PROVINCIA DI BENEVENTO

Settore Viabilità 1 e connesse infrastrutture

PROGRAMMA OPERATIVO COMPLEMENTARE CAMPANIA 2014/2020
LINEA D'AZIONE RIGENERAZIONE URBANA
AZIONE OPERATIVA FONDO DI ROTAZIONE PER LA PROGETTAZIONE DEGLI ENTI LOCALI

PROGETTO

Servizi di ingegneria di progettazione definitiva ed esecutiva, C.S.P. indagini geognostiche e relazione geologica - lavori di completamento e risanamento della S.P. n°44 di penetrazione e collegamento San Giorgio La Molara - SS. 90 bis - II lotto

FASE PROGETTUALE

PROGETTO DEFINITIVO

ELABORATO	FASE	GRUPPO	TAVOLA	PROGRESIVO
VERIFICA DI STABILITA' DEI PENDII	D	B	R004	04

FILE NOME	C.U.P.	C.I.G.	SCALA
DCG01626_PLANIMETRIA CON UBICAZIONE DI SAGGI E SONDAGGI	I31B16000460002	7085240D00	1:10000

PROGETTISTA
RTP:
GENERAL ENGINEERING SRL (Capogruppo mandatario)
ISO 9001 OHSAS
Ing. Antonello SCOCCA

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Ing. Francesco Junior MARCHESE (mandante)
Geol. Dott. Daniele PIPICELLI (mandante)
Geom. Nicola LAUDATO (mandante)

RUP
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Ing. Carlo CAMILLERI
Ing. Nicola CAMILLERI
Arch. Francesco COVINO

REVISIONE	DATA	OGGETTO	APPROVATO
0	Giugno 2018	Emissione - verifica intermedia RUP	Ing. Antonello SCOCCA

Report di Calcolo

Sommario

Contenuto Sommario

1. Descrizione del Software

ParatiePlus analizza il comportamento meccanico di una struttura di sostegno flessibile di uno scavo in terreno o roccia, ponendo l'accento sull'aspetto dell'interazione "locale" fra parete e terreno.

ParatiePlus non permette lo studio di problematiche che coinvolgano un movimento esteso del versante di scavo, in quanto ParatiePlus non consente lo sviluppo di movimenti rigidi della parete o parti di ammasso rispetto ad altre parti di terreno.

Scopo precipuo di ParatiePlus è quindi il calcolo delle azioni flettenti e taglianti e delle deformazioni laterali della parete di sostegno, e la valutazione di tutte quelle grandezze a queste connesse.

Lo studio di una parete flessibile è condotto attraverso una simulazione numerica del reale: il programma stabilisce e risolve un sistema di equazioni algebriche la cui soluzione permette di riprodurre abbastanza realisticamente l'effettivo comportamento dell'opera di sostegno.

La simulazione numerica è quella offerta dal metodo degli elementi finiti.

La schematizzazione in elementi finiti avviene in questo modo:

• si analizza un problema piano (nel piano Y-Z): i gradi di libertà nodali attivi sono lo spostamento laterale e la rotazione fuori piano: gli spostamenti verticali sono automaticamente vincolati(di conseguenza le azioni assiali nelle pareti verticali non sono calcolate);

• la parete flessibile di sostegno vera e propria è schematizzata da una serie di elementi finiti BEAM verticali;

• il terreno, che spinge contro la parete (da monte e da valle) e che reagisce in modo complesso alle deformazioni della parete, è simulato attraverso un doppio letto di molle elasto-plastiche connesse agli stessi nodi della parete;

• i tiranti, i puntoni, le solette, gli appoggi cedevoli o fissi, sono schematizzati tramite molle puntuali convergenti in alcuni punti (nodi) della parete ove convergono parimenti elementi BEAM ed elementi terreno.

2. Descrizione della Stratigrafia e degli Strati di Terreno

Tipo : HORIZONTAL
Quota : 0 m
OCR : 1

Tipo : HORIZONTAL
Quota : -1.9 m
OCR : 1

Tipo : HORIZONTAL
Quota : -3.8 m
OCR : 1

Tipo : HORIZONTAL
Quota : -12.5 m
OCR : 1

Tipo : HORIZONTAL
Quota : -19 m
OCR : 1

Strato di Terreno	Terreno	γ dry	γ sat	ø'	øcv	øp	c'	Su	Modulo Elastico	Eu	Evc	Eur	Ah	Av	exp	Pa	Rur/Rvc	Rvc	Ku	Kvc	Kur
		kN/m³	kN/m³	°	°	°	kPa	kPa			kPa	kPa				kPa		kPa	kN/m³	kN/m³	kN/m³
1	Sand	19	20	30			0		Constant		15000	44999.99									
2	Clay1	14	16.5		26	18		20	Winkler										3000	3143.04	9429.13
3	Clay2	19	20		30	21.1		150	Winkler										20000	4714.57	14143.7
4	Silt	16.5	19	28			2		Winkler											3143.04	9429.13
5	Rock	25	27	30			100		Winkler											31430.45	94291.34

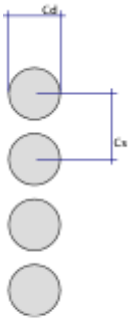
3. Descrizione Pareti

X : 0 m
Quota in alto : 0 m
Quota di fondo : -18 m
Muro di sinistra

Armatura Lunghezza segmenti : 1 m
Rinforzo longitudinale 1
Lunghezza : 18 m
Materiale :
Quota iniziale : 0 m
Barre 1
Numero di barre : 6
Diametro : 0.022 m
Distanza dal bordo : 0.067 m
Staffe 1
Numero di staffe : 2
Copertura : 0.05 m
Diametro : 0.006 m
Lunghezza : 18 m
Quota iniziale : 0 m
Passo : 0.3 m
Rinforzo longitudinale 2
Lunghezza : 18 m
Materiale :
Quota iniziale : 0 m
Barre 1
Numero di barre : 20
Diametro : 0.02 m
Distanza dal bordo : 0.067 m
Staffe 1
Numero di staffe : 2
Copertura : 0.045 m
Diametro : 0.012 m
Lunghezza : 18 m
Quota iniziale : 0 m
Passo : 0.3 m

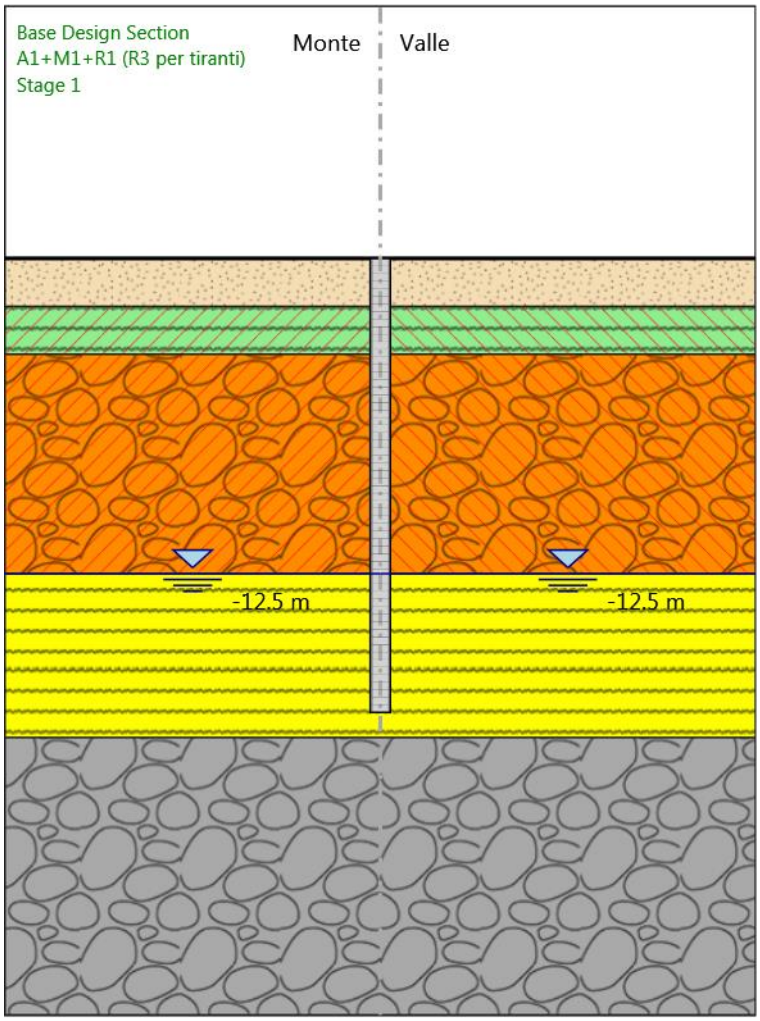
Sezione : Paratia pali fi 800
Area equivalente : 0.502654824574367 m
Inerzia equivalente : 0.0201 m^4/m
Materiale calcestruzzo : C25/30
Tipo sezione : Tangent
Spaziatura : 1 m
Diametro : 0.8 m

Efficacia : 1



4. Fasi di Calcolo

4.1. Stage 1



Stage 1

Elementi strutturali

Paratia : WallElement

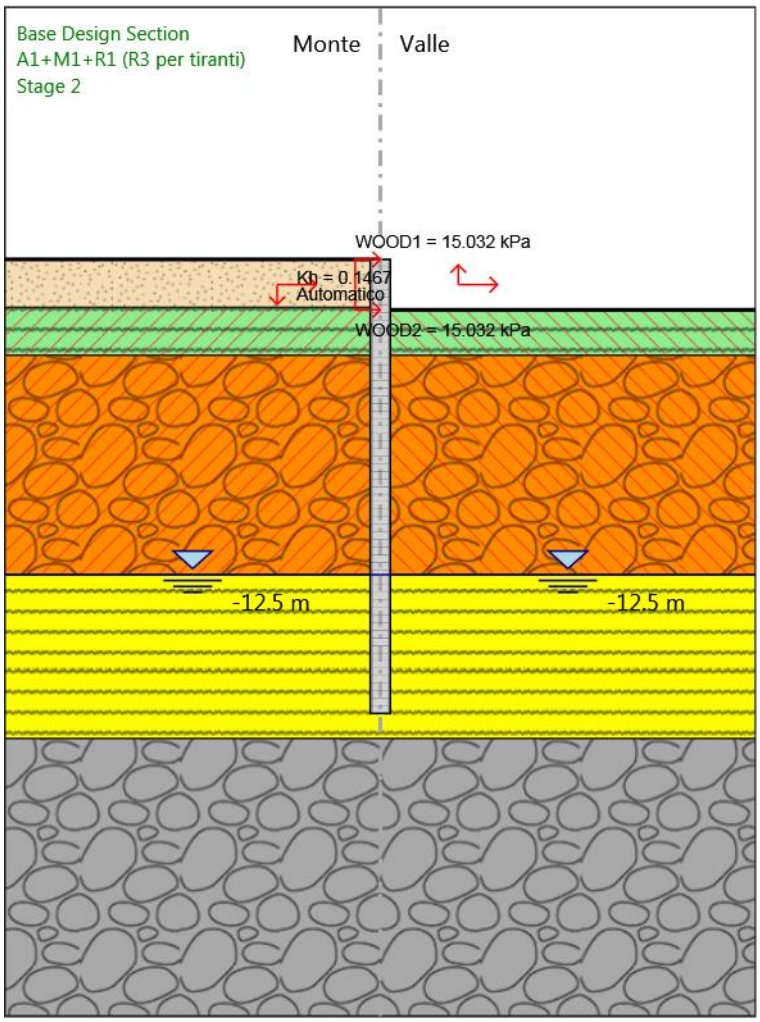
X : 0 m

Quota in alto : 0 m

Quota di fondo : -18 m

Sezione : Paratia pali fi 800

4.2. Stage 2



Stage 2

Elementi strutturali

Paratia : WallElement

X : 0 m

Quota in alto : 0 m

Quota di fondo : -18 m

Sezione : Paratia pali fi 800

5. Grafici dei Risultati

5.1. Design Assumption : Nominal

5.1.1. Tabella Spostamento Nominal - LEFT Stage: Stage 1

Design Assumption: Nominal	Tipo Risultato: Spostamento	Muro: LEFT
Stage	Z (m)	Spostamento (mm)
Stage 1	0	0
Stage 1	-0.2	0
Stage 1	-0.4	0
Stage 1	-0.6	0
Stage 1	-0.8	0
Stage 1	-1	0
Stage 1	-1.2	0
Stage 1	-1.4	0
Stage 1	-1.6	0
Stage 1	-1.8	0
Stage 1	-2	0
Stage 1	-2.2	0
Stage 1	-2.4	0
Stage 1	-2.6	0
Stage 1	-2.8	0
Stage 1	-3	0
Stage 1	-3.2	0
Stage 1	-3.4	0
Stage 1	-3.6	0
Stage 1	-3.8	0
Stage 1	-4	0
Stage 1	-4.2	0
Stage 1	-4.4	0
Stage 1	-4.6	0
Stage 1	-4.8	0
Stage 1	-5	0
Stage 1	-5.2	0
Stage 1	-5.4	0
Stage 1	-5.6	0
Stage 1	-5.8	0
Stage 1	-6	0
Stage 1	-6.2	0
Stage 1	-6.4	0
Stage 1	-6.6	0
Stage 1	-6.8	0
Stage 1	-7	0
Stage 1	-7.2	0
Stage 1	-7.4	0
Stage 1	-7.6	0
Stage 1	-7.8	0
Stage 1	-8	0
Stage 1	-8.2	0
Stage 1	-8.4	0
Stage 1	-8.6	0
Stage 1	-8.8	0
Stage 1	-9	0
Stage 1	-9.2	0
Stage 1	-9.4	0
Stage 1	-9.6	0
Stage 1	-9.8	0
Stage 1	-10	0
Stage 1	-10.2	0
Stage 1	-10.4	0
Stage 1	-10.6	0
Stage 1	-10.8	0
Stage 1	-11	0
Stage 1	-11.2	0
Stage 1	-11.4	0

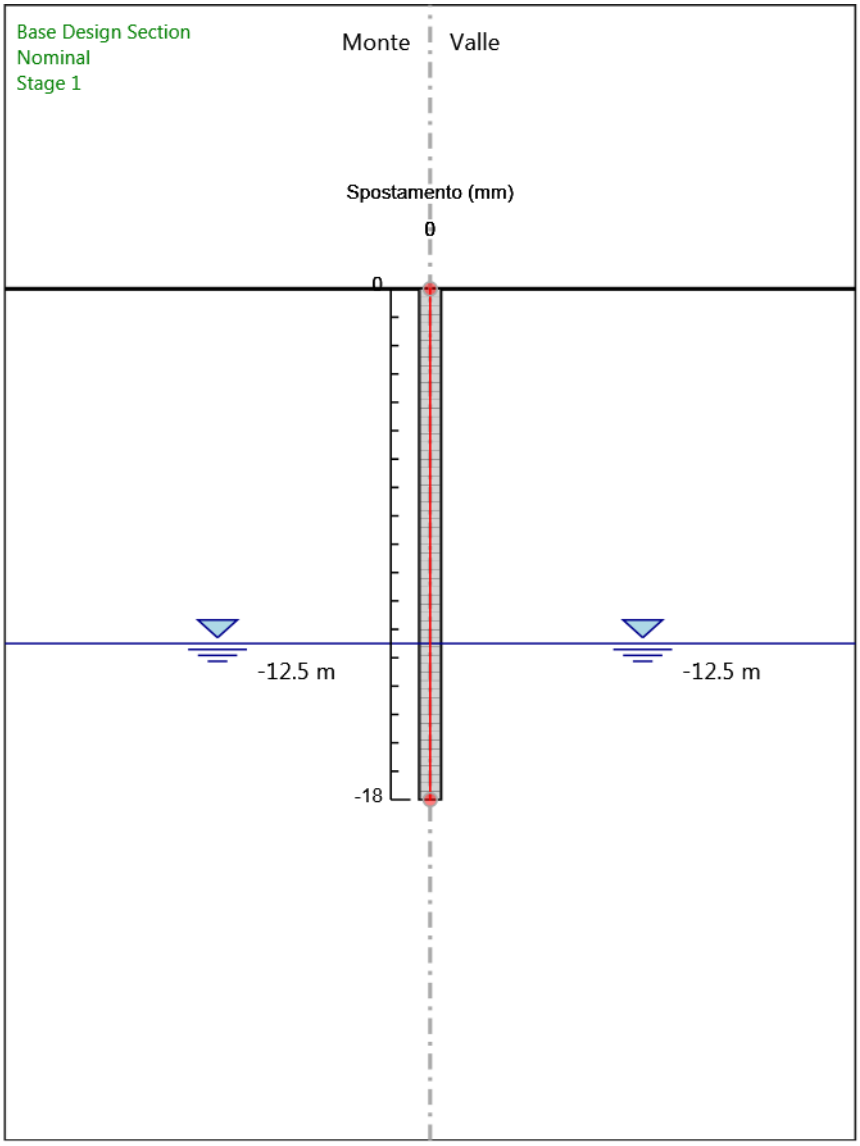
Design Assumption: Nominal	Tipo Risultato: Spostamento	Muro: LEFT
Stage	Z (m)	Spostamento (mm)
Stage 1	-11.6	0
Stage 1	-11.8	0
Stage 1	-12	0
Stage 1	-12.2	0
Stage 1	-12.4	0
Stage 1	-12.6	0
Stage 1	-12.8	0
Stage 1	-13	0
Stage 1	-13.2	0
Stage 1	-13.4	0
Stage 1	-13.6	0
Stage 1	-13.8	0
Stage 1	-14	0
Stage 1	-14.2	0
Stage 1	-14.4	0
Stage 1	-14.6	0
Stage 1	-14.8	0
Stage 1	-15	0
Stage 1	-15.2	0
Stage 1	-15.4	0
Stage 1	-15.6	0
Stage 1	-15.8	0
Stage 1	-16	0
Stage 1	-16.2	0
Stage 1	-16.4	0
Stage 1	-16.6	0
Stage 1	-16.8	0
Stage 1	-17	0
Stage 1	-17.2	0
Stage 1	-17.4	0
Stage 1	-17.6	0
Stage 1	-17.8	0
Stage 1	-18	0

