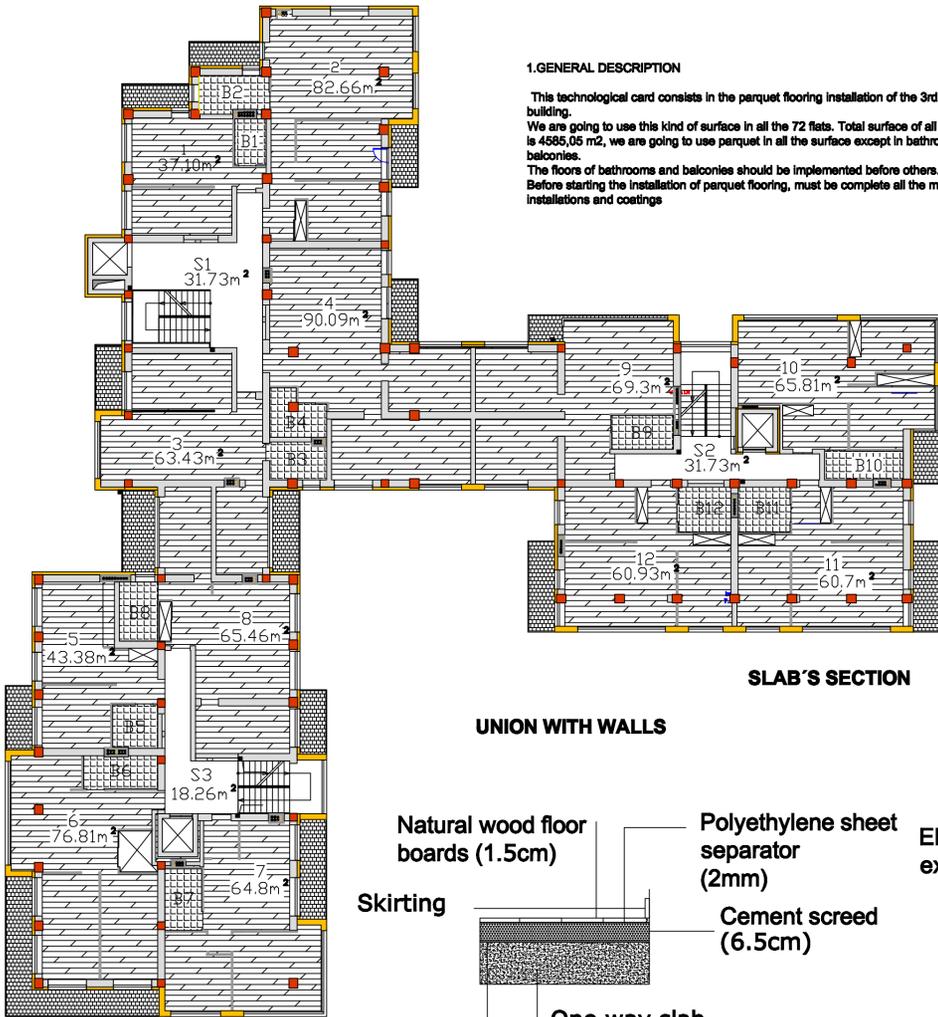


# LAMINATE FLOORING - TECHNOLOGICAL CARD

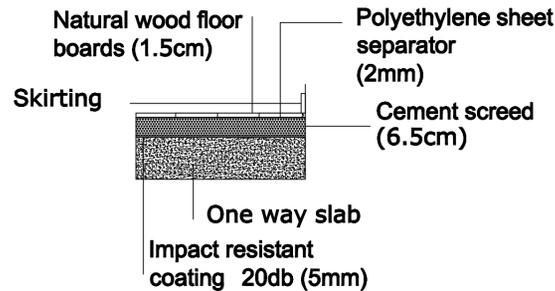
## 1. GENERAL DESCRIPTION

This technological card consists in the parquet flooring installation of the 3rd floor, of our building.  
We are going to use this kind of surface in all the 72 flats. Total surface of all the apartments is 4685,05 m2, we are going to use parquet in all the surface except in bathrooms and balconies.  
The floors of bathrooms and balconies should be implemented before others.  
Before starting the installation of parquet flooring, must be complete all the masonry, installations and coatings

