

PROJECT: PROPOSED DESIGN OF SECURITY QUARTERS AT GELEPHU AIRPORT.
CLIENT: DEPARTMENT OF AIR TRANSPORT.
BUILDING: BACHELOR'S QUARTER

PLUMBING AND SEWER DRAWINGS

SUBMITTED BY:

Gyaltshen consultancy



ROYAL GOVERNMENT OF BHUTAN
CIVIL AVIATION DEPARTMENT



NOTE:

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS SPECIFIED OTHERWISE
- ALL RELATIVE LEVELS ARE IN METERS UNLESS SPECIFIED OTHERWISE
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- THE CONSULTANTS/SUPERVISION TEAM
- MINOR ADJUSTMENTS NEED TO BE CARRIED OUT ON SITE TO MATCH WITH I
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Legend

No.	Revision	Date

Client
Royal Government of Bhutan Civil Aviation Dep:
Aviation Planners & Engineers
Leading Edge Aviation Planning Professionals
Civil Engineering Consultant
Gyaltshen Consultancy

Project Title

GELEPHU DOMESTIC AIRPORT
DESIGN & SUPERVISION

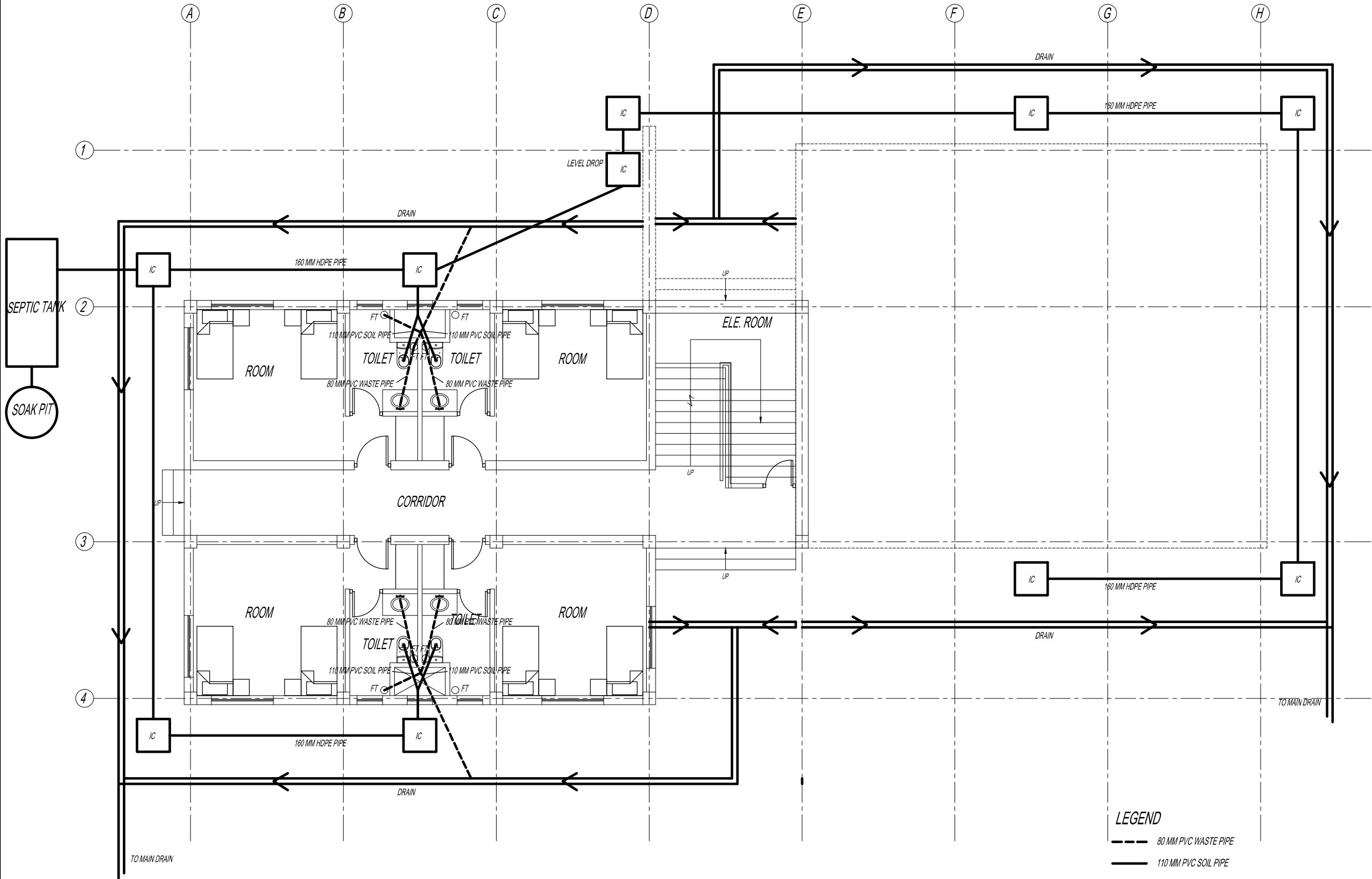
DESIGN OF SECURITY
QUARTERS.

Drawing Title

BACHELOR'S QUARTER

SEWERAGE LAYOUT

Scale	NTS
Date	SEPT 1ST 2016
Drawn By	TSHEWANG GYELTSHEN
Design By	DINESH
Drawing Number	GEL AIRPORT BQ SW01
LEAPP Project Code	----



GROUND FLOOR SEWER LAYOUT

LEGEND

--- 80 MM PVC WASTE PIPE
— 110 MM PVC SOIL PIPE

FT - FLOOR TRAP

IC - INSPECTION CHAMBER

Note:

- All internal Sewerage pipes shall be 110mm dia heavy duty PVC pipes & external 160mm dia HDPE pipe, 4kg/sqcm pressure.
- All waste water pipes shall be 90mm dia PVC heavy duty pipes.
- All joints shall be done with standard PVC fittings with application of PVC solutions.
- All pipe work and fittings shall be tested after installation.
- The size of manholes shall be 600x600 upto to the depth of 1m and 900x900 for depth more than 1m.
- All manholes shall be RCC round with smooth finish inside fitted with CI manhole cover and frame medium duty.
- The pipe gradient shall be 1 in 50 minimum.