5.1.2. Tabella Spostamento Nominal - LEFT Stage: Stage 2

Design Assumption: Nominal	Tipo Risultato: Spostamento	Muro: LEFT
Stage	Z (m)	Spostamento (mm)
Stage 2	0	1.39
Stage 2	-0.2	1.03
Stage 2	-0.4	0.67
Stage 2	-0.6	0.31
Stage 2	-0.8	-0.05
Stage 2	-1	-0.41
Stage 2	-1.2	-0.77
Stage 2	-1.4	-1.13
Stage 2	-1.6	-1.49
Stage 2	-1.8	-1.84
Stage 2	-2	-2.2
Stage 2	-2.2	-2.56
Stage 2	-2.4	-2.91
Stage 2	-2.6	-3.27
Stage 2	-2.8	-3.62
Stage 2	-3	-3.96
Stage 2	-3.2	-4.31
Stage 2	-3.4	-4.64
Stage 2	-3.6	-4.98
Stage 2	-3.8	-5.3
Stage 2	-4	-5.62
Stage 2	-4.2	-5.92
Stage 2	-4.4	-6.22
Stage 2	-4.6	-6.51
Stage 2	-4.8	-6.78
Stage 2	-5	-7.03
Stage 2	-5.2	-7.27
Stage 2	-5.4	-7.49
Stage 2	-5.6	-7.7
Stage 2	-5.8	-7.88
Stage 2	-6	-8.05
Stage 2	-6.2	-8.2
Stage 2	-6.4	-8.32
Stage 2	-6.6	-8.42
Stage 2	-6.8	-8.51
Stage 2	-7	-8.57
Stage 2	-7.2	-8.61
Stage 2	-7.4	-8.63
Stage 2	-7.6	-8.63
Stage 2	-7.8	-8.61
Stage 2	-8	-8.58
Stage 2	-8.2	-8.52
Stage 2	-8.4	-8.45
Stage 2	-8.6	-8.36
Stage 2	-8.8	-8.26
Stage 2	-9	-8.14
Stage 2	-9.2	-8
Stage 2	-9.4	-7.86
Stage 2	-9.6	-7.69
Stage 2	-9.8	-7.52
Stage 2	-10	-7.33
Stage 2	-10.2	-7.14
Stage 2	-10.4	-6.93
Stage 2	-10.6	-6.71
Stage 2	-10.8	-6.48
Stage 2	-11	-6.25
Stage 2	-11.2	-6
Stage 2	-11.4	-5.75
Stage 2	-11.6	-5.49
Stage 2	-11.8	-5.23
Stage 2	-12	-4.96
Stage 2	-12.2	-4.68
Stage 2	-12.4	-4.41
Stage 2	-12.6	-4.13
Stage 2	-12.8	-3.85

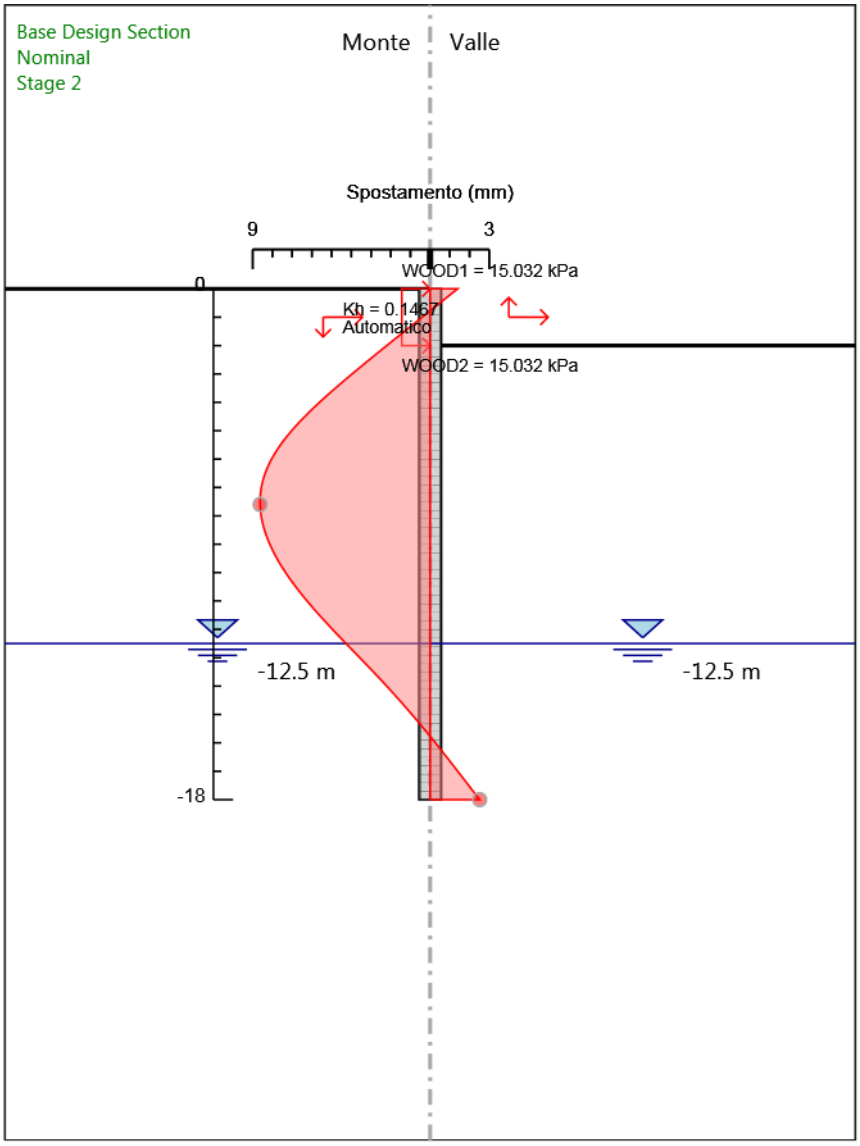
Design Assumption: Nominal	Tipo Risultato: Spostamento	Muro: LEFT
Stage	Z (m)	Spostamento (mm)
Stage 2	-13	-3.57
Stage 2	-13.2	-3.29
Stage 2	-13.4	-3.02
Stage 2	-13.6	-2.74
Stage 2	-13.8	-2.47
Stage 2	-14	-2.2
Stage 2	-14.2	-1.94
Stage 2	-14.4	-1.68
Stage 2	-14.6	-1.43
Stage 2	-14.8	-1.17
Stage 2	-15	-0.92
Stage 2	-15.2	-0.68
Stage 2	-15.4	-0.44
Stage 2	-15.6	-0.2
Stage 2	-15.8	0.03
Stage 2	-16	0.27
Stage 2	-16.2	0.5
Stage 2	-16.4	0.72
Stage 2	-16.6	0.95
Stage 2	-16.8	1.18
Stage 2	-17	1.4
Stage 2	-17.2	1.62
Stage 2	-17.4	1.85
Stage 2	-17.6	2.07
Stage 2	-17.8	2.29
Stage 2	-18	2.51

5.1.3. Grafico Spostamento Nominal - Stage: Stage 1



Design Assumption: Nominal
Stage: Stage 1
Spostamento

5.1.4. Grafico Spostamento Nominal - Stage: Stage 2



Design Assumption: Nominal
Stage: Stage 2
Spostamento

5.2. Risultati Paratia

5.2.1. Tabella Risultati Paratia Nominal - Stage: Stage 1

Design Assumption: Nominal	Risultati Paratia	Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	0	0	0
Stage 1	-0.2	0	0
Stage 1	-0.4	0	0
Stage 1	-0.6	0	0
Stage 1	-0.8	0	0
Stage 1	-1	0	0
Stage 1	-1.2	0	0
Stage 1	-1.4	0	0
Stage 1	-1.6	0	0
Stage 1	-1.8	0	0
Stage 1	-2	0	0
Stage 1	-2.2	0	0
Stage 1	-2.4	0	0
Stage 1	-2.6	0	0
Stage 1	-2.8	0	0
Stage 1	-3	0	0
Stage 1	-3.2	0	0
Stage 1	-3.4	0	0
Stage 1	-3.6	0	0
Stage 1	-3.8	0	0
Stage 1	-4	0	0
Stage 1	-4.2	0	0
Stage 1	-4.4	0	0
Stage 1	-4.6	0	0
Stage 1	-4.8	0	0
Stage 1	-5	0	0
Stage 1	-5.2	0	0
Stage 1	-5.4	0	0
Stage 1	-5.6	0	0
Stage 1	-5.8	0	0
Stage 1	-6	0	0
Stage 1	-6.2	0	0
Stage 1	-6.4	0	0
Stage 1	-6.6	0	0
Stage 1	-6.8	0	0
Stage 1	-7	0	0
Stage 1	-7.2	0	0
Stage 1	-7.4	0	0
Stage 1	-7.6	0	0
Stage 1	-7.8	0	0
Stage 1	-8	0	0
Stage 1	-8.2	0	0
Stage 1	-8.4	0	0
Stage 1	-8.6	0	0
Stage 1	-8.8	0	0
Stage 1	-9	0	0
Stage 1	-9.2	0	0
Stage 1	-9.4	0	0
Stage 1	-9.6	0	0
Stage 1	-9.8	0	0
Stage 1	-10	0	0
Stage 1	-10.2	0	0
Stage 1	-10.4	0	0
Stage 1	-10.6	0	0
Stage 1	-10.8	0	0
Stage 1	-11	0	0
Stage 1	-11.2	0	0
Stage 1	-11.4	0	0
Stage 1	-11.6	0	0
Stage 1	-11.8	0	0
Stage 1	-12	0	0
Stage 1	-12.2	0	0

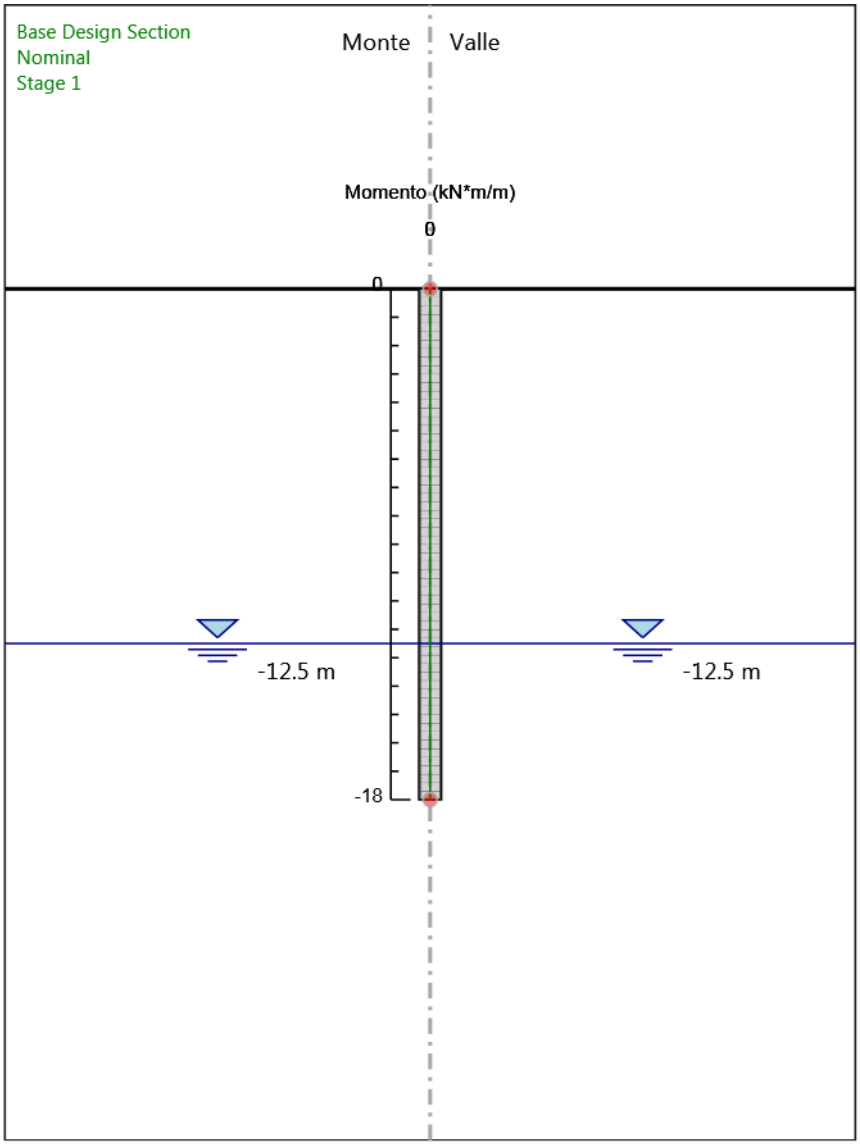
Design Assumption: Nominal	Risultati Paratia	Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 1	-12.4	0	0
Stage 1	-12.6	0	0
Stage 1	-12.8	0	0
Stage 1	-13	0	0
Stage 1	-13.2	0	0
Stage 1	-13.4	0	0
Stage 1	-13.6	0	0
Stage 1	-13.8	0	0
Stage 1	-14	0	0
Stage 1	-14.2	0	0
Stage 1	-14.4	0	0
Stage 1	-14.6	0	0
Stage 1	-14.8	0	0
Stage 1	-15	0	0
Stage 1	-15.2	0	0
Stage 1	-15.4	0	0
Stage 1	-15.6	0	0
Stage 1	-15.8	0	0
Stage 1	-16	0	0
Stage 1	-16.2	0	0
Stage 1	-16.4	0	0
Stage 1	-16.6	0	0
Stage 1	-16.8	0	0
Stage 1	-17	0	0
Stage 1	-17.2	0	0
Stage 1	-17.4	0	0
Stage 1	-17.6	0	0
Stage 1	-17.8	0	0
Stage 1	-18	0	0

