

Konstruisanje kuća od drveta



Panelni sistem

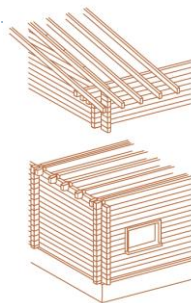
Podela objekata od drveta

- ▶ Podela na osnovu načina konstruisanja zidova
- ▶ Podela na osnovu načina prenosa opterećenja

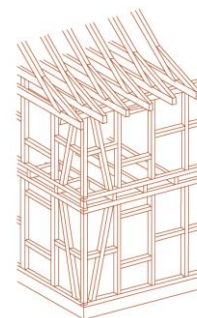


Podela na osnovu načina konstruisanja zidova

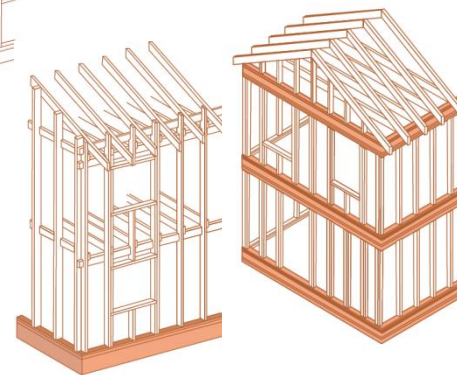
- ▶ Brvnare, talpare



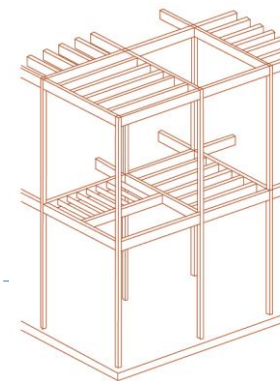
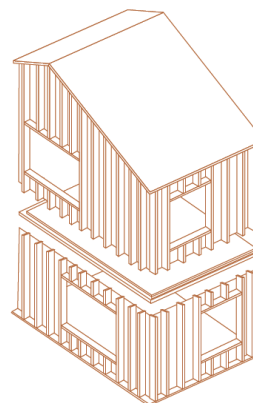
- ▶ Stari (tradicionalni) bondručni sistem