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Civil Engineering Consultant
Gyaltshen Consultancy

Project Title

GELEPHU DOMESTIC AIRP
DESIGN & SUPERVISION

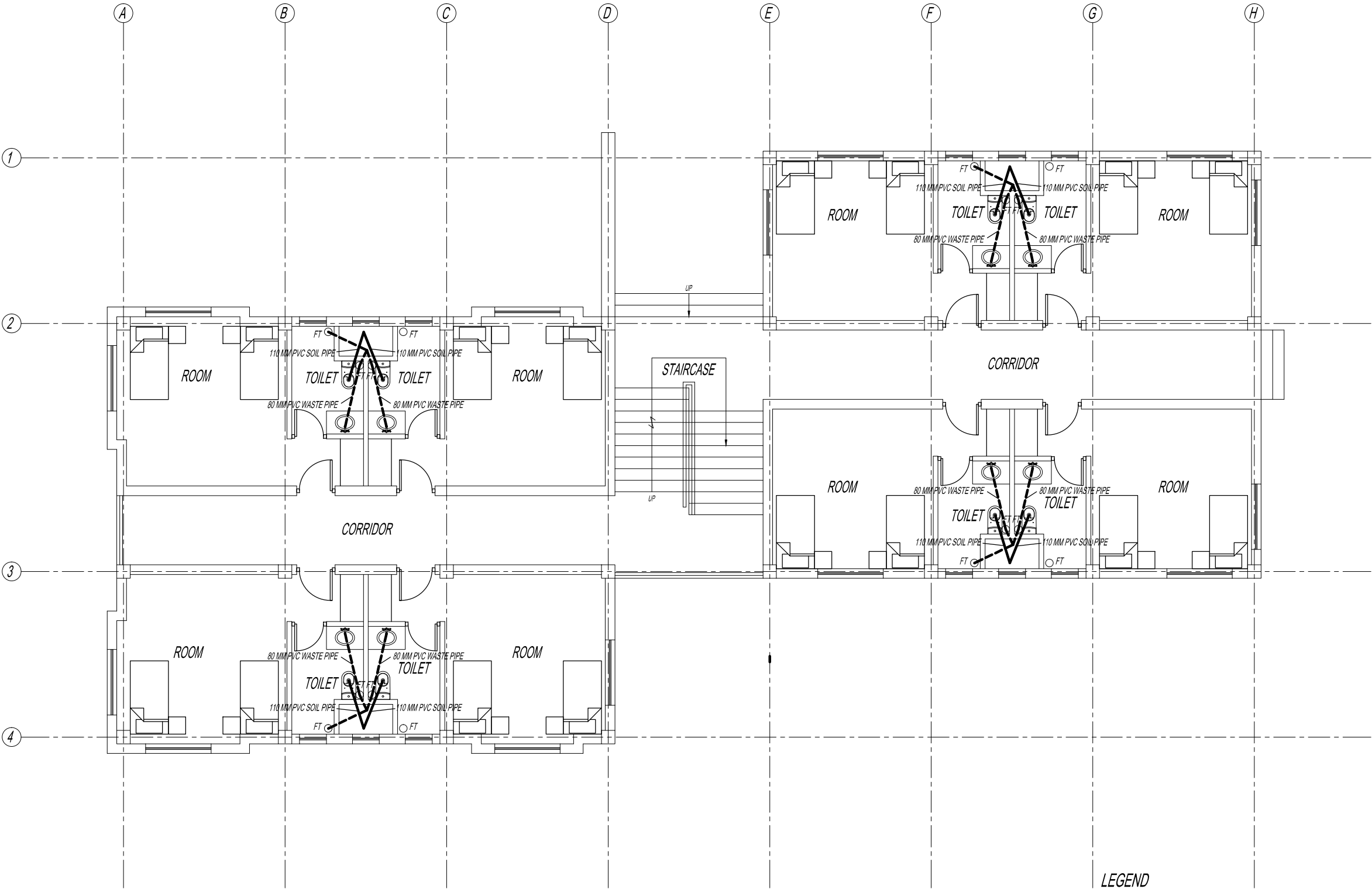
DESIGN OF SECURITY
QUARTERS.

Drawing Title

BACHELOR'S QUARTER

SEWERAGE LAYOUT

Scale	NTS
Date	SEPT 1ST 2016
Drawn By	TSHEWANG GYELTSHEN
Design By	DINESH
Drawing Number	GEL AIRPORT BQ SW02
LEAPP Project Code	----



LEGEND

--- 80 MM PVC WASTE PIPE
— 110 MM PVC SOIL PIPE

FT - FLOOR TRAP

IC - INSPECTION CHAMBER

Note:
- All internal Sewerage pipes shall be 110mm dia heavy duty PVC pipes & external
160mm dia HDPE pipe, 4kg/sqcm pressure.
- All waste water pipes shall be 90MM dia PVC heavy duty pipes.
- All joints shall be done with standard PVC fittings with application of PVC solutions.
- All pipe work and fittings shall be tested after installation.
- The size of manholes shall be 600x600 upto to the depth of 1m and 900x900 for
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- All manholes shall be RCC round with smooth finish inside fitted with CI manhole
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- The pipe gradient shall be 1 in 50 minimum.

FIRST FLOOR SEWER LAYOUT



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CIVIL AVIATION DEPARTMENT

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Leading Edge Aviation Planning Professionals
Civil Engineering Consultant
Gyaltshen Consultancy

