



Regione Toscana

LOTTO 1B - Apuano: dal Comune di Carrara al Comune di Montignoso

PROGETTO DEFINITIVO

Soggetto attuatore della progettazione

STAZIONE APPALTANTE

Regione Toscana - Settore
trasporto pubblico locale su ferro e
marittimo - mobilità sostenibile

IL DIRIGENTE

Ing. Riccardo Buffoni

IL RESPONSABILE UNICO DEL PROCEDIMENTO

Ing. Riccardo Buffoni

IL DIRETTORE ESECUTIVO DEL CONTRATTO

Ing. Michela Di Matteo

Stazione appaltante esecuzione dei lavori

STAZIONE APPALTANTE

Provincia di Massa-Carrara
Settore 2 - Edilizia scolastica-Patrimonio

IL DIRIGENTE

Arch. Marina Rossella Tongiani

IL RESPONSABILE UNICO DEL PROCEDIMENTO

Arch. Marco Nieri



Provincia di
Massa-Carrara



Comune di
Carrara



Comune di
Massa



Comune di
Montignoso

RTP progettisti



MATE Soc. Coop.



Coopprogetti Soc. Coop.



Parcianello & Partners
engineering s.r.l.



Netmobility s.r.l.



Technital S.p.a



D.R.E.A.M. Italia

RESPONSABILE DELL'INTEGRAZIONE TRA LE VARIE PRESTAZIONI SPECIALISTICHE

Ing. Lino Pollastri

ELABORATI GRAFICI

Progetto: Quaderno delle sezioni di computo

Progetto	Fase	Disciplina	Elaborato	Sub	Revisione	Revisione
20066	D	3	11	0	A	Emissione

CUP	Redatto	Controllato	Approvato	Scala	Data
D71B17002330003	Guerzoni	Pollastri	Pollastri	1:50	Dicembre 2022



Regione Toscana

Ing. Riccardo Buffoni – Dirigente Responsabile del Contratto
Ing. Riccardo Buffoni – Responsabile Unico del Procedimento
Ing. Michela Di Matteo – Direttore per l'Esecuzione del Contratto
Arch. Paolo Lucattini – Direttore Operativo
Dott. Emiliano Carnieri – Supporto al RUP
Geol. Mariano Mirannalti – Supporto al RUP

PRESTAZIONI PRINCIPALI

Responsabile delle integrazioni: Ing. Lino Pollastri
Progettista viabilità sostenibile: Ing. Elena Guerzoni
Progettista architettonico: Arch. Emanuela Barro

Progettista strutturale: Ing. Davide Liturri
Progettista idraulico: Ing. Simone Galardini
Geologo: Geol. Andrea Bizzarri

GRUPPO DI LAVORO



Mate Soc. Coop.

Ing. Lino Pollastri, Arch. Francesco Vazzano, Ing. Elena Guerzoni, Ing. Franco Di Biase, Arch. Arturo Augelletta, Ing. Matteo Cella, Arch. Agostino Maiurano, Ing. Silvia Moretti, Ing. Elettra Lowenthal, Arch. Emanuela Barro, Dott. Urb. Valeria Polizzi, Arch. Tommaso Cesaro, Arch. Maurizio Pavani, Ing. Mauro Perini (DT), Ing. Alessandro Sanna, Arch. Livia Travaglini, Arch. Sara Greco, Arch. Eleonora Sablone, Prof. Arch. Matteo Zambon, Geom. Andrea Elbi, Arch. Michele Cavallaro, Ing. Carlo Albero Caliman, Arch. Nicla Di Ciommo, Arch. Veronica D'Onofrio, Arch. Michele Avenali.



Cooprogetti Soc. coop.

Arch. Enrico Costa, Arch. Paolo Ghirelli, Ing. Lorena Ragnacci, Ing. Edoardo Filippetti, Ing. Moreno Panfili, Ing. Alessandro Placucci, Arch. Elisa Aurora Eleonora Crimi, Arch. Francesca Uccellani, Arch. Luigi Muraca, Arch. Antonella Strati, Ing. Danilo Pelle, Arch. Sonia Alunno, Arch. Alessio Mazzacrelli, Ing. Monia Angeloni, Cons. BB. AA. AA. Eleonora Gitto, Ing. Luigino Capponi, Per. Ind. Augusto Albini, Ing. Luigi Farina, Geol. Fausto Pelicci, Ing. Walter Tomassoli, Ing. Luca Vecchiato, Dott. Agr. Salvatore Mauro, Dott. Agr. Giampaolo Tripodi, Per. Agr. Roberto Tomassoli, Stefano Lapazio, Dott. Enrico Minelli, Geom. Fabio Ercoli, Rag. Rita Ercoli, Rag. Sonja Brunetti, Ing. Riccardo Cecchetti, Ing. Costanza Cecchetti, Ing. Sabina Mandaglio, Arch. Debora Marchi, Dott.ssa Arch. Maria Grazia Matarozzo, Dott. Archeo. Mariagrazia Liseno, Arch. Diego Benedetto, Arch. Alice Maria De Leo, Arch. Teresa Rita Bertino.



Parcianello & Partners engineering s.r.l.

Arch. Lio Parcianello, Arch. Renato Da Re, Arch. Gianluca Parcianello, Arch. Giada Saviane, dis. Romano Sommacal, p.e. Simona Cesa, Geom. Enzo Parcianello, Arch. Giulia Della Giustina, Arch. Andrea Maugeri, Ing. Tiziana Cataldo, Arch. Antonio Schizzi, Arch. Federica Vanich.



NetMobility s.r.l.

Ing. Francesco Seneci, Geol. Mirko Demozzi, Ing. Filippo Forlati, Ing. Francesco Avesani, Pian. Licia Bernini, P.I. Luca Baroni.



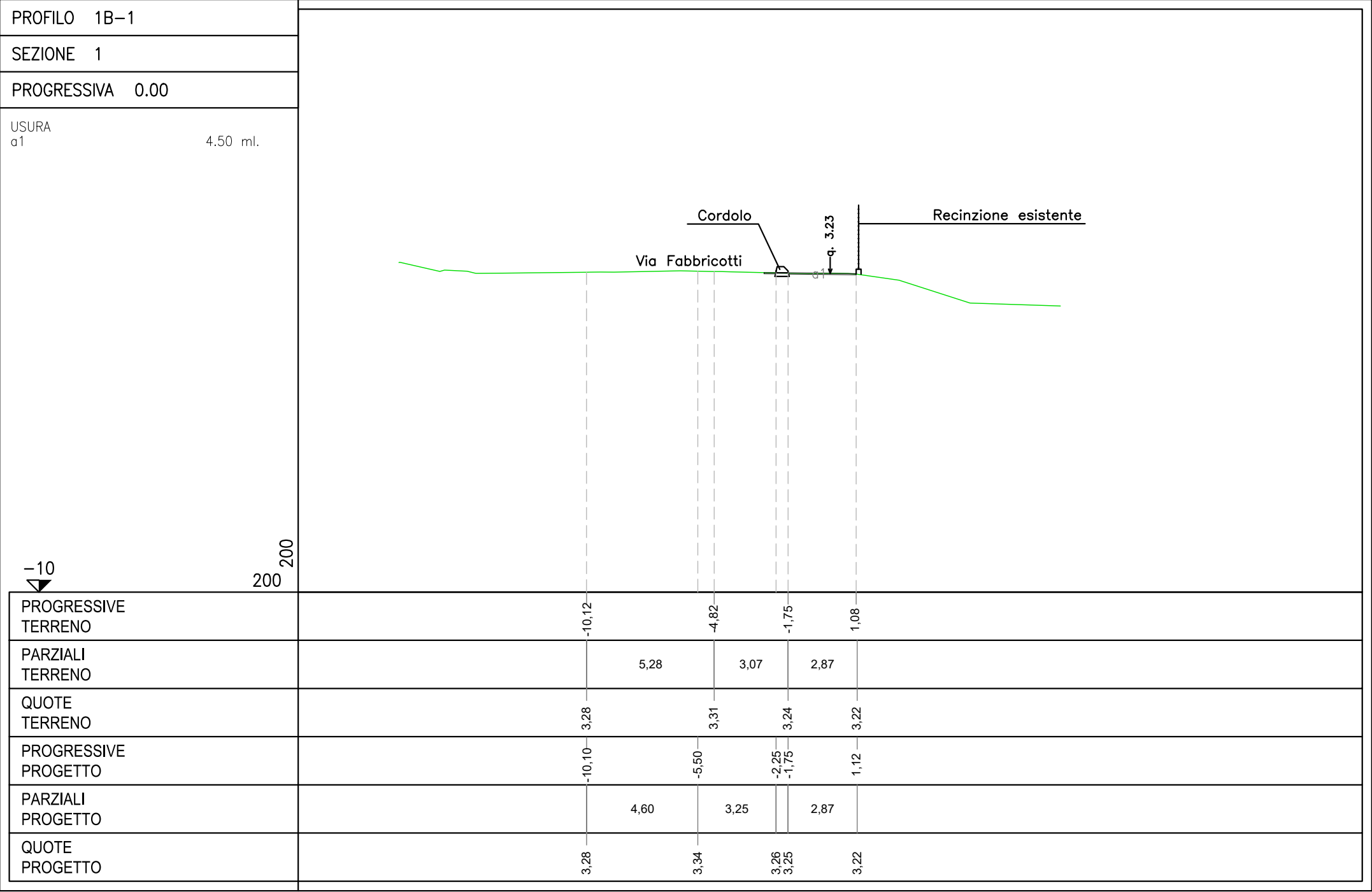
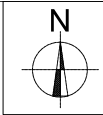
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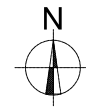
Ing. Filippo Busola, Ing. Alessio Rosin, Ing. Simone Venturini, Geol. Emanuele Fresia, Ing. Davide Liturri, Ing. Andrea Renso, Ing. Guido Rossi, Ing. Alessandro Rizzo, Ing. Marco Rossignoli, Geom. Gianluca Follesa



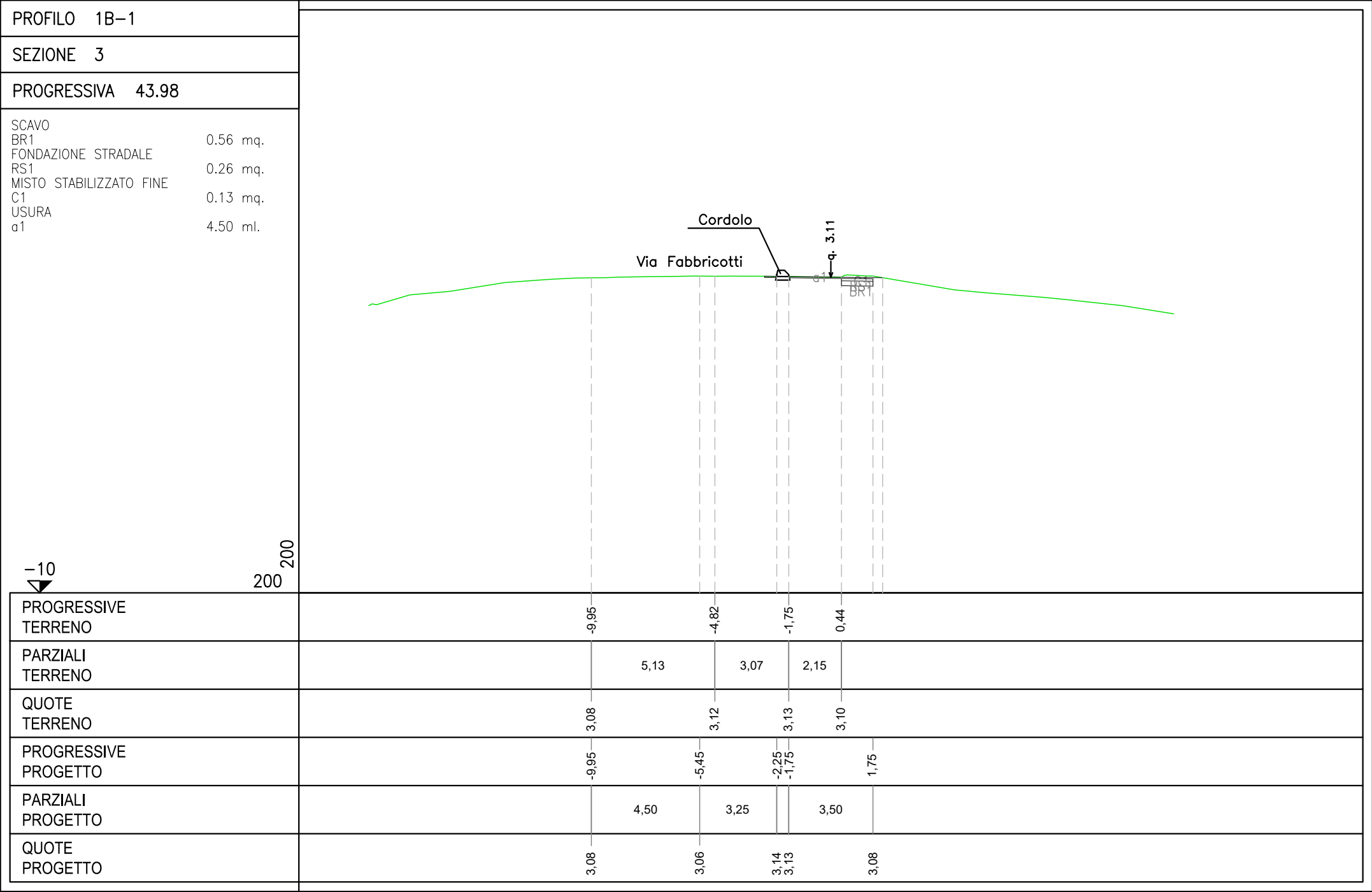
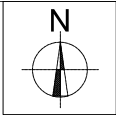
D.R.E.A.M. Italia

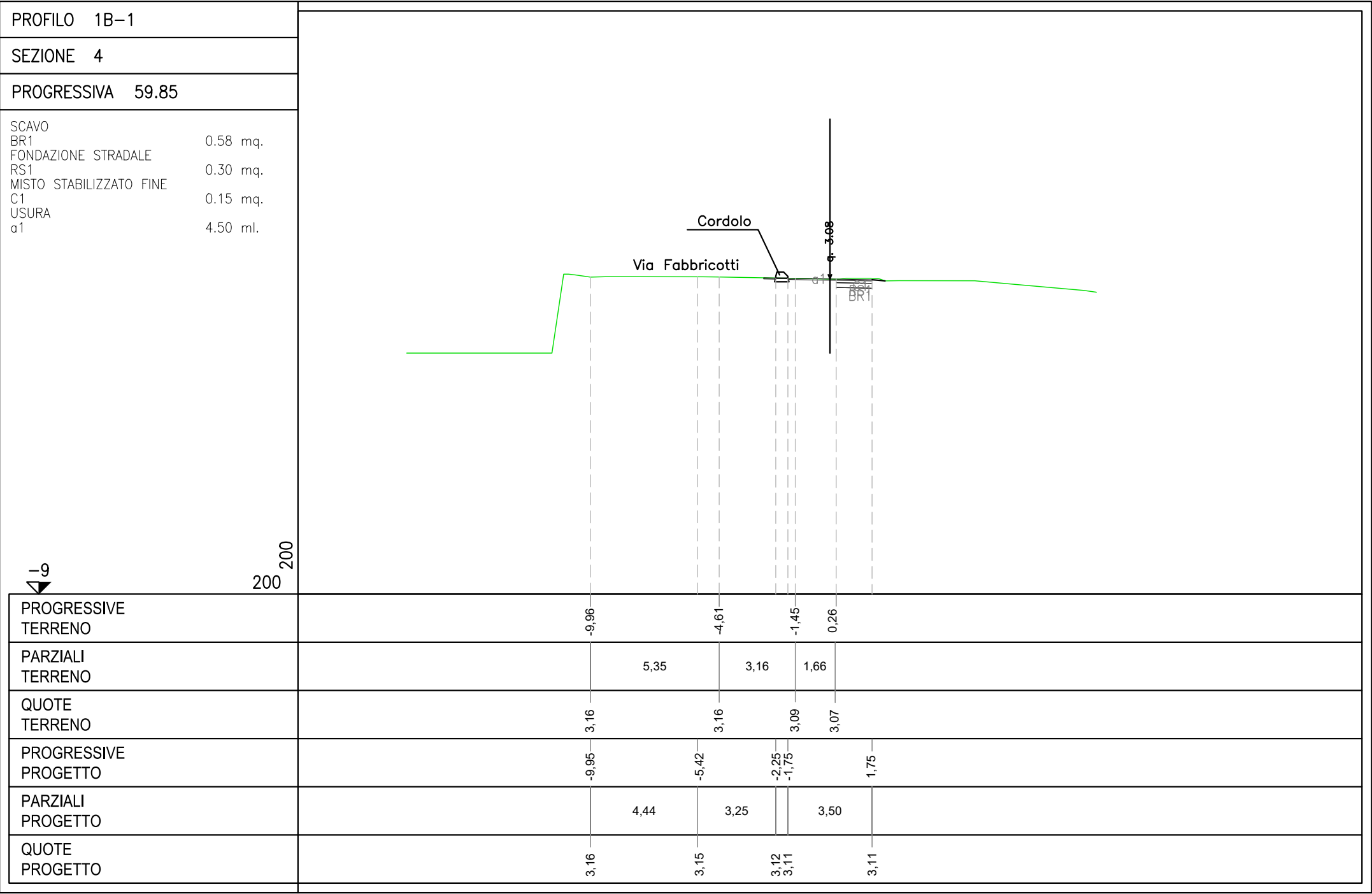
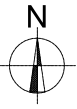
Ing. Simone Galardini, Ing. Chiara Chiostrini, Geol. Andrea Bizzarri, Dott. For. Lorenzo Mini, Dott. For. Katuscia Begliomini.

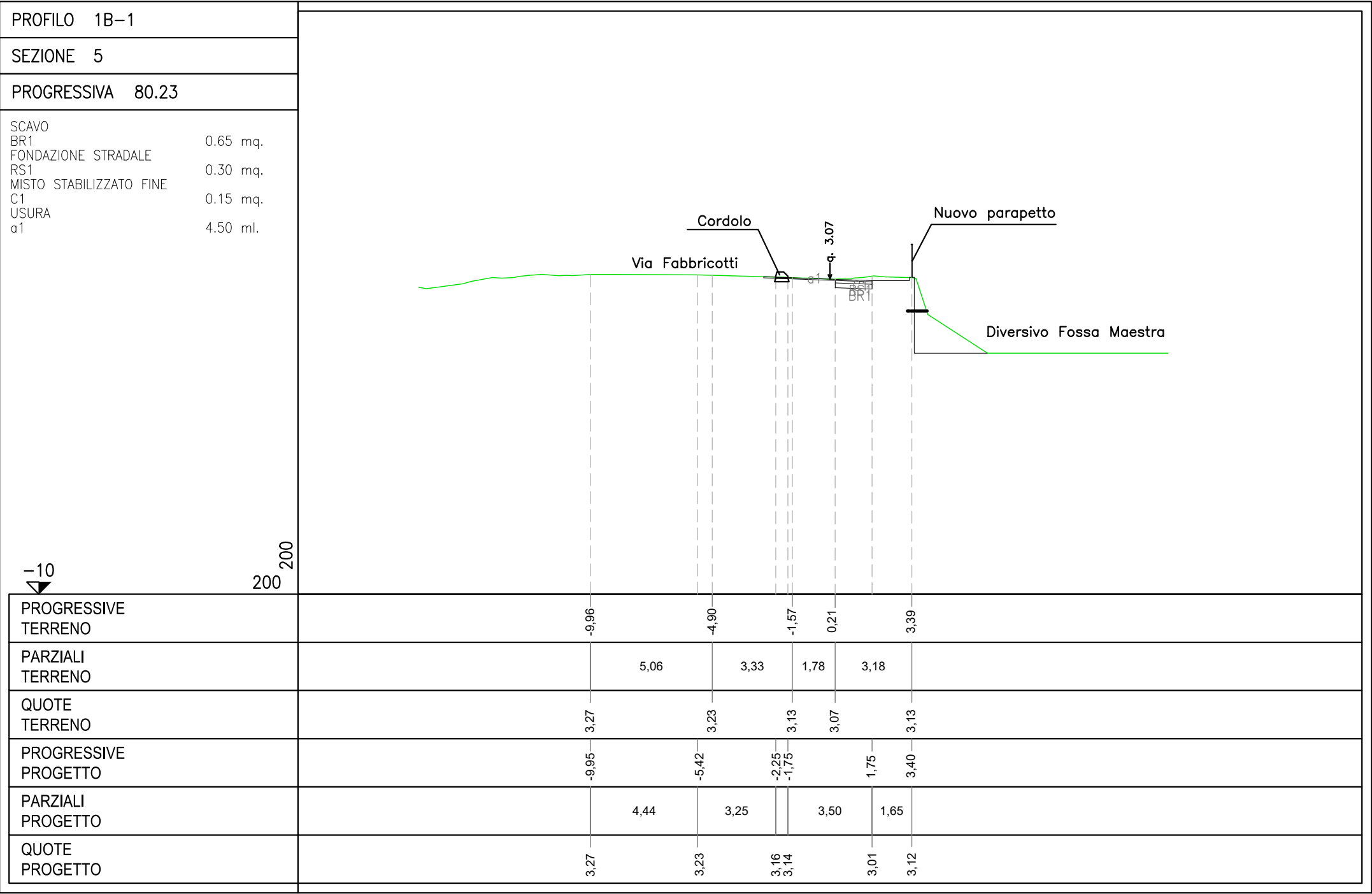
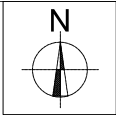


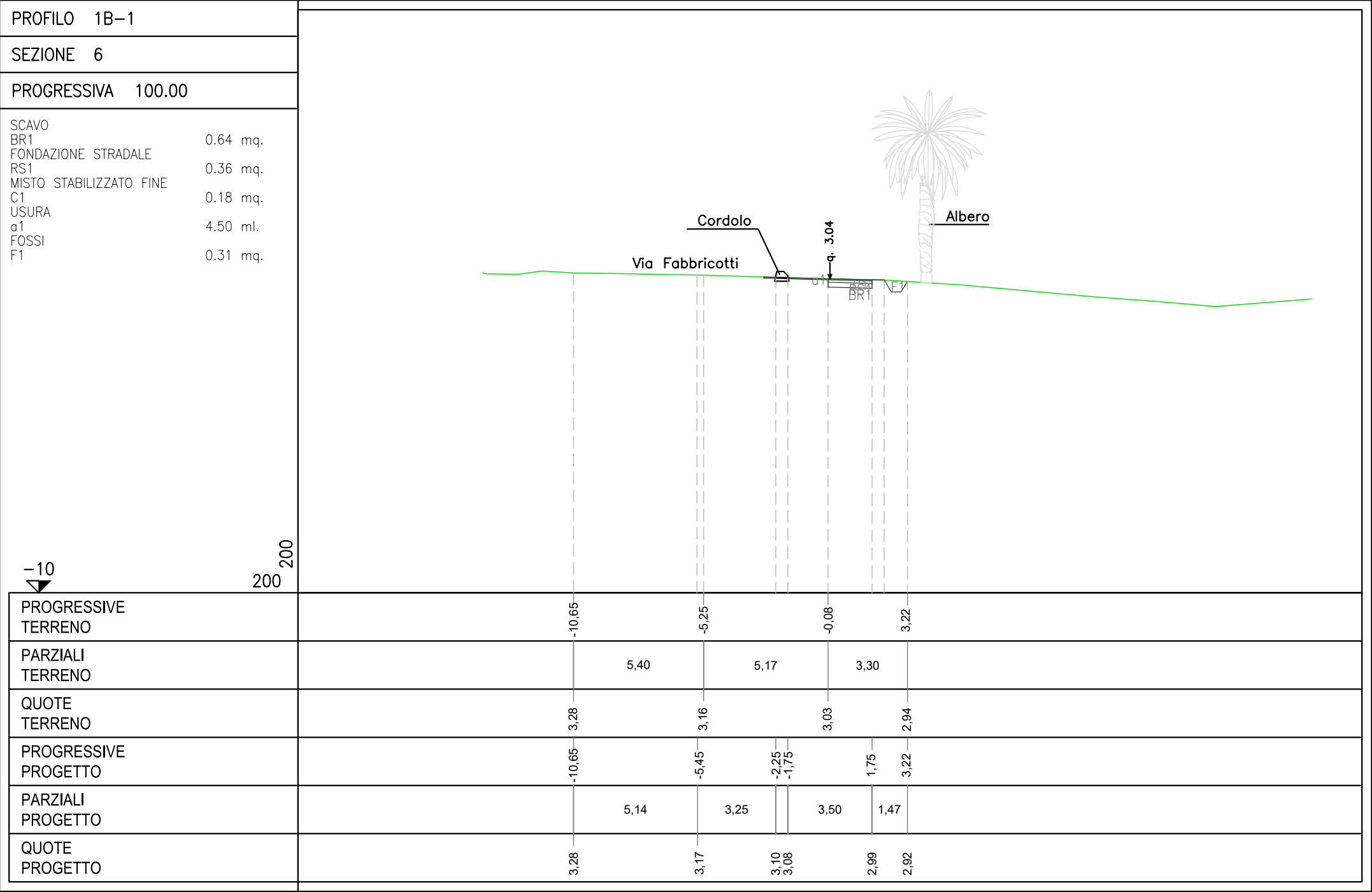
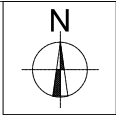


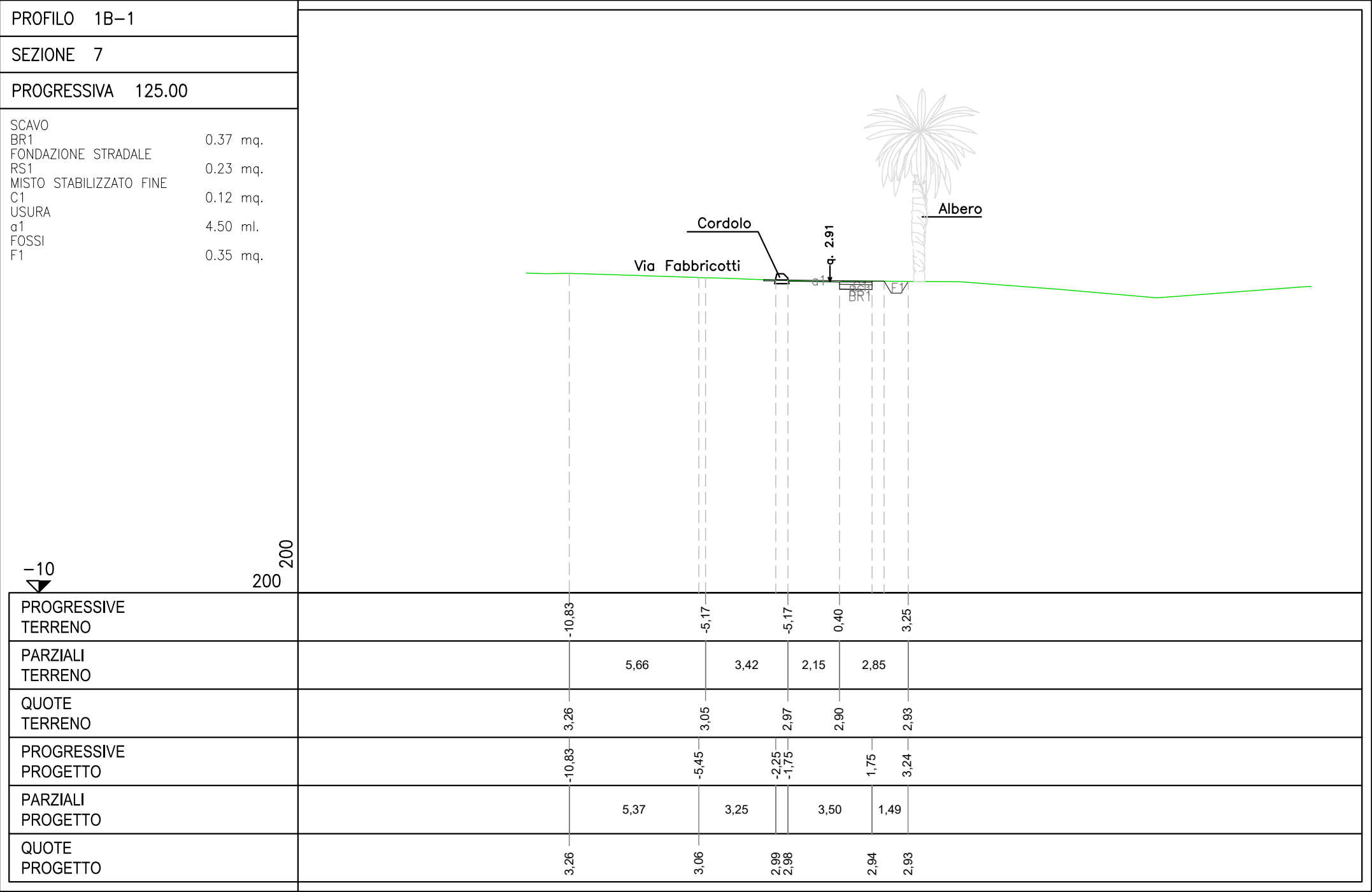
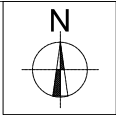
PROFILO 1B-1					
SEZIONE 2					
PROGRESSIVA 15.60					
SCAVO BR1 0.36 mq. FONDAZIONE STRADALE RS1 0.26 mq. MISTO STABILIZZATO FINE C1 0.13 mq. USURA σ1 4.50 ml.		Diagram labels: Via Fabbriotti, Cordolo, Recinzione da demolire, Nuova recinzione, 3.05, BR1.			
PROGRESSIVE TERRENO		-9.97	-4.82	-1.75	0.44
PARZIALI TERRENO		5.13	3.07	2.15	
QUOTE TERRENO		3.02	3.06	3.05	3.02
PROGRESSIVE PROGETTO		-9.95	-5.50	-2.25	1.75
PARZIALI PROGETTO		4.50	3.25	3.50	
QUOTE PROGETTO		3.02	3.08	3.05	3.04

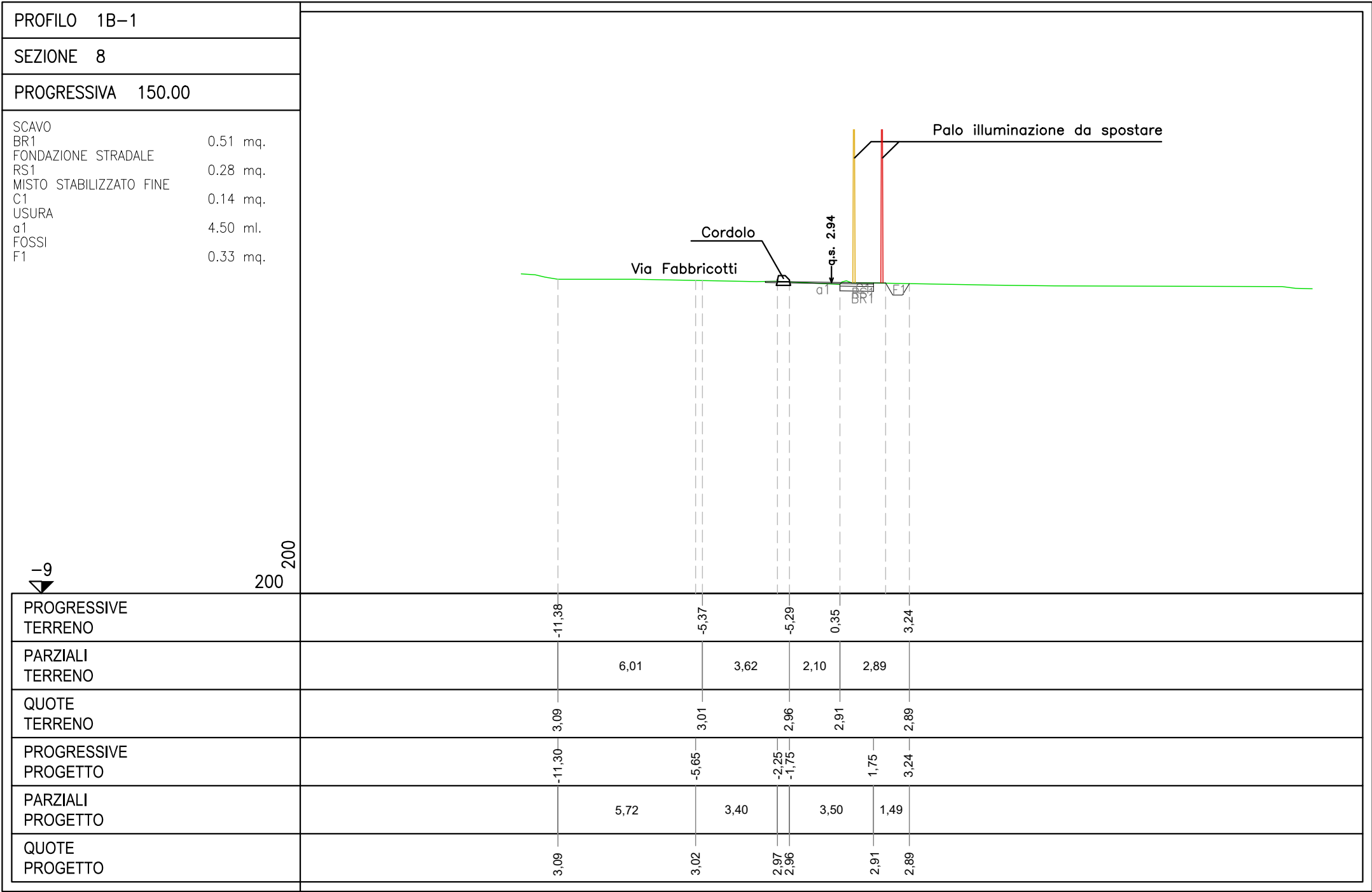
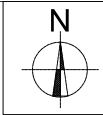


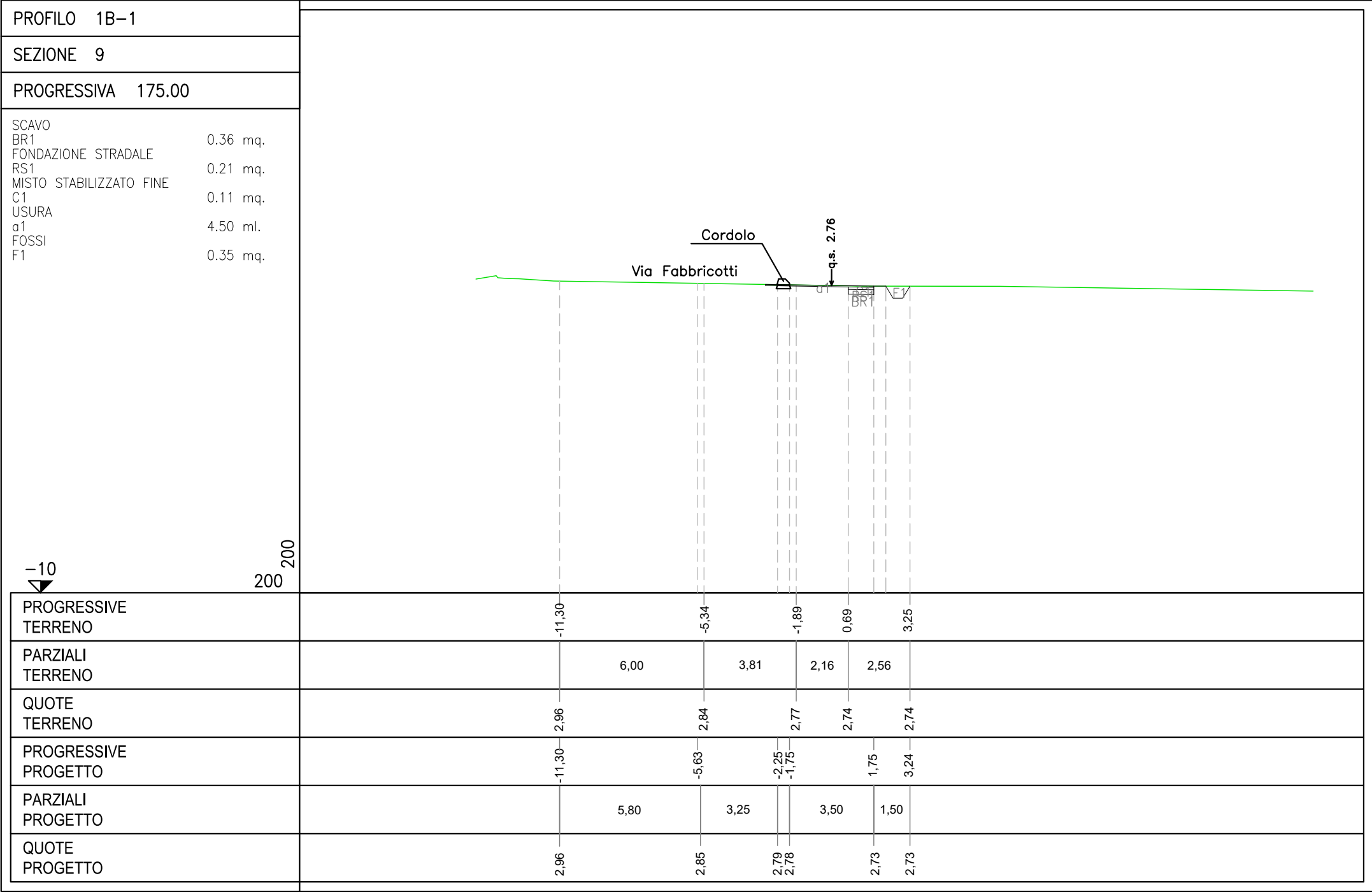
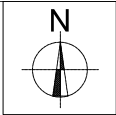


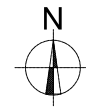




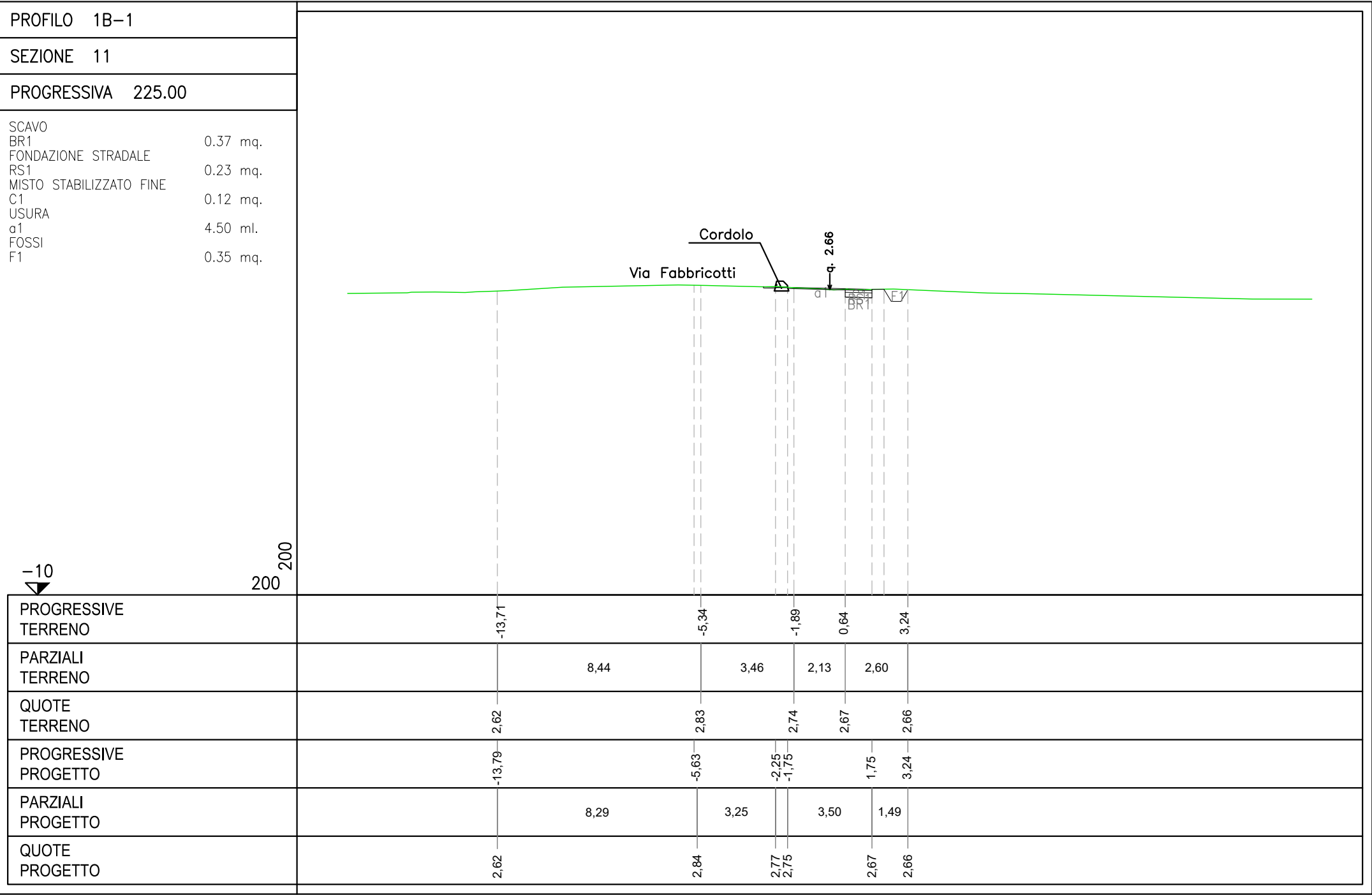
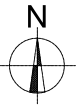


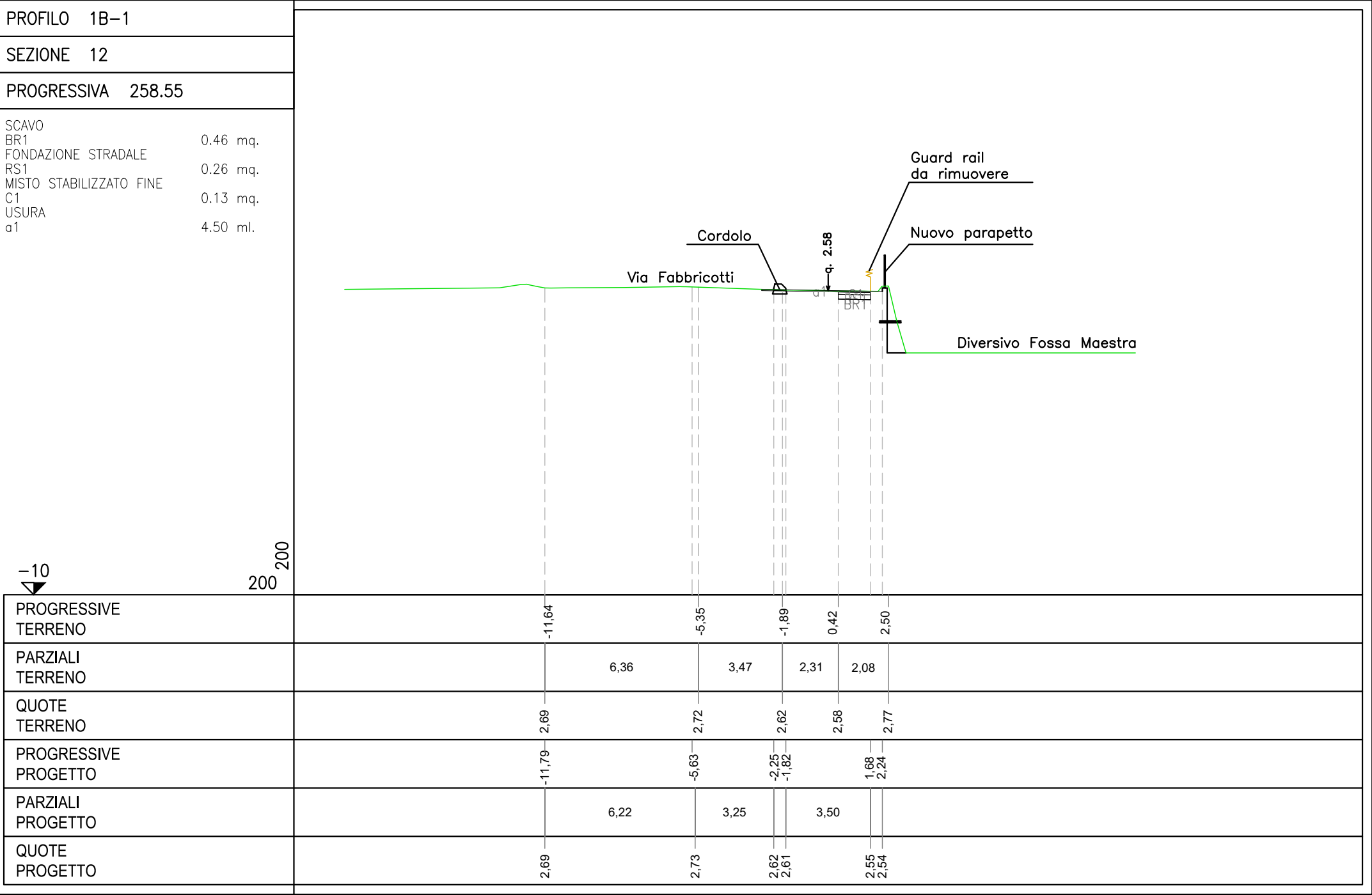
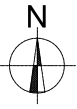


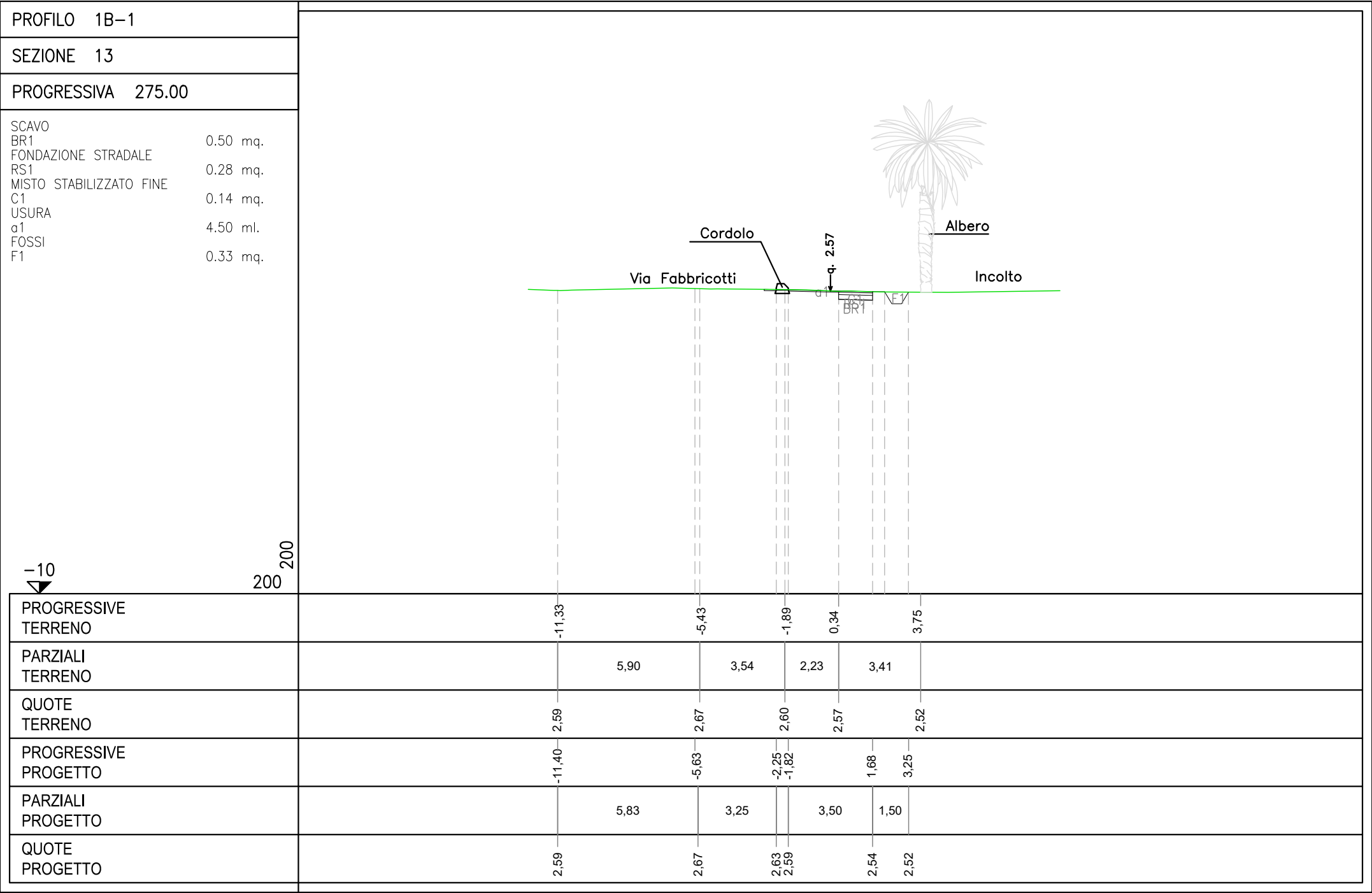
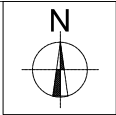


