დაგეგმარების საფუძვლები და მიზნები:

პროექტი შედგენილია ქ. თბილისის მუნიციპალიტეტის სსიპ ქ. თბილისის მუნიციპალიტეტის არქიტექტურის სამსახურის მიერ გაცემული #4308700 19.12.18წ. ბრძანებით დამტკიცებული მიწის ნაკვეთის სამშენებლოდ გამოყენების პირობების საფუძველზე.

მიწის ნაკვეთის მდებარეობა და აღწერა:

საპროექტო ტერიტორია მდებარეობს ქ. თბილისში, სექტორი - მთაწმინდა, საქანელას ქუჩა #2-ში, შ.პ.ს. „სუპერ-სერვისი“-ს საკუთრებაში არსებულ მიწის ნაკვეთზე, საკადასტრო კოდით #01.15.04.003.014.

ზემოაღნიშნული მიწის ნაკვეთის სამშენებლოდ გამოყენების პირობების თანახმად, საპროექტო მიწის ნაკვეთს საზოგადოებრივი საზღვარი გააჩნია აღმოსავლეთით, ზ. გამსახურდიას სანაპიროს მხრიდან.

პროექტის აღწერა:

წარმოდგენილი პროექტით გათვალისწინებულია მიწის საკონტროლო დონიდან 20.88მ. სიმაღლის, 6 სართულიანი (1 მიწის დონის ქვედა და 5 მიწის დონის ზედა სართულით) შენობის მშენებლობა. აქვე აღსანიშნავია, რომ მიწის საკონტროლო დონის განსაზღვრა განხორციელდა ტექნიკურ რეგლამენტზე დაყრდნობით და აღნიშნულის შესაბამისად დაიყო მიწის დონის ქვედა და მიწის დონის ზედა სართულები. შენობის ფუნქციური დანიშნულებები სართულებზე გადანაწილებულია შემდეგი სახით:

- მიწის დონის ქვედა და მიწის დონსი ზედა I სართული (-3.06 და 0.00 ნიშნულებზე) - სასტუმროს ინვენტარის შესანახი სასაწყობე და დამხმარე/ტექნიკური ფართები.
- მიწის დონის ზედა სართული (0.00 ნიშნულზე) - მიმღები პუნქტი, კაფე, ბარი, მათი მომსახურე სამზარეულო.
- მიწის დონის ზედა სართული (+0.85 - +1.30 ნიშნულზე) - წყლის ავზის და სახანძრო ტუმბოს ოთახი.
- მიწის დონის ზედა სართულები (+3.40, +6.46, +9.52, +12.58 ნიშნულებზე) - სასტუმროს ნომრები.

საპროექტო შენობა ადაფტირებულია შშმ პირთათვის. მისაწვდომი სვლა-გეზი მოიცავს შენობის ყველა სართულს. სართულებზე გადაადგილება ხორციელდება ლიფტის საშუალებით, რომლის კაბინის გაბარიტული პარამეტრები აკმაყოფილებს ICC A117-ის მოთხოვნებს.

გარე კედლები მოპირკეთდება ფასადის მოსაპირკეთებელი პანელით (ე.წ. „FunderMax“), რომელიც აკმაყოფილებს ალის გავრცელებისა და კვამლის გავრცელების დადგენილ ინდექსებს; ასევე ფასადი ნაწილობრივ შეილესება და მიეცემა ბეტონის ფაქტურა.

<u>შენობის საპროექტო ნაწილში მოეწყობა შემდეგი ხანძრისგან დაცვის სისტემები:</u>

1. ავტოსაშხეფი სისტემა - მოეწყობა მთელ შენობაში, გარდა #41-ე დადგენილებით და NFPA 13-ით განსაზღვრული საგამონაკლისო არეალებისა. შენობაშივე განთავსდება ავტოსაშხეფი სისტემისათვის განკუთვნილი წყლის ავზისა და სახანძრო ტუმბოს ოთახი.
2. ალტერნატიული ავტომატური ცეცხლსაქრობი სისტემა - კომერციული დანიშნულების სამზარეულოს გამწოვ მოწყობილობასა და არხების სისტემაში.
3. სახანძრო მილდგარების სისტემა - გზა-კიბეების შუალედურ ბაქნებზე.
4. ხელის ცეცხლმაქრობები - მთელ შენობაში.
5. სახანძრო განგაშისა და კვამლაღმომჩენი სისტემები, კერძოდ:

- კვამლის ავტომატური აღმომჩენი სისტემა.
- სახანძრო განგაშის ხელით სამართავი სისტემა.
- კვამლზე მორეაგირე მაუწყებლები;
- სახანძრო განგაშის მოწყობილობები.
- მხედველობითი განგაშის მოწყობილობები.

6. სახანძრო-სამაშველო სამსახურის მიერ გამოსაყენებელი მისაერთებელი.
7. ჰიდრანტი.

<u>დაგეგმარებისთვის გამოყენებული კანონმდებლობის აღწერა:</u>

საპროექტო შენობის დაგეგმარებისთვის გამოყენებულია საქართველოს მთავრობის #41 დადგენილება - ტექნიკური რეგლამენტი „შენობა-ნაგებობების უსაფრთხოების წესები“. საქართველოს მთავრობის 2009 წლის 24 მარტის 57 დადგენილება და ქალაქ თბილისის მუნიციპალიტეტის საკრებულოს 2016 წლის 24 მაისის #14-39 დადგენილება.

შენობა-ნაგებობის უსაფრთხოების წესებთან შესაბამისობის ანალიზი

გამოყენებული წესები - **„შენობა-ნაგებობის უსაფრთხოების წესები“**

ჩამოთვალეთ შენობის დაკავებულებები და აღწერეთ თითოეული გამოყენება
საცხოვრებელი ჯგუფი სც-1 (სასტუმროს ნომრები +3.40 - +12.58 ნიშნულებზე);
თავშეყრის ჯგუფი თვ-2 (კაფე, ბარი და სამზარეულო 0.00 ნიშნულზე)
საშუალო საფრთხის შემცველი სასაწყობო ჯგუფი სწ-1 (სასტუმროს ინვენტარის შესანახი საწყობი -3.06 ნიშნულზე);
მცირე საფრთხის შემცველი სასაწყობო ჯგუფი სწ-2 (ელექრომოწყობილობების ოთახი -3.06 ნიშნულზე);
დამხმარე და სხვადასხვა დანიშნულების ჯგუფი დს (სახანძრო ტუმოსა და წყლის ავზის ოთახი +0.85 - +1.30 ნიშნულებზე);

კონსტრუქციის ტიპი:	
განსაზღვრეთ კონსტრუქციის ტიპი ახალი შენობისთვის: მაგალითი: II-A, II-B, V-A, V-B	**I-B**

სიმაღლის შეზღუდვები ცხრილი 503 -ის მიხედვით		
დაკავებულობები	**დასაშვები სართულიანობა**	**შემოთავაზებული სართულიანობა**
საცხოვრებელი ჯგუფი სც-1;	11	**4** (მიწის დონის ზედა სართულები);
თავშეყრის ჯგუფი თვ-2;	11	**1** (მიწის დონის ზედა I სართული);
საშუალო საფრთხის შემცველი სასაწყობო ჯგუფი სწ-1;	11	**2** (მიწის დონის ქვედა და მიწის დონis ზედა I სართული);
მცირე საფრთხის შემცველი სასაწყობო ჯგუფი სწ-2 ;	11	**1** (მიწის დონის ქვედა სართული);
დამხმარე და სხვადასხვა დანიშნულების ჯგუფი დს;	5	**1** (მიწის დონის ქვედა სართული)
	დასაშვები სიმაღლე	**შემოთავაზებული სიმაღლე**

შენობის სიმაღლე =	48.8მ.	19.33მ.
მიწის დონის ზემოთ სართულ(ებ)ის რაოდენობა =	5	

ფართობის შეზღუდვები ცხრილი 503 -ის მიხედვით		
დაკავებულობები	დასაშვები ფართობი (სართულზე)	შემოთავაზებული ფართობი (სართულზე)
საცხოვრებელი ჯგუფი სც-1;	შეუზღუდავი	**194.53კვ.მ.** (+3.40 - +12.58 ნიშნულებზე);
თავშეყრის ჯგუფი თვ-2;	შეუზღუდავი	**95.57კვ.მ.** (0.00 ნიშნულზე);
საშუალო საფრთხის შემცველი სასაწყობო ჯგუფი სწ-1;	4460 კვ.მ	**140.21კვ.მ.** (-3.06 ნიშნულზე); **26.99კვ.მ.** (0.00 ნიშნულზე);
მცირე საფრთხის შემცველი სასაწყობო ჯგუფი სწ-2 ;	7340 კვ.მ	**5.00კვ.მ** (-3.06 ნიშნულზე);
დამხმარე და სხვადასხვა დანიშნულების ჯგუფი დს;	3300კვ.მ	**17.33კვ.მ.** (-3.06 ნიშნულზე);
შემოთავაზებული ფართობების ჯამი =	1063.22კვ.მ	
სართულების რაოდენობა =	**5** (მიწის დონის ზედა სართული)	
შენობის საერთო ფართობი =	1063.22კვ.მ	

გარე კედლის ცეცხლმედეგობის მოთხოვნები ცხრილი 602-ის მიხედვით			
გარე კედელი	ხანძარსაწინააღმდეგო მანძილი (მეტრი)	ცეცხლმედეგობის ხარისხი (საათი)	
		მოთხოვნილი	გათვალისწინებული
1 - 7 ღერძებში (-3.06 ნიშნულზე)	0.3 - 0.7	2 სთ.	2 სთ.
1 - 7 ღერძებში	0.3 - 0.7	1 სთ.	1 სთ.
7 - 1 ღერძებში	9 <	0 სთ.	0 სთ.
A - C ღერძებში (-3.06 ნიშნულზე)	0.1	2 სთ.	2 სთ.
C - D ღერძებში (-3.06 ნიშნულზე)	4.4	1 სთ.	1 სთ.
A - C ღერძებში	0.1	1 სთ.	1 სთ.

A - C ღერძებში (+14.96 ნიშნულზე)	9 <	2 სთ. (713.4 პუნქტის შესაბამისად)	2 სთ. (713.4 პუნქტის შესაბამისად)
D - A ღერძებში (-3.06 ნიშნულზე)	0.1	2 სთ.	2 სთ.
C - A ღერძებში	0.1	1 სთ.	1 სთ.

გარე კედლის ღიობისადმი მოთხოვნები ცხრილი 705.8 -ის მიხედვით							
გარე კედელი	**ხანძარსაწინააღმდეგო მანძილი** (მეტრი)	**კედლის ღიობების ფართობი** (კედლის %)					
		დასაშვები			**გათვალისწინებული**		
		დაცული	**დაუცველი საშხეფებით**	**დაუცველი**	**დაცული**	**დაუცველი საშხეფებით**	**დაუცველი**
1 - 7 ღერძებში	0.3 - 0.7	დაუშვებელია	დაუშვებელია	დაუშვებელია	-	0%	-
7 – 1 ღერძებში	9 <	შეუზღუდავია	შეუზღუდავია	შეუზღუდავია	-	არ იზღუდება	-
A - C ღერძებში	0.1	დაუშვებელია	დაუშვებელია	დაუშვებელია	-	0%	-
C - A ღერძებში	0.1	დაუშვებელია	დაუშვებელია	დაუშვებელია	-	0%	-

ხანძრისაგან დაცვის სისტემებისადმი მოთხოვნები							
დაკავებულობები/სივრცეები/გასასვლელი საშუალებები	**ავტოსაშველი სისტემა**	**ალტერნატიული ავტომატური ცეცხლსაქრობი სისტემები**	**სახანძრო განგაშისა, კვამლაღმომჩენი და ცეცხლაღმომჩენი სისტემები**	**სახანძრო მილდგარების სისტემები**	**კვამლის საკონტროლო სისტემები**	**ხელის ცეცხლმაქრები**	**საავარიო განგაშის სისტემები**
საცხოვრებელი ჯგუფი სც-1;	**კი**		**კი** (სახანძრო განგაშის ხელით სამართავი სისტემა, რომელიც ააქტიურებს დამკავაბელთა შეტყობინებ			**კი**	

			ის სისტემას 0.00 ნიშნულის დონეზე); (კვამლის ავტომატური აღმომჩენი სისტემა - სასტუმროს ნომრების მომსახურე დერეფნებში); (კვამლზე მორეაგირე მაუწებლის მოწყობილობები - საძინებლებში); (ვიზუალური განგაშის მოწყობილობები - სასტუმროს ორ ნომერში);				
თავშეყრის ჯგუფი თვ-2;		კი (სამზარეულოს გამწოვ მოწყობილობასა და არხის სისტემაში);	კი (მხედველობითი განგაშის მოწყობილობები - საერთო გამოყენების ფართობებზე);			კი	
საშუალო საფრთხის შემცველი სასაწყობო ჯგუფი სწ-1;			კი (კვამლაღმომჩენები);			კი	
მცირე საფრთხის შემცველი სასაწყობო ჯგუფი სწ-2 ;			კი (კვამლაღმომჩენები);				
დამხმარე და სხვადასხვა დანიშნულების ჯგუფი დს;			კი (კვამლაღმომჩენები);				

კიბის უჯრედები				კი (კიბის შუალედურ ბაქნებზე);			
ლიფტი							
დერეფნები							
სახანძრო-სამაშველო სამსახურის მიერ გამოსაყენებელი მისაერთებლები				კი			
სახანძრო ტუმბოები და წყლის რეზერვუარი (-3.06)				კი			

განიავებისადმი მოთხოვნები		
დაკავებულობები/სივრცეები/გასასვლელი საშუალებები	ბუნებრივი განიავება	ხელოვნური განიავება
საცხოვრებელი ჯგუფი სც-1;	კი	-
თავშეყრის ჯგუფი თვ-2;	კი (რესტორნის და ბარის სივრცე);	კი (სამზარეულო);
საშუალო საფრთხის შემცველი სასაწყობო ჯგუფი სწ-1;	-	კი
მცირე საფრთხის შემცველი სასაწყობო ჯგუფი სწ-2 ;	-	კი
დამხმარე და სხვადასხვა დანიშნულების ჯგუფი დს;	-	კი
კიბის უჯრედი	-	კი
ლიფტები	-	კი
დერეფანი	-	კი
ტუალეტისა და სააბაზანოს ოთახები	-	კი

თითოეული სართულიდან გასასვლელი საშუალება									
სართულები	დაკავებულობა და დაკავებულობის დატვირთვის ჯამური მაჩვენებელი	მოთხოვნილი გასასვლელების/გასასვლელთან მისადგომის რაოდენობა	გათვალისწინებული გასასვლელების/ გასასვლელთან მისადგომის რაოდენობა და ტიპი	გასასვლელი საშუალებების სიგანე(მეტრი)					
				გზა-კიბეები		დერაფანი,		გასასვლელის გზა-კარი	
				მოთხოვნილი	გათვალისწინებული	მოთხოვნილი	გათვალისწინებული	მოთხოვნილი	გათვალისწინებული
მიწის დონის ქვედა	ჯგუფი სწ-1 (დ.დ.4);	1	1 (გზა-კიბე);	0.90მ.	1.11მ.	-	-	0.82მ.	0.84მ.

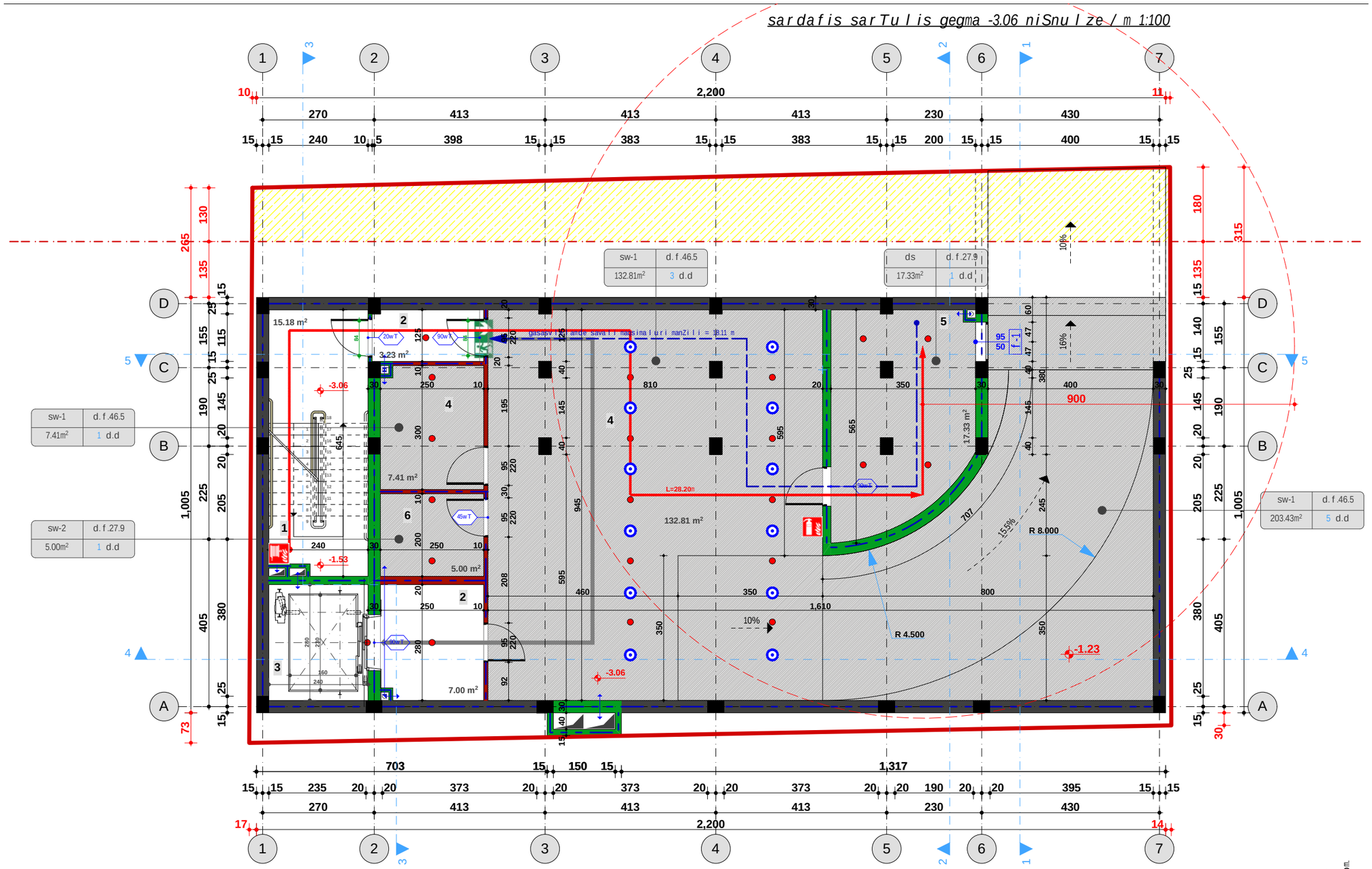
სართული	ჯგუფი სწ-2 (დ.დ.1); ჯგუფი დს (დ.დ 1);								
I სართული	ჯგუფი თვ-2 (დ.დ 64); ჯგუფი სწ-1 (დ.დ 1);	2	2 (გზა-კარი)	-	-	0.90მ.	1.20მ.	0.82მ.	0.89მ.
II სართული	ჯგუფი სც-1 (დ.დ. 11)	2	2 (გზა-კარი)	0.90მ.	0.91მ. 1.11მ.	0.90მ.	1.60მ.	0.82მ.	0.84მ.
III სართული	ჯგუფი სც-1 (დ.დ. 11)	2	2 (გზა-კარი)	0.90მ.	0.91მ. 1.11მ.	0.90მ.	1.60მ.	0.82მ.	0.84მ.
IV სართული	ჯგუფი სც-1 (დ.დ. 11)	2	2 (გზა-კარი)	0.90მ.	0.91მ. 1.11მ.	0.90მ.	1.60მ.	0.82მ.	0.84მ.
V სართული	ჯგუფი სც-1 (დ.დ. 11)	2	2 (გზა-კარი)	0.90მ.	0.91მ. 1.11მ.	0.90მ.	1.60მ.	0.82მ.	0.84მ.

