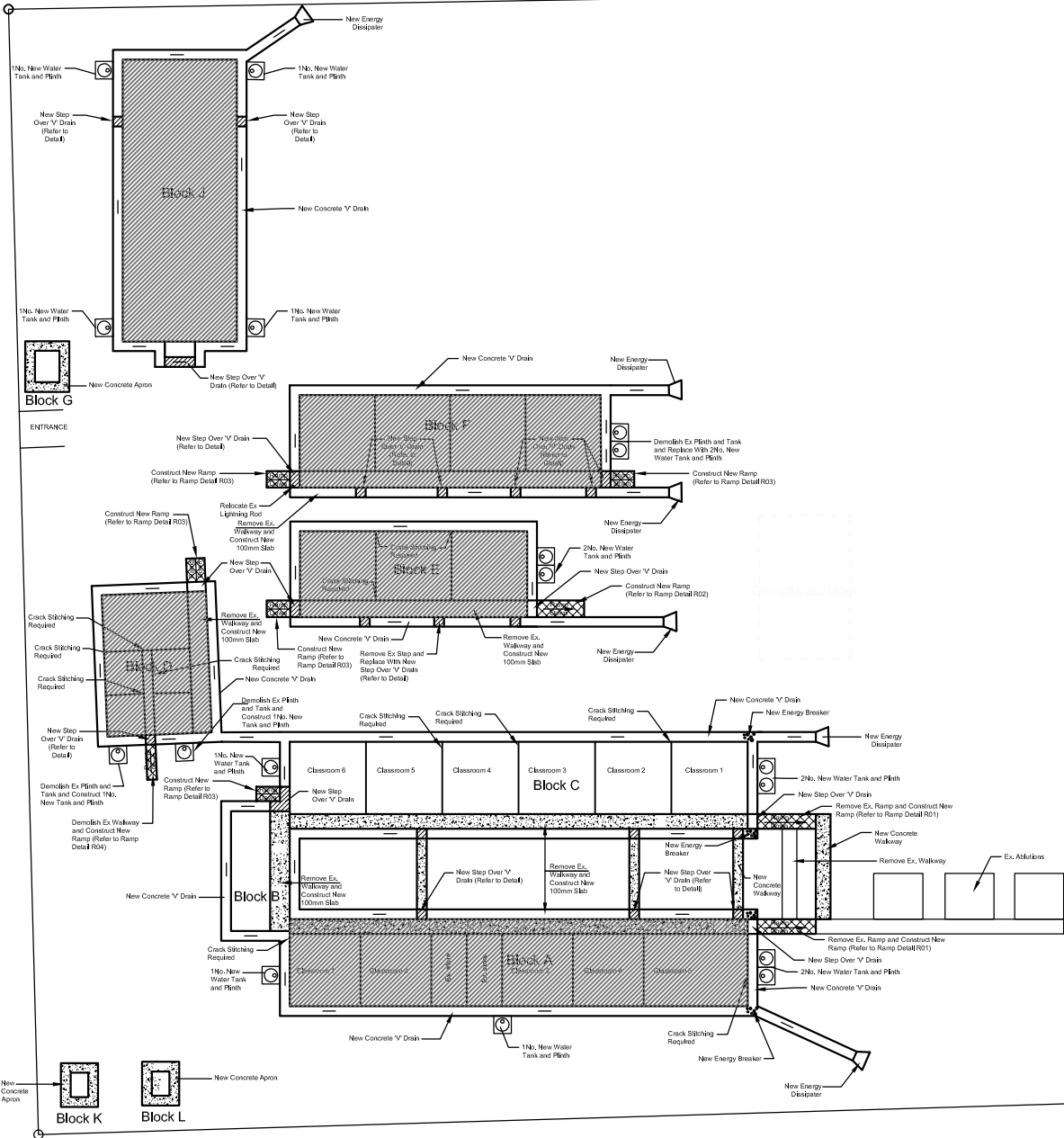


BUILDING NO.	DESCRIPTION
A	6 Classroom Block (47m x 8.9m)
B	3 Room admin block (12m x 6m)
C	6 Classroom block (47m x 8.9m)
D	Admin block (14.6m x 10.9m)
E	3 Classroom block (23.3m x 8.8m)
F	4 Classroom block (31m x 9.4m)
G	Security Gate (2.5m x 3.2m)
H	Ablution block (6.1m x 6.1m)
I	Ablution block (6.1m x 6.1m)
J	Hall (31.6m x 12.5m)
K	Ablution block (2.5m x 1.8m)
L	Ablution block (2.5m x 1.8m)
M	Newly built Ablution block
N	Newly built Ablution block
O	Newly built Ablution block

CO-ORDINATES :
LATITUDE : 28°14'4.25 "S
LONGITUDE : 30°36'36.57 "E



Aerial View
Scale NTS



Site Plan
Scale 1:250



GENERAL NOTES:

- All dimensions to be checked before work commences. Architect to be notified immediately of any discrepancies, errors, omissions, etc.
- Only figured dimensions to be taken; drawings are not to be scaled. All dimensions in mm unless otherwise stated.
- All levels to be checked on site before any work commences.
- All reinforced concrete work to be strictly in accordance with structural engineers detail and specification.
- Dampers conform to comply with S.A.N.S. 10-400 requirements.
- All walls to be reinforced with two courses brickwork at all and wall plate levels.
- Workmanship to be of the highest standard throughout.
- The contractor is to locate and identify any / all existing services and to protect these from damage whilst at site throughout the contract period.
- The contractor is responsible for the correct setting out of all works, particularly boundaries, building lines, services, etc.
- All work to be executed in strict accordance to S.A.N.S. 10-400 and LOCAL AUTHORITY BY-LAWS.
- All materials to be used in strict accordance to manufacturers specification.
- Self packaging to be used under all roof removal work and new water tank details.
- Screen to be applied as directed, to Engineers detail.
- Polycarburene to be installed as indicated in drawings, and to be confirmed on site.
- Roof element sizes and specifications as per drawings and to be confirmed on site, trusses, purlins, rafters, roof sheeting, fascia, barge board, battens, ceilings, top doors and corners, and to match existing where applicable.
- Removal of asbestos to be in strict accordance with The Department of Labour and OHS regulations and procedures.
- Self Packaging to be applied where specified, for all new work and existing where applicable, to manufacturer's specification and to Engineers detail.

NOTE:

- All STRUCTURAL, CIVIL AND ELECTRICAL work to professional Engineers detail.
- All STRUCTURAL, CIVIL & ELECTRICAL ENGINEERS details to take preference over structural, civil & electrical details indicated on this drawing.

GENERAL SPECIFICATION / CONSTRUCTION NOTES:

ROOF:

All roofs are to comply with "Part L" of the S.A.N.S. 10-400.

0.53mm thick, Aluminium-Zinc Coated (AZ150) profile 'lockstep' roof sheeting or other approved finish to both sides. (Colour on top to be confirmed and factory standard grey to underside). Sheets to be fixed to every purlin using appropriate self-drilling tapping screws. At the ridge and eave purlins, fixing to be at every crown. Purlins spaced as per manufacturers specifications, on engineered timber trusses (or existing). Holes in sheets to be drilled not punched. Sheets are to be fixed to 75 x 50mm purlins spaced at max. 1100mm (to manufacturers specification as per sheeting requirements) on engineered timber trusses and purlins to be replaced where specified and done may vary).

OR
0.53mm thick, Aluminium-Zinc Coated (AZ150) profile 'lockstep' roof sheeting or other approved finish to both sides, or similar approved. Thickness of sheeting to be confirmed on site where matching existing. (Colour on top to be confirmed and factory standard grey to underside). Sheets to be fixed to every purlin using appropriate self-drilling tapping screws. At the ridge and eave purlins, fixing to be at every crown. Purlins spaced as per manufacturers specifications, on engineered timber trusses (or existing). Holes in sheets to be drilled not punched. Sheets are to be fixed to 75 x 50mm purlins spaced at max. 1100mm (to manufacturers specification as per sheeting requirements) on engineered timber trusses and purlins to be replaced where specified and done may vary).

General roof notes:
Roof to be installed in strict accordance with manufacturers specification. All sheeting to be handled with care, no scratched or damaged sheeting shall be installed. All scratched or damaged sheets to be removed off site immediately. Sheetling to be installed by manufacturer approved installer. Manufacturer to inspect sheeting after installation and supply certification.

Reflective foil insulation (economical, durable, double sided reflective foil laminate with advanced retardant properties FR405 or similar approved) over trusses and under purlins on existing type on both sides.

Roof trusses to be fixed down to walls with 30mm x 1.2mm thick and 1.2m long galvanneal long foot straps built into batten/rafter as per S.A.N.S. 10-400 requirements prior to erection of trusses. Reflective foil insulation not to extend into eaves. Reflective foil insulation to be installed where specified. Trusses spaced as per engineers specification and resting on 114 x 38mm wall plates.

-Ridge caps to be used at all purlin truss nodes, and to be doubled at eave and ridge purlins (diagonally, as directed on site).

-Polycarburene (polyethylene) or similar approved to be installed at the ridge and eaves. Where new roof sheeting is being installed, polycarburene are to be installed at the ridge and eaves. Where a portion of sheeting is being replaced, or the ridge is being re-installed or replaced polycarburene are to be added at the ridge only.

-Should the eave or similar approved is to be installed for all BR and ridge roof sheeting at the ridge, profile, colour and material to be match the roof sheeting.

Flexible wax and resin impregnated polycarbonate foam to be installed at the ridge when installing ridge cap (Corrugated roof sheeting) and/or batten/rafter eave and ridge cap (BR and ridge roof sheeting).

-Roof pitch to match existing and be confirmed on site.

-All exposed timber to be painted with carbolineum, painting to be completed prior to installation.

-Appropriate ridge cap to be installed as per roof sheeting specification. Colour to match roof sheet.

-114 x 38mm batten rafters to be installed, at every alternative truss for the full length on both sides of the eave (Batten board support as well as both gable ends, barge board support).

-Roof filling purlins to be installed at ridge and gable ends, as directed on site.

-Roof sheeting as specified above or similar approved.

-Roof Screws:
Timber application with corrugated sheeting: 12x65 timberite hex head washer flange EPDM seal.

Timber application with BR sheeting: 12x65 timberite hex head washer flange EPDM seal new roofs to use these screws with the washer (26mm) supplied by the supplier, existing roofs to use the bented metal rubber washer.

-Outer bolts to be added where there are excessive holes, that are not fixing holes, to be directed on site.

-AZ02 re-enforced aluminium foil tape to be added on the underside and on top of isolation where sheets overlaps on both sides.

-AIR-BRICKS:
225 x 152mm Terra-cotta vented profiled air-bricks, or similar approved built into brick beam. If built as specified on drawings, or similar approved.

-BARGE BOARD:
Barge board: 225mm x 10mm fascia boards, joined together with 200mm x 10mm Plastic 14x80x16 Fascia Joists. Fix 75 x 50mm timber trimmer batten to underside of purlin ends for barge board fixing. Dill for and fix fascia board to trimmer batten with hot-dipped galvanneal screws and washers. Remove Existing Barge Boarding, then as above or similar approved. Where specified and to be confirmed on site, then as above or similar approved.

-FASCIA BOARD:
Medium density plain fibre cement 225 X 10mm ungrooved fascias, or similar approved with Hydroflex plastic fascia joists. Drill for and fix with hot-dip galvanneal steel screws and washers, then as above or similar approved. Where specified and to be confirmed on site, then as above or similar approved.

-PREPARE AND PAINT BARGE & FASCIA BOARDS WITH UNIVERSAL ENAMEL AS DESCRIBED BELOW:

SURFACE PREPARATION:
Ensure that substrates as well as primed and undercoated surfaces are clean, sound and dry.

NEW WORK:
Prime with PLASTER PRIMER or MULTI-SURFACE PRIMER. Apply liberally in order to obtain an unbroken barrier coat to seal surface properly.

FILLING: Fill defects with a good wall crack filler as appropriate.

UNDERCOAT: To all surfaces prepared and primed as above, apply a coat of UNIVERSAL UNDERCOAT. Apply one or more coats to achieve complete obliteration. Colour to Architects choice.

GUTTERS:
150 x 100mm seamless aluminum gutters with end and down and stop box. Gutters to be adequately supported and fixed to building. Or otherwise stated on drawings, to match existing.

DOWN-PIPES:

100 x 75mm seamless aluminum down-pipe. Down-pipe to be adequately fixed to wall. Slope to be provided to bottom of downpipe. Or otherwise stated on drawings, to match existing.

CEILING:

6mm thick fibre cement plain boards, fixed to 38 x 50 or edge timber boarding at max 600mm centres with timber cover or edge at gable. Cross boarding to be used at 100mm centres at joints, ends of sheets, corners and right fixings. All nail heads to be stamped 100mm level and fixed to trusses at max 1200mm centres. Contact to 10mm fibre cement, placed to ceiling board and wall with a good adhesive. Ceiling and cornice to be prepared adequately and painted 2 coats Super Acrylic. Paint must meet WATE paint then as above or similar approved.

CEILING TRAP DOORS:

Provide 1 x 600 x 400mm fibre cement trap door. Item indicated on drawings and position to be confirmed on site.

WALLS:

All walls are to comply with "Part II" of the S.A.N.S. 10-400. New walls or masonry walls to match existing. Brick or block wall to be constructed as per construction standards, to be indicated by responsible individual as required. All bonding and / or existing walls to be indicated by responsible individual as required. P.C. Bricks to be installed over all new openings where walls to be plastered and painted. As specified on drawings and to be confirmed on site.

All new walls to underside of roof sheeting. Walls to be constructed as per existing and where specified.

Wall sheeting to be strictly in accordance to Engineers detail.

MASONRY WALL: INTERNAL AND EXTERNAL (PLASTER & PAINT)

NEW PLASTERED WALLS:
Two coat steel trowelled rendered plaster with smooth finish. Prepare and paint walls as specified below. Prepare and paint with a water-based anti-fish paint as described below.

SURFACE PREPARATION:
Ensure that substrates as well as primed and undercoated surfaces are clean, sound and dry.

NEW WORK:
Prime with PLASTER PRIMER or MULTI-SURFACE PRIMER to form an unbroken barrier coat to seal substrate surface properly.

FILLING: Fill defects with a good wall crack filler as appropriate.

APPLICATION:
Water-based paint is ready for use and is best applied by brush. Apply generous full coats so that brush marks flow out to a smooth even coat. Apply one or more coats to achieve complete obliteration. - Paint colour: To match existing and to be confirmed on site.

FLASHING / WATERPROOFING:
Aluminum flashing and paint on waterproofing membrane or similar approved to be installed as specified on drawings, colour to match sheeting finish.

GMS POST:

1000 gms steel post to be installed as indicated. Going to Engineer's detail. Posts to be fixed to concrete and not screwed, using bearing appropriate base plate and to be fixed to truss or beam above using appropriate chain.

WINDOWS:

New windows to be hot dipped galvanneal steel windows or to match existing on drawings, to be confirmed on site. All new windows to be installed with 6mm toughened safety glass. Putty to be painted to match window frame, colour to be confirmed on site.

GLAZING PANELS:

New glazing panels to be 6mm Toughened safety glass. New putty to be installed as per manufacturers specifications, hardware to be applied once putty is smooth and adhered correctly. Putty to be painted to match existing window frame, colour to be confirmed on site. ** All glazing to be measured and confirmed on site to installation.

DOORS:

New doors as indicated on schedule, to be confirmed on site. All external doors to be solid muntins hardware. Internal doors to be hollow core.

SKRINKING:

Items 1 - 2mm moulding skirting - or other approved with 10mm timber quadrant sanded smooth and pre-varnished in mahogany, then fixed to wall, then as above or similar approved as required on drawings.

FLOOR COVERINGS:

Refer to drawings for layout of new floor covering.

Supply and fix 2.2mm thick x 300mm x 300mm semi-flexible tile, manufactured in accordance with SANS 561, laid on a 10mm adhesive, spread with a 1mm 200T trowel at the rate of between 5.5m² and 6.5m² per line, depending on the sub-floor profile. laid on screed to fall, made with waterproof admixture.

The newly laid floor after 72 hours must be stripped using a good Stripper, dried using a good blower and then sealed with 3 coats of a good Sealer.

-The colour to be confirmed, then as above or as per existing.

OR

Screed floors to Engineers detail. Include removal of existing screed and application of new. Above is as specified on drawings.

IN-SITU CHANNELS:

Concrete aprons and -drains laid to fall and in panels, not exceeding 1.0m in length with control joints as specified by engineer, on fill compacted to MOD ASR100 90% or as specified & approved by engineer. Control joints sealed with 10mm polycarburene seal with backing strip and impregnated sealant, after Engineers detail.

Ex. In-situ channels (drains and aprons) where action needs to be taken due to vegetation growth, then the following shall apply. Excess soil / vegetation to be removed from all gaps, are to be treated with soil poisoning as per manufacturer's specification. Gaps to be sealed with poly-ethylene sealant (with backing strip and impregnated sealant where applicable), to be confirmed on site, to Engineers detail.

BACKFILL:

Fill to be approved clean earth, well watered and rammed in layers not exceeding 150mm in depth and thoroughly consolidated, after Engineers detail.

WATER TANK AND PLINTH:

Water tanks plinth constructed to Engineers detail, with 2000 R polyethylene water tank, backed and joined in 2mm 8 motor and primed with Rust World and fluted horizontal joints and perpendicular, suitable for exposure zones 1-2.

Brickwork of NF3 bricks (14 MPa nominal compressive strength) in class II mortar.

ELECTRICAL:

Electrical as per drawings, to match existing where appropriate and to be confirmed on site.

SECURITY GATE AND BURGLAR FLAT BARS:

Galvanneal gate to be installed as directed on site, drawings to be provided.

8-gauge bars - 20mm diameter galv flat bars to be welded to the existing window frame, all welding joints to be treated with a protective anti-rust protection spray or oil/galvanneal paint coating as per manufacturers specifications.

CHALKBOARD:

Fixed projection white board (NON REFLECTIVE). Aluminium framed, magnetic chalk board without any lines or graphics etc) with heavy duty hinges and one complete aluminium pen tray for the full length of the centre board. Centre board joint to be 2400 x 1200mm with 2mm thick chalk board sides to be 1200 x 1200mm. Aluminium pen tray length 2280mm fixed to Centre board.

3 Complete full set of magnetic starter pack consisting of the following for each board supplied:

4 chalkboard markers Red, Green, Black, Blue,
1x cleaning cloth
1x Magnetic Eraser
1x Cleaning fluid 250 ml
4 x rounded magnets 6 day

FINING BOARD:

200mm (high) x 2400mm (long) wall mounted board, complete with aluminium channel and fixing brackets plugged and screwed to wall as per manufacturer's instructions.

DADO RAILS:

New 150mm x 120mm timber shutter door Dado rail fixed into walls @ every 400mm c/c with 6 x 5 x 40mm fixing screw in when plug suitable for wall and filler purpose. All fixing holes to be covered with a wood filler and sanded down smoothly before painting with the approved colour on site. All Dado rail heights to be at max. height of 850mm high, subjected, to match all table and chair heights on site.

All information is to be confirmed on site and directed by the responsible individual, items as above or similar approved, and to match existing where applicable. Any discrepancies to be brought to the consultants attention prior to the commencement of any work.