5.2.2. Tabella Risultati Paratia Nominal - Stage: Stage 2

Design Assumption: Nominal	Risultati Paratia	Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	0	0	0
Stage 2	-0.2	0	0
Stage 2	-0.2	0	0
Stage 2	-0.4	-0.08	-0.39
Stage 2	-0.6	-0.31	-1.15
Stage 2	-0.8	-0.77	-2.29
Stage 2	-1	-1.54	-3.85
Stage 2	-1.2	-2.84	-6.5
Stage 2	-1.4	-4.88	-10.23
Stage 2	-1.6	-7.89	-15.04
Stage 2	-1.8	-12.08	-20.94
Stage 2	-2	-17.66	-27.91
Stage 2	-2.2	-24.36	-33.49
Stage 2	-2.4	-32.28	-39.6
Stage 2	-2.6	-41.53	-46.25
Stage 2	-2.8	-52.22	-53.45
Stage 2	-3	-64.45	-61.18
Stage 2	-3.2	-78.33	-69.38
Stage 2	-3.4	-93.91	-77.9
Stage 2	-3.6	-111.26	-86.74
Stage 2	-3.8	-130.43	-95.87
Stage 2	-4	-150.54	-100.52
Stage 2	-4.2	-171.23	-103.48
Stage 2	-4.4	-192.18	-104.72
Stage 2	-4.6	-213.02	-104.2
Stage 2	-4.8	-233.39	-101.87
Stage 2	-5	-252.92	-97.68
Stage 2	-5.2	-271.24	-91.58
Stage 2	-5.4	-287.94	-83.51
Stage 2	-5.6	-302.62	-73.4
Stage 2	-5.8	-314.86	-61.18
Stage 2	-6	-324.21	-46.78
Stage 2	-6.2	-330.24	-30.13
Stage 2	-6.4	-332.75	-12.57
Stage 2	-6.6	-332.35	2.01
Stage 2	-6.8	-329.55	14.01
Stage 2	-7	-324.79	23.79
Stage 2	-7.2	-318.46	31.66
Stage 2	-7.4	-310.89	37.87
Stage 2	-7.6	-302.35	42.68
Stage 2	-7.8	-293.09	46.29
Stage 2	-8	-283.32	48.88
Stage 2	-8.2	-273.19	50.63
Stage 2	-8.4	-262.85	51.7
Stage 2	-8.6	-252.41	52.22
Stage 2	-8.8	-241.94	52.33
Stage 2	-9	-231.51	52.15
Stage 2	-9.2	-221.16	51.78
Stage 2	-9.4	-210.89	51.33
Stage 2	-9.6	-200.71	50.89
Stage 2	-9.8	-190.6	50.56
Stage 2	-10	-180.52	50.41
Stage 2	-10.2	-170.41	50.52
Stage 2	-10.4	-160.22	50.96
Stage 2	-10.6	-149.86	51.8
Stage 2	-10.8	-139.24	53.1
Stage 2	-11	-128.26	54.91
Stage 2	-11.2	-116.8	57.29
Stage 2	-11.4	-104.75	60.29
Stage 2	-11.6	-91.96	63.94
Stage 2	-11.8	-78.3	68.3
Stage 2	-12	-63.62	73.4
Stage 2	-12.2	-47.76	79.26
Stage 2	-12.4	-30.58	85.93
Stage 2	-12.6	-11.89	93.42

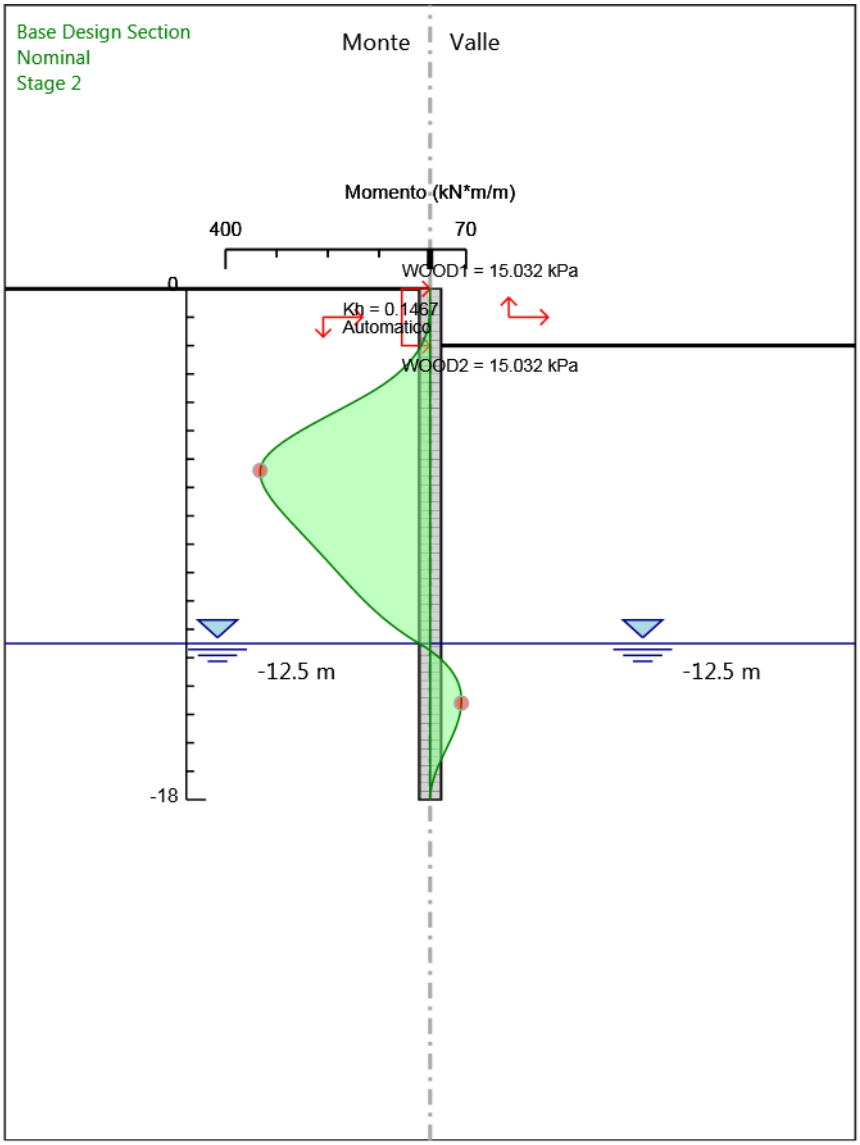
Design Assumption: Nominal	Risultati Paratia	Muro: LEFT	
Stage	Z (m)	Momento (kN*m/m)	Taglio (kN/m)
Stage 2	-12.8	4.3	80.97
Stage 2	-13	18.15	69.23
Stage 2	-13.2	29.79	58.2
Stage 2	-13.4	39.36	47.87
Stage 2	-13.6	47.01	38.24
Stage 2	-13.8	52.87	29.3
Stage 2	-14	57.08	21.05
Stage 2	-14.2	59.77	13.47
Stage 2	-14.4	61.09	6.57
Stage 2	-14.6	61.15	0.32
Stage 2	-14.8	60.09	-5.28
Stage 2	-15	58.05	-10.24
Stage 2	-15.2	55.13	-14.56
Stage 2	-15.4	51.48	-18.26
Stage 2	-15.6	47.21	-21.35
Stage 2	-15.8	42.44	-23.84
Stage 2	-16	37.3	-25.72
Stage 2	-16.2	31.94	-26.78
Stage 2	-16.4	26.55	-26.98
Stage 2	-16.6	21.29	-26.31
Stage 2	-16.8	16.33	-24.79
Stage 2	-17	11.82	-22.53
Stage 2	-17.2	7.88	-19.71
Stage 2	-17.4	4.61	-16.33
Stage 2	-17.6	2.14	-12.38
Stage 2	-17.8	0.56	-7.88
Stage 2	-18	0	-2.81

5.2.3. Grafico Momento Nominal - Stage: Stage 1



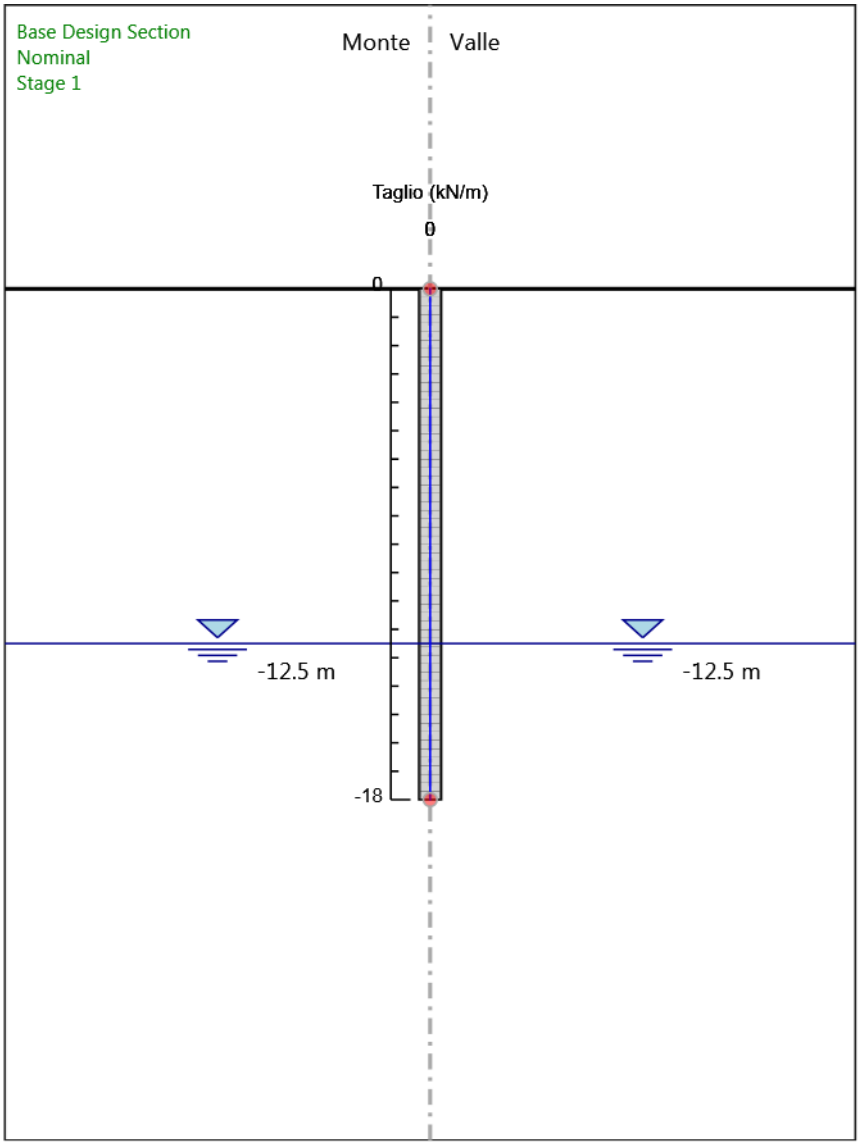
Design Assumption: Nominal
Stage: Stage 1
Momento

5.2.4. Grafico Momento Nominal - Stage: Stage 2



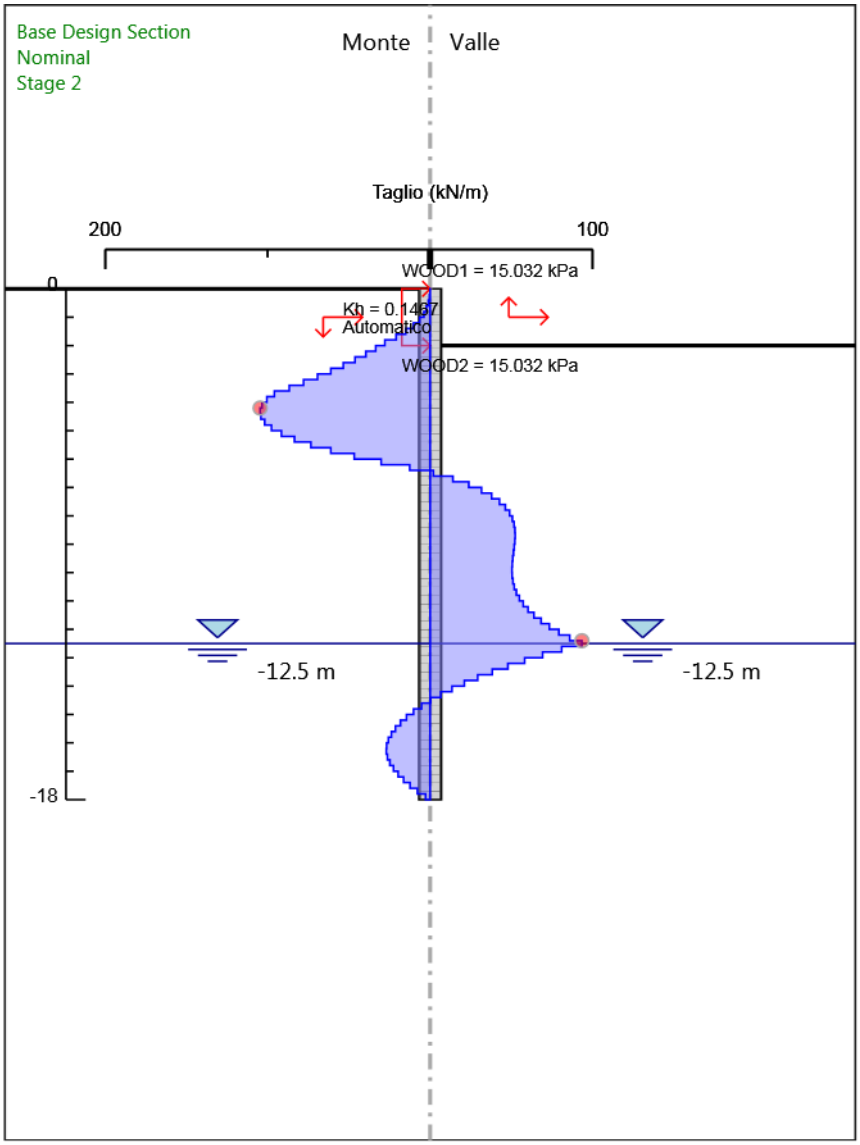
Design Assumption: Nominal
Stage: Stage 2
Momento

5.2.5. Grafico Taglio Nominal - Stage: Stage 1



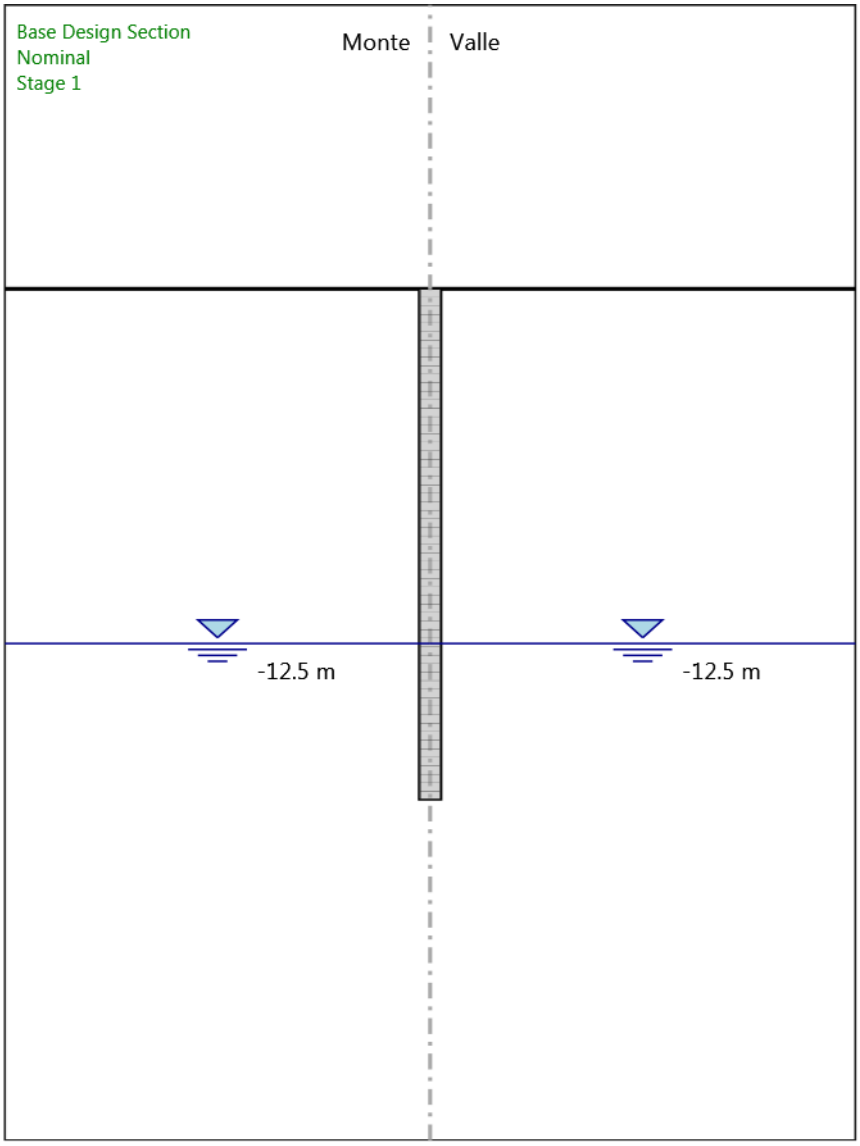
Design Assumption: Nominal
Stage: Stage 1
Taglio

