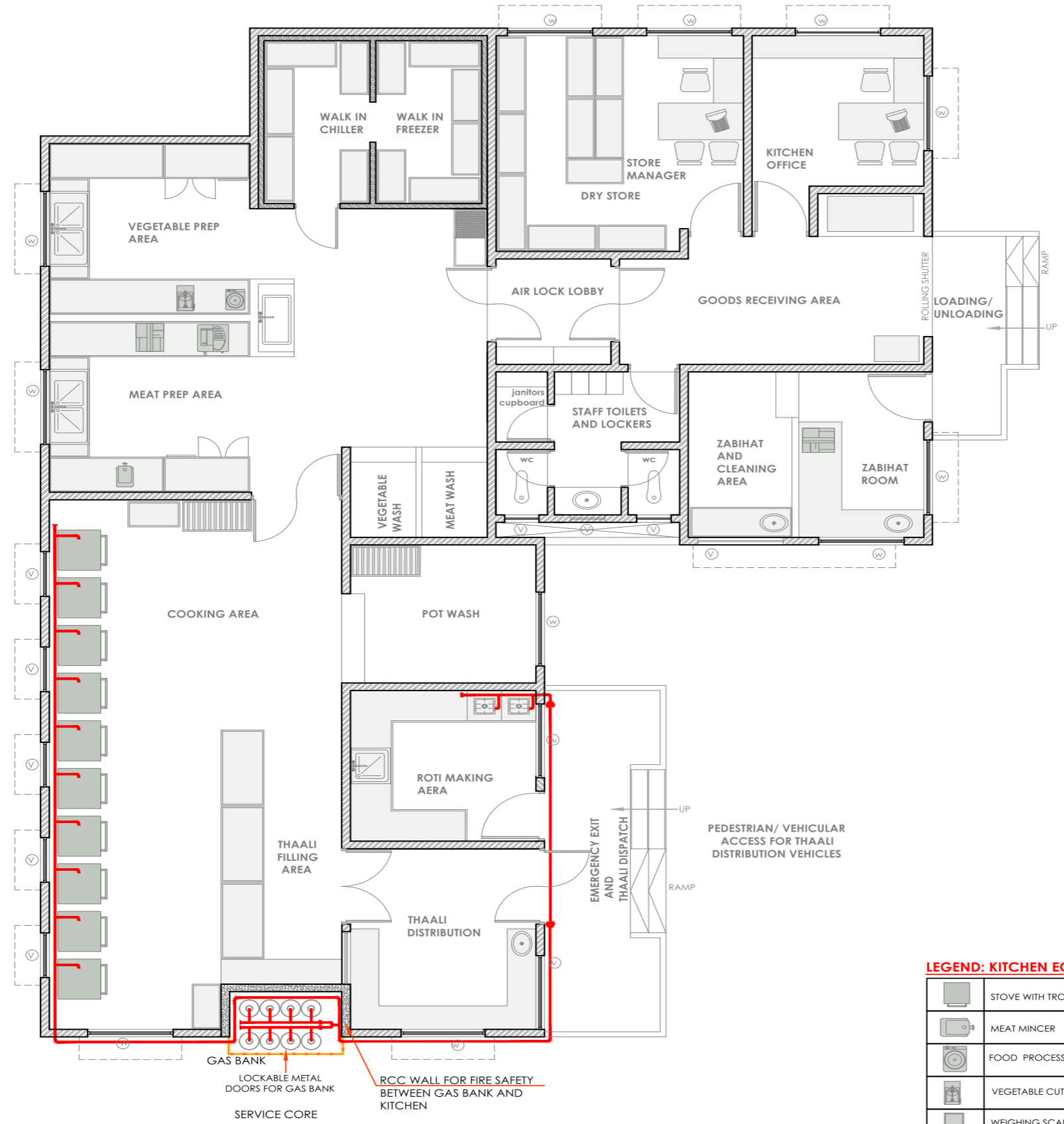
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BUILT UP AREA - 235.00 SQ.M.



ANNEXURE: 23

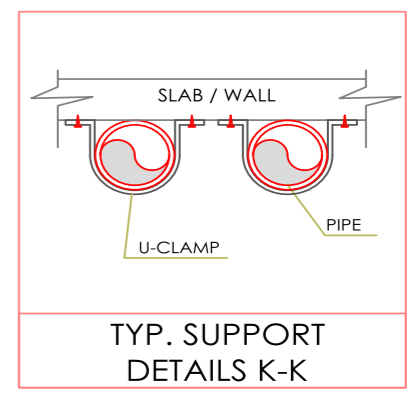
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LEGEND

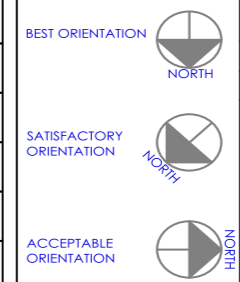
SR. NO.	TYPE	DESCRIPTION
1.		LPG GAS CYLINDER
2.		GAS PIPING