B13		B50	
2032		2032	
top of slab		top of slab	
TYPE:	D1	D2	
FRAME:	1.2mm thick pressed double rebated mild steel door frame	1.2mm thick pressed double rebated mild steel door frame	
FRAME FINISH:	Hot dipped galvanneal. Not painted	Hot dipped galvanneal. Not painted	
DOOR:	2032 x 813 x 40mm Mawaal Hard wood. Kept, Bred & better bottomed door with 110 x 40mm stile & top rail, 150 x 20mm middle ledge, 225 x 20mm bottom ledge, 110 x 20mm trusses & mth, 20 T.G. & V-jointed battens	2032 x 813 x 40mm SA Plan (solid hardwood timber bottomed door, underlaid 100mm from finished floor level.	
DOOR FINISH:	Door: Sand smooth and dust off. Seal knots with "HOT SEAL" PK 27. then prime with "PLASTON WOOD PRIMER (UC 27" then after apply one or more coats of "PLASTON ENAMEL DOORS & TRIMS" to achieve complete obliteration. Colour: Calypso, code: G 122.	Door: Sand smooth and dust off. Seal knots with "HOT SEAL" PK 27. then prime with "PLASTON WOOD PRIMER (UC 27" then after apply one or more coats of "PLASTON ENAMEL DOORS & TRIMS" to achieve complete obliteration. Colour: Calypso, code: G 122.	
FINISHING:	Door set 1: Door set 2:	Door set 2:	
NOTES:	• Contractor to check sets required against drawings and schedule. • Any discrepancies to be brought to the Architects attention immediately.		
DS	SCALE: 1:50	DETAIL DESCRIPTION: DOOR SCHEDULE BLOCK A	

DOOR SET 1: Union & Lever Commercial Series Worktop box 22417865 with CP on brass clover Lever handle CB802-01C & C26731CH door also fixed with counter-sunk bolt into anchor bolt.	DOOR SET 2: SOLID ART 214 WC standard aluminium mirror indicator. bolt. 30mm diameter door stop plugged and screwed to wall with a 40mm long brass screw.	STANDARD DOOR FRAME: 1.2mm hot dipped galvanneal pressed mild steel double rebated frame to suit wall thickness with steps to fix hinges, 2 x 100mm Galvalume & welded floor - full hinges, adjustable chrome brassy H&L & 2 roller buffers. Frame to be well rammed with mortar mix to protect from knocking when bumped.	NE ALL IRONWORKERY TO BE SABS APPROVED.
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KZN Department of Public Works Stamp and Signature

Signature: _____ Date: _____

Consultant: _____

Signature: _____ Date: _____

public works

Department: Public Works

PROVINCE OF KWAZULU-NATAL

Project Title: PHASE 14: REPAIRS AND RENOVATIONS TO STORM DAMAGED SCHOOLS - KZN MIDLANDS

REGION - CLUSTER 134 - PHUMULANI

SECONDARY

Drawing Description:

Site Plan for Phumulani Secondary School

Drawn: T. Mkhize M. Khan Date: 2020/04/05

Checked by: T. Mkhize Date: 2020/05/04

Scales: AS SHOWN

Consultant: Drawing No: 1393-18 W001

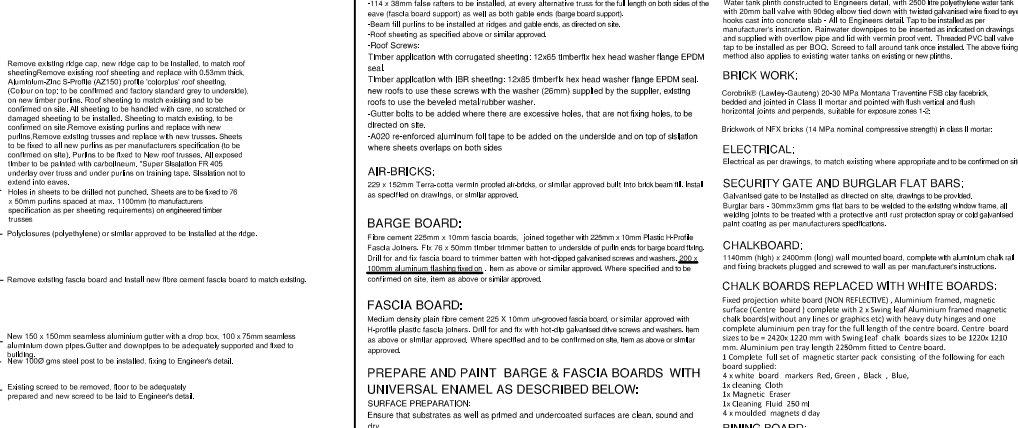
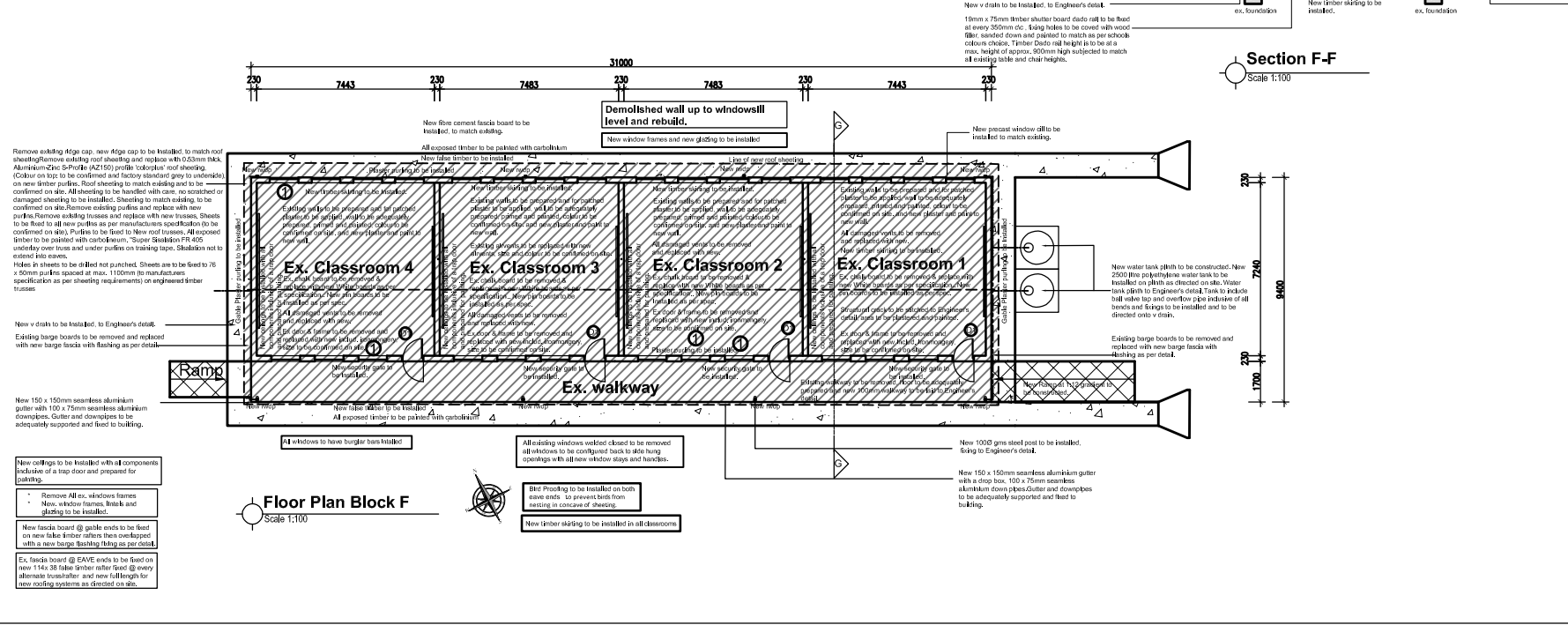
Revision: _____

DOPW ZNTL No: ZNTL 05092 W

Revision: _____

DOPW WMS No: WMS: 063801

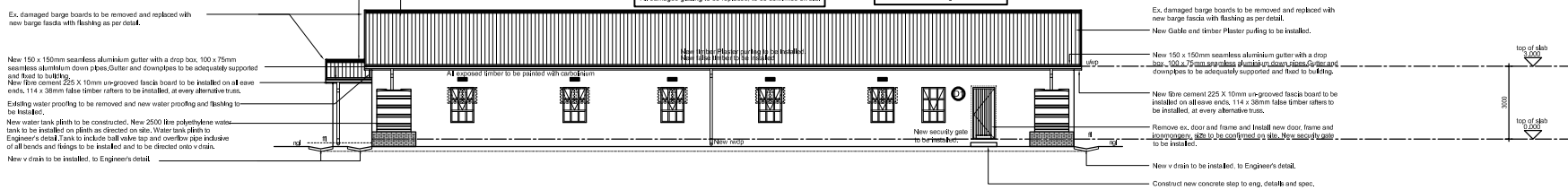
Stamped by Design Review Committee



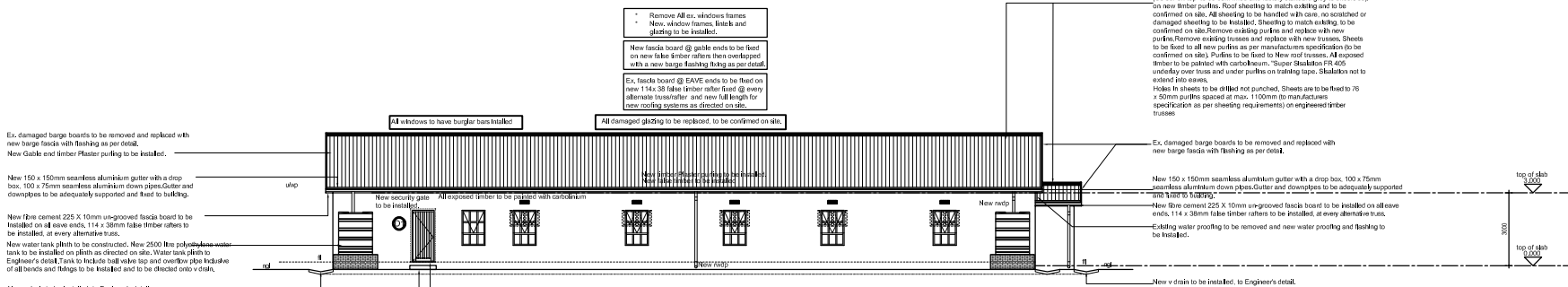
TYPE:	W1	W2	
GLASS:	6mm laminated annealed safety glass polished to with steel window putty.	6mm laminated annealed safety glass polished to with steel window putty.	
SCALE:	1:50	DETAIL DESCRIPTION:	
WS	WINDOW SCHEDULE		

		<p>DOOR SET 1: Linken Laver Commercial Series Merbau JCU 247-7855 with CP as Inset Glass Laver handles CB802-G5CH & C2371CH door stop fixed with counter-sunk bolt into anchor bolt.</p>	
TYPE:	D1		
FRAME:	1.2mm thick pressed double related mild steel door frame		
FRAME FINISH:	Hot dipped galvanised. Not painted		
GLASS:	2032 x 810 x 40mm Merbau Hard wood. Joggled, Beveled & battened door with 110 x 40mm spigot & top rail, 150 x 20mm middle glaze, 225 x 20mm bottom glaze, 110 x 20mm spigot & rail, x 201.5 & V jointed battens		
DOOR FINISH:	Good. Paint smooth and dust off. Seal battens with "KOTI SEAL (PK-2)", finish prime with "PLASCON WOOD PRIMER (UC-2)", then after apply one or more coats of "PLASCON EMERALD COLOUR (TRW-5)" to achieve complete differentiation. Colour: Calypso, (m-cs) 127.		
FURNITURE:	Door set 1 (4 Doors)		
NOTES:	<ul style="list-style-type: none"> Contractor to check we're required against drawings and schedules. Any discrepancies to be brought to the Architects attention immediately. 		
SCALE:	1:50	DETAIL DESCRIPTION:	DOOR SCHEDULE

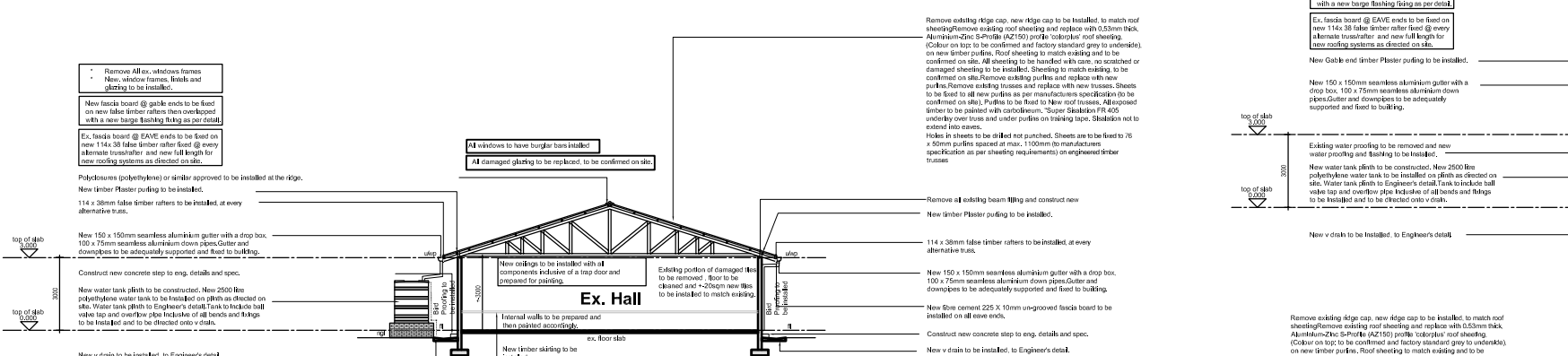
- Remove existing ridge cap, new ridge cap to be installed, to match roof sheathing/Remove existing roof sheathing and replace with 0.53mm thick, Aluminium-Zinc S-P-profile (AZ150) profile 'colorbond' roof sheathing. (Colour on top to be confirmed and factory standard grey to underside), on new timber purlins. Roof sheathing to match existing and to be confirmed on site. All sheathing to be handled with care, no scratched or damaged sheathing to be installed. Sheathing to match existing to be confirmed on site. Remove existing purlins and replace with new purlins. Remove existing trusses and replace with new trusses. Sheets to be fixed to all new purlins as per manufacturers specification (to be confirmed on site). Purlins to be fixed to New roof trusses. All exposed timber to be painted with carbosealume. 'Super Sealshield FR 405' underlay over truss and under purlins on trussing tape. Skelation not to extend into eaves.
- Holes in sheets to be drilled not punched. Sheets are to be fixed to 76 x 50mm purlins spaced at max. 1100mm (to manufacturers specification as per sheathing requirements) on engineered timber trusses.
- Remove All ex. windows frames
 - New, window frames, lintels and glazing to be installed.
- New fascia board @ gable ends to be fixed on new 114x38 false timber rafters then overclipped with a new barge flashing (facing as per detail).
- Ex. fascia board @ EAVE ends to be fixed on new 114x38 false timber rafters then overclipped with a new barge flashing (facing as per detail).



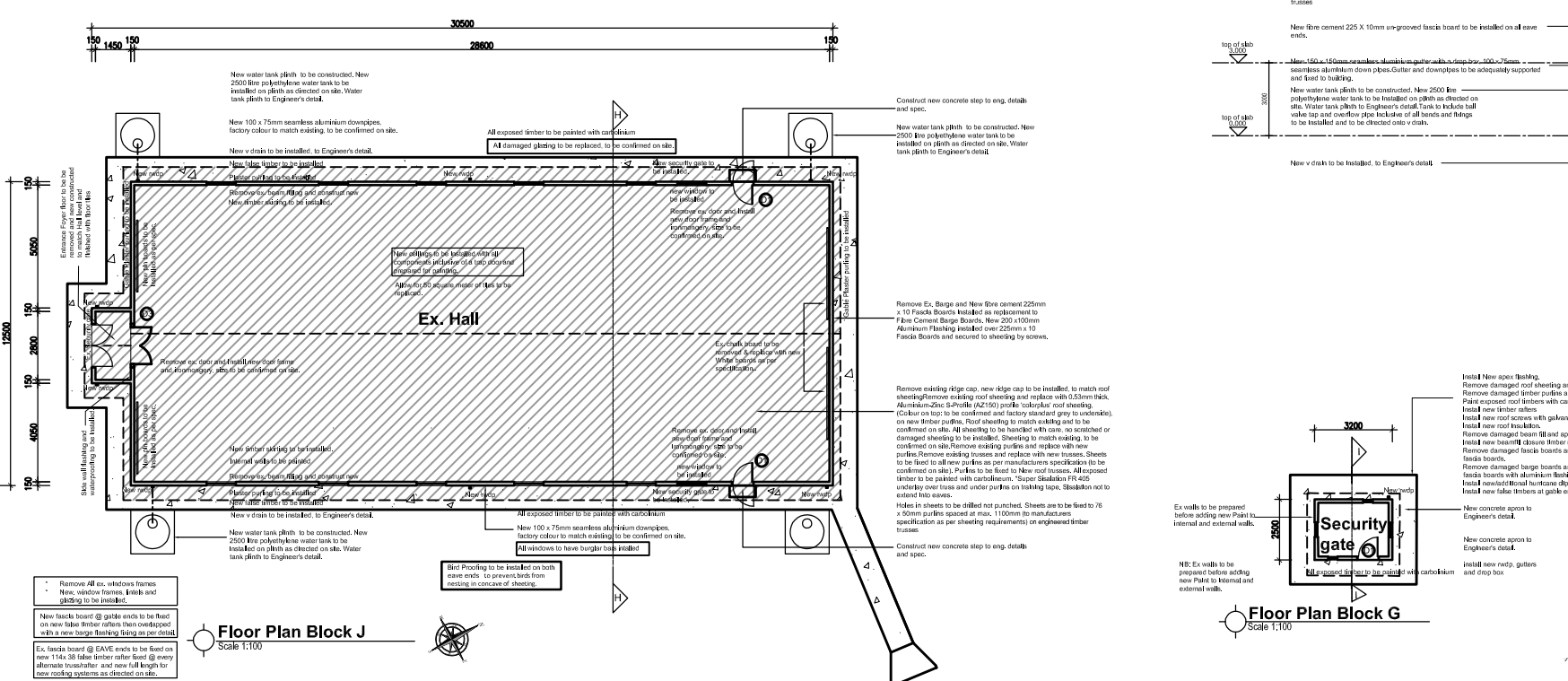
South East Elevation Block J
Scale 1:100



North West Elevation Block J
Scale 1:100



Section H-H
Scale 1:100

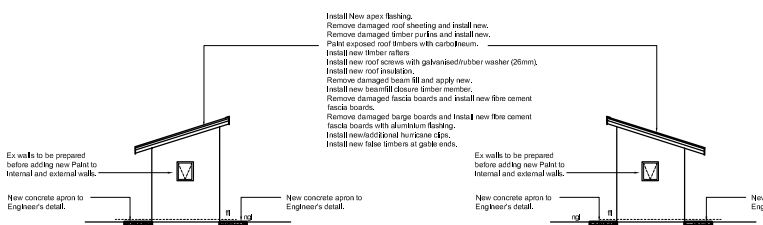


Floor Plan Block J
Scale 1:100

Floor Plan Block G
Scale 1:100

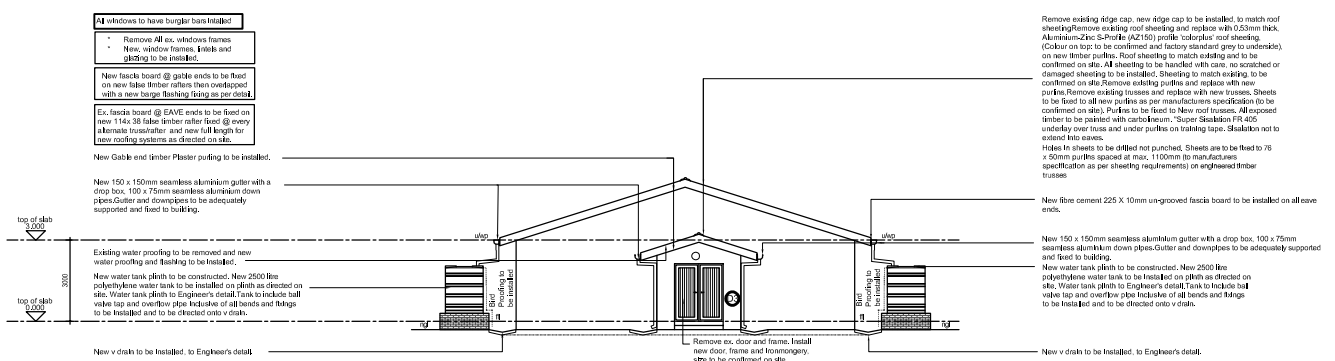
		<p>DOOR SET 1: 1.2mm hot dipped galvanized pressed metal double raised doors to suit wall thickness with stops for building. 2. 1.6mm galvanized & treated frame - built hinges, adjustable chrome striking plate & 2 rubber buffers. Frame to be well finished with mould risk to protect from denting when bumped.</p>
TYPE:	D3	
FRAME:	1.2mm thick pressed double raised mild steel door frame	
FRAME FINISH:	Hot dipped galvanized, Hot painted	
DOOR:	2032 x 1800 x 42mm Messall Hardwood, beveled, beveled & banded door with 110 x 40mm styles & top rail, 150 x 20mm middle ledge, 225 x 20mm bottom ledge, 110 x 20mm braces & rls, x 20 T.O. & V Joints below.	
DOOR FINISH:	Door: Sand smooth and dust off. Seal with 'YODIT SEAL' (P.V.C.), then prime with 'PLASCON WOOD PRIMER' U.C. 27 then after apply one or more coats of 'Placon ENAMEL DOORS & FRAMES' to achieve complete satisfaction. Colour: Colours code G 127.	
FURNITURE:	Door set 3 (T. Doors)	
NOTES:	Contractor to check with required against drawings and schedules. Any discrepancies to be brought to the Architect's attention immediately.	
SCALE:	1:50	DOOR SCHEDULE

		<p>WINDOW SCHEDULE</p>
TYPE:	W1	W2
GLASS:	6mm laminated annealed safety glass put in with steel window	6mm laminated annealed safety glass put in with steel window
SCALE:	1:50	1:50
DETAIL DESCRIPTION:	DETAIL DESCRIPTION	DETAIL DESCRIPTION

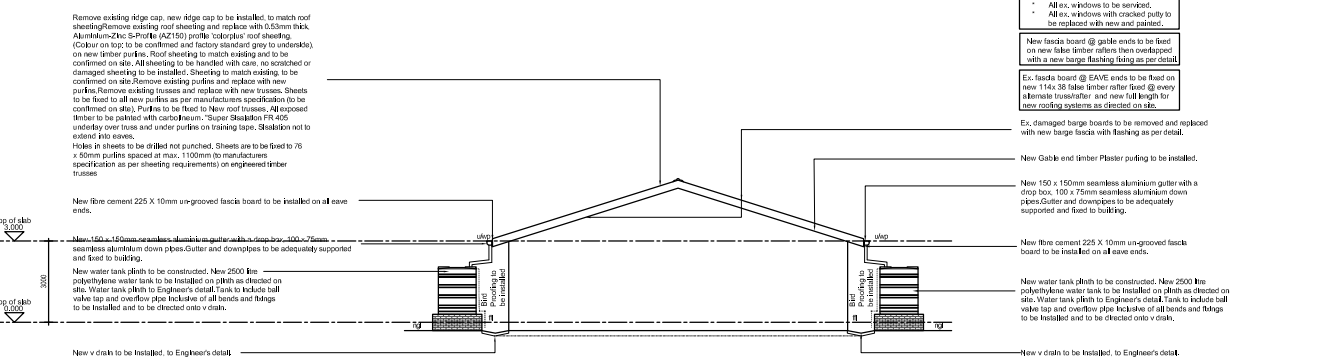


S.W. Elev. Block G
Scale 1:100

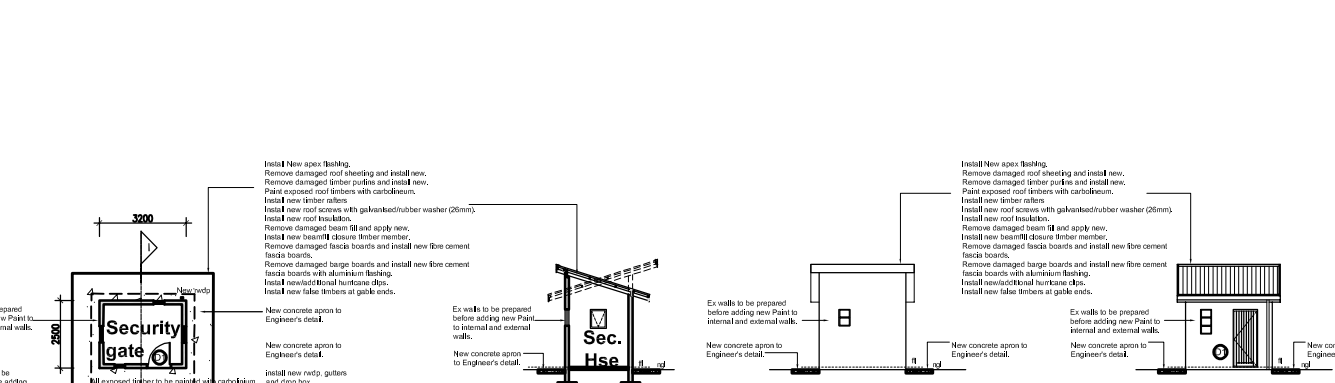
N.E. Elev. Block G
Scale 1:100



S.W. Elevation Block J
Scale 1:100



N.E. Elevation Block J
Scale 1:100



Section I-I
Scale 1:100

N.W. Elev. Block G
Scale 1:100

S.E. Elev. Block G
Scale 1:100

KZN Department of Public Works Stamp and Signature

Signature: _____ Date: _____
Consultant: _____

Signature: _____ Date: _____



Project Title:
PHASE 4: REPAIRS AND RENOVATIONS TO STORM DAMAGED SCHOOLS - KZN MIDLANDS REGION - CLUSTER 134 - PHUMULANI SECONDARY