5.2.6. Grafico Taglio Nominal - Stage: Stage 2



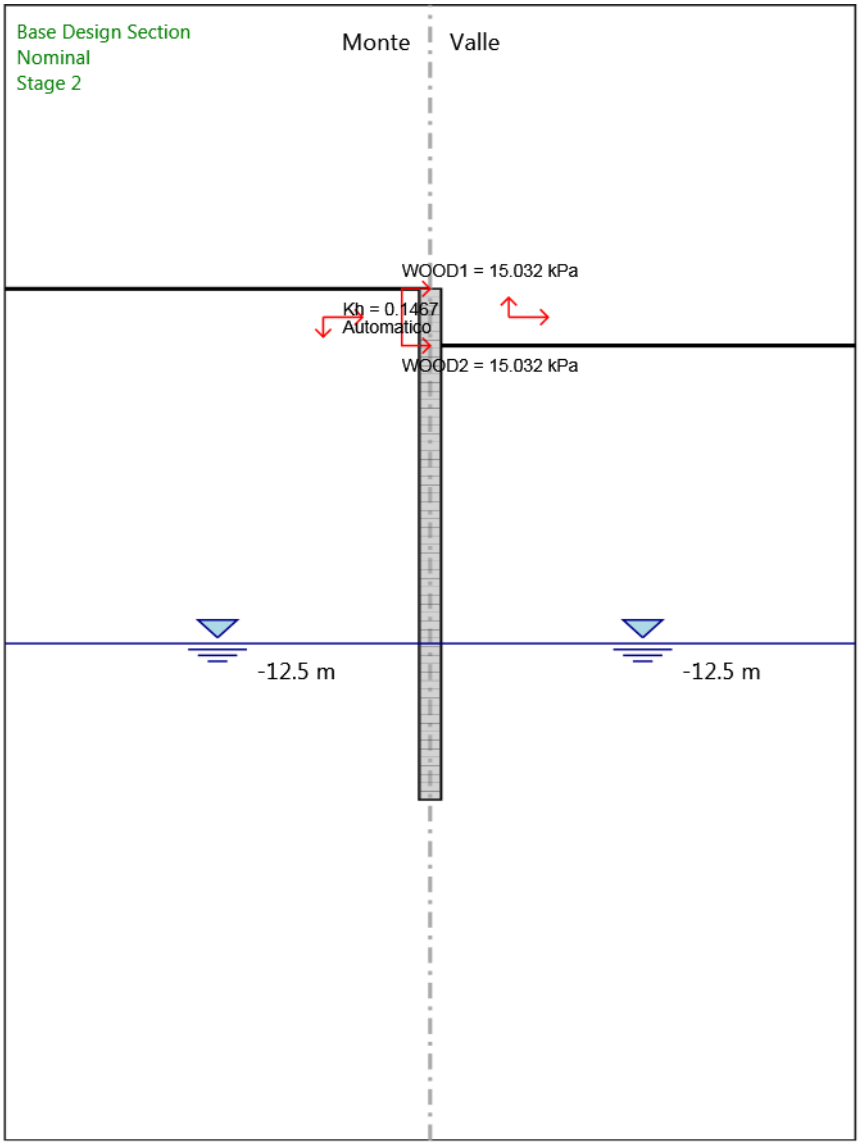
Design Assumption: Nominal
Stage: Stage 2
Taglio

5.2.7. Grafico Momento Nominal - Stage: Stage 1



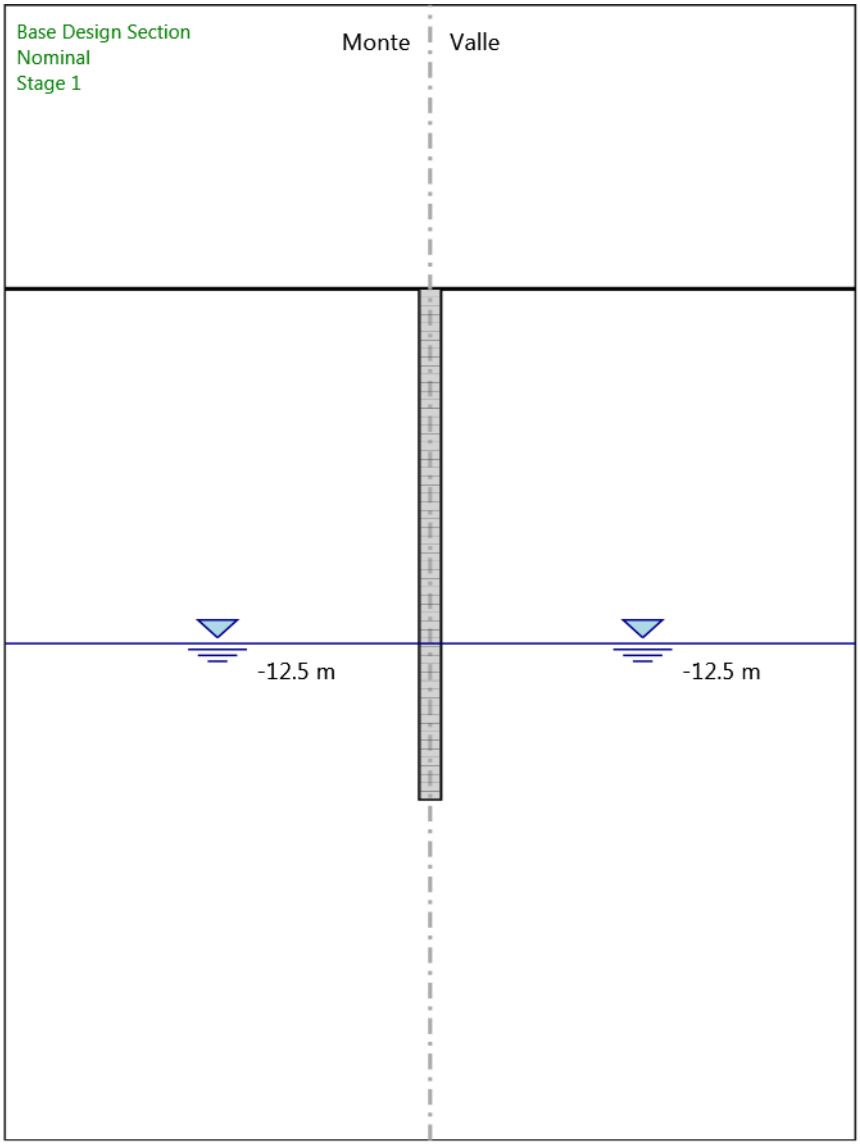
Design Assumption: Nominal
Stage: Stage 1
Momento

5.2.8. Grafico Momento Nominal - Stage: Stage 2



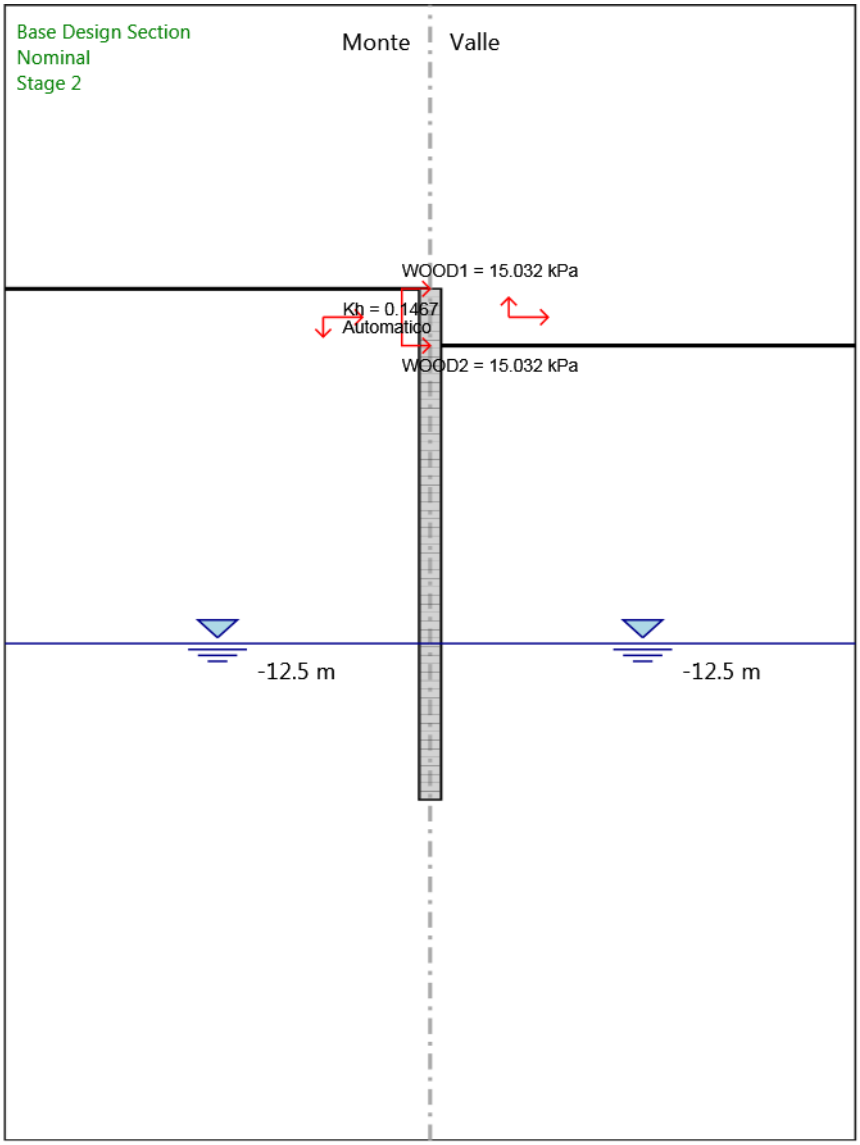
Design Assumption: Nominal
Stage: Stage 2
Momento

5.2.9. Grafico Taglio Nominal - Stage: Stage 1



Design Assumption: Nominal
Stage: Stage 1
Taglio

5.2.10. Grafico Taglio Nominal - Stage: Stage 2



Design Assumption: Nominal
Stage: Stage 2
Taglio

5.3. Risultati Terreno

5.3.1. Tabella Risultati Terreno Left Wall - Nominal - Stage 1

Design Assumption :	Nominal	Risultati Terreno	Muro:	LEFT		Lato	LEFT				
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Stage 1	0	0	0	V-C	0.333	4.288	0	0	0	0	0
Stage 1	-0.2	3.8	1.9	V-C	0.333	4.288	0	0	0	0	1.9
Stage 1	-0.4	7.6	3.8	V-C	0.333	4.288	0	0	0	0	3.8
Stage 1	-0.6	11.4	5.7	V-C	0.333	4.288	0	0	0	0	5.7
Stage 1	-0.8	15.2	7.6	V-C	0.333	4.288	0	0	0	0	7.6
Stage 1	-1	19	9.5	V-C	0.333	4.288	0	0	0	0	9.5
Stage 1	-1.2	22.8	11.4	V-C	0.333	4.288	0	0	0	0	11.4
Stage 1	-1.4	26.6	13.3	V-C	0.333	4.288	0	0	0	0	13.3
Stage 1	-1.6	30.4	15.2	V-C	0.333	4.288	0	0	0	0	15.2
Stage 1	-1.8	34.2	17.1	V-C	0.333	4.288	0	0	0	0	17.1
Stage 1	-2	37.5	21.075	V-C	0	0	0	0	0	0	21.075
Stage 1	-2.2	40.3	22.649	V-C	0	0	0	0	0	0	22.649
Stage 1	-2.4	43.1	24.222	V-C	0	0	0	0	0	0	24.222
Stage 1	-2.6	45.9	25.796	V-C	0	0	0	0	0	0	25.796
Stage 1	-2.8	48.7	27.369	V-C	0	0	0	0	0	0	27.369
Stage 1	-3	51.5	28.943	V-C	0	0	0	0	0	0	28.943
Stage 1	-3.2	54.3	30.517	V-C	0	0	0	0	0	0	30.517
Stage 1	-3.4	57.1	32.09	V-C	0	0	0	0	0	0	32.09
Stage 1	-3.6	59.9	33.664	V-C	0	0	0	0	0	0	33.664
Stage 1	-3.8	62.7	31.35	V-C	0	0	0	0	0	0	31.35
Stage 1	-4	66.5	33.25	V-C	0	0	0	0	0	0	33.25
Stage 1	-4.2	70.3	35.15	V-C	0	0	0	0	0	0	35.15
Stage 1	-4.4	74.1	37.05	V-C	0	0	0	0	0	0	37.05
Stage 1	-4.6	77.9	38.95	V-C	0	0	0	0	0	0	38.95
Stage 1	-4.8	81.7	40.85	V-C	0	0	0	0	0	0	40.85
Stage 1	-5	85.5	42.75	V-C	0	0	0	0	0	0	42.75
Stage 1	-5.2	89.3	44.65	V-C	0	0	0	0	0	0	44.65
Stage 1	-5.4	93.1	46.55	V-C	0	0	0	0	0	0	46.55
Stage 1	-5.6	96.9	48.45	V-C	0	0	0	0	0	0	48.45
Stage 1	-5.8	100.7	50.35	V-C	0	0	0	0	0	0	50.35
Stage 1	-6	104.5	52.25	V-C	0	0	0	0	0	0	52.25
Stage 1	-6.2	108.3	54.15	V-C	0	0	0	0	0	0	54.15
Stage 1	-6.4	112.1	56.05	V-C	0	0	0	0	0	0	56.05
Stage 1	-6.6	115.9	57.95	V-C	0	0	0	0	0	0	57.95
Stage 1	-6.8	119.7	59.85	V-C	0	0	0	0	0	0	59.85
Stage 1	-7	123.5	61.75	V-C	0	0	0	0	0	0	61.75
Stage 1	-7.2	127.3	63.65	V-C	0	0	0	0	0	0	63.65
Stage 1	-7.4	131.1	65.55	V-C	0	0	0	0	0	0	65.55
Stage 1	-7.6	134.9	67.45	V-C	0	0	0	0	0	0	67.45
Stage 1	-7.8	138.7	69.35	V-C	0	0	0	0	0	0	69.35
Stage 1	-8	142.5	71.25	V-C	0	0	0	0	0	0	71.25
Stage 1	-8.2	146.3	73.15	V-C	0	0	0	0	0	0	73.15
Stage 1	-8.4	150.1	75.05	V-C	0	0	0	0	0	0	75.05
Stage 1	-8.6	153.9	76.95	V-C	0	0	0	0	0	0	76.95
Stage 1	-8.8	157.7	78.85	V-C	0	0	0	0	0	0	78.85
Stage 1	-9	161.5	80.75	V-C	0	0	0	0	0	0	80.75
Stage 1	-9.2	165.3	82.65	V-C	0	0	0	0	0	0	82.65
Stage 1	-9.4	169.1	84.55	V-C	0	0	0	0	0	0	84.55
Stage 1	-9.6	172.9	86.45	V-C	0	0	0	0	0	0	86.45
Stage 1	-9.8	176.7	88.35	V-C	0	0	0	0	0	0	88.35
Stage 1	-10	180.5	90.25	V-C	0	0	0	0	0	0	90.25
Stage 1	-10.2	184.3	92.15	V-C	0	0	0	0	0	0	92.15
Stage 1	-10.4	188.1	94.05	V-C	0	0	0	0	0	0	94.05
Stage 1	-10.6	191.9	95.95	V-C	0	0	0	0	0	0	95.95
Stage 1	-10.8	195.7	97.85	V-C	0	0	0	0	0	0	97.85
Stage 1	-11	199.5	99.75	V-C	0	0	0	0	0	0	99.75
Stage 1	-11.2	203.3	101.65	V-C	0	0	0	0	0	0	101.65
Stage 1	-11.4	207.1	103.55	V-C	0	0	0	0	0	0	103.55