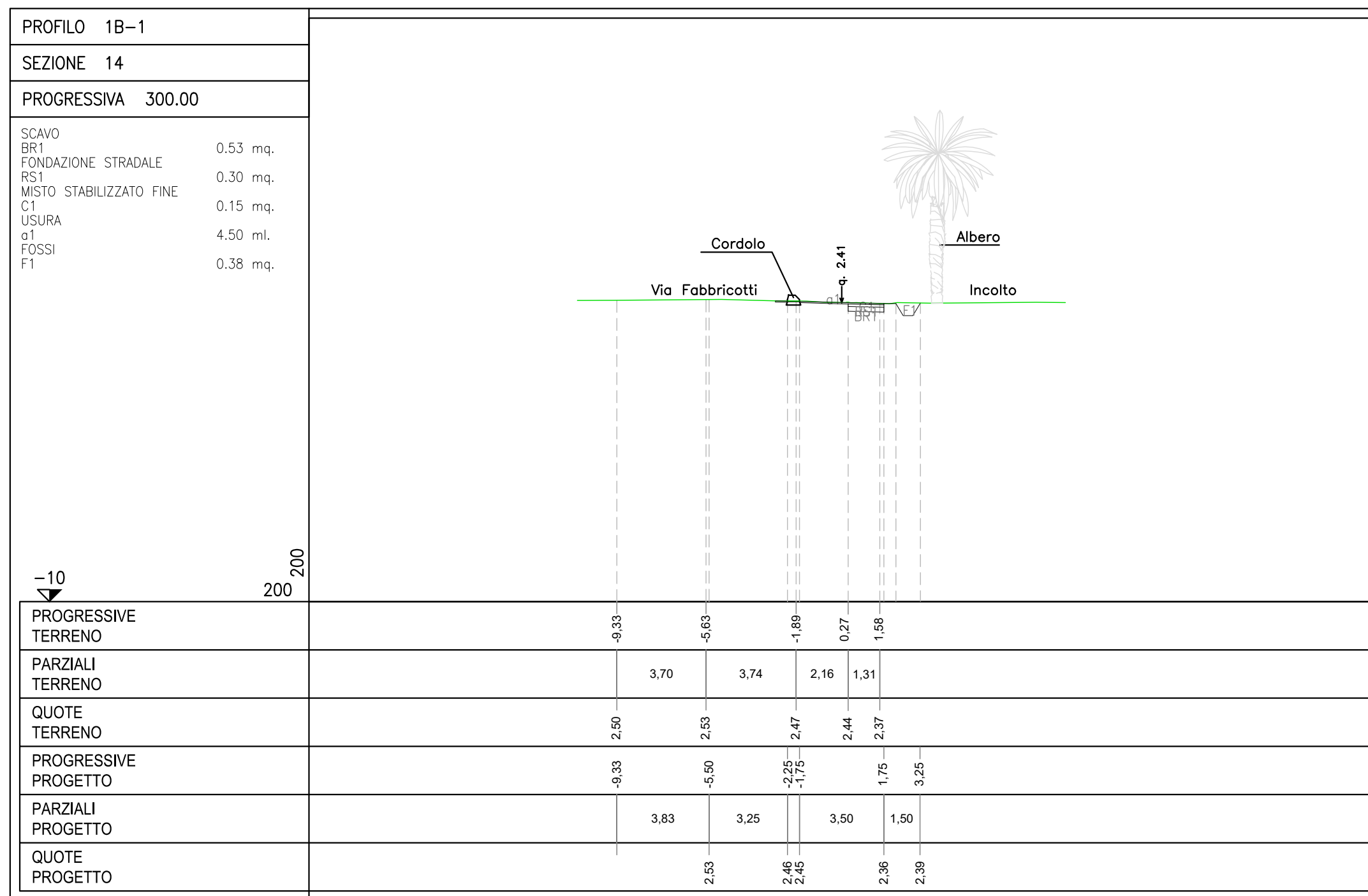


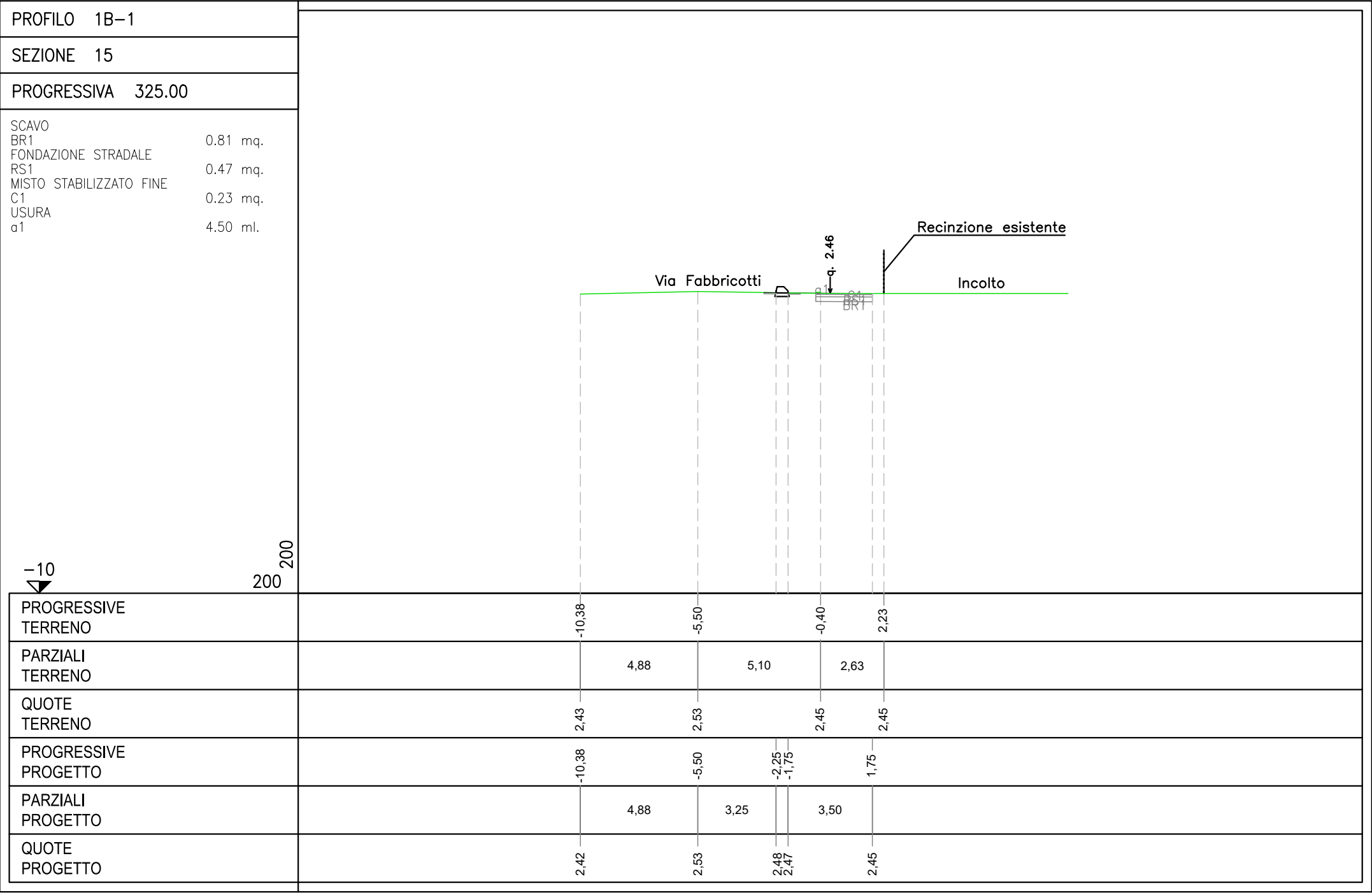
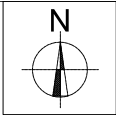
PROFILO 1B-1	
SEZIONE 10	
PROGRESSIVA 200.00	
SCAVO BR1 FONDAZIONE STRADALE RS1 MISTO STABILIZZATO FINE C1 USURA α1 FOSSI F1 0.38 mq. 0.22 mq. 0.11 mq. 4.50 ml. 0.35 mq.	
-10 200 200 Cordolo Via Fabbricotti BR1 FV q.s. 2.72 α1	
PROGRESSIVE TERRENO	-10,96 -5,34 -1,89 0,64 3,25
PARZIALI TERRENO	5,69 3,86 2,11 2,61
QUOTE TERRENO	2,87 2,86 2,75 2,69 2,67
PROGRESSIVE PROGETTO	-11,04 -5,63 -2,25 -1,75 1,75 3,24
PARZIALI PROGETTO	5,54 3,25 3,50 1,50
QUOTE PROGETTO	2,87 2,87 2,79 2,77 2,67 2,66

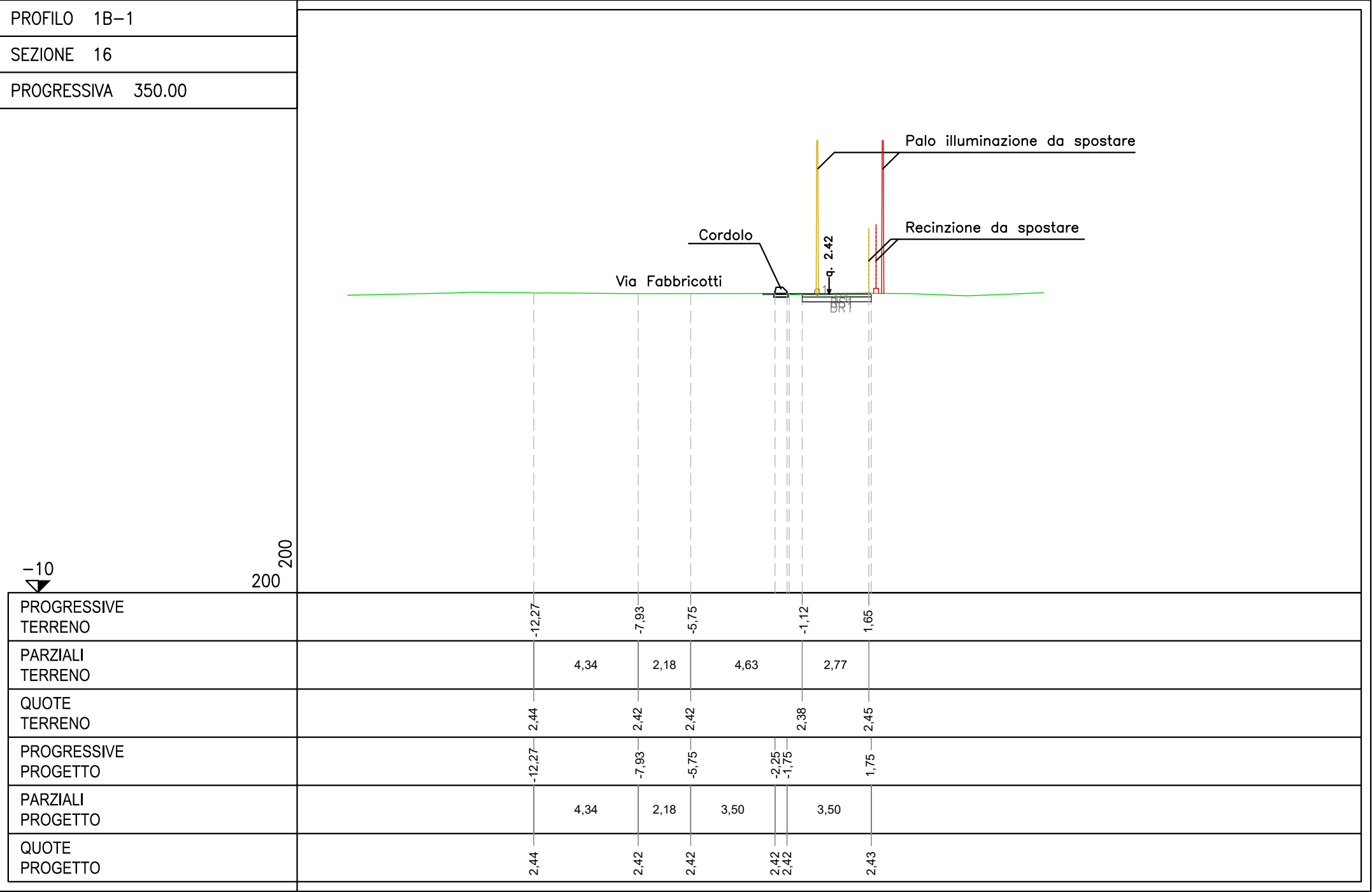
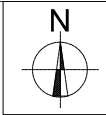


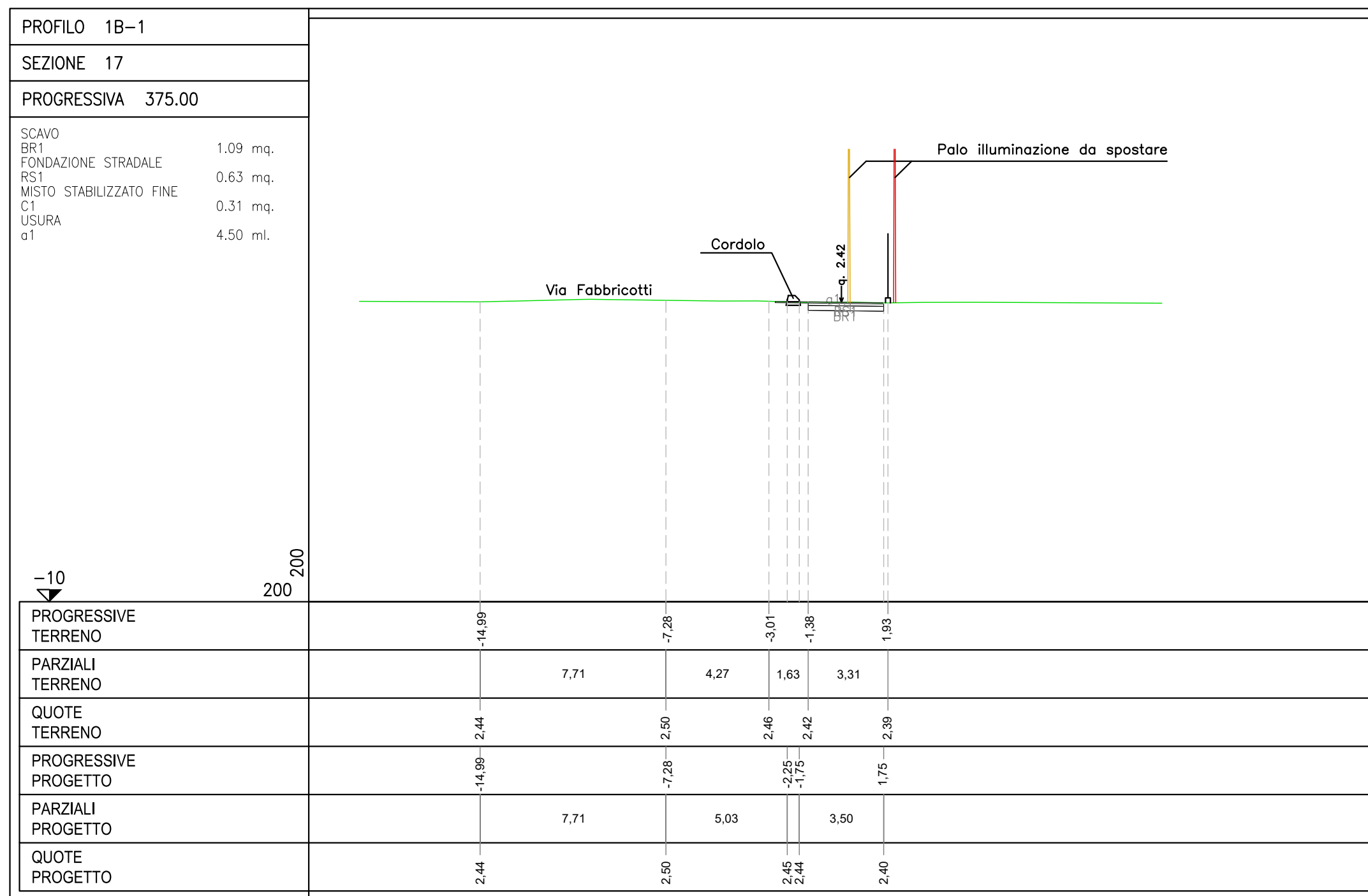


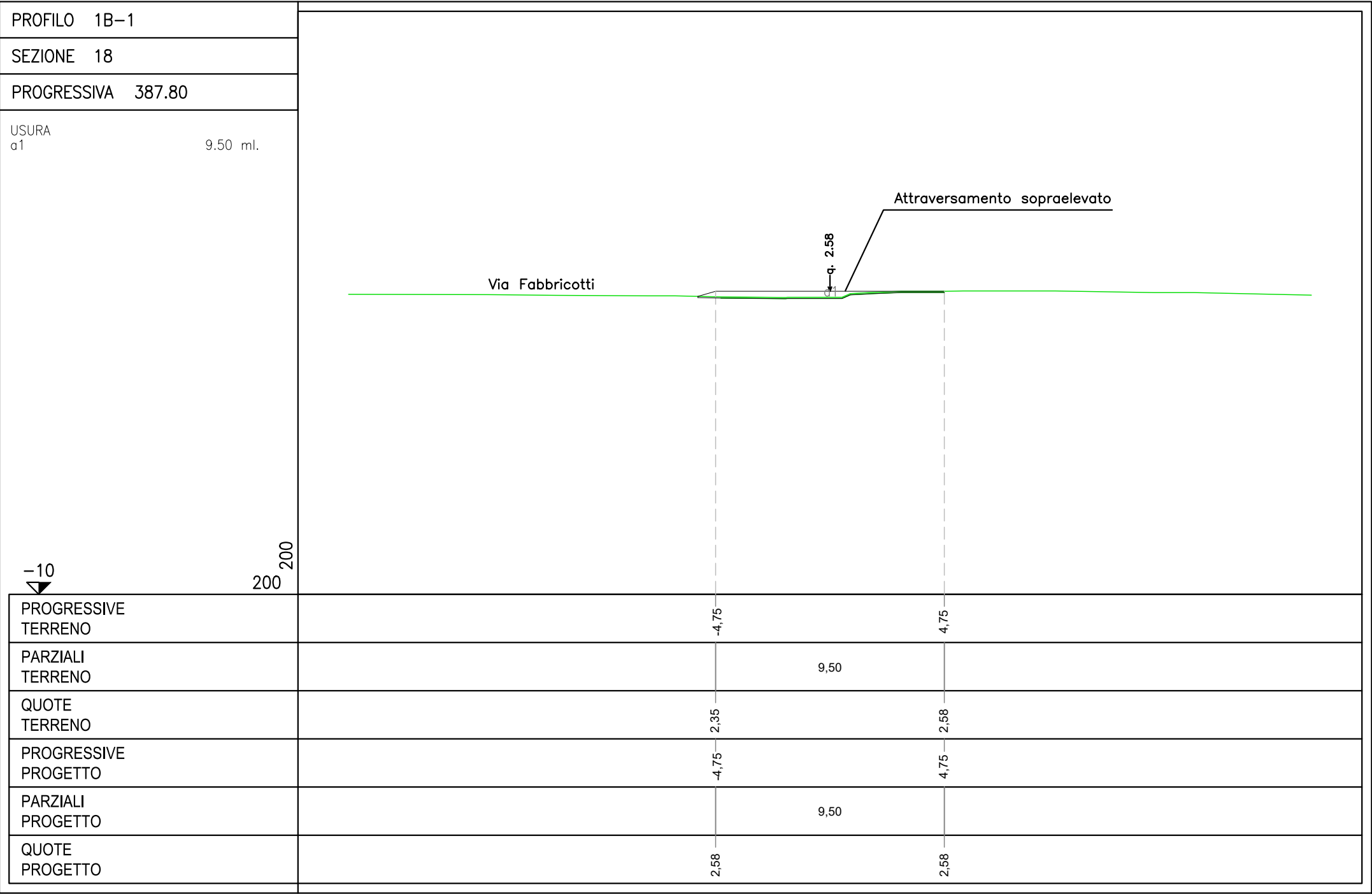
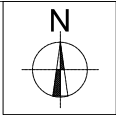


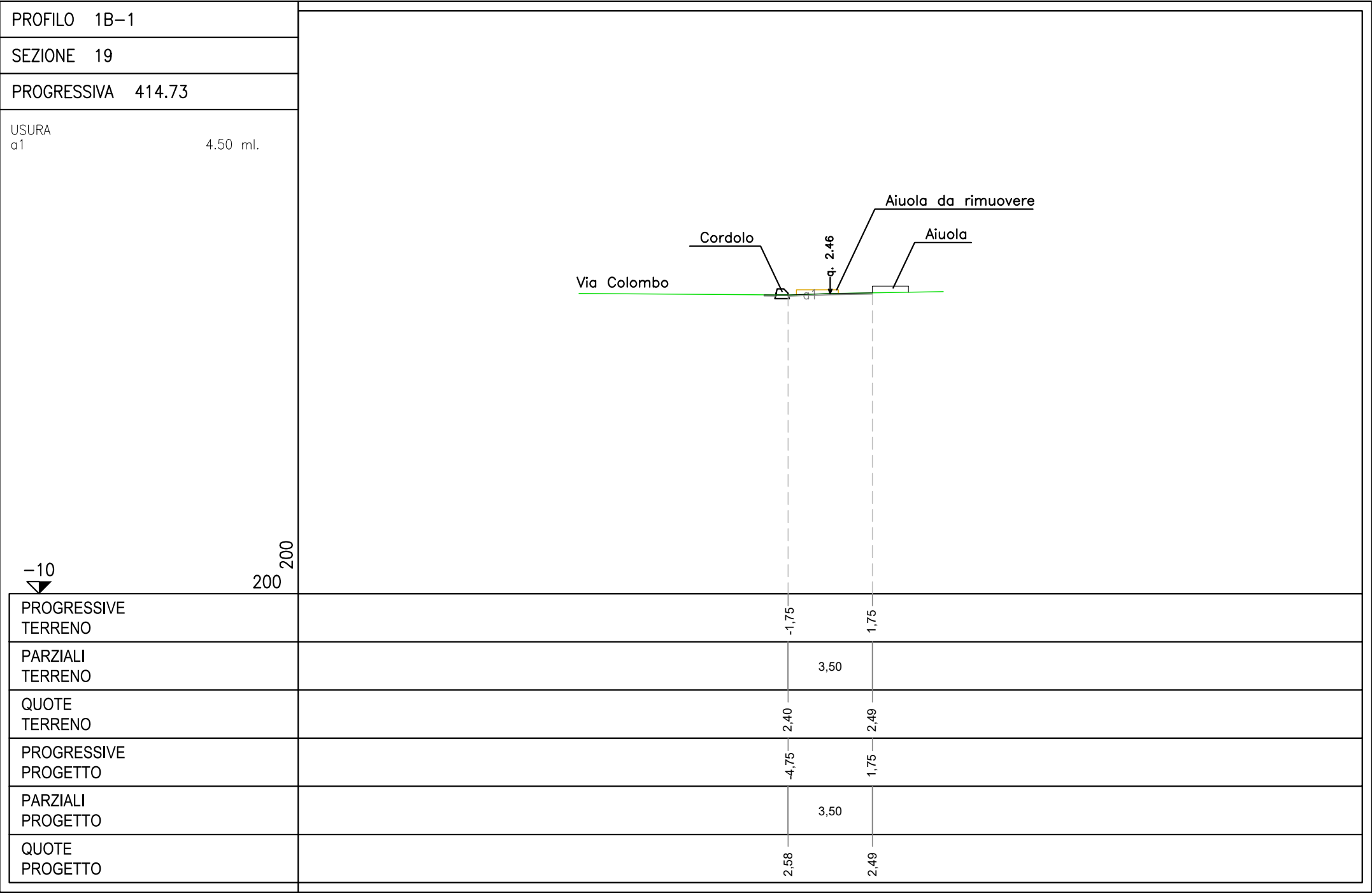
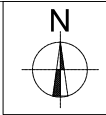


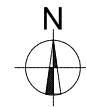




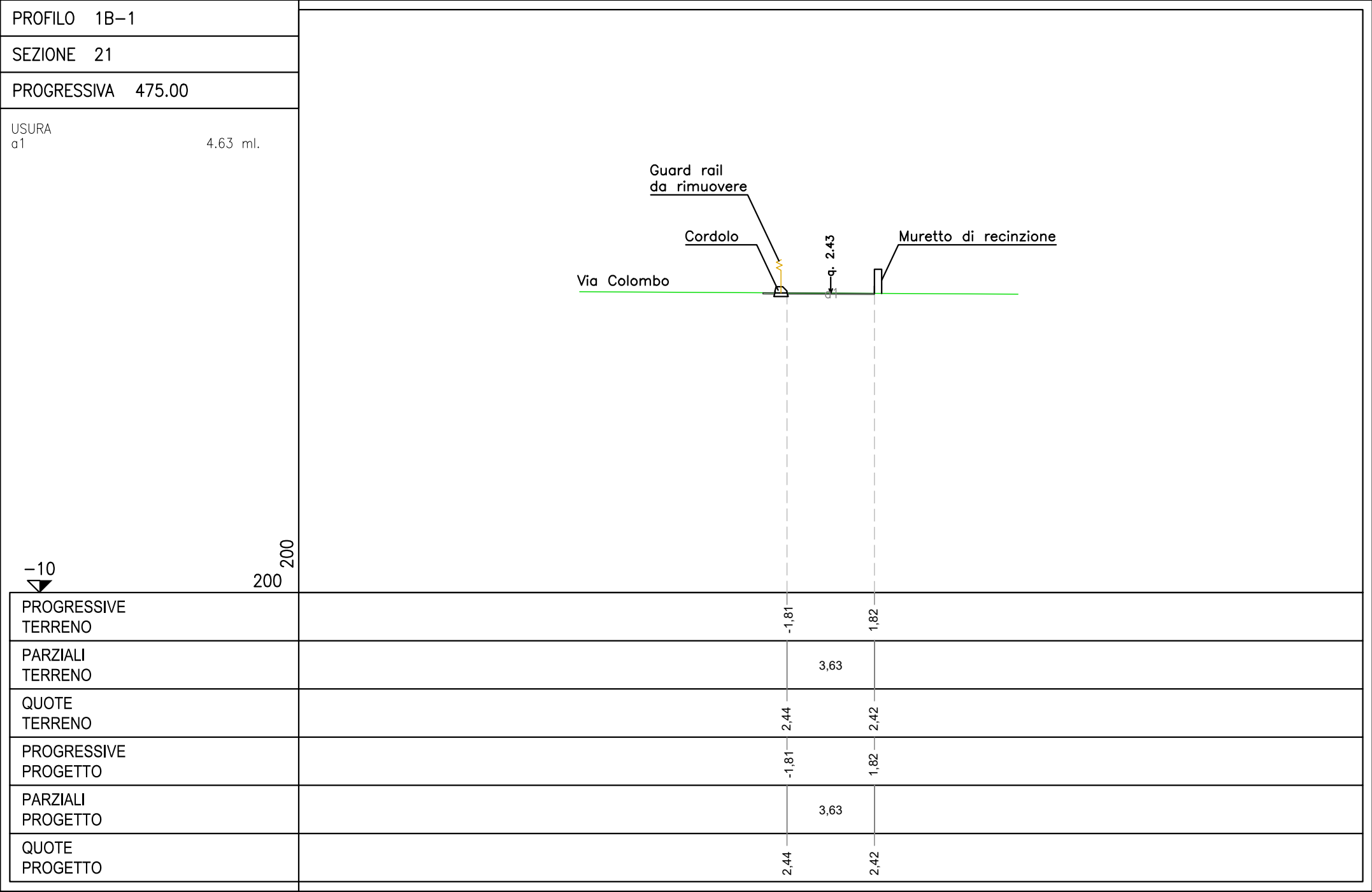
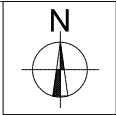


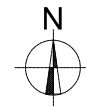




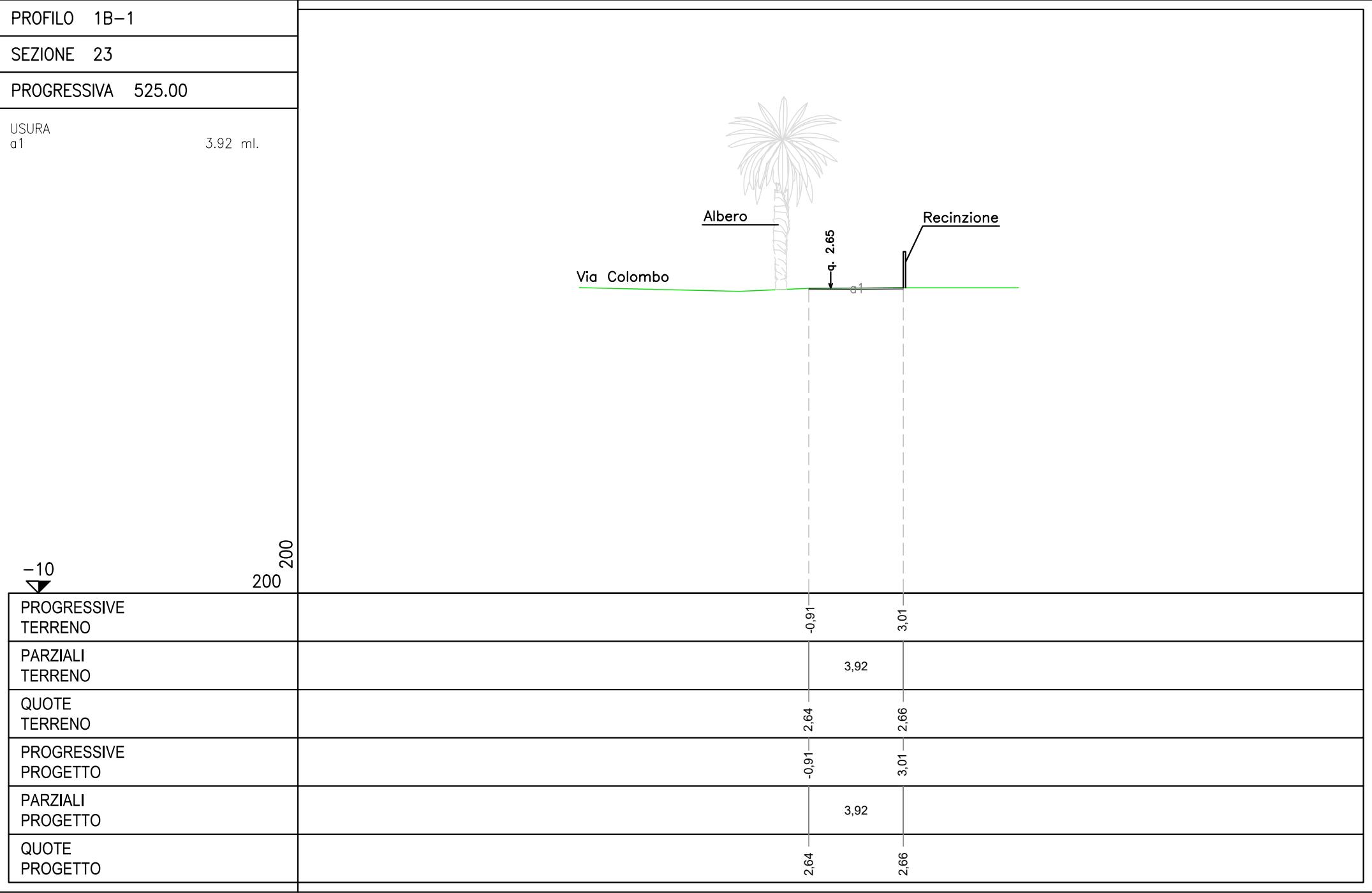
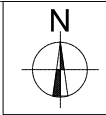


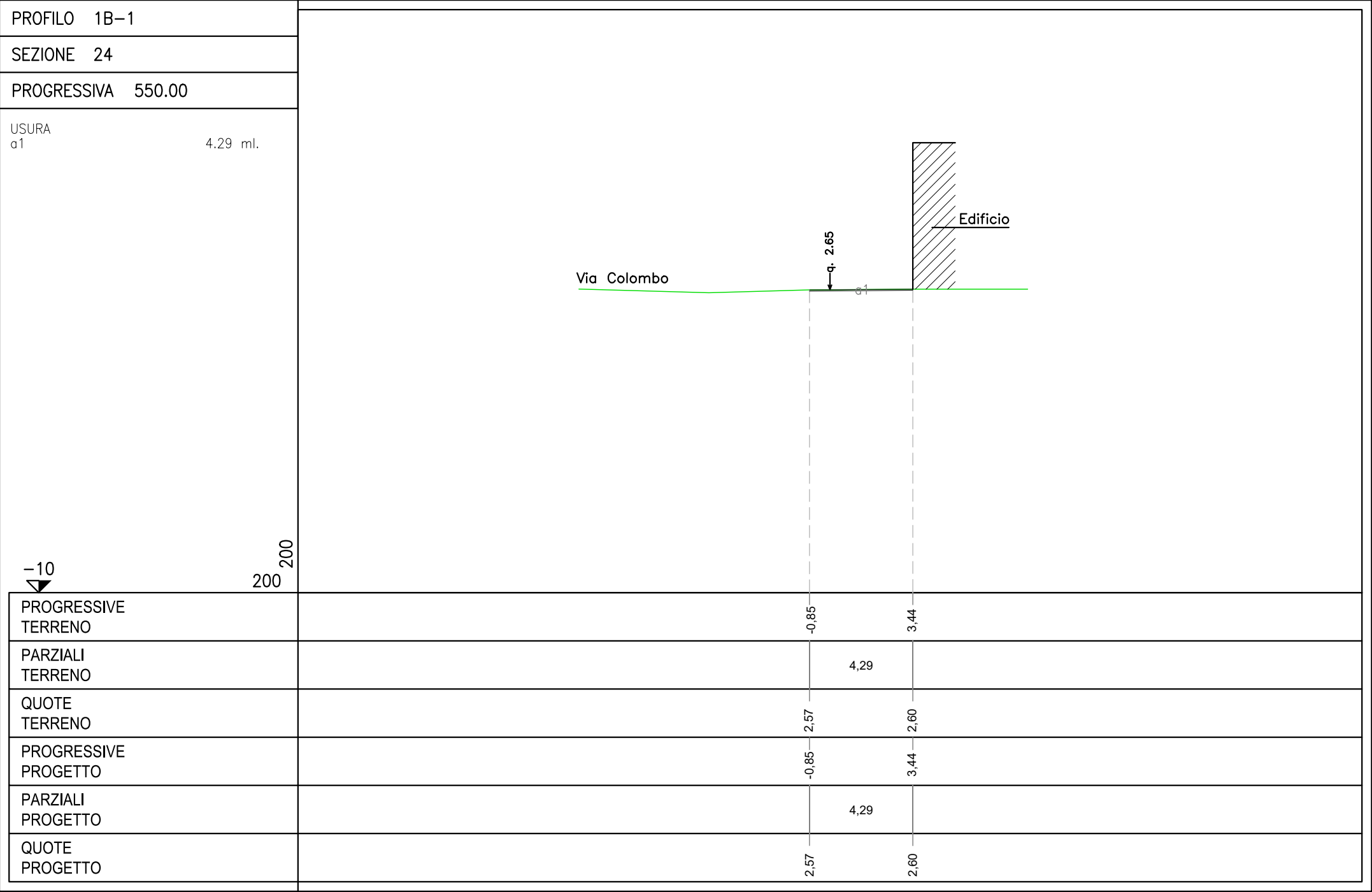
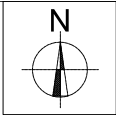
PROFILO	1B-1	
SEZIONE	20	
PROGRESSIVA	440.20	
USURA a1	4.56 ml.	
PROGRESSIVE TERRENO		-1,81 1,81
PARZIALI TERRENO		3,62
QUOTE TERRENO		2,45 2,43
PROGRESSIVE PROGETTO		-4,75 1,75
PARZIALI PROGETTO		3,50
QUOTE PROGETTO		2,45 2,43

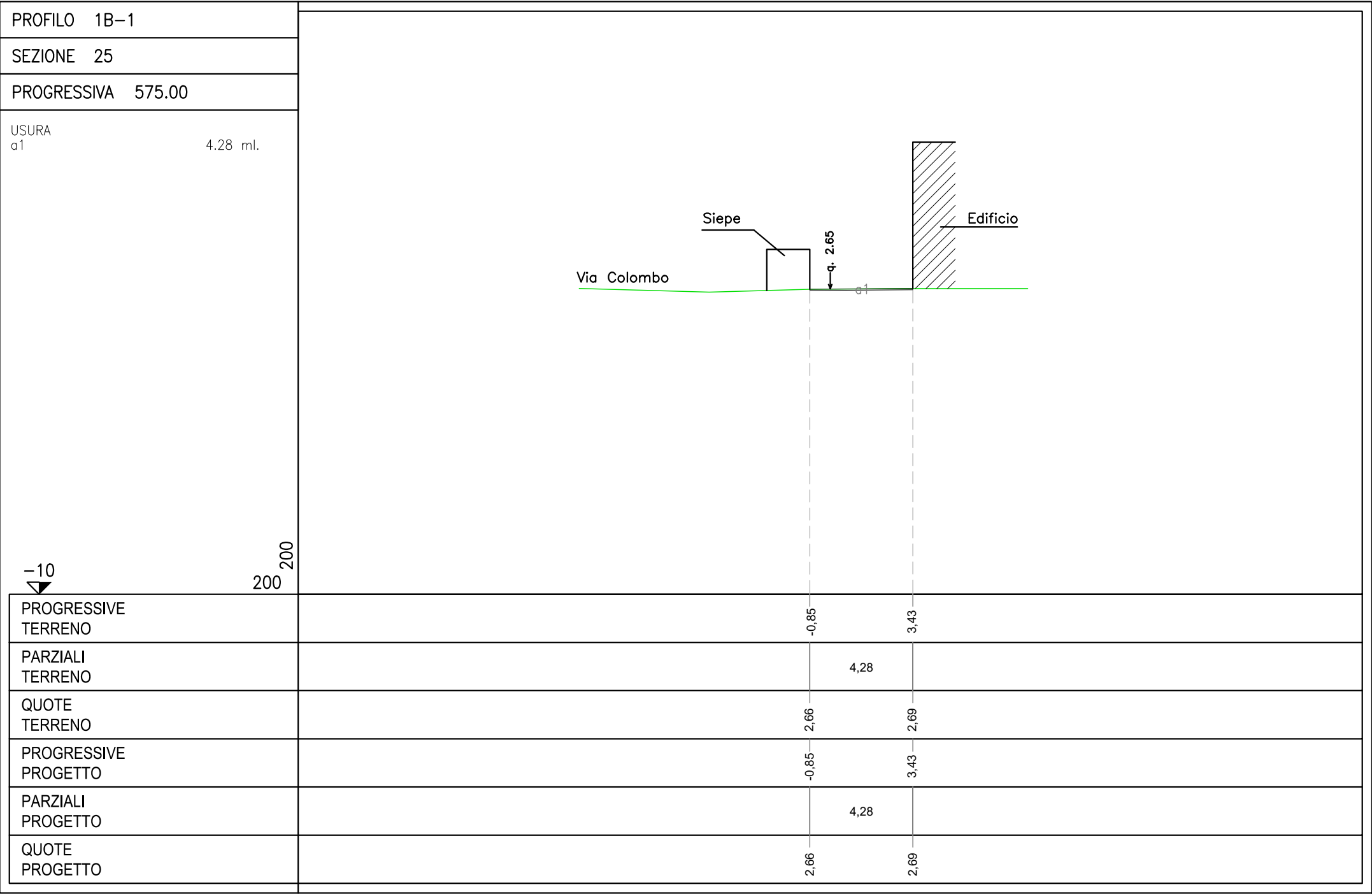
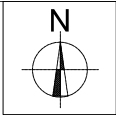


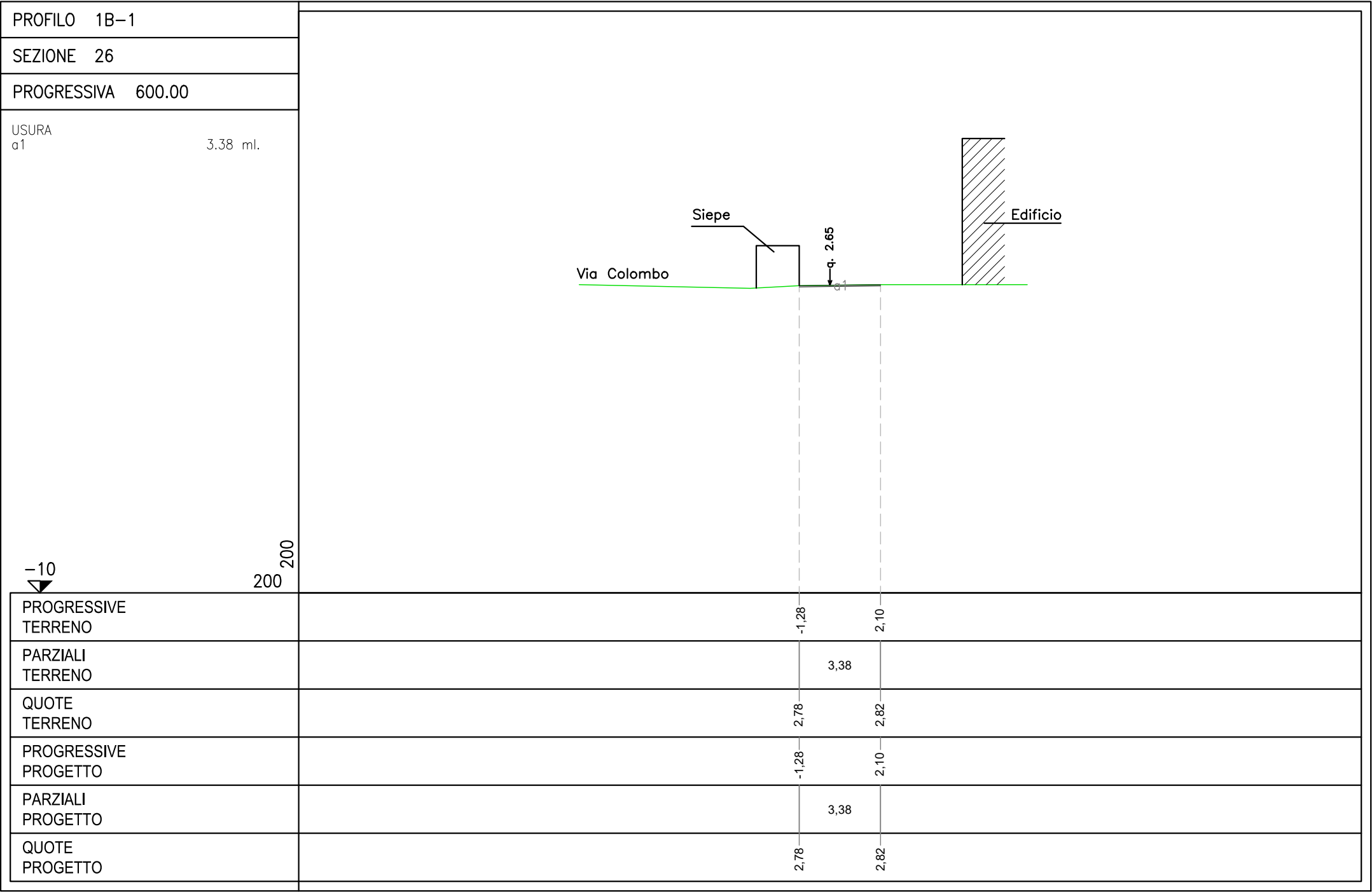
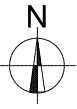


