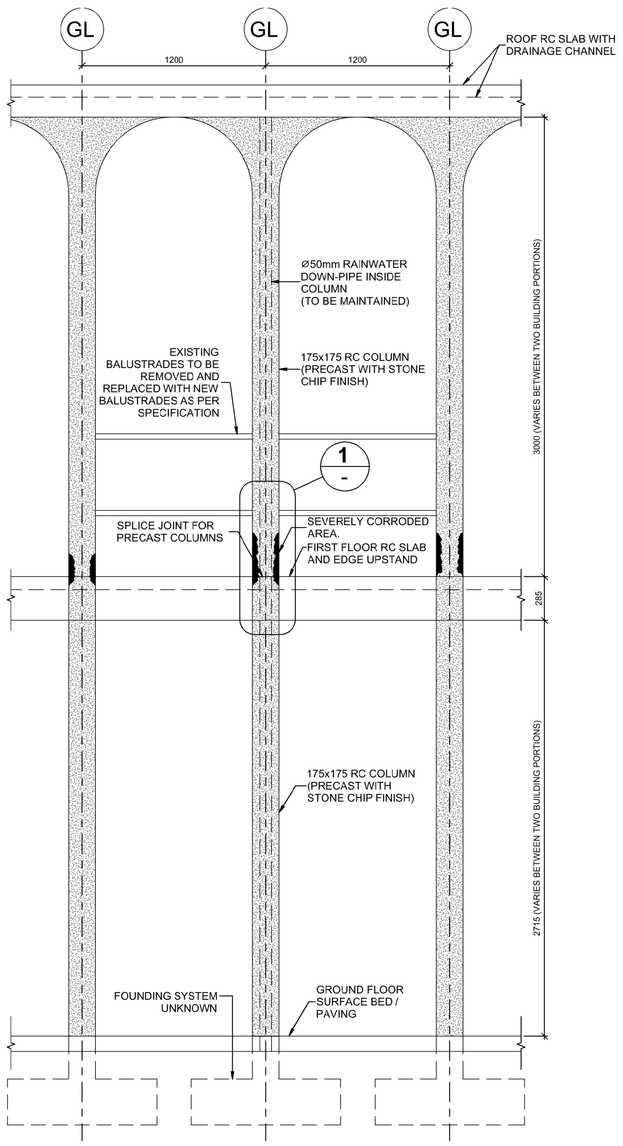
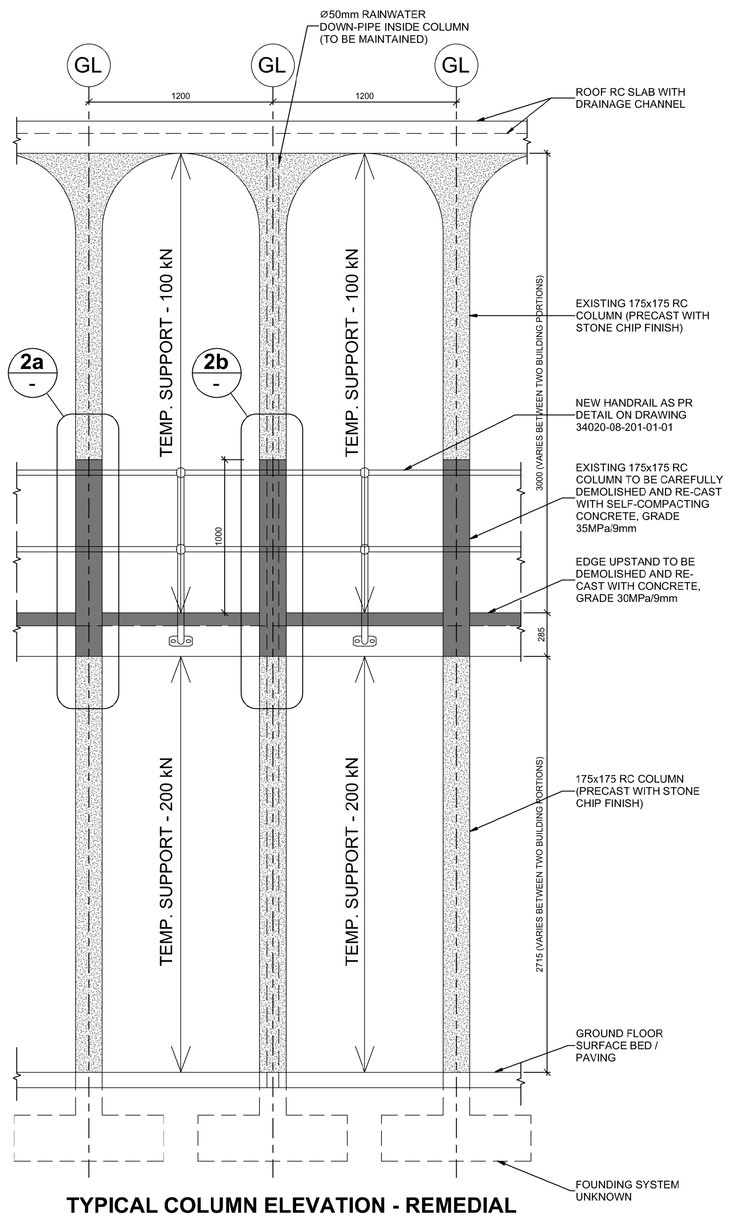