Design Assumption :	Nominal	Risultati Terreno	Muro:	LEFT		Lato	LEFT			
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Stage 1	-11.6	210.9	105.45	V-C	0	0	0	0	0	0	105.45
Stage 1	-11.8	214.7	107.35	V-C	0	0	0	0	0	0	107.35
Stage 1	-12	218.5	109.25	V-C	0	0	0	0	0	0	109.25
Stage 1	-12.2	222.3	111.15	V-C	0	0	0	0	0	0	111.15
Stage 1	-12.4	226.1	113.05	V-C	0	0	0	0	0	0	113.05
Stage 1	-12.6	228.9	121.546	V-C	0.361	3.812	2	1	0	0	122.546
Stage 1	-12.8	230.7	122.502	V-C	0.361	3.812	2	3	0	0	125.502
Stage 1	-13	232.5	123.458	V-C	0.361	3.812	2	5	0	0	128.457
Stage 1	-13.2	234.3	124.413	V-C	0.361	3.812	2	7	0	0	131.413
Stage 1	-13.4	236.1	125.369	V-C	0.361	3.812	2	9	0	0	134.369
Stage 1	-13.6	237.9	126.325	V-C	0.361	3.812	2	11	0	0	137.325
Stage 1	-13.8	239.7	127.281	V-C	0.361	3.812	2	13	0	0	140.28
Stage 1	-14	241.5	128.236	V-C	0.361	3.812	2	15	0	0	143.236
Stage 1	-14.2	243.3	129.192	V-C	0.361	3.812	2	17	0	0	146.192
Stage 1	-14.4	245.1	130.148	V-C	0.361	3.812	2	19	0	0	149.148
Stage 1	-14.6	246.9	131.104	V-C	0.361	3.812	2	21	0	0	152.104
Stage 1	-14.8	248.7	132.06	V-C	0.361	3.812	2	23	0	0	155.06
Stage 1	-15	250.5	133.016	V-C	0.361	3.812	2	25	0	0	158.015
Stage 1	-15.2	252.3	133.971	V-C	0.361	3.812	2	27	0	0	160.971
Stage 1	-15.4	254.1	134.927	V-C	0.361	3.812	2	29	0	0	163.927
Stage 1	-15.6	255.9	135.883	V-C	0.361	3.812	2	31	0	0	166.883
Stage 1	-15.8	257.7	136.839	V-C	0.361	3.812	2	33	0	0	169.838
Stage 1	-16	259.5	137.794	V-C	0.361	3.812	2	35	0	0	172.794
Stage 1	-16.2	261.3	138.75	V-C	0.361	3.812	2	37	0	0	175.75
Stage 1	-16.4	263.1	139.706	V-C	0.361	3.812	2	39	0	0	178.706
Stage 1	-16.6	264.9	140.662	V-C	0.361	3.812	2	41	0	0	181.662
Stage 1	-16.8	266.7	141.618	V-C	0.361	3.812	2	43	0	0	184.618
Stage 1	-17	268.5	142.574	V-C	0.361	3.812	2	45	0	0	187.573
Stage 1	-17.2	270.3	143.529	V-C	0.361	3.812	2	47	0	0	190.529
Stage 1	-17.4	272.1	144.485	V-C	0.361	3.812	2	49	0	0	193.485
Stage 1	-17.6	273.9	145.441	V-C	0.361	3.812	2	51	0	0	196.441
Stage 1	-17.8	275.7	146.397	V-C	0.361	3.812	2	53	0	0	199.397
Stage 1	-18	277.5	147.352	V-C	0.361	3.812	2	55	0	0	202.352

Design Assumption :	Nominal	Risultati Terreno	Muro:	LEFT		Lato	RIGHT				
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Stage 1	0	0	0	V-C	0.333	4.288	0	0	0	0	0
Stage 1	-0.2	3.8	1.9	V-C	0.333	4.288	0	0	0	0	1.9
Stage 1	-0.4	7.6	3.8	V-C	0.333	4.288	0	0	0	0	3.8
Stage 1	-0.6	11.4	5.7	V-C	0.333	4.288	0	0	0	0	5.7
Stage 1	-0.8	15.2	7.6	V-C	0.333	4.288	0	0	0	0	7.6
Stage 1	-1	19	9.5	V-C	0.333	4.288	0	0	0	0	9.5
Stage 1	-1.2	22.8	11.4	V-C	0.333	4.288	0	0	0	0	11.4
Stage 1	-1.4	26.6	13.3	V-C	0.333	4.288	0	0	0	0	13.3
Stage 1	-1.6	30.4	15.2	V-C	0.333	4.288	0	0	0	0	15.2
Stage 1	-1.8	34.2	17.1	V-C	0.333	4.288	0	0	0	0	17.1
Stage 1	-2	37.5	21.075	V-C	0	0	0	0	0	0	21.075
Stage 1	-2.2	40.3	22.649	V-C	0	0	0	0	0	0	22.649
Stage 1	-2.4	43.1	24.222	V-C	0	0	0	0	0	0	24.222
Stage 1	-2.6	45.9	25.796	V-C	0	0	0	0	0	0	25.796
Stage 1	-2.8	48.7	27.369	V-C	0	0	0	0	0	0	27.369
Stage 1	-3	51.5	28.943	V-C	0	0	0	0	0	0	28.943
Stage 1	-3.2	54.3	30.517	V-C	0	0	0	0	0	0	30.517
Stage 1	-3.4	57.1	32.09	V-C	0	0	0	0	0	0	32.09
Stage 1	-3.6	59.9	33.664	V-C	0	0	0	0	0	0	33.664
Stage 1	-3.8	62.7	31.35	V-C	0	0	0	0	0	0	31.35
Stage 1	-4	66.5	33.25	V-C	0	0	0	0	0	0	33.25
Stage 1	-4.2	70.3	35.15	V-C	0	0	0	0	0	0	35.15
Stage 1	-4.4	74.1	37.05	V-C	0	0	0	0	0	0	37.05
Stage 1	-4.6	77.9	38.95	V-C	0	0	0	0	0	0	38.95
Stage 1	-4.8	81.7	40.85	V-C	0	0	0	0	0	0	40.85
Stage 1	-5	85.5	42.75	V-C	0	0	0	0	0	0	42.75
Stage 1	-5.2	89.3	44.65	V-C	0	0	0	0	0	0	44.65
Stage 1	-5.4	93.1	46.55	V-C	0	0	0	0	0	0	46.55
Stage 1	-5.6	96.9	48.45	V-C	0	0	0	0	0	0	48.45
Stage 1	-5.8	100.7	50.35	V-C	0	0	0	0	0	0	50.35
Stage 1	-6	104.5	52.25	V-C	0	0	0	0	0	0	52.25
Stage 1	-6.2	108.3	54.15	V-C	0	0	0	0	0	0	54.15
Stage 1	-6.4	112.1	56.05	V-C	0	0	0	0	0	0	56.05
Stage 1	-6.6	115.9	57.95	V-C	0	0	0	0	0	0	57.95
Stage 1	-6.8	119.7	59.85	V-C	0	0	0	0	0	0	59.85
Stage 1	-7	123.5	61.75	V-C	0	0	0	0	0	0	61.75
Stage 1	-7.2	127.3	63.65	V-C	0	0	0	0	0	0	63.65
Stage 1	-7.4	131.1	65.55	V-C	0	0	0	0	0	0	65.55
Stage 1	-7.6	134.9	67.45	V-C	0	0	0	0	0	0	67.45
Stage 1	-7.8	138.7	69.35	V-C	0	0	0	0	0	0	69.35
Stage 1	-8	142.5	71.25	V-C	0	0	0	0	0	0	71.25
Stage 1	-8.2	146.3	73.15	V-C	0	0	0	0	0	0	73.15
Stage 1	-8.4	150.1	75.05	V-C	0	0	0	0	0	0	75.05
Stage 1	-8.6	153.9	76.95	V-C	0	0	0	0	0	0	76.95
Stage 1	-8.8	157.7	78.85	V-C	0	0	0	0	0	0	78.85
Stage 1	-9	161.5	80.75	V-C	0	0	0	0	0	0	80.75
Stage 1	-9.2	165.3	82.65	V-C	0	0	0	0	0	0	82.65
Stage 1	-9.4	169.1	84.55	V-C	0	0	0	0	0	0	84.55
Stage 1	-9.6	172.9	86.45	V-C	0	0	0	0	0	0	86.45
Stage 1	-9.8	176.7	88.35	V-C	0	0	0	0	0	0	88.35
Stage 1	-10	180.5	90.25	V-C	0	0	0	0	0	0	90.25
Stage 1	-10.2	184.3	92.15	V-C	0	0	0	0	0	0	92.15
Stage 1	-10.4	188.1	94.05	V-C	0	0	0	0	0	0	94.05
Stage 1	-10.6	191.9	95.95	V-C	0	0	0	0	0	0	95.95
Stage 1	-10.8	195.7	97.85	V-C	0	0	0	0	0	0	97.85
Stage 1	-11	199.5	99.75	V-C	0	0	0	0	0	0	99.75
Stage 1	-11.2	203.3	101.65	V-C	0	0	0	0	0	0	101.65
Stage 1	-11.4	207.1	103.55	V-C	0	0	0	0	0	0	103.55
Stage 1	-11.6	210.9	105.45	V-C	0	0	0	0	0	0	105.45
Stage 1	-11.8	214.7	107.35	V-C	0	0	0	0	0	0	107.35
Stage 1	-12	218.5	109.25	V-C	0	0	0	0	0	0	109.25
Stage 1	-12.2	222.3	111.15	V-C	0	0	0	0	0	0	111.15
Stage 1	-12.4	226.1	113.05	V-C	0	0	0	0	0	0	113.05
Stage 1	-12.6	228.9	121.546	V-C	0.361	3.812	2	1	0	0	122.546

Design Assumption :	Nominal	Risultati Terreno	Muro:	LEFT		Lato	RIGHT			
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Stage 1	-12.8	230.7	122.502	V-C	0.361	3.812	2	3	0	0	125.502
Stage 1	-13	232.5	123.458	V-C	0.361	3.812	2	5	0	0	128.457
Stage 1	-13.2	234.3	124.413	V-C	0.361	3.812	2	7	0	0	131.413
Stage 1	-13.4	236.1	125.369	V-C	0.361	3.812	2	9	0	0	134.369
Stage 1	-13.6	237.9	126.325	V-C	0.361	3.812	2	11	0	0	137.325
Stage 1	-13.8	239.7	127.281	V-C	0.361	3.812	2	13	0	0	140.28
Stage 1	-14	241.5	128.236	V-C	0.361	3.812	2	15	0	0	143.236
Stage 1	-14.2	243.3	129.192	V-C	0.361	3.812	2	17	0	0	146.192
Stage 1	-14.4	245.1	130.148	V-C	0.361	3.812	2	19	0	0	149.148
Stage 1	-14.6	246.9	131.104	V-C	0.361	3.812	2	21	0	0	152.104
Stage 1	-14.8	248.7	132.06	V-C	0.361	3.812	2	23	0	0	155.06
Stage 1	-15	250.5	133.016	V-C	0.361	3.812	2	25	0	0	158.015
Stage 1	-15.2	252.3	133.971	V-C	0.361	3.812	2	27	0	0	160.971
Stage 1	-15.4	254.1	134.927	V-C	0.361	3.812	2	29	0	0	163.927
Stage 1	-15.6	255.9	135.883	V-C	0.361	3.812	2	31	0	0	166.883
Stage 1	-15.8	257.7	136.839	V-C	0.361	3.812	2	33	0	0	169.838
Stage 1	-16	259.5	137.794	V-C	0.361	3.812	2	35	0	0	172.794
Stage 1	-16.2	261.3	138.75	V-C	0.361	3.812	2	37	0	0	175.75
Stage 1	-16.4	263.1	139.706	V-C	0.361	3.812	2	39	0	0	178.706
Stage 1	-16.6	264.9	140.662	V-C	0.361	3.812	2	41	0	0	181.662
Stage 1	-16.8	266.7	141.618	V-C	0.361	3.812	2	43	0	0	184.618
Stage 1	-17	268.5	142.574	V-C	0.361	3.812	2	45	0	0	187.573
Stage 1	-17.2	270.3	143.529	V-C	0.361	3.812	2	47	0	0	190.529
Stage 1	-17.4	272.1	144.485	V-C	0.361	3.812	2	49	0	0	193.485
Stage 1	-17.6	273.9	145.441	V-C	0.361	3.812	2	51	0	0	196.441
Stage 1	-17.8	275.7	146.397	V-C	0.361	3.812	2	53	0	0	199.397
Stage 1	-18	277.5	147.352	V-C	0.361	3.812	2	55	0	0	202.352

