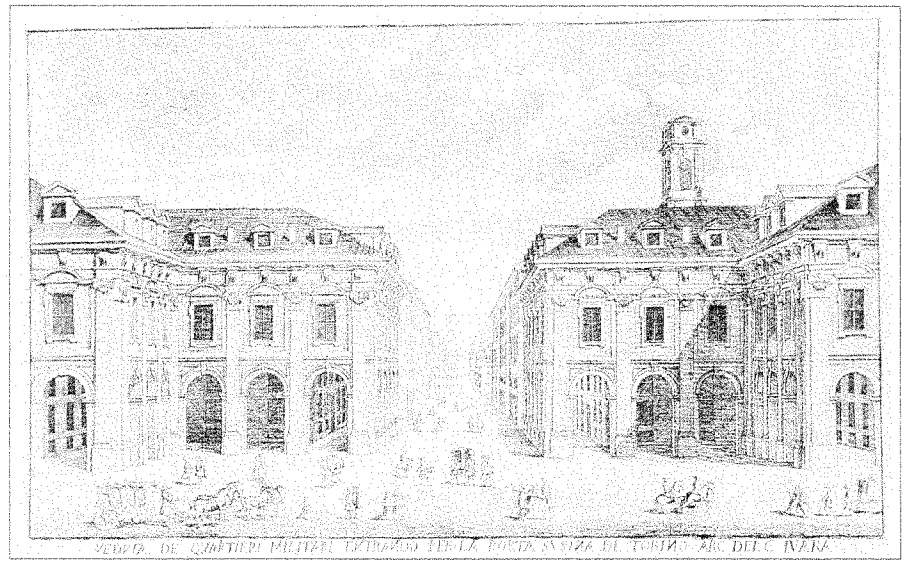
CITTA' DI TORINO

Divisione Servizi Tecnici ed Edilizia per i Servizi
Culturali - Sociali - Commerciali
Settore Edifici per la Cultura
Piazza Corpus Domini 17/E - 10122 Torino

RECUPERO FUNZIONALE DELL'EDIFICIO DI VIA DEL CARMINE 14 AD USO ARCHIVI ED ATTIVITA' CULTURALI



PROGETTO ESECUTIVO

Responsabile Unico di Procedimento e Dirigente del Settore	Arch. Rosalba Stura
Progettista opere architettoniche	Arch. Emanuela Lavezzo
Progettista opere strutturali	Ing. Gianfranco Giovagnetti
Progettista opere impiantistiche	Ing. Alfonso Famà
Progettista della sicurezza - Collaboratore alle opere strutturali	Ing. Flavio Aquilano
Supporto al R.U.P. per le opere strutturali	Ing. Elena Grillone
Collaboratore progetto opere architettoniche e strutturali	Geom. Bartolo Saullo
Collaboratore progetto opere architettoniche e sicurezza	Geom. Fabrizio Passantino
Collaboratore progetto opere architettoniche	Arch. Michelina Pirrone
Collaboratori progetto opere impiantistiche	P.I. Francesco Ferrari P.I. Maurizio Genovese

PROGETTO OPERE STRUTTURALI

SCALA	ARMATURA TRAVI E SOLAI PRIMO PIANO (copertura piano Terra)	S 18
SCALA PLOT		

REV	MODIFICHE	DATA	DISEGNATORE
	Prima Revisione	17/11/2010	Ing. G. GIOVAGNETTI/Ing. L. GIOVAGNETTI

MATERIALI DA UTILIZZARE PER LE NUOVE TRAVI E I NUOVI SOLAI

Calcestruzzo classe di resistenza minima C25 / 30
Consistenza S3 per rampe scale e strutture inclinate e S4 per setti, travi e solai
Granulometria inerti :
sabbia da 0 a 3 mm / ghiaia da 0 a 16 mm.
Acciaio B450 C

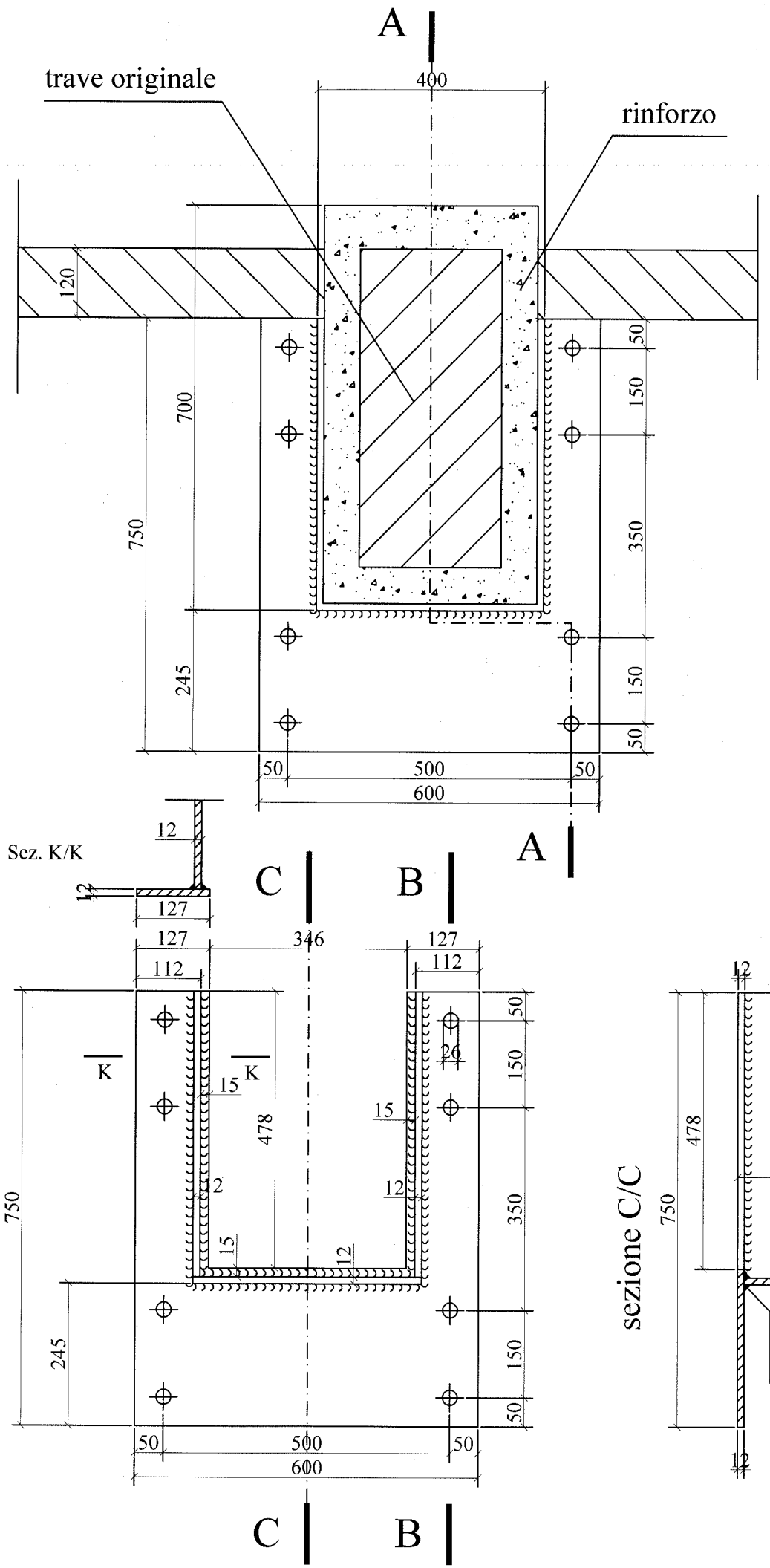
MATERIALI DA UTILIZZARE PER IL RINFORZO DELLE TRAVI ESISTENTI

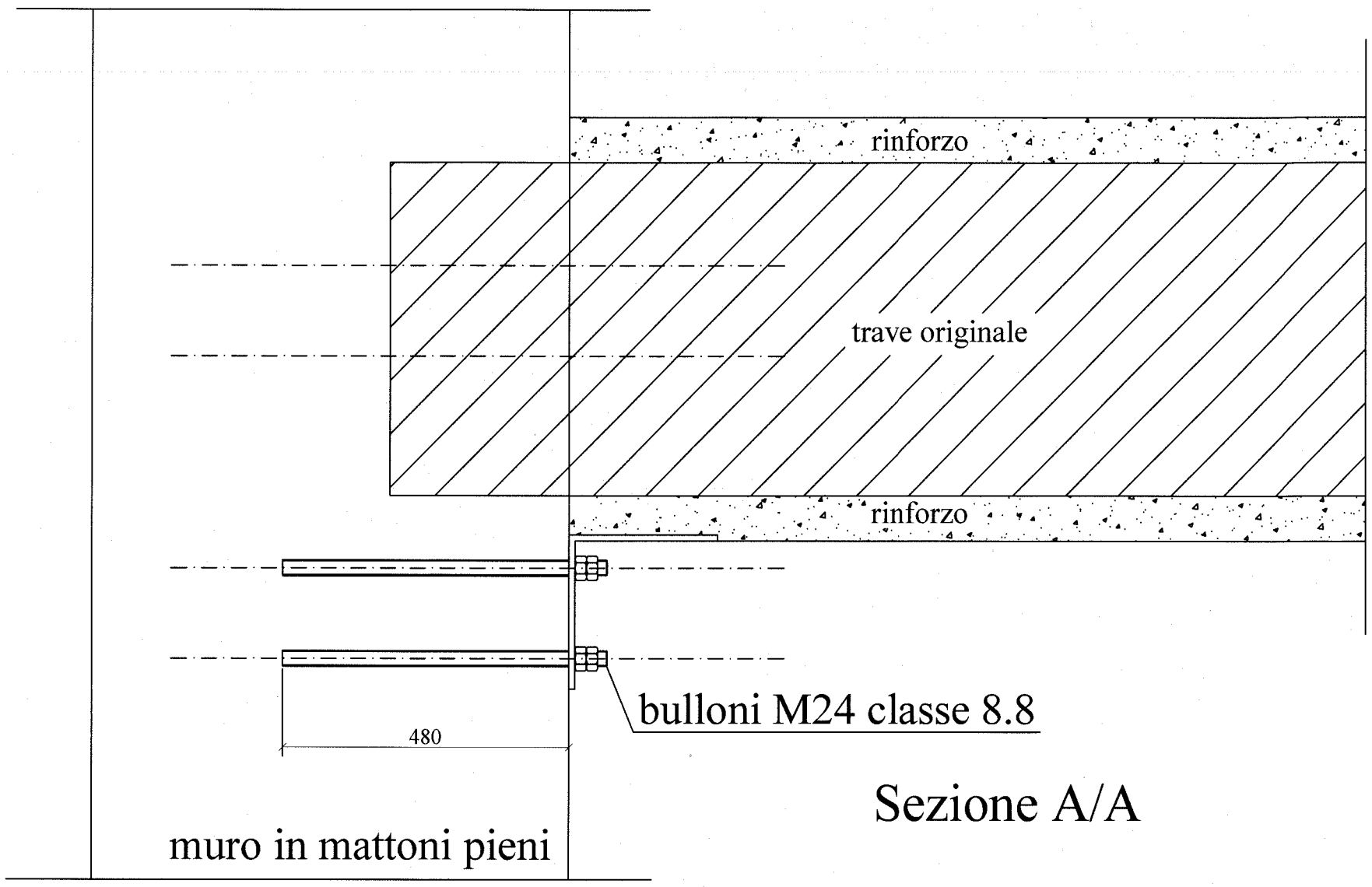
Calcestruzzo speciale auto compattante (SCC) a prestazione garantita, in accordo alla UNI EN 206-1 e UNI 11040 per strutture in elevazione confezionato con aggregati ben lavati, privi di impurità, non reattivi con gli alcali, aventi diametro massimo 16 mm. Consistenza S5 UNI EN 12350 / 2, resistenza a compressione a 28 gg. > 40 MPa (Classe 32/40)

Acciaio armature lente: B450C
Acciaio piastre e profili: S275 Uni 10025-2
Bulloni e tasselli classe 8.8
Saldature classe I

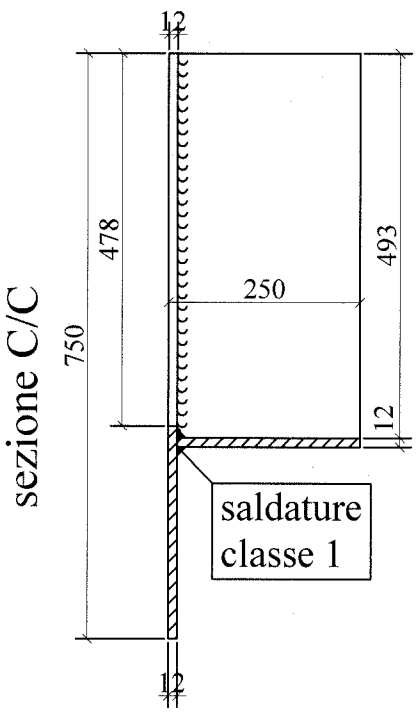
Le piastre per supporto delle travi rinforzate, dovranno essere poste in opera sopra gli interventi di placcaggio delle murature.

1 - Particolare piastre per supporto travi 40x70

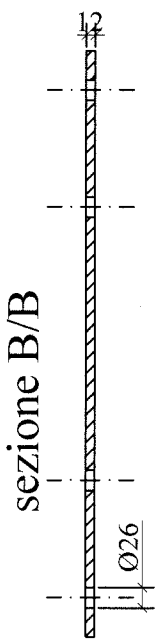




Sezione A/A



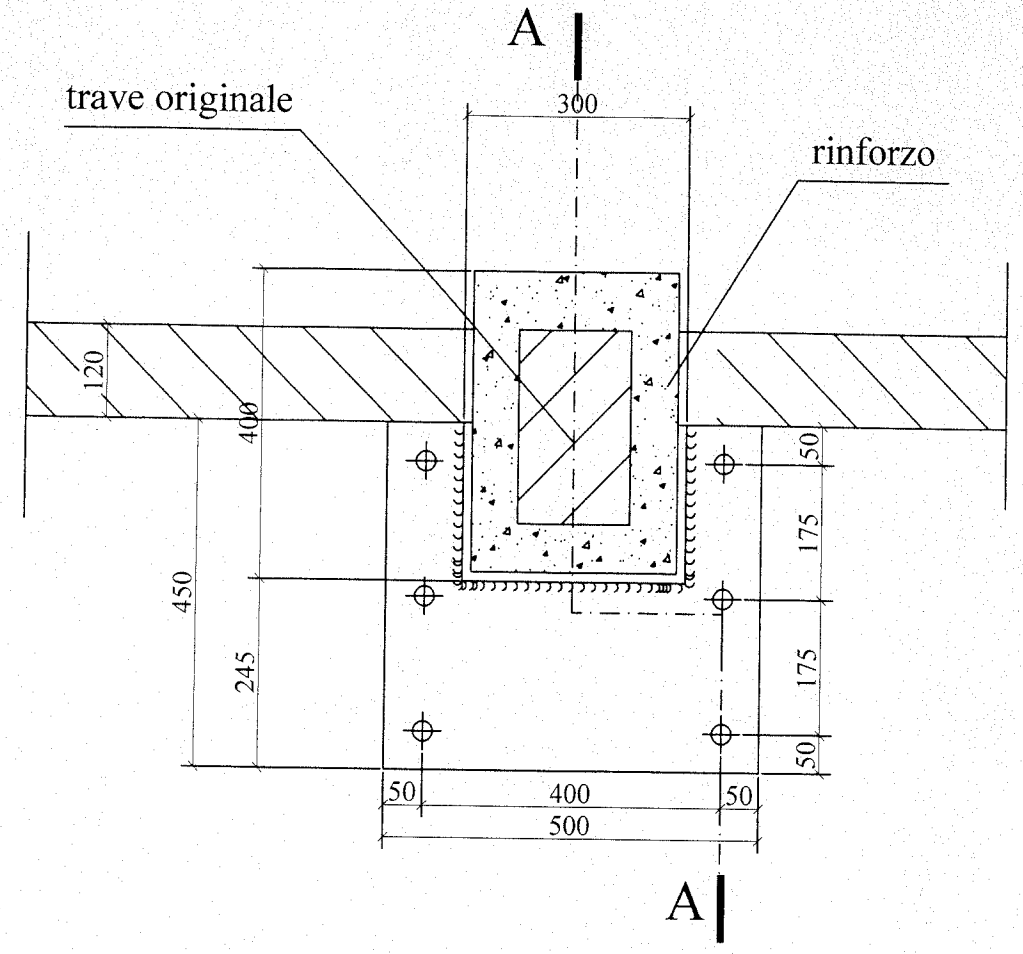
sezione C/C

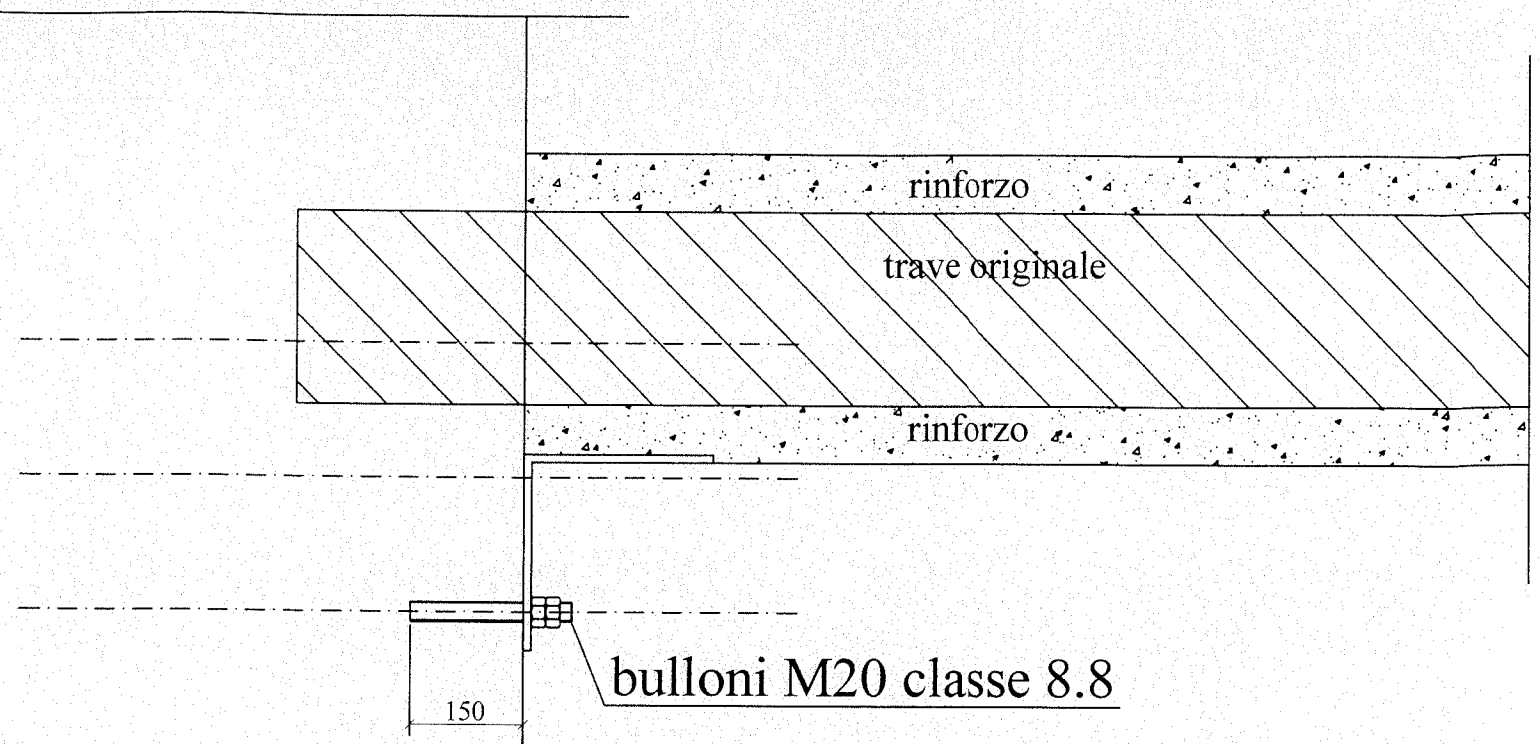


sezione B/B

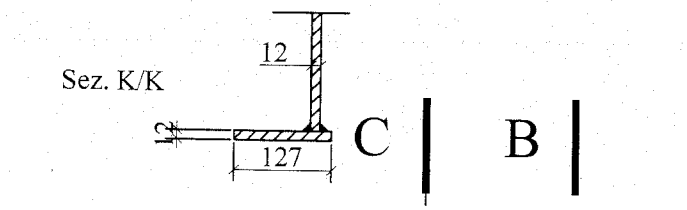
L'ancoraggio dei bulloni al muro deve essere realizzato tramite adesivo composto da una resina base epossidica bisfenolo A/F (esente da stirene) con riempitivo inorganico e da una mistura indurente con poliammine, polvere di quarzo e cemento. Per garantire la tenuta del fissaggio con la resina, occorre, una volta forata la la muratura pulire accuratamente il foro con un getto di aria compressa poi con uno scovolino e poi di nuovo con un getto di aria compressa. Visto che il foro in oggetto è molto profondo, collegare un tubo miscelatore in plastica all'estremità dell'ugello erogatore della resina. Verificare e rispettare, in ogni caso, le norme d'impiego dettate dalla ditta fornitrice del prodotto.

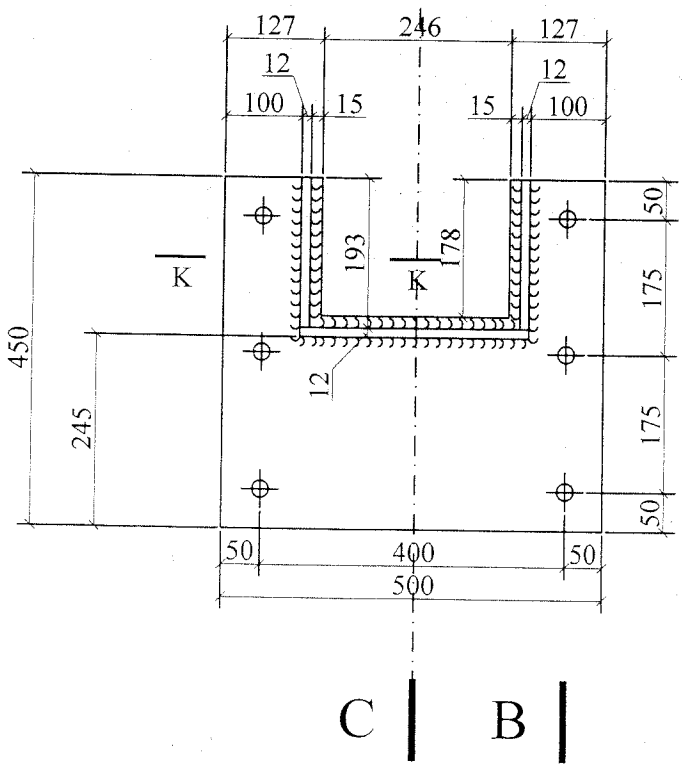
2 - Particolare piastre per supporto travi 30x40

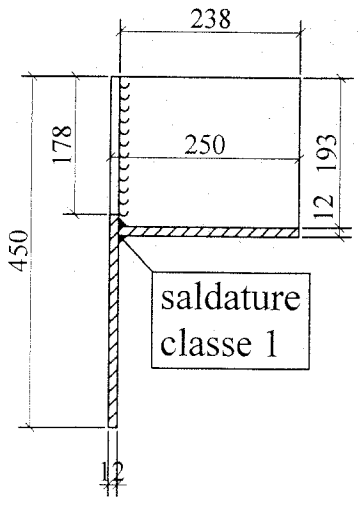




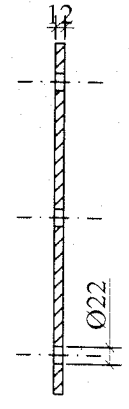
Sezione A/A







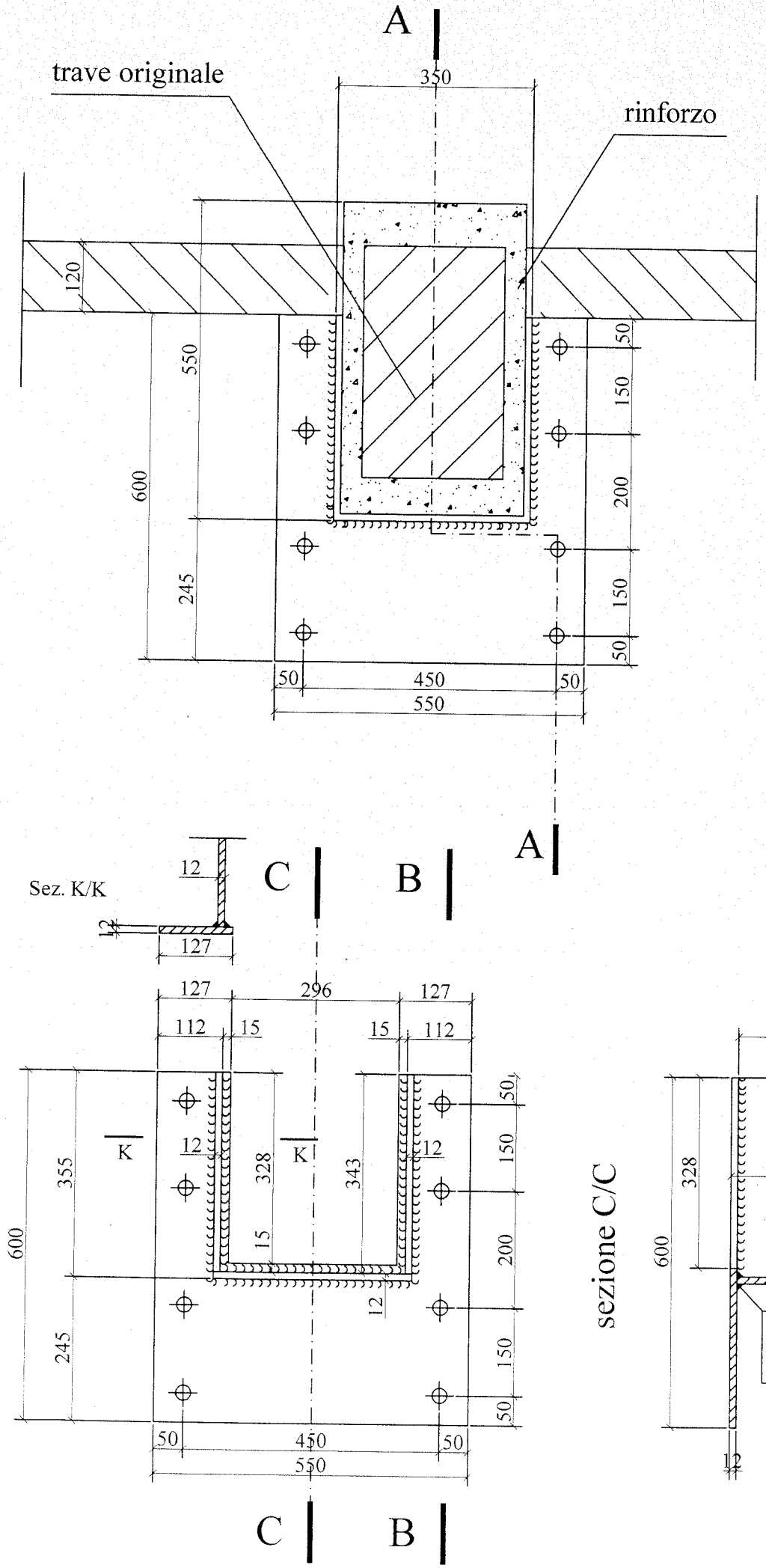
sezione C/C



sezione B/B

L'ancoraggio dei bulloni al muro deve essere realizzato tramite adesivo composto da una resina base epossidica bisfenolo A/F (esente da stirene) con riempitivo inorganico e da una mistura indurente con poliammine, polvere di quarzo e cemento. Per garantire la tenuta del fissaggio con la resina, occorre, una volta forata la la muratura pulire accuratamente il foro con un getto di aria compressa poi con uno scovolino e poi di nuovo con un getto di aria compressa. Visto che il foro in oggetto è molto profondo, collegare un tubo miscelatore in plastica all'estremità dell'ugello erogatore della resina. Verificare e rispettare, in ogni caso, le norme d'impiego dettate dalla ditta fornitrice del prodotto.

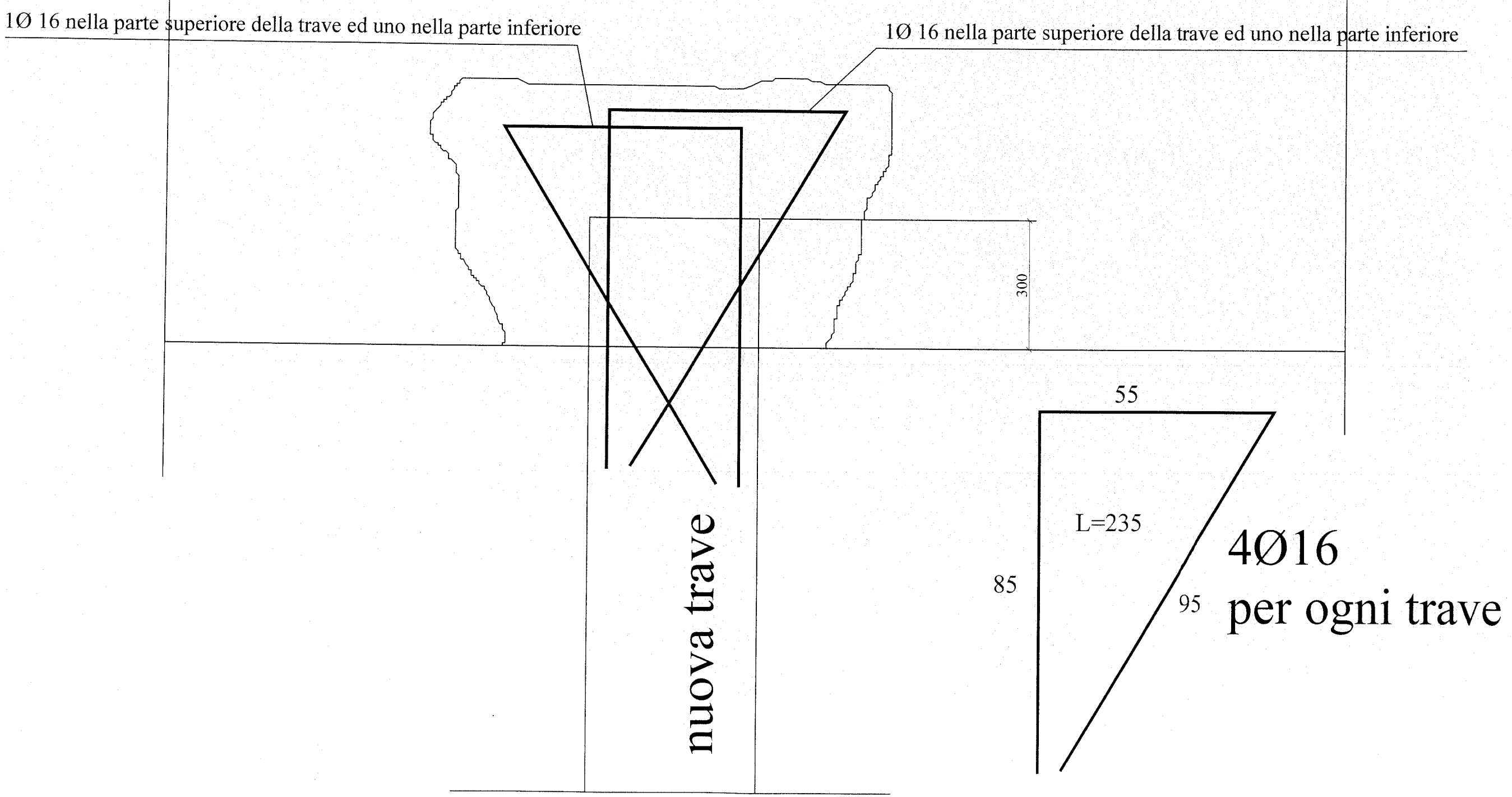
3 - Particolare piastre per supporto travi 35x55



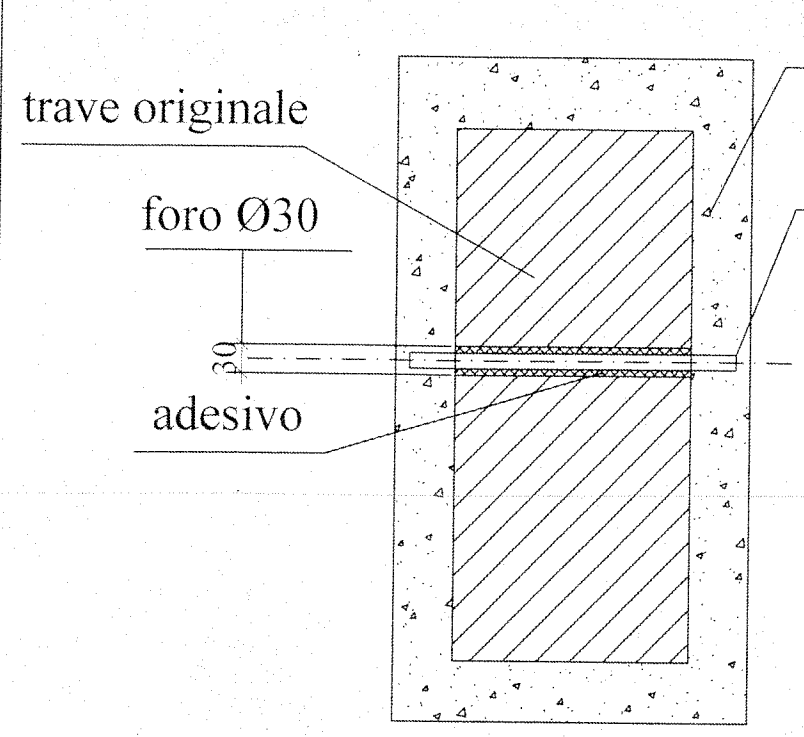
Sezione A/A

L'ancoraggio dei bulloni al muro deve essere realizzato tramite adesivo composto da una resina base epossidica bisfenolo A/F (esente da stirene) con riempitivo inorganico e da una mistura indurente con poliammine, polvere di quarzo e cemento. Per garantire la tenuta del fissaggio con la resina, occorre, una volta forata la la muratura pulire accuratamente il foro con un getto di aria compressa poi con uno scovolino e poi di nuovo con un getto di aria compressa. Visto che il foro in oggetto è molto profondo, collegare un tubo miscelatore in plastica all'estremità dell'ugello erogatore della resina. Verificare e rispettare, in ogni caso, le norme d'impiego dettate dalla ditta fornitrice del prodotto.

