THE UNITED REPUBLIC OF TANZANIA

PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

PROPOSED STANDARD DRAWINGS FOR SCHOOL FACILITIES.

Schedule of Materials, Labour & Drawings for 200 Pupils Toilet Block (8 Stances) for Boys – Dry area.

PROJECT AREA

TANZANIA MAINLAND

Ministry of Education, Science and Technology,

Government City - Mtumba,
AFYA -Street,
P. O. Box 10,
40479 DODOMA.

President's Office,
Regional Administration,
& Local Government
Government City - Mtumba
TAMISEMI Street,
P. O. Box 1923,
41185 DODOMA.

NOVEMBER, 2022 (REVISED 1) PO-RALG

Schedule of Material

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	MATERIALS				
A	**SUB-STRUCTURE -**PROVISIONAL				
1	**Strip Foundation - Grade 15 Plain**				
	Aggregate (3/4")	5	M^3		
	Sand	2	M^3		
	Cement-50kgs (42.5)	22	Bags		
2	**Foundation Walls**				
	6" Cement & Sand block - Minimum Strength 3. 5 MPa	375	No		
	Sand	3	M^3		
	Cement -50kgs (42.5)	7	Bags		
3	**Moram, Hardcore & Site sterilization**				
	Moram ($4.5m^3$ lorry)	2	Trips		
	Hardcore ($4.5m^3$ lorry)	2	Trips		
	Sand blinding	3	M^3		
	Adrian 0.5% solution or equal 500mls	1	Bottle		
4	**Oversite Concrete (100mm thick - 20 grade) & Ground Beam - 20 grade, columns and Ramp**				
	DPM	25	M^2		
	Cement -50kgs	25	Bags		
	Aggregates (1/2")	4	M^3		
	Sand	2	M^3		
	Reinforcement - 12mm diameter high tensile	14	PC'S		
	Reinforcement - 8mm diameter	12	PC'S		
	Binding Wire	4	Kg		
	A252 Mesh 200 x200x6.16kg/m2	1	PC'S		
	Timber 1" X 10 " (3.6m long)	8	PC'S		
	Timber 2" X 2"	4	PC'S		
	Nails-4"	3	Kgs		
	Nails-3"	3	Kgs		
	Supporting props	0	PC'S		
	SUB-TOTAL SUBSTRUCTURE				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
B.	**SUPERSTRUCTURE**				
1	**Walls & Ring beam & Columns**				
	6" Cement & Sand block - Minimum Strength 3. 5	890	No		
	Cement & Sand Perforated blocks	0	No		
	DPC 25m long x 1m wide)	11	M		
	Sand	5	M^3		
	Cement-50kgs	16	Bags		
	Aggregates (1/2")	1	M^3		
	Reinforcement - 12mm diameter high tensile	8	PC'S		
	Reinforcement - 8mm diameter	6	PC'S		
	Binding Wire	4	kg		
	A252 Mesh 200 x200x6.16kg	0	PC'S		
	Timber 1" X 10" to Sides (3.6m long)	6	PC'S		
	Timber 1" X 6" (Plates)	2	PC'S		
	Timber 2" X 2"	4	PC'S		
	Supporting Props	4	PC'S		
	SUB-TOTAL SUPER STRUCTURE				
C.	**ROOF STRUCTURE & COVERING**				
1	**Roof Structure -** Provisional (3.6m long)				
	Timber 2 " X 3" Purlins	9	PC'S		
	Timber 2" X 4" Wall plate,Rafter	10	PC'S		
	Fascia board 1" X 8"	6	PC'S		
	Nails -5"	3	Kgs		
	Nails -4"	3	Kgs		
	Nails -3"	3	Kgs		
	NOTE: The above softwood timber structure should be pressure impregnated treated				
2	**Roof Covering**				
	28G IT5 resincoated sheet 3m long	12	pcs		
	Roofing Nails	1	Kgs		
	TO COLLECTION			**C/F**	

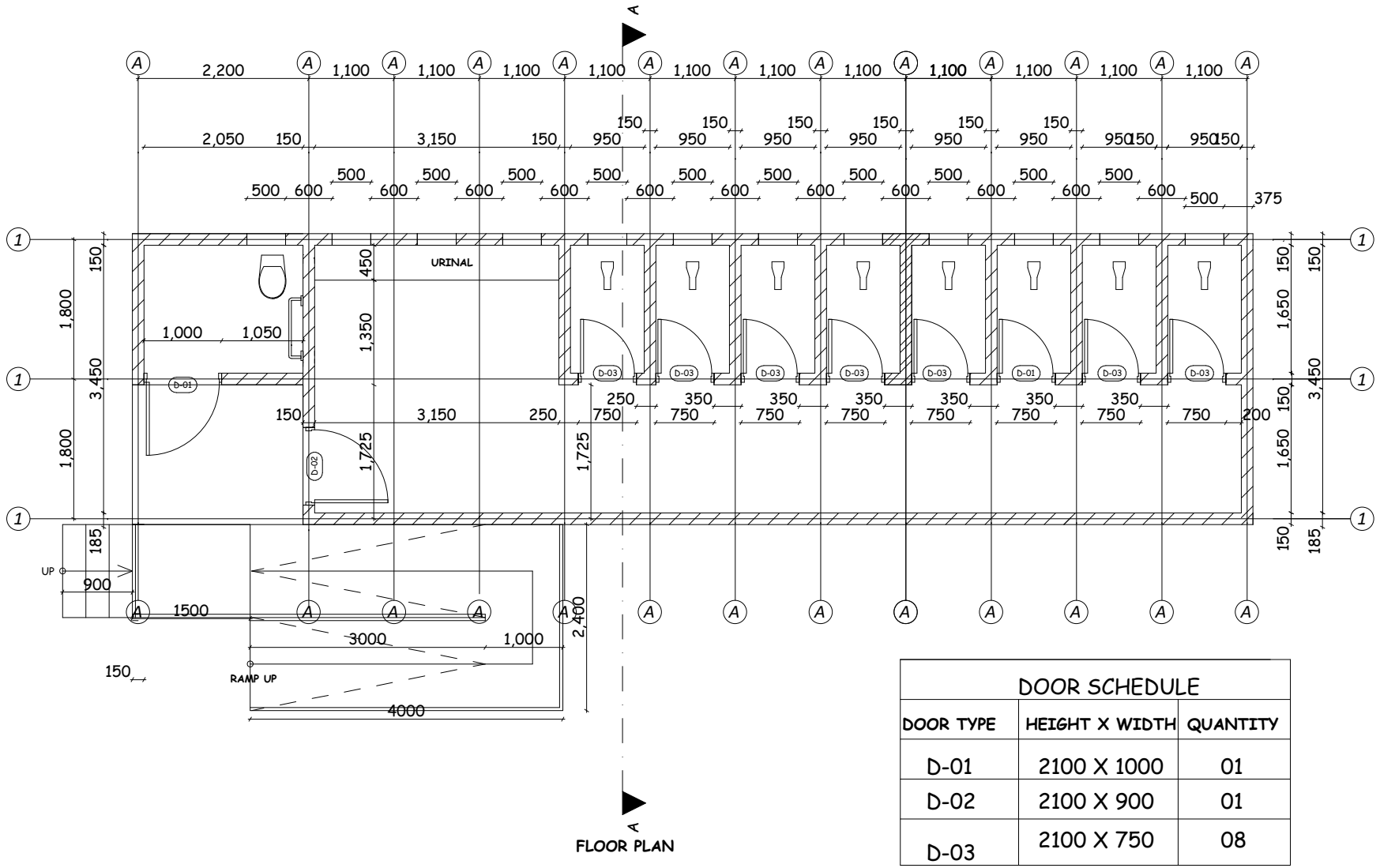
ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	ROOF STRUCTURE & COVERING CONT…				
				B/F	
3	**Gutter's**				
	Upvc 100mm half round (6m long)-5''	2	PC'S		
	Upvc 75mm diameter down pipe; Class B	1	PC'S		
	PVC outlet	1	PC'S		
	PVC bend 45'	1	PC'S		
	Gutter support bracket	4	PC'S		
	Gutter Clamp 3''	7	PC'S		
	Connector	1	PC'S		
	SUB-TOTAL ROOF STRUCTURE & COVERING				
D.	**DOOR**				
1	**40mm thick hardwood (mninga) or equal and aproved paneled door shutter**				
	920 x 2100mm high	1	PC'S		
	720 x 2100mm high	8	PC'S		
2	**45x145mm Frames (hardwood),Varnish, Glass & Buralar bar**				
	1000 x 2100 mm high frame	1	PC'S		
	800 x 2100mm high frame	8	PC'S		
	Brush 3''	2	Pcs		
	Sand paper (msasa) No.80	2	LM		
	Clear Varnish - 4Litres	2	TIN		
	Thinner for Varnish -4Litres	2	Litres		
	Door grill with 38mm x 4mm flat bars, 25mm x 25mm square pipespainted with red oxide				
	1000 x 1500mm high	1	No		
3	**IronMongeries - ref Union**				
	Barrel bolt with pad lock	10	No		
	Flush bolt	10	No		
	Brass hinges - 100mm	15	Pairs		
	SUB-TOTAL FOR DOORS				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
E.	**FINISHING**				
1	**Floor finishing -**				
	Bedding/Backing; cement sand and Chipping (1:2:2); to steel finishing				
	Sand	2	M^3		
	Cement-50kgs	8	Bags		
2	**Wall Finishing**				
	Sand	3	M^3		
	Cement-50kgs	10	Bags		
	Wall Puty	7	Bags		
	SUB-TOTAL FOR FINISHING				
F.	**PAINTING & DECORATION**				
	Emulsion Paint - 20 LTRS	3	buckets		
	Weather guard Paint - 20 LTRS	1	buckets		
	Washable paint -20 LTRS	1	buckets		
	Primer paint -5 LTRS	1	buckets		
	Solvent - 3LTRS	1	TIN		
	Brush 3''	2	Pcs		
	Roller	2	Pcs		
	Gloss paint-2LTR	1	TIN		
	Bitumen paint - 4Litres	1	TIN		
	SUB-TOTAL FOR PAINTING&DECORATION				
G.	**PLUMBING & SANITARY INSTALLATION-PROVISIONAL**				
1	Western type high level W.C disabled toilet,suite vitrious china to B.S 3402 s/p-trap compete with its accessories,supporting rails, Handwashing and any other accessories complete	1	Pcs		
2	**PIPES WORK**				
	SUPPLY PIPE PN 16				
	PPR/IPS pipes class B argentina 3/4''	Pcs	6		
	PPR/IPS socket (20Ø) 3/4''	No	6		
	PPR/IPS elbow (20Ø) 3/4''	No	35		
	PPR/IPS tee (20Ø) 3/4''	No	36		
	PPR/IPS niple (20Ø) 3/4''	No	50		

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	PPR/IPS reducing bush (20Ø) 3/4" to 1/2"(15Ø)	No	46		
	PPR/IPS pipes class B argentina 1"(32Ø)	Pcs	3		
	PPR/IPS socket 1"(32Ø)	No	6		
	PPR/IPS elbow 1"(32Ø)	No	4		
	PPR/IPS tee 1"(32Ø)	No	4		
	PPR/IPS niple 1"(32Ø)	No	4		
	PPR/IPS reducing bush (32Ø) 1" to 3/4"(20Ø)	No	10		
	PPR/IPS pipes class B argentina 11/2"(50Ø)	Pcs	6		
	PPR/IPS socket 11/2"(50Ø)	No	4		
	PPR/IPS elbow 11/2"(50Ø)	No	4		
	PPR/IPS tee 11/2"(50Ø)	No	4		
	PPR/IPS niple 11/2"(50Ø)	No	4		
	PPR/IPS reducing bush (50Ø) 11/2" to 1"(32Ø)	No	3		
	Seal tape	Pcs	20		
	VALVES AND CONTROLS				
	Bib cork pex/martex 1/2" PN 16	No	15		
	Gate valve pex/martex 3/4" PN 16	No	10		
	Gate valve pex/martex 1" PN 16	No	1		
	Ball valve 11/4"	No	1		
	WATER STORAGE TANK				
	1,000litres **TANK**	No	2		
	Tank connector 1"	No	6		
	Tangit glue 1000g	kg	1		
	Clamp 3"	5	PC'S		
	SUB-TOTAL FOR PLUMBING & SANITARY INSTALLATION-				
H.	**TANK BASE**				
	6" Cement & Sand block - Minimum Strength 3. 5 MPa	20	No		
	Cement-50kgs	2	Bags		
	Aggregates (1/2")	1	M3		
	Sand	1	M4		
	TOTAL FOR TANK BASE				