წყალსადენი სისტემის ფიქსირებული მოწყობილობების რაოდენობა

ცხრილი 1602.1-ის მიხედვით

სართულები	დაკავებულობა და დაკავებულობის დატვირთვის ჯამური მაჩვენებელი	ფიქსირებული მოწყობილობები(ცალი)											
		უნიტაზი		ტუალეტის ხელსაბანები		აბაზანა/შხაპი		სასმელი წყლის ფანტანი		სამომსახურეო ნიჟარა		სამზარეულოს ნიჟარა	
		მოთხოვნილი	გათვალისწინებული	მოთხოვნილი	გათვალისწინებული	მოთხოვნილი	გათვალისწინებული	მოთხოვნილი	გათვალისწინებული	მოთხოვნილი	გათვალისწინებული	მოთხოვნილი	გათვალისწინებული
მიწის დონის ქვედა სართული	ჯგუფი სწ-1 (დ.დ.4); ჯგუფი სწ-2 (დ.დ.1);	იმის გათვალისწინებით, რომ -3.06 ნიშნულზე გათვალისწინებული საწყობი და დამხმარე-ტექნიკური ფართები წარმოადგენს სასტუმროს დამხმარე ფართს, რომელიც არ იქნება მუდმივად დაკავებული, აღნიშნულიდან გამომდინარე ამ კონკრეტულ სივრცეს არ ემსახურება ცალკე დამოუკიდებელი ტუალეტები											
	ჯგუფი დს (დ.დ 1);	არ მოეთხოვება 1602.1 ცხრილის შესაბამისად.											
I სართული	ჯგუფი თვ-2 (დ.დ 64);	2	3	2	3	-	-	1	1 (სამზარეულოს ნიჟარა)	1	1	1	1
	ჯგუფი სწ-1 (დ.დ 1);	იმის გათვალისწინებით, რომ +0.85 და +1.30 ნიშნულზე გათვალისწინებული საწყობი წარმოადგენს სასტუმროს დამხმარე ფართს, რომელიც არ იქნება მუდმივად დაკავებული, აღნიშნულიდან გამომდინარე ამ კონკრეტულ სივრცეს არ ემსახურება ცალკე დამოუკიდებელი ტუალეტები											

II სართული	ჯგუფი სც-1 (დ.დ. 11) თითოეული ნომრისთვის	1	1	1	1	1	1	1	1	1	1	-	-
III სართული	ჯგუფი სც-1 (დ.დ. 11) თითოეული ნომრისთვის	1	1	1	1	1	1	1	1	1	1	-	-
IV სართული	ჯგუფი სც-1 (დ.დ. 11) თითოეული ნომრისთვის	1	1	1	1	1	1	1	1	1	1	-	-
V სართული	ჯგუფი სც-1 (დ.დ. 11) თითოეული ნომრისთვის	1	1	1	1	1	1	1	1	1	1	-	-



pirobiTi aRniSvnebi:

	sakadastro sazRvari
	funqciur zonebs Soris sazRvari
	satransporto zona - 1 (tz-1)
0.00	sarTulis niSnuli
3 3	Wrilis xazi
	blokis kedeli (cecxlmedegi)
	gazonis qvafenili / qvafenili
	arizonas kviparozela **curp essus arizonica fastigiata**
	irmis rqa **Lagerstroemia indica**

	emoniusi **Euonymus**
	moli / gazoni
	3 saaTiani cecxlmedegoba
	2 saaTiani cecxlmedegoba
	1 saaTiani cecxlmedegoba
1 2 3 4	1. dakavebulobis jgufi; 2. dakavebulobis faqtori 3. saerTo farTobi; 4. dakavebulobis datvirTva
	TavSeyris jgufi Tv-2
	damxmare jgufi ds
	sacxovrebeli jgufi sc-1

	saSualo safrTxis Semcveli sasawyobo jgufi sw-1
	gasasvlelamde savali maqsimaluri manZili
	saerTo savali biliki
	avtosaSxefi
	saxanZro mildgari
	xelis cecxlsaqrobi
	saxanZro gangaSis xeliT samarTavi kolofi
	kvamlis avtomaturi aRmomCeni
	kvamlze moreagire mauwyebeli

	kvamlaRmomCeni
	mxedvelobiTi gangaSis sistema
	misawvdomi svla-gezi
	saxanZro gangaSis sistema
FDC	saxanZro-samaSvelo samsaxuris mier gamosayenebeli misaerTebeli
	saxanZro-samaSvelo samsaxuris mier gamosayenebeli misaerTebeli - hidranti
	saxanZro gangaSis Setyobinebis mowyobiloba
90wT	karis cecxlmedegoba
	gasasvlelis niSani

SeniSvna: saxanZro sistemebi gegmebze datanilia pirobiTad.
maTi zusti adgilmdebareoba da raodenoba ganisazRvreba
Sesabamisi saxanZro sistemebis proeqtis damuSavebis Semdgom.

formati	A-3	dakveTis #
Tbilisi 2019 w.		

eqsplikacia:

1. kibis ujredi #1
2. tamburi
3. liftis Saxta
4. sastumros inventaris Sesanaxi sawyobi
5. saxanZro tumbo da wylis avzi
6. eleqtro fari

pirobiTi aRniSvnebi:

SeniSvna:

proeqtis saxelwodeba

q. Tbilisi, saqanelas quCa #2, (nakv. 3/14), (s/k 01.15.04.003.014)

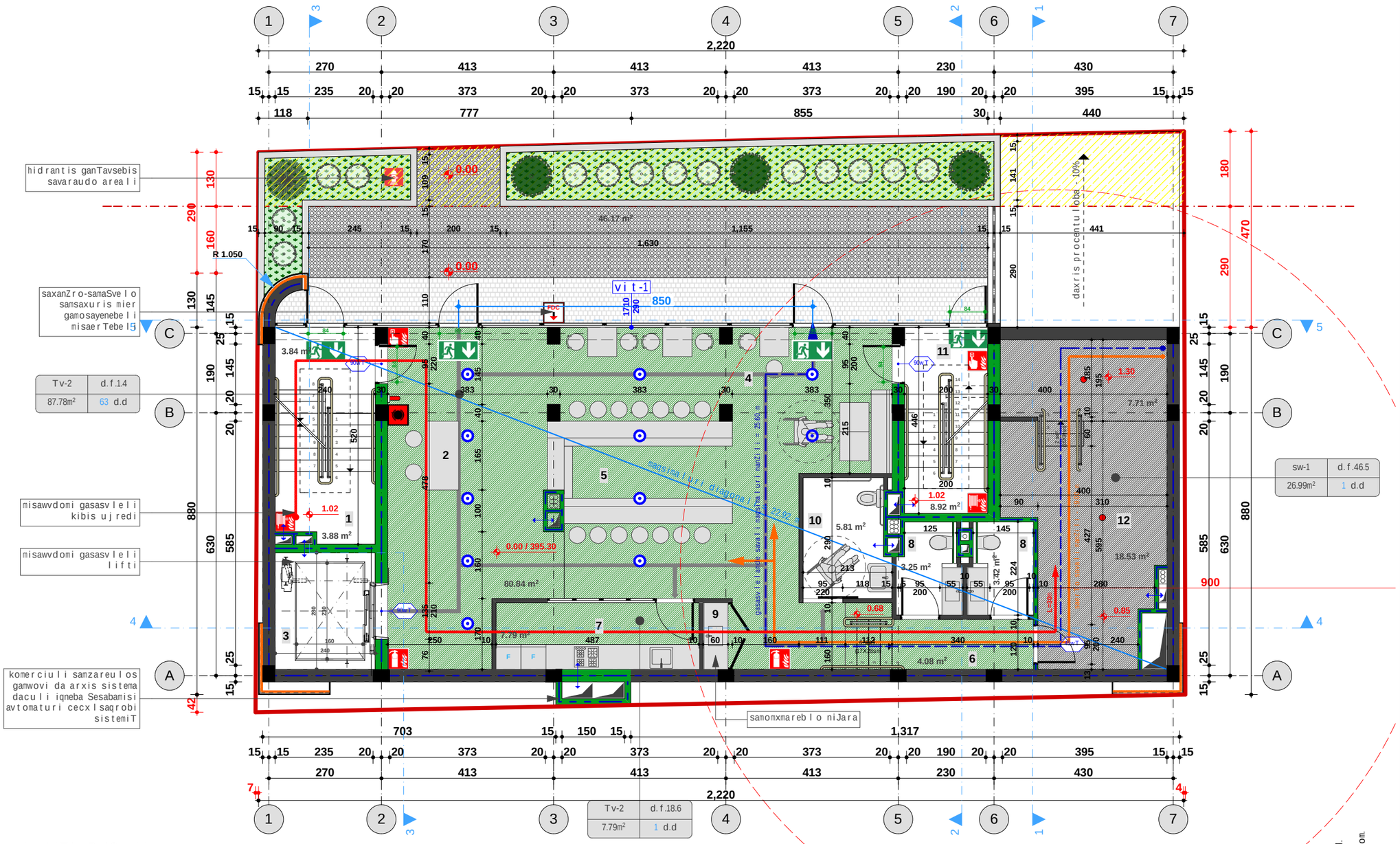
sastumros proeqti

Tanamdeboba	gvari	xelmowera
avtori		T. mosiaSvili

dasaxeleba	masStabi
sardafis sarTulis gegma -3.06 niSnulze	1:100

stadia	furceli	furclebi
mp	a-12	48

I sarTu l is gegma 0.00 niSnu l ze / m 1:100



pirobiTi aRniSvnebi:

	sakadastro sazRvari
	funqciur zonebs Soris sazRvari
	satransporto zona - 1 (tz-1)
0.00	sarTulis niSnuli
3 3	Wrilis xazi
	blokis kedeli (cecxlmedegi)
	gazonis qvafenili / qvafenili
	arizonas kviparozela **curp essus arizonica fastigiata**
	irmis rqa **Lagerstroemia indica**

	emoniusi **Euonymus**
	moli / gazoni
	3 saaTiani cecxlmedegoba
	2 saaTiani cecxlmedegoba
	1 saaTiani cecxlmedegoba
1 2 3 4	1. dakavebulobis jgufi; 2. dakavebulobis faqtori 3. saerTo farTobi; 4. dakavebulobis datvirTva
	TavSeyris jgufi Tv-2
	damxmare jgufi ds
	sacxovrebeli jgufi sc-1

	saSualo safrTxis Semcveli sasawyobo jgufi sw-1
	gasasvlelamde savali maqsimaluri manZili
	saerTo savali biliki
	avtosaSxefi
	saxanZro mildgari
	xelis cecxlsaqrobi
	saxanZro gangaSis xeliT samarTavi kolofi
	kvamlis avtomaturi aRmomCeni
	kvamlze moreagire mauwyebeli

	kvamlaRmomCeni
	mxedvelobiTi gangaSis sistema
	misawvdomi svla-gezi
	saxanZro gangaSis sistema
FDC	saxanZro-samaSvelo samsaxuris mier gamosayenebeli misaerTebeli
	saxanZro-samaSvelo samsaxuris mier gamosayenebeli misaerTebeli - hidranti
	saxanZro gangaSis Setyobinebis mowyobiloba
90wT	karis cecxlmedegoba
	gasasvlelis niSani

SeniSvna: saxanZro sistemebi gegmebze datanilia pirobiTad. maTi zusti adgilmdebareoba da raodenoba ganisazRvreba Sesabamisi saxanZro sistemebis proeqtis damuSavebis Semdgom.

formati	A-3
dakveTis #	
Tbilisi 2019 w.	

eqsplikacia:

1. kibis ujredi #1
2. resefSeni
3. liftis Saxta
4. kafe
5. bari
6. derefani
7. samzareulo
8. WC
9. niJara
10. SSm pirebis WC
11. kibis ujredi #2
12. damxmare saTavsi

pirobiTi aRniSvnebi:

SeniSvna:

proeqtis saxelwodeba

q. Tbilisi, saqanelas quCa #2, (nakv. 3/14), (s/k 01.15.04.003.014)

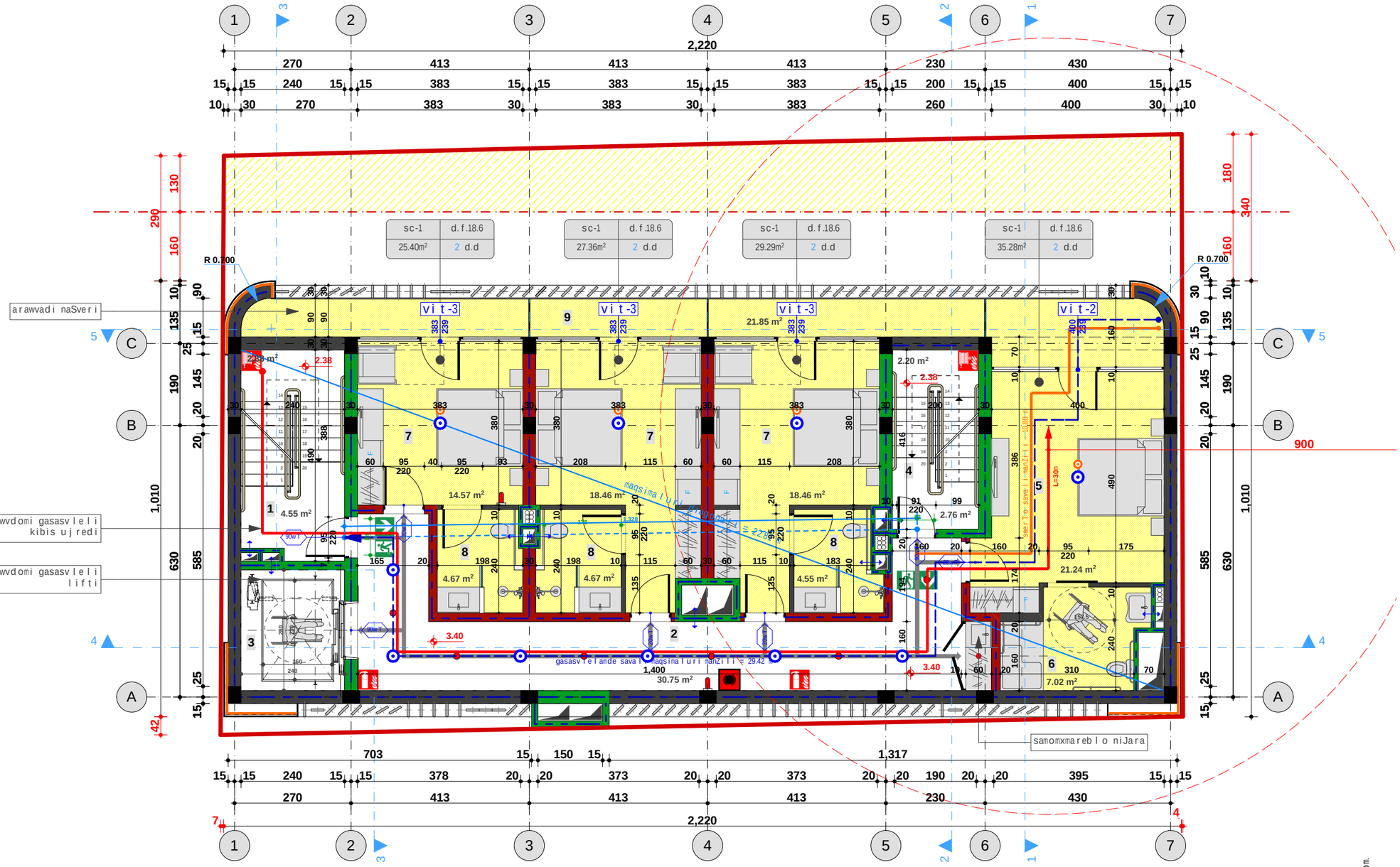
sastumros proeqti

Tanamdeboba	gvari	xelmowera
avtori		T. mosiaSvili

dasaxeleba	masStabi
I sarTulis gegma 0.00 niSnulze	1:100

stadia	furceli	furclebi
mp	a-13	48

II sarTuli s gegma 3.40 niSnuli ze / m 1:100



pirobiTi aRniSvnebi:

	sakadastro sazRvari
	funqciur zonebs Soris sazRvari
	satransporto zona - 1 (tz-1)
0.00	sarTulis niSnuli
3 3	Wrilis xazi
	blokis kedeli (cecxlmedegi)
	gazonis qvafenili / qvafenili
	arizonas kviparozela **curp essus arizonica fastigiata**
	irmis rqa **Lagerstroemia indica**

	emoniusi **Euonymus**
	moli / gazoni
	3 saaTiani cecxlmedegoba
	2 saaTiani cecxlmedegoba
	1 saaTiani cecxlmedegoba
1 2 3 4	1. dakavebulobis jgufi; 2. dakavebulobis faqtori 3. saerTo farTobi; 4. dakavebulobis datvirTva
	TavSeyris jgufi Tv-2
	damxmare jgufi ds
	sacxovrebeli jgufi sc-1

	saSualo safrTxis Semcveli sasawyobo jgufi sw-1
	gasasvlelamde savali maqsimaluri manZili
	saerTo savali biliki
	avtosaSxefi
	saxanZro mildgari
	xelis cecxlsaqrobi
	saxanZro gangaSis xeliT samarTavi kolofi
	kvamlis avtomaturi aRmomCeni
	kvamlze moreagire mauwyebeli

	kvamlaRmomCeni
	mxedvelobiTi gangaSis sistema
	misawvdomi svla-gezi
	saxanZro gangaSis sistema
FDC	saxanZro-samaSvelo samsaxuris mier gamosayenebeli misaerTebeli
	saxanZro-samaSvelo samsaxuris mier gamosayenebeli misaerTebeli - hidranti
	saxanZro gangaSis Setyobinebis mowyobiloba
90wT	karis cecxlmedegoba
	gasasvlelis niSani

SeniSvna: saxanZro sistemebi gegmebze datanilia pirobiTad. maTi zusti adgilmdebareoba da raodenoba ganisazRvreba Sesabamisi saxanZro sistemebis proeqtis damuSavebis Semdgom.

formati	A-3
Tbilisi 2019 w.	dakveTis #

eqsplikacia:

1. kibis ujredi #1
2. derefani
3. liftis Saxta
4. kibis ujredi #2
5. sastumros nomeri SSm pirebisTvis (misawvdomi saZinebeli erTeuli)
6. abazana SSm pirebisTvis (misawvdomi saZinebeli erTeulis abazana)
7. sastumros nomeri (btipis erTeuli)
8. sastumros nomris abazana (btipis erTeulis abazana)
9. aivani

pirobiTi aRniSvnebi:

SeniSvna:

proeqtis saxelwodeba

q. Tbilisi, saqanelas quCa #2, (nakv. 3/14), (s/k 01.15.04.003.014)