4 - Particolare ancoraggio nuove travi alla muratura

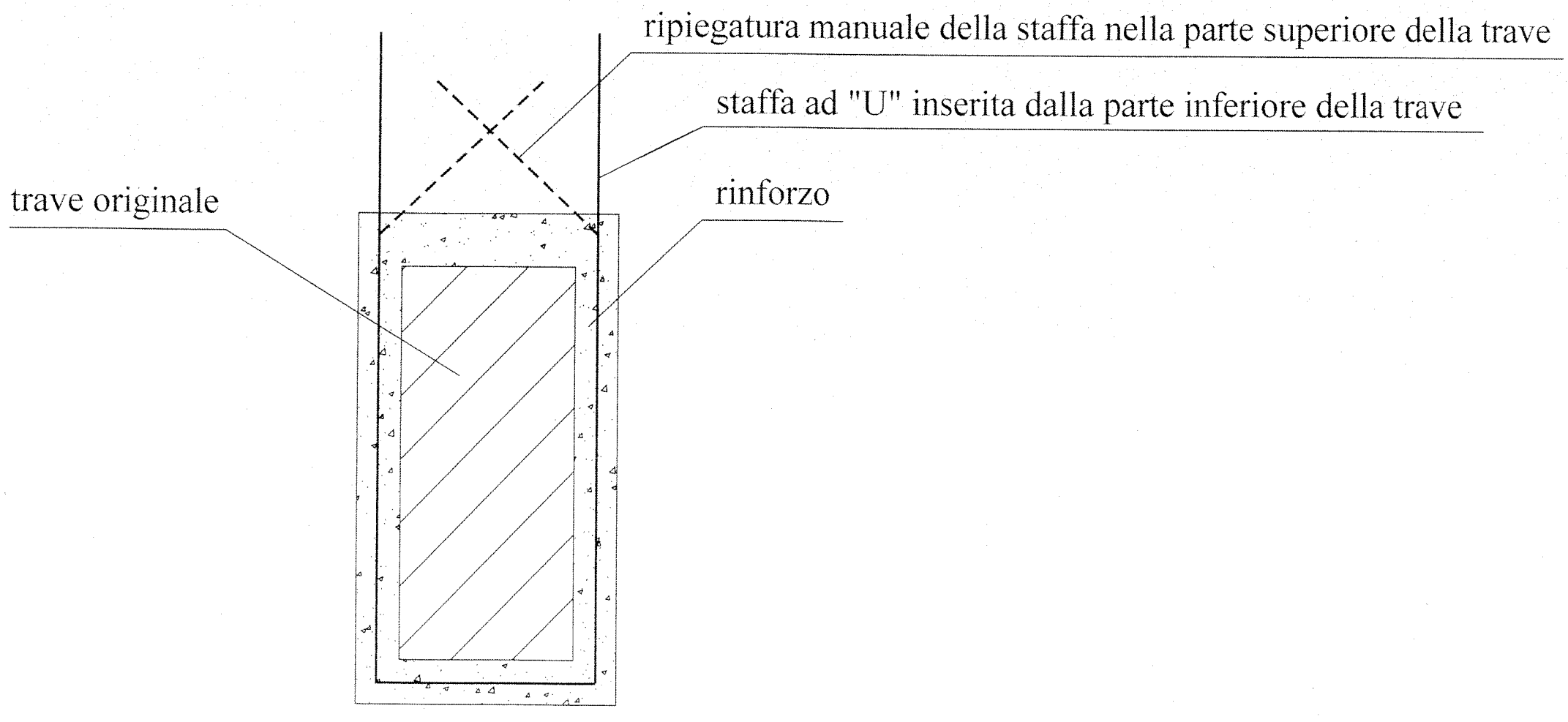


Preparazione travi esistenti



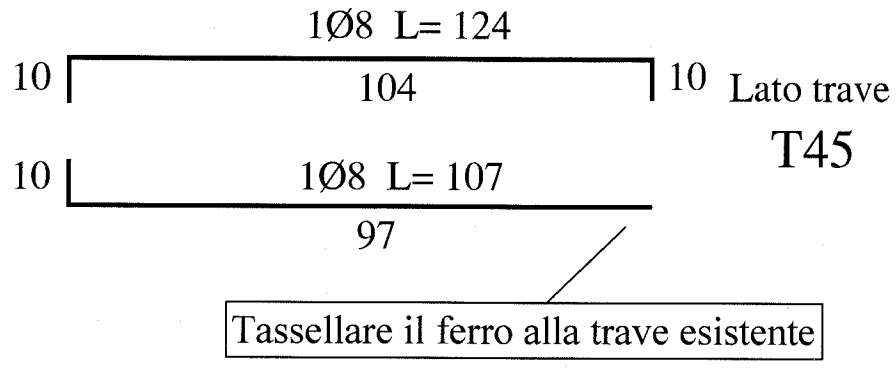
Nelle travi esistenti si devono eseguire la seguenti lavorazioni :
1- rimuovere l'intonaco dalla trave;
2- picchettare la trave con la martellina per un migliore aggrappo del calcestruzzo di rinforzo;
3- eseguire un foro Ø30 mm passante a metà altezza trave ogni metro;
4- inserire una barra Ø16 in ogni foro
5- iniettare, nel foro in cui è stata inserita la barra Ø16, adesivo epossidico bicomponente fluido, leggermente tixotropico, privo di solventi.

Particolare staffatura delle travi esistenti



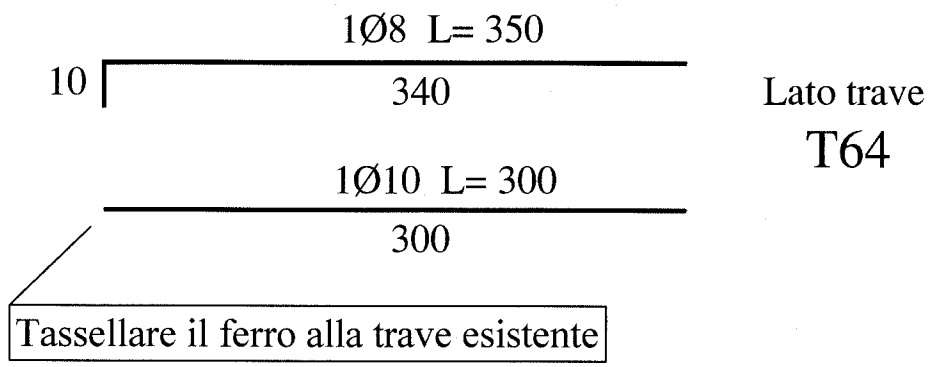
SOLAIO 1 IN TUTTO N° 5 TRAVETTI

h = 16 + 4 = 20 cm



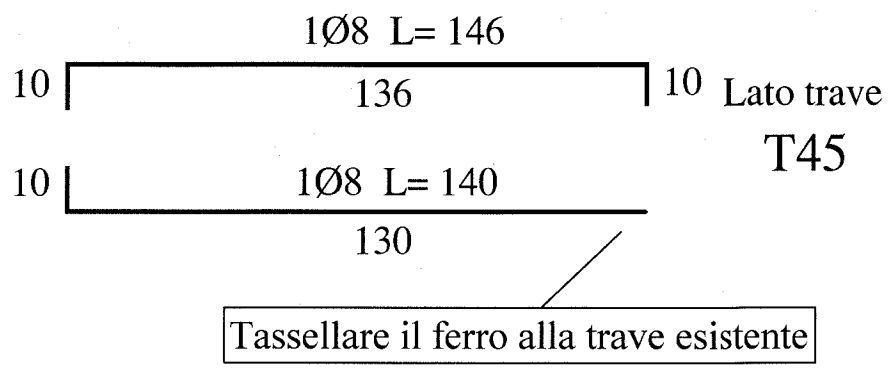
SOLAIO 2 IN TUTTO N° 5 TRAVETTI

h = 16 + 4 = 20 cm



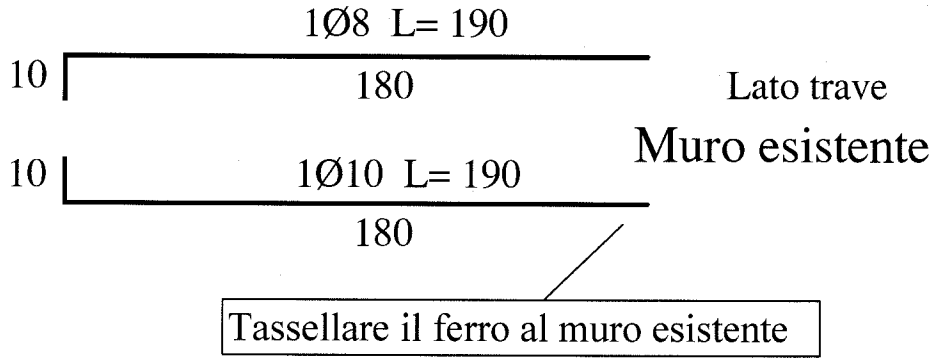
SOLAIO 3 IN TUTTO N° 4 TRAVETTI

h = 16 + 4 = 20 cm



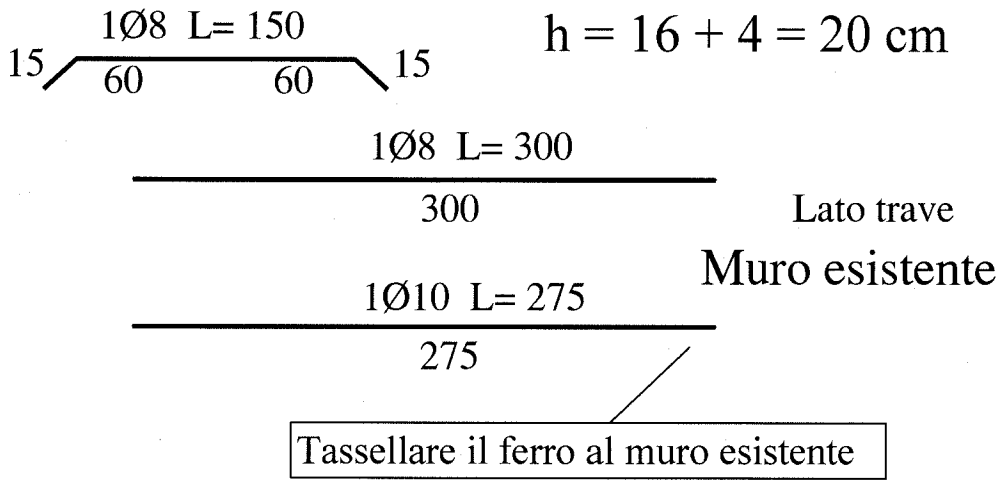
SOLAIO 4 IN TUTTO N° 5 TRAVETTI

h = 16 + 4 = 20 cm



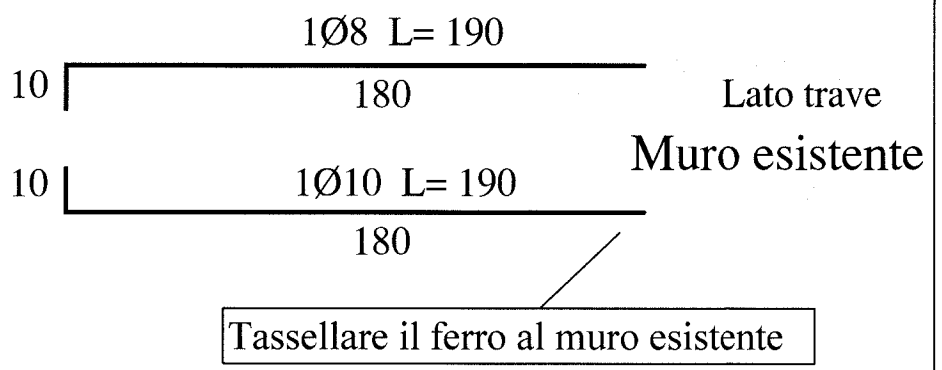
SOLAIO 5 IN TUTTO N° 5 TRAVETTI

h = 16 + 4 = 20 cm



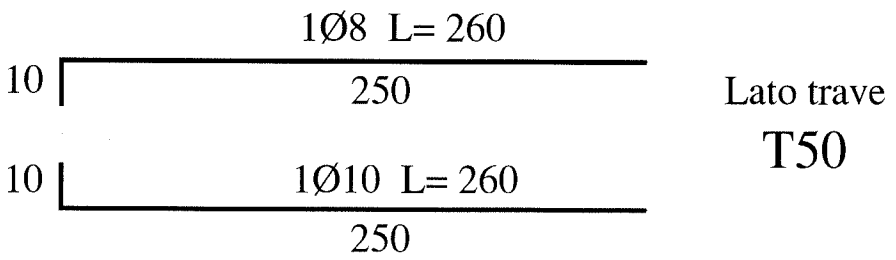
SOLAIO 6 IN TUTTO N° 5 TRAVETTI

h = 16 + 4 = 20 cm



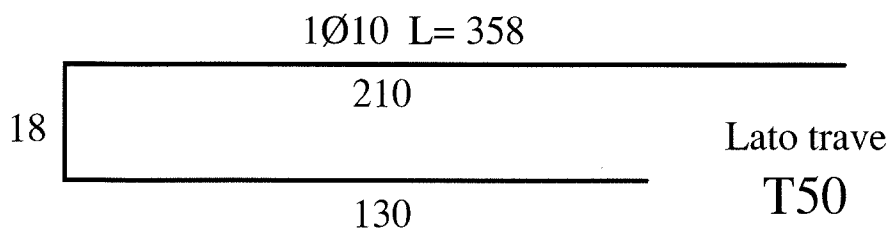
SOLAIO 7 IN TUTTO N° 4 TRAVETTI

h = 18 + 4 = 22 cm

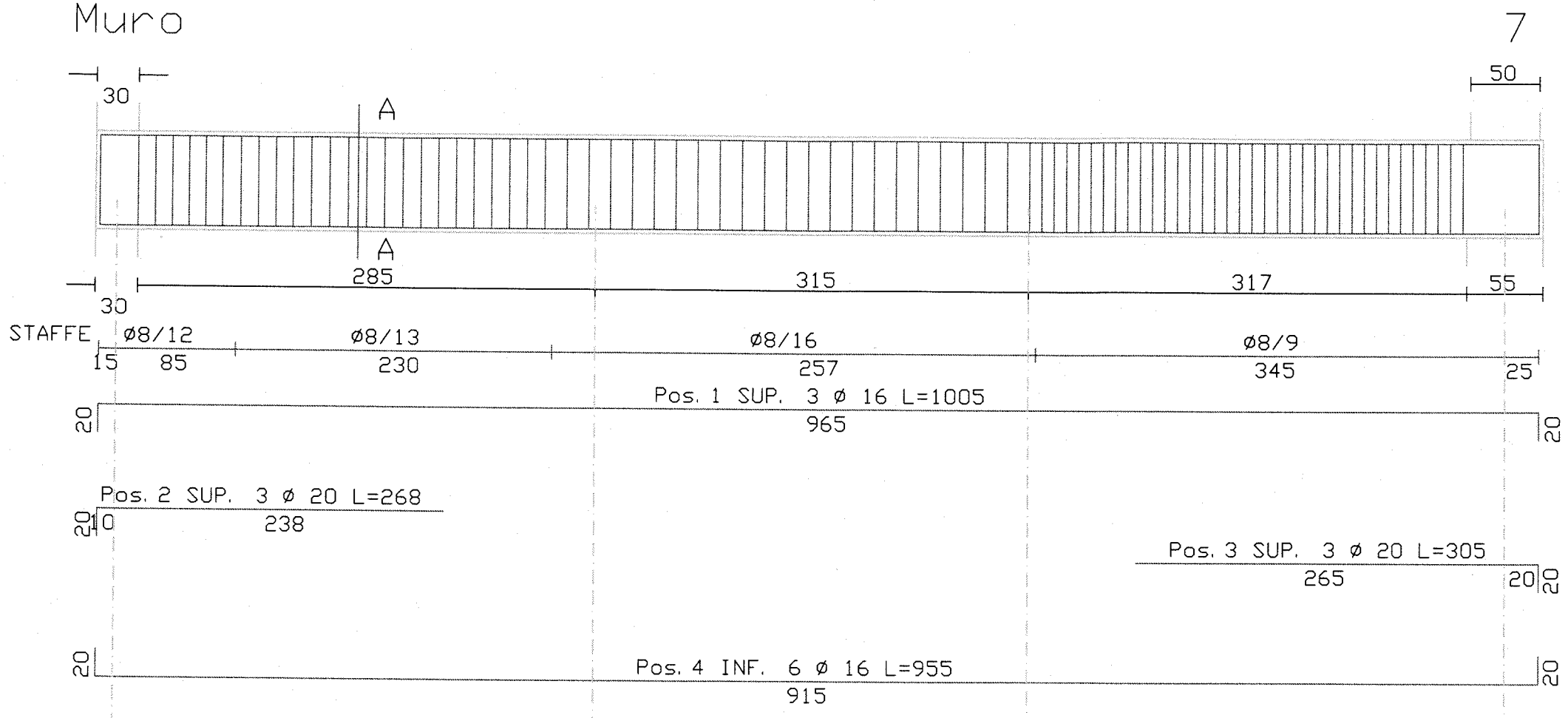


SBALZO 1 IN TUTTO N° 4 TRAVETTI

h = 18 + 4 = 22 cm

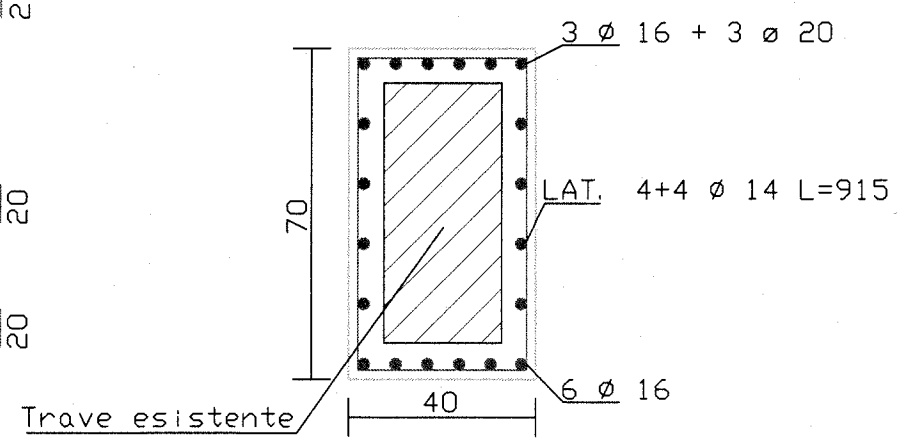


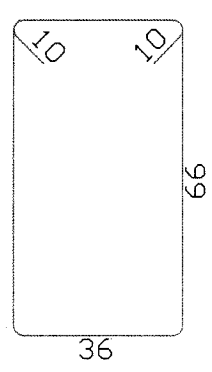
Trave 1 (40x70)



POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 16	L=1005
2 SUP.	3 ø 20	L=268
3 SUP.	3 ø 20	L=305
4 INF.	6 ø 16	L=955
5 LAT.	4 + 4 ø 14	L=915

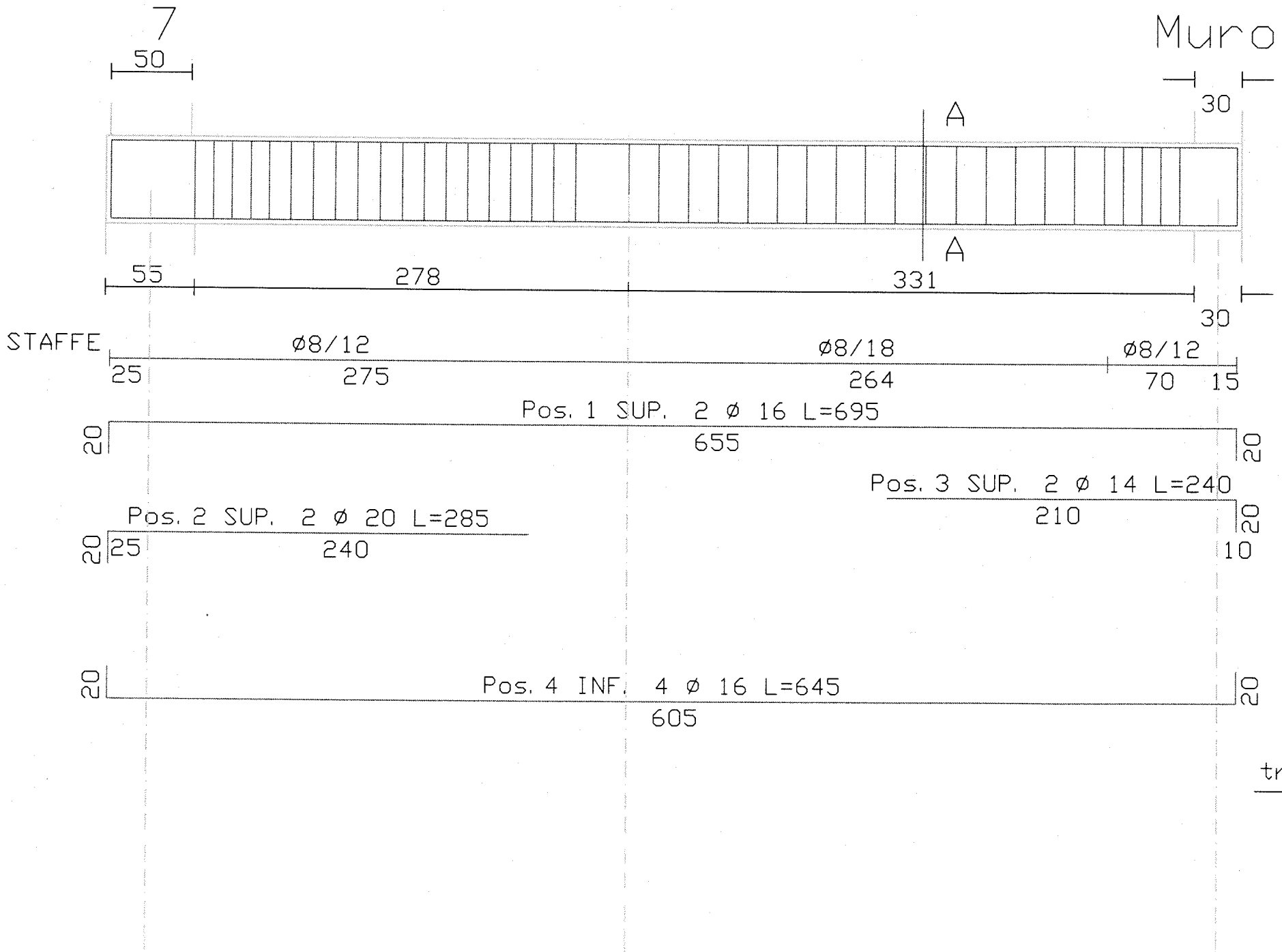
Sez. A-A





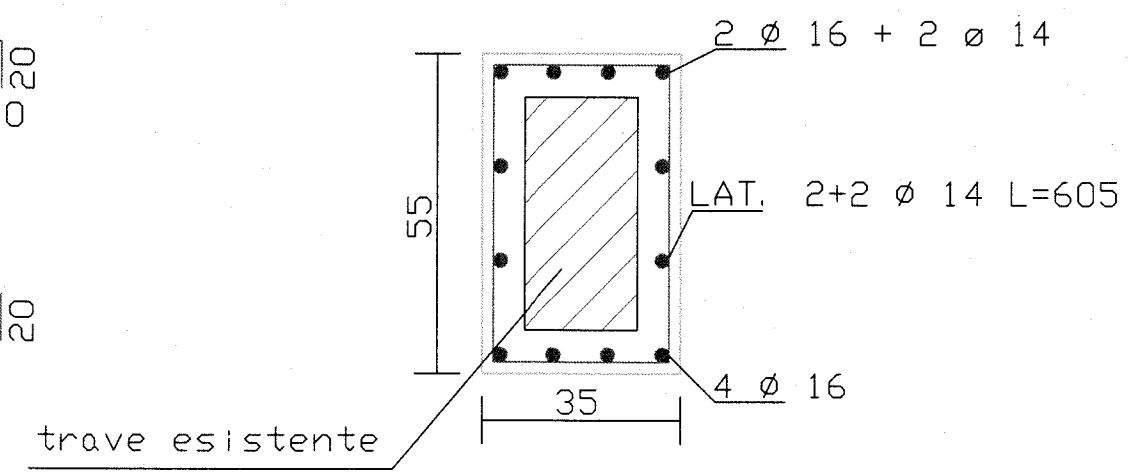
Staffe ø 8
L= 260

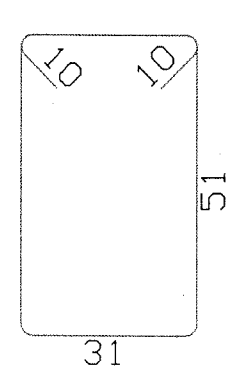
Trave 2 (35x55)



POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	2 ø 16	L=695
2 SUP.	2 ø 20	L=285
3 SUP.	2 ø 14	L=240
4 INF.	4 ø 16	L=645
5 LAT.	2 + 2 ø 14	L=605

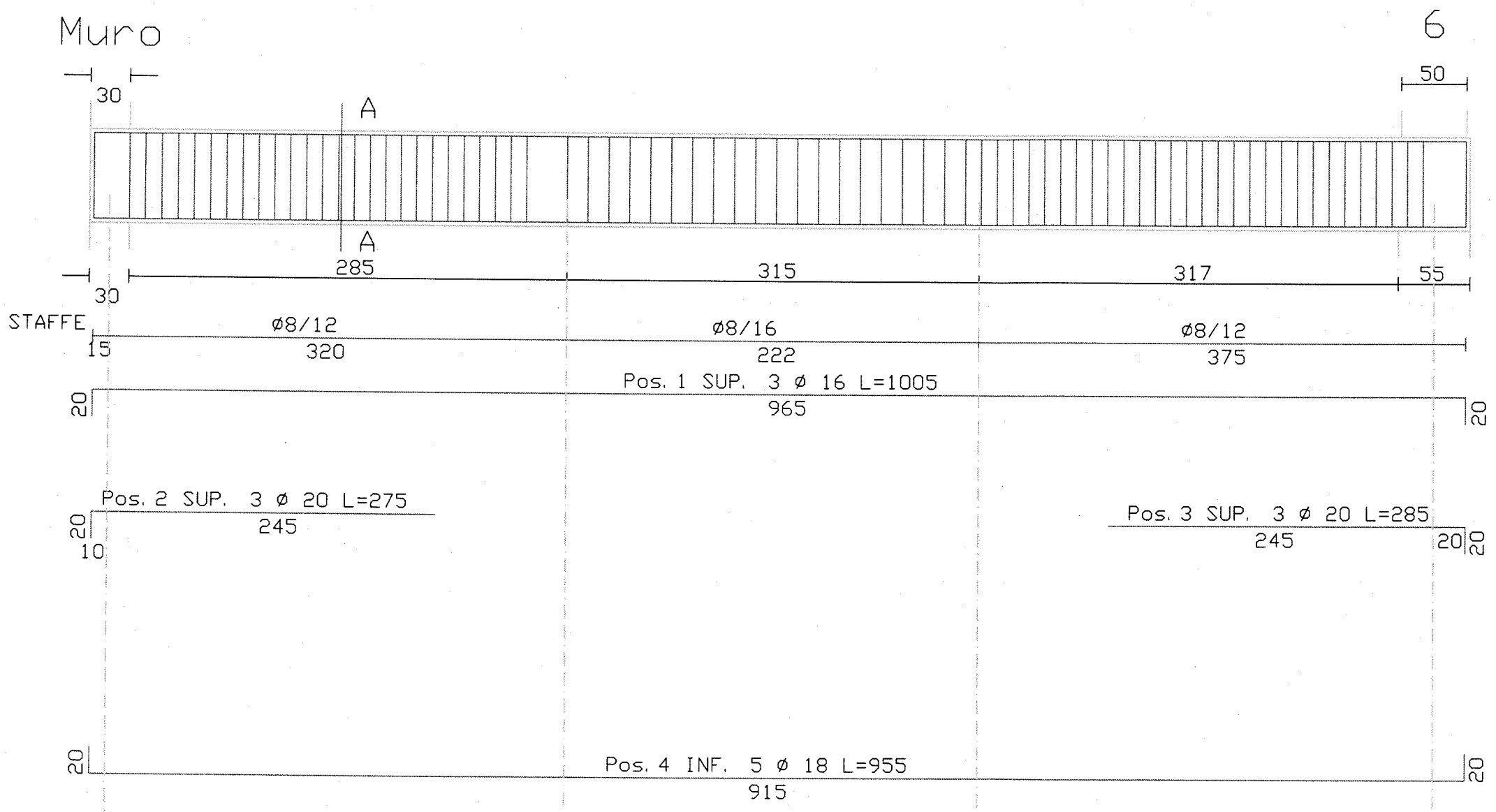
Sez. A-A





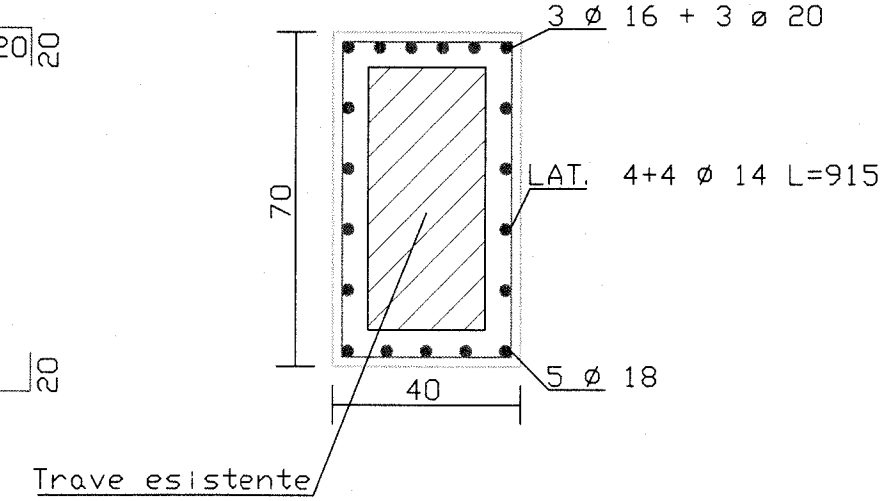
Staffe ø 8
L=215

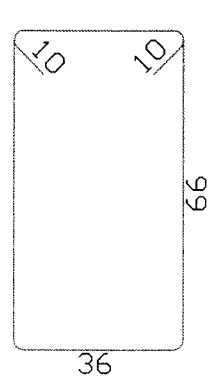
Trave 3 (40x70)



POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 16	L=1005
2 SUP.	3 ø 20	L=275
3 SUP.	3 ø 20	L=285
4 INF.	5 ø 18	L=955
5 LAT.	4 + 4 ø 14	L=915

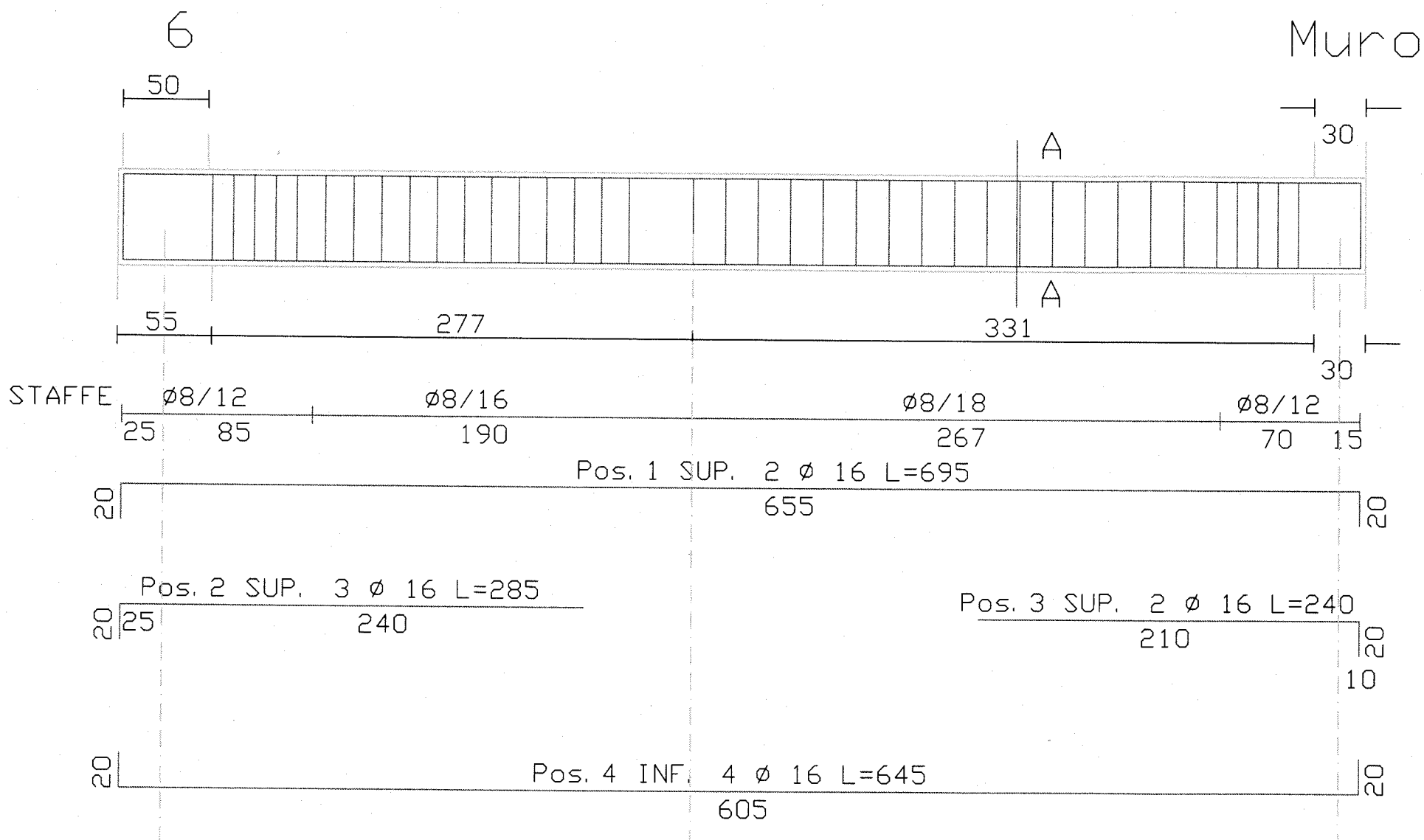
Sez. A-A





Staffe ø 8
L= 260

Trave 4 (35x55)