ITEM	DESCRIPTION	QTY	UNIT	PRICE-TZS	AMOUNT
	SOAK AWAY PIT				
	MATERIALS				
1	**Strip Foundation - Grade 15 Plain**				
	Aggregate (3/4")	3	M^3		
	Sand	2	M^3		
	Cement-50kgs	15	Bags		
2	**230mm thick Walls**				
	6" Cement & Sand block - Minimum Strength 3. 5 MPa	1,400	No		
	Sand	3	M^3		
	Cement -50kgs	23	Bags		
	Hardcore 230mm thick (4.5m^3 lorry)	2	Trips		
4	**150mm thick Suspended Concrete slab & ground beam- 20 grade**				
	Cement -50kgs	49	Bags		
	Aggregates (1/2")	6	M^3		
	Sand	3	M^3		
	Reinforcement - 12mm diameter high tensile	13	PC'S		
	Reinforcement - 8mm diameter high tensile	14	PC'S		
	Reinforcement - 10mm diameter high tensile	61	PC'S		
	Binding Wire - 1kg	10	Kgs		
	Timber 1" X 10 " (3.6m long)	14	PC'S		
	Marine board	10	PC'S		
	Timber 2" X 2"	10	PC'S		
	Supporting props	15	PC'S		
	Nails-4"	8	Kgs		
	Nails-3"	8	Kgs		
	Pre Cast concrete chamber 600 x 600mm	3	PCS		
	TOTAL SOAK AWAY PIT				
L	**Steel handrails to ramp**				
	Supply and fix steel support handrails 750mm high				
	comprising 38mm diameter hollow section pipe				
	top, bottom and vertical rails spaced at 300mm				
	centres to centres as per Architectural drawings	8	m		

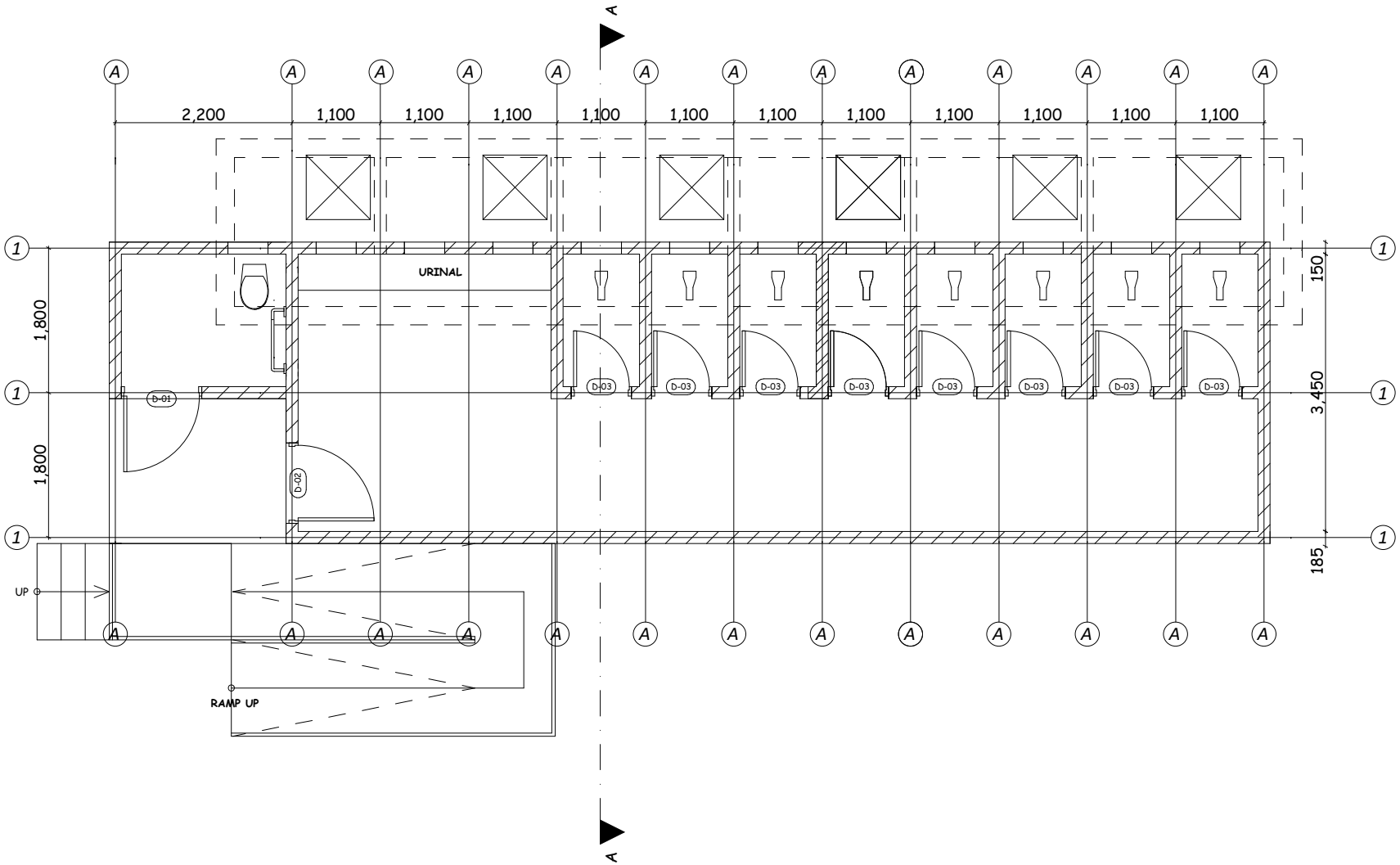
	SUMMARY	AMOUNT TZS
	8no stances toilets block -BOYS BLOCK	
A.	SUB-STRUCTURE -PROVISIONAL	
B.	SUPERSTRUCTURE	
C.	ROOF STRUCTURE & COVERING	
D	DOOR	
E	FINISHING	
F	PAINTING & DECORATION	
G	PLUMBING AND INSTALLATION	
H.	TANK BASE	
J.	SOAK AWAY PIT	
L	HANDRAILS TO RAMP	
	TOTAL BUILDING MATERIALS CARRIED TO GENERAL SUMMARY	
	ADD:	
	LABOUR COST CARRIED TO GENERAL SUMMARY : (Improve and Fill the respective Labour form)	
	Note:	
	i Refer General Summary for: Preliminary, Transportation and Supervision Costs	
	ii. Preliminary cover the following item:	
	- Setting out working tools, Equipments, Temporary toilets, water for the works, Scaffolding,	
	- Power for the works, Security, store, Materials test, levelling, holdings and removal of rubbish.	
	iii. Supervision cost depend on guideline of the specific project	



FLOOR PLAN

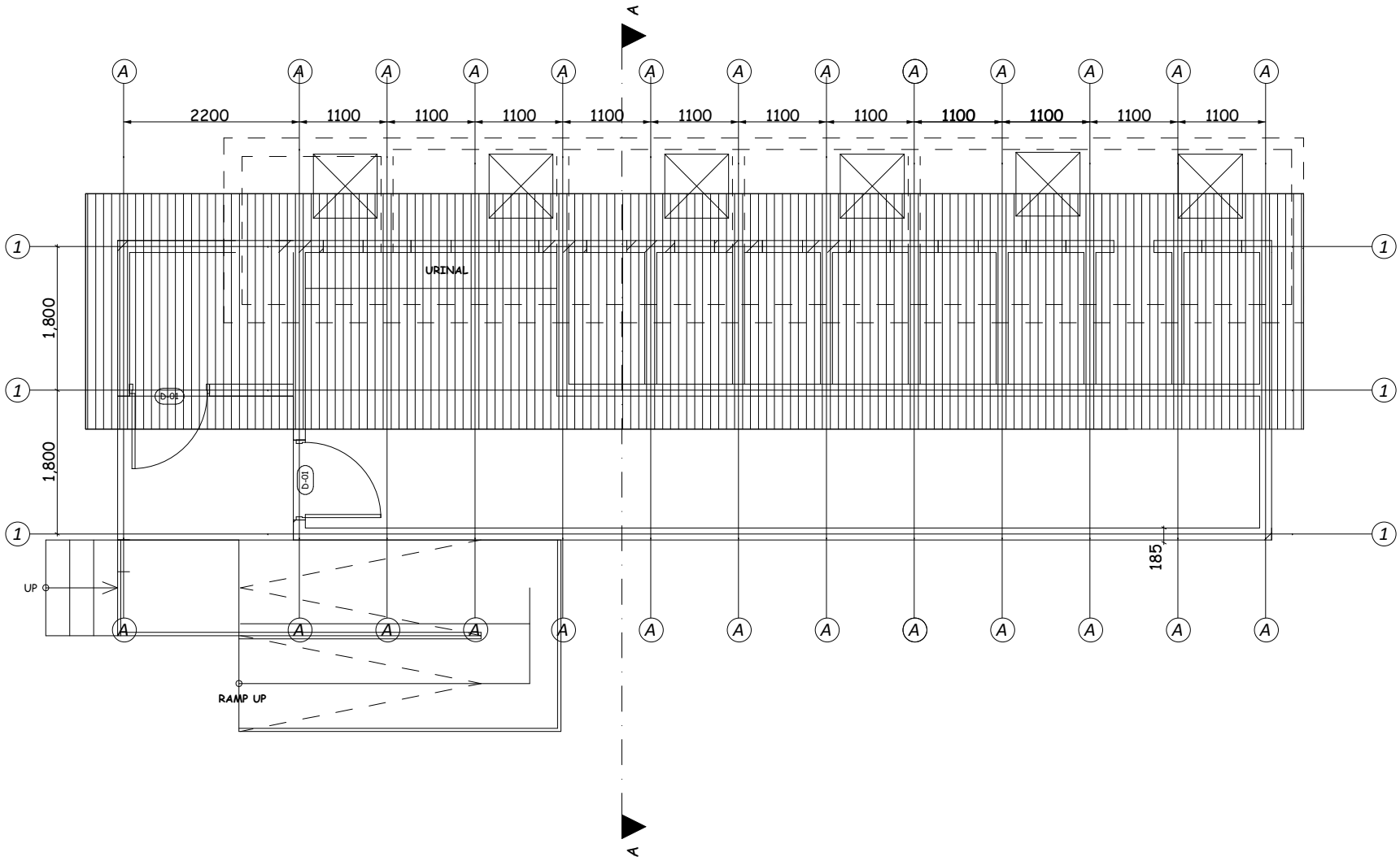
DOOR SCHEDULE		
DOOR TYPE	HEIGHT X WIDTH	QUANTITY
D-01	2100 X 1000	01
D-02	2100 X 900	01
D-03	2100 X 750	08

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY *IN COLABORATION WITH* PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	PROVISION OF PHYSICAL FACILITIES IN PRIMARY SCHOOLS	DRAWING TITLE TOILET 8 STANCES WITH FACILITY FOR DISABLED BOYS DRY AREA - FLOOR PLAN DRAWING NO. BP/ARC/TLT-DB150/01	DRAWN BY J.R CHECKED BY I.A.S. SCALE 1:200 DEC,2022



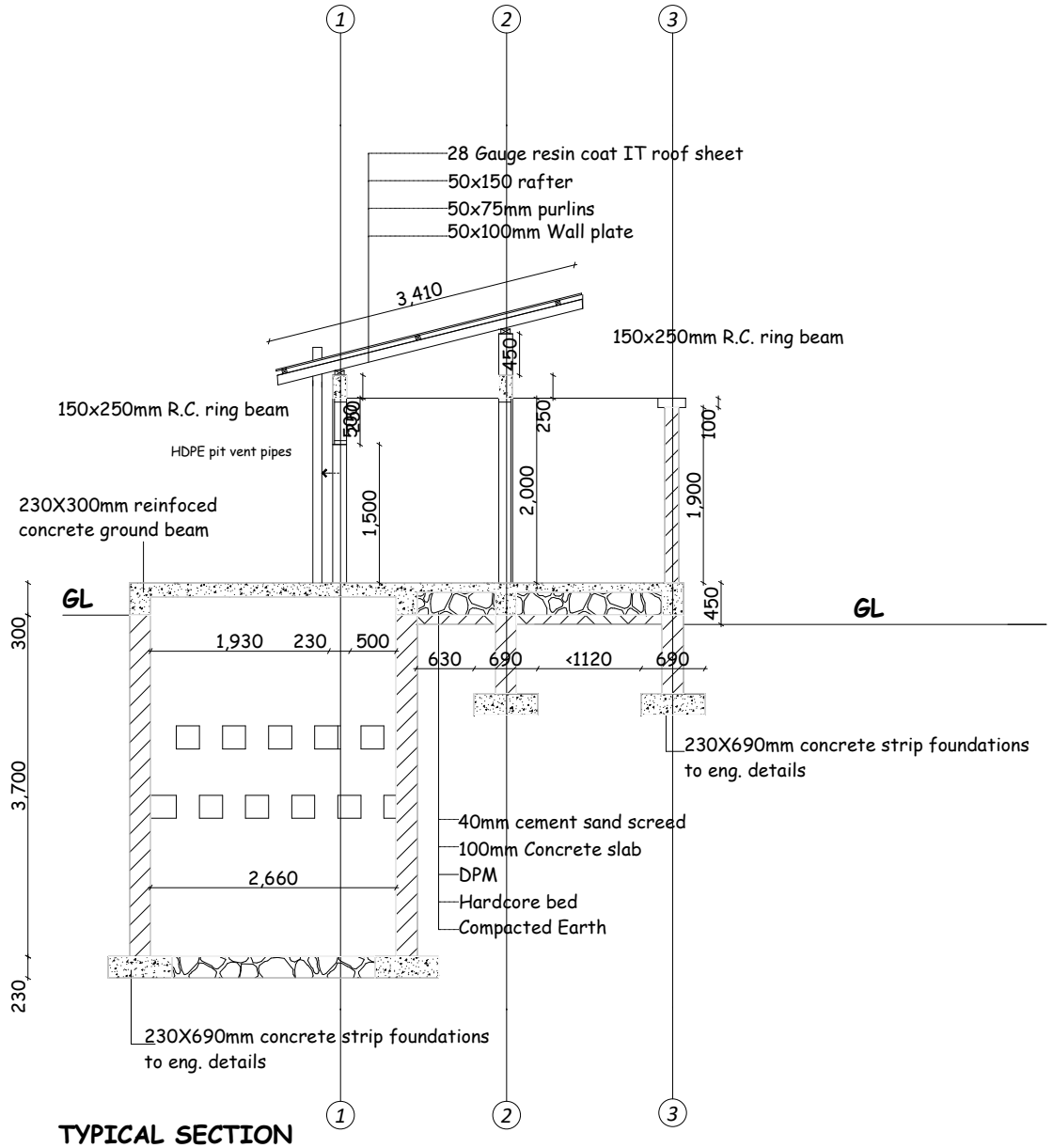
PIT TANK LOCATION LAYOUT

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY *IN COLABORATION WITH* PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT	PROVISION OF PHYSICAL FACILITIES IN PRIMARY SCHOOLS	DRAWING TITLE TOILET 8 STANCES WITH FACILITY FOR DISABLED - BOYS DRY AREA - FLOOR PLAN DRAWING NO. BP/ARC/TLT-DB150/02	DRAWN BY J.R CHECKED BY I.A.S. SCALE 1:200 DEC,2022