Project Title

GELEPHU DOMESTIC AIRP
DESIGN & SUPERVISION

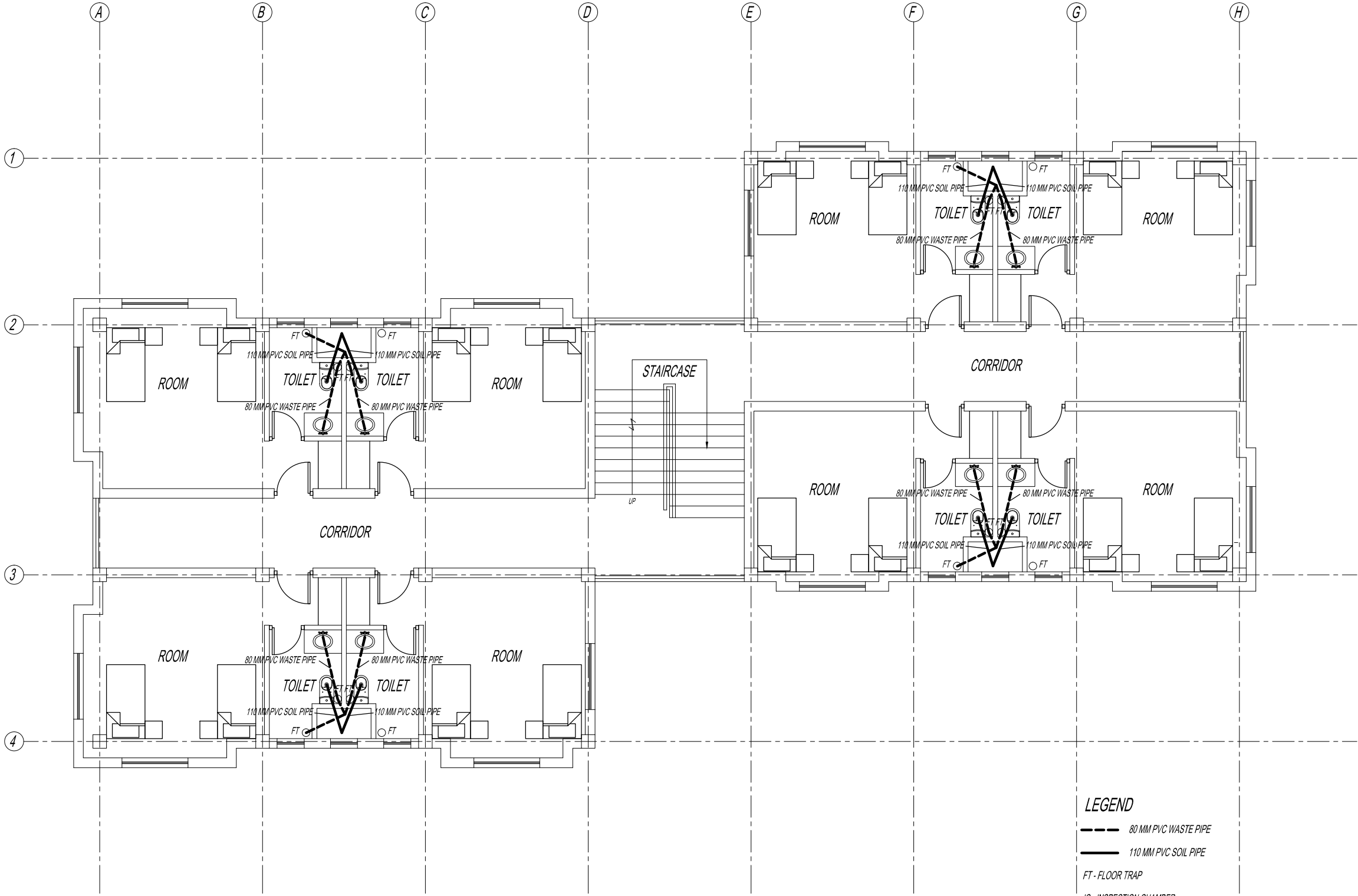
DESIGN OF SECURITY
QUARTERS.

Drawing Title

BACHELOR'S QUARTER

SEWERAGE LAYOUT

Scale	NTS
Date	SEPT 1ST 2016
Drawn By	TSHEWANG GYELTSHEN
Design By	DINESH
Drawing Number	GEL AIRPORT BQ SW03
LEAPP Project Code	----



LEGEND

80 MM PVC WASTE PIPE
110 MM PVC SOIL PIPE

FT - FLOOR TRAP

IC - INSPECTION CHAMBER

Note:
- All internal Sewerage pipes shall be 110mm dia heavy duty PVC pipes & external
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SECOND FLOOR SEWER LAYOUT



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GELEPHU DOMESTIC AIRPORT
DESIGN & SUPERVISION

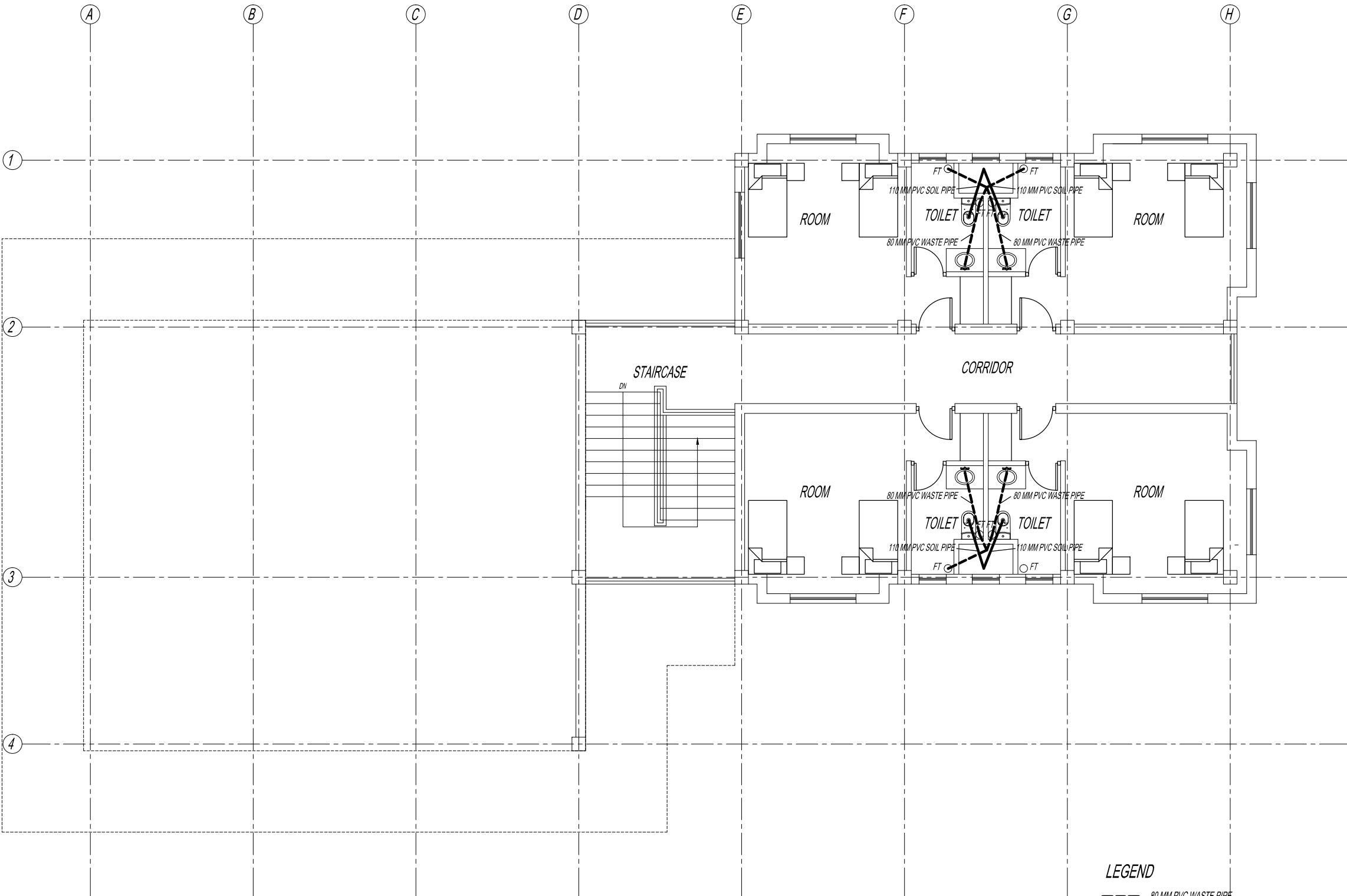
DESIGN OF SECURITY
QUARTERS.