Construction Drawings for Phumulani Secondary School - Block J and Block G Floor plans, Section, Elevations, Door Schedule and General Notes

Drawn: T. Mkhize / M. Khan Date: 2020/04/05
Checked by: T. Mkhize Date: 2020/05/04

Scales: AS SHOWN

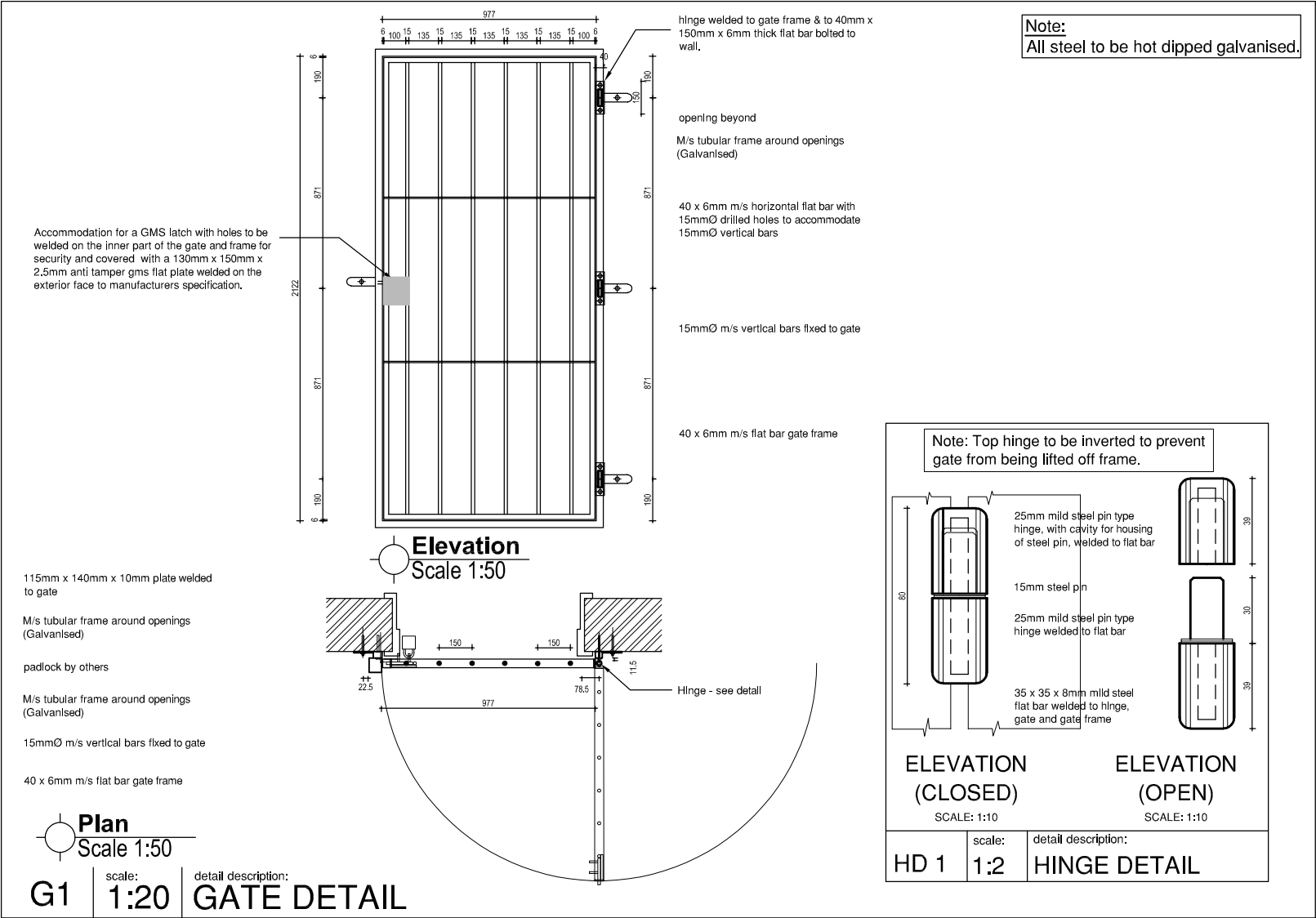
Consultant: Drawing No: 1393-18 W009

DOPW ZNTL No: ZNTL 05092 W

DOPW MMS No: WMS: 063801

Stamped by Design Review Committee

NB: All dimensions to be confirmed on site



KZN Department of Public Works Stamp and Signature

Signature: _____ Date: _____

Consultant:

Signature: _____ Date: _____



public works
Department:
Public Works
PROVINCE OF KWAZULU-NATAL

Project Title:
**PHASE 14: REPAIRS AND RENOVATIONS TO
STORM DAMAGED SCHOOLS - KZN MIDLANDS
REGION - CLUSTER 134 - PHUMULANI
SECONDARY**

Drawing Description:
Gate Detail

Drawn: T.Mkhize/ M.Khan Date: 2020/04/05
Checked by: T. Mkhize Date: 2020/05/04

Scales: AS SHOWN

Consultant Drawing No: 1393-18 WD10	Revision: .
DOPW ZNTL No: ZNTL 05092 W	Revision: .
DOPW WIMS No: WIMS : 063801	
Stamped by Design Review Committee	

BUILDING NO	DESCRIPTION
A	6 Classroom Block
B	3 Room admin block
C	6 Classroom block
D	Admin block
E	3 Classroom block
F	4 Classroom block
G	Guard Hut
H	Ablution block
I	Ablution block
J	Hall
K	Ablution block
L	Ablution block

GENERAL

- ALL WORK SHALL BE EXECUTED IN STRICT ACCORDANCE WITH SANS 2001-CC1 AND THE PROJECT SPECIFICATIONS IN THE CONTRACT DOCUMENTATION.
- THE CONTRACTOR SHALL ENSURE THAT WATERPROOFING MATERIALS ARE NOT DAMAGED DURING BACKFILLING OPERATIONS AND FIXING OF STEEL.

FOUNDATIONS AND EARTHWORKS

- ALL EARTHWORKS SHALL BE IN ACCORDANCE WITH SANS 1200 D INCLUDING THE LATEST REVISIONS.
- ALL EXCAVATIONS MUST BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE PLACING OF ANY CONCRETE FOUNDATION, BLINDING, WATERPROOFING OR GEOTEXTILE MEMBRANE.
- NO FOUNDATION SHALL BE CAST ON NON-ENGINEERED FILL OR BACKFILL MATERIAL PORTIONS THAT ARE OVER-EXCAVATED BEYOND THE DEPTH REQUIRED BY THE GEOTECHNICAL / RESIDENT ENGINEER. TO BE FILLED WITH MASS CONCRETE (20MPa / 19mm) AT THE CONTRACTOR'S EXPENSE.

BRICKWORK & BLOCKWORK:

- ALL BRICKWORK, BLOCKWORK, ANCHORS, WALL TIES AND STRAPS SHALL BE IN ACCORDANCE WITH SANS 6400 - 1995 AND SANS 0164 - 1980 INCLUDING THE LATEST REVISIONS.
- THE MINIMUM CRUSHING STRENGTH OF ALL LOAD BEARING BRICKWORK SHALL BE 14 MPa.
- THE MINIMUM CRUSHING STRENGTH OF MORTAR SHALL BE AS FOR CLASS II MORTAR IN ACCORDANCE WITH TABLE 1 SANS 0164 PART 1 - 1980.
- LOAD BEARING BRICKWORK SHALL BE REINFORCED WITH AN APPROVED BRICKFORCE EVERY FOURTH LAYER UNLESS OTHERWISE SPECIFIED ON DRAWINGS.
- IN ADDITION, BRICKFORCE IS REQUIRED IN EVERY LAYER FOR THE FIRST FOUR LAYERS ON TOP OF THE FOUNDATIONS & SLABS AS WELL AS OVER DOOR AND WINDOW OPENINGS (MIN LAP = 300mm).
- ALL BRICK ANCHORS, WALL TIES AND STRAPS SHALL BE HOT DIP GALVANIZED.
- V-JOINTS ARE TO BE MADE THROUGH PLASTERWORK WHERE BRICKWORK / BLOCKWORK AND CONCRETE JOIN.

CONCRETE:

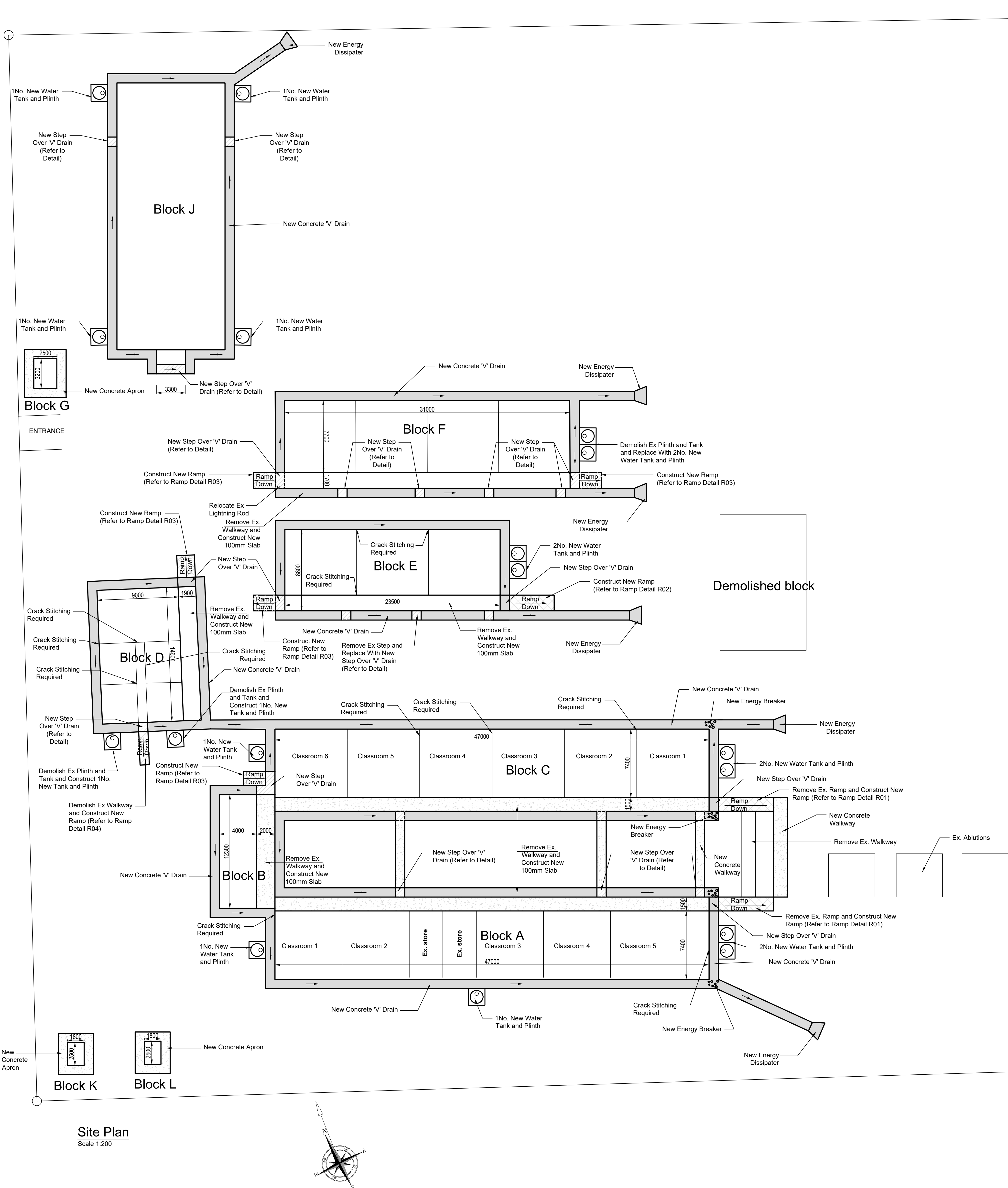
- CONCRETE GRADES:
REINFORCED CONCRETE = 30 MPa/19mm
SURFACE BEDS = 30 MPa/19mm
MASS CONCRETE = 20 MPa/19mm
BLINDING = 15 MPa/19mm
- 20 X 20 CHAMFER TO BE PROVIDED ON ALL EXPOSED EDGES
- COVER TO REINFORCEMENT:
ROOF & FLOOR SLAB = 25mm
FOUNDATION BASES = 50mm
- ALL CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENTS OF SANS 2001-CC1.
- CONCRETE TOLERANCE IN GENERAL SHALL BE OF DEGREE OF ACCURACY NO. 1 AS SPECIFIED IN SANS 2001-CC1.
- ALL CASTING PROCEDURES, CONSTRUCTION METHODS AND POSITIONS OF CONSTRUCTION JOINTS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE PROJECT.
- THE CONTRACTOR MUST CO-ORDINATE ALL SERVICES DRAWINGS FOR DETAILS AND POSITIONS OF OPENINGS AND SLEEVES REQUIRED FOR STORMWATER, SEWERAGE, DRAINAGE, ELECTRICAL, MECHANICAL AND OTHER SERVICES.
- THE CONTRACTOR MUST OBTAIN PERMISSION FROM THE ENGINEER BEFORE ANY OPENINGS OR SERVICES LARGER THAN 150 mm DIA OR 150 x 150 mm WHICH ARE NOT INDICATED ON THE DRAWINGS MAY BE INTRODUCED THROUGH ANY STRUCTURAL ELEMENT.
- CURING OF CONCRETE SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE WITH SANS 2001-CC1.
- THE STRENGTH OF CONCRETE COVER BLOCKS SHALL AT LEAST BE EQUAL TO THE CONCRETE STRENGTH OF THE STRUCTURAL ELEMENT IN WHICH THEY ARE USED. THE SIZE AND FINISH METHOD OF COVER BLOCKS SHALL BE DISCUSSED IN ADVANCE WITH THE ENGINEER.
- STRIPPING TIMES OF SHUTTERING AND PROPPING SHALL BE IN ACCORDANCE WITH SANS 2001-CC1.
- CONCRETE MIX DESIGNS FOR ALL GRADES OF CONCRETE INCLUDING SCREED MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PLACING OF ANY CONCRETE.
- COLD CONSTRUCTION JOINTS: MAIN AGGREGATE MUST BE EXPOSED, CLEANED AND THOROUGHLY WETTED BEFORE CASTING OF NEW CONCRETE. NO CEMENT GROUT SHALL BE USED. LOCATION OF JOINTS TO BE APPROVED BY THE ENGINEER IF DEVIATED FROM THE DRAWINGS.

SURFACE BEDS:

- PROVIDE 15mm ISOLATION JOINTS (I.J.) AROUND ALL CONCRETE COLUMNS AND AGAINST BRICK WALLS. AFTER CONCRETE HAS SET, JOINTS TO BE RAKED OUT 10mm DEEP AND SEALED WITH APPROVED JOINT SEALANT - REFER TO STANDARD DETAILS.
- SAW-CUT JOINTS TO BE DONE AS SOON AS CONCRETE IS FIRM ENOUGH TO NOT DAMAGE THE EDGES. USUALLY BETWEEN 6 TO 16 HOURS.
- ALL BACKFILL TO BE COMPACTED IN LAYERS NOT EXCEEDING 150mm. COMPACTION EFFORT AS INDICATED.
- FLOOR SLABS ARE WOOD FLOAT FINISHED AND SCREED TOPPING TO HAVE A STEEL TROWEL FINISH.


REINFORCEMENT:

- ALL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF SANS 923-2011.
- THE CONTRACTOR SHALL INSPECT AND APPROVE THE FIXED REINFORCEMENT BEFORE THE ENGINEER IS NOTIFIED. ALL REINFORCEMENT SHALL BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE CASTING OF CONCRETE MAY COMMENCE.
- THE CONTRACTOR SHALL GIVE AT LEAST 24 HOURS NOTICE TO THE ENGINEER FOR REBAR INSPECTIONS THAT ARE REQUIRED.
- BEND-OUT BARS AT CONSTRUCTION JOINTS SHALL BE BENT OUT WITH A SUITABLE PIPE SO THAT NO KINK IS FORMED IN THE BARS.
- NO HEAT TREATMENT, FLAME CUTTING OR WELDING OF REBAR WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER SHALL BE ALLOWED.



Site Plan
Scale 1:200

KZN Department of Education Stamp and Signature

Signature: _____ Date: _____
Consultant: _____
 REALISING CONTINENTAL POTENTIAL
Signature: _____ Date: _____

 **public works**
Department:
Public Works
PROVINCE OF KWAZULU-NATAL

Report Title:
PHASE 14: REPAIRS AND RENOVATIONS TO STORM DAMAGED SCHOOLS - KZN MIDLANDS REGION - CLUSTER 134 - PHUMLANI HIGH

Drawing Description:
Illustration site Plan of Engineering Works for Phumlani High

