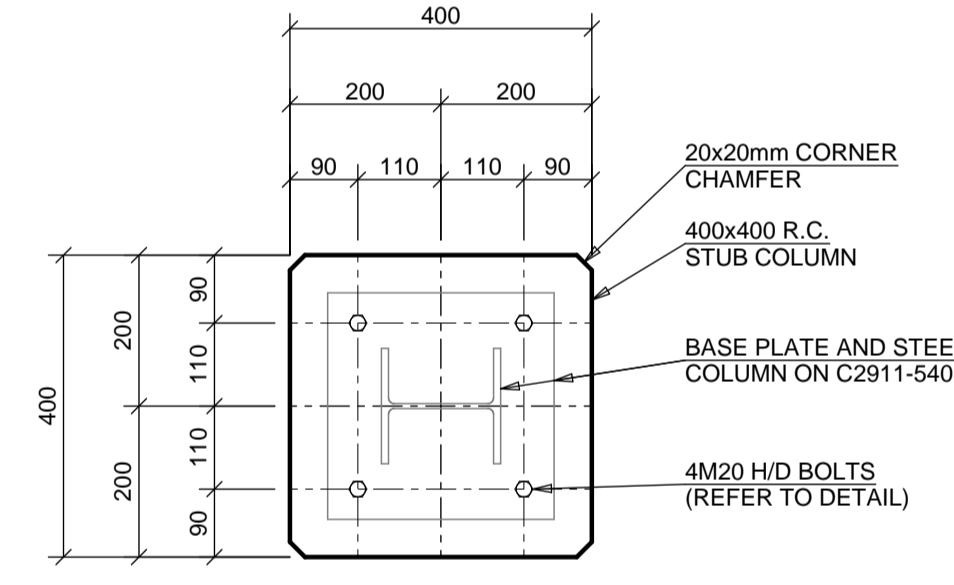
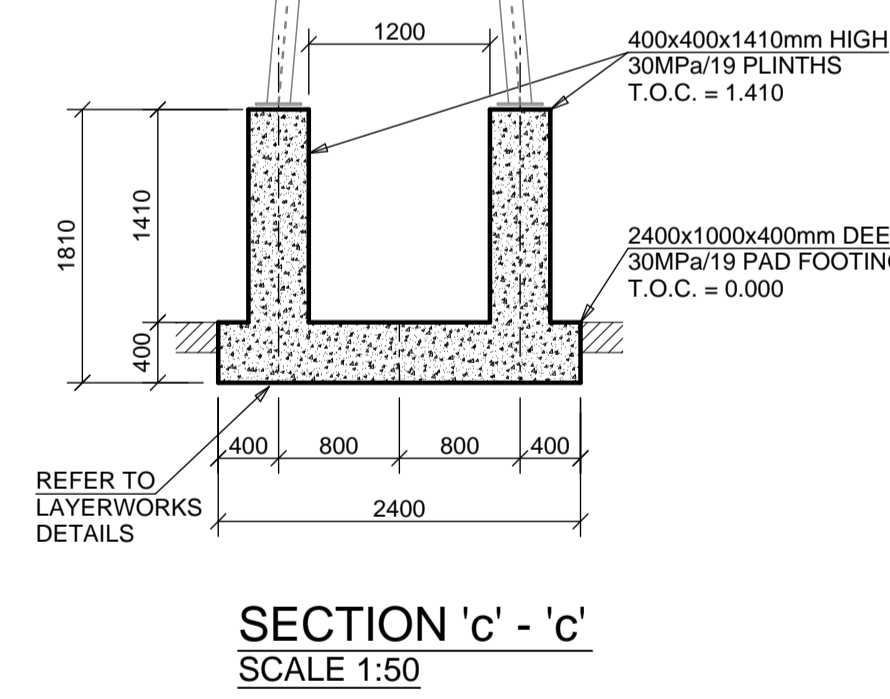
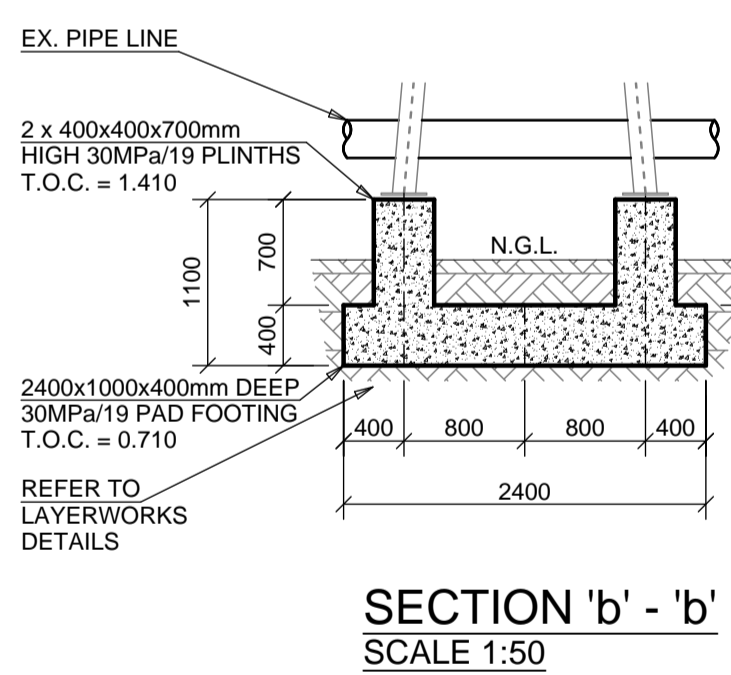