Drawing Title

BACHELOR'S QUARTER

SEWERAGE LAYOUT

Scale	NTS
Date	SEPT 1ST 2016
Drawn By	TSHEWANG GYELTSHEN
Design By	DINESH
Drawing Number	GEL AIRPORT BQ SW04
LEAPP Project Code	----



LEGEND

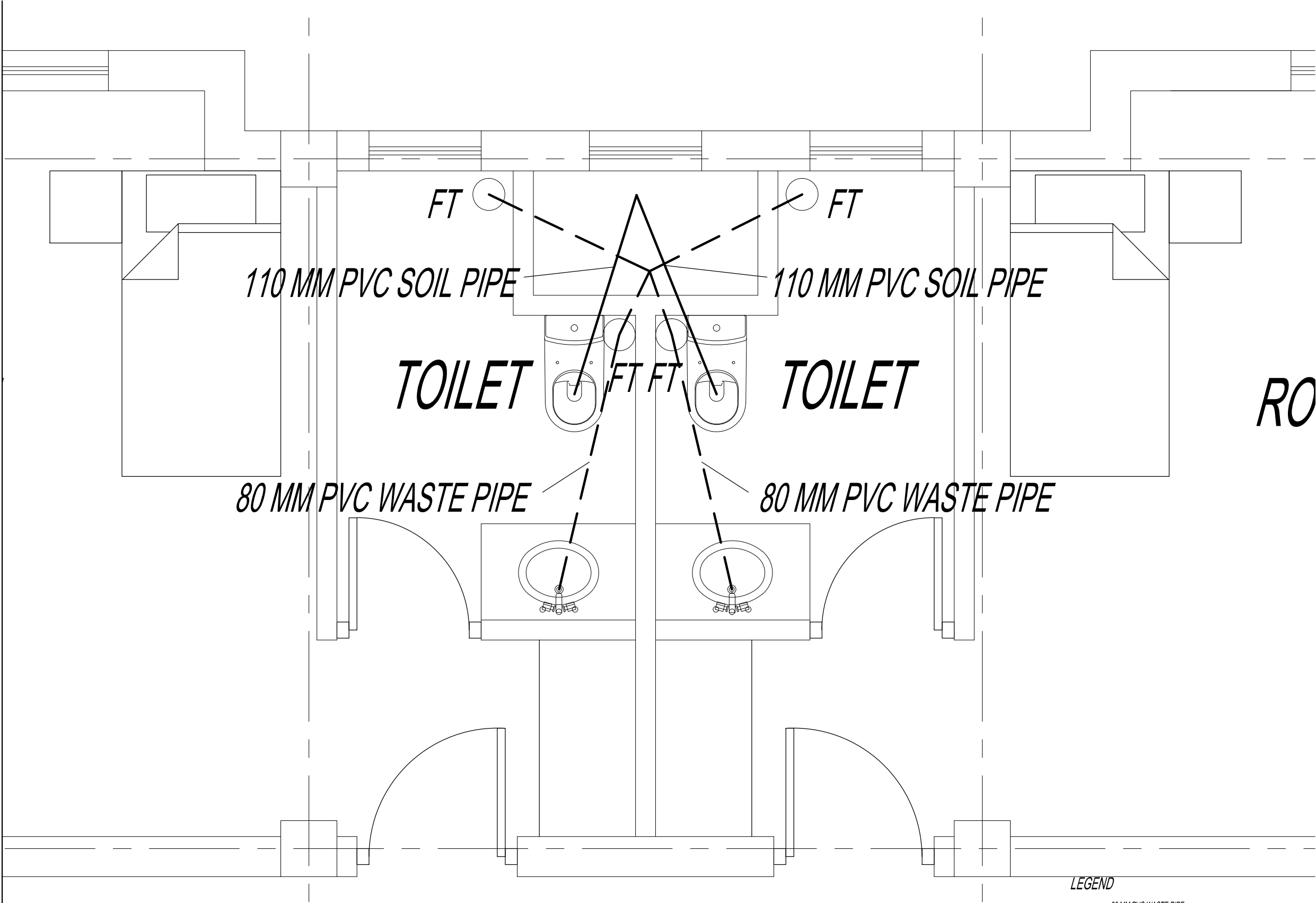
--- 80 MM PVC WASTE PIPE
— 110 MM PVC SOIL PIPE

FT - FLOOR TRAP

IC - INSPECTION CHAMBER

Note:
- All internal Sewerage pipes shall be 110mm dia heavy duty PVC pipes & external 160mm dia HDPE pipe, 4kg/sqcm pressure.
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- The pipe gradient shall be 1 in 50 minimum.