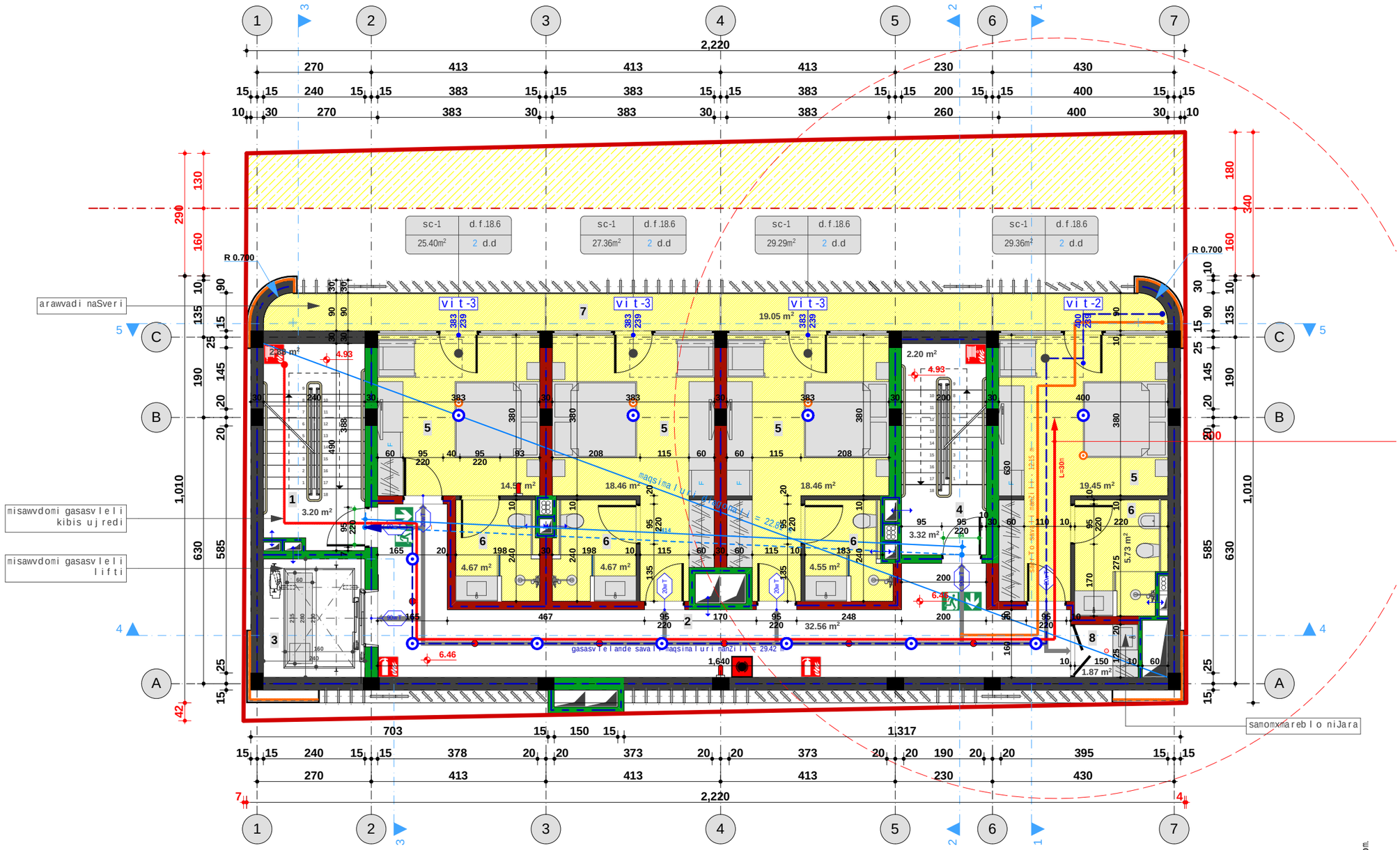
sastumros proeqti

Tanamdeboba	gvari	xelmowera
avtori		T. mosiaSvili

dasaxeleba	*masStabi*
II sarTulis gegma 3.40 niSnulze	1:100

stadia	*furceli*	*furclebi*
mp	a-14	48

III sarTuli s gegma 6.46 niSnuli ze / m 1:100



pirobiTi aRniSvnebi:

	sakadastro sazRvari
	funqciur zonebs Soris sazRvari
	satransporto zona - 1 (tz-1)
0.00	sarTulis niSnuli
3 3	Wrilis xazi
	blokis kedeli (cecxlmedegi)
	gazonis qvafenili / qvafenili
	arizonas kviparozela **curp essus arizonica fastigiata**
	irmis rqa **Lagerstroemia indica**

	emoniusi **Euonymus**
	moli / gazoni
	3 saaTiani cecxlmedegoba
	2 saaTiani cecxlmedegoba
	1 saaTiani cecxlmedegoba
1 2 3 4	1. dakavebulobis jgufi; 2. dakavebulobis faqtori 3. saerTo farTobi; 4. dakavebulobis datvirTva
	TavSeyris jgufi Tv-2
	damxmare jgufi ds
	sacxovrebeli jgufi sc-1

	saSualo safrTxis Semcveli sasawyobo jgufi sw-1
	gasasvlelamde savali maqsimaluri manZili
	saerTo savali biliki
	avtosaSxefi
	saxanZro mildgari
	xelis cecxlsaqrobi
	saxanZro gangaSis xeliT samarTavi kolofi
	kvamlis avtomaturi aRmomCeni
	kvamlze moreagire mauwyebeli

	kvamlaRmomCeni
	mxedvelobiTi gangaSis sistema
	misawvdomi svla-gezi
	saxanZro gangaSis sistema
FDC	saxanZro-samaSvelo samsaxuris mier gamosayenebeli misaerTebeli
	saxanZro-samaSvelo samsaxuris mier gamosayenebeli misaerTebeli - hidranti
	saxanZro gangaSis Setyobinebis mowyobiloba
90wT	karis cecxlmedegoba
	gasasvlelis niSani

SeniSvna: saxanZro sistemebi gegmebze datanilia pirobiTad. maTi zusti adgilmdebareoba da raodenoba ganisazRvreba Sesabamisi saxanZro sistemebis proeqtis damuSavebis Semdgom.

formati	A-3
Tbilisi 2019 w.	dakveTis #

egsplikacia:

1. kibis ujredi #1
2. derefani
3. liftis Saxta
4. kibis ujredi #2
5. sastumros nomeri (btipis erTeuli)
6. sastumros nomris abazana (btipis erTeulis abazana)
7. aivani
8. sakuWnao

pirobiTi aRniSvnebi:

SeniSvna:

proeqtis saxelwodeba

q. Tbilisi, saqanelas quCa #2, (nakv. 3/14), (s/k 01.15.04.003.014)

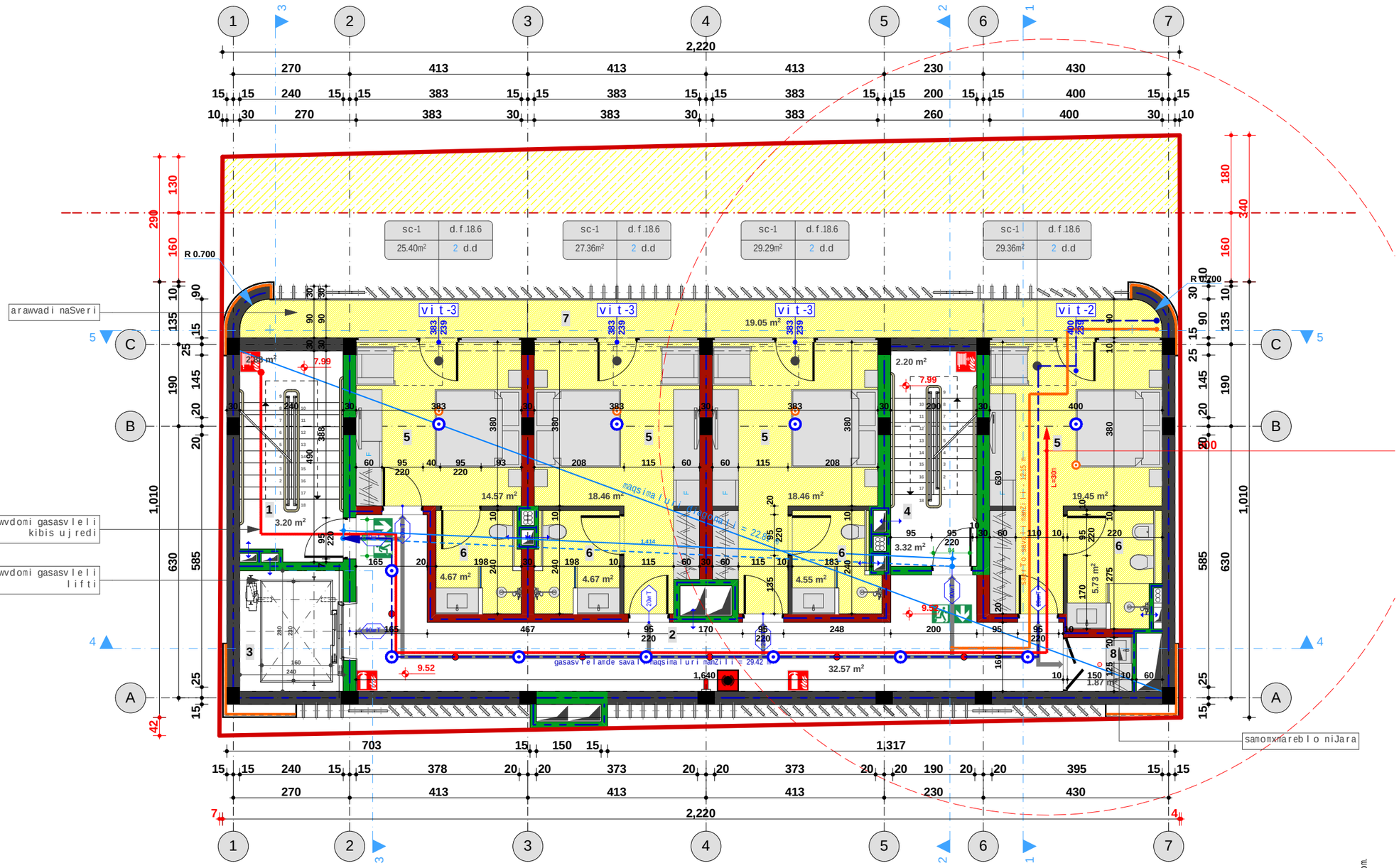
sastumros proeqti

Tanamdeboba	gvari	xelmowera
avtori		T. mosiaSvili

dasaxeleba	*masStabi*
III sarTulis gegma 6.46 niSnulze	1:100

stadia	*furceli*	*furclebi*
mp	a-15	48

IV sarTulis gegma 9.52 niSnulze / m 1:100



pirobiTi aRniSvnebi:

	sakadastro sazRvari
	funqciur zonebs Soris sazRvari
	satransporto zona - 1 (tz-1)
0.00	sarTulis niSnuli
3 3	Wrilis xazi
	blokis kedeli (cecxlmedegi)
	gazonis qvafenili / qvafenili
	arizonas kviparozela **curp essus arizonica fastigiata**
	irmis rqa **Lagerstroemia indica**
	emoniusi **Euonymus**
	moli / gazoni
	3 saaTiani cecxlmedegoba
	2 saaTiani cecxlmedegoba
	1 saaTiani cecxlmedegoba
1 2 3 4	1. dakavebulobis jgufi; 2. dakavebulobis faqtori 3. saerTo farTobi; 4. dakavebulobis datvirTva
	TavSeyris jgufi Tv-2
	damxmare jgufi ds
	sacxovrebeli jgufi sc-1
	saSualo safrTxis Semcveli sasawyobo jgufi sw-1
	gasasvlelamde savali maqsimaluri manZili
	saerTo savali biliki
	avtosaxefi
	saxanZro mildgari
	xelis cecxlsaqrobi
	saxanZro gangaSis xeliT samarTavi kolofi
	kvamlis avtomaturi aRmomCeni
	kvamlze moreagire mauwyebeli
	kvamlaRmomCeni
	mxedvelobiTi gangaSis sistema
	misawvdomi svla-gezi
	saxanZro gangaSis sistema
FDC	saxanZro-samaSvelo samsaxuris mier gamosayenebeli misaerTebeli
	saxanZro-samaSvelo samsaxuris mier gamosayenebeli misaerTebeli - hidranti
	saxanZro gangaSis Setyobinebis mowyobiloba
90w/T	karis cecxlmedegoba
	gasasvlelis niSani

SeniSvna: saxanZro sistemebi gegmebze datanilia pirobiTad. maTi zusti adgilmdebareoba da raodenoba ganisazRvreba. Sesabamisi saxanZro sistemebis proeqtis damuSavebis Semdgom.

formati A-3 | dakveTis #

Tbilisi 2019 w.

eqsplikacia:

1. kibis ujredi #1
2. derefani
3. liftis Saxta
4. kibis ujredi #2
5. sastumros nomeri (btipis erTeuli)
6. sastumros nomris abazana (btipis erTeulis abazana)
7. aivani
8. sakuWnao

pirobiTi aRniSvnebi:

SeniSvna:

proeqtis saxelwodeba

q. Tbilisi, saqanelas quCa #2, (nakv. 3/14), (s/k 01.15.04.003.014)

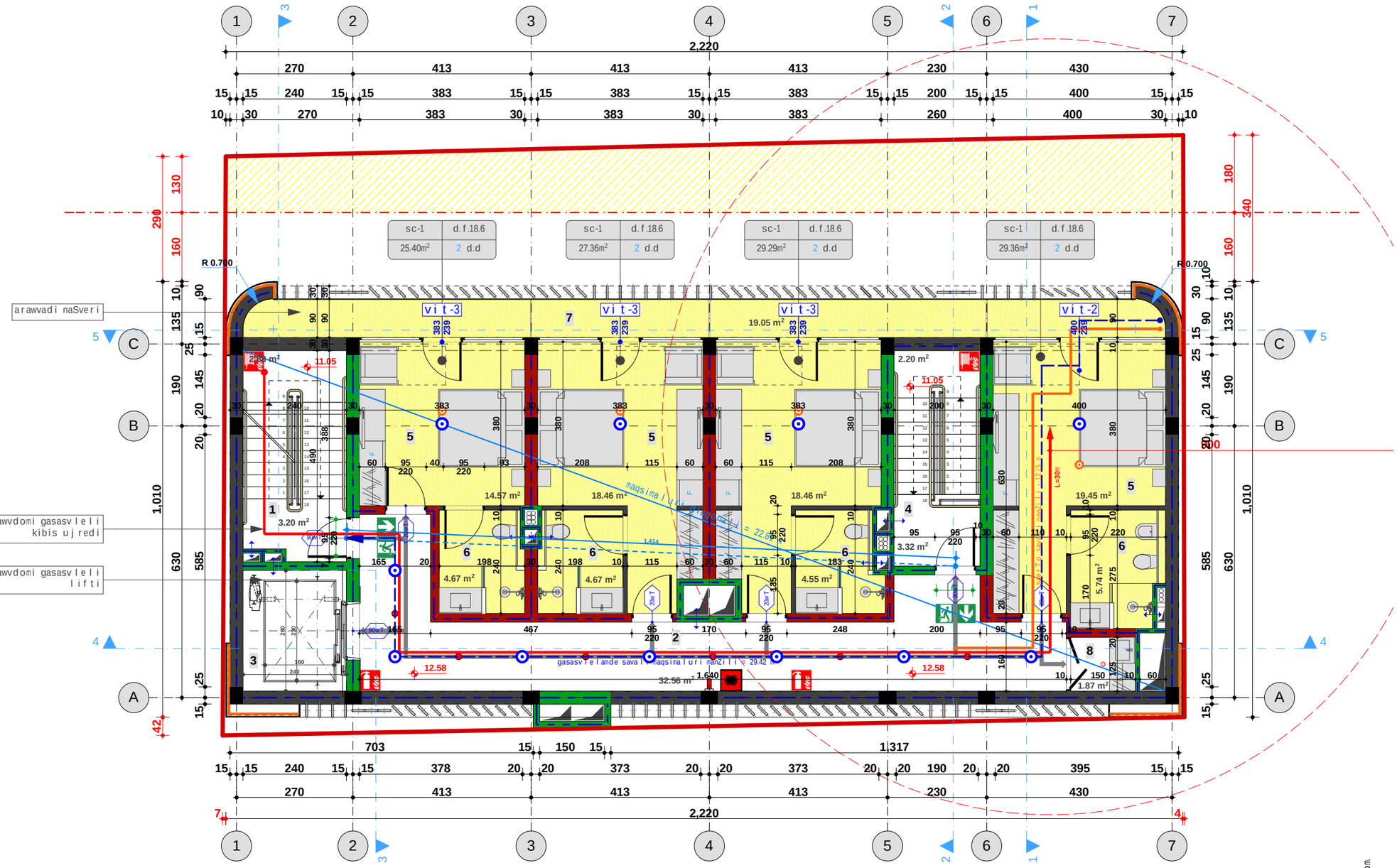
sastumros proeqti

Tanamdeboba	gvari	xelmowera
avtori		T. mosiaSvili

dasaxeleba	masStabi
IV sarTulis gegma 9.52 niSnulze	1:100

stadia	furceli	furclebi
mp	a-16	48

V sarTu l is gegma 12.58 niSnu l ze / m 1:100



pirobiTi aRniSvnebi:

	sakadastro sazRvari
	funqciur zonebs Soris sazRvari
	satransporto zona - 1 (tz-1)
0.00	sarTu l is niSnu l i
3 3	Wri l is xazi
	b l okis kede l i (cecx l medegi)
	gazonis qvafeni l i / qvafeni l i
	arizonas kviparozela **curp essus arizonica fastigiata**
	irmis rqa **Lagerstroemia indica**

	emoniusi **Euonymus**
	mo l i / gazoni
	3 saaTiani cecx l medegoba
	2 saaTiani cecx l medegoba
	1 saaTiani cecx l medegoba
1 2 3 4	1. dakavebu l obis jgufi; 2. dakavebu l obis faqtori 3. saerTo farTobi; 4. dakavebu l obis datvirTva
	TavSeyris jgufi Tv-2
	damxmare jgufi ds
	sacxovrebe l i jgufi sc-1

	saSua l o safrTxis Semcve l i sasawyobo jgufi sw-1
	gasasv l elamde sava l i maqsima l uri manZi l i
	saerTo sava l i bi l iki
	avtosaSxefi
	saxanZro mi l dgari
	xe l is cecx l saqrobi
R	saxanZro gangaSis xe l iT samarTavi ko l ofi
	kvam l is avtomaturi aRmomCeni
	kvam l ze moreagire mauwyebe l i

	kvam l aRmomCeni
	mxedve l obiTi gangaSis sistema
	misawvdomi sv l a-gezi
	saxanZro gangaSis sistema
FDC	saxanZro-samaSve l o samsaxuris mier gamosayenebe l i misaerTebe l i
	saxanZro-samaSve l o samsaxuris mier gamosayenebe l i misaerTebe l i - hidranti
	saxanZro gangaSis Setyobinebis mowyobi l oba
90wT	karis cecx l medegoba
	gasasv l e l is niSani

SeniSvna: saxanZro sistemebi gegmebze datanil ia pirobiTad. maTi zusti adgi l mdebareoba da raodenoba ganisazRvreba Sesabamisi saxanZro sistemebis proeqtis damuSavebis Semdgom.

formati	A-3
Tbi l isi 2019 w.	dakveTis #

egsp l ikacia:

1. kibis uj redi #1
2. derefani
3. l iftis Saxta
4. kibis uj redi #2
5. sastumros nomeri (b tipis erTeu l i)
6. sastumros nomris abazana (b tipis erTeu l is abazana)
7. aivani
8. sakuWnao

pirobiTi aRniSvnebi:

SeniSvna:

proeqtis saxe l wodeba

q. Tbi l isi, saqane l as quCa #2, (nakv. 3/14), (s/k 01.15.04.003.014)