ENTRANCE TO KITCHEN & PARKING FOR GOODS VEHICLE



LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE



PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH
KITCHEN TYPE - 1600 PAX
TITLE - GAS BANK AND PIPING LAYOUT

APPROVED BY	FMB	DATE	20/10/15
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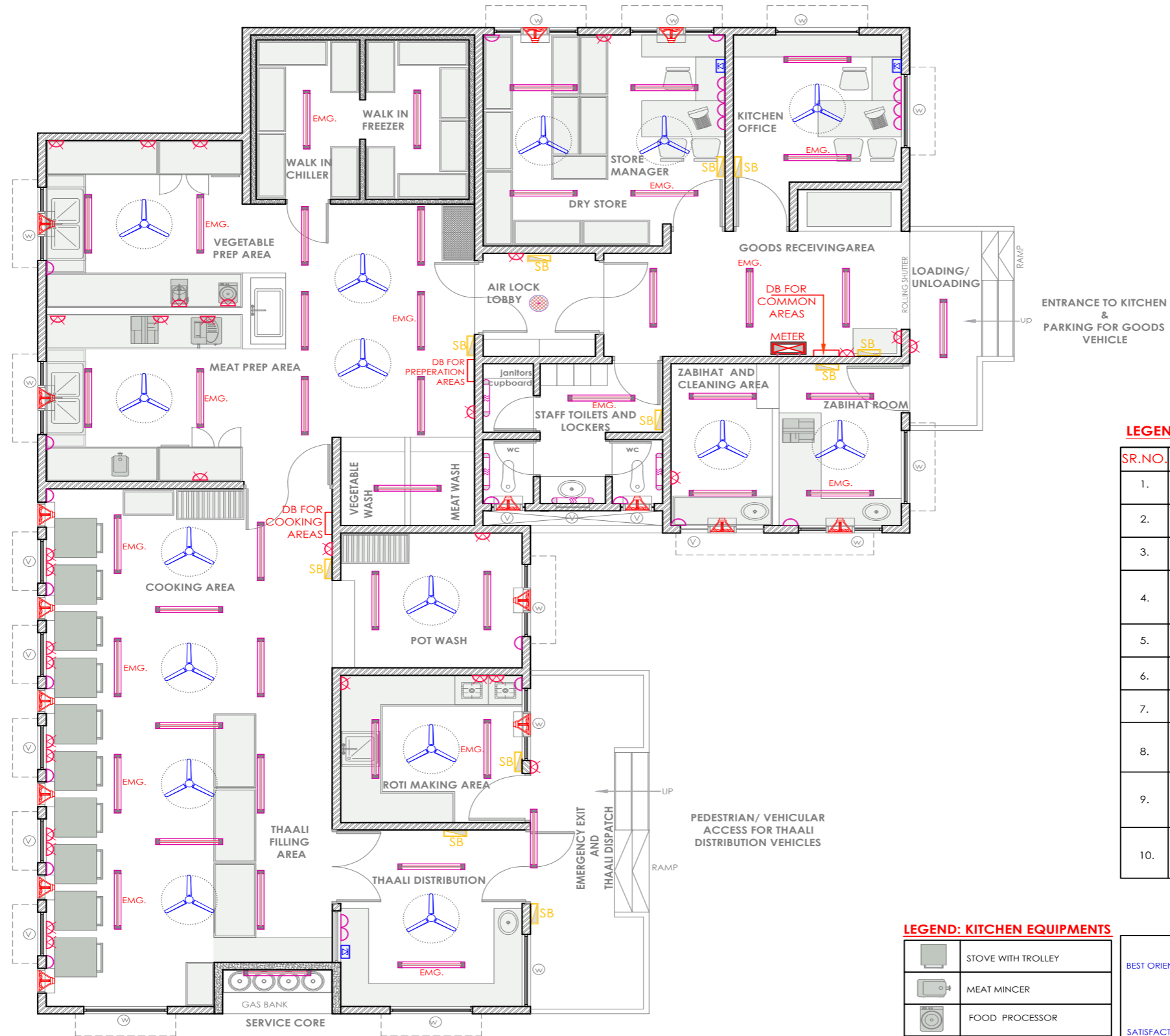
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BUILT UP AREA - 235.00 SQ.M.



ANNEXURE: 24

1600 pax



LEGEND

SR.NO.	SYMBOL	DESCRIPTION	FITTING TYPE
1.		TUBE LIGHT	SURFACE / WALL MOUNTING
2.		SMALL TUBE LIGHT	SURFACE / WALL MOUNTING
3.		ROUND BULK HEAD LIGHT	SURFACE / WALL MOUNTING
4.		FAN	CEILING MOUNTING
5.		EXHAUST FAN	WALL MOUNTING
6.		LIGHTING SWITCH BOARD @ 1.2MTS	WALL MOUNTING
7.		TELEPHONE POINT (RJ11 SOCKET)	(2 PAIR TWISTED 0.5 SQMM ANNEALED CU CABLE)
8.		RAW POWER SOCKET, FED BY DB	6A 5 PIN UNIVERSAL SOCKET ERECTED ON CONCEALED/SURFACE MOUNT
9.		RAW POWER SOCKET, FED BY DB	16A 5 PIN UNIVERSAL SOCKET ERECTED ON CONCEALED/SURFACE MOUNT
10.	EMG.	EMERGENCY LIGHT POINT	-

LEGEND: KITCHEN EQUIPMENTS

	STOVE WITH TROLLEY
	MEAT MINCER
	FOOD PROCESSOR
	VEGETABLE CUTTER
	WEIGHING SCALE
	CHOPPING BOARD - MEAT/VEGETABLE

BEST ORIENTATION	
SATISFACTORY ORIENTATION	
ACCEPTABLE ORIENTATION	

PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH			
KITCHEN TYPE - 1600 PAX			
TITLE - ELECTRICAL LAYOUT			
APPROVED BY	FMB	DATE	20/10/15
Faiz ul Mawaid il Burhaniyah office Badri Mahal in collaboration with architects and consultants			

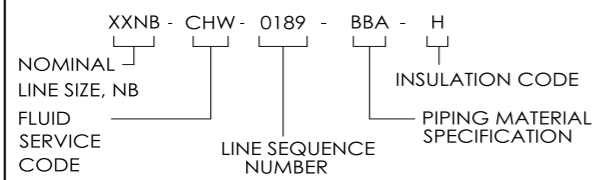
BUILT UP AREA - 235.00 SQ.M.