- NOTES:**
- ALL CONCRETE TO BE 30MPa/19
  - ALL EXPOSED CONCRETE EDGES TO RECEIVE 20x20mm CORNER CHAMFERS
  - ALL DIMENSIONS, LEVELS AND CONCRETE POSITIONS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION
  - AREA TO BE SCANNED FOR UNDERGROUND SERVICES PRIOR TO CONSTRUCTION
  - ALL DISTURBED GARDEN AREAS TO BE REINSTATED TO ORIGINAL STATE AT THE COMPLETION OF CONSTRUCTION
  - CONCRETE CUBE TESTS SHALL BE DONE ON EACH BATCH OF CONCRETE POURED (3 CUBES TO BE CRUSHED ON 7 DAYS & 3 CUBES TO BE CRUSHED ON 28 DAYS)

- GENERAL NOTES**
- DRAWINGS NOT TO BE SCALED. DIMENSIONS ARE AS INDICATED OR MUST BE DEDUCED FROM INFORMATION SUPPLIED.
  - DRAWINGS MUST BE READ IN CONJUNCTION WITH THOSE OF THE ARCHITECT TO COMPARE DIMENSIONS, DETAILS, OPENINGS AND SLEEVES. DISCREPANCIES MUST BE REPORTED TO THE ARCHITECT/ENGINEER FOR A RULING PRIOR TO COMMENCEMENT OF CONSTRUCTION.
  - ALL MATERIAL & WORKMANSHIP MUST COMPLY WITH THE LATEST REVISED EDITIONS OF THE APPLICABLE SANS/SABS SPECIFICATIONS & CODES OF PRACTICE AND IN PARTICULAR WITH THE FOLLOWING STANDARD SPECIFICATIONS:
    - SANS 2001-BE-1 - EARTHWORKS
    - SANS 2001-DP-1 - EARTHWORKS FOR BURIED PIPELINES AND PREFABRICATED CULVERTS
    - SANS 2001-CC-1 - CONCRETE (STRUCTURAL)
    - SANS 2001-CS-1 - STRUCTURAL STEELWORK
  - NO CONCRETE MAY BE CAST WITHOUT THE PRIOR WRITTEN APPROVAL OF THE EXCAVATIONS AND THE REINFORCEMENT BY THE ENGINEER.
  - WRITTEN APPROVAL MUST BE OBTAINED FROM THE ENGINEER TO USE READY MIXED CONCRETE, TO PUMP CONCRETE, TO USE ADMIXTURES OR TO USE ANY CEMENT OTHER THAN COMMON CEMENTS TO SANS 50197-1.
  - BUILDING TOLERANCES WITH RESPECT TO CONCRETE WORK WITH SABS SANS 2001-CC-1 (TABLE 1) WITH A GRADE 0 DEGREE OF ACCURACY, UNLESS OTHERWISE SHOWN.