THIRD FLOOR SEWER LAYOUT



TYPICAL SEWER LAYOUT

LEGEND

- 80 MM PVC WASTE PIPE
- 110 MM PVC SOIL PIPE

FT - FLOOR TRAP
IC - INSPECTION CHAMBER

Note:
- All internal Sewerage pipes shall be 110mm dia heavy duty PVC pipes & external 160mm dia HDPE pipe, 4kg/sqcm pressure.
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Client
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Leading Edge Aviation Planning Professionals
Civil Engineering Consultant
Gyaltshen Consultancy

Project Title

GELEPHU DOMESTIC AIRPORT
DESIGN & SUPERVISION

DESIGN OF SECURITY
QUARTERS.

Drawing Title

BACHELOR'S QUARTER

SEWERAGE LAYOUT

Scale	NTS
Date	SEPT 1ST 2016
Drawn By	TSHEWANG GYELTSHEN
Design By	DINESH
Drawing Number	GEL AIRPORT BQ SW05
LEAPP Project Code	----



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GELEPHU DOMESTIC AIRPORT
DESIGN & SUPERVISION

DESIGN OF SECURITY
QUARTERS.

Drawing Title

BACHELOR'S QUARTER

PLUMBING LAYOUT

Scale 1:100

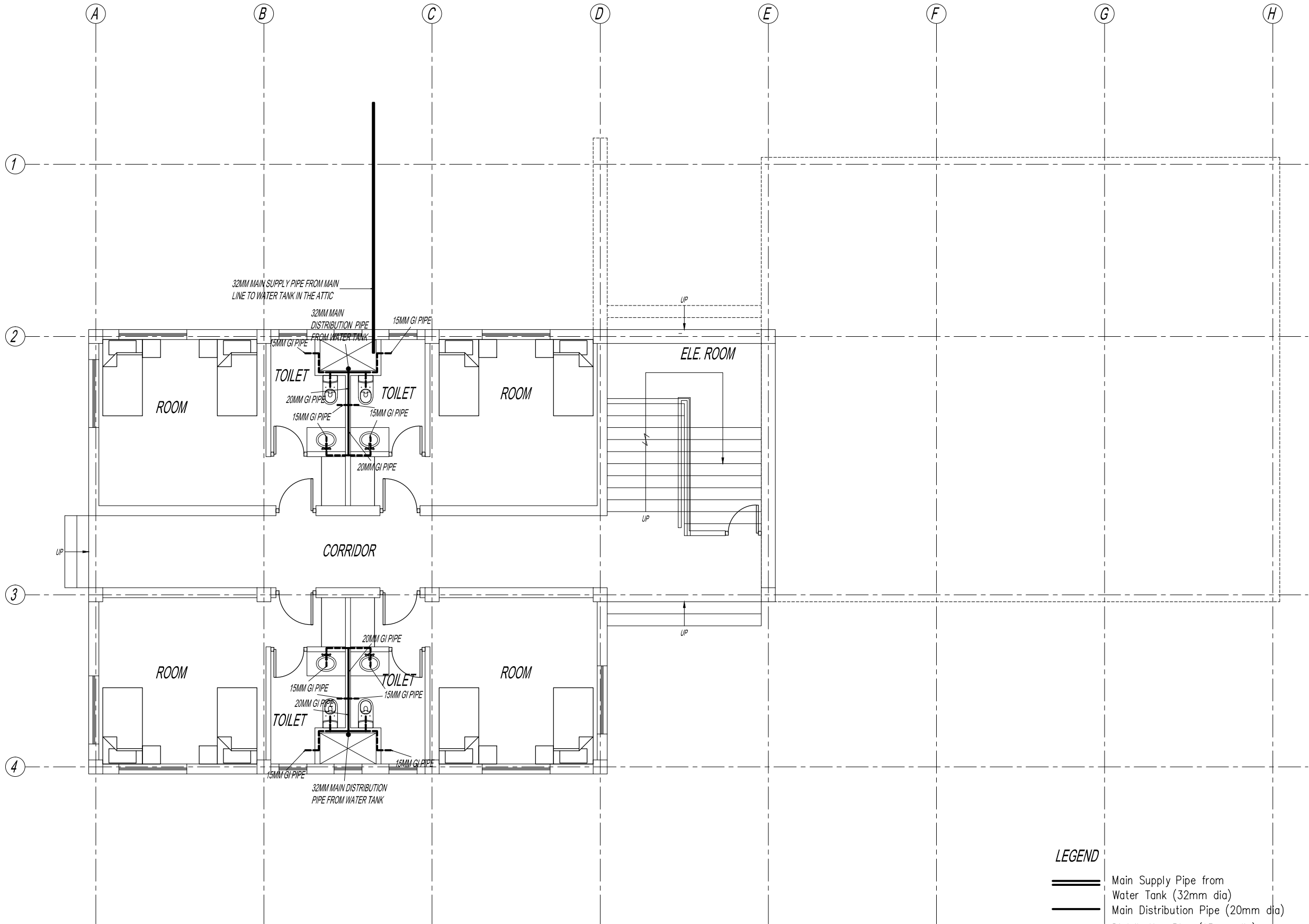
Date SEPT 1ST 2016

Drawn By TSHEWANG GYELTSHEN

Design By DINESH

Drawing Number
GEL AIRPORT BQ PL01

LEAPP Project Code

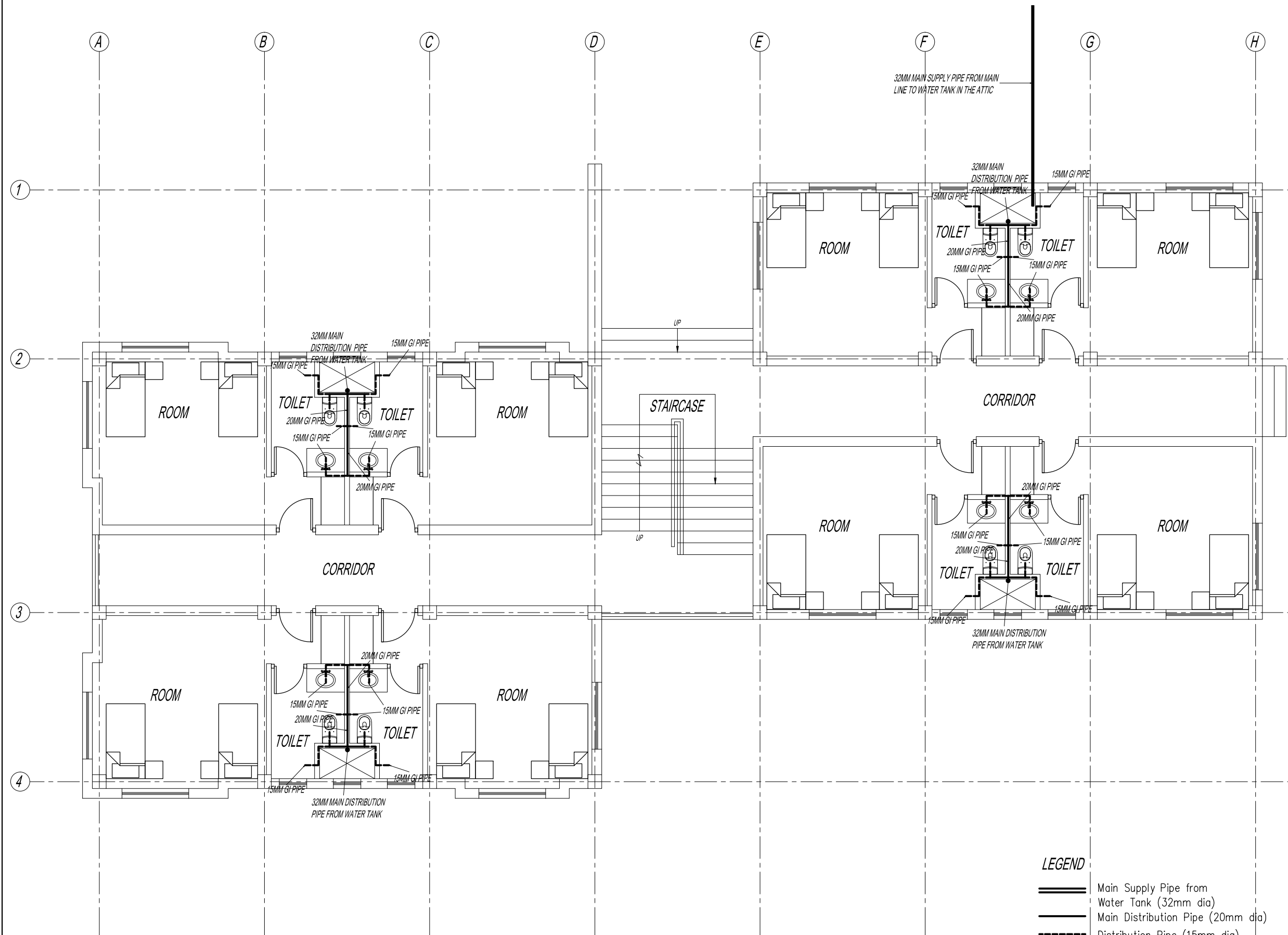


GROUND FLOOR PLUMBING LAYOUT

LEGEND

- Main Supply Pipe from Water Tank (32mm dia)
- Main Distribution Pipe (20mm dia)