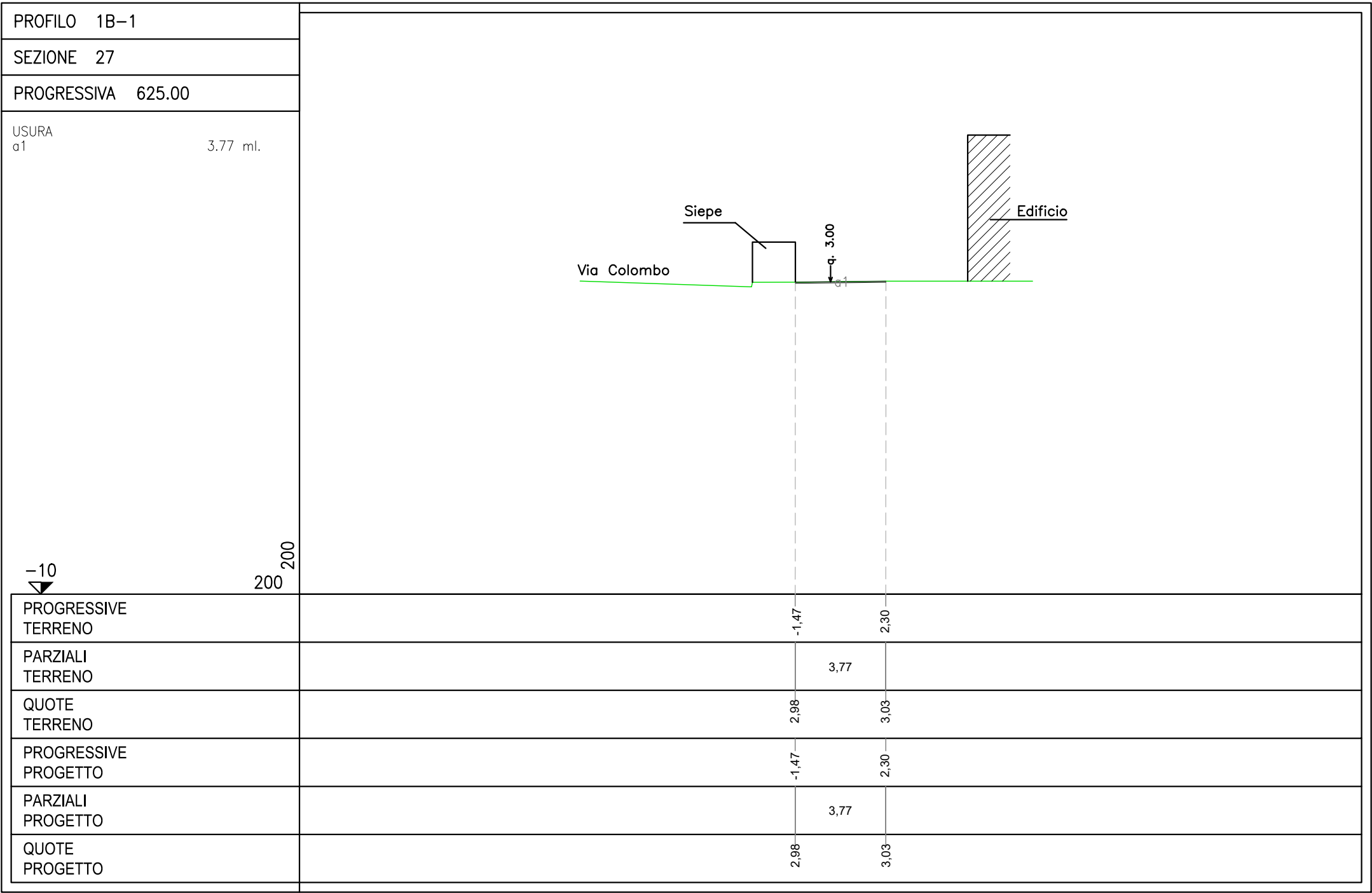
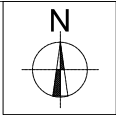
PROFILO	1B-1	
SEZIONE	22	
PROGRESSIVA	491.40	
USURA a1	4.60 ml.	
PROGRESSIVE TERRENO		-2,30 2,30
PARZIALI TERRENO		4,60
QUOTE TERRENO		2,43 2,47
PROGRESSIVE PROGETTO		-2,30 2,30
PARZIALI PROGETTO		4,60
QUOTE PROGETTO		2,43 2,47

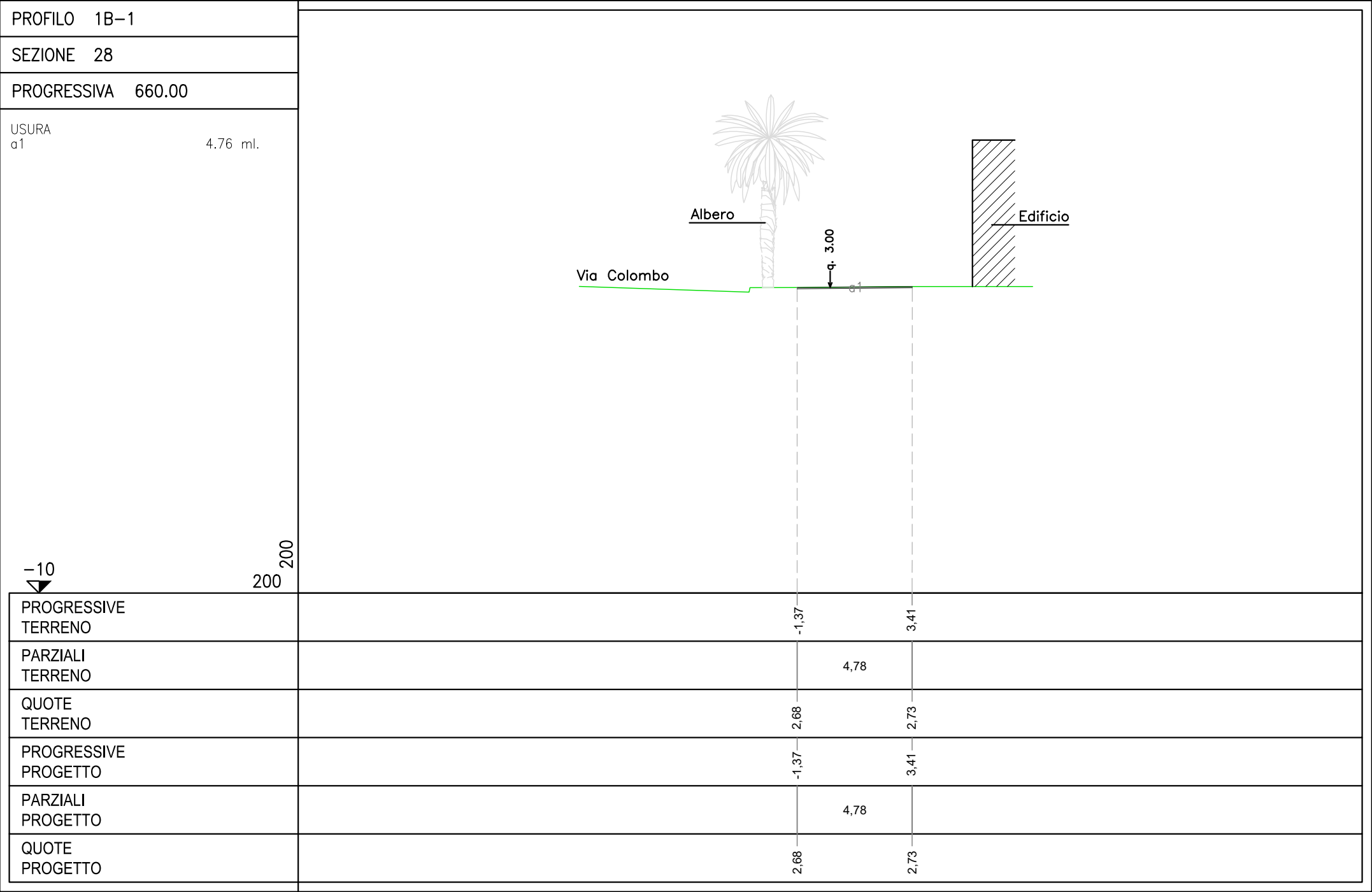
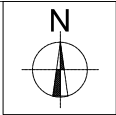


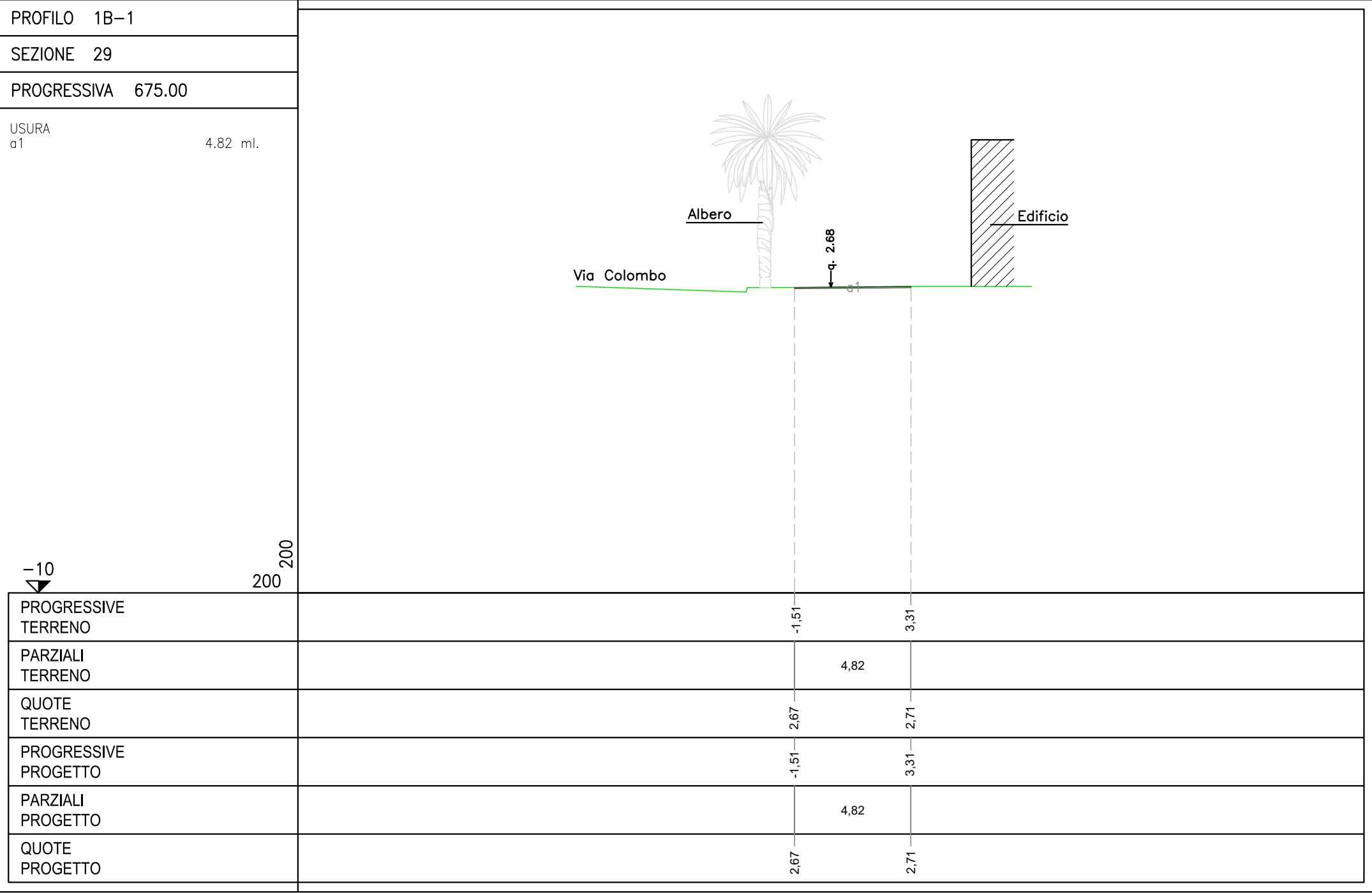
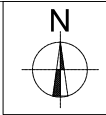


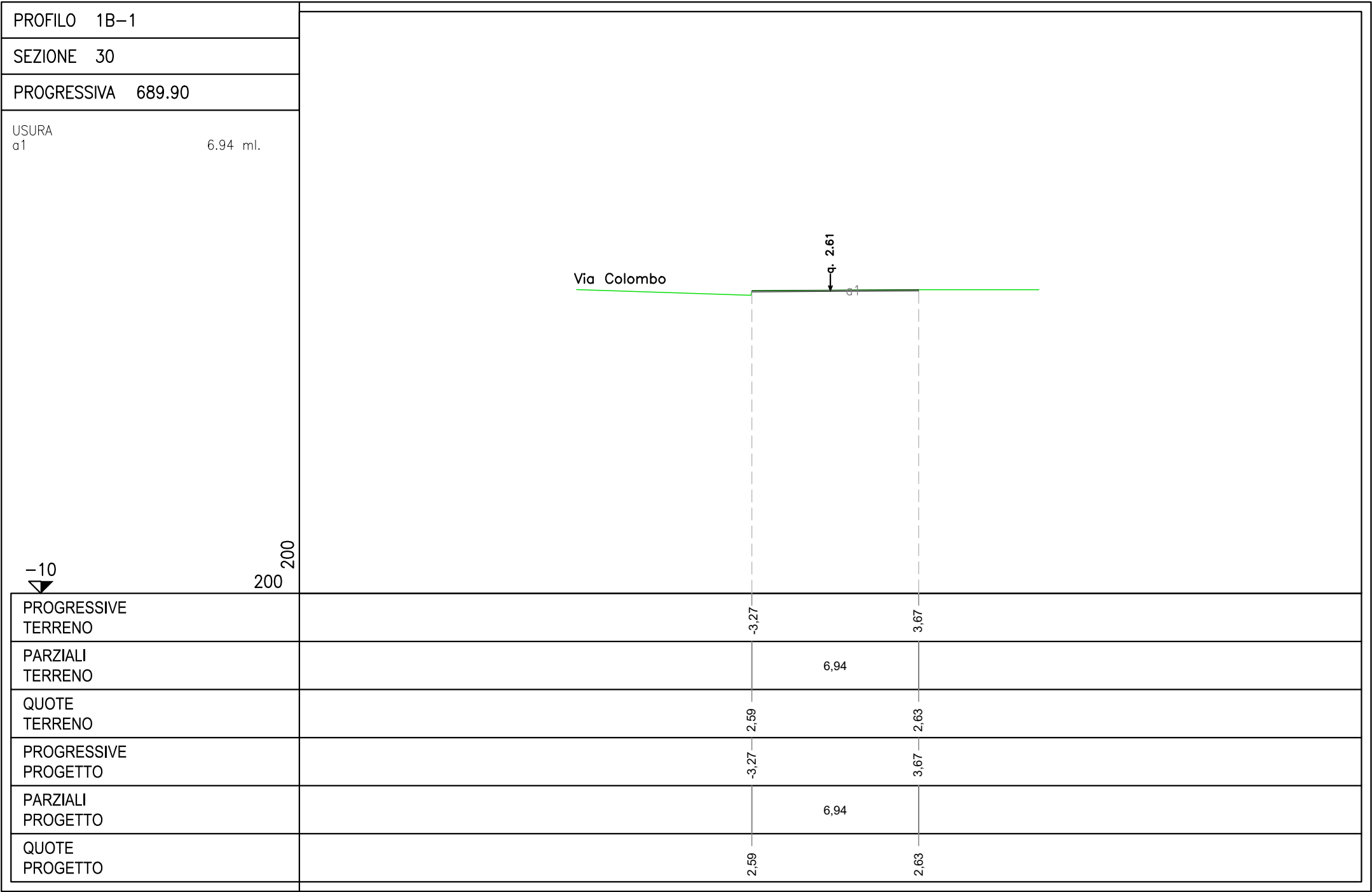
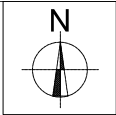


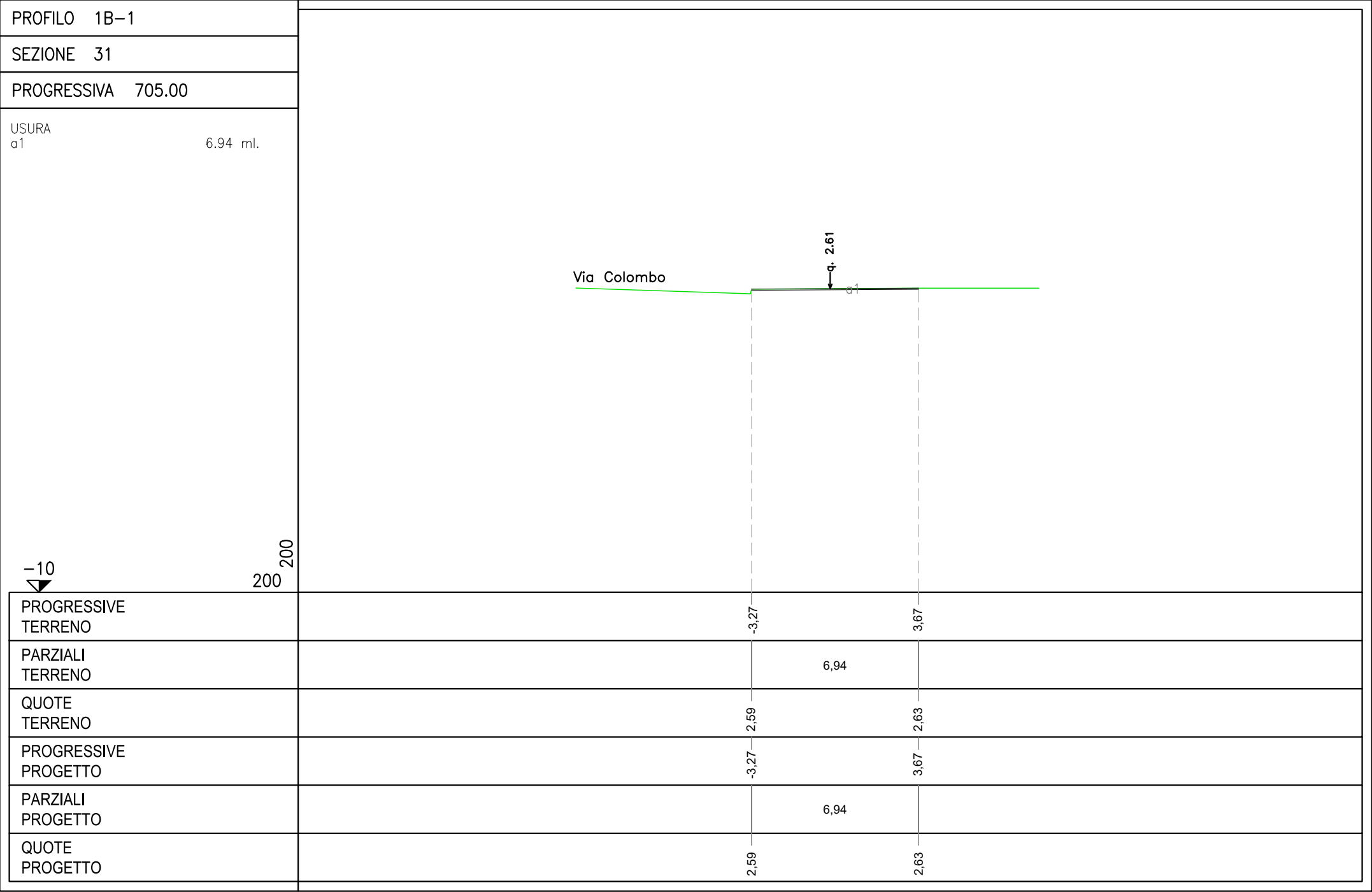
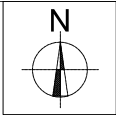


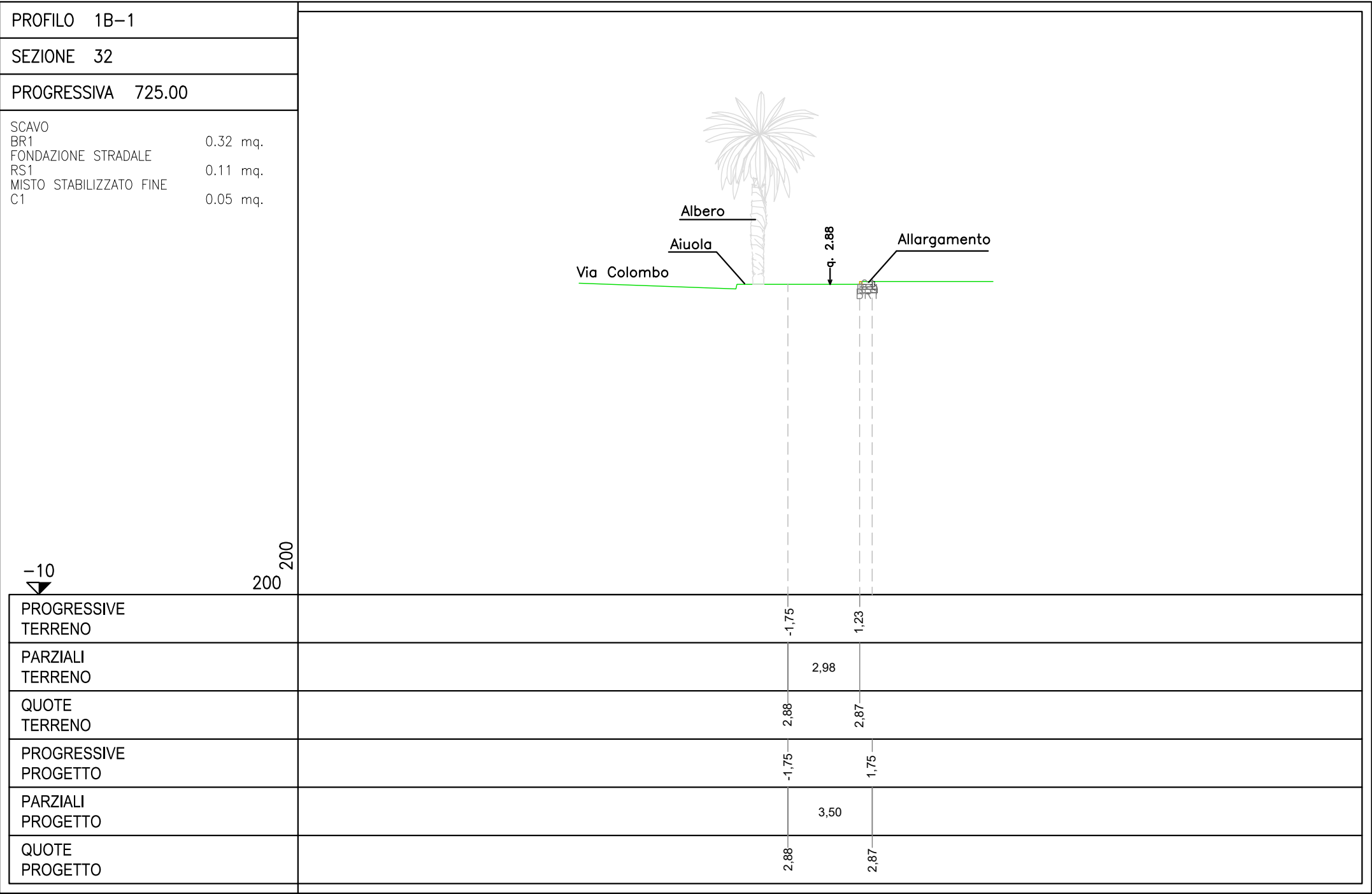
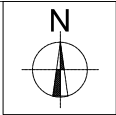


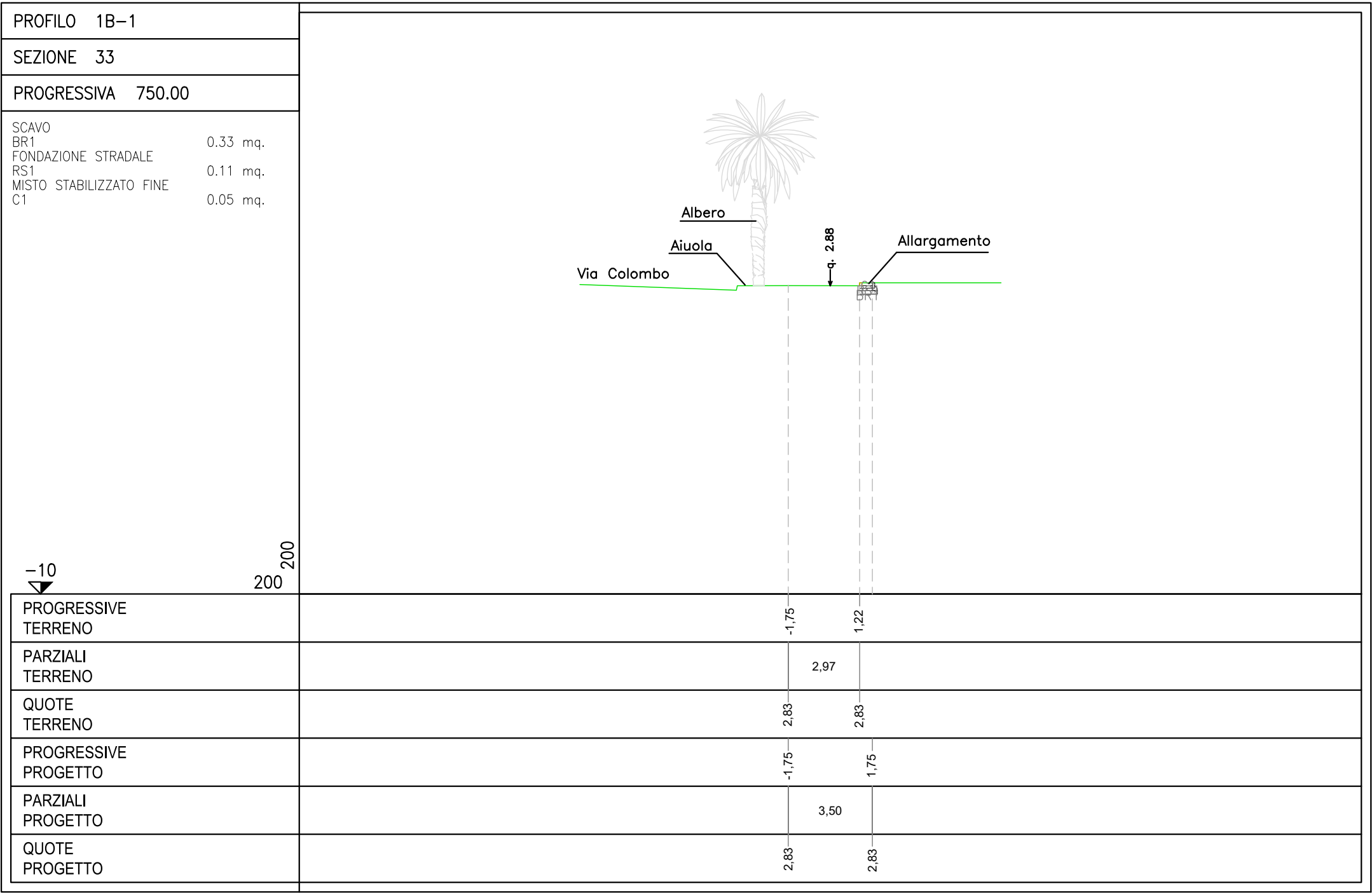
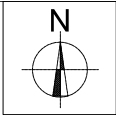


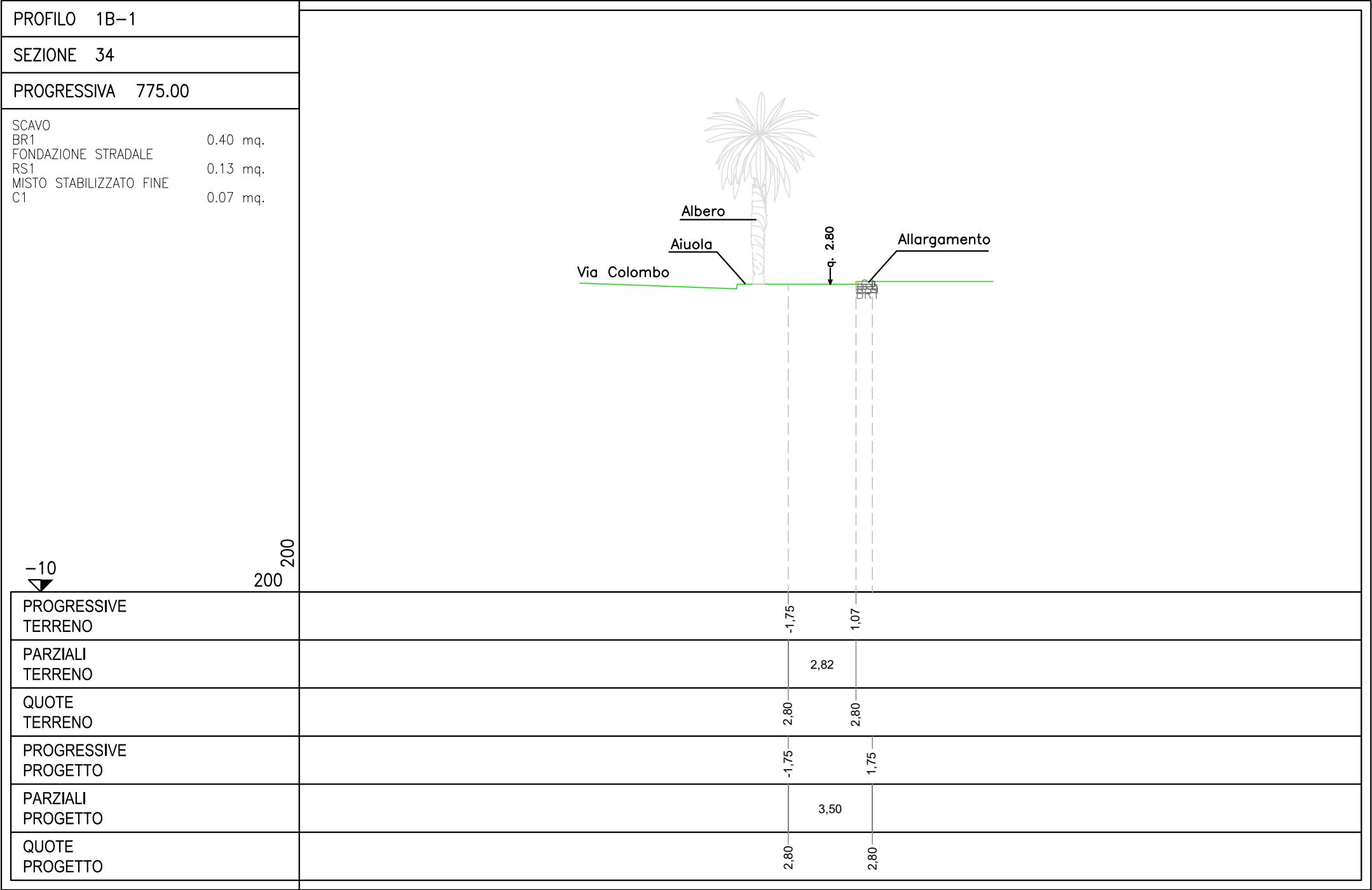
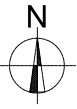


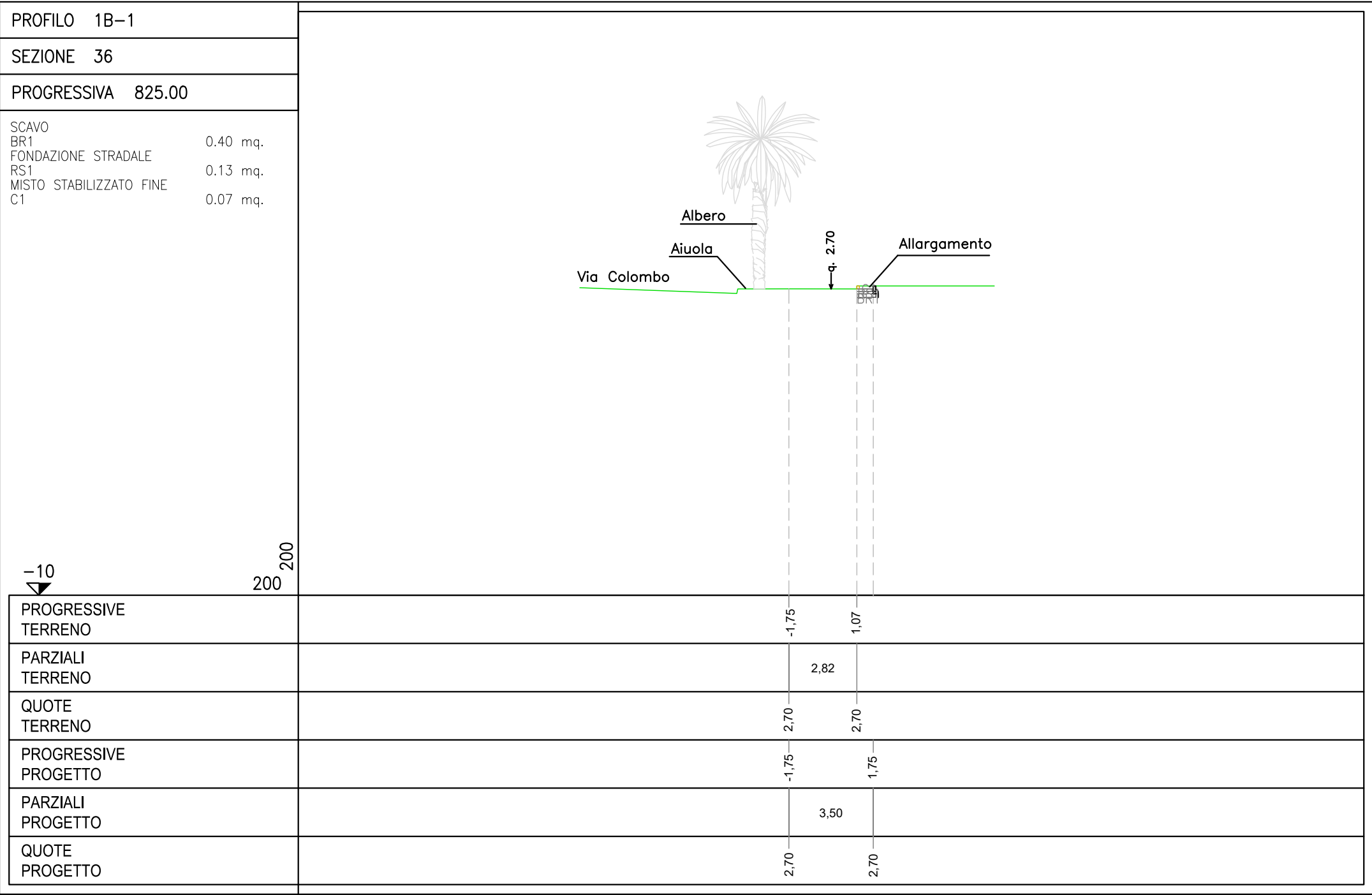
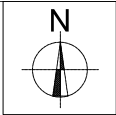


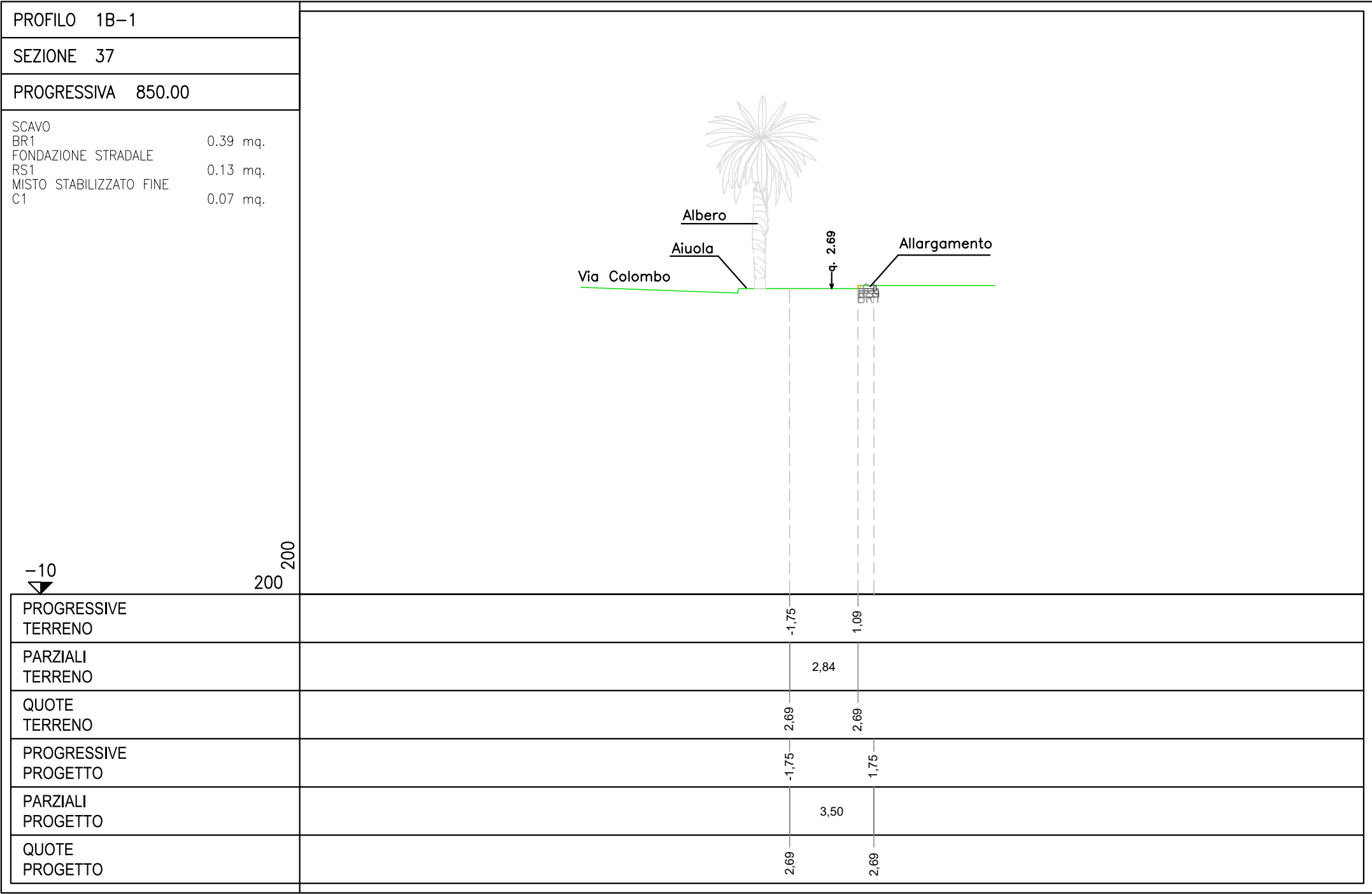
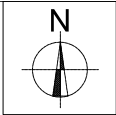


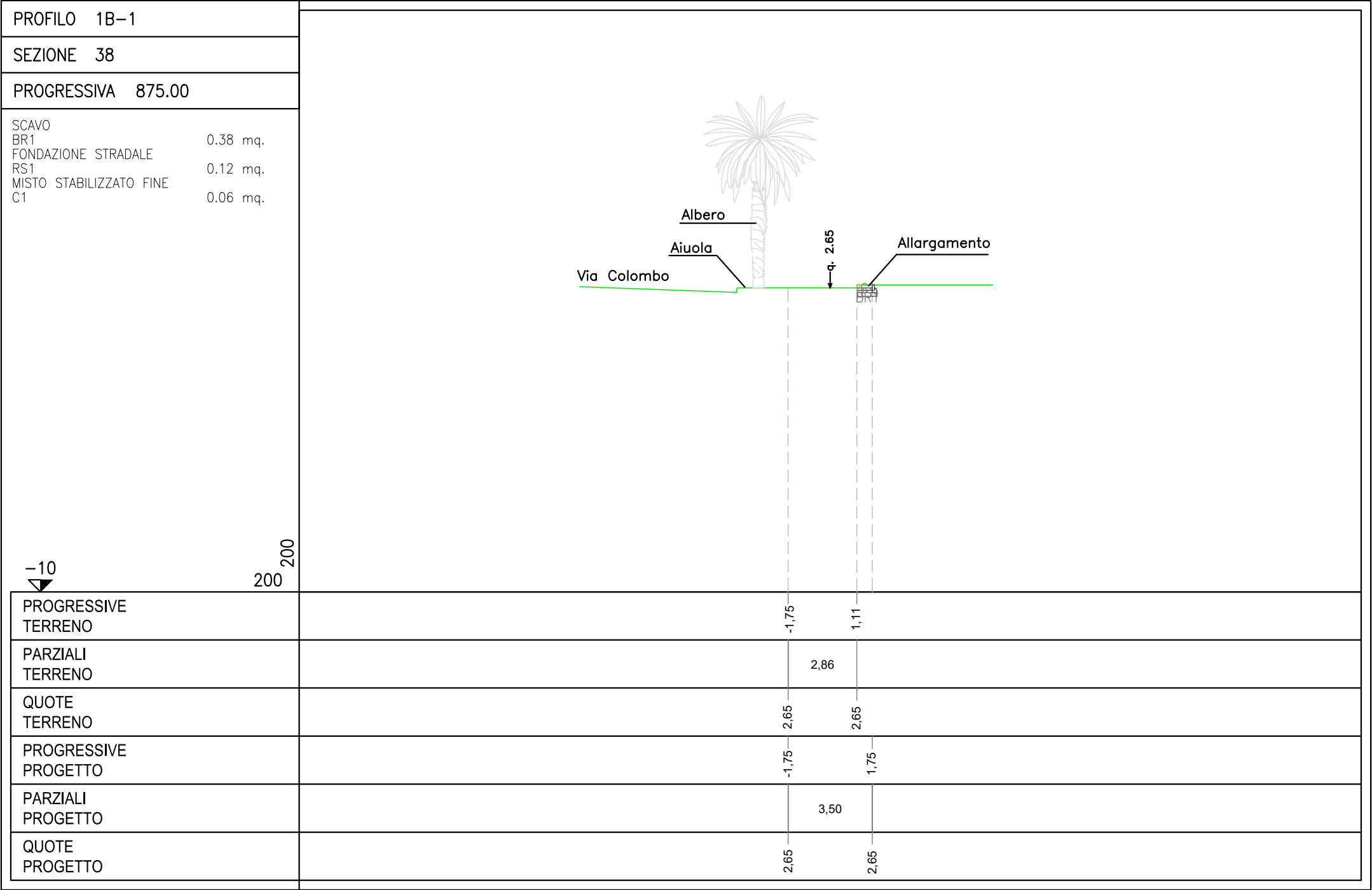
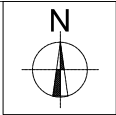


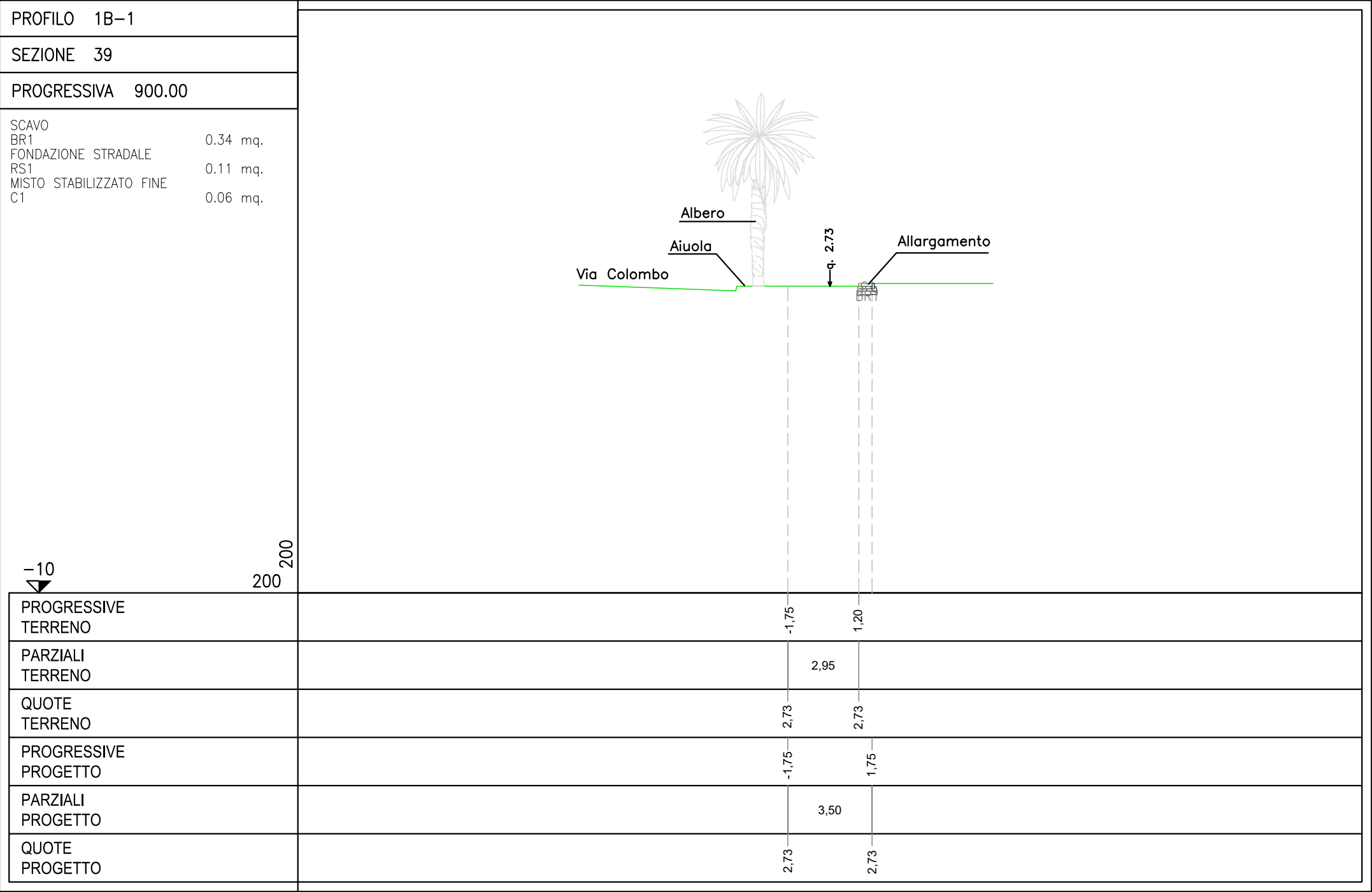
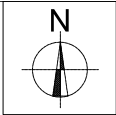


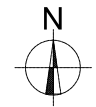




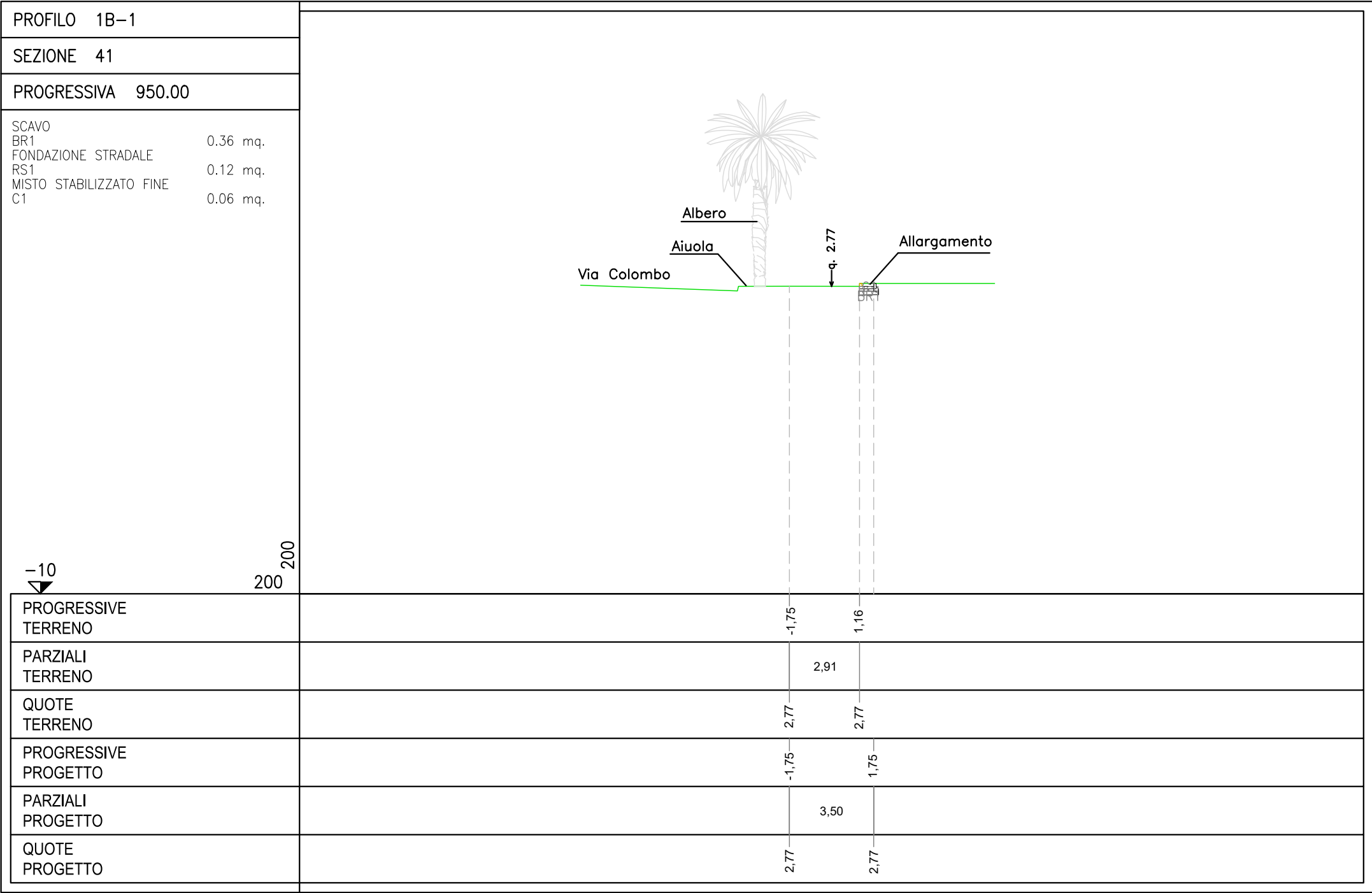
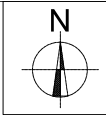