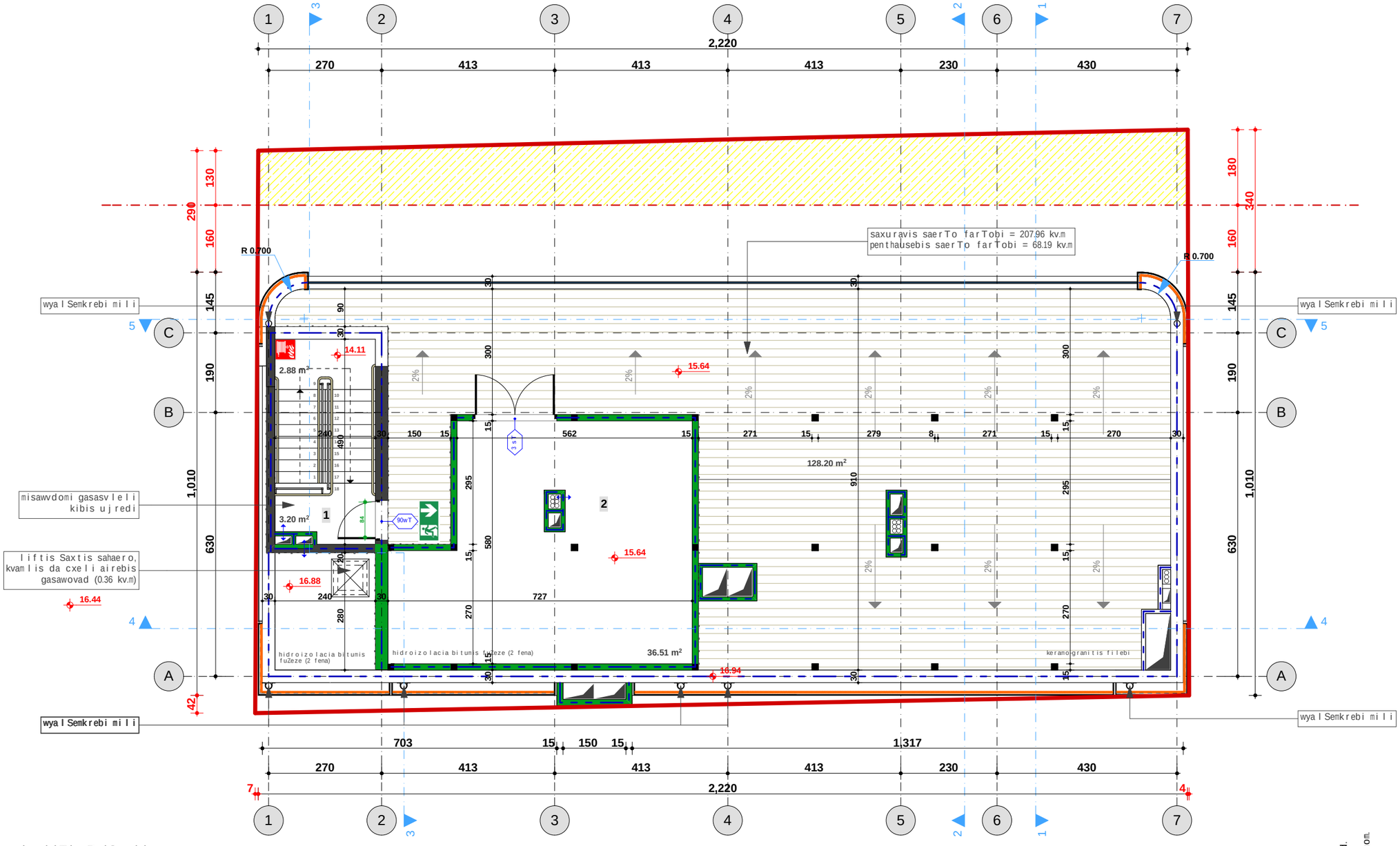
sastumros proeqti

Tanamdeboba	gvari	xe l mowera
avtori		T. mosiaSvi l i

dasaxe l eba	masStabi
V sarTu l is gegma 12.58 niSnu l ze	1:100

stadia	furce l i	furc l ebi
mp	a-17	48

saxuravis gegma 15.64 niSnuLze / m 1:100



pirobiTi aRniSvnebi:

	sakadastro sazRvari
	funqciur zonebs Soris sazRvari
	satransporto zona - 1 (tz-1)
0.00	sarTulis niSnuli
3 3	Wrilis xazi
	blokis kedeli (cecxlmedegi)
	gazonis qvafenili / qvafenili
	arizonas kviparozela **curp essus arizonica fastigiata**
	irmis rqa **Lagerstroemia indica**

	emoniusi **Euonymus**
	moli / gazoni
	3 saaTiani cecxlmedegoba
	2 saaTiani cecxlmedegoba
	1 saaTiani cecxlmedegoba
1 2 3 4	1. dakavebulobis jgufi; 2. dakavebulobis faqtori 3. saerTo farTobi; 4. dakavebulobis datvirTva
	TavSeyris jgufi Tv-2
	damxmare jgufi ds
	sacxovrebeli jgufi sc-1

	saSualo safrTxis Semcveli sasawyobo jgufi sw-1
	gasasvlelamde savali maqsimaluri manZili
	saerTo savali biliki
	avtosaSxefi
	saxanZro mildgari
	xelis cecxlsaqrobi
	saxanZro gangaSis xeliT samarTavi kolofi
	kvamlis avtomaturi aRmomCeni
	kvamlze moreagire mauwyebeli

	kvamlaRmomCeni
	mxedvelobiTi gangaSis sistema
	misawvdomi svla-gezi
	saxanZro gangaSis sistema
FDC	saxanZro-samaSvelo samsaxuris mier gamosayenebeli misaerTebeli
	saxanZro-samaSvelo samsaxuris mier gamosayenebeli misaerTebeli - hidranti
	saxanZro gangaSis Setyobinebis mowyobiloba
90wT	karis cecxlmedegoba
	gasasvlelis niSani

SeniSvna: saxanZro sistemebi gegmebze datanilia pirobiTad. maTi zusti adgilmdebareoba da raodenoba ganisazRvreba. Sesabamisi saxanZro sistemebis proeqtis damuSavebis Semdgom.

formati	A-3
Tbilisi 2019 w.	dakveTis #

egsplikacia:

1. kibis ujredi #1
2. saTavsi generatorisTvis da agregatebisTvis

pirobiTi aRniSvnebi:

SeniSvna:

proeqtis saxelwodeba

q. Tbilisi, saqanelas quCa #2, (nakv. 3/14), (s/k 01.15.04.003.014)

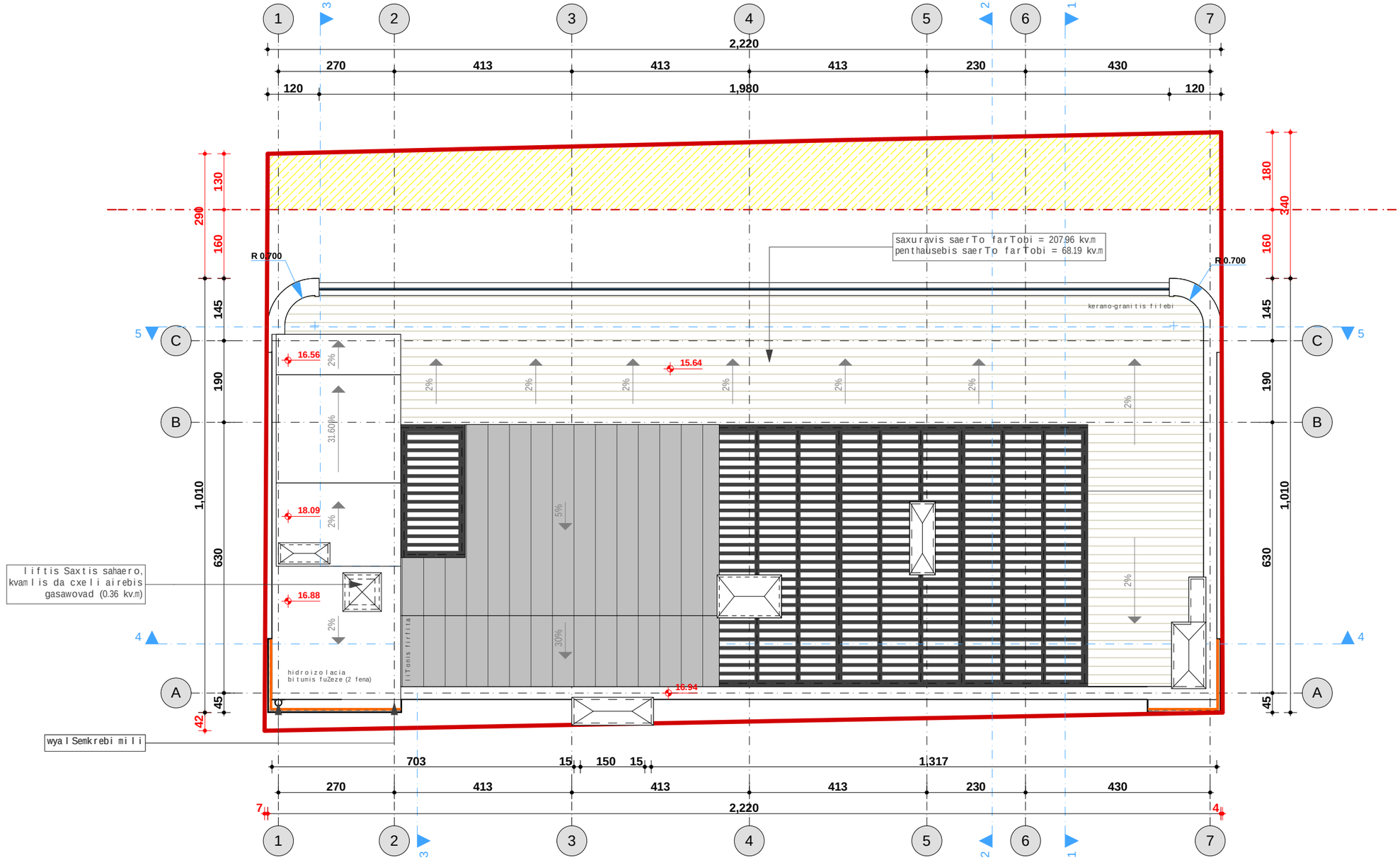
sastumros proeqti

Tanamdeboba	gvari	xelmowera
avtori	a. [illegible]	T. mosiaSvili

dasaxeleba	*masStabi*
saxuravis gegma 15.64 niSnulze	1:100

stadia	*furceli*	*furclebi*
mp	a-18	48

saxuravis gegma / m 1:100



pirobiTi aRniSvnebi:

	sakadastro sazRvari
	funqciur zonebs Soris sazRvari
	satransporto zona - 1 (tz-1)
0.00	sarTulis niSnuli
3 3	Wrilis xazi
	blokis kedeli (cecxlmedegi)
	gazonis qvafenili / qvafenili
	arizonas kviparozela **curp essus arizonica fastigiata**
	irmis rqa **Lagerstroemia indica**

	emoniusi **Euonymus**
	moli / gazoni
	3 saaTiani cecxlmedegoba
	2 saaTiani cecxlmedegoba
	1 saaTiani cecxlmedegoba
1 2 3 4	1. dakavebulobis jgufi; 2. dakavebulobis faqtori 3. saerTo farTobi; 4. dakavebulobis datvirTva
	TavSeyris jgufi Tv-2
	damxmare jgufi ds
	sacxovrebeli jgufi sc-1

	saSualo safrTxis Semcveli sasawyobo jgufi sw-1
	gasasvlelamde savali maqsimaluri manZili
	saerTo savali biliki
	avtosaSxefi
	saxanZro mildgari
	xelis cecxlsaqrobi
	saxanZro gangaSis xeliT samarTavi kolofi
	kvamlis avtomaturi aRmomCeni
	kvamlze moreagire mauwyebeli

	kvamlaRmomCeni
	mxedvelobiTi gangaSis sistema
	misawvdomi svla-gezi
	saxanZro gangaSis sistema
FDC	saxanZro-samaSvelo samsaxuris mier gamosayenebeli misaerTebeli
	saxanZro-samaSvelo samsaxuris mier gamosayenebeli misaerTebeli - hidranti
	saxanZro gangaSis Setyobinebis mowyobiloba
90wT	karis cecxlmedegoba
	gasasvlelis niSani

SeniSvna: saxanZro sistemebi gegmebze datanilia pirobiTad. maTi zusti adgilmdebareoba da raodenoba ganisazRvreba Sesabamisi saxanZro sistemebis proeqtis damuSavebis Semdgom.

formati	A-3
Tbilisi 2019 w.	dakveTis #

eqsplikacia:

pirobiTi aRniSvnebi:

SeniSvna:

proeqtis saxelwodeba

q. Tbilisi, saqanelas quCa #2, (nakv. 3/14), (s/k 01.15.04.003.014)

sastumros proeqti

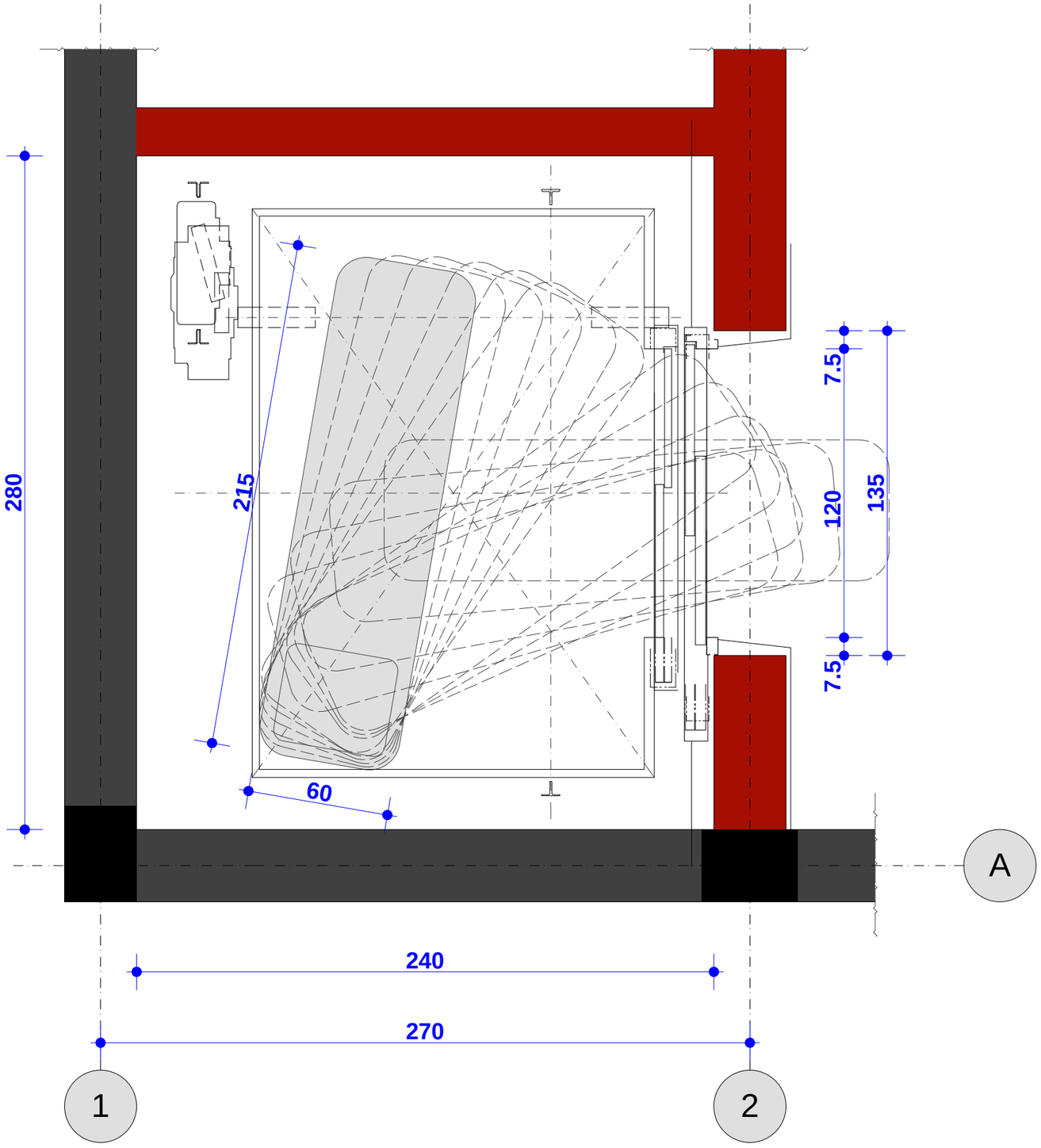
Tanamdeboba	gvari	xelmowera
avtori		T. mosiaSvili

dasaxeleba	masStabi
saxuravis gegma 18.94 niSnulze	1:100

stadia	furceli	furclebi
mp	a-19	48

sakacis kabinaSi Setanis sqema

zedxedi (fragmenti) / m 1:20



formati A-3		dakveTis #
Tbilisi 2019 w.		

eqsplikacia:

pirobiTi aRniSvnebi:

SeniSvna:

proeqtis saxelwodeba

q. Tbilisi, saqanelas quCa #2, (nakv. 3/14), (s/k 01.15.04.003.014)

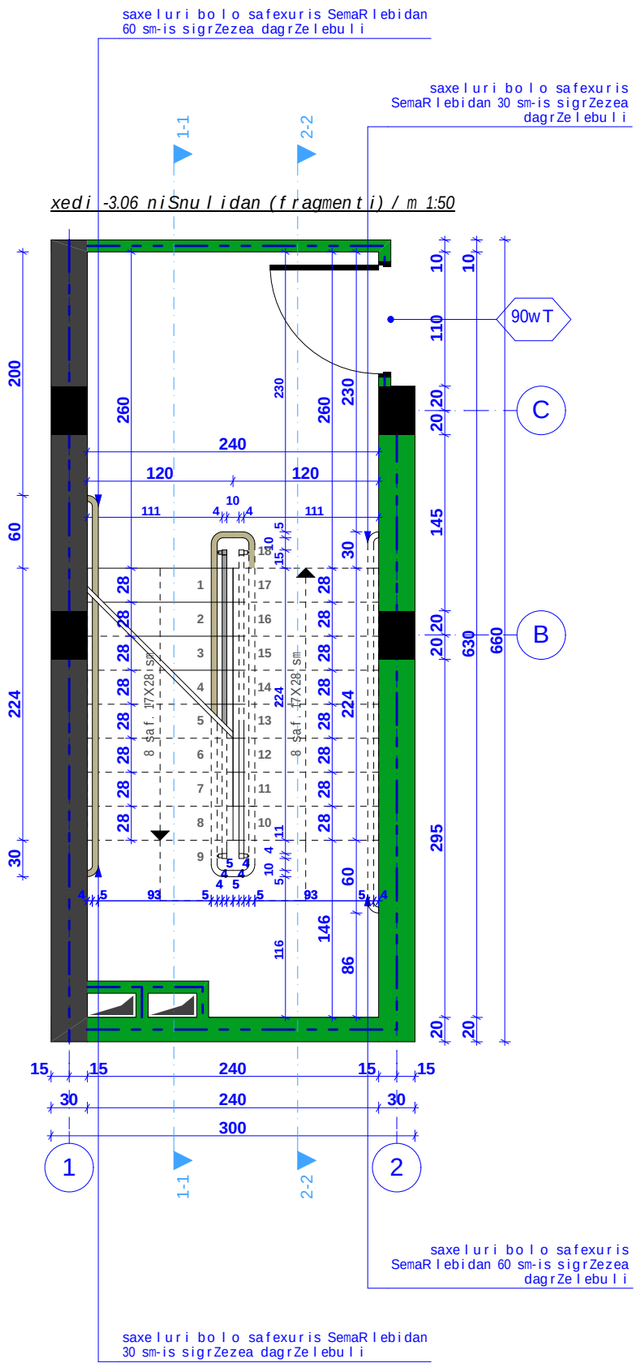
sastumros proeqti

Tanamdeboba	gvari	xelmowera
avtori		T. mosiaSvili

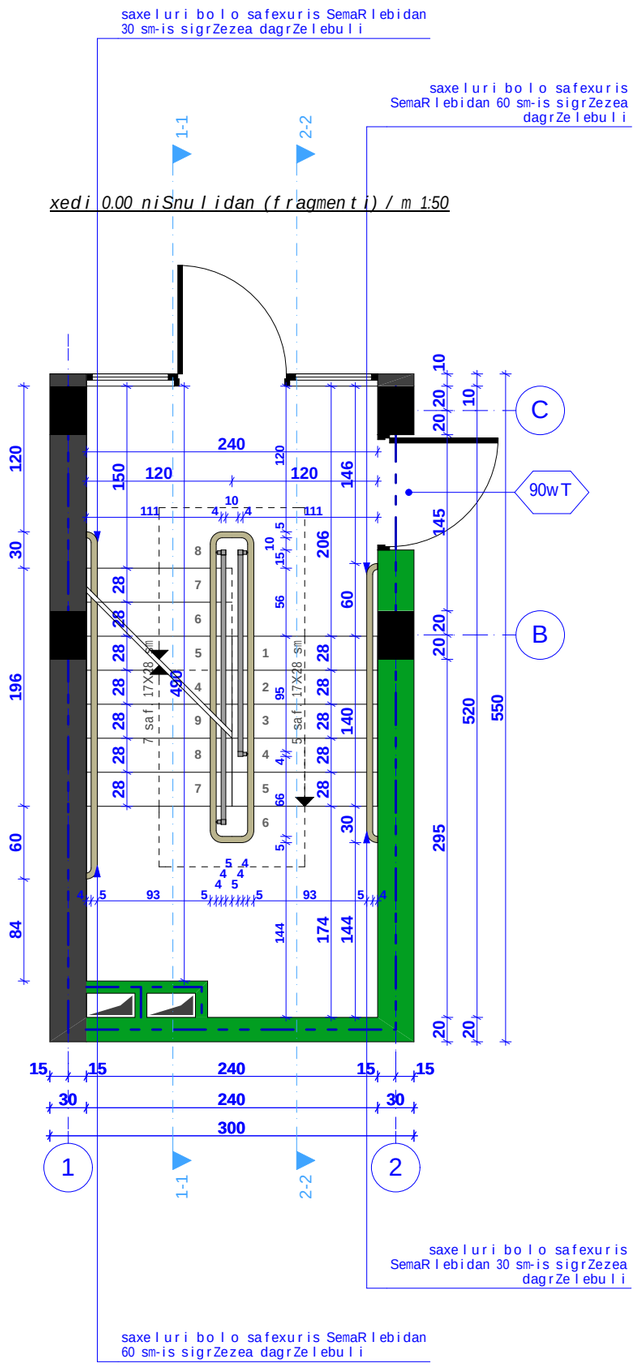
dasaxeleba	masStabi
sakacis kabinaSi Setanis sqema	1:20

stadia	furceli	furclebi
mp	a-19	36

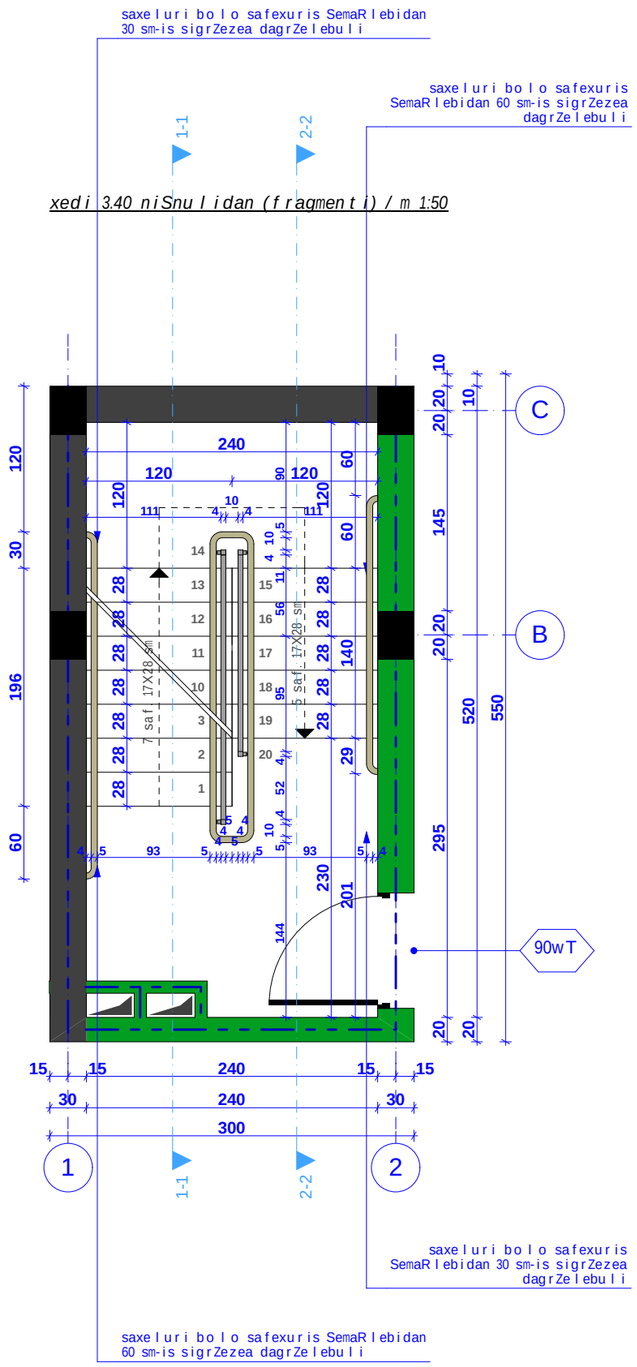
kibis ujredi #1-is mowyobis fragmenti



xedi -3.06 niSnulidan (fragmenti) / m 1:50



xedi 0.00 niSnulidan (fragmenti) / m 1:50



xedi 3.40 niSnulidan (fragmenti) / m 1:50

formati A-3		*dakveTis #*
Tbilisi 2019 w.		