  - FORMWORK TO BE HIGHLY CONSTRUCTED TO THE EXACT DIMENSIONS OF CONCRETE MEMBERS. UNLESS OTHERWISE SHOWN, SOFFITS OF BEAMS AND SLABS MUST HAVE A POSITIVE CAMBER OF 1.5mm FOR EACH 1m OF SPAN.
  - ALL CONCRETE TO ATTAIN THE MINIMUM CUBE STRENGTHS AT 28 DAYS WITH THE AGGREGATE SIZES AS DETAILED BELOW. ALL IN ACCORDANCE WITH SANS 2001-CC-1:
    - COLUMNS 30/19
    - SLABS 30/19
    - SURFACE BEDS 30/19
    - GROUND BEAMS 30/19
    - PILE CAPS 30/19
    - PILES 30/19
  - PROVIDE A 50mm BLINDING LAYER UNDER ALL REINFORCED CONCRETE FOUNDATIONS.
  - REINFORCEMENT MUST BE SECURELY FIXED IN THE CORRECT POSITIONS SUCH THAT DISPLACEMENT DOES NOT OCCUR DURING CASTING OF CONCRETE. ALL CONCRETE, UNLESS OTHERWISE SPECIFIED, MUST BE COMPACTED TO SANS 2001-CC-1: CLAUSE 4.7.11.
  - CONSTRUCTION JOINT POSITIONS TO BE APPROVED BY THE ENGINEER PRIOR TO CASTING.
  - BRICK WALLS SHOWN SHADED ON THE DRAWINGS ARE LOAD BEARING AND MUST BE BUILT TO SOFFIT LEVEL BEFORE CONCRETE IS CAST. PROVIDE ONE LAYER BRICK FORCE IN EVERY FIVE BRICK COURSES. BEARINGS AS DETAILED MUST BE PROVIDED BETWEEN REINFORCED CONCRETE MEMBERS AND BRICKWORK.
  - IN THE EVENT OF CONFLICT BETWEEN THE VARIOUS SPECIFICATIONS, THE CONSECUTIVE ORDER OF THE SPECIFICATIONS LISTED IN THE FOLLOWING LIST SHALL TAKE PRECEDENCE:
    - A. ENGINEERS DETAILED DRAWINGS
    - B. PROJECT AND/OR ADDITIONAL SPECIFICATIONS
    - C. STANDARD SPECIFICATIONS SANS 2001
    - D. QUANTITY SURVEYORS PREAMBLES (BILL OF QUANTITIES)
  - THE DESIGN CODES ARE: (WHERE APPLICABLE)
    - A. SANS 10160 - BASIS OF STRUCTURAL DESIGN AND ACTIONS FOR BUILDINGS
    - B. SANS 10161 - FOUNDATIONS
    - C. SANS 10162 - STRUCTURAL STEEL
    - D. SANS 10163 - STRUCTURAL TIMBER
    - E. SANS 10164 - STRUCTURAL MASONRY
    - G. SABS 0100 - STRUCTURAL USE OF CONCRETE
  - WHERE A NEW STRUCTURE ABUTS AN EXISTING STRUCTURE A 10mm SOFTBOARD JOINT MUST BE PROVIDED.