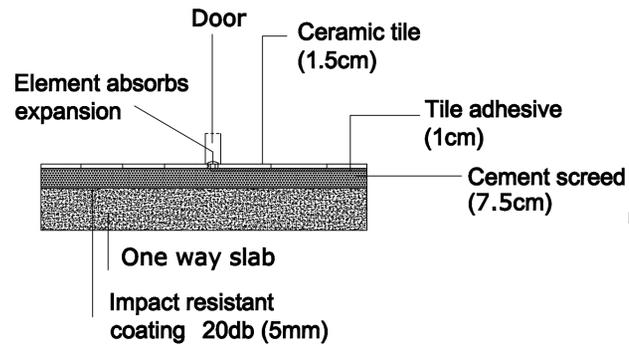


SLAB'S SECTION

### UNION WITH WALLS



### UNION WITH CERAMIC



## 5. MECHANICS, MATERIALS AND TOOLS

Num	NAME	UNITS	QUANTITY
1	Machines		
1.1	Chainsaw wood	Unit	1
2	Materials		
2.1	Polyethylene Film	m2	706,57
2.2	Natural hardwood tables varnished	m2	706,57
2.3	Skirting	m	623,11
2.4	Adhesive	L	1
2.5	Adhesive tape	m	350
3	Tools		
3.1	Hammer	Unit	1
3.2	Level	Unit	1

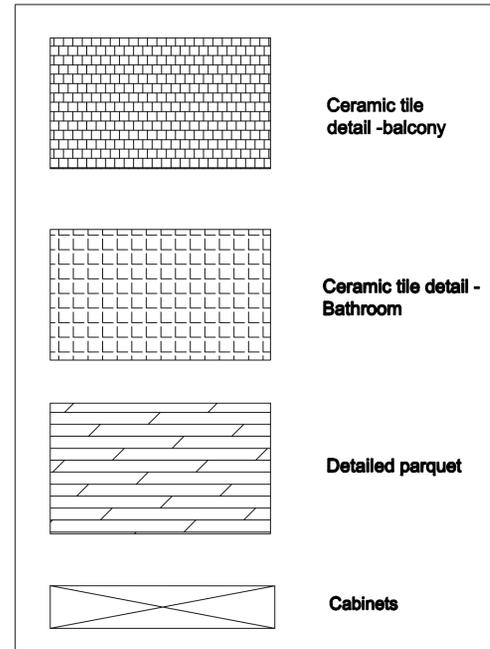
## 3. ORGANIZATION OF WORKS

Id	Work name	Duration of the work	Number of work teams	Work teams	D-1	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20	D21	D22	D23	D24	
1	RYGOS STREET BUILDING	18 dias																												
2	PAVEMENT OF LAMINATE FLOORING THIRD FLOOR ( 706,57 m2)	18 dias																												
3	PLACEMENT IMPACT RESISTANT COATINGS	3 dias	1	PAVEMENT																										
4	LAYER OF CEMENT SCREED	5 dias	1	PAVEMENT																										
5	PLACEMENT POLYETHYLENE SHEET SEPARATOR	1 dia	1	PAVEMENT																										
6	PLACEMENT OF NATURAL HARDWOOD TABLES	6 dias	1	PAVEMENT																										
7	PLACEMENT OF SKIRTING	3 dias	1	PAVEMENT																										

## SURFACES

3rd FLOOR	M2	3rd FLOOR	M2
<b>1 FLAT</b>		<b>7 FLAT</b>	
a Living room / kitchen	18.59	a Living room / kitchen	23.16
b Main room	12.54	b Main room	19.27
d Bathroom	3.93	c Second room	12.59
f Entrance	1.74	d Bathroom	6.14
<b>TOTAL</b>	<b>37.10</b>	<b>f Entrance</b>	<b>3.62</b>
g Balcony	4.14	<b>TOTAL</b>	<b>64.80</b>
<b>2 FLAT</b>		g Balcony	7.02
a Living room / kitchen	40.70	<b>8 FLAT</b>	
b Main room	13.64	a Living room / kitchen	34.48
c Second room	12.34	b Main room	12.25
d Bathroom	6.98	c Second room	11.33
f Entrance	7.99	d Bathroom	6.14
<b>TOTAL</b>	<b>82.66</b>	<b>TOTAL</b>	<b>65.46</b>
g Balcony	4.36	g Balcony	4.46
<b>3 FLAT</b>		<b>9 FLAT</b>	
a Living room / kitchen	29.66	a Living room / kitchen	31.92
b Main room	15.39	b Main room	14.10
c Second room	11.33	c Second room	13.88
d Bathroom	5.90	d Bathroom	5.63
f Entrance	1.15	f Entrance	3.77
<b>TOTAL</b>	<b>63.43</b>	<b>TOTAL</b>	<b>69.30</b>
g Balcony	4.53	g Balcony	2.34
<b>4 FLAT</b>		<b>10 FLAT</b>	
a Living room / kitchen	46.68	a Living room / kitchen	24.63
b Main room	13.81	b Main room	14.52
c Second room	23.71	c Second room	12.56
d Bathroom	5.58	d Bathroom	6.14
<b>TOTAL</b>	<b>90.08</b>	f Entrance	7.94
g Balcony	4.36	<b>TOTAL</b>	<b>65.81</b>
<b>5 FLAT</b>		g Balcony	3.66
a Living room / kitchen	19.92	<b>11 FLAT</b>	
b Main room	11.66	a Living room / kitchen	25.12
d Bathroom	5.29	b Main room	13.03
f Entrance	6.51	c Second room	10.27
<b>TOTAL</b>	<b>43.38</b>	d Bathroom	6.37
g Balcony	4.46	f Entrance	5.91
<b>6 FLAT</b>		<b>TOTAL</b>	<b>60.70</b>
a Living room / kitchen	29.96	g Balcony	6.28
b Main room	16.33	<b>12 FLAT</b>	
c Second room	16.33	a Living room / kitchen	25.10
d Bathroom	6.58	b Main room	13.25
f Entrance	3.82	c Second room	10.27
<b>TOTAL</b>	<b>76.81</b>	d Bathroom	6.40
g Balcony	18.73	f Entrance	5.91
<b>TOTAL</b>	<b>60.93</b>	<b>TOTAL</b>	<b>62.8</b>
		g Balcony	6.28