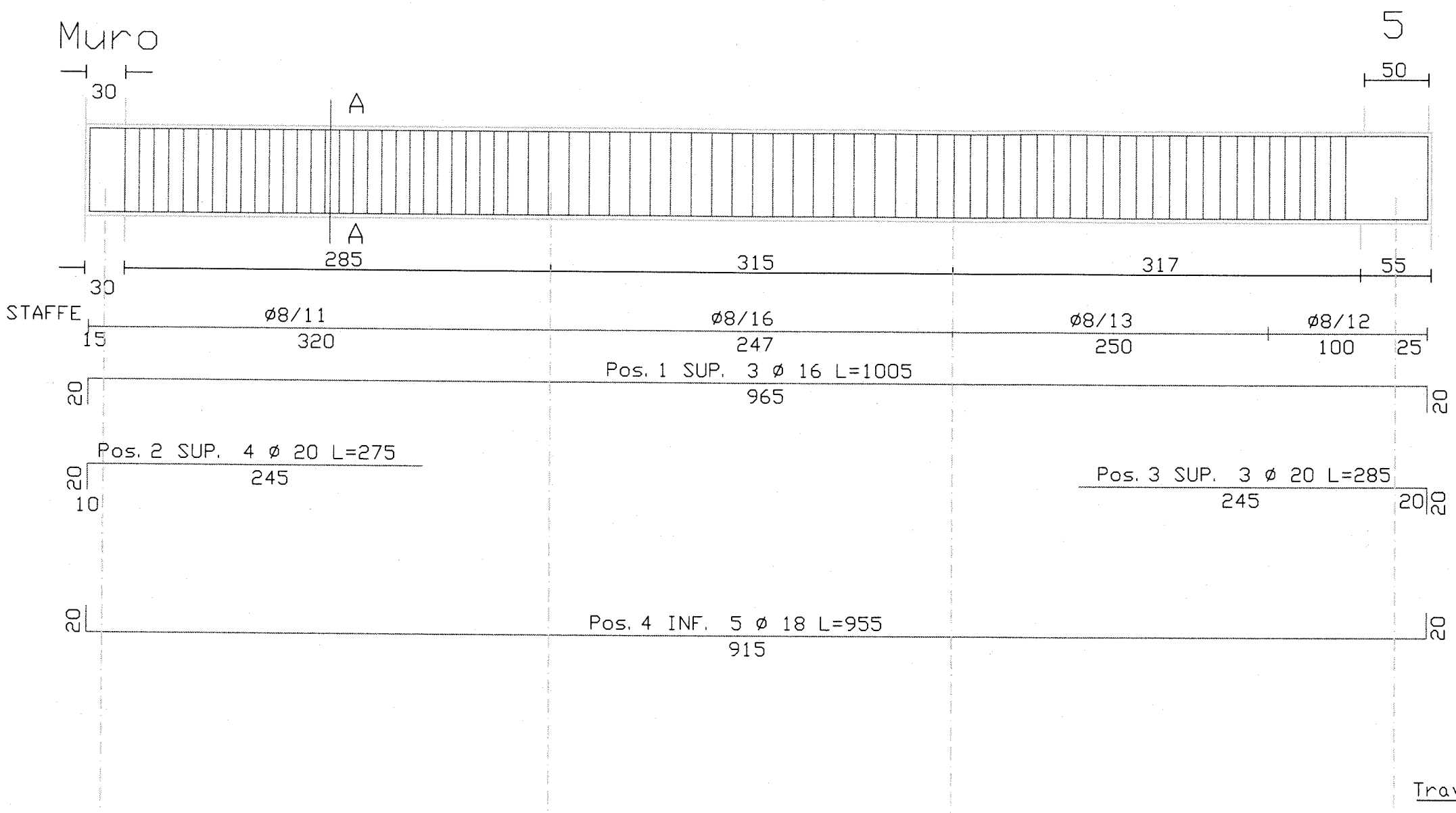


POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	2 ø 16	L=695
2 SUP.	3 ø 16	L=285
3 SUP.	2 ø 16	L=240
4 INF.	4 ø 16	L=645
5 LAT.	2 + 2 ø 12	L=605

Sez. A-A

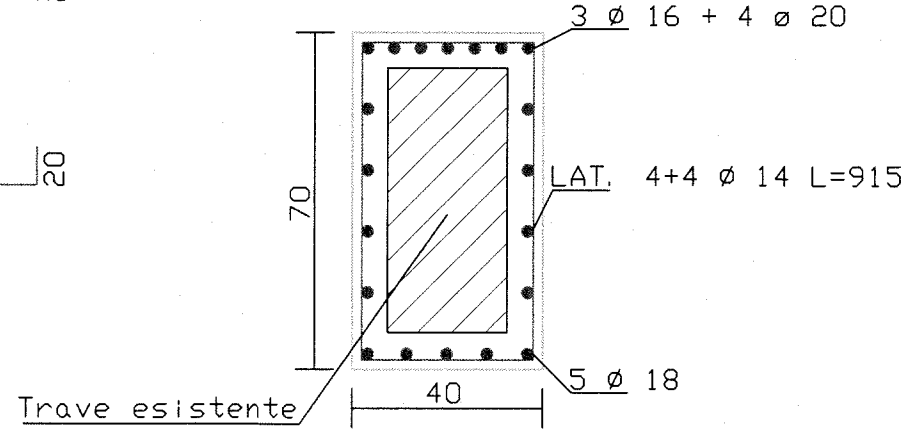
Staffe ø 8
L=215

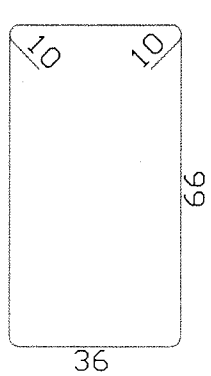
Trave 5 (40x70)



POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 16	L=1005
2 SUP.	4 ø 20	L=275
3 SUP.	3 ø 20	L=285
4 INF.	5 ø 18	L=955
5 LAT.	4 + 4 ø 14	L=915

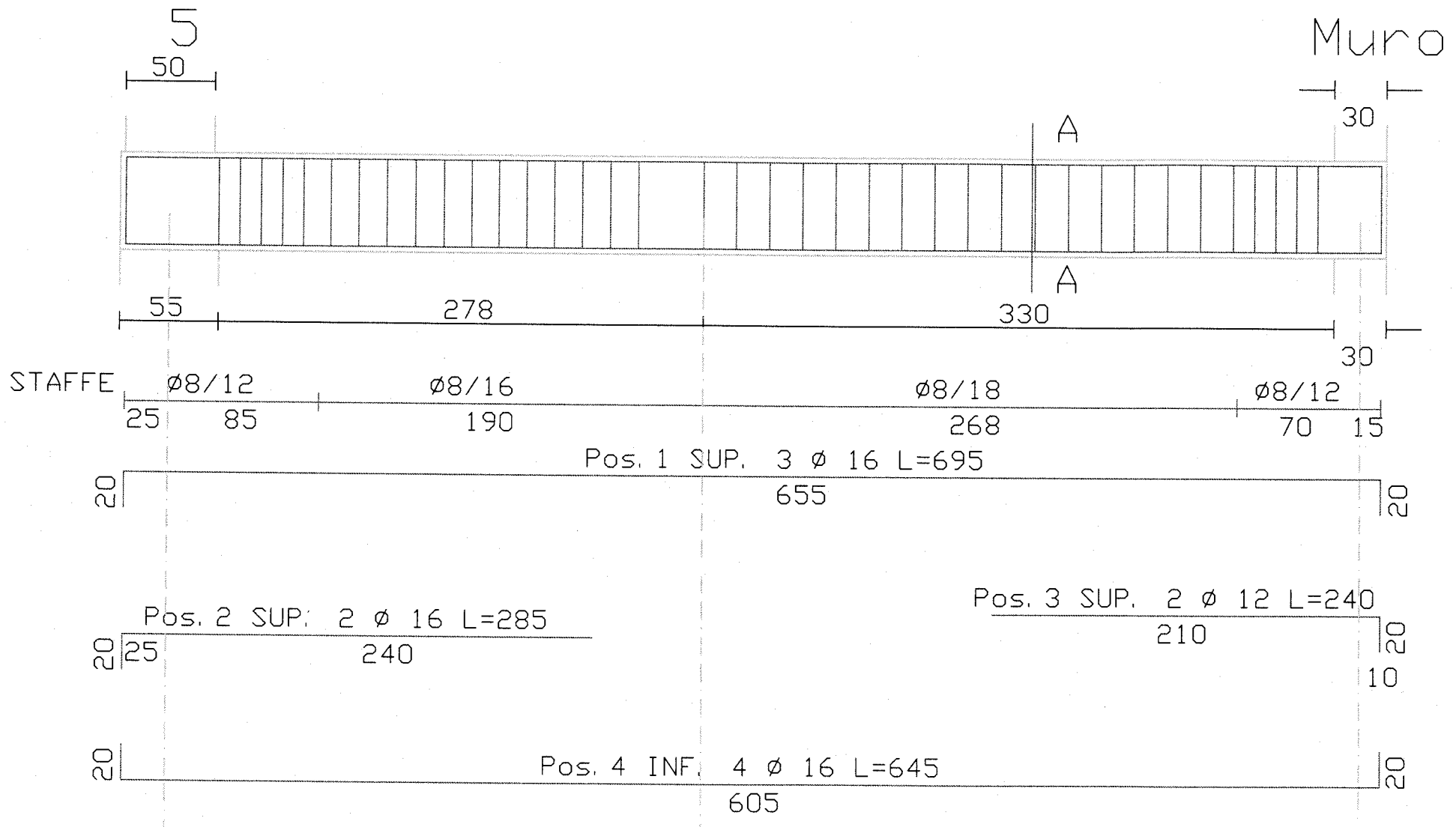
Sez. A-A





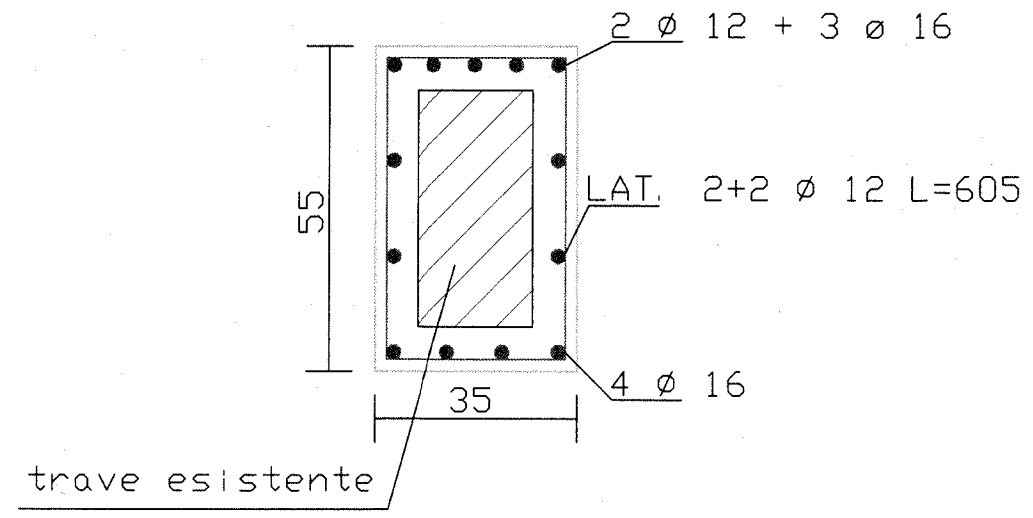
Staffe ø 8
L= 260

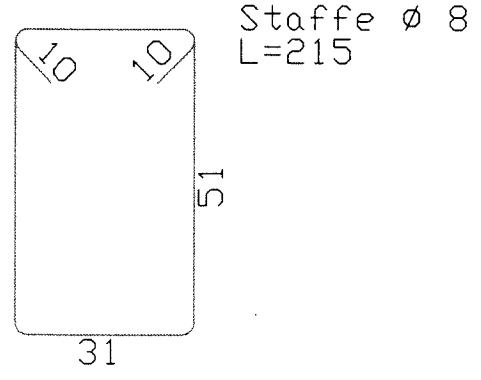
Trave 6 (35x55)



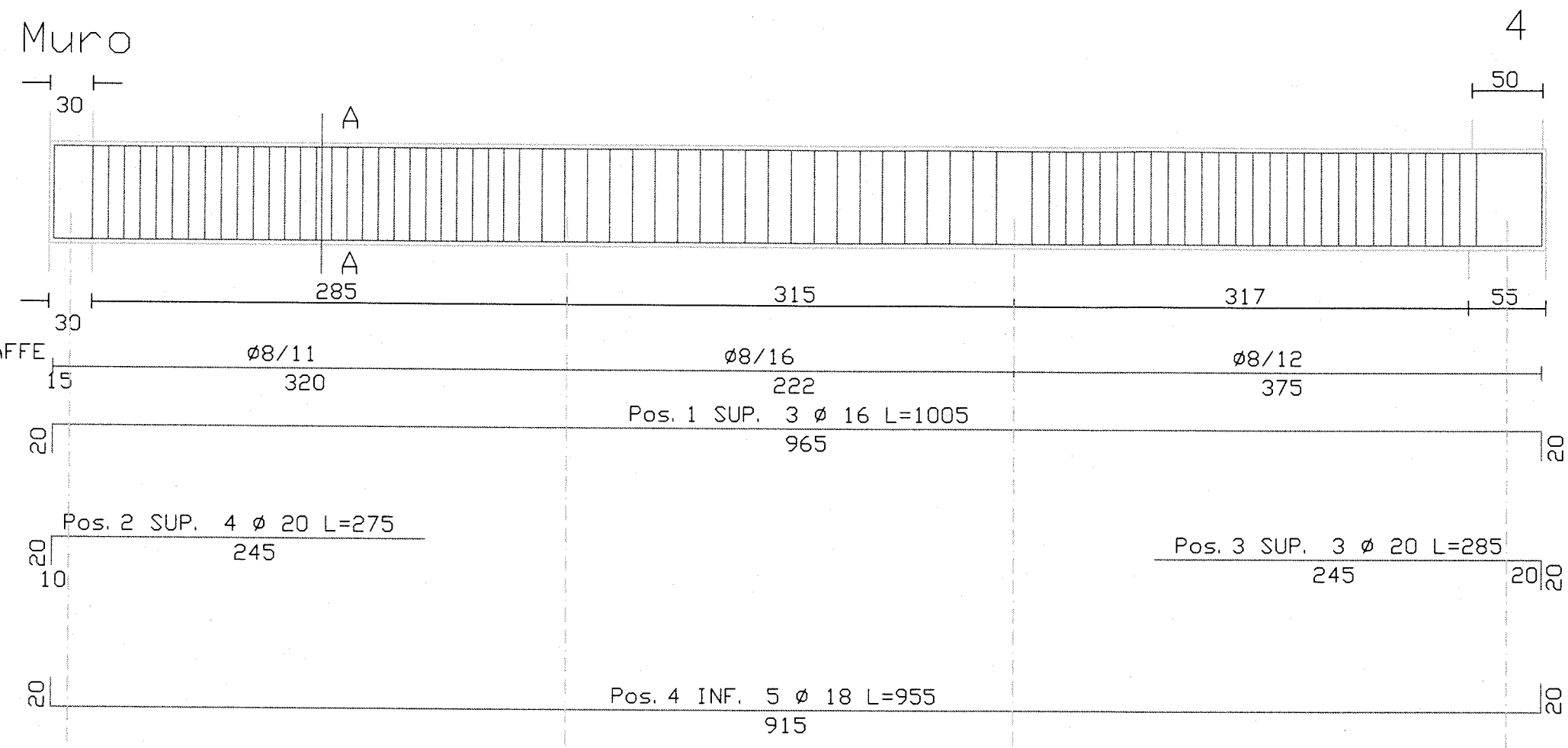
POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 16	L=695
2 SUP.	2 ø 16	L=285
3 SUP.	2 ø 12	L=240
4 INF.	4 ø 16	L=645
5 LAT.	2 + 2 ø 12	L=605

Sez. A-A



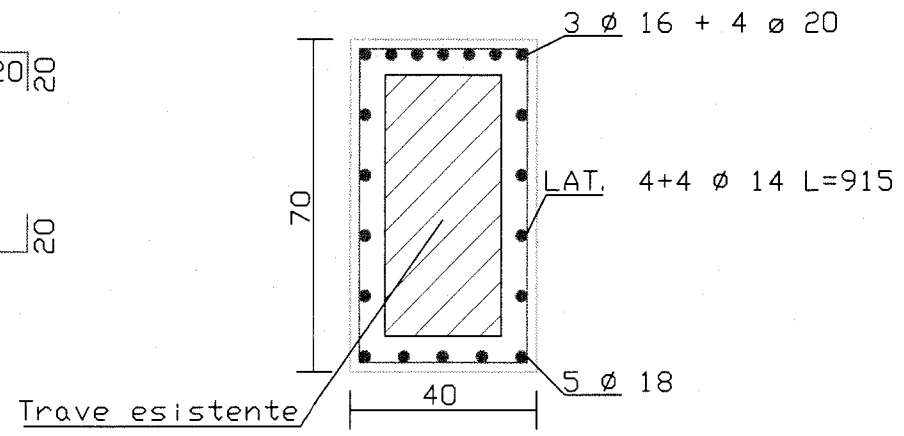


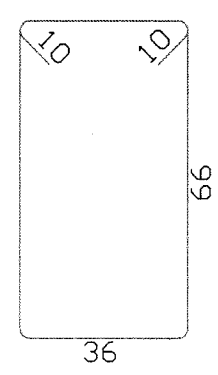
Trave 7 (40x70)



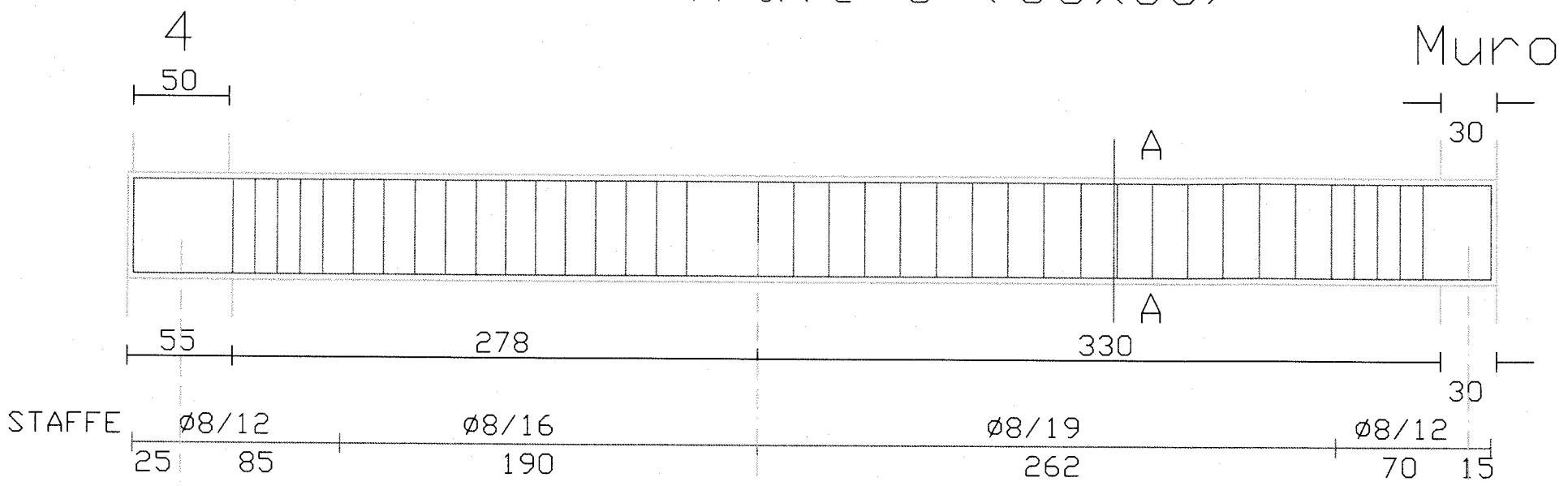
POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 16	L=1005
2 SUP.	4 ø 20	L=275
3 SUP.	3 ø 20	L=285
4 INF.	5 ø 18	L=955
5 LAT.	4 + 4 ø 14	L=915

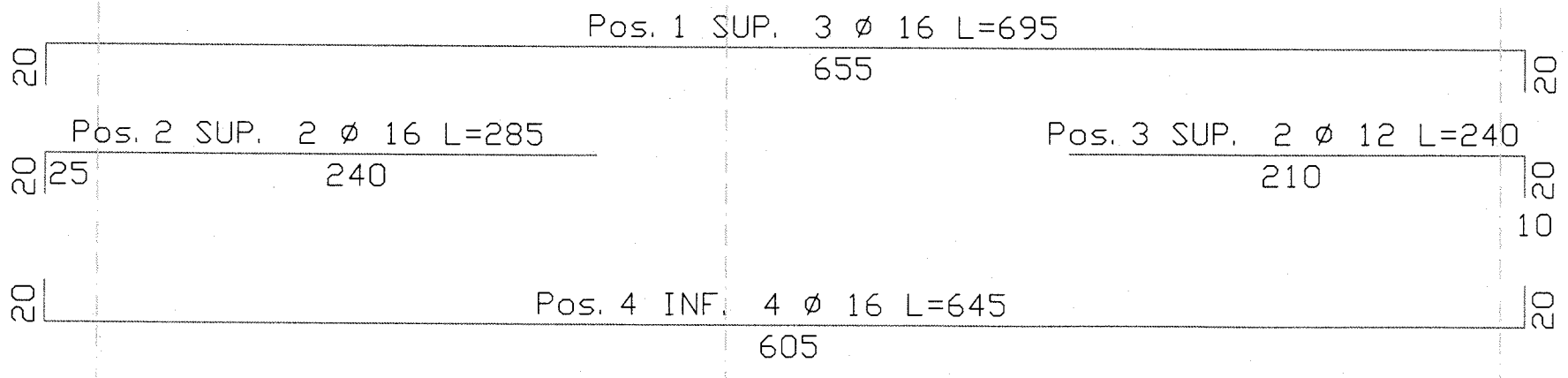
Sez. A-A





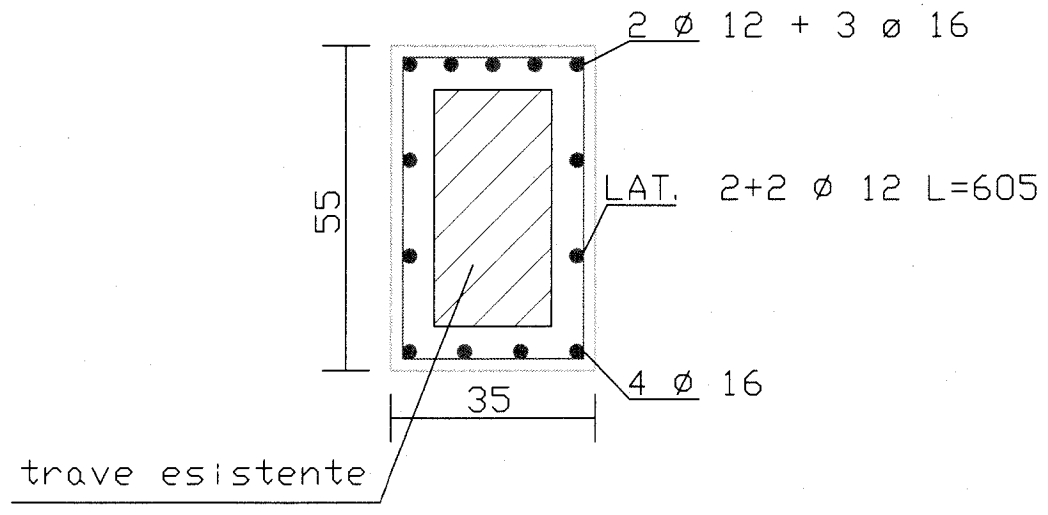
Trave 8 (35x55)

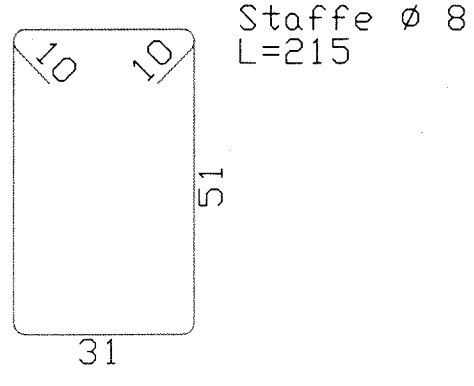




POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 16	L=695
2 SUP.	2 ø 16	L=285
3 SUP.	2 ø 12	L=240
4 INF.	4 ø 16	L=645
5 LAT.	2 + 2 ø 12	L=605

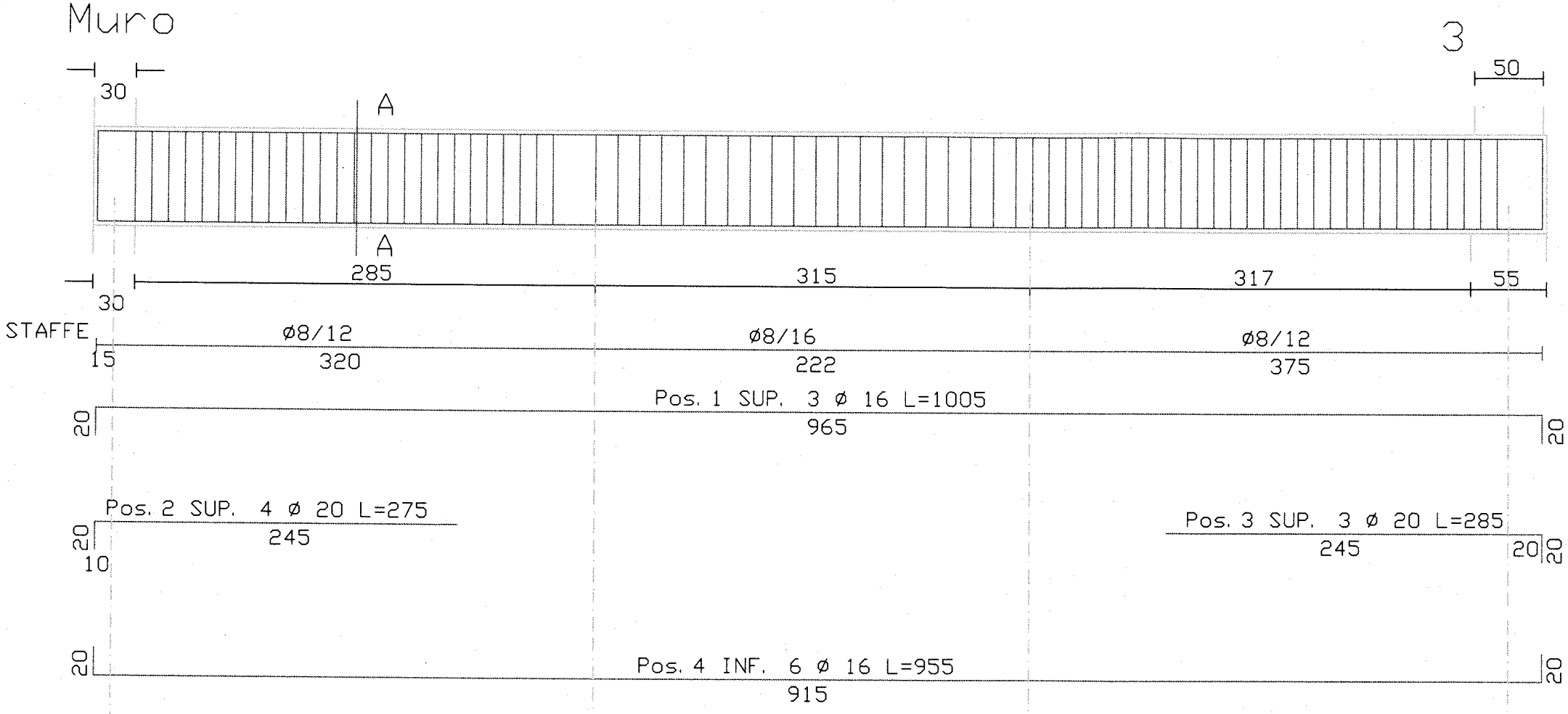
Sez. A-A





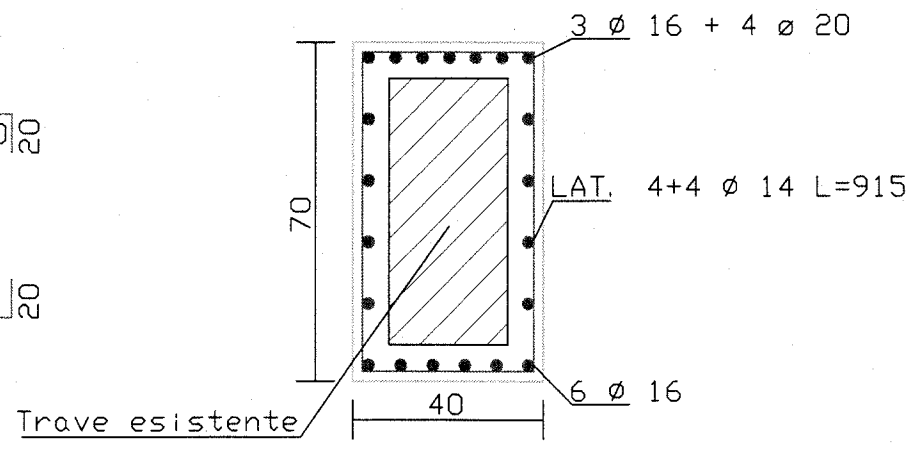
Trave 9 (40x70)

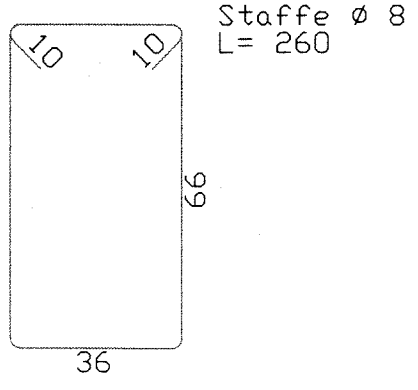
Muro



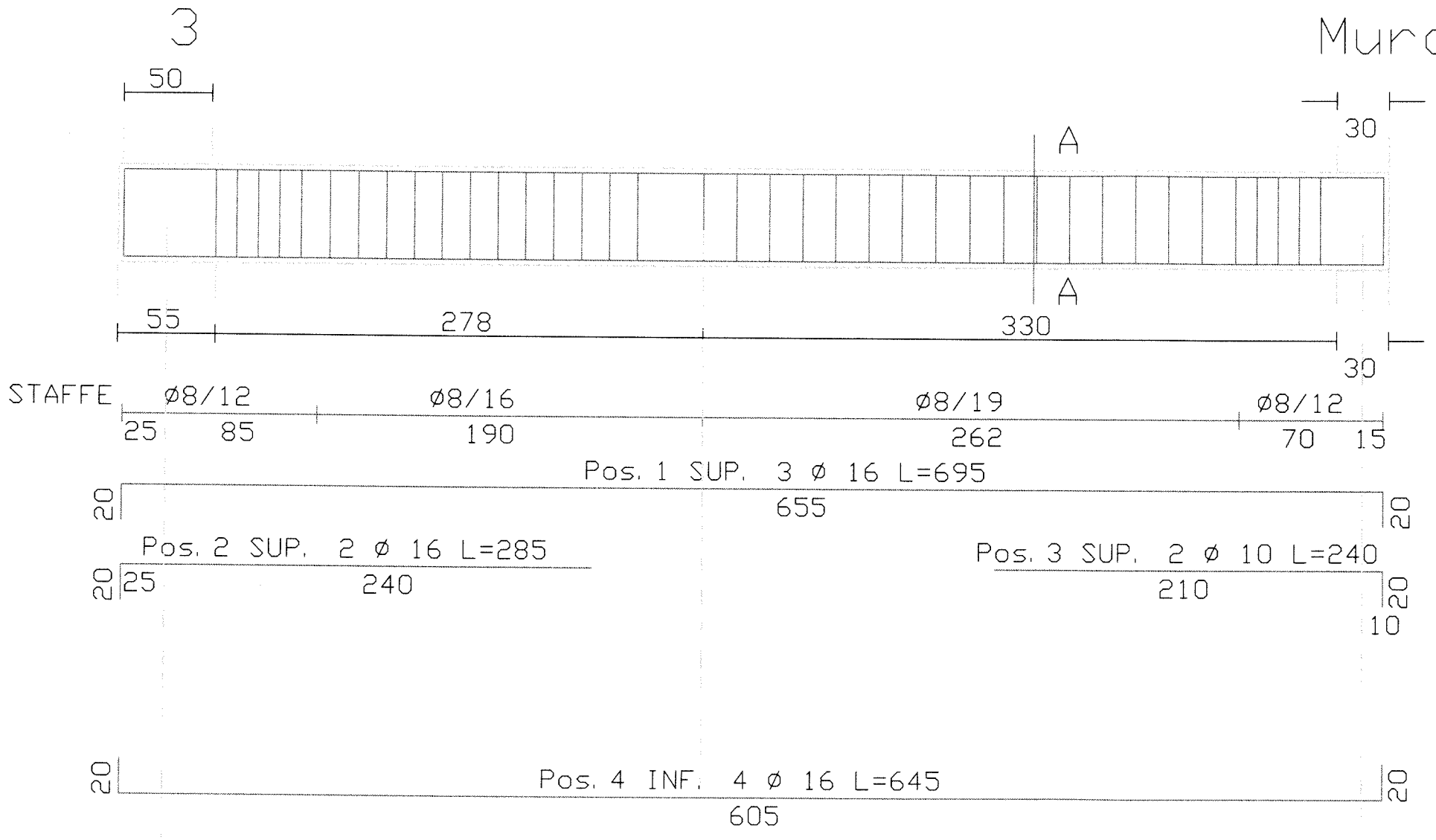
POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 16	L=1005
2 SUP.	4 ø 20	L=275
3 SUP.	3 ø 20	L=285
4 INF.	6 ø 16	L=955
5 LAT.	4 + 4 ø 14	L=915

Sez. A-A



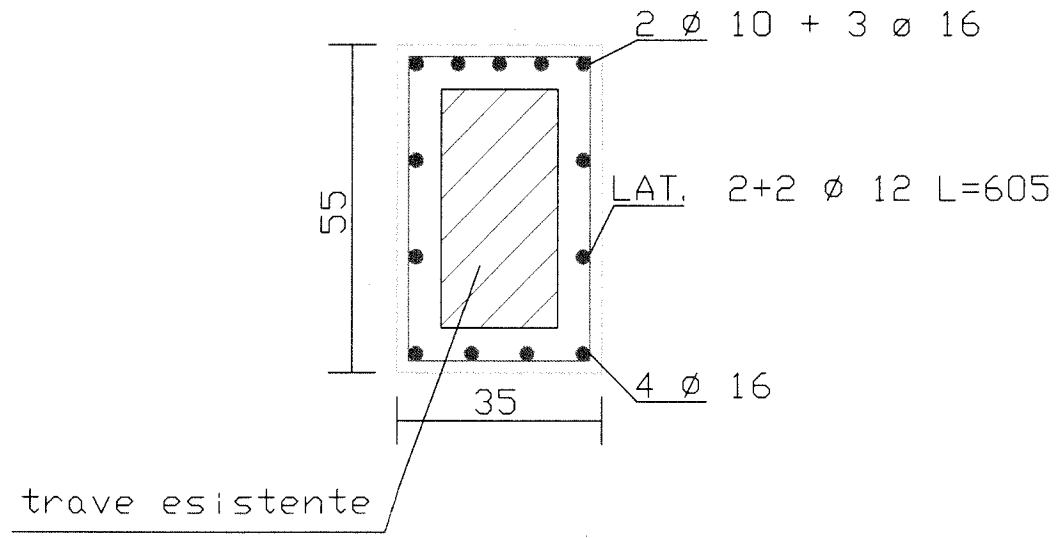


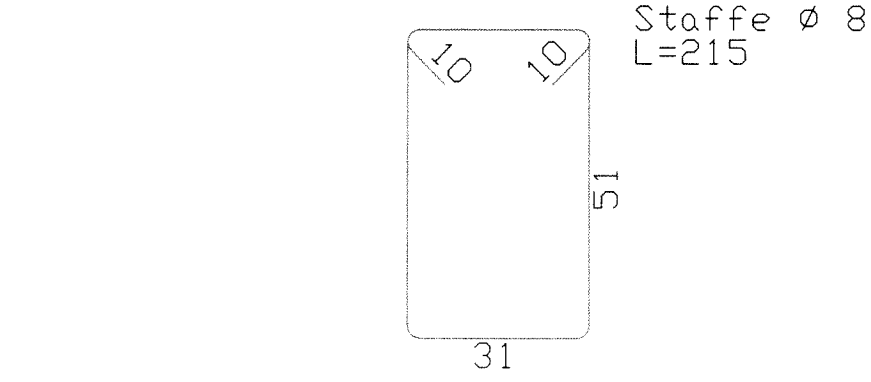
Trave 10 (35x55)



POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 16	L=695
2 SUP.	2 ø 16	L=285
3 SUP.	2 ø 10	L=240
4 INF.	4 ø 16	L=645
5 LAT.	2 + 2 ø 12	L=605

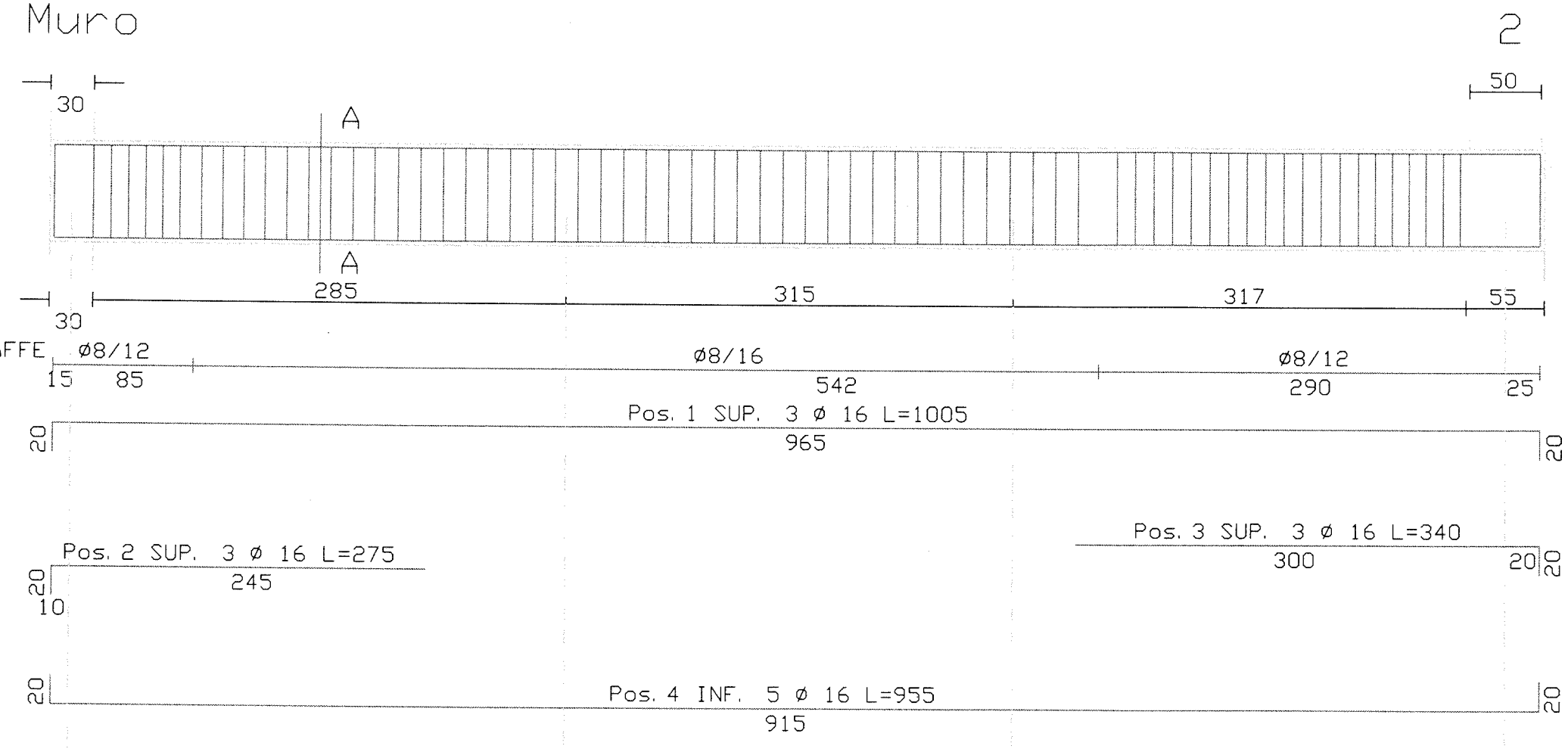
Sez. A-A





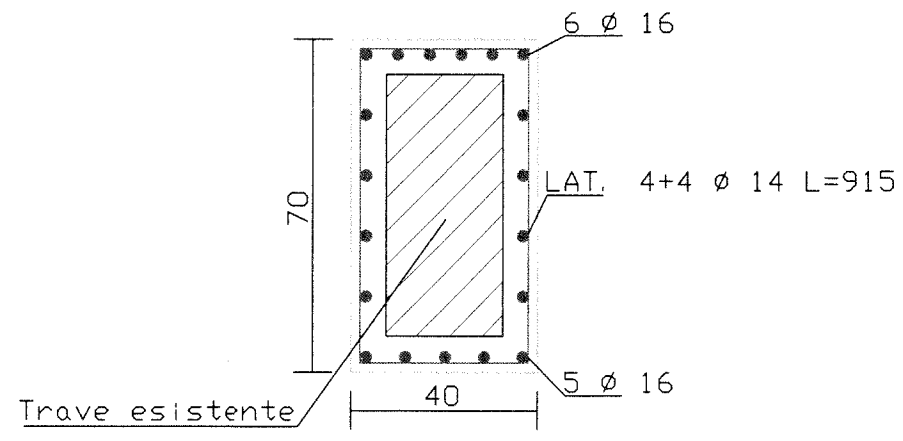
Trave 11 / 13 (40x70)

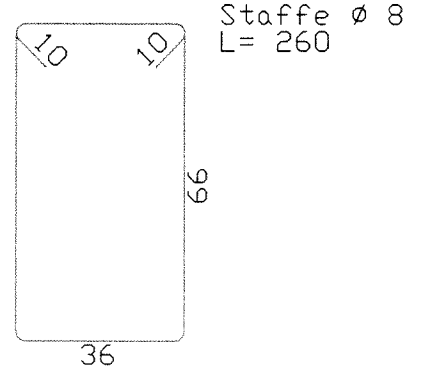
Muro



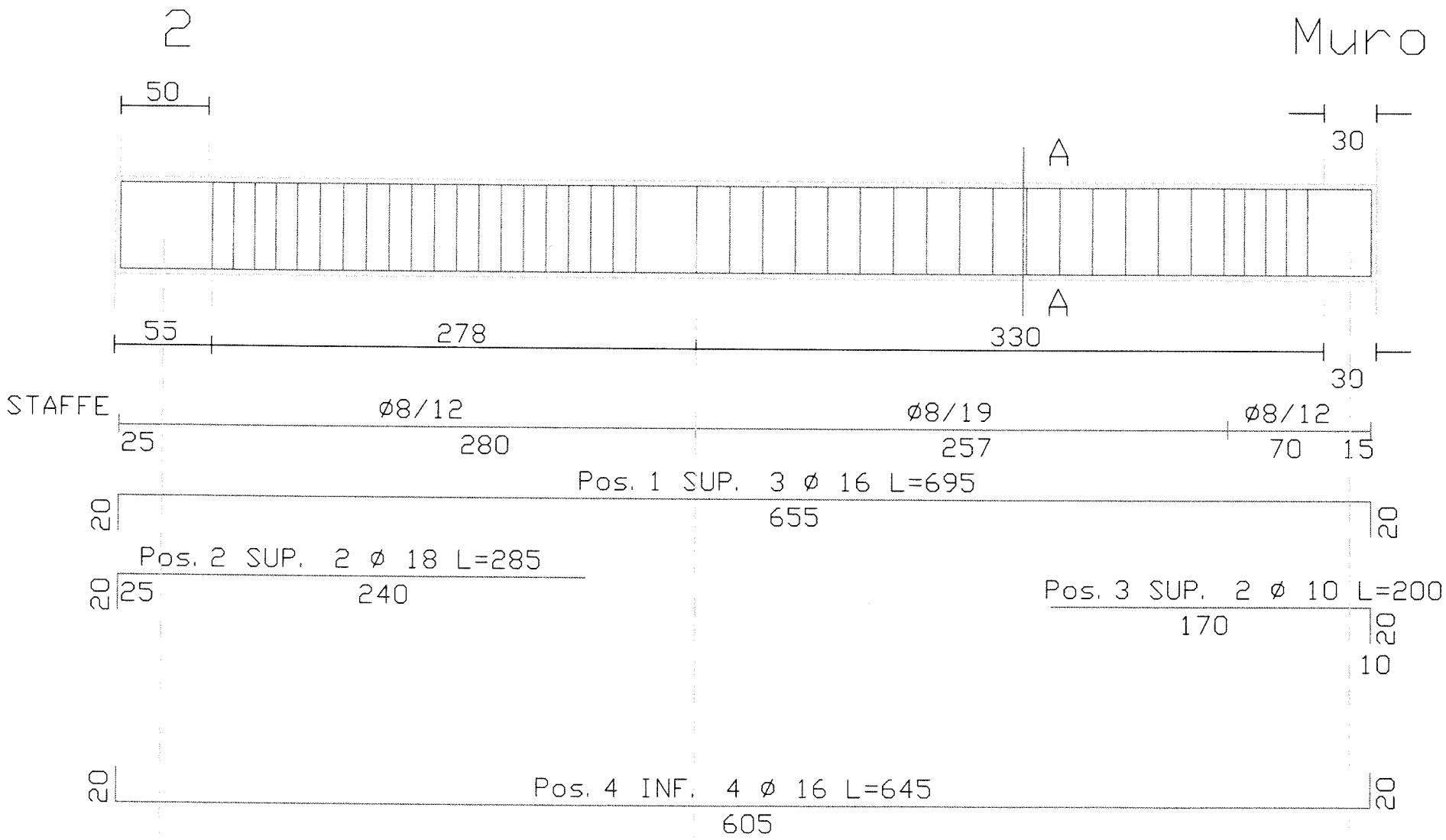
POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 16	L=1005
2 SUP.	3 ø 16	L=275
3 SUP.	3 ø 16	L=340
4 INF.	5 ø 16	L=955
5 LAT.	4 + 4 ø 14	L=915

Sez. A-A



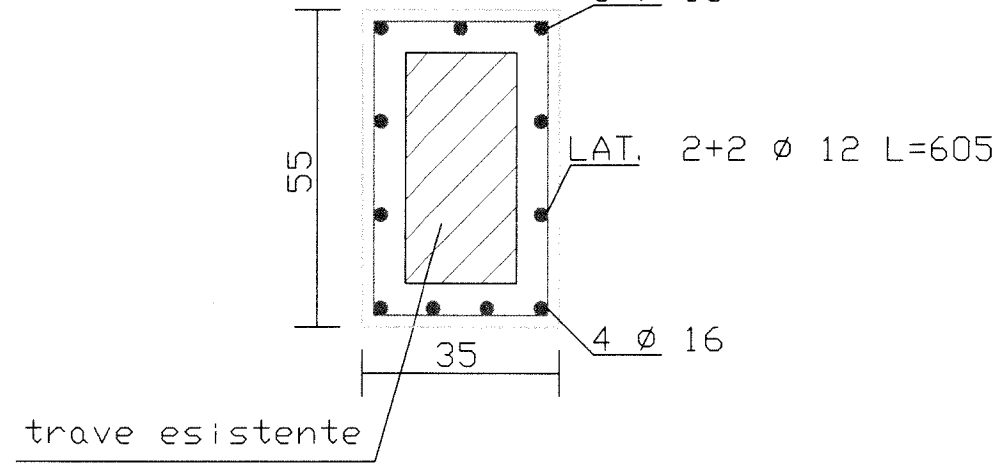


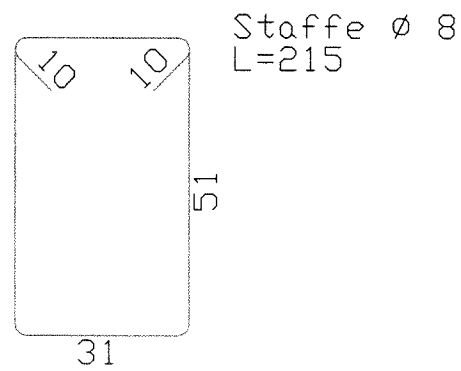
Trave 12 (35x55)



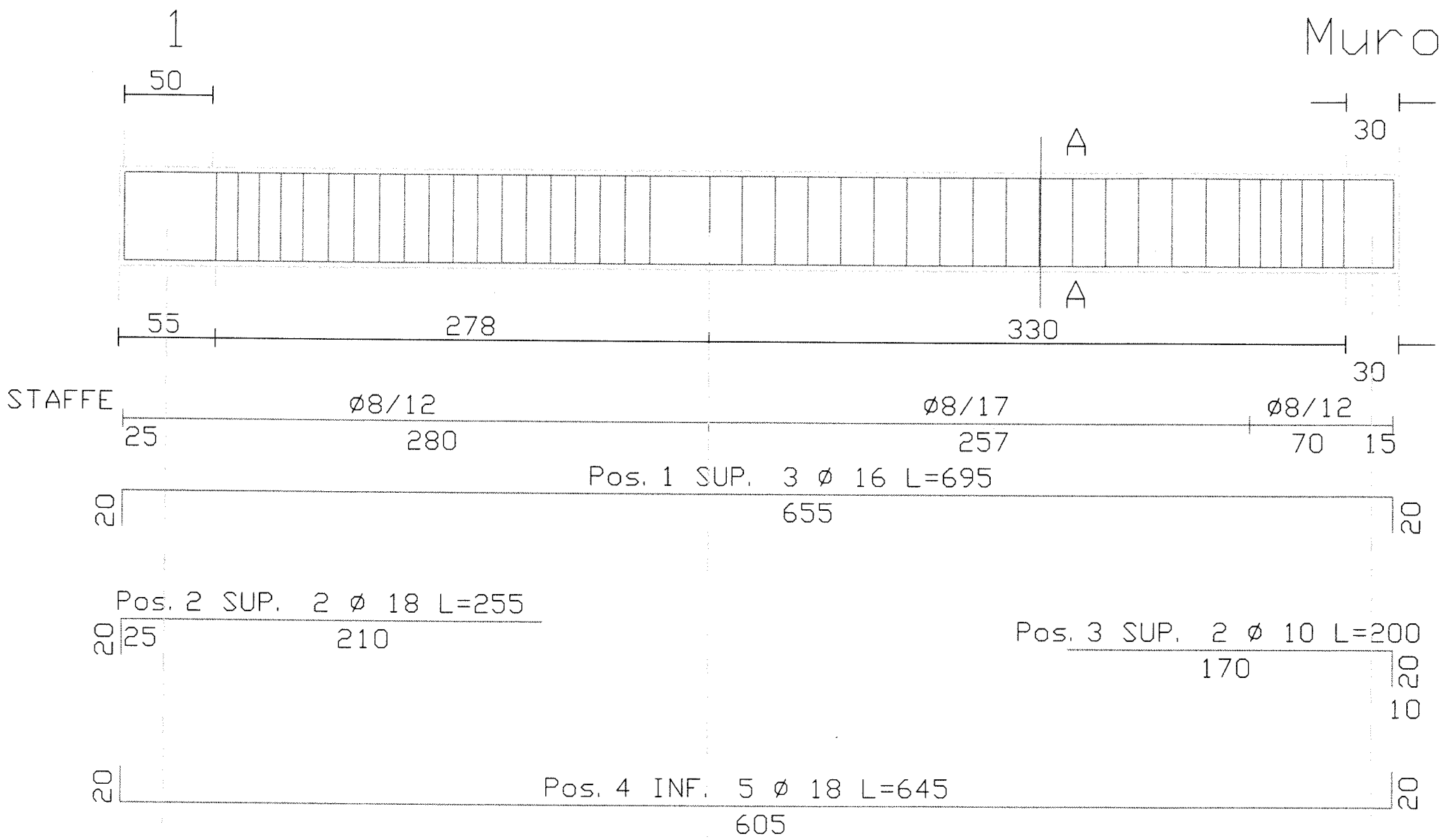
POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 16	L=695
2 SUP.	2 ø 18	L=285
3 SUP.	2 ø 10	L=200
4 INF.	4 ø 16	L=645
5 LAT.	2 + 2 ø 12	L=605

Sez. A-A



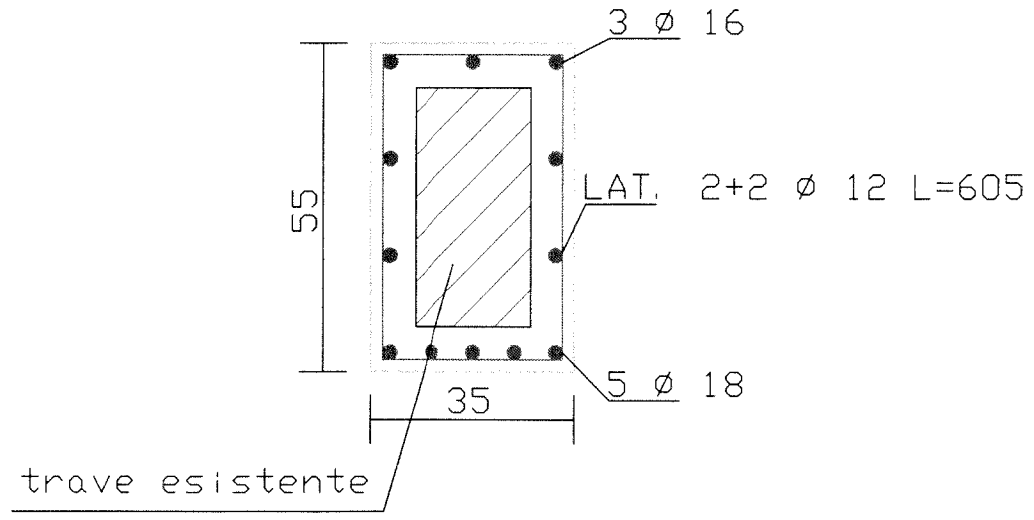


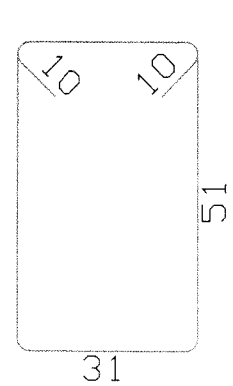
Trave 14 (35x55)



POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 16	L=695
2 SUP.	2 ø 18	L=255
3 SUP.	2 ø 10	L=200
4 INF.	5 ø 18	L=645
5 LAT.	2 + 2 ø 12	L=605

Sez. A-A

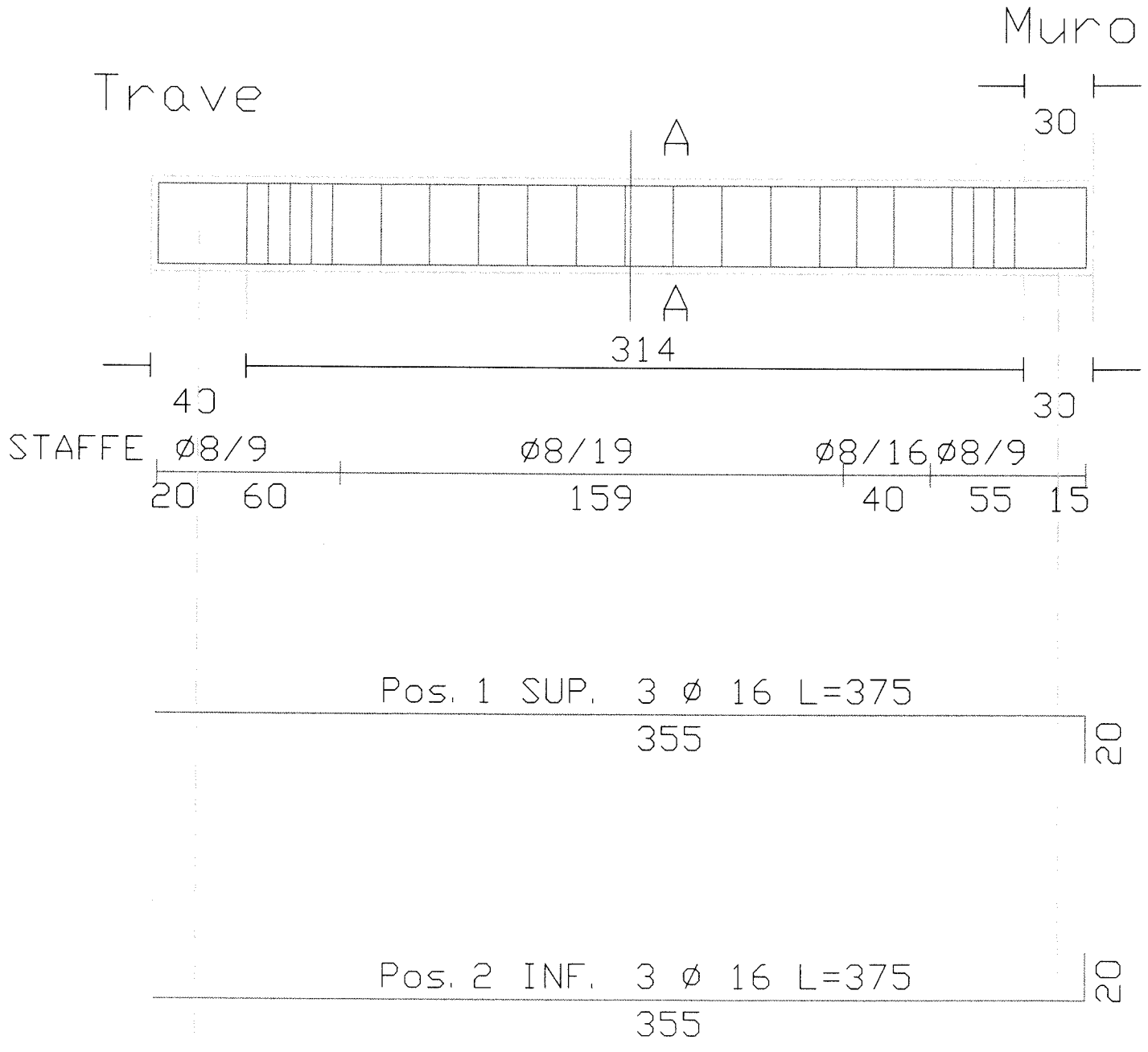




Staffe ø 8
L=215

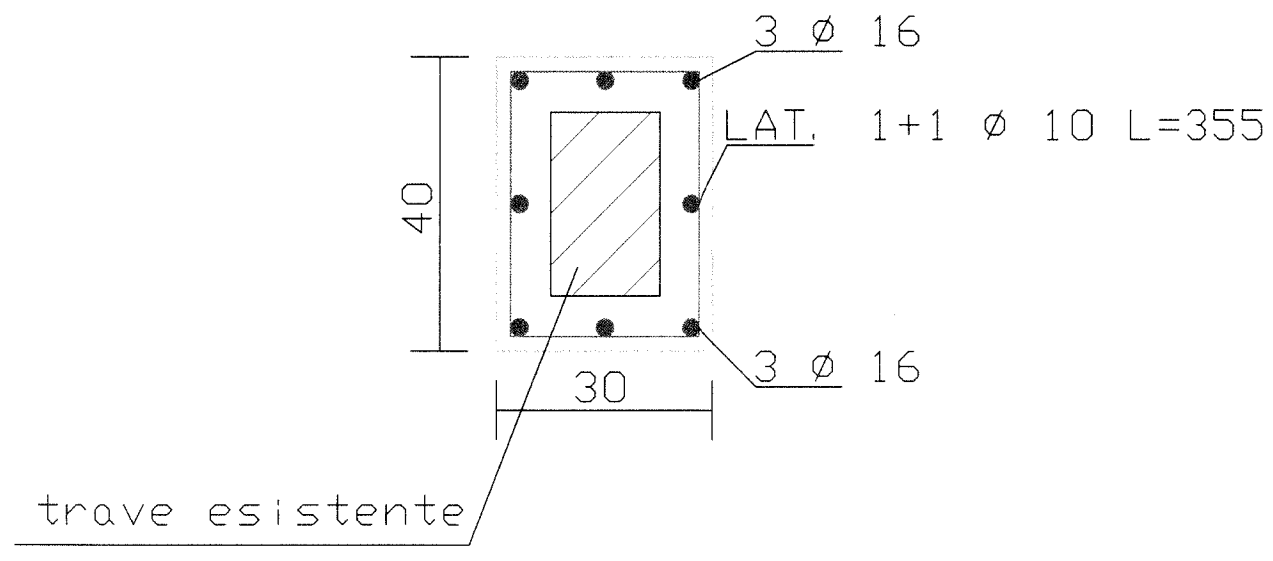
Trave 15/16/18/41/42/44 (30x40)

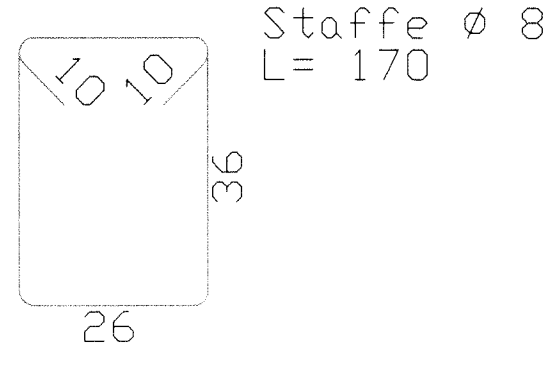
Verificare le lunghezze dei ferri in loco con la D.L.



POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 16	L=375
2 INF.	3 ø 16	L=375
3 LAT.	1 + 1 ø 10	L=355

Sez. A-A



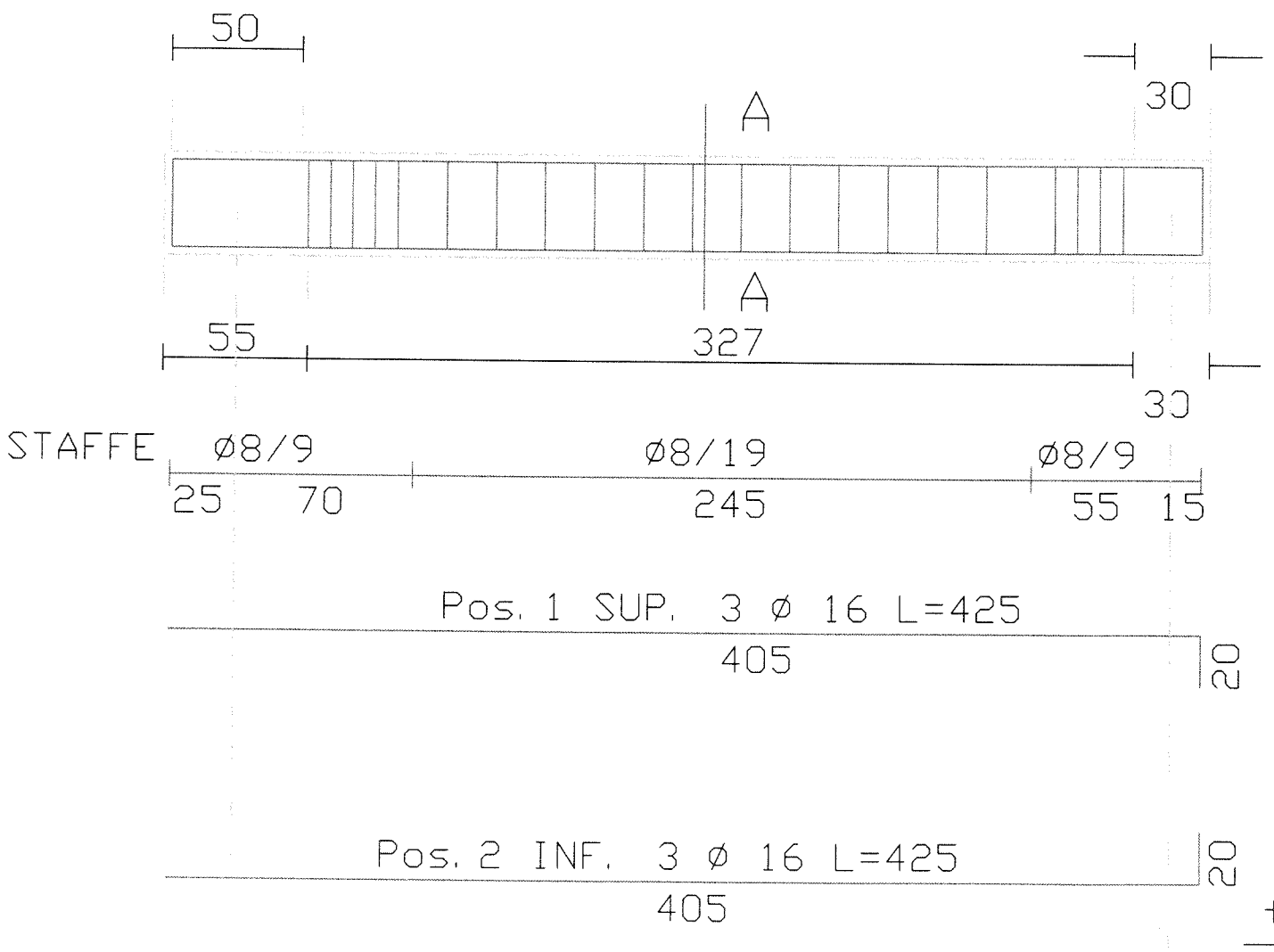


Staffe ø 8
L= 170

Trave 17 / 43 (35x55)

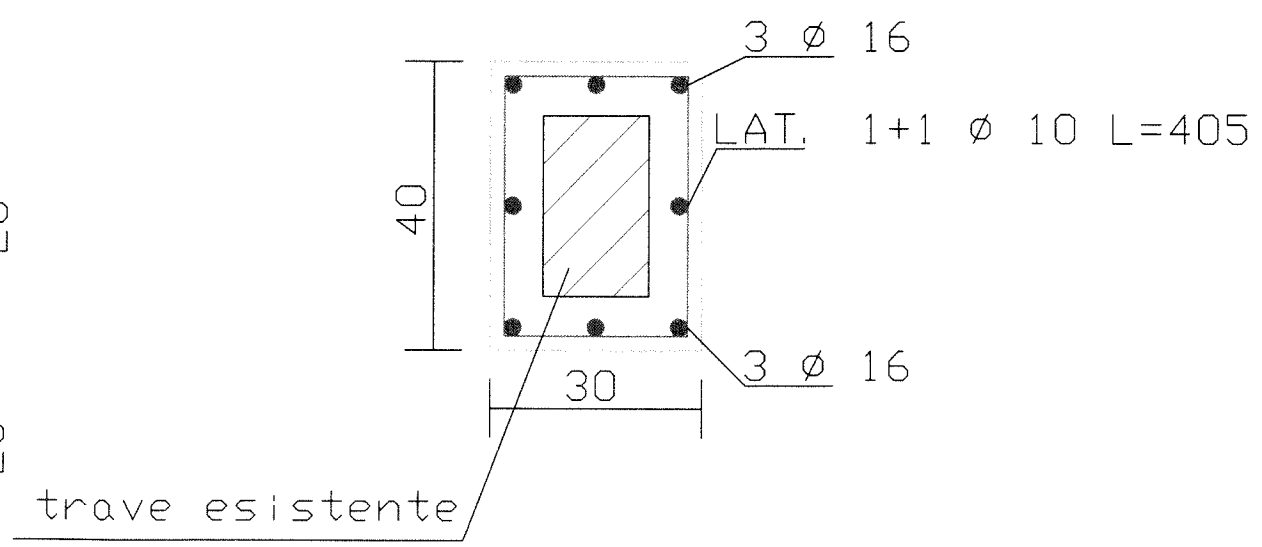
Verificare le lunghezze dei ferri in loco con la D.L.

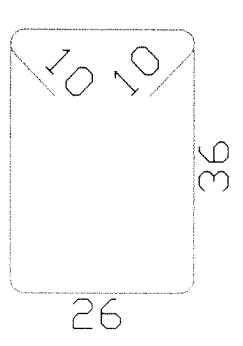
7 / 1



POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 16	L=425
2 INF.	3 ø 16	L=425
3 LAT.	1 + 1 ø 10	L=405

Sez. A-A

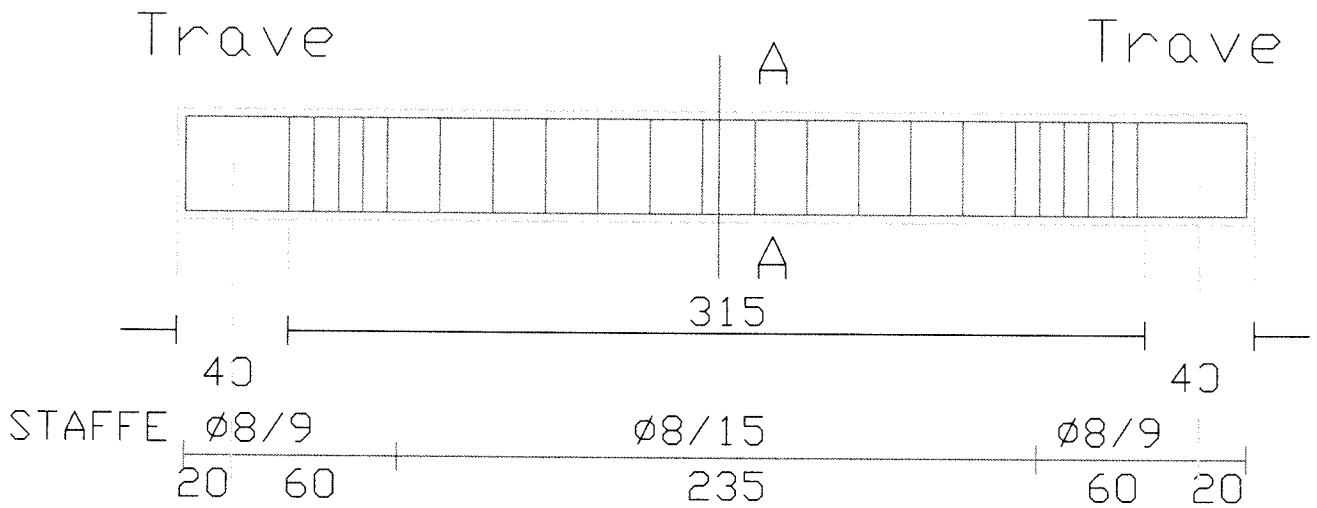




Staffe ø 8
L= 170

Trave 19/20/22/23/24/26/27/28/30/31/32/34/38/40 (30x40)

Verificare le lunghezze dei ferri in loco con la D.L.



POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 16	L=385
2 INF.	3 ø 16	L=385
3 LAT.	1 + 1 ø 10	L=385

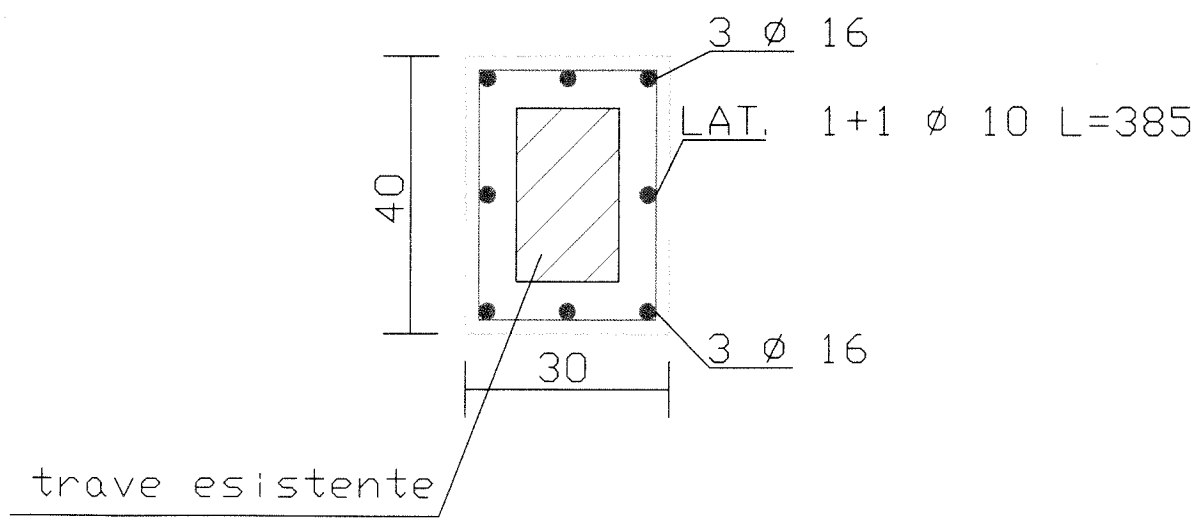
Pos. 1 SUP. 3 ø 16 L=385

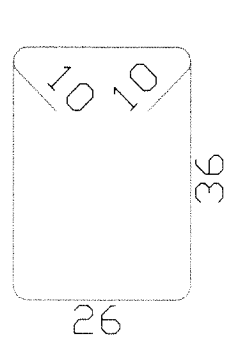
385

Pos. 2 INF. 3 ø 16 L=385

385

Sez. A-A

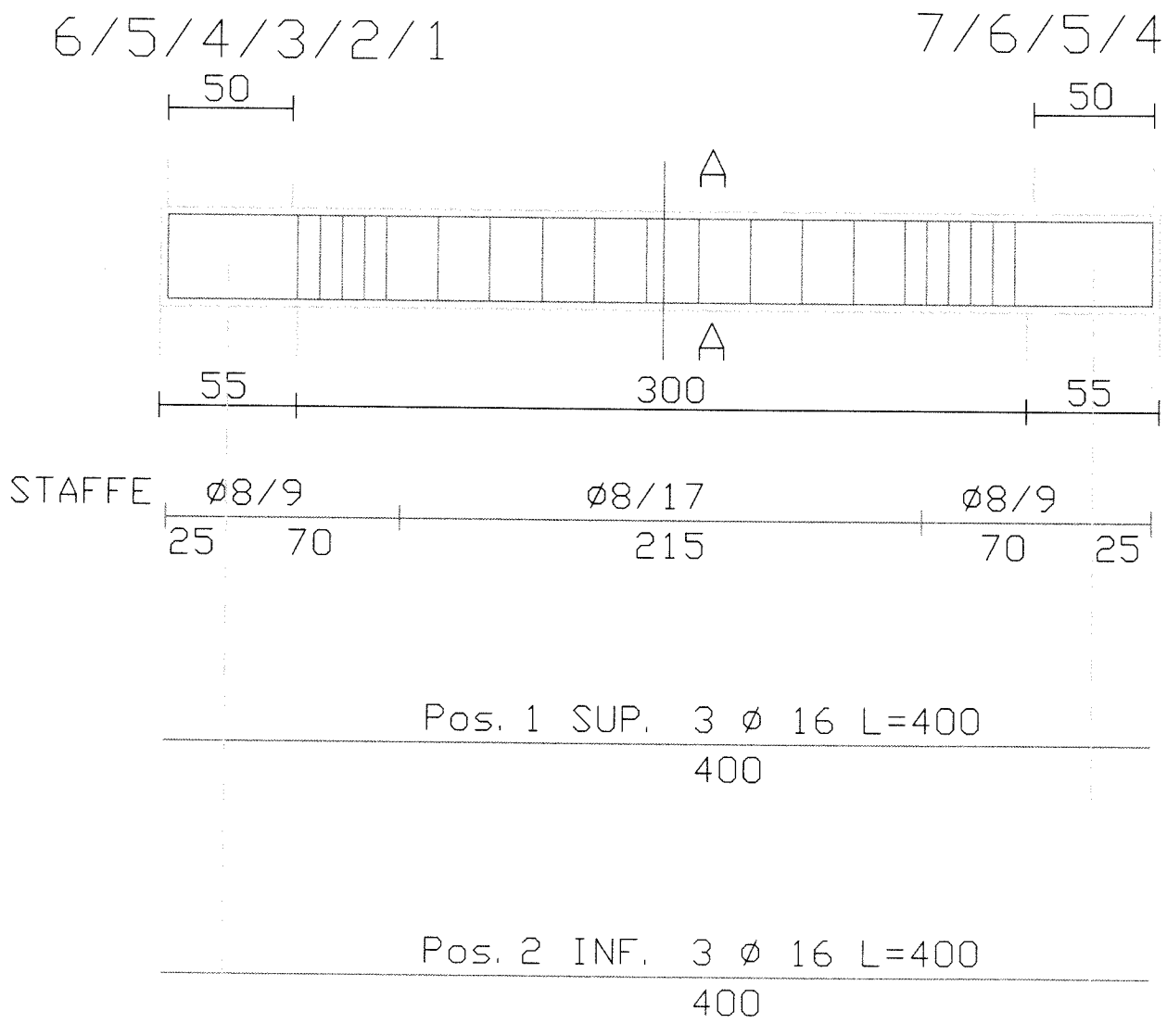




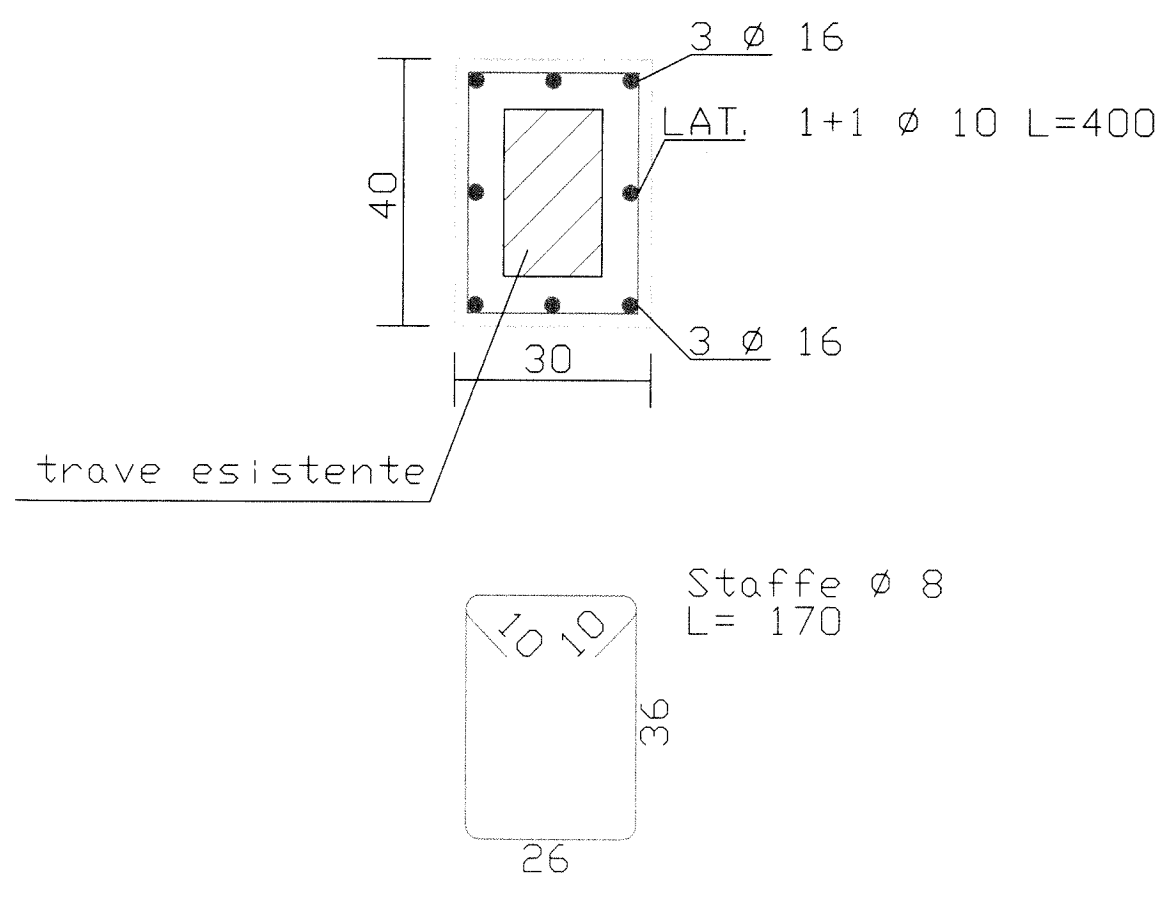
Staffe ø 8
L= 170

Trave 21/25/29/33/37/39/43 (30x40)

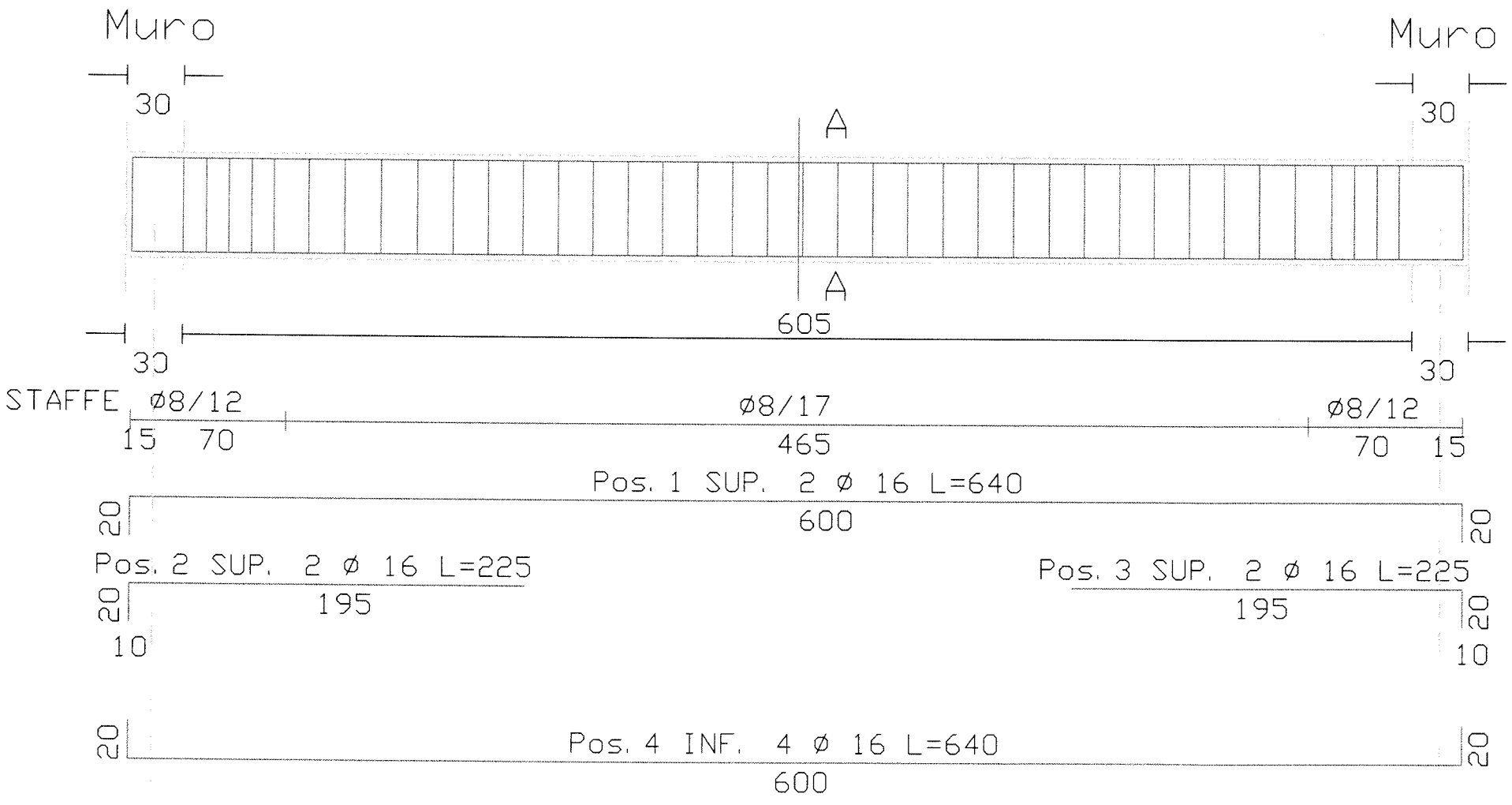
Verificare le lunghezze dei ferri in loco con la D.L.



POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 16	L=400
2 INF.	3 ø 16	L=400
3 LAT.	1 + 1 ø 10	L=400

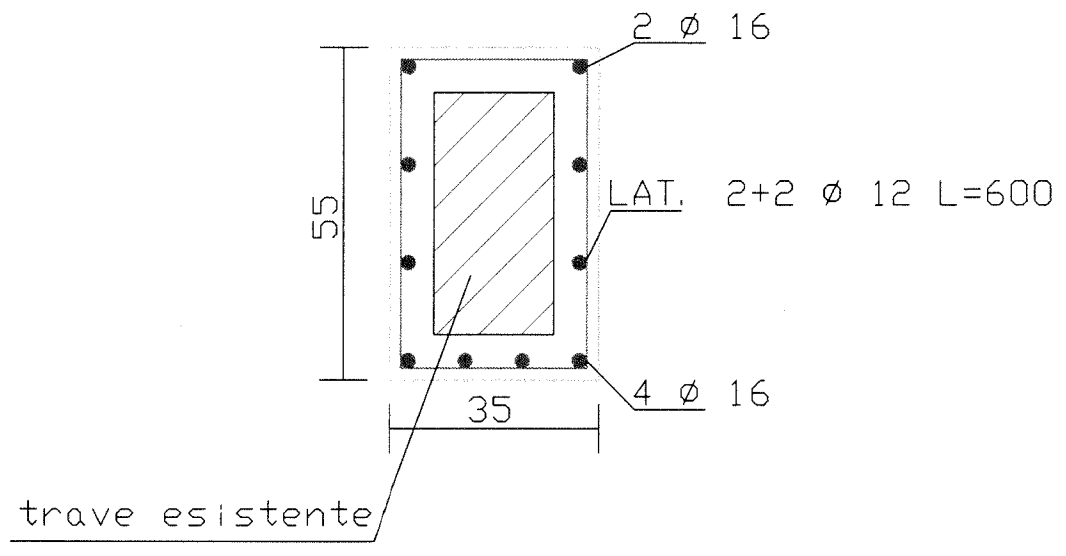


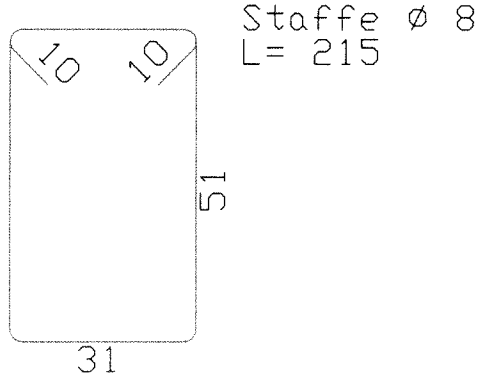
Trave 45 (35x55)



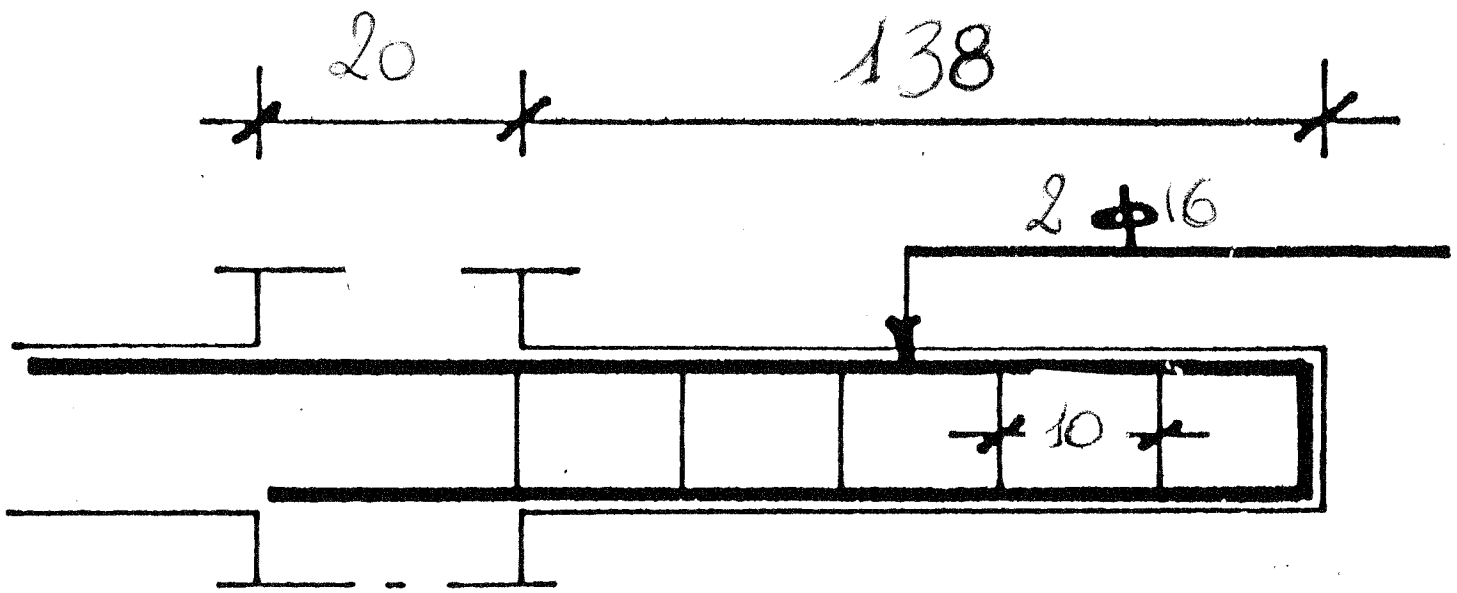
POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	2 ø 16	L=640
2 SUP.	2 ø 16	L=225
3 SUP.	2 ø 16	L=225
4 INF.	4 ø 16	L=640
5 LAT.	2 + 2 ø 12	L=600

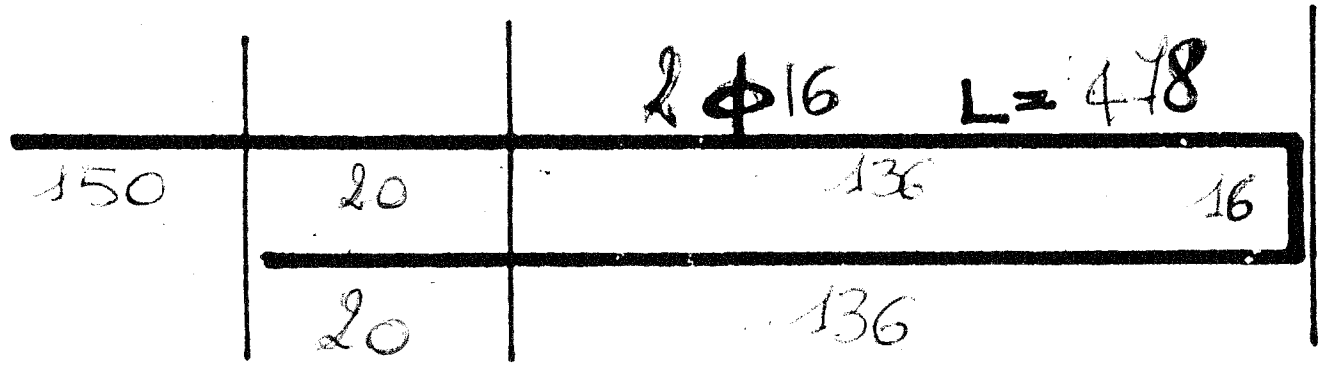
Sez. A-A

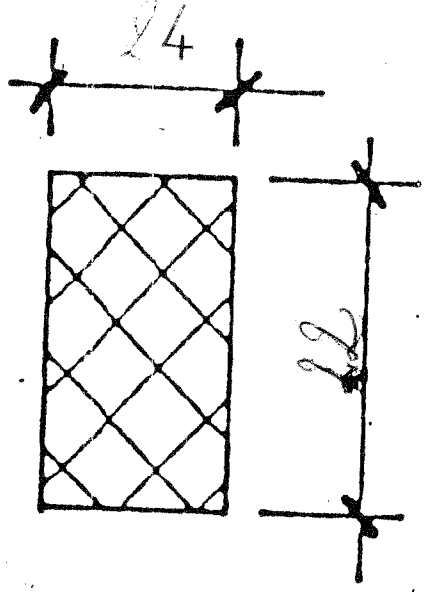


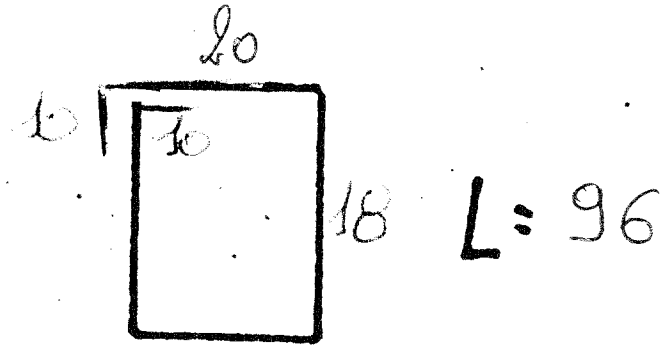


Sezione A | T 46 (24 x 22)



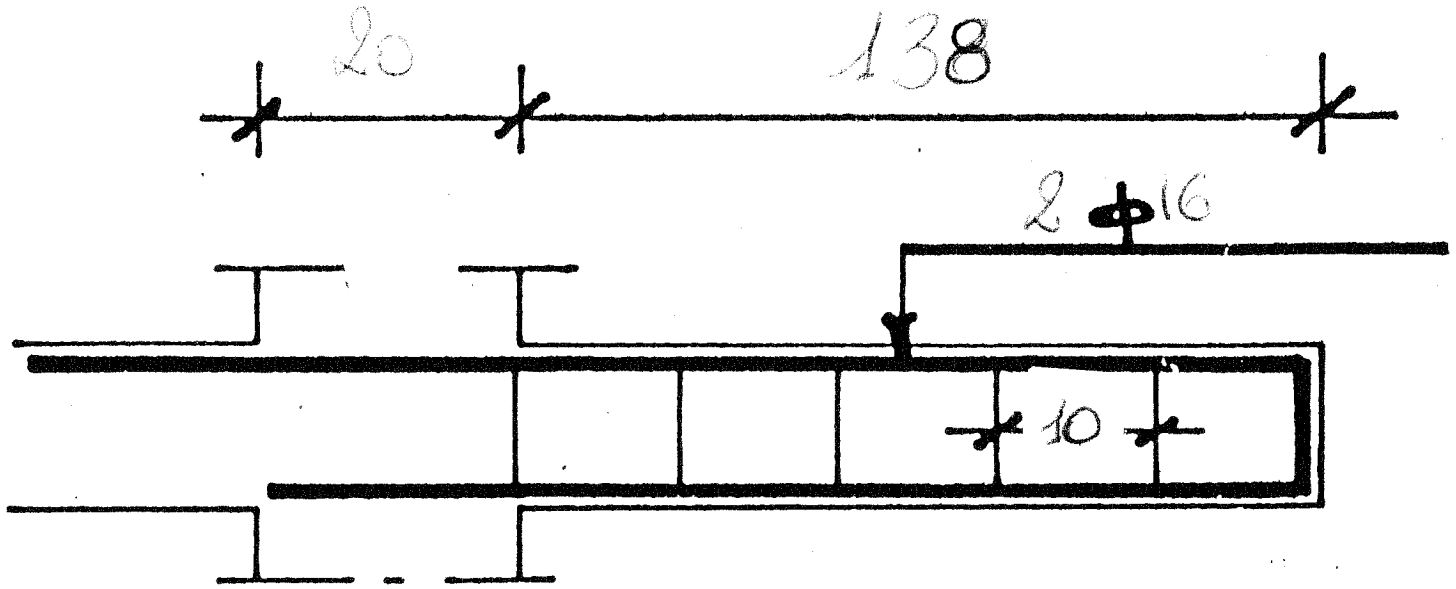


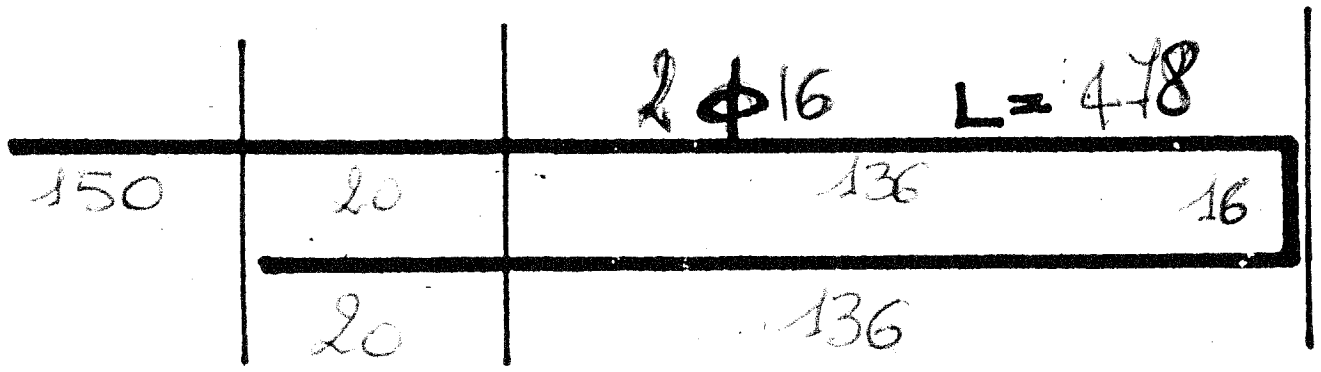


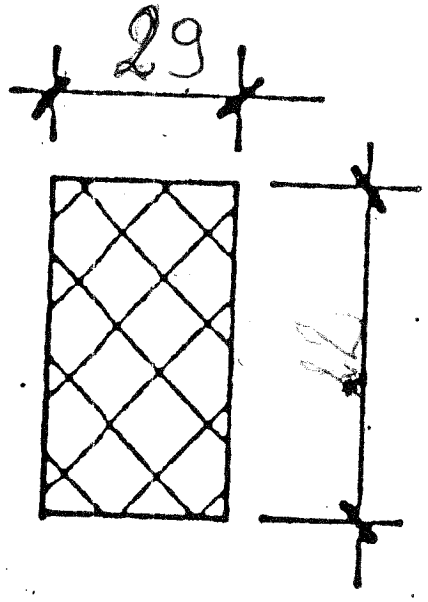


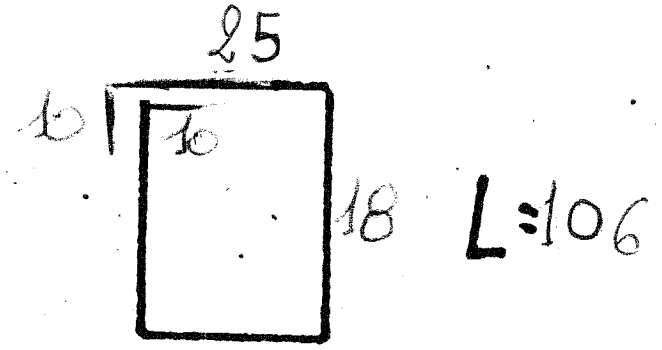
N° 15 staffe ϕ 8
passo 10 cm.

Sette CA | T 47 (29x42)





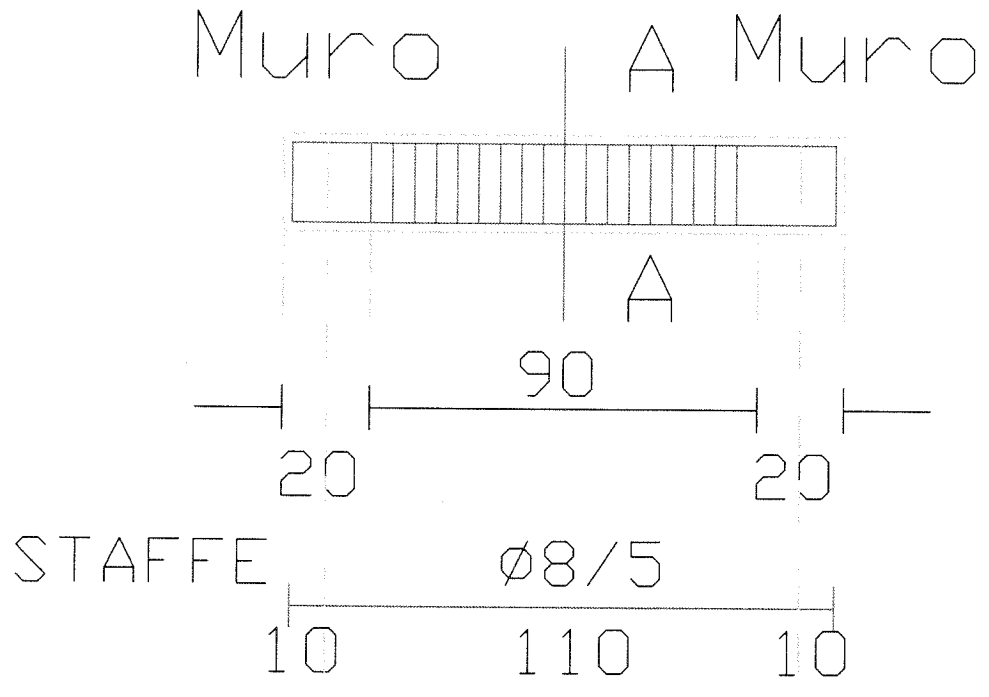




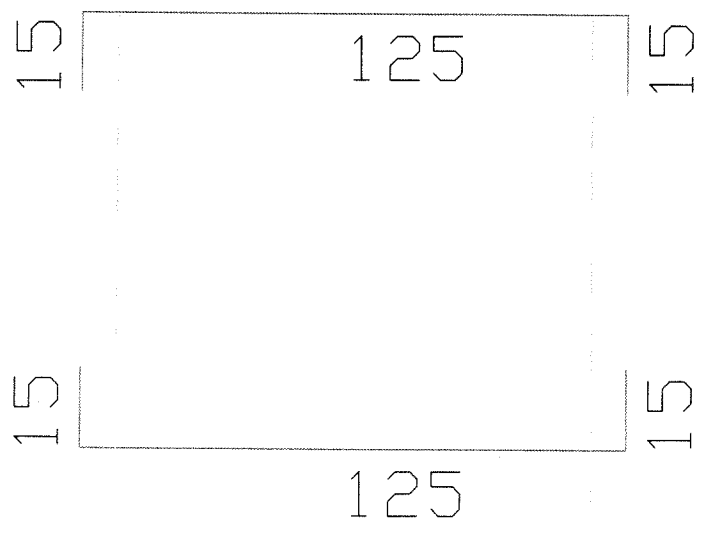
N° 15 Staffe ϕ8

passo 10 cm.