- ▶ Novi bondručni (skeletni) sistem

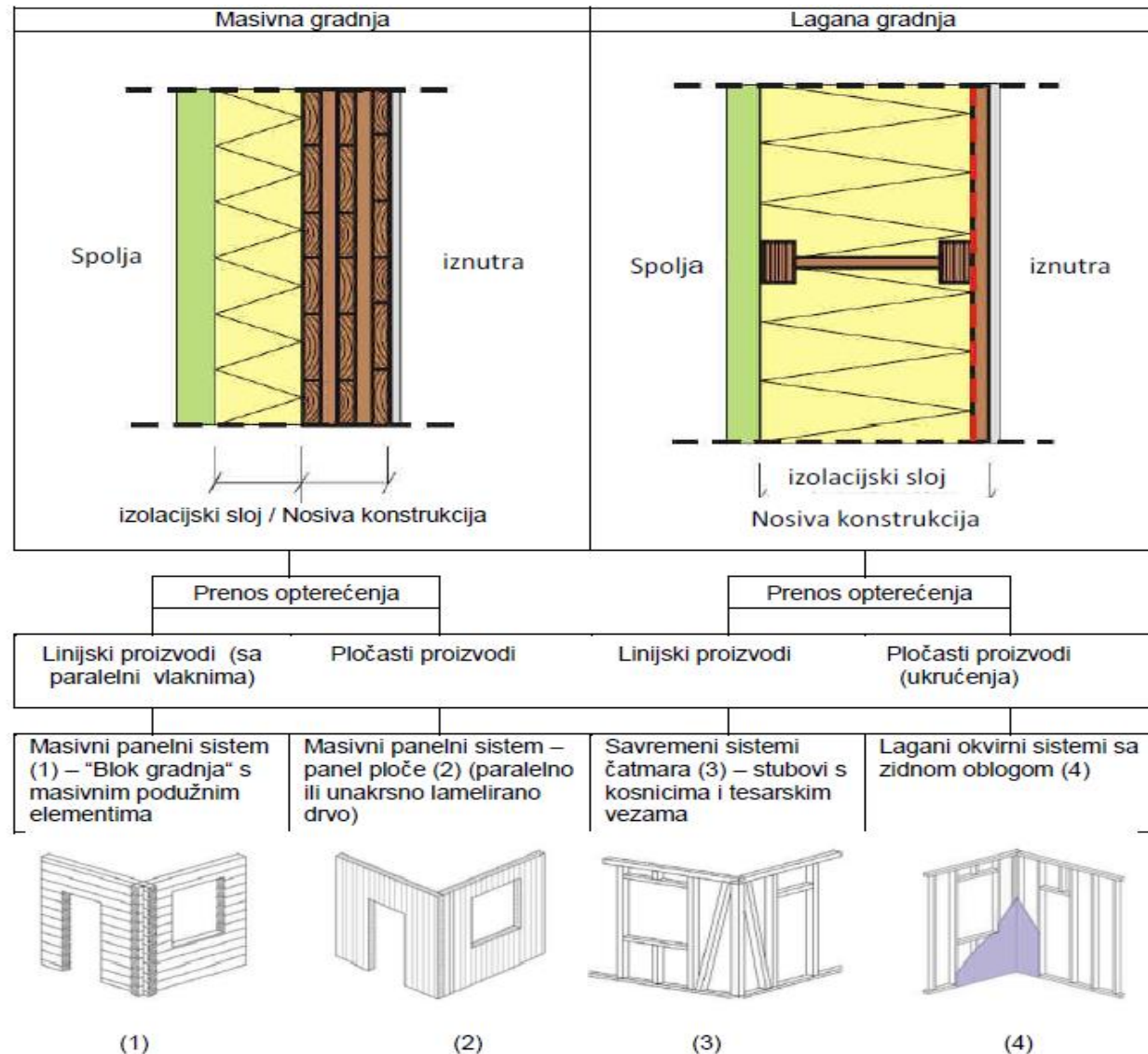


- ▶ Prefabrikovane drvene zgrade



Podela na osnovu načina prenosa opterećenja

- ▶ Masivna gradnja
- ▶ Lagana gradnja



Konstruisanje kuća od drveta

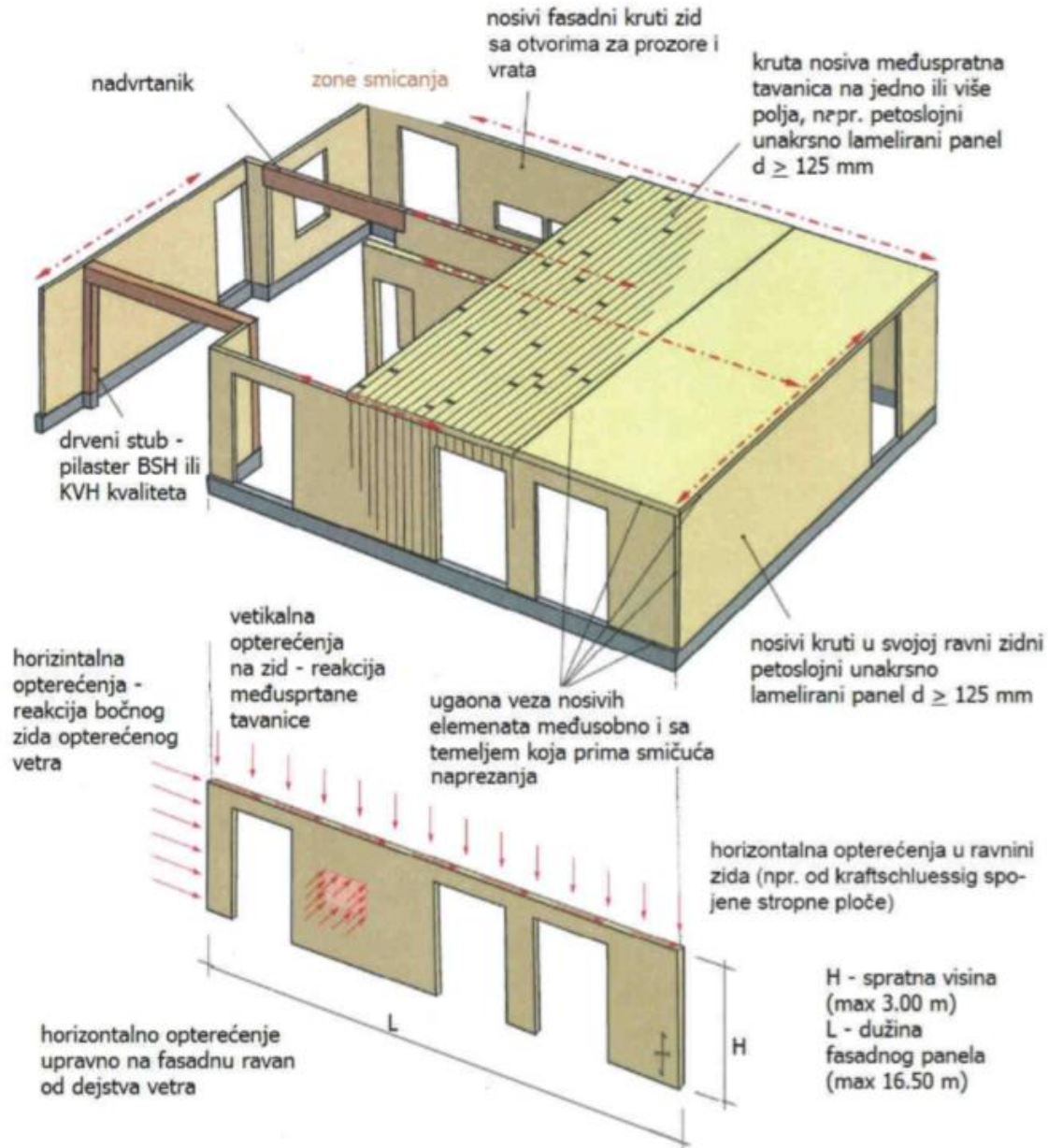


Panelni sistem

prednosti

- ▶ Prefabrikovani zidovi
- ▶ Lakša manipulacija
- ▶ Kraće vreme izrade
- ▶ Kraće vreme montaže
- ▶ Moguća demontaža
- ▶ Smanjen % škarta i dorade
- ▶ Mogućnost proizvodnje u modularnim sistemima

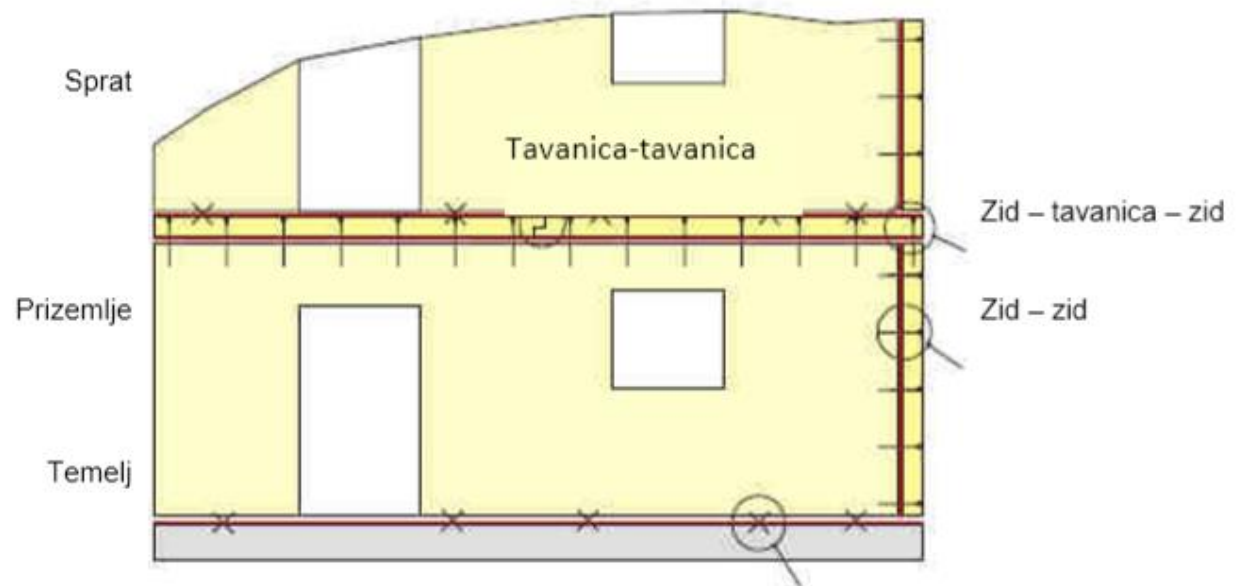




Krutost konstrukcije

KONTAKTNE POVRŠINE

- ▶ Tavanica-tavanica
- ▶ Zid-zid
- ▶ Zid-temelj
- ▶ Zid-tavanica
- ▶ Zid-tavanica-zid