Drawn: K. Chetty Date: 2020/04/20

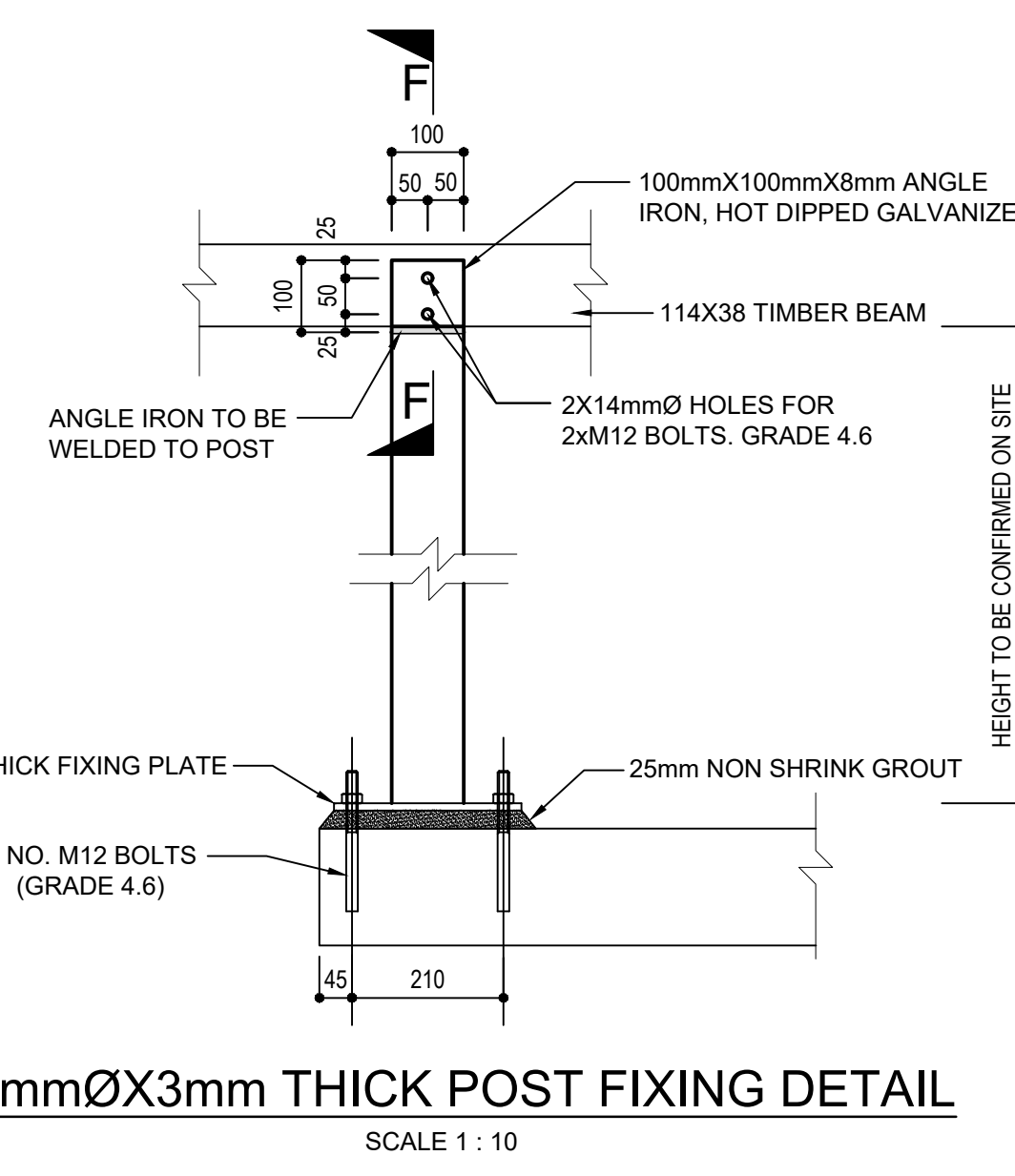
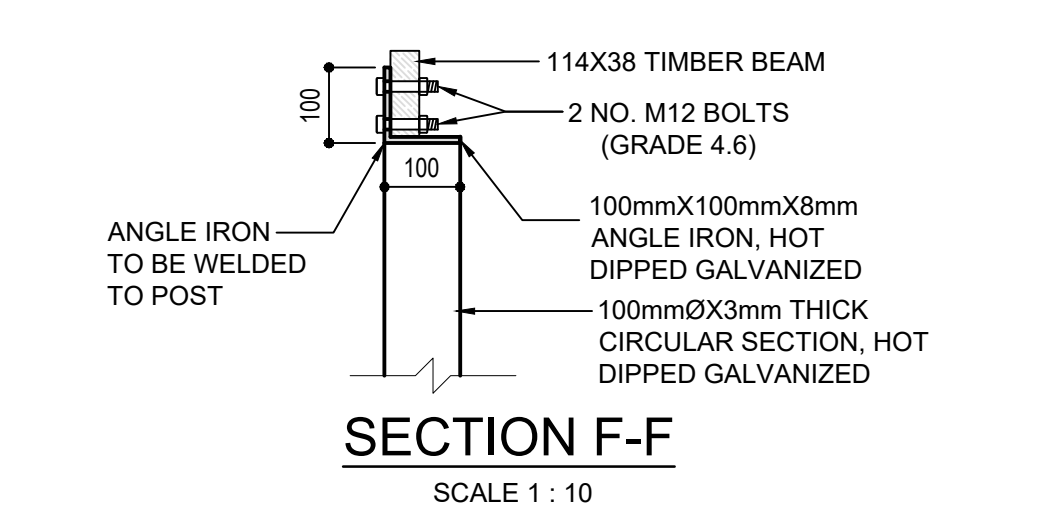
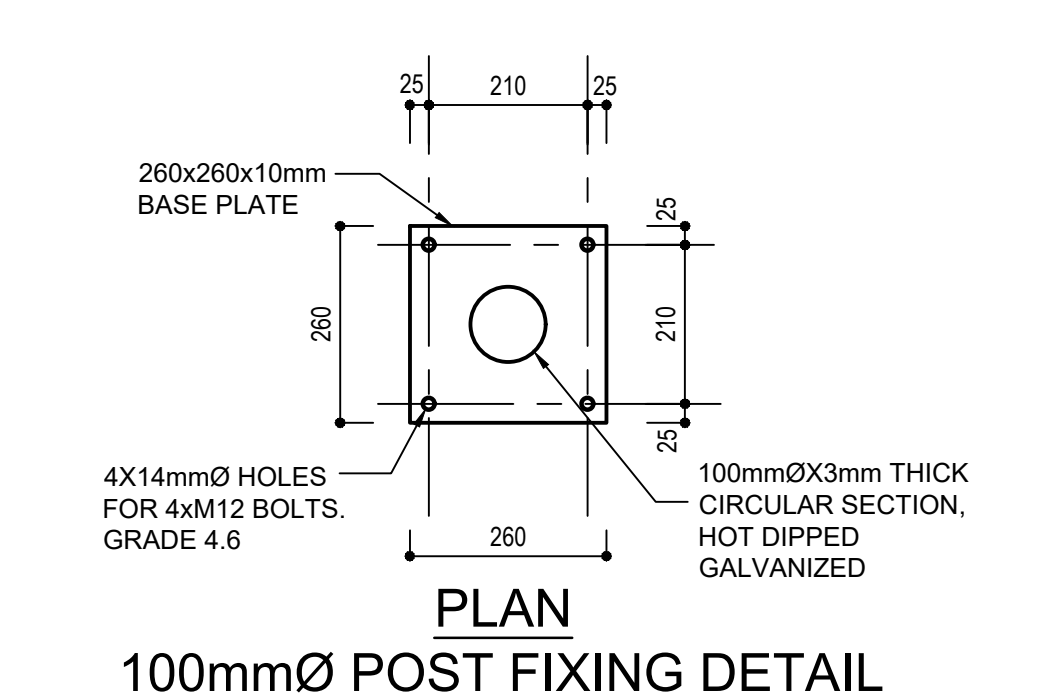
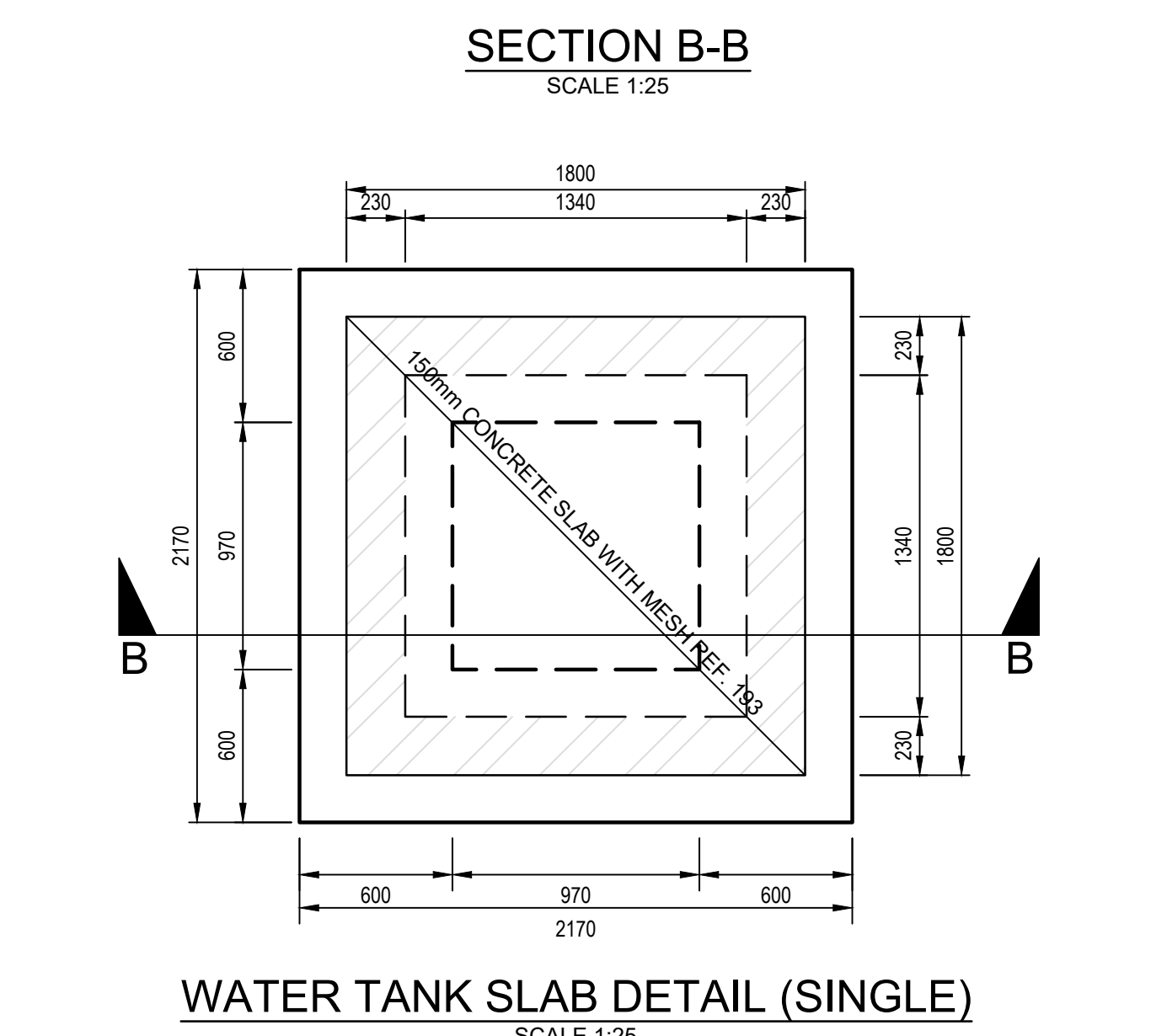
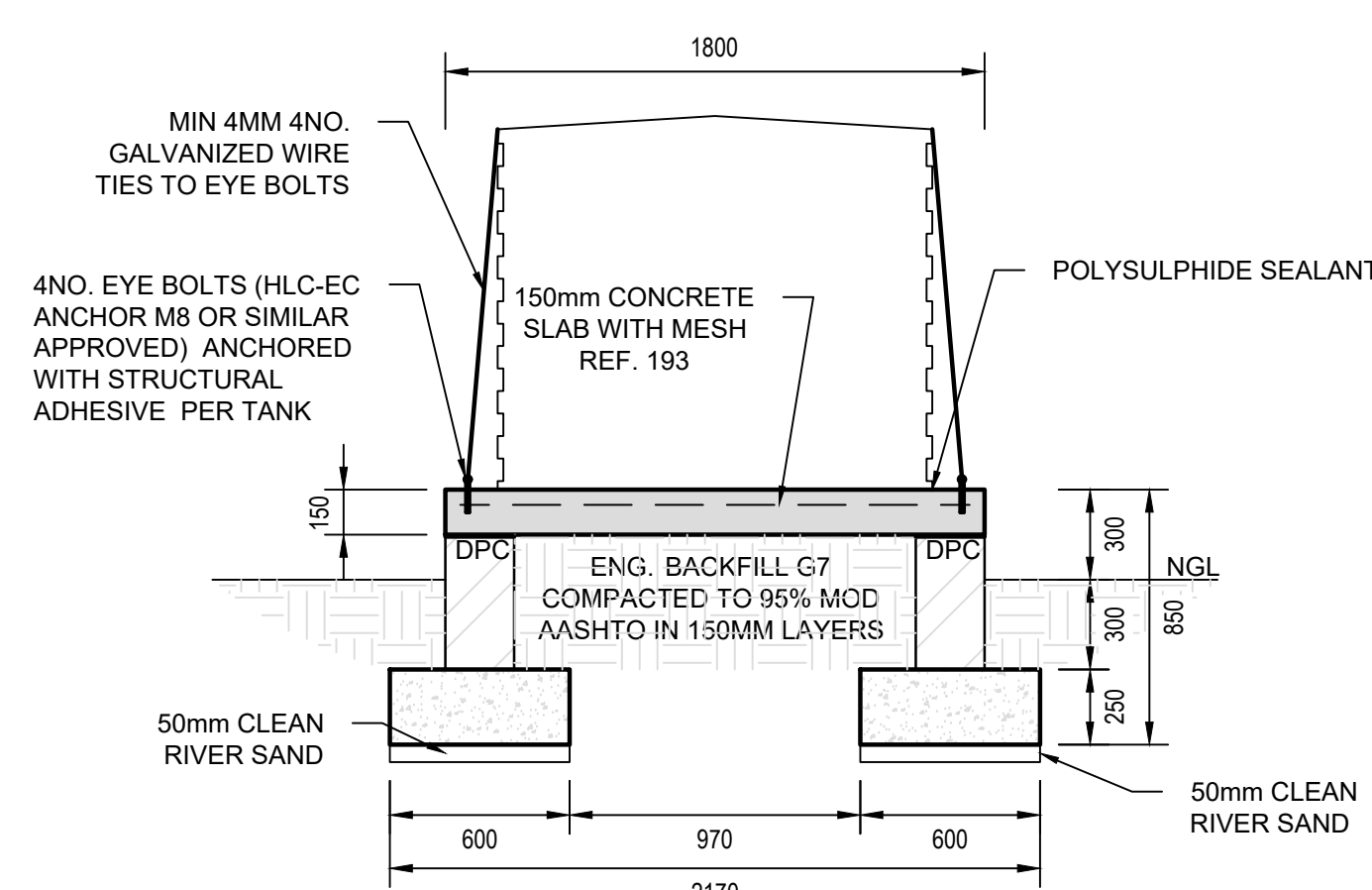
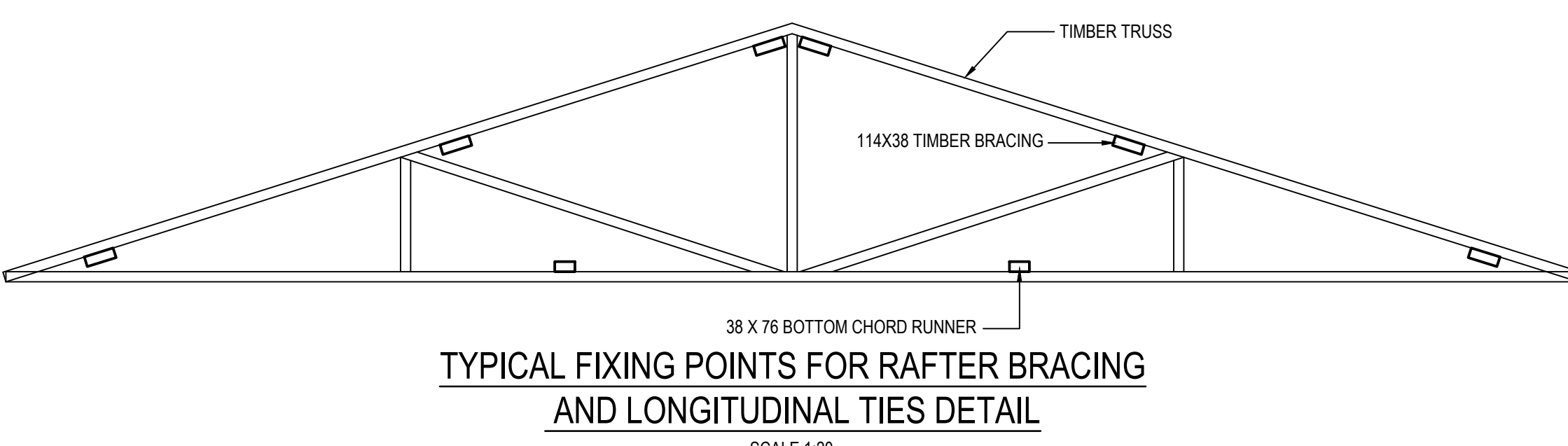
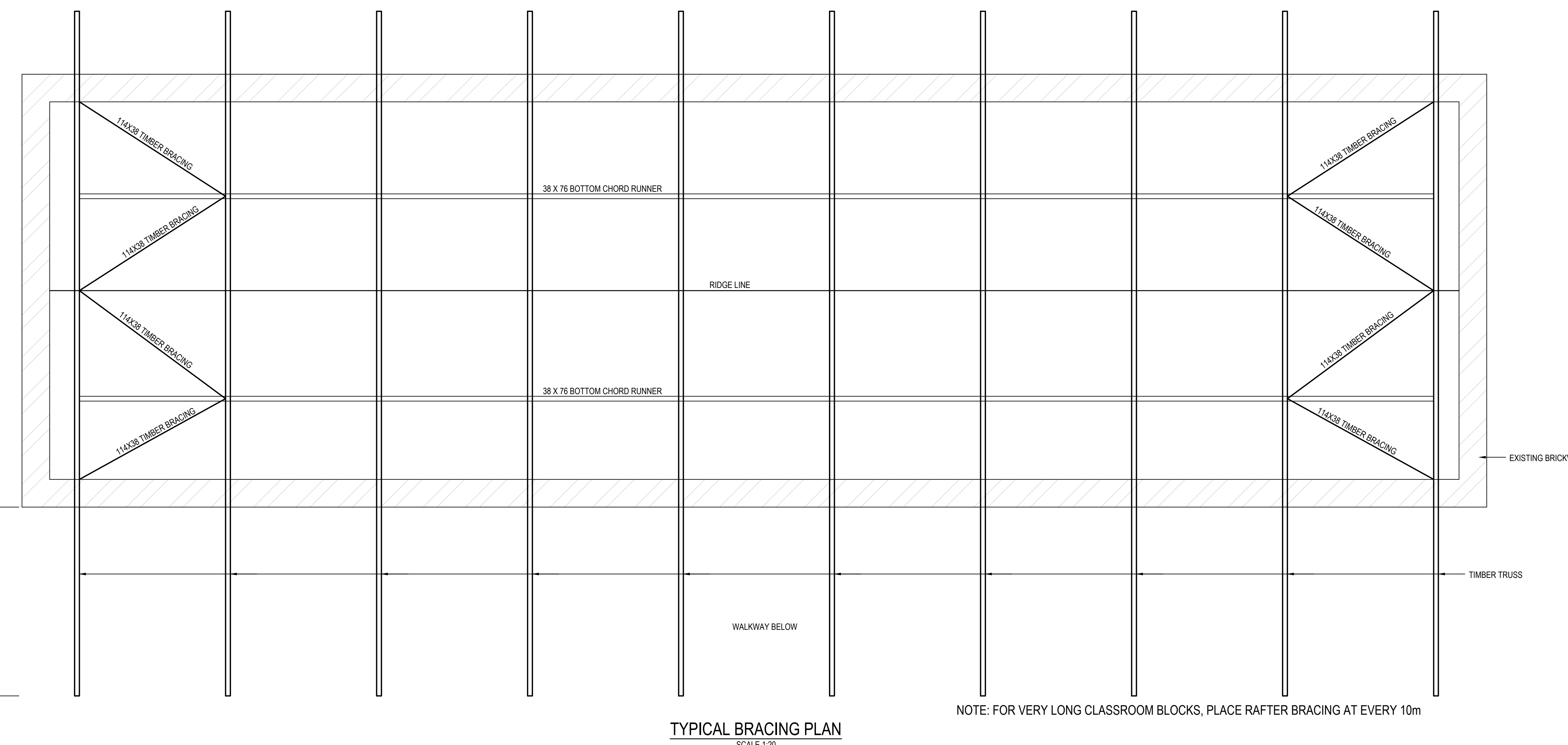
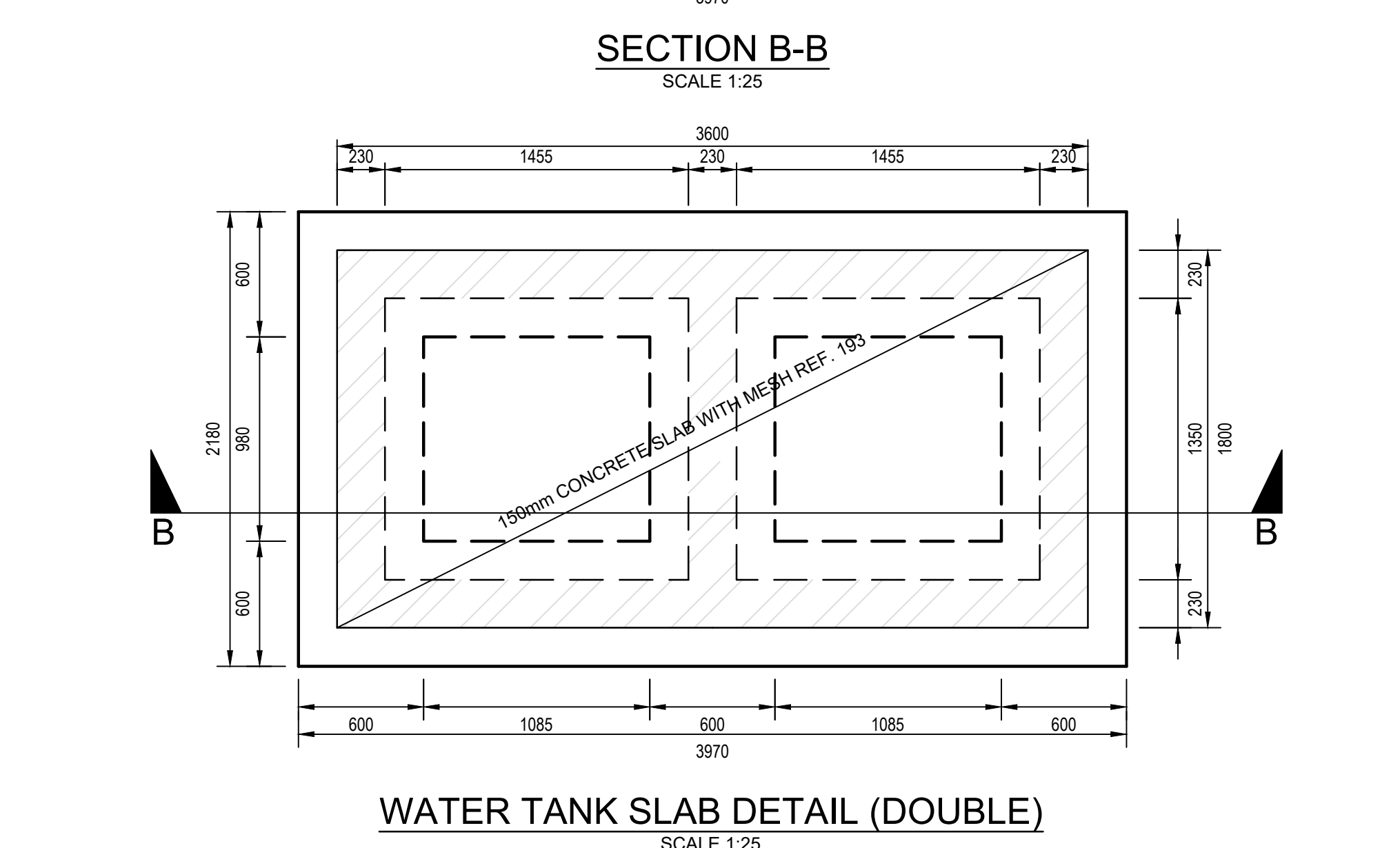
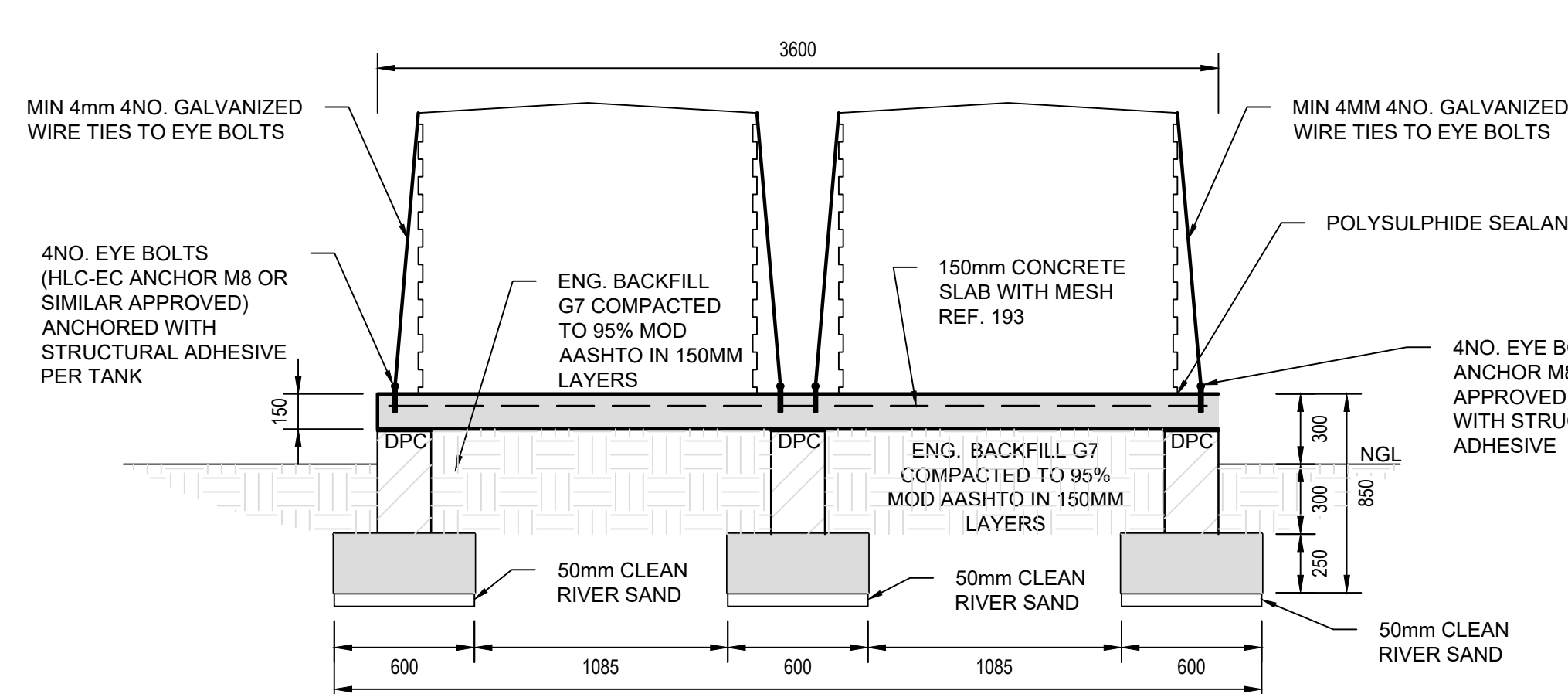
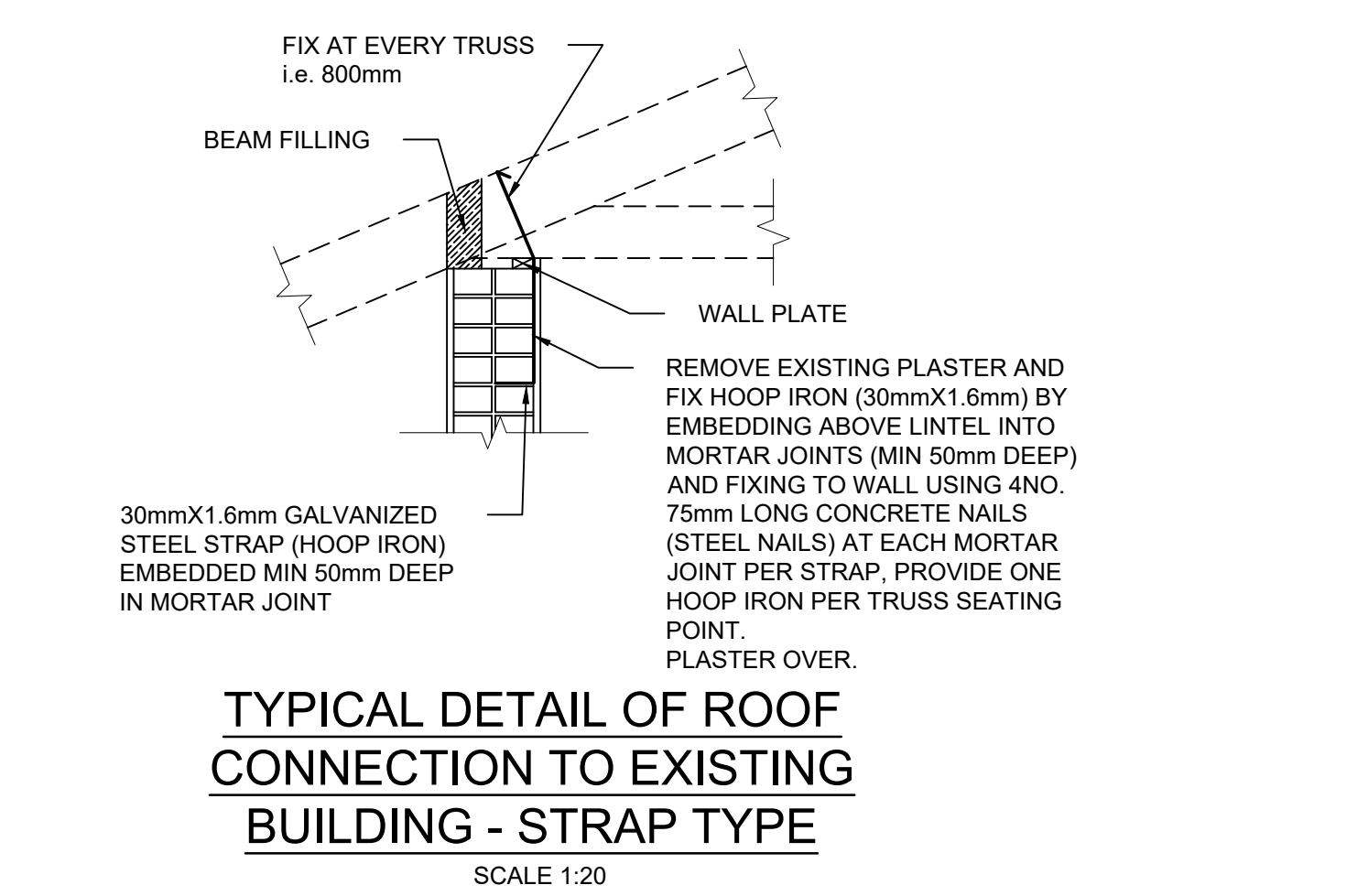