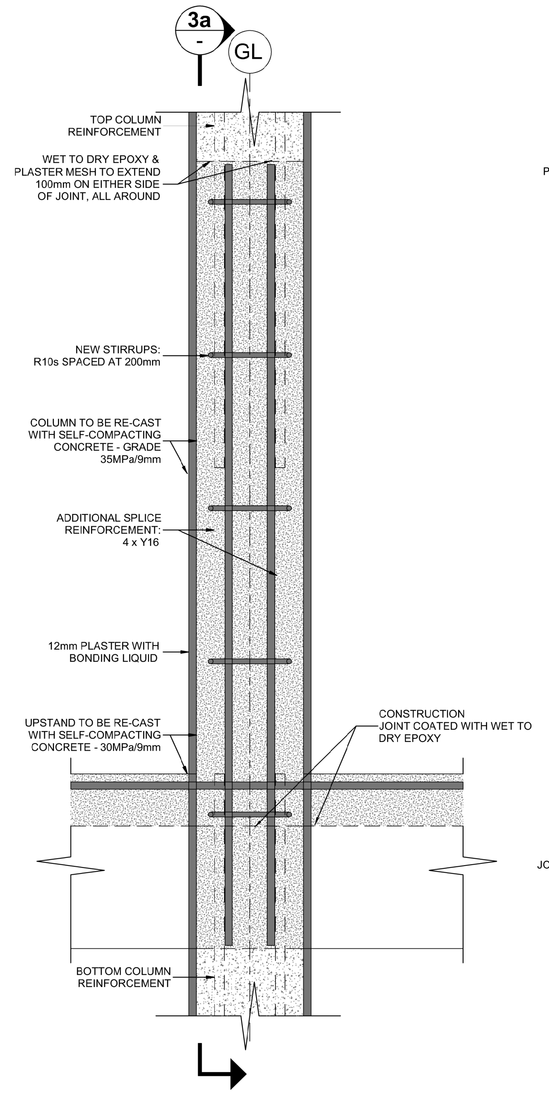
TYPICAL COLUMN ELEVATION - EXISTING

SCALE 1 : 20



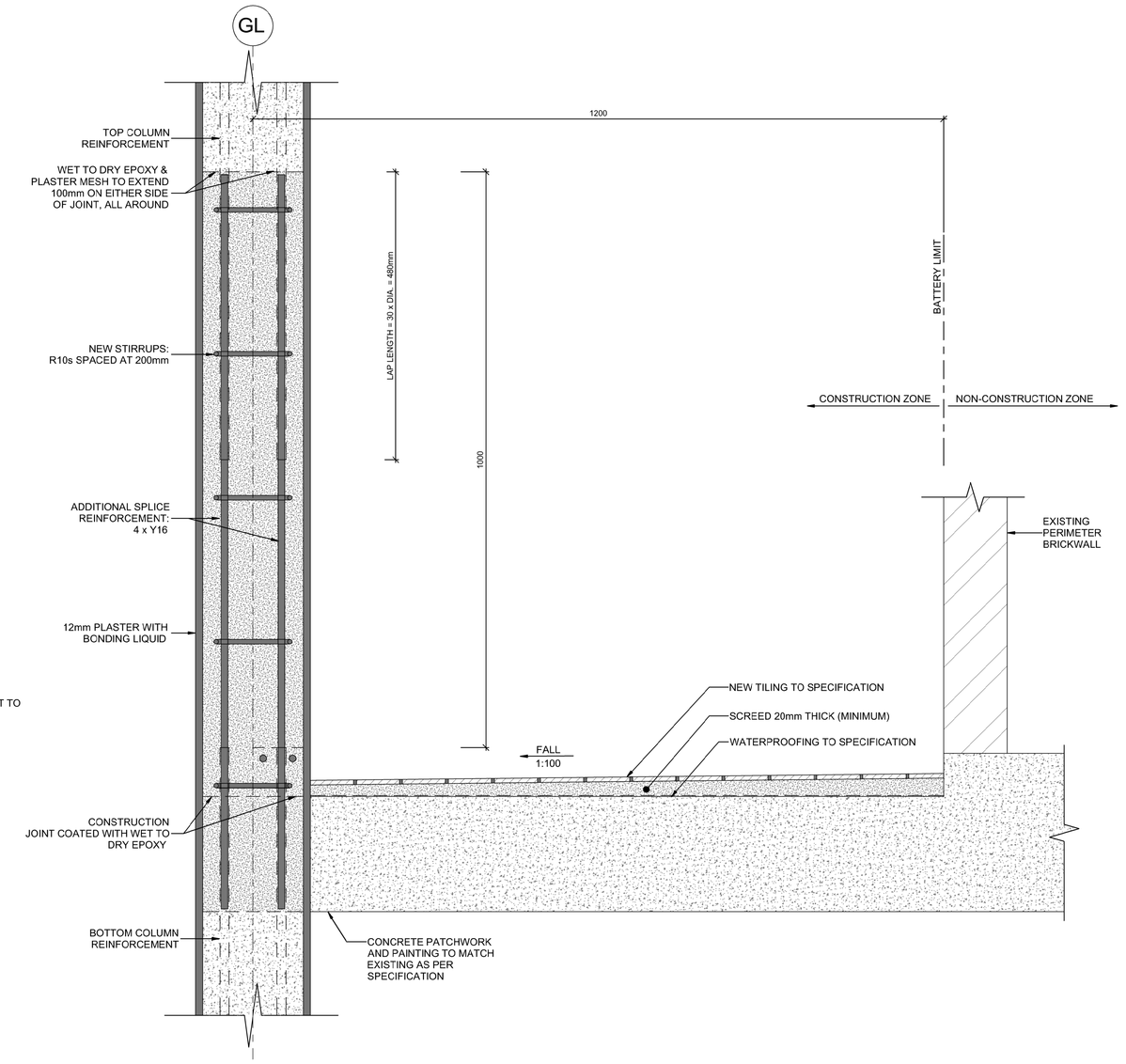
TYPICAL COLUMN ELEVATION - REMEDIAL

SCALE 1 : 20



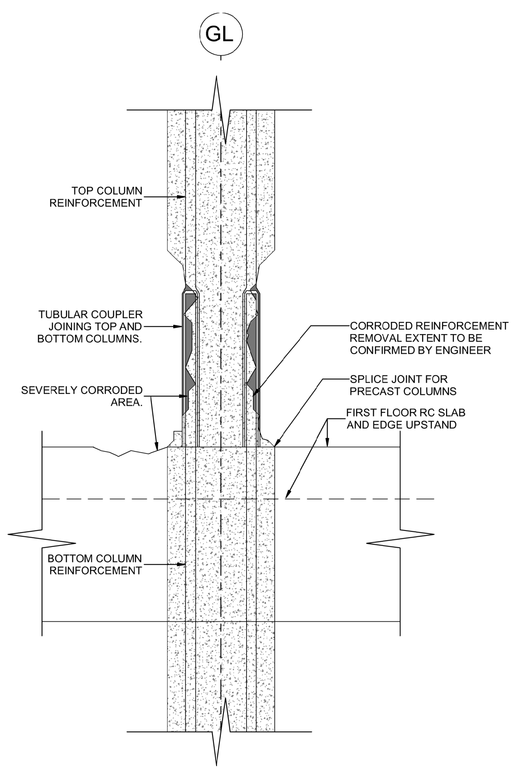
DETAIL 2a

SCALE 1 : 5



SECTION 3a

SCALE 1 : 5

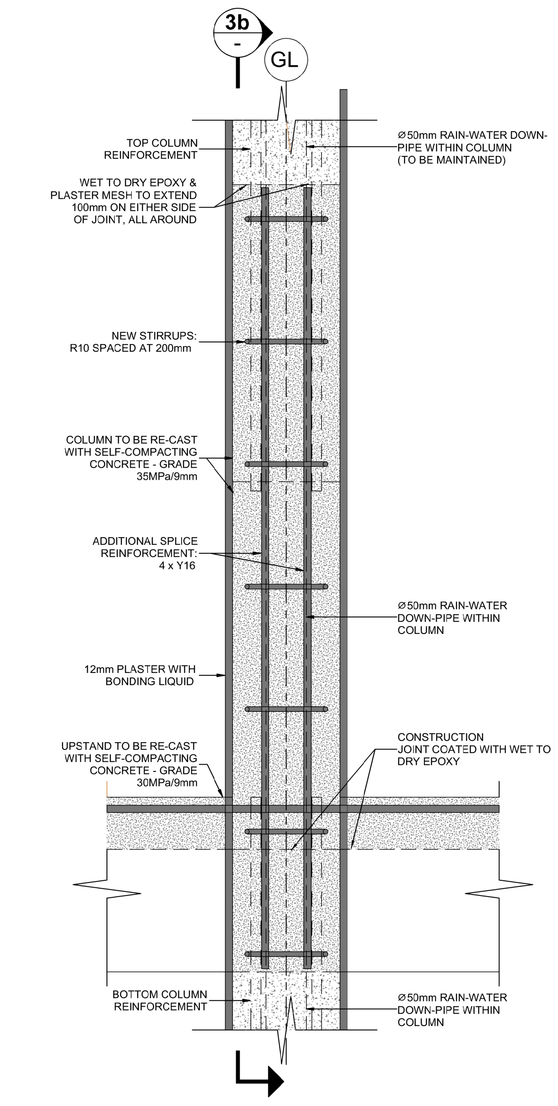


DETAIL 1

SCALE 1 : 5

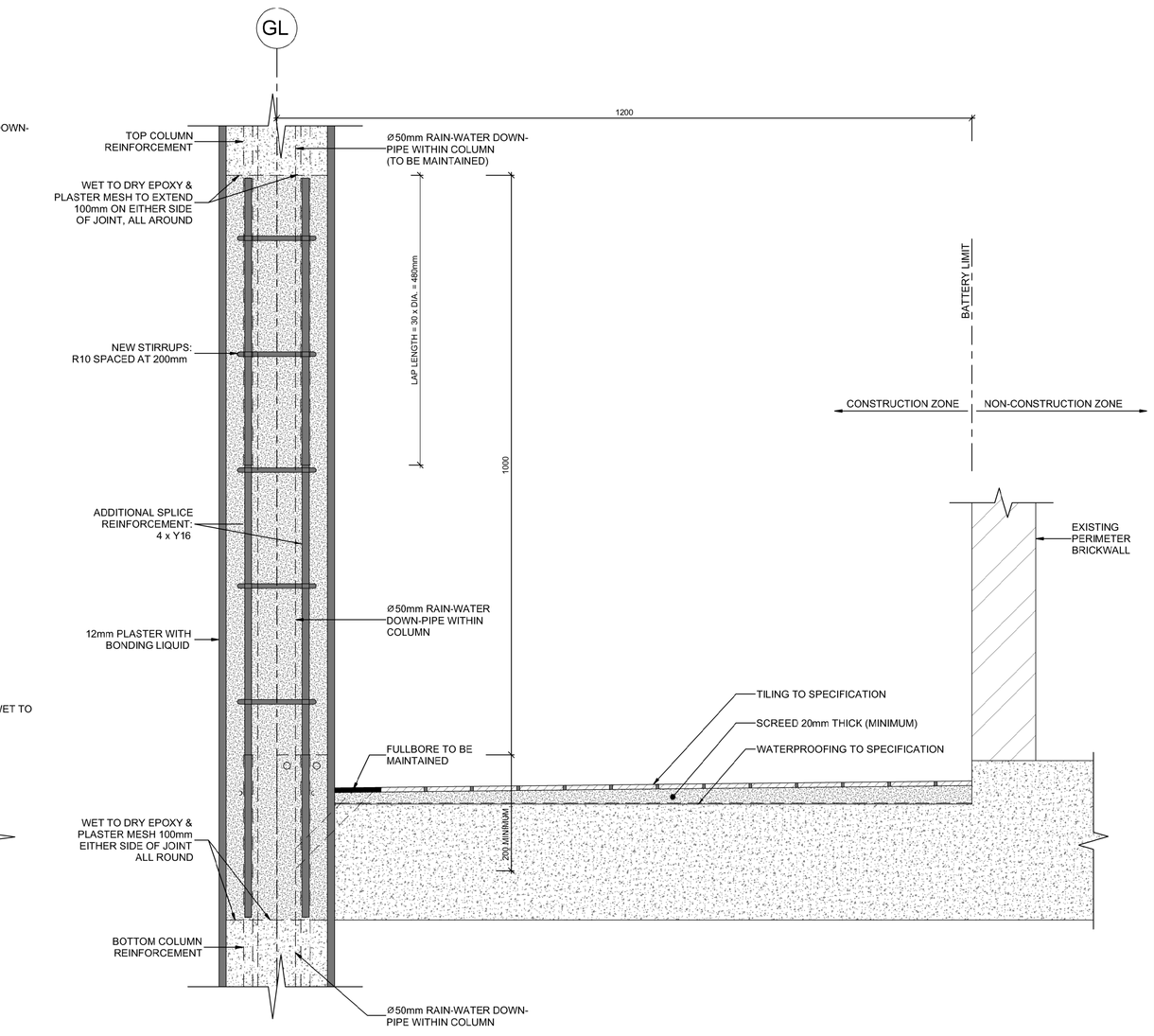
COLUMN REPAIR METHODOLOGY

- ENSURE PROPS ARE INSTALLED BEFORE STARTING ANY REMEDIAL WORKS,
- REMOVE HANDRAILS,