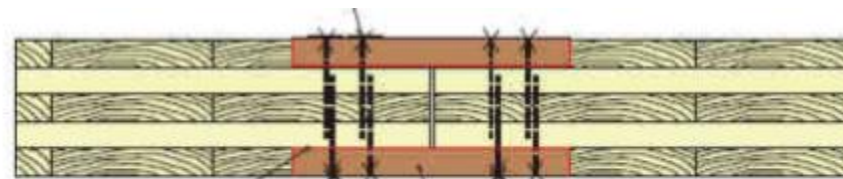
Tavanica-tavanica

Bploče = 3÷4,8m

Veza na preklop



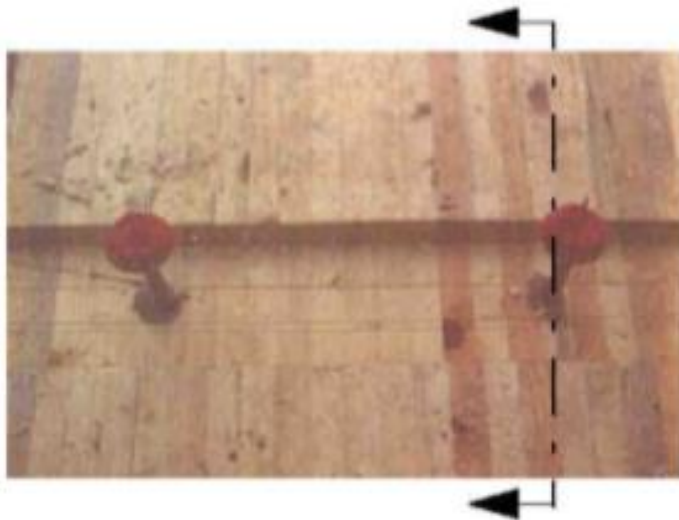
Lepljena spojnica (pritisak lepljenja
osiguravaju wkseri ili vijci za drvo



Tavanica-tavanica

Bploče = 3÷4,8m

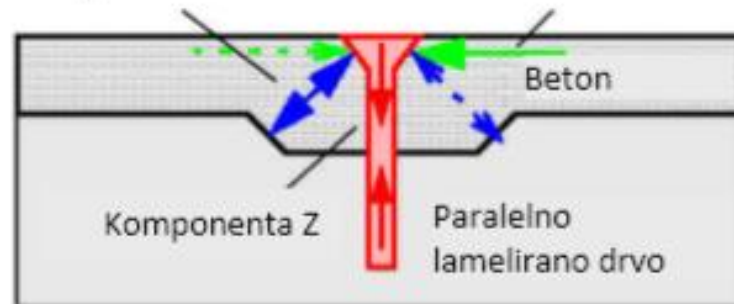
Veza na preklop



Shema raspodele sila u spregnutom sitemu

Komponenta P

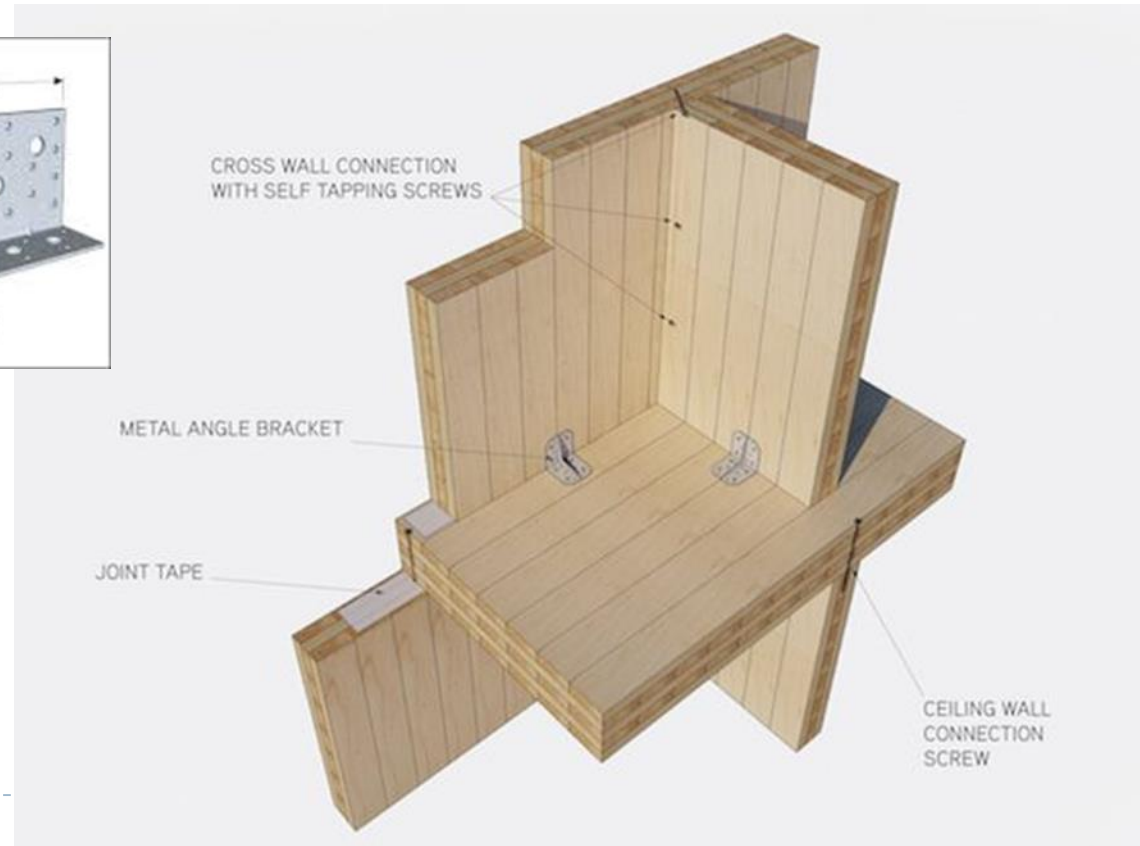
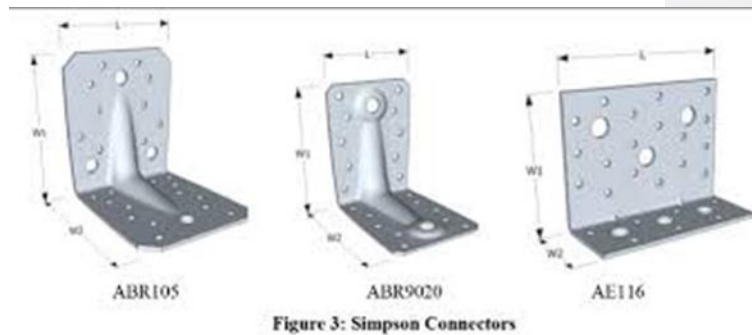
Smičuća sila

