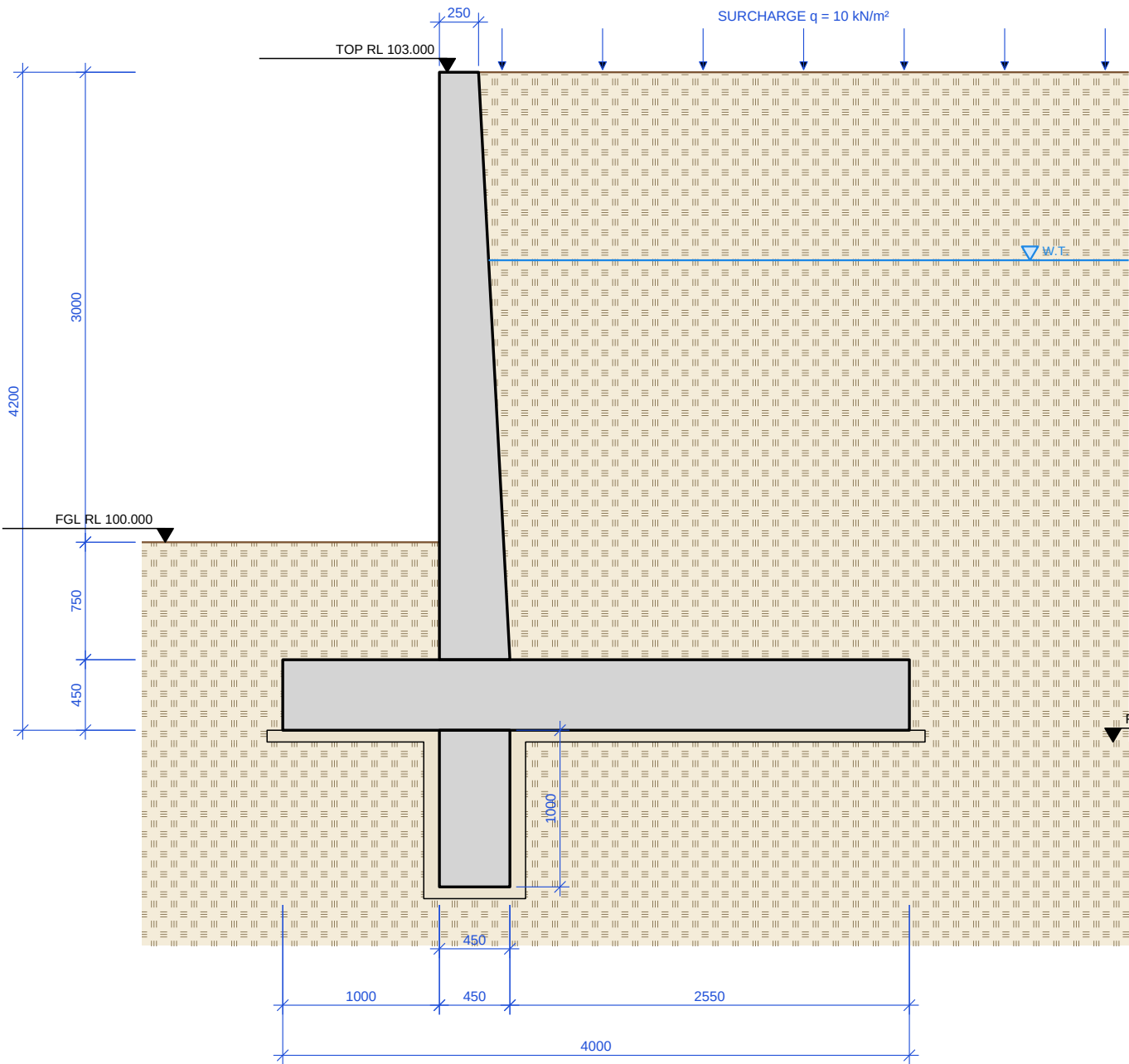
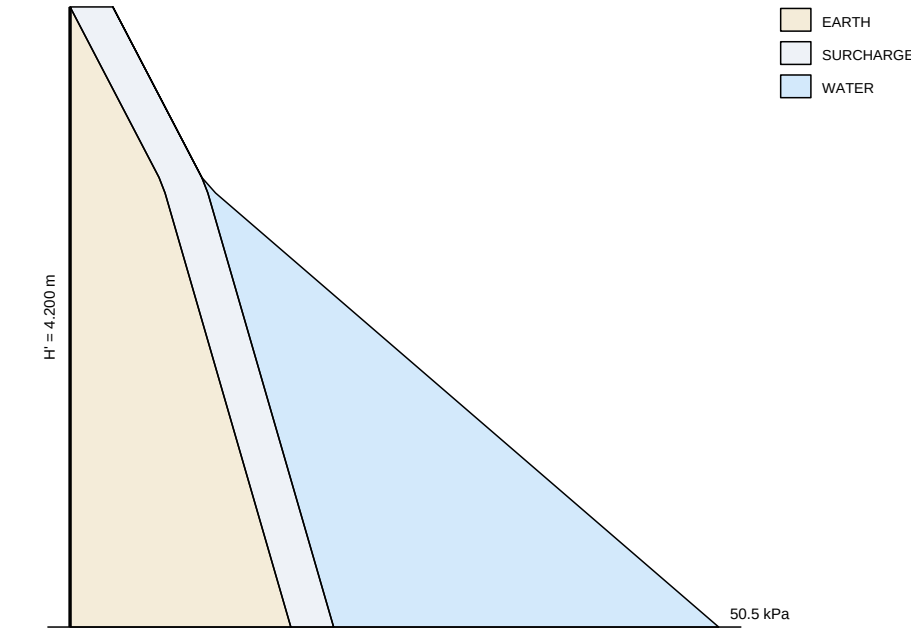