eqsplikacia:

pirobiTi aRniSvnebi:

SeniSvna:

proeqtis saxelwodeba

q. Tbilisi, saqanelas quCa #2, (nakv. 3/14), (s/k 01.15.04.003.014)

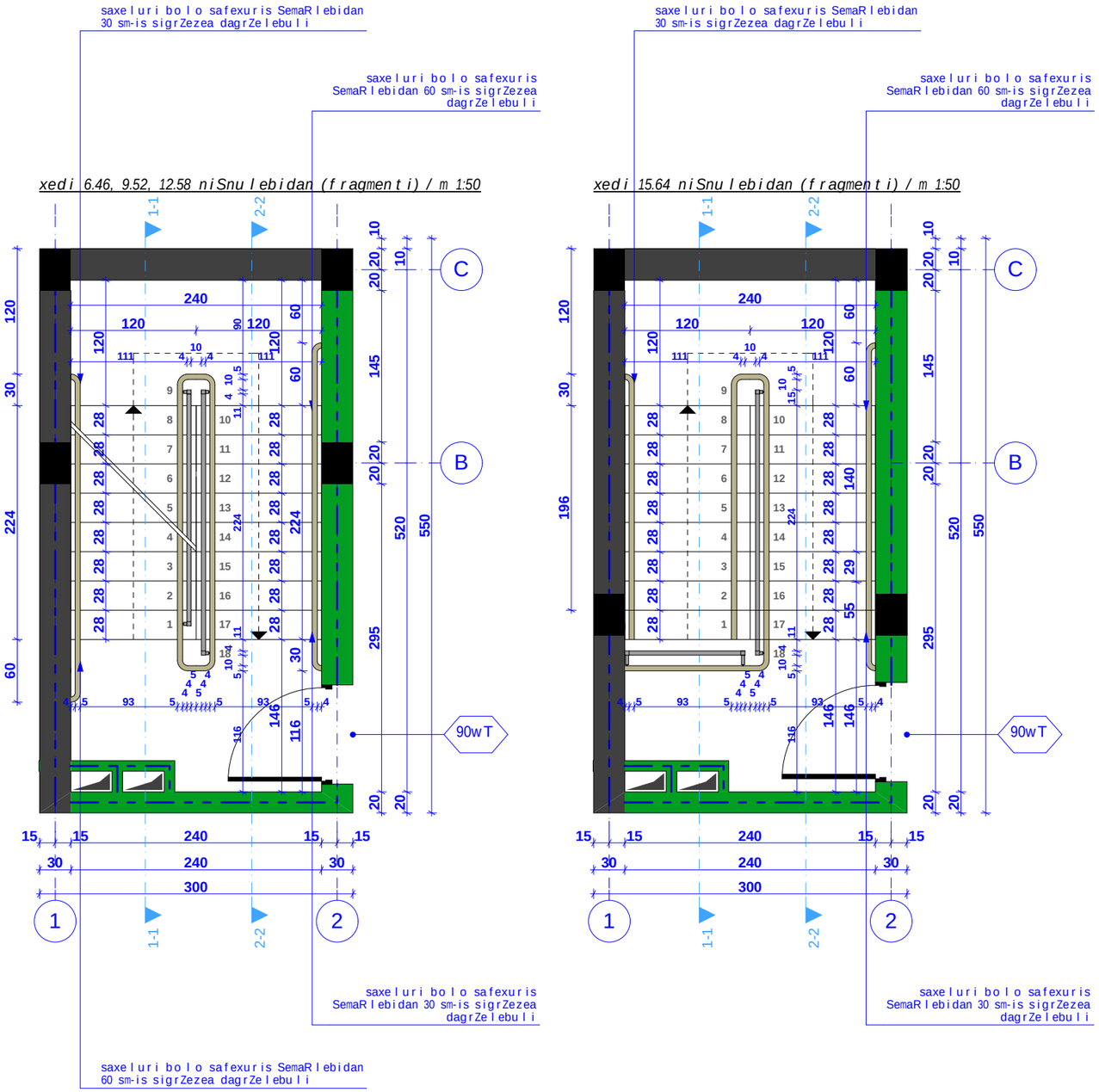
sastumros proeqti

Tanamdeboba	gvari	xelmowera
avtori		T. mosiaSvili

dasaxeleba	*masStabi*
kibis ujredi #1	1:50

stadia	*furceli*	*furclebi*
mp	a-20	36

kibis ujredi #1-is mowyobis fragmenti



formati A-3		dakveTis #
Tbilisi 2019 w.		

eqsplikacia:

pirobiTi aRniSvnebi:

SeniSvna:

proeqtis saxelwodeba

q. Tbilisi, saqanelas quCa #2, (nakv. 3/14), (s/k 01.15.04.003.014)

sastumros proeqti

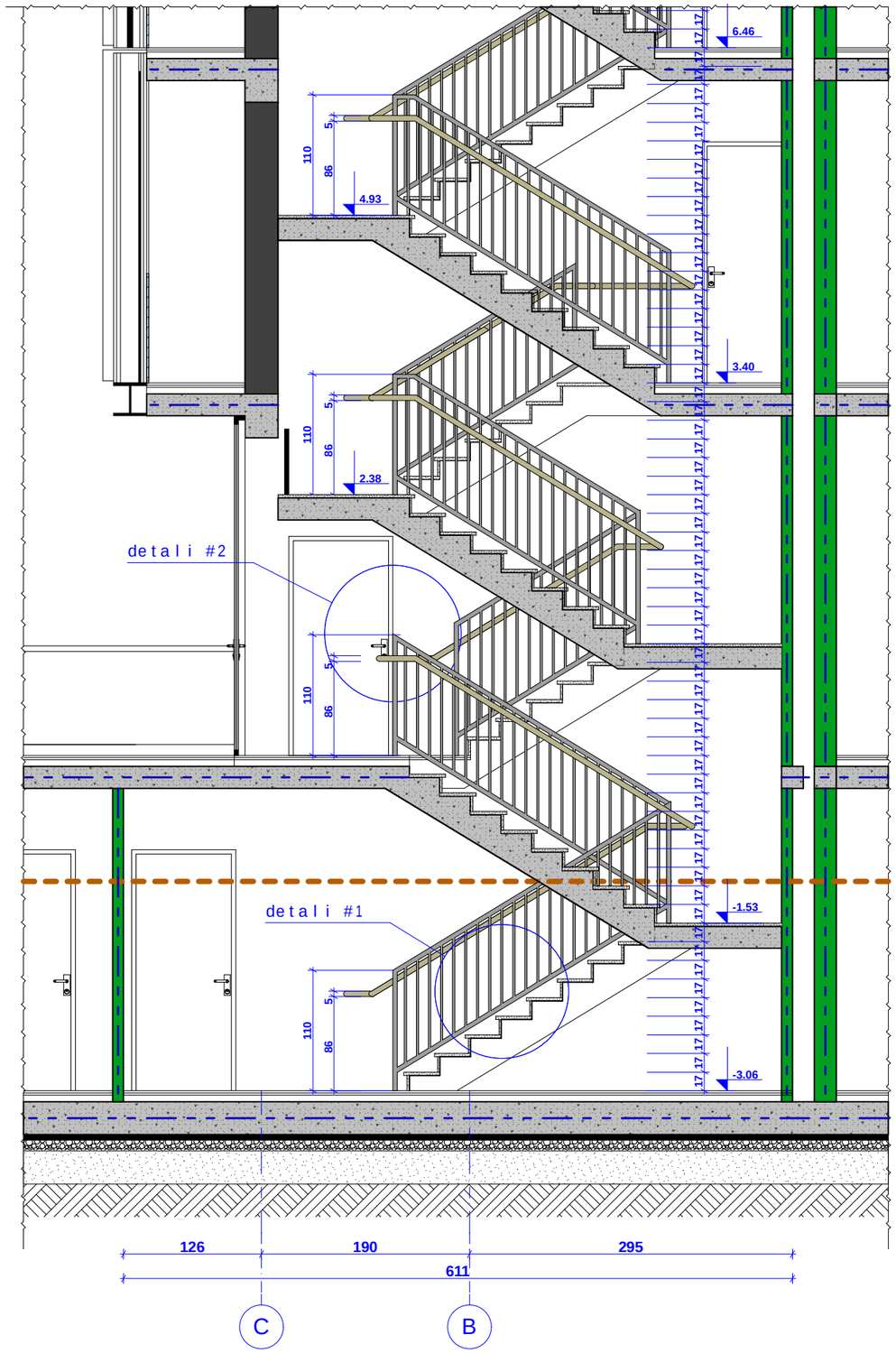
Tanamdeboba	gvari	xelmowera
avtori		T. mosiaSvili

dasaxeleba	masStabi
kibis ujredi #1	1:50

stadia	furceli	furclebi
mp	a-21	36

kibis ujredi #1-is mowyobis fragmenti

kveTi 1-1 / m 1:50



formati A-3	*dakveTis #*
Tbilisi 2019 w.	

eqsplikacia:

pirobiTi aRniSvnebi:

SeniSvna:

proeqtis saxelwodeba

q. Tbilisi, saqanelas quCa #2, (nakv. 3/14), (s/k 01.15.04.003.014)

sastumros proeqti

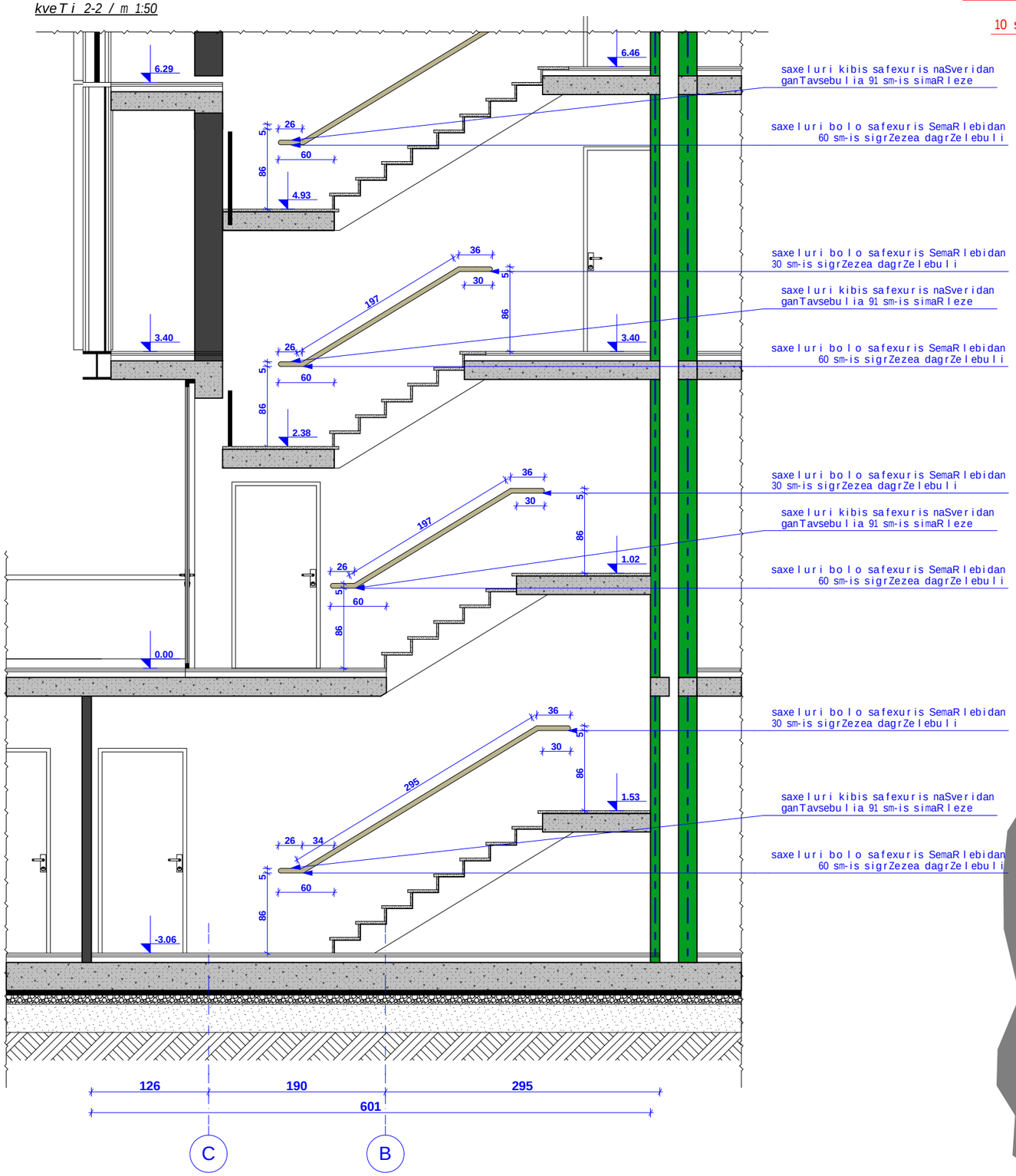
Tanamdeboba	gvari	xelmowera
avtori		T. mosiaSvili

dasaxeleba	*masStabi*
kibis ujredi #1	1:50

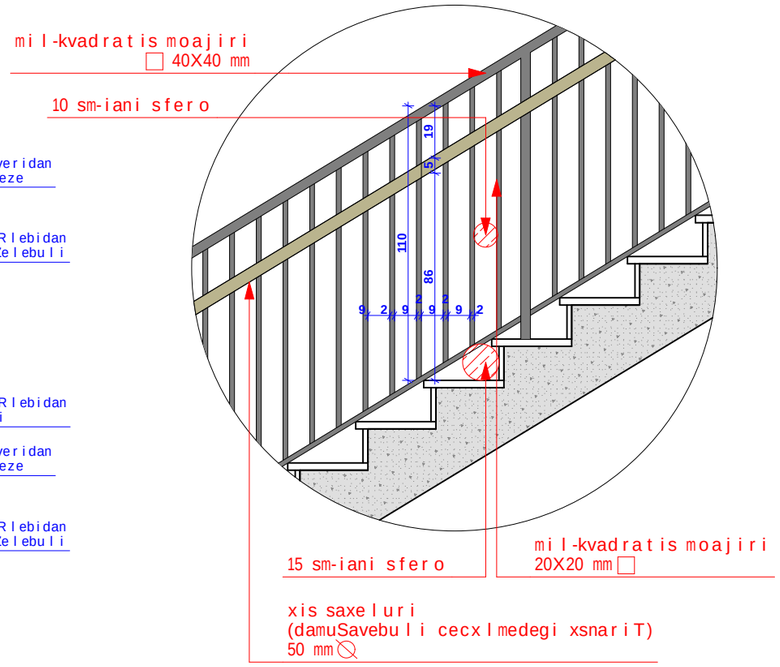
stadia	*furceli*	*furclebi*
mp	a-22	36

kibis ujredi #1-is mowyobis fragmenti

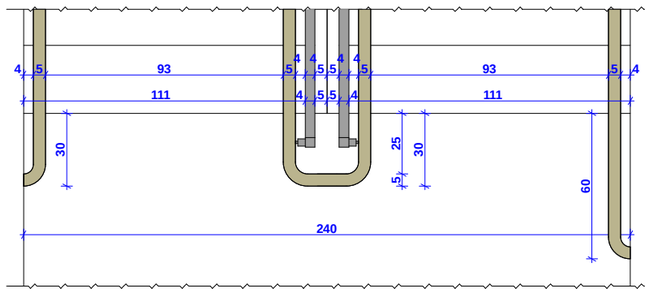
kveTi 2-2 / m 1:50

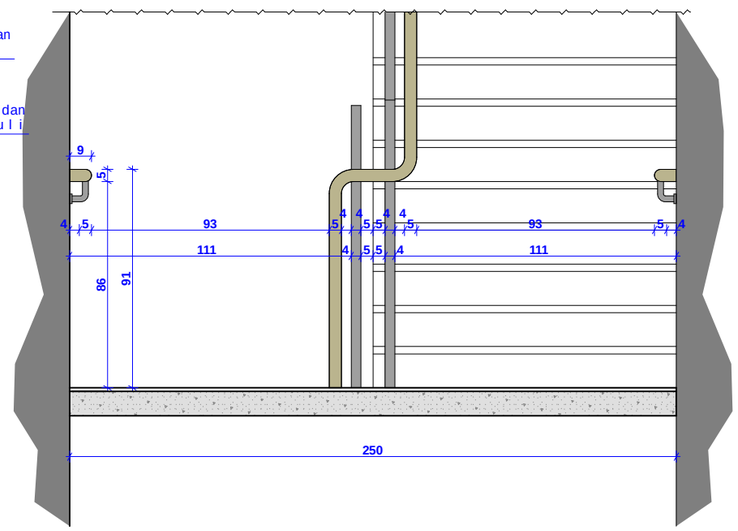


detali #1 / m 1:25



detali #2 / m 1:25





formati A-3 | dakveTis #

Tbilisi 2019 w.

eqsplikacia:

pirobiTi aRniSvnebi:

SeniSvna:

proeqtis saxelwodeba

q. Tbilisi, saqanelas quCa #2, (nakv. 3/14), (s/k 01.15.04.003.014)

sastumros proeqti

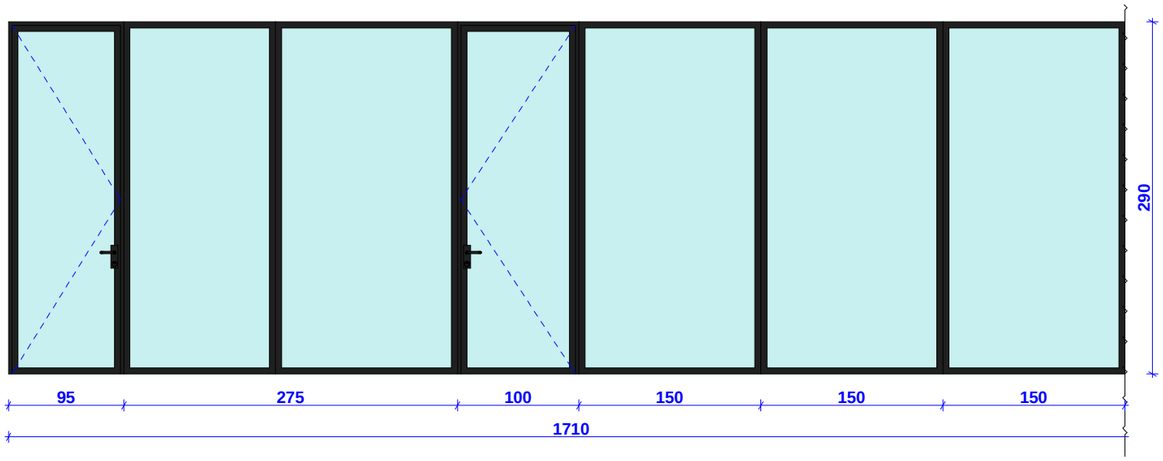
Tanamdeboba	gvari	xelmowera
avtori		T. mosiaSvili