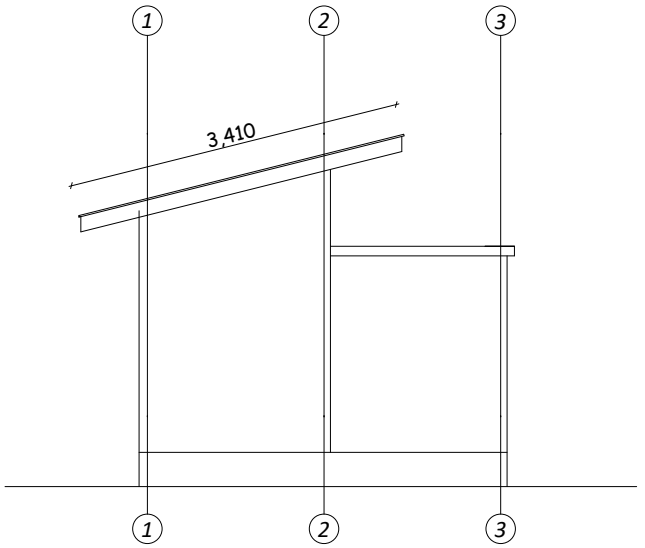


ROOF PLAN

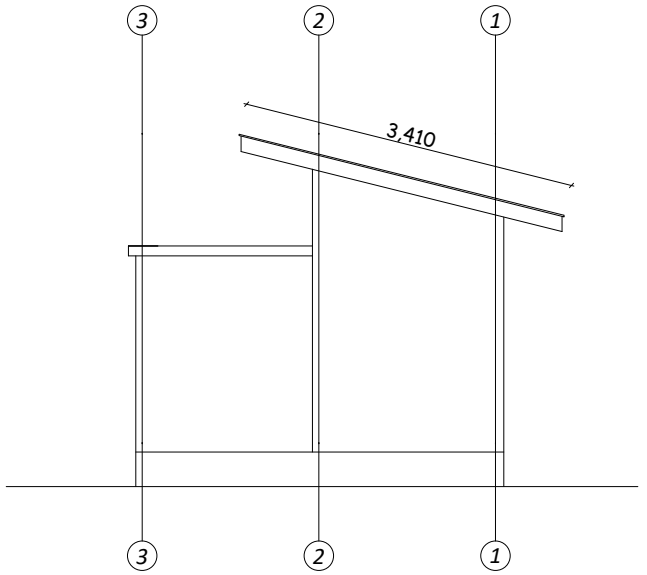
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY *IN COLABORATION WITH* **PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**	**PROVISION OF PHYSICAL FACILITIES IN PRIMARY SCHOOLS**	DRAWING TITLE **TOILET 8 STANCES WITH FACILITY FOR DISABLED - BOYS** **DRY AREA - ROOF PLAN** DRAWING NO. **BP/ARC/TLT-DB 150/03**	DRAWN BY J.R CHECKED BY I.A.S. SCALE 1:200 DEC,2022



TYPICAL SECTION



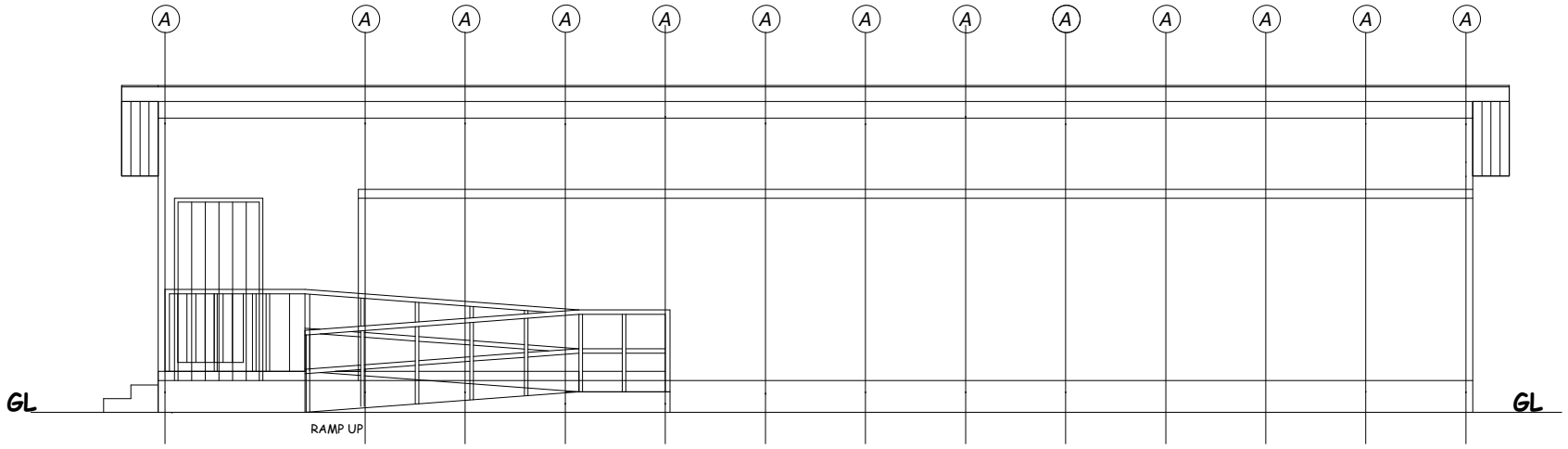
SIDE ELEVATION



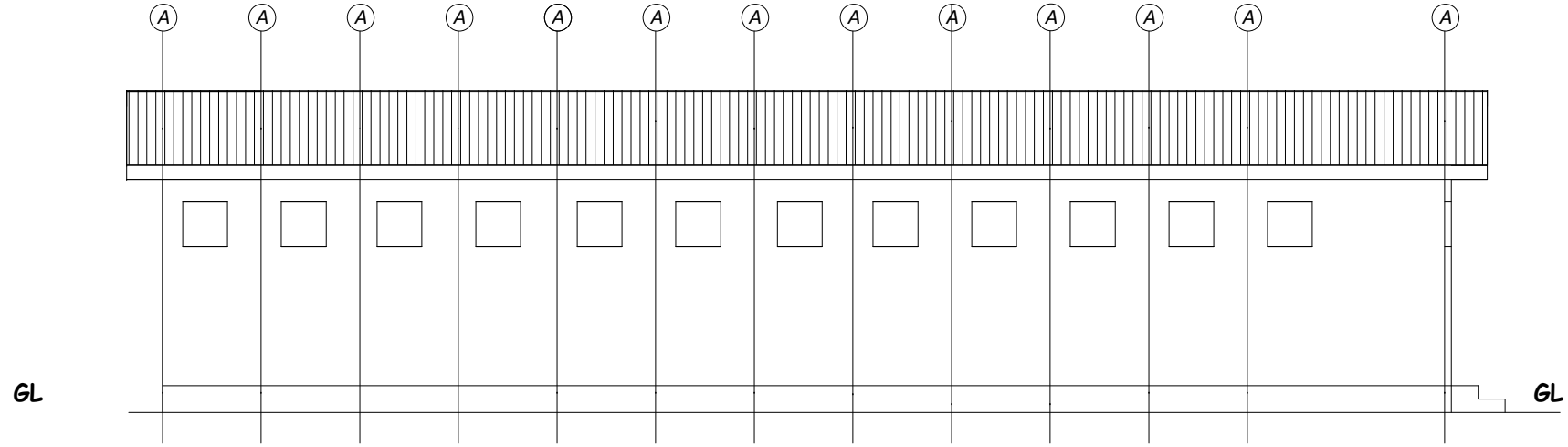
SIDE ELEVATION

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY *IN COLABORATION WITH* **PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**	**PROVISION OF PHYSICAL FACILITIES IN PRIMARY SCHOOLS**	DRAWING TITLE **TOILET 8 STANCES WITH FACILITY FOR DISABLED BOYS** **DRY AREA - TYPICAL SECTION & SIDE ELEVATIONS** DRAWING NO. **BP/ARC/TLT-DB150/05**	DRAWN BY J.R CHECKED BY I.A.S. SCALE 1:200 DEC,2022

TYPICAL SECTION



FRONT ELEVATION



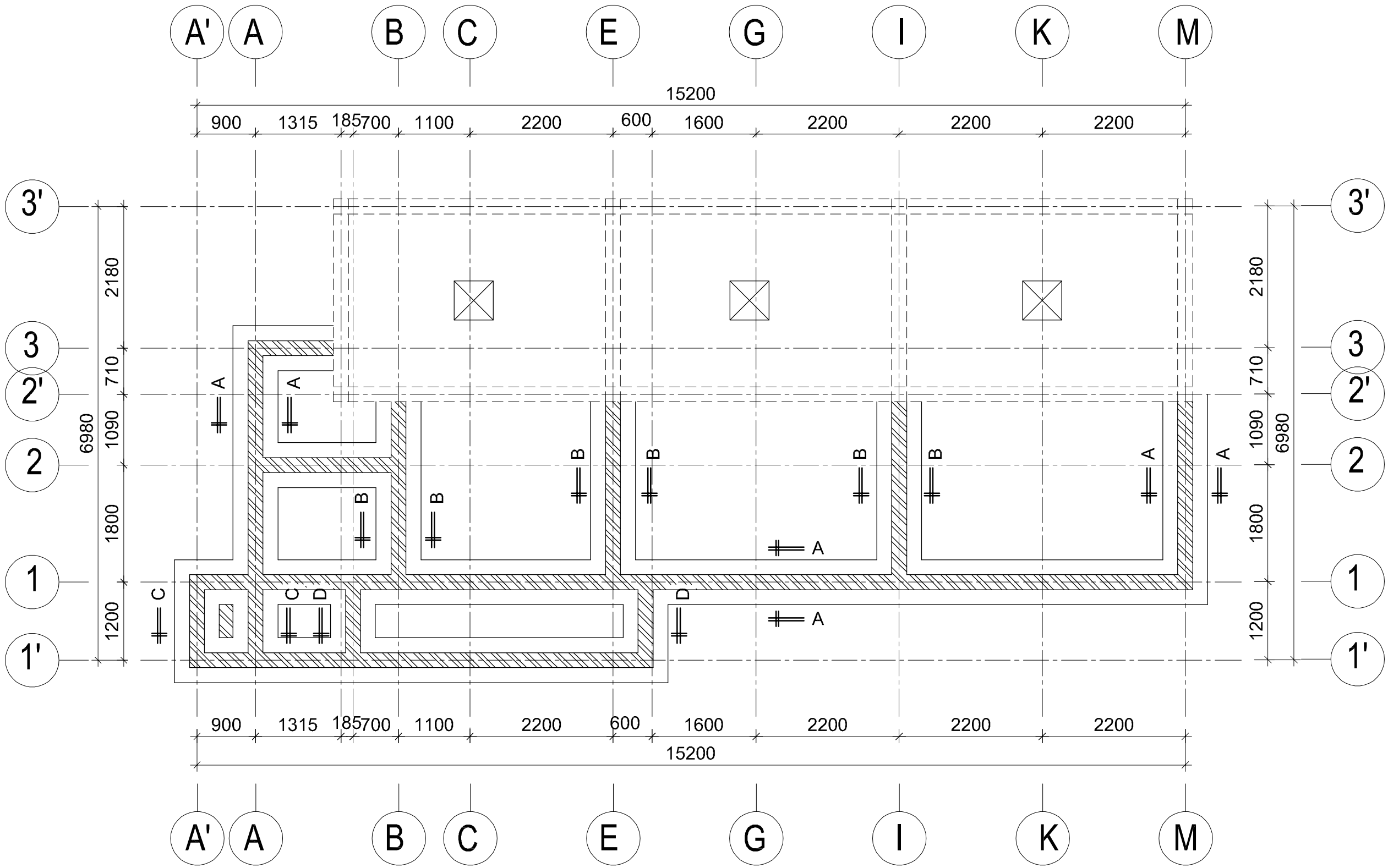
REAR ELEVATION

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY *IN COLABORATION WITH* **PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**	**PROVISION OF PHYSICAL FACILITIES IN PRIMARY SCHOOLS**	DRAWING TITLE **TOILET 8 STANCES WITH FACILITY FOR DISABLED - BOYS** **DRY AREA - ROOF PLAN** DRAWING NO. **BP/ARC/TLT-DB150/04**	DRAWN BY J.R CHECKED BY I.A.S. SCALE 1:200 DEC,2022

STRUCTURAL DRAWINGS

FOR

TOILET BLOCK - DRY AREA
200 BOYS (8 STANCES) WITH FACILITY FOR DISABLED



FOUNDATION LAYOUT PLAN
Scale 1:100

NOTE:

1. All dimensions are in millimetres unless otherswise stated. In case of discrepancy, consult the Structural Engineer.
2. All structural engineering drawings should be read in conjunction with relevant architectural drawings.
3. All Reinforced concrete shall be Grade 20 - Nominal volumetric proportion 1: 2: 4 cube strength not less than 20N/mm² at 28 days.
4. Steel for reinforced concrete shall comply with BS4449 whereby fy = 460N/mm².
5. Bars lap length should be at least 50 times the diameter of the bars lapped.
6. Structural Engineer shall be furnished with copies of the manufacturers certificates of tests for the steel reinforcement to be used.
7. Cement for works shall comply with BS12 and shall be "Ordinary Portland Cement"
8. Clear cover for reinforcement shall be as follows:
   - Slabs 25mm
   - Beams 25mm
   - Columns 25mm
   - Footings.....50mm
7. All concrete work to be done in one operation.
8. All steel fixing, shuttering and concreting works to be done under close supervision of Structural Engineer.
9. Sand borrow pits shall be clean and free from organic materials and shall be approved by Structural Engineers before use.
10. Minimum Compressive Strength for Blocks shall be 3.5N/mm².