## REFERENCES

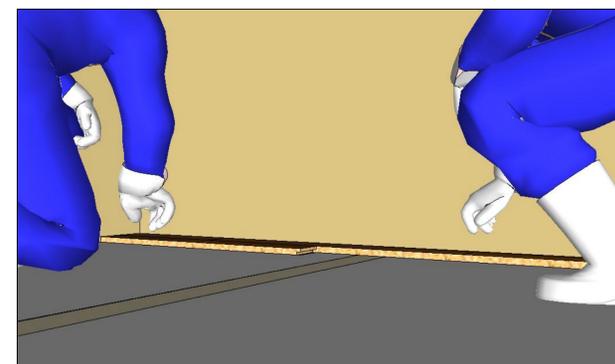


## 10. TECHNICAL - ECONOMIC INDICATORS

- Quantity of works: 706.57
- Installation costs: 77.164,51 € or 266.430 Litass
- Duration of works: 50 days / 9 floors = 5.55 days
- Wage: Official: 22.2h x 18.12€ = 402.264 € or 1387.81 Litass  
Regular worker: 22.2h x 15.35€ = 340.77 € or 1278 Litass

## INSTRUCTIONS

For installing the laminate flooring we will need two workers, one officer and one regular worker



## 2. DESCRIPTION OF TECHNOLOGY AND ORGANIZATION OF INSTALLATION

Laminate flooring is a highly developed type of pavement over the last years in Spain. There are basically two types of synthetic material (mutants to wood) and natural wood. I have chosen the natural wood because it is of superior quality.  
The mark of our laminate flooring supplier will be "KÄHRS" our laminate flooring consist of two sheets rather differences among them, the bottom 10 mm of cheap wood and hardwood top 5 mm.

Below, we will describe the works, bearing in mind that should begin when the support surface is completely clean.

### Works order:

- Polyethylene Film placement
- Placement of natural hardwood tables
- Placement of skirting
- Varnish

### 1. Polyethylene Film placement

The first step is to place a polyethylene film of 2 mm thick. This material is supplied in large rolls of a meter wide. We will be deploying the roll to suit the geometry of space requirements, making 20 cm overlap different layers. Finally we will fix with adhesive tape because we don't want any kinds of movements.

### 2. Placement of natural hardwood tables

Natural wood tables are supplied in boxes of 30 kg. So it can be transported comfortably. The fixation system is called clicking, each piece has two parts, male and female. We must put the male against the wall always, and at the same time, we will also need wedges of separation to allow the expansion of this kind of materials. Now we can start joining all the different pieces with the clicking system. When we need to adjust a piece to a particular form, we use a wood sawing machines.

### 3. Placement of skirting

When all the wooden parts are assembled, we proceed to the placement of the skirting board. To do this, we use a wood adhesive rather than nails, because we do not want to see them. Finally we push all the skirting boards against the wall and that is all.

### 4. Varnish

This may take 7 layer of varnish to keep the pieces for the desired time. It can be varnished at the factory or on site. Our choice will be to receive the varnished pieces.

## 4. HUMAN SAFETY

Although the works cannot be considered dangerous, the work will be carried out in accordance with health and safety rules in construction request.

- Workers are allowed to work only with the knowledge of safety equipment.
- Each worker must use protective equipment (special clothing, footwear, gloves and respirators).
- For mixtures, workers should wear gloves and goggles.
- Collection of unnecessary materials and debris from the workplace.
- Electrical equipment should be grounded.
- All electrical devices must be absolutely clean.
- All cables must be in perfect condition.

## CHAINSAW WOOD



Name and surname	Signature	Date	VILNIUS GEDIMINAS TECHNICAL UNIVERSITY	
Student	Vicenta Carlin Medrano	-2021	Construction design of the multistorey dwelling-house at RYGOS str. 11 in Vilnius	
Supervisor	Jonas Sepenukas	-2021		
Consultant	Ramūnas Šalys	-2021		
Head of Department	Edmundas Kazimieras Zavadskas	-2021		
Reviewer		-2021	LAMINATE FLOORING - TECHNOLOGICAL CARD	Department of Construction Technology and Management
			Page	Page
			4	7