ANNEXURE: 25

LEGEND

NO	SYMBOLS	NAME
01		BALL VALVE
02		FLOAT VALVE
03		NON RETURN VALVE
04		SUBMERSIBLE PUMP
05		PRESSURE GAUGE
06		WATER METER

LINE IDENTIFICATION NUMBERS

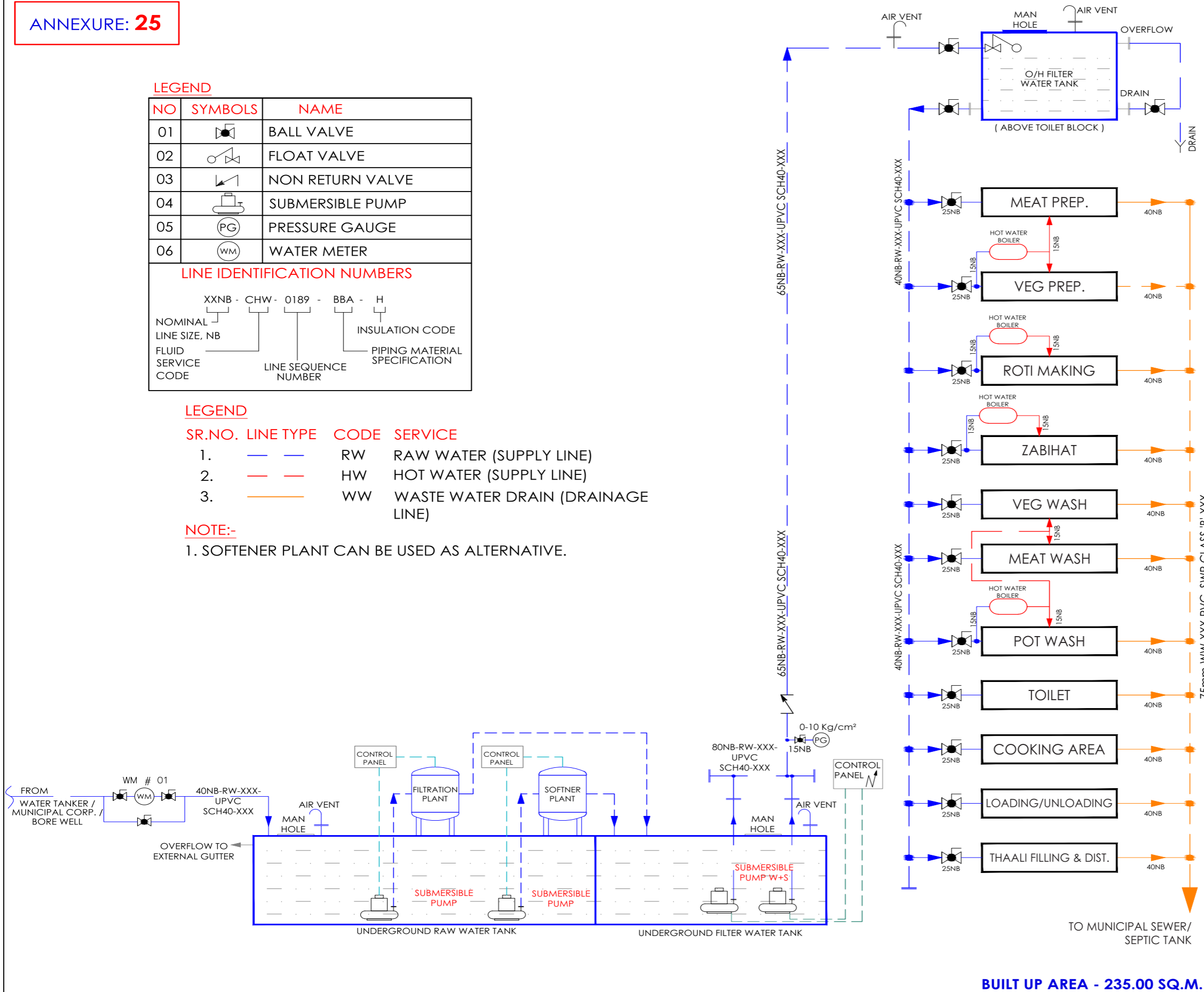


LEGEND

SR.NO.	LINE TYPE	CODE	SERVICE
1.		RW	RAW WATER (SUPPLY LINE)
2.		HW	HOT WATER (SUPPLY LINE)
3.		WW	WASTE WATER DRAIN (DRAINAGE LINE)