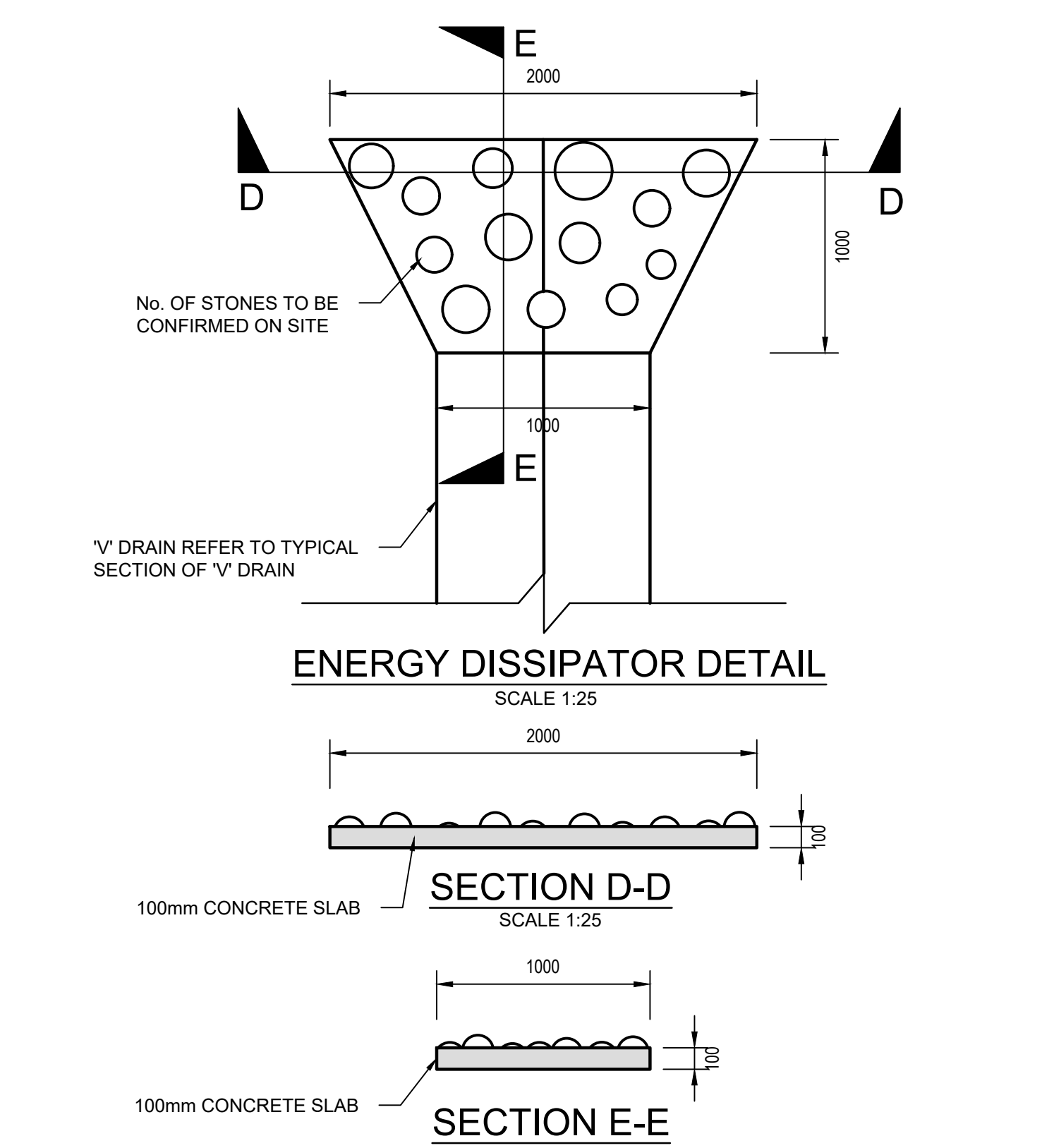
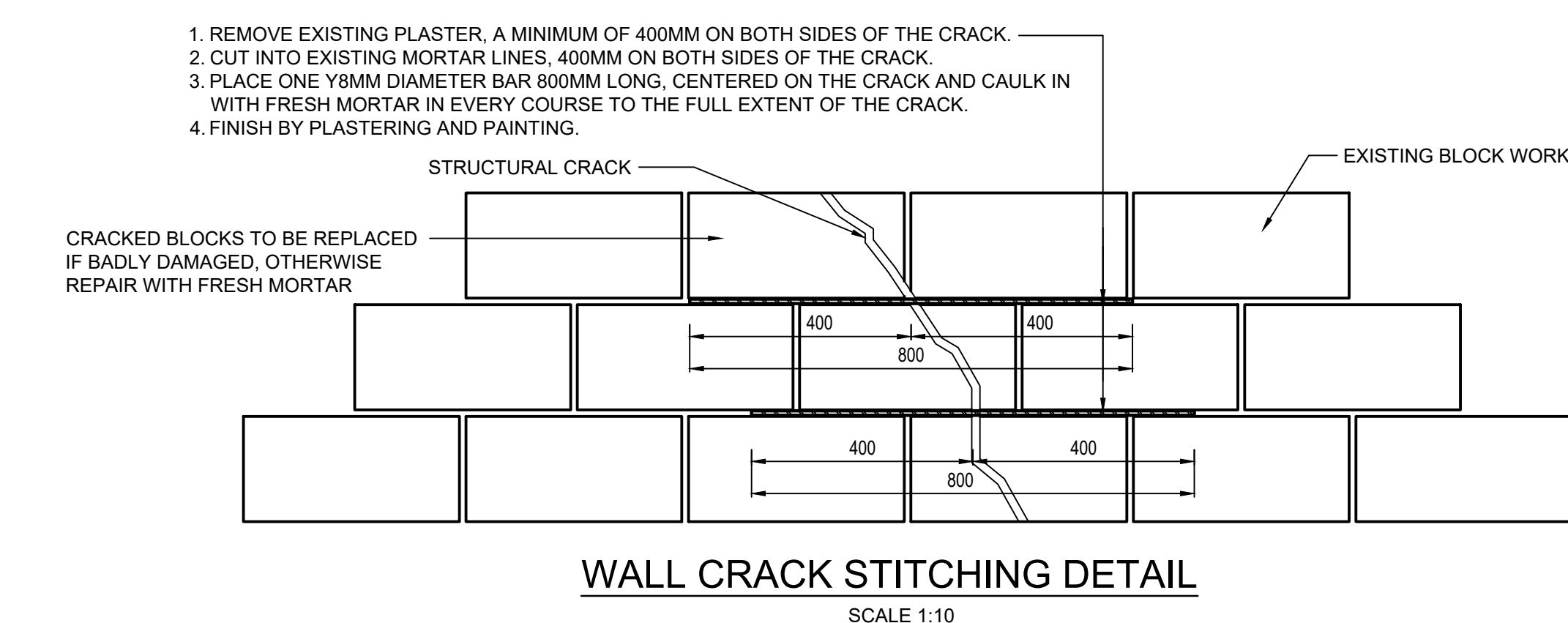
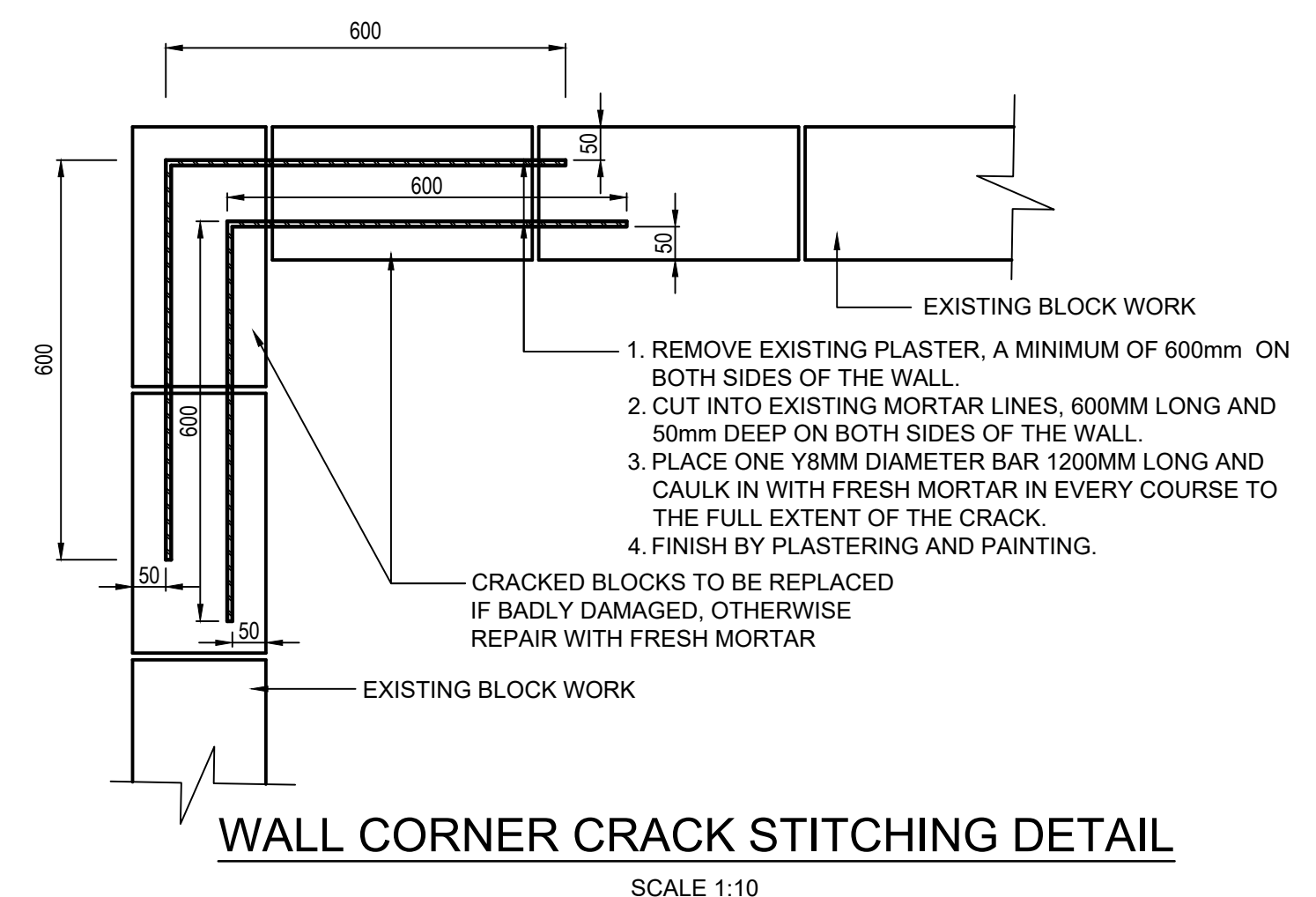
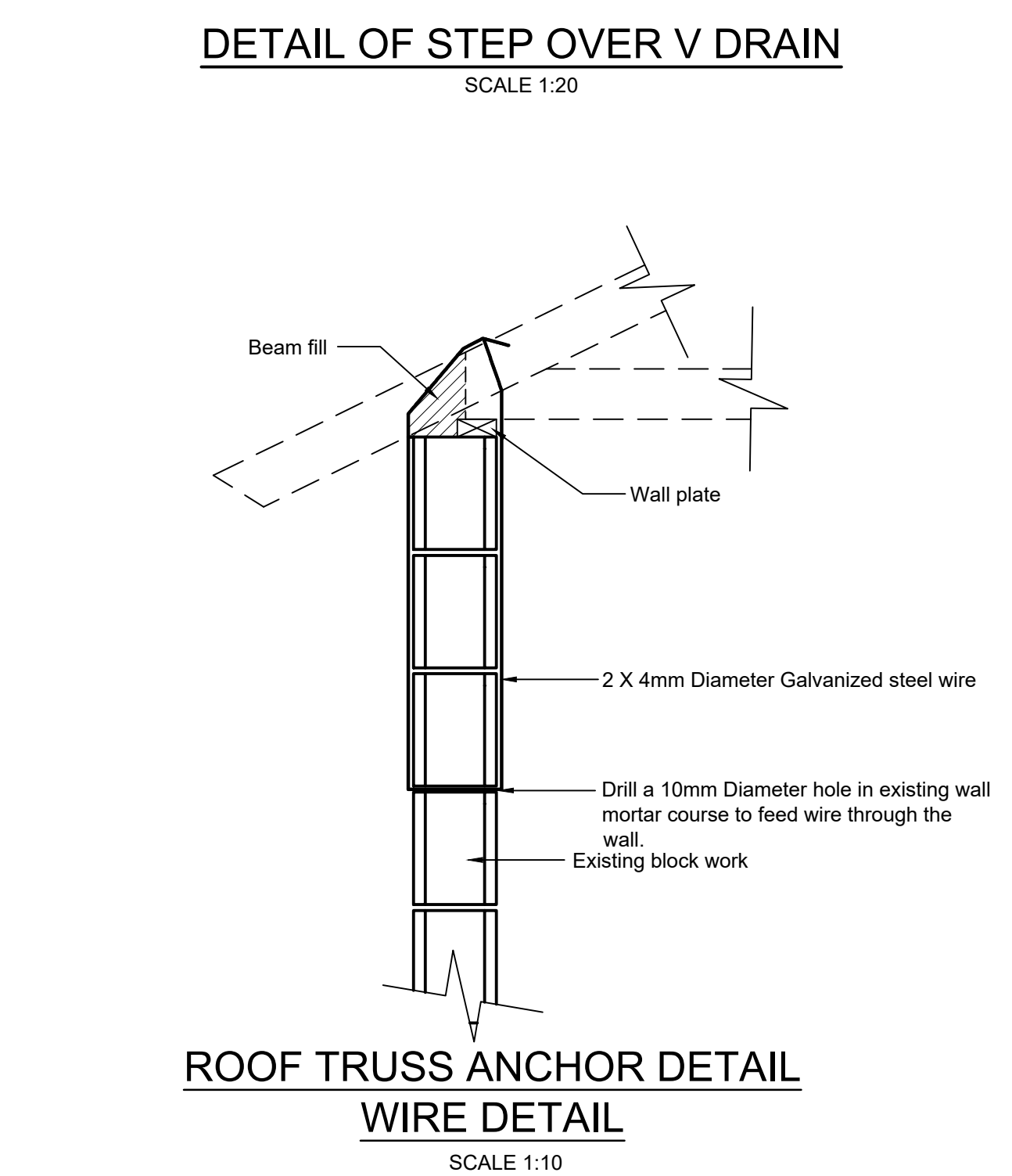
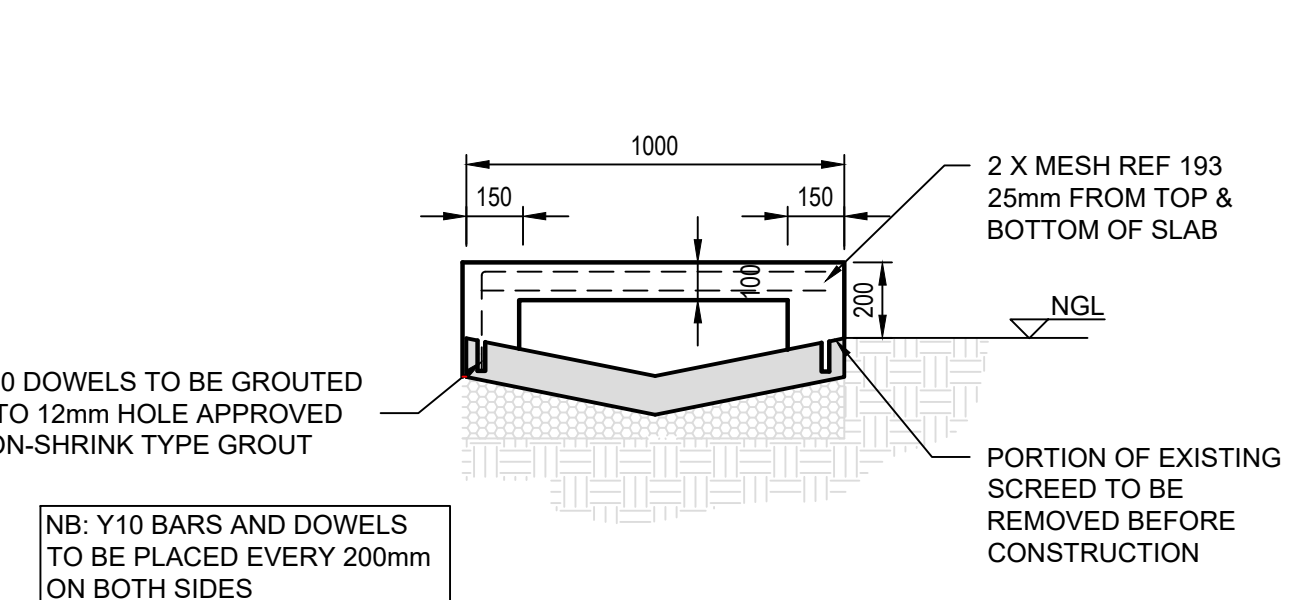
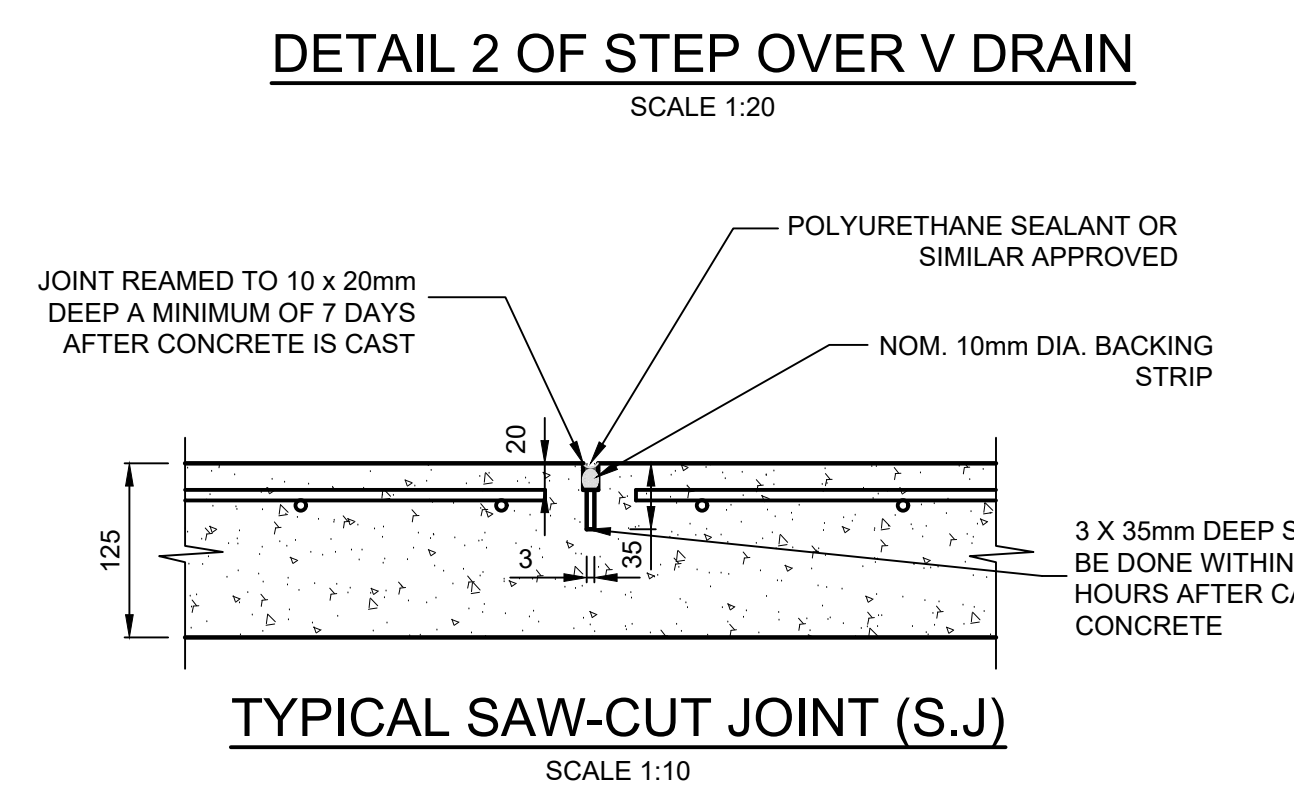
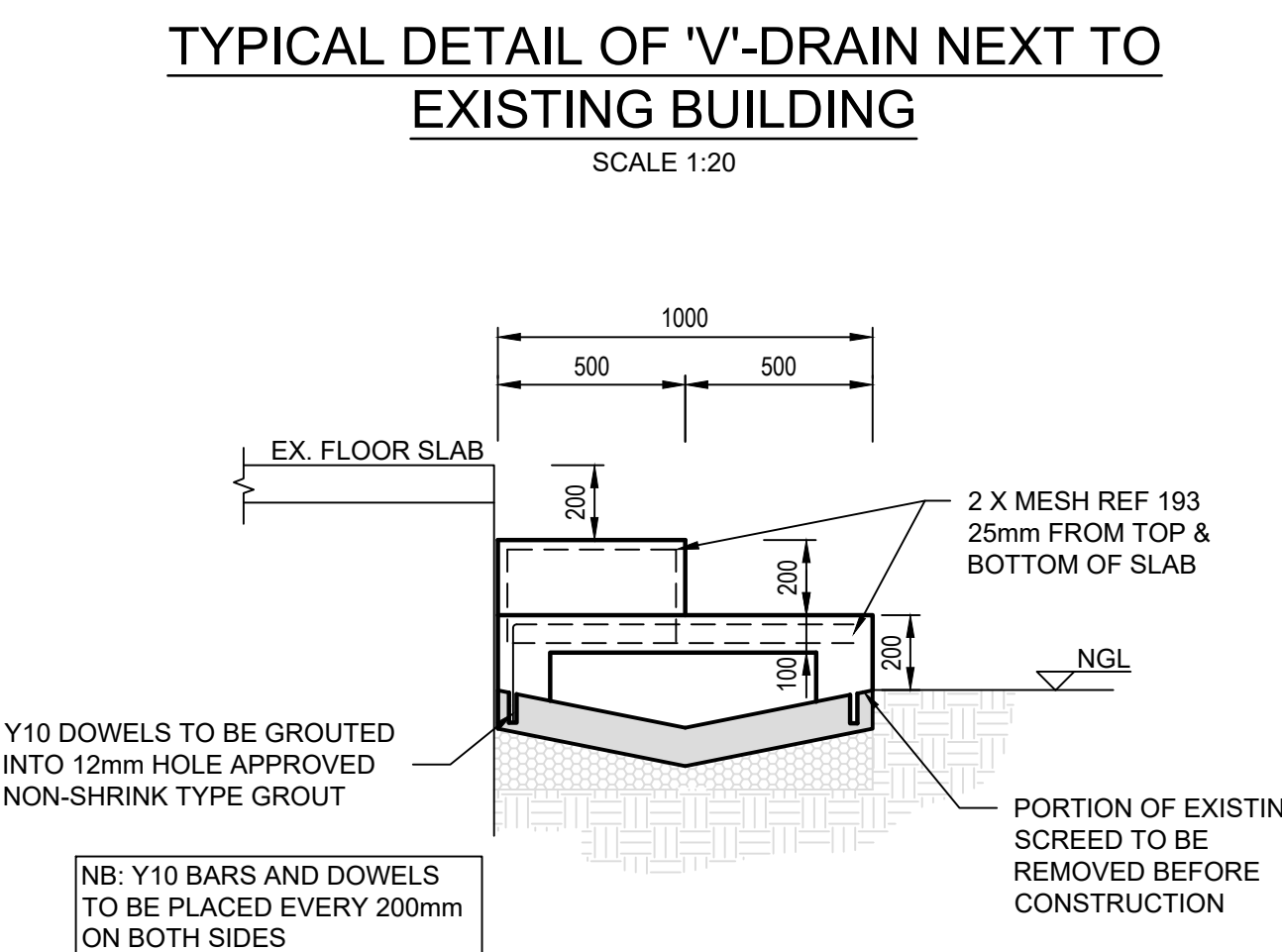
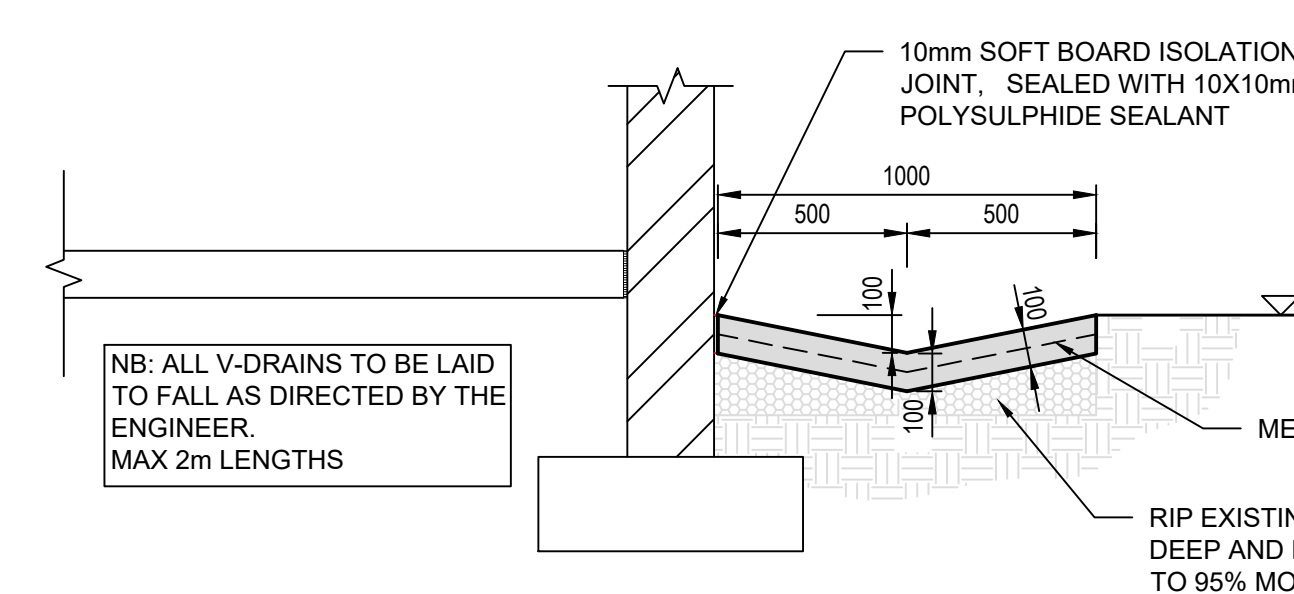
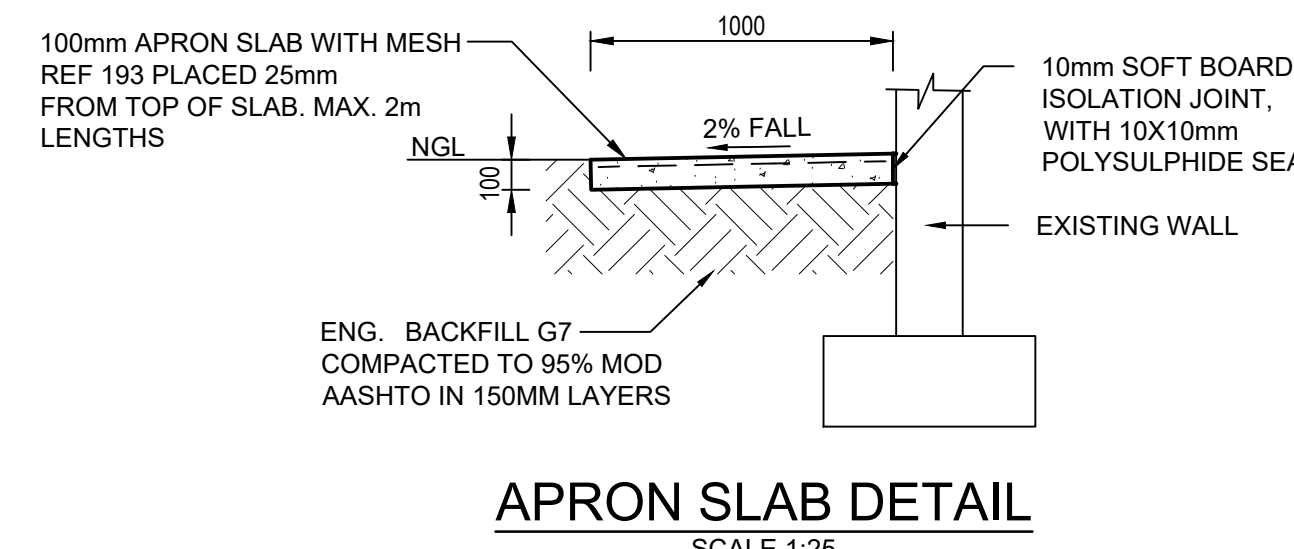
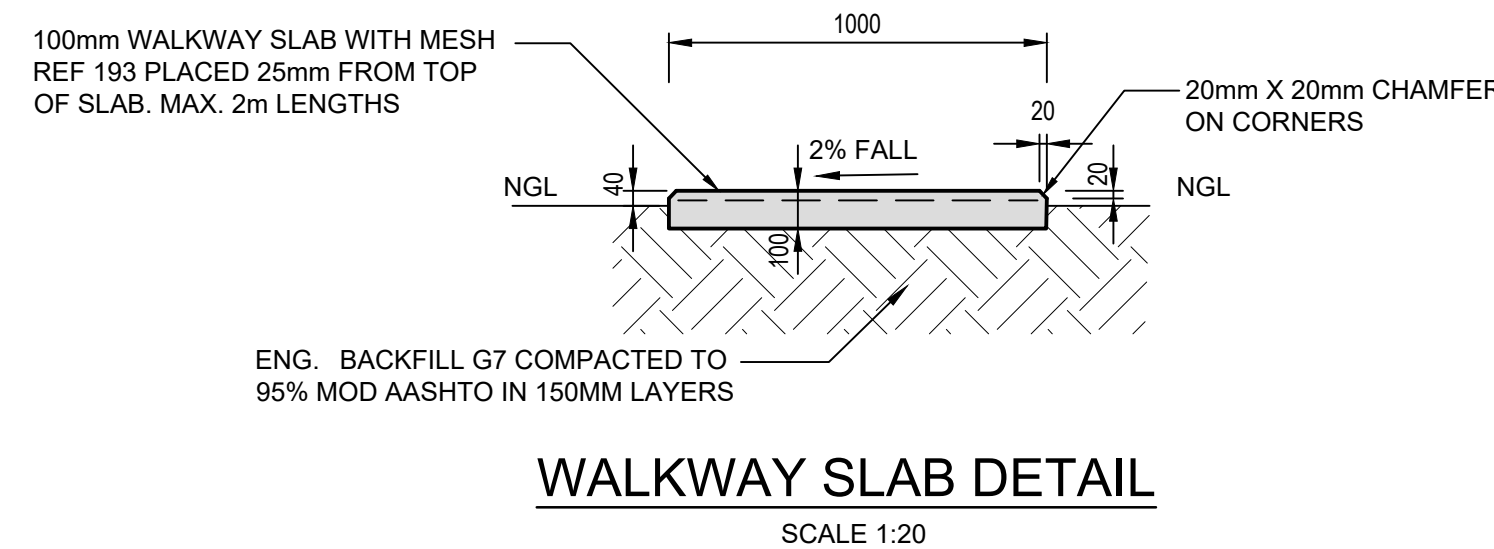
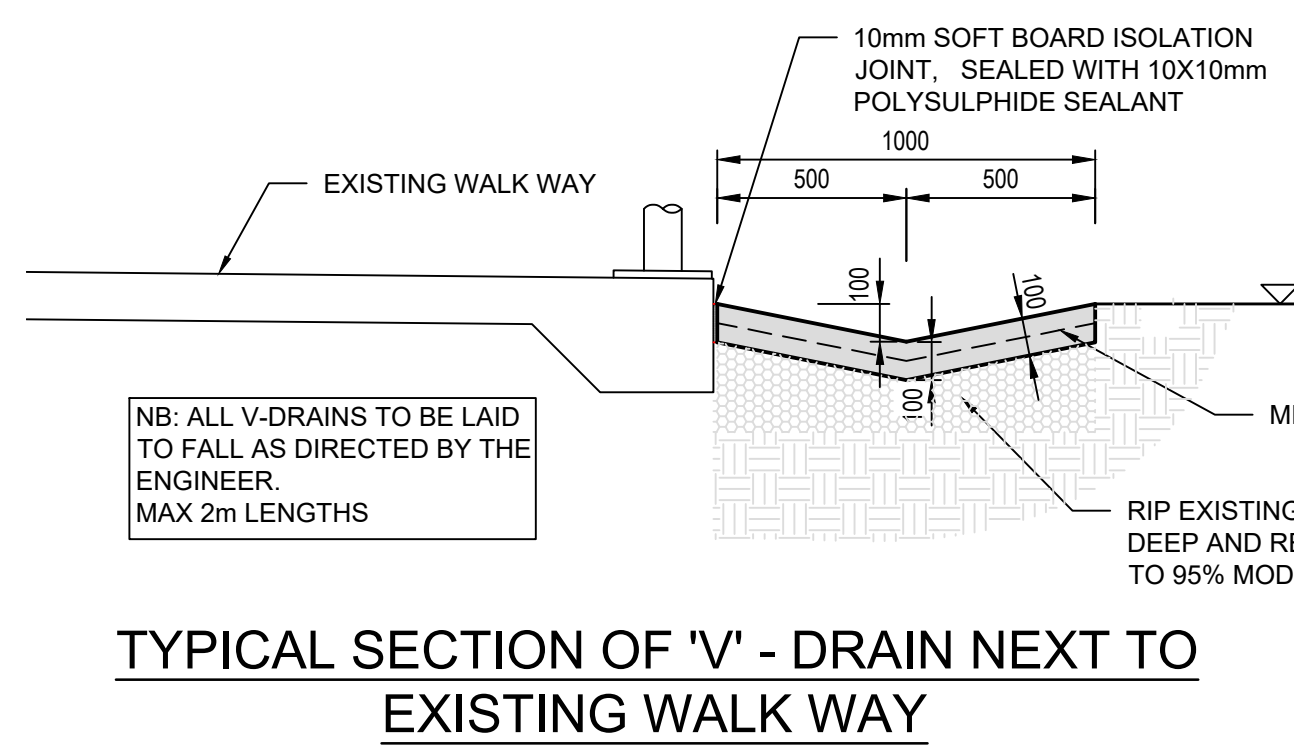
Scales: As Shown