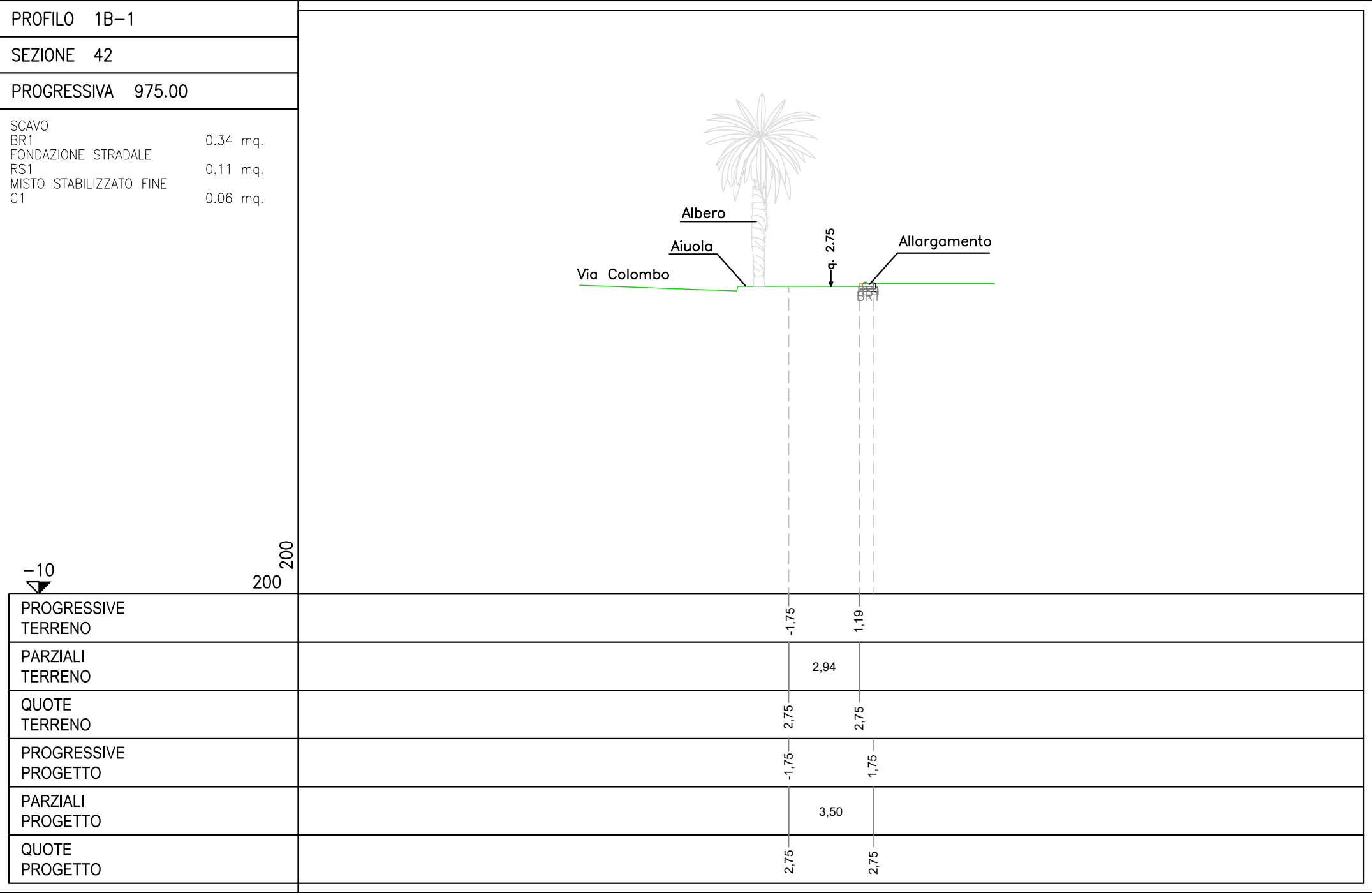
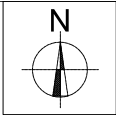


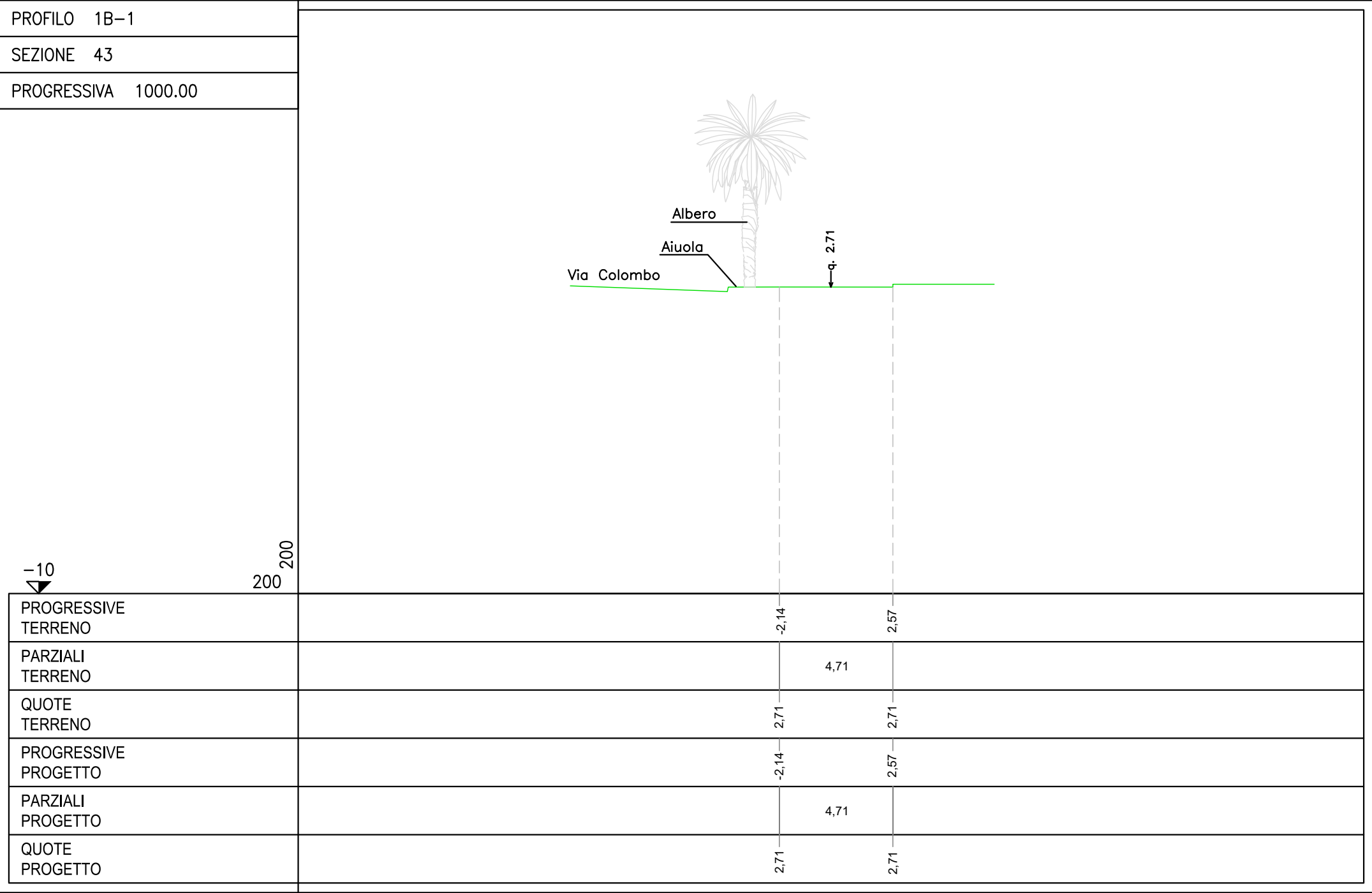
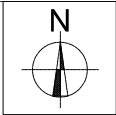


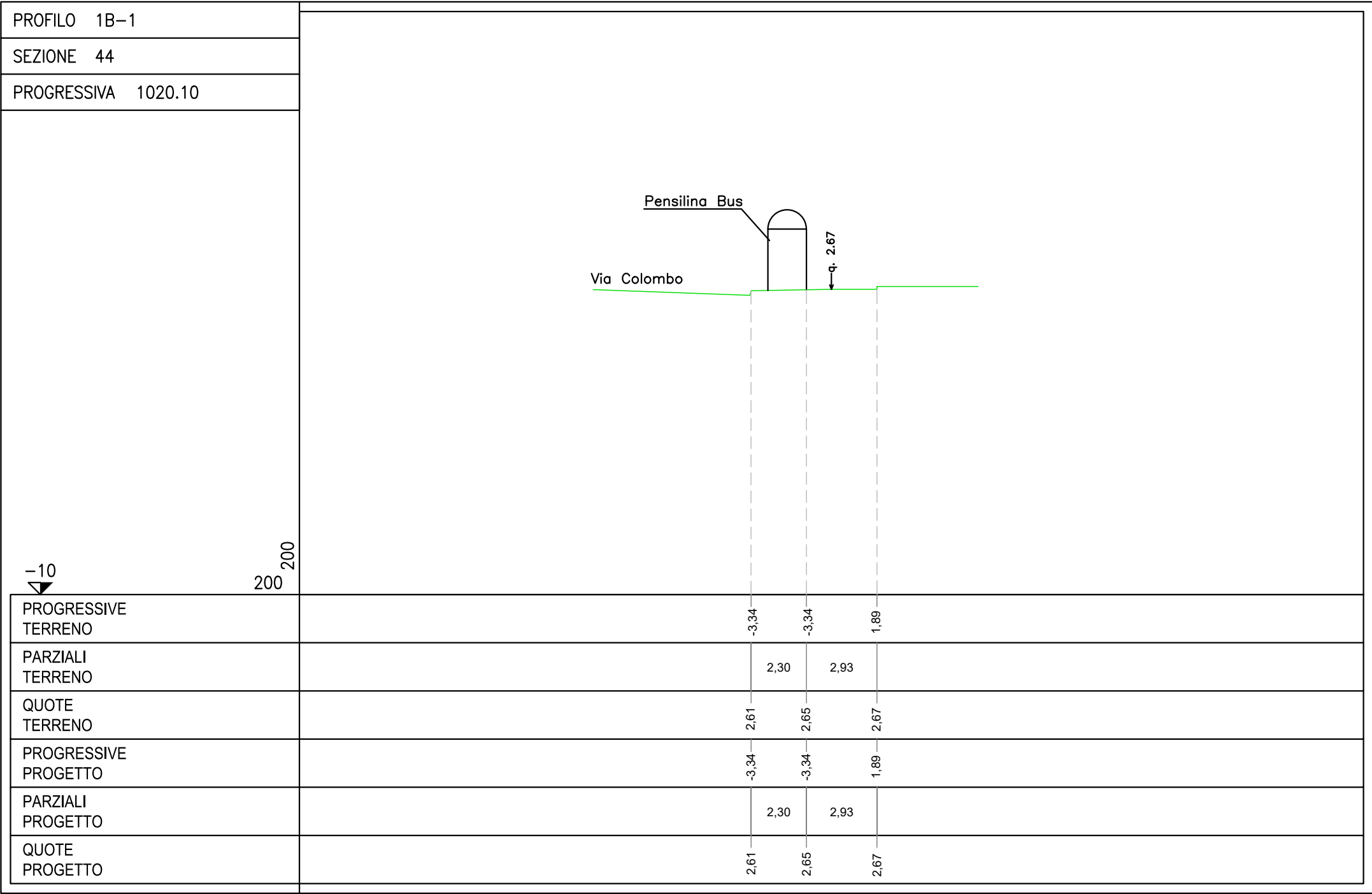
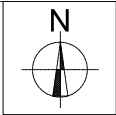


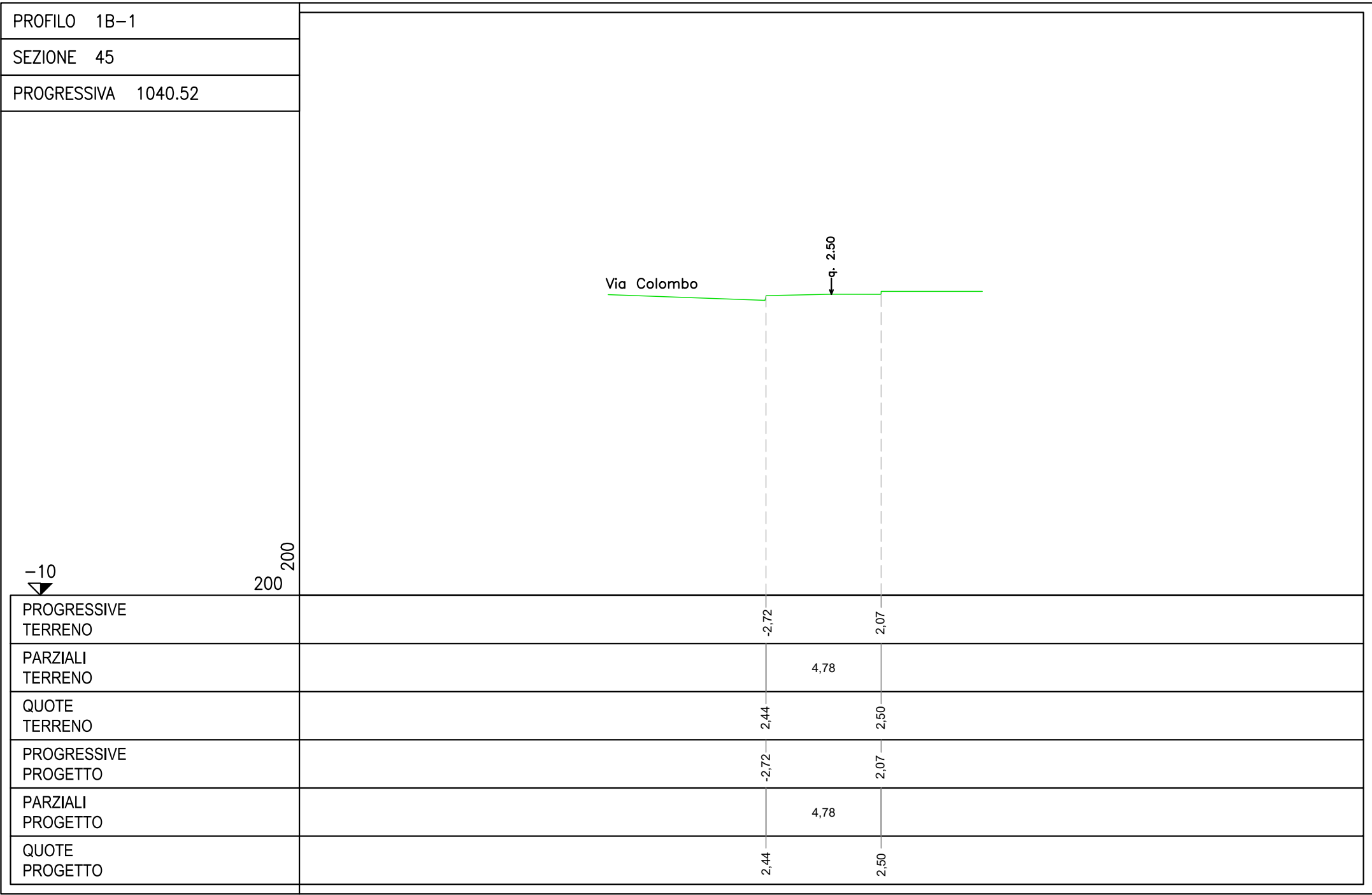
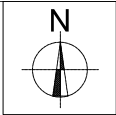
PROFILO	1B-1	
SEZIONE	40	
PROGRESSIVA	925.00	
SCAVO BR1	0.35 mq.	
FONDAZIONE STRADALE RS1	0.11 mq.	
MISTO STABILIZZATO FINE C1	0.06 mq.	
PROGRESSIVE TERRENO		-1,75 1,18
PARZIALI TERRENO		2,93
QUOTE TERRENO		2,73 2,73
PROGRESSIVE PROGETTO		-1,75 1,75
PARZIALI PROGETTO		3,50
QUOTE PROGETTO		2,73 2,73

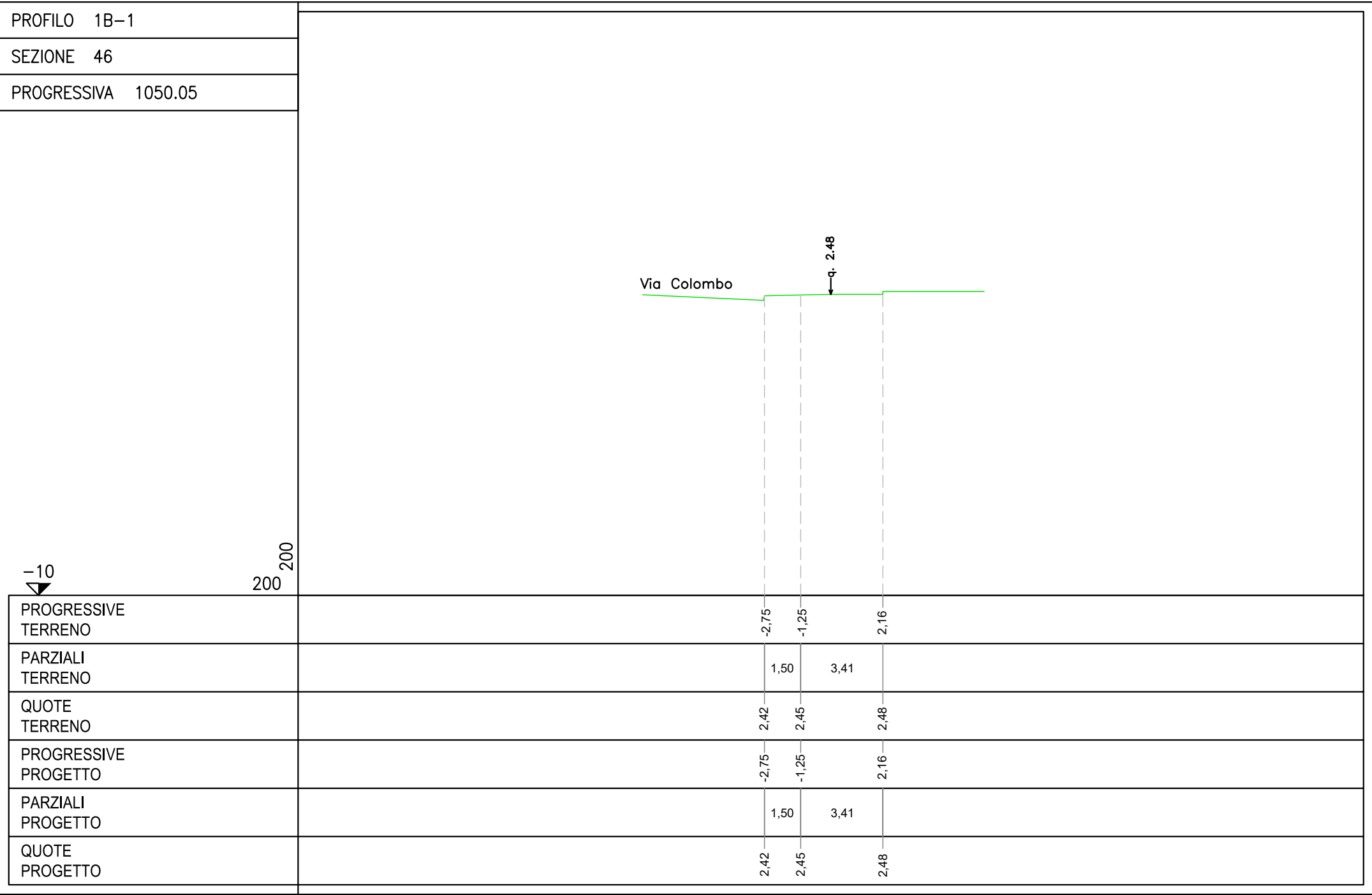
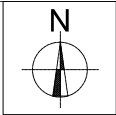


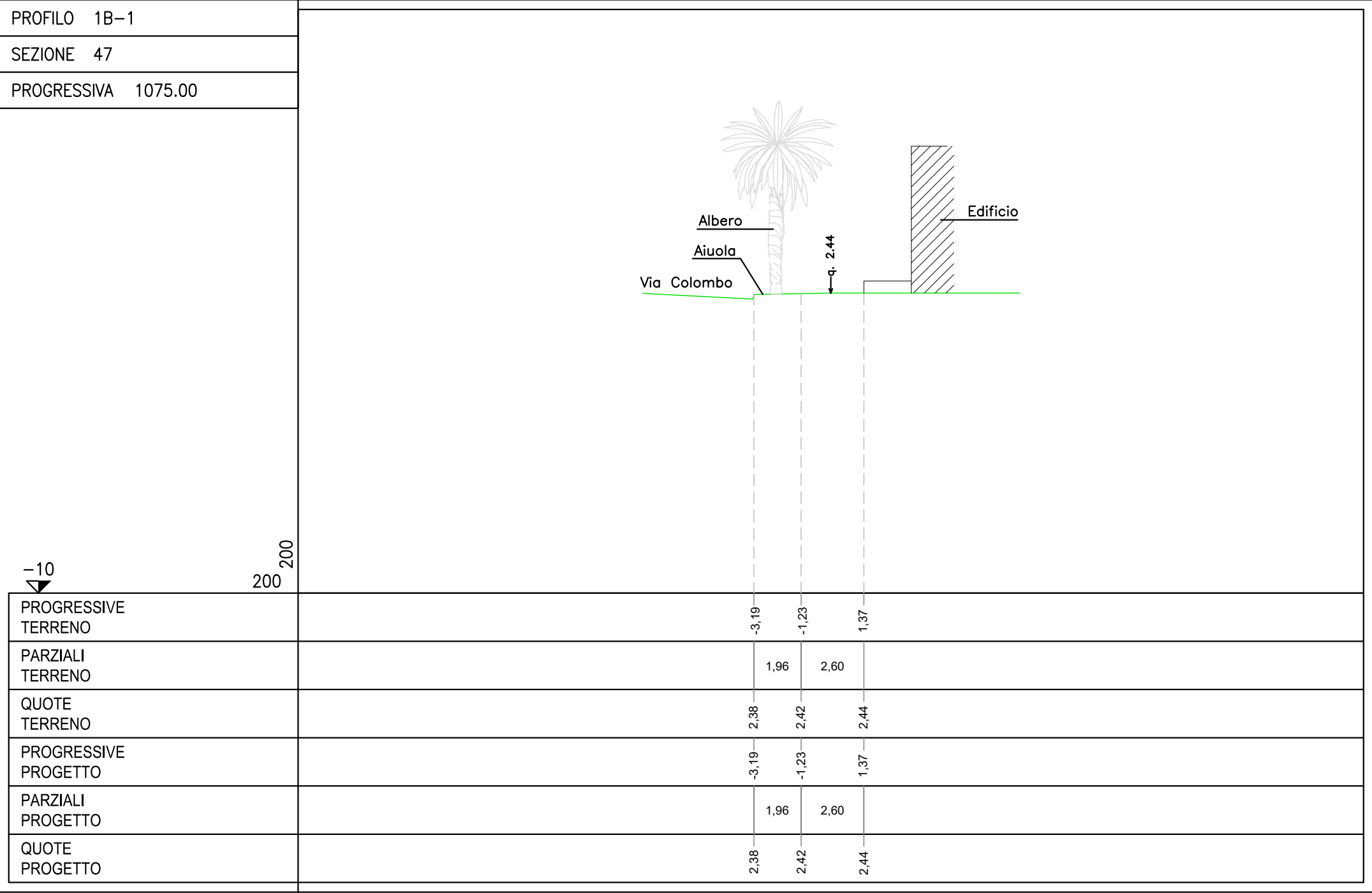
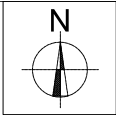


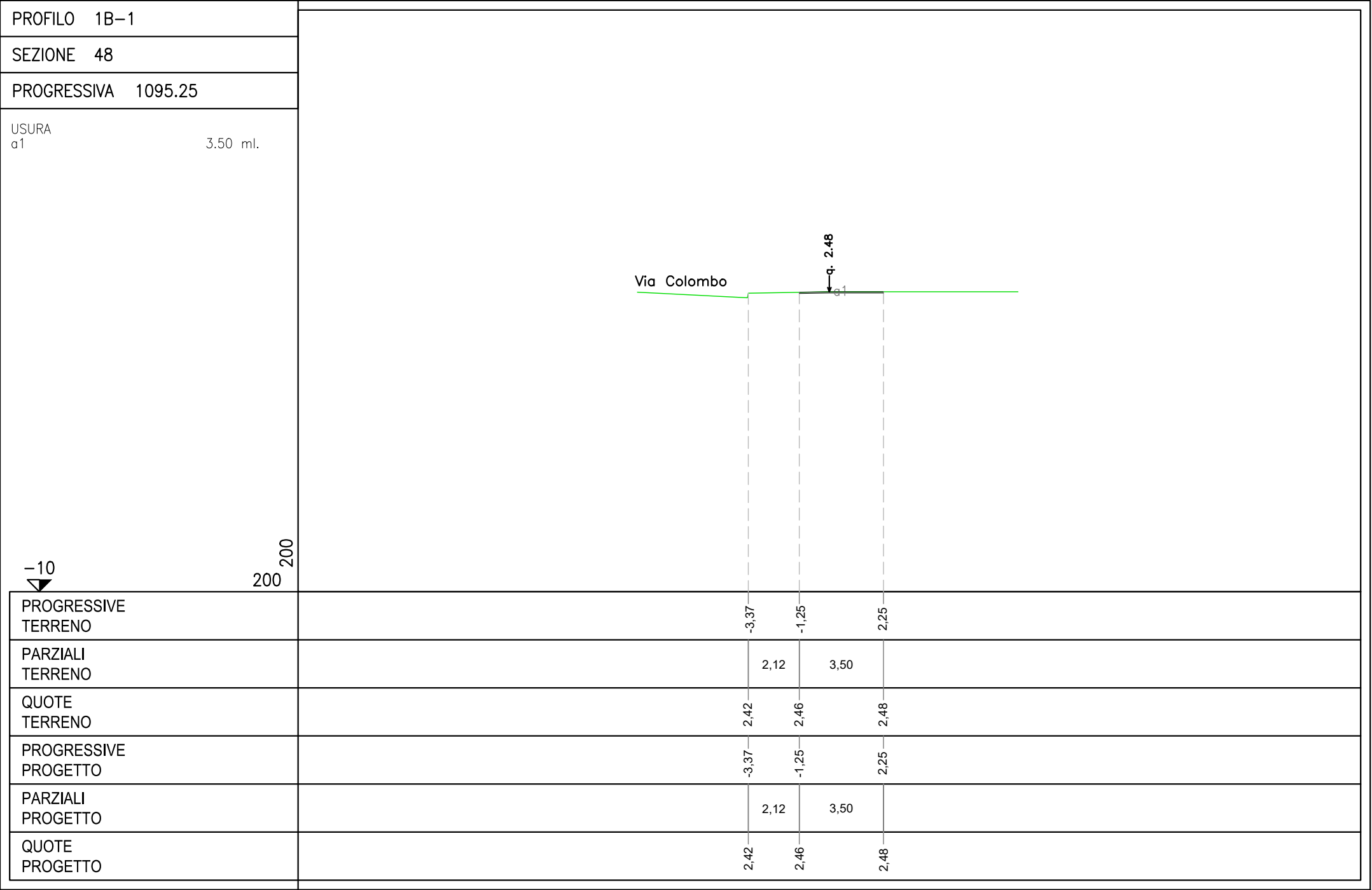
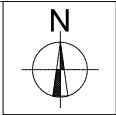


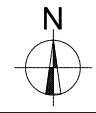


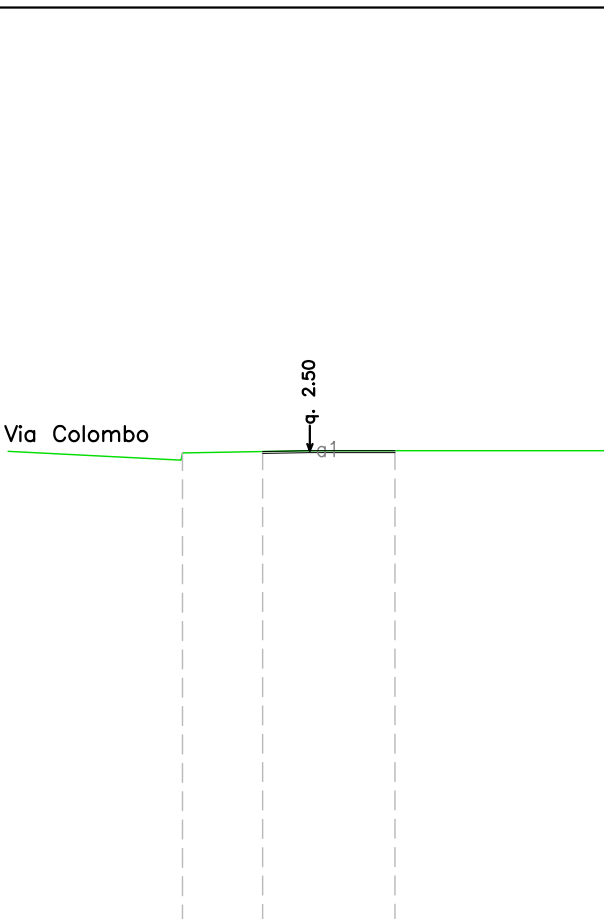


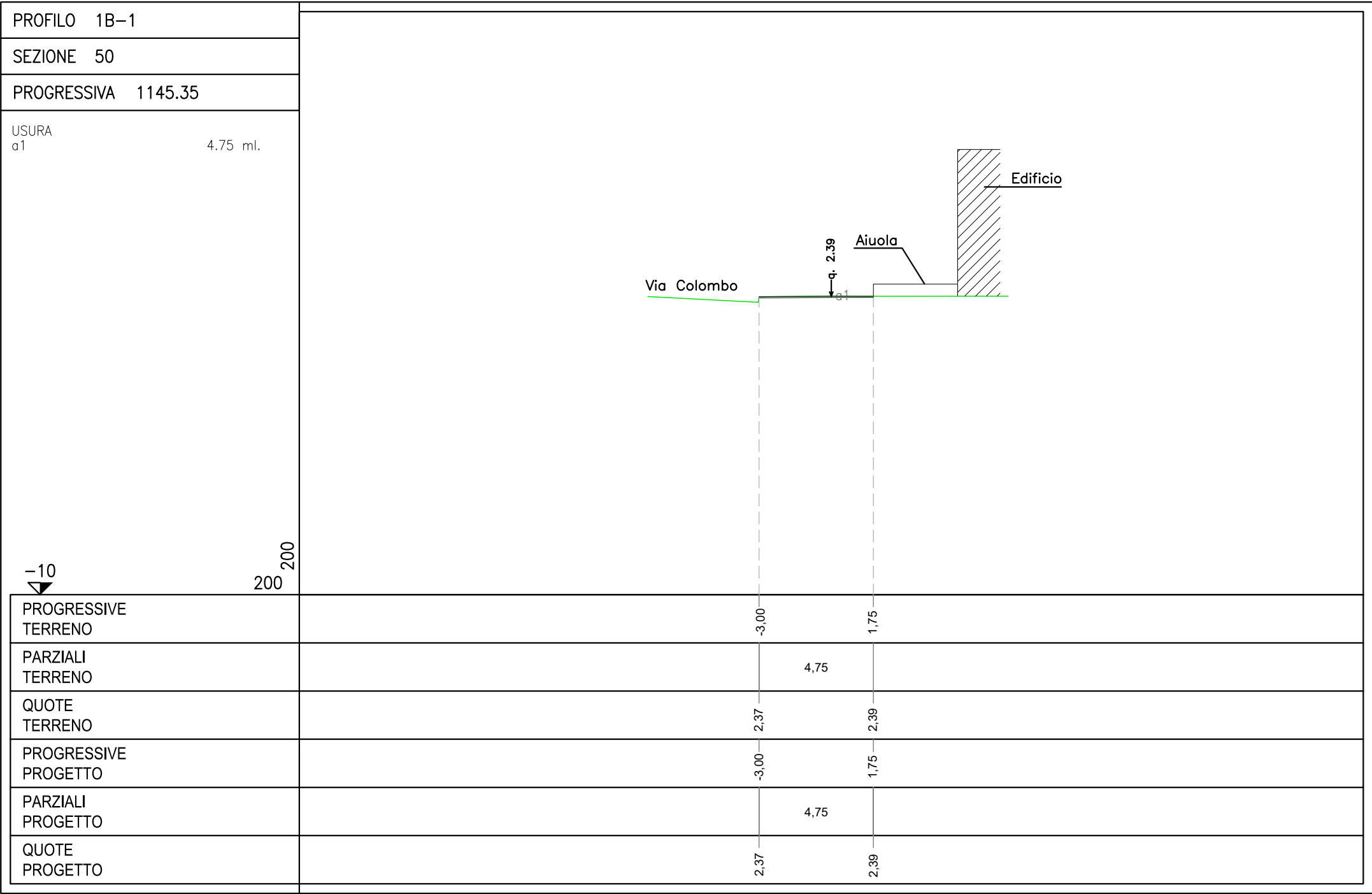
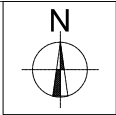


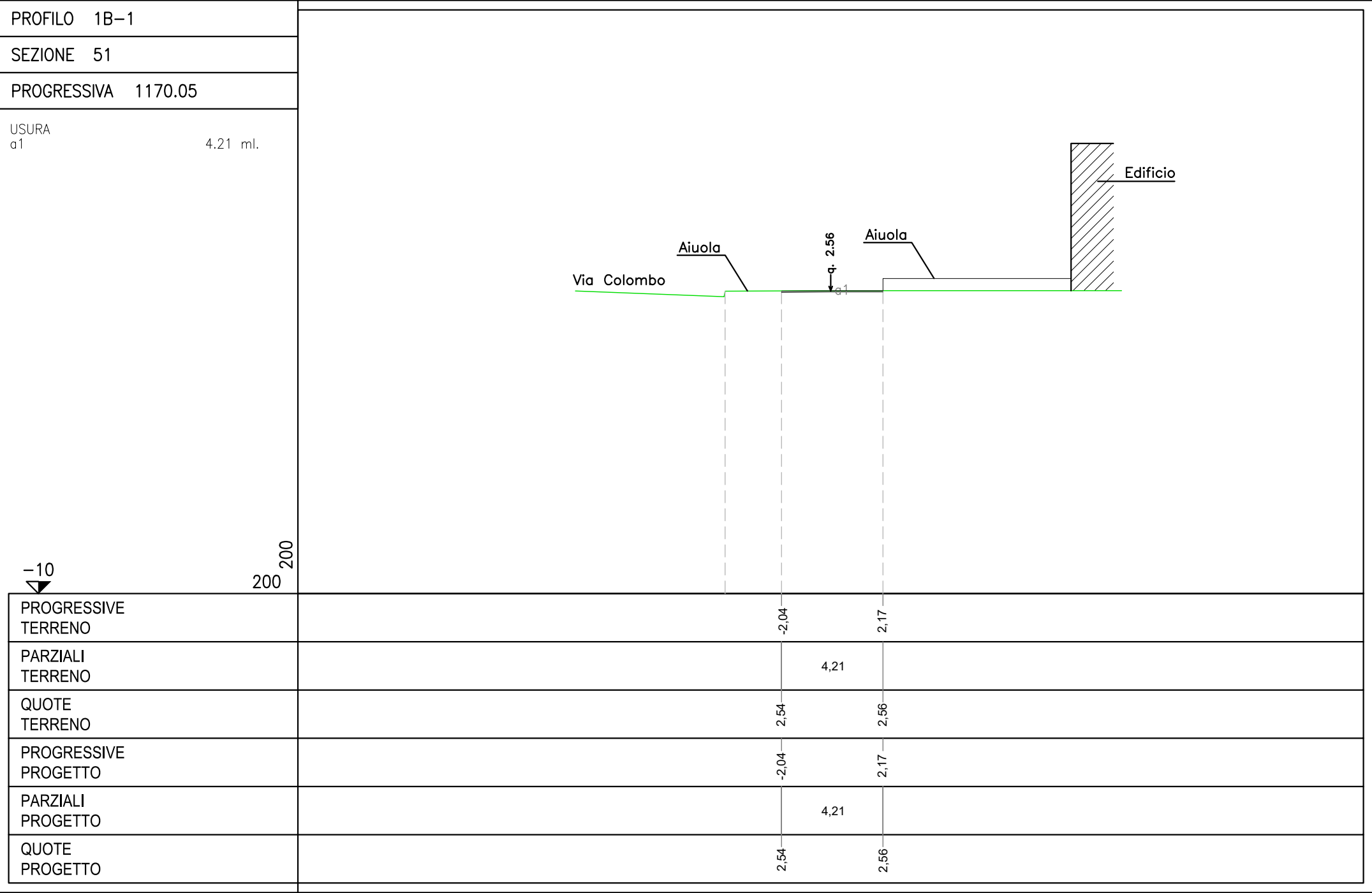
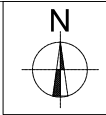


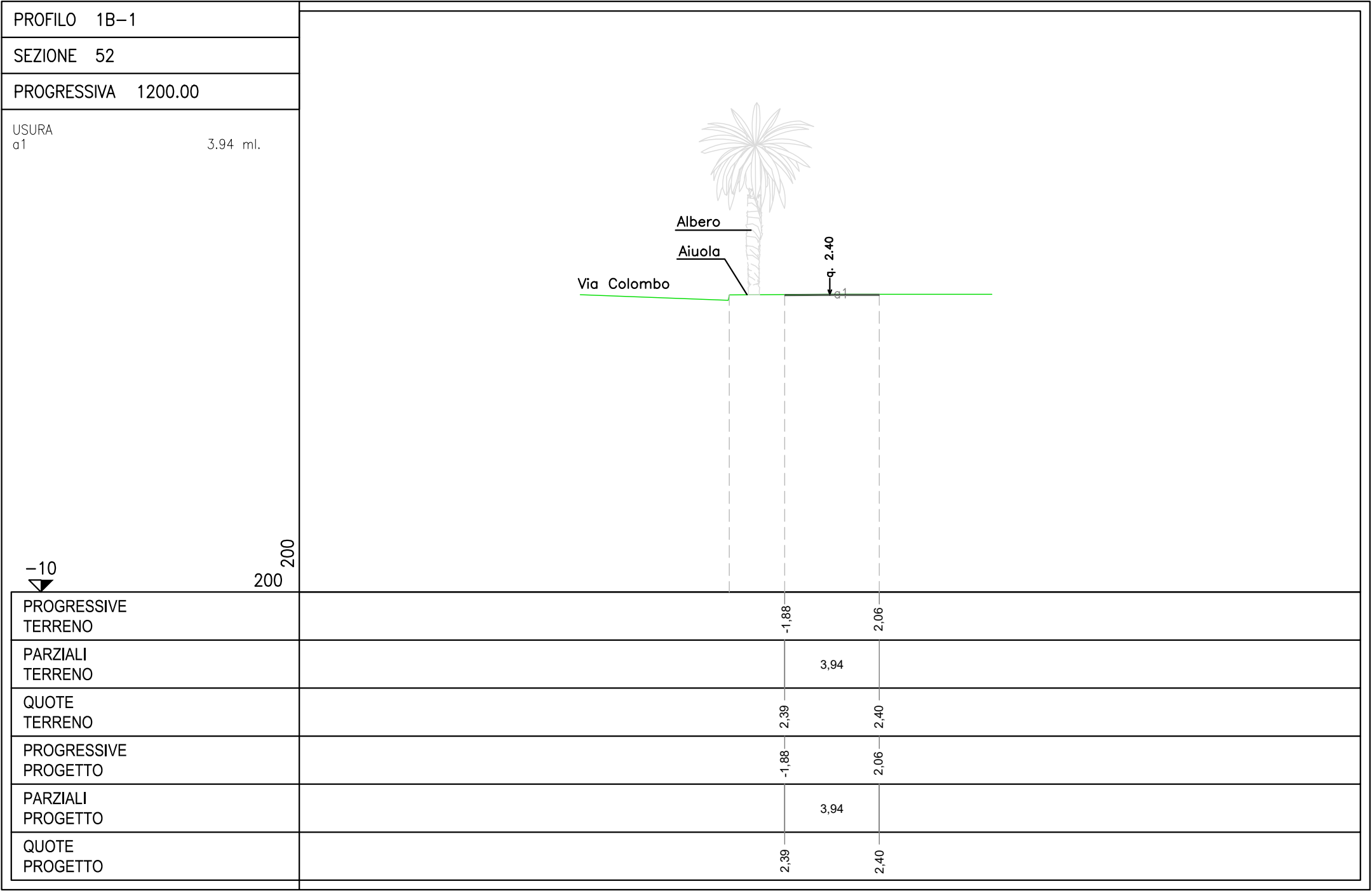
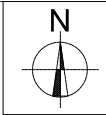


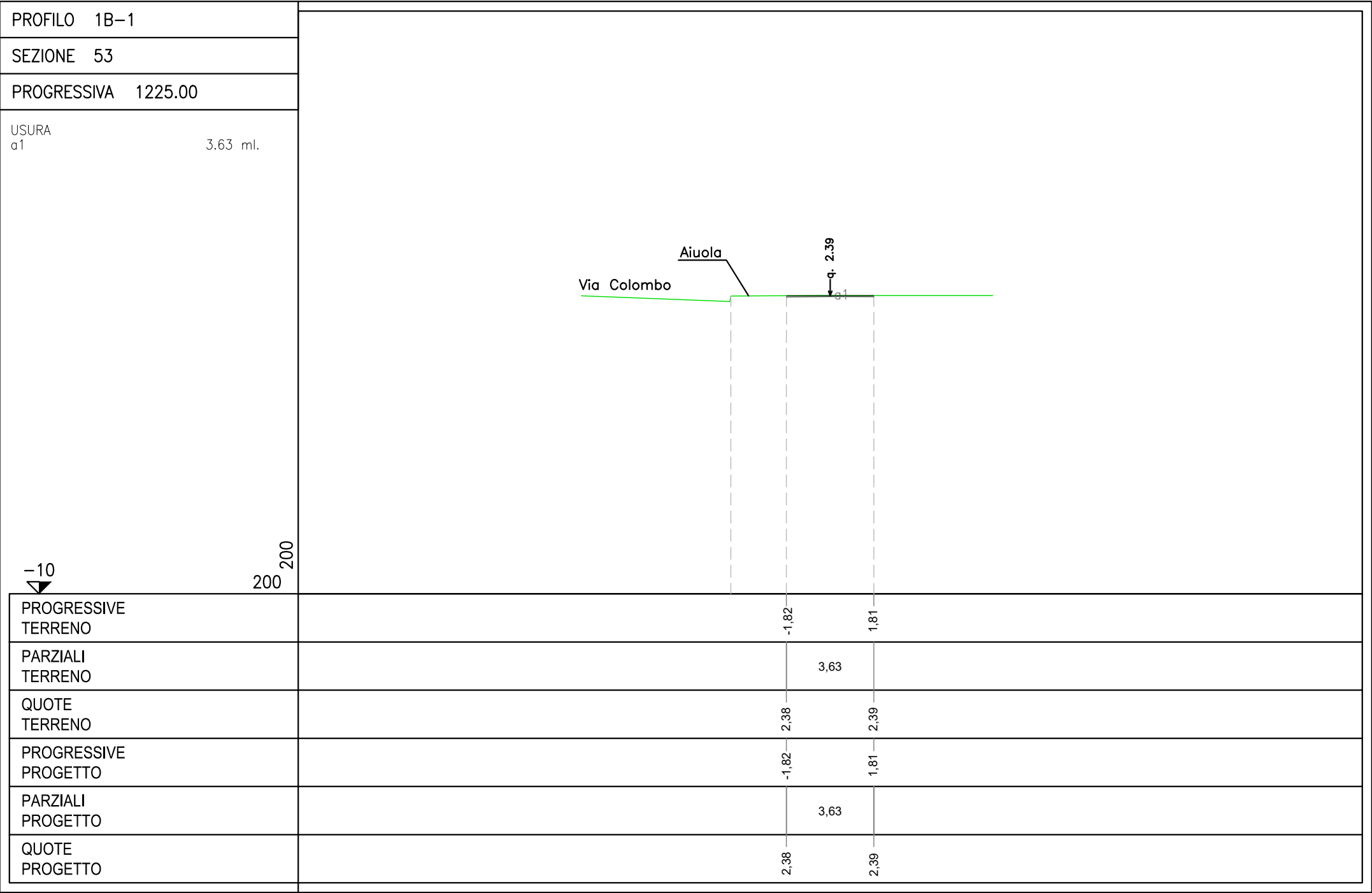
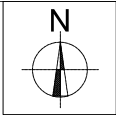


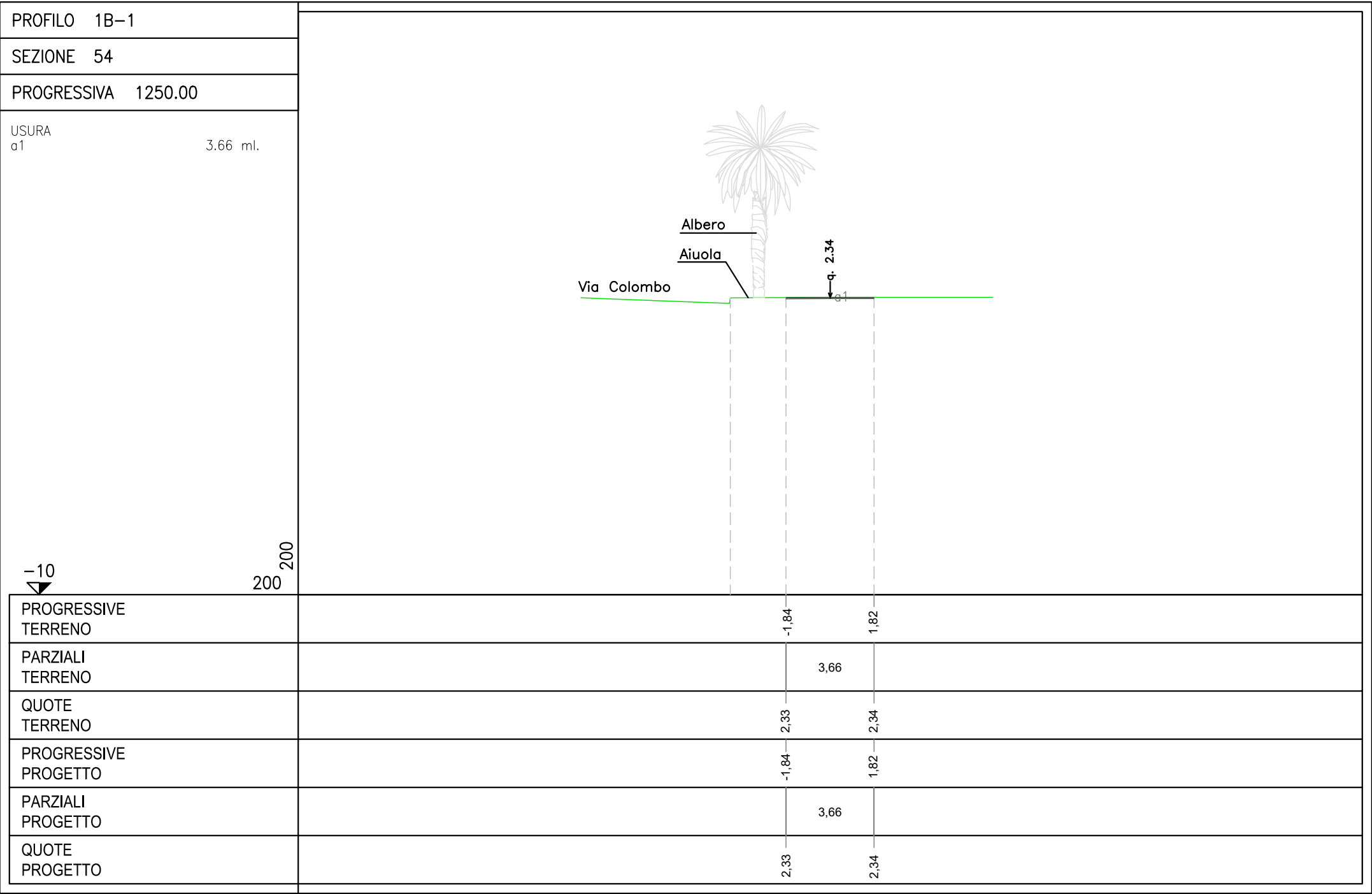
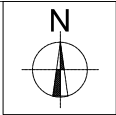
PROFILO 1B-1					
SEZIONE 49					
PROGRESSIVA 1126.94					
USURA a1 3.50 ml.					
					