- Distribution Pipe (15mm dia)
- Hot Water Pipe (15mm dia)

Notes for plumbing:
1. Pipes shall be GI, medium duty.
3. Provide separate connections for GF & FF
4. All inlets shall be controlled with gate valve as shown in site plan
5. Pressure testing shall be done before conceding the pipes



FIRST FLOOR PLUMBING LAYOUT

LEGEND

- Main Supply Pipe from Water Tank (32mm dia)
- Main Distribution Pipe (20mm dia)
- Distribution Pipe (15mm dia)
- Hot Water Pipe (15mm dia)

Notes for plumbing:
1. Pipes shall be GI, medium duty.
3. Provide separate connections for GF & FF
4. All inlets shall be controlled with gate valve as shown in site plan
5. Pressure testing shall be done before concealing the pipes



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Project Title

GELEPHU DOMESTIC AIRPC
DESIGN & SUPERVISION

DESIGN OF SECURITY
QUARTERS.

Drawing Title

BACHELOR'S QUARTER

PLUMBING LAYOUT

Scale	1:100
Date	SEPT 1ST 2016
Drawn By	TSHEWANG GYELTSHEN
Design By	DINESH
Drawing Number	GEL AIRPORT BQ PL02
LEAPP Project Code	----



ROYAL GOVERNMENT OF BHUTAN
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Leading Edge Aviation Planning Professionals
Civil Engineering Consultant
Gyaltshen Consultancy

Project Title

GELEPHU DOMESTIC AIRPORT
DESIGN & SUPERVISION

DESIGN OF SECURITY
QUARTERS.