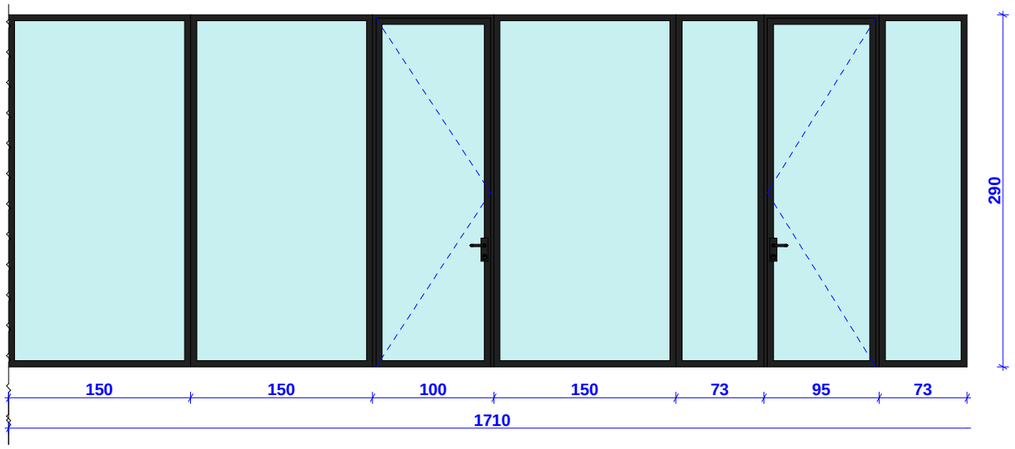
dasaxeleba	masStabi
kibis ujredi #1	1:50

stadia	furceli	furclebi
mp	a-23	36

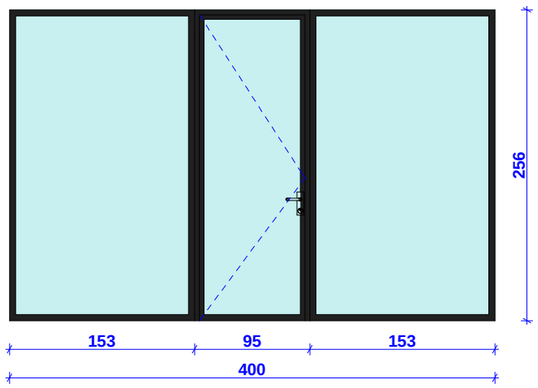
gare vitraJebis da fanjrebis specifikacia

vit-1
m 1:50

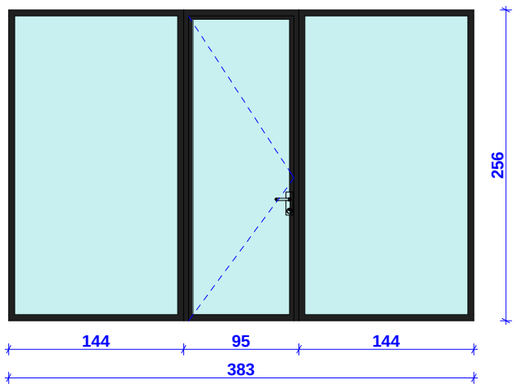




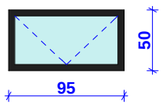
vit-2
m 1:50



vit-3
m 1:50



f-1
m 1:50



#	vitraJis marka	vitraJis zoma	sul raodenoba	erTeulis farTobi kv.m	sul kv.m
1	vit-1	1710X290	1 c.	49.59 m²	49.59 m²
2	vit-2	400X256	4 c.	10.24 m²	40.96 m²
3	vit-3	383X256	12 c.	9.80 m²	117.66 m²
4	f-1	100X50	2 c.	0.50 m²	1.00 m²
5	f-2	95X50	1 c.	0.48 m²	0.48 m²
					209.69 m²

SeniSvna: fanjrebis da vitraJebis zomebi dazustdes adgilze mwarmoeblis mier. masala da feri SeTanxmdes damkveTTan da proeqtis avtorTan

formati A-3

dakveTis #

Tbilisi 2019 w.

eqsplikacia:

pirobiTi aRniSvnebi:

SeniSvna:

proeqtis saxelwodeba

q. Tbilisi, saqanelas quCa #2, (nakv. 3/14), (s/k 01.15.04.003.014)

sastumros proeqti

Tanamdeboba	gvari	xelmowera
avtori		T. mosiaSvili

dasaxeleba	masStabi
fanjrebis da vitraJebis specifikacia	1:50

stadia	furceli	furclebi
mp	a-47	48

LIFTINSTITUUT

PRODUCTS
RvA C 067

EU-TYPE EXAMINATION CERTIFICATE

Issued by Liftinstituut B.V.
identification number Notified Body 0400,
commissioned by Decree no. 2018-0000125182

Certificate no.	: NL12-400-1002-074-09	Revision no.: 10
Description of the product	: Gearless Traction Lift	
Trademark, type	: Kleemann, Atlas Gigas N(-LH) & R	
Name and address of the manufacturer	: Kleemann Group Kilkis Industrial Area P.O Box 25 P.C. 61 100 Kilkis, Greece	
Name and address of the certificate holder	: Kleemann Group Kilkis Industrial Area P.O Box 25 P.C. 61 100 Kilkis, Greece	
Certificate issued on the following requirements	: Lifts Directive 2014/33/EU	
Certificate based on the following standard	: Parts of: EN81-20:2014, EN81-50:2014, EN81-21:2018	
Test laboratory	: None	
Date and number of the laboratory report	: None	
Date of EU-type examination	: March 2012 – February 2018, October 2018	
Additional document with this certificate	: Report belonging to the EU-type examination certificate no.: NL12-400-1002-074-09REV.10	

Additional remarks :

Model	N	N-LH	R	
Rated load	1275-2500	1275-2500	1050 - 2500	kg
Max speed	1,60	1,00	2,00	m/s
Max travel	45	45	70	m

Prior approval of the member state can be required if the well has reduced free space according article 2.2 of the Lifts Directive 2014/33/EU.
Furthermore see chapter 2 & 5 of the report belonging to this EU-type examination certificate.

Conclusion : The (model) lift meets the requirements of the Lifts Directive 2014/33/EU taking into account any additional remarks mentioned above.

Amsterdam

Date : 02-10-2018
Valid until : 20-12-2021

ing. P.J. Peeters
Manager

Certification decision by

Report EU-type examination

Report belonging to EU-type examination certificate no.	:	NL12-400-1002-074-09
Date of issue of original certificate	:	July 19, 2012
Concerns	:	Lift
No. and date of revision	:	10; October 2, 2018
Requirements	:	Lifts Directive 2014/33/EU Standards: EN81-20:2014, EN81-50:2014, EN81-21:2018
Project no.	:	P180018

1. General specifications

Name and address of company responsible for manufacturing	:	Kleemann Group Kilkis Industrial Area P.O Box 25 P.C. 61 100 Kilkis, Greece
Description of lift	:	Gearless traction lift
Type	:	Atlas Gigas N, Gigas N-LH, Gigas R
Address of examined lift	:	Kleemann Group Kilkis Industrial Area P.O Box 25 P.C. 61 100 Kilkis, Greece
Data of examination	:	March-July 2012, October 2012. March-December 2013, January-February 2014, June-July 2014, November 2014 - February 2015, April - September 2015, June – December 2016, August 2017, November 2017 – February 2018, October 2018
Examination performed by	:	W.Visser

2. Description lift

General:
The Kleemann Atlas Gigas N(-LH) and R is a traction lift with a 2:1 suspension system that is built with (MR) or without a separate machine room (MRL). The car is centrally suspended and guided. The gearless traction machine which is applied is depending on the load. In case of Gigas N(-LH) the traction machine and the

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governor are supported by a frame that is mounted in the top of the well and secured with specially designed wall plates.
In case of Gigas R the traction machine is supported by a frame that is mounted on the side in the top of the well, resting on and bolted to 3 guide rails (both cwt guide rails an 1 car guide rail) and is secured with specially designed wall plates. Also the overspeed governor is located in the top of the well, to the other car guide rail, on the other side if the well on its own frame.
The Gigas N(-LH) has a car with undersling (diverting pully's below the car) while the Gigas R has a car with upper sling (diverting pulley's on top of the car). The Gigas N-LH has reduced headroom, while Gigas N and Gigas R have normal pit and headroom.
The power switches, the fuses and the controller including functions for inspection and rescue operation are mounted in a cabinet. In case an integrated controller/drive is applied, it can be installed inside the well.
For MRL this cabinet is mounted in or in the vicinity of one of the landing doorframes, at one of the two upper floors or in rare cases on other floors.
If the travel of the car is more than 30 m, an intercom is provided for two-direction communication between the car and the control panel.
When for maintenance or inspection entrance to the car roof is necessary, a fixed balustrade of 700 mm height at least on machine side provides a safe working area.
The car can be built with a single entrance or a double entrance oriented opposite to each other. The allowed car and landing doors can be automatic or manual. The automatic doors are two or three panel telescopic doors and two, four or six panels central opening doors. The manual doors are side closing single collapsible, folding, shutters.

In case of insufficient headroom, Gigas N-LH; to reduce the risk of crushing by the car and to detect any persons on top of the car several measures are taken. In that case due to the opening of any landing door, giving access to the car roof, with an emergency triangular key the lift is put out of the automatic control. Even after the landing door is closed, the lift stays out of service. To restart the normal drive of the carrier a reset through the use of a switch in the control cabinet is needed, in some cases together with a manual reset of the bi-stable safety contact situated on the triangular emergency opening device of the landing door. Also a manually operated safety prop has to be put in the safe position when accessing the dangerous zone on the car.

The certified machine brake is used as the required mechanical safety device that keeps the stationary as long as the manually operated movable stop is not in its extended position. The machine brakes that are used as the stopping element are mounted on the same shaft as the traction sheave and have built in redundancy and they have a EU type-examination certificate as braking element for Unintended Car Movement Protections according Lifts Directive 2014/33/EU.

The motor and mechanical brake are activated accordingly the harmonized standard (e.g. by minimal two independent contactors). The supply for these contactors is only

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possible if the safety chain is closed. The main contactors used for the motor and brake belong to the category AC-3 as defined in EN 60947-4-1. Contact ratings shall be dimensioned accordingly their purpose (accordingly the components technical data).
The SIL 2 certified Yaskawa L1000A frequency converter itself can be used as one of the main contactors, to activate the motor circuit (in compliance with article 5.9.2.5.4 of EN 81-20:2014. The L1000A safety integrated Safe-Disable-Status-Function (SDSF) is the means to stop the car. Inputs H1 / H2 of L1000A are used to enable/disable the drive by means of contactor FR, which is energized behind the safety line. The SDSF contact is checked by the lift controller at the contactor check input, prior to every run.

The SIL 3 certified Zetadyn 4C frequency converter itself is used to activate the motor circuit. The 4C safety integrated Safe-Torque-Off function (STO) is the means to stop the car. Inputs STO-A and STO-B of 4C are used to enable/disable the drive by means of contactors K1 and K2, which are energized behind the safety line. The 4C "Umrichterstörung" outputs Xout 1-2 are checked by the lift controller at the " REG " input, prior to every run.
Together with the Zetadyn 4C, a contactor-less control of the motor brake can be applied. In that case a safety circuit, incorporated in in the ZAsbc4C module, is interrupting the supply of energy to the electro-mechanical motor brake.

The SIL 3 certified Gefran ADL300 frequency converter itself is used to activate the motor circuit. The ADL300 safety integrated Safe-Torque-Off function (STO) is the means to stop the car. Inputs EN and ENHW of ADL300 are used for monitoring and to enable/disable the drive by means of contactors K2 and K3, which are energized behind the safety line. The correct operation of the ADL300 is monitored by the controller, prior to every run.

Unintended Car Movement Protection (UCMP):
The controller monitors the safety circuit just before the lift starts and during the trip in the period where the door bypass device, if applied, is active.
When the car leaves the landing zone with open doors it leads to an open safety circuit because of the door-bridging circuit becoming inactive. After this UCM detection the machine brake is no longer energized and will close due to spring force. The lift enters a status that requires the intervention of a lift technician to recover to normal mode, switching off and on of the main switch will not recover the lift. The UCM detection status is stored in a non-volatile memory and is cleared only when a dedicated unblocking action is performed. For this action, the lift maintenance person has to select the related menu in the lift controller in order to reset the lift.
In absence of a door safety bypassing device and a re-levelling function with open doors, UCMP relies on the exclusion of an unintended car movement by measures mentioned above. The braking force must be guaranteed. A relevant Risk Analysis is provided and found in order.

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This means that also in this case both brake elements must be monitored by switches which are checked by the inverter or controller prior to start. These switches are pre-set and therefore guard excessive wear of the brake elements.

Ascending Overspeed Protection (ASD):
The ascending overspeed protection for Gigas N(-LH) can be performed by either the bi-directional safety gear on the car which is triggered by the overspeed governor or by the machine brake which is tripped by the overspeed contact on the governor.
The ascending overspeed protection for Gigas R is performed by the machine brake which is tripped by the overspeed contact on the governor.

The main characteristics of the Atlas Gigas N(-LH) lift are given in table 1a and 2a. The main characteristics of the Atlas Gigas R lift are given in table 1b and 2b. The general drawings are given in Annex 1a and 1b.

2.1 Lift data

Table 1a: Main characteristics of ATLAS Gigas N(-LH).

Rated load	kg	1275	1600	1800	2000	2500
Rated speed Gigas N	m/s	≤1.6				
Rated speed Gigas N-LH	m/s	≤1.0				
Max. Car area	m^2	2,95	3,56	3,88	4,20	5,00
Min car weight	kg	1300	1600	1700	1800	1800
Max car weight	kg	1960	1960	2060	2100	2400
Door type		telescopic single side or central opening doors				
Number of car entrances		1 entrance or 2 entrances at 180°				
Maximum no. of stops		16				
Maximum no. of accesses		32				
Maximum travel	m	45				
Minimum headroom N	mm	3800				
Minimum headroom N-LH	mm	3000				
Minimum pit depth	mm	1400				
Machine type 1 Brake		SM225.60B Mayr 896.00_31 1300				
Machine type 2 Brake		SM250.60B Mayr RSO 1300				
Controller type		Kleemann Lisa 20 / KLLC 100				
Drive type		Ziehl Abegg Zetadyn 3C or 4C / Yaskawa L1000A / Gefran ADL300				
Integrated Controller / Drive type		STEP CH 1000 / Kleemann UControl				
Diameter governor rope	mm	Drako 8 / 8 (250T)				
- Min. braking load	kN	30,4 / 43,3				
Rope manufacturer - type -diameter -min braking load	 mm kN	Drako K8 x 19 10 47,4				-
Number of ropes		6	7	8	8	-

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Rope manufacturer - type -diameter -min braking load	 mm kN	Drako 250T 10 67,7				
Number of ropes		6	7	8	8	8
Rope manufacturer - type -diameter -min braking load	 mm kN	Drako 250T 8 43,3				-
Number of ropes		8	8	10	10	-
Traction sheave diameter -α, groove, γ	mm °	320 / 400 180, V-groove, 30-45				
Car guide rails	mm	T125/82/16				
Max bracket distance	mm	2500				2000
Cwt guide rails	mm	T75/62/10 or T89/62/16*				
Max bracket distance	mm	2500 or 2000*				
Cwt guide rails in case CWT safety gear	mm	T89/62/16				
Max bracket distance	mm	2000 or 1750*				2000

* ***Note: For travels over 40 m***

Table 1b: Main characteristics of ATLAS Gigas R.

Rated load	kg	1050	1275	1600	1800	2000	2500
Rated speed	m/s	≤2,00					
Max. Car area	m^2	2,72	2,95	3,56	3,88	4,20	5,00
Min car weight	kg	900	1000	1000	1000	1000	1000
Max car weight	kg	2550	2300	2350	2150	2300	2100
Door type		telescopic single side or central opening doors					
Number of car entrances		1 entrance or 2 entrances at 180°					
Maximum no. of stops***		24					
Maximum no. of accesses		48					
Maximum travel***	m	70					
Min.pit depth : - v ≤ 1,00 m/s - 1,00 < v ≤ 1,60 m/s - 1,60 < v ≤ 1,75 m/s - 1,75 < v ≤ 2.00 m/s	 mm	1100 (1040**) 1270 1315 1365					
Min.headroom, - v ≤1,00 m/s - 1,00< v ≤1,60 m/s - 1,60< v ≤ 1,75 m/s - 1,75 < v ≤2.00 m/s	 mm	3800 (3500*) 4000 4060 4160					
Machine type 1		ER3D		ER3	ER6D		
- brake		PZ1600B		SPZ800	SPZ1600		
Machine type 2		SM225.45C			SM225.60B		
- brake		Warner Fenix 09 10-1000			Mayr 896.00_31 1300		
Machine type 3				SM225.60B			
- brake				Mayr 896.00_31 1300			
Machine type 4						SM250.60B	
- brake						Mayr RSO-1300	
Controller type		Kleemann Lisa 20 / KLLC 100					

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Drive type		Ziehl Abegg Zetadyn 3C or 4C / Yaskawa L1000A / Gefran ADL300			
Integrated Controller / Drive type		STEP CH 1000 / Kleemann UControl			
Diameter governor rope	mm	Drako 8 / 8 (250T) / 6,5 (250 T)			
- Min. braking load	kN	30,4 / 43,3 / 31,5			
Suspension Rope - manufacturer, type -diameter -min braking load	 mm kN	 Drako, 250T 8 43,3			
Number of ropes		8 / 9 / 10	9 / 10 / 11	10 / 11 / 12	11 / 12
Traction sheave diameter -α, groove, γ	mm °	320 180, V-groove, 30-50			
Car guide rails	mm	T125/82/16			
Max bracket distance	mm	2500			2250
Cwt guide rails	mm	T75/62/10			
Max bracket distance	mm	2500			2250
Cwt guide rails in case CWT safety gear	mm	T89/62/16			
Max bracket distance	mm	2500 or 2000****		2500	2250

* ***Note: Lower headroom of min 3500 mm can be possible with protective measures according to prEN81-21:2016***
** ***Note: Lower pit for 1m/s can be possible with protective measures according to prEN81-21:2016***
*** ***Note: Higher travels and more than 24 stops are possible provided the necessary calculations are delivered by KLEEMANN.***
**** ***Note: For travels over 40 m***

2.2a Summary of applicable safety components for Gigas N(-LH)

The following table lists the allowed safety components with their certificate number which may be used in the Atlas Gigas N(-LH) lift within their application range.