PROGRESSIVE TERRENO		-3,37	-1,25	2,25	
PARZIALI TERRENO		2,12	3,50		
QUOTE TERRENO		2,42	2,46	2,48	
PROGRESSIVE PROGETTO		-3,37	-1,25	2,25	
PARZIALI PROGETTO		2,12	3,50		
QUOTE PROGETTO		2,42	2,46	2,48	

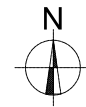






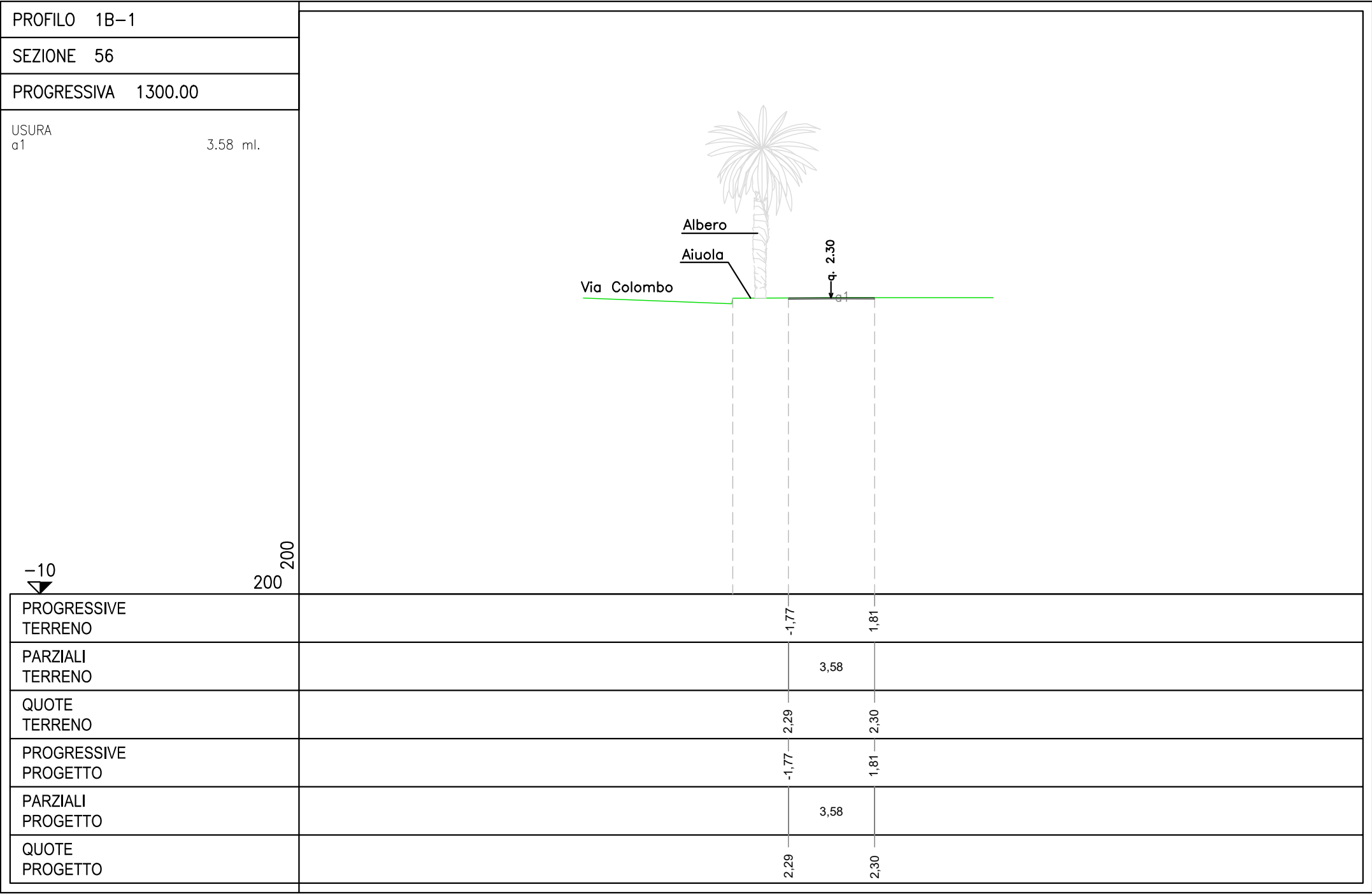
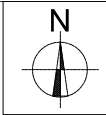


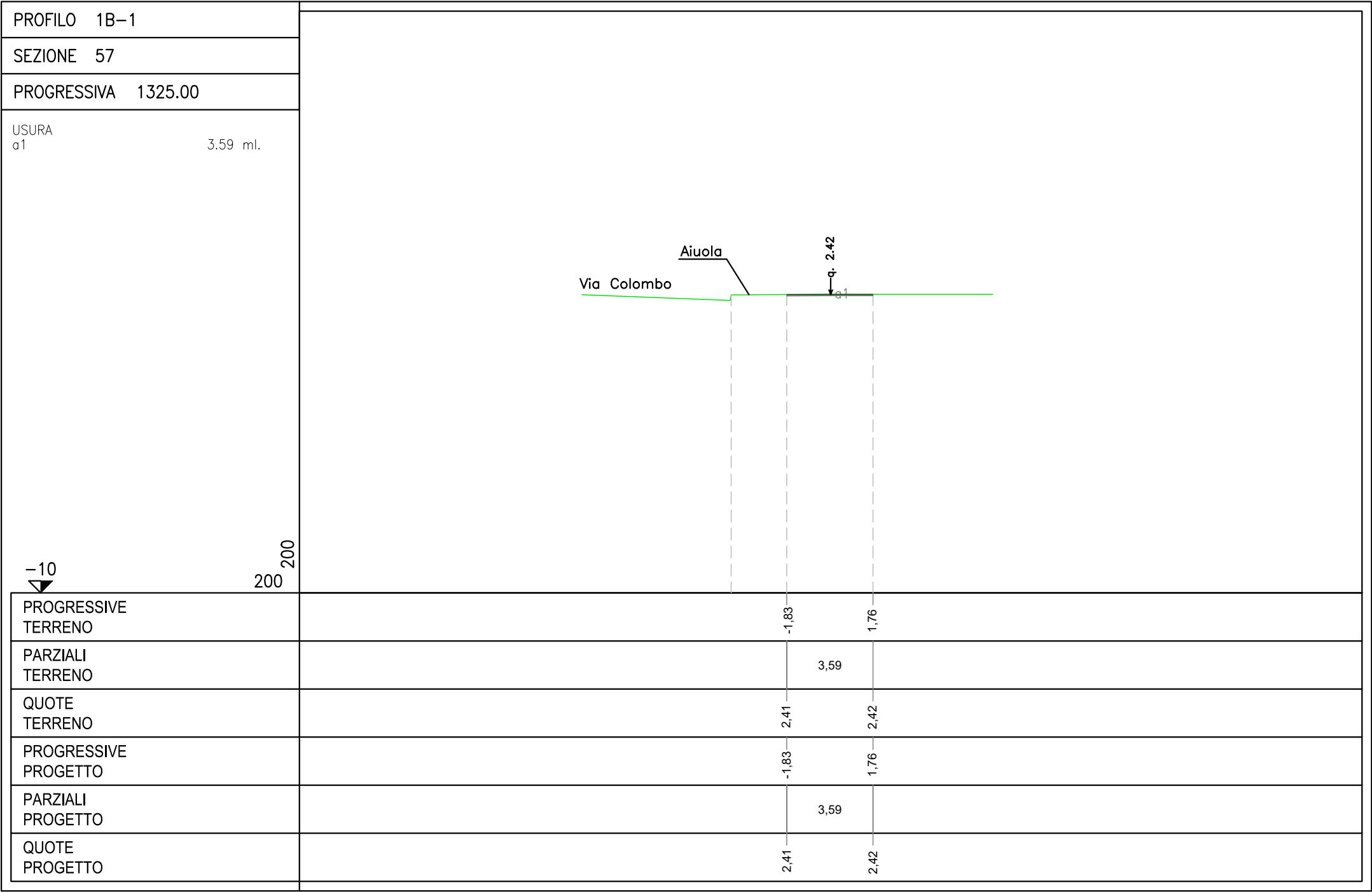
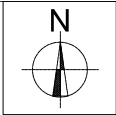


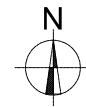


PROFILO	1B-1
SEZIONE	55
PROGRESSIVA	1275.00
USURA a1	3.58 ml.

PROGRESSIVE TERRENO	-1,83	1,75
PARZIALI TERRENO	3,58	
QUOTE TERRENO	2,37	2,38
PROGRESSIVE PROGETTO	-1,83	1,75
PARZIALI PROGETTO	3,58	
QUOTE PROGETTO	2,37	2,38



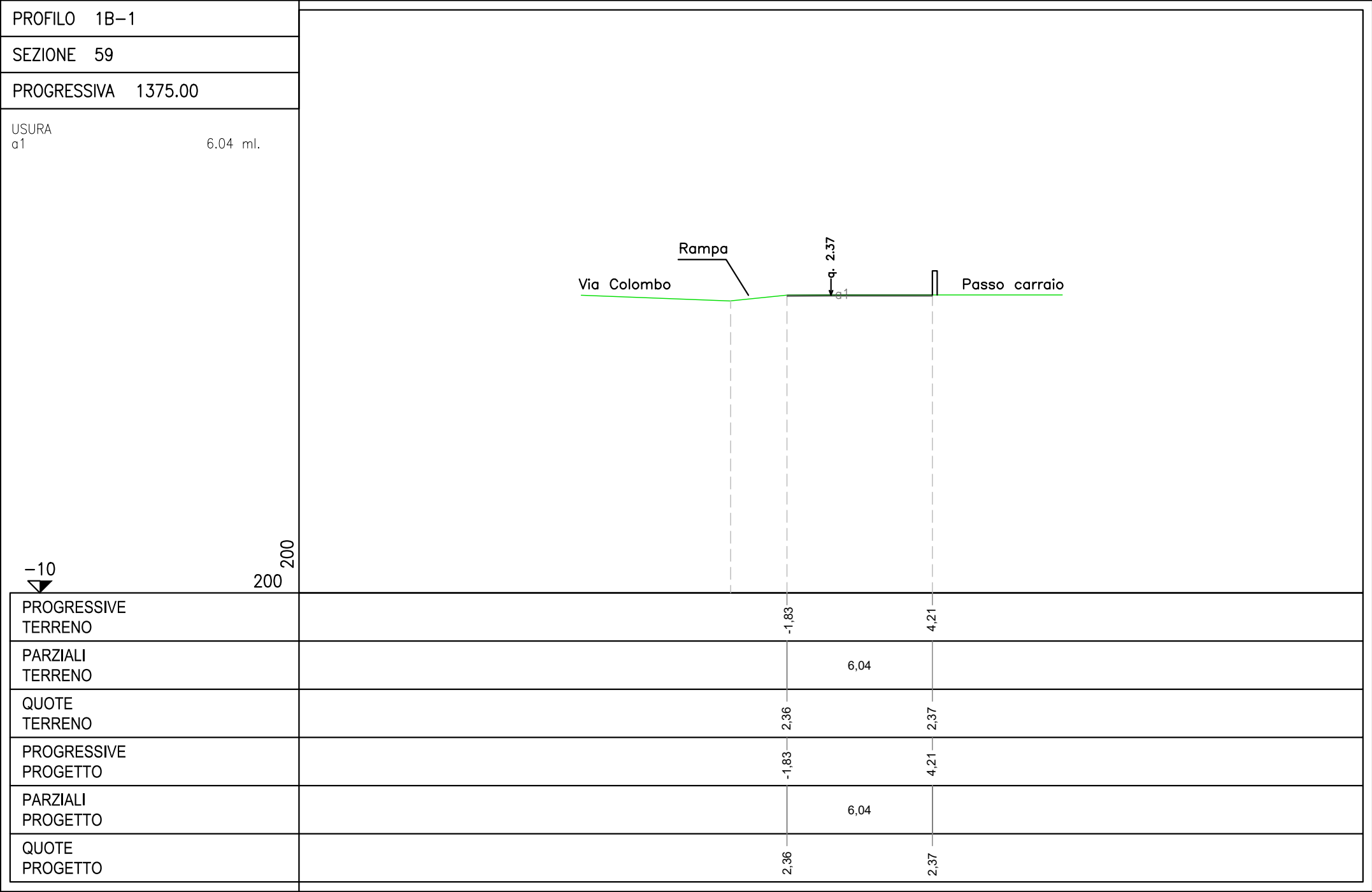
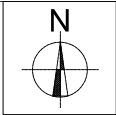


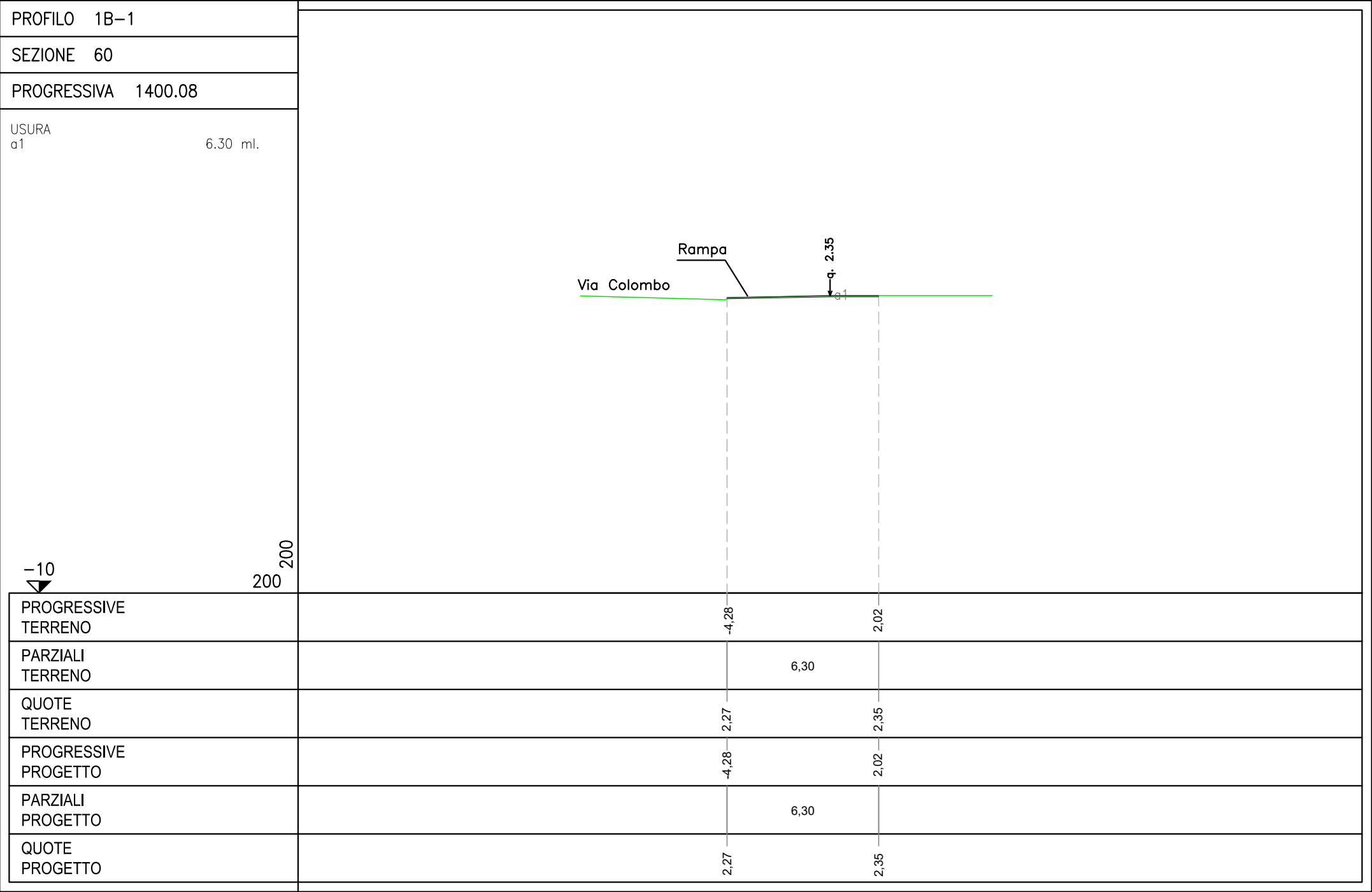
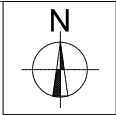


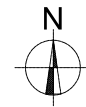
PROFILO	1B-1
SEZIONE	58
PROGRESSIVA	1350.00
USURA a1	3.65 ml.

Diagram showing a cross-section profile of a road. The profile is labeled with 'Via Colombo' and 'Aiuola'. The vertical drop is indicated as 'q. 2.41'. The profile is divided into two sections by a vertical dashed line. The left section is labeled '200' and the right section is labeled '200'. The profile is also labeled with 'PROGRESSIVE TERRENO' and 'PARZIALI TERRENO'.

PROGRESSIVE TERRENO	-1.86	1.79
PARZIALI TERRENO	3.65	
QUOTE TERRENO	2.40	2.41
PROGRESSIVE PROGETTO	-1.86	1.79
PARZIALI PROGETTO	3.65	
QUOTE PROGETTO	2.40	2.41

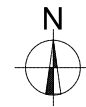


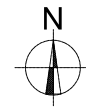


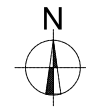


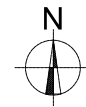
PROFILO	1B-1
SEZIONE	61
PROGRESSIVA	1424.36
USURA a1	3.59 ml.

PROGRESSIVE TERRENO	-1.95	3.68
PARZIALI TERRENO	5.63	
QUOTE TERRENO	2.35	2.36
PROGRESSIVE PROGETTO	-1.95	3.68
PARZIALI PROGETTO	5.63	
QUOTE PROGETTO	2.35	2.36

[illegible]

[illegible]

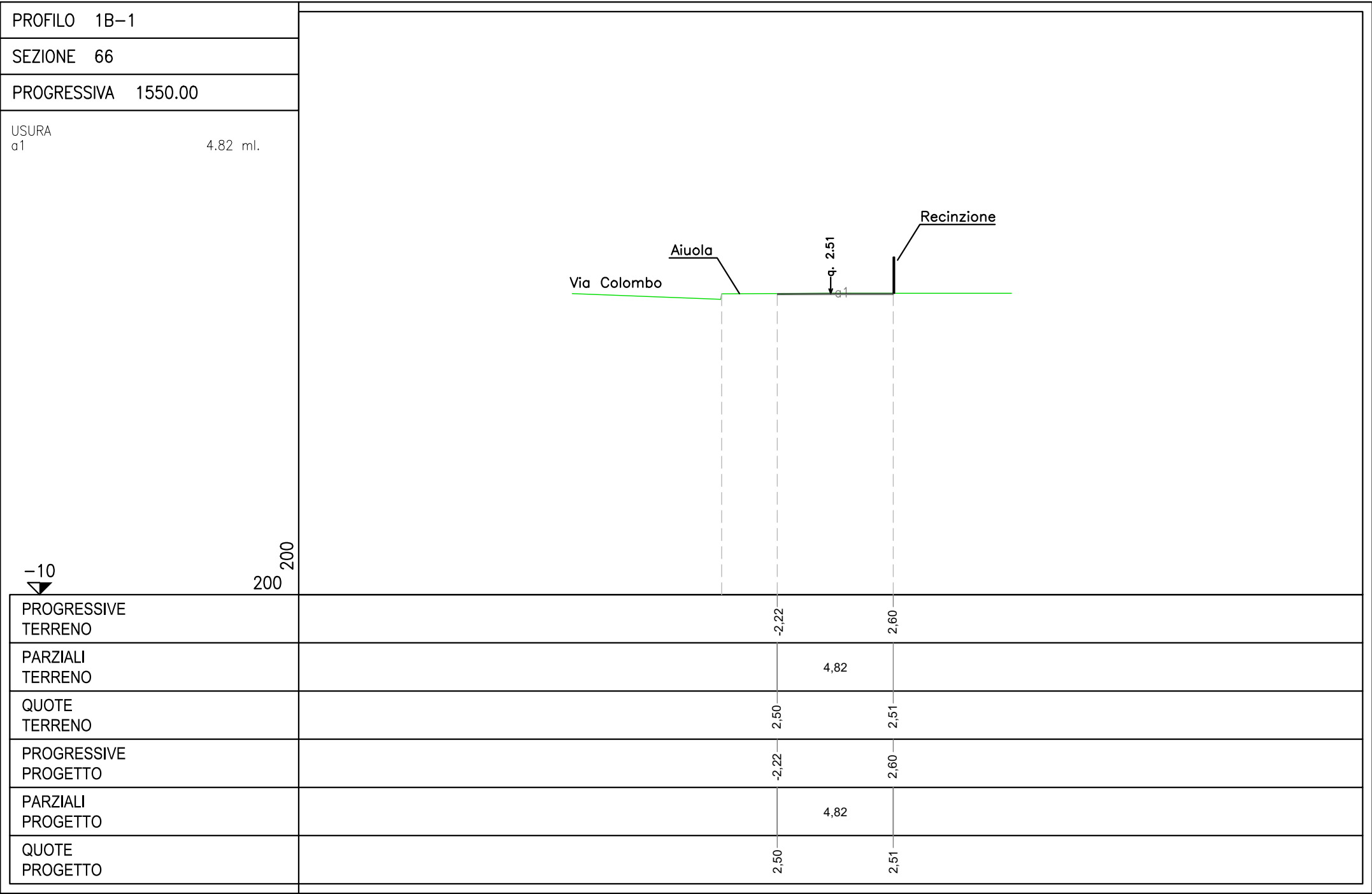
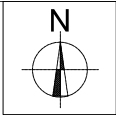
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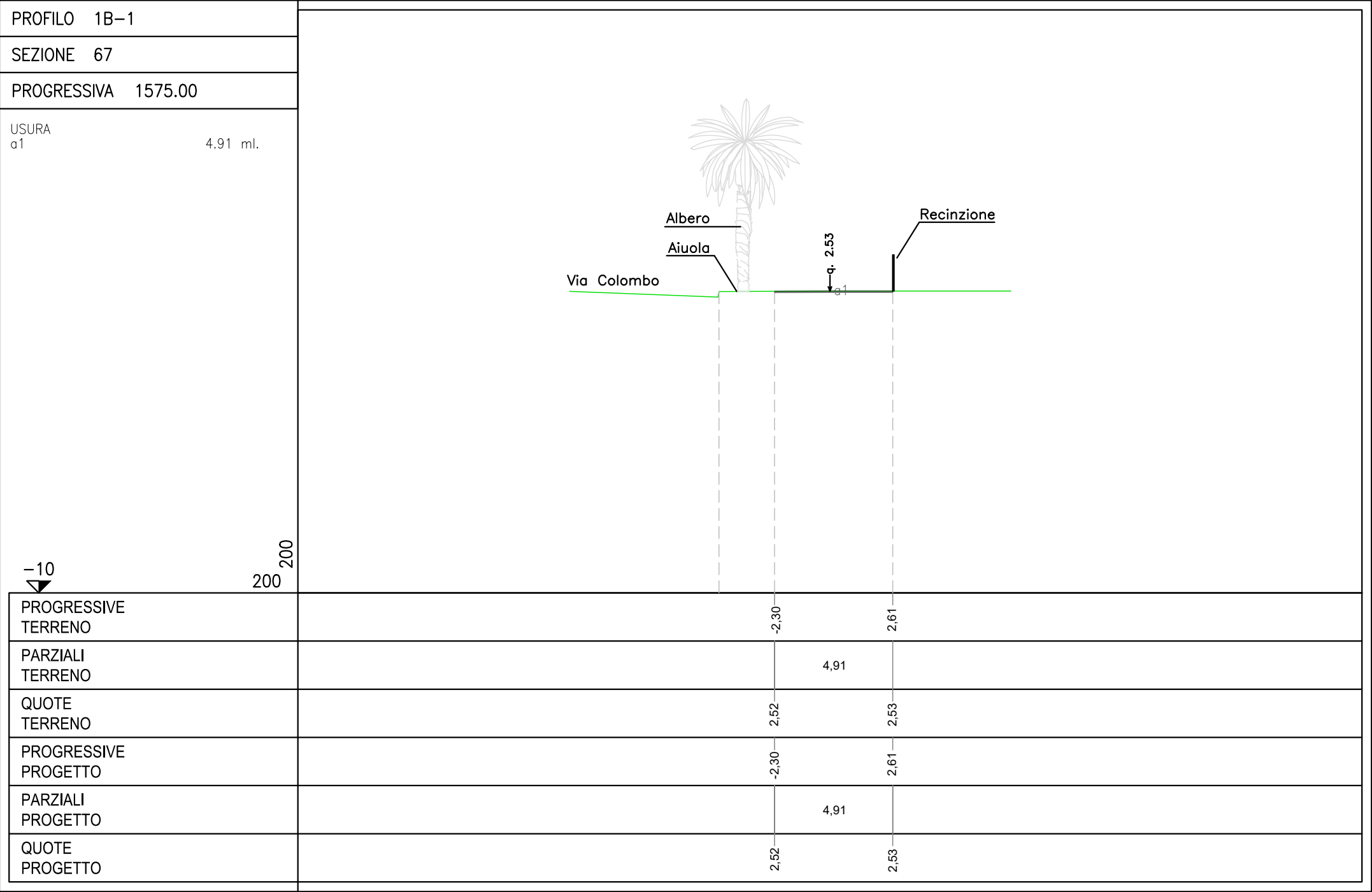
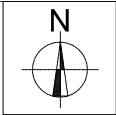


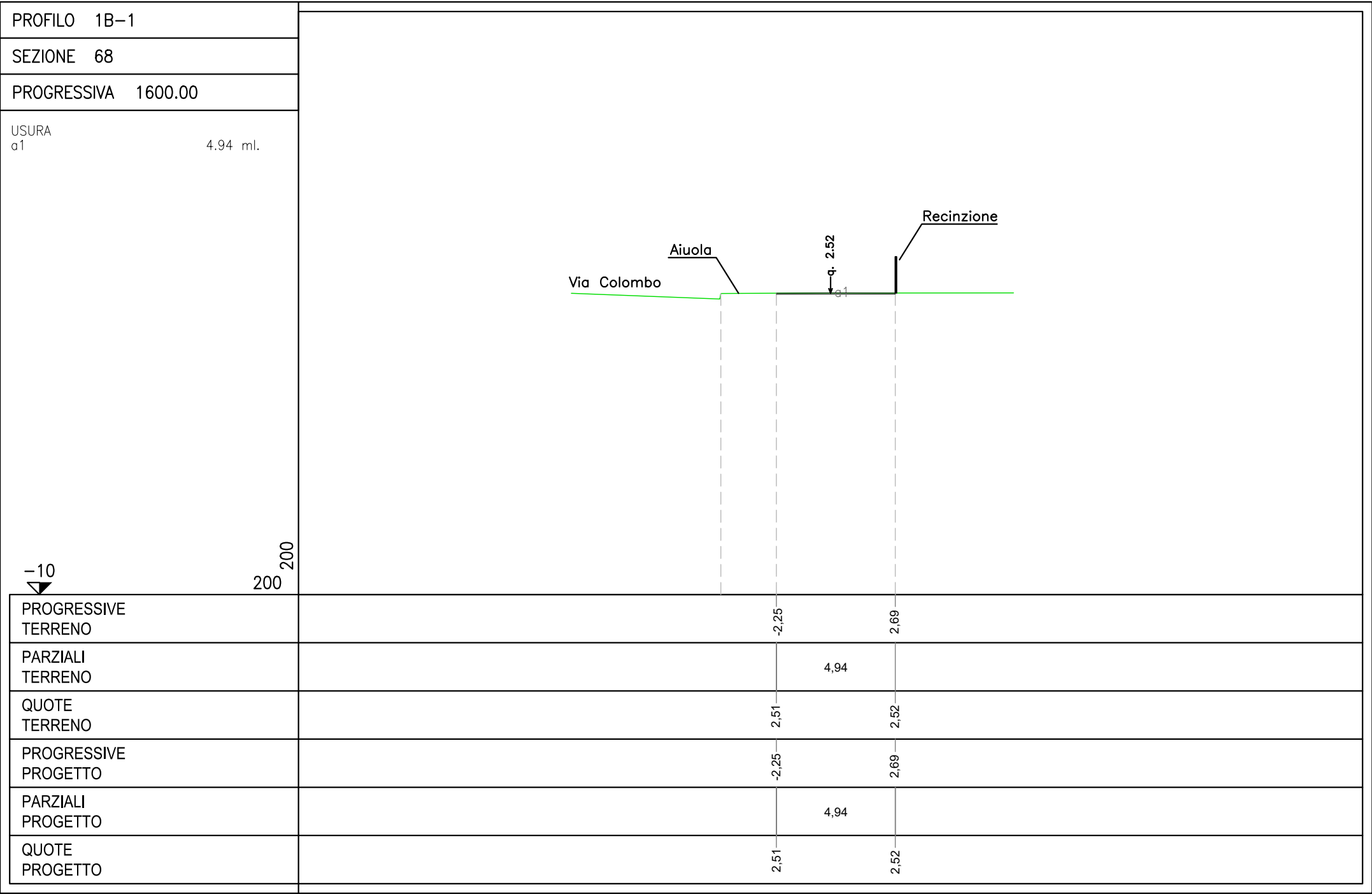
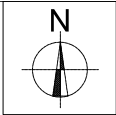
PROFILO	1B-1
SEZIONE	65
PROGRESSIVA	1525.00
USURA a1	4.80 ml.

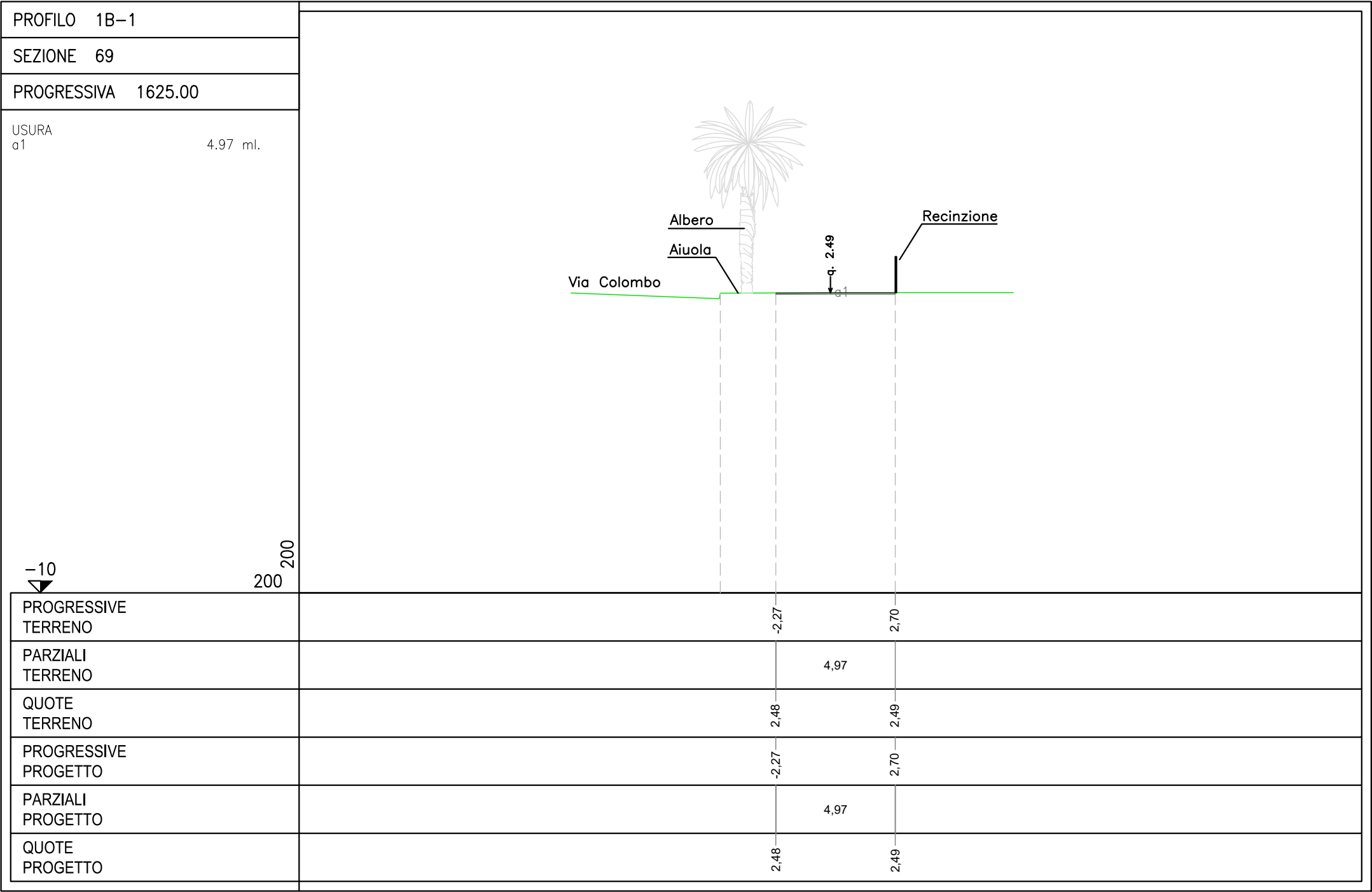
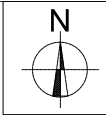
The diagram shows a cross-section of a road or path. The ground line is a solid black line. A green line indicates the proposed or existing boundary. A vertical dashed line marks the center of the section. A horizontal dashed line marks the top of the section. A vertical arrow points down from the top line to the ground line, labeled 'q. 2.57'. A vertical line segment on the right side is labeled 'Recinzione'. A label 'Aiuola' points to the top of the section. A label 'Via Colombo' points to the ground line. A scale bar at the bottom left shows a distance of 200 units.

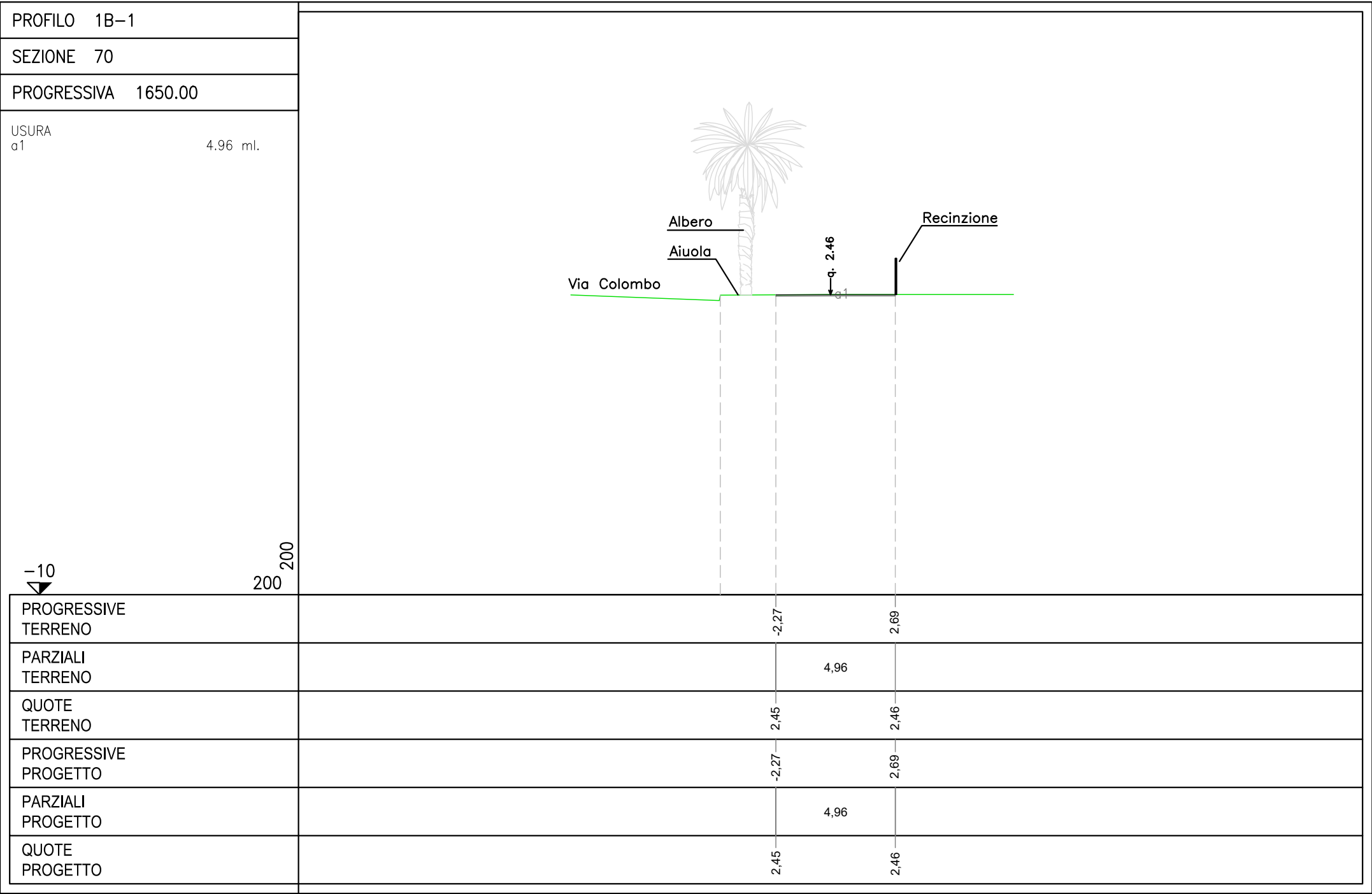
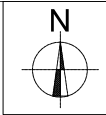
PROGRESSIVE TERRENO	-2,03	2,77
PARZIALI TERRENO	4,80	
QUOTE TERRENO	2,56	2,57
PROGRESSIVE PROGETTO	-2,03	2,77
PARZIALI PROGETTO	4,80	
QUOTE PROGETTO	2,56	2,57

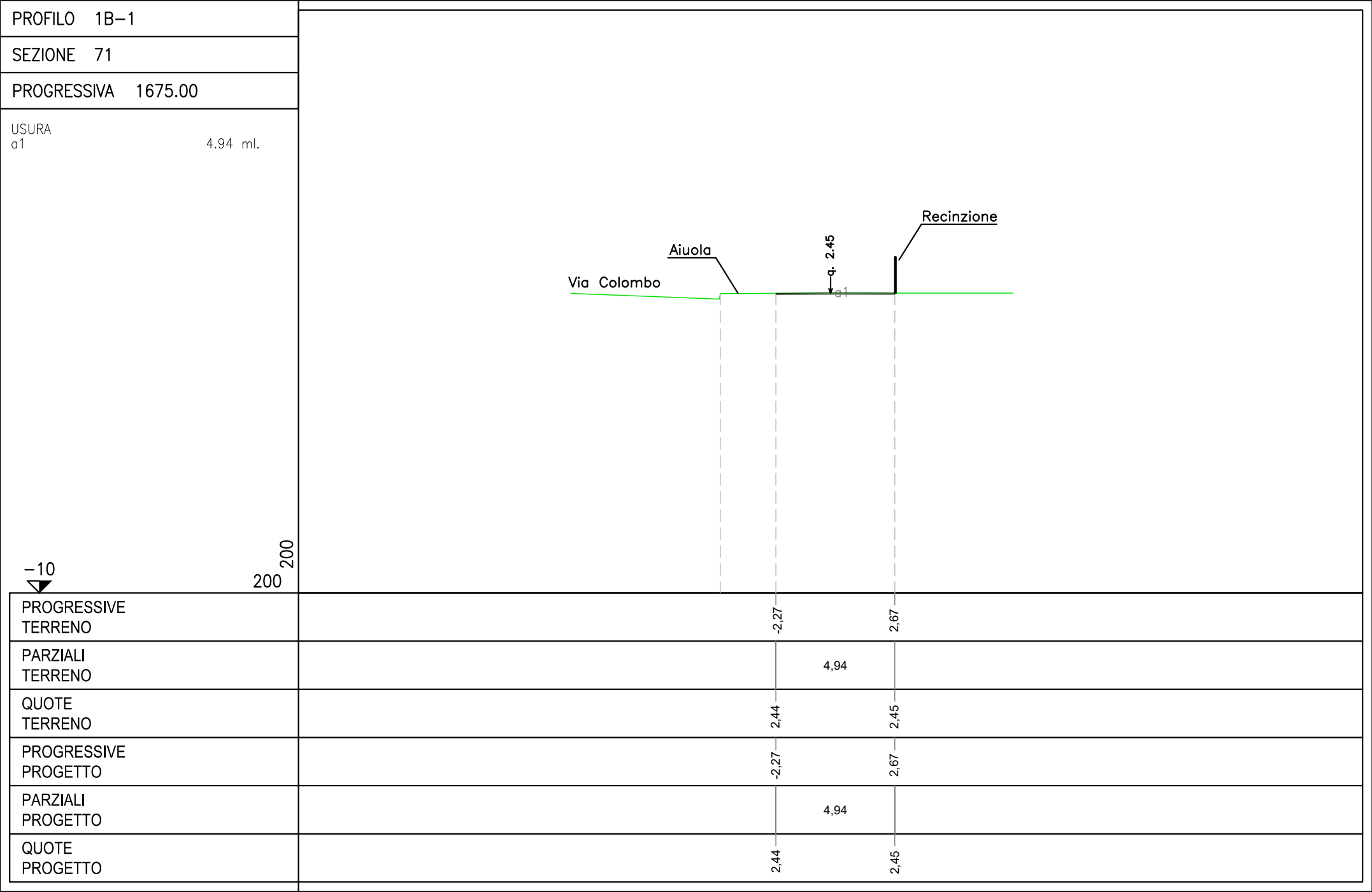
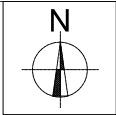


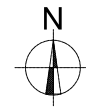




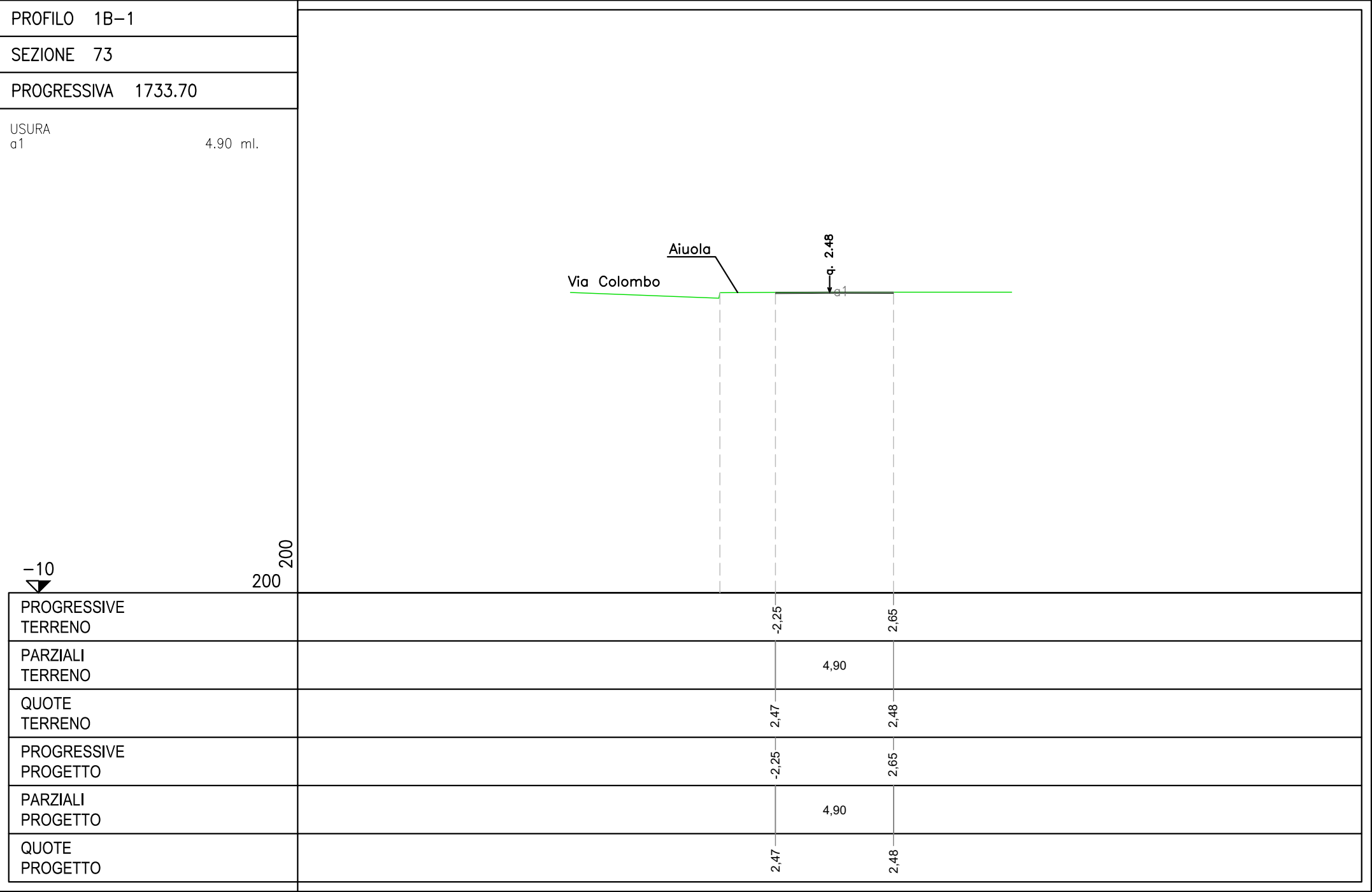
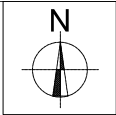