Trave 48 (20x22)



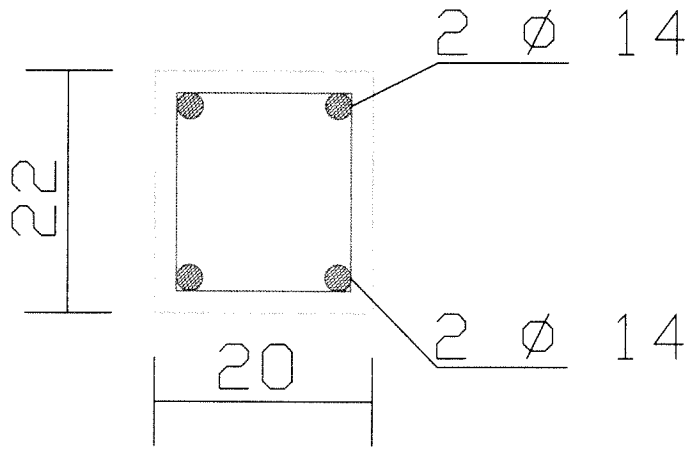
Pos. 1 SUP. 2 ø 14 L=155

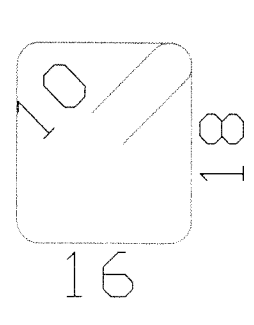


Pos. 2 INF. 2 ø 14 L=155

POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	2 ø 14	L=155
2 INF.	2 ø 14	L=155

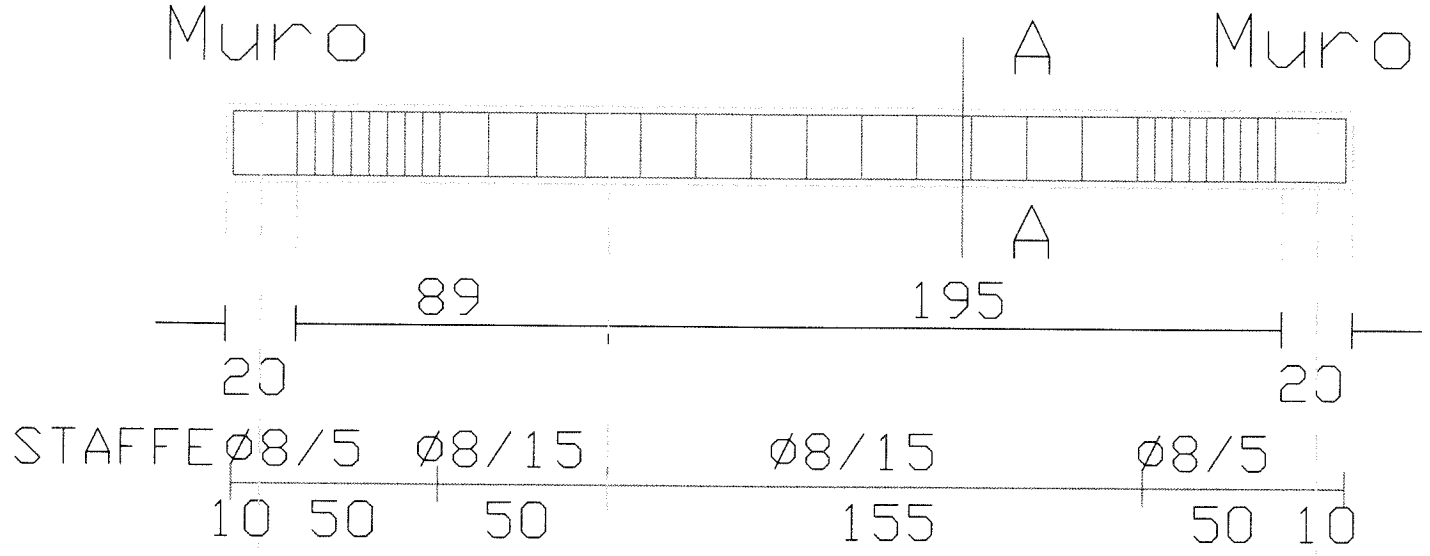
Sez. A-A

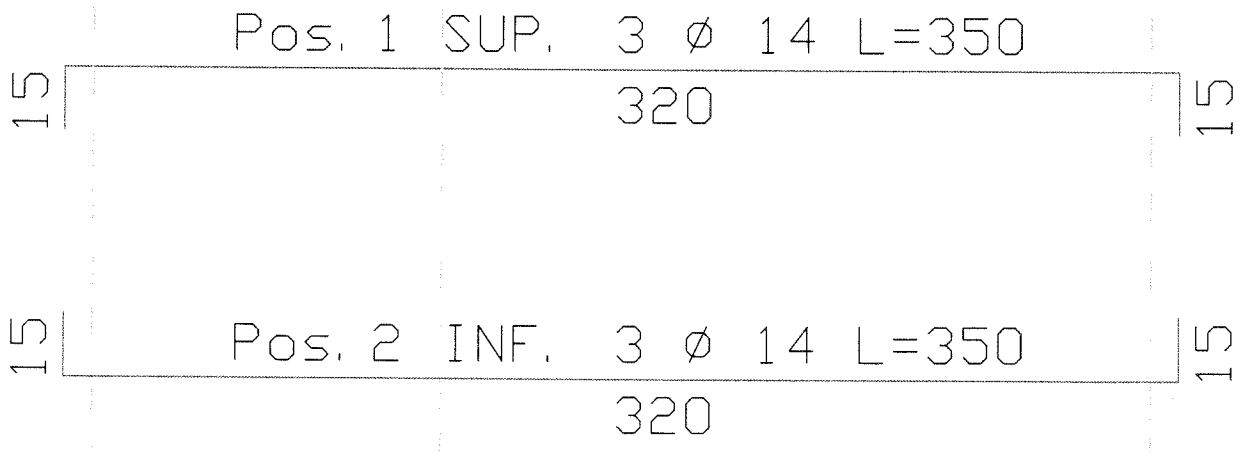




Staffe ø 8
L= 88

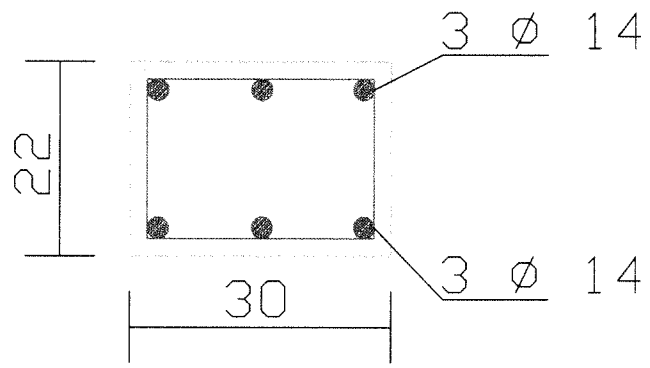
Trave 49 (30x22)

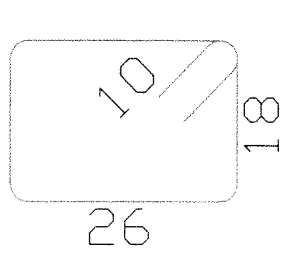




POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 14	L=350
2 INF.	3 ø 14	L=350

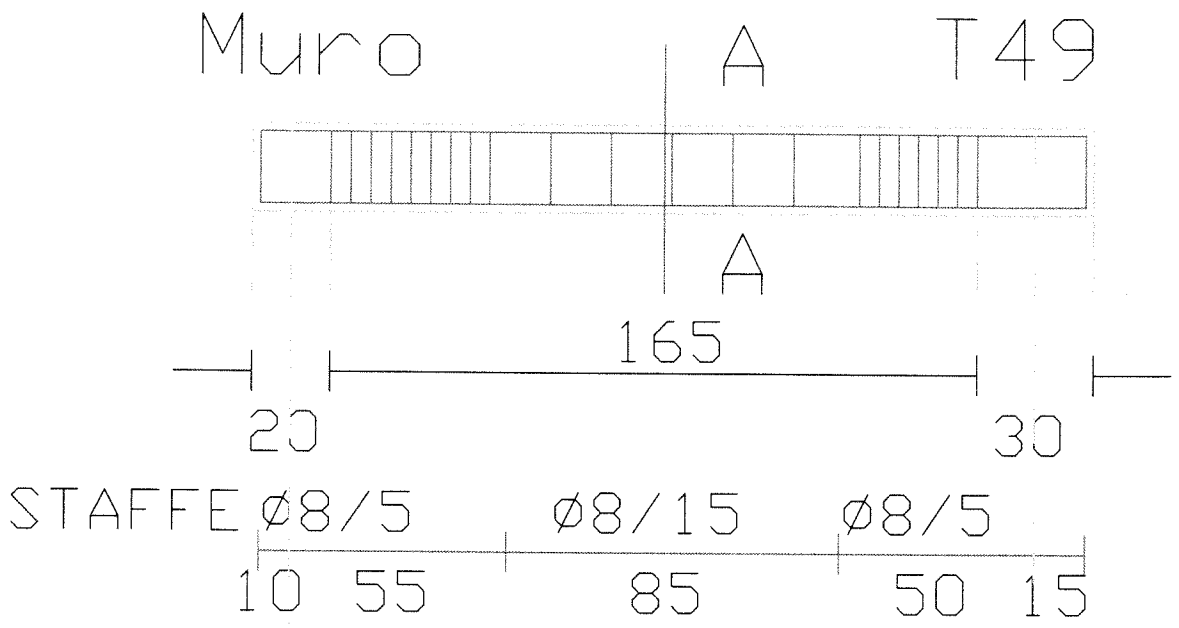
Sez. A-A



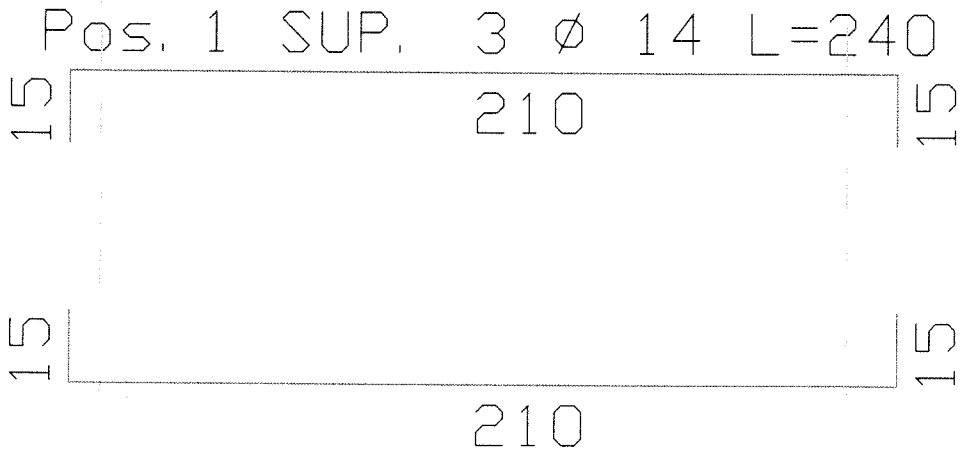


Staffe ø 8
L= 108

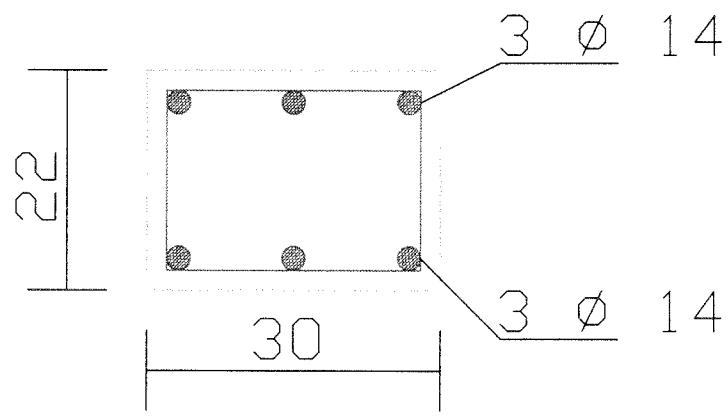
Trave 50 (30x22)

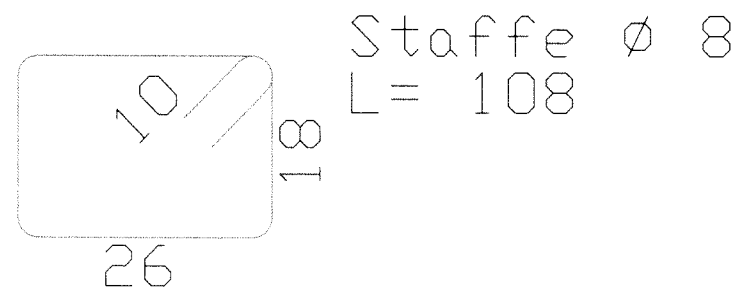


POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 14	L=240
2 INF.	3 ø 14	L=240

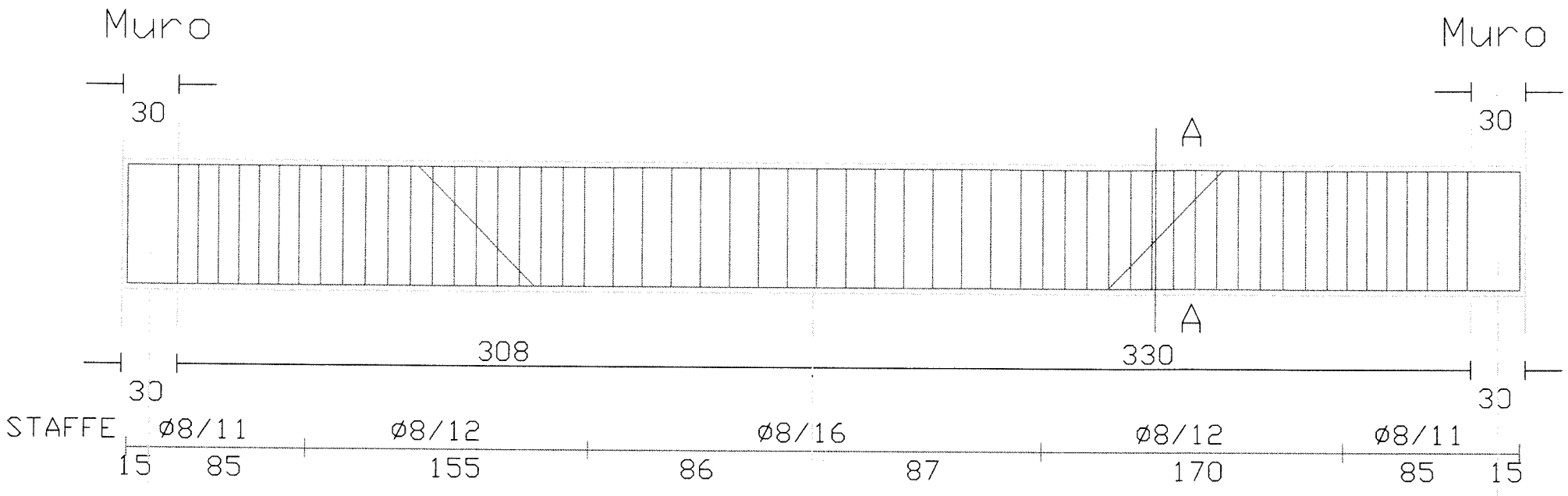


Sez. A-A

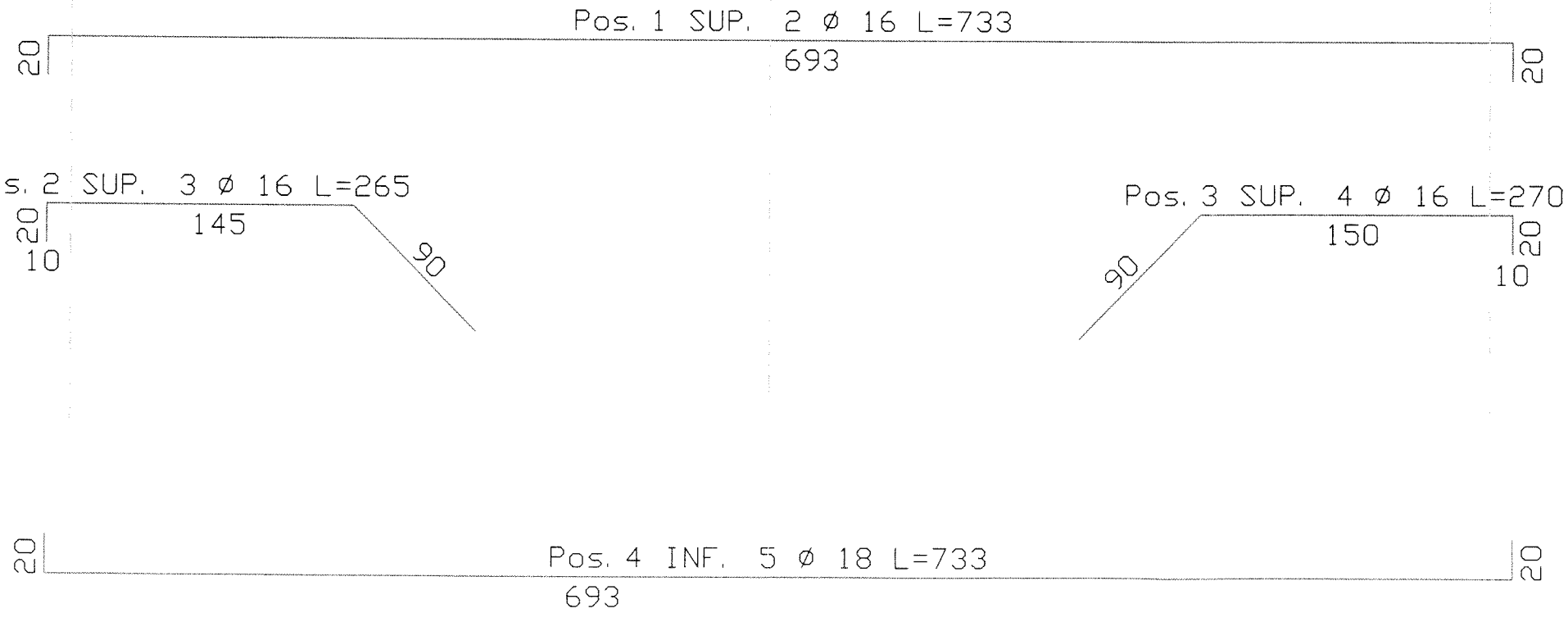




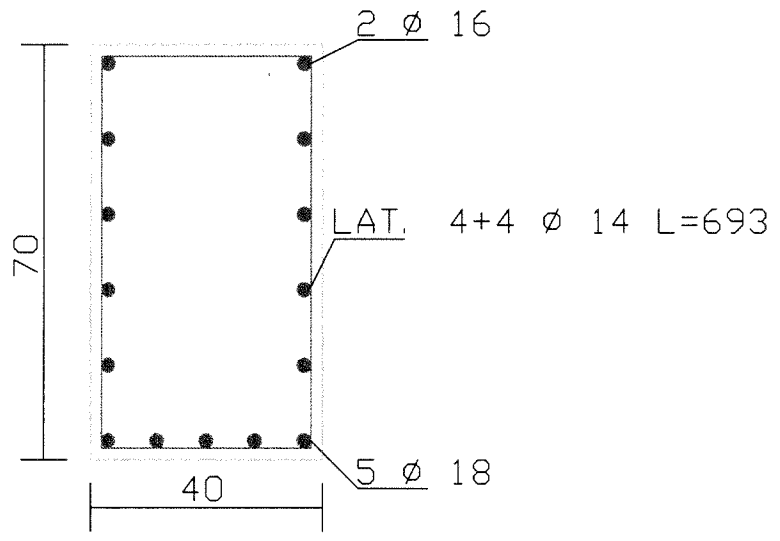
Trave 51 (40x70)

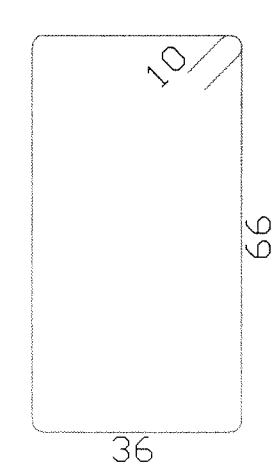


POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	2 ø 16	L=733
2 SUP.	3 ø 16	L=265
3 SUP.	4 ø 16	L=270
4 INF.	5 ø 18	L=733
5 LAT.	4 + 4 ø 14	L=693



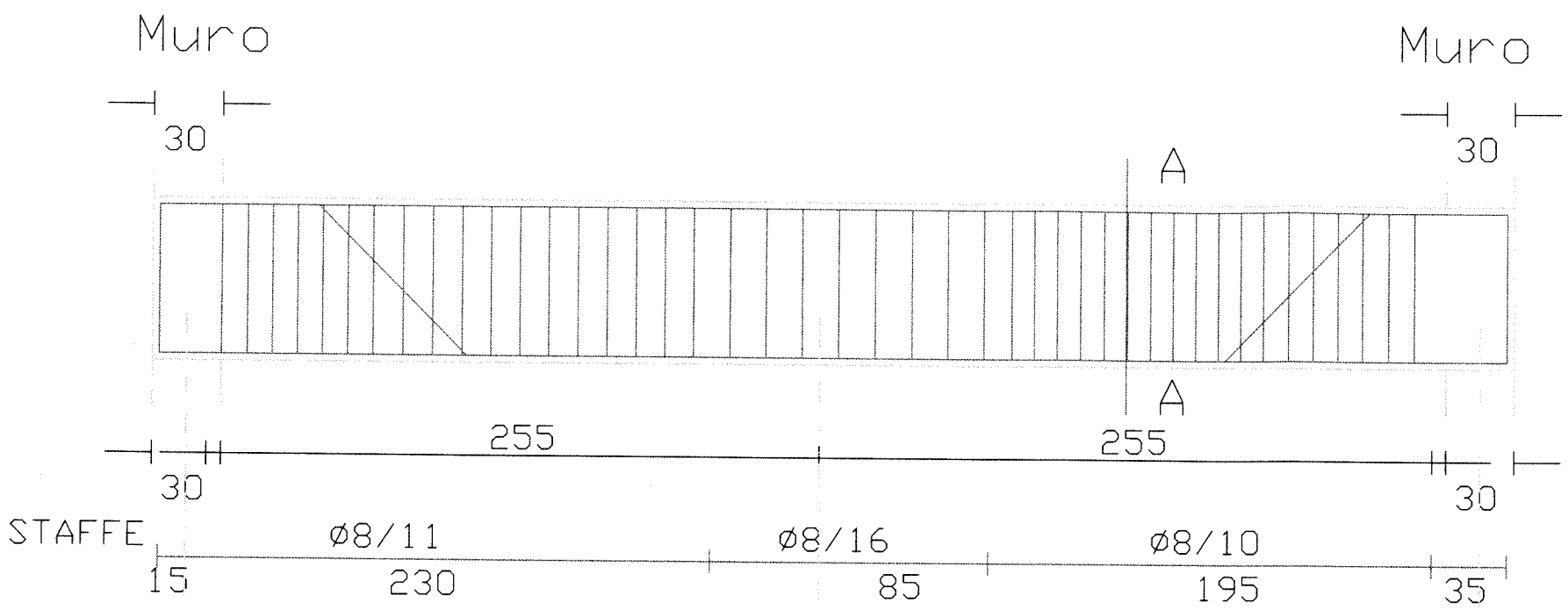
Sez. A-A

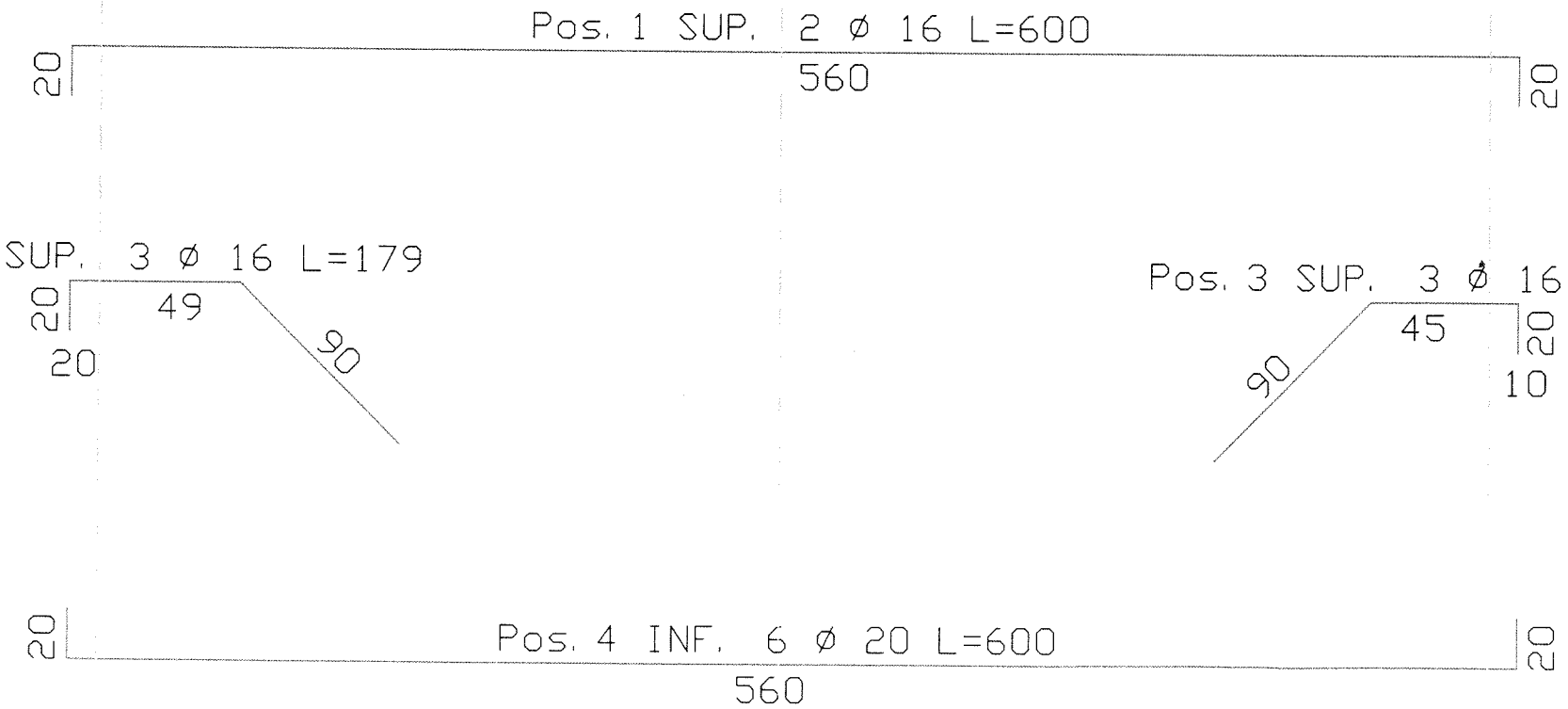




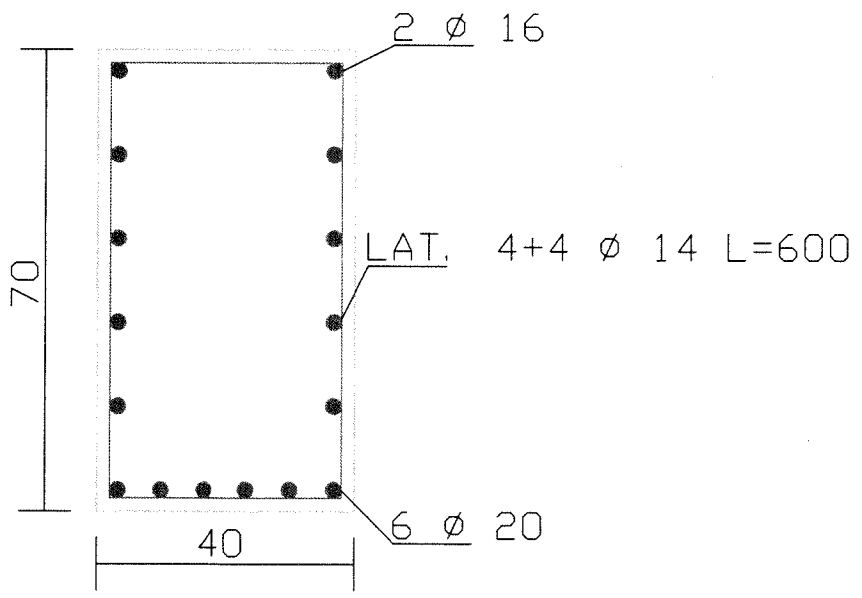
Trave 52 (40x70)

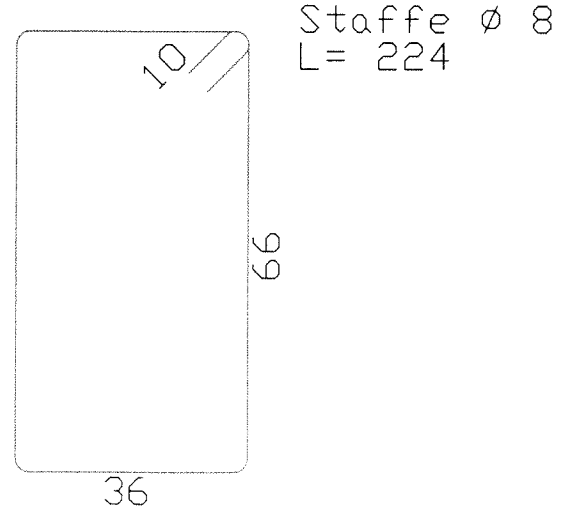
POS		DIAM ø (mm)	LUNGH (cm)
1	SUP.	2 ø 16	L=600
2	SUP.	3 ø 16	L=179
3	SUP.	3 ø 16	L=165
4	INF.	6 ø 20	L=600
5	LAT.	4 + 4 ø 14	L=600



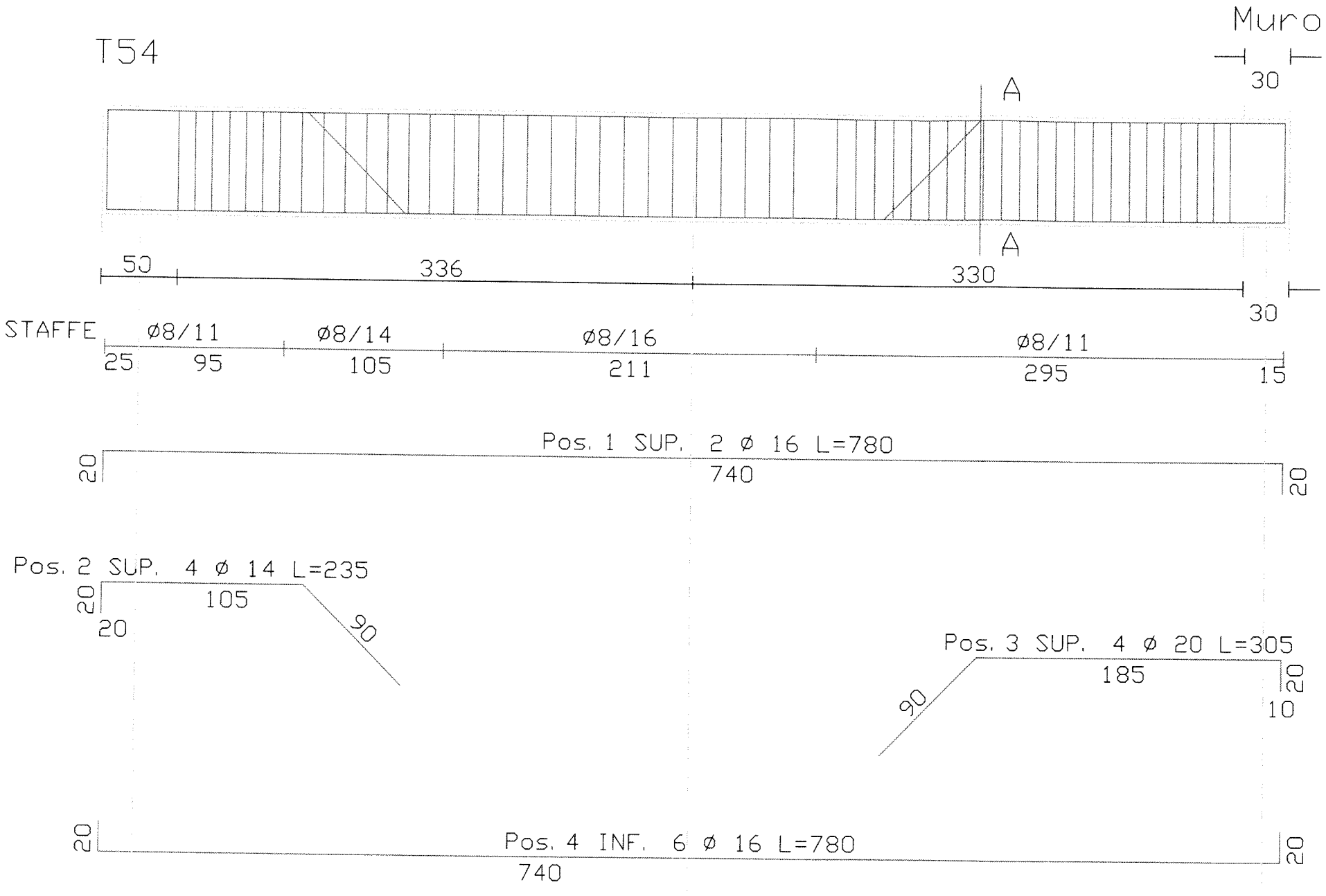


Sez. A-A



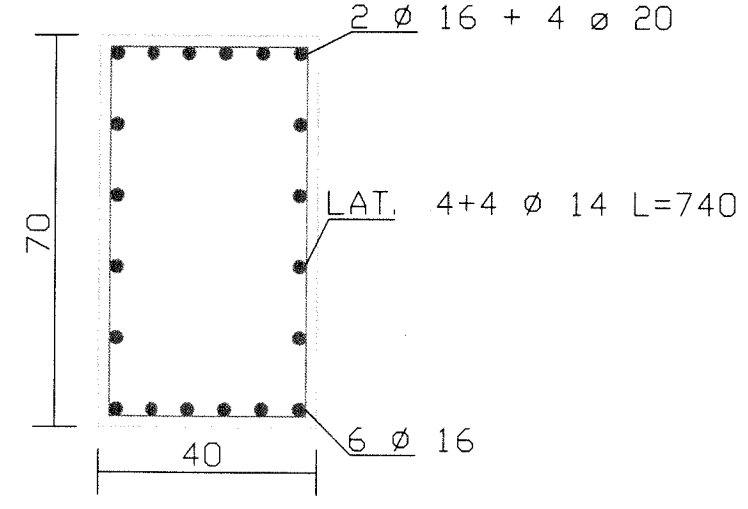


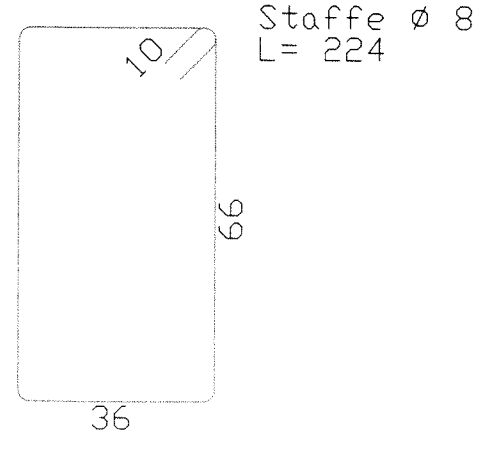
Trave 53 (40x70)



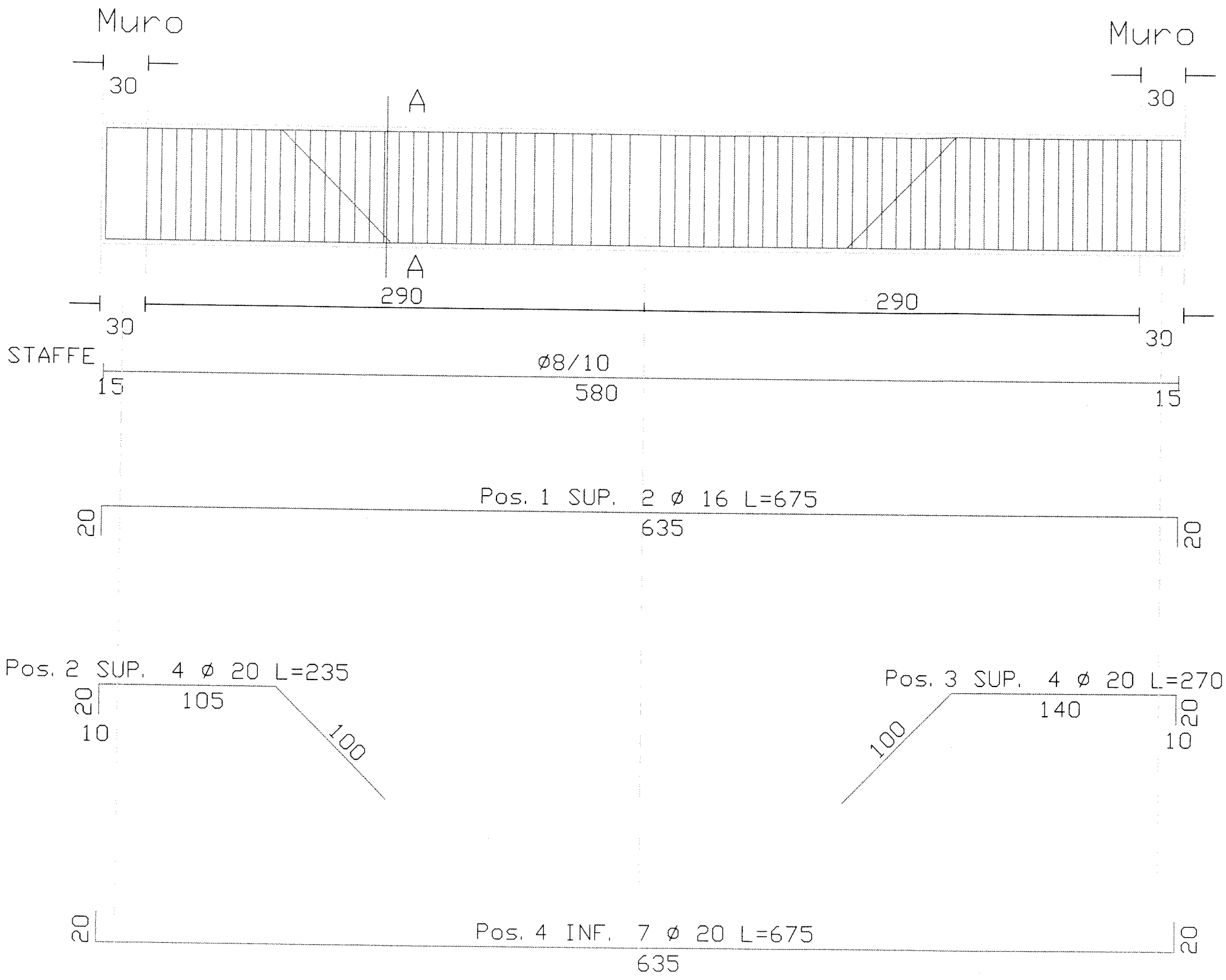
POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	2 ø 16	L=780
2 SUP.	4 ø 14	L=235
3 SUP.	4 ø 20	L=305
4 INF.	6 ø 16	L=780
5 LAT.	4 + 4 ø 14	L=740