PROJECT:
PROVISION OF PHYSICAL FACILITIES IN PRIMARY SCHOOLS

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

IN COLLABORATION WITH

PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT.

Designed by: Eng. J.M.S
Checked by: Eng. N.T.B
Approved by:

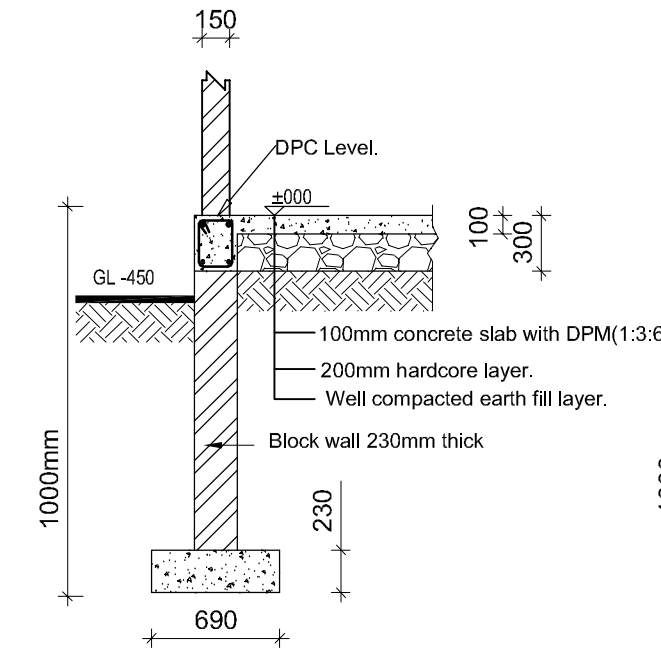
DRAWING TITLE:
TOILET FOR 200 BOYS WITH FACILITY FOR DISABLED DRY AREA

FOUNDATION LAYOUT PLAN

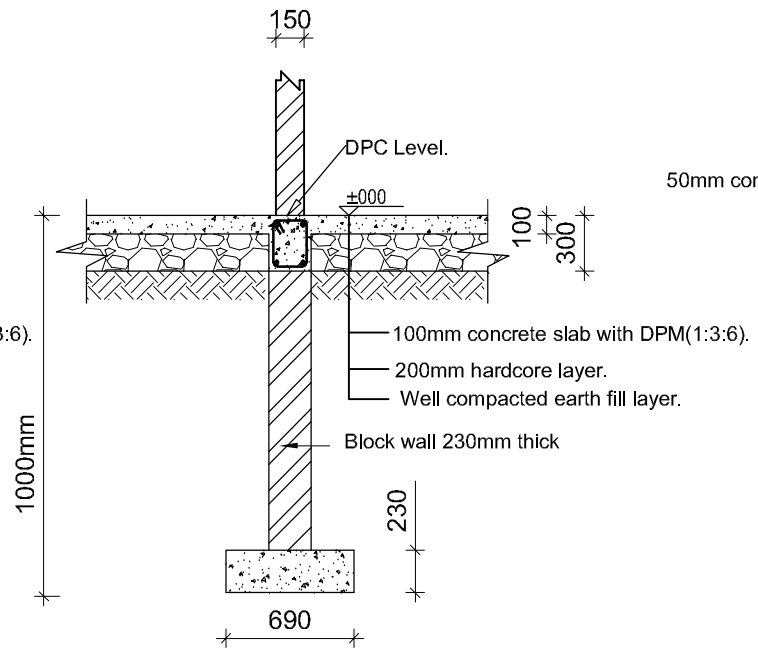
(**REVISED -1**)

DRAWING USE:
For Building permit: ☐
For Construction: ☑

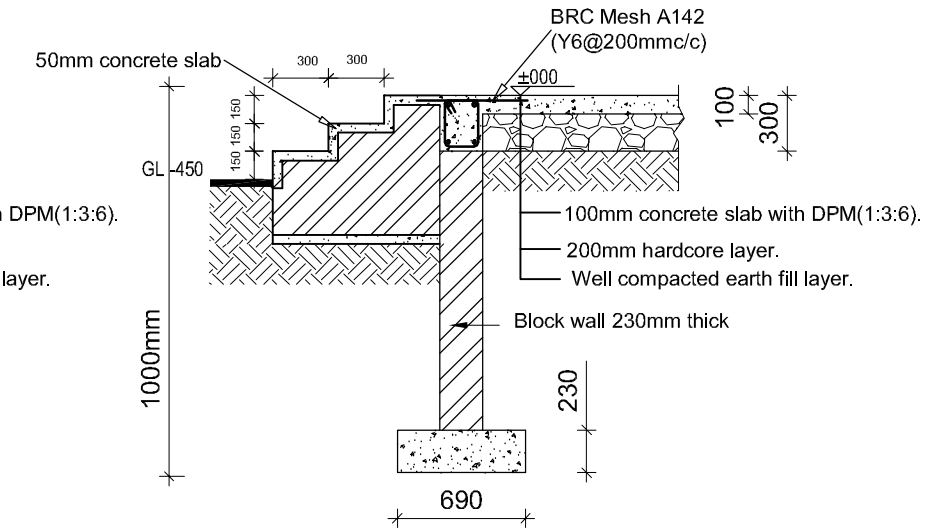
Drawn by:	J.M.S
Date: 2022	Scale:
Drawing No:STR.CR	Sheet: 01/09



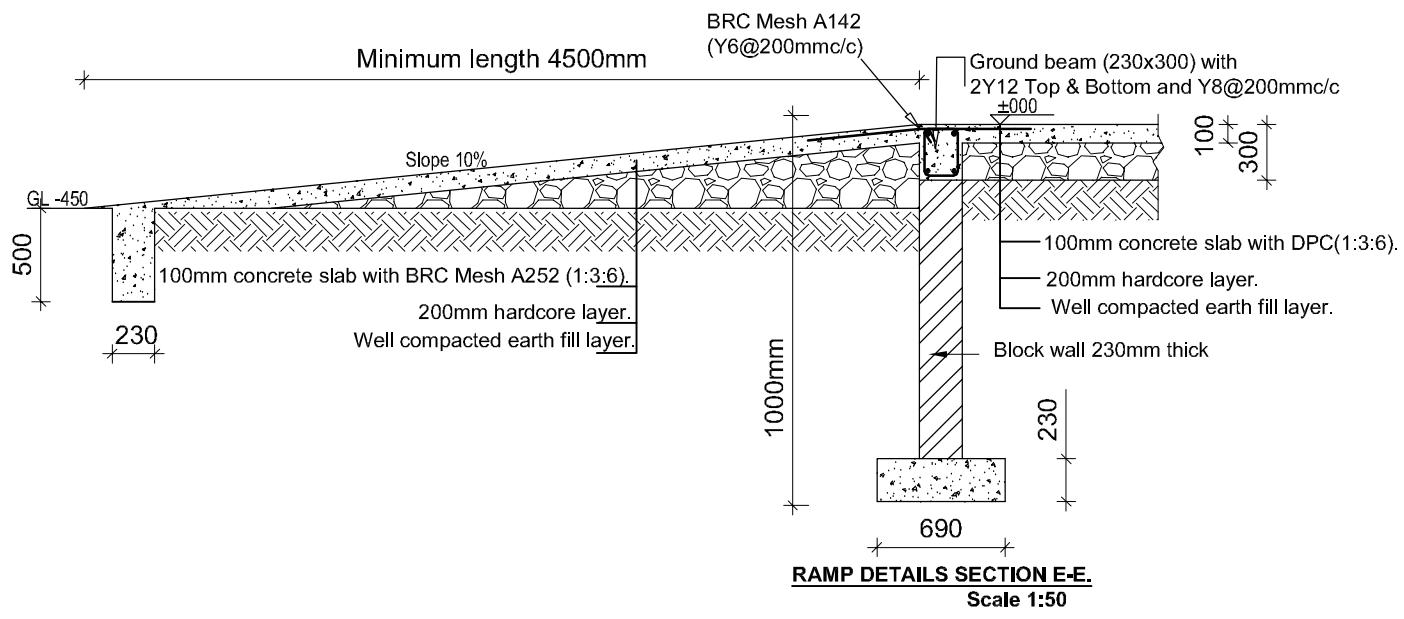
EXTERIOR WALL FOUNDATION SECTION A-A.
Scale 1:50



INTERIOR WALL FOUNDATION SECTION B-B.
Scale 1:50



EXTERIOR WALL FOUNDATION SECTION C-C.
Scale 1:50



RAMP DETAILS SECTION E-E.
Scale 1:50

NOTE:

1. All dimensions are in millimetres unless otherswise stated. In case of discrepancy, consult the Structural Engineer.
2. All structural engineering drawings should be read in conjunction with relevant architectural drawings.
3. All Reinforced concrete shall be Grade 20 - Nominal volumetric proportion 1: 2: 4 cube strength not less than 20N/mm² at 28 days.
4. Steel for reinforced concrete shall comply with BS4449 whereby fy = 460N/mm².
5. Bars lap length should be at least 50 times the diameter of the bars lapped.
6. Structural Engineer shall be furnished with copies of the manufacturers certificates of tests for the steel reinforcement to be used.
7. Cement for works shall comply with BS12 and shall be "Ordinary Portland Cement"
8. Clear cover for reinforcement shall be as follows:
   - Slabs 25mm
   - Beams 25mm
   - Columns 25mm
   - Footings.....50mm
7. All concrete work to be done in one operation.
8. All steel fixing, shuttering and concreting works to be done under close supervision of Structural Engineer.
9. Sand borrow pits shall be clean and free from organic materials and shall be approved by Structural Engineers before use.
10. Minimum Compressive Strength for Blocks shall be 3.5N/mm².

PROJECT:

PROVISION OF PHYSICAL FACILITIES IN PRIMARY SCHOOLS

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

IN COLLABORATION WITH

PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT.