Drawing Title

BACHELOR'S QUARTER

PLUMBING LAYOUT

Scale 1:100

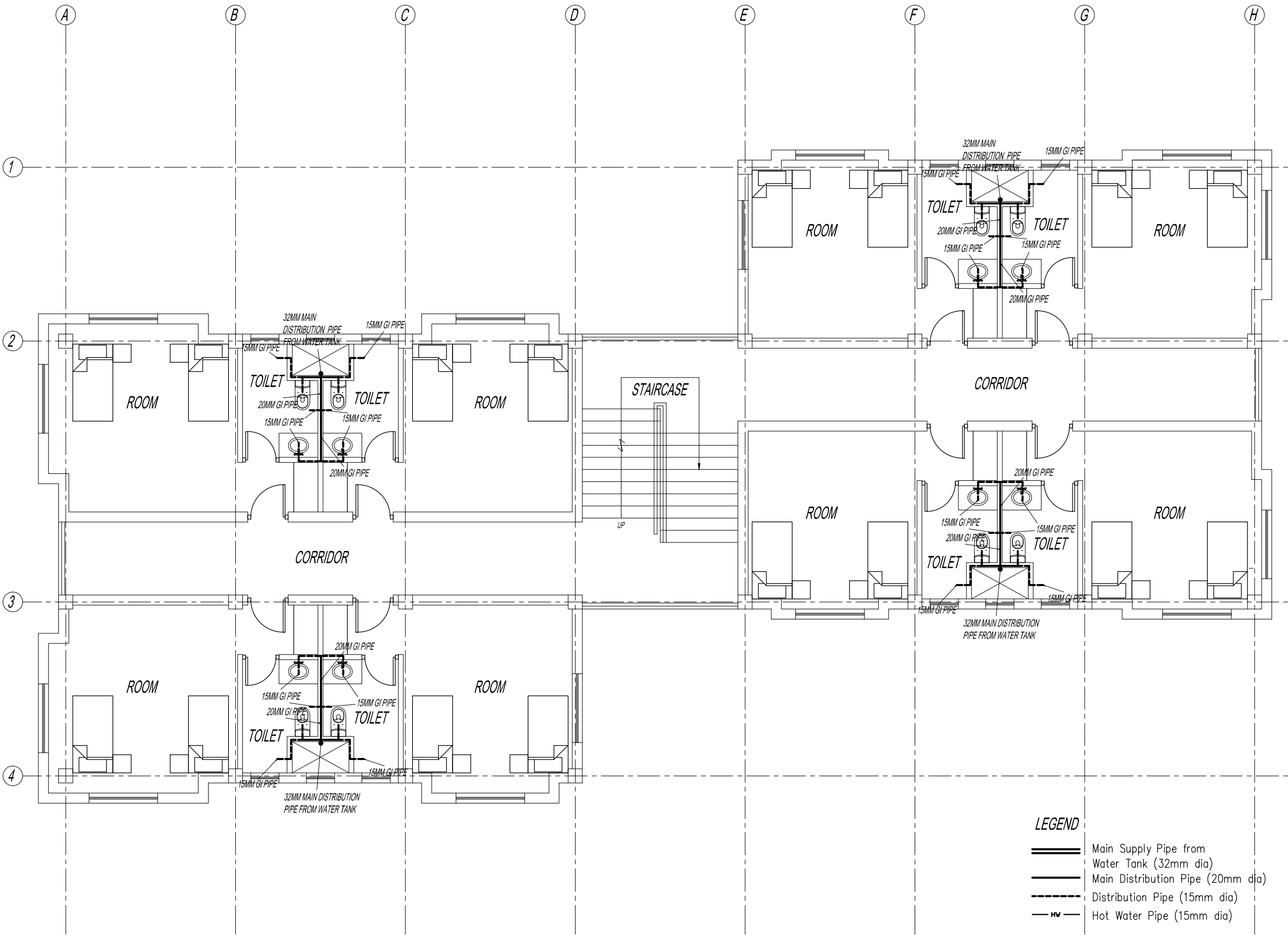
Date SEPT 1ST 2016

Drawn By TSHEWANG GYELTSHEN

Design By DINESH

Drawing Number
GEL AIRPORT BQ PL03

LEAPP Project Code

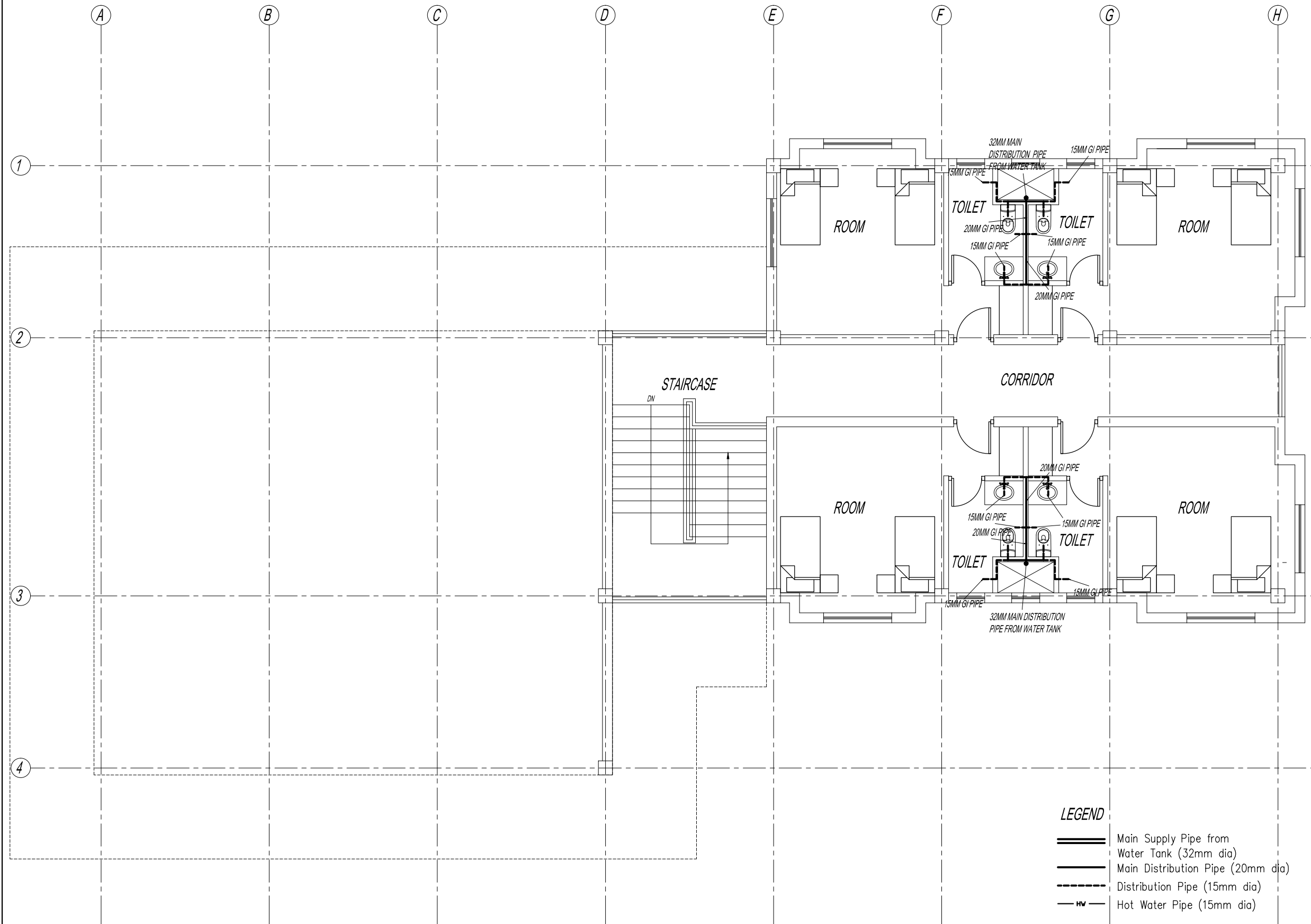


SECOND FLOOR PLUMBING LAYOUT

LEGEND

- Main Supply Pipe from Water Tank (32mm dia)
- Main Distribution Pipe (20mm dia)
- Distribution Pipe (15mm dia)
- Hot Water Pipe (15mm dia)