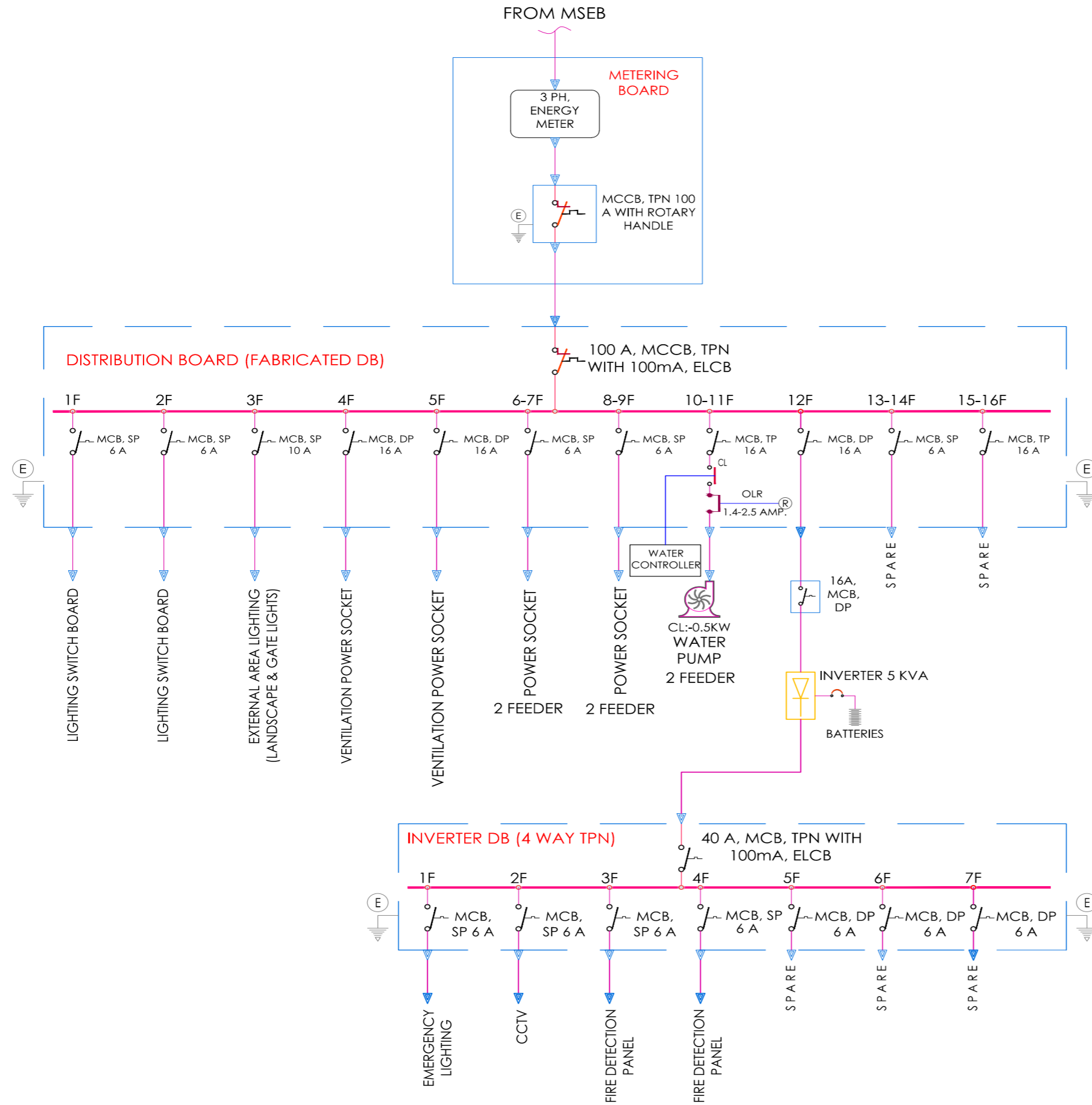
NOTE:-

1. SOFTENER PLANT CAN BE USED AS ALTERNATIVE.



BEST ORIENTATION NORTH	PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH		
	KITCHEN TYPE - 1600 PAX		
	TITLE - SINGLE LINE DIAGRAM: HOT AND COLD WATER SUPPLY LAYOUT		
SATISFACTORY ORIENTATION NORTH	APPROVED BY FMB	DATE 20/10/15	
ACCEPTABLE ORIENTATION NORTH	Faiz ul Mawaid il Burhaniyah office Badri Mahal in collaboration with architects and consultants		

BUILT UP AREA - 235.00 SQ.M.



ELECTRICAL SYMBOLS

1		MOULDED CASE CIRCUIT BREAKER
2		MINIATURE CIRCUIT BREAKER
3		CONTACTOR
4		GI / CU BUS BAR
5		PUMP
6		CABLE / WIRE

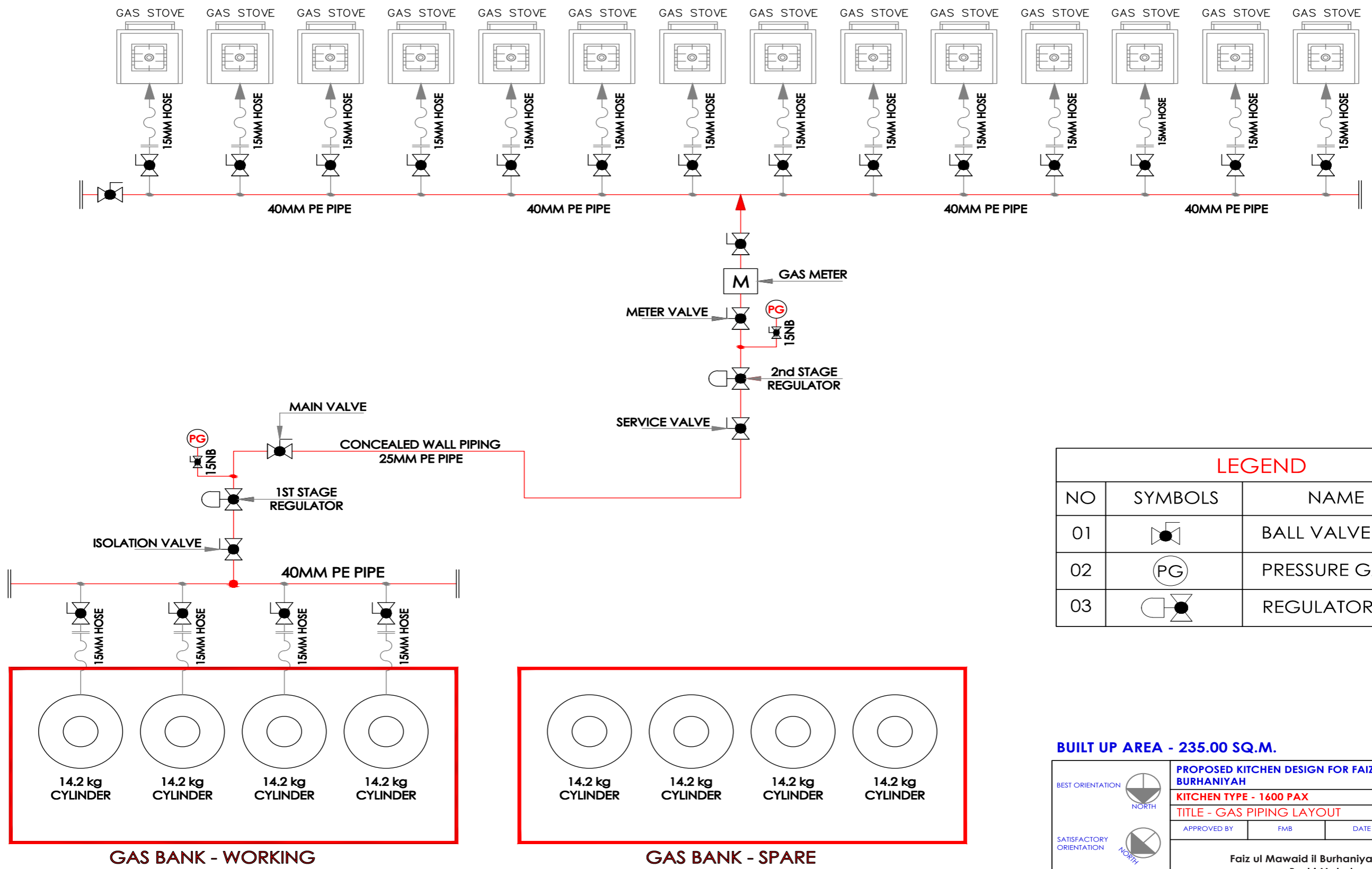
BUILT UP AREA - 235.00 SQ.M.