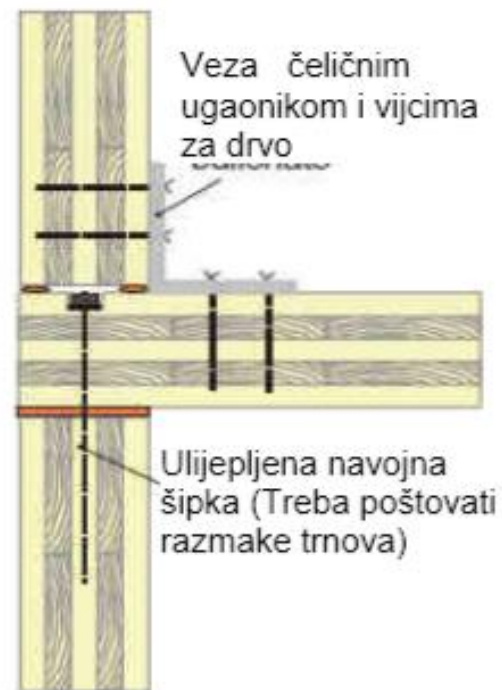
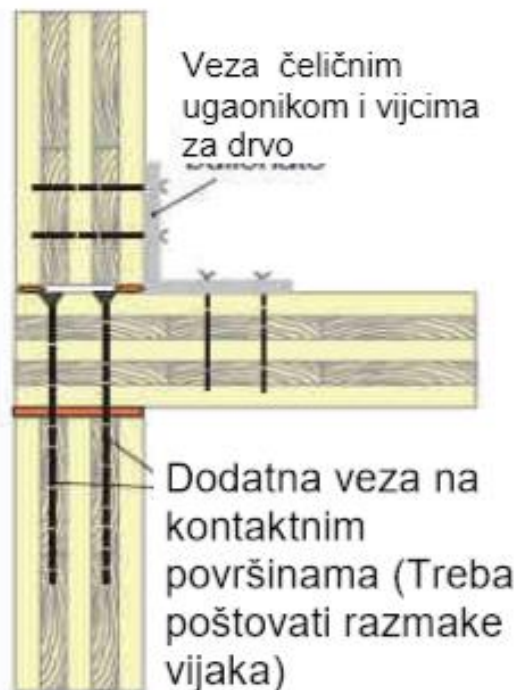
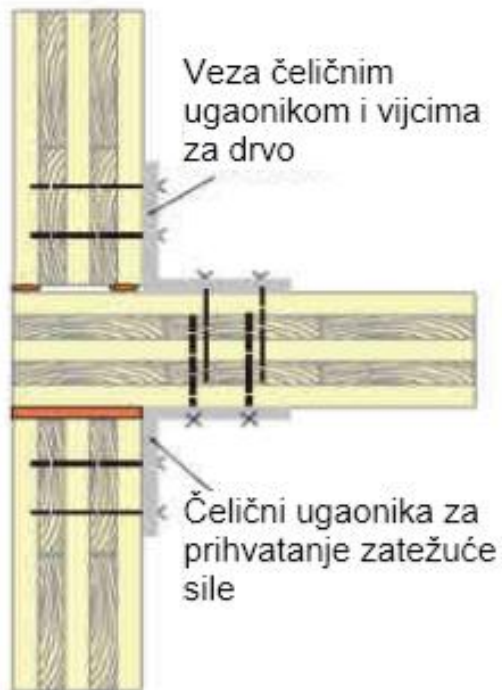


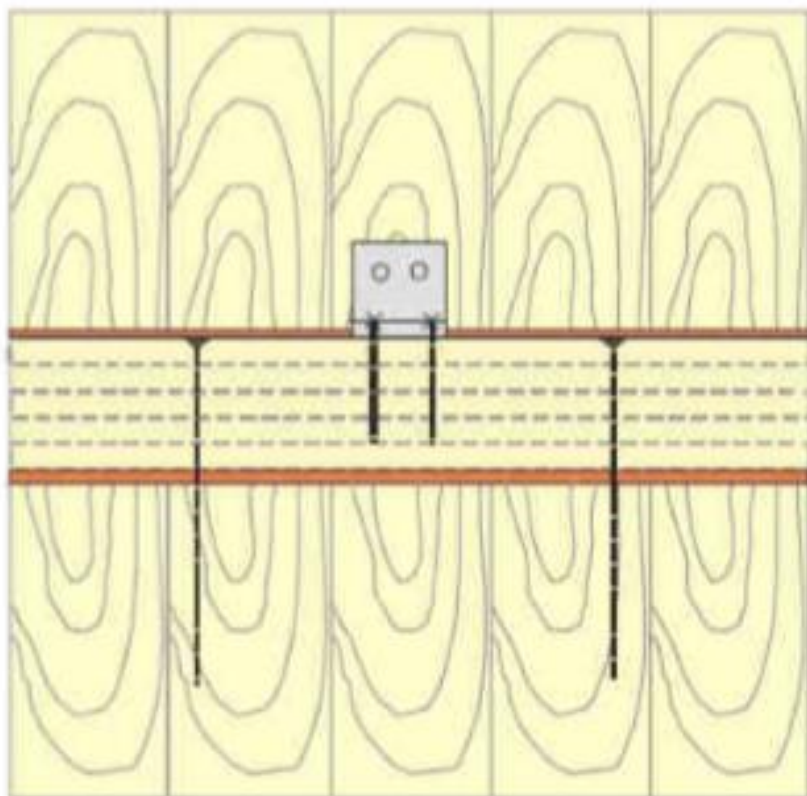
Zid-Tavanica-zid

Ugaoni okov za spajanje

Navajna šipka uz upotrebu lepka





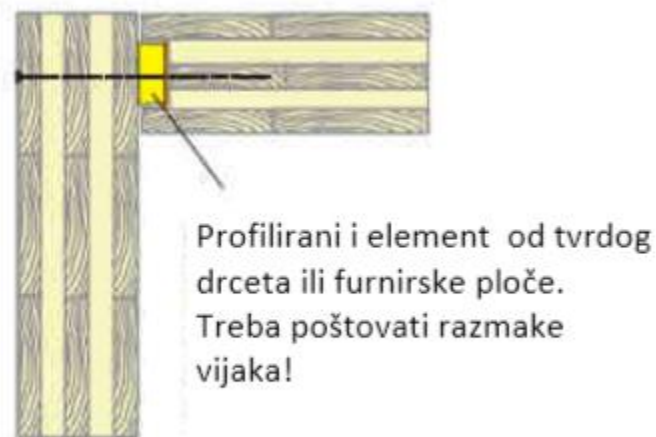
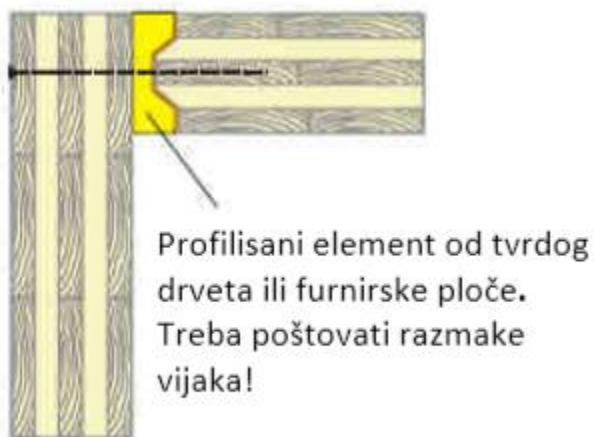
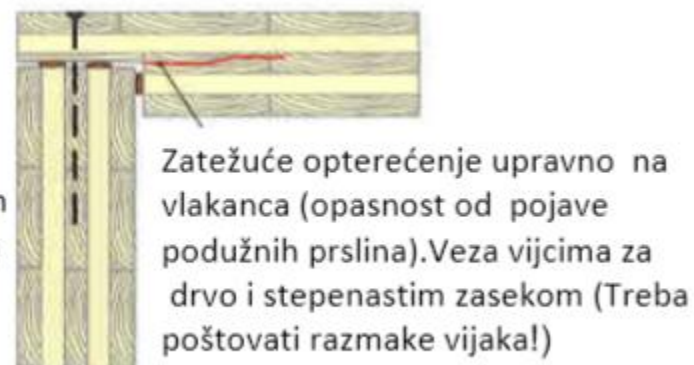