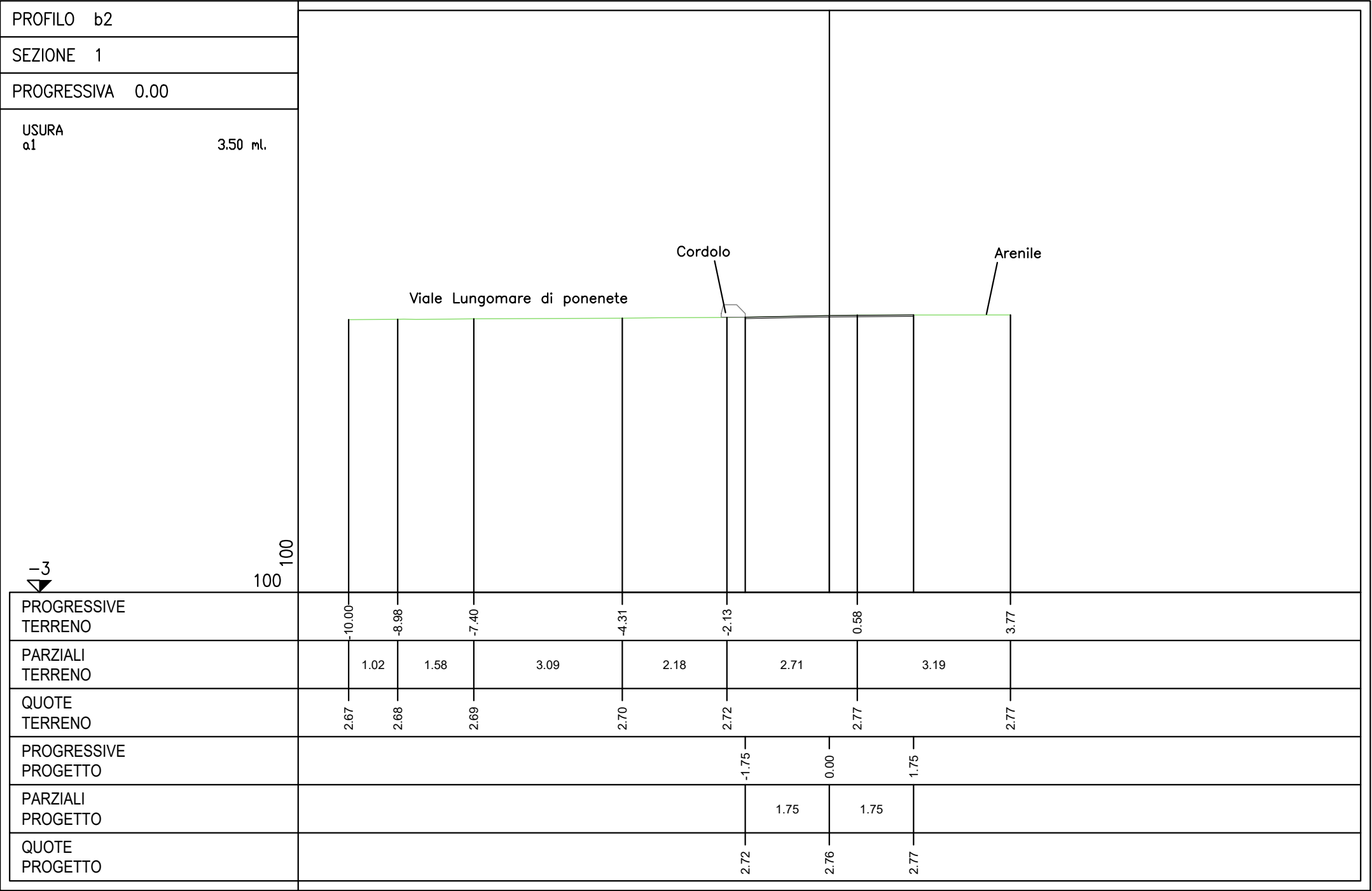
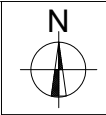


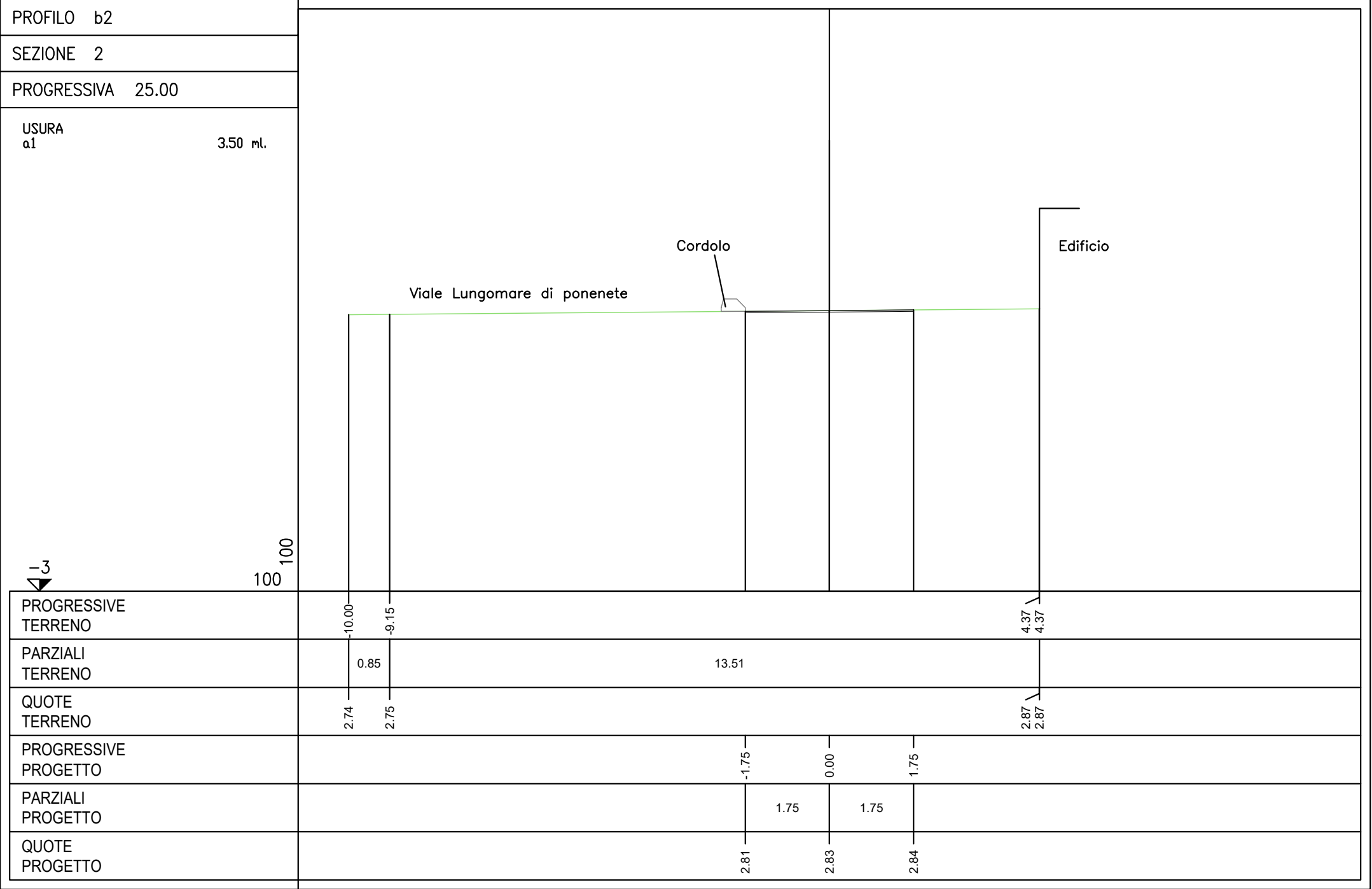
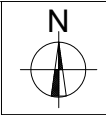


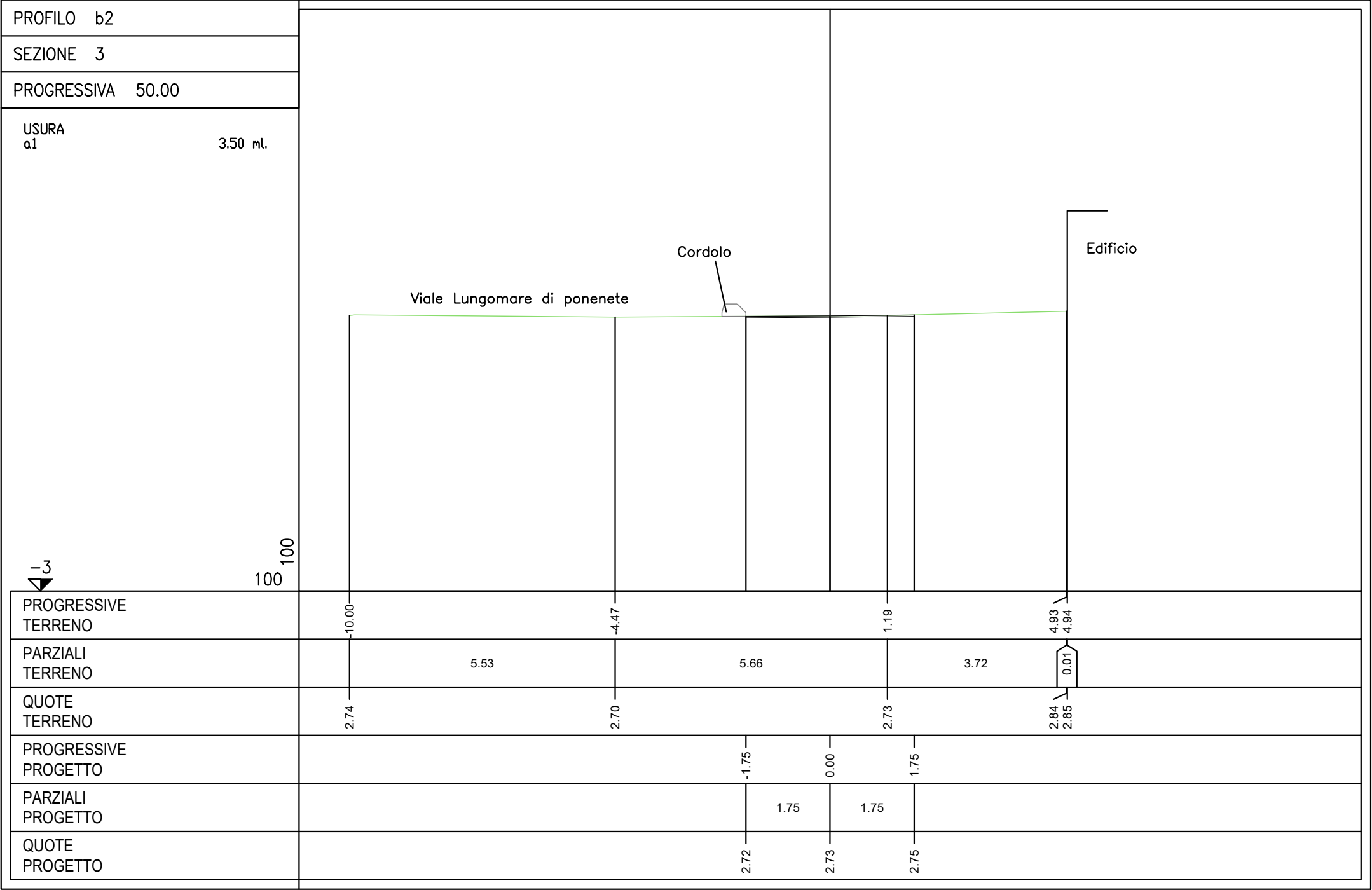
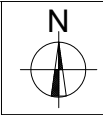


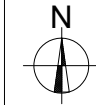
PROFILO	1B-1	
SEZIONE	72	
PROGRESSIVA	1700.00	
USURA a1	4.92 ml.	
PROGRESSIVE TERRENO		-2,26 2,66
PARZIALI TERRENO		4,92
QUOTE TERRENO		2,45 2,46
PROGRESSIVE PROGETTO		-2,26 2,66
PARZIALI PROGETTO		4,92
QUOTE PROGETTO		2,45 2,46











PROFILO	b2
SEZIONE	4
PROGRESSIVA	75.00
USURA a1	3.50 ml.

Viale Lungomare di ponenete

Cordolo

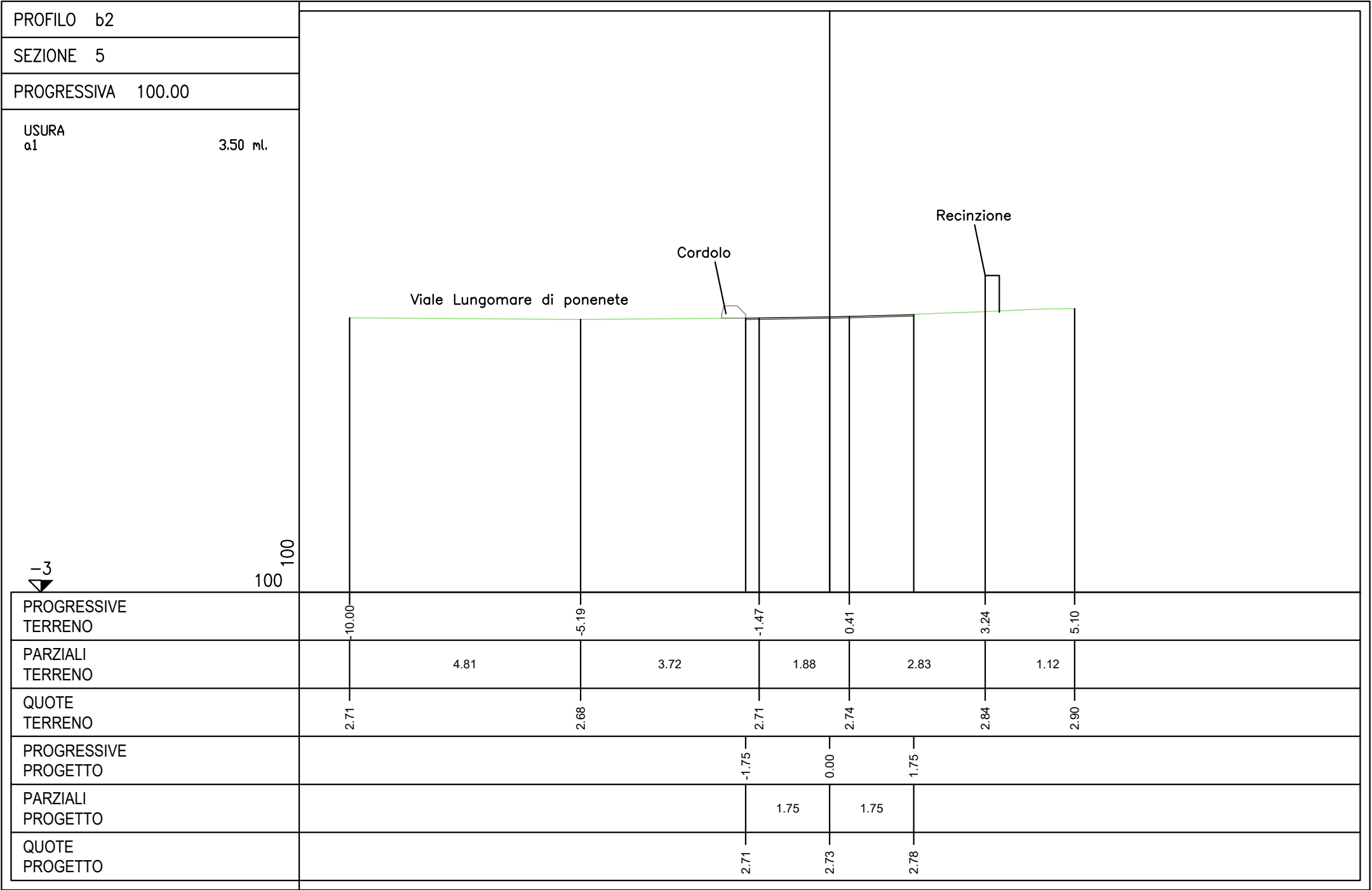
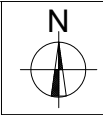
Recinzione

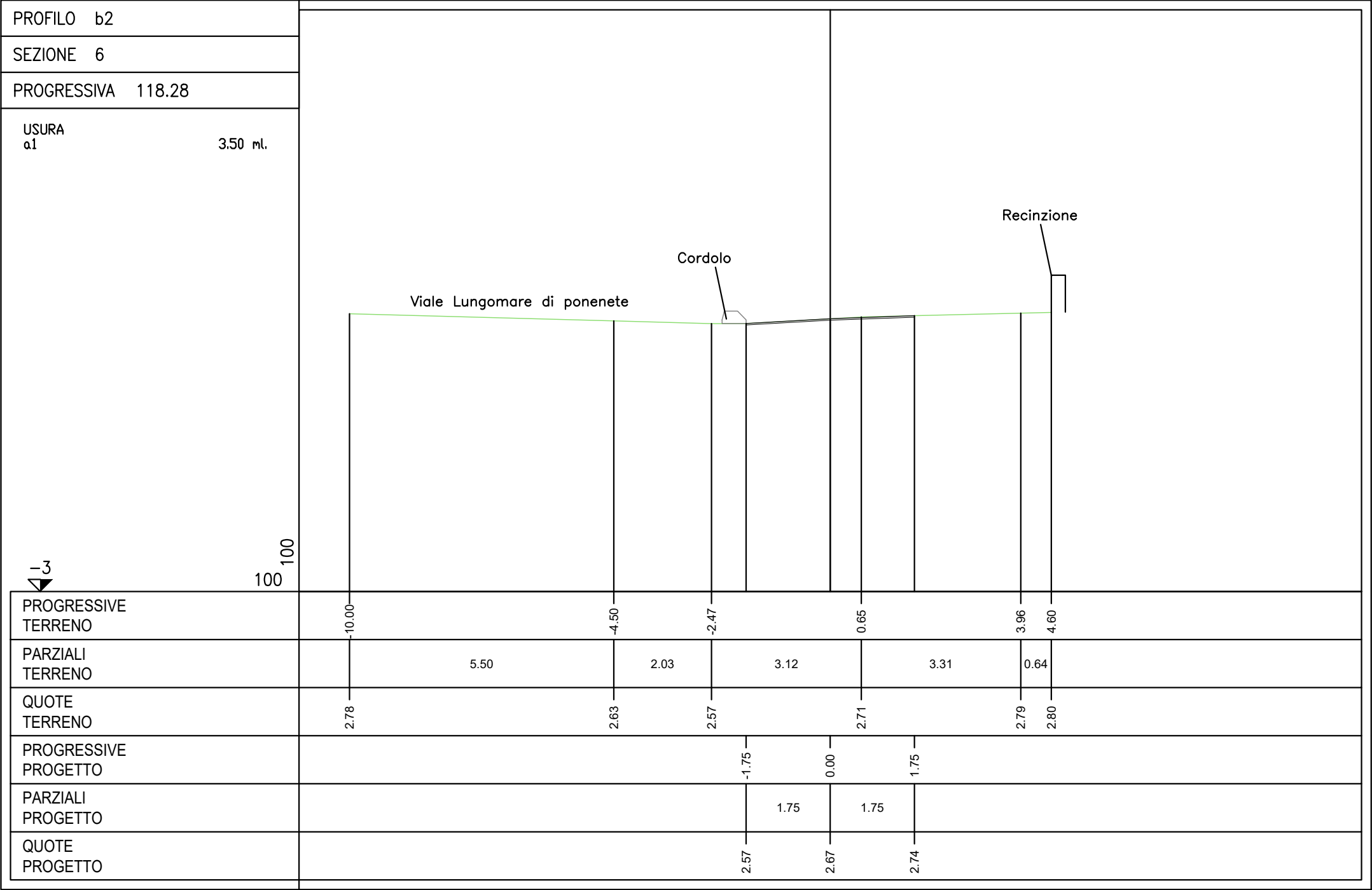
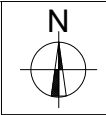
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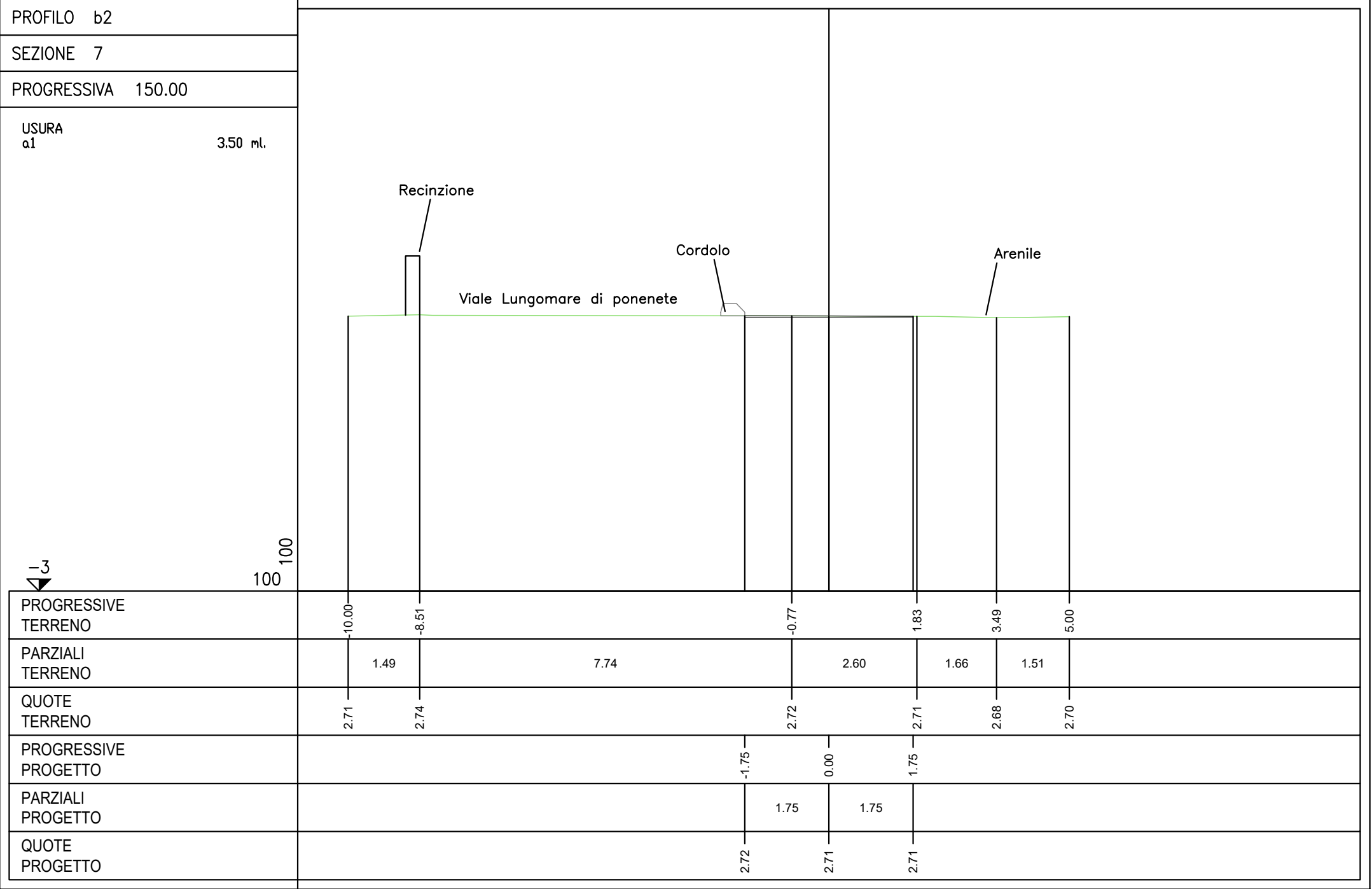
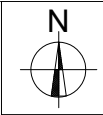
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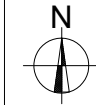
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PROGRESSIVE TERRENO	-10.00	-8.23	-6.16	-5.11	-0.46	5.56	5.89
PARZIALI TERRENO	1.77	2.07	1.05	4.65	5.56	0.28	
QUOTE TERRENO	2.85	2.75	2.74	2.73	2.70	2.90	2.93
PROGRESSIVE PROGETTO					-1.75	0.00	1.75
PARZIALI PROGETTO					1.75	1.75	
QUOTE PROGETTO					2.71	2.71	2.76

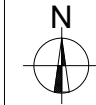




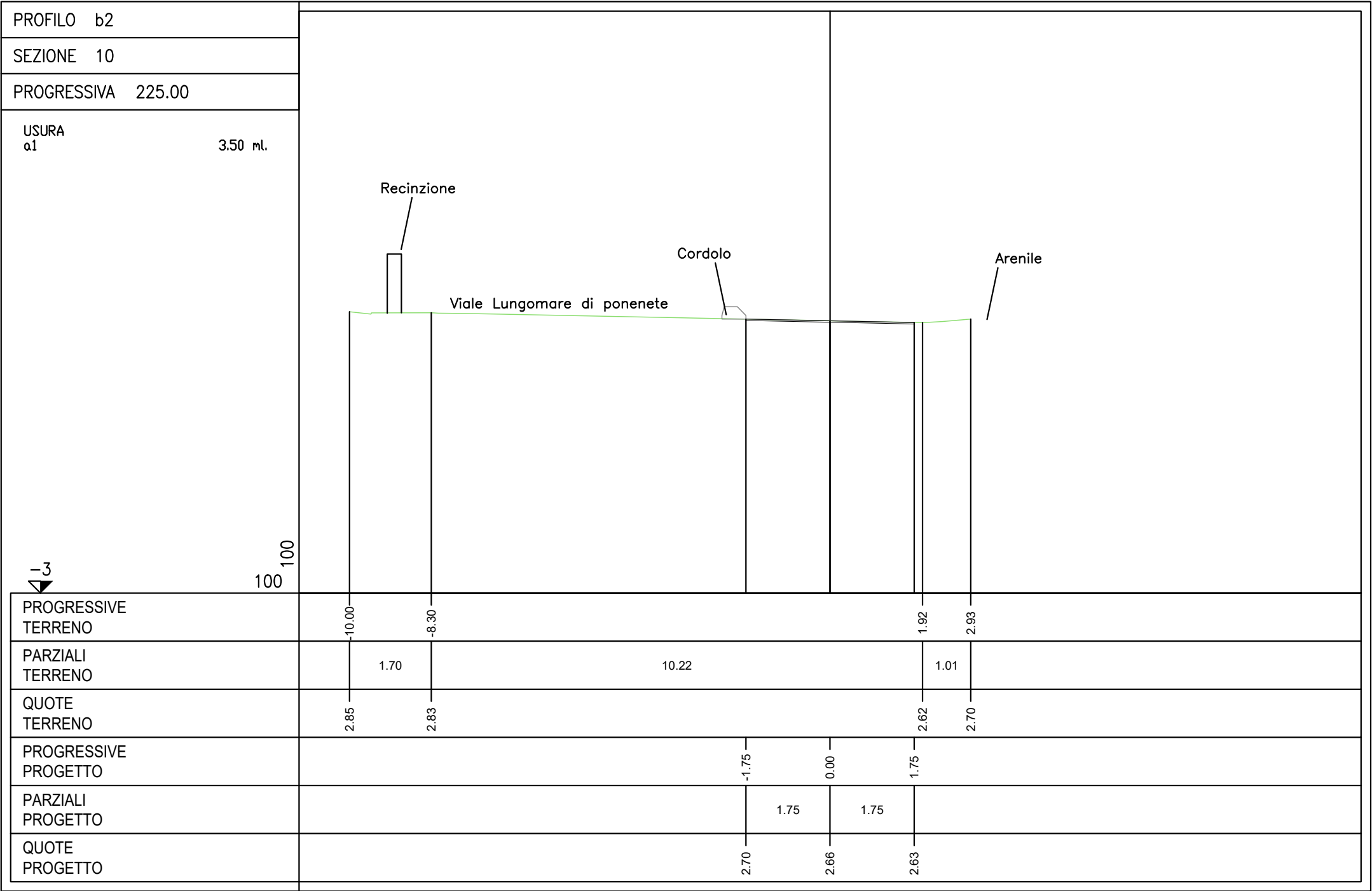
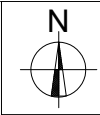


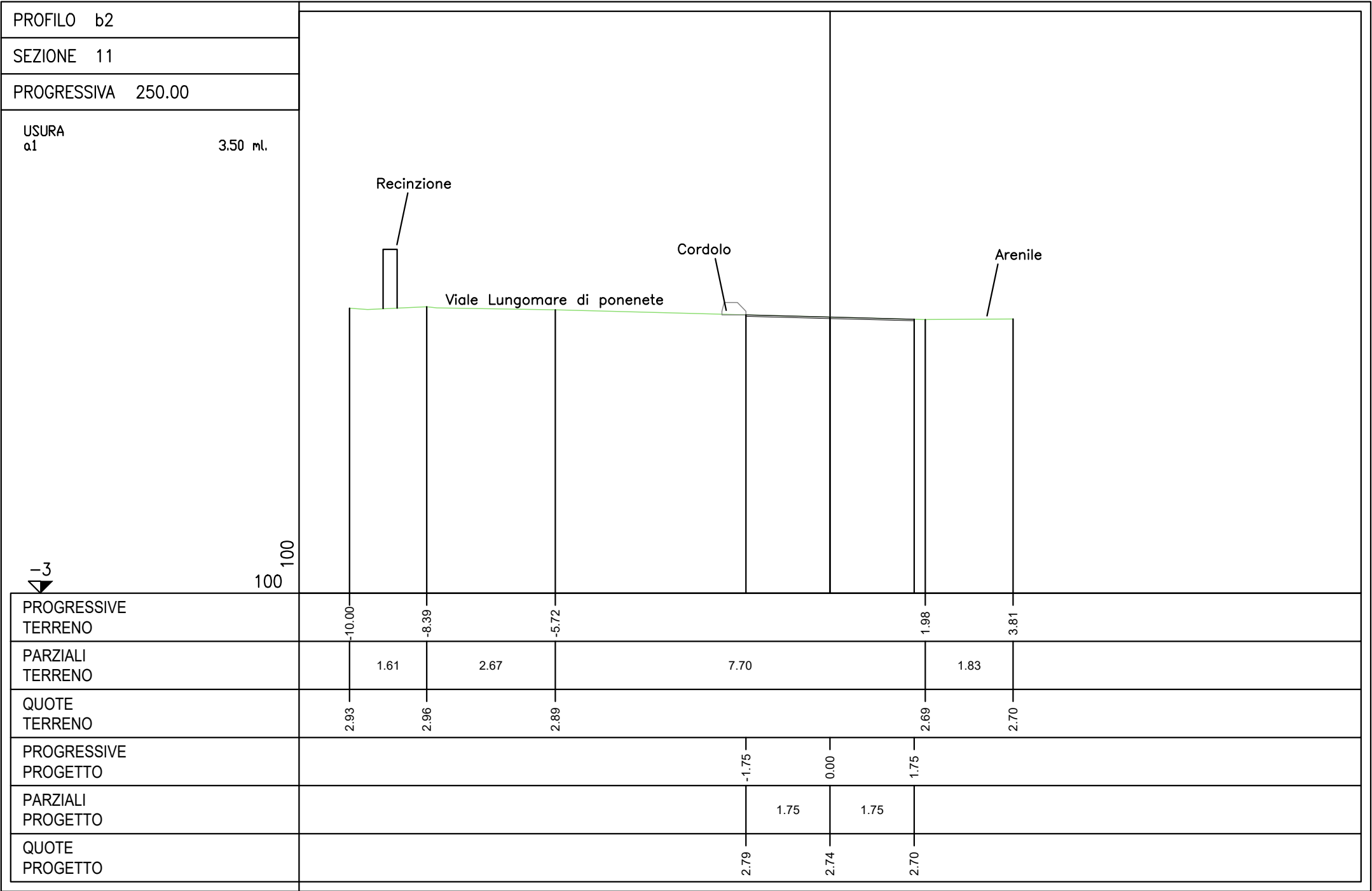
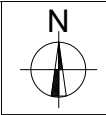


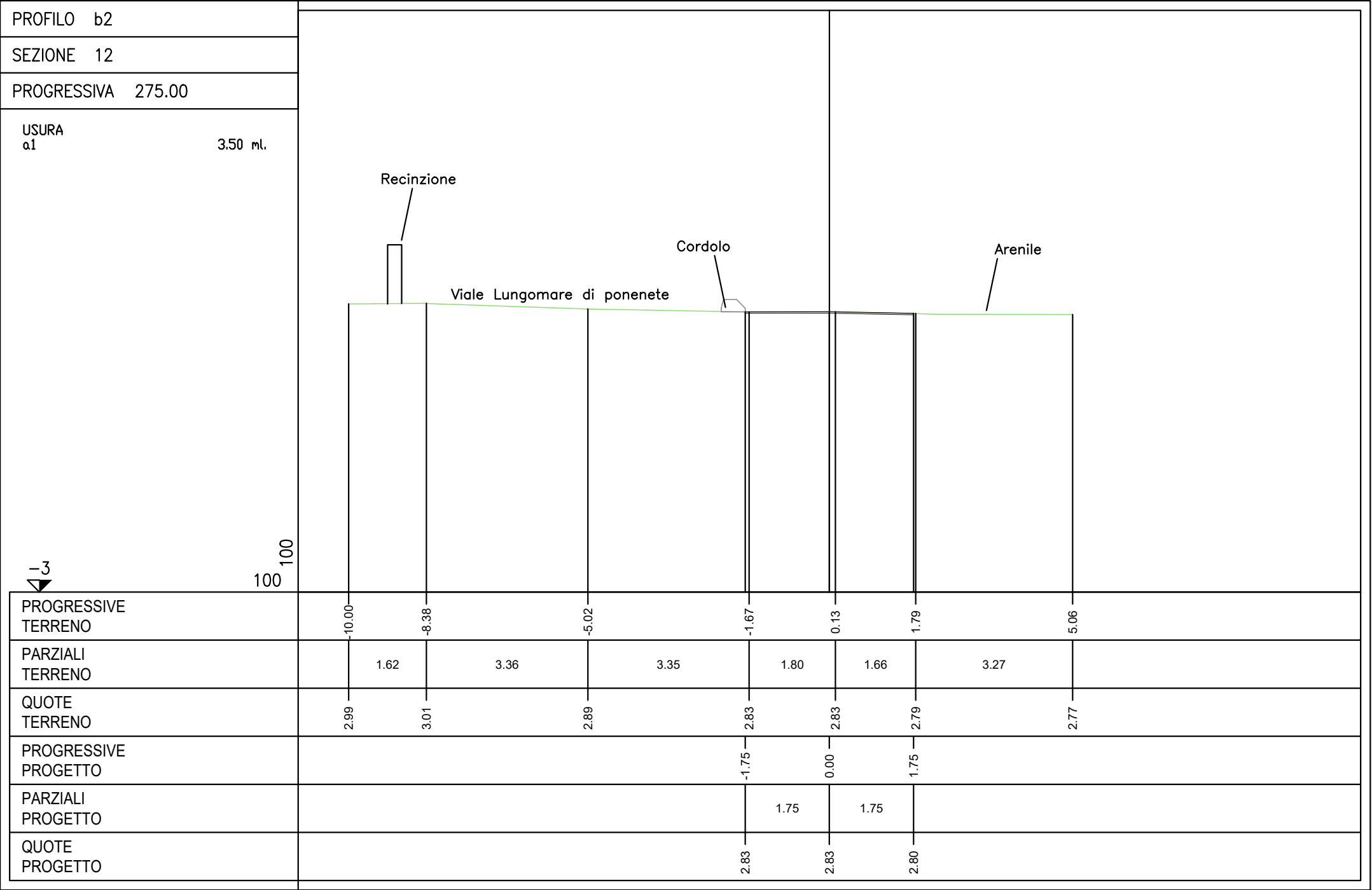
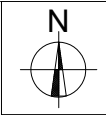
PROFILO b2	
SEZIONE 8	
PROGRESSIVA 175.00	
USURA α1 3.50 ml.	
PROGRESSIVE TERRENO	-10.00 -8.28 -2.45 0.42 1.30 3.29 4.24
PARZIALI TERRENO	1.72 5.83 2.87 0.88 1.99 0.95
QUOTE TERRENO	2.67 2.71 2.66 2.63 2.64 2.66 2.69
PROGRESSIVE PROGETTO	-1.75 0.00 1.75
PARZIALI PROGETTO	1.75 1.75
QUOTE PROGETTO	2.65 2.64 2.65

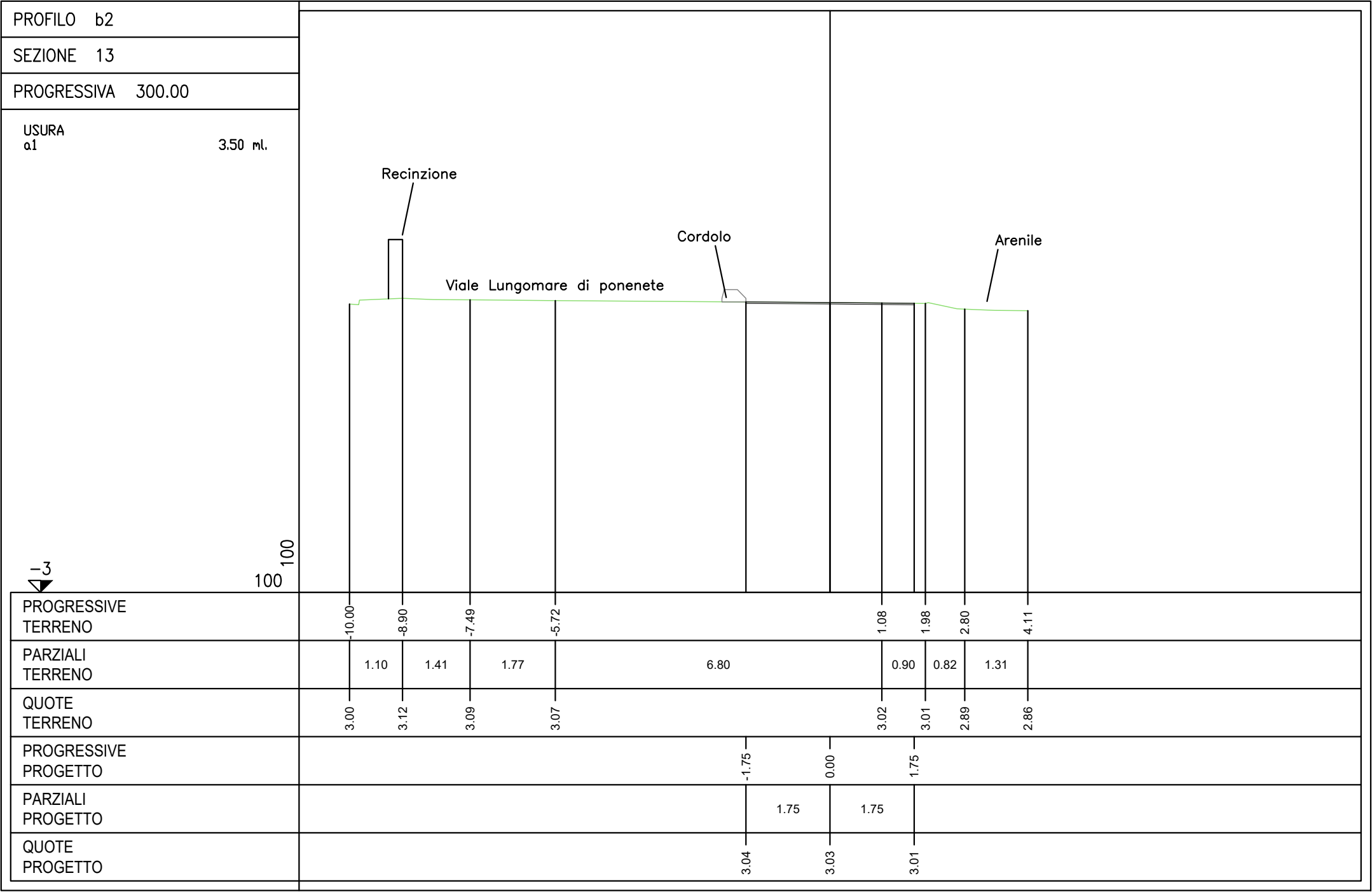
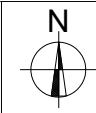


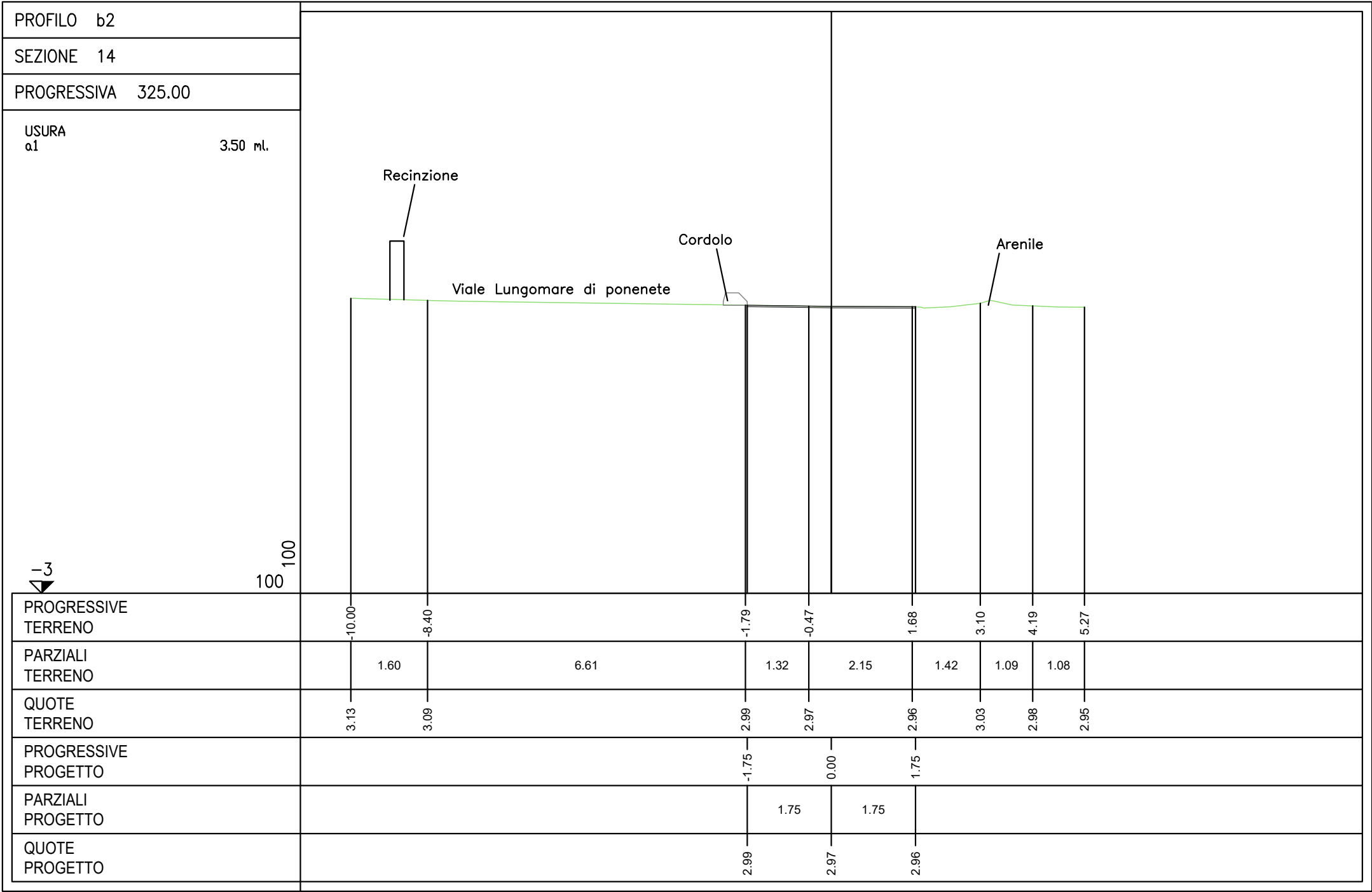
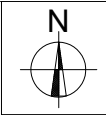
PROFILO	b2
SEZIONE	9
PROGRESSIVA	200.00
USURA a1	3.50 ml.
PROGRESSIVE TERRENO	-10.00 -8.30 -1.09 1.74 3.21 3.58
PARZIALI TERRENO	1.70 7.21 2.83 1.47 0.37
QUOTE TERRENO	2.77 2.67 2.60 2.59 2.66 2.69
PROGRESSIVE PROGETTO	-1.75 0.00 1.75
PARZIALI PROGETTO	1.75 1.75
QUOTE PROGETTO	2.61 2.60 2.59