Table 2a

Component	Manufacturer; type	Certificate no.
Landing door locking device	Tecnolama; Premium	NL16-400-1002-075-07, 01/11-099/PR/R
	Tecnolama; 265/11/50	NL16-400-1002-075-06, 02/09-009/PR/R
	Tecnolama; 210/10/40	NL16-400-1002-075-05, 01/09-009/PR/R
Car door locking device	Tecnolama; CDL	NL16-400-1002-075-02, 04/09-009/PR/R
Car safety gear	Dynatech; PQ 4000 UD	ATI / PP / 008
	Dynatech; ASG-100	ATI / PP / 010
	Dynatech; ASG-120	ATI / PP / 010
	Thyssen; 6071/2	EU-SG 212
	Wittur; SGB 02	TUV-A-AT-1/99/102/CEFV-3
Counterweight safety gear (optional)	Dynatech; PQ 4000 UD	ATI / PP / 008
	Dynatech; ASG-100	ATI / PP / 010
	Dynatech; ASG-120	ATI / PP / 010
	Kleemann; 1410315-D	C/TH/LF06-03/0004/16

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	Thyssen; 6071/1	EU-SG 213
	Thyssen; 6071/2	EU-SG 212
Ascending car overspeed and UCM safety device	Dynatech; PQ 4000 UD	ATI / PP / 008
	Dynatech; ASG-100-UD	ATI / PP / 010
	Dynatech; ASG-120-UD	ATI / PP / 010
	Thyssen; 6071/2	EU-SG 212
	Mayr 896.00_31 1300	EU-BD 760
	Mayr RSO 1300/896.30_3 SO	EU-BD 783
PU Buffers	BASF Elastogran; 80-80	44 208 12 0827 19
	BASF Elastogran; 125-80	44 208 12 0827 21
	BASF Elastogran; 165-80	44 208 12 0827 22
	Acla, 300400A	44 208 12019088
	Acla, 300401A	44 208 12019090
	Acla, 300401B	44 208 12019091
	Acla, 300402A	44 208 12019093
	Acla, 300403A	44 208 12019097
	Acla, 300404A	44 208 12019098
	Acla, 300405A	44 208 12019092
	Acla, 300400L	44 208 17053401
	Acla, 300401L	44 208 17053403
	Acla, 300402L	44 208 17053404
	Acla, 300403L	44 208 17053406
	Acla, 300404L	44 208 17053407
Hydraulic Buffers	Thyssen; O1A, O1B, O1C	EU-B 001/002/003
	Thyssen; O2A, O2B, O2C	EU-B 004/005/006
	Oleo ; MLB18.1	BSI-LB-570092
	Oleo ; LSB16.B	BSI-LB-570095
Overspeed governor (car and cwt)	Montanari; RG300,RH300,RG300BD,RH300BD	EDLV 013
	Jungblutt, HJ200	EU-OG 001
	Jungblutt, HJ250 & HJ300	EU-OG 002
	Thyssen; GBTK 6023	EU-OG 055
	PFB; LK300	EU-OG 184
	Aspar - Kleemann, KLG A	NL16-400-1002-071-13
	Aspar - Kleemann, KLG B	NL16-400-1002-071-14
UCM detector	Kleemann; Lisa 20_RB_V3.1	NL11-400-1002-135-02≥REV.8
	STEP/Kleemann; SM11B V3.4	44 208 16050002
	STEP/Kleemann; SM11A ver.7	SCMB.0078 rev.1
	STEM, NCUM 10	EDES 009
	STEM, NC80	CA50.00340
UCMP system	Kleemann, UCMP for traction lifts with gearless drive models ATLAS 1:1, ATLAS 2:1N(-RL), ATLAS RPH N, ATLAS RPH R, ATLAS 2:1-L, ATLAS GIGAS 2:1N(-LH)&R, ATLAS SUPER GIGAS 4:1, ModaLift Line 2000.	NL12-400-1002-074-05≥Rev.8

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2.2b Summary of applicable safety components for Gigas R

The following table lists the allowed safety components with their certificate number which may be used in the Atlas Gigas R lift within their application range.

Table 2b

Component	Manufacturer; type	Certificate no.
Landing door locking device	Tecnolama; Premium	NL16-400-1002-075-07, 01/11-099/PR/R
	Tecnolama; 265/11/50	NL16-400-1002-075-06, 02/09-009/PR/R
	Tecnolama; 210/10/40	NL16-400-1002-075-05, 01/09-009/PR/R
Car door locking device	Tecnolama; CDL	NL16-400-1002-075-02, 04/09-009/PR/R
Car safety gear	Dynatech; ASG-121	ATI / PP / 010
	Dynatech; ASG-120	
	Thyssen; 6071/2	EU-SG 212
	Thyssen; 6071/3	EU-SG 214
Counterweight safety gear (optional)	Wittur; SGB 01	TUV-A-AT-1-99-101-CEFV-3
	Wittur; SGB 02	TUV-A-AT-1-99-102-CEFV-3
	Wittur; SGB 05	TUV-A-AT-1-99-104-CEFV-3
	Thyssen; 6071/0	EU-SG 345
	Thyssen; 6071/1	EU-SG 213
	Thyssen; 6071/2	EU-SG 212
Ascending car overspeed and UCM safety device	Mayr 896.0	EU-BD 760
	Mayr RSO 1300/896.30_3 SO	EU-BD 783
	Warner ERS Fenix 09	EU-BD 906
	Suzhou Torin Drive ; SPZ 800	EU-BD 898
	Suzhou Torin Drive ; SPZ 1600	EU-BD 866
	Suzhou Torin Drive ; PZ 1600 B	EU-BD 939
PU Buffers	BASF Elastogran; 80-80	44 208 12 0827 19
	BASF Elastogran; 125-80	44 208 12 0827 21
	BASF Elastogran; 165-80	44 208 12 0827 22
	Acla, 300400A	44 208 12019088
	Acla, 300401A	44 208 12019090
	Acla, 300401B	44 208 12019091
	Acla, 300402A	44 208 12019093
	Acla, 300403A	44 208 12019097
	Acla, 300404A	44 208 12019098
	Acla, 300405A	44 208 12019092
	Acla, 300400L	44 208 17053401
	Acla, 300401L	44 208 17053403
	Acla, 300402L	44 208 17053404
	Acla, 300403L	44 208 17053406

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	Acla, 300404L	44 208 17053407
Hydraulic Buffers	Thyssen; O1A, O1B, O1C	EU-B 001/002/003
	Thyssen; O2A, O2B, O2C	EU-B 004/005/006
	Oleo ; LSB16.B	BSI-LB-570095
	Oleo ; MLB18.1	BSI-LB-570092
	Oleo ; MLB20.1	BSI-LB-570093
Overspeed governor (car and cwt)	PFB; LK300	EU-OG 184
	Jungblutt, HJ200	EU-OG 001
	Jungblutt, HJ250 & HJ300	EU-OG 002
	Aspar - Kleemann, KLG A	NL16-400-1002-071-13
	Aspar - Kleemann, KLG B	NL16-400-1002-071-14
	Dynatech Quasar	ATI / LV / 008
UCM detector	Kleemann; Lisa 20_RB_V3.1	NL11-400-1002-135-02≥REV.8
	STEP/Kleemann; SM11B V3.4	44 208 16050002
	STEP/Kleemann; SM11A ver.7	SCMB.0078 rev.1
	STEM, NCUM 10	EDES 009
	STEM, NC80	CA50.00340
UCMP system	Kleemann, UCMP for traction lifts with gearless drive models ATLAS 1:1, ATLAS 2:1N(-RL), ATLAS RPH N, ATLAS RPH R, ATLAS 2:1-L, ATLAS GIGAS 2:1N(-LH)&R, ATLAS SUPER GIGAS 4:1, ModaLift Line 2000.	NL12-400-1002-074-05≥Rev.8

2.3 Applied other certified components

Component	**Manufacturer; type**	**Certificate no.**
Suspension ropes	Pfeifer Drako; 250 T	CA 067
Controller - Main PCB	Kleemann; Lisa 20_RB_V3.1 -SW	NL11-400-1002-135-02≥REV.8 -V2.031B or higher
	KLLC 100: MLC; LC 100-S (PCB Safety Circuit) Rev. B -SW MLC; LC 100-Z (PCB Car connections) Rev. B MLC; LC100-SR (PCB for monitoring) Rev. A	968/A 165.00/17 -V4.401.05 or higher 968/A 165.00/17 968/FSP 1051.00/17
Inverter	Yaskawa; L1000A (SIL2)	Z10/15/05/22733/029
	Zetadyn; 4C	01/205/5288.01/15
	Gefran, ADL300 (SIL3)	CA50.00616
Integrated Drive / Controller	STEP; CH1000 (AS380) or Kleemann; UControl -SW	44 799 16050001 - NSPE07KN14T6 or higher
Safety relay	STEM, NCUM10	EDES 009
	STEM, NC80	CA50.00340
	Pizzato, CS AR-9#	IMQ CP 432 DM

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Contactorless Brake module	Ziehl Abegg; ZAsbc(xx)(yyy)	01/208/4A/6108.00/16
Wrapped car apron for reduced pit	Kleemann; WA 175	NL18-400-1002-074-24

2.4 Applied other components

Component	Manufacturer	Type
Inverter	Zetadyn	3C
Retiring cam for manual gates	Dewhurst	FR21
Manual gates	Bolton Gate Co. Limited	Eurofold, Superior

See annex 1 for a general overview of the product.

3. Examinations and tests

The examination covered a check whether compliance with the Lifts Directive 2014/33/EU is met, based on the harmonized product standards EN81-21:2018, EN81-20:2014 and EN81-50:2014.
Issues not covered by or not complying these standards are directly related to the above mentioned essential requirements based on the risk assessments.
The examination included:

- Examination of the technical file (See annex 2):
- Check of performed calculations according to EN 81-20/50.
- Examination of the representative model in order to establish conformity with the technical file.
- Inspections and tests to check compliance with the requirements.

4. Results

After the final examination the installation and the technical file were found in accordance with the requirements. The functional tests passed without remarks. The load tests passed without remarks and did not lead to permanent deformations or loss of stability.

4.1. Calculations

Calculations of the car guide rails and counterweight guide rails are made on the basis of EN 81-50 requirements. Additional calculations were made for the

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counterweight frame, machine support frame, drive shaft and the buffer support structure. The calculations were checked and found in order.
There has been given special attention to the fact that it should be possible to conduct final inspections without the need of checking calculations.
This means that, where possible, system limits are given such as maximum car mass and maximum bracketing distance for the guide rails.

4.1.1. Guide rail calculations
The calculations are made according to EN 81-50, paragraph 5.10.
The calculations take into account the additional loads introduced by the machine.
The information stated in the model description enables final inspections without the need of a calculation check. The maximum bracket span for each allowed type of guide rail is stated in the model description.

4.1.2. Traction
The calculations are made according to EN 81-50, paragraph 5.11 and found in order.
The minimum and maximum required mass of the car is indicated in the model description. The information stated in the model description enables final inspections without the need of a traction calculation check.

4.1.3. Suspension rope safety factor
All relevant factors have been considered and lead to the maximum allowed car mass and car dimensions as stated in the model description.
The information stated in the model description enables final inspections without the need of a calculation check.

4.1.4. Machine base frame calculations
Calculations are made with maximum P and Q in worst conditions and found in order.

4.1.5. Car frame calculations
Calculations are made with maximum P and Q and found in order.

4.2. **Measurements**

4.2.1. Current measurements
Current measurements were done to check proper balancing. The final result was ok.

4.2.2. Speed measurements
The following speed measurements, using test loads, have been performed:
- nominal speed
- inspection drive speed

All measurements were within the set values according to clause 5.9.2.4 (nominal speed), clause 5.12.1.5. (inspection drive speed) of EN 81-20.

4.2.3. Insulation resistance measurements

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On the following circuits, insulation resistance measurements have been performed:
- Motor circuit
- Safety circuit
- Car lighting circuit

The measured values of the single lines, and of parts of lines, as well as their summation, were significantly higher than the required values in the standard.

5. Conditions

Additional to the applicable demands in the considered requirements / standards (see certificate and/or page 1 of this report), the following conditions shall be taken into account:

General:
- Motor and brakes must be energized according to the requirements of EN 81-20:2014 clauses 5.9.2.2.2, 5.9.2.5.2, 5.9.2.5.4, while the used contactors must fulfill the requirements of EN 81-20:2014 clause 5.10.3.1.
- This EU type certification does not include approval for fire-fighting purposes according to EN 81-72.

Atlas Gigas	:	N	N-LH
– Nominal load	:	1275 - 2500	1275 - 2500 kg
– Max. nominal speed	:	1,6	1,0 m/s
– Max travel	:	45	45 m
– Max number of stops	:	16	16

Atlas Gigas	:	R
– Nominal load	:	1050-1800 1801-2000 2001- 2500 kg
– Max. nominal speed	:	2,00 m/s
– Max travel*	:	70 m
– Max number of stops*	:	24

Note: Higher travels and more than 24 stops are possible provided the necessary calculations are delivered by KLEEMANN.

Control cabinet:
- The controller must be located in a separate and lockable cabinet. It must be able to close and lock this door without the use of a key. Opening can only be done with the use of a key.
- The control cabinet must be located next to one of the two upper landing doors or in the nearby vicinity. In rare cases the control cabinet can be located at intermediate floors, always in the nearby vicinity of the landing door. In that case the following conditions must be met:

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- Put a label at the bottom and top landing door, indicating the location of the control panel.
- The control cabinet must be accessible at all times
- Put a label inside the control cabinet door:" *do not leave unattended, close door when leaving ".*
- Install an additional 3-phase main switch near the motor

– The control panel shall be protected against splashing water and shall have a protection degree IPX3, the electrical equipment inside the control panel shall have a protection degree IP2X.
– The cabinet shall be located in an area which is suitably protected against all weather conditions, such as rain, including the working area (min. 500 x 700 mm) in front of the cabinet.
– Unrestricted access to the controller must be ensured. Therefore the controller cannot be located in private premises without additional measures.
– The control panel shall not be located in areas where interference with public can be expected to lead to dangerous situations.
– If the controller is installed outside, the effect of high and low temperatures and the influences on the lift system must be examined separately.
– In front of the control panel a horizontal free space of 70 cm is required. In case the space in front of the control cabinet shall allow the passing of public this minimum horizontal free space needs to be 1.20 m. In specific situations for instance if wheelchairs have to pass by, this value might need to be enlarged to 1,55 m. The essence is that in any case a free horizontal space of 70 cm is guaranteed. In addition, depending on the frequency of passing public and the nature of activities on site, the use of a fence guarding the working area might be needed.
– The light intensity in front of the opened control panel shall be 200 lux.
– A LED display must be installed in the control cabinet as a level indicator including identification of car movement and car travelling direction.
– An emergency powered rescue drive must be supplied in the cabinet .
– It shall be possible to perform all dynamic tests from this cabinet (outside the well).
– It shall be possible to remove the car from a safety gear activated situation at all times by normal means. After this a reset by a technician is required.
– In case the integrated drive/controller is located inside the well, the requirements mentioned above shall be met by the Emergency and Inspection panel, located outside the well.

Ucontrol Controller:

– Incoming ground/neutral is connected on terminal JP1Ø1 of the AS.T029 board. The ground/neutral used for the main contactors shall be supplied from terminal JP1Ø5 of the AS.T029 board.

KLLC 100 Controller:

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- No switching elements, like relays, that take part in the safety circuit or the brake supply, shall be installed on the LC100-SR100 Printed Circuit Board.

Lisa 20 Controller

- Incoming ground is connected to terminal "NA", the ground used for the main contactors shall be supplied from terminal "NI".

ZAsbc4C:

- All conditions mentioned in The Operating instructions have to be met.

Machine:

- The light intensity in front of the machine, inverter and all other panels in the well top shall be 200 Lux.
- The machine used is equipped with a non-adjustable brake. This brake is considered by its manufacturer as a maintenance free brake. The machine itself needs only visual inspections. The maintenance work foreseen to be performed from the car roof is not likely to cause any unexpected movement of the car Changing of the machine or the brake is considered repair work and not maintenance work. For that reason the car is not equipped with any mechanical blocking device to keep it in position to perform maintenance.
- Considering the location of the machine at the side in the top of the well, there shall be a free space of minimum 0,3 m above the moving parts, unless they are completely covered.

Compensating means:

- In case the speed exceeds 1,75 m/s for the Gigas R, compensating chains might be used with a chain guide roller system, fixed in the pit.

Pit :

- The minimum vertical distance between the cover of the tension weight and the lowest part of the car bottom shall be 100 mm when the car is at its fully compressed buffers.
- After making use of the pit inspection station the installation can only get back to normal operation after a reset by means of a reset switch located at the bottom landing or by a specific sequence and time of operating the LOP at the bottom landing.
- For entrance of the pit, in case the depth is over 500 mm, a vertically fixed ladder shall be present to reach the pit floor from the landing. When this is not possible, a not permanently fixed ladder can be used under several conditions:
  - Its position shall be guarded by a safety contact
  - It must be possible to place the not permanently fixed ladder in an operational position angle of approximately 70° to the horizontal.
  - Additional requirements for this ladder are that it can be stored either against the wall of the well or on a support attached to the guide rail within

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a reach of 0.70 m or it is stored on the pit floor under the condition that it is connected to a chain in order to lift it from the landing position.
- The ladder shall be connected irremovable to the pit.
- The ladder shall comply with EN 81-20, annex F.

Car :
- The car roof is accessible, provided with required balustrades of sufficient strength and inspection drive.
- In case a 1,10 m balustrade is needed, it can be a foldable version. It is equipped with 2 safety switches: one is checking the folded position that enables normal drive and the other is checking the complete upright, unfolded, position and enables inspection drive from the car top.
- The car and its interior with finishes shall be designed according to the requirements of EN81-50. Walls, floor, roof and balustrade shall be of sufficient strength.
- Car doors shall be accompanied by a pendulum test report according to clause 5.14.5 of EN81-50.
- The car door shall be locked between floors or be equipped with a door restrictor.
- The connection box on the car roof shall be non-accessible due to dimensions.
- In case of low pit where the car apron does not fulfil the requirements of EN 81-20 it must fulfil the requirements of EN81-21:2018 art. 5.8.2. a. The unfolded / unwrapped apron must be of sufficient strength according to EN81-21:2018 art. 5.8.1. The automatic car door must be locked and be able to be unlocked from outside after opening the landing door. When foldable car doors are applied together with hinged landing doors, it must be made impossible to unlock the landing door from inside the car after the car door is manually opened. Unfolding / unwrapping of the apron is done by the use of the unlocking key, from the landing. The folded / wrapped / retracted position is guarded by a safety switch which enables normal operation. The fixed part of the apron must be of sufficient length.
  Because of the short apron UCM upwards shall be excluded. Therefore a low pit and short apron can only be used in an installation without re-levelling function.
  Putting back the car apron into the folded / wrapped / retracted position is only allowed and shall only be possible from the lowest landing or from the pit floor, by appropriate means. In case inspection or recall drive is possible with unfolded / unwrapped apron, a downward direction dependant switch shall stop the downwards movement before the unfolded apron hits the pit floor.
  In case the Kleemann wrapped car apron for reduced pit, WA 175, is applied, all conditions in its certificate and report have to be met.

Re-levelling with open doors or pre-opening of doors:
When the option re-levelling with the doors open or pre-opening of doors is provided, the following items will have to be checked during final inspection:

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- The maximum length of the zones is 100 mm. It must fulfil the requirements of EN 81-20 and the conditions of the UCMP certificate NL12-400-1002-074-05.
- The magnets which define the re-levelling or pre-opening zone, shall be bonded to prevent movement with open doors outside the allowed zone.
- Only allowed in no low pit installations

Well:

- Local requirements may demand an emergency light on the car roof or top of the well.
- Landing doors shall be accompanied by a pendulum test report according to clause 5.14.5 of EN81-50.
- Vertical and horizontal clearances in top of the well as required by clause 5.2.5.7 of EN81-20 have to be met, considering all control cabinets located in top of the well, like the drive, controller, UPS but also the machine and OSG.
- A two way communication device shall allow contact with the rescue service and shall be designed and constructed such that it will function even without the normal power supply. This provision shall be there both on the car roof and on the bottom of the car so that it can be reached when trapped in the pit.
- A temperature between +5°C and + 40°C must be ensured in the lift well
- For travels over 40m SH clips are used for fixing the car guide rails and SL clips for the counterweight guide rails.

According to Lifts Directive 2014/33/EU annex I, section 2.2, the lift must be designed and constructed to prevent the risk of crushing when the car is in one of its extreme positions. This has been achieved when the following conditions due to possible reduced free space above the carrier. (deviation from clause 5.2.5.7 of EN 81-20) are met:

- Guaranteed headroom as defined in clause 5.2.5.7 of EN81-20 shall at least be 0,5 m + 0,035 v^2 and the refugee space shall at least be 0,5 x 0,7 x 1,0 m for each person.
- Additional contacts must be installed on all landing doors checking if a door is manually opened by means of a triangular key.
- This compulsory Door Opening Monitoring system (DOM) meets clause 5.5.3 of EN81-21:2018.
- When the landing doors are manually opened by means of a triangular key, the safety system and so normal operation of the installation is cut off and a visual red alarm is lit. The UCMP certified machine brake is preventing any unexpected car movement.
- Inspection drive will only be possible as soon as the safety prop beneath the counterweight is installed in its blocking position and the foldable balustrade (if any) is in its upright position. This leads to the changing of the visual alarm from red to green and opening the safety line due to safety switches.
- Inspection drive upwards will be cut off when the car passes the inspection limit switch in upwards direction, before the downwards moving counterweight hits the positioned safety prop. In this position maintenance can be performed.