Designed by: Eng. J.M.S
Checked by: Eng. N.T.B
Approved by:

DRAWING TITLE:

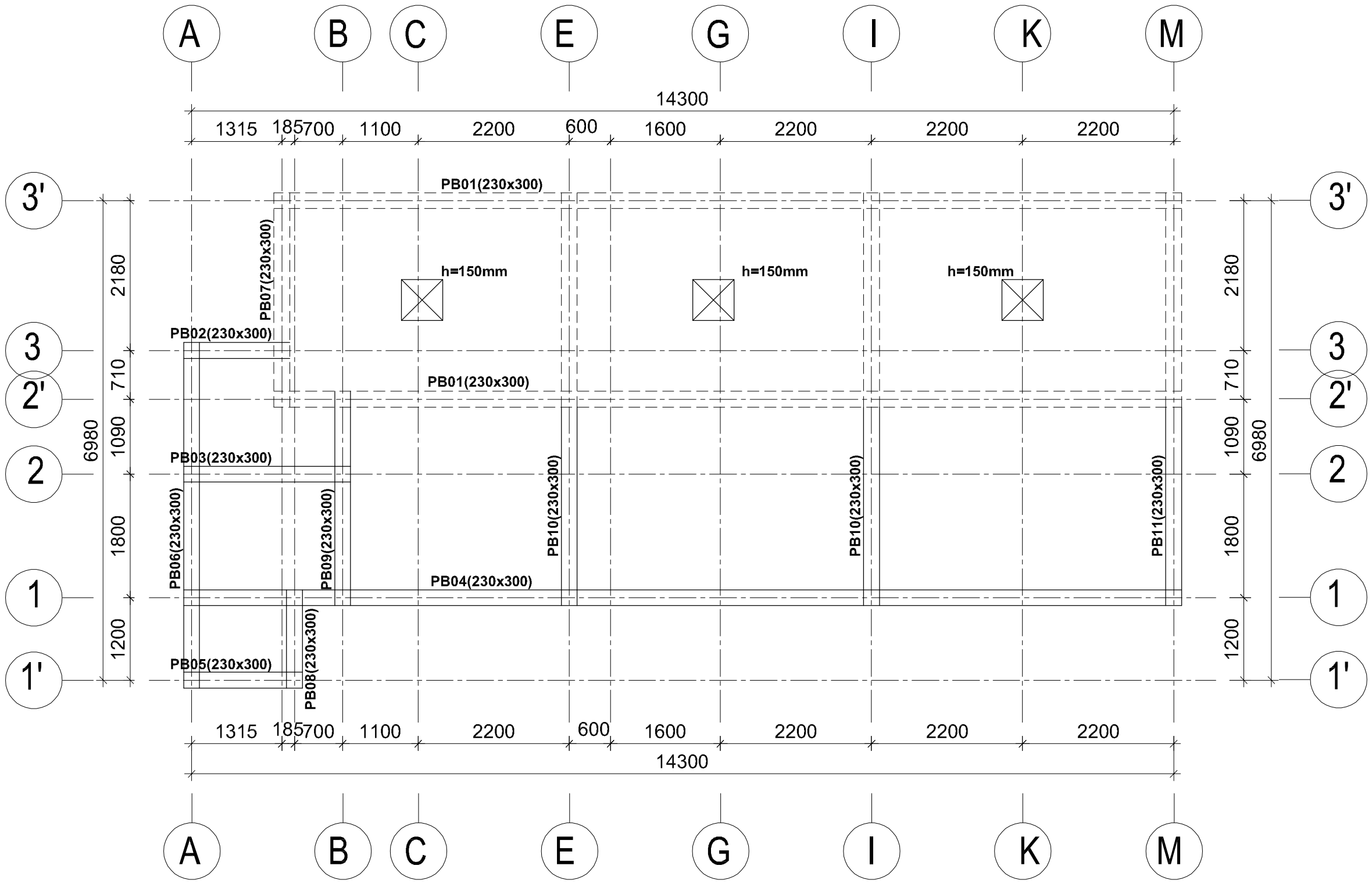
TOILET FOR 200 BOYS WITH FACILITY FOR DISABLED DRY AREA

FOUNDATION DETAILS

(**REVISED -1**)

DRAWING USE:
For Building permit: ☐
For Construction: ☑

Drawn by:	J.M.S
Date: 2022	Scale:
Drawing No:STR.CR	Sheet: 02/09



PLINTH BEAMS LAYOUT PLAN
Scale 1:100

NOTE:

1. All dimensions are in millimetres unless otherswise stated. In case of discrepancy, consult the Structural Engineer.
2. All structural engineering drawings should be read in conjunction with relevant architectural drawings.
3. All Reinforced concrete shall be Grade 20 - Nominal volumetric proportion 1: 2: 4 cube strength not less than 20N/mm² at 28 days.
4. Steel for reinforced concrete shall comply with BS4449 whereby fy = 460N/mm².
5. Bars lap length should be at least 50 times the diameter of the bars lapped.
6. Structural Engineer shall be furnished with copies of the manufacturers certificates of tests for the steel reinforcement to be used.
7. Cement for works shall comply with BS12 and shall be "Ordinary Portland Cement"
8. Clear cover for reinforcement shall be as follows:
   - Slabs 25mm
   - Beams 25mm
   - Columns 25mm
   - Footings.....50mm
7. All concrete work to be done in one operation.
8. All steel fixing, shuttering and concreting works to be done under close supervision of Structural Engineer.
9. Sand borrow pits shall be clean and free from organic materials and shall be approved by Structural Engineers before use.
10. Minimum Compressive Strength for Blocks shall be 3.5N/mm².

PROJECT:
PROVISION OF PHYSICAL FACILITIES IN PRIMARY SCHOOLS

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

IN COLLABORATION WITH

PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT.

Designed by: Eng. J.M.S
Checked by: Eng. N.T.B
Approved by:

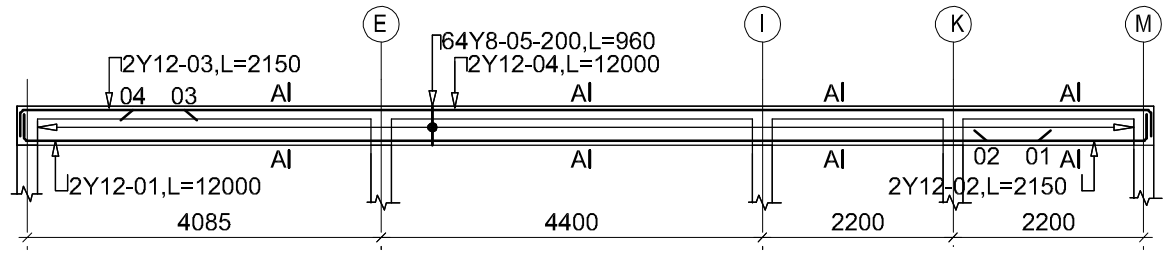
DRAWING TITLE:
TOILET FOR 200 BOYS WITH FACILITY FOR DISABLED DRY AREA

PLINTH BEAMS LAYOUT PLAN

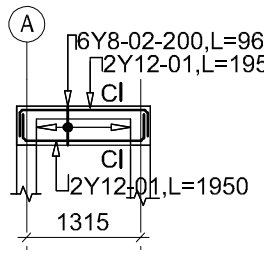
(**REVISED -1**)

DRAWING USE:
For Building permit: ☐
For Construction: ☑

Drawn by:	J.M.S
Date: 2022	Scale:
Drawing No:STR.CR	Sheet: 03/09



PLINTH BEAM PB01 (230x300) 2Nos
Scale 1:100



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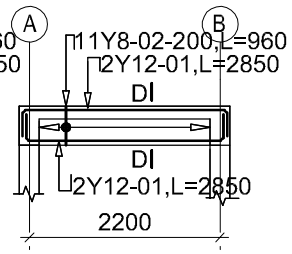
(230x300) 1Nos Scale 1:100



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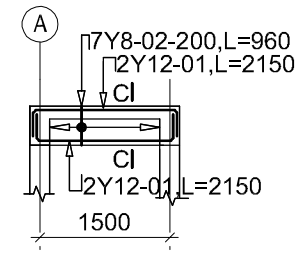
(230x300) 1Nos Scale 1:100



PLINTH BEAM PB05
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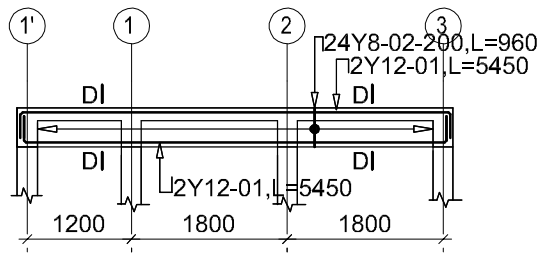

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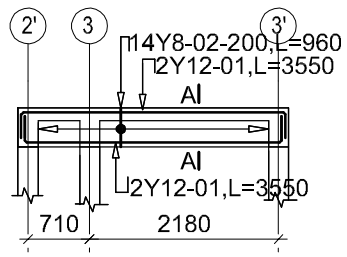

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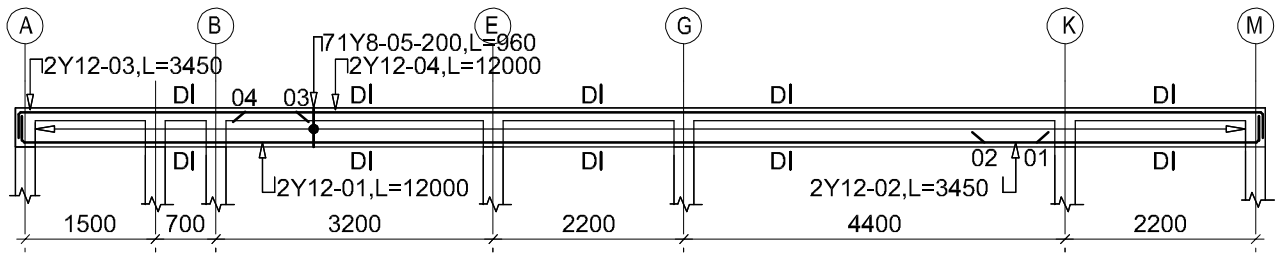

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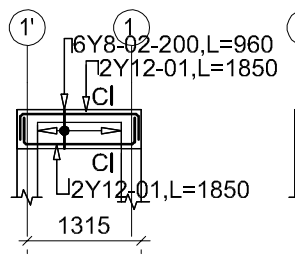
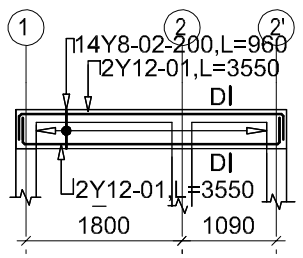
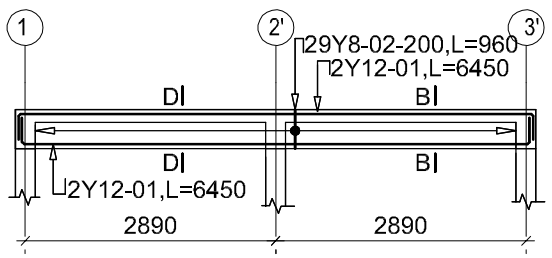
Scale 1:100



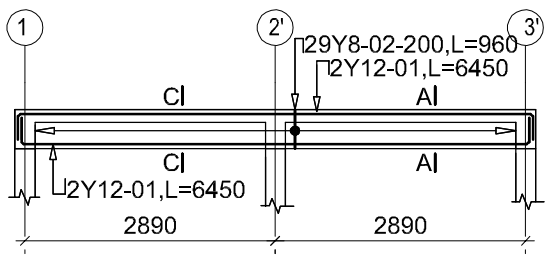
PLINTH BEAM PB08
(230x300) 1Nos Scale 1:100



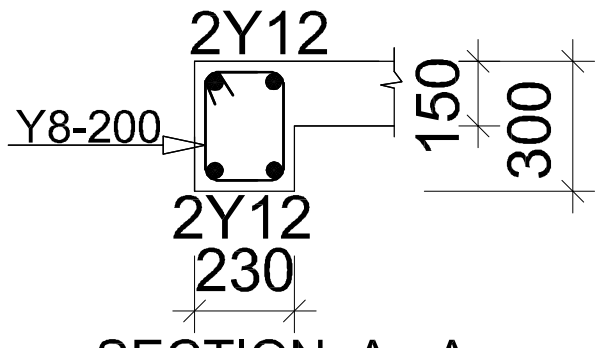
PLINTH BEAM PB09 (230x300) 1Nos
Scale 1:100



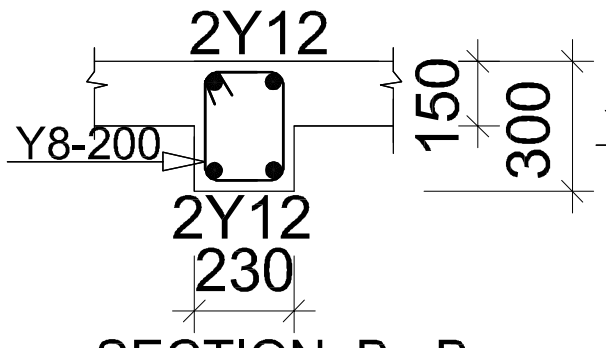
PLINTH BEAM PB10 (230x300) 2Nos
Scale 1:100



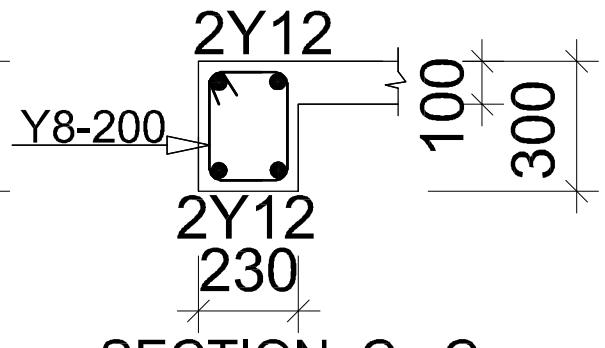
PLINTH BEAM PB11 (230x300) 1Nos
Scale 1:100



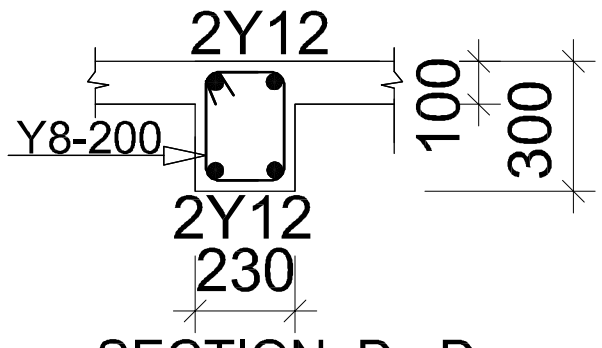
SECTION A - A
Scale 1:50



SECTION B - B
Scale 1:50



SECTION C - C
Scale 1:50



SECTION D - D
Scale 1:50

NOTE:

1. All dimensions are in millimetres unless otherswise stated. In case of discrepancy, consult the Structural Engineer.
2. All structural engineering drawings should be read in conjunction with relevant architectural drawings.
3. All Reinforced concrete shall be Grade 20 - Nominal volumetric proportion 1: 2: 4 cube strength not less than 20N/mm² at 28 days.
4. Steel for reinforced concrete shall comply with BS4449 whereby fy = 460N/mm².
5. Bars lap length should be at least 50 times the diameter of the bars lapped.
6. Structural Engineer shall be furnished with copies of the manufacturers certificates of tests for the steel reinforcement to be used.
7. Cement for works shall comply with BS12 and shall be "Ordinary Portland Cement"
8. Clear cover for reinforcement shall be as follows:
   - Slabs 25mm
   - Beams 25mm
   - Columns 25mm
   - Footings.....50mm
7. All concrete work to be done in one operation.
8. All steel fixing, shuttering and concreting works to be done under close supervision of Structural Engineer.
9. Sand borrow pits shall be clean and free from organic materials and shall be approved by Structural Engineers before use.
10. Minimum Compressive Strength for Blocks shall be 3.5N/mm².