BEST ORIENTATION NORTH	PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH			
	KITCHEN TYPE - 1600 PAX			
	TITLE - SINGLE LINE DIAGRAM ELECTRICAL WORKS			
SATISFACTORY ORIENTATION NORTH	APPROVED BY	FMB	DATE	20/10/15
	Faiz ul Mawaid il Burhaniyah office Badri Mahal in collaboration with architects and consultants			
ACCEPTABLE ORIENTATION EAST				



ANNEXURE: 27

FOR COOKING AREA & ROTI MAKING



LEGEND

NO	SYMBOLS	NAME
01		BALL VALVE
02		PRESSURE GAUGE
03		REGULATOR

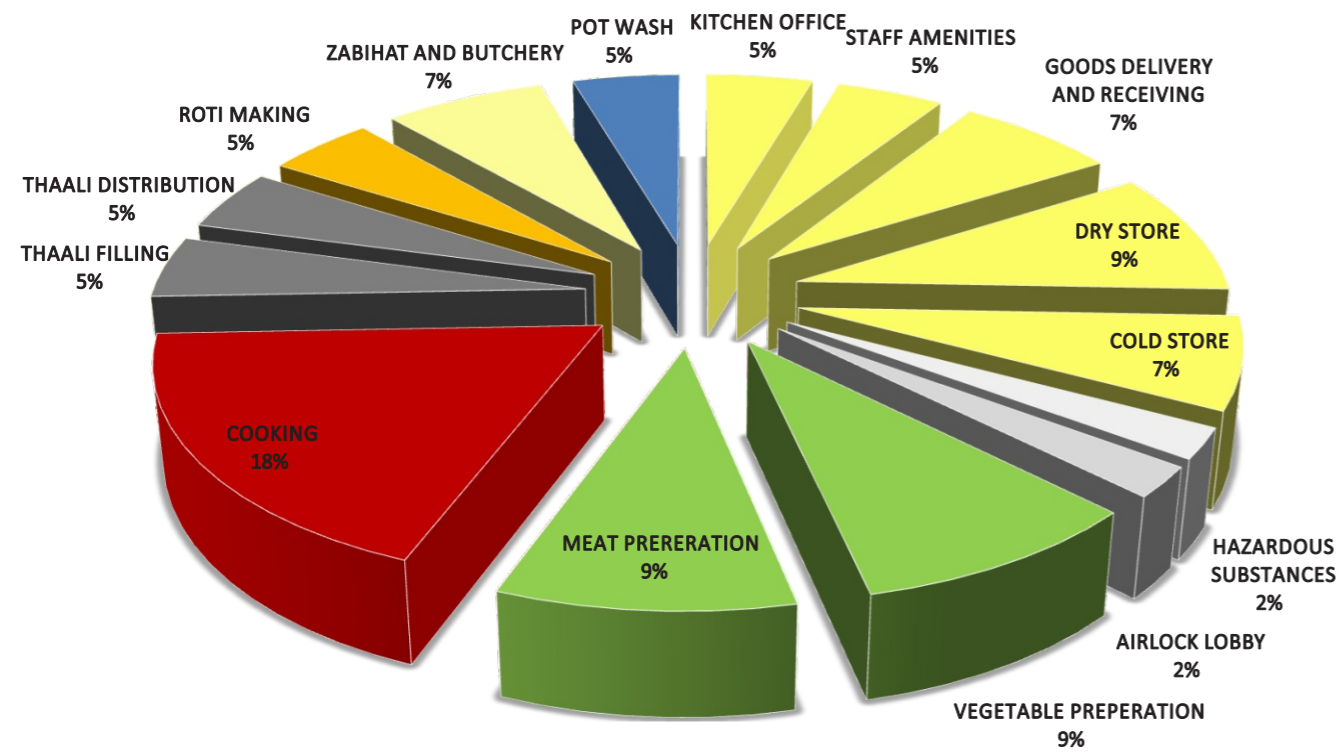
BUILT UP AREA - 235.00 SQ.M.

BEST ORIENTATION NORTH SATISFACTORY ORIENTATION NORTH ACCEPTABLE ORIENTATION NORTH	PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH KITCHEN TYPE - 1600 PAX TITLE - GAS PIPING LAYOUT			
	APPROVED BY	FMB	DATE	20/10/15
	Faiz ul Mawaid il Burhaniyah office Badri Mahal In collaboration with architects and consultants			