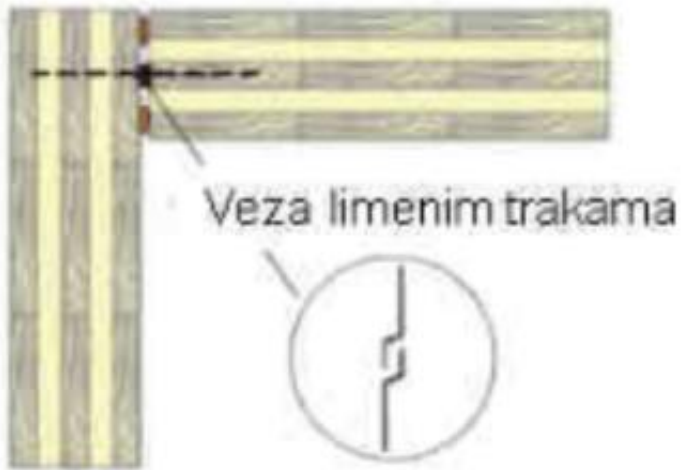
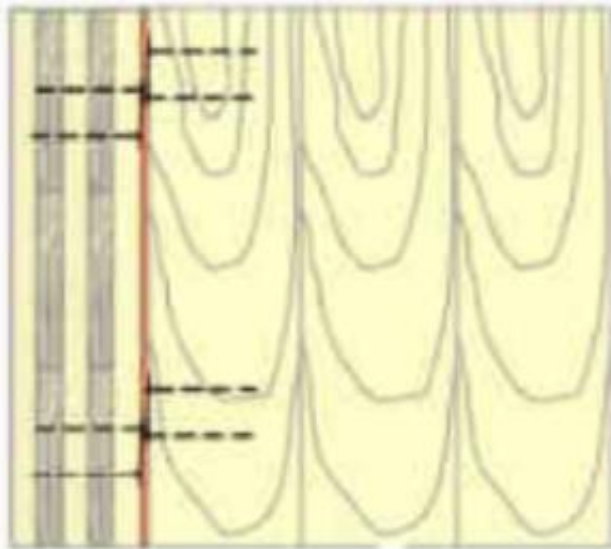
Direktna veza vijcima za drvo ugrađenim paralelno vlaknima nije dopušteno ! normativa



Zid-zid

Spojno sredstvo – vijci za drvo $\varnothing_{\min} 10$

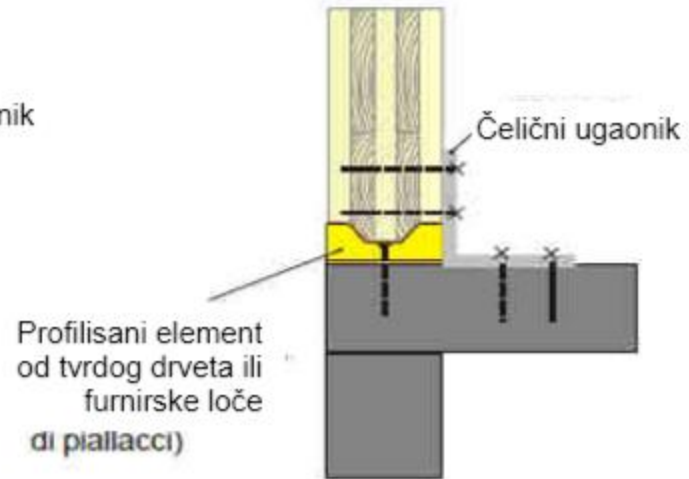
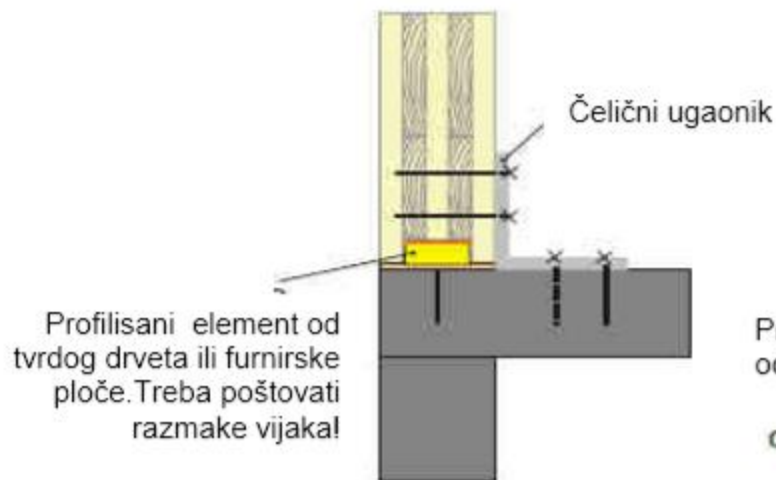
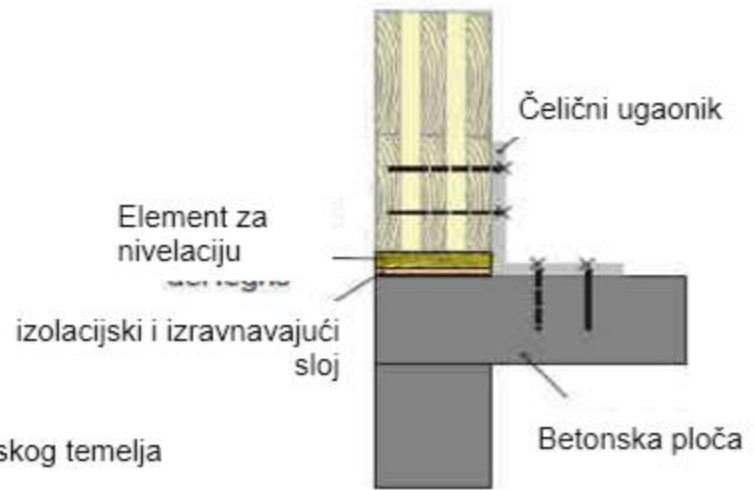
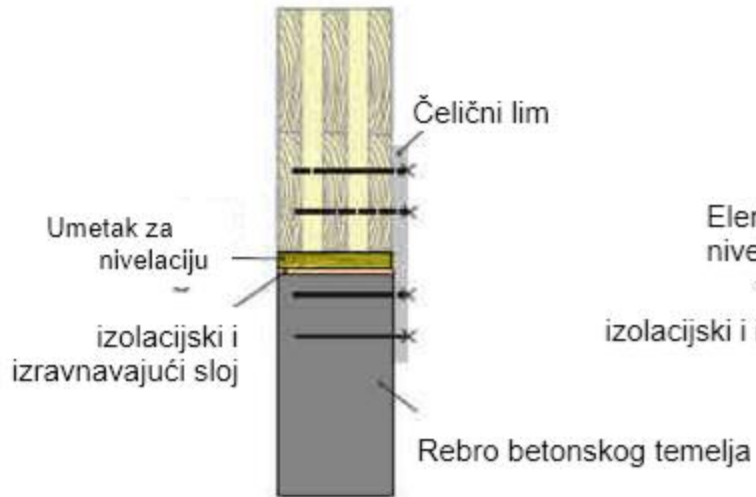




