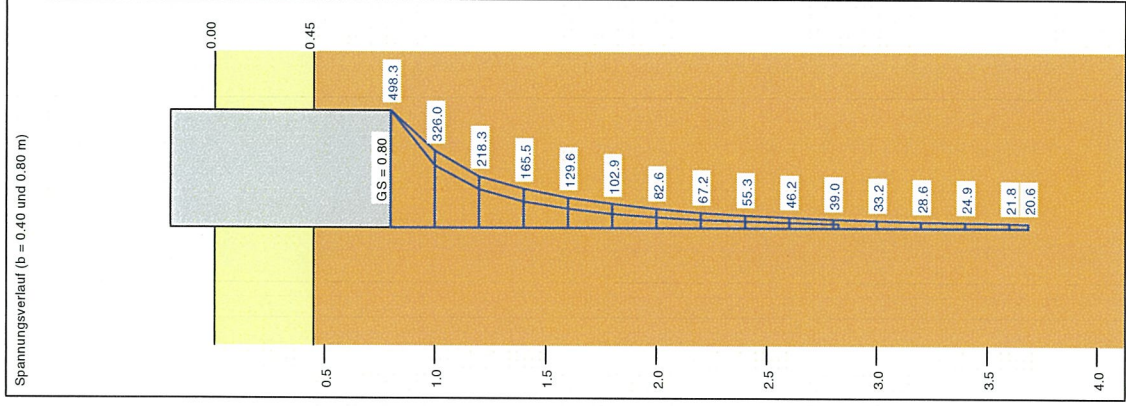
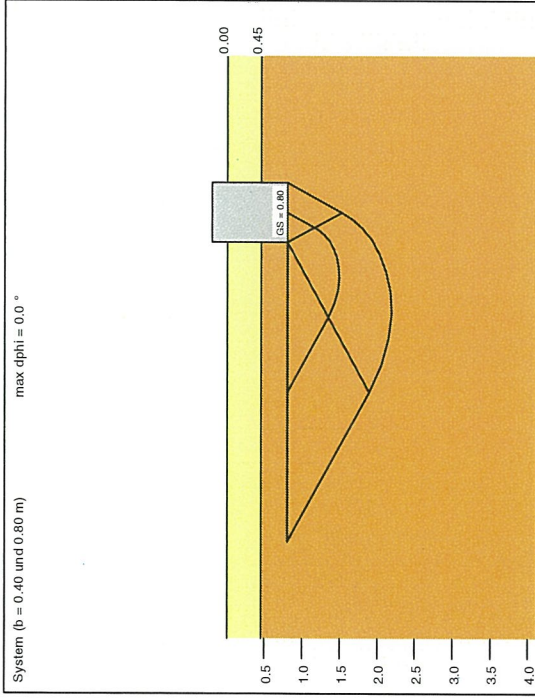


Anlage 6 Setzungsberechnung, Hp. Steinalben Mittelbahnsteig, Verwendung des Profils KRB/DPH 18,965

Boden	γ [kN/m ³]	γ' [kN/m ³]	ϕ [°]	c [kN/m ²]	E_s [MN/m ²]	v [-]	Bezeichnung
	17.0	9.5	30.0	0.0	15.0	0.00	Schicht 1.1a [GE]
	20.0	12.0	32.5	0.0	40.0	0.00	Schicht 3.1 (Sst, v5)