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- The safety prop must guarantee a vertical clearance of 1400 mm minimum above the car roof when its buffer is fully compressed, in case a (foldable) balustrade of 1100mm erected height is used. In case a 700 mm balustrade is used, the safety prop under the counterweight can be reduced.
- After leaving the car roof, putting the inspection drive in the normal drive position, resetting the bi-stable additional contact on the unlocking device manually and closing of the landing door, the installation can only regain normal operation after the counterweight safety pitprop is put back in drive position and also the bi-stable additional contact on the unlocking device of the bottom landing door has been reset manually and the door closed. Finally normal operation is reset by using the reset switch inside the control cabinet. There is also a solution possible with an electrical reset of the mentioned bi-stable contacts, by using the same reset switch. All electrical resets are only possible with a closed safety chain. The used contactors are guarded in a so called safety circuit or are incorporated in a safety relay.
- A power failure may not reset the above described safety system
- When the reset switch remains activated an electric safety device prevents normal operation.
- In case the one of the upper landing doors has been opened manually without the movable safety prop being put in its safe position under the counterweight, also upwards movement by electrical emergency operation shall not be possible.

According to Lifts Directive 2014/33/EU annex I, section 2.2, the lift must be designed and constructed to prevent the risk of crushing when the car is in one of its extreme positions. However, in specific cases, other appropriate means may be provided to avoid this risk. It should be noted that, Liftinstituut issues an EU type-examination certificate for the Gigas N-LH and Gigas R with means to prevent the crushing risk other than permanent free space or refuge. That is why Liftinstituut clearly states that the installation of a Gigas N-LH or Gigas R with reduced clearances according to the EU type-examination certificate is permitted only in cases where the requirement for free space or refuge is impossible to fulfill and where prior approval has been granted by the Member State where the lift is to be installed according to the national procedure, if any.

Conditions due to possible reduced free space beneath or above the car, if applicable:

- For lifts with manual doors a second safety switch shall prevent any movement of the car if any door giving access to the car roof or pit is open. This switch shall not be accessible without using a tool.
- The compulsory Door Opening Monitoring system (DOM) meets clause 5.5.3 of EN81-21:2018.

Conditions due to possible reduced free space above the carrier. (deviation from art 5.2.5.7 of EN 81-20), applicable for Gigas N-LH and Gigas R:

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- Additional contacts must be installed on all landing doors checking if a door is manually opened by means of a triangular key.
- When the landing doors are manually opened by means of a triangular key, the safety system and so normal operation of the installation is cut off and a visual red alarm is lit. The UCMP certified machine brake is preventing any unexpected car movement.
- Inspection drive will only be possible as soon as the safety prop beneath the counterweight is installed in its blocking position and the foldable balustrade (if any) is in its upright position. This leads to the changing of the visual alarm from red to green and opening the safety line due to safety switches.
- Inspection drive upwards will be cut off when the car passes the inspection limit switch in upwards direction, before the downwards moving counterweight hits the positioned safety prop.
- The safety prop with a minimum height of 900 mm must guarantee a vertical clearance of 1200 mm minimum above the car roof when its buffer is fully compressed.
- After leaving the car roof, putting the inspection drive in the normal drive position, resetting the bi-stable additional contact on the unlocking device manually and closing of the landing door, the installation can only regain normal operation after the counterweight safety pitprop is put back in drive position and also the bi-stable additional contact on the unlocking device of the bottom landing door has been reset manually and the door closed. Finally normal operation is reset by using the reset switch inside the control cabinet. There is also a solution possible with an electrical reset of the mentioned bi-stable contacts, by using the same reset switch. All electrical resets are only possible with a closed safety chain. The used contactors are guarded in a so called safety circuit or are incorporated in a safety relay.
- A power failure may not reset the above described safety system
- When the reset switch remains activated an electric safety device prevents normal operation.
- In case the one of the upper landing doors has been opened manually without the movable safety prop being put in its safe position under the counterweight, also upwards movement by electrical emergency operation shall not be possible.

Conditions due to possible reduced free space beneath the carrier, if applicable. (deviation from art 5.2.5.8 of EN 81-20), applicable for Gigas R:

- Additional contacts must be installed on the bottom landing door checking if the door is manually opened by means of a triangular key.
- When the bottom landing doors are manually opened by means of a triangular key, the safety system and so normal operation of the installation is cut off and a visual red alarm is lit. The UCMP certified machine brake is preventing any unexpected car movement.
- After entering the well pit two safety props, with sufficient height, have to be installed in their blocking position. This leads to the changing of the

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visual alarm from red to green and opening the safety line due to safety switches.
- The clearance between bottom of the car and the pit floor is with the safety props in position 1500mm minimum.
- After leaving the pit, putting the props back in their non-safety position, resetting the bi-stable additional contact on the unlocking device manually and closing of the landing door, the installation can only regain normal operation after reset by using the reset switch at the bottom landing or inside the control cabinet. There is also a solution possible with an electrical reset of the mentioned bi-stable contacts, by using the same reset switch. All electrical resets are only possible with a closed safety chain. The used contactors are guarded in a so called safety circuit or are incorporated in a safety relay.
- A power failure may not reset the above described safety system
- When the reset switch remains activated an electric safety device prevents normal operation.
- In case the bottom landing door has been opened manually without the movable safety prop being put in its safe position, also downwards movement by electrical emergency operation shall not be possible.

Movable Counterweight Stop for Gigas N-LH
- Movable stop is kept in a holster on the wall of the well inside the pit during normal operation.
- The movable stop is placed upright on top of the counterweight buffer, in order to be in its blocking position.
- Both positions of the movable stop are guarded by safety switches
- The movable stop is using the present counterweight buffer, suitable for the nominal load and speed, according to EN81-21:2018.

Movable Car Stops for Gigas R
- Movable stops are kept in a holster on the pit floor, during normal operation.
- The movable stops are placed upright under the car, in order to be in their blocking position
- Both positions of the movable stops are guarded by safety switches
- The movable stops are foreseen with a buffer, suitable for the nominal load and speed, according to EN81-21:2018

Manually operated side closing single collapsible folding gates
- An alarm shall sound when either the car or landing gate is open and either the lift is being called from another landing or once homing time has expired.
- The foldable landing gate shall have a VL10 locking device with a so-called A circuit for door close monitoring and a B circuit for locking monitoring.
- The VL10 locking device shall be operated by a FR21 retiring cam, which shall only be energized when the A circuit is closed.
- Conditions of clause 5.2.5.3 of EN81-20 have to be met.

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- Landing shutters shall be equipped with a vision panel or a "car here" indication shall be present.
- It may be necessary to prevent the manual opening of the car gate when outside the unlocking zone, to avoid a UCM being registered by the controller.

Warnings in case of reduced clearances:

- A striking sign must be attached to the car roof stating: *Access only allowed when inspection drive is selected and safety prop below cwt is in position.*
- A striking sign must be attached to the car roof stating: *Caution! Reduced clearances during normal operation.*
- All these warnings must also be present inside the control cabinet.

Documents:

- A technical file, a user manual, a maintenance manual and an electrical diagram must be present at the lift.
- When the option re-levelling with the doors open is provided, the following items will have to be present at the installation to be checked during final inspection:
  - Detailed field test instructions regarding UCMP must be present in one of the following documents "Kleemann KL-UCMP Traction-Examination and Tests before putting into service"
    - "Gearless Machine / Lift Drive Zetadyn / Serial controller" or,
    - "Gearless Machine / Lift Drive Zetadyn / Lisa controller" or,
    - "Gearless Machine / Lift Drive Yaskawa / Serial controller" or,
    - "Gearless Machine / Lift Drive Yaskawa / Lisa controller".
    - " UCM test procedure with UControl ".
  - An additional calculation shall be done to check whether the deceleration and stopping distance is within the limits as required by EN 81-20:2014. The calculation method to be used is "Kleemann Calculations for UCM-A3, stopping with Machine Brake". For each installation the calculations shall be checked and approved.

6. Conclusions

Based upon the results of the EU-type examination Liftinstituut B.V. issues an EU-type examination certificate.

The EU-type examination certificate is only valid for products which are in conformity with the same specifications as the type certified product. The certificate is issued based on the requirements that are valid at the date of issue. In case of changes of the product specifications, changes in the requirements or changes in the state of the art the certificate holder shall request Liftinstituut B.V. to reconsider the validity of the certificate.

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7. CE marking and EU Declaration of conformity

Every product that is placed on the market in complete conformity with the examined type must be provided with a CE marking according to article 18 of the Lifts Directive 2014/33/EU under consideration that conformity with eventually other applicable Directives is proven.

Also every product must be accompanied by an EU declaration of conformity according to annex II of the Directive in which the name, address and Notified Body identification number of Liftinstituut B.V. must be included as well as the number of the EU-type examination certificate.

Prepared by:



W.Visser
Product Specialist Certification
Liftinstituut B.V.

Certification decision by:



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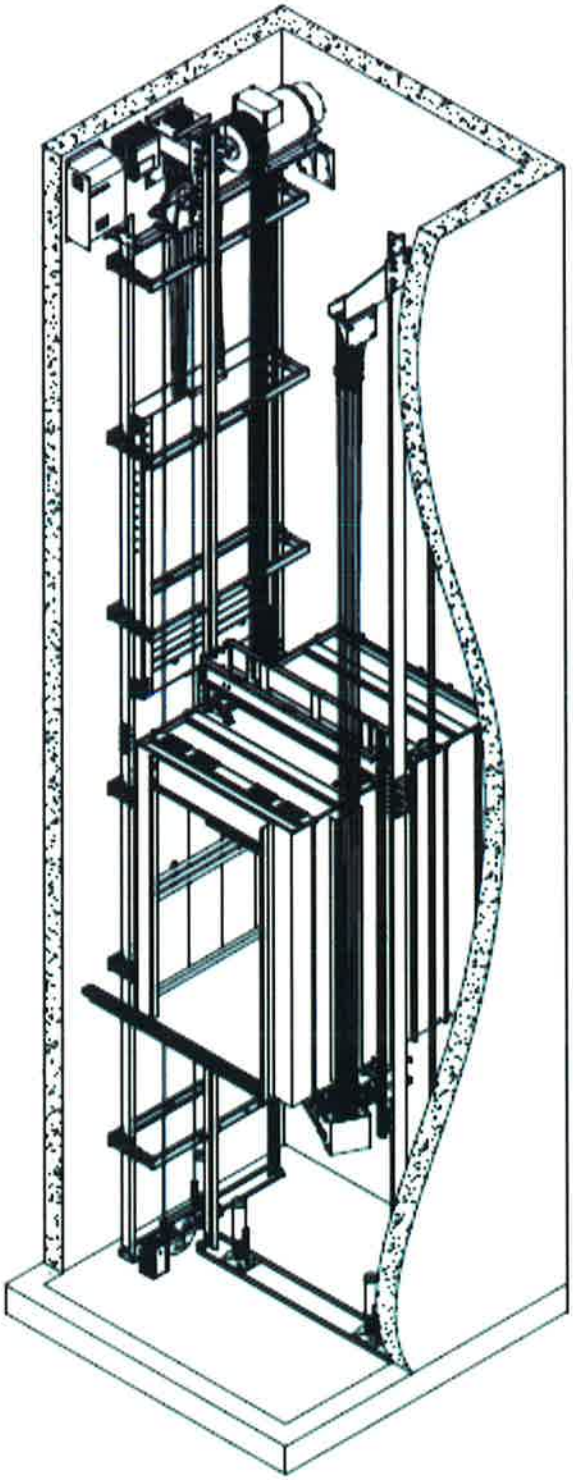
Annexes

Annex 1a. Atlas GigasN(-LH)



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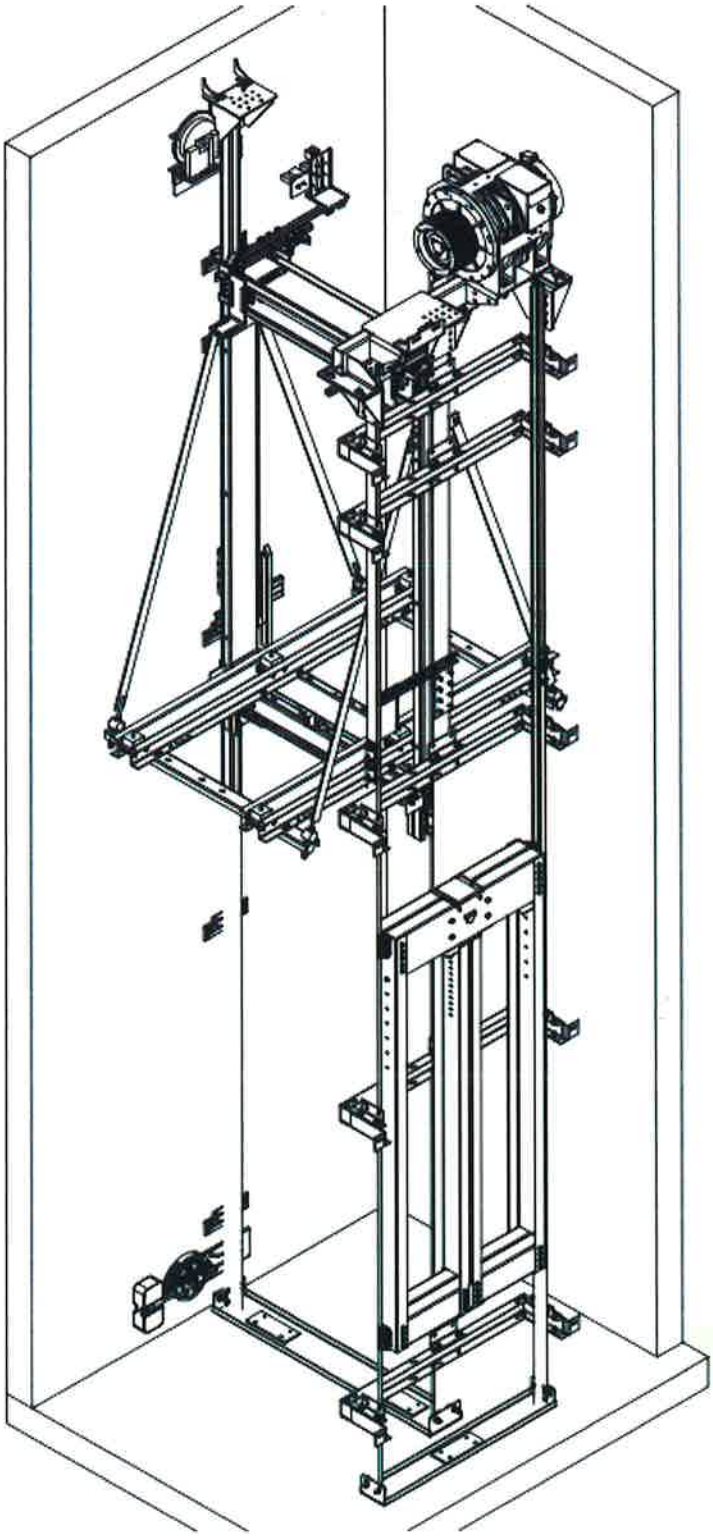
Annex 1b. Atlas Gigas R



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Annex 2. Documents of the Technical File which were subject of the examination

title	document number	date
results of tests		14-06-2012
operation instructions	V4-2012	05-04-2012
installation instructions	V1.7-2011	05-04-2012
planning data	V10-2011	05-04-2012
RA > no Block device	V1	05-04-2012
Yaskawa Quick Start guide	CP710616 33 B	Dec 2009
Stopping distance calcs (UCM)	5.5.3-13	05-04-2012
Atlas Gigas Buckling calcs	V1	28-06-2012
Atlas Gigas Ropes calcs	V1	25-06-2012
Atlas Gigas machine beam calcs	V1	19-07-2012
El diagram Serial-Zetadyn 3C	V1	12-04-2012
El diagram Serial-Yaskawa	V1	12-04-2012
El diagram Lisa 10-Zetadyn 3C	V1	12-04-2012
El diagram Lisa 10-Yaskawa	V1	12-04-2012
El diagram Lisa 20-Zetadyn 3C	V1	31-10-2013
El diagram Lisa 20-Yaskawa	V1	28-10-2013
Lisa-20 Systembeschreibung A3	V1.0	22-12-2011
Lisa 20 Benutzerhandbuch	V0.92	30-10-2013
STEP Instruction Manual	V2.12	31-01-2014
El diagram Step	V2	05-02-2014
Manual Zetadyn 4C	R_TBA12_01	10-11-2014
El diagram Lisa 10-Zetadyn 4C	V1	30-10-2014
El diagram Lisa 20-Zetadyn 4C	V2	29-11-2017
LC100 User Manual	V1	01-09-2013
El diagram MLC L100-Gefran ADL	Rev.1	03-09-2013
Eurofold manual	1-11	01-01-2012
Superior manual	1-13	01-01-2012
VL10 installations instructions	II063/0212	01-02-2012
Electrical Diagram 81-20/50 for Lisa 20 with Zetadyn	ZaDyn, V1	16-12-2016
Electrical Diagram 81-20/50 for Lisa 20 with Yaskawa	V2	29-11-2017
Electrical Diagram 81-20/50 with Ucontrol	Ucontrol DF, V1	30-11-2016
Drawing well	Gigas R + ZA	30-11-2016
Drawing well	Gigas R + Ucontrol	30-11-2016
Drawing well	Gigas R + Yaskawa	30-11-2016
Drawing well	Gigas N- LH + Ucontrol	30-11-2016
Drawing well	Gigas N- LH + Yaskawa	30-11-2016
Atlas Gigas-R Buckling calcs	V600	12-06-2017
Atlas Gigas-R Ropes&Traction calcs	V1	13-06-2017
Manual LC100	Ver. 8.1	24-09-2017
El diagram:		04-10-2017
KLLC100-Traction with NC80	Ver.1	
KLLC100-Traction with NCUM10	Ver.1	04-10-2017
KLLC100-Traction+NC80+CS AR 90	Rev.2	02-02-2018
KLLC100-Traction+NC80+NC80	Rev.2	14-08-2018
KLLC100-Traction+NCUM+CS AR 90	Rev.2	02-02-2018

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KLLC100-Traction+NCUM+NC80	Rev.1	02-02-2018
Ucontrol, SM11A, 1-2 doors	Rev.1	24-07-2018
Lisa 20, Zet 4C, ZAsbc4C	Rev.1	27-07-2018
Lisa 20 Low PD & HR, new pos apron	Ver.1	25-07-2018
Ucontrol, low PD&HR, new pos apron	Ver.1	25-07-2018
Lisa 20,4CS,Bernstein DOM	Ver.1	27-07-2018
Lisa 20,Yask,Bernstein DOM	Ver.1	27-07-2018
Ucontrol, Bernstein DOM	Ver.1	31-07-2018
STEM NCUM10 certificate	EDES009	17-02-2016
STEM NC80 certificate	CA50.00340	03-05-2016
KLLC 100 certificate	968/A 165 00/17	25-04-2017
ZAsbc4C Operating Instructions	R-TBA16_02-GB 1638	10-10-2016

Annex 3. Reviewed deviations from the standards

EN 81-20 par.	Requirement	Accepted design
5.2.5.7	Top clearances	EN 81-21:2018 solution
5.2.5.8	Bottom clearances	EN 81-21:2018 solution
5.2.6.4.3.1	Mech blocking device car not present	RA > Maintenance free brake
5.2.5.8.2.b	Clearance between tension wheel and bottom of car	RA > Always 100 mm remaining

EN 81-21 par.	Requirement	Accepted design
5.5.2.5.2.b	Temp. Mech safety device	RA > EU type certified brake
5.7.2.5.2.b	Temp. Mech safety device	RA > EU type certified brake
5.5.3.2	Memory function of DOM	RA > UPS

Annex 4. Revision overview

REVISIONS OF THE CERTIFICATE AND THE REPORT

Rev.:	Date	Summary of revision
-	July 19, 2012	Original
1	October 22, 2012	Including SB-ZONE
2	December 10, 2013	Including several safety components, controllers
3	February 25, 2014	Including STEP Controller/Drive
4	July 10, 2014	Adding Kleemann UControl
5	February 12, 2015	Add 4C, Gigas N-LH, Gigas R, Machines
6	September 10, 2015	Add manual shutters, MLC controller, Gefran drive and update table 1b.
7	December 20, 2016	Revised and updated to EN81-20/50

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8	August 01, 2017	Increased speed Gigas-R to 2m/s. Added Thyssen safety gear and Oleo Buffer
9	February 22, 2018	Added KLLC 100 controller, Gefran drive and Thyssen buffers
10	October 02,, 2018	Added Acla buffers, ZAsbc4C Brake module, NC80 & SM11A UCM detector, WA 175 apron, 2nd DOM solution

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