Consultant Drawing No: Y/16-0538-04/1 Revision: 0

DOPW CONTRACT No:

DOPW WIMS No: WIMS : 063801

Stamped by Design Review Committee



GENERAL

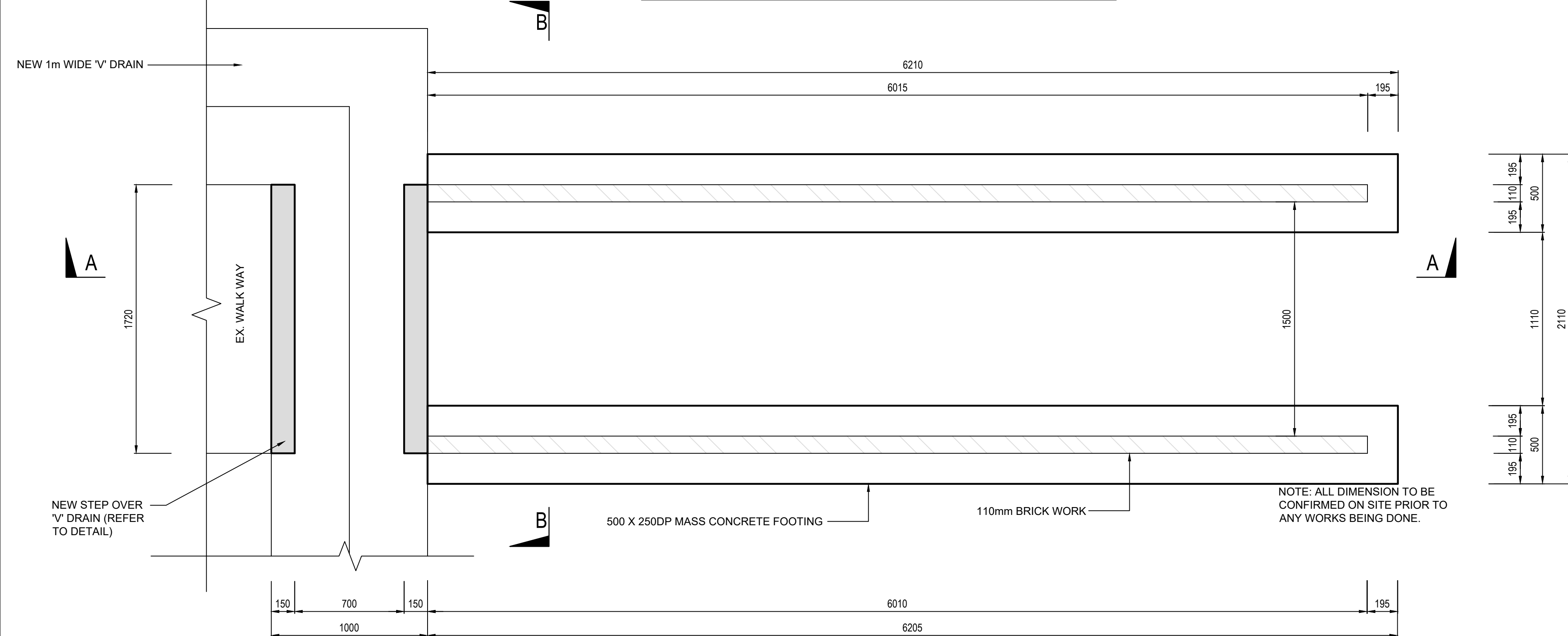
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2. THE CONTRACTOR SHALL ENSURE THAT WATERPROOFING MATERIALS ARE NOT DAMAGED DURING BACKFILLING OPERATIONS AND FILING OF STEEL.