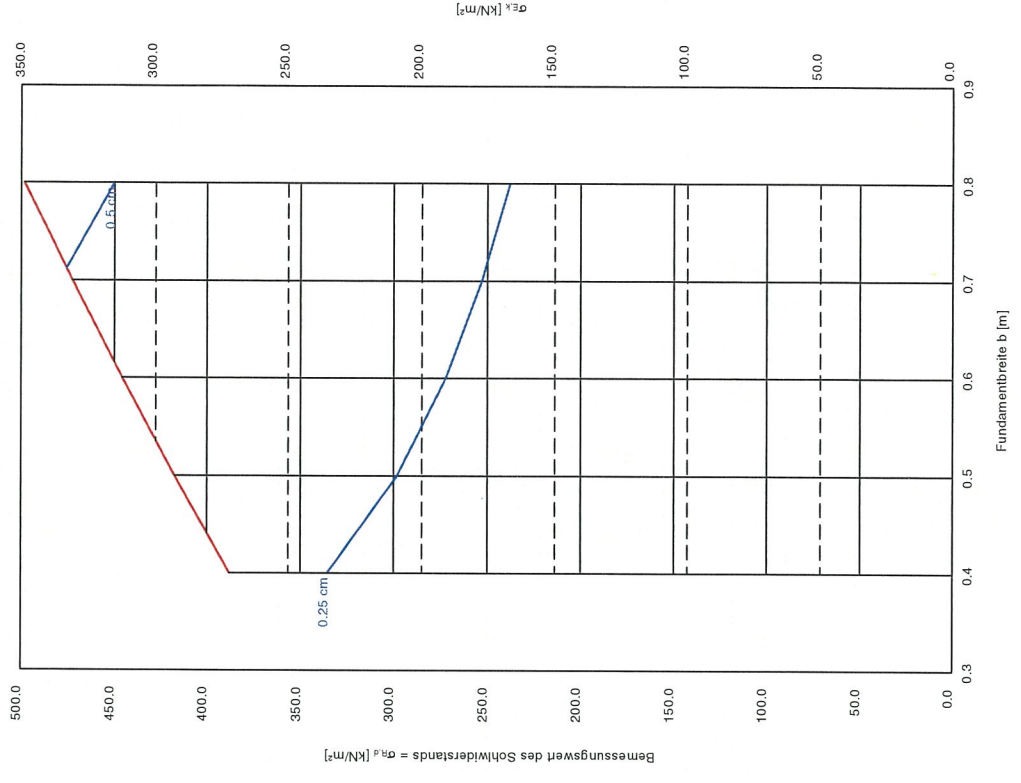


a [m]	b [m]	$\sigma_{s,d}$ [kN/m ²]	$F_{s,d}$ [kN/m]	$\sigma_{E,k}$ [kN/m ²]	s [cm]	cat ϕ [°]	cat c [kN/m ²]	γ_2 [kN/m ³]	σ_u [kN/m ²]	t_g [m]	UK LS [m]	k_s [MN/m ³]
1.00	0.40	388.1	155.2	272.4	0.29	32.5	0.00	20.00	14.65	2.83	1.49	93.1
1.00	0.50	417.6	208.8	293.0	0.36	32.5	0.00	20.00	14.65	3.07	1.67	81.5
1.00	0.60	445.8	267.5	312.8	0.43	32.5	0.00	20.00	14.65	3.29	1.84	73.4
1.00	0.70	472.7	330.9	331.7	0.49	32.5	0.00	20.00	14.65	3.50	2.01	67.3
1.00	0.80	498.3	398.7	349.7	0.56	32.5	0.00	20.00	14.65	3.69	2.19	62.7

$\sigma_{E,k} = \sigma_{s,d} / (\gamma_{s,d} \cdot \gamma_{(G,Q)}) = \sigma_{s,d} / (1.40 \cdot 1.43) = \sigma_{s,d} / 1.99$ (für Setzungen)
Verhältnis Veränderliche(Q)/Gesamlasten(G+Q) F] = 0.50

Berechnungsgrundlagen:
 Norm: EC 7
 BS: DIN 1054: BS-P
 Grundbruchformel nach DIN 4017:2006
 Teilsicherheitskonzept (EC 7)
 Streifenfundament (a = 1.00 m)
 $\gamma_{r,v} = 1.40$
 $\gamma_a = 1.35$
 $\gamma_a = 1.50$
 Anteil Veränderliche Lasten = 0.500