PROJECT:

PROVISION OF PHYSICAL FACILITIES IN PRIMARY SCHOOLS

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

IN COLLABORATION WITH

PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT.

Designed by: Eng. J.M.S
Checked by: Eng. N.T.B
Approved by:

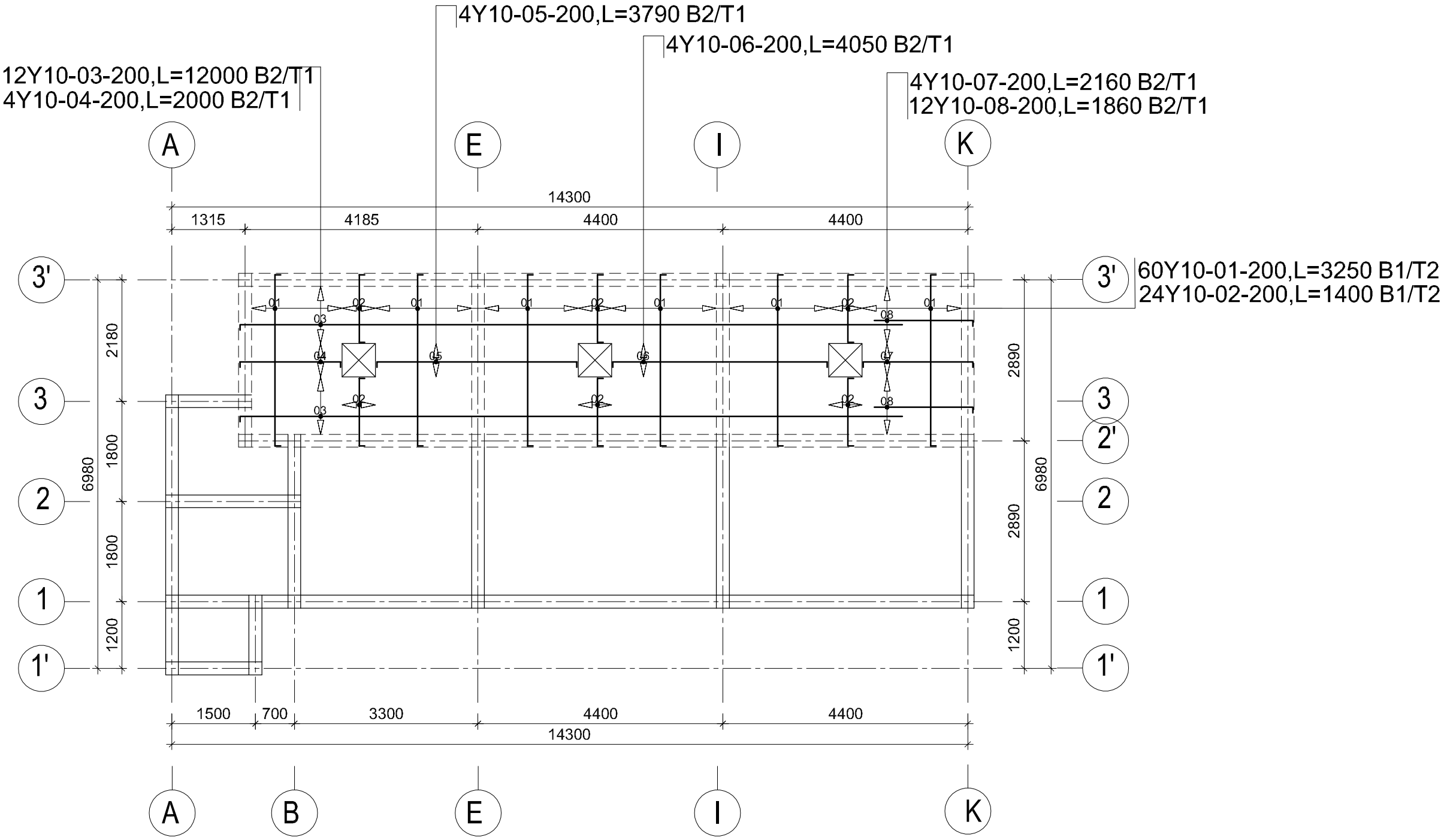
DRAWING TITLE:

TOILET FOR 200 BOYS WITH FACILITY FOR DISABLED DRY AREA

PLINTH BEAMS DETAILS
(**REVISED -1**)

DRAWING USE:
For Building permit: ☐
For Construction: ☑

Drawn by:	J.M.S
Date: 2022	Scale:
Drawing No:STR.CR	Sheet: 04/09



SLABS REINFORCEMENTS DETAILS
Scale 1:100

NOTE:

1. All dimensions are in millimetres unless otherswise stated. In case of discrepancy, consult the Structural Engineer.
2. All structural engineering drawings should be read in conjunction with relevant architectural drawings.
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   - Slabs 25mm
   - Beams 25mm
   - Columns 25mm
   - Footings.....50mm
7. All concrete work to be done in one operation.
8. All steel fixing, shuttering and concreting works to be done under close supervision of Structural Engineer.
9. Sand borrow pits shall be clean and free from organic materials and shall be approved by Structural Engineers before use.
10. Minimum Compressive Strength for Blocks shall be 3.5N/mm².

PROJECT:

PROVISION OF PHYSICAL FACILITIES IN PRIMARY SCHOOLS

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

IN COLLABORATION WITH

PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT.

Designed by: Eng. J.M.S
Checked by: Eng. N.T.B
Approved by:

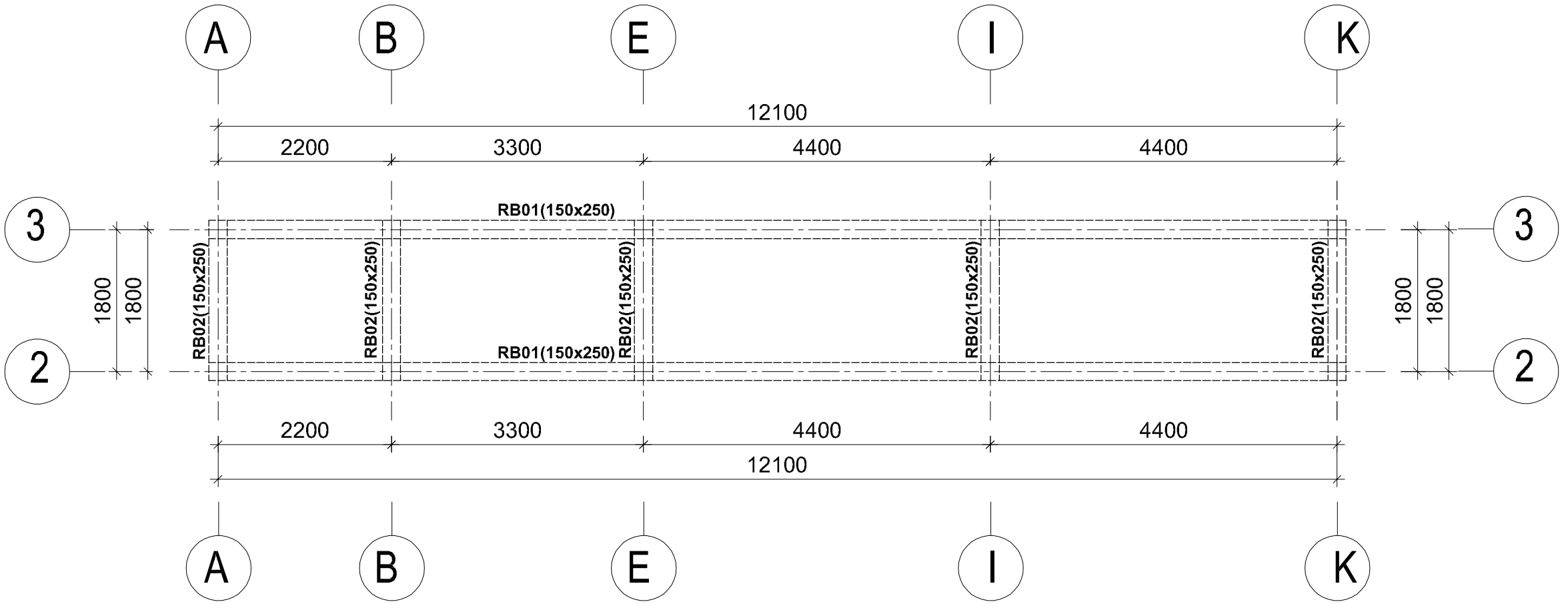
DRAWING TITLE:

TOILET FOR 200 BOYS WITH FACILITY FOR DISABLED DRY AREA

SLAB REINFORCEMENT DETAILS (**REVISED -1**)

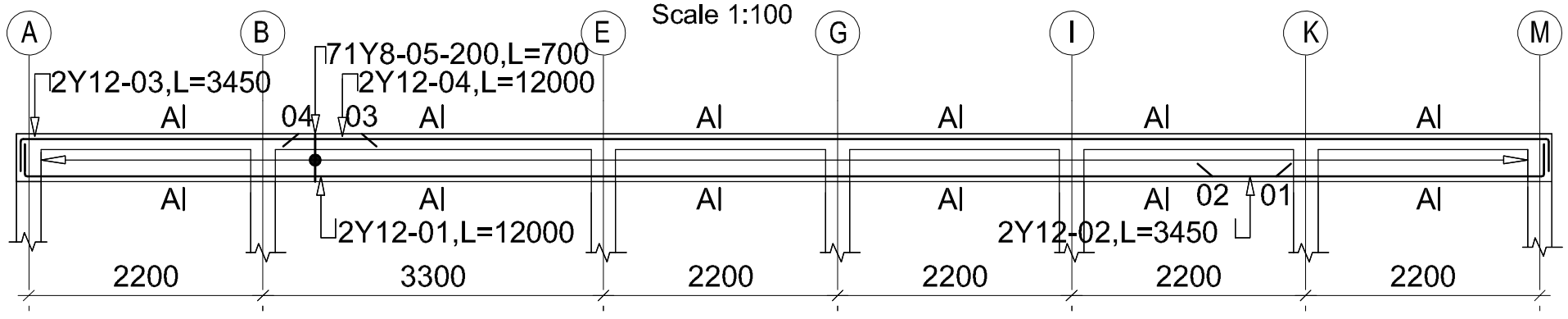
DRAWING USE:
For Building permit: ☐
For Construction: ☑

Drawn by:	J.M.S
Date: 2022	Scale:
Drawing No:STR.CR	Sheet: 05/09



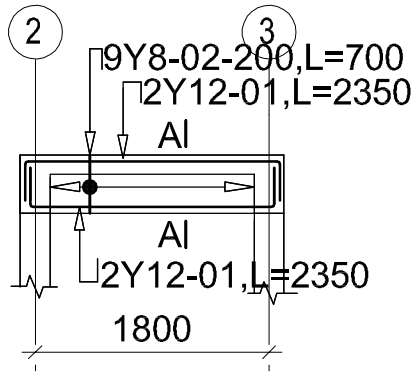
ROOF RING BEAMS LAYOUT PLAN

Scale 1:100

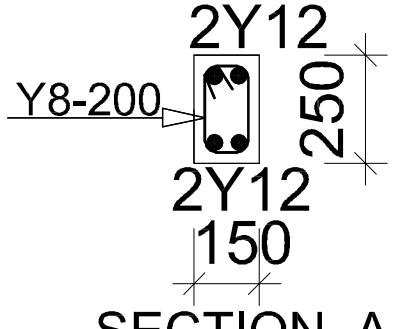


ROOF RING BEAM RB01 (150x250) 2Nos

Scale 1:100



ROOF RING BEAM RB05
(150x250) 5Nos Scale 1:100



SECTION A - A

Scale 1:50

NOTE:

1. All dimensions are in millimetres unless otherswise stated. In case of discrepancy, consult the Structural Engineer.
2. All structural engineering drawings should be read in conjunction with relevant architectural drawings.
3. All Reinforced concrete shall be Grade 20 - Nominal volumetric proportion 1: 2: 4 cube strength not less than 20N/mm² at 28 days.
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8. All steel fixing, shuttering and concreting works to be done under close supervision of Structural Engineer.
9. Sand borrow pits shall be clean and free from organic materials and shall be approved by Structural Engineers before use.
10. Minimum Compressive Strength for Blocks shall be 3.5N/mm².