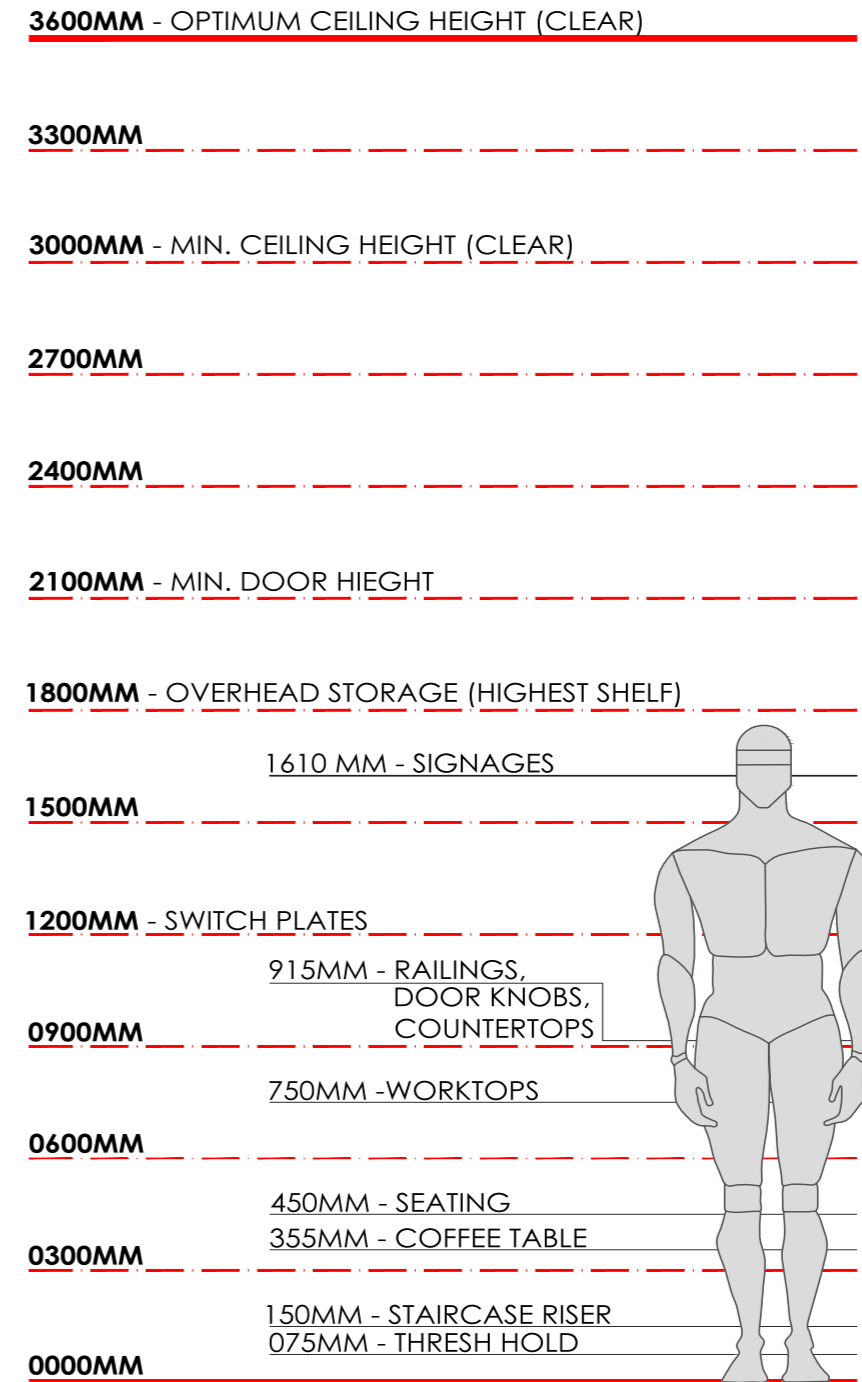
ANNEXURE: 28

AREA ANALYSIS CHART



AREA ANALYSIS DIAGRAM

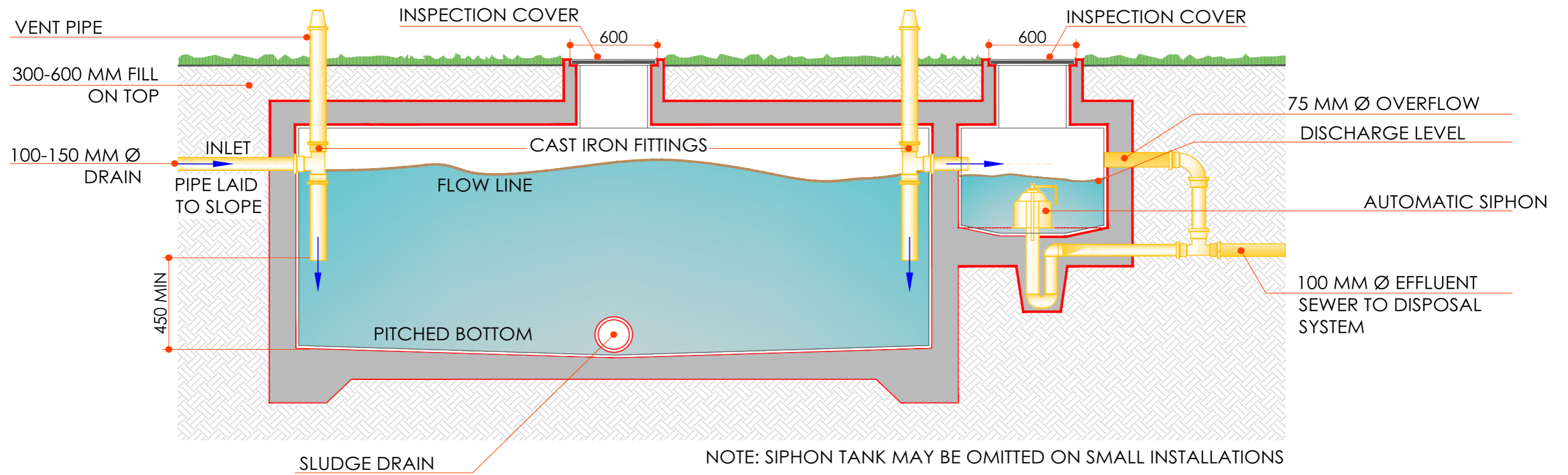
ANNEXURE: 29



MOUNTING AND WORKING HIEGHTS FOR HUMAN ANTHROPOMETRY



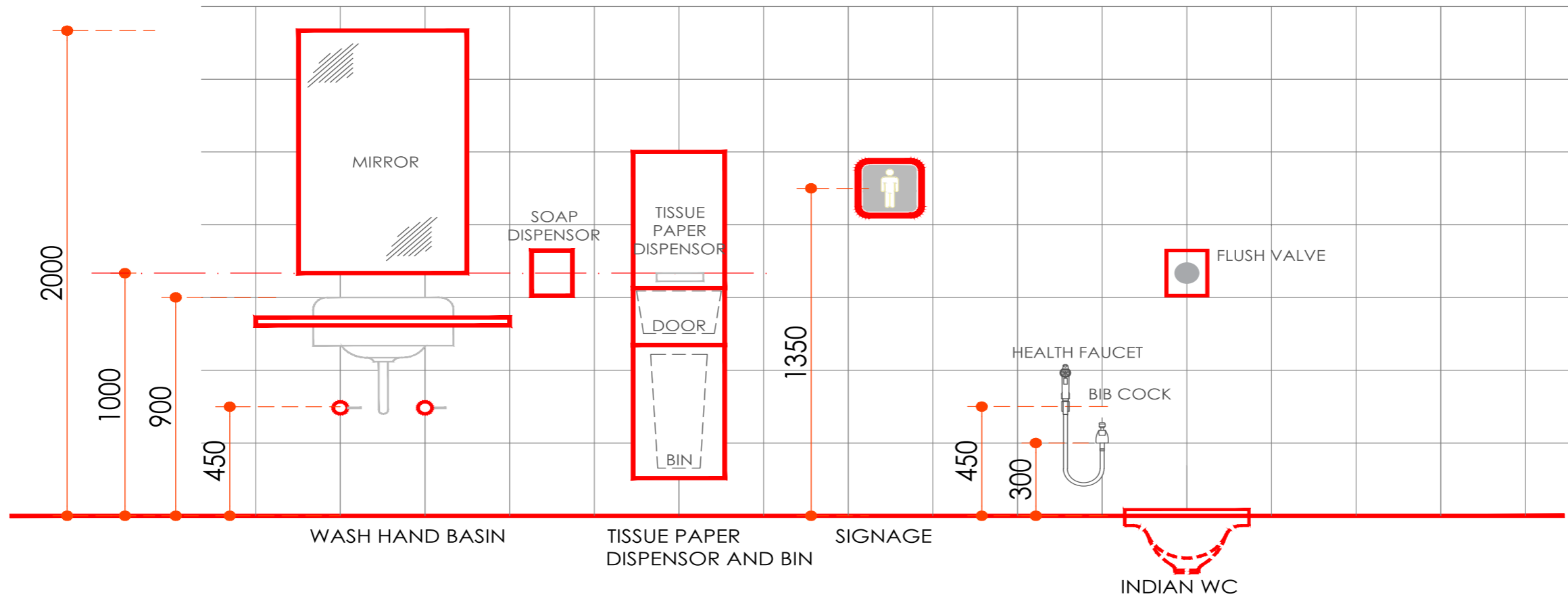
ANNEXURE: 30



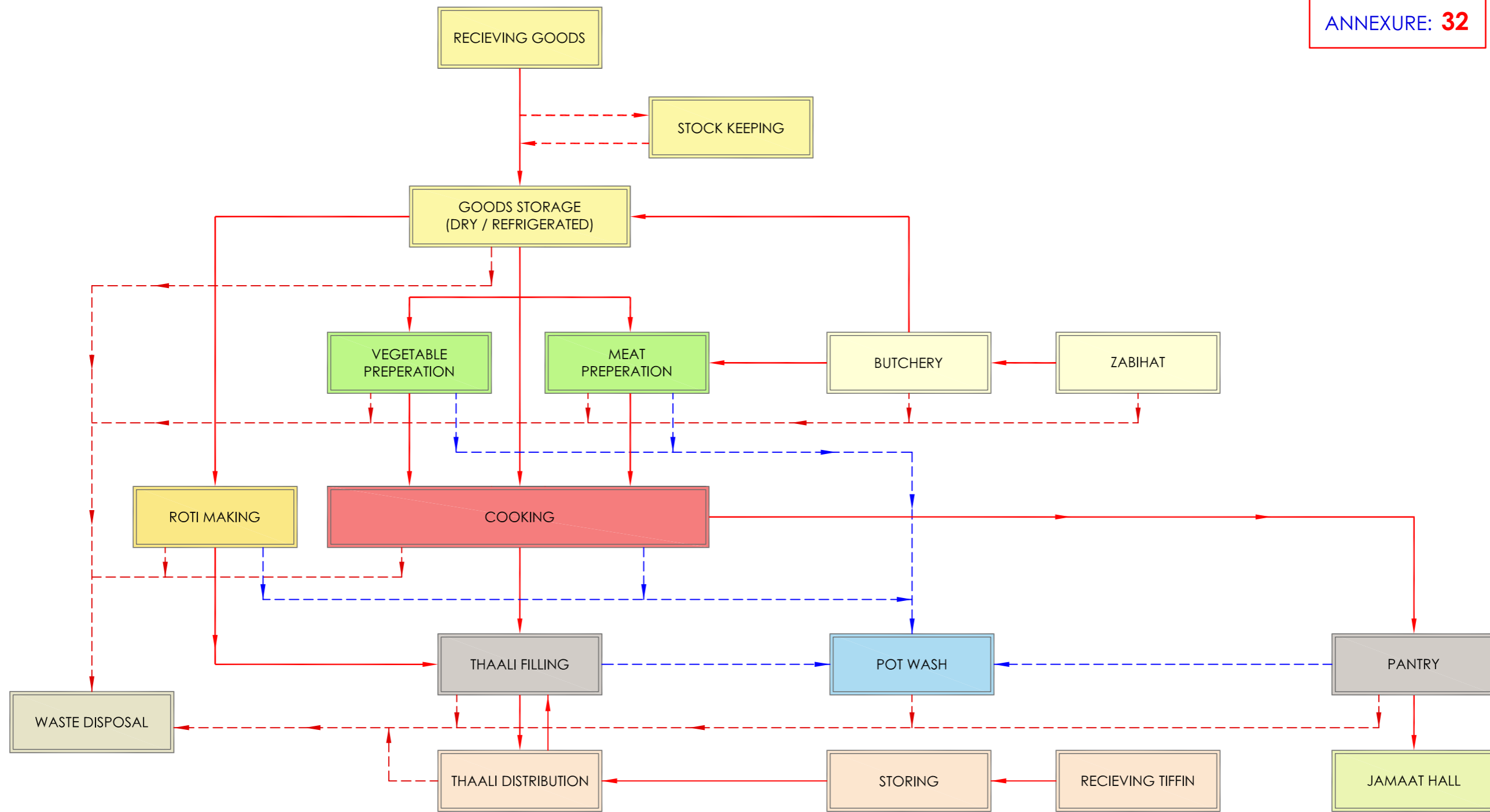
SEPTIC TANK



ANNEXURE: 31



MOUNTING HEIGHTS OF FITTINGS AND FIXTURES IN TOILETS

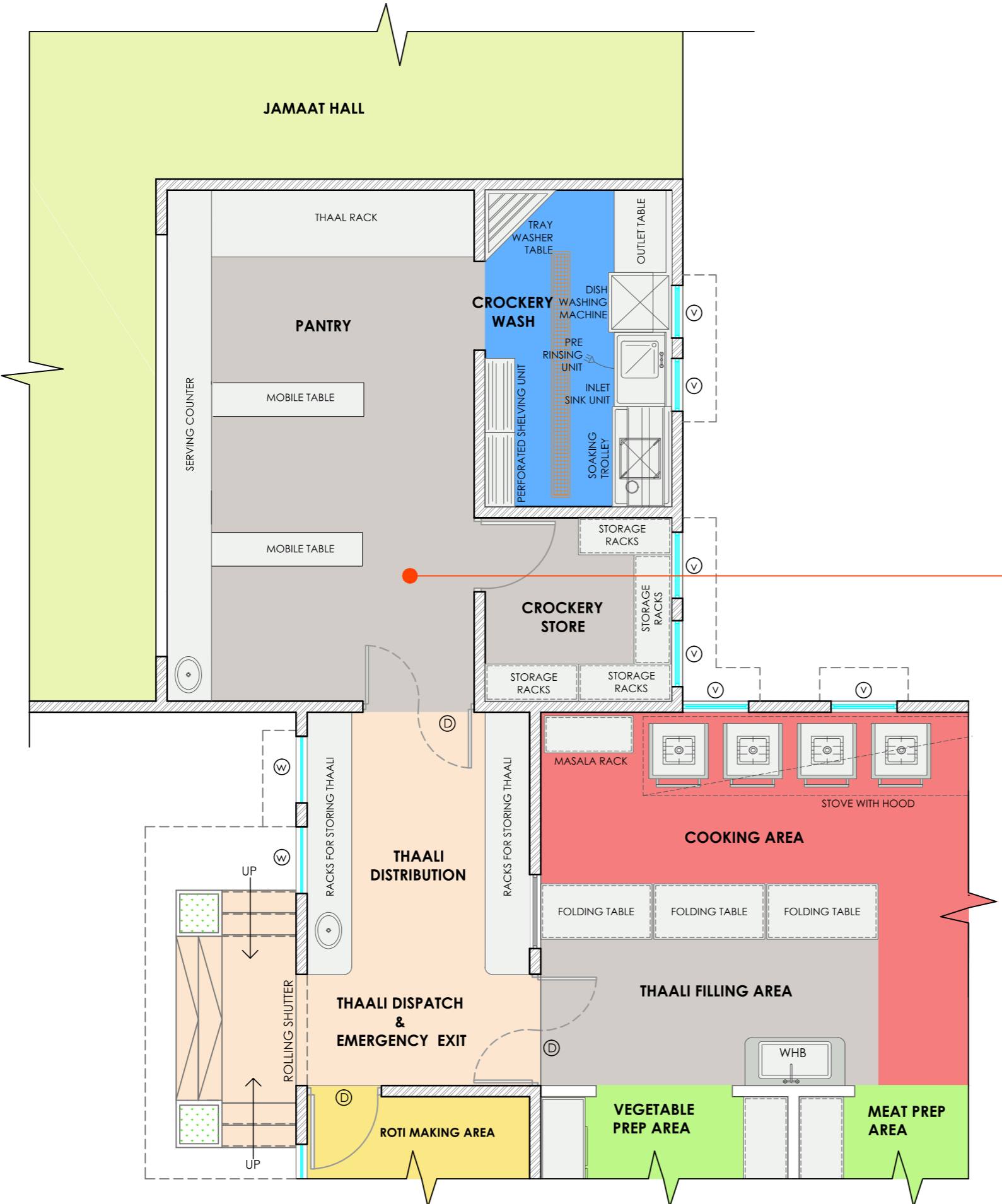


LEGEND

- FOOD
- WASTE
- UNTENSILS