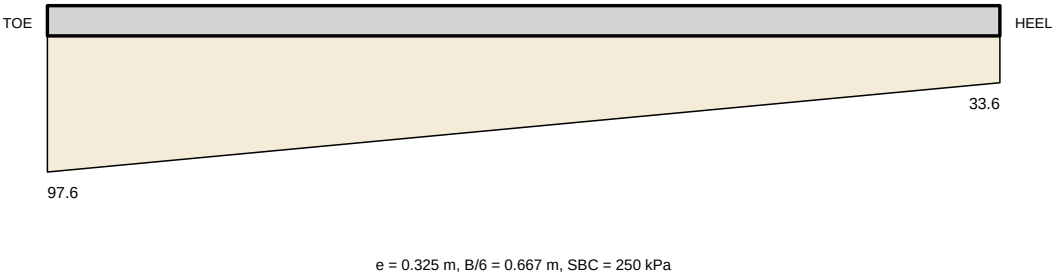


SECTION OF RETAINING WALL
SCALE 1:40

LATERAL PRESSURE ON THE VIRTUAL BACK



BASE PRESSURE (kPa)



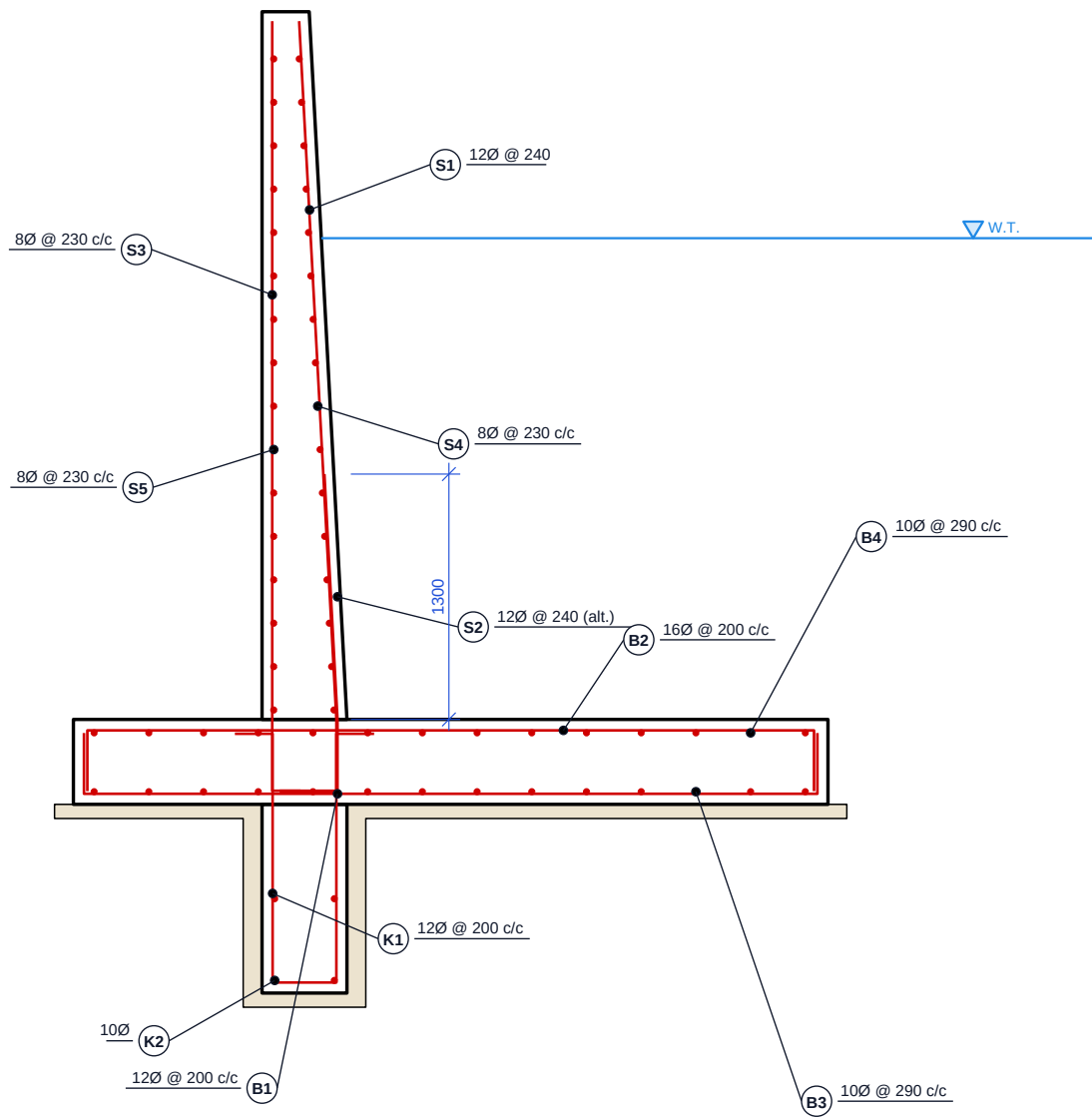
CHECK	VALUE	LIMIT	
Overturning	2.01	≥ 1.4	OK
Sliding	2.21	≥ 1.4	OK
Max. base pressure	97.6 kPa	≤ 250	OK
Eccentricity	0.325 m	≤ 0.667	OK
Overturning (EQ)	1.58	≥ 1.2	OK
Sliding (EQ)	1.56	≥ 1.2	OK
Max. base pressure (EQ)	128.0 kPa	≤ 312	OK
Eccentricity (EQ)	0.635 m	≤ 0.667	OK

NOTES

- All dimensions are in mm and levels in m unless noted.
- Water table behind the wall considered in design (backfill not drained).
- No weep holes: wall designed for full water pressure.
- Contraction joints at 8 to 10 m c/c; wall length considered 10 m.

Design: IS 456:2000, IS 1893 | Generated by nxstructural Retaining Wall Designer

<div><div><div></div><div>NX</div><div>Structural</div></div><div>CANTILEVER RETAINING WALL</div></div>				
GENERAL ARRANGEMENT				
CLIENT			STRUCTURE	
-			T-SHAPED CANTILEVER WALL, H = 4.20 m	
DESIGNED	CHECKED	DATE	SCALE	SHEET
-	-	01-11-2026	AS SHOWN	1 of 3



REINFORCEMENT DETAILS - SECTION
SCALE 1:40

REINFORCEMENT SCHEDULE

MARK	BARS	LOCATION
S1	12Ø @ 240	Stem, earth face
S2	12Ø @ 240 (alt.)	Stem, earth face (curtailed)
S3	8Ø @ 230 c/c	Stem, front face
S4	8Ø @ 230 c/c	Stem horizontal, earth face
S5	8Ø @ 230 c/c	Stem horizontal, front face
B1	12Ø @ 200 c/c	Base bottom (transverse)
B2	16Ø @ 200 c/c	Base top (transverse)
B3	10Ø @ 290 c/c	Base bottom (longitudinal)
B4	10Ø @ 290 c/c	Base top (longitudinal)
K1	12Ø @ 200 c/c	Shear key U-bars
K2	10Ø	Shear key longitudinal