PROJECT:

PROVISION OF PHYSICAL FACILITIES IN PRIMARY SCHOOLS

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

IN COLLABORATION WITH

PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT.

Designed by: Eng. J.M.S
Checked by: Eng. N.T.B
Approved by:

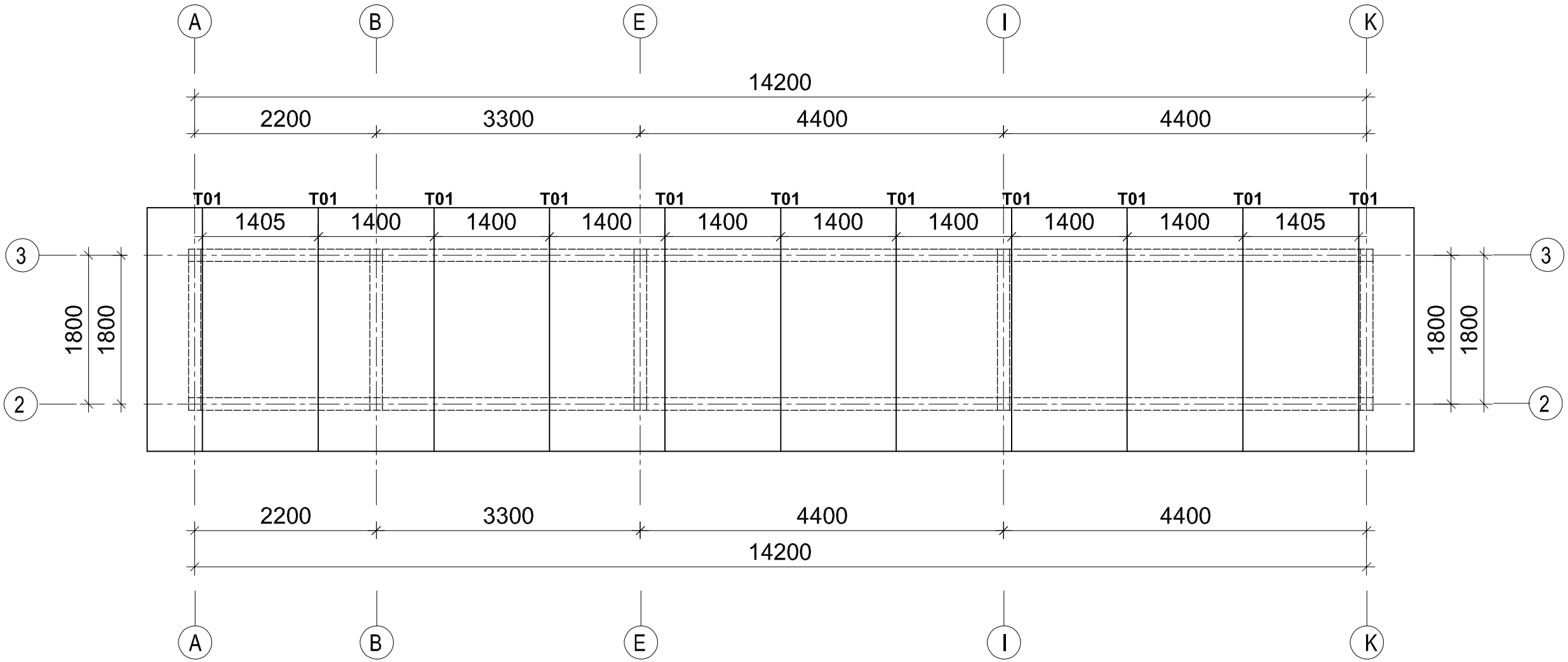
DRAWING TITLE:

TOILET FOR 200 BOYS WITH FACILITY FOR DISABLED DRY AREA

ROOF RING BEAMS LAYOUT PLAN AND SECTION DETAILS (**REVISED -1**)

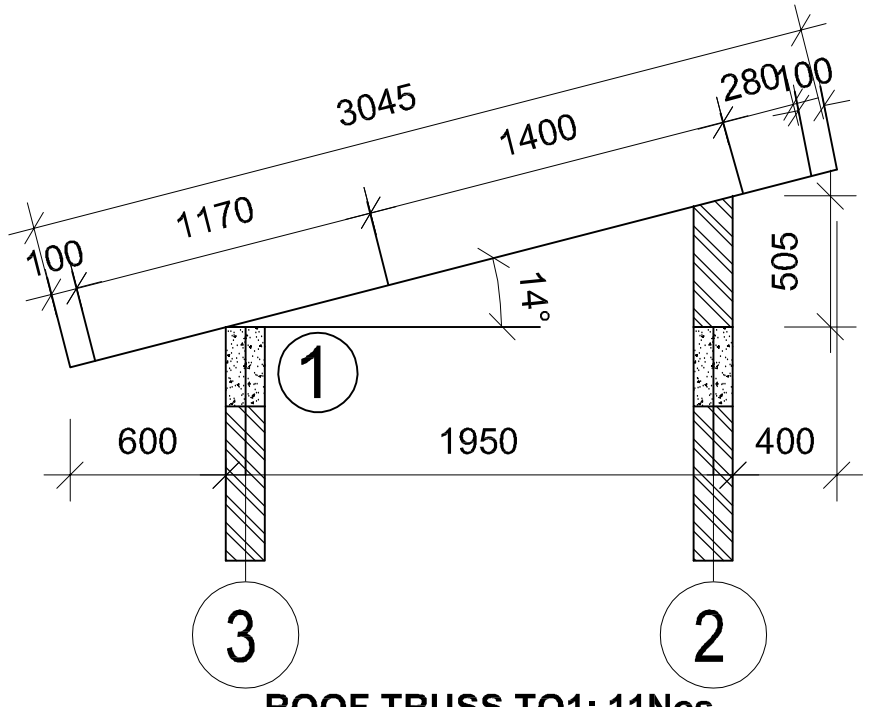
DRAWING USE:
For Building permit: ☐
For Construction: ☑

Drawn by:	J.M.S
Date: 2022	Scale:
Drawing No:STR.CR	Sheet: 06/09



ROOF TRUSS LAYOUT PLAN

Scale 1:100



ROOF TRUSS TO1; 11Nos.

Scale 1:100

NOTE:

1. All dimensions are in millimetres unless otherswise stated. In case of discrepancy, consult the Structural Engineer.
2. All structural engineering drawings should be read in conjunction with relevant architectural drawings.
3. All Reinforced concrete shall be Grade 20 - Nominal volumetric proportion 1: 2: 4 cube strength not less than 20N/mm² at 28 days.
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   - Columns 25mm
   - Footings.....50mm
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PROJECT:

PROVISION OF PHYSICAL FACILITIES IN PRIMARY SCHOOLS

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

IN COLLABORATION WITH

PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT.

Designed by: Eng. J.M.S
Checked by: Eng. N.T.B
Approved by:

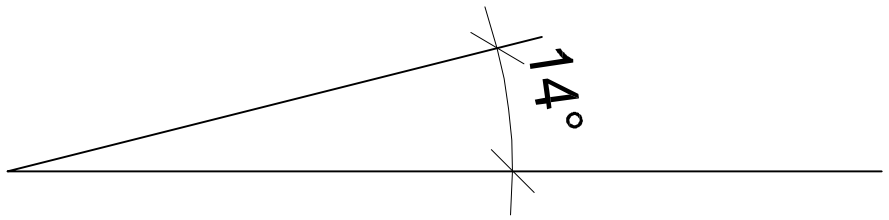
DRAWING TITLE:

TOILET FOR 200 BOYS WITH FACILITY FOR DISABLED DRY AREA

ROOF TRUSS LAYOUT PLAN AND DETAILS (**REVISED -1**)

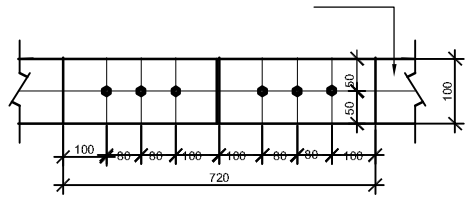
DRAWING USE:
For Building permit: ☐
For Construction: ☑

Drawn by:	J.M.S
Date: 2022	Scale:
Drawing No:STR.CR	Sheet: 07/09



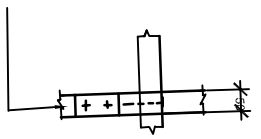
100mm long nails 6 Nos.
GUSSETS-2NOS -25 mm. marine plywood
bothways.

2x50x150mm, or 1x50x150mm.

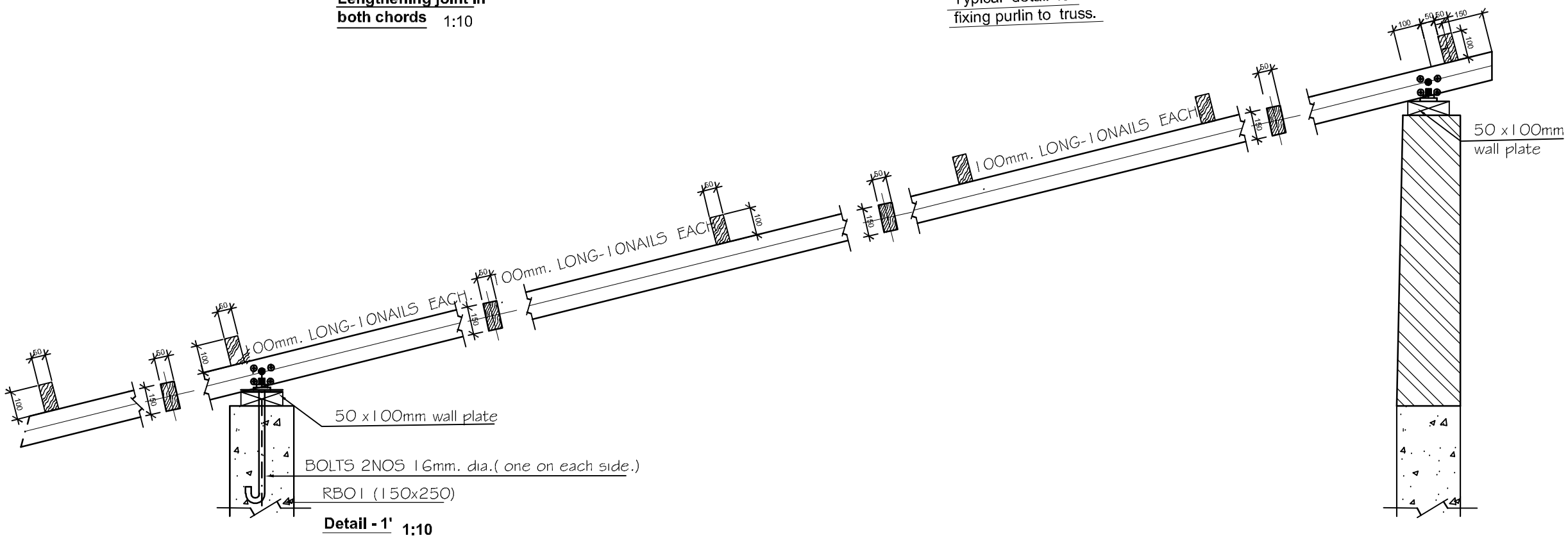


Lengthening joint in both chords 1:10

1x50x150mm



Typical detail for fixing purlin to truss.



Detail - 1' **1:10**

TYPICAL TRUSS CONNECTIONS DETAIL

NOTE:

1. All dimensions are in millimetres unless otherswise stated. In case of discrepancy, consult the Structural Engineer.
2. All structural engineering drawings should be read in conjunction with relevant architectural drawings.
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5. Bars lap length should be at least 50 times the diameter of the bars lapped.
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7. Cement for works shall comply with BS12 and shall be "Ordinary Portland Cement"
8. Clear cover for reinforcement shall be as follows:
   - Slabs 25mm
   - Beams 25mm
   - Columns 25mm
   - Footings.....50mm
7. All concrete work to be done in one operation.
8. All steel fixing, shuttering and concreting works to be done under close supervision of Structural Engineer.
9. Sand borrow pits shall be clean and free from organic materials and shall be approved by Structural Engineers before use.
10. Minimum Compressive Strength for Blocks shall be 3.5N/mm².

PROJECT:

PROVISION OF PHYSICAL FACILITIES IN PRIMARY SCHOOLS

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

IN COLLABORATION WITH

PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT.