REPLACING OF MATERIAL DUE TO DAMAGE FOR CONTRACTORS COST

FOUNDATIONS AND EARTHWORKS

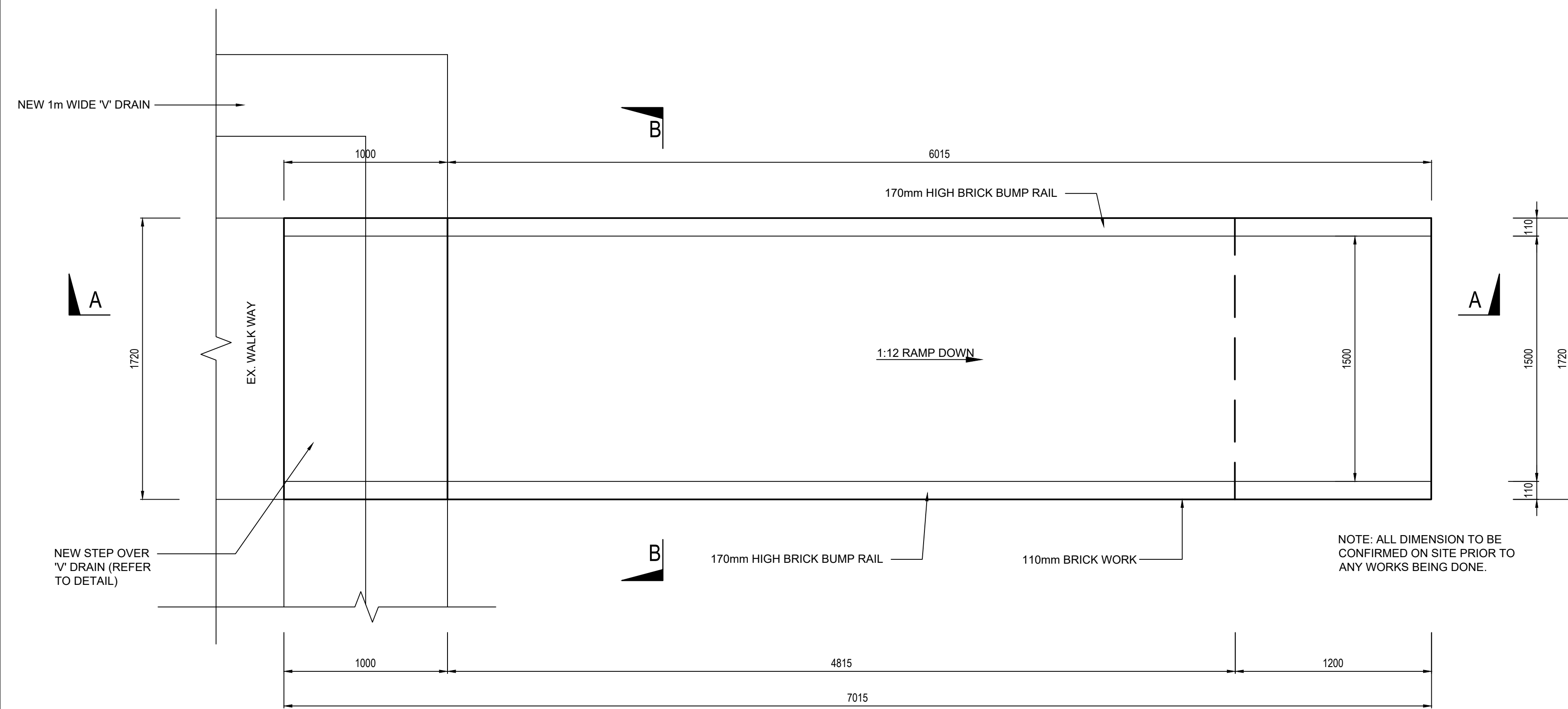
1. ALL EARTHWORKS SHALL BE IN ACCORDANCE WITH SANS 10400, INCLUDING THE LATEST REVISIONS.
2. ALL EXCAVATIONS MUST BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE PLACING OF ANY CONCRETE FOUNDATION, BLINDING, WATERPROOFING OR GEOTEXTILE MEMBRANE.
3. NO FILL OR SHALL BE CAST ON NON-ENGINEERED FILL OR BACKFILL MATERIAL PORTIONS THAT ARE NOT AUTHORIZED BY THE ENGINEER AND REQUIRED BY THE GEOTECHNICAL / RESIDENT ENGINEER TO BE SUBMITTED TO A CLASS CONTEST (200MPa / 18mm) AT THE CONTRACTORS EXPENSE.

DISABLED RAMP DETAIL - R01 (2No.)



FOUNDATION PLAN - DISABLED RAMP DETAIL

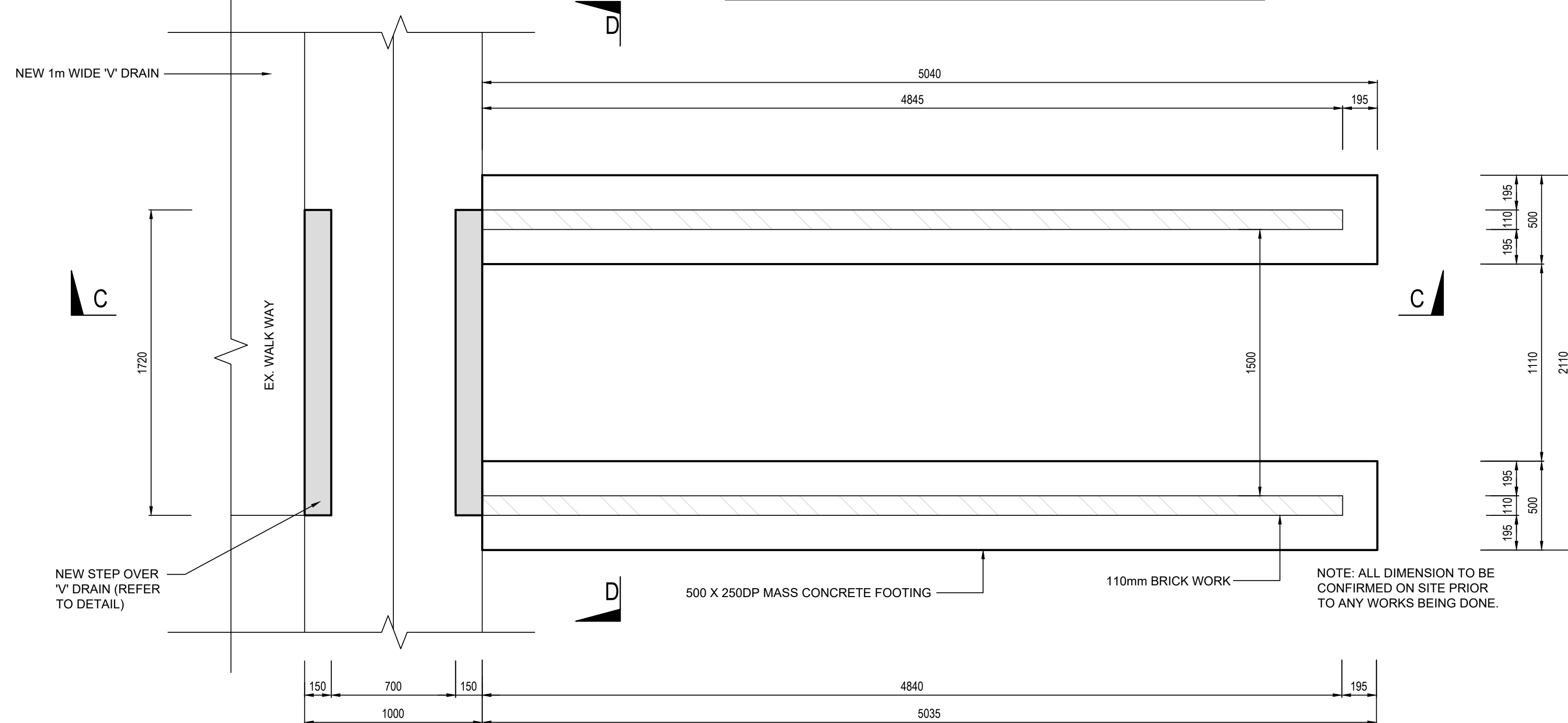
SCALE 1:20



SLAB LAYOUT PLAN - DISABLED RAMP DETAIL

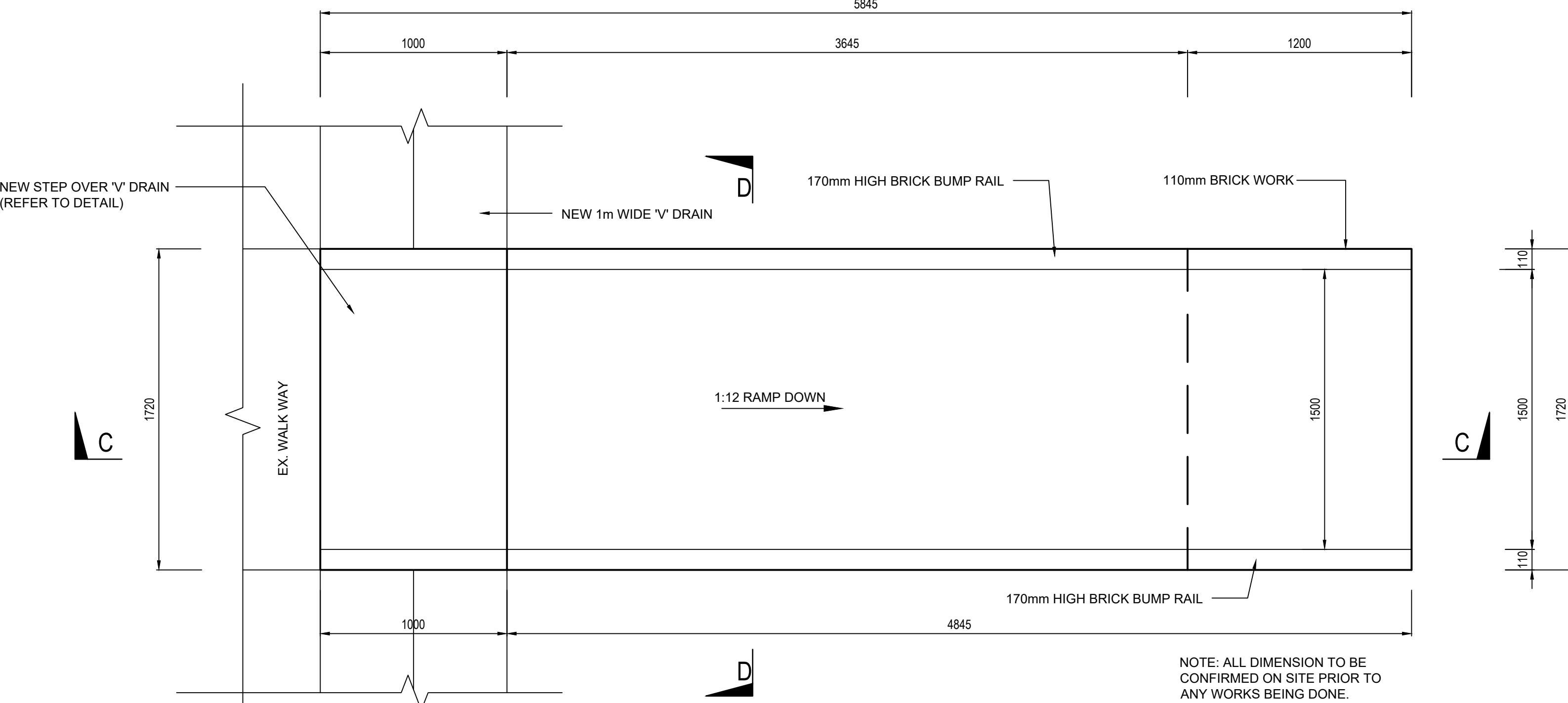
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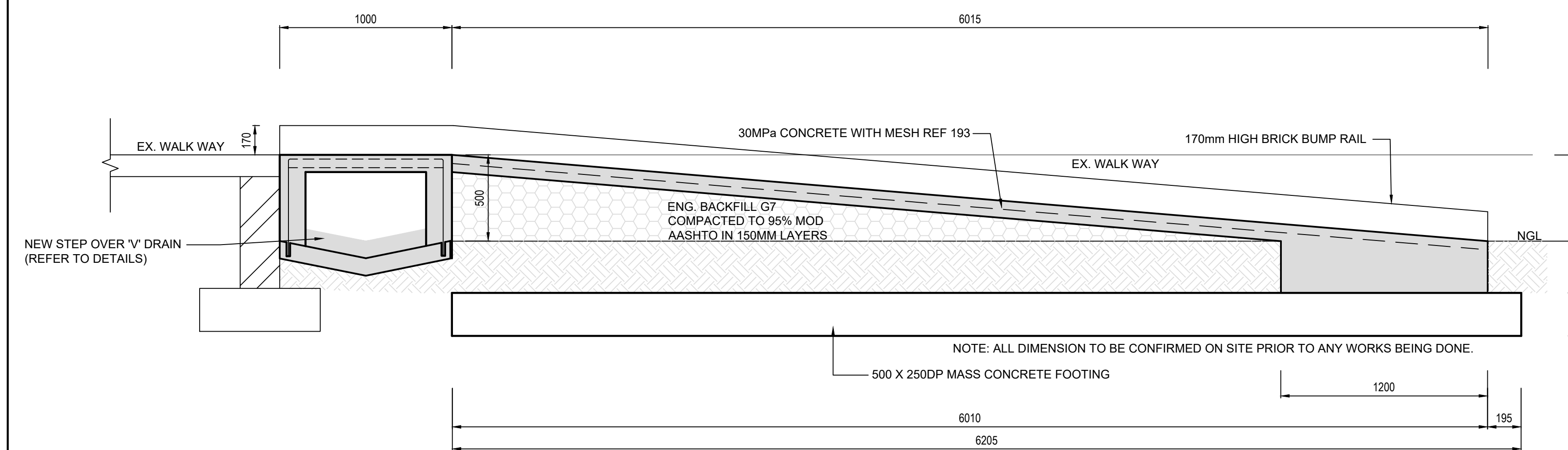
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SCALE 1:20



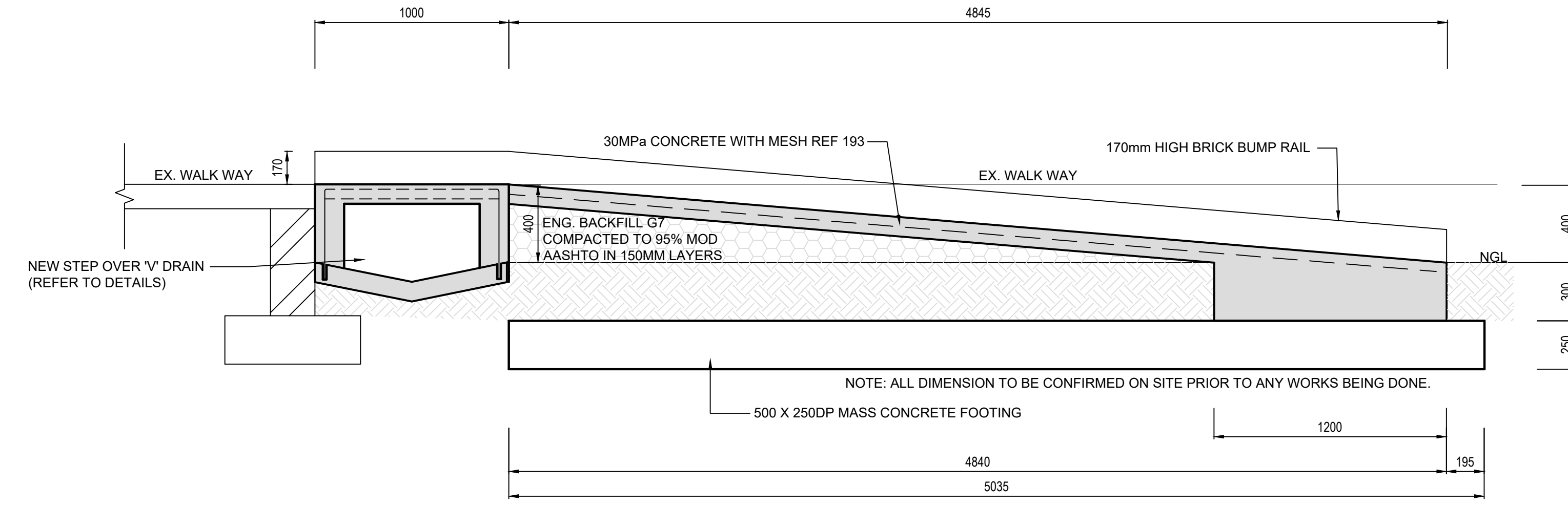
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SCALE 1:20