WORK FLOW DIAGRAM WITH PANTRY

ANNEXURE: 33



PANTRY:

- should not interfere with the kitchen work flow
- entrance for pantry should not pass through the preparation or cooking areas
- should have sufficient crockery store and crockery wash area

BEST ORIENTATION NORTH	PROPOSED KITCHEN DESIGN FOR FAIZ UL MAWAID IL BURHANIYAH			
	KITCHEN TYPE - 800 PAX			
	PANTRY LAYOUT			
SATISFACTORY ORIENTATION EAST	APPROVED BY	FMB	DATE	20/10/15
	Faiz ul Mawaid il Burhaniyah office Badri Mahal in collaboration with architects and consultants			
ACCEPTABLE ORIENTATION SOUTH				



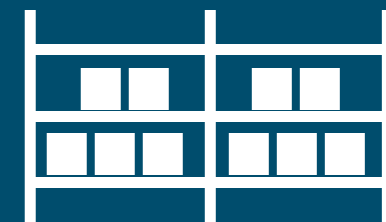
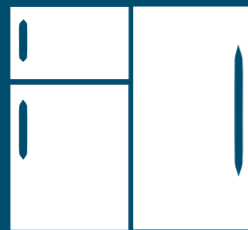
This guide has been prepared by **Faiz ul Mawaid il Burhaniyah office.**

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This booklet is **Part III** of three parts that constitute the FMB guidelines for a smart kitchen.
For complete understanding please also refer to:

Part I

Part II