Zid-temelj

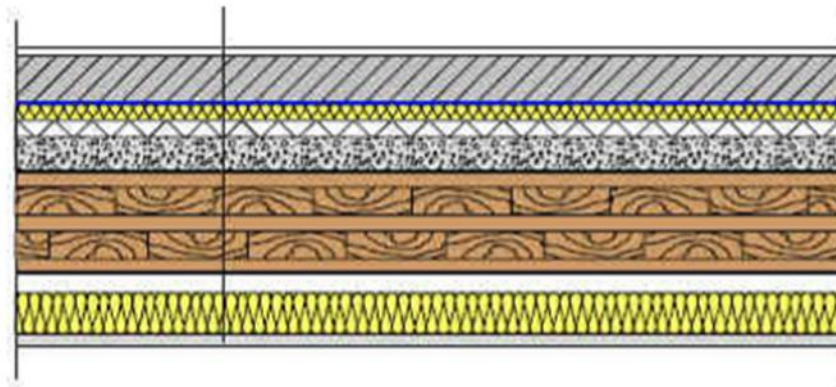
Spojno sredstvo – metalni okovi sa vijcima za drvo i beton





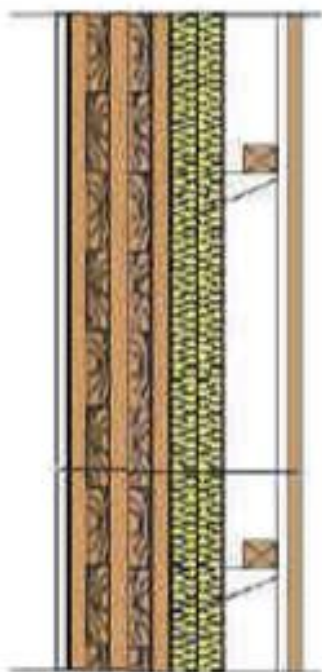
Konstrukcija podova

▶ ZAHTEVI: toplotna i zvučna izolacija



Podna obloga		10 mm
Plivajući estrih		60 mm
PE folija		
izolacija protiv udarnog zvuka		20 mm
Ekspandirani polistiren	20 mm	40 mm
ispuna		
Ploča od unakrsno lameliranog drveta		125 mm
Prostor za provetranje	25 mm	
Zvučna izolacija		50 mm
Gips-kartonska ploča		15 mm
		<hr/>
		365 mm

Spoljašnji (fasadni) zid



Gips-kartonska ploča	15 mm
Ploča od unakrsno lameliranog drveta	125 mm
Termo - izolacija	40 mm
Termo - izolacija	40 mm
Zaštita od vetra	
Prostor za ventilaciju	30 mm
Letva	50 mm
Obloga	20 mm
<u>Fasadna obloga (pročelje)</u>	<u>20 mm</u>
	340 mm

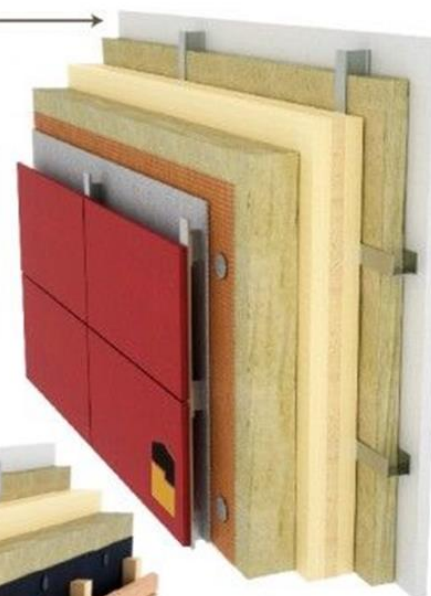


Spoljašnji (fasadni) zid

PARETE PORTANTE PERIMETRALE VENTILATA

Tipo A

- STRATIGRAFIA ESTERNO
1. Pannelli Metallici
| finitura a scelta |
 2. Telaio Metallico
 3. Strato di Rasante
 4. Rete Armata
 5. Strato Isolante
 6. Pannello Portante in CLT
- STRATIGRAFIA INTERNO
7. Telaio
 8. Isolante | a scelta
 9. Cartongesso

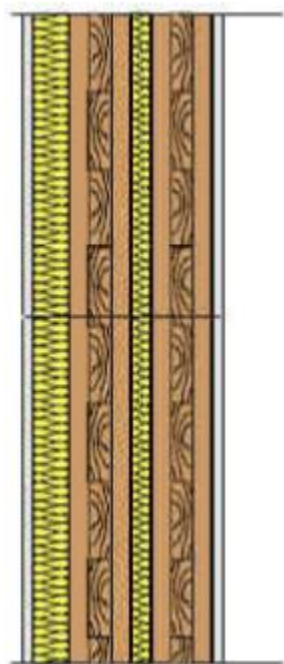


Tipo B

- STRATIGRAFIA ESTERNO
1. Doghe di Legno
| finitura a scelta |
 2. Telaio in Legno
 3. Telo Antivento
 4. Supporto in Legno
 5. Strato Isolante
 6. Pannello Portante in CLT
- STRATIGRAFIA INTERNO
7. Telaio
 8. Isolante | a scelta
 9. Cartongesso

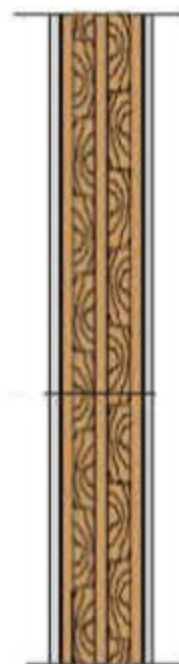


Unutrašnji (pregradni) zid



Gipskartonska ploča	15 mm
3- slojna ploča od unakrsno lameliranog drveta	95 mm
Zvučna izolacija	30 mm
Vazušni sloj	
Ploča od unakrsno lameliranog drveta	95 mm
Obloga	70 mm
<hr/>	
	305 mm