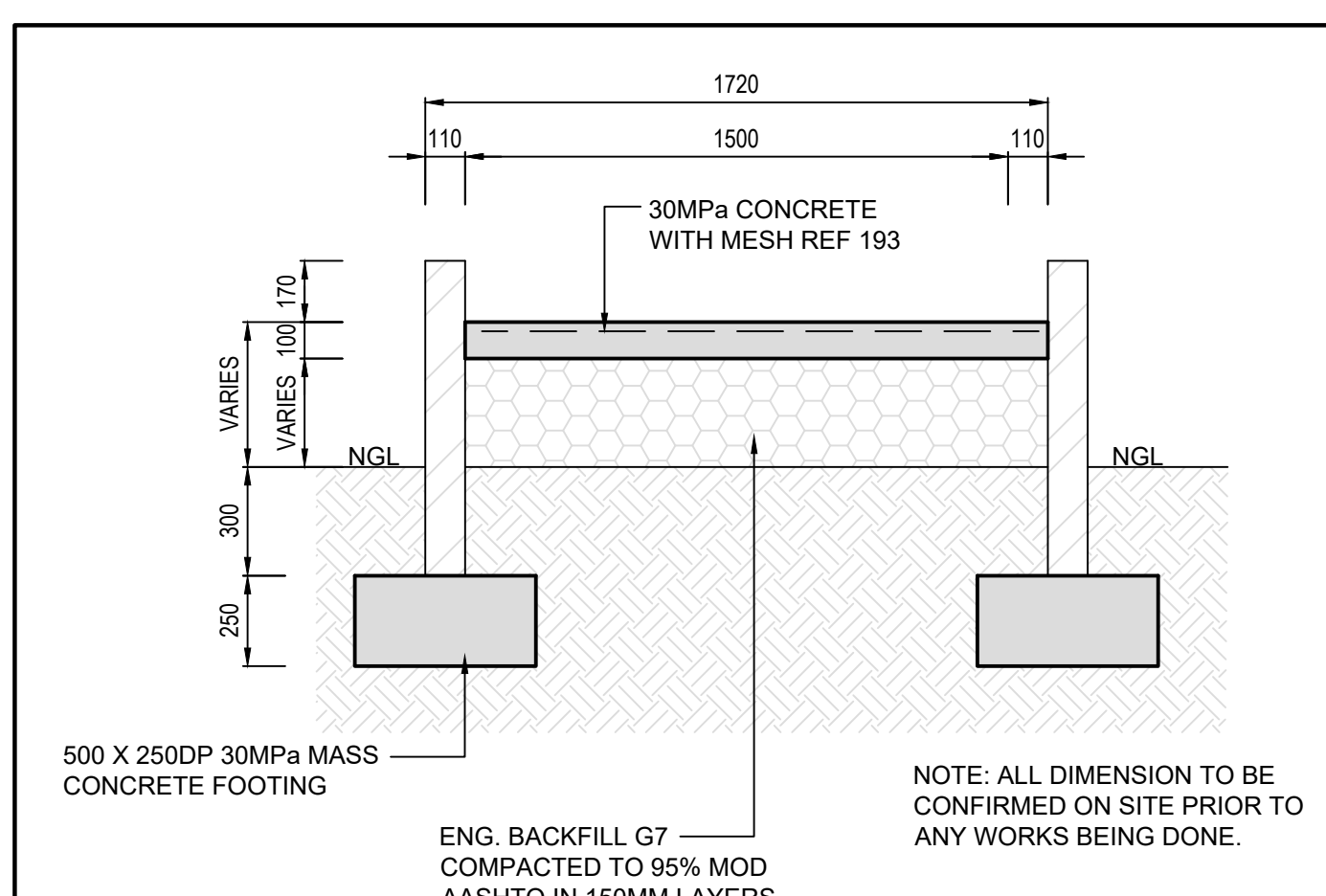
SECTION A-A - DISABLED RAMP DETAIL

SCALE 1:20



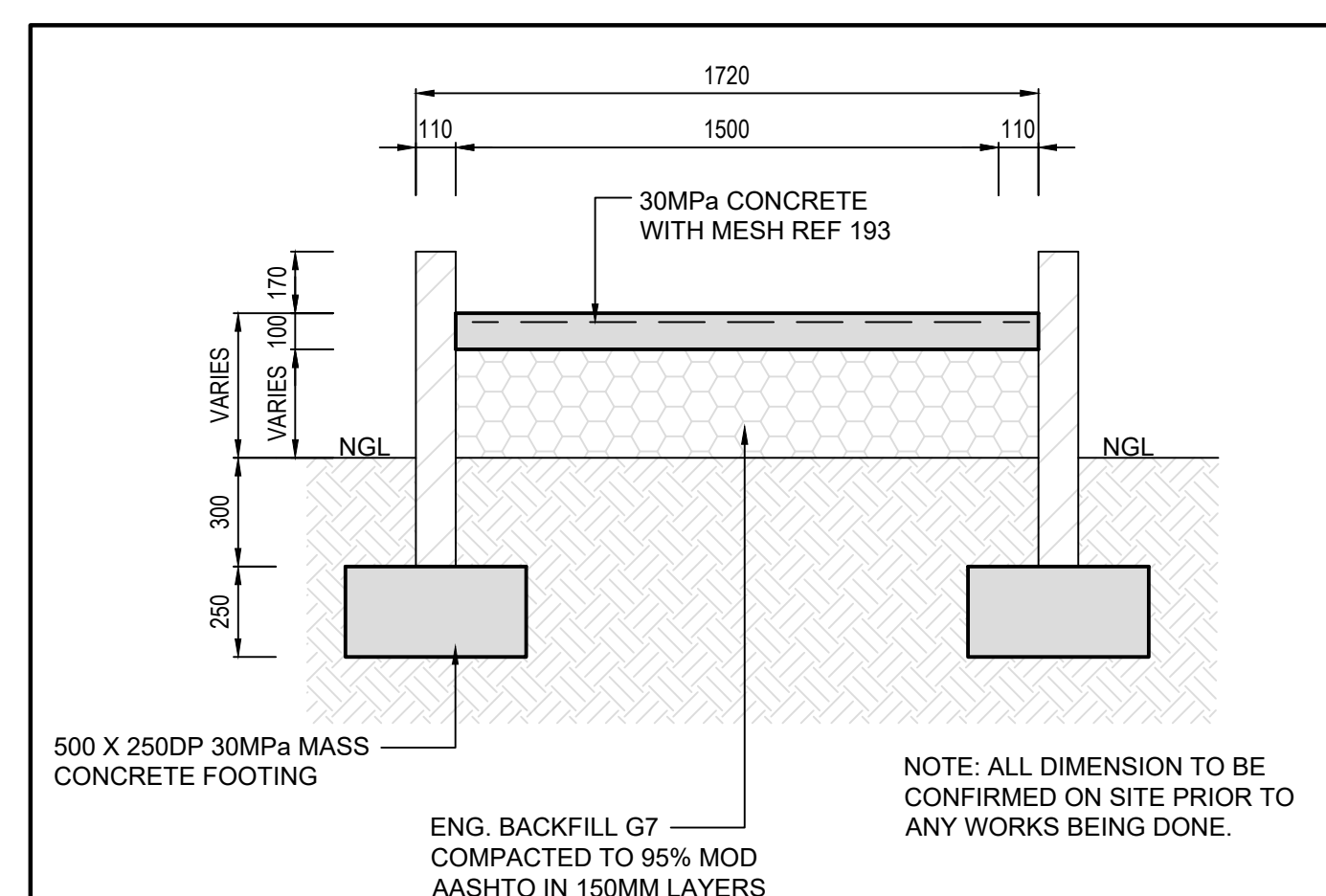
SECTION C-C - DISABLED RAMP DETAIL

SCALE 1:20



SECTION B-B - DISABLED RAMP DETAIL

SCALE 1:20



SECTION D-D - DISABLED RAMP DETAIL

SCALE 1:20

GENERAL

- ALL WORK SHALL BE EXECUTED IN STRICT ACCORDANCE WITH SANS 2001-CCTV AND THE PROJECT SPECIFICATIONS IN THE CONTRACT DOCUMENTATION.
- THE CONTRACTOR SHALL ENSURE THAT WATERPROOFING MATERIALS ARE NOT DAMAGED DURING BACKFILL OPERATIONS AND FIXING OF STEEL.
- REPLACING OF MATERIAL DUE TO DAMAGE FOR CONTRACTOR'S COST.

FOUNDATIONS AND EARTHWORKS

- ALL EARTHWORKS SHALL BE IN ACCORDANCE WITH SANS 1200 D INCLUDING THE LATEST REVISIONS.
- ALL EXCAVATIONS MUST BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE PLACING OF ANY CONCRETE FOUNDATION, BLINDING, WATERPROOFING OR GEOTEXTILES.
- NO FOUNDATION SHALL BE CAST ON NON-ENGINEERED FILL OR BACKFILL MATERIAL PORTIONS THAT ARE OVER-EXCAVATED BEYOND THE DEPTH REQUIRED BY THE GEOTECHNICAL / RESIDENT ENGINEER. IT TO BE FILLED WITH MASS CONCRETE (20MPa / 15mm) AT THE CONTRACTOR'S EXPENSE.

BRICKWORK & BLOCKWORK:

- ALL BRICKWORK, BLOCKWORK, ANCHORS, WALL TIES AND STRAPS SHALL BE IN ACCORDANCE WITH SANS 0400 - 1990 AND SANS 0164 - 1980 INCLUDING THE LATEST REVISIONS.
- THE MINIMUM CRUSHING STRENGTH OF ALL LOAD BEARING BRICKWORK SHALL BE 14 MPa.
- THE MINIMUM CRUSHING STRENGTH OF MORTAR SHALL BE AS FOR CLASS I MORTAR IN ACCORDANCE WITH TABLE 1 SANS 0164 PART 1 - 1980.
- LOAD BEARING BRICKWORK SHALL BE REINFORCED WITH AN APPROVED BRICKFORCE EVERY FOURTH LAYER UNLESS OTHERWISE SPECIFIED ON DRAWINGS.
- IN ADDITION, BRICKFORCE IS REQUIRED IN EVERY LAYER FOR THE FIRST FOUR LAYERS ON TOP OF THE FOUNDATIONS & SLABS AS WELL AS OVER DOOR AND WINDOW OPENINGS (MIN. LAPS = 300mm).
- ALL BRICK ANCHORS, WALL TIES AND STRAPS SHALL BE HOT DIP GALVANIZED.
- V-JOINTS ARE TO BE MADE THROUGH PLASTERWORK WHERE BRICKWORK / BLOCKWORK AND CONCRETE JOIN.

CONCRETE:

- CONCRETE GRADES:

REINFORCED CONCRETE	=	30 MPa/19mm
MASS CONCRETE	=	20 MPa/19mm
BLINDING	=	15 MPa/19mm
SURFACE BEDS	=	30 MPa/19mm
- 20 X 20 CHAMFER TO BE PROVIDED ON ALL EXPOSED EDGES
- COVER TO REINFORCEMENT:

ROOF & FLOOR SLABS	=	25mm
FOUNDATION BASES	=	50mm
- ALL CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENTS OF SANS 2001-CCT1.
- CONCRETE TOLERANCE IN GENERAL SHALL BE OF DEGREE OF ACCURACY NO. II AS SPECIFIED IN SANS 2001-CCT1.
- ALL CASTING PROCEDURES, CONSTRUCTION METHODS AND POSITIONS OF CONSTRUCTION JOINTS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE PROJECT.
- THE CONTRACTOR MUST CO-ORDINATE ALL SERVICES, DRAWINGS FOR DETAILS AND POSITIONS OF OPENINGS AND SLEEVES REQUIRED FOR STORMWATER, SEWERAGE, DRAINAGE, ELECTRICAL, MECHANICAL AND OTHER SERVICES.
- THE CONTRACTOR MUST OBTAIN PERMISSION FROM THE ENGINEER BEFORE ANY OPENINGS OR SERVICES LARGER THAN 150 mm DIA OR 150 x 150 mm WHICH ARE NOT INDICATED ON THE DRAWINGS MAY BE INTRODUCED THROUGH ANY STRUCTURAL ELEMENT.
- CURING OF CONCRETE SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE WITH SANS 2001-CCT1.
- THE STRENGTH OF CONCRETE COVER BLOCKS SHALL AT LEAST BE EQUAL TO THE CONCRETE STRENGTH OF THE STRUCTURAL ELEMENT IN WHICH THEY ARE USED. THE SIZE AND FIXING METHOD OF COVER BLOCKS SHALL BE DISCUSSED IN ADVANCE WITH THE ENGINEER.
- STRIPPING TIMES OF SHUTTERING AND PROPPING SHALL BE IN ACCORDANCE WITH SANS 2001-CCT1.
- CONCRETE MIX DESIGNS FOR ALL GRADES OF CONCRETE INCLUDING SCREED MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PLACING OF ANY CONCRETE.
- COLD CONSTRUCTION JOINTS: MAIN AGGREGATE MUST BE EXPOSED, CLEANED AND THOROUGHLY WETTED BEFORE CASTING OF NEW CONCRETE. NO CEMENT GROUT SHALL BE USED. LOCATION OF JOINTS TO BE APPROVED BY THE ENGINEER IF DEVIATED FROM THE DRAWINGS.

SURFACE BEDS:

- PROVIDE 12mm ISOLATION JOINTS (I.J.) AROUND ALL CONCRETE COLUMNS AND AGAINST BRICK WALLS AFTER CONCRETE HAS SET. JOINTS TO BE RAKED OUT 10mm DEEP AND SEALED WITH APPROVED JOINT SEALANT - REFER TO STANDARD DETAILS.
- SAWCUT JOINTS TO BE DONE AS SOON AS CONCRETE IS FIRM ENOUGH TO NOT DAMAGE THE EDGES. USUALLY BETWEEN 4 TO 16 HOURS.
- ALL BACKFILL TO BE COMPACTED IN LAYERS NOT EXCEEDING 150mm. COMPACTION EFFORT - AS INDICATED.
- FLOOR SLABS ARE WOOD FLOAT FINISHED AND SCREED TOPPING TO HAVE A STEEL TROWEL FINISH.

REINFORCEMENT:

- ALL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF SANS 600/2011.
- THE CONTRACTOR SHALL INSPECT AND APPROVE THE FIXED REINFORCEMENT BEFORE THE ENGINEER IS NOTIFIED. ALL REINFORCEMENT SHALL BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE CASTING OF CONCRETE MAY COMMENCE.
- THE CONTRACTOR SHALL GIVE AT LEAST 24 HOURS NOTICE TO THE ENGINEER FOR REBAR INSPECTIONS THAT ARE REQUIRED.
- BEND-OUT BARS AT CONSTRUCTION JOINTS SHALL BE BENT OUT WITH A SUITABLE PIPE SO THAT NO KINK IS FORMED IN THE BARS.
- NO HEAT TREATMENT, FLAME CUTTING OR WELDING OF REBAR WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER SHALL BE ALLOWED.

KZN Department of Education Stamp and Signature

Signature: _____ Date: _____

Consultant: _____



Signature: _____ Date: _____

Department: _____

public works
Department:
Public Works
PROVINCE OF KWAZULU-NATAL

Project Title:
PHASE 14: REPAIRS AND RENOVATIONS TO STORM DAMAGED SCHOOLS - KZN MIDLANDS REGION - CLUSTER 134 - PHUMLANI HIGH

Drawing Description:
DISABLED RAMP DETAILS (R01 AND R02)

Drawn: K. Chetty Date: 2020/02/17

Scale: As Shown

Consultant Drawing No: V16-0538-0416 Revision: 0

DOPW CONTRACT No: _____

DOPW WIMS No: _____

WIMS : 063901

Stamped by Design Review Committee

Figure 10.10 shows a dimension line with a total length of 3400. The dimension is divided into segments of 1000, 2400, 150, 700, 150, 2100, and 300.



SCALE 1:20



SCALE 1:20



SCALE 1:20

1. ALL EARTHWORKS SHALL BE IN ACCORDANCE WITH SANS 1200 D INCLUDING THE LATEST REVISIONS.
2. ALL EXCAVATIONS MUST BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE PLACING OF ANY CONCRETE FOUNDATION, BLINDING, WATERPROOFING OR GEOFABRIC MEMBRANE.
3. NO FOUNDATION SHALL BE CAST ON NON-ENGINEERED FILL OR BACKFILL. MATERIAL PORTIONS THAT ARE OVER-EXCAVATED BEYOND THE DEPTH REQUIRED BY THE GEOTECHNICAL / RESIDENT ENGINEER, TO BE FILLED WITH MASS CONCRETE (20MPa / 19mm) AT THE CONTRACTOR'S EXPENSE.

1. ALL BRICKWORK, BLOCKWORK, ANCHORS, WALL TIES AND STRAPS SHALL BE IN ACCORDANCE WITH SANS 4040 - 1990 AND SANS 0164 - 1980 INCLUDING THE TOP REVISIONS.
2. THE MINIMUM CRUSHING STRENGTH OF ALL LOAD BEARING BRICKWORK SHALL BE 14 MPa.
3. THE MINIMUM CRUSHING STRENGTH OF MORTAR SHALL BE 10 MPa FOR CLASS OR M20.
4. ALL BRICKWORK SHALL BE IN ACCORDANCE WITH TABLE 1 SANS 0164 PART - I - 1980.
5. LOAD BEARING BRICKWORK SHALL BE REINFORCED WITH AN APPROVED BRICKFORCE EVERY FOURTH LAYER. THIS IS NOT TO BE SHOWN IN DRAWINGS. IN ADDITION, BRICKFORCE IS REQUIRED IN EVERY LAYER FOR THE FIRST FOUR LAYERS ON TOP OF THE FOUNDATIONS & SLABS AS WELL AS OVER DOOR AND WINDOW OPENINGS.
6. ALL BRICK, BLOCK, WALL TIES AND STRAPS SHALL BE HOT DIP GALVANIZED.
7. V-JOINTS ARE TO BE MADE THROUGH PLASTERWORK WITH BRICKWORK / BLOCKWORK AND CONCRETE JOINT.

1. CONCRETE GRADES:
 REINFORCED CONCRETE = 30 MPa/19mm
 MASS CONCRETE = 20 MPa/19mm
 BLINDING = 15 MPa/19mm
 SUB-BASE BEDS = 30 MPa/19mm
2. 20 X 20 X CHAMFER TO BE PROVIDED ON ALL EXPOSED EDGES
3. COVER TO REINFORCEMENT:
 ROOF & FLOOR SLABS = 25mm
 FOUNDATION BASES = 50mm
4. ALL CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENTS OF SANS 2001-CC1.
5. CONCRETE TOLERANCE IN GENERAL SHALL BE OF ORDER OF ACCURACY NO. II AS SPECIFIED IN SANS 2001-CC1.
6. ALL CASTING PROCEDURES, CONSTRUCTION METHODS AND POSITIONS OF CONSTRUCTION JOINTS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE PROJECT.
7. THE CONTRACTOR MUST CO-ORDINATE ALL SERVICES DRAWINGS FOR DETAILS AND POSITIONS OF OPENINGS AND SLEEVES REQUIRED FOR STORMWATER, SEWERAGE, DRAINAGE, ELECTRICAL, MECHANICAL AND OTHER SERVICES.

8. THE CONTRACTOR MUST OBTAIN PERMISSION FROM THE ENGINEER BEFORE ANY OPENINGS OR SERVICES LARGER THAN 150 mm DIA OR 150 x 150 mm WHICH ARE NOT SPECIFIED OR NOTED ON THE DRAWINGS ARE INTRODUCED THROUGH ANY STRUCTURAL ELEMENT.
9. CURING OF CONCRETE SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE WITH SANS 2001-CC.
10. THE MINIMUM LENGTH OF THE CURING PERIOD SHALL AT LEAST BE EQUAL TO THE CONCRETE STRENGTH OF THE STRUCTURAL ELEMENT IN WHICH THEY ARE USED. THE SIZE AND FIXING METHOD OF THE CURING STRIPS SHALL BE DISCUSSED WITH THE ENGINEER.
11. STRIPPING TIMES OF SHUTTERING AND PROPPING SHALL BE IN ACCORDANCE WITH SANS 2001-CC1.
12. CONCRETE MIX DESIGN REPORTS OF ALL CRACKS IN CONCRETE INCLUDING SCREED MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PLACING OF ANY CONCRETE.
13. CONCRETE JOINTS: MAIN AGGREGATE MUST BE EXPOSED, CLEANED AND THOROUGHLY WETTED BEFORE CASTING OF NEW CONCRETE. NO CEMENT GROUT SHALL BE USED. LOCATION OF JOINTS TO BE APPROVED BY THE ENGINEER IF DEVIATED FROM THE DRAWINGS.

1. PROVIDE 12mm ISOLATION JOINTS (I.J.) AROUND ALL CONCRETE COLUMNS AND AGAINST BRICK

The diagram illustrates the layout of a rectangular area with the following dimensions and offsets:

- Top Row:** A total length of 4600, divided into a 1000 segment on the left and a 3600 segment on the right.
- Bottom Row:** A total length of 4600, divided into a 150 segment on the left, a 3300 segment in the middle, and a 300 segment on the right.
- Vertical Offsets:** The bottom row is offset to the left by 150 units and to the right by 300 units relative to the top row.



SCALE 1:20



SCALE 1:20



SCALE 1:20

- WALLS. AFTER CONCRETE HAS SET, JOINTEX TO BE RAKED OUT 10mm DEEP AND SEALED WITH APPROVED JOINT SEALANT – REFER TO STANDARD DETAILS.
2. SAW-CUT JOINTS TO BE DONE AS SOON AS CONCRETE IS FIRM ENOUGH TO NOT DAMAGE THE EDGES. USUALLY BETWEEN 6 TO 16 HOURS.
3. ALL BACKFILL TO BE COMPACTED IN LAYERS NOT EXCEEDING 150mm. COMPACTION EFFORT : AS INDICATED
4. FLOOR SLABS ARE WOOD FLOAT FINISHED AND SCREED TOPPING TO HAVE A STEEL TROWEL FINISH

1. ALL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF SANS 920-2011.
2. THE CONTRACTOR SHALL INSPECT AND APPROVE THE FIXED REINFORCEMENT BEFORE THE ENGINEER IS NOTIFIED. ALL REINFORCEMENT SHALL BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE CASTING OF CONCRETE MAY COMMENCE.
3. THE CONTRACTOR SHALL GIVE AT LEAST 24 HOURS NOTICE TO THE ENGINEER FOR REBAR INSPECTIONS THAT ARE REQUIRED.
4. BEND-OUT BARS AT CONSTRUCTION JOINTS SHALL BE BENT OUT WITH A SUITABLE PIPE SO THAT NO KINK IS FORMED IN THE BARS.
5. NO TREATMENT, FLAME CUTTING OR WELDING OF REBAR WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER SHALL BE ALLOWED.

Signature: _____ Date: _____

Consultant



Signature: _____ Date: _____



Project Title:

PHASE 14: REPAIRS AND
RENOVATIONS TO STORM DAMAGED
SCHOOLS - KZN MIDLANDS REGION -
CLUSTER 134 - PHUMLANI HIGH

Drawing Description:

DISABLED RAMP DETAILS (R03 AND R04)

Drawn: K. Chetty	Date: 2020/02/17
Scales: As Shown	

Consultant Drawing No:
M16-0520-041-

DOPW CONTRACT No.

DOPW WIMS No:
WIMS : 063801

Stamped by Design Review Committee

SCHEDULE NO. 01

- 1 **NAME** : DISTRIBUTION BOARD
- 2 **LOCATION** : GROUND FLOOR AS INDICATED ON DRAWINGS
- 3 **FED FROM** : MAIN DB
- 4 **FEEDER** : 10mm² /2 CORE CONCENTRIC CABLE WITH EARTH
- 5 **MAIN SWITCH** : 63A DOUBLE POLE ISOLATOR
- 6 **FAULT LEVEL** : 5kA
- 7 **MOUNTING** : FLUSH MOUNT/ @1800mm AFFL TO TOP OD DB
- 8 **TYPE** : LOCKABLE DOORS WITH ACCESSIBLE MAIN SWITCH
- 9 **COLOUR** : WHITE
- 10 **SINGLE POLE CIRCUIT BREAKERS**

Circuits 1 - 2	2 x 15A	- External Lighting
Circuits 3 - 5	3 x 15A	- Internal Lighting
Circuits 6 - 9	4 x 20A	- Switched Socket Outlets
Circuit 10	1 x 20A	- Dedicated Socket Outlets
Circuit 11	1 x 20A	- Hydroboil Isolator
Circuit 12	1 x 5A	- Bypass Switch
Circuit 13	1 x 45A	- Feed to Next Block
- 11 **OTHER EQUIPMENT**
 - 1 x set 63A Single phase and neutral busbars
 - 1 x 30mA, 60A double pole earth leakage units without overload protection
 - Earth bars
 - Typed legend cards
 - Engraved trofolyte main labels reflecting items 1, 3, 4, 5 & 6 above
- 12 **SPECIAL INSTRUCTIONS**
 - Distribution board to have a minimum 30% spare capacity in all sections