Notes for plumbing:
1. Pipes shall be GI, medium duty.
3. Provide separate connections for GF & FF
4. All inlets shall be controlled with gate valve as shown in site plan
5. Pressure testing shall be done before conceding the pipes



THIRD FLOOR PLUMBING LAYOUT

LEGEND

- Main Supply Pipe from Water Tank (32mm dia)
- Main Distribution Pipe (20mm dia)
- Distribution Pipe (15mm dia)
- Hot Water Pipe (15mm dia)

Notes for plumbing:
1. Pipes shall be GI, medium duty.
3. Provide separate connections for GF & FF
4. All inlets shall be controlled with gate valve as shown in site plan
5. Pressure testing shall be done before conceding the pipes



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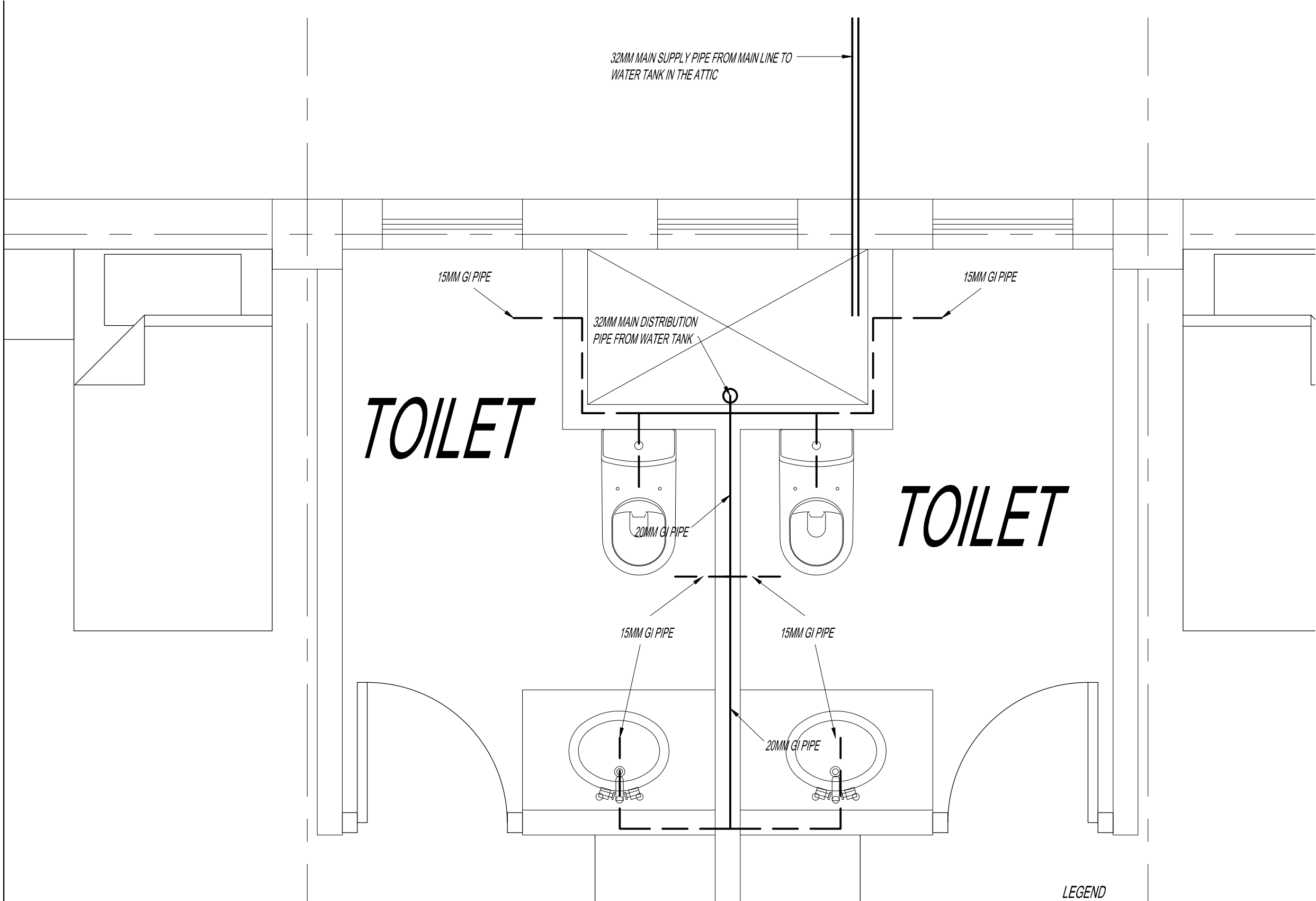
GELEPHU DOMESTIC AIRPC
DESIGN & SUPERVISION

DESIGN OF SECURITY
QUARTERS.

Drawing Title
BACHELOR'S QUARTER

PLUMBING LAYOUT

Scale	1:100
Date	SEPT 1ST 2016
Drawn By	TSHEWANG GYELTSHEN
Design By	DINESH
Drawing Number	GEL AIRPORT BQ PL04
LEAPP Project Code	----



TYPICAL PLUMBING LAYOUT

LEGEND

- Main Supply Pipe from Water Tank (32mm dia)
- Main Distribution Pipe (20mm dia)
- Distribution Pipe (15mm dia)
- Hot Water Pipe (15mm dia)

Notes for plumbing:
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GELEPHU DOMESTIC AIRPORT
DESIGN & SUPERVISION

DESIGN OF SECURITY
QUARTERS.

Drawing Title
BACHELOR'S QUARTER

TYPICAL PLUMBING LAYOUT

Scale	1:20
Date	SEPT 1ST 2016
Drawn By	TSHEWANG GYELTSHEN
Design By	DINESH
Drawing Number	GELE AIRPORT BQ PL05
LEAPP Project Code	----