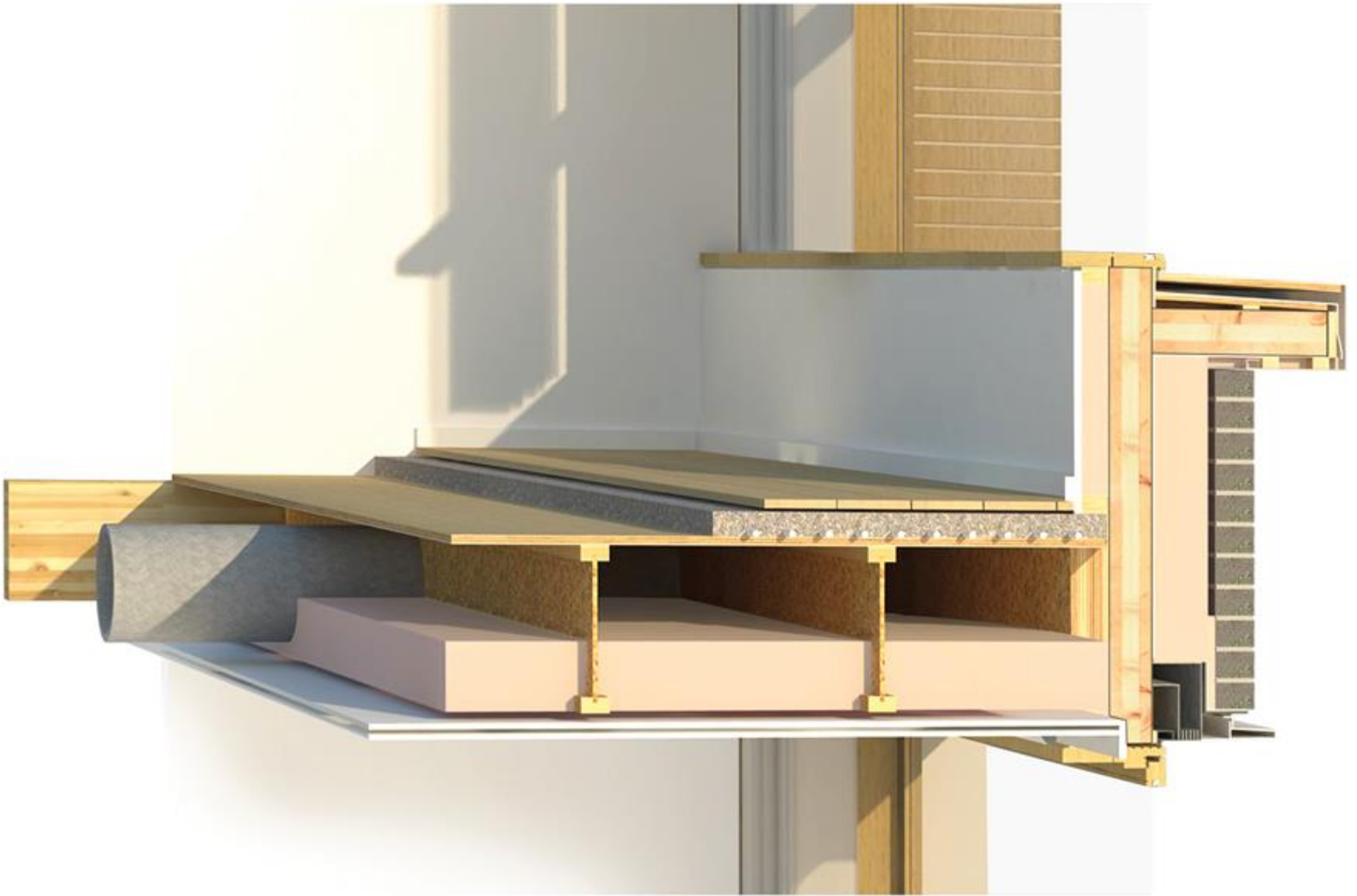
Pregradni zid zid

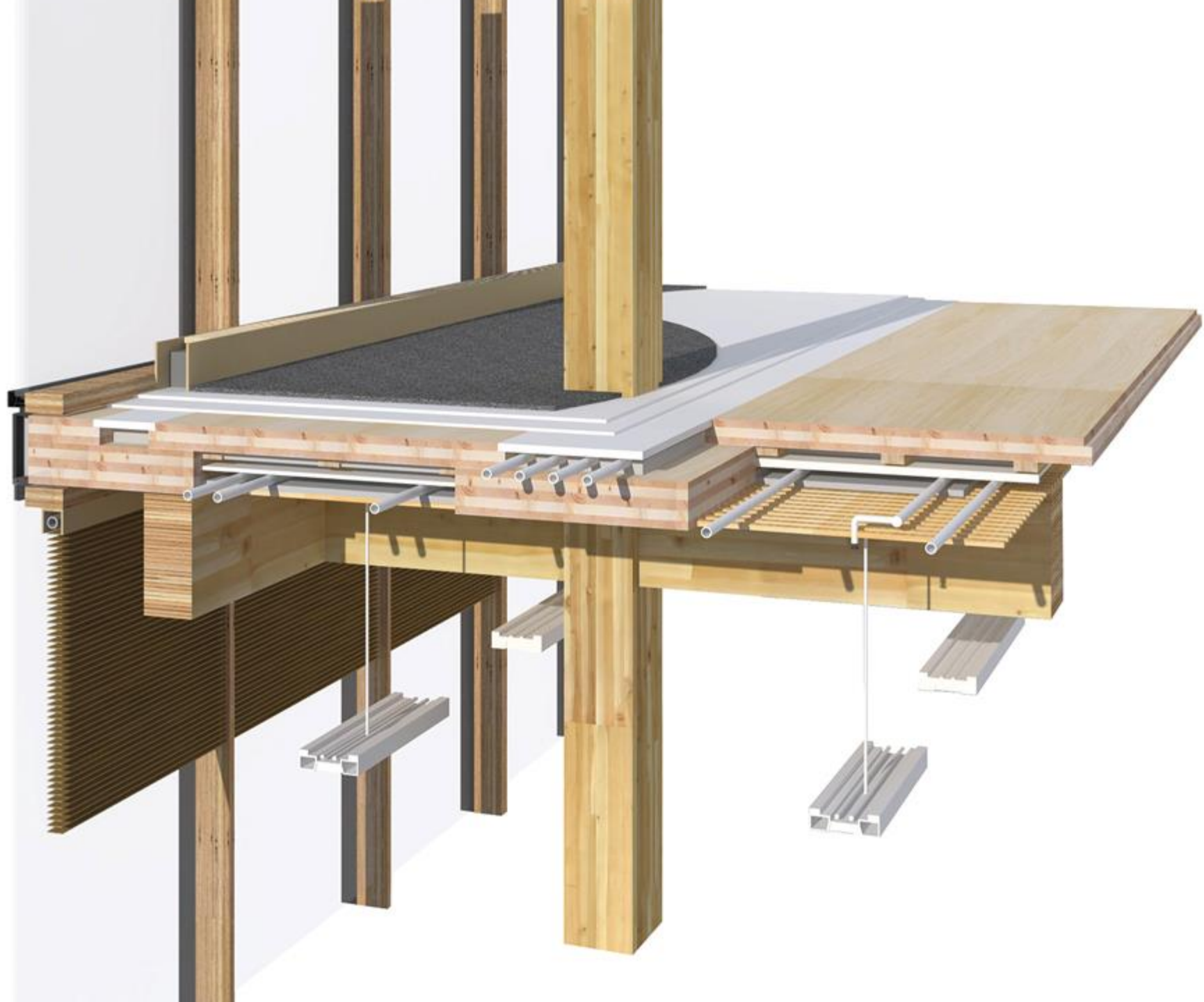


Gipskartonska ploča	15 mm
Ploča od unakrsno lameliranog drveta	95 mm
<u>Gipskartonska ploča</u>	<u>15 mm</u>
<hr/>	
	125 mm