Sez. A-A



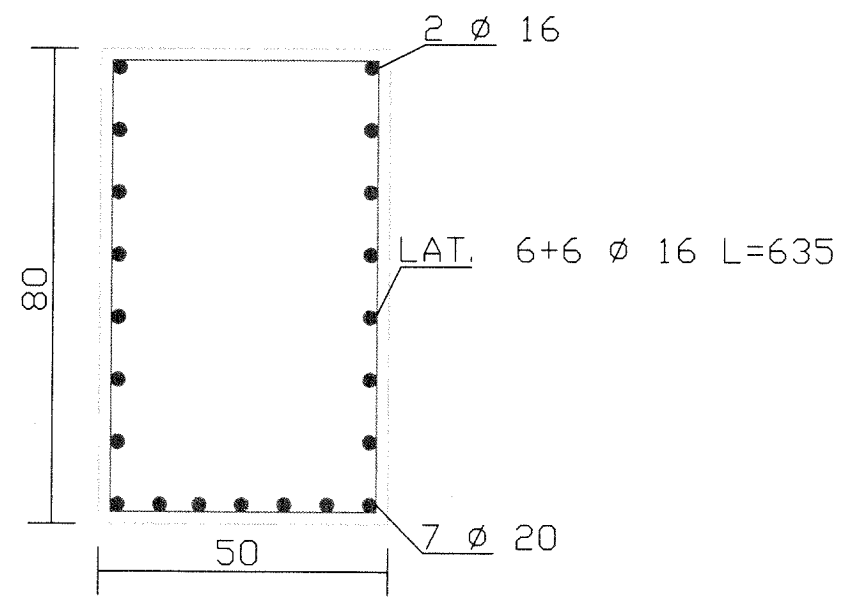


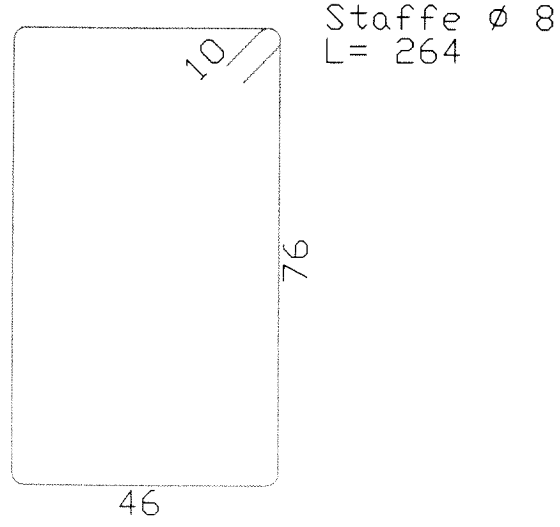
Trave 54 (50x80)



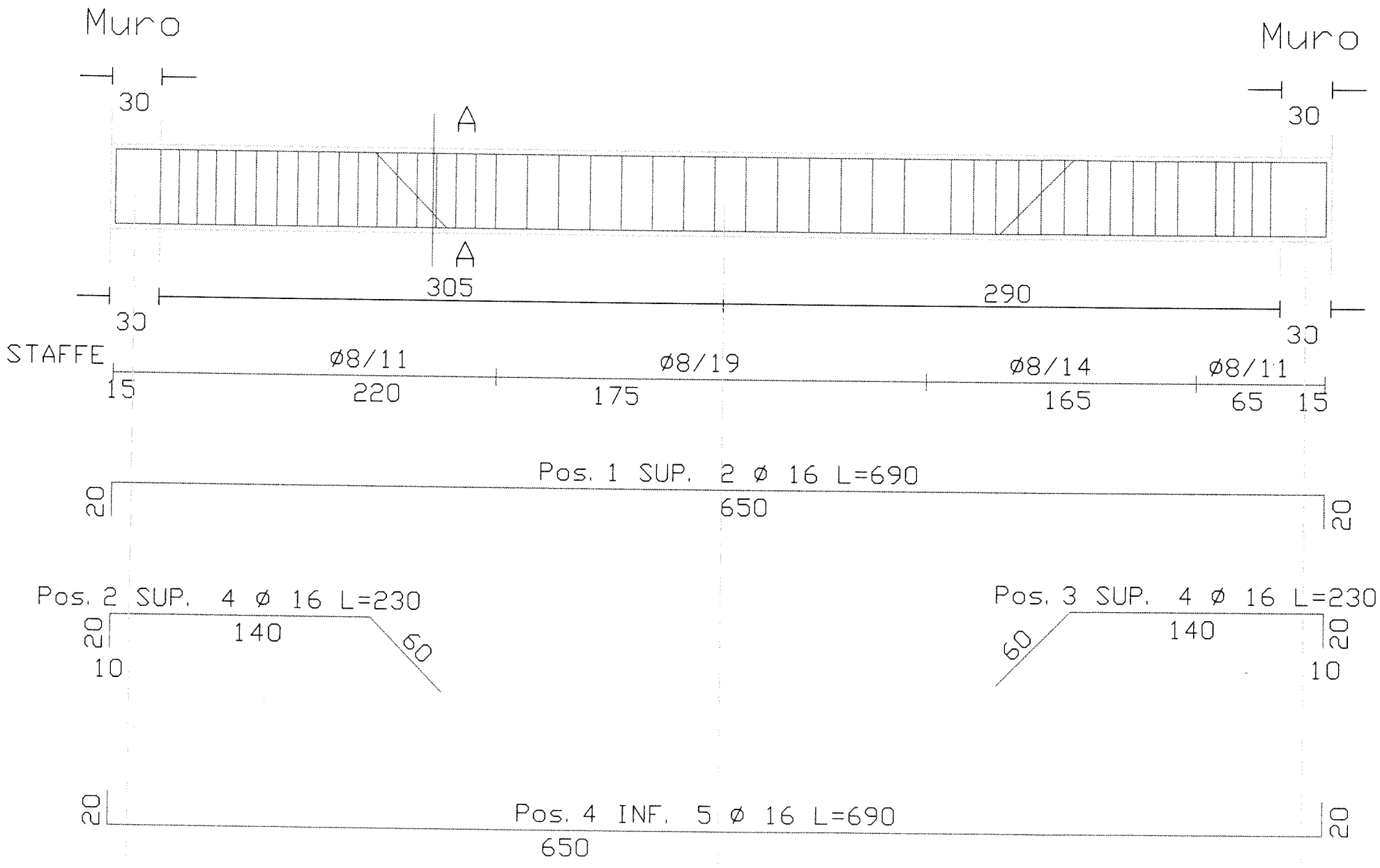
POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	2 ø 16	L=675
2 SUP.	4 ø 20	L=235
3 SUP.	4 ø 20	L=270
4 INF.	7 ø 20	L=675
5 LAT.	6 + 6 ø 16	L=635

Sez. A-A



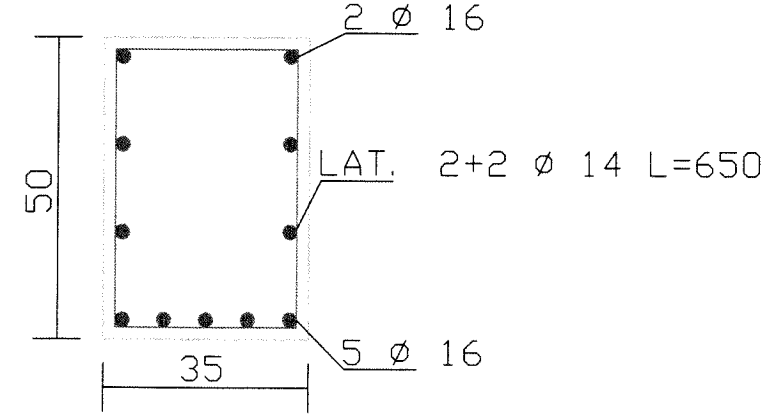


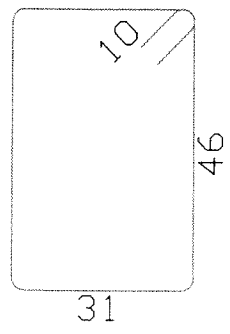
Trave 55 (35x50)



POS	DIAM ø (mm)	LUNGH (cm)
1	SUP. 2 ø 16	L=690
2	SUP. 4 ø 16	L=230
3	SUP. 4 ø 16	L=230
4	INF. 5 ø 16	L=690
5	LAT. 2 + 2 ø 14	L=650

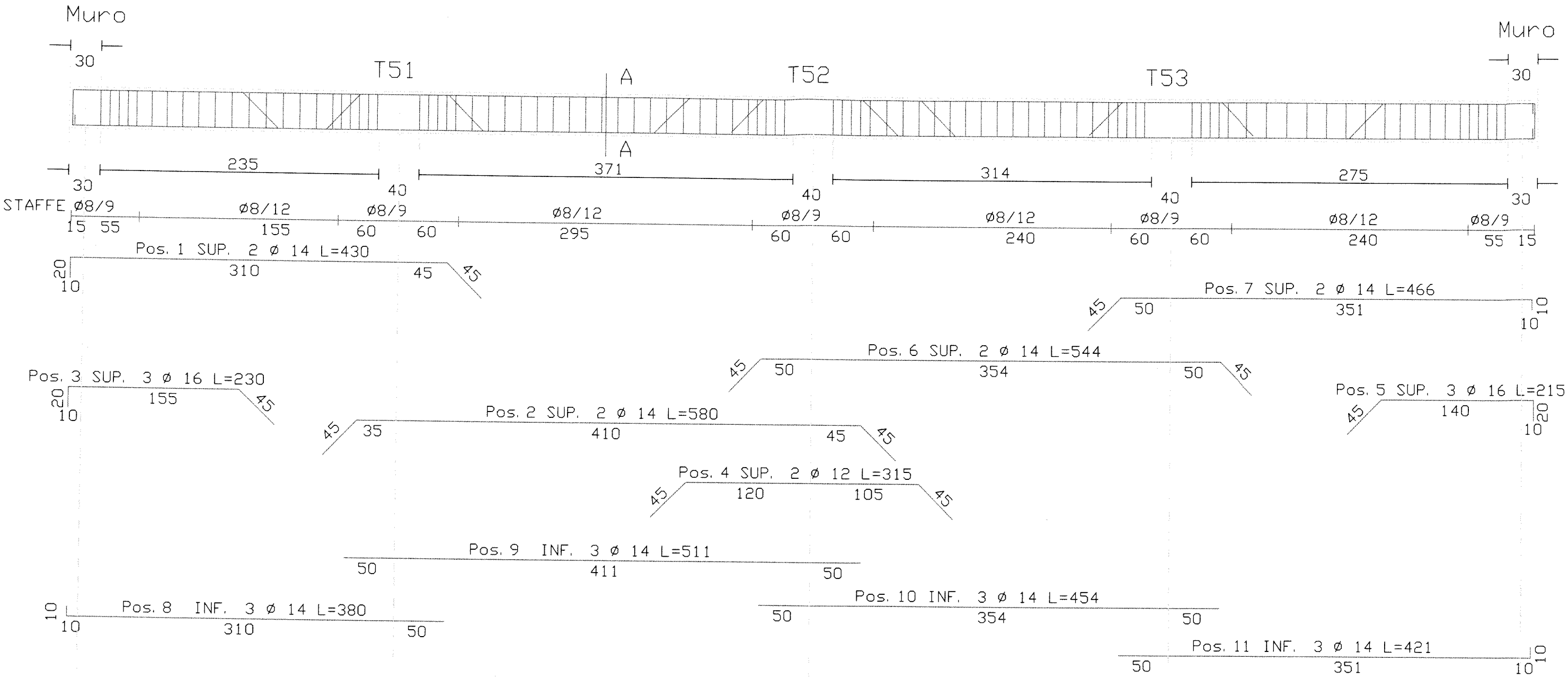
Sez. A-A



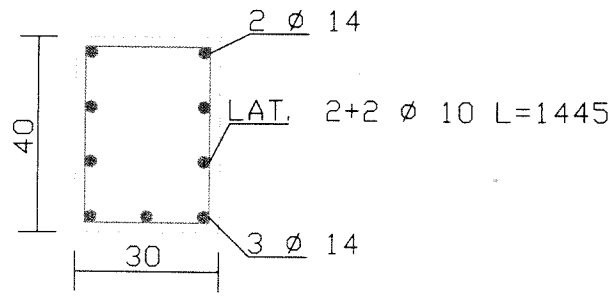


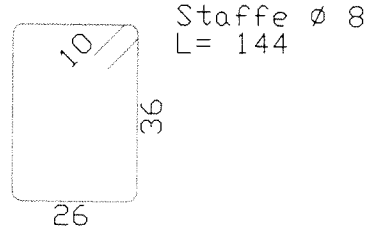
Staffe ø 8
L= 174

Trave 56 (30x40)



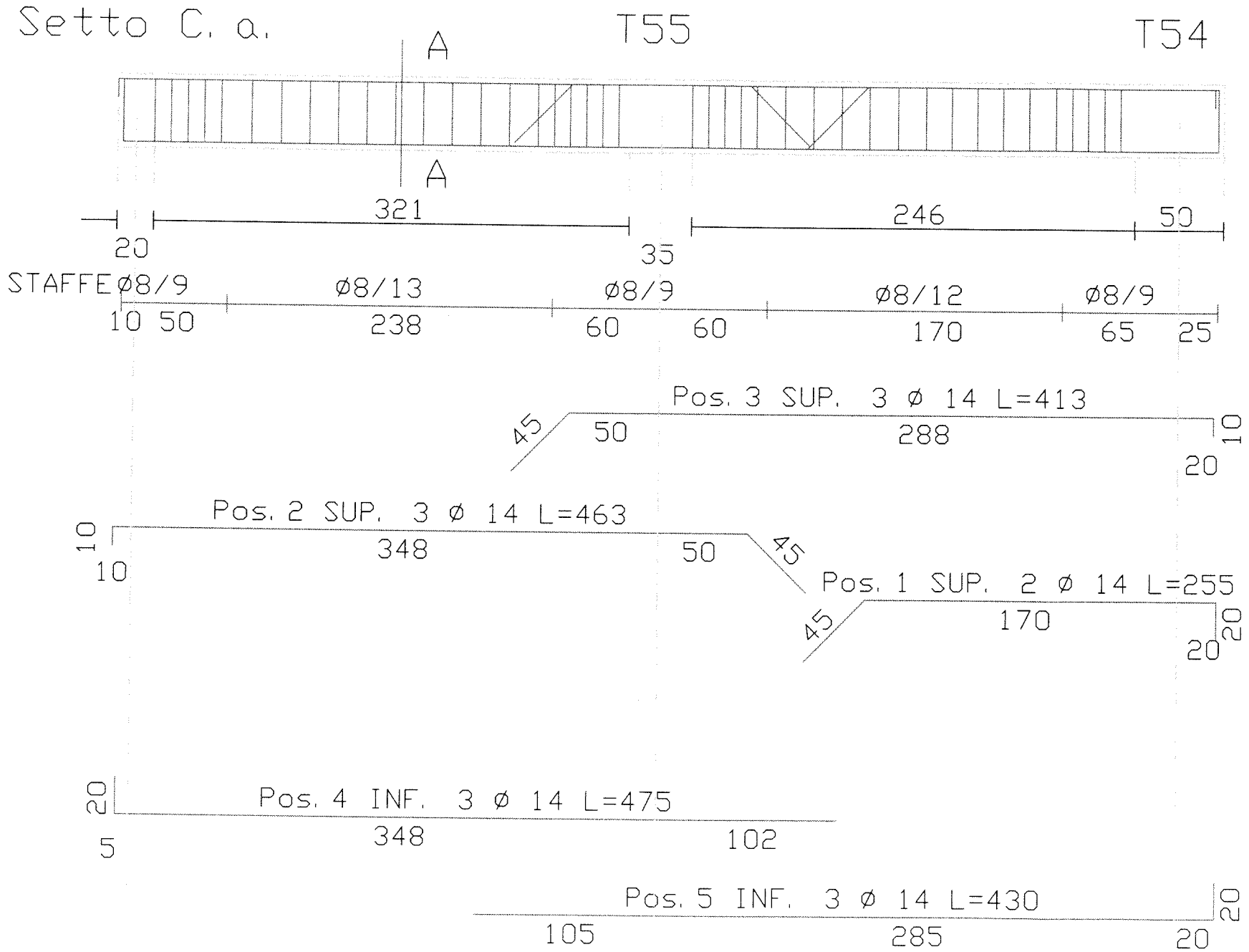
Sez. A-A





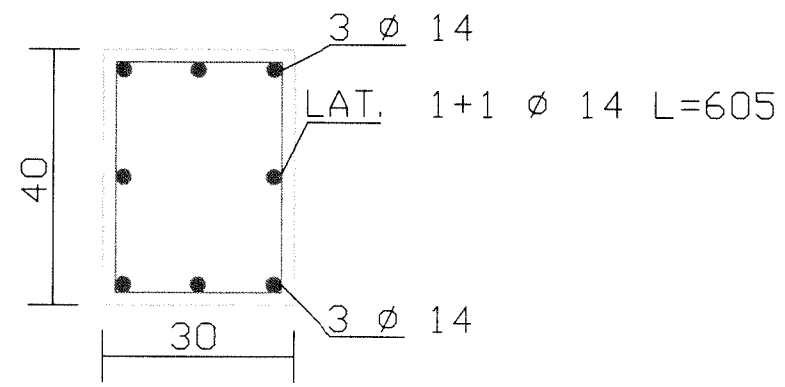
POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	2 ø 14	L=430
2 SUP.	2 ø 14	L=580
3 SUP.	3 ø 16	L=230
4 SUP.	2 ø 12	L=315
5 SUP.	3 ø 16	L=215
6 SUP.	2 ø 14	L=544
7 SUP.	2 ø 14	L=466
8 INF.	3 ø 14	L=380
9 INF.	3 ø 14	L=511
10 INF.	3 ø 14	L=454
11 INF.	3 ø 14	L=421
12 LAT.	2 + 2 ø 10	L=1445

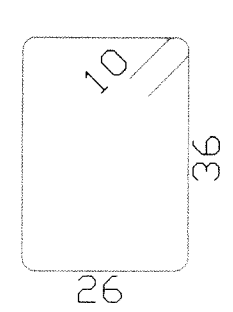
Trave 57 (30x40)



POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	2 ø 14	L=255
2 SUP.	3 ø 14	L=463
3 SUP.	3 ø 14	L=413
4 INF.	3 ø 14	L=475
5 INF.	3 ø 14	L=430
6 LAT.	1 + 1 ø 14	L=605

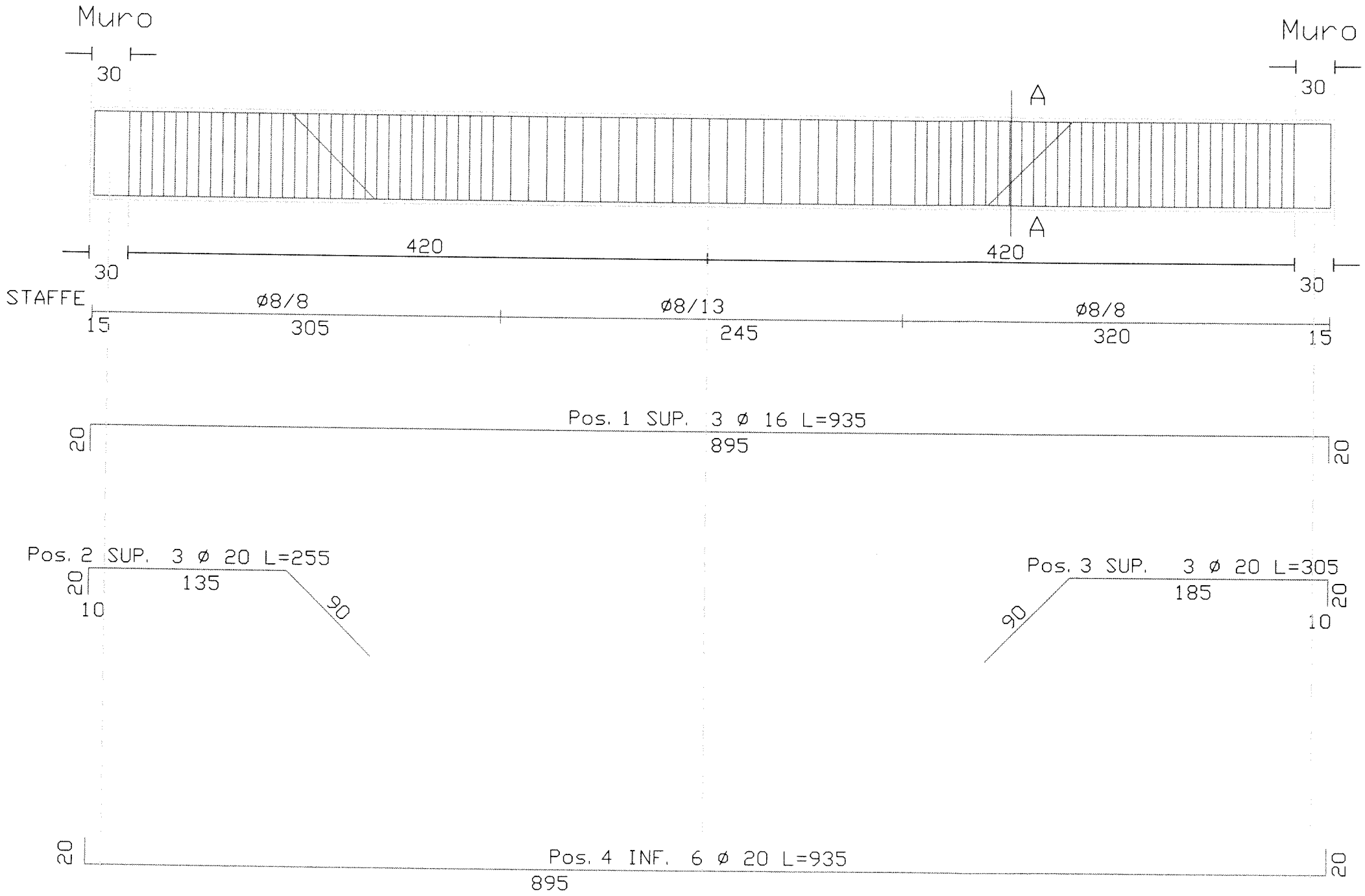
Sez. A-A





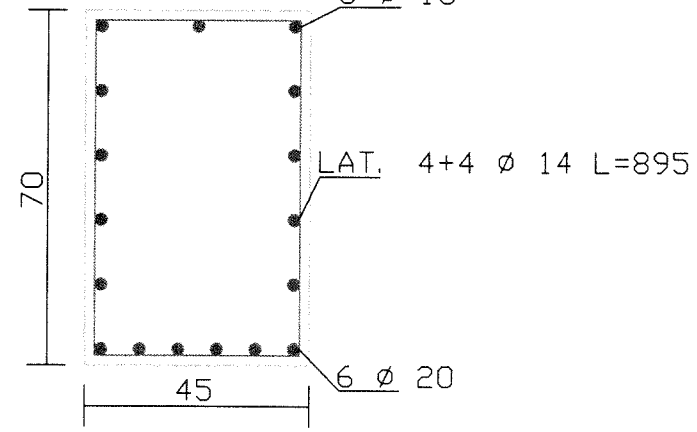
Staffe ø 8
L= 144

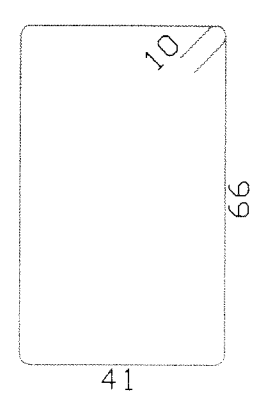
Trave 58 (45x70)



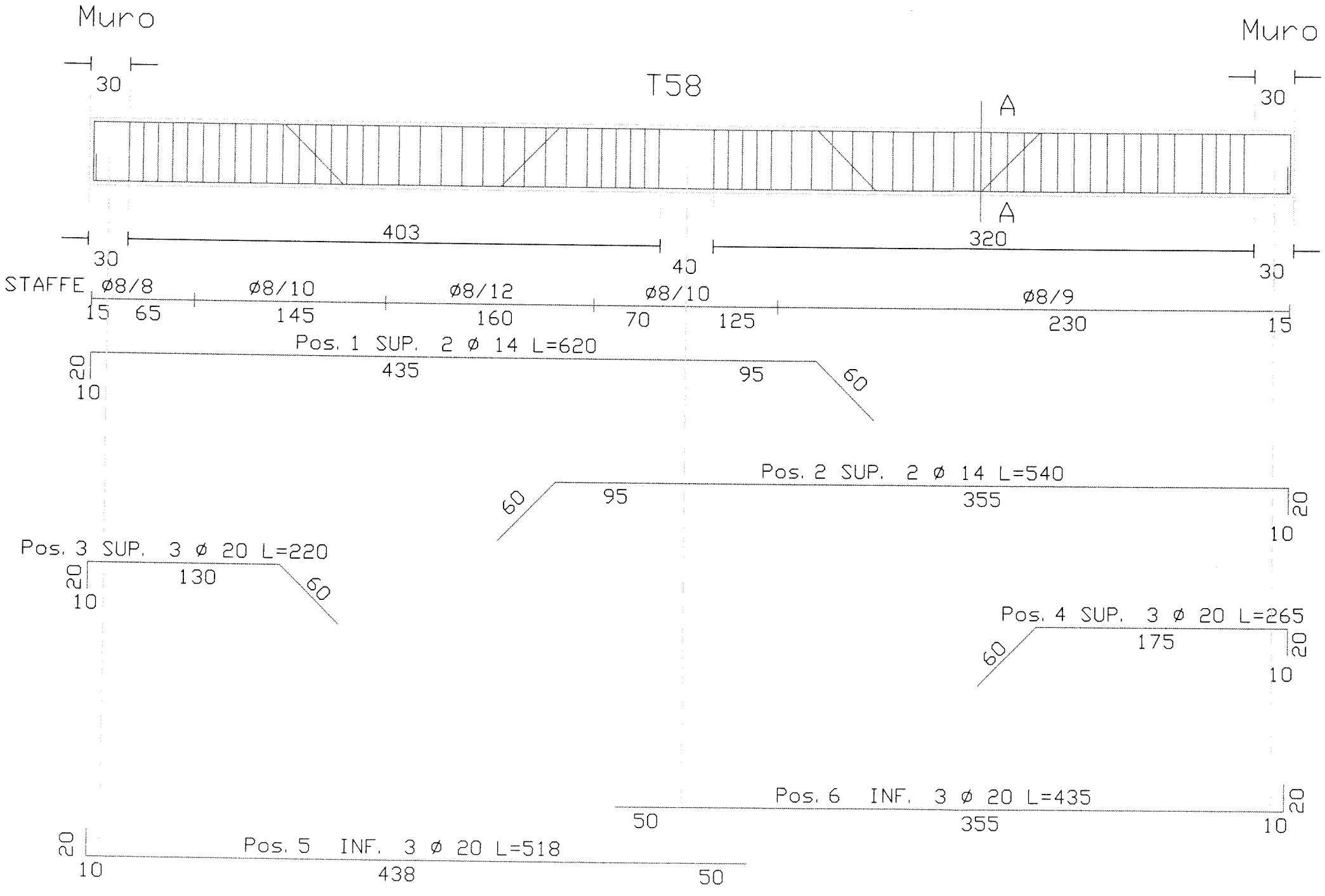
POS	DIAM Ø (mm)	LUNGH (cm)
1 SUP.	3 Ø 16	L=935
2 SUP.	3 Ø 20	L=255
3 SUP.	3 Ø 20	L=305
4 INF.	6 Ø 20	L=935
5 LAT.	4 + 4 Ø 14	L=895

Sez. A-A



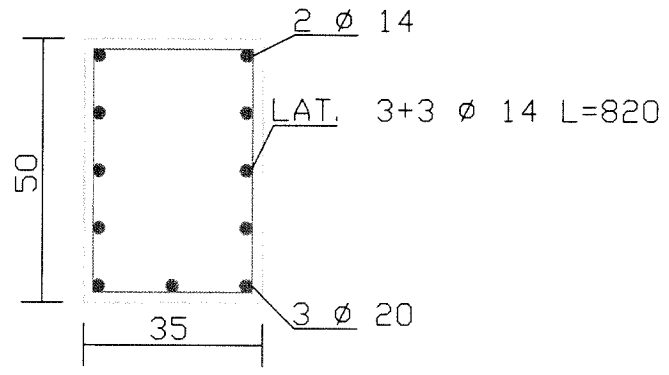


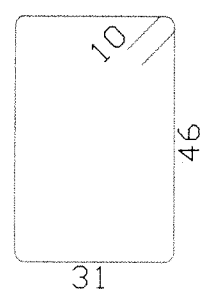
Trave 59 (35x50)



POS	DIAM ø (mm)	LUNGH (cm)
1	SUP. 2 ø 14	L=620
2	SUP. 2 ø 14	L=540
3	SUP. 3 ø 20	L=220
4	SUP. 3 ø 20	L=265
5	INF. 3 ø 20	L=518
6	INF. 3 ø 20	L=435
7	LAT. 3 + 3 ø 14	L=820

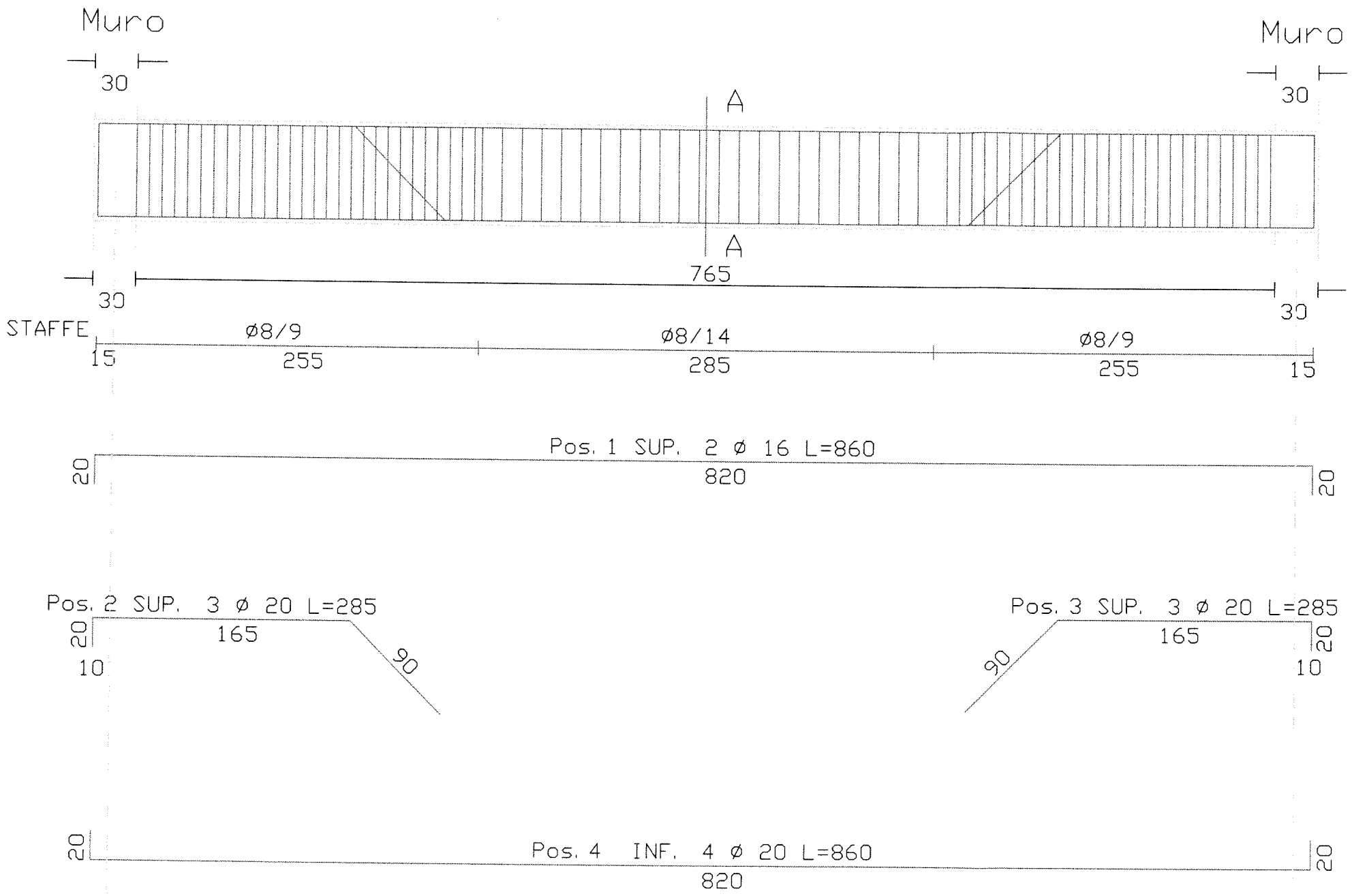
Sez. A-A





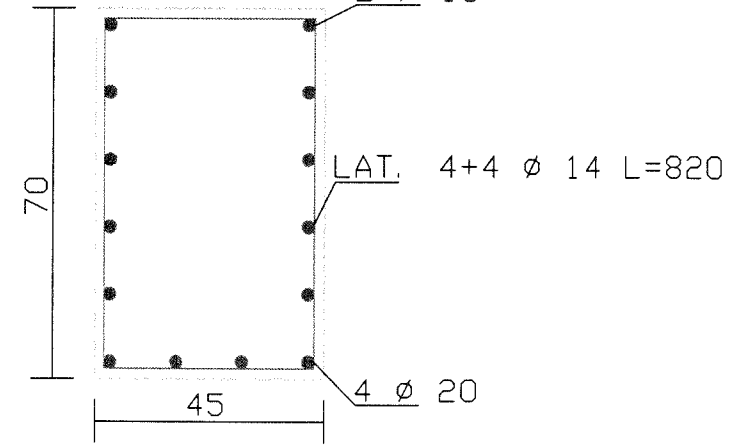
Staffe ø 8
L= 174

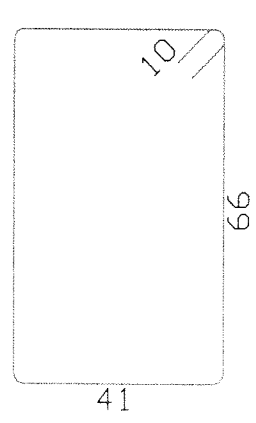
Trave 60/61 (45x70)