5.3.2. Tabella Risultati Terreno Left Wall - Nominal - Stage 2

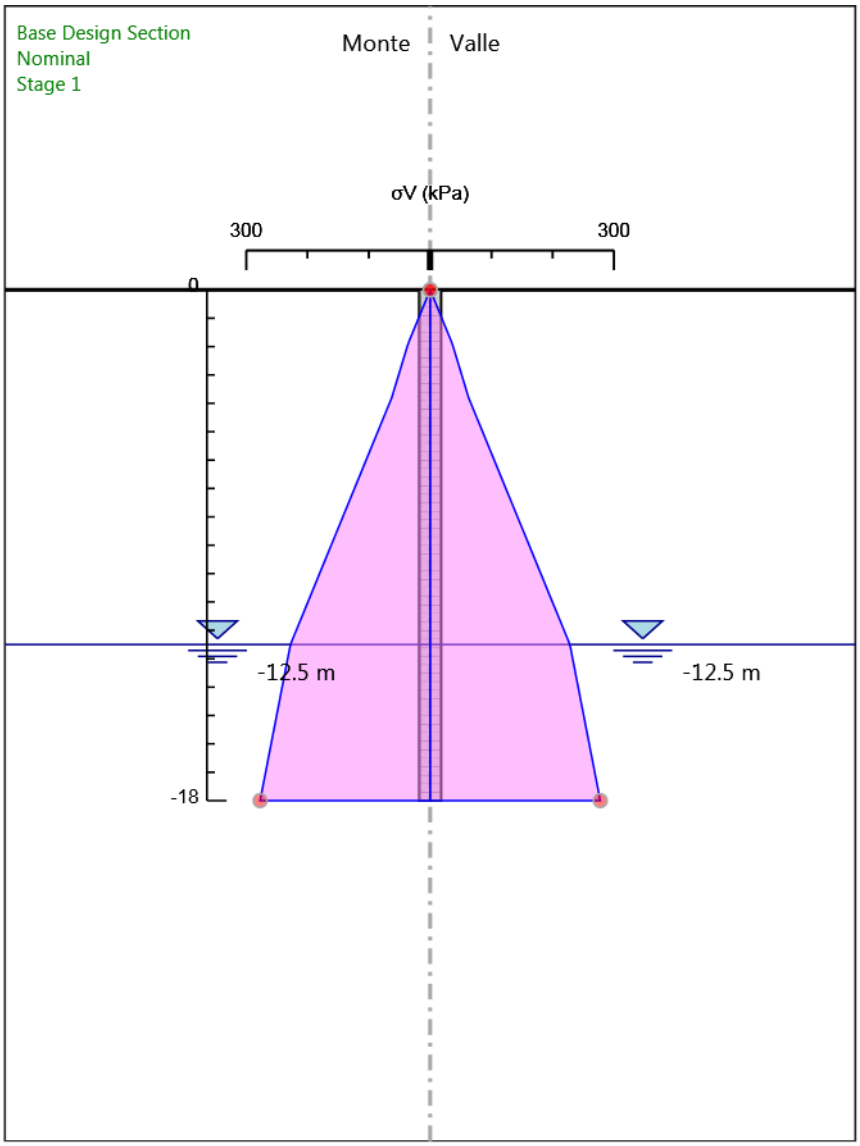
Design Assumption :	Nominal	Risultati Terreno	Muro:	LEFT		Lato	LEFT			
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Stage 2	0	0	0	ACTIVE	0.333	4.288	0	0	0	0	0
Stage 2	-0.2	3.8	1.966	UL-RL	0.333	4.288	0	0	0	0	1.966
Stage 2	-0.4	7.6	3.791	UL-RL	0.333	4.288	0	0	0	0	3.791
Stage 2	-0.6	11.4	5.693	UL-RL	0.333	4.288	0	0	0	0	5.693
Stage 2	-0.8	15.2	7.808	UL-RL	0.333	4.288	0	0	0	0	7.808
Stage 2	-1	19	13.229	UL-RL	0.333	4.288	0	0	0	0	13.229
Stage 2	-1.2	22.8	18.649	UL-RL	0.333	4.288	0	0	0	0	18.649
Stage 2	-1.4	26.6	24.067	UL-RL	0.333	4.288	0	0	0	0	24.067
Stage 2	-1.6	30.4	29.481	UL-RL	0.333	4.288	0	0	0	0	29.481
Stage 2	-1.8	34.2	34.889	UL-RL	0.333	4.288	0	0	0	0	34.889
Stage 2	-2	37.5	27.943	UL-RL	0	0	0	0	0	0	27.943
Stage 2	-2.2	40.3	30.642	UL-RL	0	0	0	0	0	0	30.642
Stage 2	-2.4	43.1	33.336	UL-RL	0	0	0	0	0	0	33.336
Stage 2	-2.6	45.9	36.023	UL-RL	0	0	0	0	0	0	36.023
Stage 2	-2.8	48.7	38.702	UL-RL	0	0	0	0	0	0	38.702
Stage 2	-3	51.5	41.37	UL-RL	0	0	0	0	0	0	41.37
Stage 2	-3.2	54.3	44.024	UL-RL	0	0	0	0	0	0	44.024
Stage 2	-3.4	57.1	46.663	UL-RL	0	0	0	0	0	0	46.663
Stage 2	-3.6	59.9	49.283	UL-RL	0	0	0	0	0	0	49.283
Stage 2	-3.8	62.7	56.318	UL-RL	0	0	0	0	0	0	56.318
Stage 2	-4	66.5	59.715	UL-RL	0	0	0	0	0	0	59.715
Stage 2	-4.2	70.3	63.067	UL-RL	0	0	0	0	0	0	63.067
Stage 2	-4.4	74.1	66.367	UL-RL	0	0	0	0	0	0	66.367
Stage 2	-4.6	77.9	69.61	UL-RL	0	0	0	0	0	0	69.61
Stage 2	-4.8	81.7	72.789	UL-RL	0	0	0	0	0	0	72.789
Stage 2	-5	85.5	75.899	UL-RL	0	0	0	0	0	0	75.899
Stage 2	-5.2	89.3	78.933	UL-RL	0	0	0	0	0	0	78.933
Stage 2	-5.4	93.1	81.885	UL-RL	0	0	0	0	0	0	81.885
Stage 2	-5.6	96.9	84.751	V-C	0	0	0	0	0	0	84.751
Stage 2	-5.8	100.7	87.525	V-C	0	0	0	0	0	0	87.525
Stage 2	-6	104.5	90.206	V-C	0	0	0	0	0	0	90.206
Stage 2	-6.2	108.3	92.79	V-C	0	0	0	0	0	0	92.79
Stage 2	-6.4	112.1	95.277	V-C	0	0	0	0	0	0	95.277
Stage 2	-6.6	115.9	97.664	V-C	0	0	0	0	0	0	97.664
Stage 2	-6.8	119.7	99.952	V-C	0	0	0	0	0	0	99.952
Stage 2	-7	123.5	102.142	V-C	0	0	0	0	0	0	102.142
Stage 2	-7.2	127.3	104.236	V-C	0	0	0	0	0	0	104.236
Stage 2	-7.4	131.1	106.234	V-C	0	0	0	0	0	0	106.234
Stage 2	-7.6	134.9	108.14	V-C	0	0	0	0	0	0	108.14
Stage 2	-7.8	138.7	109.956	V-C	0	0	0	0	0	0	109.956
Stage 2	-8	142.5	111.684	V-C	0	0	0	0	0	0	111.684
Stage 2	-8.2	146.3	113.328	V-C	0	0	0	0	0	0	113.328
Stage 2	-8.4	150.1	114.89	UL-RL	0	0	0	0	0	0	114.89
Stage 2	-8.6	153.9	116.374	UL-RL	0	0	0	0	0	0	116.374
Stage 2	-8.8	157.7	117.782	UL-RL	0	0	0	0	0	0	117.782
Stage 2	-9	161.5	119.118	UL-RL	0	0	0	0	0	0	119.118
Stage 2	-9.2	165.3	120.386	UL-RL	0	0	0	0	0	0	120.386
Stage 2	-9.4	169.1	121.587	UL-RL	0	0	0	0	0	0	121.587
Stage 2	-9.6	172.9	122.726	UL-RL	0	0	0	0	0	0	122.726
Stage 2	-9.8	176.7	123.805	UL-RL	0	0	0	0	0	0	123.805
Stage 2	-10	180.5	124.828	UL-RL	0	0	0	0	0	0	124.828
Stage 2	-10.2	184.3	125.796	UL-RL	0	0	0	0	0	0	125.796
Stage 2	-10.4	188.1	126.714	UL-RL	0	0	0	0	0	0	126.714
Stage 2	-10.6	191.9	127.584	UL-RL	0	0	0	0	0	0	127.584
Stage 2	-10.8	195.7	128.41	UL-RL	0	0	0	0	0	0	128.41
Stage 2	-11	199.5	129.194	UL-RL	0	0	0	0	0	0	129.194
Stage 2	-11.2	203.3	129.94	UL-RL	0	0	0	0	0	0	129.94
Stage 2	-11.4	207.1	130.651	UL-RL	0	0	0	0	0	0	130.651
Stage 2	-11.6	210.9	131.331	UL-RL	0	0	0	0	0	0	131.331
Stage 2	-11.8	214.7	131.984	UL-RL	0	0	0	0	0	0	131.984
Stage 2	-12	218.5	132.604	UL-RL	0	0	0	0	0	0	132.604

Design Assumption :	Nominal	Risultati Terreno	Muro:	LEFT		Lato	LEFT			
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Stage 2	-12.2	222.3	133.186	UL-RL	0	0	0	0	0	0	133.186
Stage 2	-12.4	226.1	133.754	UL-RL	0	0	0	0	0	0	133.754
Stage 2	-12.6	228.9	134.453	UL-RL	0.361	3.812	2	1	0	0	135.453
Stage 2	-12.8	230.7	134.512	UL-RL	0.361	3.812	2	3	0	0	137.512
Stage 2	-13	232.5	134.572	UL-RL	0.361	3.812	2	5	0	0	139.572
Stage 2	-13.2	234.3	134.634	UL-RL	0.361	3.812	2	7	0	0	141.634
Stage 2	-13.4	236.1	134.701	UL-RL	0.361	3.812	2	9	0	0	143.701
Stage 2	-13.6	237.9	134.776	UL-RL	0.361	3.812	2	11	0	0	145.776
Stage 2	-13.8	239.7	134.858	UL-RL	0.361	3.812	2	13	0	0	147.858
Stage 2	-14	241.5	134.95	UL-RL	0.361	3.812	2	15	0	0	149.95
Stage 2	-14.2	243.3	135.052	UL-RL	0.361	3.812	2	17	0	0	152.052
Stage 2	-14.4	245.1	135.164	UL-RL	0.361	3.812	2	19	0	0	154.164
Stage 2	-14.6	246.9	135.287	UL-RL	0.361	3.812	2	21	0	0	156.287
Stage 2	-14.8	248.7	135.421	UL-RL	0.361	3.812	2	23	0	0	158.421
Stage 2	-15	250.5	135.565	UL-RL	0.361	3.812	2	25	0	0	160.564
Stage 2	-15.2	252.3	135.718	UL-RL	0.361	3.812	2	27	0	0	162.718
Stage 2	-15.4	254.1	135.881	UL-RL	0.361	3.812	2	29	0	0	164.881
Stage 2	-15.6	255.9	136.052	UL-RL	0.361	3.812	2	31	0	0	167.052
Stage 2	-15.8	257.7	136.231	UL-RL	0.361	3.812	2	33	0	0	169.231
Stage 2	-16	259.5	135.28	UL-RL	0.361	3.812	2	35	0	0	170.28
Stage 2	-16.2	261.3	134.067	UL-RL	0.361	3.812	2	37	0	0	171.067
Stage 2	-16.4	263.1	132.874	UL-RL	0.361	3.812	2	39	0	0	171.874
Stage 2	-16.6	264.9	131.696	UL-RL	0.361	3.812	2	41	0	0	172.696
Stage 2	-16.8	266.7	130.531	UL-RL	0.361	3.812	2	43	0	0	173.531
Stage 2	-17	268.5	129.375	UL-RL	0.361	3.812	2	45	0	0	174.375
Stage 2	-17.2	270.3	128.227	UL-RL	0.361	3.812	2	47	0	0	175.227
Stage 2	-17.4	272.1	127.084	UL-RL	0.361	3.812	2	49	0	0	176.084
Stage 2	-17.6	273.9	125.943	UL-RL	0.361	3.812	2	51	0	0	176.943
Stage 2	-17.8	275.7	124.804	UL-RL	0.361	3.812	2	53	0	0	177.804
Stage 2	-18	277.5	123.665	UL-RL	0.361	3.812	2	55	0	0	178.665

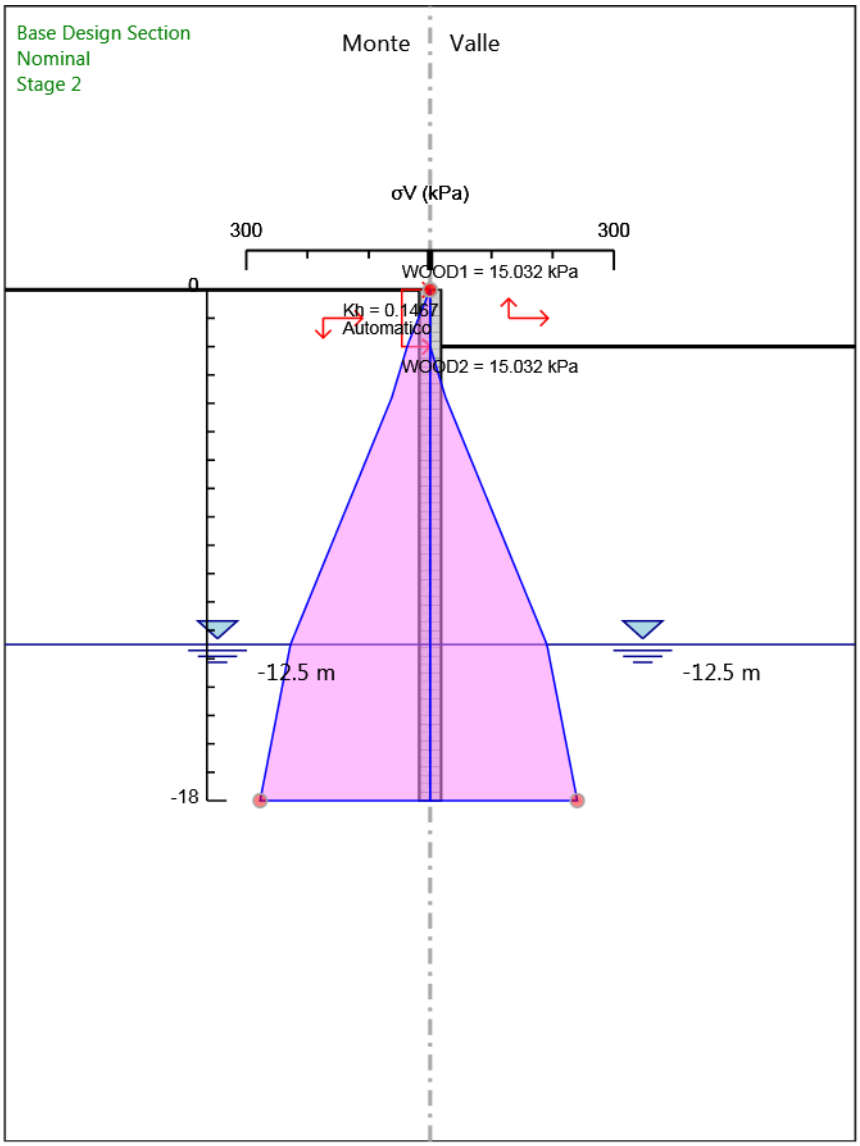
Design Assumption :	Nominal	Risultati Terreno	Muro:	LEFT		Lato	RIGHT				
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Stage 2	0	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-0.2	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-0.4	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-0.6	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-0.8	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-1	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-1.2	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-1.4	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-1.6	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-1.8	0	0	REMOVED	0	0	0	0	0	0	0
Stage 2	-2	0	0.082	UL-RL	0	0	0	0	0	0	0.082
Stage 2	-2.2	2.8	0.074	UL-RL	0	0	0	0	0	0	0.074
Stage 2	-2.4	5.6	0.067	UL-RL	0	0	0	0	0	0	0.067
Stage 2	-2.6	8.4	0.06	UL-RL	0	0	0	0	0	0	0.06
Stage 2	-2.8	11.2	0.054	UL-RL	0	0	0	0	0	0	0.054
Stage 2	-3	14	0.333	UL-RL	0	0	0	0	0	0	0.333
Stage 2	-3.2	16.8	1.419	UL-RL	0	0	0	0	0	0	1.419
Stage 2	-3.4	19.6	2.506	UL-RL	0	0	0	0	0	0	2.506
Stage 2	-3.6	22.4	3.593	UL-RL	0	0	0	0	0	0	3.593
Stage 2	-3.8	25.2	33.098	UL-RL	0	0	0	0	0	0	33.098
Stage 2	-4	29	44.916	UL-RL	0	0	0	0	0	0	44.916
Stage 2	-4.2	32.8	56.869	UL-RL	0	0	0	0	0	0	56.869
Stage 2	-4.4	36.6	68.975	UL-RL	0	0	0	0	0	0	68.975
Stage 2	-4.6	40.4	81.252	UL-RL	0	0	0	0	0	0	81.252
Stage 2	-4.8	44.2	93.72	UL-RL	0	0	0	0	0	0	93.72
Stage 2	-5	48	106.396	UL-RL	0	0	0	0	0	0	106.396
Stage 2	-5.2	51.8	119.298	UL-RL	0	0	0	0	0	0	119.298
Stage 2	-5.4	55.6	132.443	UL-RL	0	0	0	0	0	0	132.443
Stage 2	-5.6	59.4	145.844	UL-RL	0	0	0	0	0	0	145.844
Stage 2	-5.8	63.2	159.516	UL-RL	0	0	0	0	0	0	159.516
Stage 2	-6	67	173.468	UL-RL	0	0	0	0	0	0	173.468
Stage 2	-6.2	70.8	180.589	UL-RL	0	0	0	0	0	0	180.589
Stage 2	-6.4	74.6	168.149	UL-RL	0	0	0	0	0	0	168.149
Stage 2	-6.6	78.4	157.673	UL-RL	0	0	0	0	0	0	157.673
Stage 2	-6.8	82.2	148.861	UL-RL	0	0	0	0	0	0	148.861
Stage 2	-7	86	141.476	UL-RL	0	0	0	0	0	0	141.476
Stage 2	-7.2	89.8	135.33	UL-RL	0	0	0	0	0	0	135.33
Stage 2	-7.4	93.6	130.269	UL-RL	0	0	0	0	0	0	130.269
Stage 2	-7.6	97.4	126.168	UL-RL	0	0	0	0	0	0	126.168
Stage 2	-7.8	101.2	122.923	UL-RL	0	0	0	0	0	0	122.923
Stage 2	-8	105	120.445	UL-RL	0	0	0	0	0	0	120.445
Stage 2	-8.2	108.8	118.66	UL-RL	0	0	0	0	0	0	118.66
Stage 2	-8.4	112.6	117.503	UL-RL	0	0	0	0	0	0	117.503
Stage 2	-8.6	116.4	116.918	UL-RL	0	0	0	0	0	0	116.918
Stage 2	-8.8	120.2	116.857	UL-RL	0	0	0	0	0	0	116.857
Stage 2	-9	124	117.277	UL-RL	0	0	0	0	0	0	117.277
Stage 2	-9.2	127.8	118.139	UL-RL	0	0	0	0	0	0	118.139
Stage 2	-9.4	131.6	119.41	UL-RL	0	0	0	0	0	0	119.41
Stage 2	-9.6	135.4	121.059	UL-RL	0	0	0	0	0	0	121.059
Stage 2	-9.8	139.2	123.057	UL-RL	0	0	0	0	0	0	123.057
Stage 2	-10	143	125.38	UL-RL	0	0	0	0	0	0	125.38
Stage 2	-10.2	146.8	128.004	UL-RL	0	0	0	0	0	0	128.004
Stage 2	-10.4	150.6	130.908	UL-RL	0	0	0	0	0	0	130.908
Stage 2	-10.6	154.4	134.07	UL-RL	0	0	0	0	0	0	134.07
Stage 2	-10.8	158.2	137.473	UL-RL	0	0	0	0	0	0	137.473
Stage 2	-11	162	141.097	UL-RL	0	0	0	0	0	0	141.097
Stage 2	-11.2	165.8	144.925	UL-RL	0	0	0	0	0	0	144.925
Stage 2	-11.4	169.6	148.94	UL-RL	0	0	0	0	0	0	148.94
Stage 2	-11.6	173.4	153.123	UL-RL	0	0	0	0	0	0	153.123
Stage 2	-11.8	177.2	157.459	UL-RL	0	0	0	0	0	0	157.459
Stage 2	-12	181	161.93	UL-RL	0	0	0	0	0	0	161.93
Stage 2	-12.2	184.8	166.518	UL-RL	0	0	0	0	0	0	166.518
Stage 2	-12.4	188.6	171.204	UL-RL	0	0	0	0	0	0	171.204
Stage 2	-12.6	191.4	72.222	UL-RL	0.361	3.812	2	1	0	0	73.222