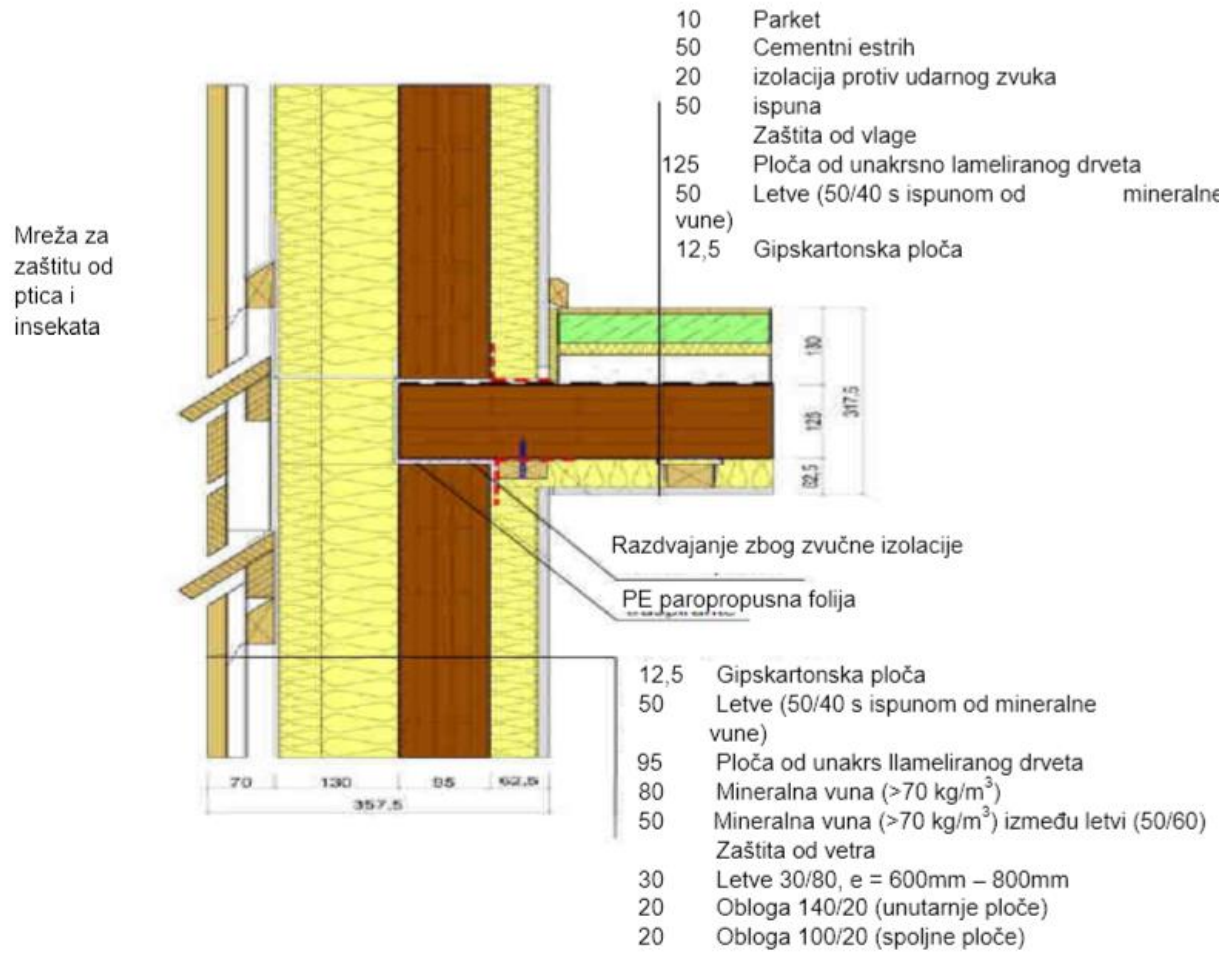
Unutrašnji nosivi zid



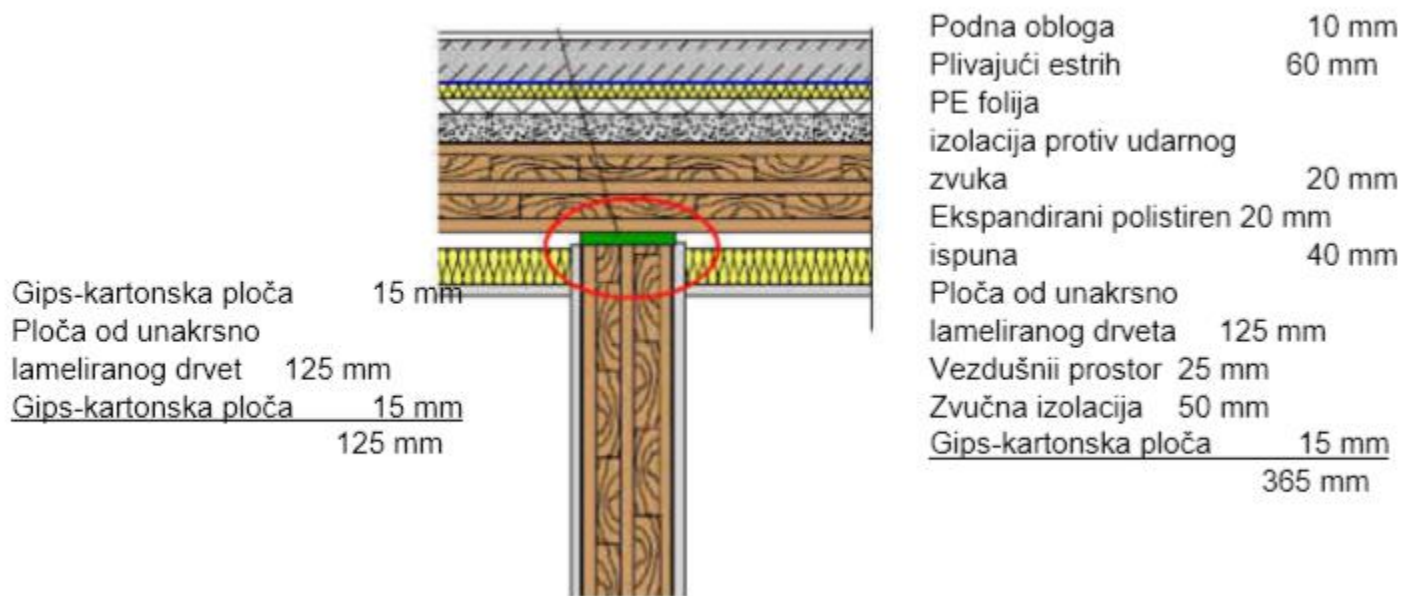




Zvučna izolacija



Zvučna izolacija



Zvučna izolacija