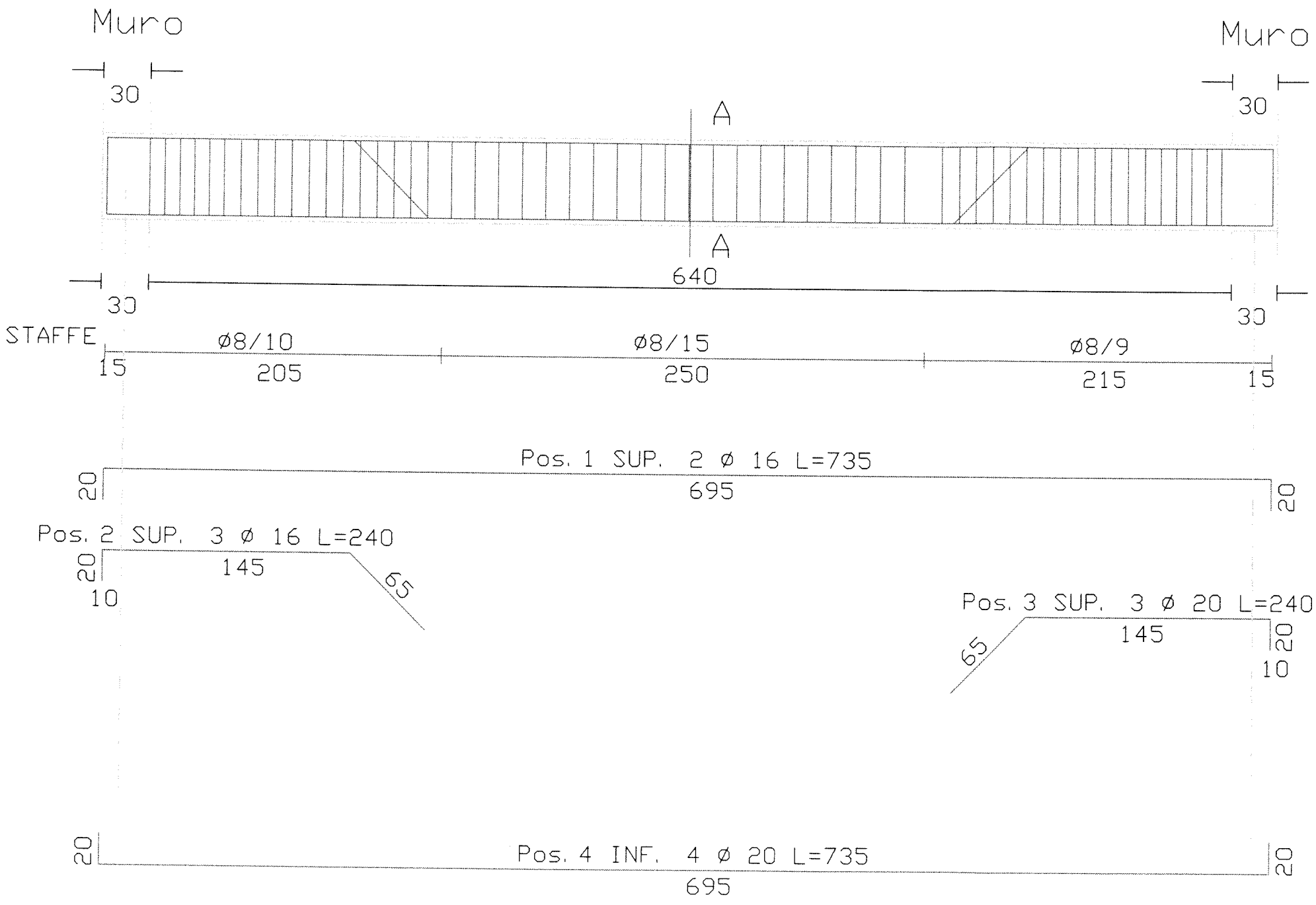
POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	2 ø 16	L=860
2 SUP.	3 ø 20	L=285
3 SUP.	3 ø 20	L=285
4 INF.	4 ø 20	L=860
5 LAT.	4 + 4 ø 14	L=820

Sez. A-A



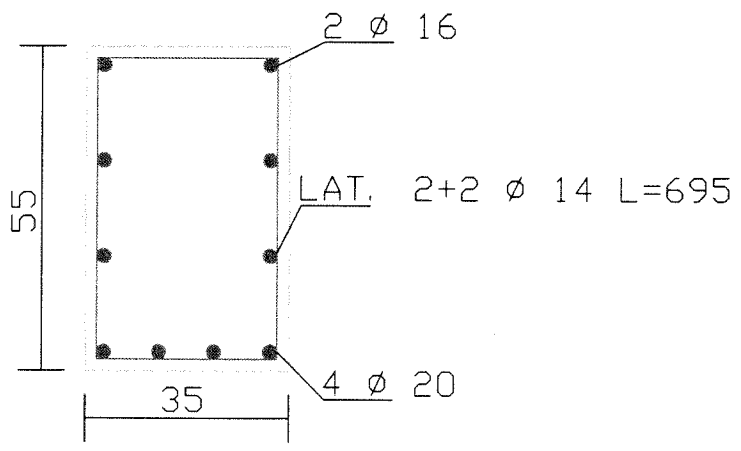


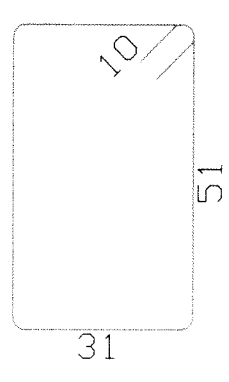
Trave 62/63 (35x55)



POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	2 ø 16	L=735
2 SUP.	3 ø 16	L=240
3 SUP.	3 ø 20	L=240
4 INF.	4 ø 20	L=735
5 LAT.	2 + 2 ø 14	L=695

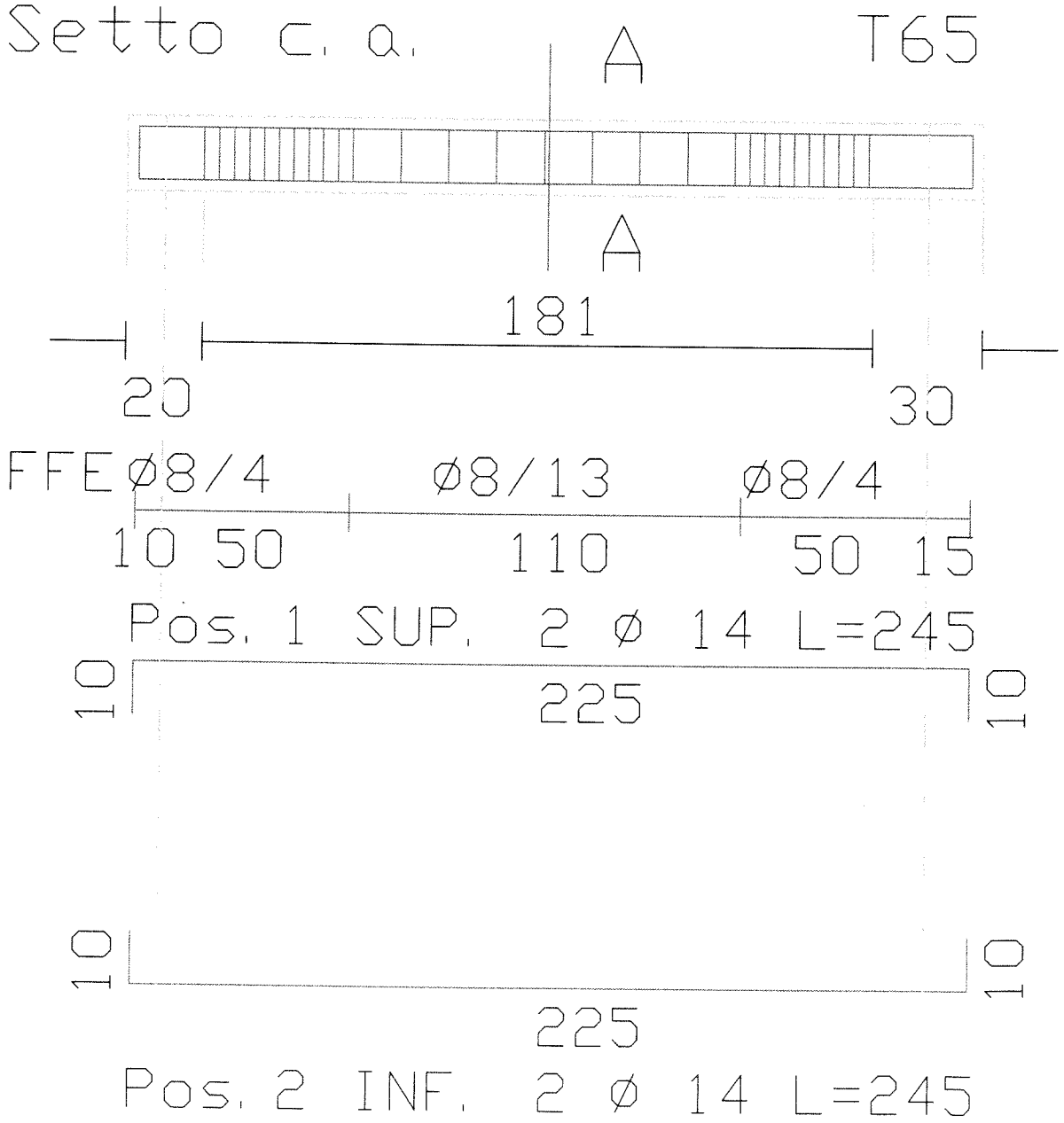
Sez. A-A





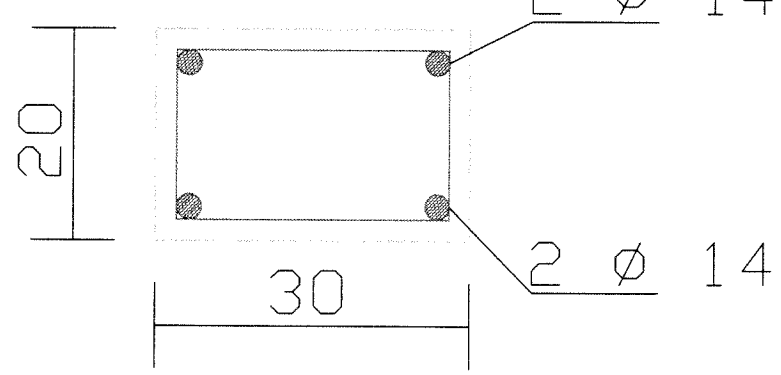
Staffe ø 8
L= 184

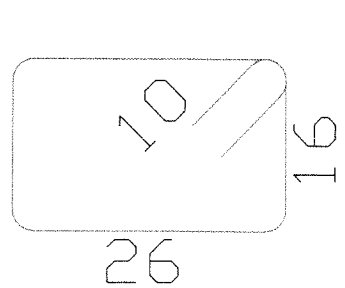
Trave 64 (30x20)



POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	2 ø 14	L=245
2 INF.	2 ø 14	L=245

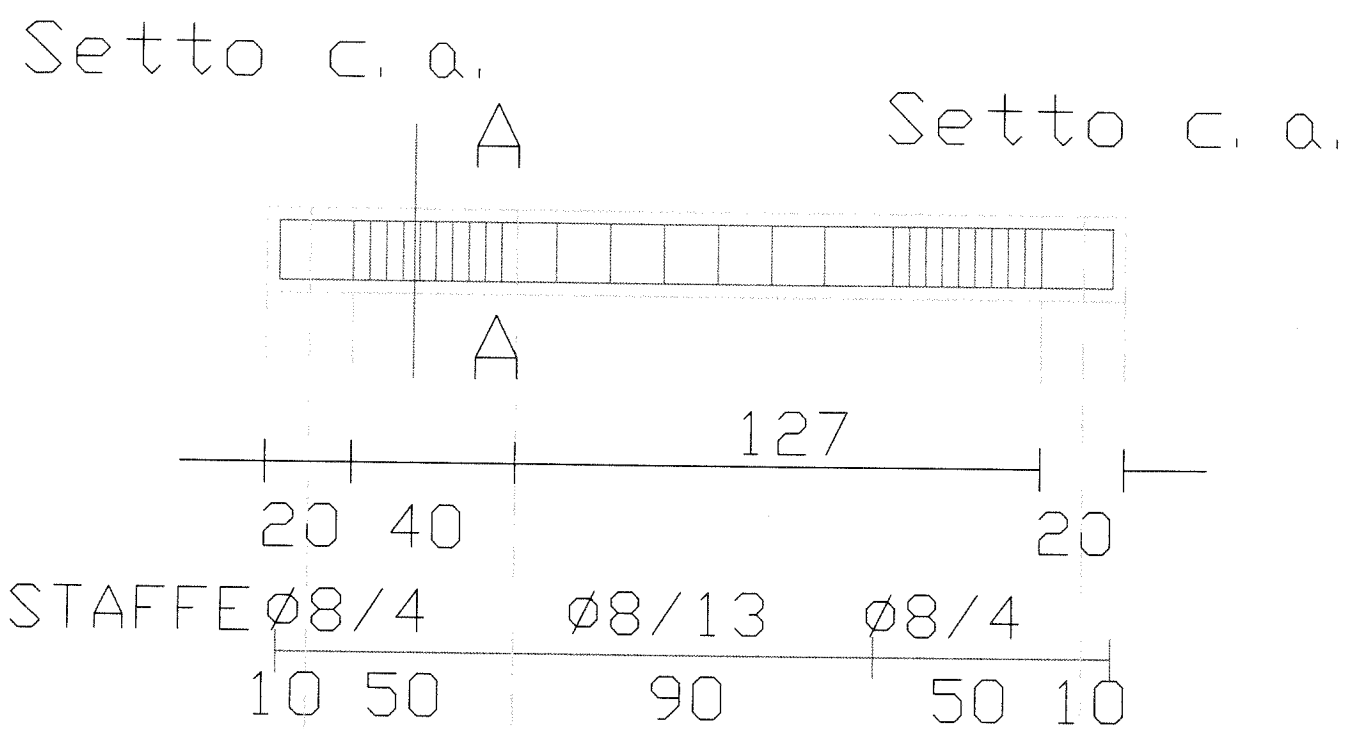
Sez. A-A





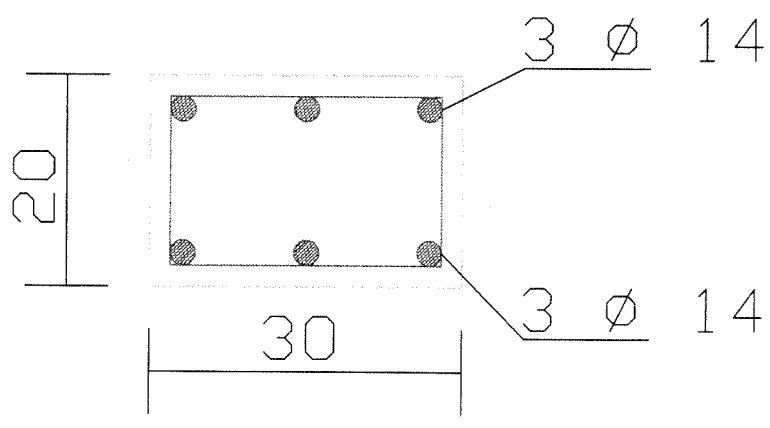
Staffe ø 8
L= 104

Trave 65 (30x20)

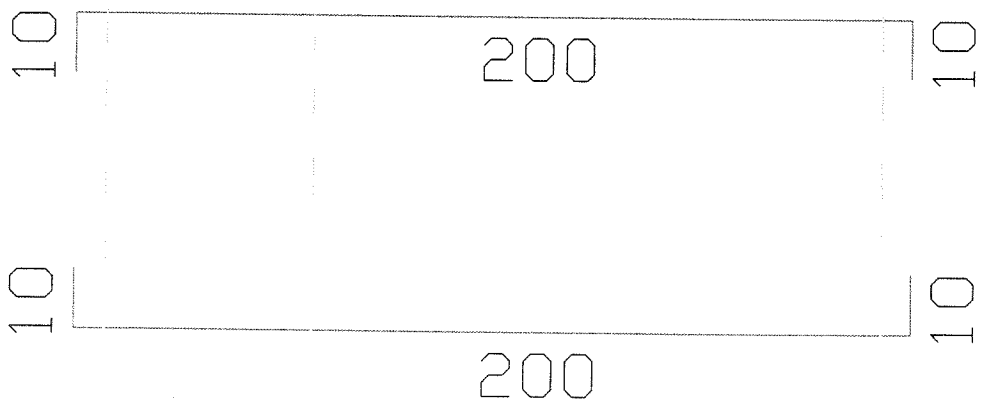


POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	3 ø 14	L=220
2 INF.	3 ø 14	L=220

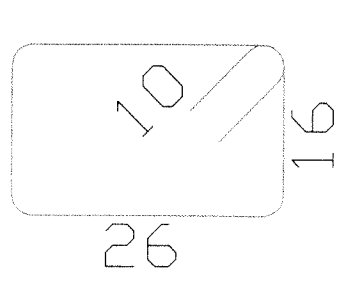
Sez. A-A



Pos. 1 SUP. 3 ø 14 L=220



Pos. 2 INF. 3 ø 14 L=220

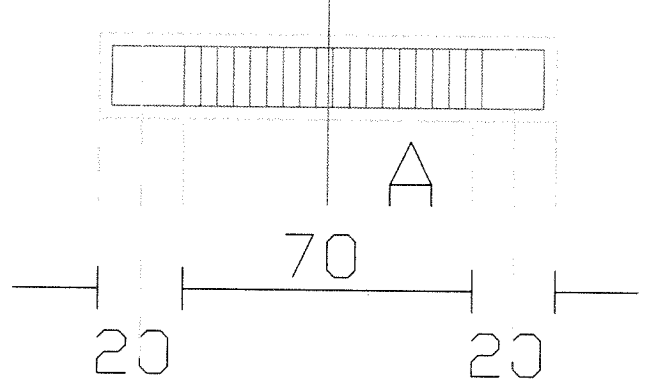


Staffe ø 8
L= 104

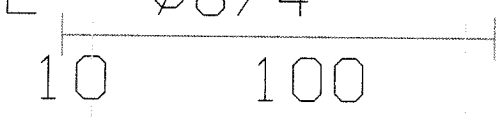
Trave 66 (20x20)

POS		DIAM ø (mm)	LUNGH (cm)
1	SUP.	2 ø 14	L=120
2	INF.	2 ø 14	L=120

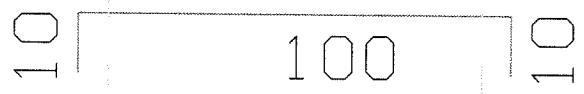
Setto c.a. A Setto c.a.

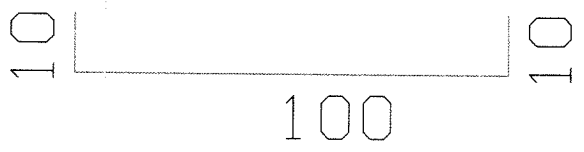


STAFFE ø8/4



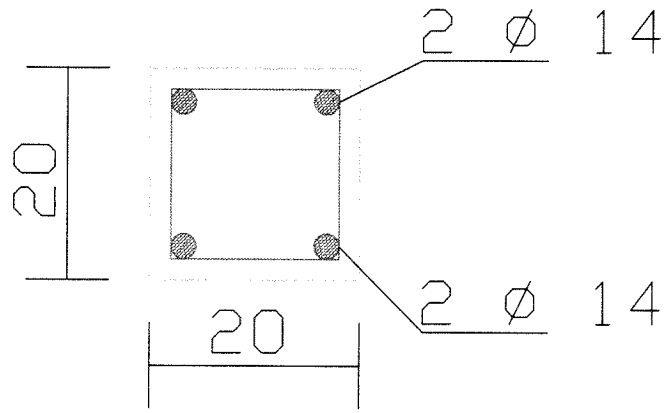
Pos. 1 SUP. 2 ø 14 L=120

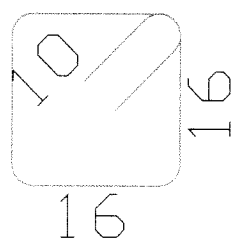




Pos. 2 INF. 2 ø 14 L=120

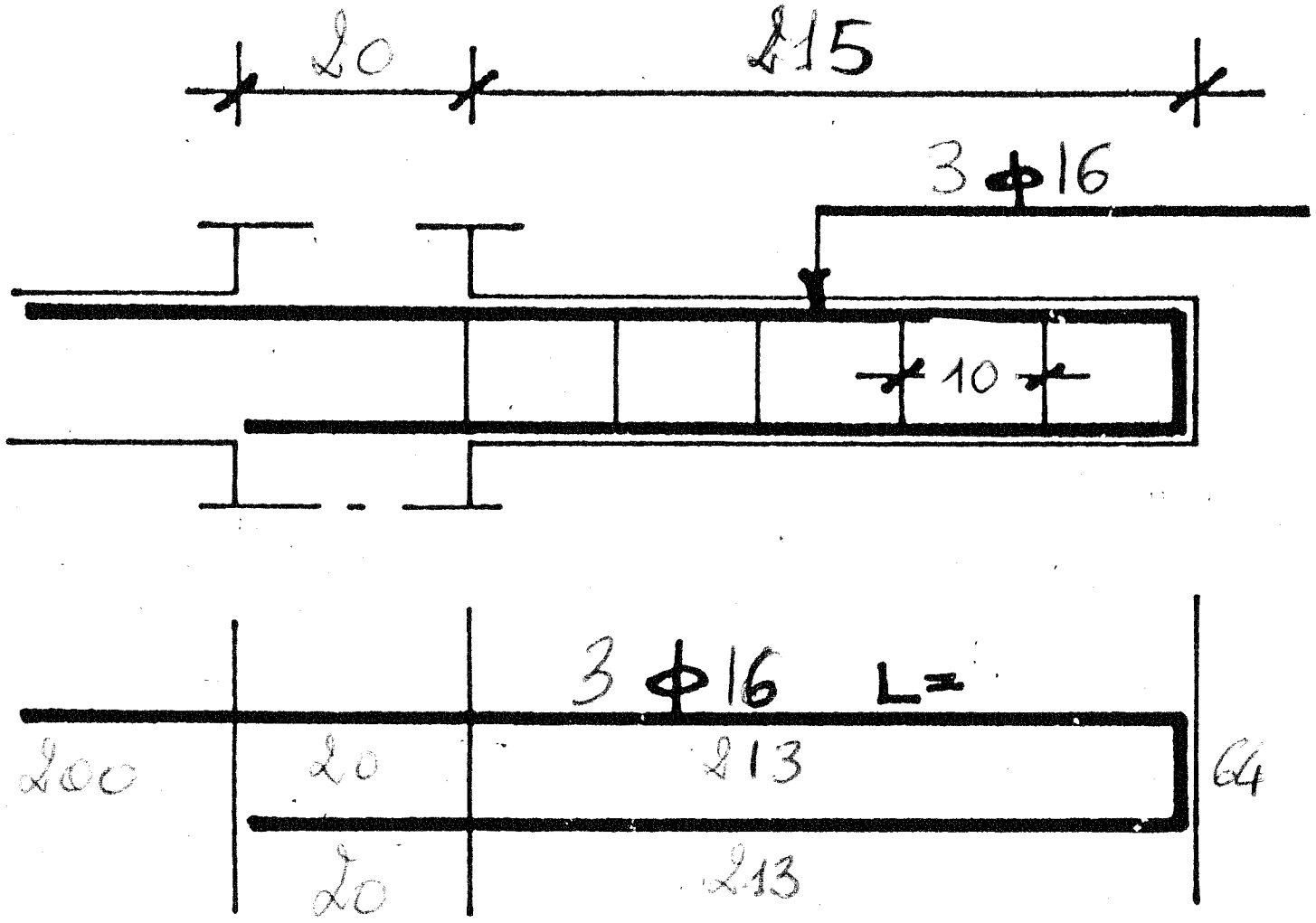
Sez. A-A

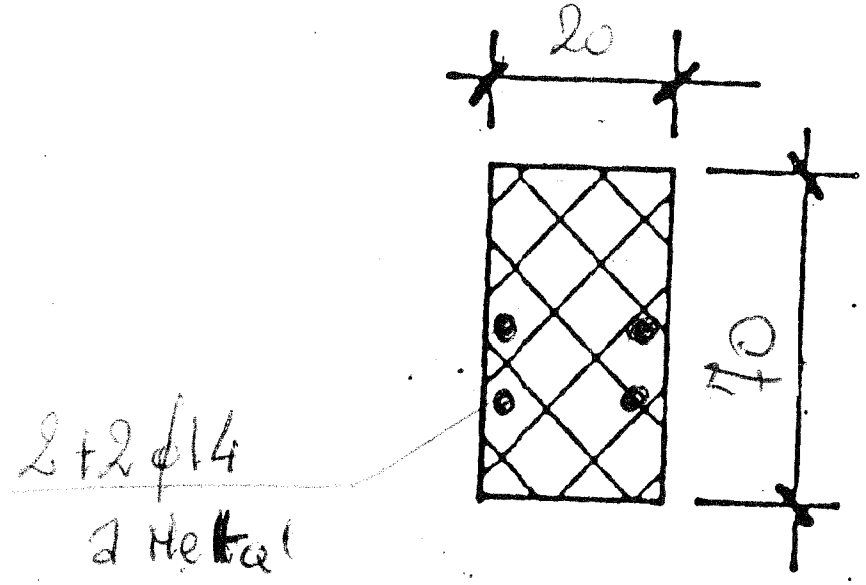


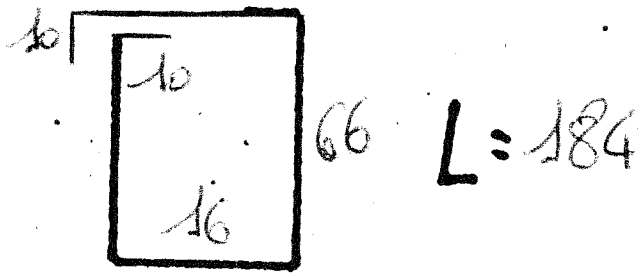


Staffe ø 8
L= 84

Sett. c.A	T 67	(20 x 70)

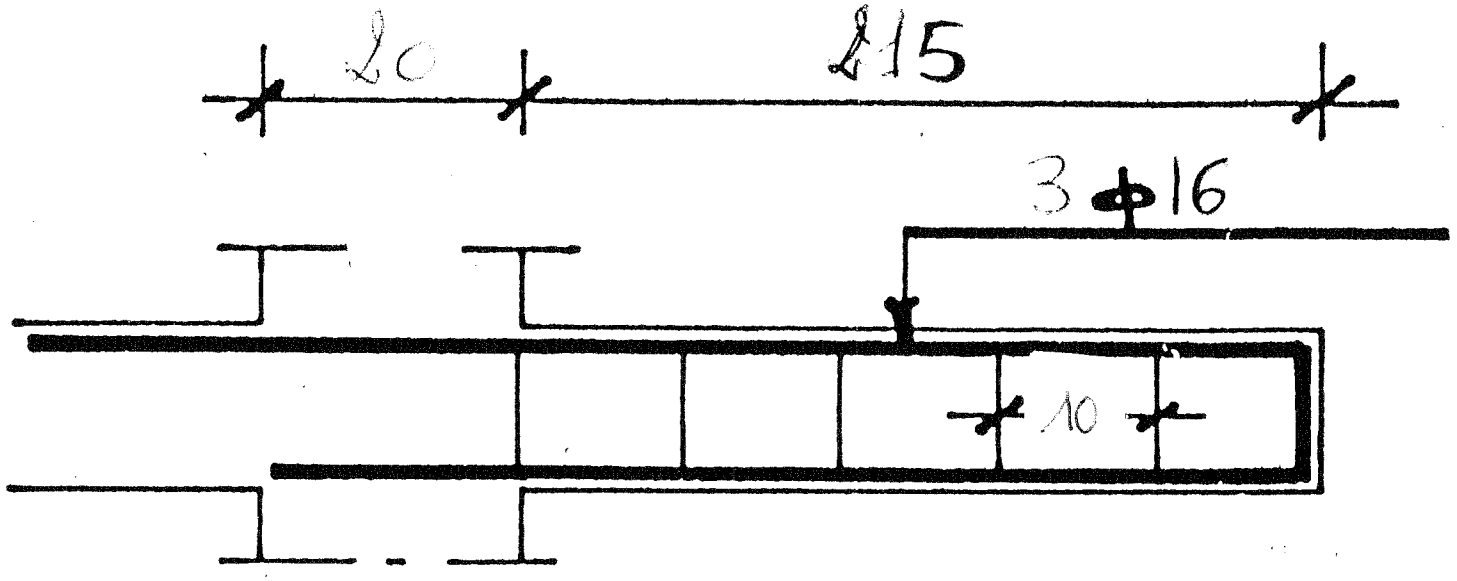


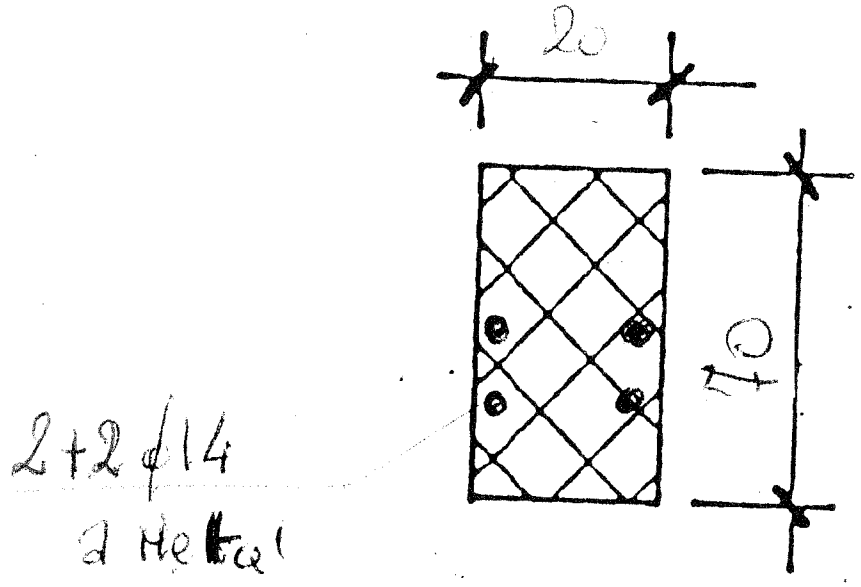


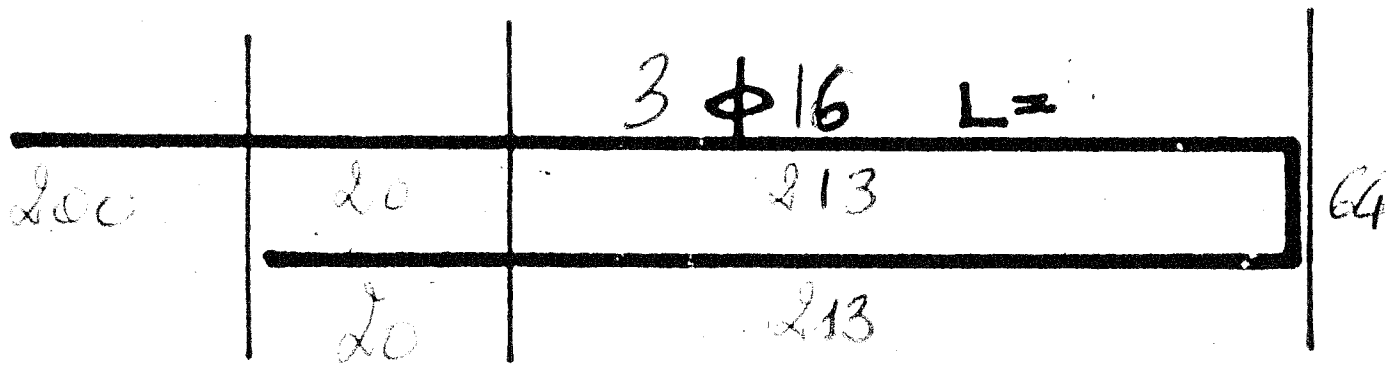


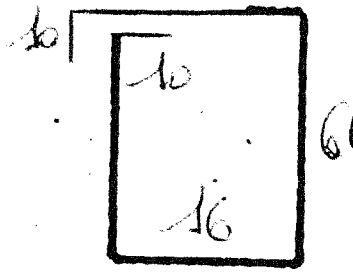
N° 22 Staffe ϕ 8
passo 10 cm.

Sotto c.A	T 68	(20 x 40 ?







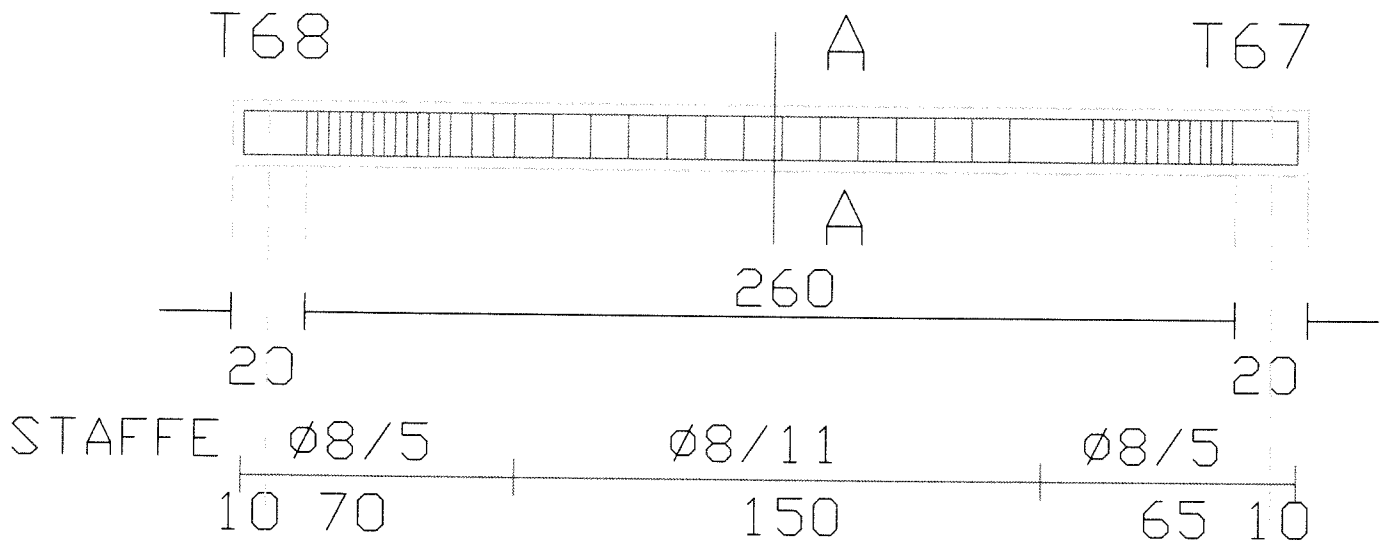


L = 184

N° 22 staffe ϕ 8

passo 10 cm.

Trave 69 (50x18)



POS	DIAM ø (mm)	LUNGH (cm)
1 SUP.	4 ø 16	L=310
2 INF.	4 ø 16	L=310