Design Assumption :	Nominal	Risultati Terreno	Muro:	LEFT		Lato	RIGHT			
Stage	Z (m)	Sigma V (kPa)	Sigma H (kPa)	Stato	Ka	Kp	Coesione (kPa)	Pore (kPa)	Gradiente	U* (kPa)	Peq (kPa)
Stage 2	-12.8	193.2	75.814	UL-RL	0.361	3.812	2	3	0	0	78.814
Stage 2	-13	195	79.404	UL-RL	0.361	3.812	2	5	0	0	84.404
Stage 2	-13.2	196.8	82.983	UL-RL	0.361	3.812	2	7	0	0	89.983
Stage 2	-13.4	198.6	86.545	UL-RL	0.361	3.812	2	9	0	0	95.545
Stage 2	-13.6	200.4	90.083	UL-RL	0.361	3.812	2	11	0	0	101.083
Stage 2	-13.8	202.2	93.593	UL-RL	0.361	3.812	2	13	0	0	106.593
Stage 2	-14	204	97.072	UL-RL	0.361	3.812	2	15	0	0	112.072
Stage 2	-14.2	205.8	100.517	UL-RL	0.361	3.812	2	17	0	0	117.517
Stage 2	-14.4	207.6	103.927	UL-RL	0.361	3.812	2	19	0	0	122.927
Stage 2	-14.6	209.4	107.3	UL-RL	0.361	3.812	2	21	0	0	128.3
Stage 2	-14.8	211.2	110.636	UL-RL	0.361	3.812	2	23	0	0	133.636
Stage 2	-15	213	113.937	UL-RL	0.361	3.812	2	25	0	0	138.937
Stage 2	-15.2	214.8	117.204	UL-RL	0.361	3.812	2	27	0	0	144.204
Stage 2	-15.4	216.6	120.437	UL-RL	0.361	3.812	2	29	0	0	149.437
Stage 2	-15.6	218.4	123.64	UL-RL	0.361	3.812	2	31	0	0	154.64
Stage 2	-15.8	220.2	126.815	UL-RL	0.361	3.812	2	33	0	0	159.815
Stage 2	-16	222	129.964	UL-RL	0.361	3.812	2	35	0	0	164.964
Stage 2	-16.2	223.8	133.092	UL-RL	0.361	3.812	2	37	0	0	170.091
Stage 2	-16.4	225.6	136.2	UL-RL	0.361	3.812	2	39	0	0	175.2
Stage 2	-16.6	227.4	139.292	UL-RL	0.361	3.812	2	41	0	0	180.292
Stage 2	-16.8	229.2	141.83	UL-RL	0.361	3.812	2	43	0	0	184.83
Stage 2	-17	231	143.492	UL-RL	0.361	3.812	2	45	0	0	188.492
Stage 2	-17.2	232.8	145.151	UL-RL	0.361	3.812	2	47	0	0	192.151
Stage 2	-17.4	234.6	146.809	UL-RL	0.361	3.812	2	49	0	0	195.809
Stage 2	-17.6	236.4	148.466	UL-RL	0.361	3.812	2	51	0	0	199.466
Stage 2	-17.8	238.2	150.123	UL-RL	0.361	3.812	2	53	0	0	203.123
Stage 2	-18	240	151.78	UL-RL	0.361	3.812	2	55	0	0	206.78