- FOR EVERY ALTERNATIVE COLUMN, CAREFULLY CUT THE COLUMN CONCRETE WITH A SMALL GRINDER AT 1m ABOVE THE FIRST FLOOR LEVEL, 30mm DEEP.
- TAKE GOOD CARE NOT TO DAMAGE REINFORCEMENT AND THE RWDP.
- CAREFULLY BREAK THE COLUMN CONCRETE WITH A SMALL ELECTRIC BREAKER BETWEEN THE CUT AND THE FIRST FLOOR UPSTAND. THE UPSTAND SHOULD ALSO BE DEMOLISHED, DEPENDING ON EXTENT OF CORROSION.
- REQUEST AN INSPECTION FROM THE ENGINEER TO DETERMINE IF SUFFICIENT CORROSION IS REMOVED.
- CUT THE EXISTING REINFORCEMENT BACK IN ACCORDANCE WITH THE ENGINEER'S INSTRUCTION, (NOTE: FOR EXAMPLE, THE 1m BREAKING OF THE COLUMN, ASSUMES 520mm CORRODED REINFORCEMENT TO BE CUT AND 480mm TO BE USED FOR LAPPING). THEREFORE, IF CORROSION OF REINFORCEMENT IS MORE THAN 520mm, MORE CONCRETE OF THE COLUMN AND OR UPSTAND WILL HAVE TO BE DEMOLISHED.
- FIX THE DAMAGED RWDP AND OR REPAIR THE FULL-BORE OUTLET, (WHERE APPLICABLE)
- INSTALL NEW SPLICE REINFORCEMENT 4Y16 BARS AND R10 STIRRUPS SPACED AT 200mm CENTRE AS PER DETAILS 2a AND 2b ON DRAWING 34020-08-201-01-02
- CONFIRM THERE ARE NO LEAKS FROM THE RWDP, WHERE APPLICABLE,
- REQUEST INSPECTION FROM THE ENGINEER.
- SHUTTER UPSTAND AND CAST IN-SITU CONCRETE GRADE 30MPa/9mm
- SHUTTER COLUMN AND CAST WITH SELF-COMPACTING CONCRETE, GRADE 35/9. THE MIX DESIGN MUST ALLOW FOR AN EARLY CHARACTERISTIC STRENGTH OF 30MPa AT 7 DAYS,
- TAKE A TOTAL OF NINE CONCRETE CUBE TESTS.
- REMOVE ALL SHUTTERING AFTER 3 DAYS AND PROCEED TO APPLY A UNIFORM 12mm PLASTER WITH AN APPROVED PLASTER KEY.
- PAINT AFTER TWO WEEKS OF CURING USING APPROVED PAINT,
- REMOVE PROPS AS SOON AS THE REQUIRED STRENGTH IS ACHIEVED, SAY AT 14 DAYS AFTER CASTING THE SELF-COMPACTING CONCRETE.