Designed by: Eng. J.M.S
Checked by: Eng. N.T.B
Approved by:

DRAWING TITLE:

TOILET FOR 200 BOYS WITH FACILITY FOR DISABLED DRY AREA

TRUSS CONNECTION DETAILS (**REVISED -1**)

DRAWING USE:
For Building permit: ☐
For Construction: ☑

Drawn by:	J.M.S
Date: 2022	Scale:
Drawing No:STR.CR	Sheet: 08/09

Page 1/2

Bar Bending Schedule

PROVISION OF PHYSICAL FACILITIES FOR PRIMARY SCHOOLS - TOILET FOR 200 BOYS WITH FACILITY FOR DISABLED - DRY AREA (PLINTH BEAMS)

MEMBER TYPE	NUMBER OF MEMBER.	MARK No.	BAR TYPE AND SIZE (mm)	LENGTH OF EACH BAR (mm)	NO. OF BARS	TOTAL LENGTH (m)	SKETCH OF BAR DIMENSIONS IN (mm)	NOTE
PLINTH BEAM PB01	2	01	Y12	12000	4	48	11750, 250	
PLINTH BEAM PB01	2	02	Y12	2150	4	8.6	1900, 250	
PLINTH BEAM PB01	2	03	Y12	2150	4	8.6	1900, 250	
PLINTH BEAM PB01	2	04	Y12	12000	4	48	11750, 250	
PLINTH BEAM PB01	2	05	Y8	960	128	122.88	50, 50, 250, 180	
PLINTH BEAM PB02	1	01	Y12	1950	4	7.8	1450, 250	
PLINTH BEAM PB02	1	02	Y8	960	6	5.76	50, 50, 250, 180	
PLINTH BEAM PB03	1	01	Y12	2850	4	11.4	2350, 250	
PLINTH BEAM PB03	1	02	Y8	960	11	10.56	50, 50, 250, 180	
PLINTH BEAM PB04	1	01	Y12	12000	2	24	11750, 250	
PLINTH BEAM PB04	1	02	Y12	3450	2	6.9	1050, 250	
PLINTH BEAM PB04	1	03	Y12	3450	2	6.9	1050, 250	
PLINTH BEAM PB04	1	04	Y12	12000	2	24	11750, 250	
PLINTH BEAM PB04	1	05	Y8	960	71	68.16	50, 50, 250, 180	
PLINTH BEAM PB05	1	01	Y12	2150	4	8.6	1650, 250	
PLINTH BEAM PB05	1	02	Y8	960	42	40.32	50, 50, 250, 180	
PLINTH BEAM PB06	1	01	Y12	5450	4	21.8	4950, 250	
PLINTH BEAM PB06	1	02	Y8	960	24	23.04	50, 50, 250, 180	
PLINTH BEAM PB07	1	01	Y12	3550	4	14.2	3050, 250	
PLINTH BEAM PB07	1	02	Y8	960	14	13.44	50, 50, 250, 180	
PLINTH BEAM PB08	1	01	Y12	1850	4	7.4	1350, 250	
PLINTH BEAM PB08	1	02	Y8	960	6	5.76	50, 50, 250, 180	
PLINTH BEAM PB09	1	01	Y12	3550	4	14.2	3050, 250	
PLINTH BEAM PB09	1	02	Y8	960	14	13.44	50, 50, 250, 180	

Page 2/2

Bar Bending Schedule

PROVISION OF PHYSICAL FACILITIES FOR PRIMARY SCHOOLS - TOILET FOR 200 BOYS WITH FACILITY FOR DISABLED - DRY AREA (PLINTH BEAMS, SLAB AND ROOF RING BEAMS)

MEMBER TYPE	NUMBER OF MEMBER.	MARK No.	BAR TYPE AND SIZE (mm)	LENGTH OF EACH BAR (mm)	NO. OF BARS	TOTAL LENGTH (m)	SKETCH OF BAR DIMENSIONS IN (mm)	NOTE
PLINTH BEAM PB10	1	01	Y12	6450	4	25.8	250	
PLINTH BEAM PB10	1	02	Y8	960	29	27.84	50, 50, 250, 180	
PLINTH BEAM PB11	1	01	Y12	3550	4	14.2	3050, 250	
PLINTH BEAM PB11	1	02	Y8	960	24	23.04	50, 50, 250, 180	
PLINTH BEAM PB12	1	01	Y12	3550	4	14.2	3050, 250	
PLINTH BEAM PB12	1	02	Y8	960	14	13.44	50, 50, 250, 180	
PLINTH BEAM PB13	1	01	Y12	6450	4	25.8	250	
PLINTH BEAM PB13	1	02	Y8	960	29	27.84	50, 50, 250, 180	
SLAB	1	01	Y10	3250	120	390	3050, 100	
SLAB	1	02	Y10	1400	48	67.2	1200, 100	
SLAB	1	03	Y10	12000	24	288	11900, 100	
SLAB	1	04	Y10	2000	8	16	1800, 100	
SLAB	1	05	Y10	3790	8	30.32	3590, 100	
SLAB	1	06	Y10	4050	8	32.4	3950, 100	
SLAB	1	07	Y10	2160	8	17.28	1960, 100	
SLAB	1	08	Y10	1860	24	44.62	1760, 100	
ROOF RING BEAM RB01	2	01	Y12	12000	4	48	11800, 200	
ROOF RING BEAM RB01	2	02	Y12	3450	4	13.8	3250, 200	
ROOF RING BEAM RB01	2	03	Y12	3450	4	13.8	3250, 200	
ROOF RING BEAM RB01	2	04	Y12	12000	4	48	11800, 200	
ROOF RING BEAM RB01	2	05	Y8	700	142	99.4	50, 50, 200, 100	
ROOF RING BEAM RB02	5	01	Y12	2350	20	47	1950, 200	
ROOF RING BEAM RB02	5	02	Y8	700	40	28	50, 50, 200, 100	

NOTE:

1. All dimensions are in millimetres unless otherswise stated. In case of discrepancy, consult the Structural Engineer.
2. All structural engineering drawings should be read in conjunction with relevant architectural drawings.
3. All Reinforced concrete shall be Grade 20 - Nominal volumetric proportion 1: 2: 4 cube strength not less than 20N/mm² at 28 days.
4. Steel for reinforced concrete shall comply with BS4449 whereby fy = 460N/mm².
5. Bars lap length should be at least 50 times the diameter of the bars lapped.
6. Structural Engineer shall be furnished with copies of the manufacturers certificates of tests for the steel reinforcement to be used.
7. Cement for works shall comply with BS12 and shall be "Ordinary Portland Cement"
8. Clear cover for reinforcement shall be as follows:
   - Slabs 25mm
   - Beams 25mm
   - Columns 25mm
   - Footings.....50mm
7. All concrete work to be done in one operation.
8. All steel fixing, shuttering and concreting works to be done under close supervision of Structural Engineer.
9. Sand borrow pits shall be clean and free from organic materials and shall be approved by Structural Engineers before use.
10. Minimum Compressive Strength for Blocks shall be 3.5N/mm².

PROJECT:

PROVISION OF PHYSICAL FACILITIES IN PRIMARY SCHOOLS

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

IN COLLABORATION WITH

PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT.

Designed by: Eng. J.M.S

Checked by: Eng. N.T.B

Approved by:

DRAWING TITLE:

TOILET FOR 150 BOYS WITH FACILITY FOR DISABLED DRY AREA

BAR BENGING SCHEDULES FOR PLINTH AND ROOF RING BEAMS (**REVISED -1**)

DRAWING USE:

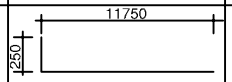
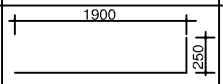
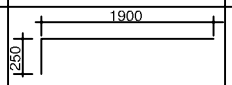
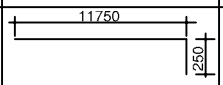
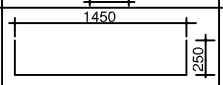
For Building permit: ☐

For Construction: ☑

Drawn by:	J.M.S
Date: 2022	Scale:
Drawing No:STR.CR	Sheet: 09/09

Bar Bending Schedule

PROVISION OF PHYSICAL FACILITIES FOR PRIMARY SCHOOLS - TOILET FOR 200 BOYS WITH FACILITY FOR DISABLED - DRY AREA (PLINTH BEAMS)

MEMBER TYPE	NUMBER OF MEMBER.	MARK No.	BAR TYPE AND SIZE (mm)	LENGTH OF EACH BAR (mm)	NO. OF BARS	TOTAL LENGTH (m)	SKETCH OF BAR DIMENSIONS IN (mm)	NOTE
PLINTH BEAM PB01	2	01	Y12	12000	4	48		
PLINTH BEAM PB01	2	02	Y12	2150	4	8.6		
PLINTH BEAM PB01	2	03	Y12	2150	4	8.6		
PLINTH BEAM PB01	2	04	Y12	12000	4	48		
PLINTH BEAM PB01	2	05	Y8	960	128	122.88		
PLINTH BEAM PB02	1	01	Y12	1950	4	7.8		
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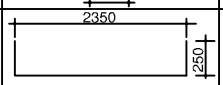
PLINTH BEAM PB03	1	01	Y12	2850	4	11.4		
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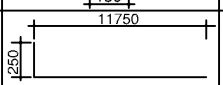
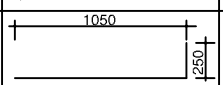
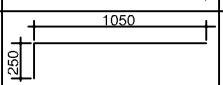
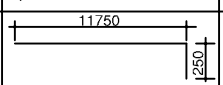
PLINTH BEAM PB04	1	01	Y12	12000	2	24		
PLINTH BEAM PB04	1	02	Y12	3450	2	6.9		
PLINTH BEAM PB04	1	03	Y12	3450	2	6.9		
PLINTH BEAM PB04	1	04	Y12	12000	2	24		
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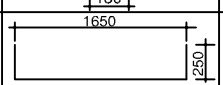
PLINTH BEAM PB05	1	01	Y12	2150	4	8.6		
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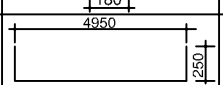
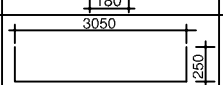
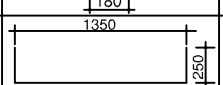
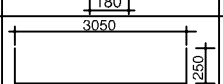
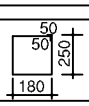
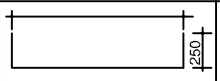
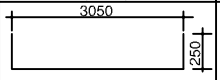
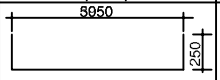
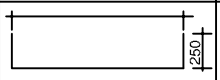
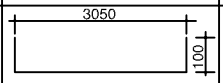
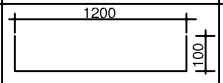
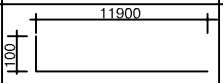
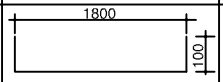
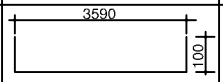
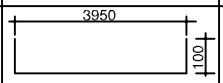
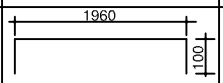
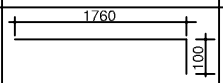
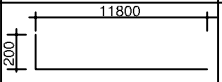
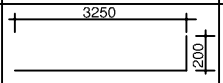
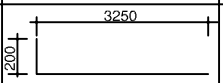
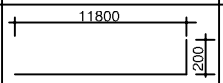
PLINTH BEAM PB06	1	01	Y12	5450	4	21.8		
PLINTH BEAM PB06	1	02	Y8	960	24	23.04		
PLINTH BEAM PB07	1	01	Y12	3550	4	14.2		
PLINTH BEAM PB07	1	02	Y8	960	14	13.44		
PLINTH BEAM PB08	1	01	Y12	1850	4	7.4		
PLINTH BEAM PB08	1	02	Y8	960	6	5.76		
PLINTH BEAM PB09	1	01	Y12	3550	4	14.2		
PLINTH BEAM PB09	1	02	Y8	960	14	13.44		

Page 2/2	Bar Bending Schedule PROVISION OF PHYSICAL FACILITIES FOR PRIMARY SCHOOLS - TOILET FOR 200 BOYS WITH FACILITY FOR DISABLED - DRY AREA (PLINTH BEAMS, SLAB AND ROOF RING BEAMS)							
MEMBER TYPE	NUMBER OF MEMBER.	MARK No.	BAR TYPE AND SIZE (mm)	LENGTH OF EACH BAR (mm)	NO. OF BARS	TOTAL LENGTH (m)	SKETCH OF BAR DIMENSIONS IN (mm)	NOTE
PLINTH BEAM PB10	1	01	Y12	6450	4	25.8		
PLINTH BEAM PB10	1	02	Y8	960	29	27.84		
PLINTH BEAM PB11	1	01	Y12	3550	4	14.2		
PLINTH BEAM PB11	1	02	Y8	960	24	23.04		
PLINTH BEAM PB12	1	01	Y12	3550	4	14.2		
PLINTH BEAM PB12	1	02	Y8	960	14	13.44		
PLINTH BEAM PB13	1	01	Y12	6450	4	25.8		
PLINTH BEAM PB13	1	02	Y8	960	29	27.84		
SLAB	1	01	Y10	3250	120	390		
SLAB	1	02	Y10	1400	48	67.2		
SLAB	1	03	Y10	12000	24	288		
SLAB	1	04	Y10	2000	8	16		
SLAB	1	05	Y10	3790	8	30.32		
SLAB	1	06	Y10	4050	8	32.4		
SLAB	1	07	Y10	2160	8	17.28		
SLAB	1	08	Y10	1860	24	44.62		
ROOF RING BEAM RB01	2	01	Y12	12000	4	48		
ROOF RING BEAM RB01	2	02	Y12	3450	4	13.8		
ROOF RING BEAM RB01	2	03	Y12	3450	4	13.8		
ROOF RING BEAM RB01	2	04	Y12	12000	4	48		
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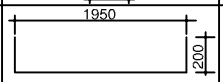
ROOF RING BEAM RB02	5	01	Y12	2350	20	47		
ROOF RING BEAM RB02	5	02	Y8	700	40	28