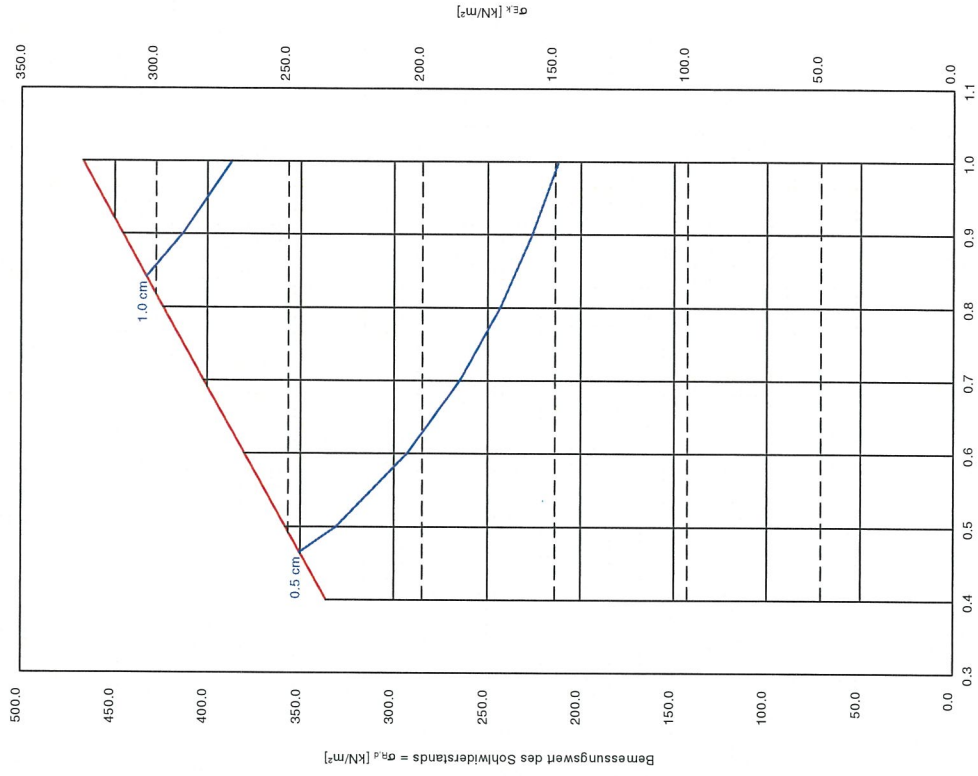
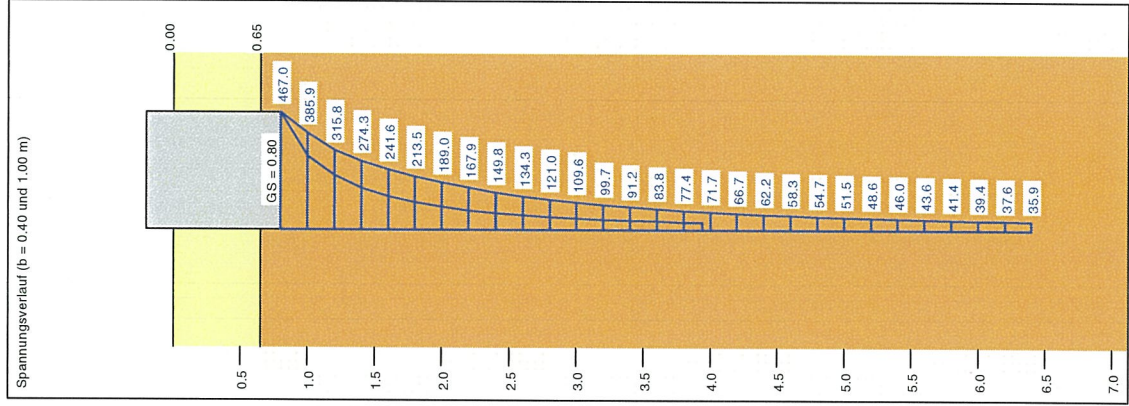
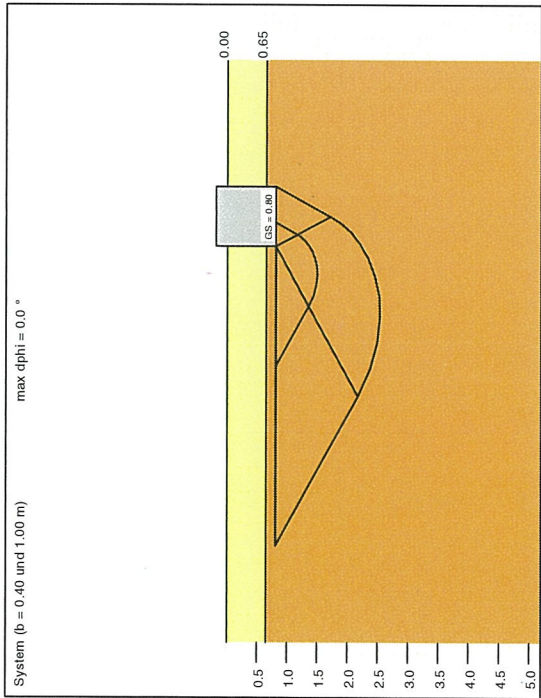
$\gamma_{(G,Q)} = 0.500 \cdot \gamma_a + (1 - 0.500) \cdot \gamma_g$
 $\gamma_{(G,Q)} = 1.425$
 Gründungssohle = 0.80 m
 Grundwasser = 10.00 m
 Grenztiefe mit p = 20.0 %
 Grenztiefen spannungsvariabel bestimmt
 — Schindruck
 — Setzungen