SECTION 2b

SCALE 1 : 5



SECTION 3b

SCALE 1 : 5

NOTES / LEGEND

NOTES:

CONCRETE
1. CONCRETE GRADES
1.1. UPSTANDS 30MPa/9mm
1.2. COLUMN REPAIRS 35MPa/9mm (SELF-COMPACTING)
2. CONCRETE COVER = 30mm MINIMUM
3. CONCRETE FINISH TO BE WOOD FLOAT FINISH U.O.S
4. ALL EXPOSED CONCRETE EDGES TO RECEIVE 25x25 CHAMFER

REINFORCEMENT
1. HIGH YIELD REINFORCEMENT (Y-BARS): Fy =450MPa
2. MILD REINFORCEMENT (R-BARS): Fy= 250MPa
3. MINIMUM LAP LENGTH IS 50 x DIA U.O.S

BALUSTRADES
EXISTING BALUSTRADES TO BE REMOVED AND REPLACED WITH GALVANIZED BALL TYPE OR STAINLESS STEEL GRADE 316 BALUSTRADES MADE OF TWO 60x3.5 STANCHIONS FIXED WITH A TYPICAL MENTIS M090 FIXING AT EVERY 1200 C/C MAXIMUM. CONTRACTOR TO PROVIDE SAMPLES FOR APPROVAL.

PRODUCTS
1. CONTRACTOR TO SUBMIT MIX DESIGNS OR TECHNICAL PRODUCT SHEETS FOR:
1.1. 30MPa/9mm CONCRETE
1.2. 35MPa/9mm (SELF-COMPACTING) CONCRETE
1.3. PLASTER & SCREED MIX
1.4. BONDING LIQUID
1.5. CURING COMPOUND
1.6. ANTI CORROSION PRODUCT
1.7. STRUCTURAL GROUT
1.8. PAINT
1.9. DOWELING PRODUCT
2. CONTRACTOR TO SUBMIT SAMPLES FOR APPROVAL:
2.1. TILES
2.2. BALUSTRADES (GMS)

DO NOT SCALE DRAWING
IF IN DOUBT, REFER TO DRAWING OFFICE

CLIENT PLAN NUMBER

REFERENCE DRAWINGS

NUMBER	DRAWING DESCRIPTION
34020-08-201-02-01	COLUMN REMEDIAL WORKS - FIRST FLOOR LAYOUT

APPROVED BY COUNCIL / CLIENT

CITY ENGINEER / CLIENT	REG. NO.	DATE

AMENDMENTS CODE

A-Y : / : REPORT/DESIGN/TENDER
0-99 : / : CONSTRUCTION
Z : / : AS BUILT

A : BY CLIENT
B : BY ARCHITECT
C : BY MECHANICAL OR ELECTRICAL
D : BY BVI
E : BY OTHER ( )

DATE	NITIAL	CODE	REVISION DESCRIPTION
08/07/22	PvN	A	ISSUED FOR TENDER PURPOSES ONLY

OFFICES

CESA
GREEN BUILDING COUNCIL SOUTH AFRICA
bvi 50 YEAR CELEBRATION EST 1967-2017
• ENGINEERING • PROCUREMENT • MANAGEMENT

CLIENT

SABS
South African Bureau of Standards

PROJECT

SABS EAST COAST
STRUCTURAL REMEDIAL WORKS

DRAWING TITLE

COLUMN REMEDIAL WORK - DETAILS

APPROVED BY BVI

P.v. NIEUWENHUIZEN	232001098	
ENGINEER/TECHNOLOGIST	REG. NO.	DATE

SCALE	As indicated	DRAWN	
DESIGNED	T. MSIZA	CHECKED	
PLAN NUMBER		REV. NO.	DATE SAVED
34020-08- 201- 01-02		A	Issue Date

A0