5.4. Grafico Risultati Terreno Sigma V

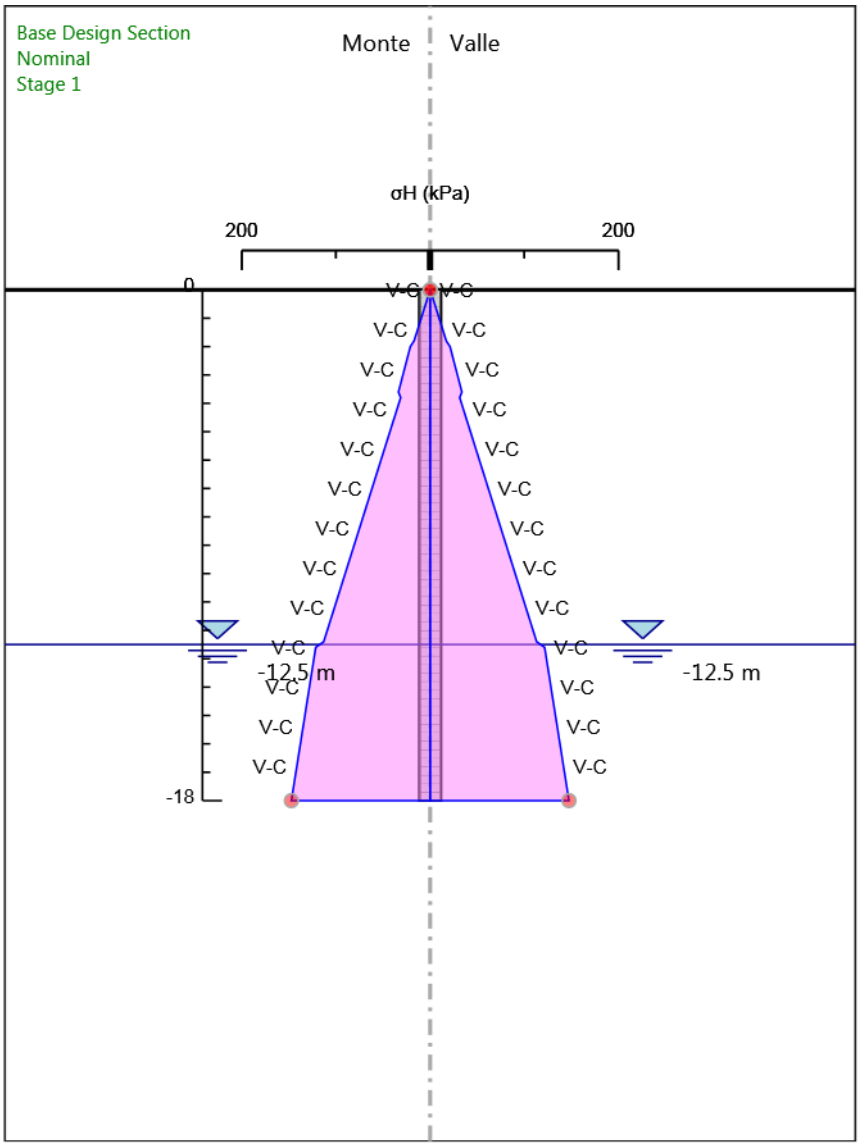


Design Assumption: Nominal
Stage: Stage 1
Sigma V

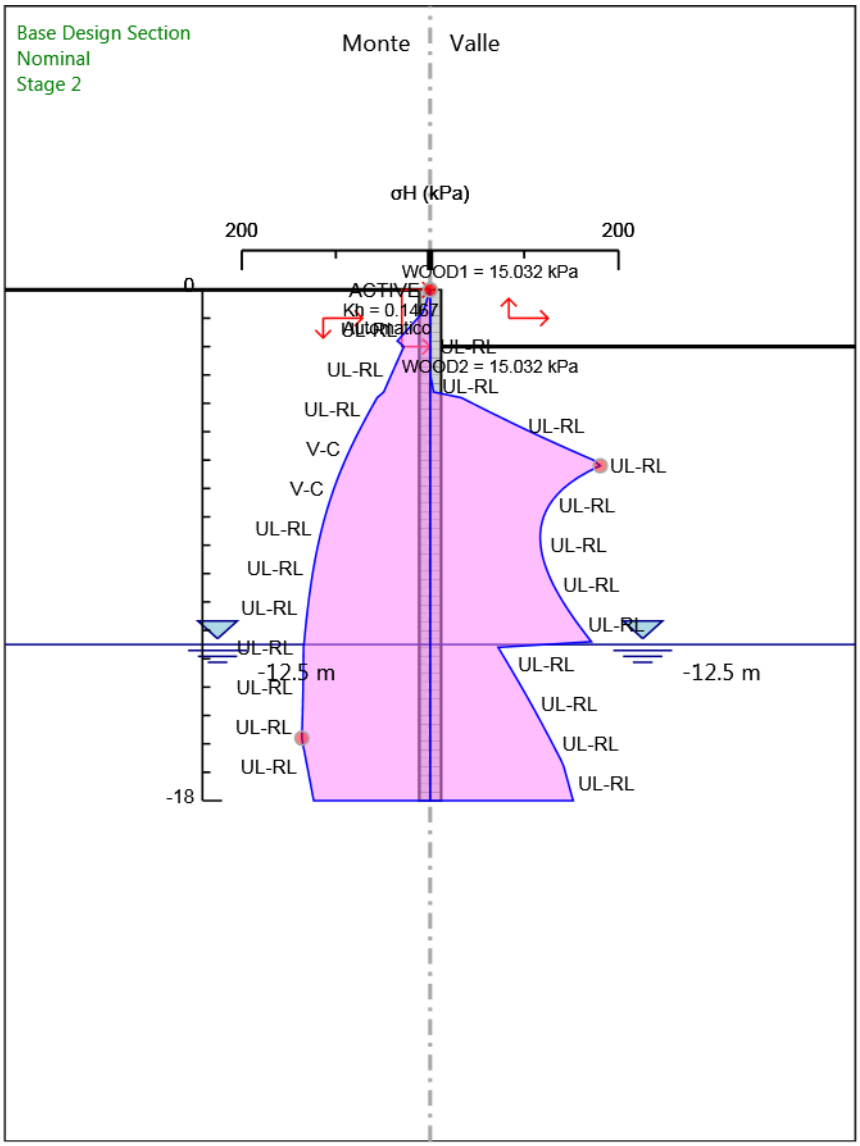


Design Assumption: Nominal
Stage: Stage 2
Sigma V

5.5. Grafico Risultati Terreno Sigma H

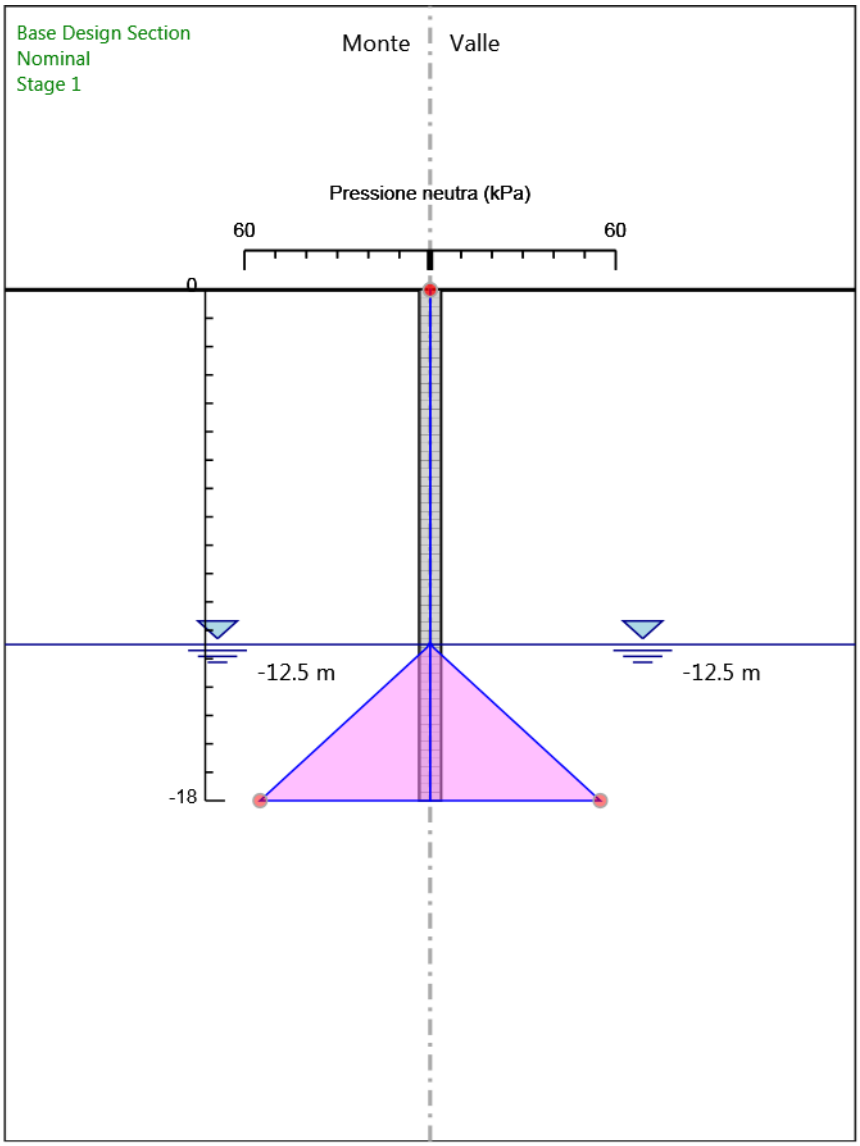


Design Assumption: Nominal
Stage: Stage 1
Sigma H

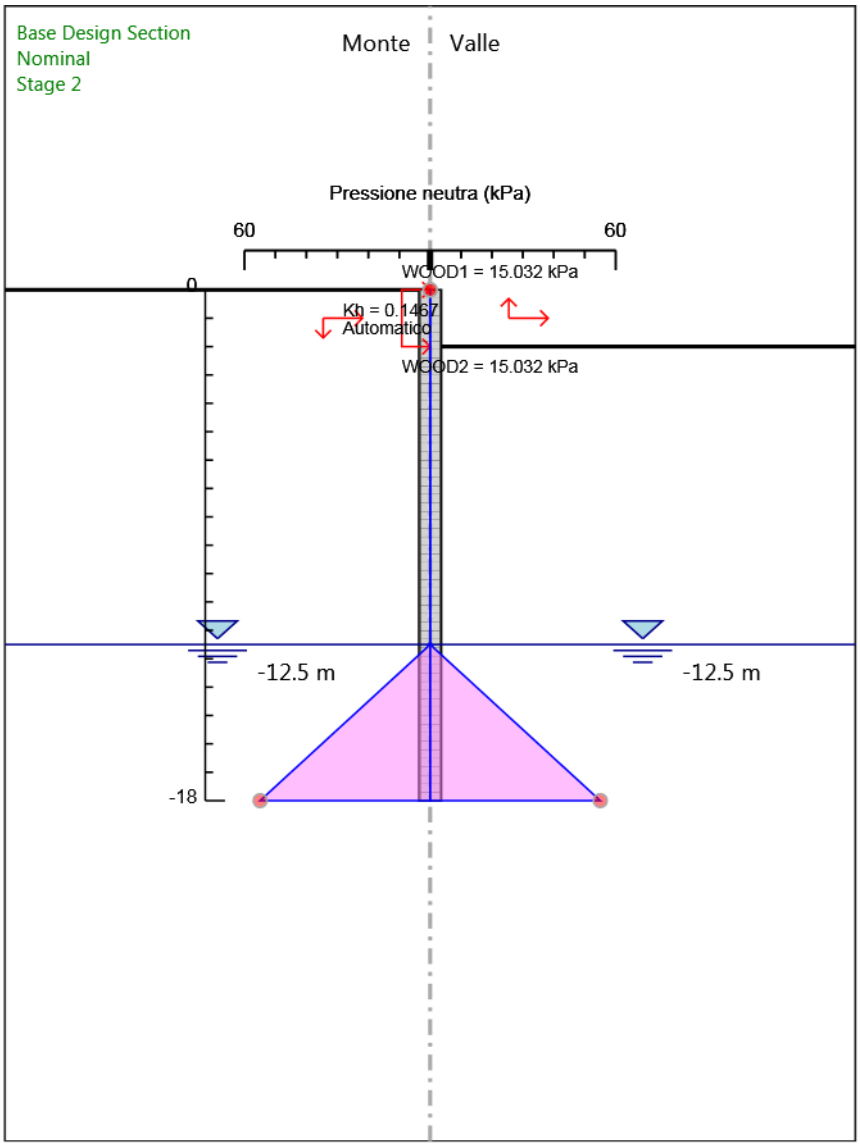


Design Assumption: Nominal
Stage: Stage 2
Sigma H

5.6. Grafico Risultati Terreno Pressione neutra

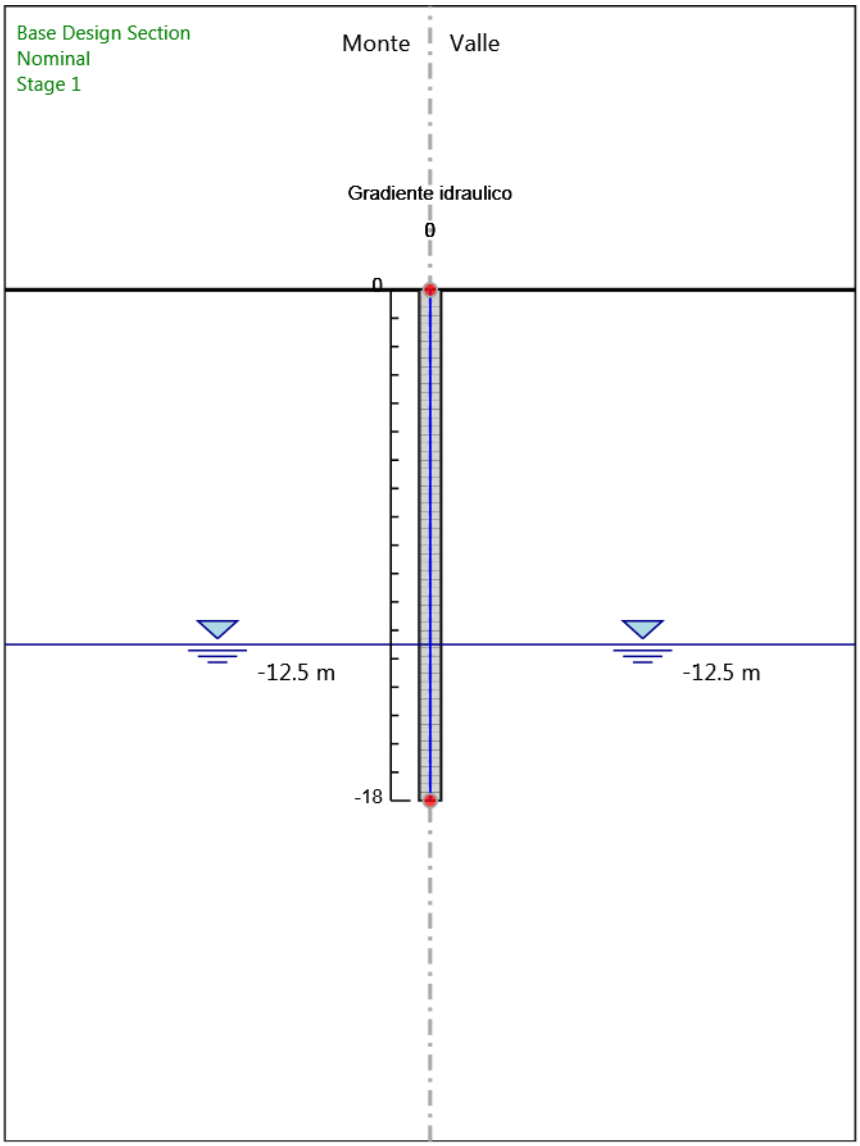


Design Assumption: Nominal
Stage: Stage 1
Pressione neutra

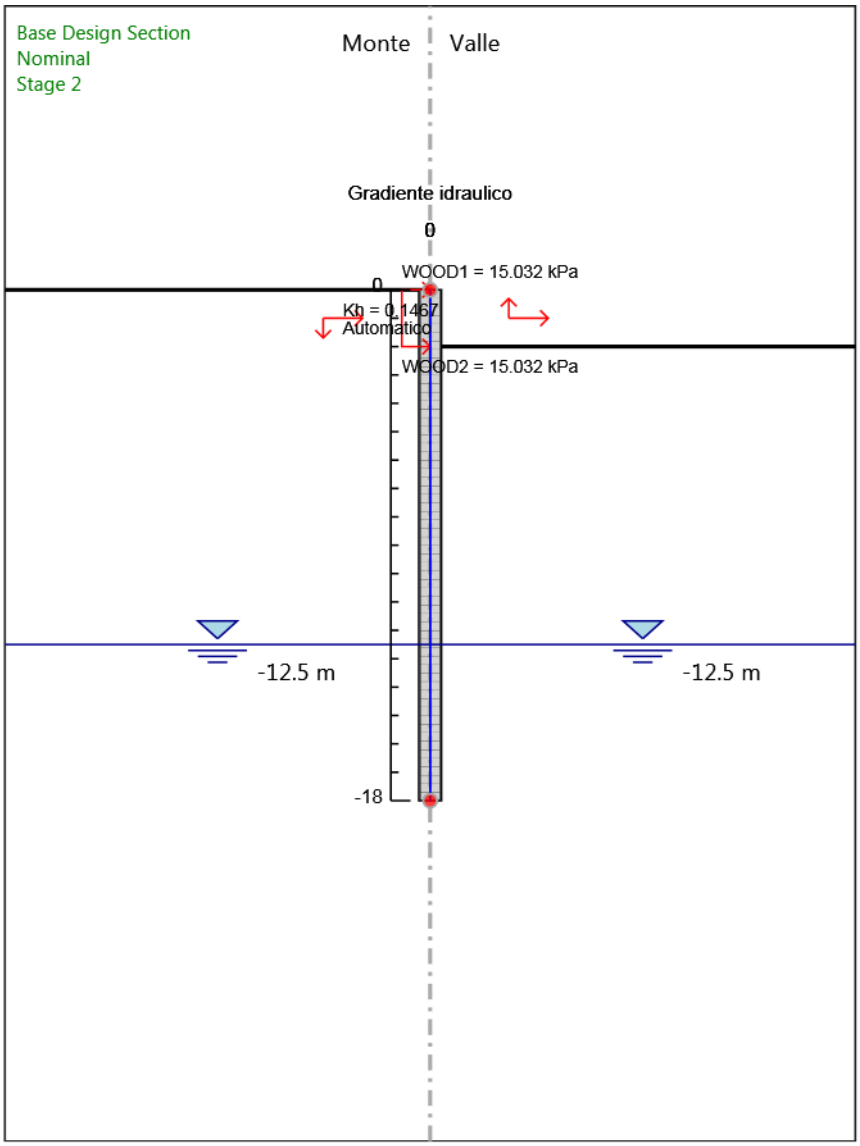


Design Assumption: Nominal
Stage: Stage 2
Pressione neutra

5.7. Grafico Risultati Terreno Gradiente idraulico

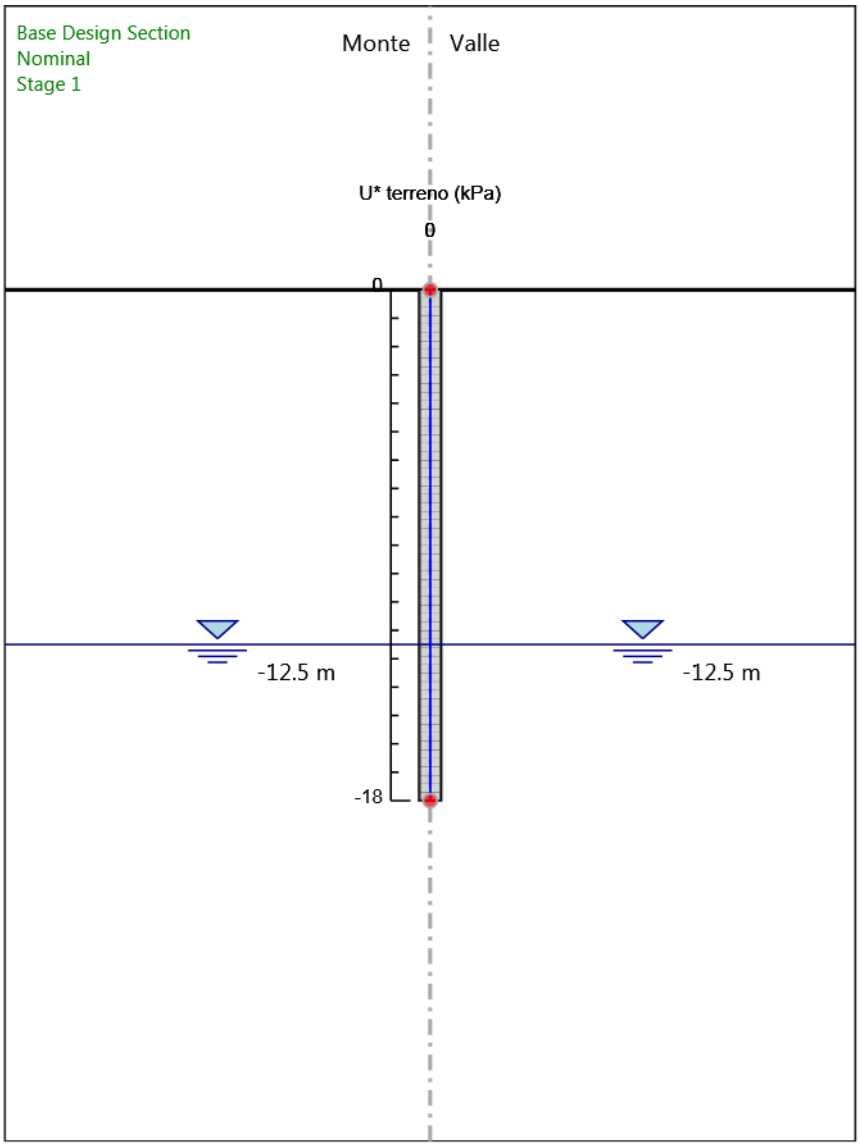


Design Assumption: Nominal
Stage: Stage 1
Gradiente idraulico

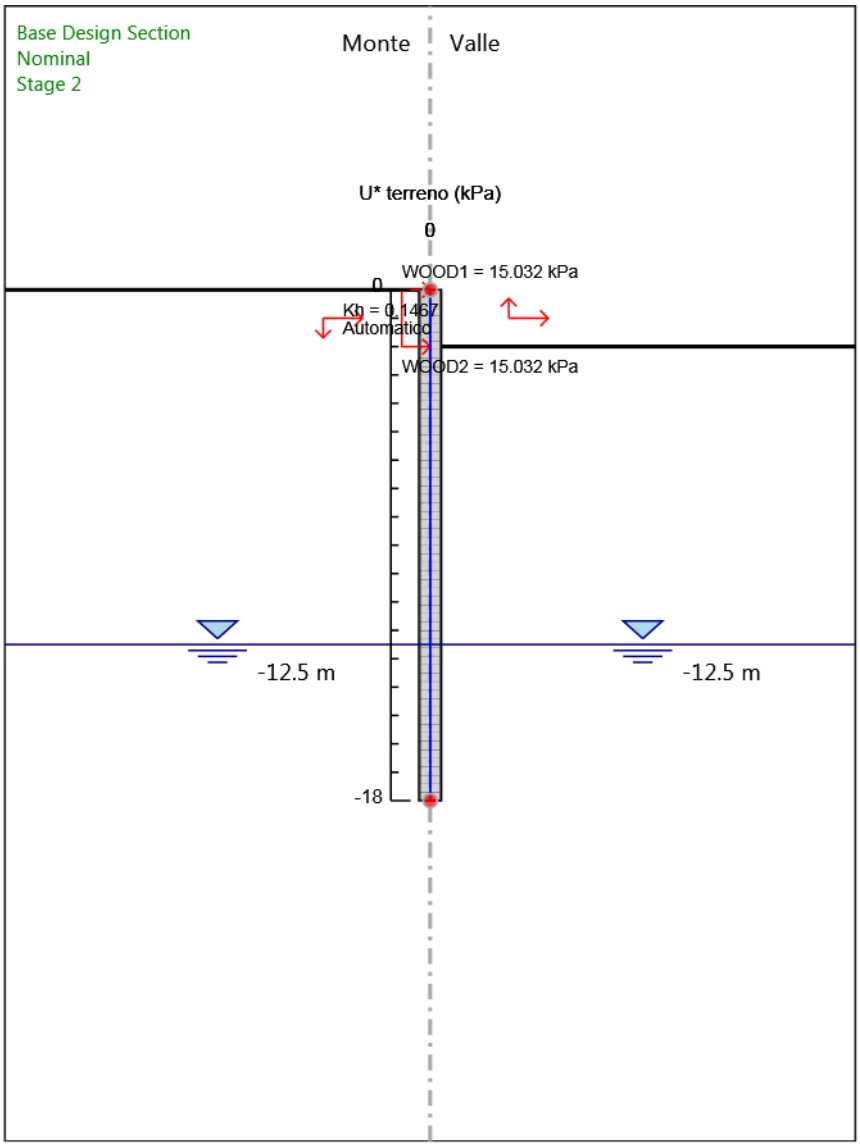


Design Assumption: Nominal
Stage: Stage 2
Gradiente idraulico

5.8. Grafico Risultati Terreno U* terreno



Design Assumption: Nominal
Stage: Stage 1
U* terreno



Design Assumption: Nominal
Stage: Stage 2
U* terreno

5.8. Riepilogo spinte

Design Assumption: Nominal	Tipo Risultato: Riepilogo spinte	Muro:	LEFT	Lato	LEFT		
Stage	Vera effettiva (kN/m)	Pressione neutra (kN/m)	Vera Totale (kN/m)	Min ammissibile (kN/m)	Max ammissibile (kN/m)	Percentuale di resistenza massima	Vera / Attiva
Stage 1	1439.9	151.3	1591.2	9.8	11236.2	12.81%	146.93
Stage 2	1763.6	151.3	1914.9	9.8	11236.2	15.7%	179.96

Design Assumption: Nominal	Tipo Risultato: Riepilogo spinte	Muro:	LEFT	Lato	RIGHT		
Stage	Vera effettiva (kN/m)	Pressione neutra (kN/m)	Vera Totale (kN/m)	Min ammissibile (kN/m)	Max ammissibile (kN/m)	Percentuale di resistenza massima	Vera / Attiva
Stage 1	1439.9	151.3	1591.2	9.8	11236.2	12.81%	146.93
Stage 2	1763.6	151.3	1914.9	8.4	8661.2	20.36%	209.95