Anlage 6 Setzungsberechnung, Hp. Steinalben Modulgebäude, Verwendung des Profils KRB/DPH 19,017

Boden	γ [kN/m ³]	γ' [kN/m ³]	ϕ [°]	c [kN/m ²]	E_s [MN/m ²]	v [-]	Bezeichnung
1	17.0	9.5	30.0	0.0	15.0	0.00	Schicht 1.1a [GT, GE, ST]
2	20.0	12.0	32.5	0.0	40.0	0.00	Schicht 3.1 (Sst, v5)

Berechnungsgrundlagen:
 Norm: EC 7
 $\gamma_{(e,0)} = 0.500 \cdot \gamma_a + (1 - 0.500) \cdot \gamma_g$
 $\gamma_{(e,0)} = 1.425$
 BS: DIN 1054; BS-P
 Grundbruchformel nach DIN 4017:2006
 Grundwasser = 10.00 m
 Teilsicherheitskonzept (EC 7)
 Streifenfundament (a = 12.00 m)
 $\gamma_{R,v} = 1.40$
 $\gamma_G = 1.35$
 $\gamma_Q = 1.50$
 Anteil Veränderliche Lasten = 0.500



a	b	$\sigma_{n,d}$	$R_{n,d}$	σ_{Ex}	s	cal ϕ	cal c	γ_z	σ'_0	γ_y	γ_y	UKLS	k_s
[m]	[m]	[kN/m ²]	[kN/m]	[kN/m ²]	[cm]	[°]	[kN/m ²]	[kN/m ²]	[kN/m ²]	[m]	[m]	[m]	[MN/m ³]
12.00	0.40	336.1	134.5	235.9	0.43	32.5	0.00	20.00	14.05	3.94	1.49	55.2	
12.00	0.50	359.2	179.1	251.4	0.55	32.5	0.00	20.00	14.05	4.40	1.67	46.0	
12.00	0.60	380.2	228.1	266.8	0.67	32.5	0.00	20.00	14.05	4.83	1.84	39.7	
12.00	0.70	402.1	281.5	282.2	0.80	32.5	0.00	20.00	14.05	5.24	2.01	35.1	
12.00	0.80	423.8	339.1	297.4	0.94	32.5	0.00	20.00	14.05	5.64	2.19	31.5	
12.00	0.90	445.5	400.9	312.6	1.09	32.5	0.00	20.00	14.05	6.02	2.36	28.7	
12.00	1.00	467.0	467.0	327.8	1.24	32.5	0.00	20.00	14.05	6.40	2.53	26.5	

$\sigma_{Ex} = \sigma_{n,d} / (\gamma_{R,v} \cdot \gamma_{(e,0)}) = \sigma_{n,d} / (1.40 \cdot 1.43) = \sigma_{n,d} / 1.99$ (für Setzungen)
 Verhältnis Veränderliche(Q)/Gesamtlasten(G+Q) [] = 0.50