NOTES

- Concrete M25, reinforcement Fe 500 (IS 1786).
- Clear cover: stem 50 mm, base 50 mm.
- Lap lengths (mm): 8Ø 390, 10Ø 490, 12Ø 590, 16Ø 780; laps staggered, not more than 50 % at a section.
- Stem bars bent at the bottom mat towards the toe, leg 300 mm (Ld = 583 mm).
- Alternate bars (S2) stop 1300 mm above the base: theoretical cut-off 910 mm + max(d, 12Ø), and at least Ld = 583 mm.
- S1 and S2 are placed alternately.

Design: IS 456:2000, IS 1893 | Generated by nxstructural Retaining Wall Designer

<div><div><div>NX</div><div>Structural</div></div><div>CANTILEVER RETAINING WALL</div></div>				
REINFORCEMENT DETAILS				
CLIENT			STRUCTURE	
-			T-SHAPED CANTILEVER WALL, H = 4.20 m	
DESIGNED	CHECKED	DATE	SCALE	SHEET
-	-	01-11-2026	AS SHOWN	2 of 3

BAR BENDING SCHEDULE - RETAINING WALL (10 m LONG)

MARK	MEMBER	DESCRIPTION	SHAPE	DIMENSIONS (mm)	DIA	SPACING	NOS	CUT LEN (m)	TOTAL (m)	kg/m	WEIGHT (kg)
S1	Stem	Main bars, earth face (full height)		a=4087, b=300	12	240	42	4.363	183.3	0.889	162.9
S2	Stem	Main bars, earth face (alternate, stop 1300 above base)		a=1680, b=300	12	240	41	1.962	80.4	0.889	71.5
S3	Stem	Vertical bars, front face		a=4078, b=150	8	230	44	4.212	185.3	0.395	73.2
S4	Stem	Horizontal bars, earth face		a=9900	8	230	16	9.900	158.4	0.395	62.6
S5	Stem	Horizontal bars, front face		a=9900	8	230	16	9.900	158.4	0.395	62.6
B1	Base slab	Transverse bars, bottom (toe), legs up		a=3888, b=322	12	200	50	4.484	224.2	0.889	199.3
B2	Base slab	Transverse bars, top (heel), legs down		a=3852, b=322	16	200	50	4.432	221.6	1.580	350.2
B3	Base slab	Longitudinal bars, bottom		a=9900	10	290	14	9.900	138.6	0.617	85.6
B4	Base slab	Longitudinal bars, top		a=9900	10	290	14	9.900	138.6	0.617	85.6
K1	Shear key	U-bars anchored in the base, legs bent along the top mat		a=338, b=1318, c=200	12	200	50	3.278	163.9	0.889	145.7
K2	Shear key	Longitudinal bars		a=9900	10	-	4	9.900	39.6	0.617	24.4

STEEL ABSTRACT

DIAMETER (mm)	WEIGHT (kg)
8 mm	198.4
10 mm	195.6
12 mm	579.4
16 mm	350.2
TOTAL	1,323.5 kg (1.323 t)

NOTES / QUANTITIES

1. Cutting lengths deduct 2ϕ per 90° bend; bars over 12 m are lapped (IS 456 cl 26.2.5).
2. Concrete M25: 35.62 m³; steel 37.2 kg/m³.
3. Formwork 104.1 m²; PCC (75 mm) 3.00 m³.

Design: IS 456:2000, IS 1893 | Generated by nxstructural Retaining Wall Designer

<div><div><div>NX</div><div>Structural</div></div><div>CANTILEVER RETAINING WALL</div></div>				
BAR BENDING SCHEDULE				
CLIENT			STRUCTURE	
-			T-SHAPED CANTILEVER WALL, H = 4.20 m	
DESIGNED	CHECKED	DATE	SCALE	SHEET
-	-	01-11-2026	NTS	3 of 3