- LAYERWORKS NOTE:**
- 80mm INTERLOCKING BLOCK PAVING ON 20mm BEDDING SAND
  - 150mm SUBBASE, G6 WITH 3% CEMENT (C4) COMPACTED TO 95% MDD
  - 150mm SELECTED G7 COMPACTED TO 93% MDD
  - OVERSATURATE IN-SITU MATERIAL 150mm DEEP AND COMPACT TO 100% MDD (ONLY ON INSTRUCTION BY ENGINEER)
  - BACKFILL USING EXCAVATED MATERIAL IN LAYERS NOT EXCEEDING 150mm AND COMPACT TO 93% MDD

**CONCRETE LAYOUT**  
SCALE 1:50

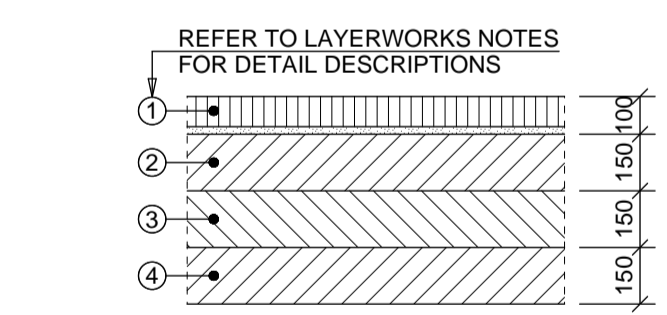


**BOLT TYPE TABLE:**

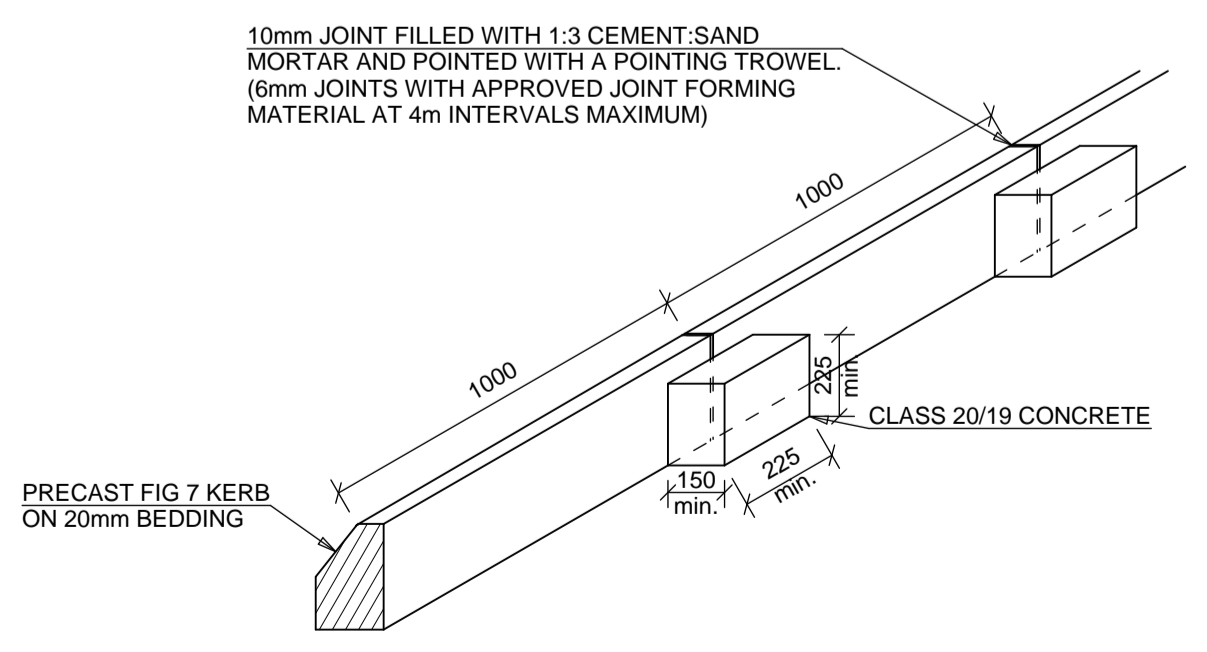
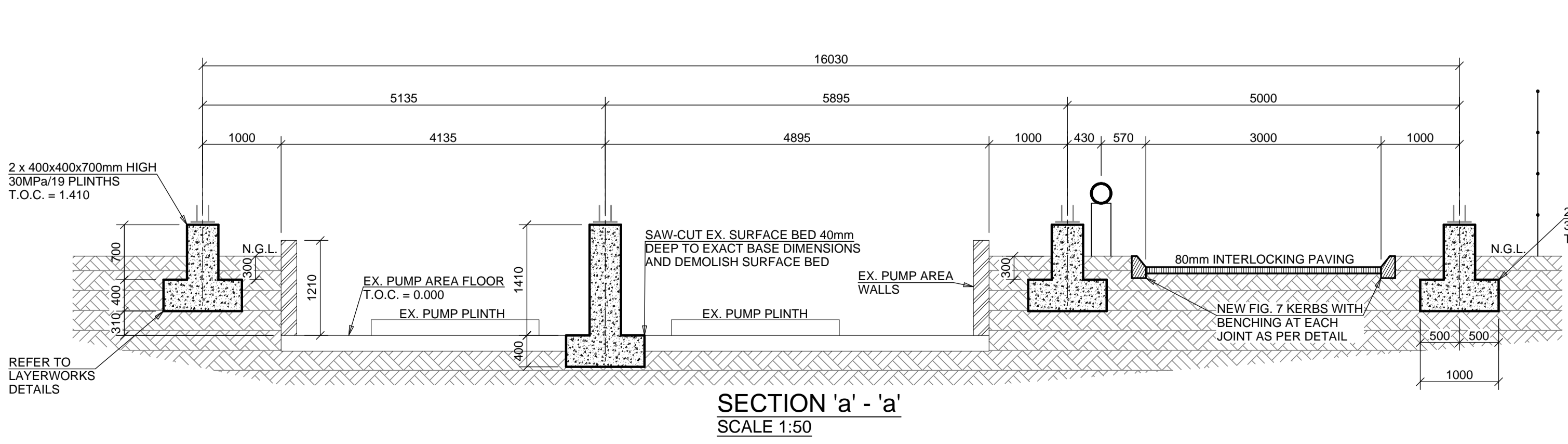
CON. COL. SIZE	COL. QTY.	STEEL COLUMN SIZE	BOLT Ø THREAD	A mm	B mm	C mm	D mm	E Ø mm	BOLTS IN SET	TOTAL BOLTS
400x400	8	152x152x30 H	M20	350	110	150	500	75	4	32

**HOLDING DOWN BOLTS**  
N.T.S.

**LAYERWORKS DETAIL SECTION**  
SCALE 1:20  
TYPICAL FOR PAD FOOTINGS



**LAYERWORKS DETAIL SECTION**  
SCALE 1:20  
TYPICAL FOR PAVED AREAS



**FIGURE 7 KERBS ALONG STRAIGHT SECTIONS**  
N.T.S.

DATE	NO	REVISION
22/06/2022	0	ISSUED FOR TENDER
31/05/2022	C	GENERAL REVISION
25/05/2022	B	HOIST DETAILS ADDED
25/05/2022	A	ISSUED FOR APPROVAL

CLIENT  
**CSIR**

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PROJECT  
**BUILDING 13 CRAWL BEAM STRUCTURE**

DRAWING TITLE  
**CONCRETE LAYOUT**

DRAWING NO  
**C2911 - 340**

REV. NO.	A	B	C	0			
SCALE:	AS SHOWN	DESIGNED	C.C. STEYN				
SHEET:	A1	DRAWN	C.C. STEYN				
DATE:	MAY 2021	CHECKED	T.S. KRUGER				