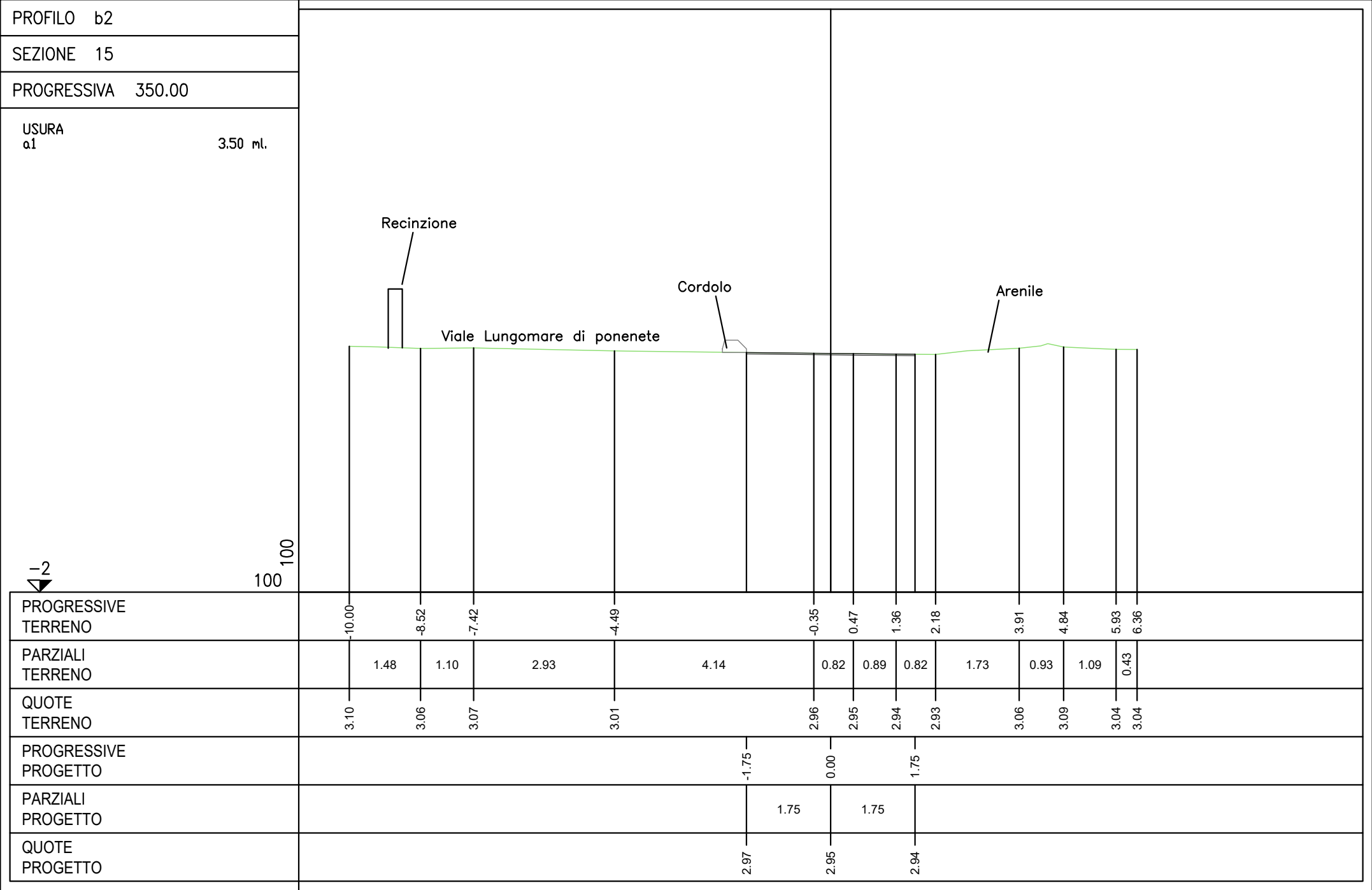
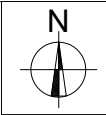


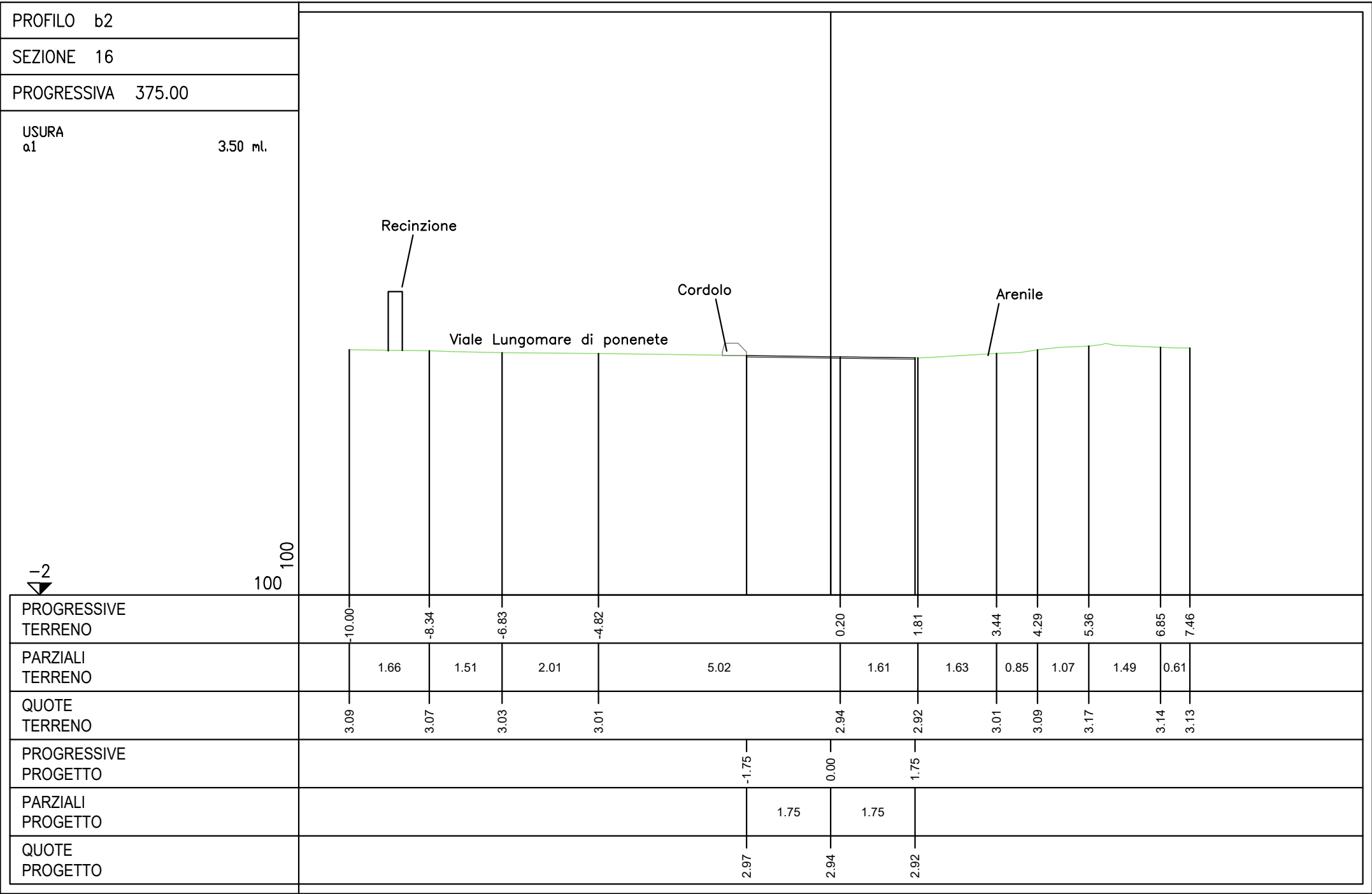
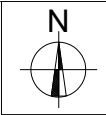


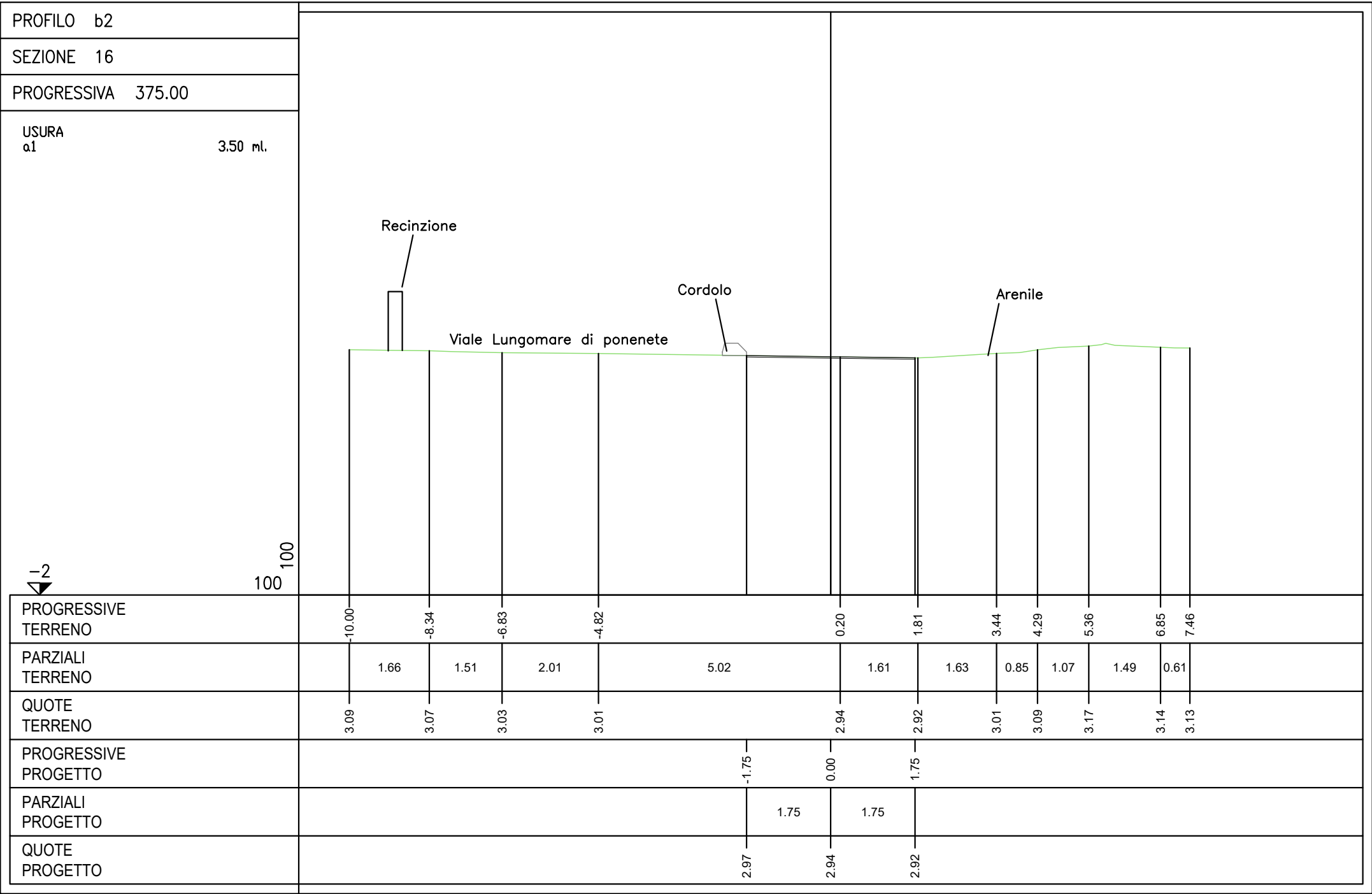
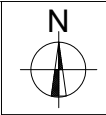


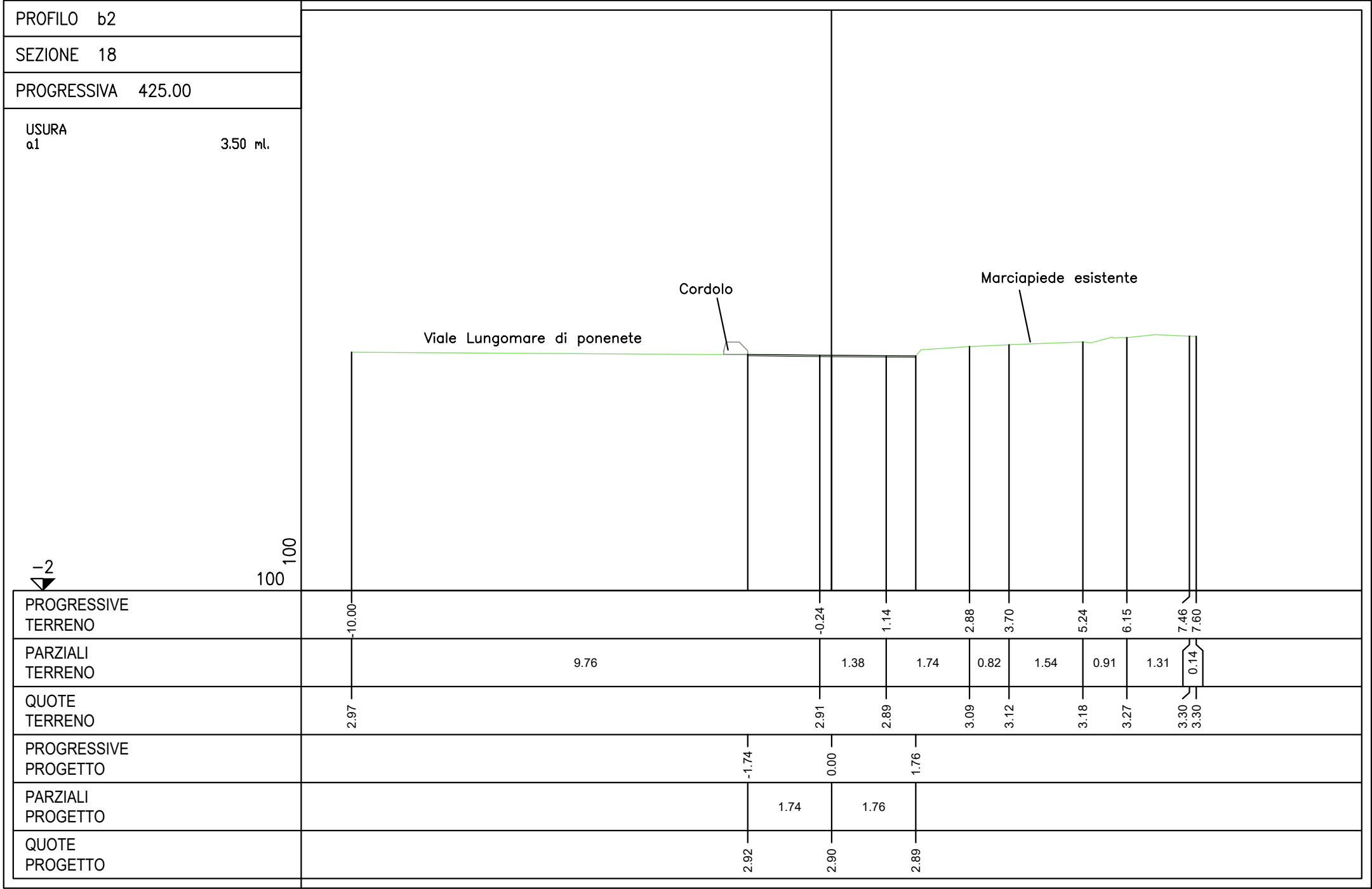
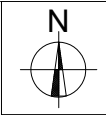


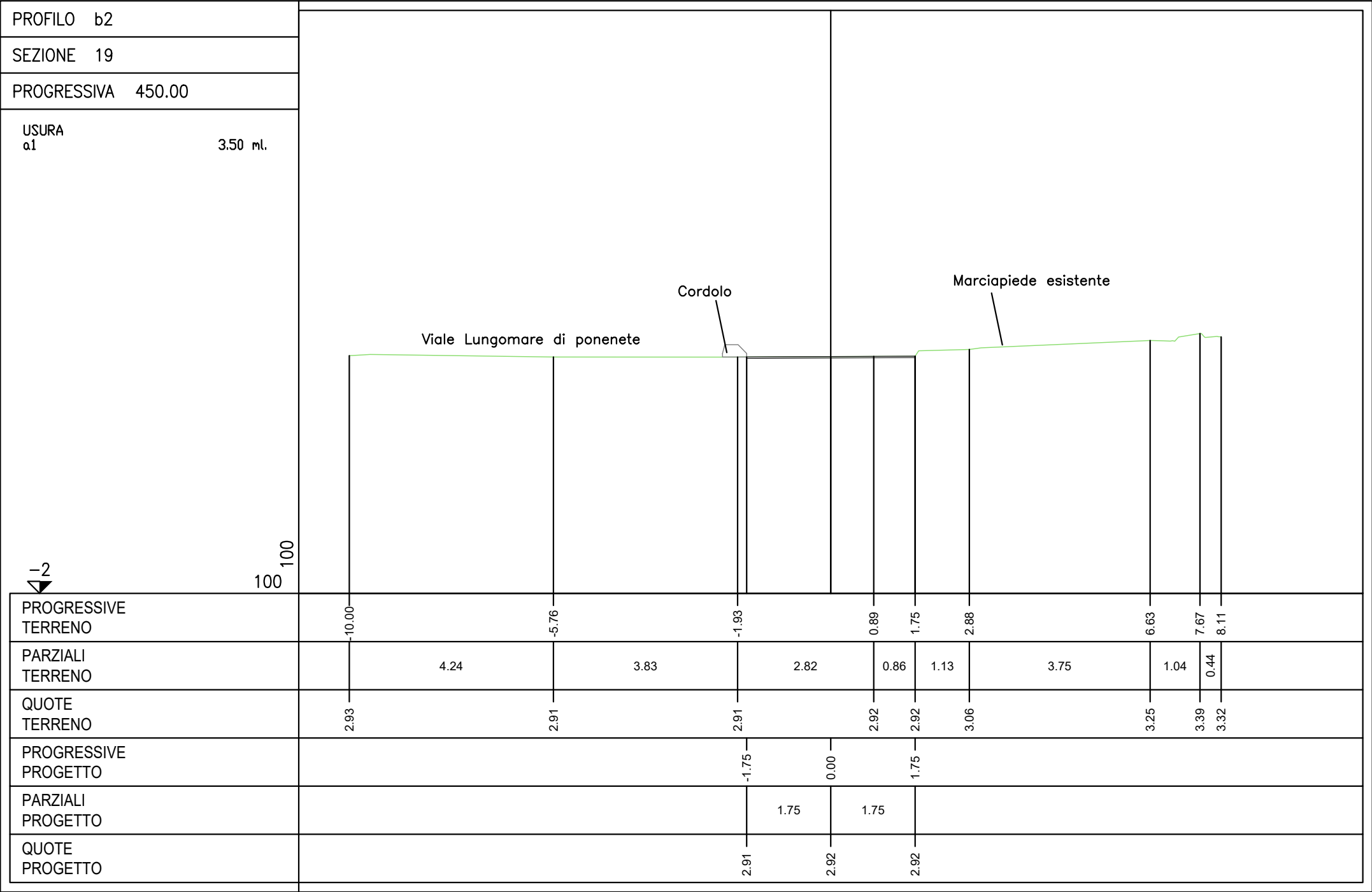
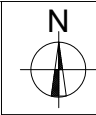


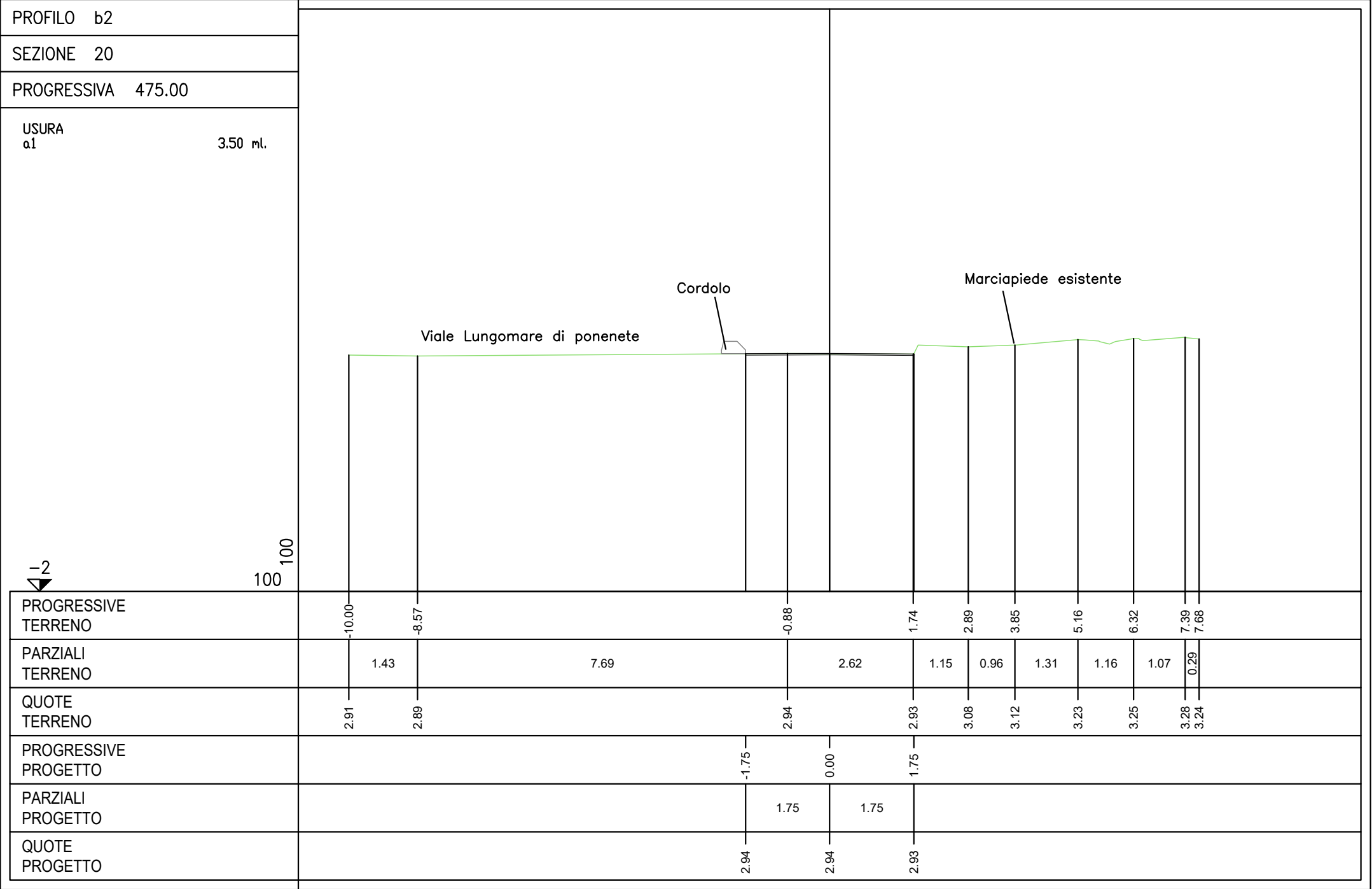
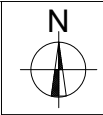


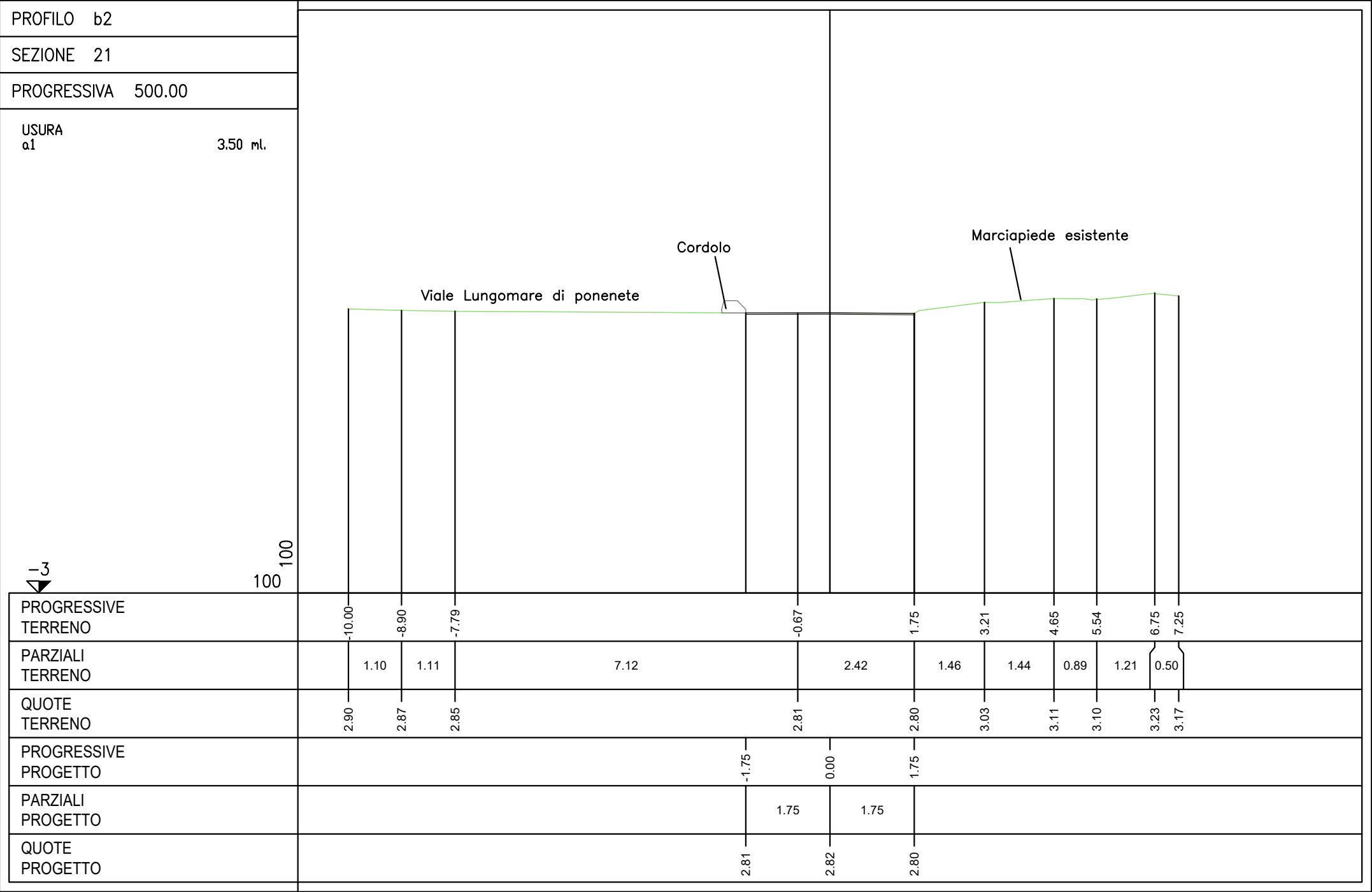
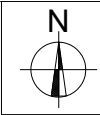


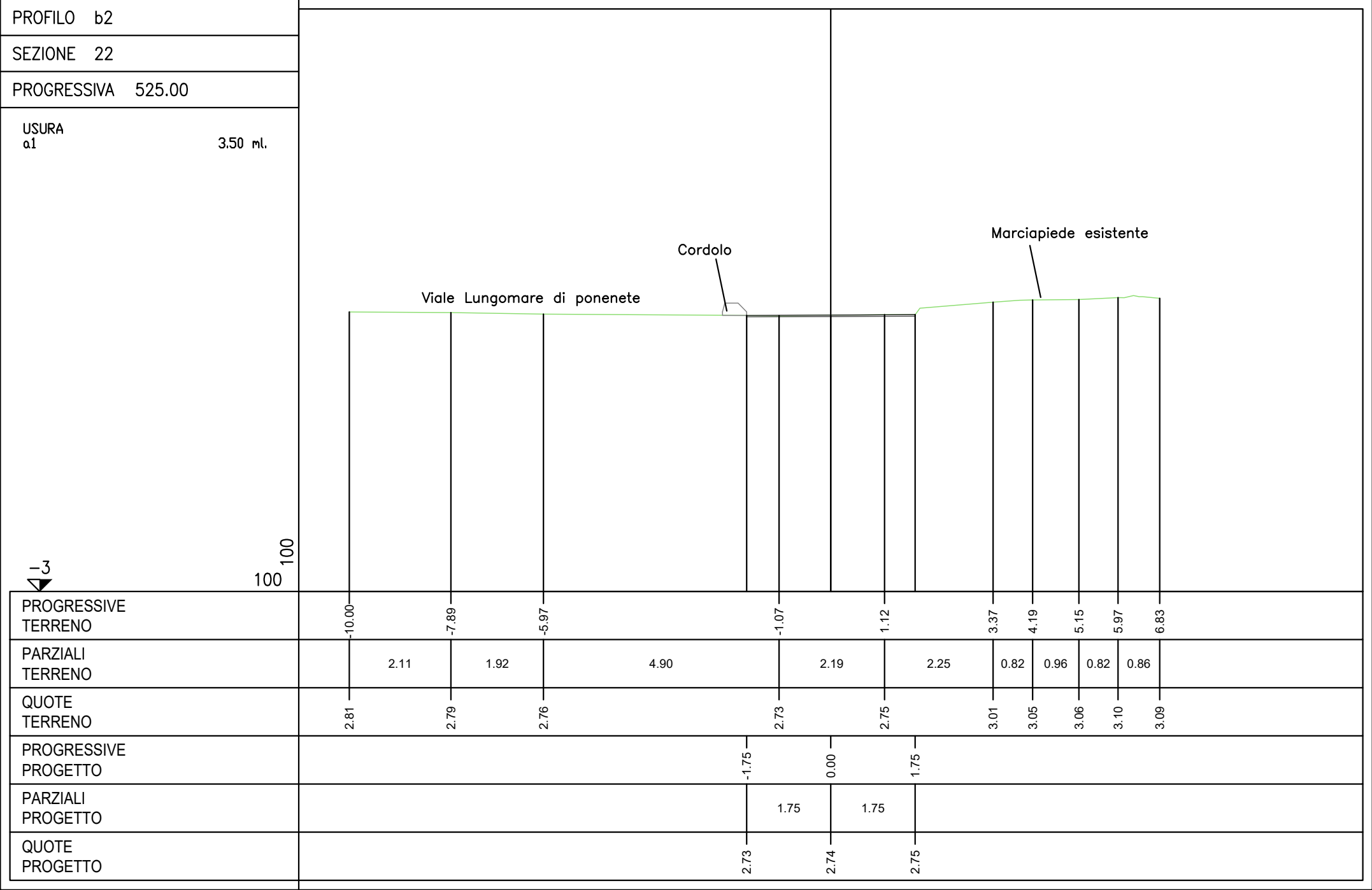
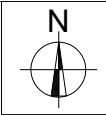


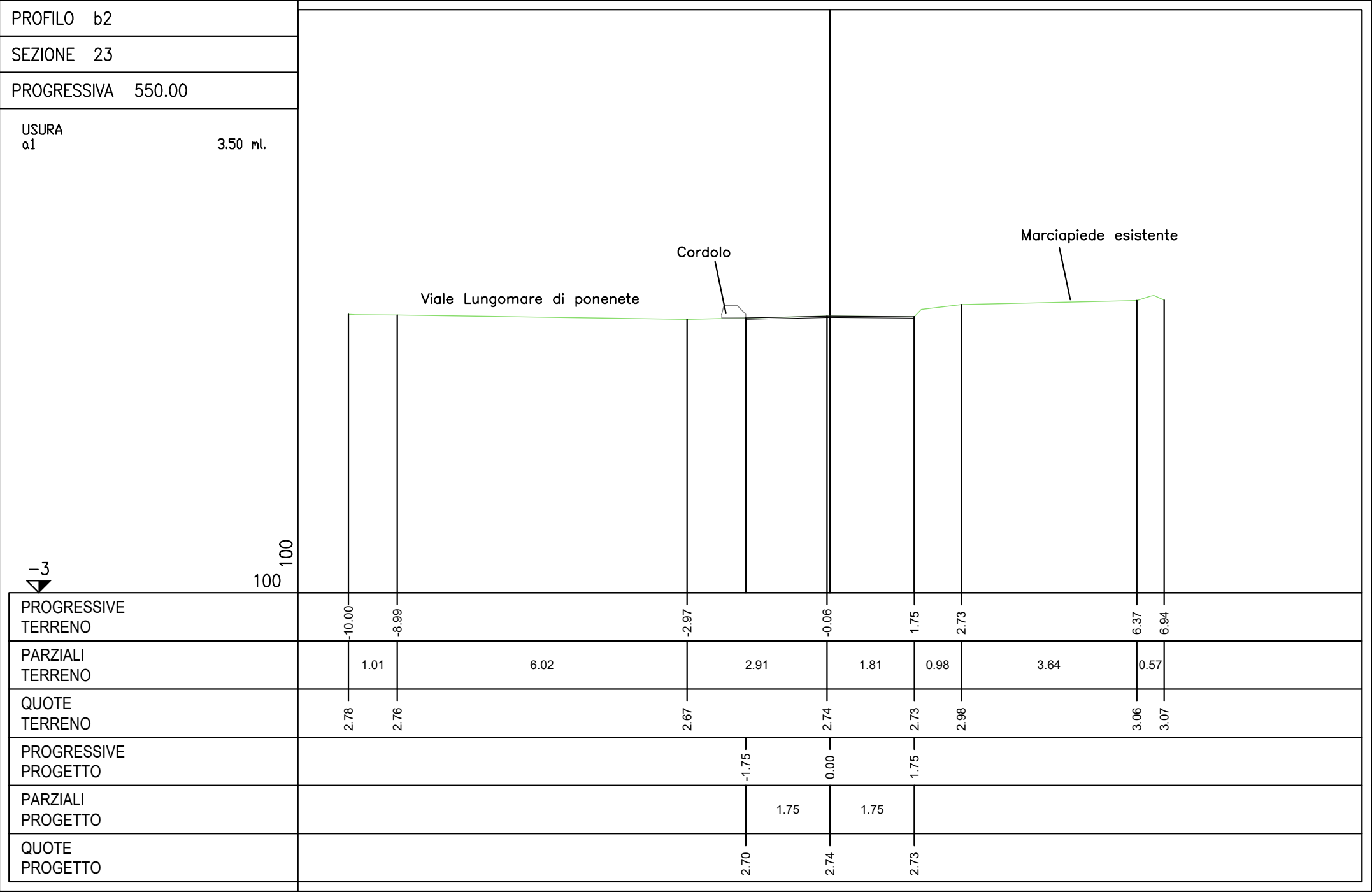
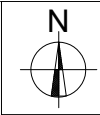


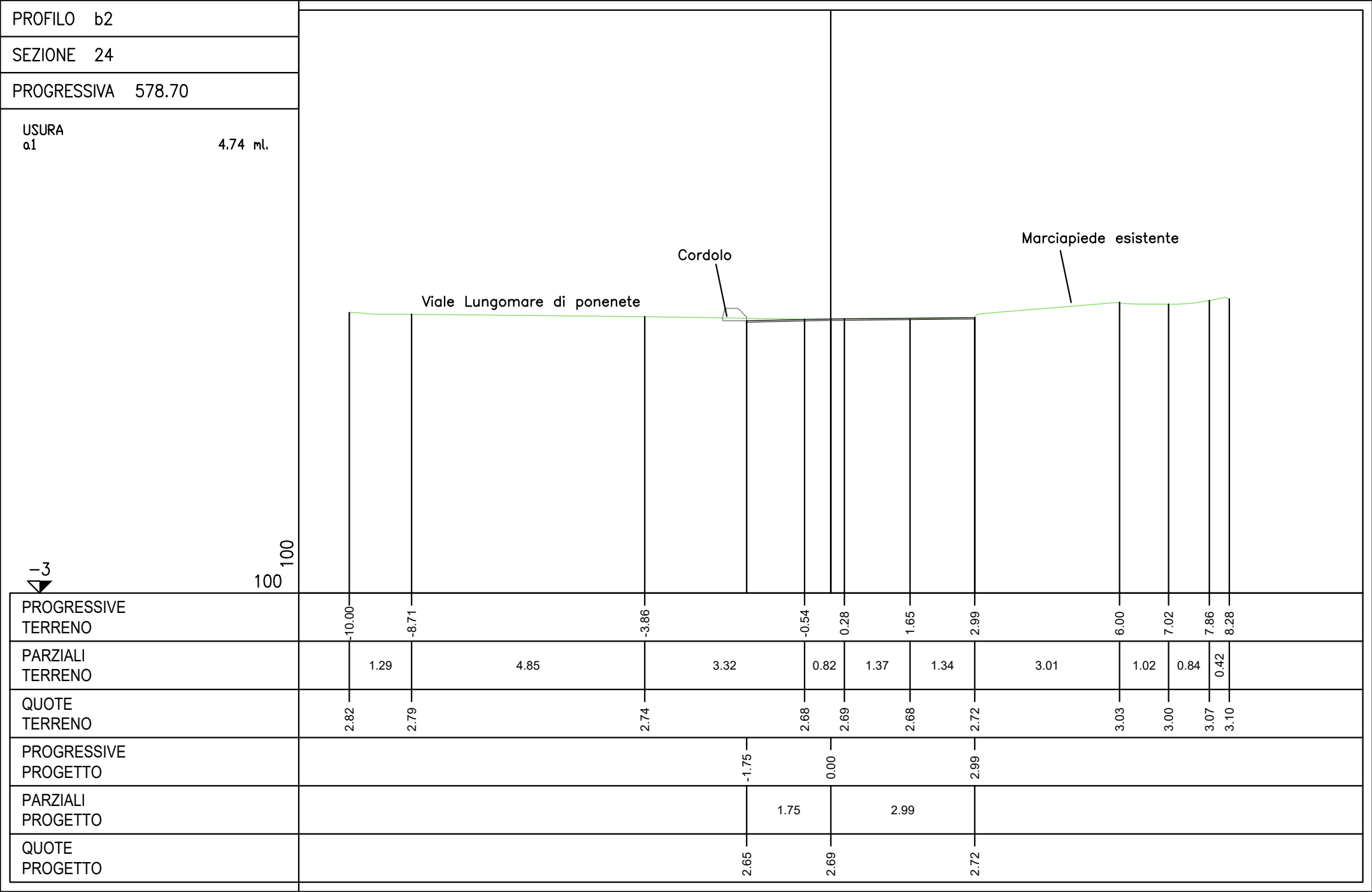
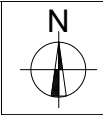


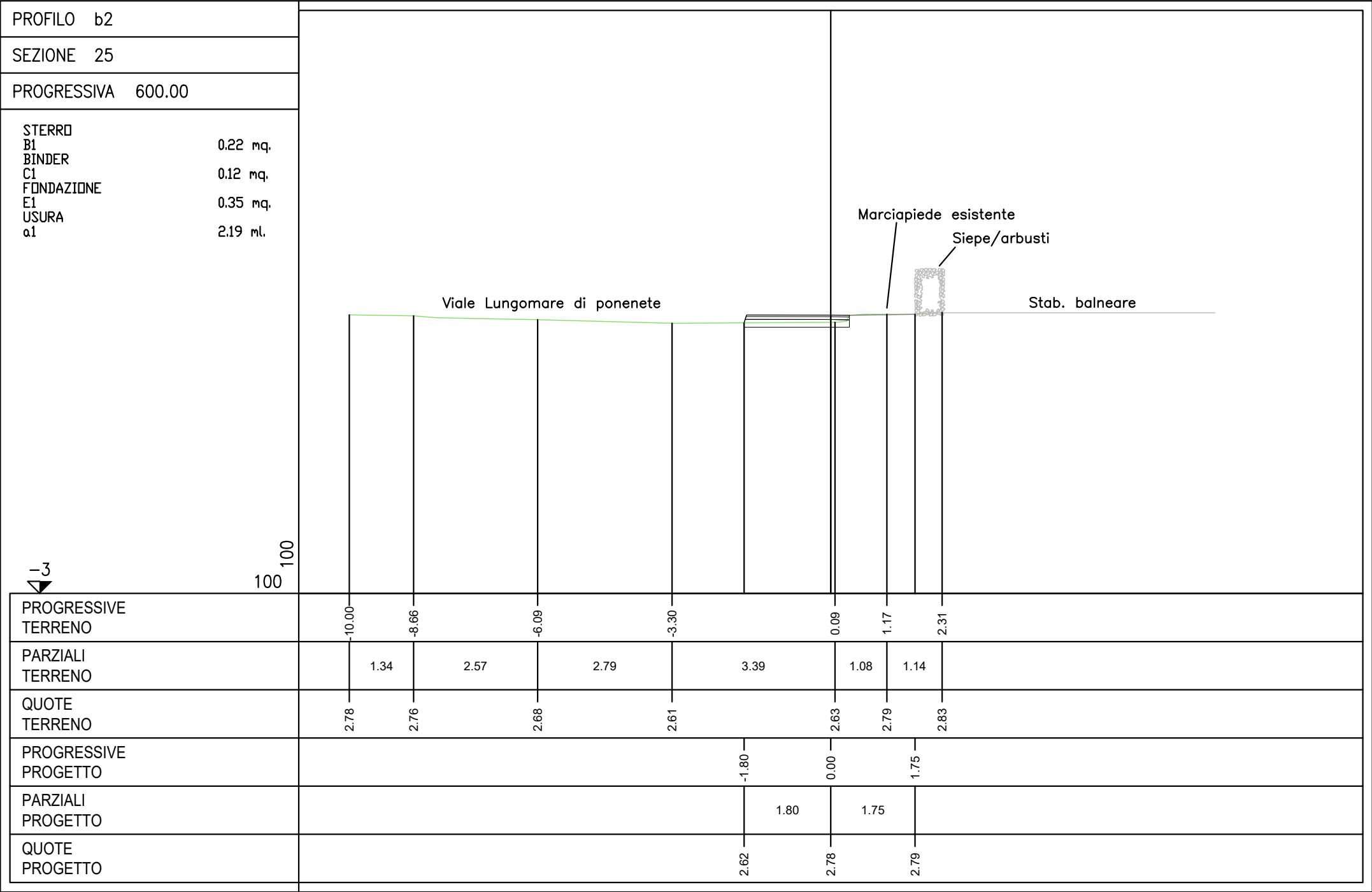
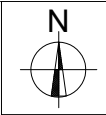


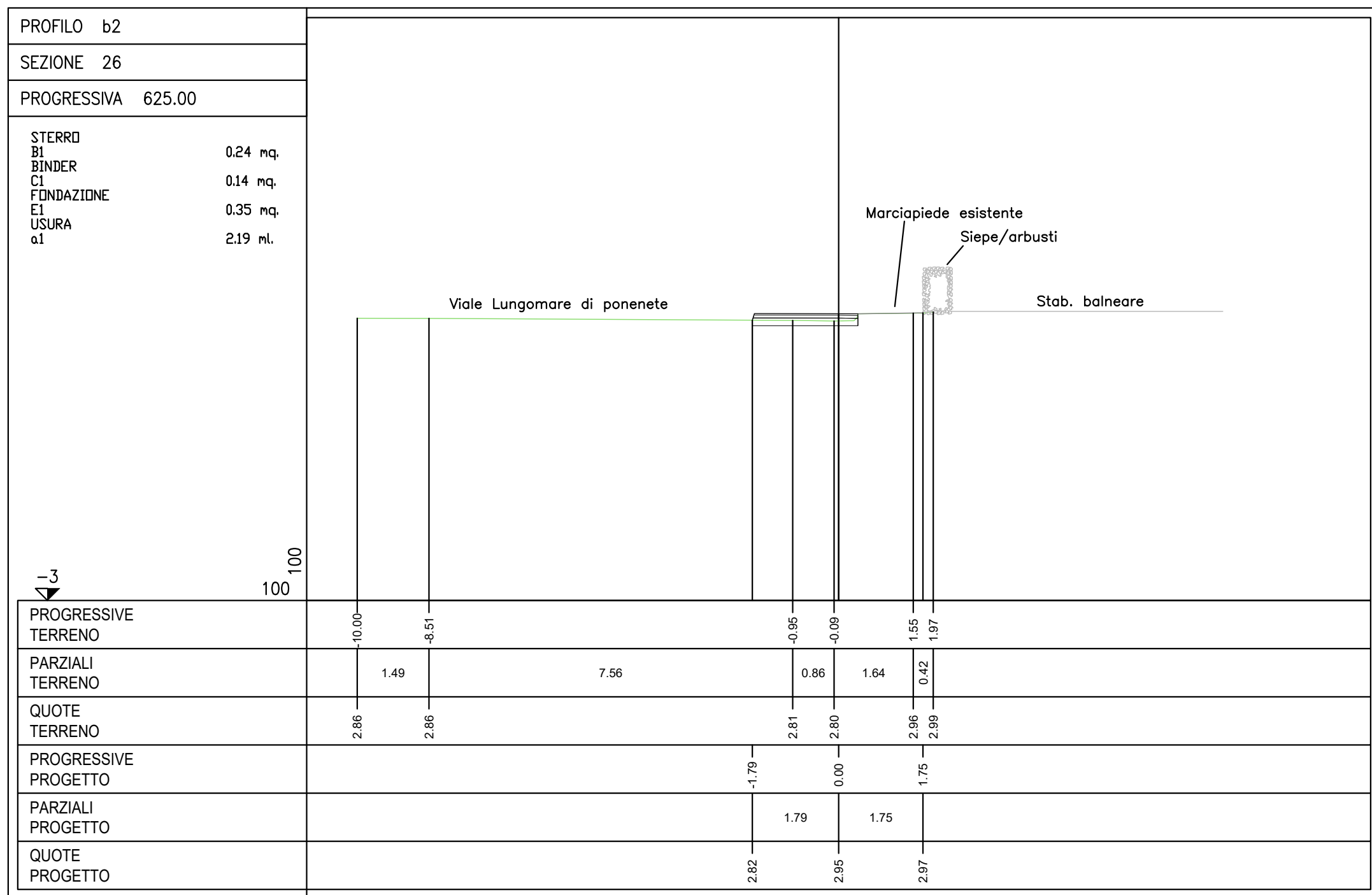


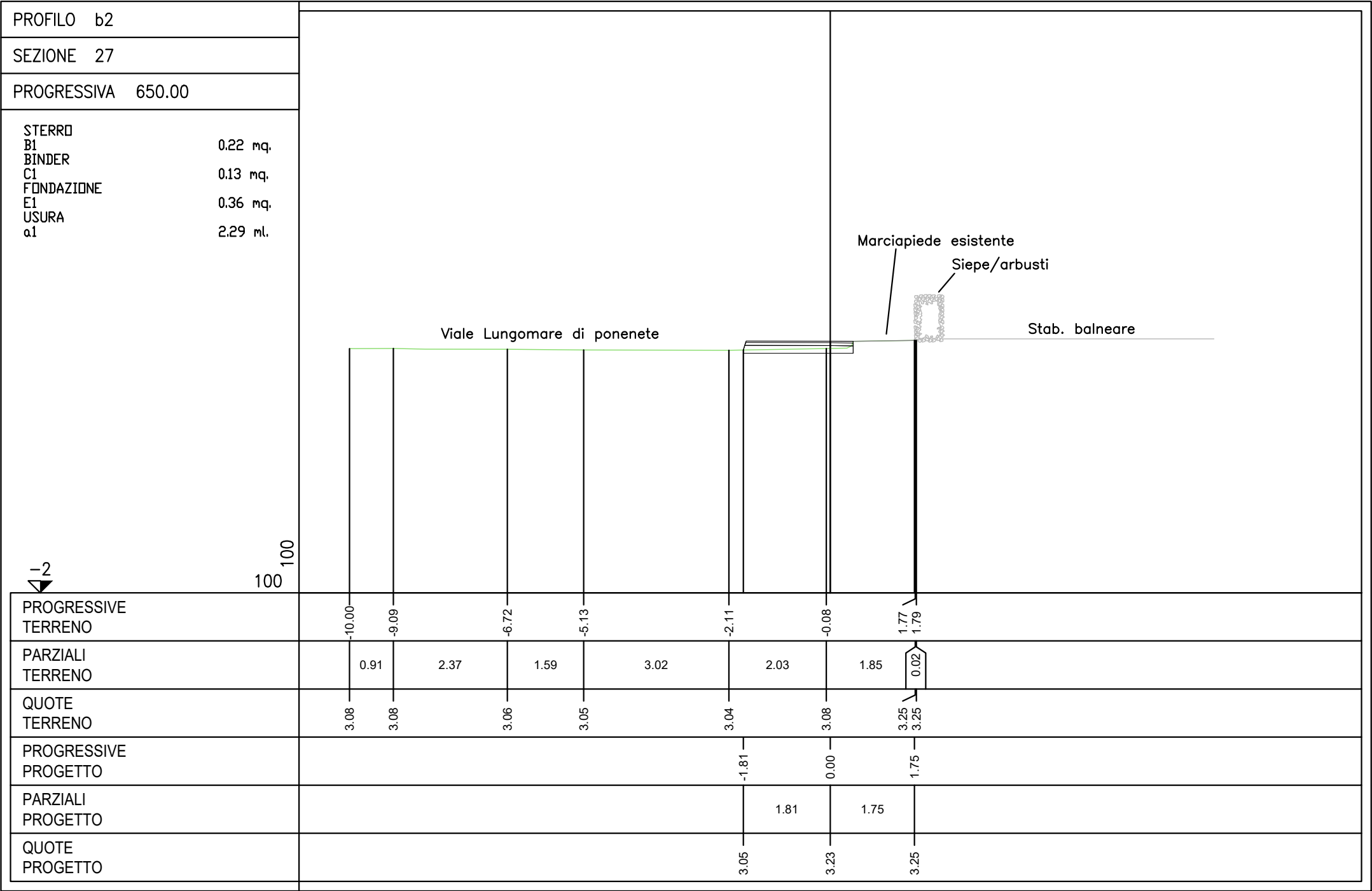
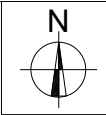


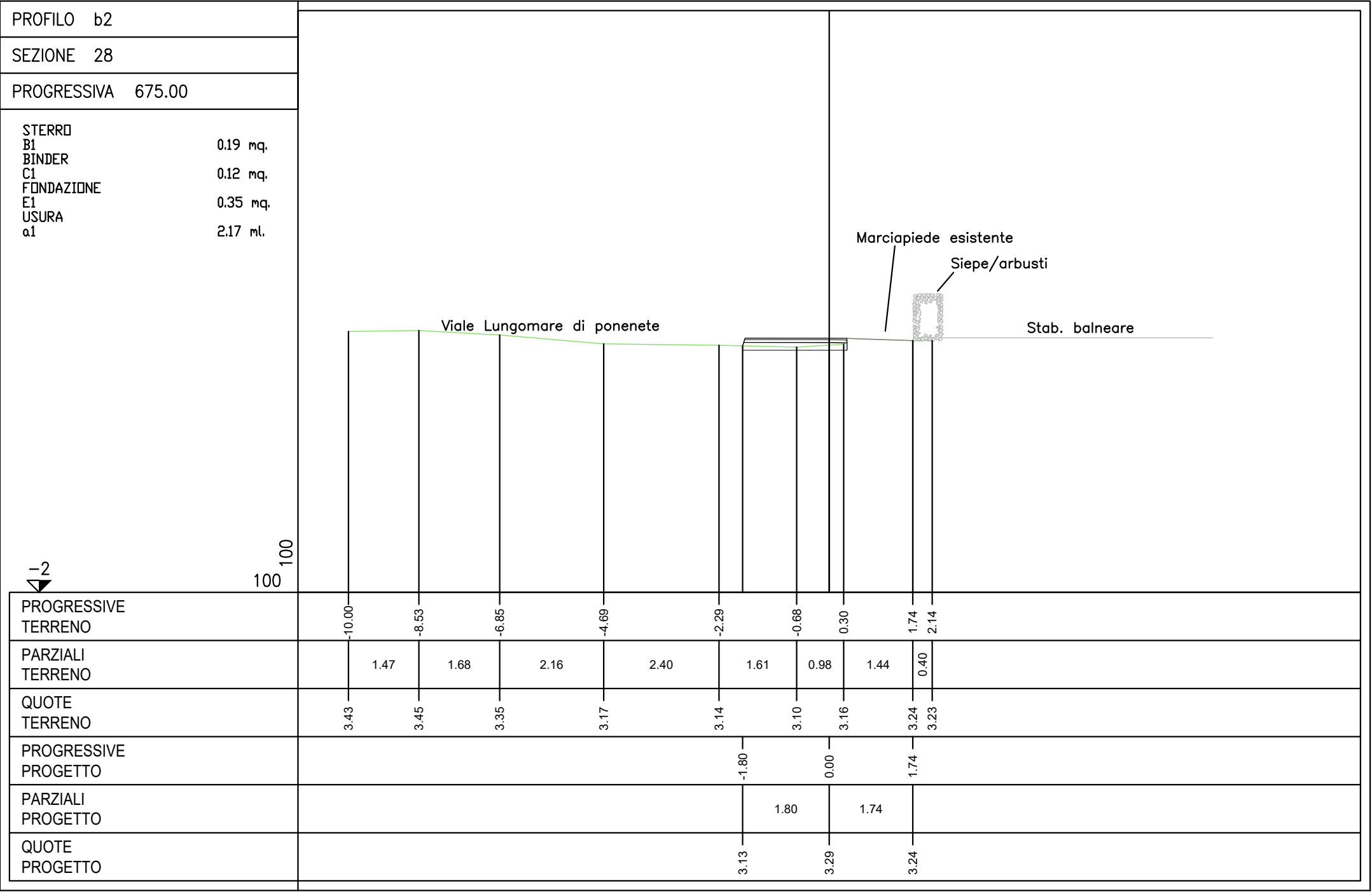
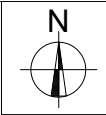


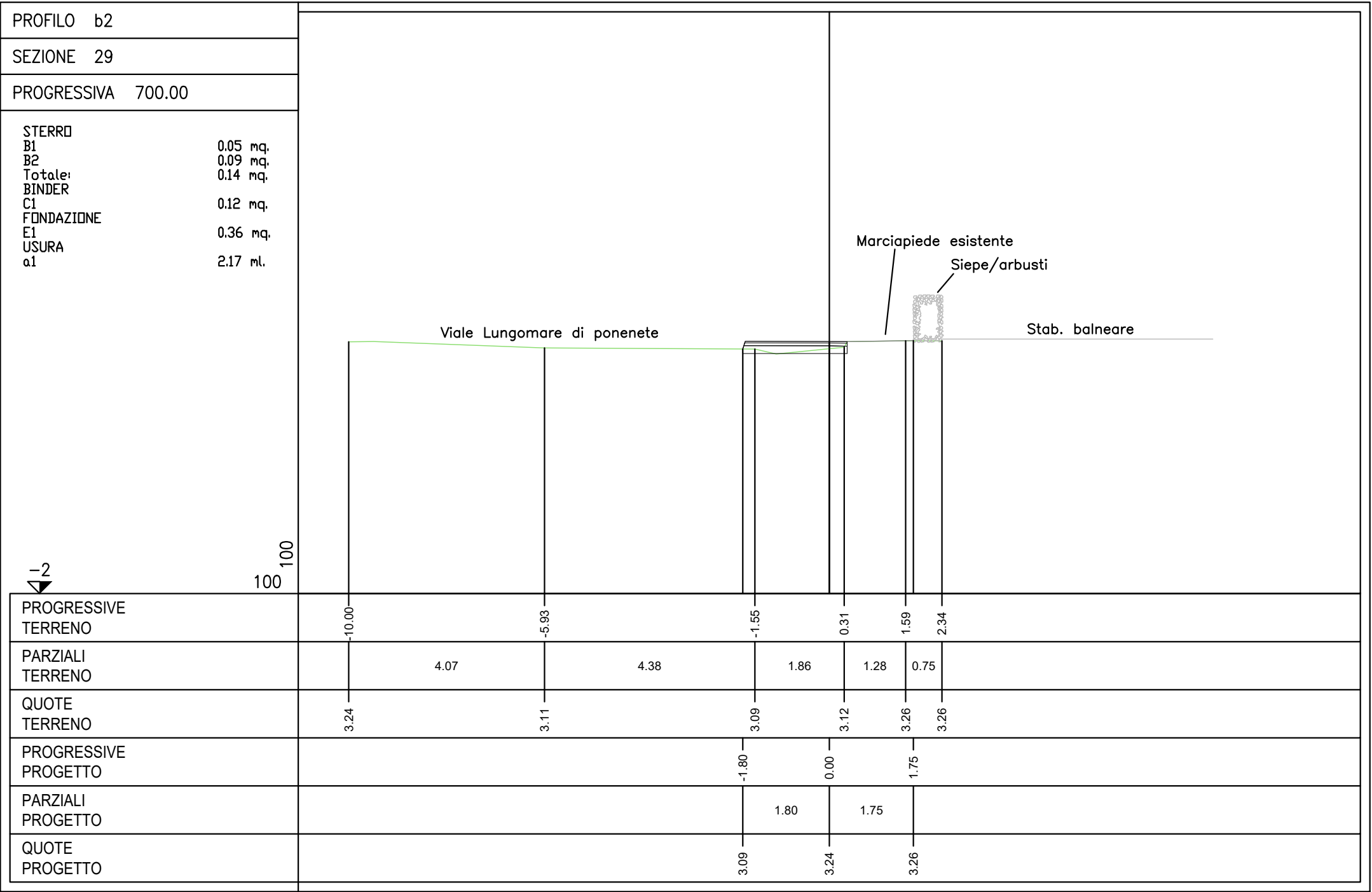
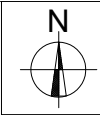


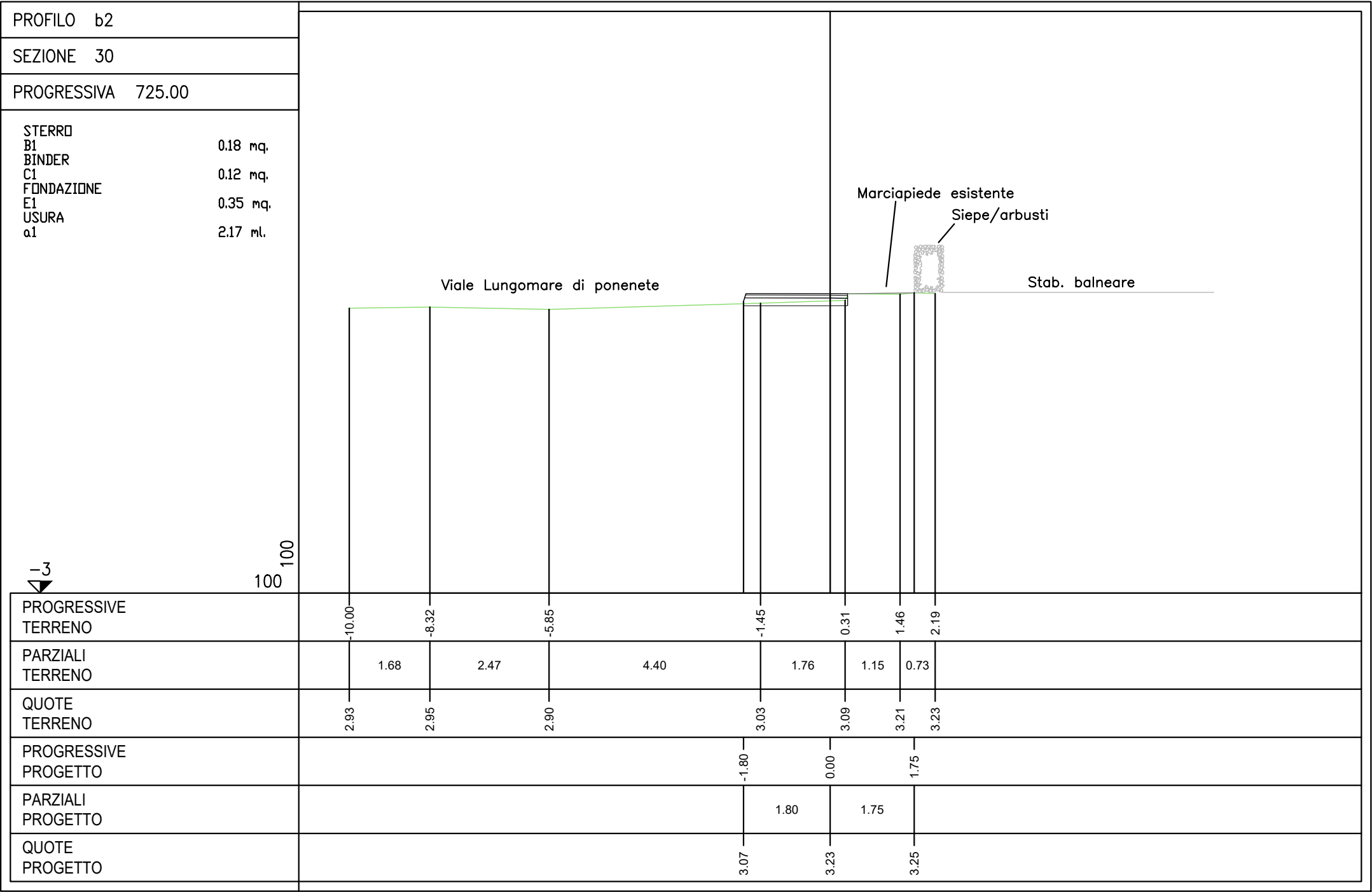
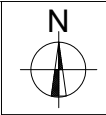


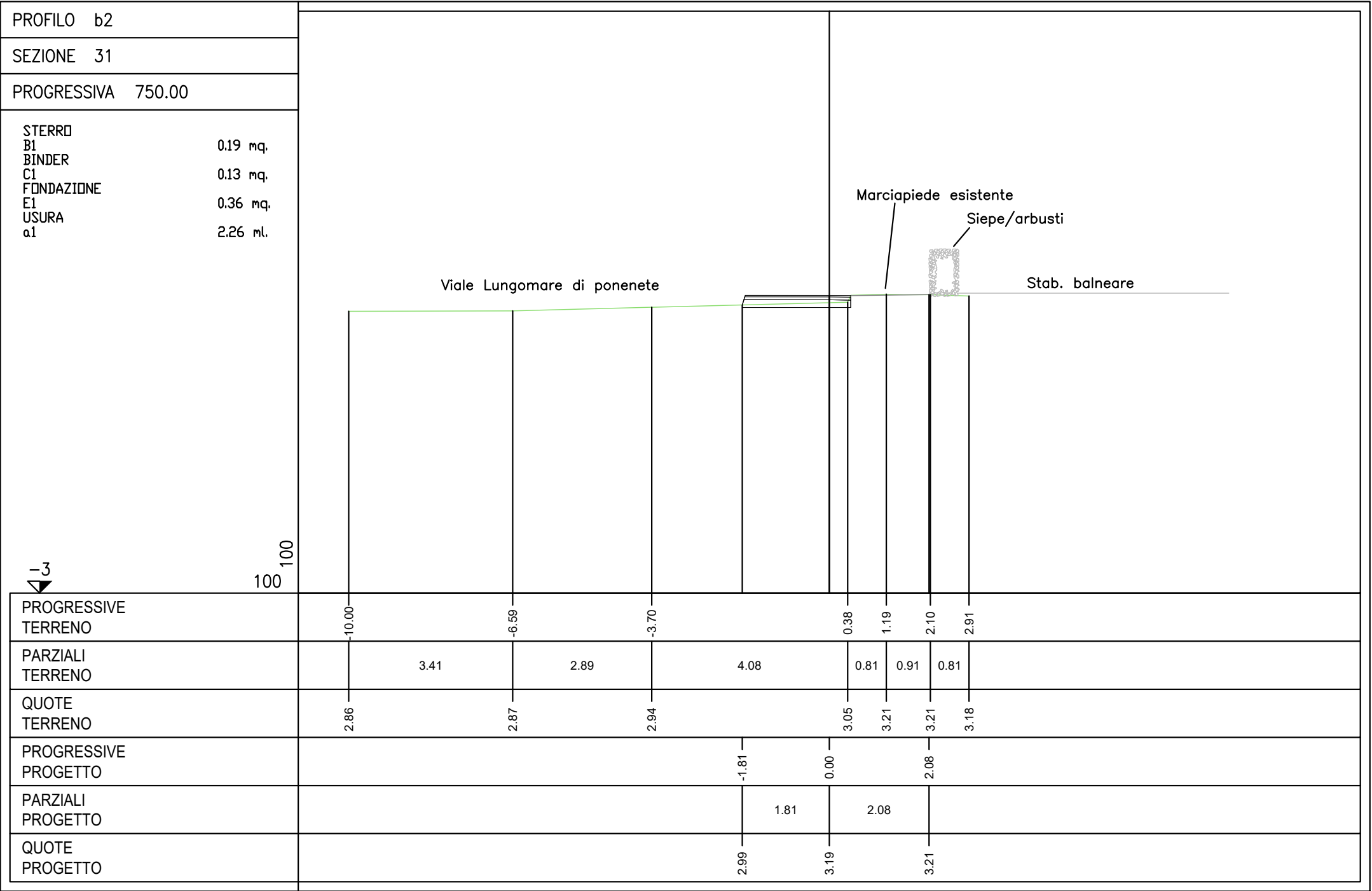
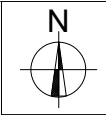


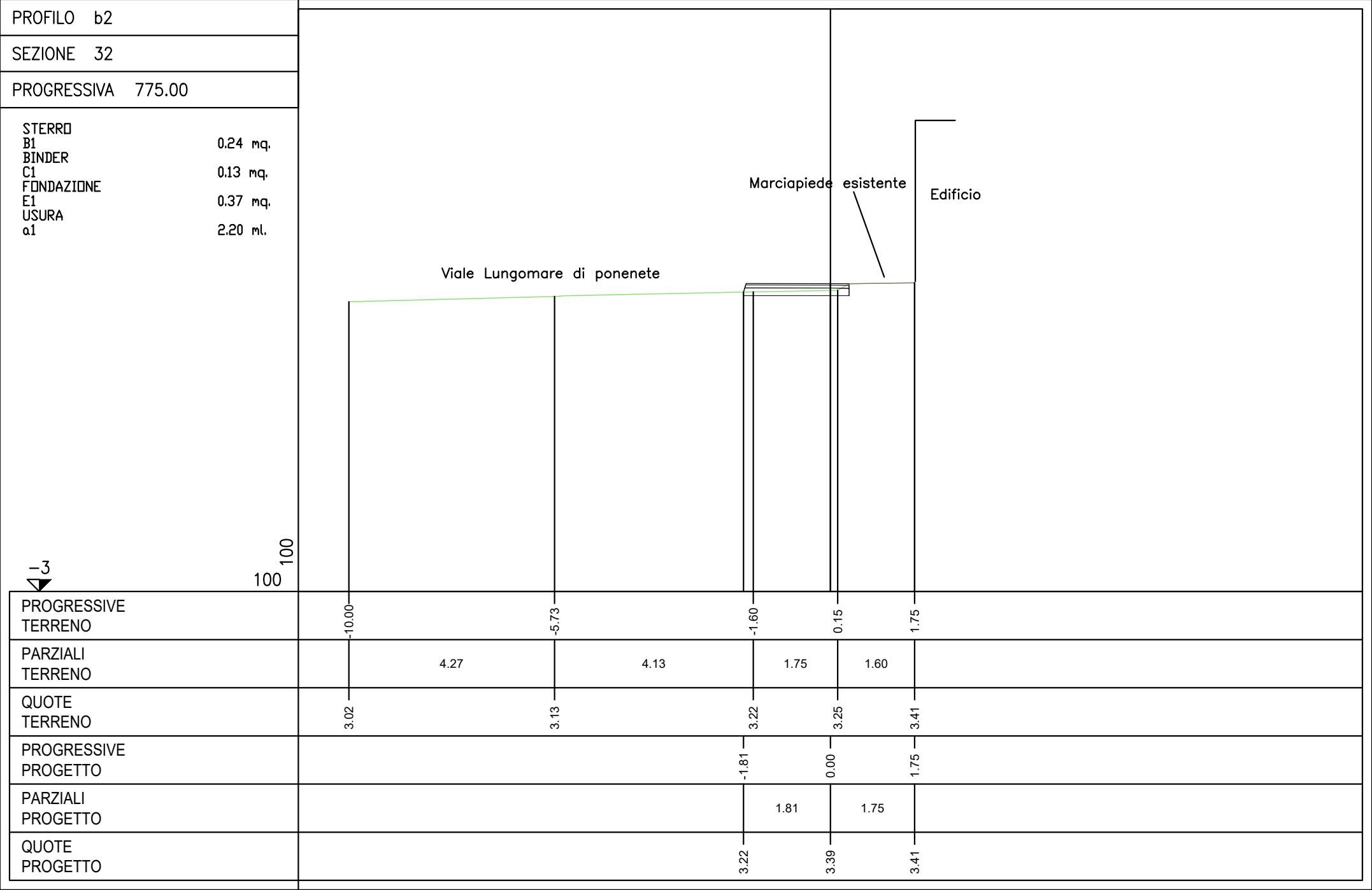
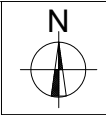


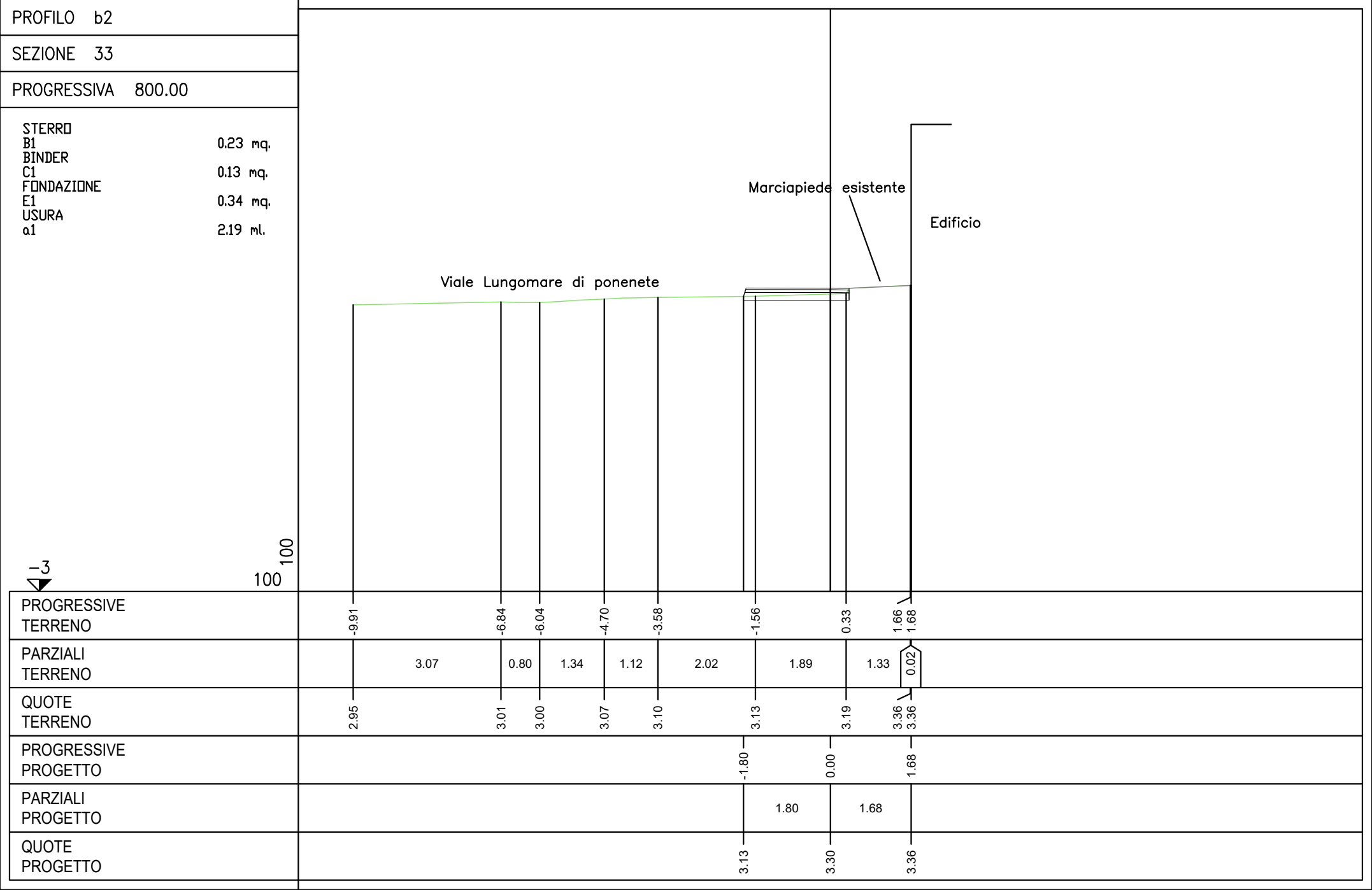
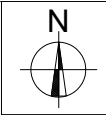


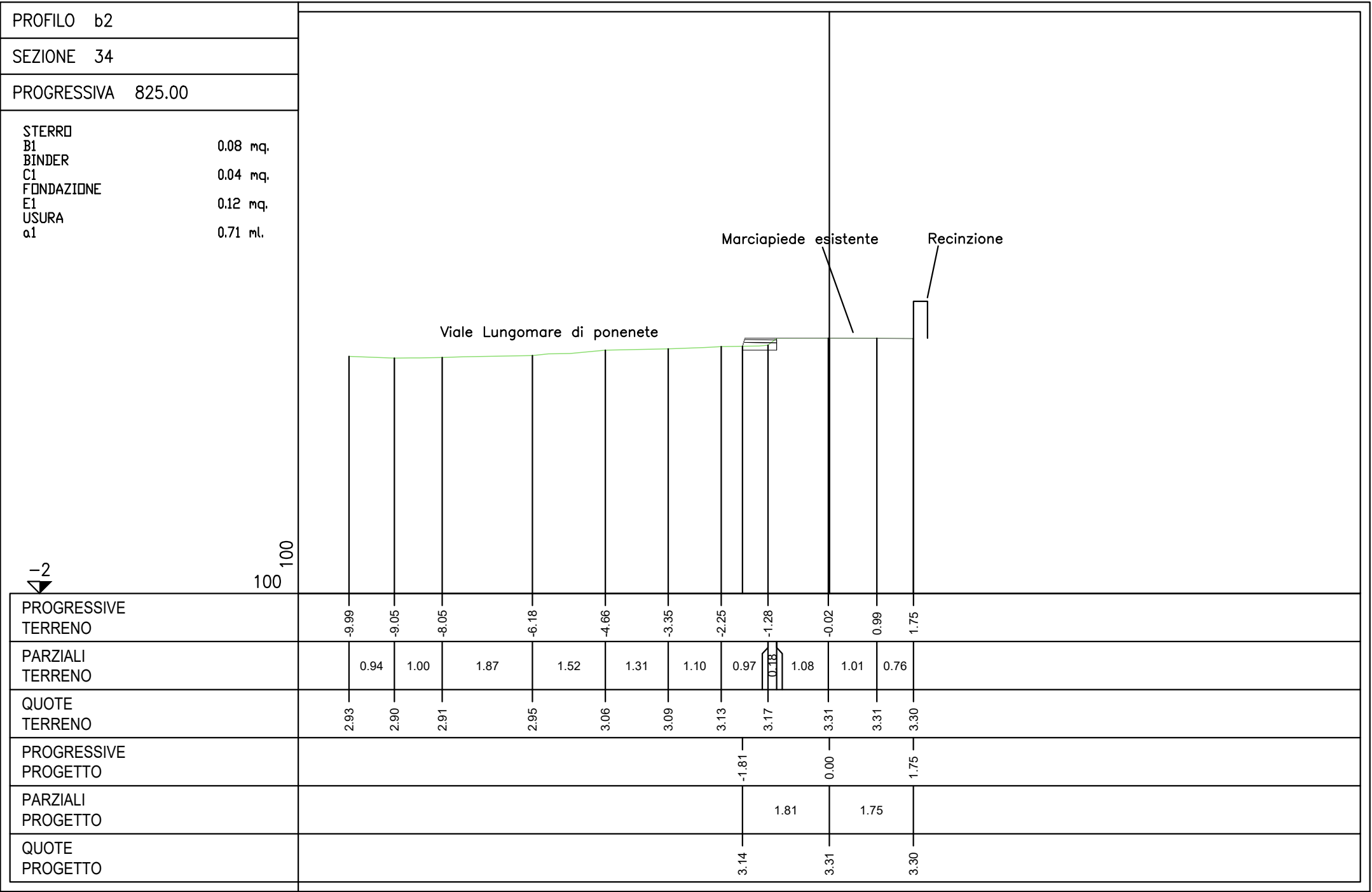
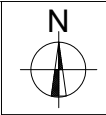


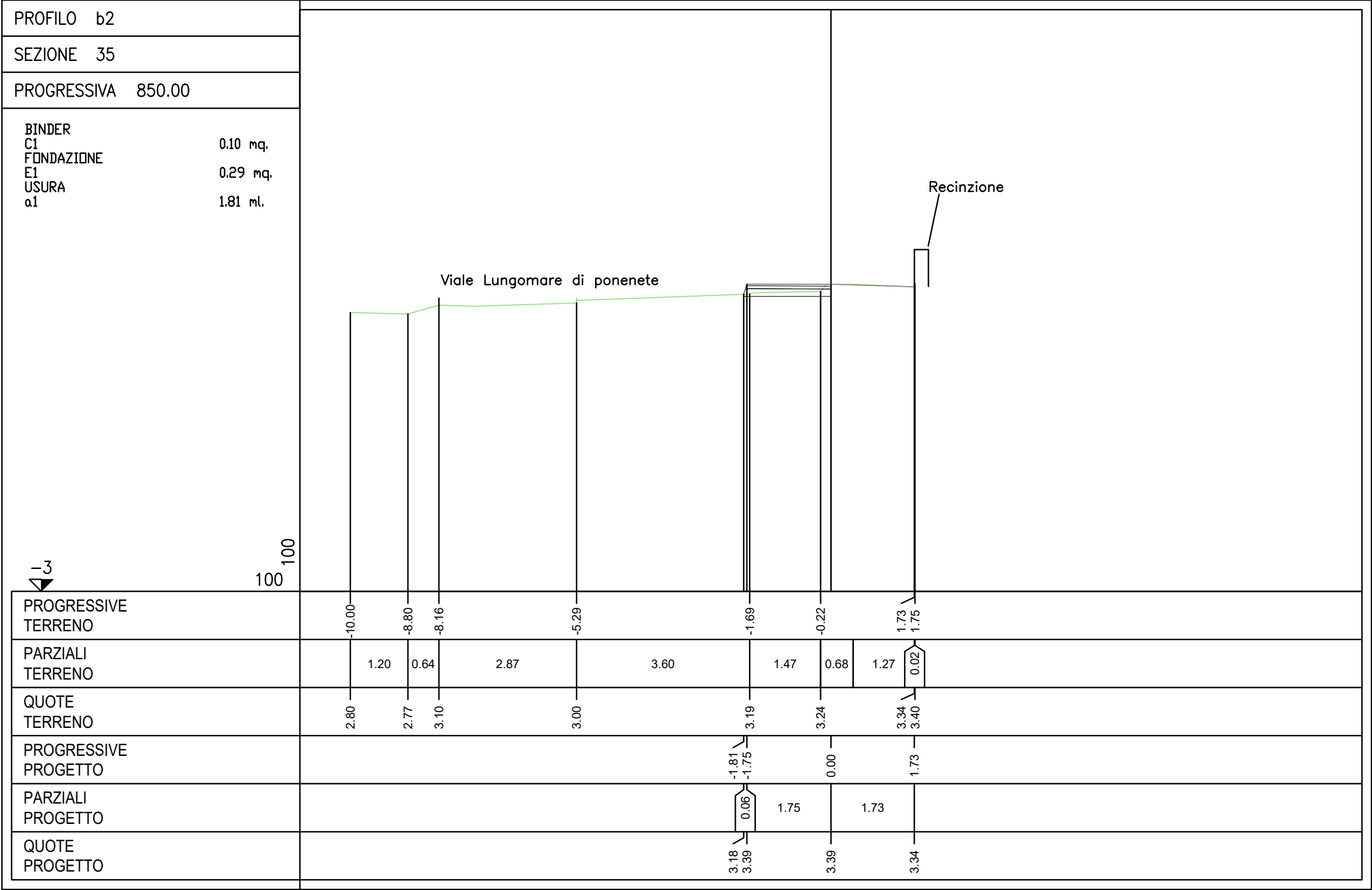
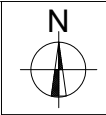


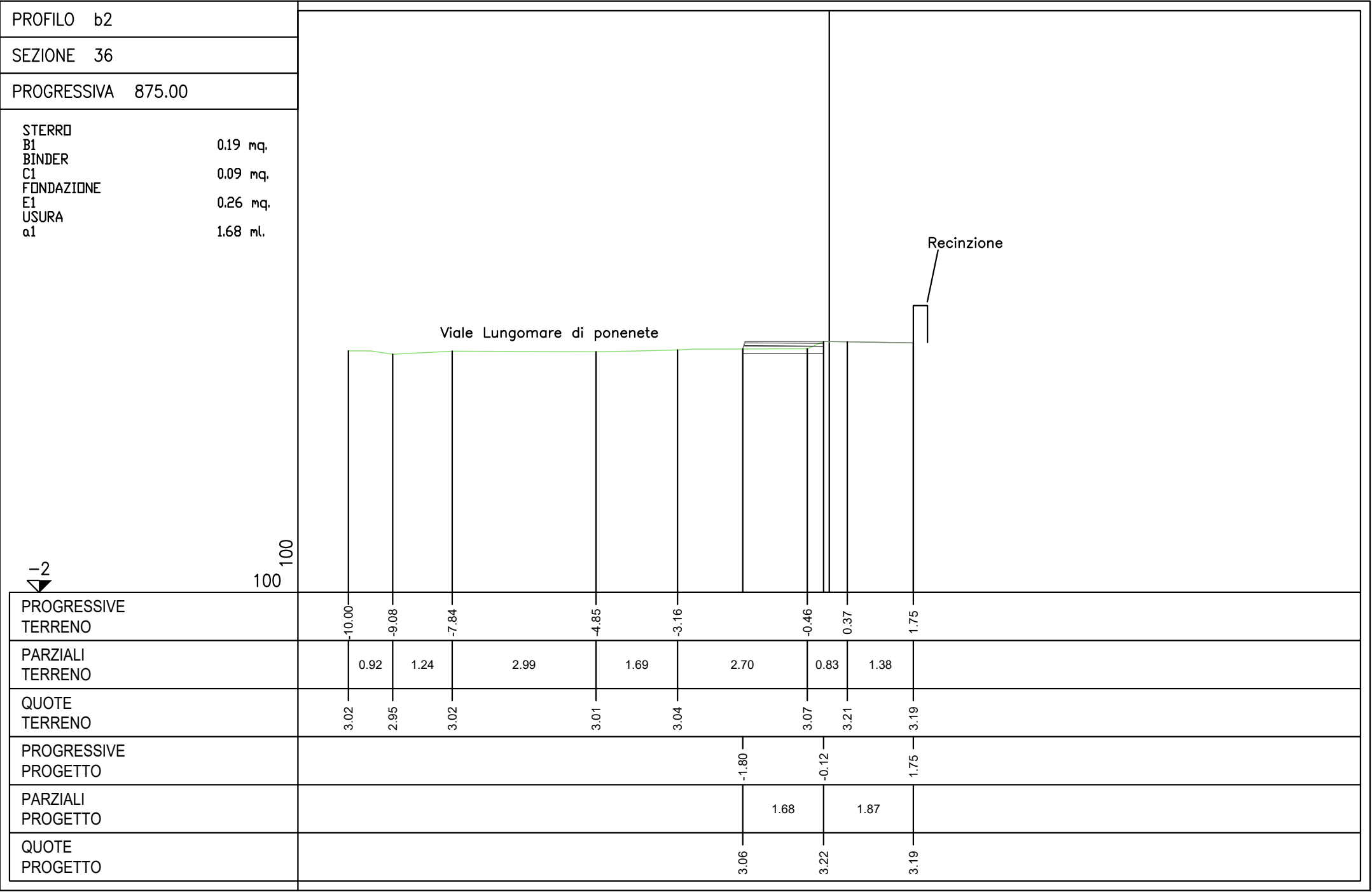
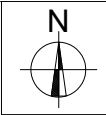


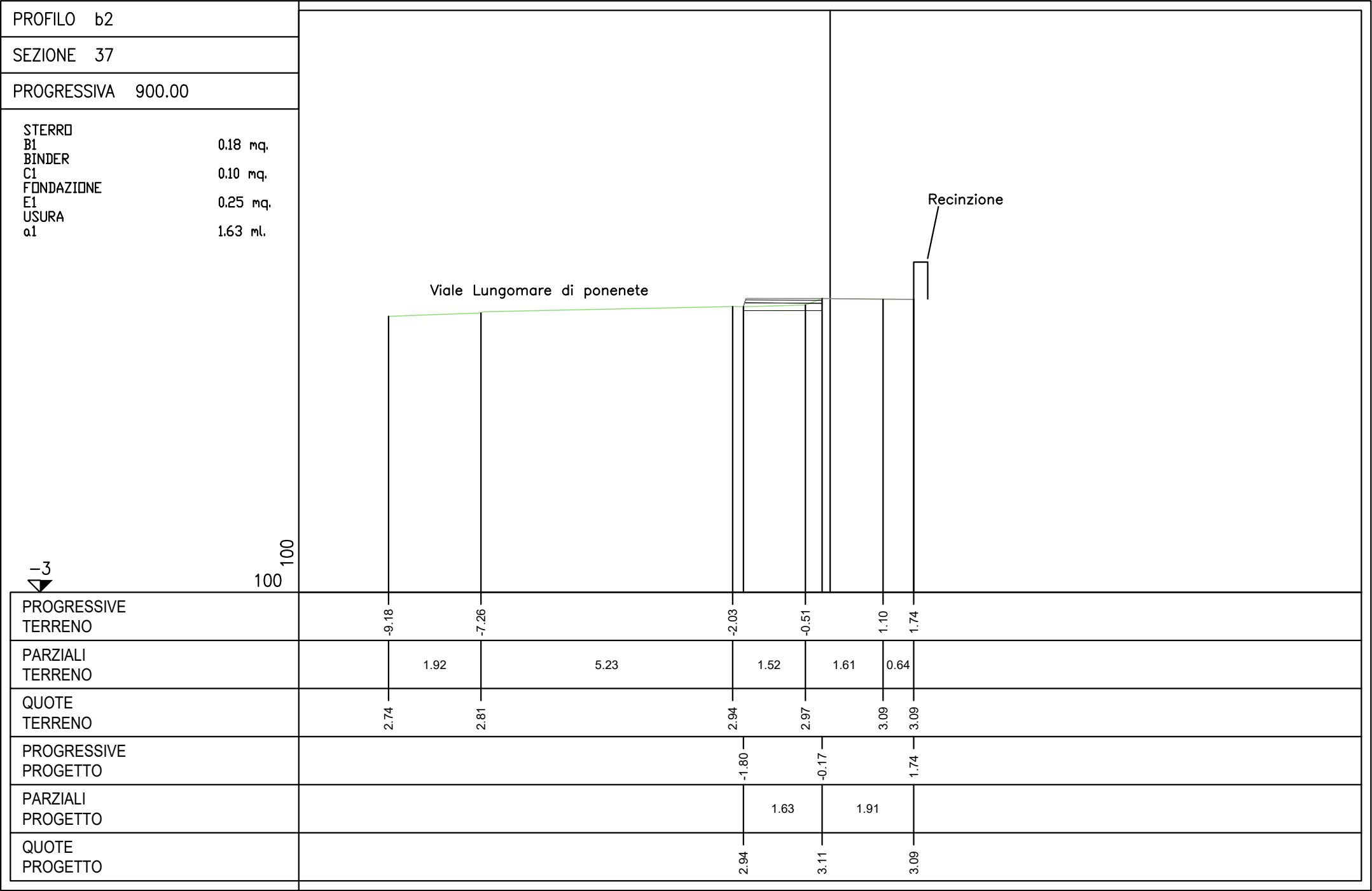
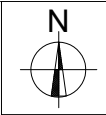


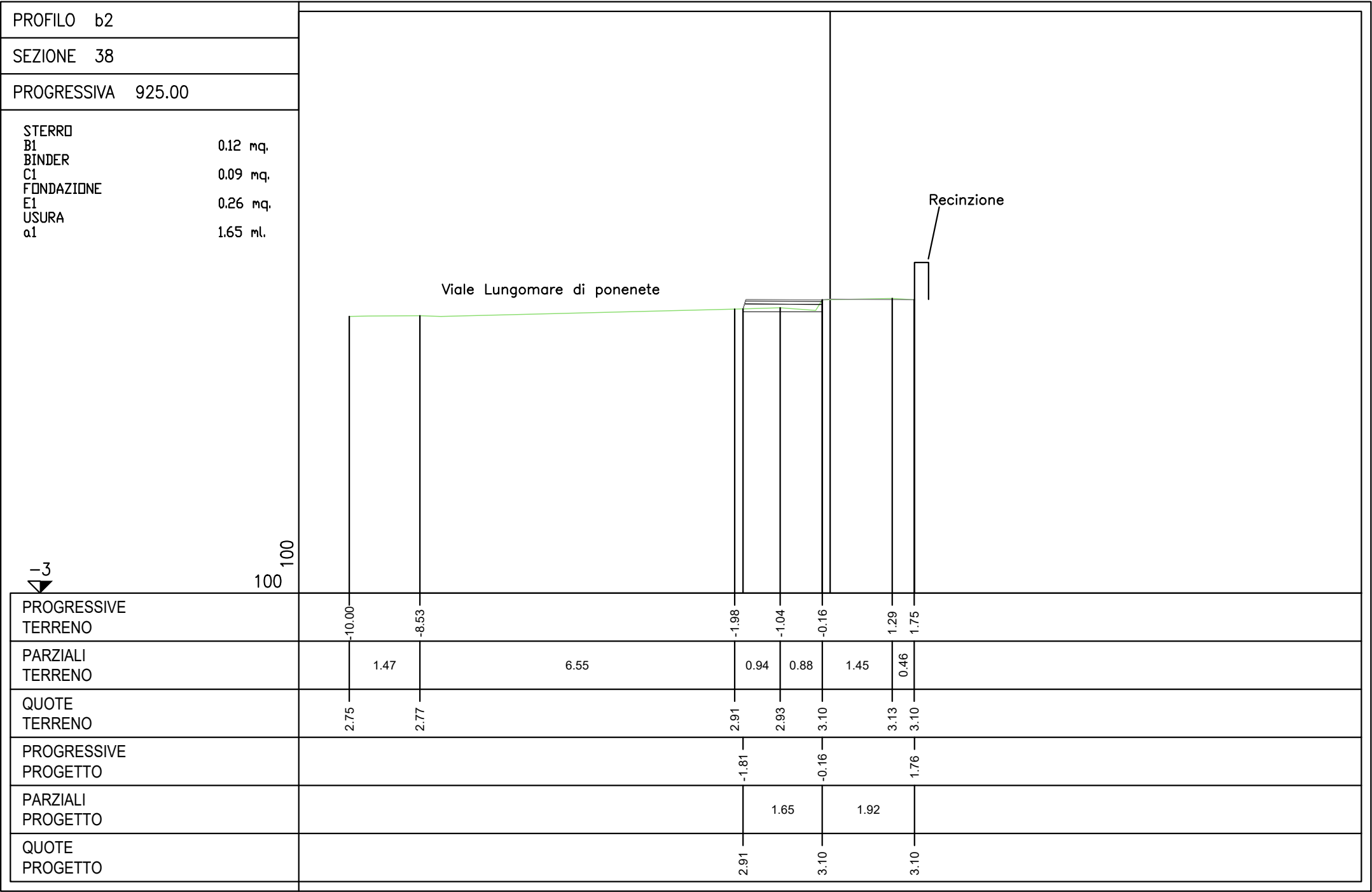
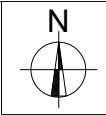


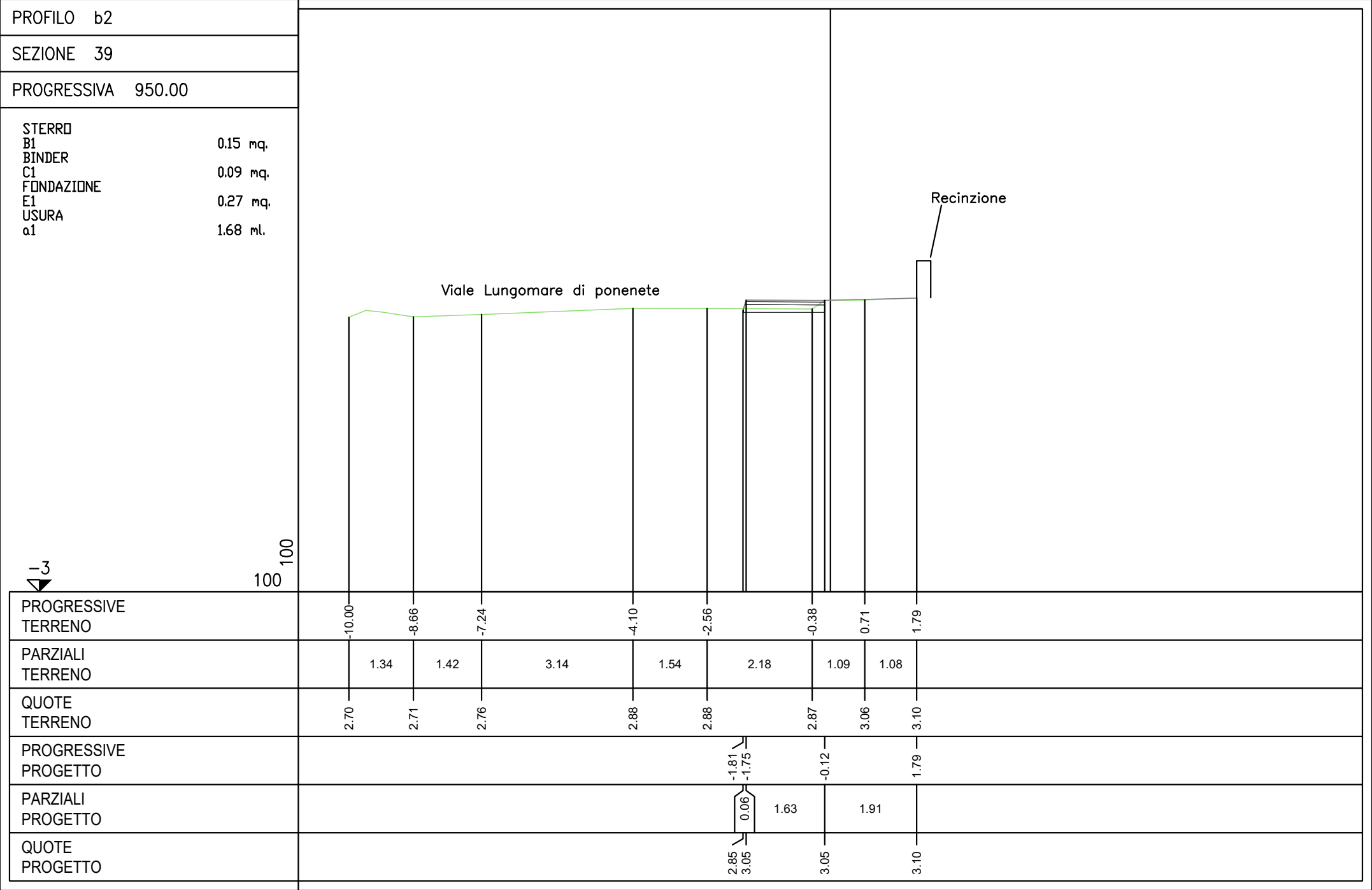
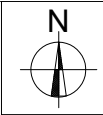


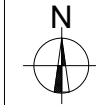












PROFILO	b2
SEZIONE	40
PROGRESSIVA	975.30
PROGRESSIVE TERRENO	-10.00 -6.70 -5.64 -4.81 -2.43 -1.76 0.26 1.75
PARZIALI TERRENO	3.30 1.06 0.83 2.38 0.67 2.02 1.49
QUOTE TERRENO	2.67 2.68 2.75 2.68 2.77 2.99 2.95 3.01
PROGRESSIVE PROGETTO	-1.75 0.00 1.75
PARZIALI PROGETTO	1.75 1.75
QUOTE PROGETTO	2.99 2.96 2.99

